



Public Transportation and Multimodal Open End II



Phase II Final Report -- Paratransit Service

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**Work Order #52 – Transit Development Plan for
Berks Area Regional Transportation Authority**

**Task #10 – Human Service Transportation Coordination Plan Update and
Phase II Final Report**

Deliverable #10 – Phase II Final Report



TABLE OF CONTENTS

Section	Page
Introduction	1
Existing System	3
Transportation Programs	3
Service Description	5
Fare Structure	6
Physical Plant and Assets	6
Organization	9
Customer Survey	12
Survey Methodology	12
Survey Results	13
Operator Comments	26
BARTA	26
Easton Coach	28
System Trends	30
Functional Area Review	37
Eligibility and Certification Process	37
Technology	40
Reservations and Scheduling	41
Dispatching	42
Customer Service	43
Contract Management	43
Driver Training	45
Program Oversight	45
Service Standards	45
Operational Analysis	47
Stakeholder Interviews	70
Stakeholders	70
Findings and Results	70
Recommended Plan	75
Forecasts	83
Operating and Financial Forecasts	83
Capital Plan	84

LIST OF EXHIBIT/TABLES

Page

Exhibit1 – Survey Card	following	12
Table 1 – BARTA Vehicle Fleet		7
Table 2 – Easton Coach Vehicle Fleet		8
Table 3 – BARTA Staffing		9
Table 4 – Easton Coach Staffing		10
Table 5 – Survey Response Rate		13
Table 6 – Operating Statistics		31
Table 7 – Ridership and Productivity		31
Table 8 – Operating Cost and Financial Measures		32
Table 9 – Operating and Cost Results by Operator		33
Table 10 – Financial and Productivity Measures by Operator		33
Table 11 – FY2010-2011 Operating and Cost Results by Program		34
Table 12 – FY2010-2011 Financial and Productivity Measures by Program		35
Table 13 – Operating Funding		36
Table 14 – Registered Special Service Passengers		40
Table 15 – Stakeholder Interview Participants		70
Table 16 – Operating and Financial Forecasts		84
Table 17 – Fleet Requirements		85
Table 18 – Vehicle Replacement (BARTA Owned Vehicles)		86
Table 19 – Vehicle Replacement (Easton Coach Owned Vehicles)		87

LIST OF FIGURES

	Page
Figure 1 – BARTA Weekday Vehicle Activity	48
Figure 2 – BARTA Weekday Passenger Activity	49
Figure 3 – BARTA Weekday Productivity	50
Figure 4 – Easton Coach Weekday Vehicle Activity	51
Figure 5 – Easton Coach Weekday Passenger Activity	52
Figure 6 – Easton Coach Weekday Productivity	53
Figure 7 – Easton Coach Saturday Vehicle Activity	54
Figure 8 – Easton Coach Saturday Passenger Activity	55
Figure 9 – Easton Coach Saturday Productivity	56
Figure 10 – Weekday Passenger Activity	57
Figure 11 – Weekday Passenger Activity by Operator	58
Figure 12 – Operating Speeds of BARTA Weekday Runs	59
Figure 13 – Percent of Scheduled Trips Not Operated of BARTA Weekday Runs	60
Figure 14 – Productivity of BARTA Weekday Runs	61
Figure 15 – Weekday Trip Length by Operator	62
Figure 16 – Trip Length by Day	63
Figure 17 – On-Time Performance - BARTA Weekday	64
Figure 18 – On-Time Performance - Easton Coach Weekday	65
Figure 19 – On-Time Performance - Easton Coach Saturday	66
Figure 20 – On-Time Performance - Pick Up	67
Figure 21 – On-Time Performance - Drop Off	68
Figure 22 – Geographical Distribution of Trip Ends	69

INTRODUCTION

Several years have passed since the last comprehensive review of the Berks Area Regional Transportation Authority (BARTA) public transportation system has been undertaken. This earlier work resulted in a more user friendly system with numerous changes to the system coverage, frequency and span of service. Recognizing the need to continuously revise and modify the system to respond to changing conditions, the current analysis has been undertaken with the financial support of the Pennsylvania Department of Transportation (PennDOT). The current analysis is similar to the earlier assignment in that the transit review includes both the fixed route and demand responsive services. The study relies on considerable data collection and analysis of current riders and potential markets. Relying on this review, various alternatives will be developed on where, when and how transit service should be delivered. Based on an evaluation of different proposals and strategies, a recommended plan will be developed that should guide BARTA during the next few years.

During the course of the study, interim reports will be prepared that presents the data gathered, analysis, and findings of a particular study aspect. In this way, BARTA and PennDOT staff can review study findings as they become available. This Final Report includes analysis of the Special Services Division presented in two prior documents: Current Paratransit Service Evaluation and Agency Surveys/Interviews and Service Analysis and Recommendations. In addition, the Final Report presents estimates of key operating, ridership and financial results for the next five years along with elements of a capital program.

The Final Report includes a description of the existing paratransit system in terms of programs, utilization of in-house personnel and contractors, system assets and facilities. The methodology and results of a survey of Special Services Division riders for both BARTA and contractor operated services. Questions were asked regarding the trip being made and the frequency of use as well as their assessment of service for various attributes. In addition, information was solicited on the characteristics of the rider. The report presents the results of a discussion of drivers' comments on the paratransit system. As the "eyes and ears" of the Special Services Division, their comments are informative.

This report also presents key operating, ridership and financial statistics for the past five years along with various performance measures. The report also discusses functional areas of how demand responsive service is provided to Berks County residents. To gain a perspective from agencies that operate human service programs and rely on BARTA to transport their clients, staffs from select agencies were interviewed. They provided an assessment of the current demand responsive service, their working relationship with BARTA and opportunities for improvement. To better understand the nature of the current system, sample logs were analyzed for a representative weekday and Saturday. The objective was to gauge the relationship between system supply and demand, utilization of service and on-time performance. Based on the extensive data collection and analysis, a series of recommendations to improve the demand responsive system was delineated. The objective of these proposals were to build on the

strengths of the existing system, improve the experience of the rider, enhance management control and increase system efficiency and effectiveness.

The report presents forecasts of operating statistics, ridership, operating costs, revenue and funding for BARTA paratransit services for the next five years. The concluding topic is related to the size and characteristics of the fleet and a vehicle acquisition schedule. While not part of this report, but a related issue, is the preparation of Human Service Transportation Plan Update which has been provided under separate cover.

At the time of this writing, BARTA notified Berks County that it would cease operations of MATP services at the end of March 2012 unless additional funding was provided. While it would be desirable to have a coordinated approach to medical transportation, it is recognized that BARTA is not in a financial position to underwrite the cost of medical transportation.

EXISTING SYSTEM

In addition to its network of bus routes, BARTA operates and administers a number of transportation programs oriented to meeting the needs of specific human service programs. Although most riders are eligible for service through their participation in various programs, the service is also available to other residents of Berks County, although no subsidy may be provided by a sponsoring agency. The Special Services Division administers the program, establishes and verifies eligibility, and processes grants and prepares various reports on the door-to-door transportation system. While the majority of trips and vehicles are maintained by BARTA in-house personnel, some trips are assigned to a contractor (i.e., Easton Coach).

Transportation Programs

BARTA Special Services is responsible for the management, oversight, and operation of a variety of major state and federally funded human service transportation programs. The organization, through direct operation or use of a contractor, provides approximately 800 to 1,000 trips on weekdays and about 100 trips on Saturdays. Ridership levels vary from one week to the next. Overall, the BARTA in-house operations provided about two-thirds of the trips with the remaining one-third operated by Easton Coach. Similar to the trip volumes, the allocation of trips to Easton Coach varies from one service day to the next. The only transportation program not operated by BARTA Special Services is the Meals-on-Wheels program which is administered by the Berks County Office on Aging and provided through the use of volunteer drivers.

BARTA's Special Services operates on a demand responsive basis in which the routing and scheduling of vehicles is based on client requests in terms of origin and destination, as well as pick-up and drop-off times. All trips are scheduled on an advanced reservation basis. Passengers are transported on wheelchair accessible, body-on-chassis vehicles and mini-vans that can accommodate folding wheelchairs. However, like BARTA's fixed route bus service, riders must be willing to share their vehicle with other passengers, as multiple riders are typically scheduled on a given trip and picked-up and dropped-off between the initial origin and final destination of the vehicle run.

A summary of the transportation programs that provide mobility and access to various human services is presented below:

- **Americans with Disabilities Act (ADA)** - This legislation mandates that all transit agencies must provide demand responsive transportation to individuals unable to use the bus system because of a physical or mental disability. The demand responsive service is required to serve origins and destinations within a three-quarter mile radius of each BARTA fixed route bus alignment and during the same hours and days that fixed route bus service operates along the alignment. Unlike the other human service transportation programs, the ADA program operates during late evening hours and on

Saturdays which corresponds to the span of service on the bus system. BARTA staff has established eligibility standards, consistent with federal guidelines, and reviews all applications for eligibility. No specific funding program is identified for ADA service and its costs must be covered by fares and local, state, and federal sources.

- **Shared-Ride** - This program is administered at the state level by PennDOT and financed with State Lottery funding. The service is available throughout Berks County to all persons, although the extent of subsidy varies by age. For persons 65 and older, PennDOT reimburses BARTA 85 percent of the PennDOT approved fare structure for each trip, with the rider or (third-party sponsor) required to pay the remaining 15 percent of the fare. In Berks County, the 15 percent co-pay is provided by the Berks County Office of Aging, which also pays 100 percent of the fare for seniors aged 60 to 64 but for only certain individuals and trips. This would include travel to and from senior centers as well individuals with specific needs (e.g., low income). Funding to subsidize the co-payment or entire trip is provided by the Aging Transportation Services Block Grant program which is administered at the state level by the Pennsylvania Department of Aging. While the general public can use the service, they are not eligible for lottery funding and are responsible for paying the full fare. The fares charged to riders and reimbursement to BARTA, as well as any increases, must be approved by PennDOT.

It should also be recognized that while not part of the Shared-Ride program, senior citizens aged 65 and older can ride the BARTA fixed route bus system for free by presenting the appropriate identification.

- **Medical Assistance Transportation Program (MATP)** - MATP provides free non-emergency medical transportation to persons on public assistance who receive medical care under the Medicaid program. The program is administered by the Department of Public Welfare using both state and federal funding. MATP clients enrolled in a Managed Care Organization can travel in Berks County and to medical facilities located outside of the county. MATP clients enrolled in a fee-for-service program are provided transportation to the medical facility closest to their home unless their provider approves transportation to a more distant medical facility. MATP trips should be provided using the least expensive and most appropriate mode. This could include the demand responsive service which BARTA directly operates, as well as service provided by the contractor. Easton Coach handles all out of county trips. For some persons, BARTA's Special Services will issue bus tickets if they can ride BARTA's fixed route bus system or Bieber Tourways inter-city bus service to access medical appointments. Also, a family member or friend transporting a MATP client to a medical appointment is paid on a mileage rate, plus additional costs related to parking fees or tolls. BARTA staff has responsibility for the entire Medicaid transportation program. The payment is made to the client.

- **Persons with Disabilities (PwD)** - This service is available to persons aged 18 to 64 who have a disability and live in rural areas that are not served by fixed route or complimentary ADA transportation service. PennDOT reimburses BARTA 85 percent of the cost of operating each trip and the disabled individual pays the remaining 15 percent of the fare. The client pays the ADA fare which is currently \$3.40. It should also be recognized that an individual under 65 years of age with a disability and able to ride the BARTA fixed route system is eligible for paying only a half fare.
- **Mental Health and Mental Retardation (MH/MR)** - MH/MR is administered at the state level by the Department of Public Welfare's Office of Mental Health and Substance Abuse Services. The Office of Developmental Programs (ODP) within DPW manages programs for individuals with developmental disabilities. In Berks County, the MH/MR programs are subcontracted to Service Access Management, Inc., a not-for-profit human services organization providing intake, emergency services and case management. Prospectus Berco, a private non-profit corporation providing programs for persons with disabilities, is responsible for billing ODP directly for transportation services made by MH/MR clients in the county. The majority of MH/MR clients receive fully subsidized transportation service through the MATP program. MH/MR clients who can utilize the BARTA fixed route bus system are provided with monthly bus passes.

All riders, including the general public and agency clients receiving support from the various programs must be registered with BARTA Special Services before they can use the service. To register, individuals must contact Special Services who will determine which program or programs the person is eligible for and will send them either an ADA or PwD eligibility application which can also be downloaded from the BARTA website. The processing and approval of the application may take up to 21 days. All applicants will receive a letter to inform them of their eligibility. Eligible riders will be mailed the BARTA Special Services Handbook and the MATP Guidelines brochure. In addition, a voter registration form is mailed to comply with state law.

Service Description

ADA service is available on weekdays from 5:00 AM to 10:40 PM and on Saturdays from 5:50 AM to 10:40 PM, with the coverage area determined by routes in operation at those hours. The human service related transportation programs are available on weekdays from 8:00 AM to 4:00 PM and depending on where a rider lives in Berks County, service may be limited to certain times or days of the week. BARTA does not operate service on Sundays.

The BARTA in-house and Easton Coach contracted operations each provide trips under the five transportation programs described above; however, the geographical coverage and service hours of the two operations differs considerably. The BARTA in-house operations are limited to Berks County and operate on weekdays only between 6:00 AM and 6:00 PM. The Easton Coach Company operates Monday through Saturday at approximately the same hours as

the BARTA fixed route bus system. Easton Coach has also been assigned trips that occur after 4:00 PM and on Saturdays, as well as out-of-county trips. The assignment of trips to either in-house or the contractor is at the discretion of BARTA staff.

Individuals eligible to ride ADA are entitled to next day service while riders eligible for the human service related programs are required to schedule their trips at least two business days in advance. Riders using ADA or any of the human service related programs also have the option of scheduling a trip up to two weeks in advance.

All trips must be scheduled through BARTA Special Services on weekdays from 8:00 AM to 4:00 PM. Easton Coach does not handle any aspect of the trip reservation process and is instructed to refer any trip requests to BARTA. BARTA uses an answering machine on weekends and holidays to take trip requests for next day service on ADA transportation, with calls accepted between 8:00 AM and 4:00 PM. The answering machine is then checked no later than 4:30 PM.

Fare Structure

The base fare for an ADA eligible trip is \$3.40, which is double the base cash fare paid by riders on the BARTA fixed route system. ADA regulations allow transit systems to charge no more than double the regular fixed route fare. The same fare policy applies to individuals escorting an ADA eligible rider, as well as riders eligible to use the PwD program. However, as specified in ADA regulations, personal care attendants accompanying an ADA rider are not required to pay a fare.

BARTA Special Services uses a distance-based fare structure for all non-ADA trips, which is based on dividing Berks County into four zones of concentric circles five miles wide that expand outward from the Berks County Courthouse in downtown Reading. The fare is determined according to the number of zones; the more zones a rider travels through, the higher the fare. Fares start at \$12.60 and go as high as \$21.55 if a rider travelled through all four zones. As noted previously, the actual fare paid by the rider is dependent on their age, disability and program sponsor. Accordingly, riders are asked to contact Special Services to determine what fare, if any, they are required to pay at the time of their trip.

Physical Plant and Assets

Reliance is placed on both BARTA in-house personnel and Easton Coach with each operator utilizing separate facilities and vehicles. A brief overview of these physical resources is presented below.

BARTA Special Services - All administrative activities related to the operation of BARTA Special Services (i.e., establishing rider eligibility, enrollment, scheduling, processing invoices and billing, monitoring service quality, etc.), are performed at the transit system's administrative, operations and maintenance headquarters located at 1700 North 11th Street in Reading. This facility is where vehicles are stored during non-operating hours and also where



vehicle maintenance and servicing are performed. All vehicles used by BARTA are washed and fueled at this location.

BARTA’s administration building was completely modernized approximately five years ago. Special Services has its own office area for administrative staff and dispatchers. There is one break room at the facility that is used by both fixed route and Special Services drivers.

The building is secured by a fence surrounding the perimeter of BARTA property. Entry into the facility from the street or entering the office requires the use of a swipe card that is issued to BARTA staff. The only area open to the public is the dispatch office which also allows the fixed route dispatcher to sell bus tickets.

BARTA Special Services maintains a fleet of 47 wheelchair accessible body-on-chassis vehicles at its facility, which does not include nine Ford E-450 vehicles leased to the Easton Coach Company at no cost. The vehicles range in length from 23.5 to 26.5 feet, with a majority of the vehicles manufactured by Ford between 2006 and 2011. The most common model is the 12 passenger Ford E450, of which BARTA Special Services operates 25. Of the remaining vehicles in the fleet, 15 vehicles seat 24 passengers, two vehicles seat 13 passengers, and 7 vehicles seat 12 passengers. Table 1 provides a listing of the vehicle fleet operated by Special Services.

Table 1 - BARTA Vehicle Fleet

Manufacturer	Model	Model Year	Number	Length	Seats	Lift Equipped?
International	Condor	2003	9	26.5'	24	Yes
International	Condor	2004	6	26.5'	24	Yes
Ford	E450	2006	7	23.5'	12	Yes
Ford	E450	2008	5	23.5'	12	Yes
Ford	E450	2010	3	23.5'	12	Yes
Ford	Phoenix	2011	15	23.5'	12	Yes
Ford	Phoenix	2011	2	23.5'	13	Yes

The average age of the vehicles in the BARTA Special Services fleet is approximately four years. BARTA has established a useful life of seven years for the International Condors and five years for the Ford manufactured vehicles. Some of the vehicles exceed this useful life and should be replaced. The concern is that the cost of maintaining older buses is expensive relative to having a modern fleet.

Easton Coach - The Easton Coach Company operates from an inadequate facility located in a building at 160 Water Street in Muhlenberg Township that also includes two other companies. The Easton Coach facility comprises approximately 2,700 square feet with the majority of the facility consisting of a garage that is currently used for washing the vehicles and serving as a makeshift driver break room. The office area is small and includes one office and a work area for scheduling and dispatching. All vehicles are stored in an unsecured parking lot in front of the facility. The size and features of the facility preclude fueling and limit servicing and maintenance activities.

All vehicle maintenance functions are performed at an Easton Coach Company garage located approximately 36 miles away at 1282 Manheim Pike in Lancaster County. Easton Coach also has a contract with the Red Rose Transit Authority to operate paratransit service and uses this location as their operating and maintenance base. At that facility three full-time mechanics, one part-time Ford master technician, and two full-time vehicle cleaners maintain the vehicle fleet that serves Berks and Lancaster Counties. Easton Coach follows a preventative maintenance program which requires that an administrative staff person or driver from 160 Water Street drive vehicles back and forth from the Lancaster garage as vehicles are scheduled for service. In the event that a vehicle cannot be driven to the Lancaster garage, the vehicle is towed by a local towing company in Berks County. This arrangement results in an additional 72 miles on each vehicle when it is service or maintained at the Lancaster facility

There is no fueling station at the Easton Coach facility at 160 Water Street. Drivers are provided with a Wrights Fuel Card System to purchase fuel from local establishments.

As noted previously, the Easton Coach Company leases from BARTA nine Ford E450 body-on-chassis vehicles (three manufactured in 2002, three in 2005, and three in 2006). Easton Coach also operates 13 vehicles which they own. These vehicles consist of 12 mini-vans including models from Dodge, Ford, and Chrysler manufactured between 2000 and 2007 and one 2007 Ford body-on-chassis shuttle bus. Eight of the mini-vans seat six passengers, three seat seven passengers, and one seats five passengers. The mini-vans are not wheelchair accessible unless the wheelchair can be folded and placed in the trunk of the vehicle. The 2007 Ford shuttle bus seats eight passengers and can also accommodate two wheelchair passengers. Table 2 provides a listing of the vehicle fleet owned by the Easton Coach Company.

Table 2 - Easton Coach Vehicle Fleet

Manufacturer	Model	Model Year	Number	Length	Seats	Lift Equipped?
Dodge	Caravan	2000	1	NA	5	No
Dodge	Caravan	2001	2	NA	6	No
Dodge	Caravan	2002	2	NA	6	No
Ford	Windstar	2002	1	NA	6	No
Ford*	E450	2002	3	23.5'	12	Yes
Ford	Windstar	2003	1	NA	6	No
Chevrolet	NA	2003	1	NA	7	No
Chrysler	T&C	2003	1	NA	7	No
Dodge	Caravan	2005	1	NA	6	No
Chevrolet	NA	2005	1	NA	7	No
Ford*	E450	2005	3	23.5'	12	Yes
Ford*	E450	2006	3	23.5'	12	Yes
Chrysler	T&C	2007	1	NA	6	No
Ford	Braun	2007	1	NA	8	Yes

* Vehicles leased from BARTA

The age of the fleet used by Easton Coach is older than that used by BARTA in its operations. Further, the age of Easton Coach fleet would suggest that vehicle replacement has not been as timely as suggested according to FTA guidelines.

Organization

Because service is provided by both BARTA and Easton Coach, the organization structure and staffing of each agency was examined and documented in this section.

BARTA Special Services - Special Services is headed by the Director of Special Services, who reports to the Assistant Executive Director for Operations, Safety, and Training (who in turn reports to BARTA's Executive Director/CEO). A list of personnel is presented in Table 3, which details the Special Services Staff job category. The Director of Special Services oversees an administrative staff of seven full-time employees, including one Administrative and Operations Assistant, two Transportation Coordinators, four Clerks (Customer Service Clerk, MATP Clerk, and two Clerks), and 35 operators (33 full-time and 2 part-time). The administrative staff reflects the requirements of overseeing operations as well as performing tasks such as establishing eligibility, coordination with sponsoring agencies, recordkeeping and billing.

Table 3 - BARTA Staffing

Position	Full Time
Management/Supervisor	1
Administrative Support	7
Drivers	
Full-Time	33
Part-Time	2
Total	35
Total	43

Special Services does not have its own dedicated vehicle maintenance and servicing staff and relies on the BARTA maintenance personnel (i.e., 18 full-time Mechanics, three part-time Hostlers, one full-time parts manager, and one full-time Administrative Director), who maintain the fixed route vehicles and the facilities.

Because of the daily volume of trips operated, BARTA Special Services utilizes scheduling software developed by TransView to aid in the preparation of daily driver manifests. The out-of-county MATP trips, evening, Saturday and any trips that cannot be efficiently served by BARTA operators are e-mailed to Easton Coach in the morning the day prior to when the trips are scheduled to be operated. Easton Coach is responsible for scheduling the trips assigned to them and overseeing the delivery of service provided by their drivers. BARTA and Easton Coach do not share scheduling software or any other information technology. BARTA and Easton Coach scheduling and dispatch staff communicate daily on an as needed basis. This would include making changes to the assignment of trips and schedules based on the events that day.

BARTA fixed route and Special Services drivers are represented by the Amalgamated Transit Union Division No. 1345. A collective bargaining agreement is typically renegotiated every three years, with the most recent agreement ratified on July 1, 2010 that expires on June

30, 2013. The majority of the labor provisions in the contract such as work rules, seniority, overtime and fringe benefits are the same for both the fixed route and demand responsive operations.

However, fixed route drivers earn approximately \$5.00 more per hour than a Special Services driver with a CDL and approximately \$8.00 more per hour than a Special Services without a CDL. Another significant difference is sick pay, with Special Services driver receiving 75 percent of the sick pay afforded the fixed route drivers.

BARTA Special Services drivers bid only once a year based on seniority. The full-time drivers are paid a 40 hour work week consisting of eight hour work shifts five days a week. Beyond 40 hours per week and eight hours per day, drivers are paid overtime at 1 ½ times their wage rate. Operators are paid 10 minutes for pre-trip inspections and 15 minutes relating to turn-in time activities such as daily reports.

Easton Coach - Easton Coach staff at the 160 Water Street facility includes one full-time Manager, one full-time Scheduler, one full-time Safety Manager and three Dispatchers (one full-time and two part-time). As noted previously, the company relies on maintenance staff from a Lancaster garage, as well as on the company’s main office in Easton, Pennsylvania for some administrative support. The company employs a total of 26 drivers (e.g., 16 full-time and 10 part-time). The drivers are not unionized and are paid at a lower pay scale compared to BARTA Special Services drivers. Easton Coach personnel used to operate the services under contract with BARTA is presented in Table 4. As noted previously, maintenance is performed at the Lancaster County site.

Table 4 - Easton Coach Staffing

Position	Full Time
Management/Supervisor	1
Administrative Support	
Full-Time	3
Part-Time	2
Total	5
Drivers	
Full-Time	16
Part-Time	10
Total	26
Total	32

The Easton Coach Company has held a contract with BARTA since 2004 and currently operates under a five year contract ratified in 2009. Easton Coach is paid on a per trip basis within Berks County with the rate per trip determined based on the zone fare structure used by BARTA Special Services. The contract rate starts at \$18.45 and can go as high as \$32.45. As might be expected the rates paid to the contractor are greater than the fares charged which also conforms to a zone structure. Out-of-county trips are paid on a mileage rate of \$2.21 per mile.

Easton Coach also receives \$27.53 per hour while waiting for passengers on out-of-county trips and receives \$100.00 per trip for an out-of-county trip that results in a no-show.

CUSTOMER SURVEY

This chapter presents findings from a rider survey that was conducted on the BARTA Special Services demand responsive system which supports a variety of transportation needs of human service agency and programs. As noted previously, the service is provided by both BARTA in-house personnel and through a contractor. The objective of the survey effort was to ascertain riders' views on the service and solicit suggestions for improving service. Since space for riders to provide comments, the survey also served as a forum to solicit customer comments.

Survey Methodology

A survey of BARTA Special Services riders was undertaken during a one week period (i.e., Monday through Saturday) in early October, 2011. Administrative personnel of both BARTA and Easton Coach selected specific driver runs on which to conduct the survey with an overall objective of a response rate of 20 to 25 percent. This sampling approach reflects the number of riders transported during a typical week and the fact that many riders use the system daily and only needed to be surveyed once. A key dimension of the survey was the use of drivers from BARTA and Easton Coach to issue and collect survey cards from the riders. The purpose of the survey was explained to the drivers who also received instructions on how to carry-out the survey effort.

Each driver was issued an envelope that included a supply of survey cards and pencils. The drivers were responsible for handing out the survey cards to all boarding passengers. The survey cards were printed on index paper to make writing easier while riding in the vehicles and the drivers provided pencils to the riders who did not have their own writing instrument. If the rider did not complete the survey at the time they were issued a survey card, they could return the survey to any driver on a subsequent trip. The passenger opinion survey was conducted on a sample of all BARTA Special Services vehicles during the entire one week period. Riders were asked to complete only one survey during the one week period.

Survey Instrument - The survey card, which is shown in Exhibit 1, consisted of 22 questions. With the exception of the last question asking the rider to provide a suggestion to improve service, the riders were only required to check off a box to answer the other 21 survey questions. The survey questions were primarily focused on three areas. The first group of questions concerned the trip being made and customer riding habits. This included questions relating to length of time riding, trip purpose, the frequency of riding, and the use of BARTA fixed route bus service. The next group of questions requested attitudinal information regarding their view of existing services including the telephone scheduling process, scheduled trip times, on time performance and rating a variety of service characteristics. Riders were also asked to suggest the single most important improvement. The third group of questions focused on socioeconomic characteristics of the respondent. These questions asked for information pertaining to key factors influencing travel including ethnicity, age and automobile ownership.



Exhibit 1 - BARTA Special Services Survey – 2011

Dear Customers: We'd like to learn more about you and your travel needs to help BARTA plan its future services. Please read each question and mark the most appropriate answer. Please complete only one full survey card. Thank you!

1. Where did you start this trip?

(Nearest street intersection) (Town) (State) (Zip)

2. My final Destination is:

(Nearest street intersection) (Town) (State) (Zip)

3. What is the purpose of this trip? Work Shopping Senior Center
 Medical/Dental Social/Recreational Personal Business
 Work Shop Other _____

4. Do you use BARTA Special Services for other reasons? No Yes
 (if yes, please check all that apply)
 Work Shopping Senior Center Medical/Dental Social/Recreational
 Personal Business Work Shop Other _____

5. Monday through Saturday, how often do you use BARTA Special Service?
 6 Days 5 Days 4 Days 3 Days 2 Days 1 Day
 Once or twice a month Less often

6. How long have you been using BARTA Special Service?
 Less than a year 1 to 3 years 4 to 6 years More than 6 years

7. Compared to last year, are you using BARTA Special Services:
 More Less About the same

8. Do you use BARTA Fixed Route Bus Service? Yes No

9. Does BARTA provide Fixed Route Bus Service near your home?
 Yes No Don't Know

10. Could you have made this trip if this service were not available?
 No Yes Yes, but with inconvenience

11. Which group provided your eligibility to use BARTA Special Services?
 MATP PWD MH/MR Shared Ride Other None

12. Please rate the following regarding how the telephone answering service was conducted for scheduling your trips:

- Normally receive a busy signal? Yes No Sometimes
 Often there is no answer? Yes No Sometimes
 Hold time is too long? Yes No Sometimes
 Person answering the phone is polite? Yes No Sometimes
 Person answering the phone is rude? Yes No Sometimes

13. Rate the scheduled trip time versus the time that you wanted to travel.
 Convenient Acceptable Inconvenient Very Inconvenient

14. How close was your pick up time to the scheduled time?

- Right on Time Not on Time (Please complete below)
Early **Late**
 1 to 10 Minutes 1 to 10 Minutes
 11 to 20 Minutes 11 to 20 Minutes
 More than 20 Minutes More than 20 Minutes

15. How would you describe the time it took from your home to your destination?

- Very Long Long About right

16. For your return trip, how close was your pick up time to the scheduled time?

- Right on Time Not on Time (Please complete below)
Early **Late**
 1 to 10 Minutes 1 to 10 Minutes
 11 to 20 Minutes 11 to 20 Minutes
 More than 20 Minutes More than 20 Minutes

17. How do you rate BARTA Special Services for each of the following:

	Excellent	Very Good	Good	Fair	Poor
Days Operated	<input type="checkbox"/>				
Hours of Service	<input type="checkbox"/>				
Vehicle Cleanliness	<input type="checkbox"/>				
Driver Courtesy	<input type="checkbox"/>				
Driver Skills	<input type="checkbox"/>				
Comfort of Ride	<input type="checkbox"/>				
Fare Charged	<input type="checkbox"/>				

18. How many vehicles does your household own?

- None One Two Three or More

19. Your sex: Male Female 20. Your age: _____ years

21. What is your ethnicity? Caucasian African American Asian American
 Hispanic/Latino (of any race) Native Hawaiian and Other Pacific Islander
 Some other race Two or more races

22. What is the single most important improvement that you would suggest for BARTA Special Services? (If needed, please use the back for more space)

After completing this card, please return it to the driver. You can also take it with you and return it to the driver on your next trip. Thank you!

Survey Card Processing - The steps required to process the survey cards was straightforward. A coding dictionary was generated which provided instructions on how the responses to all fields would be converted to an electronic format that would permit subsequent analysis of the survey returns. A spreadsheet was created with each row representing a survey card and each column the answer for a particular question.

Survey Response - During the survey period, 207 survey cards were returned (181 from BARTA’s directly operated service and 26 from the Easton Coach contractor). As shown in Table 5, this represents an overall response rate of 25 percent.

Table 5 - Survey Response Rate

Attribute	Service Operator		Total
	BARTA	Easton Coach	
Average Weekday Riders	616	220	836
Completed Survey Cards	181	27	207
Response Rate (Percent)	29	12	25

It should be noted that the response rate for Easton Coach is somewhat less since they also provide demand responsive service to ADA eligible patrons on Saturday. The number of riders of this service is less than a 100 daily patrons. Another point to note is that the sampling rate is based on total trips with most riders completing a round trip. Based on observed travel symmetry, the likelihood of being included in the sample is greater than indicated by the response rate. The response rate for the survey is typical for surveys of this type where about 20 to 25 percent of all survey cards issued are completed and returned.

Survey Results

The remainder of this chapter presents the results of each question in the survey on a percentage basis with no responses and extraneous answers eliminated. Also, the results are presented separately by operator (i.e., directly operated by BARTA and contract services by Easton Coach).

What is the purpose of this trip - Riders were asked to identify the purpose of the trip they were making the day they received a survey card from the vehicle operator. The table shows that medical-dental trips account for the largest percentage of trips provided by the BARTA directly operated and Easton Coach contracted services (34.5 percent for BARTA and 48.0 percent for Easton Coach). The higher percentage of medical related trips provided by Easton Coach is likely attributed to the fact that the operator is responsible for operating all out-of-county medical trips approved under the MATP program. The directly operated service exhibits more diverse ridership with senior centers, workshop programs, and employment trips comprising between 15.5 percent and 17.8 percent of all trips. Work trips accounted for 20 percent of the Easton Coach ridership, with another 16 percent of the trips made for “other” reasons. Shopping trips comprised only four percent of the trips on both the BARTA and Easton Coach services.



Trip Purpose	Percent	
	BARTA	Easton Coach
Work	15.5	20.0
Shopping	4.0	4.0
Senior Center	17.8	4.0
Medical-Dental	34.5	48.0
Social-Recreation	2.3	4.0
Personal Business	2.9	4.0
Workshop	16.1	0.0
Other	6.9	16.0
Total	100.0	100.0

Other Trip Purposes - Riders were asked if they used the BARTA Special Services for other trip purposes besides the one they listed above. If the rider answered yes, they were instructed to list all other trip purposes. Overall, 28.5 percent of BARTA riders and 34.6 percent of riders using Easton Coach indicated they use BARTA Special Services for other reasons. As shown in the table below, medical-dental received the largest number of responses (32.1 percent for BARTA and 28.6 percent for Easton Coach) followed by shopping (21.8 percent for BARTA and 28.6 percent for Easton Coach). Social-recreational was third among BARTA riders with 17.9 percent, while personal business and the senior center were tied for third on Easton Coach with 14.3 percent.

Other Trip Purposes	Percent	
	BARTA	Easton Coach
Work	1.3	7.1
Shopping	21.8	28.6
Senior Center	7.7	14.3
Medical-Dental	32.1	28.6
Social-Recreation	17.9	7.1
Personal Business	14.1	14.3
Workshop	1.3	0.0
Other	3.8	0.0
Total	100.0	100.0

Service Usage - The next question asked how many trips the rider makes on BARTA Special Services in a week (i.e., Monday through Saturday). The table below shows that 47.4 percent of BARTA riders and 33.3 percent of the Easton Coach riders use the demand responsive system five days a week. This ridership pattern is consistent with the high percentage of riders who indicated they use BARTA Special Services to access employment, medical-dental, senior center, shopping, and workshop related trips. Conversely, approximately 12 percent of the total ridership rides less than one day a week, with only 1.1 percent of the riders using the system Monday through Saturday. The relatively low number of riders using BARTA Special Services six days a week is likely attributed to complimentary ADA service being the only transportation program operated by BARTA Special Services on Saturdays, which is limited to fewer people and is not available on a county-wide basis.

Weekly Service Usage	Percent	
	BARTA	Easton Coach
6 Days	1.1	0.0
5 Days	47.4	33.3
4 Days	9.1	12.5
3 Days	20.0	33.3
2 Days	6.3	8.3
1 Day	3.4	0.0
Once or Twice a Month	8.0	12.5
Less Often	4.6	0.0
Total	100.0	100.0

Length of time riding BARTA Special Services - This question asked how long each passenger has been riding BARTA Special Services. The table shows that a slight majority of BARTA riders have been using the demand responsive system for at least four years, with approximately one-third of the riders using the system for more than six years. Conversely, only about 23.0 percent of the riders on Easton Coach have been riding for at least four years. The survey results indicate almost one-half of BARTA riders and approximately three-quarters of the Easton Coach riders have been riding BARTA Special Services for three years or less, with almost one-quarter of the total ridership using the service for less than one year. This indicates a high ridership turnover rate and indicates BARTA Special Services needs to continually provide information about the various programs it operates and rules and eligibility requirements to access service.

Years Riding Special Services	Percent	
	BARTA	Easton Coach
Less than a year	17.3	26.9
1-3 years	29.6	50.0
4-6 years	18.4	15.4
More than 6 years	34.6	7.7
Total	100.0	100.0

Compared to last year are you riding more - Riders were asked if they are currently riding BARTA Special Services more compared to the previous year. The table below indicates that 26.5 percent of riders on the BARTA service and 39.1 percent of riders on Easton Coach have been riding more compared to the same time last year, while only 1.2 percent and 8.7 percent, respectively indicated they ride the system less. The majority of riders surveyed on BARTA and Easton Coach have been using BARTA Special Services about the same amount as last year.

Riding Trend (This year vs. last year)	Percent	
	BARTA	Easton Coach
More	26.5	39.1
Less	1.2	8.7
About the same	72.3	52.2
Total	100.0	100.0



Use of BARTA fixed route bus service - Riders were asked if they use the BARTA fixed route bus system, which is an important indicator regarding the possibility of attracting certain BARTA Special Services riders to less expensive fixed route bus service. The table below indicates that nearly three-quarters of the riders surveyed do not use the BARTA fixed route bus system. The survey results show that slightly less Easton Coach riders use fixed route bus service compared to the BARTA riders, which may be attributed to Easton Coach providing the out-of-county medical trips and operating all of the ADA complimentary service on Saturday for people unable to ride the BARTA fixed route bus system due to a functional disability.

Use of BARTA Fixed Route Service	Percent	
	BARTA	Easton Coach
Yes	31.1	26.9
No	68.9	73.1
Total	100.0	100.0

However, it is important to recognize that a fairly significant number of riders are using fixed route service and BARTA should continue to encourage Special Services riders to use the fixed route system as much as possible. The transit system offers free rides on the fixed route system to senior citizens 65 and older and half-fare discounts to persons with disabilities.

Is BARTA fixed route bus service near your home - This question compliments the previous question by asking BARTA Special Service riders if they know if fixed route bus service is near their home. The table below shows that even though fewer of the Easton Coach riders use the BARTA fixed route bus system – as noted in the previous question – 60 percent live near BARTA fixed route services, compared to 51.2 percent of the riders surveyed on the BARTA directly operated vehicles. Again, it is probable that many of the Easton Coach riders surveyed do not use the fixed route bus system because they need to travel out-of-county for medical appointments or use Easton Coach on Saturday when the contractor is responsible for operating ADA transportation service.

Is BARTA Fixed Route Service Available Near Home	Percent	
	BARTA	Easton Coach
Yes	51.2	60.0
No	15.9	16.0
Don't Know	32.9	24.0
Total	100.0	100.0

Approximately 16 percent of the riders stated their homes are not served by BARTA fixed route bus service. In addition, about 28 percent of the riders don't know if fixed route service is available near their home, with riders surveyed on the BARTA service representing a larger share of this ridership group (32.9 percent) compared to Easton Coach (24.0 percent).

The percentage of riders who don't know if BARTA operates fixed route bus service near their home is relatively high and may be an indication that the transit system needs to conduct more public outreach and/or provide more information to ensure that Special Services riders are made aware of the availability of the fixed route bus system. At the same time, this finding



could indicate many riders live in the outlying areas of Berks County where fixed route service is not available, or could also indicate riders are unable to use the fixed route service and do not seek out information about the service.

Could you have made this trip if this service were not available - This question asked riders if they could have made their trip if BARTA Special Services was not available. The table below shows that almost two-thirds of the riders indicated that they could not have made the trip without BARTA Special Services.

Able to Make Trip Without BARTA Special Services	Percent	
	BARTA	Easton Coach
No	71.5	53.9
Yes	5.6	11.5
Yes, but with inconvenience	22.9	34.6
Total	100.0	100.0

About 29 percent of the surveyed riders indicated they could have made the trip, but it would have been inconvenient to do so; these riders would likely include individuals who rely on family and friends for a ride. Less than six percent of riders surveyed on BARTA vehicles could make the trip without using Special Services compared to 11.5 percent of the riders surveyed on Easton Coach. The results from this question show that BARTA riders have a higher level of transit dependency compared to the riders using Easton Coach, especially since the previous question showed that a higher percentage of riders using Easton Coach live near BARTA fixed route bus service.

Program being used for this trip - BARTA Special Services provides several different transportation programs in Berks County for transit dependent individuals who meet certain federal and state eligibility requirements enabling them to enroll in agency program that pays for the partial or entire portion of the fare for a specific trip purpose. This question asked the rider to indicate the program under which they were traveling at the time they received a survey card. It should be recognized that riders often do not know the program that enables them to ride. The actual usage by program can be accurately determined from counts that are maintained as part of the scheduling/dispatch function. As shown in the table, approximately one-third of BARTA and Easton Coach (35.7%) riders were traveling under the Mental Health/Mental Retardation program (MH/MR), with approximately another third of the BARTA and Easton Coach riders traveling under some “other” program.

Program Used for Eligibility	Percent	
	BARTA	Easton Coach
MATP	4.9	0.0
PWD	1.6	0.0
MH/MR	38.6	35.8
Shared Ride	10.7	7.1
Other	30.3	35.7
None	13.9	21.4
Total	100.0	100.0



As noted above, the results reflect the limited knowledge riders have of the programs, as well as the response rate of riders.

Telephone Answering Service - The next five questions relate to the performance of the telephone trip scheduling process administered by BARTA Special Services. The queries include the frequency of busy signals, long hold times and unanswered phone calls, as well as the customer service provided by the BARTA Special Services employee who is answering the calls and scheduling trips. Easton Coach does not handle any aspect of the trip reservation process and any riders calling the contractor are instructed to call BARTA Special Services. Accordingly, the survey results relate only to BARTA; however, the results are reported separately for each operator to be consistent with other survey reporting. For the most part, the results are similar, although some differences are noted which may reflect the different programs served, trip location and time of the trip.

The first question related to the frequency in which riders receive a busy signal when calling to schedule a trip. As seen in the table, approximately one-half of the riders indicated they either normally or sometimes receive a busy signal when calling BARTA Special Services to schedule a trip.

Normally Receive Busy Signal	Percent	
	BARTA	Easton Coach
Yes	14.4	23.5
No	50.0	41.2
Sometimes	35.6	35.3
Total	100.0	100.0

In contrast to the previous question, a large majority of the riders (73.2 percent for BARTA and 64.3 percent for Easton Coach) indicated they never encounter a situation when BARTA Special Services did not answer the telephone. It should still be noted however, that approximately 20 percent of the riders stated that BARTA Special Services sometimes did not answer the telephone.

No Answer When Calling BARTA	Percent	
	BARTA	Easton Coach
Yes	5.6	14.3
No	73.3	64.3
Sometimes	21.1	21.4
Total	100.0	100.0

The next question asked riders if they experience a long hold time once their call is answered by BARTA Special Services. The table shows that over one half of the riders indicated that they normally or sometimes experience a long hold time after their call has been answered by BARTA Special Services.



Is the Hold Time Too Long	Percent	
	BARTA	Easton Coach
Yes	23.5	36.4
No	43.6	40.9
Sometimes	32.9	22.7
Total	100.0	100.0

The fourth and fifth questions relate to telephone customer service and ask if the BARTA Special Services employee answering the phone and conducting the trip reservation process was polite or rude when speaking to the rider. The table below shows that an overwhelming majority of the riders (89.5 percent for BARTA and 87.0 percent for Easton Coach) share the opinion that BARTA Special Services employees are polite on the telephone, with only a few riders stating that the call-taker was not polite.

Is BARTA Call-Taker Polite	Percent	
	BARTA	Easton Coach
Yes	89.5	87.0
No	2.9	4.3
Sometimes	7.6	8.7
Total	100.0	100.0

Not surprisingly, the table below shows that a similar percentage of riders (83.7 percent for BARTA and 7.8 percent for Easton Coach) do not think the BARTA Special Services call-taker was rude. The survey results from this question do show that a slightly higher percentage of riders think the call-taker is rude or sometimes rude when answering the telephone and scheduling trips

Is BARTA Call-Taker Rude	Percent	
	BARTA	Easton Coach
Yes	4.3	0.0
No	83.6	77.8
Sometimes	12.1	22.2
Total	100.0	100.0

Scheduled trip time versus the actual trip time - The next four questions focused on the scheduled and actual trip provided by BARTA Special Services. The first question asked the rider to rate whether the scheduled trip time was convenient to the actual time the rider wanted to travel. The table on the following page indicates that the riders were unanimous (100 percent for Easton Coach) or nearly unanimous (93.6 percent for BARTA) in their opinion that the scheduled time of their trip was either convenient or acceptable. This performance rating indicates BARTA Special Services is doing a good job of scheduling trips to meet the travel time needs of the riders.



Scheduled Trip Time	Percent	
	BARTA	Easton Coach
Convenient	57.6	58.3
Acceptable	36.0	41.7
Inconvenient	2.3	0.0
Very Inconvenient	4.1	0.0
Total	100.0	100.0

The next question asked the riders to indicate the reliability of their scheduled pick up time at home. If BARTA and Easton Coach did not arrive on time, the riders were asked to select how early or how late the operators were in arriving for the scheduled pick up. It should be recognized that the responses to this question are subjective and based in part on rider perceptions. As shown below, the majority of the BARTA (53.5 percent) and Easton Coach (73.1 percent) riders indicated that their scheduled pick up at home did not arrive on time, while 46.5 percent of BARTA riders and 26.9 percent of the Easton Coach riders said their scheduled pick up arrived on time. The disparity in on-time performance between operators is striking.

Pick Up Time from Home (Actual vs. Scheduled)	Percent	
	BARTA	Easton Coach
Right on time	46.5	26.9
Not on time	53.5	73.1
Total	100.0	100.0

The table below shows the percentage breakdown of the pick-ups that did not arrive at the scheduled time. The majority of BARTA (66.4 percent) and Easton Coach (56.5 percent) riders indicated that the actual pick up time was early, with 33.7 percent of BARTA riders and 43.5 percent of the Easton Coach riders indicating that that the vehicles arrived late.

On Time Performance	Percent	
	BARTA	Easton Coach
<i>Early</i>		
1-10 minutes	35.5	39.1
11-20 minutes	15.0	4.3
More than 20 minutes	15.9	13.0
Sub-Total	66.4	56.4
<i>Late</i>		
1-10 minutes	14.0	13.0
11-20 minutes	15.0	4.3
More than 20 minutes	4.7	26.1
Sub-Total	33.7	43.4
Total	100.0	100.0

Within the transit industry, on time performance standards for demand responsive service vary from system to system, assuming that they have a written set of standards. However, many systems consider a scheduled pick up to be “on time” as long as the pick-up is no more than 20 minutes early or 20 minutes late. Using the results for the ±20 minute window shows that 20.6 percent of BARTA trips and 39.1 percent of the trips operated by Easton Coach were not on

time. Once again, these results document a wide difference in on-time performance by operator and worth exploring further in the subsequent analysis.

The next question referred to the travel time between the rider’s home and their destination. As shown in the table below, the length of the trip does not appear to be a problem, with approximately 93 percent of BARTA riders and 88 percent of the Easton Coach riders indicating that the overall trip time was about right.

Trip Time/ Trip Length	Percent	
	BARTA	Easton Coach
Very long	0.6	4.0
Long	6.4	8.0
About Right	93.0	88.0
Total	100.0	100.0

The last question in this series asked the riders to indicate the reliability of the scheduled pick up for their return trip home. As in the prior question, if BARTA and Easton Coach did not arrive on time, the riders were asked to select how early or how late the operators arrived for the scheduled pick up. As shown below, a slight majority (51.9 percent) of the BARTA pick-ups for the return trips arrived on time compared with only 46.5 percent of the initial pick-ups described above. The percentage of the Easton Coach pick-ups that arrived on time for return trips also improved slightly compared to the home pick-ups earlier in the day, from 26.9 percent up to 36.4 percent; however, this improvement still indicates relatively low on time performance.

Return Trip to Home (Actual vs. Scheduled)	Percent	
	BARTA	Easton Coach
Right on time	51.9	36.4
Not on time	48.1	63.6
Total	100.0	100.0

The table below shows the percentage breakdown of the return pick-ups that did not arrive at the scheduled time. The majority of BARTA’s return pick-ups (54.7 percent) were early and 45.3 percent were late, which was similar to the ratio of the home pick-ups earlier in the day. In contrast to BARTA, a higher percentage of the Easton Coach return pick-ups were late (53.3 percent) rather than early (46.7 percent); this ratio was the opposite of what occurred earlier in the day, when 56.5 percent of the home pick-ups provided by Easton Coach were early and 43.5 percent were late.



On Time Performance (Return Trip)	Percent	
	BARTA	Easton Coach
<i>Early</i>		
1-10 minutes	32.6	33.3
11-20 minutes	16.3	6.7
More than 20 minutes	5.8	6.7
Sub-Total	54.7	46.7
<i>Late</i>		
1-10 minutes	12.8	20.0
11-20 minutes	18.6	0.0
More than 20 minutes	14.0	33.3
Sub-Total	45.4	53.3
Total	100.0	100.0

Adjusting the results for the ± 20 minute window described above shows that 19.8 percent of the BARTA and 40 percent of the Easton Coach return trips were not on time, which was similar to the on-time performance of the initial home pick-ups of 20.6 percent and 39.1 percent, respectively. Clearly, Easton Coach lags behind the service directly operated by BARTA when it comes to on-time performance.

How would you rate BARTA Special Services for each of the following - Most of the questions on the survey form were quantitative in that they requested specific information on the trip being made and the rider making the trip. This question asked riders to provide a subjective rating of the performance of BARTA Special Services in seven different categories on a scale of one to five (one being poor and five being excellent). For this type of survey, a response is considered favorable if the combined total of responses in the excellent, very good or good categories (i.e., 3, 4 and 5) is greater than or equal to 85 percent of all responses. The table below provides a breakdown of the responses obtained from riders using the BARTA directly operated service with the results showing that six of the seven categories attained a favorable rating between 97.1 percent and 99.5 percent. The lowest rating was for the fare charged which received a rating of 88.9 percent, which is still a favorable response.

Category	BARTA Directly Operated - Percent					Total Favorable
	1 (Poor)	2 (Fair)	3 (Good)	4 (Very Good)	5 (Excellent)	
Days operated	0.6	1.7	18.6	25.6	53.5	97.7
Hours of service	0.6	2.4	23.1	23.7	50.3	97.1
Vehicle cleanliness	1.8	0.6	21.2	20.6	55.9	97.7
Driver courtesy	0.0	0.6	15.7	13.4	70.3	99.4
Driver skills	0.0	0.6	16.2	18.0	65.3	99.5
Comfort of ride	0.6	2.4	21.6	24.0	51.5	97.1
Fare charged	2.1	9.0	25.0	22.2	41.7	88.9

The table on the next page provides a breakdown of the responses obtained from riders using the Easton Coach contracted service with the results showing that the lowest score among the seven categories was 95.2 percent. In fact, two categories – vehicle cleanliness and fare charged – attained a 100 percent favorable rating.



Category	Easton Coach - Percent					Total Favorable
	1 (Poor)	2 (Fair)	3 (Good)	4 (Very Good)	5 (Excellent)	
Days operated	0.0	0.0	19.2	11.5	69.2	99.9
Hours of service	0.0	4.8	9.5	19.0	66.7	95.2
Vehicle cleanliness	0.0	0.0	8.0	24.0	68.0	100.0
Driver courtesy	0.0	3.8	7.7	11.5	76.9	96.1
Driver skills	4.0	0.0	8.0	20.0	68.0	96.0
Comfort of ride	4.0	0.0	4.0	24.0	68.0	96.0
Fare charged	0.0	0.0	9.1	31.8	59.1	100.0

How many vehicles does your household own - This question provides a good indication of the transit dependency of the BARTA Special Services riders by asking information on the number of vehicles owned by the rider’s household. The table shown below indicates that over three-quarters of the riders’ households (BARTA with 83.5 percent and Easton Coach with 88.5 percent) have no more than one vehicle available. There is a high level of transit dependency among the BARTA Special Services riders.

Automobiles in Household	Percent	
	BARTA	Easton Coach
Zero	51.1	57.7
One	32.4	30.8
Two	14.8	3.8
Three or more	1.7	7.7
Total	100.0	100.0

Gender - This question asked riders to identify their gender. The table below shows that the majority of riders on BARTA (64.8 percent) and Easton Coach (80.8 percent) are female. A large female majority is typical of the make-up of the ridership base at transit systems. Female majorities tend to grow the more the ridership base is skewed to older age groups, which is the case for BARTA Special Services as shown by the results of the following question.

Gender	Percent	
	BARTA	Easton Coach
Female	64.8	80.8
Male	35.2	19.2
Total	100.0	100.0

Age - This question asked the rider to identify their age, which was grouped into a series of four categories. As shown in the table on the following page, the single largest age group of riders using BARTA and Easton Coach are 65 years old and older, followed by riders aged 45 to 64. These two age groups together combine for approximately three-quarters of the riders using BARTA Special Services. This high majority of older riders should be expected due to the various programs administered by BARTA Special Services specifically for senior citizens (i.e., Shared Ride) or based on eligibility criteria (i.e., ADA & PWD) that tend to disproportionately include older adults who generally have a higher incidence of functional disabilities compared to younger and healthier adults.

Age Group	Percent	
	BARTA	Easton Coach
18-29	10.0	0.0
30-44	16.7	18.2
45-64	36.0	36.4
65 and older	37.3	45.4
Total	100.0	100.0

What is your ethnicity - Riders were asked to indicate their ethnicity as part of the survey effort. As shown in the table below, Caucasian riders were the largest ridership group on BARTA (61.2 percent) and Easton Coach (66.7 percent) followed by Hispanic/Latino riders (22.9 percent for BARTA and 16.6 percent for Easton Coach).

Ethnicity	Percent	
	BARTA	Easton Coach
Caucasian	61.2	66.7
African American	11.2	8.3
Asian American	2.4	0.0
Hispanic/Latino	22.9	16.6
Some other race	1.2	0.0
Two or more races	1.2	8.3
Total	100.0	100.0

Single most important improvement for BARTA Special Services - The final question was an open-ended query that asked riders to provide comments and suggestions that would improve BARTA Special Services. Approximately 30 percent of the riders who completed a survey wrote-in an improvement suggestion on the survey card. Overall, there were 53 comments provided by the riders on the BARTA directly operated service and 11 comments provided by riders on Easton Coach. The 64 responses obtained from the BARTA and Easton Coach surveys were combined and presented in the table shown on the next page.

The most frequently cited improvement suggestion from the riders was the need to shorten to wait time for pick-ups (28.1 percent), followed by improving various aspects of driver actions and responsibilities (15.6 percent). The need for BARTA Special Services to provide better on time performance comprised 11.7 percent of the responses and was the third most common improvement suggestion.

Special Services Improvement Suggestions	Percent
Shorten wait times for pick-ups	28.1
Driver actions and responsibilities	15.6
On time performance	14.1
Improve telephone reservation process	7.8
Extend service hours	7.8
Better information when service is delayed or suspended	4.7
Shorten trip length/travel time	4.7
Shorten wait time for pick-ups	3.1
More service outside of Reading area	3.1
Provide next day service for all programs	1.6
Spanish speaking drivers	1.6
Provide consistent door-to-door service	1.6
More comfortable vehicles	1.6
Make sure wheelchair lifts work	1.6
Cleaner buses	1.6
More service for social/recreational purposes	1.6
Total	100.0

The current survey provides a description of current riders, the trips they make, level of satisfaction and desired improvements. A similar survey was conducted and documented in 2004 with many of the same questions. Comparisons were made between the directly operated BARTA services since Easton Coach has replaced Metro Cab. With the exception of the telephone reservation system, the results between the two survey efforts do not vary significantly. The percentage of riders who encountered a busy signal declined from 50.5 percent in 2004 to only 14.4 percent in 2011. Similar favorable improvements were observed when riders were queried as to whether there was no answer. These results would suggest substantial improvements in the telephone system and responsiveness to persons calling to make a reservation.

OPERATOR COMMENTS

Along with the description of the demand responsive system and rider survey, the study effort also included separate meetings with the Special Services and Easton Coach drivers. The interviews with the drivers provided useful insights since these individuals have extensive knowledge of the service area, have a good understanding of ridership activity and trip patterns, and hear requests from passengers that might not have been fully documented in the rider survey.

The driver interviews were conducted on an informal basis in the morning as the drivers arrived before the start of their shifts. Since drivers have limited time to answer questions before they are scheduled to leave for their first pick-ups, they were asked a few general questions regarding service issues and service improvements that would not require more than ten minutes of their time. The consultant team member explained the purpose for the interviews and spoke with as many of the drivers as possible. Some of the interviews were conducted one-on-one with a driver while other interviews were conducted with multiple drivers at one time. The conduct of individual and group interviews resulted in a representative cross-section of comments from the drivers. This section provides a summary of the key comments.

BARTA

Interviews with the Special Services drivers were conducted at the BARTA main office on October 28, 2011. Of the 30 drivers scheduled to report that morning, the consultant team member was able to speak with 25 of the drivers. The following provides a summary of key findings that were provided by multiple drivers, or any unique comment or information provided by the driver that may be important as the planning effort moves forward.

- Overall, Special Services drivers indicated that the administration, schedulers, and dispatchers do a good job and provide as much help as they can. However, many drivers were critical of the scheduling software which has been in use for about two years and still does not seem to work properly, with pick-ups often scheduled too close together or too far apart to allow the driver to operate on-time.

Some drivers said BARTA does not have a consistent policy on the amount of assistance a driver is required to provide to passengers. The problem usually arises as a result of a situation where a driver will do a favor or go out of their way to assist a passenger, resulting in the passenger expecting the same service from other drivers. BARTA management should ensure that parameters regarding driver assistance are consistent and adhered to by operating personnel.

- Many drivers added that even if they arrive on-time, many passengers don't understand rules regarding door-to-door service or the five minute wait time and are often not ready to be picked-up or not at the appropriate pick-up location. A number

of drivers indicated that they can enter a lobby of a building to meet a passenger but are not allowed to go any further. However, passengers often are waiting in a doctor's office or somewhere where they cannot be reached. In some cases, this is not the fault of the rider, especially if they are disabled and depend on facility staff to make sure they are available in the lobby to meet the driver.

A number of drivers indicated that passengers often require a few minutes to board the vehicle. This can affect the on-time performance of other pick-ups or drop-offs on a particular run, especially if this pattern persists among several riders.

Other problems affecting on-time performance included a growing number of riders using scooters which are more difficult to strap down compared to wheelchairs.

Another comment provided by multiple drivers that sometimes affects scheduling and on-time performance is the lack of accessible buildings in the area that make it more difficult and sometimes impossible to properly serve a passenger. Drivers suggested BARTA administrative staff should visit facilities to ensure that they can be served by Special Services transportation.

- Some drivers indicated they hear riders asking for evening service, Saturday service other than ADA, out-of-county service for shopping trips, and more service in the outlying areas of Berks County. However, the majority of riders appear satisfied with the level of service currently provided.
- When asked if any areas currently served by Special Services could be provided with fixed route service, there were a few riders who indicated fixed route service might be justified in the Flying Hills area. However, most drivers interviewed could not identify any areas or did not think additional fixed route service is needed. When asked if passengers are capable of using fixed route service, the response among the drivers was fairly evenly divided. On one side, drivers thought their passengers would not be capable of riding fixed route bus service as a result of a their physical condition or a disability, while other drivers thought many of their riders could use fixed route bus service and in fact, currently utilize both services. Further, a few drivers indicated that it is too easy for people to qualify to utilize Special Services.
- The majority of drivers indicated riders prefer BARTA over Easton Coach. The reasons cited included more polite and considerate drivers, consistent service policies, better on-time performance and higher overall service quality, and cleaner vehicles. A number of drivers indicated Easton Coach has high turnover rate which could contribute to some of problems noted by riders.
- A few drivers want more input in the design of the vehicles because the existing fleet is not configured to easily accommodate the growing use of scooters.

- There were a few comments regarding a language barrier between the passengers and the drivers, in particular, BARTA drivers are unable to understand passengers who only speak Spanish.

Easton Coach

Interviews with the Easton Coach drivers were conducted at the Easton Coach facility at 160 Water Street in Muhlenberg Township on November 1, 2011. A member of the consultant team spoke with 20 of the 21 drivers scheduled to report that day. The following provides a summary of key findings that were provided by multiple drivers, or any unique comment or information that was provided that may be important as the planning effort moves forward.

The Easton Coach operators repeated some of the issues cited by the BARTA Special Services drivers. Many of the Easton Coach drivers indicating tight scheduling was a common occurrence negatively impacting on-time performance because pick-ups are either too close together or spaced too far apart. Easton Coach drivers attribute this problem in part to the use of manually scheduling techniques to create the runs. Other common topics between the two systems included the lack of passenger knowledge concerning service policies, requests for additional service on evenings and weekends for shopping, and the opinion that the location of fixed route bus service in Berks County is appropriate. However, the majority of comments were very different compared to BARTA and were more focused on improving the operations rather than the actual delivery of service.

One area that is worth pointing out is that BARTA drivers indicated an issue with a language barrier with Spanish speaking riders. It was observed during the Easton Coach driver interviews that many of these drivers are bilingual.

- Almost all of the drivers indicated the need for an on-site mechanic since many of the vehicles are older and require more maintenance. In particular, a major issue of concern among the drivers was the malfunction of the wheelchair lifts on the vehicles that are leased from BARTA. The need for functioning lifts is important because the majority of the vehicle fleet is comprised of mini-vans that seat fewer passengers and can only accommodate a wheelchair if it can be folded and placed into the trunk of the vehicles.
- Several drivers also stated that BARTA does not provide enough assistance in terms of training and providing timely updates on service related issues. It was mentioned that BARTA only responds when there is a problem.
- Many drivers wondered why BARTA could not provide vehicle maintenance at their facility instead of Easton Coach having to take vehicles to the Lancaster garage. Additionally, several drivers also suggested that Easton Coach vehicles be fueled at the BARTA facility rather than at local gas stations.

- A few drivers think Easton Coach should use the same scheduling software as BARTA.
- A few drivers indicated that certain medical facilities in Philadelphia are no longer accepting MATP clients from Berks County and they are now traveling as far as Delaware to receive medical treatment. Easton Coach is responsible for providing all out-of-county transportation for BARTA Special Services. The costs of these non-emergency medical trips are viewed as costly.
- One driver suggested that Easton Coach have more afternoon drivers rather than split shifts.
- Higher pay and better driver benefits were mentioned by several drivers to lower the driver turnover rate.

SYSTEM TRENDS

One element of the analysis of BARTA Special Services is the examination of key operating and financial statistics and various performance measures which were tracked for a five year period from FY 06-07 to FY 10-11, with each year beginning July 1 and ending June 30 of the following year. Data is presented for the overall system and is also broken-out to show the individual statistics and results of the BARTA in-house and Easton Coach Company contracted operations.

The principal data source of the statistical information was the PennDOT Bureau of Public Transportation (BPT) Legacy Report, which is submitted annually to BPT as part of the Act 44 requirements and provides information on key operating statistics, ridership, and financial results. Other data sources that are commonly used in the analysis of transit systems such as the National Transit Database (NTD) are not suitable for this review since Special Services provides transportation which is not open to the public (i.e., MATP). Moreover, BARTA staff indicated that the Legacy Reports are more representative of the system than those reported for NTD.

There are certain caveats that are important and should be kept in mind when reviewing the trend results. First, the nature of the trips varies considerably by program. Clearly, persons traveling to a nearby senior center in Berks County (e.g., Shared Ride) are far different than Medicaid trips to relatively distant medical facilities (e.g., Delaware). In some cases, there are different requirements imposed by the program. For most trip categories, BARTA ascertains eligibility and then transports the individual through in-house or contract personnel. For MATP, BARTA can rely on the paratransit system, assign the individual to ride a bus or pay a mileage reimbursement when the person rides in an automobile of a friend or family member.

Also, it is important to remember that BARTA and Easton Coach are two very different operations in terms of their cost structure and the service they provide. Easton Coach is assigned several groups of trips: evenings, Saturdays, out-of-county and trips that BARTA staff chose to assign to the contractor. Also, the administrative burden (e.g., client eligibility) of the demand responsive system is incurred by BARTA and not the contractor. During the five year period, the way data was recorded changed. For the first four years, MATP trips were included with Shared Ride since they used the same fare structure. In the last year, the Legacy Reports had MATP trips, their operating statistics and financial results reported separately. Finally, an enormous amount of data is captured, recorded and accumulated. There is always a possibility that anomalies and variability in the reported results, particularly as it relates to the initial years of the Legacy Reports. Accordingly, some caution should be exercised when viewing system trends.

This situation is further complicated since BARTA is also required to submit information on demand responsive service to the Federal Transit Administration as part of the National Transit Database reporting system. Definitions for state and federal reporting for certain statistics are different. For operating statistics (i.e., hours and miles), BARTA assumed that its



Transview software package would be able to provide the necessary information for PennDOT reports. The alternative of using manual computation is very time consuming and not a viable approach because of limited staff time. Because BARTA used different data collection methodologies in different fiscal years, there is variability in certain data items. To remedy this situation, BARTA intends to use a paratransit software package which will be available through PennDOT. The software is designed to provide in an accurate and automated basis to obtain the necessary information which should remedy this situation in the future.

Tables 6, 7 and 8 provide overall operating statistics and performance measures for the Special Services system for both in-house and contracted operations during the five year period from FY 06-07 to FY 10-11.

Table 6 shows that over the five year review period, revenue hours and revenue miles declined, while vehicle miles and the percent of vehicle deadhead have increased. Also, the average speed of the system has decreased over the review period. This has implications for BARTA operated service since their drivers are paid on an hourly rate. It has less significance for Easton Coach trips within Berks County since they charge for their service based on the trip and zone fare structure.

Table 6 – Operating Statistics

Item	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	Change
Revenue Hours	61,800	72,600	71,900	54,700	61,300	(0.81%)
Revenue Miles	959,700	1,193,000	1,184,700	956,100	846,400	(11.81%)
Vehicle Miles	1,342,200	1,399,000	1,398,700	1,407,800	1,533,400	14.25%
Average Speed (mph)	15.53	16.43	16.48	17.48	13.81	(11.08%)
Percent Deadhead	28.50	14.72	15.30	32.09	44.80	57.19%

Table 7 indicates that ridership steadily increased in each of the five years of the review period for an overall increase of approximately 12 percent. The system productivity exhibited improving performance, with passengers per revenue hour and per revenue mile increasing by approximately 13 percent and 27 percent, respectively, during the review period. Passengers per vehicle mile declined by about two percent and can be attributed to vehicle miles increasing at a greater rate than ridership. This measure includes revenue and non-revenue (i.e., deadhead) mileage and reflects the increase in deadhead movements.

Table 7 – Ridership and Productivity

Item	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	Change
Ridership	218,600	220,600	227,500	240,900	245,200	12.17%
Passengers/Revenue Hour	3.54	3.04	3.16	4.40	4.00	12.99%
Passengers/Revenue Mile	0.228	0.185	0.192	0.252	0.290	27.19%
Passengers/Vehicle Mile	0.163	0.158	0.163	0.171	0.160	(1.84)%

Table 8 shows that overall operating costs increased by nearly one-quarter. With the previous data showing a drop in service levels, increasing costs has reduced the efficiency of Special Services over the review period, as costs per revenue hour and per revenue mile have risen by approximately 25 percent and 40 percent, respectively. With larger deadhead

movements, the cost per vehicle mile increased at a relatively modest rate of 8.4 percent. The cost effectiveness (i.e., cost per passenger) of Special Services also increased during the review period, but at a more modest rate of 10.4 percent. This performance indicates that the increase in the cost per revenue hour was offset by higher passenger productivity.

Table 8 – Operating Cost and Financial Measures

Item	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	Change
Operating Cost	\$4,618,500	\$4,971,500	\$5,214,600	\$5,382,500	\$5,720,700	23.86%
Cost/Revenue Hour	\$74.73	\$68.48	\$72.53	\$98.40	\$93.32	24.88%
Cost/Revenue Mile	\$4.81	\$4.17	\$4.40	\$5.63	\$6.76	40.54%
Cost/Vehicle Mile	\$3.44	\$3.55	\$3.73	\$3.82	\$3.73	8.43%
Cost/Passenger	\$21.13	\$22.54	\$22.92	\$22.34	\$23.33	10.41%

Tables 9 and 10 present key operating statistics and performance measures during the five year review period, with the data broken-out to show differences between directly operated (BARTA in-house) and purchased (Easton Coach) transportation services. As noted previously, it is important to remember that there is considerable difference between BARTA in-house operations and Easton Coach contracted service in terms of the level of service provided, ridership, administrative and overhead costs, reimbursement basis and the type of service provided. These factors need to be taken into consideration when making comparisons between the two operators.

The revenue hours, ridership and operating cost attributed to BARTA in-house operations and the Easton Coach contracted services are shown in Table 4. The system total is also shown for each data item and is the same statistics presented in Tables 1, 2 and 3. The revenue hours for BARTA declined almost seven percent over the review period, while Easton Coach exhibited an increase of 8.6 percent. The data also shows that both operators provided more service between the fourth and fifth year of the five year trend. It also worth noting that service levels of BARTA and Easton Coach are fairly similar and is attributed to Easton Coach operating longer service hours (i.e., evenings), Saturday service and out-of-county trips provided by Special Services.

BARTA’s ridership increased 16.5 percent over the review period while Easton Coach experienced a smaller ridership increase of 2.6 percent. Also, noteworthy is that BARTA exhibited its highest ridership in the final year of the review period while Easton Coach exhibited a slight decline, with the contractor’s highest ridership occurring in the second year of the review period. Overall, the ridership trend shows that BARTA in-house operations accounted for approximately two-thirds of the total ridership provided by Special Services.



Table 9 – Operations and Cost Results by Operator

Item	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	Change
<i>Revenue Hours</i>						
Directly Operated	37,500	37,800	39,400	31,600	34,900	(6.93%)
Purchased	24,300	34,800	32,500	23,100	26,400	8.64%
Total	61,800	72,600	71,900	54,700	61,300	(0.81%)
<i>Ridership</i>						
Directly Operated	150,000	146,500	158,600	170,000	174,800	16.53%
Purchased	68,600	74,100	68,900	70,900	70,400	2.62%
Total	218,600	220,600	227,500	240,900	245,200	12.17%
<i>Operating Cost</i>						
Directly Operated	\$3,169,300	\$3,176,300	\$3,813,300	\$3,415,500	\$4,121,000	30.03%
Purchased	\$1,449,200	\$1,795,200	\$1,401,300	\$1,967,000	\$1,599,700	10.39%
Total	\$4,618,500	\$4,971,500	\$5,214,600	\$5,382,500	\$5,720,700	23.86%

BARTA’s operating cost increased approximately 30 percent during the review period which was substantially greater than the 10.4 percent increase reported by Easton Coach. For both BARTA and Easton Coach, operating costs outpaced ridership gains. The data also shows that operating costs trended in opposite directions for the operators between the fourth and fifth year of the review period, with BARTA’s costs increasing and Easton Coach’s costs declining.

The disparity in operating costs is consistent with BARTA being a much larger operation than Easton Coach and being responsible for administrative costs (e.g., assessing eligibility and taking reservations). However, it is important to point out that BARTA drivers are unionized and receive higher hourly wages and more generous fringe benefits compared to Easton Coach.

Table 10 presents the financial and productivity measures attributed to BARTA in-house operations and the Easton Coach contracted services. The system total is also shown for each data item which has already been discussed in Tables 1, 2 and 3. The productivity of BARTA’s in-house operations (i.e., passengers per revenue hour) increased by approximately one-quarter during the five year review period, with the productivity of Easton Coach dropping by about 5.7 percent.

Table 10 – Financial and Productivity Measures by Operator

Item	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	Change
<i>Passengers/Revenue Hour</i>						
Directly Operated	4.00	3.88	4.03	5.38	5.01	25.25%
Purchased	2.82	2.13	2.12	3.07	2.66	(5.67)%
Total	3.54	3.04	3.16	4.40	4.00	12.99%
<i>Operating Cost/Revenue Hour</i>						
Directly Operated	\$84.51	\$84.04	\$96.78	\$108.9	\$118.23	39.90%
Purchased	\$59.64	\$51.52	\$43.12	\$85.15	\$60.54	1.51%
Total	\$74.73	\$68.48	\$72.53	\$98.40	\$93.32	24.88%
<i>Operating Cost/Passenger</i>						
Directly Operated	\$21.13	\$21.68	\$24.04	\$20.09	\$23.58	11.59%
Purchased	\$21.13	\$24.24	\$20.34	\$27.74	\$22.72	7.52%
Total	\$21.13	\$22.54	\$22.92	\$22.34	\$23.33	10.41%



The difference in productivity is reasonable since Easton Coach is assigned the out-of-county MATP trips, and the more difficult to serve trips (i.e., distance, dispersed ridership) that provide fewer opportunities for grouped trips. In contrast, BARTA’s higher productivity is largely attributed to the system operating primarily in the more densely populated Reading area, where there are more opportunities to group trips to common destinations and shorter trip lengths that allow for more passengers to be scheduled each hour. Further, BARTA serves the majority of the subscription trips that travel back and forth to the same place at the same time each day. Another reason for the higher productivity is that BARTA utilizes computer scheduling while Easton Coach relies on manual techniques.

Conversely, BARTA’s cost per revenue hour increased by almost 40 percent over the review period compared to a modest 1.5 percent increase incurred by Easton Coach. Further, in the fifth year of the trend, BARTA’s cost per revenue hour is almost twice as high as Easton Coach. One reason for this wide disparity is that BARTA the costs include various administrative tasks and the difference in drivers’ compensation (i.e., wages and fringe benefits).

The cost effectiveness (i.e., cost per passenger) of the two operators exhibited a downward trend, however, the rate of decline was comparable, with BARTA’s cost per passenger increasing 11.6 percent compared to a 7.5 percent increase by Easton Coach.

Table 11 presents revenue hours, ridership and operating costs by program for FY 10-11. Information was presented for a one-year period because starting in FY 10-11, MATP began to be reported separately while in prior years, the data was included as part of Shared Ride. For this reason, all MATP information is included under Non-Public and removed from Shared Ride for the most recent fiscal year.

Table 11 – FY 2010-2011 Operating and Cost Results by Program

Item	Shared Ride	ADA	Non-Public	Total
<i>Revenue Hours</i>				
Number	21,000	13,300	27,000	61,300
Percent	34.26	21.70	44.04	100.00
<i>Ridership</i>				
Number	103,700	63,800	77,700	245,200
Percent	42.29	26.02	31.69	100.00
<i>Operating Cost</i>				
Amount	\$3,232,300	\$1,132,700	\$1,355,700	\$5,720,700
Percent	56.50	19.80	23.70	100.00

Special Services provided a total of 61,300 revenue hours in FY 10-11, with 44 percent of the service allocated to providing Non-Public trips (i.e., the majority being MATP). Approximately a third of the revenue hours were allocated to providing Shared Ride trips, with the remaining revenue hours (i.e., 21.7%) allocated to ADA service.

Shared Ride accounted for approximately 42 percent of the 245,200 trips operated by Special Services in FY 10-11. Non-Public accounted for about 32 percent of the trips followed by ADA with 26 percent. More than half of Special Services total operating costs in FY 10-11



were attributable to the Shared Ride program. Almost 24 percent of costs went to the Non-Public program and almost 20 percent went to ADA. One reason why the costs to provide Shared Ride service were so much higher than Non-Public or ADA can be attributed to the fact that most of these trips were provided by BARTA in-house operations which has a higher cost structure compared to Easton Coach. Other reasons are the administrative burden and operating in more densely developed areas where vehicle speeds are low.

It is worth noting that the ADA program was the smallest for each of the three statistics. This is the result of the service being more restrictive and limited to a smaller service area than the Shared Ride and Non-Public programs. However, another factor could be that individuals eligible to ride ADA, such as senior citizens and persons with disabilities, might be choosing to ride Shared Ride or BARTA fixed route services because they provide free or reduced fares compared to ADA which charges riders double the BARTA fixed route base fare. The lower utilization of ADA could be positive, especially if eligible riders are using fixed route service.

Table 12 presents financial and productivity measures by program for FY 10-11. Shared Ride was the most productive (i.e., passengers per revenue hour) of the three programs. This is consistent with the program comprising the largest ridership base while using about a third of the total revenue hours. This data indicates a higher degree of group trips on Shared Ride compared with Non-Public and ADA which tend to be more specialized for individual needs.

Table 12 – FY 2010-2011 Financial and Productivity Measures by Program

Item	Shared Ride	ADA	Non-Public	Total
Passengers/Revenue Hour	4.93	4.82	2.88	4.00
Cost/Revenue Hour	\$153.80	85.45	\$50.19	\$93.32
Cost/Passenger	\$31.19	\$17.74	\$17.44	\$23.33

While Shared Ride is the most productive program operated by Special Services it is also the most expensive program to operate as measured on a per revenue hour and per passenger basis. This data is consistent with the fact that most of these trips are served by BARTA. Conversely, the Non-Public program had the lowest productivity and was the least costly to operate. In contrast to the Shared Ride program, Non-Public (i.e., MATP) trips are difficult to group together because of the individual needs of the riders who often need to be at a medical appointment at different times of the day. Further, most of these trips are operated by Easton Coach which exhibits much lower hourly costs than BARTA.

The concluding portion of the trend review describes funding. Since revenue from riders covers a small portion of the costs to operate Special Services, the system is mostly funded by federal and state transportation programs that underwrite the deficit and fund capital investments and subsidize the trips taken by agency clients. Table 13 details the operating revenues, subsidy and deficit over the five year review period.

Table 13 – Operating Funding

Item	FY 06-07	FY 07-08	FY 08-09	FY 09-10	FY 10-11	Change
<i>Transportation Revenues</i>						
Farebox	\$135,700	\$144,300	\$138,700	\$93,700	\$147,500	8.70%
Lottery	\$830,600	\$826,800	\$799,800	\$773,900	\$753,000	(9.34%)
Agency/Other	\$273,800	\$263,300	\$297,200	\$338,100	\$350,600	28.05%
Total	\$1,240,100	\$1,234,400	\$1,235,700	\$1,205,700	\$1,251,100	0.89%
<i>Other Revenues</i>						
MATP	\$1,243,800	\$1,483,900	\$1,636,300	\$1,770,700	\$1,851,500	48.86%
ADA Prospectus/Other	\$106,500	\$123,900	\$126,300	\$119,100	\$124,200	16.62%
Total	\$1,350,300	\$1,607,800	\$1,762,600	\$1,889,800	\$1,975,700	46.32%
<i>Subsidy</i>						
Federal	\$678,600	\$996,100	\$847,100	\$868,600	\$946,600	39.49%
State	\$1,243,200	\$1,047,100	\$1,274,000	\$1,321,500	\$1,439,400	15.78%
Local	\$106,300	\$86,100	\$95,200	\$96,900	\$107,900	1.51%
Total	\$2,028,100	\$2,129,300	\$2,216,300	\$2,287,000	\$2,493,900	22.97%
<i>Revenue and Subsidy - All Sources</i>						
Total	\$4,618,500	\$4,971,500	\$5,214,600	\$5,382,500	\$5,720,700	23.87%

Transportation revenues (i.e., farebox, State Lottery and agency/other sources) increased by a combined rate of less than one percent over the review period. This small increase was affected by a 9.3 percent drop in State Lottery funding, which accounts for the majority of transportation revenue. The drop in Lottery funding may reflect the way funding for senior citizen transportation was tracked in BARTA’s accounting system. Pennsylvania Lottery funds were based on the number of senior citizen riders. The reimbursement basis has changed to a four variable formula where senior citizen ridership is one component of the formula.

MATP provided significant transportation revenue with funding from this program increasing almost 50 percent during the five year review period. The operating subsidies from local, state and federal sources increased about 23 percent over the review period. Federal funds increased the most (i.e., 39.5%) followed by state (i.e., 15.8%) and local (1.5%) funding. However, funding from the Commonwealth continues to account for the majority of operating assistance. In total, operating funding obtained from revenues and subsidies increased almost 24 percent over the review period. In FY 10-11, the primary funding sources were state and federal subsidies, followed by MATP and the State Lottery program.

FUNCTIONAL AREA REVIEW

BARTA Special Services employees are responsible for the day-to-day administration and management of the system, including client eligibility and registration, reservations, scheduling, dispatching, billing and record keeping, program oversight, and service monitoring. Special Services relies on other departments and staff within the BARTA organization to provide assistance in the areas of vehicle maintenance, procurement, finance, planning, coordination and reporting to funding agencies as well as public information and marketing.

BARTA directly carries approximately two-thirds of the annual ridership. The remaining trips are provided by the Easton Coach Company, a private operator that has held a contract with BARTA since 2004. Each day, BARTA receives all requests for service and decides which trips are to be operated with in-house personnel or assigned to Easton Coach. The contractor is responsible for providing out-of-county medical transportation for MATP clients along with weekday evening and Saturday service for ADA eligible riders. In addition, BARTA selects those trips in Berks County that they would find difficult or costly to provide and assigns them to Easton Coach.

Eligibility and Certification Process

BARTA's Director of Special Services is responsible for administering the eligibility and certification process for residents and visitors wanting to use ADA transportation or enroll in the human service related transportation programs (i.e., Shared Ride, MATP, PwD, and MH/MR) that provide subsidized or free fares. Individuals seeking eligibility must first complete BARTA's ADA application that can be obtained by calling BARTA and having the form mailed to them or by downloading the form from BARTA's website. Individuals wanting to enroll in the Persons with Disabilities (PwD) program or are told they are eligible for that program after completing the ADA application, are required to complete a second application for the PwD program. This form can also be obtained through the mail by calling BARTA or downloaded from BARTA's website.

The ADA application follows a self certification format in which the applicant describes their disability and how it prevents them from using the BARTA fixed route bus system. The applicant is also asked if the disability is temporary and if so, for how long. The application includes a series of questions to assess the applicants overall functional capabilities. There are also questions regarding the use of a mobility device, a service animal or a Personal Care Attendant. A medical professional is not required to complete or sign any form, however, the applicant is required to provide the name and contact information for a physician, health care or rehabilitation professional who can confirm the disability.

Special Services follows the three categories defined by the Americans with Disabilities Act regulations to determine if a person is ADA eligible. They are:

1. Individuals with a physical, mental, visual disability who cannot independently board, ride, or disembark from an accessible BARTA Special Services vehicle;
2. Any person with a disability who can use an accessible vehicle, but is eligible for ADA paratransit service because fixed route buses are not available on the bus route in which they need to travel and when they need to travel. This is not relevant for BARTA since all fixed route buses are accessible; and
3. Individuals who have impairment-related conditions preventing them from getting to or from a boarding location. However, conditions making getting to the bus stop more difficult, such as architectural barriers not under the control of BARTA (i.e., no curb cuts) or environmental barriers (i.e., distance, terrain, and weather) do not, when considered alone, grant eligibility. However, ADA service will be provided if an individual's specific impairment-related condition coincides with both the architectural and environmental conditions to make it impossible to travel to or from a boarding location.

Special Services also provides conditional eligibility for limited time periods to individuals who are able to use the BARTA fixed route bus system most of the time, but have a specific condition (i.e., asthma) that prevents them from using fixed route service all of the time. These individuals are subject to the same standards as individuals with permanent disabilities.

The applicant is also asked if they are an ACCESS client and are instructed to provide a copy of some form of state or federal identification if they are a senior citizen (65+) and directions to their home if they live in a rural part of Berks County. This additional information is included to provide the Director of Special Services with enough information to determine eligibility for the Shared-Ride, MATP, PwD, and MH/MR programs.

Upon receipt of the ADA application, the Director date stamps and reviews the application to make sure it is complete. Incomplete applications are not processed and are mailed back to the applicant. Applications that are submitted for eligibility to use ADA transportation are mailed to the medical professional listed in the application to confirm the disability. Special Services does not conduct any type of in-person functional assessment.

As required by ADA regulations, the Director has 21 days to review an application and notify the applicant in writing if they are approved or denied ADA eligibility. After the 21-day period, the applicant is provided with temporary eligibility and can use ADA service until notified otherwise. The Director noted that the 21-day policy is also used when processing applications for the Shared Ride, MATP, and MH/MR programs.

Individuals who also completed a PwD application, mail the form to BARTA where the Director will notify the applicant in writing within ten days if they have been approved or denied eligibility for the PwD program. If the applicant has been denied, the letter will give an explanation and provide the applicant with any additional information needed to be approved.

If an individual is eligible to use ADA or any of the human service related transportation programs, they receive a BARTA Special Services Handbook which includes instructions on making a reservation and other information to assist riders in understanding how to use the Special Services system. A person eligible for MATP is also provided with a Medical Assistance Transportation Program brochure that explains what type of services are available to MATP clients. Since MATP is a Medicaid program, clients must use the least expensive means of transportation. This can include Special Services, mileage reimbursement, intercity bus passes, or a BARTA 20 trip ticket for the BARTA bus system.

BARTA does not require ADA eligible riders to recertify after a specific period of time even though this procedure is permitted under ADA regulations and is common practice throughout the transit industry. Typically, ADA riders are required to recertify every few years depending on their disability. Recertification may reveal that certain ADA riders can make greater use of the BARTA fixed route bus system or no longer qualify for ADA service. Recertification also provides an opportunity for Special Services to update its records and make modifications, as needed.

If ADA eligibility is denied, the Director of Special Services will mail the individual a written notification explaining the reasons for the denial and instructions for filing an appeal. Appeals must be in writing and received by Special Services within 60 days. Once the appeal is received, the applicant is invited to present their appeal in-person in front of a panel of outside agencies. There is a separation of authority between appeal panel and the Director of Special Services who made the initial eligibility determination. After the in-person appeal, the initial determination can be overturned and the applicant will be granted ADA eligibility status, or the initial ruling will be upheld and the person will receive a second and final written notification explaining the reasons why they were denied eligibility. The Director indicated there has not been an in-person appeal regarding ADA eligibility.

The PwD application is similar to BARTA's ADA application, however, the PwD form requires a written verification of the applicant's disability by a health care professional or human service organization, and also requires verification that the applicant is not already receiving subsidized transportation from another organization. For example, if the applicant is enrolled in MATP they will not be able to use PwD for medical trips, but would be allowed to use the PwD program for work or shopping. If the applicant is over the age of 65 they cannot use PwD because they are eligible for the Shared Ride program.

Once an individual is ADA eligible, or enrolled in an agency program their information is entered into a database and they can call Special Services to schedule trips. Since all residents are allowed to use the Shared Program, regardless of age, they are also added into the database. The database is part of the TransView software package used by Special Services for reservations, scheduling, dispatching, and other functions. The database creates a file for each client, which includes contact information (i.e., name, address, and phone number), registration ID and date of registration date, eligibility, a billing code, and any pertinent information that Special Services needs to know about the client.

As shown in Table 14, there are almost 16,000 individuals registered to ride BARTA Special Services as of September 1, 2011, with the number reflecting passengers with multiple billing codes. MATP passengers comprise the majority of riders, followed by senior citizens (65 and older) and ADA riders. Special Services does not regularly track whether or not registered passengers are active or non-active users.

Table 14 – Registered Special Services Passengers

Passenger Group	Number	Percent
MATP	7,246	45.8
Over 65	4,974	31.4
ADA	2,987	18.9
PwD	328	2.0
MH/MR	205	1.3
Office of Aging	94	0.6
Total	15,834*	100.0

* Some passengers have multiple billing codes

Technology

Many of the administrative and operations functions are supported with the use of TransView paratransit and dispatching scheduling software. The software is used for reservations, scheduling, dispatching, billing, reporting and various other management functions. This software program was installed approximately two years ago and provides Special Services with a fully automated, Windows-based modular software package that can accommodate additional applications such as interactive voice response (IVR) and mobile communication systems. For example, Special Services is currently in the process of installing mobile data terminals (MDTs) in its vehicles that are linked to TransView and provide the system the ability to instantly adjust routing and trip schedules in real-time.

BARTA’s staff is becoming more proficient with increasing use of the software, but should take greater advantage of the full functionality of the TransView software. Also, BARTA is directing its attention to automated data input through MDTs which would eliminate the need for drivers to manually record mileage and time at all stops. The technology should be broadened to include AVL to help the dispatcher know the location of all vehicles and respond to no shows, late cancellations and similar variations from the schedule.

Easton Coach does not use computerized scheduling in Berks County, although they do use TransView software in other locations where they have a service contract. Moreover, the individual who manages the BARTA contract is familiar with TransView and has used it elsewhere. This would suggest having the contractor use TransView, if only for the electronic transmitting of trips to be served by the contractor. Currently, BARTA’s staff faxes or e-mails the trips assigned to Easton Coach which results in a manual process.

Another issue related to technology is that the Bureau of Public Transportation has entered into an agreement to provide scheduling software to transit agencies. The software

(Ecolane) is currently being evaluated as part of a demonstration project in Montgomery and York Counties. When the results of these projects are known and BARTA's staff becomes more accomplished in computerized scheduling, they should explore the use of this new package. It should have features that would simplify meeting the reporting requirements of PennDOT.

Reservations and Scheduling

The reservation and scheduling functions occur at BARTA's headquarters in Reading. Trip requests can only be made over the telephone on weekdays between 8:00 AM and 4:00 PM. ADA eligible riders can schedule next day service and can also make a reservation for next day service on weekends and holidays by leaving a message on BARTA's answering machine. All other riders are required to call two business days in advance to schedule a trip. Special Services does not accommodate same-day service but does allow riders to schedule trips up to two weeks in advance.

Three full-time employees are designated to scheduling trip requests, with one of these employees responsible for scheduling all MATP trip requests. In addition, there are two full-time employees who split their time between scheduling trips and performing other job functions.

Riders can call a local number, a toll-free number or a TDD number to make a reservation. When riders call to schedule trips they receive a message reminding them of the reservation hours and to have the address of their destination ready. Their call is placed into a queue and answered in the order in which it was received by the telephone system.

When the schedulers are connected with the riders they ask for the rider's name or ID number, desired travel time, and the address and telephone number of the destination. If the requested destination is already in TransView from previous trips, the scheduler verifies the correct address and telephone number and selects the location. If it is a new location, the call taker inputs the new address and telephone number into the software program.

Trips are booked in real-time with the scheduler using TransView to provide the rider with an option of trip times. Return trips are normally booked at the same time. However, riders are permitted to leave the return pick-up time open (i.e., will call) and call later in the day to be picked-up. In most instances, these return pick-ups are due to medical appointments when the rider is unable to provide a definite pick-up time.

All trips are confirmed at the time of the reservation with no confirmation call provided. Scheduled pick-ups are provided within a 60-minute window, which means the vehicle can arrive 30 minutes before or after the scheduled pick-up time and the rider must be ready anytime within that 60-minute period. Drivers will wait five minutes after they arrive at the pick-up location. If the rider is not ready or not present, the driver is instructed to leave and the trip is considered a no show. If a rider misses the scheduled pick-up, the return pick-up is automatically cancelled.

In the afternoon, the Director of Special Services uses TransView's batch scheduling function to assign the next day's trips onto vehicle runs based on the most efficient pick-up and drop-off times according to the software's algorithm. Although the process is fully automated, the Director can override the software and adjust the schedules manually. The Director reviews the computer generated vehicle runs to ensure that parameters set in the automated scheduling function provide sufficient time and logic to the pick-up and drop-off patterns given to the drivers. Once the schedules are reviewed and any adjustments have been made, the manifests are printed for each vehicle run and are available to the drivers later in the afternoon.

The manifests printed out by TransView include the customer name, the scheduled pick-up and drop-off times, the pick-up and drop-off addresses, trip purpose, and notes alerting the driver if the passenger requires assistance, uses a mobility device or is required to pay a fare. The manifests also include spaces in each trip for the drivers to record the actual pick-up and drop-off times and the starting and ending mileage. The top of the manifest includes the route and vehicle number, driver shift time, and the number of passenger trips assigned that day. Cancelled trips and no shows are typically noted by the drivers with a handwritten "C" or "NS". Although the manifests are well organized, the reliance on manual input of pick-up and drop-off times and mileage do not provide for the most accurate record keeping. This will eventually change as vehicles in the fleet are equipped with MDTs that should provide more accurate reporting since drivers will electronically enter time and mileage data that will be automatically transmitted to the office in real time.

As part of the scheduling process, BARTA staff decides which trips are to be handled by in-house drivers and which are assigned to Easton Coach. Since BARTA drivers only work weekday "daylight" hours, all evening and Saturday trips are assigned to the contractor. Easton Coach also serves all out-of-county MATP trips and any trip that Special Services believes could be handled more readily and economically by the contractor. The assigned trips are faxed or e-mailed (pdf format) to the contractor. The manifest received by Easton Coach includes all of the scheduled pick-ups in sequential order. The data transmission is not in an electronic format that can be readily manipulated and is used manually by Easton Coach to create their driver runs.

Dispatching

The dispatch function is administered by two full-time employees between the hours of 8:00 AM and 6:00 PM. The key function of the dispatchers is relaying scheduling changes to the drivers throughout the day, which may include adding, canceling or reassigning trips onto another vehicle. The dispatchers also regularly communicate with the Easton Coach dispatcher in the event of a trip cancellation, a no show, or if a trip needs to be reassigned onto Easton Coach and vice versa. BARTA dispatchers communicate to their drivers by two-way radio and communicate with Easton Coach over the phone. BARTA and Easton Coach use different radio communication equipment, so any scheduling change from one operator to another must first go through the dispatchers. This is appropriate since it would not be good policy to have drivers take instructions from personnel from another organization. Communication between BARTA and Easton Coach dispatchers works well; however, it would benefit from automation and use of the same scheduling/dispatch software.

A limited number of BARTA vehicles have been equipped with MDTs that provide the system with the ability to instantly adjust routing and trip schedules. MDTs will be installed on all BARTA vehicles in the near future. This approach should be broadened to include all vehicles owned or operated by Easton Coach.

If a driver has to add a trip to their manifest they use a blank manifest sheet to write-in all the relevant information, including passenger name, pick-up and drop-off addresses, and the time and mileage at both ends of the trip. A review of one complete day of manifests indicated that consistency in the detail and legibility of handwritten scheduling adjustments varied, with some trips missing pick-up or drop-off times, addresses, mileage, etc. In addition, any change in the driver manifests should also be reflected in the manifests kept by the dispatchers for the purpose of verification.

The current dispatching function at Special Services relies heavily on the familiarity of established run schedules which is consistent with the relatively high proportion of subscription trips. This process should become easier and more efficient once MDTs are installed on the vehicles.

Customer Service

Special Services is responsible for staffing a customer service area next to the dispatch office where the public can purchase BARTA fare media, obtain the BARTA Ride Guide and information for Special Services transportation program. The area is staffed by one full-time employee who is responsible for providing information about MATP and also reviews the driver manifests from the previous day to ensure data has been properly entered and is accurate. General information about Special Services is available on the BARTA website, where the public can download the ADA and PwD applications as well as the BARTA Special Services Handbook. The website also includes telephone numbers for contacting Special Services for people that have questions about the services offered.

Contract Management

BARTA contracts with the Easton Coach Company to provide trips that fall in four categories: (1) evening weekday, (2) Saturday, (3) out-of-county MATP trips and (4) those trips that BARTA feels could be more readily and economically operated by the contractor. The contract between BARTA and Easton Coach is for a one-year period with four one-year renewals. Easton Coach is paid per trip in Berks County with the rate varying according to the number of zones the vehicle traverses in the county. The cost for out-of-county trips is \$2.21 per mile, with a wait time of \$27.53 per hour.

Easton Coach is responsible for providing vehicles, liability insurance, drivers, administrative staff, record keeping, and having its own operations facility. The contractor is also responsible for scheduling and dispatching the trips it receives from Special Services. The contractor provides their own vehicles and additionally leases nine vehicles from BARTA and is responsible for maintenance. The Easton Coach administrative staff consists of 1 full-time

Manager, 1 full-time Scheduler/Manager, 1 full-time Safety Manager, and 3 Dispatchers (1 full-time and 2 part-time). The largest employee group is drivers which consist of 15 full-time and 9 part-time. It should be noted that many of the Easton Coach drivers are bilingual.

The contract is appropriate in that it pays Easton Coach primarily on the basis of passenger trips since they perform their own scheduling. However, the contract does not include any incentives or penalties based on performance, such as schedule adherence, passenger comfort, vehicle reliability and cleanliness, driver uniforms and appearance, and passenger complaints.

Vehicle maintenance is performed at an Easton Coach garage in Lancaster County, which services the Easton Coach vehicles providing contract service for the Red Rose Transit Authority (RRTA). This adds unnecessary deadhead miles to the BARTA buses. Vehicles are fueled at local gas stations in Reading using a Wrights Fuel Card System. Easton Coach pays fuel taxes during the fueling process and then quarterly applies for fuel tax credits. Administrative functions are performed at the Easton Coach Company headquarters in Easton, Pennsylvania.

Most of the communication between Easton Coach and Special Services occurs by telephone between the dispatchers, who regularly have to adjust schedules, swap trips, provide notification of cancellations, and various other operational issues. There is no communication between the Easton Coach drivers and BARTA dispatcher which is appropriate and also reflects the different radio systems.

The Director of Special Services is responsible for monitoring Easton Coach and visits its facility in Muhlenberg Township once or twice a year to make sure the contractor is in compliance with various issues relating to ADA regulations, safety training, vehicle condition, driver records, drug testing, etc.

Communication between Special Services and the Easton Coach management is primarily conducted over the telephone and generally occurs only when there is some type of issue or problem that needs to be resolved. However, it does appear that the relationship between the staffs is friendly and professional. The Director of Special Services noted that the Easton Coach record-keeping is timely and accurate and the quality of service has improved in recent years. Based on various public outreach efforts and stakeholder interviews conducted for this study, Easton Coach was not operating satisfactory service when the contractor first started operating for BARTA in 2004; however, in recent years the consensus seems to be that Easton Coach has improved its service.

The trip manifest sheets that Special Services sends to Easton Coach are sorted by scheduled pick-up time. Easton Coach schedules its trips manually with the Scheduler/Manager responsible for “cutting and pasting” the manifests in order to organize the trips so they can be assigned to vehicle runs. This is a time consuming process and requires approximately six hours a day to perform. The Easton Coach Company does use scheduling software at other locations where it provides contract service and in fact, has experience using TransView at other locations where it operates. Not surprisingly, the manifests are not as well organized or as easy to

understand compared to the manifests used by BARTA. A review of the Easton Coach manifests for one weekday and one Saturday indicated vehicle runs that were frequently not in sequential order, with the driver serving the trips based on the route they have found to be most efficient. In addition, there was a considerable amount of handwritten data that was often difficult to read or know if the data was accurate. There was no uniform format for marking-up the manifests which made it difficult to ascertain the difference between cancellations, no shows and covered trips.

Easton Coach is required to fax their completed manifests the day after service was provided. In the beginning of each month, Easton Coach provides Special Services with an invoice of the services it provided during the previous month. Special Services will review trip records and invoices and pay Easton Coach for the service it provided up to about 30-days later. This is one of the few ways that Special Services is able to monitor the performance of Easton Coach other than hearing complaints from riders.

Driver Training

The BARTA and Easton Coach drivers are required to undergo training in defensive driving, customer service, passenger sensitivity, and must complete an annual drug and alcohol test. Drivers are not required to have CDL's. BARTA drivers are unionized while the Easton Coach drivers are not. BARTA drivers are higher paid and receive a more generous benefits package. Training is conducted through the use of direct instruction and training videos. Most drivers use maps or GPS units to help them navigate their daily runs. The MDTs equipped in the BARTA vehicles have built-in GPS units but are not activated for use at this time.

Program Oversight

The BARTA Board of Directors serves as the primary oversight body for Special Services operations. The Board is scheduled to meet monthly at the BARTA headquarters in Reading and is open to the public. Meetings generally provide an update of the BARTA system, including information regarding budgetary and financial statistics, the status projects or initiatives being undertaken by BARTA at the time of the meeting, and any other pertinent items related to public information, marketing, customer service, etc. The Director of Special Services and the Assistant Executive Director for Operations, Safety, and Training provide monthly and year-to-date ridership numbers for the demand responsive and fixed route systems, respectively. Special Services ridership is broken-out by program while the fixed route ridership is broken-out by route.

Service Standards

Special Services performs very limited on-street service monitoring, satisfaction and other passenger surveys. This applies to service operated by in-house personnel and by Easton Coach. Many service related issues are discovered through customer and driver input. It should be pointed out that an on-board rider survey was conducted as part of this study.

On-time performance is based on the 60-minute pick-up window but schedule adherence is not tracked. Most pick-up and drop-off times still being handwritten in the manifests, which can be difficult to read and decipher. The use of MDTs should improve the tracking of on-time performance as well as other data such as trip length, and travel time.

The late cancellation policy is very lenient and asks riders to cancel trips between 6:00 AM and 6:00 PM the day before their scheduled trip or as soon as possible. However, there is no penalty if riders do not adhere to this guideline. Schedule service is often disrupted because of the volume of late cancellations. BARTA should institute a policy for late cancellations similar to that for no shows where riders are provided a warning and possibly the loss of service for frequent violations. BARTA does have a formal policy that if a rider cancels their pick-up they cannot keep their scheduled return pick-up later in the day.

A no show occurs when a driver waits five minutes after the scheduled pick-up time and the passenger does not show up. Riders receive written warnings for the first and second no shows. The third no show results in a written notice informing the rider that their service has been suspended for 30 days. Riders can file an appeal within ten days after receiving the notice. One problem with the current no show policy is that there are no time parameters – such as by month or frequency of use – in which three no shows result in service suspension.

An Operations Summary Report prepared by Special Services for a one week period (i.e., Monday-Friday) in July, 2011 indicated that nearly one-quarter of the scheduled trips were cancelled. This is a high rate of cancellations and results in unproductive service hours. At the same time, no shows accounted for about three percent of the total scheduled trips that week. A no show rate under five percent is considered acceptable.

While Special Services maintains a client database, there is no regular tracking of whether or not the clients are active or non-active users. As a result, the database may not be a reliable source for predicting potential customers and daily demand.

The Director prepares various types of reports that provide information by trip purpose, billing code, use of mobility devices, etc. In addition, the Director has also recently been preparing detailed monthly Productivity Analysis reports using TransView. This report includes a variety of useful data, including trips by time period, general operating characteristics and performance measures. The reports could be used to conduct various service planning functions (i.e., tracking passenger demand, trip time, load factor, etc.) as well develop a set of service and performance standards for both in-house and contract operations. BARTA staff should continue to make greater use of the TransView reporting system to manage transit resources and monitor system performance.

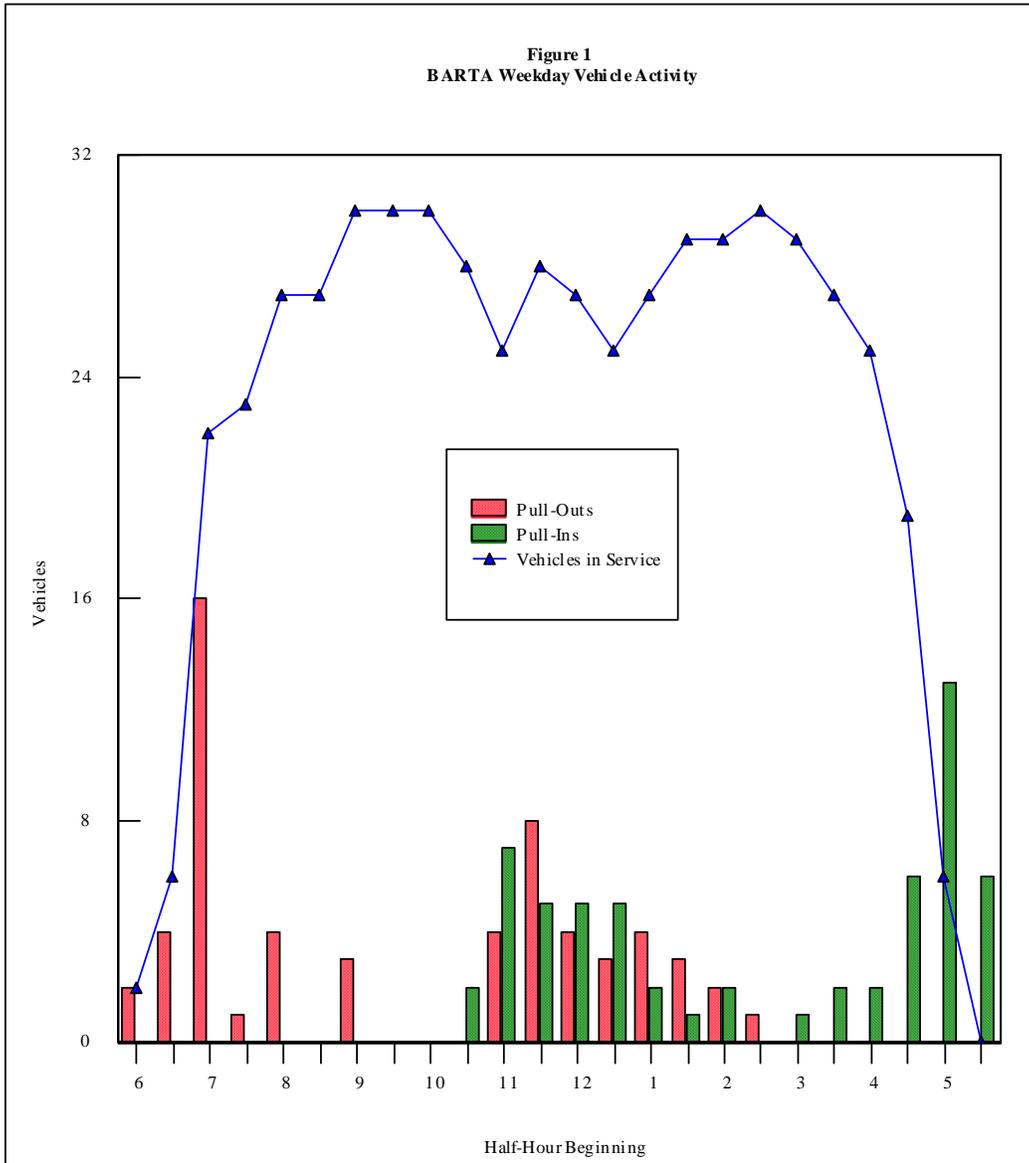
OPERATIONAL ANALYSIS

As part of the study, various performance measures were calculated using sample completed driver manifests from BARTA in-house and Easton Coach contracted operations for a single weekday. Since Easton Coach is the only operator on Saturdays, completed manifests for one Saturday were also obtained for review. The review of driver manifests can provide insight into the utilization of operator resources and can lead to the identification of a number of performance and service related issues and the development of recommendations for improvement. The analysis of the driver manifests for both operators is presented in graphical format.

Figures 1, 2 and 3 provide the temporal characteristics and system productivity of BARTA's weekday in-house operations, with Figures 4 through 9 presenting the same information for Easton Coach's weekday and Saturday operations. The sample weekday manifests for BARTA in-house operations indicated about 700 scheduled trips distributed among 30 vehicle runs. The number of scheduled trips on each vehicle varied from 12 to 43, with the overall vehicle fleet that day averaging 23 scheduled trips. One driver was assigned to each vehicle and worked a straight shift that averaged approximately nine hours with the longest shift lasting almost eleven hours. The majority of the drivers also received a 20 minute unpaid lunch break.

Figure 1 shows that BARTA in-house operations started at 6:00 AM with all 30 vehicles in service by 9:00 AM. The first driver shift ended at about 3:30 PM, with 10 percent of the drivers pulling-in at the BARTA garage between 3:30 PM and 4:00 PM. Approximately one-quarter of the drivers ended their shifts during the 4:00 PM hour, with 63 percent of the drivers ending their shifts during the 5:00 PM hour. The final pull-in occurred at around 6:00 PM. There were at least 24 vehicles in service during most of the day, with peak service occurring during the 9:00 AM hour and again at 2:30 PM. The greatest fluctuation in vehicle supply occurred in the midday when drivers are assigned lunch breaks.

Figure 2 shows that there are two distinct peaks in the utilization BARTA's vehicles and occur at 30 minute intervals from 8:00 AM to 8:30 AM and from 2:30 PM to 3:00 PM. Passenger activity is considerably lower before, after and in between these peak load times. This type of demand distribution is common for demand responsive service as these trip times primarily serve time-sensitive subscription-based trips (e.g., work and senior centers) during the morning and afternoon and using the midday period for discretionary travel (i.e., shopping) that requires a less rigid schedule. The data also shows that while the distribution of passenger demand drops significantly during the midday period, the number of vehicles in service remains relatively constant. This reflects the use of full-time drivers for all weekday operations.



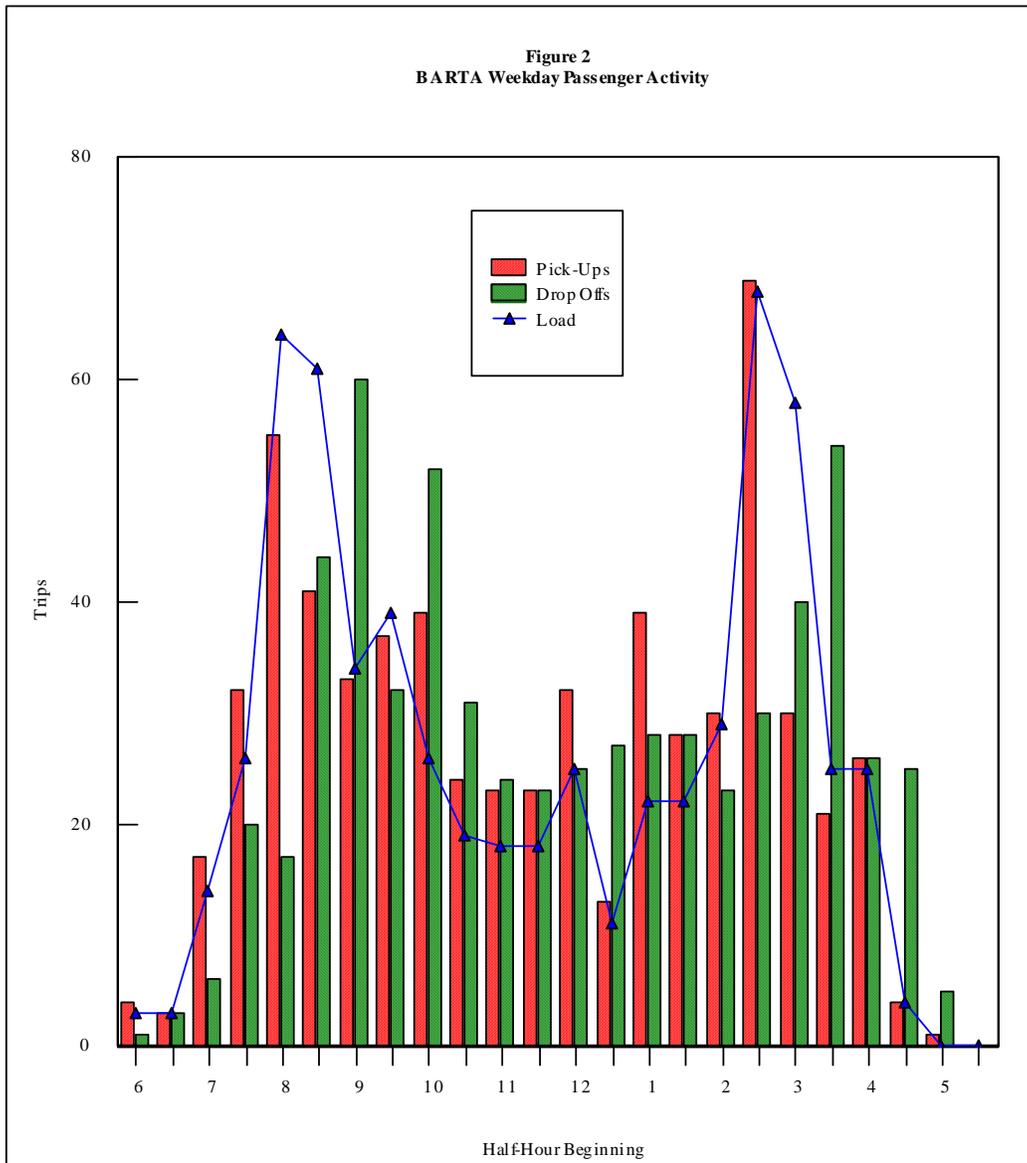
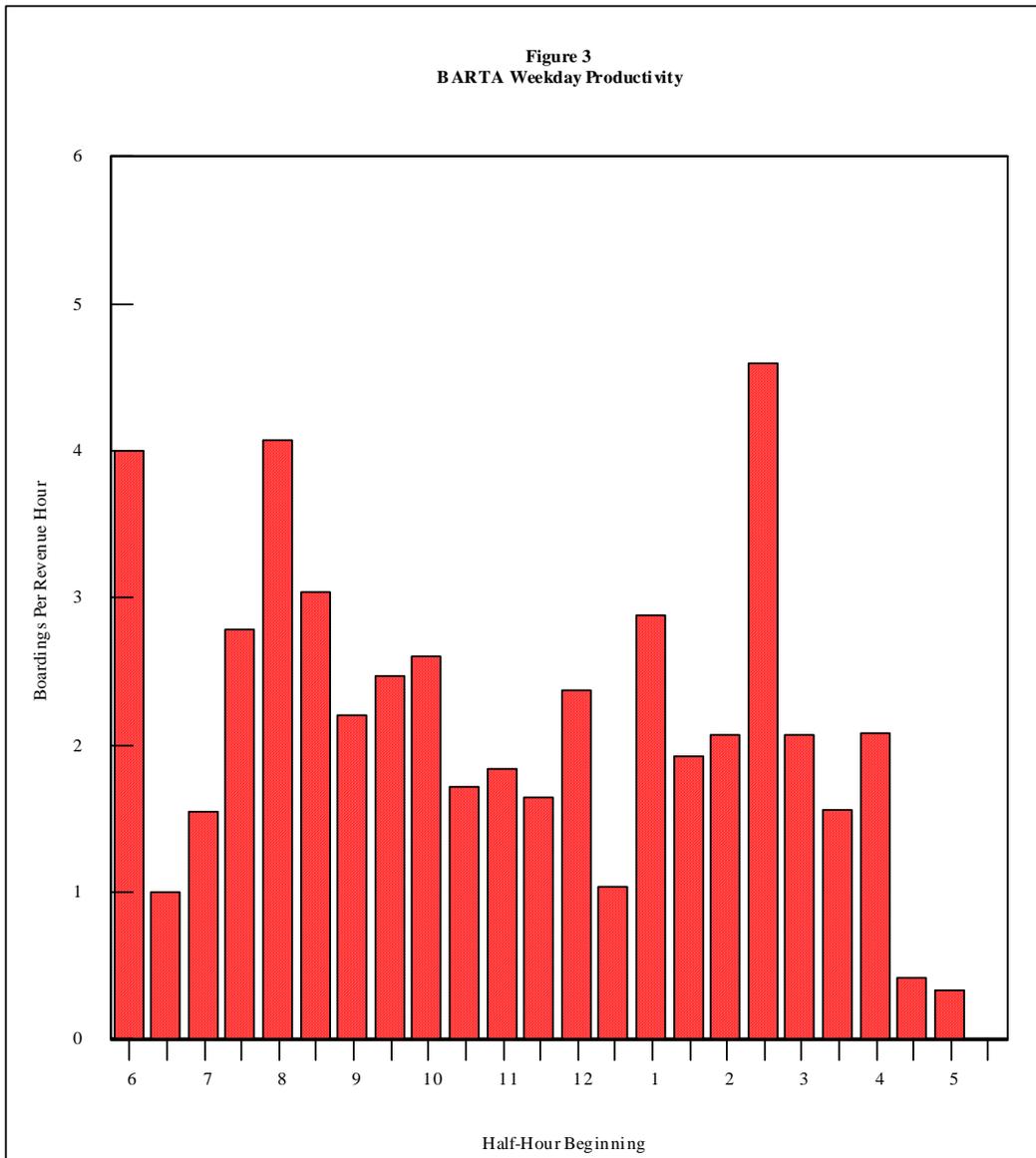


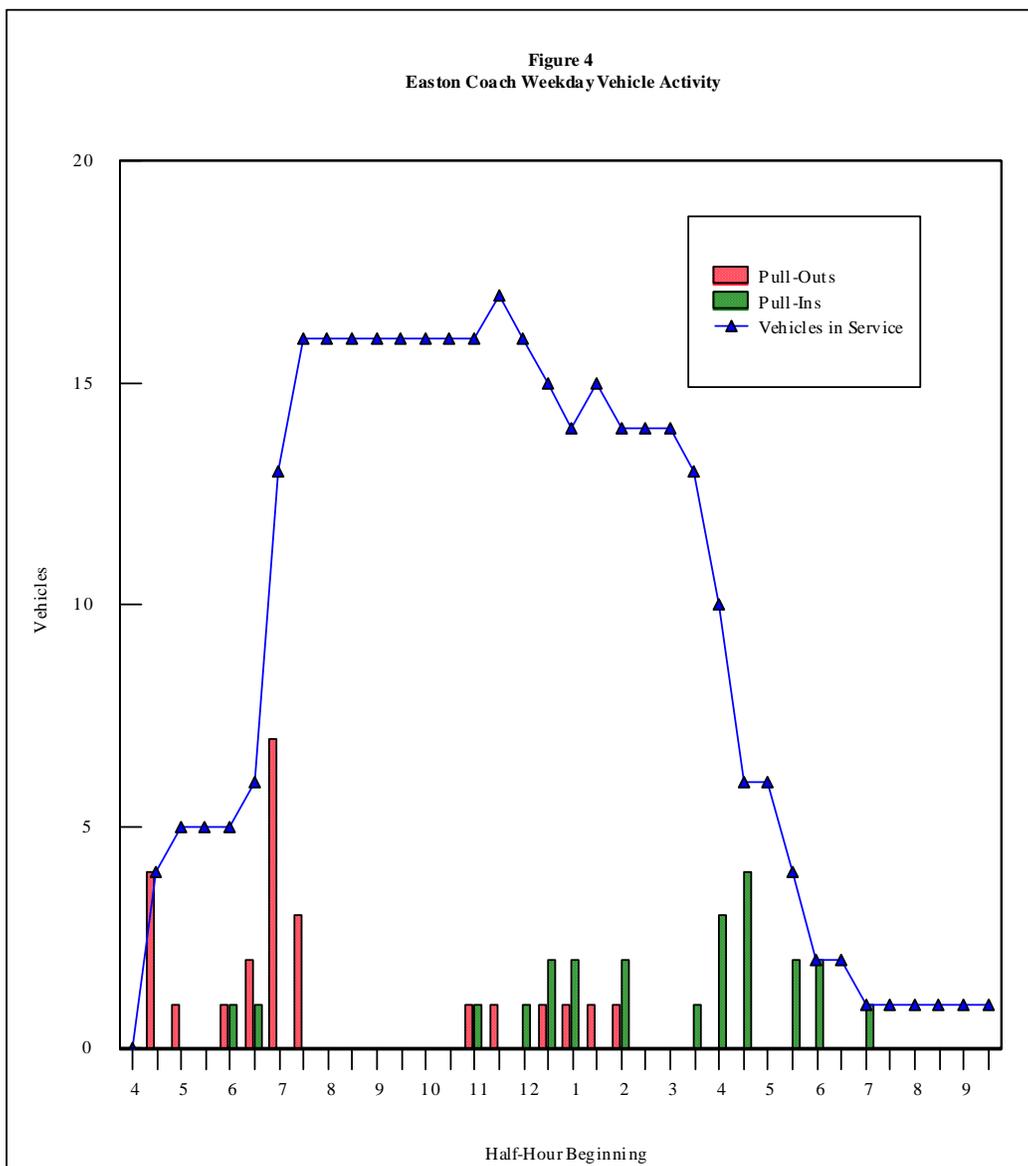
Figure 3 depicts the productivity of the BARTA in-house service measured by the number of passengers boarding and alighting the vehicles each half hour. This performance measure varies throughout the day but generally follows the passenger activity levels. The exception is the spike in productivity during the 6:00 AM hour which has more to do with fewer vehicles being in service rather than high ridership. It should also be pointed out that productivity is affected by the fact that vehicle supply remains relatively constant even though passenger demand varies.

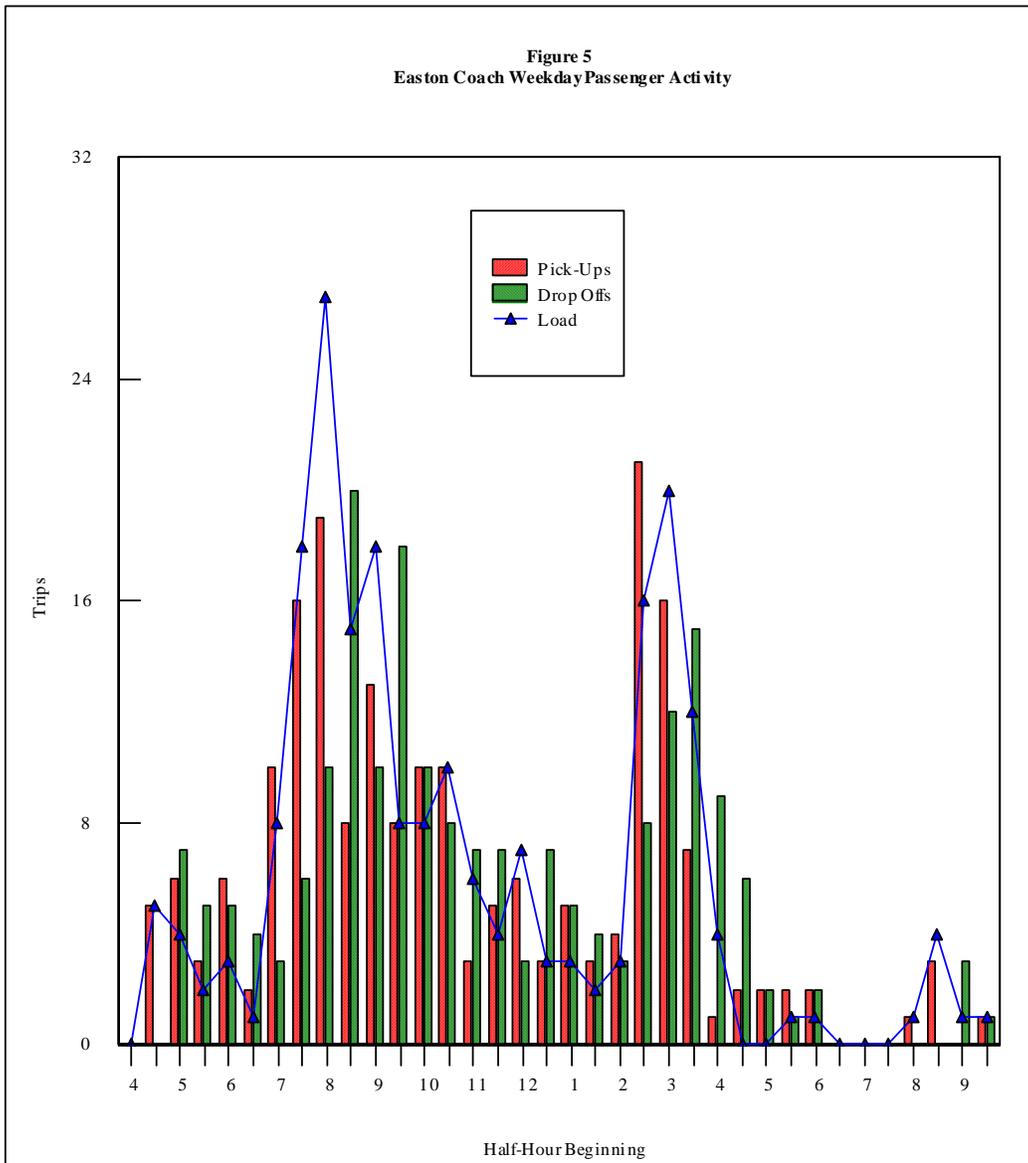


Figures 4, 5 and 6 provide the temporal characteristics and system productivity of the Easton Coach contracted operations. The sample manifests for Easton Coach indicated about 260 scheduled trips distributed among 21 driver assignment. The number of scheduled trips on each vehicle varied from 3 to 22, with the overall vehicle fleet that day averaging 12 scheduled trips. Each driver was assigned to a vehicle and worked a straight shift that averaged approximately eight hours, with the shortest shift lasting about two hours (part-time) and the longest shift approximately 11 hours (full-time). Approximately 29 percent of the drivers did not take a lunch break. The other drivers took unpaid lunch breaks that typically were 30, 45, and 60 minutes in length.

Easton Coach operates a longer span of service than BARTA with the first shift starting at 4:30 AM and the last shift ending at approximately 10:00 PM. As a result, the number of vehicles in service varied widely with several drivers ending or beginning their shifts during the midday period.

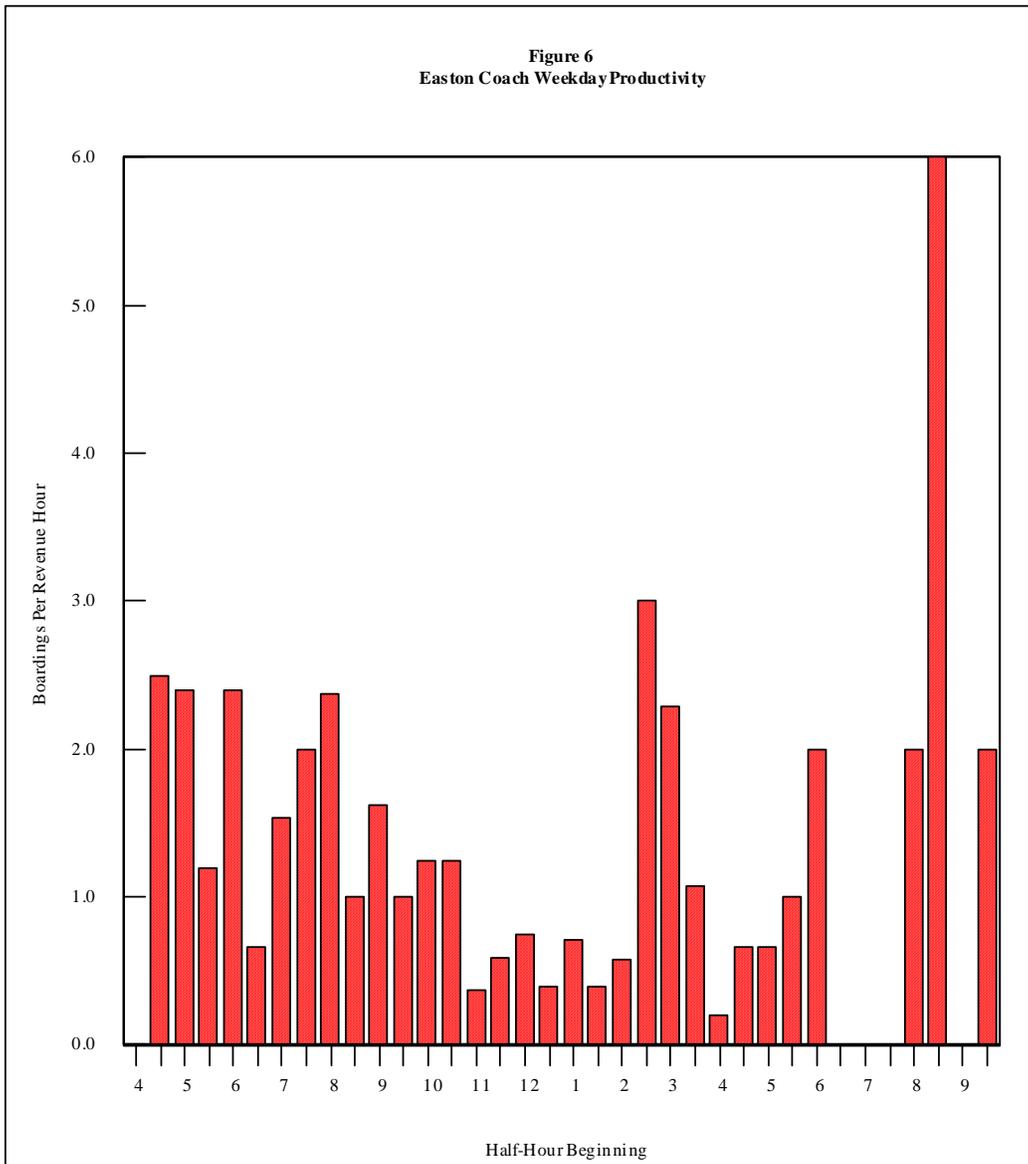
As shown in Figure 4, the majority of vehicles were in service from 7:00 AM to 11:00 AM, with the peak vehicles in service for a 30 minute period between 11:30 AM and 12:00 PM. In the afternoon and early evening, the vehicle supply fluctuated with service leveling off during the 2:00 PM hour then generally declining during the next few hours. From 7:00 PM until the end of service at 10:00 PM, Easton Coach had one vehicle in service.



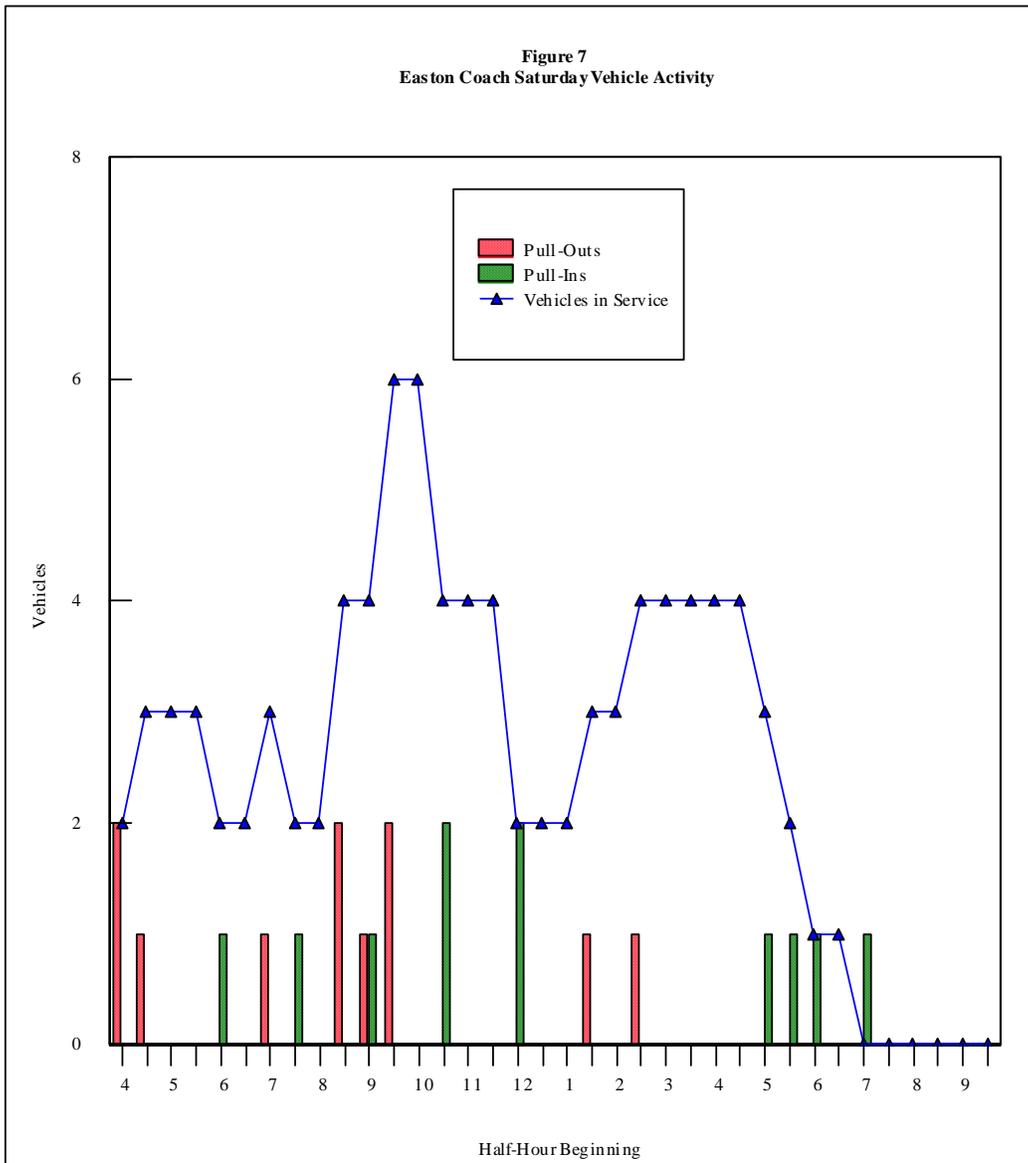


As shown in Figure 5, Easton Coach experienced two distinct peaks of passenger activity at 8:00 AM and 3:00 PM, with three smaller spikes in passenger activity occurring at 7:30 AM, 9:00 AM, and 2:30 PM. Overall, the highest demand for service occurs in the morning, with demand falling considerably after the 3:00 PM peak.

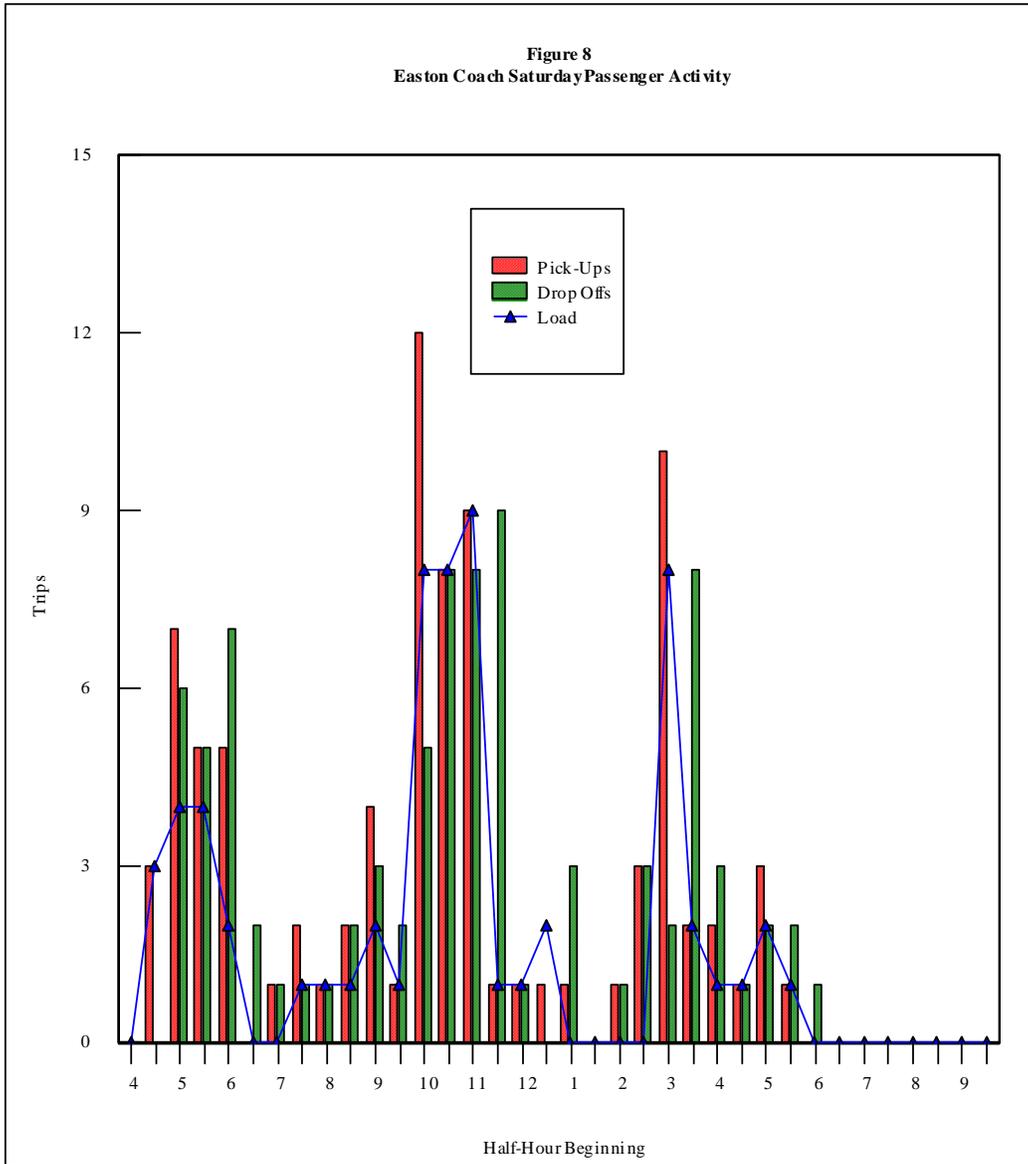
Figure 6 showed that Easton Coach generally provided less than three passenger trips per hour. The lowest productivity occurred mostly in the midday and early evening hours, with the highest productivity occurring during the 8:00 PM hour when the contractor's productivity level doubled. The overall performance can be attributed to operating less efficient long distance trips. The spike in productivity in the evening is likely due to the one vehicle carrying multiple ADA eligible riders to a common area or operating shorter distances between trips.



Figures 7, 8, and 9 provide the temporal characteristics and system productivity of the Easton Coach Saturday operations, when the contractor is responsible for operating ADA trips. The Saturday manifests indicated about 100 scheduled trips distributed among seven driver runs. It is important to recognize that ADA transportation is the only service provided on Saturdays and is one factor why the number of scheduled trips is much lower compared to weekdays. Figure 7 shows that throughout most of the day there are between two and four vehicles in service, except for a 30 minute period between 9:30 AM and 10:00 AM when a maximum of six vehicles were in service. One vehicle was in service from 6:00 PM until the end of trip demand on Saturday.



As shown in Figure 8, most of the passenger activity occurred during three time periods, including the 5:00 AM, 10:00 AM and 3:00 PM hours, with demand being much lower at all other times of the day. Peak loads were not as distinct on Saturday as compared to weekday service, with the highest passenger utilization occurring at 10:00 AM, with slightly lower utilization levels occurring at 3:00 PM with ridership considerably lower at other times of the day.



As shown in Figure 9, the highest productivity on Saturday occurred during the same times of the highest passenger activity, namely during the 5:00 AM, 10:00 AM, and 3:00 PM hours. At all other times of the day, the contractor generally carried less than two passengers per hour.

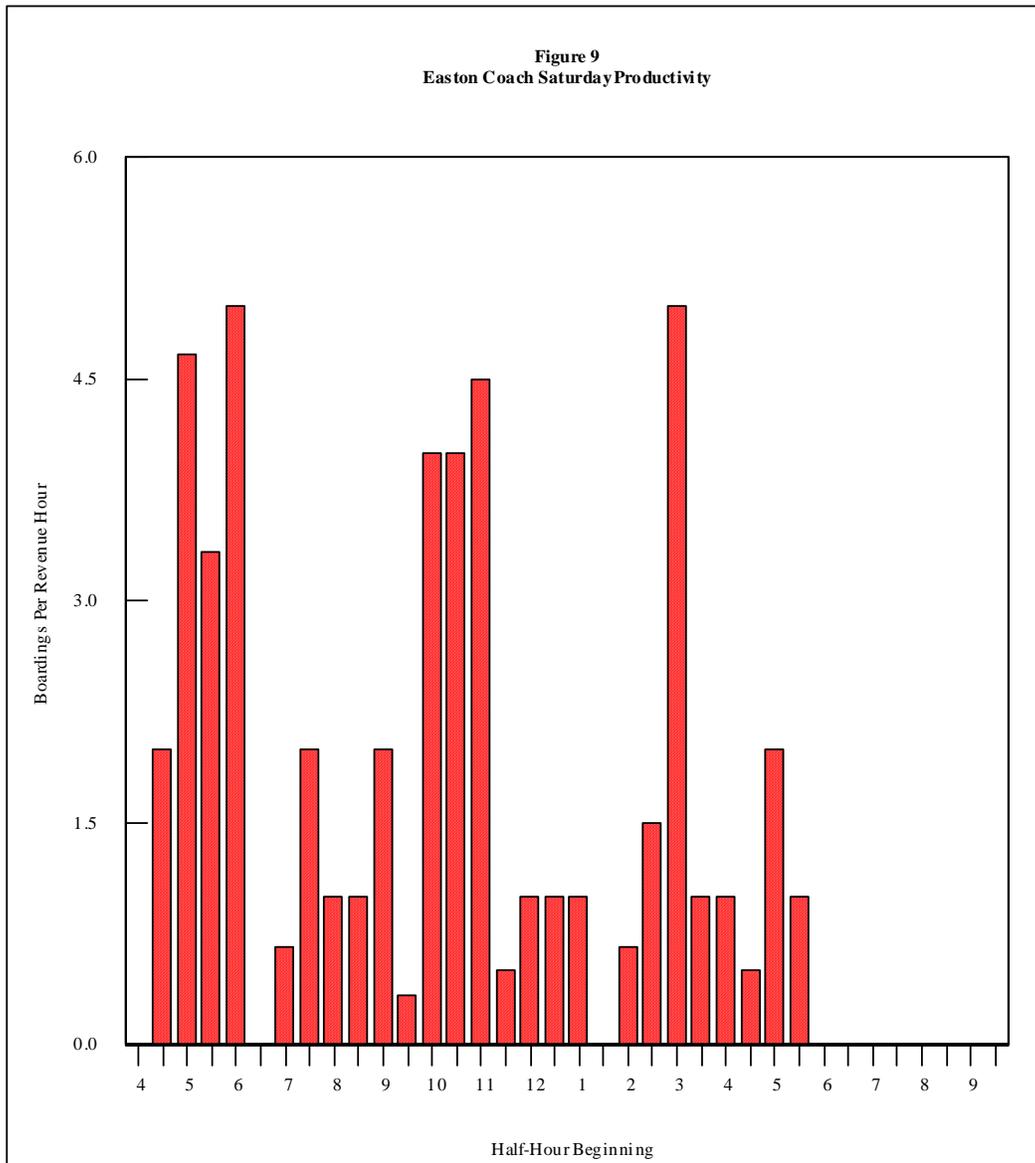


Figure 10 displays weekday passenger activity by trip end, or whenever a passenger boarded or alighted from a vehicle. BARTA in-house and Easton Coach contracted operations are presented together in the figure, with additional data showing the total combined trip ends of the entire paratransit system. The combined data shows two clear peaks of activity occurring at 9:00 AM and 2:30 PM. Individually, both systems also peak at 2:30 PM, but Easton Coach also peaks at 8:00 AM.

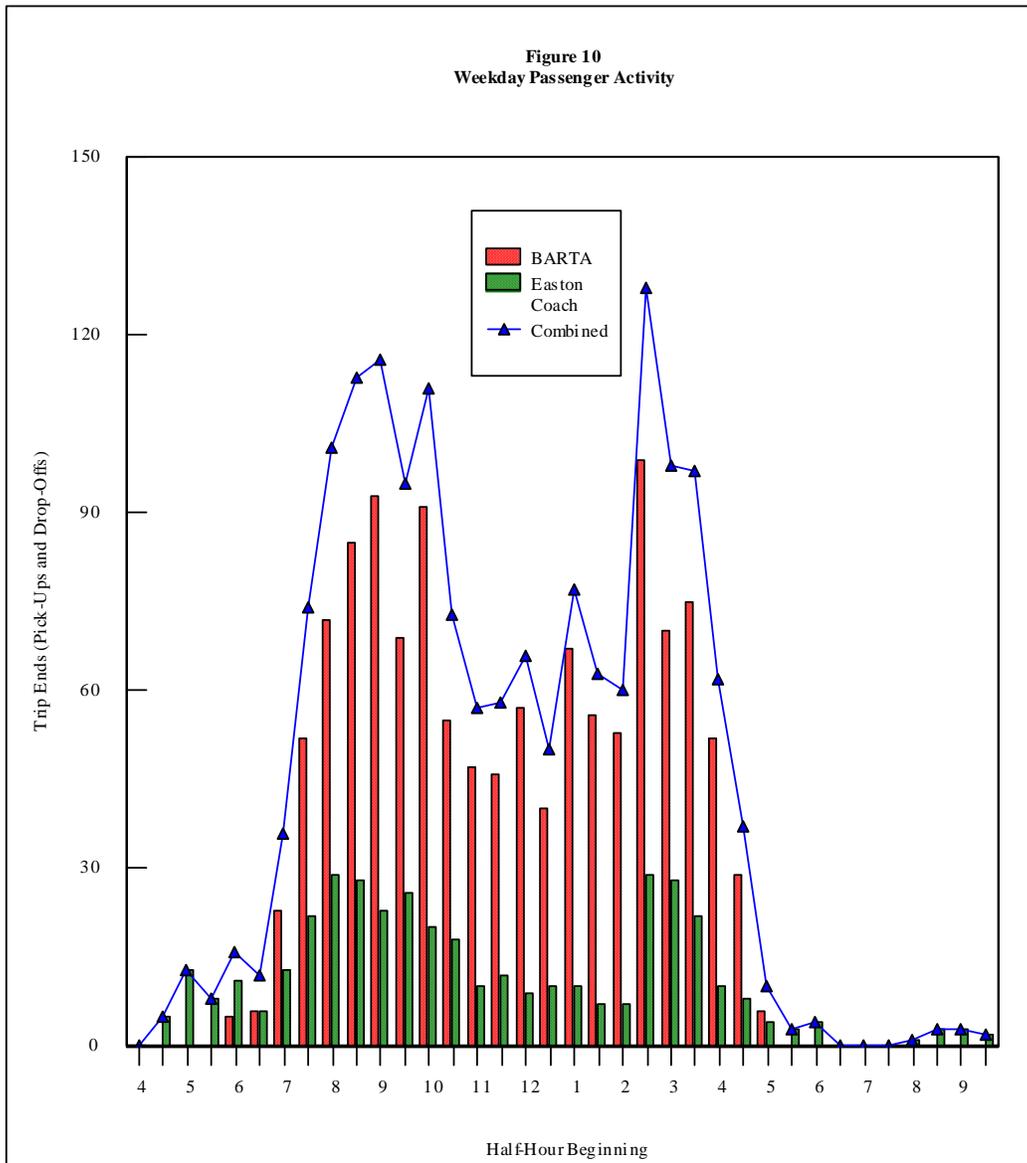
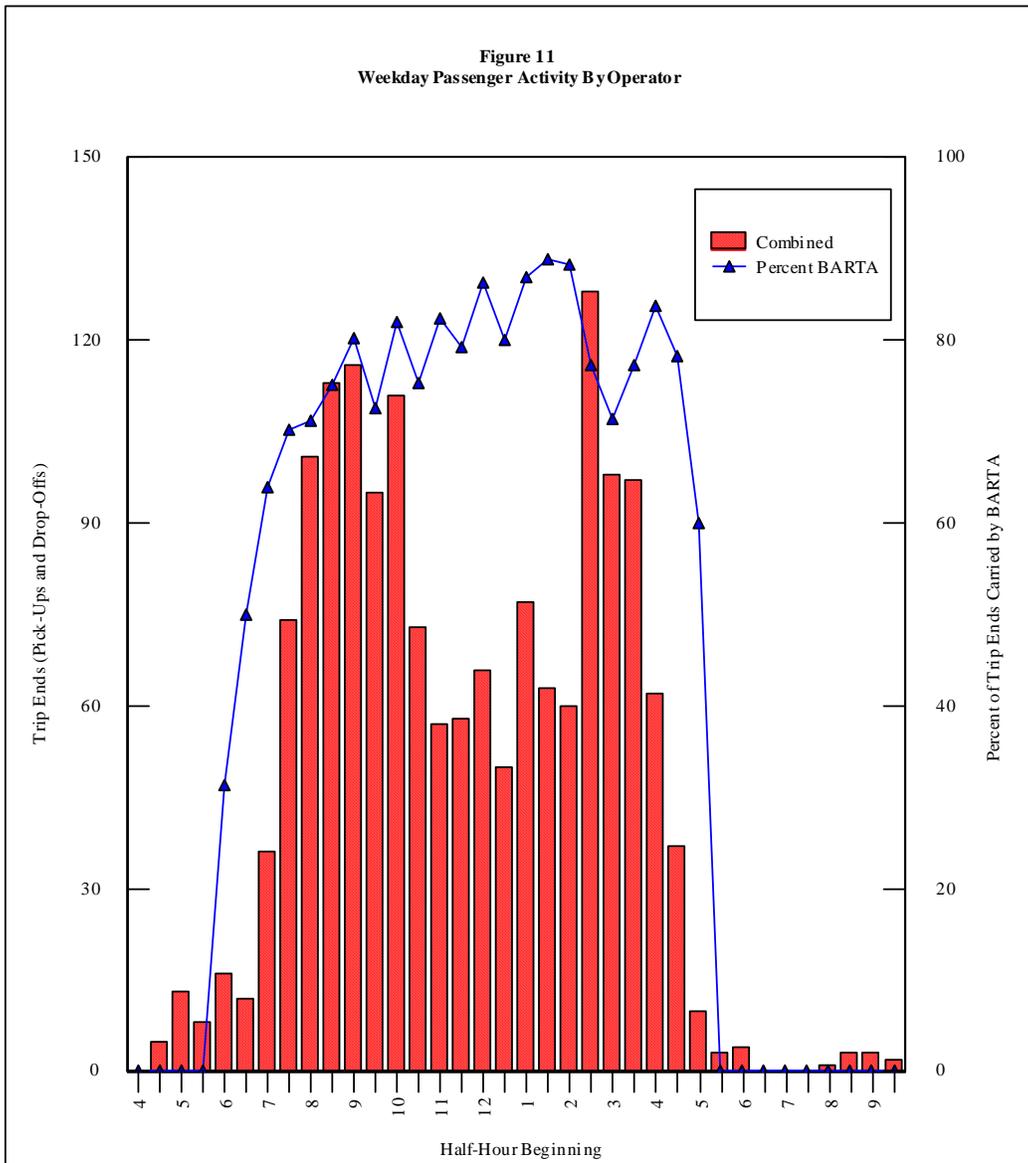
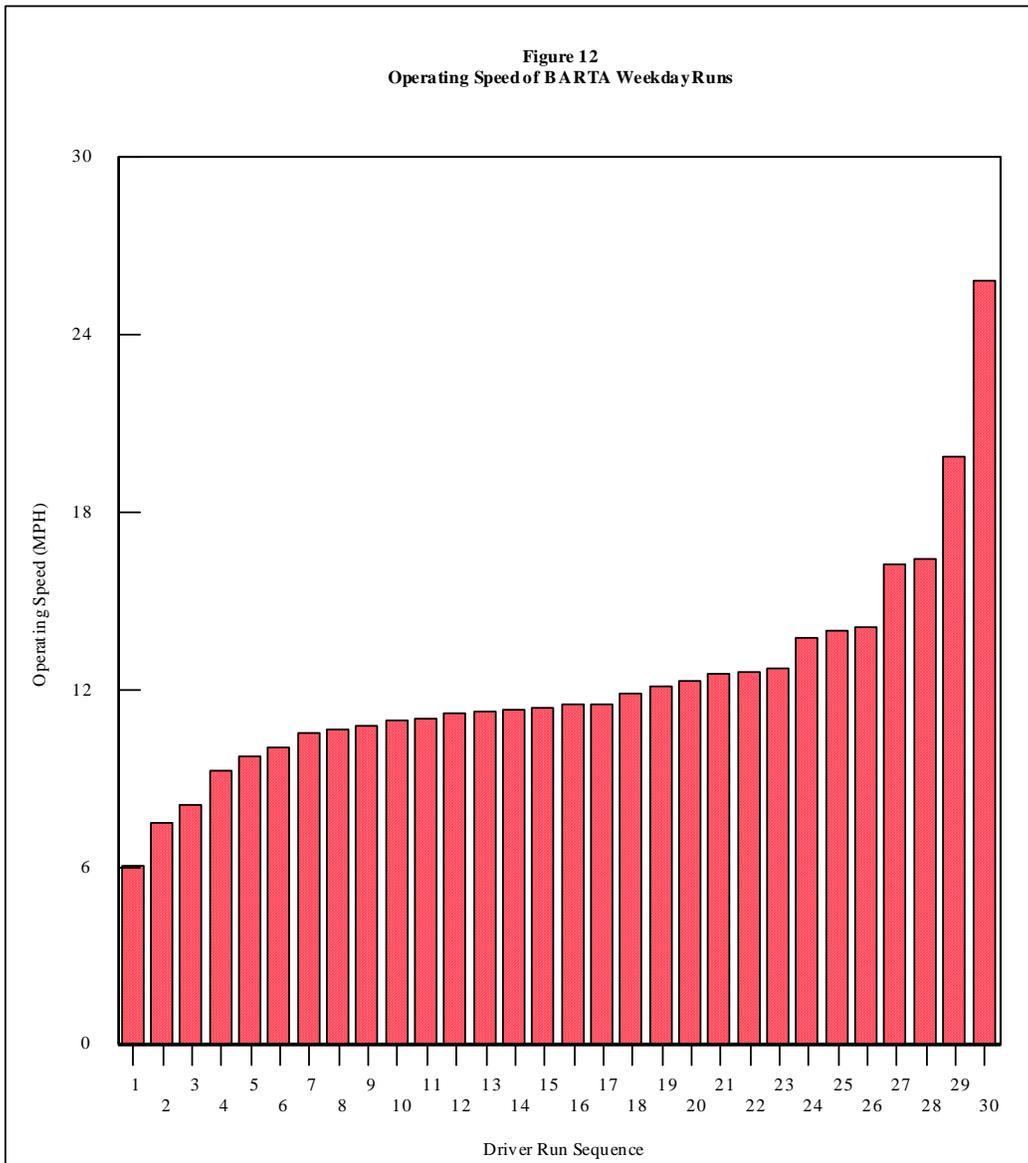


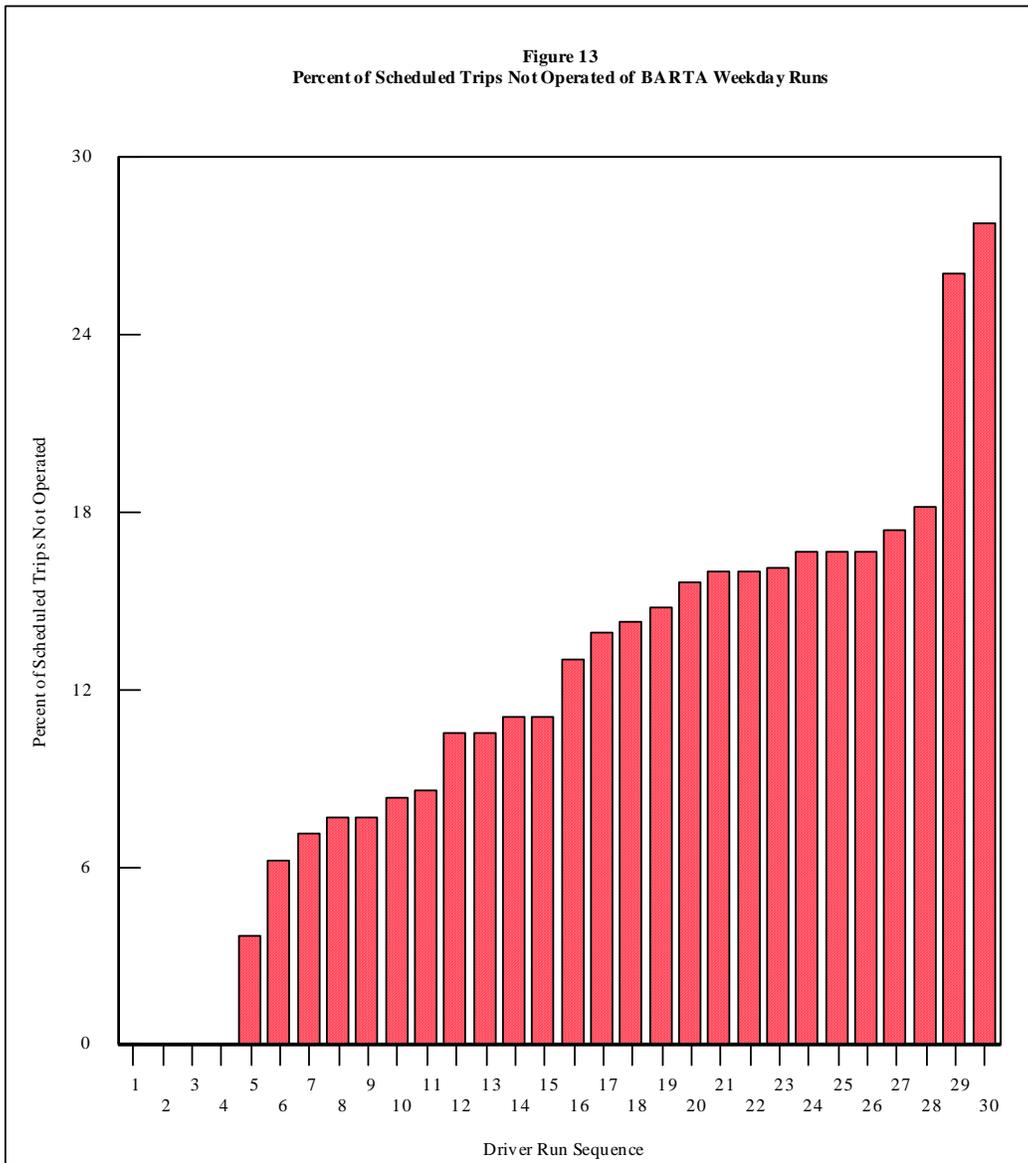
Figure 11 presents the combined trip ends of both operators, but the exhibit also shows the percentage of the trip ends served by BARTA. As the figure shows, the proportion of trip ends provided by BARTA generally exceeds 80 percent, with the highest levels occurring between 1:30 PM and 2:00 PM. During the evening hours, all trips are served by Easton Coach. On Saturdays, Easton Coach is the only provider and these assignments results in about two-thirds of all trips served by BARTA in-house operations.



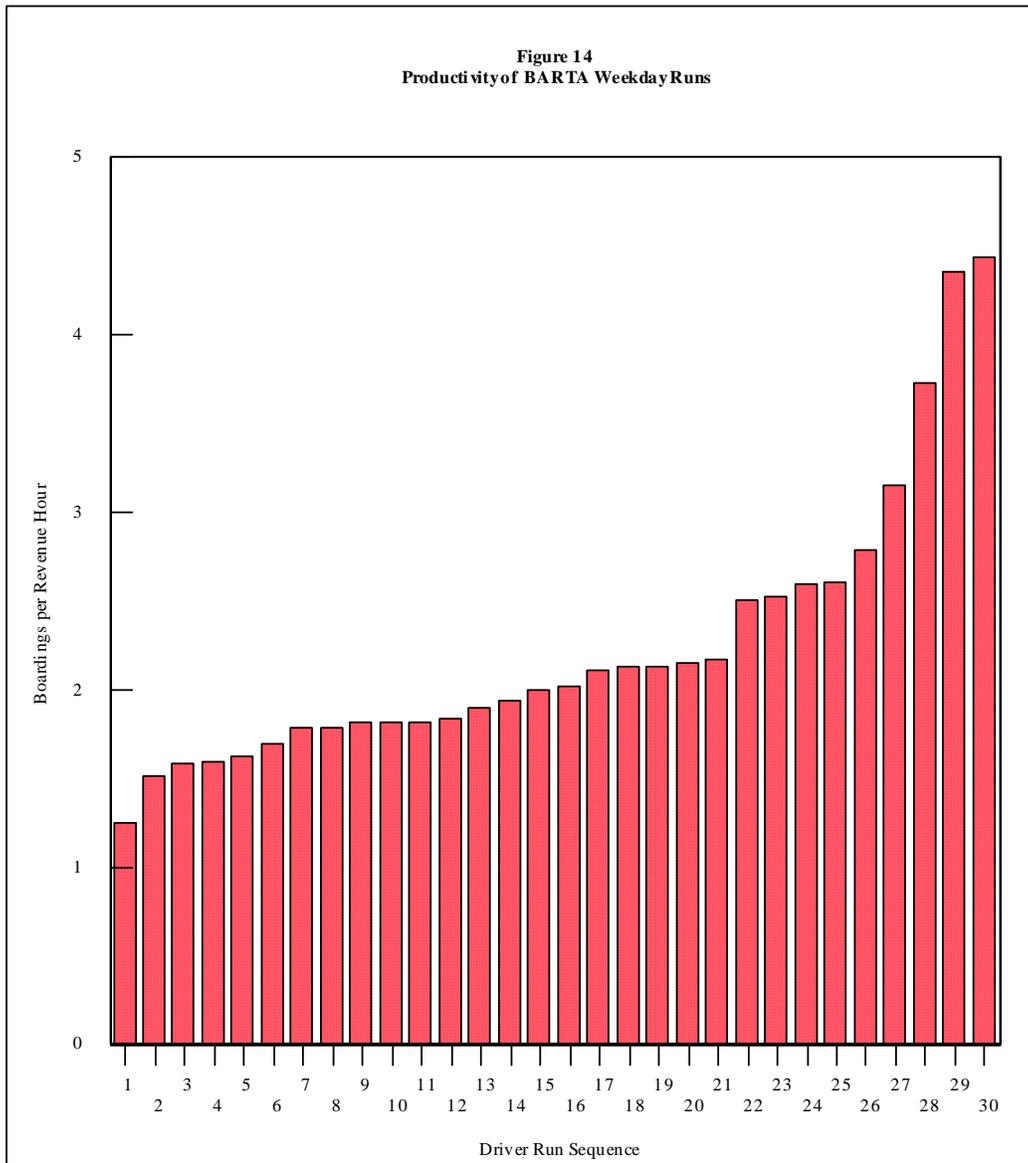
The weekday operating speeds of the 30 vehicle runs operated by BARTA in-house operations is shown in Figure 12. The majority of runs operated below or slightly higher than 12 miles per hour (mph). The big difference in speed occurs on vehicle run 29 which operated at about 19 mph and run 30 which operated at approximately 25 mph. The difference in operating speed may be attributed to vehicle runs 29 and 30 operating a higher proportion of their service outside of the City of Reading and surrounding municipalities where there is less traffic congestion and more spacing between stops.



Information in Figure 13 shows the percentage of scheduled trips that were not operated on the BARTA vehicle runs on sample weekday. These trips were scheduled, but not operated because of late cancellations or no shows. Overall, approximately 12 to 25 percent of the scheduled trips did not occur on over half of BARTA’s vehicle runs during the sample weekday. This information indicates a high rate of late cancellations and no shows.



Weekday passenger productivity for each of BARTA’s 30 vehicle runs is shown in Figure 14. Overall, 21 of the 30 vehicle runs carried less than two passengers per hour. This low productivity may be the result of the vehicle runs operating in continuous service for at least eight hours due to the use of full-time drivers. The vehicle runs that carried the highest number of passengers exhibited better productivity.



Drivers are responsible for recording the start and end times of trips. The weekday trip length for the BARTA and Easton Coach operations is shown in Figure 15. Nearly one-half of the BARTA and Easton Coach trips ranged from 10 minutes to 29 minutes. BARTA exceeded or was about the same as Easton Coach in terms of trips with travel times under 40 minutes. Conversely, Easton Coach exceeded BARTA in the trips that were 40 minutes or greater. This disparity is consistent with Easton Coach having the responsibility for operating out-of-county medical transportation for MATP clients

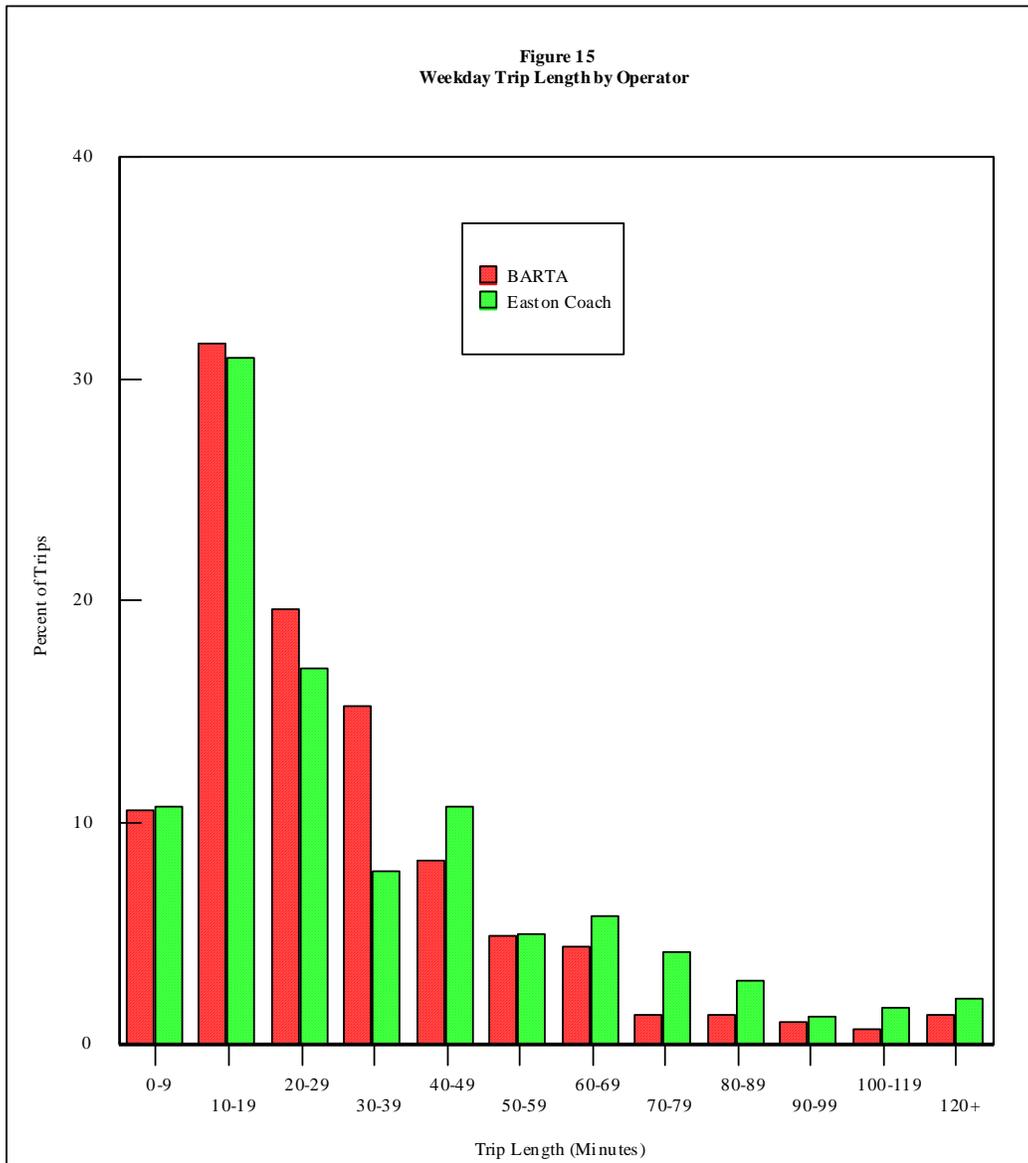
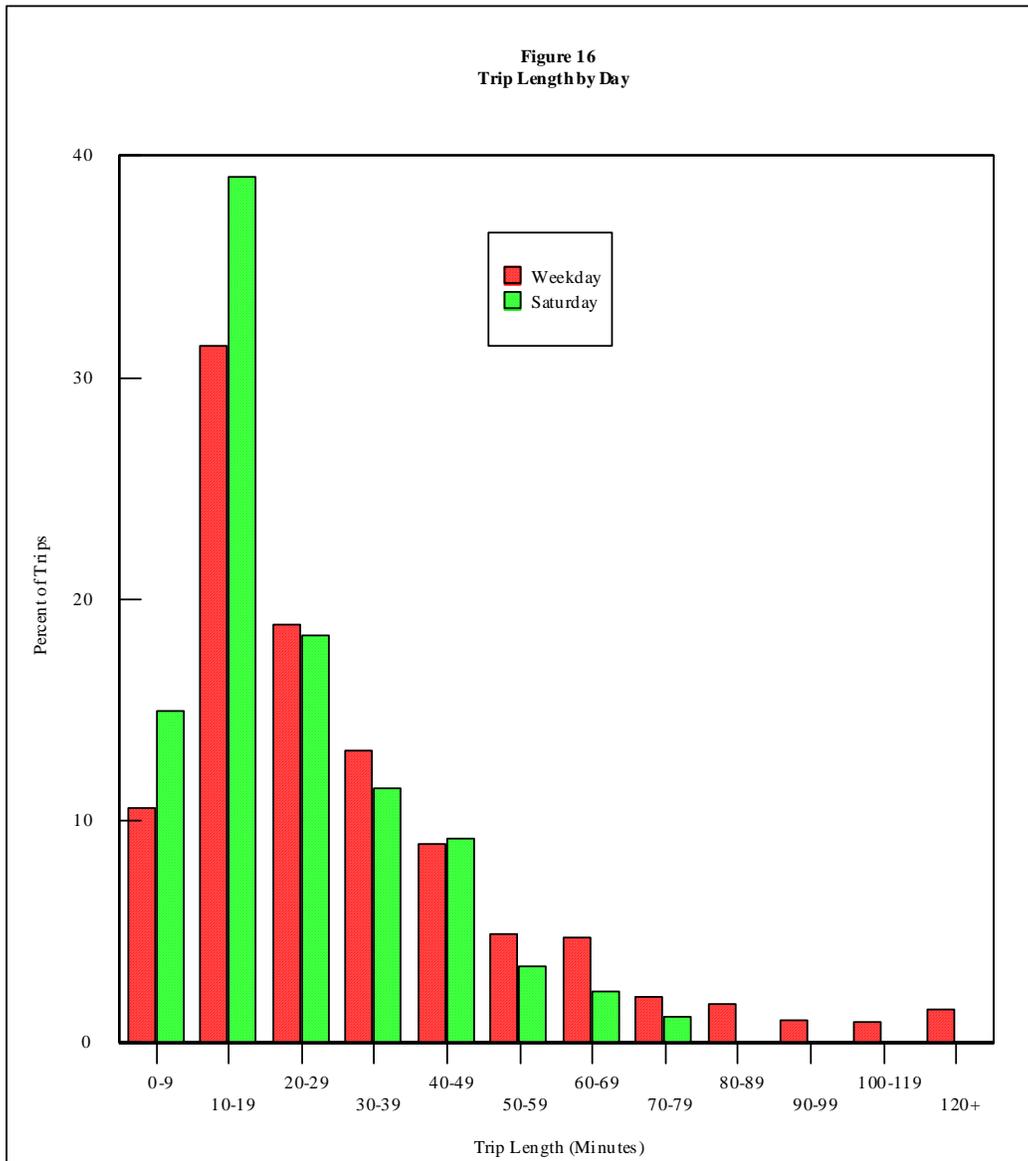
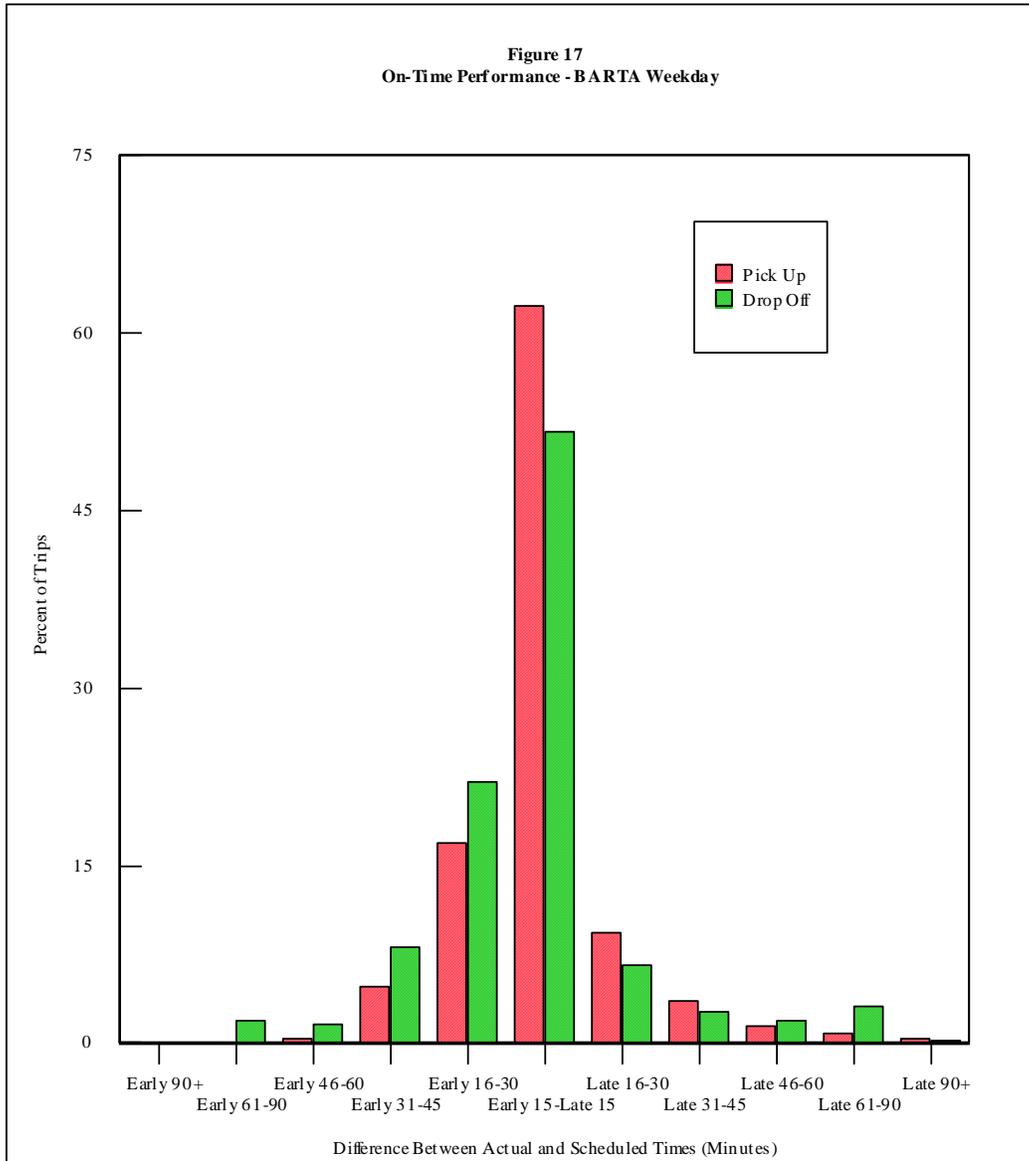


Figure 16 shows the trip length by weekday and Saturday. On weekdays, the BARTA and Easton Coach data is combined, while Saturday only reflects Easton Coach. Approximately one-third of the weekday and Saturday trips were completed between 10 and 19 minutes and almost 20 percent were completed between 20 and 29 minutes. Overall, longer travel times are more common on weekday than on Saturdays. This is consistent with the out-of-county service provided on weekdays and the Saturday service consisting of only ADA trips operated within $\frac{3}{4}$ mile of BARTA fixed route service.



Figures 17 through 21 analyzed the service reliability of the BARTA and Easton Coach operations by measuring the difference between the actual and scheduled arrival time at each pick-up and drop-off location. BARTA Special Services uses a 60-minute scheduling window, which means that a vehicle is on-time as long as it arrives within 30 minutes before or after the scheduled pick-up. This policy applies to both in-house and contracted operations. Special Services does not have an on-time performance policy for the drop-off portion of the trip. However, a scheduled drop-off time is provided on the driver manifests and was used to calculate schedule adherence for drop-offs.

The on-time performance of the weekday trips provided by BARTA’s in-house operations and Easton Coach are shown in Figures 17 and 18, respectively. In Figure 17, the data shows that nearly two-thirds of pick-ups and approximately one-half of drop-offs were provided within 15 minutes (before or after) of their requested scheduled time.



Further, almost 85 percent of BARTA’s trips on the sample weekday were provided within 30 minutes (before or after) of their requested scheduled time. This performance indicates BARTA’s in-house operations are adhering to the 60-minute window by a substantial margin.

As shown in Figure 18, Easton Coach exhibited lower performance compared to BARTA with approximately 41 percent of pick-ups and 30 percent of drop-offs provided within 15 minutes (before or after) of their requested scheduled time. However, Easton Coach did adhere to the 60-minute window by providing approximately two-thirds of its trips within 30 minutes (before or after) of the scheduled time. Easton Coach exhibited lower performance primarily because approximately 30 percent of its trips on the sample weekday were provided between 31 to 45 minutes (before or after) the scheduled time.

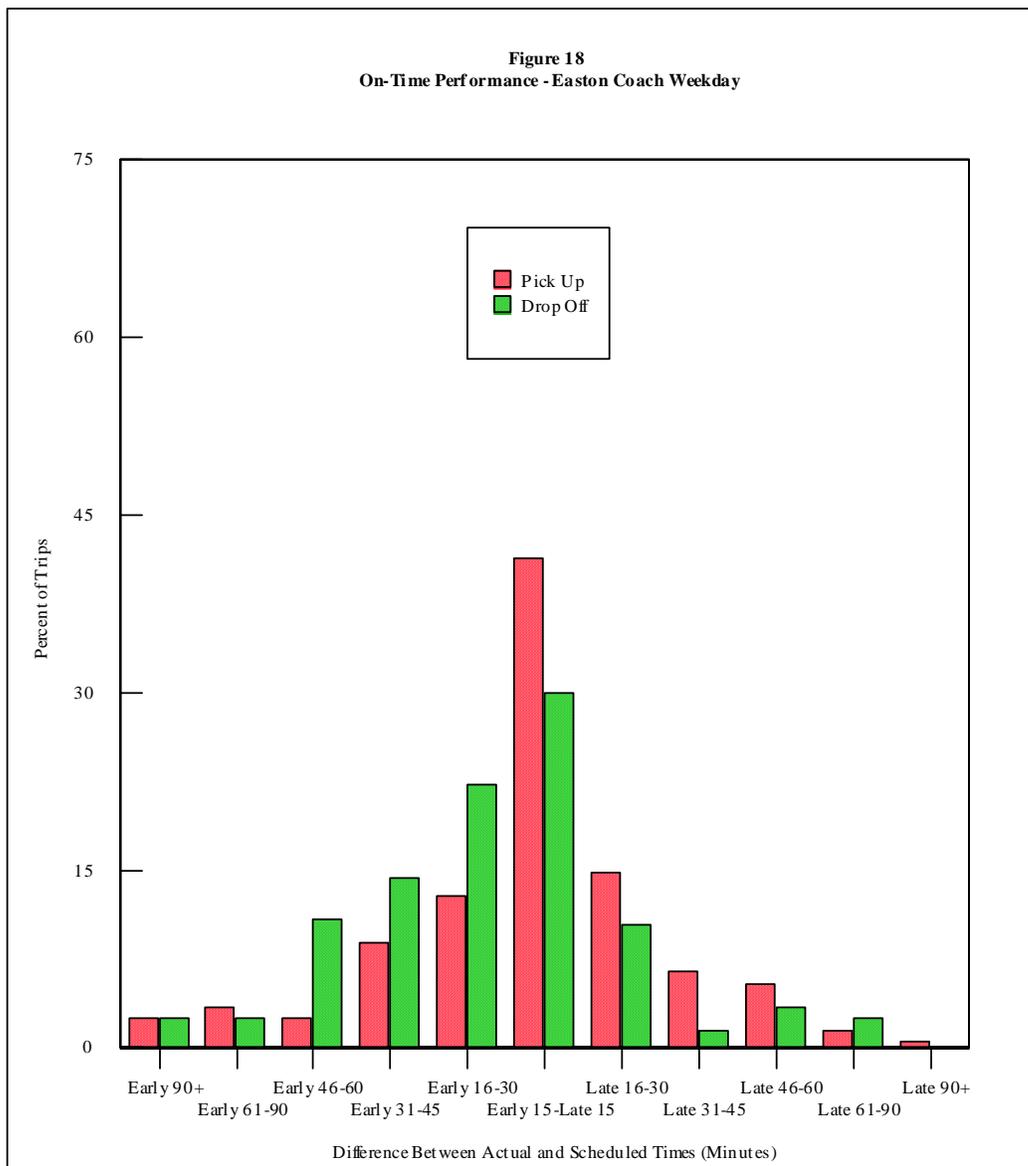
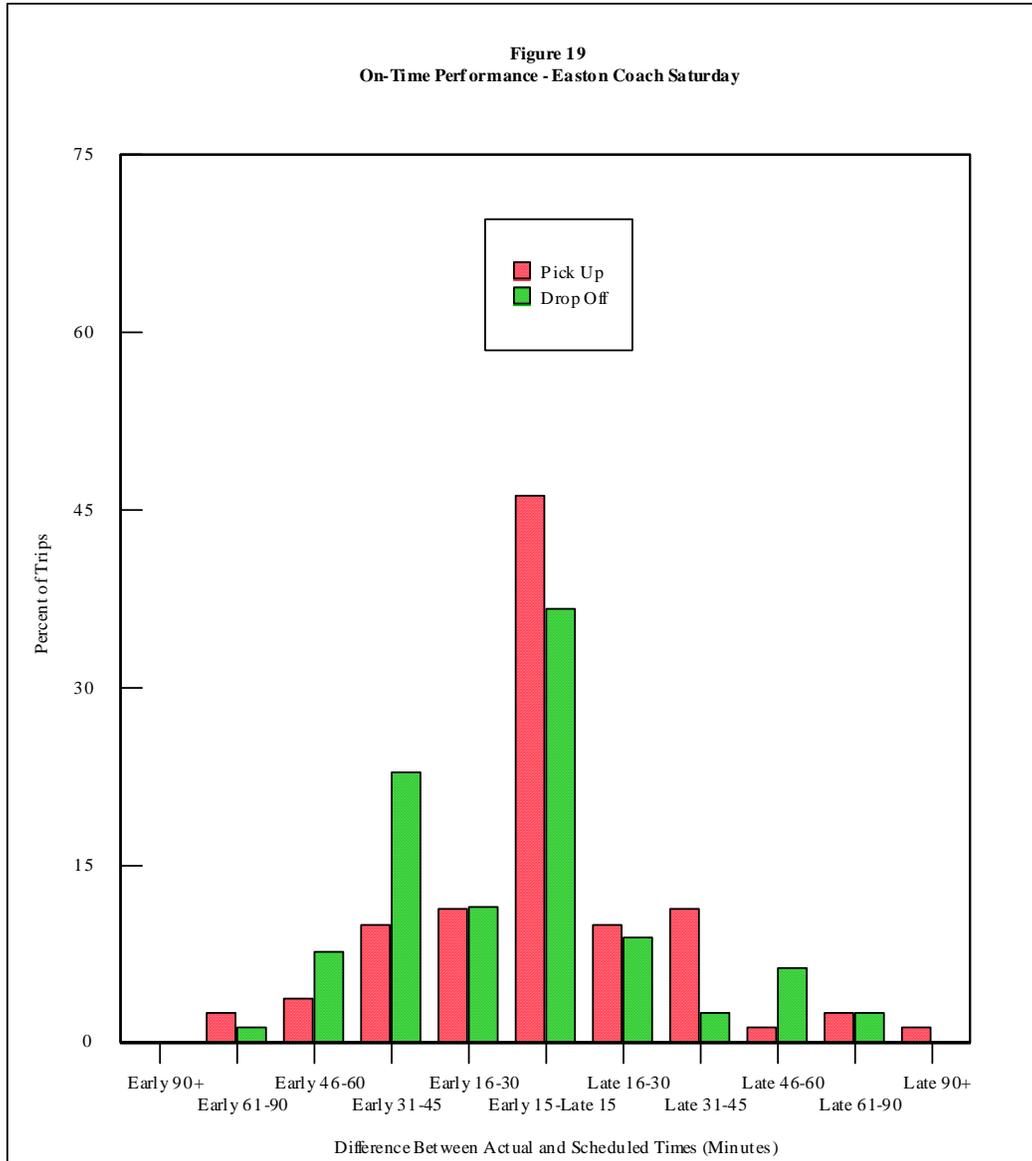
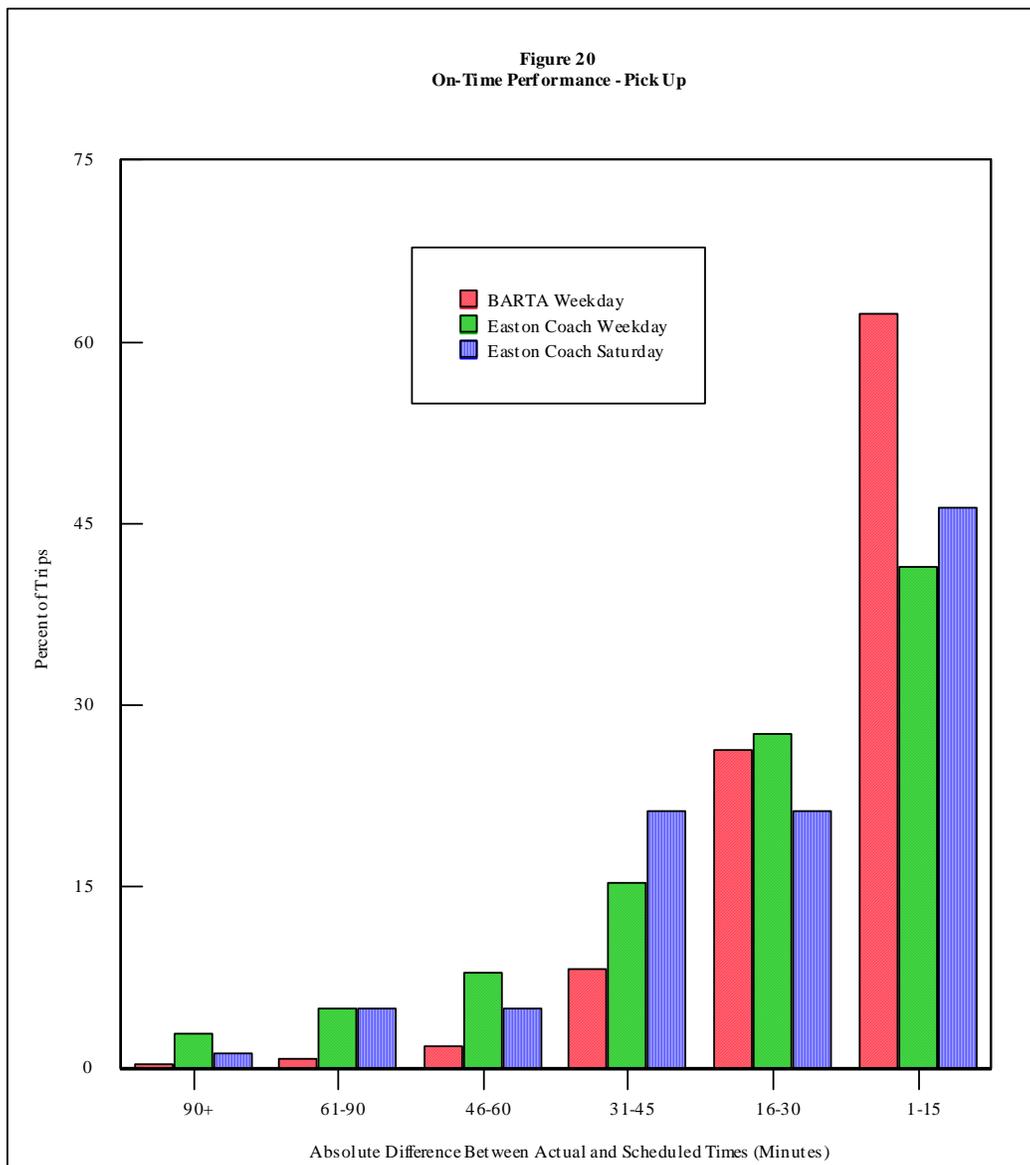


Figure 19 presents the on-time performance for one sample day of Saturday trips operated by Easton Coach. As noted previously, BARTA does not operate any in-house service on Saturdays and the service that is provided is limited to ADA trips within a 3/4 mile distance of BARTA fixed route bus service. As the data shows, less than one-half of the pick-ups and drop-offs are provided within 15 minutes (before or after) of the requested scheduled time and less than two-thirds of the trips were provided within the 60-minute window. On this particular Saturday, nearly 30 percent of the pick-ups and 42 percent of the drop-offs were provided between 30 to 60 minutes (before or after) the scheduled time.

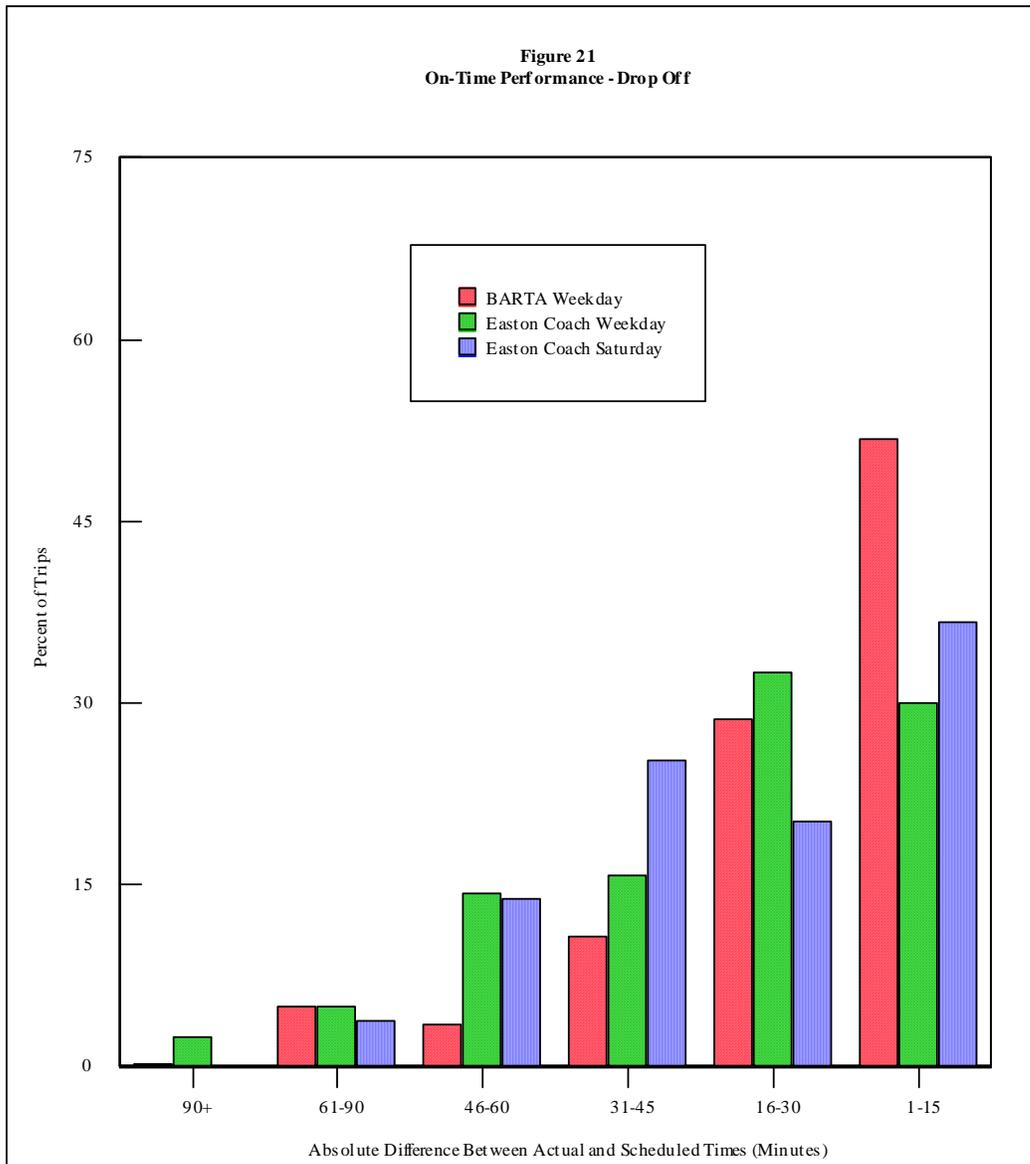


Figures 20 and 21 present the on-time performance of the weekday and Saturday operations by pick-up and drop-off, respectively. The deviation from schedule is shown in absolute terms regardless of whether the vehicle was early or late. Although the system is currently measuring on-time performance at the pick-up end only, on-time performance at the drop-off end may be more important to the rider, particularly for time-sensitive trips such as work or medical appointments.

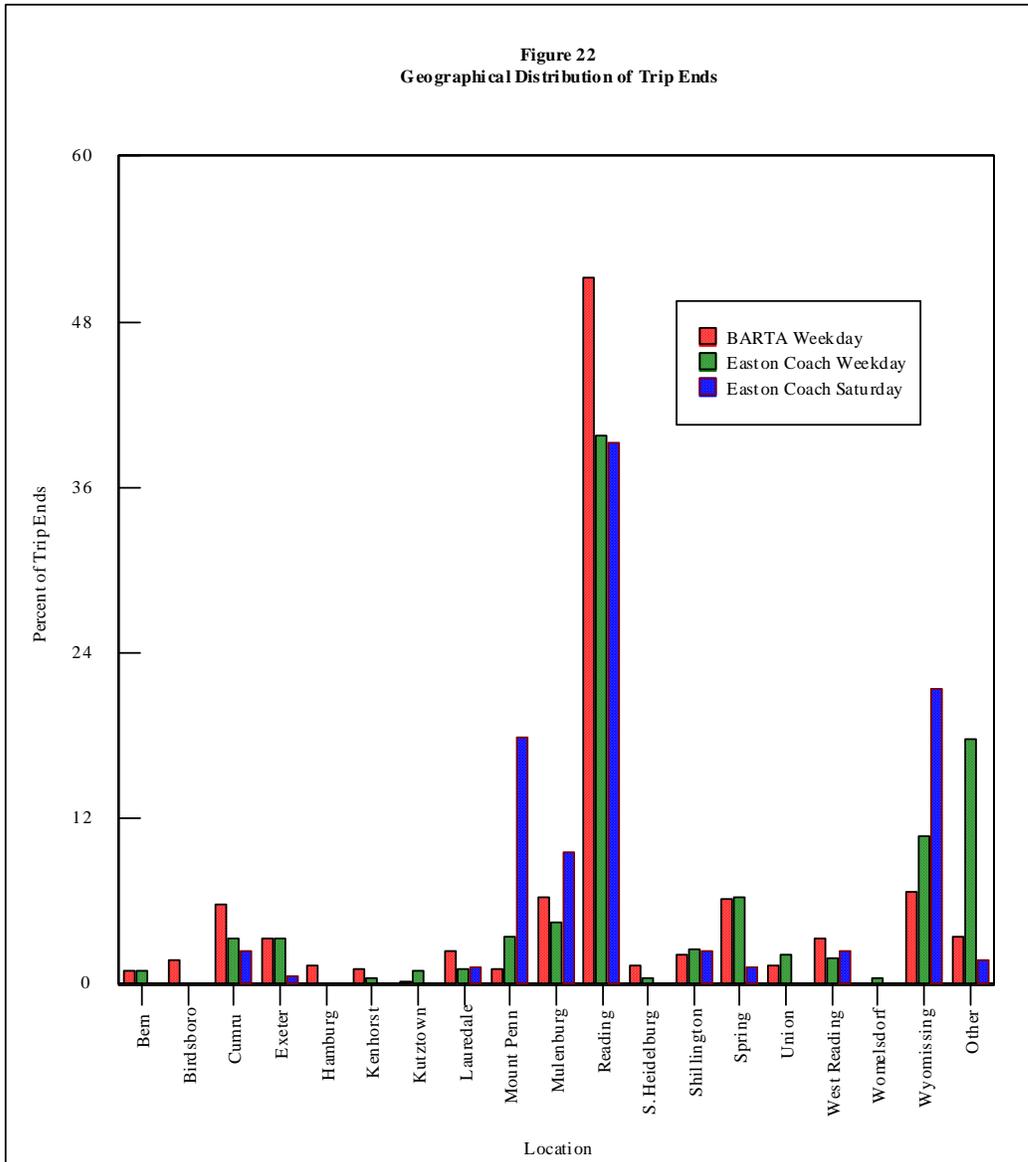
Figure 20 shows that BARTA in-house operations provided a clear majority of its pick-ups and drop-offs within 15 minutes of the scheduled time, with Easton Coach performing better on Saturday compared to the weekday.



In Figure 21, the two operators exhibited dissimilar performance in terms of weekday pick-ups and drop-offs. BARTA in-house operations offer service that has greater on-time performance than that exhibited by Easton Coach. The percentage of trips provided later than 30 minutes is clearly more prevalent on Easton Coach.



The weekday and Saturday drivers' logs also indicate both the pick-up and drop-off locations for each trip. In the current analysis, these data were converted to trip ends by geographical location. As shown in Figure 22, the dominance of Reading reflects trips that both originate and terminate in this community. The figure also shows high percentages of Saturday trip ends occurring in the municipalities of Mount Penn and Wyomissing, which are areas with several shopping centers and other major generators. In addition, a high percentage of weekday trip ends operated to "other" provided by Easton Coach likely reflects out-of-county MATP trips.



STAKEHOLDER INTERVIEWS

This section presents the results of a series of interviews conducted with representatives from various social service agencies and medical facilities in Berks County whose clients/patients utilize BARTA Special Services on a regular basis. The intention of this study phase was to give the organizations a forum in which to offer their opinions of the overall performance of BARTA Special Services as well as provide suggestions on improving the service. The observations that are noted in the interviews provide the consultant team with valuable qualitative information to identify functional characteristics of the service that may warrant further review and analysis and form the basis for future planning activities. The stakeholder interview process consisted of three basic steps: (1) identification of the stakeholders, (2) preparation of a list of topics to be discussed and (3) the actual conduct of the interviews. Each of these steps and the results are presented in this interim report.

Stakeholders

BARTA Special Services staff and the consultant team worked together to identify a list of organizations in Berks County that would likely have the greatest knowledge and insight into the day-to-day operations of the BARTA Special Services system as a result of having a significant number of clients or patients who utilize the service. The organizations selected represent a cross-section of government and non-profit organizations, with each organization providing a unique viewpoint regarding the transportation needs of their clients. A total of eight individuals were invited to participate in the stakeholder interview process; of this group, seven individuals participated in the interviews. The complete list of the stakeholder interview participants is presented in Table 15 which indicates the range of interests and perspectives that the stakeholders brought to the effort.

Table 15 - Stakeholder Interview Participants

Name	Agency
Heather Brossman	Threshold
Stephanie Hill	Prospectus Berco
Debbie Lubas	Pennsylvania Dialysis Clinic of Reading, Inc.
Kathy Munroe	Berks County Area Agency on Aging
LuAnn Oatman	Berks Encore
Jodie Smith	Reading Dialysis
Ralph Trainer	Abilities in Motion

Findings and Results

While the stakeholder interview process provides a flexible format for soliciting views, eleven topics were prepared prior to the conduct of the interviews. It provided an outline of issues to be discussed and in some cases led to the discussion of other topics. The topics ranged from the assessment of current services through suggested improvements. At the end of the

interview, time was allowed for participants to make any comments that they felt were not covered.

It should be noted that some comments reflected the view of a single individual, while other comments represented a widely held view. Another point to note is that the views are subjective and reflect attitudes and perceptions. Only one of the stakeholders rides BARTA Special Services on a regular basis, with the other stakeholders using the service only when a client requires an escort during their first trip aboard the system. In many instances, stakeholder comments and/or perceptions of BARTA Special Services is based on what they hear from their clients who use the service.

It should also be recognized that BARTA Special Services consists of several programs (i.e., Shared-Ride, ADA, MATP, and PwD) with different eligibility requirements and operating hours. For example, ADA service operates during the same hours as the BARTA fixed route bus system, while the other programs administered by Special Services operate a more limited span of service with weekday “daylight” hours. Further, ADA eligible users can request next day service while the other programs require users to schedule their trips at least two business days in advance. Another factor that may impact the perception of service is that BARTA contracts approximately one-third of its demand responsive trips to the Easton Coach Company.

Although the stakeholder participants generally do not ride BARTA Special Services, the comments still provide a useful and timely input to the planning process. The remainder of this chapter presents the comments of the study participants.

- **The first three questions asked to stakeholders to describe the programs offered by their agency, the types of clients and their transportation needs, and whether or not they rely solely on BARTA and/or provide their own transportation or transportation from another provider.** The stakeholders represent organizations that primarily serve senior citizens, persons with disabilities, and low income individuals and provide a wide array of services to these population groups such as meal programs, advocacy and medical and financial consultation. A proportion of their clients rely on BARTA Special Services and/or the BARTA fixed route system to access medical appointments, employment opportunities, and other essential services. The stakeholder organizations determine if their clients are eligible to use BARTA Special Services.

MH/MR clients pay for transportation, with the money coming out of their annual “budget” that is funded by state and federal programs to attend day or residential programs. In some cases, BARTA Special Services trips are subsidized using Human Services Development Funds which require clients to pay \$3.00 per trip to ride the demand responsive system. Although the cost of transportation is often subsidized, a few of the stakeholders indicated that clients live on very modest incomes and any cost attributed to transportation is a financial burden, especially if the client uses BARTA on a regular basis. Further, the annual money received from state and

federal programs can fluctuate and in turn, may provide less money to clients during a particular year depending on the overall economic situation.

None of the stakeholder agencies directly operate transportation service or use any operator other than BARTA to provide transportation for their clients. The only transportation program of significance not operated by BARTA is the “Meals on Wheels” program which is provided through the use of volunteer drivers. It was also noted that many of the group homes in Berks County have a vehicle available on-site; however, these vehicles are not used on a regular basis and are not intended to be an alternative to BARTA. There are some occasions when a client will use a taxi or ambulance service on a return trip from a medical appointment if the appointment ends after the operating hours of BARTA Special Services. In these situations, the cost of using taxi or ambulance service is paid for by the stakeholder agency, the medical facility or the client and is considerably more expensive than using BARTA.

Other factors that contribute to the utilization of transportation providers other than BARTA include the requirement that all trips other than ADA be scheduled at least two business days in advance, as well as the system’s policy of not providing transportation to a client if the initial pick up is cancelled or determined to be a no show, despite the fact that the client may need transportation service later in the day. More than one of the stakeholders indicated that many of the no shows are the result of BARTA Special Services drivers not providing door-to-door service and thus, not alerting the client that their vehicle has arrived.

A few stakeholders also indicated that many senior citizens are now driving well into old age rather than rely on BARTA Special Services.

- **Reservation procedures and the process for tracking trips, basis of payment and monitoring performance.** The stakeholders indicated that social service agencies are responsible for completing the application process and/or determining client eligibility, while the clients are largely responsible for making their own reservations on BARTA Special Services. The stakeholders noted that some trips to senior centers and MATP trips are scheduled by the agencies, as are trips for clients who lack the cognitive ability to schedule transportation on their own. The stakeholders do not track trips or monitor performance other than the service they observe on a daily basis that is provided to their clients. Overall, the only complaint from the stakeholders regarding the reservation process is the requirement that trips other than ADA must be scheduled at least two business days in advance. In addition, a few stakeholders also indicated that they occasionally receive complaints from their clients that the telephone reservation number is busy for an extended period of time.
- **Quality of service and management provided by BARTA.** BARTA Special Services received a favorable opinion from the stakeholders in terms of the overall quality of service and the system’s responsiveness to questions and/or concerns about existing services. Many of the stakeholders realize that there are limits of what can

be expected from BARTA as a result of limited resources and the unique needs of the people using the Special Services system. At the same time, there were certain issues cited by multiple stakeholders that could be improved, including the lack of professionalism and sensitivity among certain drivers, long wait times for pick-ups, excessive travel times between origins and destinations, and inconsistency in the provision of door-to-door service. Further, one stakeholder indicated that many of the older Special Services vehicles provide an uncomfortable ride, especially for those riders sitting in wheelchairs. At the same time, many of the stakeholders were pleased with the overall condition and interior cleanliness of the vehicles.

- **Knowledge of BARTA Special Services in Berks County.** There was a general consensus among the stakeholders that BARTA could do a better job marketing the Special Services system to agencies whose clients use the service and also in the outlying areas beyond the City of Reading, where fixed route bus service is not as prevalent and residents are not as familiar with public transportation compared to residents in Reading who in recent years have been coming from large metropolitan areas with large transit systems and understand how to use the BARTA system (i.e., transit habit).

Many stakeholders do not have printed information about BARTA Special Services and lack a full understanding of the eligibility requirements and programs offered by the system. This was magnified by the lack of knowledge concerning how to file a complaint about the system. BARTA publishes a Special Services Handbook as well as a brochure describing the MATP program. The Special Services handbook is available on the BARTA website; however, the MATP brochure or information regarding the MATP program is not on the website at this time. A few stakeholders indicated that most agencies and clients generally call BARTA if they have any questions about the Special Services system.

In addition, it was mentioned during the stakeholder interviews that Berks County will soon have a 2-1-1 telephone number that will provide a one-stop information resource for the human service programs and public transportation options.

- **Transportation needs in Berks County not being met by BARTA Special Services.** There was a general consensus among the stakeholders regarding the unmet needs that should be addressed by BARTA Special Services, which included the provision of same-day service, more service in the rural areas of Berks County, and the provision of evening and weekend service. The increase in service hours and the expansion of service was seen as important to provide more opportunities for clients to access job opportunities and for senior citizens to have better access to essential services; same-day service was in response to the observation that the wait times for pick-ups is too long and results in the use of more expensive taxi and ambulance services that is paid for by the agencies, medical facilities, or the clients themselves. Comments provided by a single stakeholder included expanding the fixed route service and creating transit hubs in the rural areas of Berks County.

- **Travel training and education programs to encourage greater use of the BARTA fixed route system.** It was noted that a few agencies train their clients how to ride both the BARTA fixed route and Special Services systems, with one stakeholder suggesting that BARTA should provide a day pass to agencies so they can have a staff member ride with their clients on their first trip on the system without the agency having to pay out-of-pocket for the trip. In general, the stakeholders indicated that BARTA does not actively promote travel training to agencies or their clients.

One stakeholder indicated that BARTA should reach out to certain segments of the riders using Special Services who may think they are unable to utilize the fixed route bus system, when in fact they can ride the buses and experience a significant increase in their mobility options compared to the Special Services system. The same stakeholder also added that it is not only more cost effective for BARTA if more people switched from Special Services to the fixed route buses, but it would also ensure that Special Services has sufficient capacity and resources to provide transportation to people who really need and depend on Special Services to meet their mobility needs.

This question also elicited a number of comments regarding the need for BARTA to provide more sensitivity training, as well as provide drivers with better information about certain riders or current conditions at pick-up points so drivers are not surprised or annoyed when there is a delay or difficult passenger.

- **Improving BARTA Special Services.** There were several comments repeated from previous questions, such as driver sensitivity training, improving on-time performance, more rural service, and excessive trip length/travel time experienced by clients that may indicate areas where BARTA may need to undertake a closer analysis to determine if a problem does exist in these areas. The improvement suggestions that were not mentioned in previous questions were generally provided by a single stakeholder and included the use of voicemail or e-mail to make reservations; the operation of a weekly shopping shuttle for senior citizens; technology to track buses; prepaid smart cards; better communication between BARTA and human service agencies; and initiate more frequent meetings of the demand responsive advisory committee.

Overall, the stakeholders indicated that there is more positive than negative aspects regarding BARTA Special Services, but there is room for improvement in certain areas. Additional information that was obtained from this question included that the service provided by Easton Coach has improved over the last few years compared to when the operator first began providing service. Another stakeholder suggested that since rail service to Reading is not likely to happen for some time, BARTA should provide inter-county service to Lancaster so people can access Amtrak. Lastly, a stakeholder indicated that BARTA is the only real option for transit service in the area for their clients due to the lack of taxi companies and other private transportation operators in the area.

RECOMMENDED PLAN

There are various opportunities where BARTA Special Services can improve the productivity and efficiency of the demand responsive system. The recommendations are primarily short-term that can be implemented within one or two years, while other improvements are longer term and would require more significant changes that can be implemented within a three- to five-year time period. Each of the recommendations is highlighted below.

- **Functional Assessments** - BARTA should develop a more rigorous application process for determining ADA eligibility by requiring an in-person functional assessment. This recommendation would require an ADA applicant to meet with a medical professional who would test a person's abilities, skills, or limitations. In many cases, certain individuals with disabilities that are not expected to change are excluded from this process, such as the legally blind, nursing home residents, and older senior citizens (age 80+). Alternatively, a functional assessment could be performed from a practical level where the applicant could be required to visit BARTA's office to determine if the individual can board a bus, read headway signs, etc. Currently, BARTA staff does not view functional assessments as a problem area, but may take on added importance in the future.
- **ADA Re-certification** - According to federal regulations, BARTA can require individuals to periodically re-apply for ADA eligibility. While a person's disability may be permanent, other factors determining eligibility may change. For example, barriers that previously limited a person's access to transit may have been corrected and the person could make greater use of the BARTA fixed route bus system. While the ADA regulations do not specify the period for which individuals should be certified, Special Services currently has no re-certification process and does not update its records on ADA eligible clients on a regular basis.

Special Services should implement a re-certification process for ADA clients every three years. This change could be used to identify certain individuals capable of riding fixed route service. The re-certification process permits the agency to eliminate from their eligibility rosters passengers who are deceased or those who have relocated to another community.

- **Travel Training** - Providing travel training can help BARTA encourage more ADA riders to use the fixed route bus system. Some travel training programs are directed toward riders with cognitive disabilities. The travel training they receive is often for a specific round trip, such as a trip between home and work or home and another common destination. Other travel training programs are broader in scope. Some older individuals who apply for ADA transportation have rarely used public transportation. As a result, if Special Services does provide travel training, it is

important that the training include teaching the basics of public transportation which would include:

- how to read a map and bus schedule;
- where to wait for a bus, how to board and pay the fare; and
- how and when to signal for the desired stop.

To encourage the use of the BARTA fixed route system over the use of ADA service, disabled riders should be allowed to ride fixed route buses at no cost. Senior citizens are currently allowed to ride the fixed route system for free. This is a significant economic incentive since the demand responsive trip is priced at twice the comparable bus fare.

- **Improve Public Information Materials** - BARTA should produce separate brochures for each transportation program that explain all of the transportation services offered by BARTA. The materials should have a similar format and be available in hardcopy and on the BARTA website.

Further, the information included in the brochures should be consistent and the policies clearly defined. In the two public information documents currently provided by Special Services (i.e., BARTA Special Services Handbook and the Medical Assistance Transportation Program (MATP) Guidelines brochure), there are certain inconsistencies as well as information that could be better clarified so new riders understand how Special Services operates. To some extent, the inconsistencies reflect mandates of the MATP program. They include:

- The process for filing a complaint is included in the MATP brochure but is not in the BARTA handbook. In addition, the complaint instructions are unclear as to where the complaint should be directed to in terms of designee, address, etc.;
- The no-show policy is explained differently in the two printed documents;
- The 60-minute pick-up window should be more clearly defined so the public understands that it applies to all passengers and is not only related to ADA trips. For example, in the BARTA booklet, a section states that riders are given an approximate pick-up time and to be ready a few minutes ahead of schedule; this explanation is inconsistent with the existing 60-minute window; and
- Telephone hours are inconsistent in that there is information indicating riders can call Special Services on weekdays between 8:00 AM and 4:00 PM, while other information indicates riders can call to cancel service on weekdays from 6:00 AM to 6:00 PM. This information could be confusing to a rider who left their return pick-up time open because of a doctor's appointment and is told to

call BARTA for a pick-up when the appointment is finished. It is unclear if the rider can still call BARTA after 4:00 PM to be picked-up.

At the time of this report, BARTA staff was preparing revised public information materials that address many of the points raised here.

- **Monitor Call Center Statistics** - BARTA should begin monitoring the telephone reservation process for the purpose of ensuring service quality and timeliness. This could be accomplished through enabling the telephone system to track calls or conduct a phone study for a sample of calls. Information that should be collected in evaluating the quality of telephone service and timeliness in responding to rider calls includes:

- Average daily trip requests;
- Maximum hold time each day;
- Average hold time each day;
- Average call processing time; and;
- Missed or dropped calls that are terminated.

- **Refresher Training on TransView** - The Director of Special Services indicated that staff is still learning what kind of information and reports can be generated from TransView. This area does seem to be improving based on the preparation of Monthly Productivity Analysis reports, which provide a variety of operating and performance data and show trips by time of day. In addition, drivers indicated that many trips that might appear appropriate on paper actually provide little slack or recovery time and make it difficult for drivers to operate on-time. This type of scheduling issue can be rectified by adjusting the algorithm used by TransView to schedule trips.

It is recommended that BARTA contact the maker of TransView (i.e., Enghouse Transportation) and request refresher and additional training. It would appear that effort has been initiated to obtain additional training. The Director of Special Services indicated that limited training was provided when the software was installed approximately two years ago.

- **Software Functionality** - TransView has a number of capabilities and reporting features that are not currently being fully utilized by staff. As noted above, the generation of the Monthly Productivity Analysis is a step in the right direction and will indicate other opportunities for reporting and support analysis to improve system efficiency and effectiveness.
- **TransView Use by Easton Coach** - BARTA should make the TransView software package available to Easton Coach to provide better coordination between services, facilitate faster data collection, and allow for more accurate and timely data analysis.

The transmittal of data and day-to-day scheduling information would occur using the internet to connect the two operators. Easton Coach has experience using TransView in other counties where it operates contract service so the learning curve would likely not be too significant. At the very least, it would simplify the transmission of trips requests that have been assigned to the contractor. With increased functionality, additional information could be obtained on Easton Coach.

- **PennDOT Software** - The Bureau of Public Transportation has recently secured paratransit scheduling software (i.e., Ecolane). Two demonstrations will soon be underway in Montgomery County and York County, and the results may suggest BARTA switch from TransView to the new software. In addition to the capabilities of the new software, it is designed to simplify reporting various statistics to PennDOT. Also, it does include provisions for automated data input through MDTs and AVL which should provide useful information on paratransit operations and performance. BARTA should monitor the performance of the new scheduling software purchased by PennDOT. Since there are similarities between programs, efforts expended on better use of TransView should prove beneficial should BARTA opt to use the new software.
- **Technology** - BARTA recognizes the importance and benefit of technology to schedule service and monitor its performance. All Special Services vehicles, operated by BARTA, are equipped with AVL units which track the location of vehicles on a real-time basis, and the system is in the process of installing MDTs in all Special Services vehicles to allow drivers to enter actual mileage and time at each pick-up and drop-off location. The information should also include late cancellations and no shows which affect operations. These data enables staff to compare the way trips are scheduled and the way service is actually operated. Currently, data on actual operations needs to be entered manually which precludes its use except on a sample basis. The technology would permit the key data items to be recorded and be available for review in an efficient manner. Knowing the deployment of the fleet allows the dispatcher to make changes more readily.

The installation and application of AVL and MDT technology should also be extended to Easton Coach to improve service delivery and more accurate data collection.

- **Service Standards** - BARTA should adopt a set of service standards for paratransit service that is similar to those for the fixed route system in that it reflects the views of the riders, operator and funding agencies. It would include the following statistics for parts of the operation (i.e., in-house and contractor) and the entire system:
 - Passengers per revenue hour
 - Operating cost per revenue hour
 - Operating cost per passenger
 - Safety Incidents per 100,000 Vehicle Miles

- Miles between roadcalls
 - Complaints per 100,000 riders
 - On-time performance
 - Trip denials
 - Missed calls
 - Telephone hold times
 - Missed trips
 - No show/late cancellation rates
 - Average travel time
 - Average trip length
- **System Monitoring** - The service standards should become the basis for monitoring the system and suggest reports that should be presented of aggregate statistics along with performance measures as illustrated above. The reports would be prepared for in-depth review by staff and more summary results that are more appropriate for Board presentations. Monitoring system performance on a regular basis is critical to maintaining efficient service, assuring contract compliance, identifying potential problems as well as suggesting areas for improvement. Special Services is beginning to provide more comprehensive reports for determining performance, such as the Monthly Productivity Analysis report that is prepared using TransView. Further, with the installation of MDTs and AVL, data will be more accurately recorded and more readily available for analysis.

The reporting should follow a monthly, quarterly and annual reporting cycle. At the end of the year, BARTA should compare performance to the established guidelines at the beginning of the year. BARTA staff should determine which performance measures improved and which performance measures declined. If any strategies were tried to rectify any problems, staff should determine if the strategies had a positive or negative effect, and why. An annual assessment of performance will enable BARTA to delineate positive performance improvements and aid in determining changes needed where performance may have declined.

- **On-Street Supervision** - More emphasis should be placed on providing on-street supervision along with rider satisfaction surveys. BARTA should monitor Easton Coach Company on a more regular basis. The most recent FTA compliance review cited Special Services for its lack of oversight over Easton Coach. Although this issue has been corrected, interviews conducted with the Easton Coach operations and administration staff indicated there is limited interaction with BARTA unless there is some type of problem that needs to be resolved.
- **Staffing** - Some of the recommendations presented here call for more analysis of the paratransit system. In view of the current limited staff, these proposals may suggest additional staff to perform the routine tasks which would allow more time to be devoted to managing the system and its resources.

- **No Show/Late Cancellations Policy** - The difference between scheduled and actual trips served is relatively high and steps should be taken to discourage people from not making trips that they requested. Special Services has a no-show policy in which the rider receives written warnings for the first two no-shows, and a written warning and a 30-day suspension of service after the third no-show. However, there are no time parameters regarding the no-show policy (i.e., riding frequency, monthly usage, etc.). The accumulation of no shows over a period of time should be better defined as the current policy might be contributing to the high number of late cancellations.

BARTA does need to reduce the rate of late cancellations by implementing a policy that penalizes riders who cancel trips within a specified period of time. The penalties should be similar to the no show policy with an initial late cancellation generating a warning letter through greater sanctions that include loss of service for repeat offenders. No shows and late cancellations should be reported daily the same way Special Services tracks passengers carried and other operating statistics. Most systems report both the aggregate occurrence of no shows and late cancellations as well as on a percentage basis relative to either trips scheduled or operated.

- **Fleet** - The demand responsive system fleet consists of both vehicles owned by BARTA and those provided by the contractor. It would appear that some vehicles currently in use exceed their useful life and should be replaced. The vehicles used by Easton Coach appear to be older in age and more likely to exceed their useful life. Many of the buses that BARTA provides to Easton Coach are older. The service should be transparent from the viewpoint of the rider and the likelihood of riding in an older coach should not differ by whether the service is operated by in-house personnel or the contractor. One possible remedy is for BARTA to own all vehicles and provide some buses to the contractor at a nominal charge. This would more readily permit MDTs and AVL on all vehicles. Regardless of the ownership situation, the fleet should be modern with no vehicles exceeding their useful life.
- **Vehicle Maintenance** - Vehicles operated by BARTA are maintained by in-house staff at their facility. Easton Coach does not perform vehicle maintenance at its operating base in Muhlenberg Township and instead drives its vehicles to an Easton Coach garage in Lancaster County for vehicle servicing and repairs. This procedure increases mileage on revenue vehicles and it is likely that vehicles are not being serviced on a regular basis. An on-site observation coupled with driver interviews indicated various mechanical problems including inoperable wheelchair lifts and difficulty starting vehicles in the morning for the first pull-outs. The existing facility is not properly equipped or sized to perform adequate preventative maintenance, nor can the facility store more than a few vehicles indoors at a given time.

Easton Coach should find a larger facility in Berks County which will permit it to provide on-site vehicle maintenance. Alternatively, Easton Coach could arrange an agreement with BARTA to use its facilities and staff to provide certain vehicle maintenance functions; it is important to point out that the Easton Coach and BARTA

facilities are separated by only a few miles. One benefit of BARTA providing vehicle maintenance would be the ability to ensure Easton Coach is maintaining consistent maintenance practices and is keeping its vehicles in good condition for the benefit of the passenger.

- **Vehicle Storage** - Easton Coach does not provide indoor storage. In view of the climate, arrangements should be made to avoid outdoor storage.
- **Contracting** - The key feature of the contract between BARTA and Easton Coach is the basis for payment. For trips within Berks County, Easton Coach is paid per trip with the amount tied to the number of zones traverse which is a surrogate of the distance travelled. MATP out-of-county trips are paid on a mileage and waiting time rate. The payment basis is logical since Easton Coach performs its own scheduling. Some potential enhancements to the contract would include:
 - Since Easton Coach uses vehicles that are provided by BARTA and those they own, there should be a differential rate based on the vehicle ownership. This arrangement encourages the contractor to accumulate miles on BARTA buses. If BARTA provided the entire fleet, this would not be an issue.
 - The contract should include incentives/penalties based on various quantitative performance measures such as on-time/schedule adherence, vehicle cleanliness, driver appearance and complaints.
 - Currently, BARTA staff resources are not adequate to schedule all vehicles and provide Easton Coach the driver runs. In a few years with increasing capability in scheduling this situation could occur. Under these circumstances, the basis for compensation could be tied to revenue hours of service.
 - One concern with the current contract was that Easton Coach was the only bidder. BARTA should take steps to encourage a more competitive situation. This could include a joint award with another agency or contracting out a larger share of the Berks County trips to encourage national contractors to bid. Another approach would be to break the RFP into smaller bids with multiple awards. In the future, debriefings should be sought with those firms that expressed initial interest, but chose not to submit and ascertain how the RFP could be revised.
 - Because of differences in wages and fringe benefits, it is less costly to provide service on Easton Coach than using BARTA in-house staff. Typically, about one-third of all trips are transported by the contractor and this trip share could be increased. One concern is whether the current private operator would be able to transport additional riders.

- **Transparency** - The riding experience should be the same regardless of whether the person is being transported on a vehicle operated by BARTA in-house staff or by Easton Coach. This was mentioned with regard to fleet age, but should also be evaluated in terms of vehicle cleanliness, driver appearance and courtesy and similar attributes observed by the riders.
- **Part-Time Drivers** - The current contract allows for no more than five part-time drivers with the bulk of the BARTA runs performed by full-time employees. An objective of future collective bargaining agreements should be to increase the number of part-time drivers. The ridership levels vary considerably during the day with relatively low volumes during the midday period. With the exception of lunch, driver assignments are for most of day, which results in more vehicles in service than needed during the service span. Increased part-time operators would provide opportunities for reducing overtime payments to drivers and achieve other cost savings. The current labor contract expires on June 30, 2013. It is recognized any revisions to the current contract terms would have to consider part-time driving positions in light of wages, fringe benefits, percent of trips contracted, span of operations (e.g., Saturday) and a host of monetary and other proposals.
- **Extend Shared Ride Service Hours** - Consideration should be given to extending the extending the Shared Ride program's span of service to later in the early evening and on Saturday and possibly introduce Sunday service. This is a longer term proposal since it has significant impacts in terms of staffing levels and costs.

The discussion above provides an extensive list of proposed changes to the BARTA demand system. Some of these proposals have been initiated and call for increased efforts while others represent new suggestions to improve the quality of service and its efficiency and effectiveness.

FORECASTS

The previous chapters have provided considerable information on the existing demand responsive system administered and operated by BARTA. It also included more than a dozen proposals to build on the strengths of the current system and identify improvements in a number of areas. The concluding portion of the review of BARTA's Special Services Division is operating and financial forecasts for the next five years and a capital program. Much of this material is taken from BARTA's existing information since the agency has prepared budget estimates for the next few years as well as a capital improvement program to support the regional Transportation Improvement Program (TIP).

Operating and Financial Forecasts

To indicate the impacts of the operating and financial requirements of BARTA's Special Services Division for the five-year planning period between FY11-12 and FY15-16, forecasts were prepared using key operating, ridership and financial statistics, with the latter including operating costs, revenue and deficit. The first four years of the plan is derived from projections developed by BARTA and have been presented to PennDOT. BARTA is to be complimented for extending its budget cycle beyond one year to a more useful multi-year trend of future conditions. The final year (i.e., FY 15-16) forecasts were estimates prepared by the consultant team. They extrapolate trends observed in prior years and those anticipated by BARTA during the next four years.

As shown in Table 16, service levels are expected to remain at current levels and not change during the next five years. The projections reflect no planned expansion of operations for the Special Services Division during the five-year period. Consistent with the stable nature of revenue hours and revenue miles, system speed will be unchanged.

Ridership is projected to increase by approximately eight percent, which is a slightly lower rate than ridership reported in previous years before the planning period. With service levels stable, the ridership gains result in improved productivity in terms of both passengers per revenue hour and revenue mile.

The next step in preparing the operating forecasts was an estimate of both operating costs and revenue. To reflect the impact of inflation, both operating costs and revenue were adjusted with the resulting amounts presented in current year dollars. Between FY 11-12 and FY 15-16, it was assumed that costs would escalate about four percent annually. In a similar manner, revenues were escalated to reflect decisions regarding fare policy and reimbursement. For the planning period, it was assumed that revenue would increase between three and four percent annually from approximately \$2.1 million to \$2.4 million. While the plan for Special Services does not call for a specific fare increase, it is reasonable to expect some modifications to the current fare structure and agency reimbursements. The revenue estimates also reflect the gain in ridership during the planning period.

Table 16 – Operating and Financial Forecasts

Item	FY 11-12	FY 12-13	FY 13-14	FY 14-15	FY 15-16
Operating Statistics					
Revenue Hours	61,500	61,500	61,500	62,100	62,100
Revenue Miles	923,600	923,600	923,600	932,500	932,500
Average Speed (mph)	15.00	15.00	15.00	15.00	15.00
Ridership and Productivity					
Ridership	248,100	253,100	258,100	263,100	268,400
Passengers/Revenue Hour	4.03	4.11	4.20	4.24	4.32
Passengers/Revenue Mile	0.269	0.274	0.279	0.282	0.288
Operating Costs and Financial Measures					
Operating Cost	\$5,490,500	\$5,723,600	\$5,952,500	\$6,131,100	\$6,376,300
Revenue	\$2,120,800	\$2,184,400	\$2,269,900	\$2,334,200	\$2,425,500
Deficit	\$3,369,700	\$3,539,100	\$3,682,600	\$3,796,900	\$3,950,800
Cost/Revenue Hour	\$89.24	\$93.03	\$96.75	\$98.74	\$102.69
Cost/Revenue Mile	\$5.94	\$6.20	\$6.44	\$6.57	\$6.84
Cost/Passenger	\$22.13	\$22.61	\$23.06	\$23.30	\$23.76
Operating Funding					
Federal	\$896,700	\$932,900	\$968,900	\$1,007,600	\$1,046,500
State	\$2,366,700	\$2,496,600	\$2,598,500	\$2,668,400	\$2,777,300
Local	\$106,400	\$109,700	\$115,100	\$120,900	\$126,900
Total	\$3,369,700	\$3,539,100	\$3,682,600	\$3,796,900	\$3,950,800

The next step in the process was to estimate the amount and source of funding to close the gap between operating cost and revenue. Considering past funding levels, estimates were prepared of expected increases in subsidy by federal, state and local governments. Federal funding sources accounted for about one-quarter of the required subsidy. Major funding would be from the Commonwealth which is expected to provide about two of every three dollars of subsidy. Local funding from Berks County is expected to comprise about three percent of the funding. While escalation rates differ between sources, typically increases in funding range from approximately three to four percent annually.

Capital Plan

The demand responsive system is operated by a fleet of 62 vehicles which are both owned and operated by BARTA and Easton Coach. Currently, BARTA owns 49 vehicles of which 40 are used for in-house operations and nine are leased to the contractor. In addition, Easton Coach provides 13 vehicles which they own and operate. The BARTA owned fleet consists primarily of body-on-chassis vehicles which are lift equipped. In contrast the Easton Coach owned vehicles are vans and are not accessible. Another characteristic of the fleet used in service is that some of the vehicles exceed their useful life of about five years.

A review of current operations of services operated by both BARTA and Easton Coach suggests that the current fleet size is adequate in terms of vehicles necessary for meeting scheduled service and an adequate allowance of spare vehicles as shown in Table 17.

Table 17 - Fleet Requirements

Operator	Peak Vehicles	Spares	Total
BARTA	34	6	40
Easton Coach	18	4	22
Total	52	10	62

With respect to the future needs of the demand responsive system, several proposals are suggested as follows:

- The combined vehicle fleet operated by BARTA and Easton Coach is properly sized to accommodate current and future demand, with enough vehicles available to provide sufficient peak period service while at the same time having an appropriate number spare vehicles on-hand. Accordingly, the bus acquisition program is designed to replace buses without the need to provide additional vehicles for system expansion. In view of the stable service levels anticipated in the future, the fleet requirements presented in Table 17 are adequate for the next five years.
- All vehicles that are currently beyond their useful economic life or will be so during the five year planning horizon period should be replaced.
- The service provided to users should be transparent in terms of vehicles used and regardless of operator. This can best be achieved by BARTA ownership of all vehicles, although near term this may not be possible because of funding constraints.
- All vehicles should be accessible to all patrons and be AVL/MDT equipped.
- The vehicle best suited to Special Services operations is the body-on-chassis coach that is lift equipped. This is consistent with BARTA’s current fleet and plans for the future. BARTA is exploring alternative propulsion vehicles which will shape future procurement decisions. Because of the nature of some trips, consideration should be given to the purchase of two or three vans, but they should be lift equipped.

In the current TIP (FY 13-FY 16), BARTA plans to replace all 49 vehicles used by Special Services which would include the 40 used by BARTA and nine vehicles that are leased to Easton Coach. In this current year, BARTA acquired 25 vehicles which allowed them to retire the oldest vehicles in their fleet (e.g., manufactured in 2002). In addition, five vehicles would need to be replaced in the next year (FY 17) to assure a modern fleet. The fleet replacement schedule is presented in Table 18. The costs of replacing the 49 vehicle are included in the TIP with the costs of five vehicles in the last year would be \$425,000.

Table 18 - Vehicle Replacement (BARTA Owned Vehicles)

Year of Manufacture	2012	2013	2014	2015	2016	2017
2000						
2001						
2002	2					
2003						
2004	1					
2005	1					
2006	7					
2007						
2008	5					
2009						
2010	3	3	3			
2011	25	25	25	25		
2012	5	5	5	5	5	
2013		16	16	16	16	16
2014			0			
2015				3	3	3
2016					25	25
2017						5
Total	49	49	49	49	49	49

Denotes vehicle purchase

The contractor also owns a fleet of 13 vans that are not wheelchair accessible and have exceeded their useful life. The TIP does not include a vehicle replacement plan for the Easton Coach owned vehicles but a vehicle replacement plan has been developed for the service operated by the contractor (Table 19). While it would be desirable to replace all 13 vehicles this year, the cost would be substantial at about \$1.1 million. The plan presented assumes a more gradual replacement schedule with smaller sums available in each year. No funds have been identified to replace the vehicles that Easton Coach provides for the service that they operate. As noted previously, BARTA should have as an objective to own all vehicles and make them available to the contractor. An alternative would be for the Easton Coach to replace the vehicles and negotiate a lease rate for this new equipment.

Because of the recommendation that all vehicles be AVL equipped, outfitting the 13 vehicles with AVL units will cost a total of approximately \$160,000, or around \$12,300 per vehicle.

Table 19 - Vehicle Replacement (Easton Coach Owned Vehicles)

Year of Manufacture	2012	2013	2014	2015	2016	2017
2000	1					
2001	2	1				
2002	3	3	2			
2003	3	3	3	2		
2004						
2005	2	2	2	2	1	
2006						
2007	2	2	2	2	2	
2008						
2009						
2010						
2011						
2012						
2013		2	2	2	2	2
2014			2	2	2	2
2015				3	3	3
2016					3	3
2017						3
Total	13	13	13	13	13	13

Denotes vehicle purchase