INTRODUCTION

To prepare this Long Range Public Transportation Plan, a work program of several sequential tasks was undertaken. The initial step was the conduct of a retreat with RRTA Board members and staff to obtain their insights on the future of the RRTA. Community leaders and representations of businesses were also surveyed to obtain their input. Next, a description of the current bus system was prepared along with a description of the community in which it operates. The study also included is a community participation program that solicited input from the bus riders and residents of the county. The final part of the plan includes a description of the long range service improvement proposals followed by a recommended plan that identified the impact of the service recommendations as well as provides an implementation schedule for the various proposals.

Major input to this plan was obtained through many sources including the Counties 2005-2030 Long Range Transportation Plan, the Counties Human Services Transportation Plan adopted in 2007 by Lancaster County Transportation Coordinating Committee, the Comprehensive Plan for Lancaster County completed in 2006 and the 2009-2035 Long Range Transportation Plan update.

This initial chapter summarizes the organization of this Long Range Public Transportation Plan.

There are five major chapters comprising this report, including:

- **Community Characteristics** – The initial chapter of the study describes the setting within which the existing RRTA fixed route bus services are provided. The chapter examines information on socioeconomic characteristics and identifies major transit generators throughout Lancaster County. The socioeconomic variables examined include current population, population change from 2000 to 2030, population density, senior citizen population, youth population, disabled population, low income population, median household income, zero car households, employment, and journey to work. The transit trip generators include major employers, retail complexes, colleges and universities, hospitals, senior citizen facilities, and business parks and warehouses. This information is subsequently used to assess how the RRTA system could most efficiently utilize their resources to address existing and future needs and to provide the background data necessary for developing service improvement proposals.

- **Existing Transit Services** – The focus of this existing public transportation services section is on the scheduled, fixed route bus services operated by RRTA. This chapter provides an overview of these services with a description of routing, frequency and span of services provided as well as a brief description of Red Rose Access service. Also included in this chapter is a description of the current fare structure as well as the five-

year operating, financial and ridership performance trend analysis of the services on a systemwide basis.

- **Community Participation Program** – This chapter included the results of an opinion survey of current RRTA riders and the results of a mail-out/mail-back survey that was mailed to Lancaster County residents. The rider opinion survey was intended to identify the types of changes that would influence the riders to travel more, as well as provide riders with the opportunity to provide input on a variety of local issues related to RRTA service. The riders were asked a series of questions concerning their riding habits, opinions regarding RRTA services as well as questions pertaining to their family income, age, gender, and occupation. A total of 151 valid surveys were returned and tabulated. The resident survey was intended to quantify the attitudes of non-regular users toward public transportation services. A total of 364 valid surveys were returned and tabulated. This chapter presents the findings of the rider and resident surveys.

- **Long Range Service Improvement Proposals** – This chapter presents a description of the long range service change proposals developed for RRTA. The proposals are based on meetings with the local business community, the RRTA board and staff, and several community leaders; the findings from the community characteristics chapter; and the results of the riders and resident surveys. Next, long range goals and objectives are developed from a series of Guiding Principles and input from the RRTA Board and Advisory Committee. The final part of this chapter summarizes the long range transit service proposals and groups them into several implementation categories.

- **Recommended Plan** – The final chapter summarizes the financial and capital impacts of the Long Range Improvement Plan presented in the previous chapter. This analysis includes estimates of service levels and operating costs as well as expected patronage and revenue. The chapter also includes a capital improvement program that reflects current needs and those needs related to the service proposals. The capital improvement plan includes recommendations for revenue equipment, park-n-ride lots, garage facility expansion, facility upgrades, new stations and other transit facilities.

- **Appendices** – Appendix A includes the survey form that was used for the Rider Survey. Appendix B provides the letter and survey form that was mailed to residents of Lancaster County as part of the Resident Survey.

COMMUNITY CHARACTERISTICS

Lancaster County is located in southeastern Pennsylvania, bounded by Berks County to the northeast, Chester County to the east, Cecil County (MD) to the south, York County to the west, and Dauphin and Lebanon Counties to the northwest. The County covers 950 square miles and has a population density of 495.4 persons per square mile. The county is largely rural with agriculture being the predominant land use. The primary urban setting is Lancaster City, which is located in the central portion of the county at the confluence of U.S. Route 30 and U.S. Route 222. The municipalities surrounding Lancaster City comprise the county's largest suburbanized area. Taken together, Lancaster City and the surrounding municipalities contain the majority of the county's major transit generators including hospitals, shopping centers, and institutions of higher learning. Lancaster County is served by several major road corridors, including Interstate 76, U.S. Routes 30, 222, and 322, and PA 283. In addition, Amtrak intercity rail service is available from Lancaster City to destinations along the Keystone and Northeast Corridors, including Harrisburg, Philadelphia, and New York City.

There are 60 municipalities (Lancaster City, 18 boroughs, and 41 townships) in Lancaster County. The 2000 census reported that 470,658 people living in Lancaster County with almost 70 percent of the county's population residing in urbanized areas. According to the Lancaster County Planning Commission, the 2006 estimated population of Lancaster County was 494,486. Figure 1 presents a graphical depiction of Lancaster County, which is the service area for the Red Rose Transit Authority (RRTA).

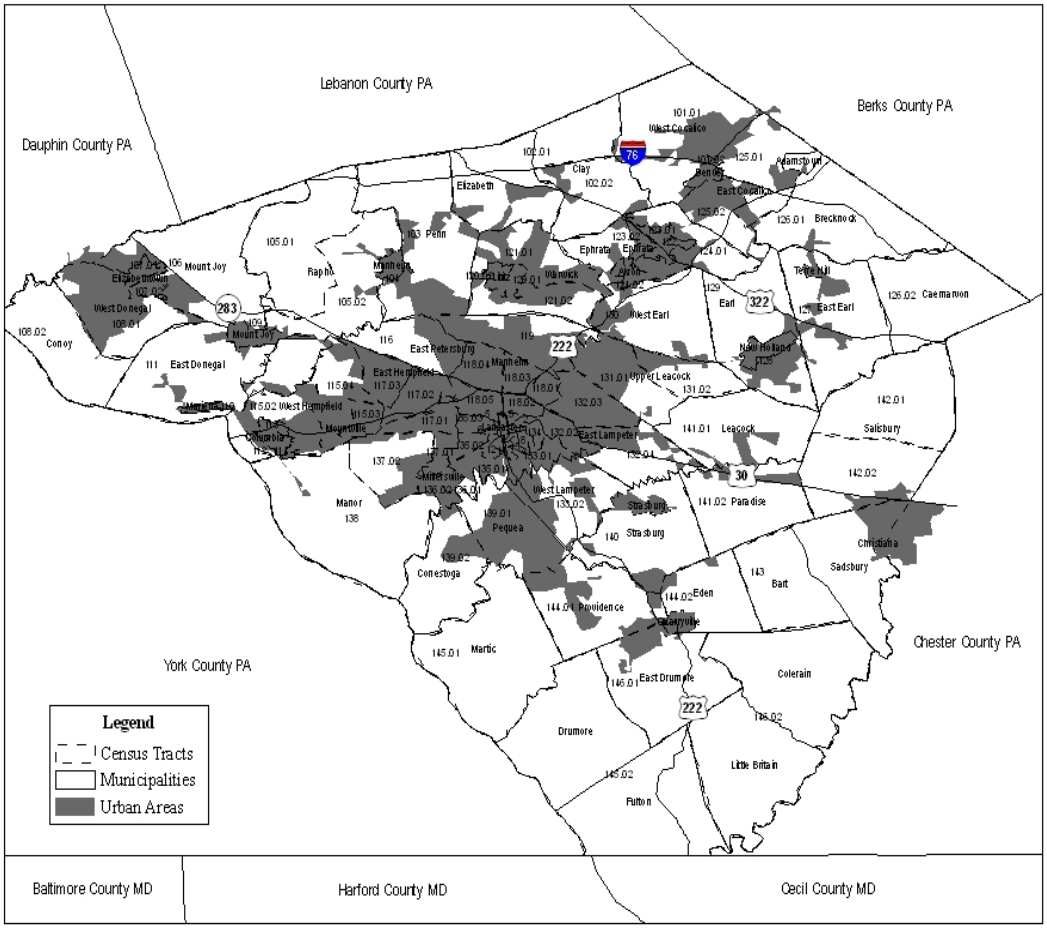
Data used in this chapter was primarily obtained from the 1990 and 2000 U.S. Census and the Lancaster County Planning Commission. Throughout this chapter, most of the demographic data is depicted at the census tract level. However, in areas pertaining to population change, population and employment projections, municipal boundaries were utilized. Information pertaining to land use and projected growth in Lancaster County was based on several documents prepared by the Lancaster County Planning Commission, including the Lancaster County Long Range Transportation Plan update 2009-2035 and the Growth Management Element of the Comprehensive Plan for Lancaster County.

Land Use and Projected Growth

A majority of Lancaster County's existing residential, commercial, and industrial development is located in the Central Lancaster region, and extends outward along the major road corridors in the northeastern and northwestern portion of the county, including I-76, US 30, US 322, and PA 283. Recent trends in the County continue to show that most of the residential and commercial growth is occurring in the suburban townships and not in the urban areas, such as Lancaster City and the boroughs. Further, although the County is still mostly agricultural outside of Lancaster City and the boroughs, residential subdivisions, large-lot development and commercial strip development is increasing in rural areas. To better manage the spread of

development in rural areas, the Lancaster County Planning Commission (LCPC) has created a number of Growth Areas throughout Lancaster County, which are areas that already have the infrastructure in place to accommodate new development, or are appropriate sites for new and future development. The Growth Areas are primarily located in the central and northern portion of the County and closely mirror urban area boundaries designated by the U.S. Census Bureau (See Figure 1). According to the Lancaster County Growth Tracking Report, between 1994 and 2002, 76 percent of all new residential housing units were built within the Growth Areas, with the larger developments located near the U.S. Route 222/I-76 interchange and in the Central Lancaster Region. Conversely, many of the remaining developments that were not built in Growth Areas are located in the rural southern end of the County near PA 272 and U.S. 222, and along local roads near the borders of Berks and Chester Counties.

Figure 1
Lancaster County (RRTA Service Area)



Future development in Lancaster County is expected to continue along the major road corridors in the northern and central portions of the county, while rural areas are expected to experience scattered residential development. In addition, there is expected to be lower demand for residential development in Lancaster City and the 18 boroughs compared to the surrounding townships. However, demand for non-residential development will be greatest in and around Lancaster City; the remaining non-residential development will likely be scattered throughout the County.

Population Distribution and Characteristics

Lancaster County is the sixth most populous county in Pennsylvania, with a 2000 population of 470,658. Between 1990 and 2000, Lancaster County's population increased by 47,836, an increase of 11.3 percent; the 2006 population was estimated to be 494,486. Approximately 70 percent of the 2000 Lancaster County population, 323,918 persons, resided in urbanized areas, which is an increase of 67.3 percent from the 1990 urbanized area population of 193,583. Population data for Lancaster County is shown in Table 1.

Lancaster City is the largest municipality in the County, with a population of 56,348. The second largest municipality was Manheim Township, with a population of 33,697, while the third largest municipality was East Hempfield Township, with a population of 21,399. Table 1 also indicates the projected population changes for each municipality and the county as a whole for the next three decades from the last complete U.S. Census in 2000. While the focus of the current analysis is on near term changes, the long range forecasts provide a context for the expected growth in Lancaster County. Most communities are expected to increase population, with the rate of change consistent with an area undergoing a shift from a rural to a much more suburbanized community. The only areas that are projected to experience a drop in population include Lancaster City, Adamstown Borough, Christiana Borough, Columbia Borough, and Manheim Borough. The projected population decline in these municipalities may have more to do with "build-out" or the lack of developable sites within these communities. Overall, Lancaster County is projected to experience a population growth rate of approximately 24 percent between 2000 and 2030.

Figure 2 shows the projected population change by municipality between 2000 and 2010. The figure shows that the largest expected population increases will occur in the outlying townships in the County, while population loss will occur within Lancaster City and many of the small boroughs located throughout the County. However, the largest population decline is no more than 2.8 percent, which is indicates a stable population base.

Population density indicates how many people live within a one square mile area. Large areas of high population densities represent communities with existing or potential transit need. Based on the 2000 U.S. Census, the overall population density in the study area was 495.4. Figure 3 shows the population density in Lancaster County by census tract from the 2000 U.S. Census.

Table 1
Population Trends

Municipality	2000 Census	2010 Projection	2020 Projection	2030 Projection	00-30 % Change
Adamstown Borough	1,201	1,198	1,194	1,186	-1.25
Akron Borough	4,046	4,244	4,432	4,588	13.40
Bart Township	3,003	3,288	3,569	3,825	27.37
Brecknock Township	6,699	7,588	8,487	9,342	39.45
Caernarvon Township	4,278	4,742	5,215	5,661	32.33
Christiana Borough	1,124	1,116	1,107	1,095	-2.58
Clay Township	5,173	5,762	6,357	6,918	33.73
Colerain Township	3,261	3,692	4,132	4,555	39.68
Columbia Borough	10,311	10,123	9,943	9,746	-5.48
Conestoga Township	3,749	4,047	4,339	4,598	22.65
Conoy Township	3,067	3,334	3,595	3,829	24.85
Denver Borough	3,332	3,666	3,990	4,283	28.54
Drumore Township	2,243	2,484	2,727	2,954	31.70
Earl Township	6,183	6,583	6,967	7,298	18.03
East Cocalico Township	9,954	11,291	12,653	13,961	40.26
East Donegal Township	5,405	5,996	6,592	7,149	32.27
East Drumore Township	3,535	4,002	4,486	4,959	40.28
East Earl Township	5,723	5,960	6,181	6,360	11.13
East Hempfield Township	21,399	23,844	26,301	28,605	33.67
East Lampeter Township	13,556	14,763	15,937	16,990	25.33
East Petersburg Borough	4,450	4,702	4,941	5,143	15.57
Eden Township	1,856	2,062	2,273	2,476	33.41
Elizabeth Township	3,833	4,386	4,961	5,528	44.22
Elizabethtown Borough	11,887	12,923	13,924	14,816	24.64
Ephrata Borough	13,213	14,010	14,771	15,422	16.72
Ephrata Township	8,026	9,284	10,606	11,931	48.65
Fulton Township	2,826	3,067	3,304	3,517	24.45
Lancaster City	56,348	56,154	55,945	55,553	-1.41
Lancaster Township	13,944	14,848	15,709	16,451	17.98
Leacock Township	4,878	5,146	5,401	5,617	15.15
Lititz Borough	9,029	9,483	9,913	10,270	13.74
Little Britain Township	3,514	4,034	4,572	5,100	45.13
Manheim Borough	4,784	4,648	4,521	4,391	-8.21
Manheim Township	33,697	36,621	39,482	42,049	24.79
Manor Township	33,697	36,621	39,482	42,049	24.79
Marietta Borough	2,689	2,652	2,617	2,575	-4.24
Martic Township	4,990	5,671	6,373	7,054	41.36
Millersville Borough	7,774	7,992	8,195	8,345	7.34
Mount Joy Borough	6,765	7,152	7,522	7,835	15.82

Table 1 (Continued)
Population Trends

Municipality	2000 Census	2010 Projection	2020 Projection	2030 Projection	00-30 % Change
Mount Joy Township	7,944	8,941	9,946	10,896	37.16
Mountville Borough	2,444	2,723	2,999	3,253	33.10
New Holland Borough	5,092	5,368	5,629	5,849	14.87
Paradise Township	4,698	4,906	5,102	5,263	12.03
Penn Township	7,312	8,151	9,017	9,849	34.70
Pequea Township	4,358	4,668	4,967	5,230	20.01
Providence Township	6,651	7,657	8,740	9,851	48.11
Quarryville Borough	1,994	2,109	2,217	2,310	15.85
Rapho Township	8,578	9,355	10,132	10,844	26.42
Sadsbury Township	3,025	3,424	3,835	4,232	39.90
Salisbury Township	10,012	11,207	12,419	13,567	35.51
Strasburg Borough	2,800	3,037	3,265	3,469	23.89
Strasburg Township	4,021	4,364	4,700	5,003	24.42
Terre Hill Borough	1,237	1,252	1,266	1,273	2.91
Upper Leacock Township	8,229	8,681	9,109	9,469	15.07
Warwick Township	15,475	18,084	20,828	23,586	52.41
West Cocalico Township	6,967	7,668	8,359	8,989	29.02
West Donegal Township	6,359	7,233	7,927	8,570	31.06
West Earl Township	6,766	7,306	7,834	8,305	22.75
West Hempfield Township	15,128	17,638	20,285	22,954	51.73
West Lampeter Township	13,145	15,161	17,227	19,238	46.35
Municipal Totals	**470,658**	**509,720**	**548,979**	**585,489**	**24.40**

Source: Lancaster County Planning Commission

Figure 2
2000 to 2010 Projected Population Change

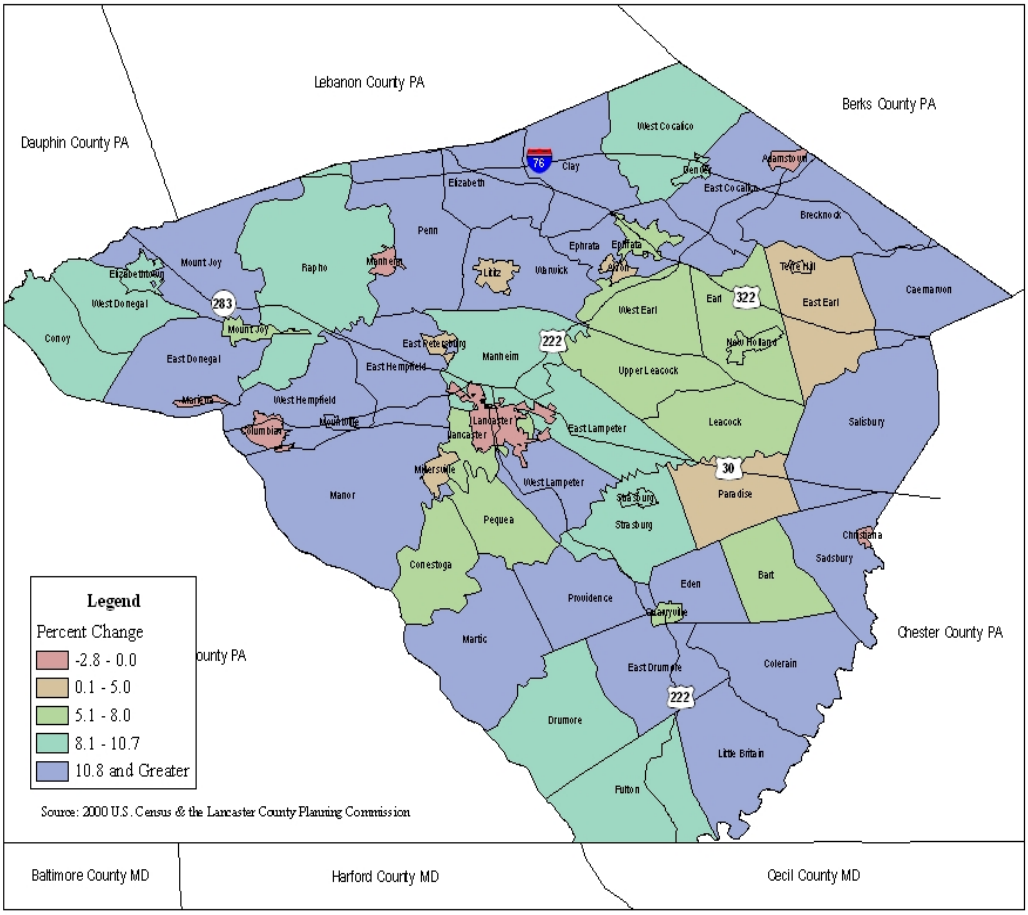
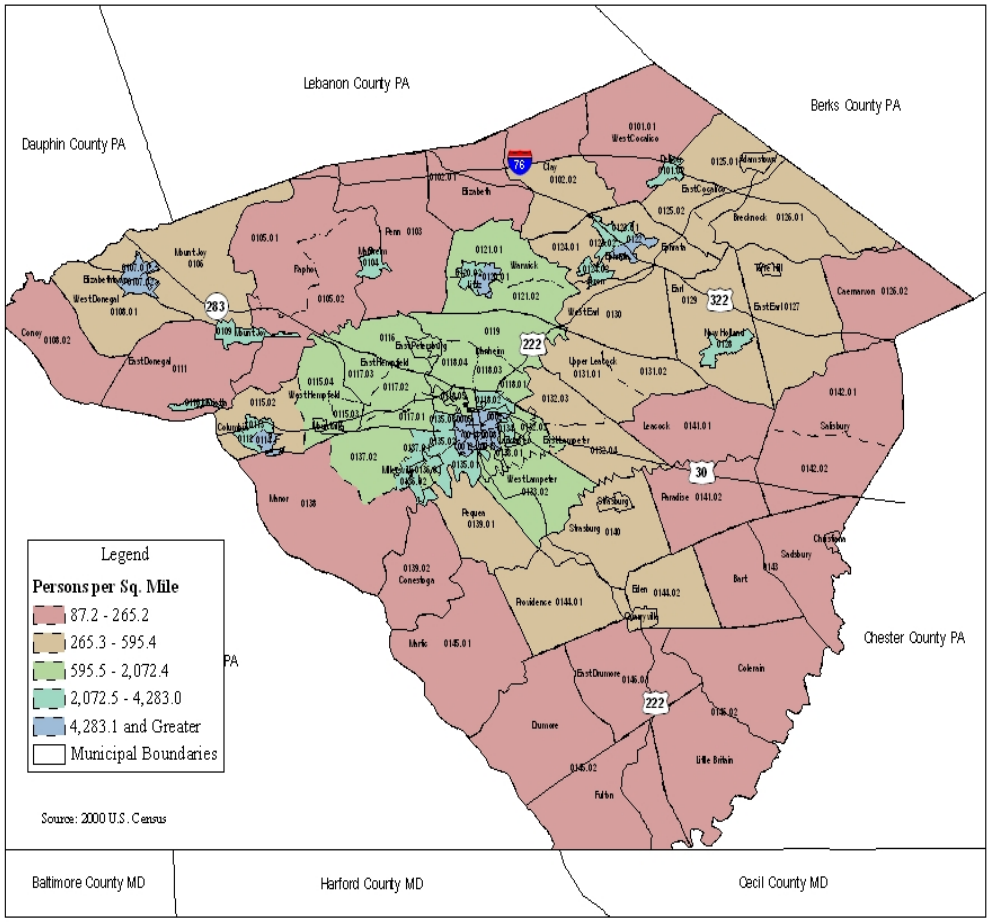


Figure 3 shows the highest population densities are prevalent in Lancaster City and in the boroughs of Elizabethtown, Columbia, Lititz, and Ephrata. The population density in these census tracts is in excess of 4,283 persons per square mile. High population densities are also prevalent in several census tracts located near or along the border of Lancaster City, as well as in census tracts located in the boroughs of Akron, Denver, Manheim, Marietta, Mount Joy, and New Holland.

Figure 3
Population Density



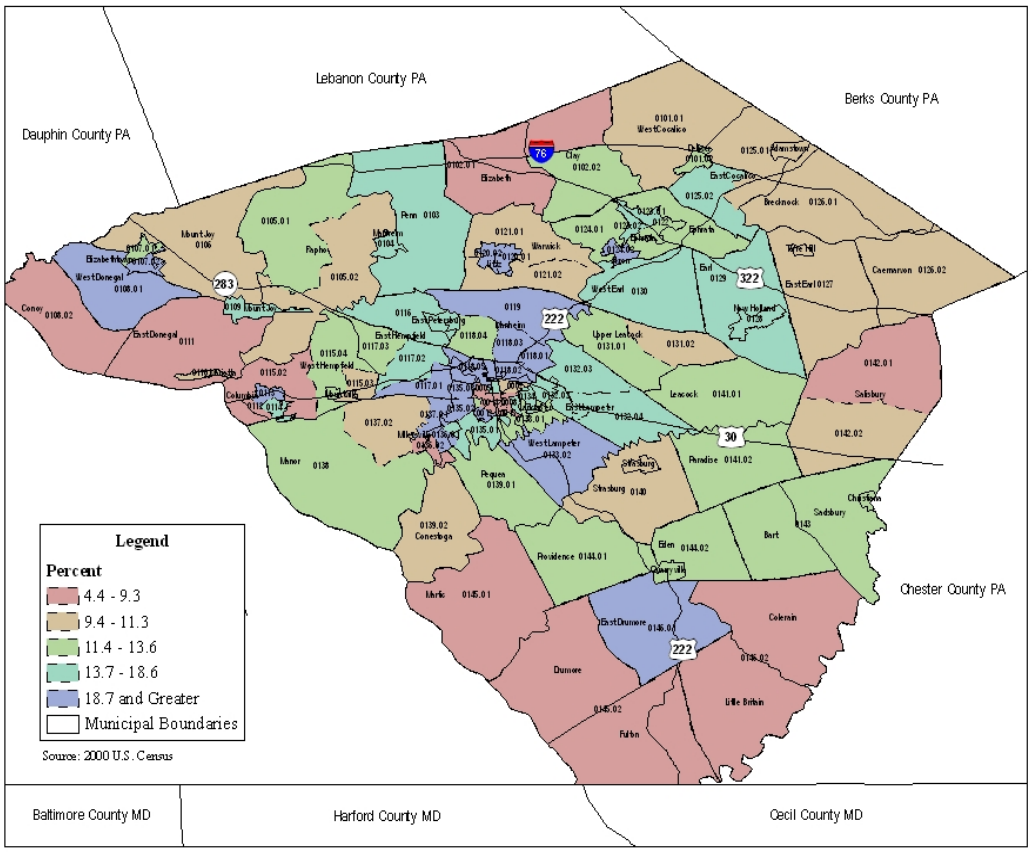
Some population density statistics are higher than the census tract's actual population. This is due to the fact that many census tracts in the areas with the highest population densities are smaller than one square mile. Although the population density statistics does not represent the number of people living in the census tract, it provides a valuable indicator of the character of the residential development in the tract. Due to the amount of land area in the county that is used for agricultural purposes, it is not surprising that most areas in the county have population densities of less than 600 persons per square mile, with the lowest density figures located in the communities located along the periphery of the County.

Senior Citizen Population - There are several "target" market groups for transit. These groups generally have limited transportation mode choices so that, in some cases, they must rely on transit services in order to travel. They are not able to either drive or do not have access to an automobile. Senior citizens (persons 65 years old and older) are one of these groups. There are 65,902 people age 65 and older in Lancaster County. This represents approximately 14 percent

of the county's population. The percentage of seniors in the Commonwealth of Pennsylvania is 15.6 percent. As shown in Figure 4, census tracts with senior citizen populations in excess of 18.7 percent are predominately located in the central portion of the County. In addition, there are a few municipalities in the northern portion of the County, such as Akron, Columbia, Lititz, and Elizabethtown Boroughs and West Donegal Township that exhibit high senior citizen populations in excess of 18.7 percent. Lastly, East Drumore Township located in the southern portion of the county also exhibits a significant concentration of senior citizens. The census tracts with the lowest percentage of senior citizens are primarily located along the periphery of the County; however, it is also apparent that several census tracts in Lancaster City also exhibit a low percentage of seniors.

Lancaster County 2000 Pop	Number of Persons 65 and Over	% of Population 65 and Over	% of Population 65 and Over (PA)
470,658	65,902	14.0	15.6

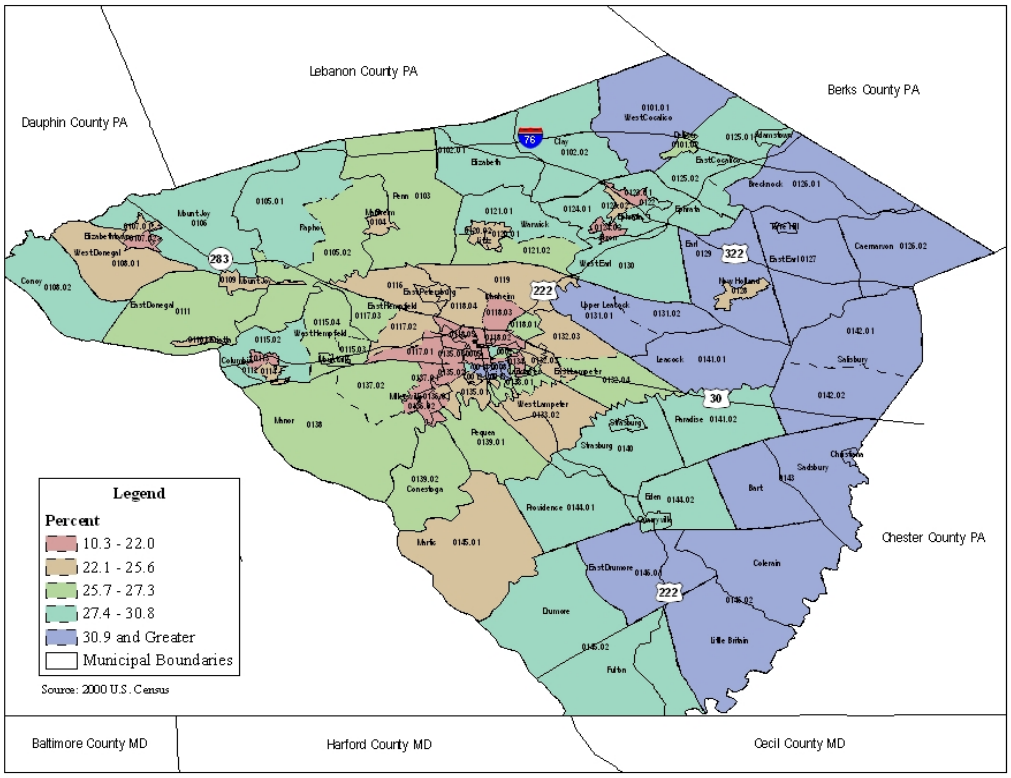
Figure 4
Percent Senior Citizen Population (65 and Older)



Youth Population - The youth population (persons under 18 years of age) is considered another captive group, as most of them are unable to drive legally. There are 125,269 persons in Lancaster County under age eighteen. This represents 26.6 percent of the overall county population. The percentage of people under the age of 18 in the Commonwealth of Pennsylvania is 23.8 percent. As shown in Figure 5, census tracts located along the eastern portion of the County exhibit the highest percentage of youth population, with the youth population in these tracts being in excess of 30.9 percent. The high number of children in this portion of the County may be attributed to the significant number of Amish families who reside in this area, as well as the fact that this area has also become a popular bedroom community for residents who work in the Philadelphia metropolitan area. Census tracts with the lowest number of children are primarily located in Lancaster City and the adjacent municipalities. Also, census tracts in the boroughs of Akron, Columbia, Elizabethtown, and Ephrata also exhibit relatively low numbers of children compared to county figures.

Lancaster County 2000 Pop	Number of Persons Under 18	% of Population Under 18	% of Population Under 18 (PA)
470,658	125,269	26.6	23.8

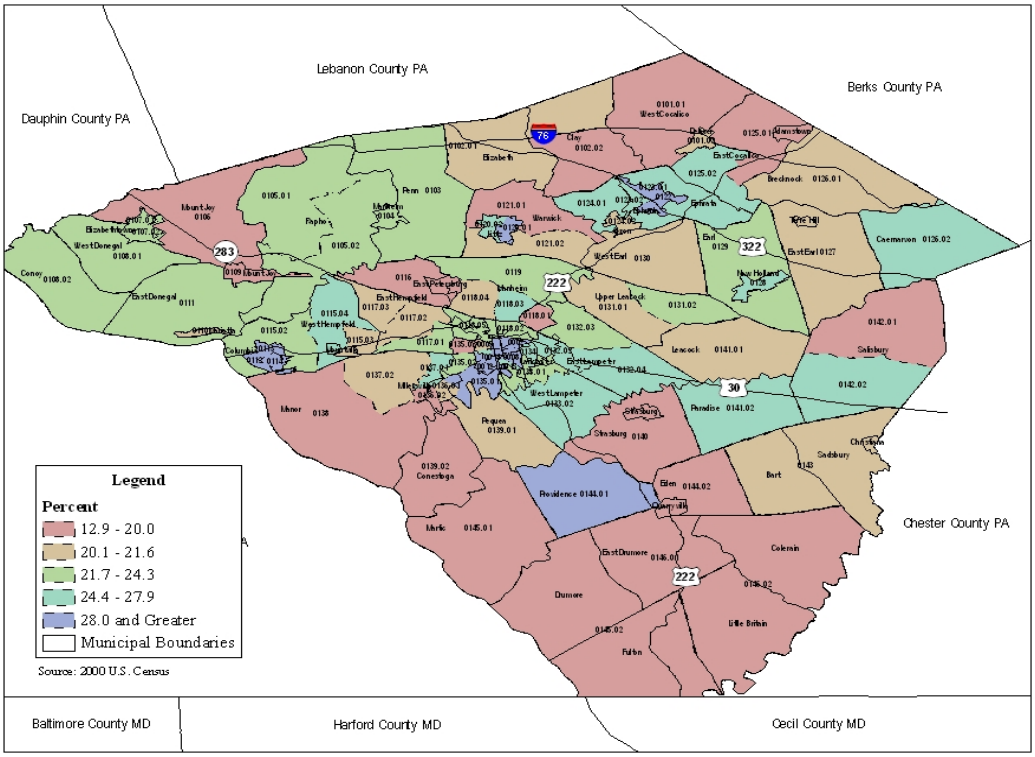
Figure 5
Percent Youth Population (Under 18)



Mobility Status - Mobility status provides a measure of the number of non-institutionalized persons age 16 and older who have some type of impairment that limits their mobility. This group represents another population that is typically more dependent on public transportation than the general public, since they often cannot drive. There are 112,240 persons in Lancaster County of at least 16 years of age who have some type of mobility limitation. This represents 23.8 percent of the overall county population. The mobility impaired population for the Commonwealth of Pennsylvania as a whole is 26.1 percent. As shown in Figure 6, the largest concentrations of mobility impaired residents are located in Lancaster City, Columbia, Ephrata, and Lititz Boroughs, and Lancaster and Providence Townships. All or a majority of the census tracts within these areas have mobility impaired populations in excess of 28 percent. The southern portion of Lancaster County contains the lowest percentages of mobility impaired residents, while the northern portion of the county generally shows a higher and more evenly distributed mobility impaired population.

Lancaster County 2000 Pop	Number of Persons With a Disability	% of Population With a Disability	% of Population 65 and Over (PA)
470,658	112,240	23.8	26.1

Figure 6
Percent Disabled Population (16 and Older)

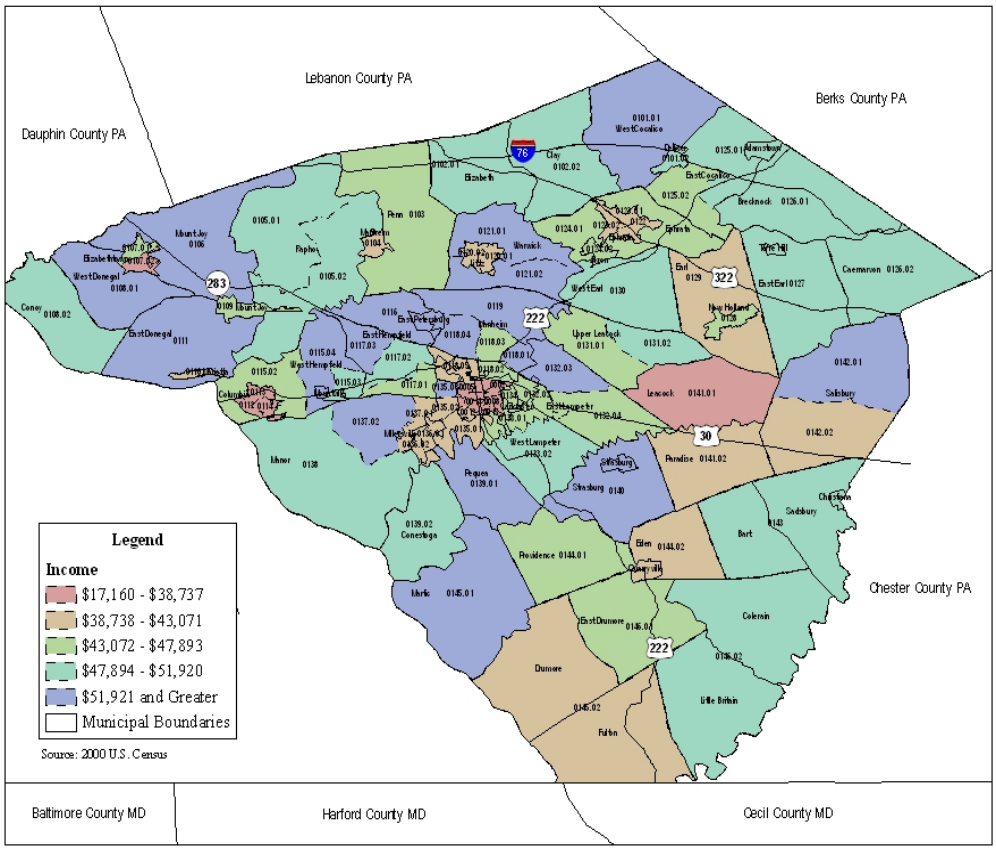


Household Income - Income is another major factor in determining transit ridership, as people with higher incomes have automobiles and typically ride transit less frequently than persons with lower incomes. The 2000 U.S. Census reported that the median household income for Lancaster County was $45,507, which is higher than the median household income for the Commonwealth of Pennsylvania ($40,106).

Figure 7 displays the income distribution in Lancaster County. The figure shows that the highest median incomes are generally confined to the suburban townships located in the northern portion of the County, while the lowest median incomes are concentrated within Lancaster City, Columbia and Elizabethtown Boroughs, and Leacock Township.

Lancaster County Median Income	Commonwealth of PA Median Income
$44,507	$40,106

Figure 7
Median Household Income

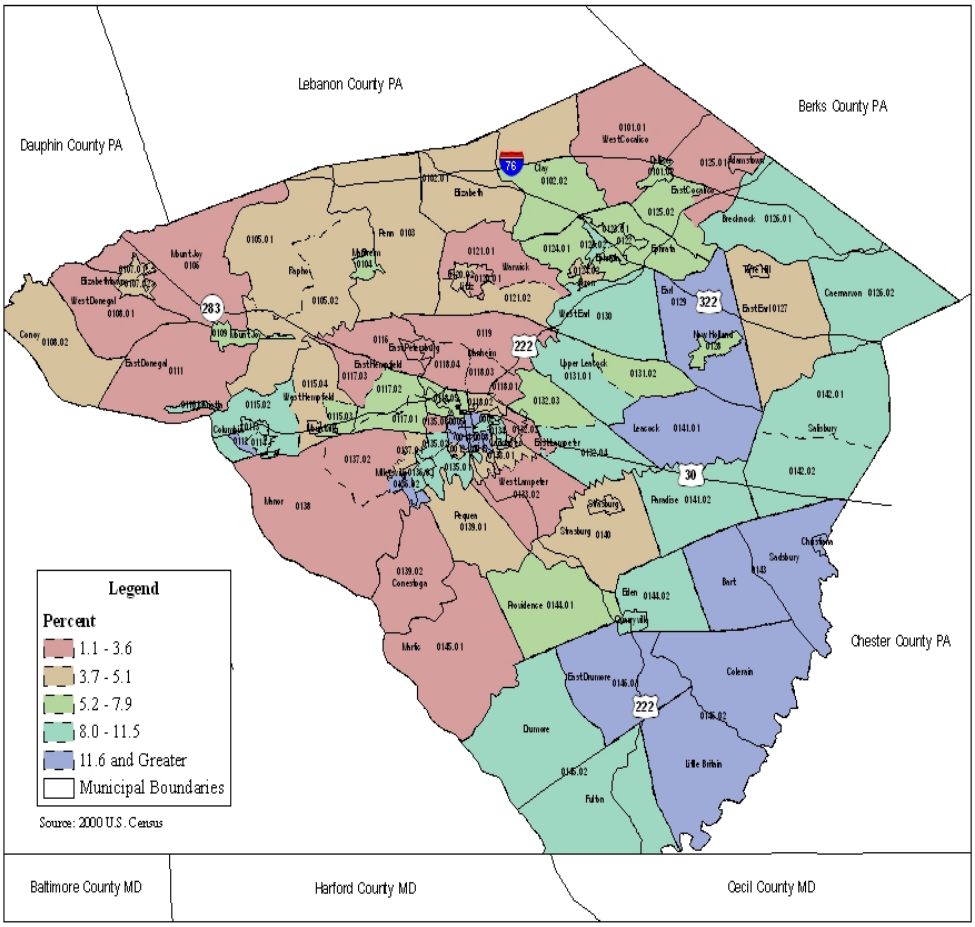


Another important factor impacting the viability of public transportation services is the number of persons living at or below the poverty level. Low income persons tend to rely more heavily on public transit service because many are unable to afford an automobile, cannot afford a second automobile for their household, or choose not to use their limited income for an automobile. There are 35,553 persons in Lancaster County who are living at or below the poverty level, which represents 7.5 percent of the overall county population. The low income population for the Commonwealth of Pennsylvania is 11 percent.

As shown in Figure 8, census tracts in which the low income population represents at least 11.6 percent of the total population are heavily concentrated in Lancaster City. Further, low income populations of at least 11.6 percent are also evident within Bart, Colerain, Earl, Leacock, Little Britain, and East Drumore Townships. Lastly, one census tract in Millersville Borough and one census tract in Columbia Borough also exhibit low income populations of at least 11.6 percent. The northern and southwestern portions of the County generally exhibit the lowest percentages of low income persons. Conversely, the many of the municipalities in the eastern side of Lancaster County have poverty levels of at least eight percent; this relatively high poverty level is most likely attributed to the high number of agricultural related jobs located in this area.

Lancaster County 2000 Pop	Number of Low Income Persons	% Population That is Low Income	% Low Income Population (PA)
470,658	35,553	7.5	11.0

Figure 8
Percent Poverty Population



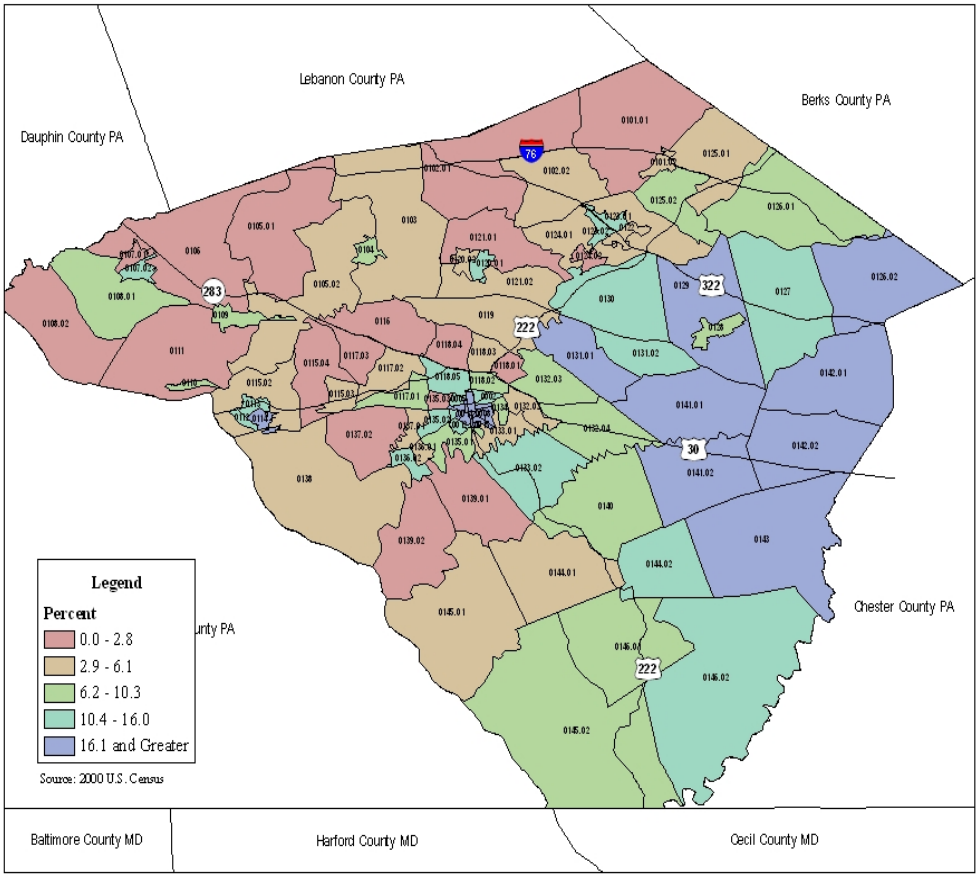
Automobile Ownership - Automobile ownership is a key variable in transit analysis since many persons who do not have access to a vehicle are more dependent on public transportation as a mobility option. The availability of automobiles is a good indication of how "captive" a household is to transit. Households with no automobiles are most in need of transit service for basic mobility. In Lancaster County, 16,837 housing units or 9.8 percent of all households have no vehicle available. The percentage of zero car households for the Commonwealth of Pennsylvania is 12.8 percent.

As shown in Figure 9, the highest percentages of zero car households are primarily located in Lancaster City and in several townships in the eastern portion of the County. The high levels of zero car households in these rural eastern townships is most likely attributed to the significant number of Amish households residing in this area who typically refrain from owning

motorized vehicles. The census tracts with the lowest percentage of zero car households are primarily located in the northern portion of the County.

Lancaster County Households	Number of Zero Car Households	% Zero Car Households	% Zero Car Households (PA)
172,560	16,837	9.8	12.8

Figure 9
Percent Zero Car Households



Employment

High concentrations of employment within an area indicate common destinations for transit use. Table 2 shows the distribution of employment within Lancaster County and forecasts trends in employment between 2000 and 2030. At the time of the 2000 U.S. Census, Lancaster City had the largest employment base in the County with a total of 41,420 jobs followed by

Manheim Township with 22,206 jobs and East Hempfield Township with 17,857 jobs. These statistics are consistent with the population densities and land uses within these areas.

As shown in Table 2, forecasts for the year 2030 indicate that the number of jobs in Lancaster County is projected to increase by approximately 58 percent. Eden Township is projected to experience the highest percentage rate increase during the 30 year period (343.7 %), with the number of jobs increasing from 245 to 1,087. However, Lancaster City is projected to experience the largest employment growth in absolute terms, with the number of jobs increasing from 41,420 to 68,346, an increase of almost 27,000 jobs or 65 percent. The municipalities projected to exhibit significant employment growth are primarily located in the central and northern portions of the county, which are the areas that are also projected to experience significant population growth. The central and northern portion of the County is accessible by numerous road corridors, including Interstate 76 and U.S. 30, 222 and 322, and also includes several Growth Areas designated by the Lancaster County Planning Commission. Conversely, the municipalities projected to lose jobs during the 30 year period are concentrated in the eastern half of the county, which is primarily agricultural in character. The projected job losses in this area may be attributed to the character of the area evolving from agricultural uses to residential uses. The large percentage of children under 18 (See Figure 5) may confirm this assumption.

Table 2
Employment Trends

Municipality	2000 Census	2030 Projection	00-30 % Change
Adamstown Borough	1,117	2,285	104.57
Akron Borough	1,381	1,861	34.76
Bart Township	867	577	-33.45
Brecknock Township	1,663	1,398	-15.94
Caernarvon Township	1,488	794	-46.64
Christiana Borough	513	378	-26.32
Clay Township	1,144	3,387	196.07
Colerain Township	663	364	-45.10
Columbia Borough	3,194	6,117	91.52
Conestoga Township	405	375	-7.41
Conoy Township	515	863	67.57
Denver Borough	2,451	2,383	-2.77
Drumore Township	290	333	14.83
Earl Township	3,587	5,596	56.01
East Cocalico Township	5,415	15,074	178.37
East Donegal Township	1,923	5,995	211.75
East Drumore Township	1,302	2,456	88.63
East Earl Township	3,630	6,104	68.15
East Hempfield Township	17,857	22,870	28.07
East Lampeter Township	13,393	19,823	48.01
East Petersburg Borough	1,539	6,057	293.57
Eden Township	245	1,087	343.67
Elizabeth Township	663	515	-22.32
Elizabethtown Borough	5,028	7,401	47.20
Ephrata Borough	7,011	8,623	22.99

Table 2 (Continued)
Employment Trends

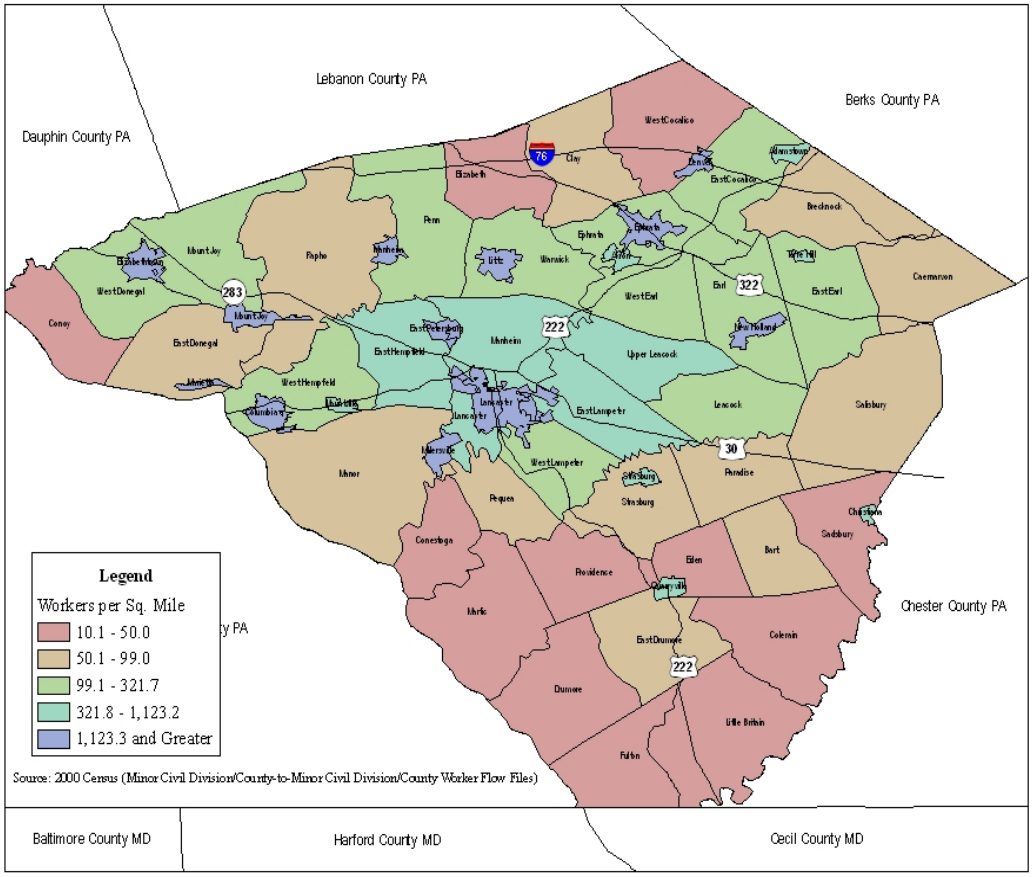
Municipality	2000 Census	2030 Projection	00-30 % Change
Ephrata Township	4,409	5,809	31.75
Fulton Township	695	702	1.01
Lancaster City	41,420	68,346	65.01
Lancaster Township	2,924	8,593	193.88
Leacock Township	2,539	2,450	-3.51
Lititz Borough	4,293	6,063	41.23
Little Britain Township	485	445	-8.25
Manheim Borough	2,390	2,564	7.28
Manheim Township	22,206	36,084	62.50
Manor Township	4,755	8,081	69.95
Marietta Borough	1,253	1,074	-14.29
Martic Township	612	696	13.73
Millersville Borough	2,993	2,918	-2.51
Mount Joy Borough	3,465	3,265	-5.77
Mount Joy Township	3,109	6,844	120.14
Mountville Borough	603	934	54.89
New Holland Borough	7,049	7,566	7.33
Paradise Township	1,466	1,220	-16.78
Penn Township	3,754	11,582	208.52
Pequea Township	924	1,438	55.63
Providence Township	911	1,206	32.38
Quarryville Borough	1,313	1,409	7.31
Rapho Township	2,647	3,433	29.69
Sadsbury Township	914	2,245	145.62
Salisbury Township	2,179	2,756	26.48
Strasburg Borough	583	1,197	105.32
Strasburg Township	1,672	4,207	151.61
Terre Hill Borough	273	338	23.81
Upper Leacock Township	6,915	6,682	-3.37
Warwick Township	4,640	7,492	61.47
West Cocalico Township	1,358	1,568	15.46
West Donegal Township	1,550	3,389	118.65
West Earl Township	2,396	3,472	44.91
West Hempfield Township	4,104	9,865	140.38
West Lampeter Township	4,601	6,381	38.69
Municipal Totals	**224,684**	**355,030**	**58.01**

Source: Lancaster County Planning Commission

Figure 10 presents the employment density for Lancaster County, which is measured by the number of jobs per square mile. Employment densities are mapped at the municipal level and are based on data compiled from the county to county work flow files from the 2000 U.S. Census; employment data of this kind is not available at the census tract level. Generally, Lancaster City and most of the boroughs located in the northern portion of the County exhibit the highest employment densities. Overall, Lancaster City and the adjacent municipalities comprise the densest concentration of employment activity. Conversely, a significant portion of southern

Lancaster County exhibits the lowest employment densities of between 10.1 and 50 jobs per square mile.

Figure 10
Employment Density



Commuting

As shown in Table 3, approximately 87 percent of Lancaster County workers commute to jobs located within the County. However, as shown in the chart on the following page, the number of Lancaster County residents who commute outside the county has increased by about 25 percent between 1990 and 2000, with Delaware and Dauphin counties experiencing the largest percentage increase of Lancaster County commuters during the 10 year period. In fact, the only county work destination to experience a decline over the 10 year period was Philadelphia (-12%).

Residence County to Workplace County Flows

County	1990 Number	2000 Number	1990-2000 Percent Change
Berks	3,506	4,074	16.2
Cecil, MD	169	203	20.1
Cumberland	912	1,197	31.2
Chester	5,174	6,134	18.6
Delaware	369	615	66.6
Dauphin	4,593	6,927	50.8
Lancaster	188,071	212,114	12.8
Lebanon	1,471	1,952	32.7
Lehigh	152	169	11.2
Montgomery	617	745	20.7
New Castle, DE	420	523	24.5
Philadelphia	690	607	-12.0
York	3,359	4,018	19.6
Total Outside	**24,043**	**30,066**	**25.1**

Source: Lancaster County Planning Commission

Table 3
Commuting Patterns by Municipality

Residence Municipality	Work In Lancaster Co.	Work Outside of Lancaster Co.	Work Outside of State	Total
Adamstown borough	427	242	7	676
Akron borough	1,912	204	5	2,121
Bart township	1,106	180	30	1,316
Brecknock township	2,503	647	13	3,163
Caernarvon township	1,434	605	14	2,053
Christiana borough	288	232	4	524
Clay township	2,396	274	17	2,687
Colerain township	1,023	399	93	1,515
Columbia borough	4,154	613	7	4,774
Conestoga township	1,859	96	4	1,959
Conoy township	1,246	433	4	1,683
Denver borough	1,392	366	6	1,764
Drumore township	903	108	48	1,059
Earl township	2,408	168	11	2,587
East Cocalico township	3,960	888	25	4,873
East Donegal township	2,535	519	16	3,070
East Drumore township	1,283	223	57	1,563
East Earl township	2,326	333	7	2,666
East Hempfield township	10,057	1,167	182	11,406
East Lampeter township	6,351	391	80	6,822
East Petersburg borough	2,317	237	28	2,582
Eden township	794	97	8	899
Elizabeth township	1,760	238	14	2,012

Table 3 (Continued)
Commuting Patterns by Municipality

Residence Municipality	Work In Lancaster Co.	Work Outside of Lancaster Co.	Work Outside of State	Total
Elizabethtown borough	4,116	1,919	37	6,072
Ephrata borough	6,463	578	62	7,103
Ephrata township	3,749	240	18	4,007
Fulton township	912	164	136	1,212
Lancaster city	22,636	1,145	109	23,890
Lancaster township	6,421	496	75	6,992
Leacock township	1,874	182	66	2,122
Lititz borough	4,173	341	39	4,553
Little Britain township	797	586	156	1,539
Manheim borough	2,286	174	11	2,471
Manheim township	14,683	1,255	188	16,126
Manor township	7,999	716	54	8,769
Marietta borough	1,224	207	19	1,450
Martic township	2,401	134	20	2,555
Millersville borough	3,558	270	25	3,853
Mount Joy borough	3,180	567	57	3,804
Mount Joy township	3,024	1,134	67	4,225
Mountville borough	1,203	145	9	1,357
New Holland borough	2,430	240	23	2,693
Paradise township	1,819	317	44	2,180
Penn township	3,549	301	39	3,889
Pequea township	2,068	179	6	2,253
Providence township	3,096	214	38	3,348
Quarryville borough	751	138	17	906
Rapho township	4,168	421	29	4,618
Sadsbury township	848	524	20	1,392
Salisbury township	2,844	1,434	114	4,392
Strasburg borough	1,297	156	30	1,483
Strasburg township	1,766	168	45	1,979
Terre Hill borough	573	99	3	675
Upper Leacock township	3,647	170	55	3,872
Warwick township	7,414	814	56	8,284
West Cocalico township	2,784	733	16	3,533
West Donegal township	2,013	1,070	34	3,117
West Earl township	3,170	264	8	3,442
West Hempfield township	7,028	910	92	8,030
West Lampeter township	5,210	389	115	5,714
Municipal Total	**201,608**	**27,454**	**2,612**	**231,674**

Source: 2000 U.S. Census

Journey to Work

The chart shown below compares the modal split for journey to work trips made by residents in Lancaster County in 2000. The chart on the following page sows that the primary means of transportation throughout the County during 2000 from the U.S. Census was by private auto. Drive alone accounted for over three-quarters of all commuting trips. Transit accounted for 1.2 percent of all work trips of employed study area residents; the use of public transportation in the Commonwealth was 5.2 percent. Lancaster County has a higher percentage of workers working from home (4.3%) compared to the Commonwealth (3%).

Work Mode Split (Residents)

Mode	Lancaster County	
	Trips	Percent
Drove Alone	181,149	78.2
Carpooled	23,602	10.2
Public Transportation	2,756	1.2
Motorcycle	219	0.1
Bicycled	1,049	0.5
Walked	10,080	4.3
Other Means	1,631	0.7
Worked at Home	11,188	4.8
Total	231,674	

Source: 2000 U.S. Census

Transit use among commuters reflects development patterns and other demographic characteristics which have an impact upon mode. Table 4 lists the mode split for Lancaster County municipalities based on the 2000 U.S. Census. The table shows that Lancaster City had the highest percentage (6.5%) of transit commuters in the County, which was followed by Lancaster Township (2.3%) and Leacock Township (1.9%).

Table 4
2000 Work Trips by Municipality

Residence Municipality	Drove Alone	Carpool	Public Transportation	Motorcycle	Bicycle	Walked	Other Means	Worked at Home	Total	Percent Transit
Adamstown borough	550	68	0	0	3	28	0	27	676	0.0
Akron borough	1,806	133	4	6	10	88	12	62	2,121	0.2
Bart township	761	165	3	0	0	54	33	300	1,316	0.2
Brecknock township	2,471	433	7	0	63	41	8	140	3,163	0.2
Caernarvon township	1,401	312	6	0	58	69	5	202	2,053	0.3
Christiana borough	394	77	0	0	0	31	0	22	524	0.0
Clay township	2,081	373	15	0	0	20	14	184	2,687	0.6
Colerain township	1,003	138	14	0	0	126	54	180	1,515	0.9

Table 4 (Continued)
2000 Work Trips by Municipality

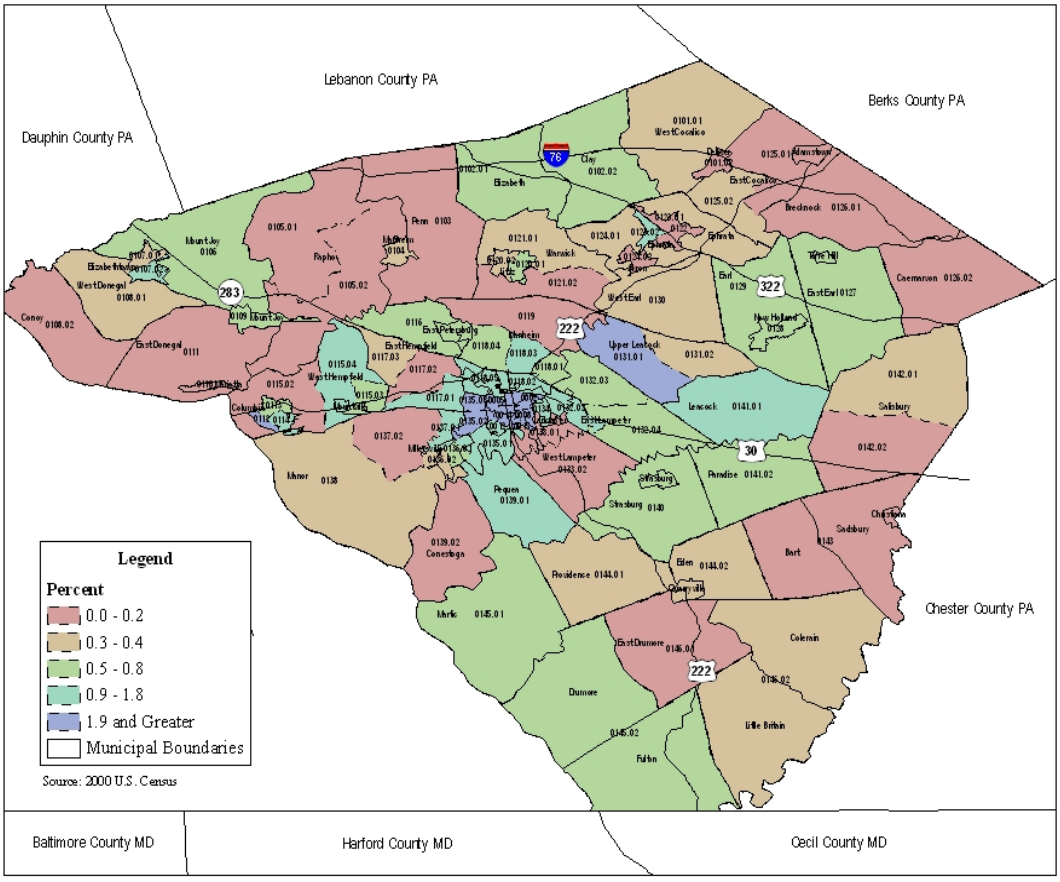
Residence Municipality	Drove Alone	Carpool	Public Transportation	Motorcycle	Bicycle	Walked	Other Means	Worked at Home	Total	Percent Transit
Columbia borough	3,418	816	69	4	17	362	20	68	4,774	1.4
Conestoga township	1,699	166	0	0	0	28	9	57	1,959	0.0
Conoy township	1,339	214	0	0	0	67	5	58	1,683	0.0
Denver borough	1,558	91	0	0	0	60	17	38	1,764	0.0
Drumore township	759	135	5	0	0	30	9	121	1,059	0.5
Earl township	1,486	415	24	0	94	128	32	408	2,587	0.9
East Cocalico township	3,969	493	7	6	46	75	20	257	4,873	0.1
East Donegal township	2,669	273	0	0	0	60	0	68	3,070	0.0
East Drumore township	1,193	214	0	4	5	17	16	114	1,563	0.0
East Earl township	1,869	286	21	0	70	72	17	331	2,666	0.8
East Hempfield township	10,004	613	77	7	21	209	31	444	11,406	0.7
East Petersburg borough	2,263	221	12	0	0	41	12	33	2,582	0.5
Eden township	560	149	14	0	4	22	30	120	899	1.6
Elizabeth township	1,687	181	12	0	0	12	0	120	2,012	0.6
Elizabethtown borough	4,773	476	35	9	9	665	38	67	6,072	0.6
Ephrata borough	5,907	716	24	7	9	205	35	200	7,103	0.3
Ephrata township	3,036	443	17	6	61	193	0	251	4,007	0.4
Fulton township	869	145	6	4	0	28	14	146	1,212	0.5
Lancaster city	14,875	3,701	1,564	36	149	2,782	297	486	23,890	6.5
Lancaster township	5,642	720	160	10	17	194	25	224	6,992	2.3
Leacock township	751	552	40	0	20	276	52	431	2,122	1.9
Lititz borough	3,689	383	20	0	16	236	39	170	4,553	0.4
Little Britain township	1,159	151	6	0	0	23	31	169	1,539	0.4
Manheim borough	1,944	234	13	7	12	149	12	100	2,471	0.5
Manheim township	13,839	934	120	11	25	408	49	740	16,126	0.7
Manor township	7,436	776	23	4	7	175	14	334	8,769	0.3
Marietta borough	1,175	137	0	6	8	68	13	43	1,450	0.0
Martic township	2,123	212	19	0	0	15	32	154	2,555	0.7
Millersville borough	2,825	249	30	0	40	601	25	83	3,853	0.8
Mount Joy borough	3,216	308	29	0	0	133	76	42	3,804	0.8
Mount Joy township	3,578	339	25	0	14	57	28	184	4,225	0.6
Mountville borough	1,204	78	7	0	0	42	0	26	1,357	0.5
New Holland borough	2,240	198	17	7	12	141	27	51	2,693	0.6
Paradise township	1,416	342	18	5	7	110	44	238	2,180	0.8
Penn township	3,296	260	0	0	0	64	34	235	3,889	0.0
Pequea township	1,935	166	20	9	0	57	7	59	2,253	0.9
Providence township	2,807	273	9	11	0	85	22	141	3,348	0.3
Quarryville borough	745	59	0	0	11	48	13	30	906	0.0
Rapho township	3,805	364	0	8	7	76	13	345	4,618	0.0
Sadsbury township	923	174	0	9	0	93	26	167	1,392	0.0
Salisbury township	3,040	664	5	0	8	179	90	406	4,392	0.1
Strasburg borough	1,263	148	2	5	8	29	3	25	1,483	0.1

Residence Municipality	Drove Alone	Carpool	Public Transportation	Motorcycle	Bicycle	Walked	Other Means	Worked at Home	Total	Percent Transit
Terre Hill borough	556	72	0	0	2	24	2	19	675	0.0
Upper Leacock township	2,637	448	48	0	27	376	27	309	3,872	1.2
Warwick township	7,232	690	15	6	11	85	21	224	8,284	0.2
West Cocalico township	2,836	340	13	0	7	91	8	238	3,533	0.4
West Donegal township	2,695	309	9	0	0	31	15	58	3,117	0.3
West Earl township	2,327	378	12	10	155	133	8	419	3,442	0.3
West Hempfield township	6,925	685	53	11	0	126	23	207	8,030	0.7
West Lampeter township	4,754	523	8	11	8	131	16	263	5,714	0.1
Municpal Total	**181,149**	**23,602**	**2,756**	**219**	**1,049**	**10,080**	**1,631**	**11,188**	**231,674**	**1.2**

Source: 2000 U.S. Census

To provide more detailed information on the 2000 U.S. Census journey to work data, travel information is presented by census tract. Figure 11 shows public transportation usage by Lancaster County residents and indicates that the highest percentages of commuters who travel to work by public transportation live in Lancaster City, Lancaster and Upper Leacock Townships, and Columbia Borough. Generally, areas with high number of commuters using public transit also exhibit a high number of low income residents and/or a high number of zero car households. Further, Lancaster City exhibits population density levels in excess of 4,283 persons per square mile, which is favorable for providing a high level of public transportation service.

Figure 11
Percent of Residents Commuting By Public Transportation (excluding taxi trips)



Major Trip Generators

Major trip generators are locations frequented by a significant number of people, traveling by all modes, within the study area. Major trip generators for this analysis include major employers, shopping centers and malls, hospitals, senior citizen facilities (i.e., assisted living, nursing homes, retirement homes, and senior centers), post secondary schools, and business parks and warehouses. These generators must be considered when evaluating transit service for Lancaster County as they comprise the majority of origins and destinations in a transportation network.

Table 5 lists the employers in Lancaster County who employ at least 500 people. Many of the major employers in the county have all their employees based at a single location, which increases the public transit trip potential at these locations. However, some major employers in

the county such as the School District of Lancaster, have their employees distributed throughout the county, and therefore there would not be a specific site which would generate a sufficient number of trips to warrant transit service. The largest employer in the county is the Lancaster General Hospital, which is located in downtown Lancaster City and employs 5,819 people. The area around the hospital is also home to a health campus and a burgeoning complex of medical offices that are expected to become a major employment generator in the near future. The second largest employer is Armstrong World Industries, Inc., which is located on Columbia Avenue in Manor Township and employs 2,000 people. A significant number of the major employers are located in Lancaster City and the adjacent municipalities. In addition, concentrations of employers are evident in the boroughs of Lititz, Ephrata, and New Holland. Overall, most of the major employers are located in either the central and northern portion of the County. It should be noted that the Lancaster County government that employees over 500 workers is not included in this list. The major employers are depicted in Figure 12.

Figure 12 also depicts and Table 6 lists the other major trip generators in the county. The largest numbers of major trip generators are located in Lancaster City and in the adjacent municipalities surrounding the City. This area contains several downtown shopping and employment centers, Lancaster County Courthouse Complex, Lancaster General Hospital, Lancaster Regional Medical Center, numerous senior citizen facilities, and several post secondary schools including Franklin and Marshall College, Penn State University (Lancaster), and the Pennsylvania College of Art and Design. In some instances, major transit generators are listed twice. For example, Lancaster General Hospital is shown as a hospital as well as a major employer. Other concentrations of major transit generators are located in West Lampeter Township, Ephrata and Lititz Boroughs, and the northeastern periphery of the County which includes Elizabethtown Borough and portions of Mount Joy Township. The location of the major transit generators is similar to the major employers in that most of the generators are located in the central and northern portion of the county. The exceptions are two senior citizen facilities located in Quarryville Borough and one facility located in Christiana Borough.

Table 5
Major Employers

ID	Employer	Number of FT Employees
1	Anvil International	620
2	Armstrong Holdings Inc.	1869
3	CNH America LLC	1,400
4	Alcoa	860
5	Burnham Holdings	542
6	Conestoga Wood Specialties	980
7	D&E Communications Inc.	550
8	Ephrata Community Hospital	1,072
9	Four Seasons Produce	524
10	Franklin & Marshall College	731
11	Fulton Financial Corporation	1,516
12	Kellogg Company	571
13	High Industries Inc.	1,038
14	Lancaster General Hospital	5,819
15	Lancaster Laboratories Inc.	665
16	Lancaster Regional Medical Center	635
17	Lancaster Newspaper Inc.	557
18	Lancaster-Lebanon IU-13	1,426
19	McNeial-PPC	923
20	Millersville University	959
21	Pepperidge Farms Inc.	775
22	QVC	1,336
23	Sterling Financial Corporation	900
24	The High Cos	1,121
25	The Jay Group	562
27	Tyson Foods	1,000
28	Willow Valley Retirement Community	710
29	Y&S Candies	600

Source: Lancaster County Planning Commission

Figure 12
Major Transit Generators

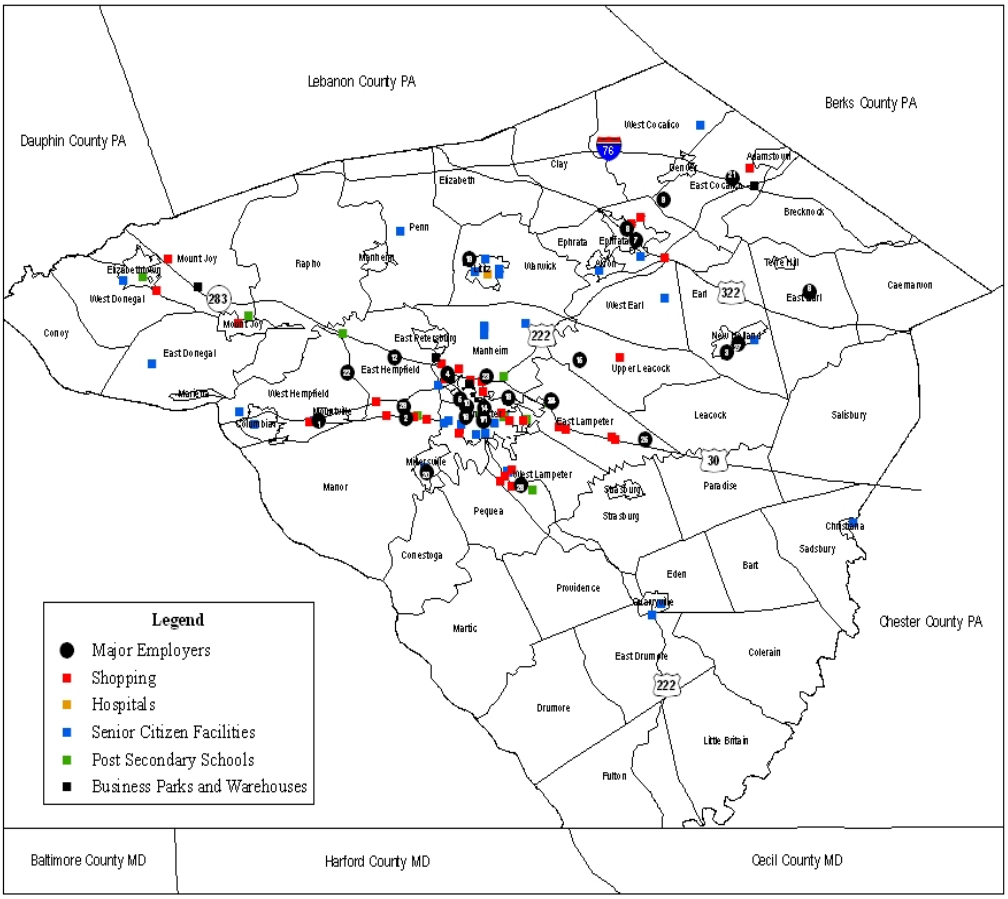


Table 6
Major Transit Generators

Generators	Location
Senior Citizen Facilities	
Brethren Village	Manheim Township
Country Meadows of Lancaster	Lancaster Township
Garden Spot Village	New Holland Borough
Landis Homes	Manheim Township
Longwood Manor	East Donegal Township
Luther Acres	Lititz Borough
Masonic Village at Elizabethtown	Elizabethtown Borough
Mennonite Home Communities	Lancaster City
Moravian Manor, Inc.	Lititz Borough
Pleasant View Retirement Community	Penn Township
Quarryville Presbyterian Retirement Community	East Drumore Township
St. Anne's Retirement Community	West Hempfield Township
Willow Valley Retirement Community	West Lampeter Township
Conestoga View	Lancaster City
Ephrata Manor	Ephrata Township
Fairmount Homes	West Earl Borough
Golden Living Center	Lancaster City
Hamilton Arms Center	Lancaster Township
Harrison Senior Living	Christiana Borough
Lancashire Hall	Manheim Township
Manorcare Health Services	Lancaster Township
Maple Farm Nursing Center	Akron Borough
Susquehanna Valley Nursing & Rehab Center	West Hempfield Township
The Glen at Willow Valley	West Lampeter Township
Cocalico Senior Association	West Cocalico Township
Columbia Senior Center	Columbia Borough
Lancaster Neighborhood Senior Center	Lancaster City
Lancaster Recreation Center	Lancaster City
Lititz Senior Center	Lititz Borough
Luis Munoz Marin Senior Center	Lancaster City
Millersville Senior Center	Millersville Borough
Solanco Senior Citizen Center	Quarryville Borough

Table 6 (Continued)
Major Transit Generators

Generators	Location
Hospitals	
Ephrata Community Hospital	Ephrata Borough
Heart of Lancaster Regional Medical Center	Warwick Township
Lancaster General	Lancaster City
Lancaster Regional Medical Center	Lancaster City
Post Secondary Schools	
Albright College	East Lampeter Township
Consolidated School of Business	East Hempfield Township
Eastern Mennonite University	East Lampeter Township
Elizabethtown College	Elizabethtown Borough
Franklin and Marshall College	Lancaster City
Harrisburg Community College – Lancaster	East Lampeter Township
Lancaster Bible College & Graduate School	Manheim Township
Lancaster County Career & Technology Center	Mount Joy Borough
Lancaster County Career & Technology Center	East Hempfield Township
Lancaster County Career & Technology Center	West Lampeter Township
Lancaster General College of Nursing	Lancaster City
Millersville University	Millersville Borough
PA College of Art and Design	Lancaster City
Penn State - Lancaster Center	East Lampeter Township
Thaddeus Stevens College of Technology	Lancaster City
Shopping Centers and Malls	
Cloister Shopping Center	Ephrata Borough
Columbia Shopping Center	West Hempfield Township
East Town Mall	East Lampeter Township
Giant Food Store	Lancaster City
Giant Food Store	East Hempfield Township
Giant Food Store	Upper Leacock Township
Golden Triangle Shopping Cente	Manheim Township
Kendig Square	West Lamapeter Township
Lancaster Shopping Center	Manheim Township
Manor Shopping Center	Lancaster Township
Park City Center	Lancaster City
Place Marie	Lancaster City
Quality Centers	East Lampeter Township
Red Rose Commons	Manheim Township

Table 6 (Continued)
Major Transit Generators

Generators	Location
Redner's Warehouse Market	Ephrata Borough
Redner's Warehouse Market	Manheim Township
Redner's Warehouse Market	West Hempfield
Redner's Warehouse Market	Mount Joy Township
Rockvale Square Outlets	East Lampeter
Tanger Outlet Center	East Lampeter Township
Wal-Mart	Ephrata Township
Wal-Mart	East Lampeter
Weis Market	East Cocalico Township
Weis Market	Elizabethtown Borough
Weis Market	Mount Joy Borough
Weis Market	Manheim Township
Weis Market	East Lampeter Township
Weis Market	Lancaster Township
Weis Market	East Hempfield Township
Weis Market	West Lamapeter Township
Western Corners Shopping Cente	East Hempfield Township
Wheatland Shopping Center	Manor Township
Willow Valley Shopping Center	West Lamapeter Township
Business Parks and Warehouses	
Acme Markets	Denver Borough
Burle Business Park	Lancaster City
Central Pennsylvania Transportation	Lancaster City
Earland Industrial Park	Lancaster Township
Granite Run Corporate Center	Manheim Township
Greenfield Corporate Center	East Lampeter Township
Greiner Industries Inc.	Mount Joy Township
High Real Estate Group LLC	East Lampeter Township
Rapho Business Park	Manheim Township
Yellow Transportation	East Petersburg Township

Source: Lancaster County Planning Commission

Needs Assessment

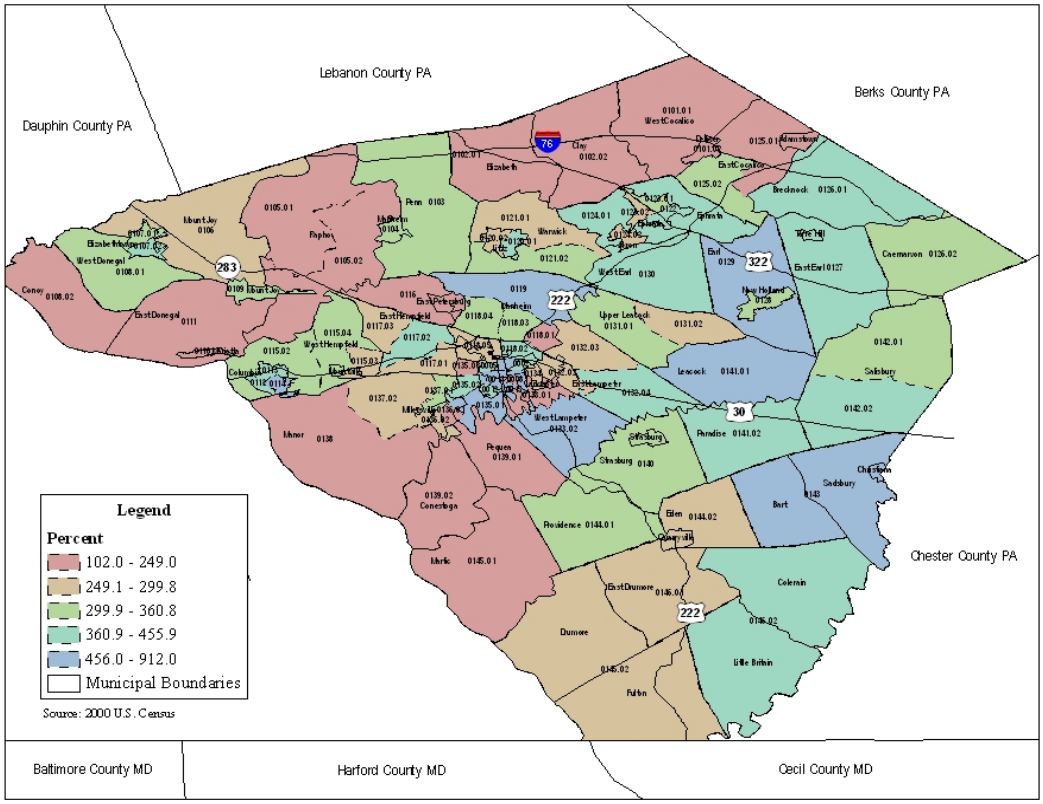
This section presents an overview of the likelihood of transit use and a composite measure of transit need. It is based on a method developed based on prior work that relates transit use to socioeconomic characteristics. For example, households with zero cars available are more likely to be transit users. An assessment of transit need was performed to identify those areas with the greatest need and potential demand for public transportation. Seventeen variables were used to rate each census tract in terms of transit potential. These variables include both rate and aggregate measures of transit need. Rates, such as percentage of seniors in total population and density of senior citizens are useful in understanding the composition of an area. Aggregate measures, such as total population, indicate the absolute potential for travel in general, and transit trip-making in particular.

The variables used to analyze transit need for the study area are: population density, senior population (over 65) in terms of number, percent and density, youth population (under 18) in terms of number, percent and density, zero car households in terms of number, percent and density, low income population in terms of number, percentage and density, disabled population in terms of number, percentage and density, and percentage of trips by transit.

For all of the variables, higher values are indicative of greater need and likelihood of transit use. For example, a census tract with high population density or a high number of zero car households exhibits greater mobility need and propensity for transit use. In the current analysis, a standardized score has been used to combine the different variables. With this approach for each variable, the census tract with the lowest value is assigned a score of zero while the census tract with the highest value is assigned a value of 100. The other areas are computed by interpolating between the maximum and minimum values. These scores can then be added for 17 variables. Accordingly, the highest possible score would be 1,700.

Figure 13 presents the Transit Needs Score by census tract for Lancaster County, and illustrates that the census tracts attaining the highest scores (456 and above) are located in Lancaster City, Christiana, Columbia and Millersville Boroughs, and Bart, Earl, Lancaster, Leacock, Manheim, Sadsbury, and West Lampeter Townships. Generally, Lancaster City and the eastern portion of the County exhibit the greatest transit need. These results reflect the combined impact of various measures and both aggregate and rate indices.

Figure 13
Transit Needs Score



Summary

This report has presented considerable information on the transportation setting in which RRTA operates. It indicates the trends in population and employment along with the characteristics of Lancaster County that influences the propensity to use and the need for public transportation. Journey to work information is also provided and reveals that private auto is the dominant mode. The results point to a county that is growing outward from the traditional urban core, with development increasing along the major transportation corridors that traverse the central and northern portions of the County. As a result, population and employment are generally moving away from denser and more transit friendly communities to suburban locations where the private automobile is the preferred mode of transportation. The exception appears to be Lancaster City which is projected to experience a significant increase in jobs over the next three decades. It is anticipated that this information will support subsequent planning efforts.

EXISTING TRANSIT SERVICES

The Red Rose Transit Authority (RRTA) operates scheduled, fixed route bus transit service within the City of Lancaster, county bus routes which connect the city with various outlying communities, a metro region bus route which serve major regional activity centers and shuttle/circulator services which are designed to meet specific travel needs of Millersville University. RRTA also operates under contract with private vendors for the provision of paratransit services throughout Lancaster County. This service known as Red Rose Access includes the mandatory Americans with Disabilities Act (ADA) complementary service, the State's Shared Ride service, Medical Assistance Transportation, Area Agency on Aging Transportation and transportation service for various human service agencies.

This chapter presents a description of the existing RRTA system. The primary focus of this existing public transportation services report is on the scheduled, fixed route bus transit service operated by RRTA throughout Lancaster County. The operations of the paratransit services in the area are also briefly summarized.

System Overview

The RRTA system consists of 19 bus routes, with a focal point and major transfer location in the downtown area of the City of Lancaster known as the Queen Street Station. As shown in Table 7, RRTA's bus routes are broken down into four groups including city routes, county routes, a metro region route and Millersville University circulator/shuttle routes. The city routes (Routes 1 through 5 plus the Historic Downtown Trolley) provide basic circulation within the city. Three of the routes also serve the Park City Mall retail center in the northwestern corner of the city. In addition, City Routes 1 through 4 are designed with a two leg route structure and are through-routed through the downtown district. This route structure serves to connect neighborhoods on one side of downtown with retail centers or other destinations on the opposite side. The county routes (Routes 10 through 19) operate between downtown Lancaster and various suburban/rural destinations in a spoke-type configuration in almost every direction. The metro region route (Route 20) serves the Greenfield Industrial Park and the two current circulator/shuttle services (MU Express and MU-Park City Express) are specifically designed to meet various travel needs of Millersville University students. All 19 routes operate under a set schedule along a fixed route. All RRTA routes operate at least eight round trips per day on weekdays. Certain routes provide evening service during the week and some level of weekend service.

Table 7
RRTA Fixed Route Network

Route	Between	And
City Routes		
1 Park City A/Southeast	South Ann & Chesapeake Streets	Park City Kohl's Mall Depot
2 Park City B/6th Ward	Hamilton & Franklin Streets (6th Ward)	LGH Health Campus (Park City)
3 Park City C/8th Ward	Wabank Road & Union Street (8th Ward)	Park City Kohl's Mall Depot
4 Elm Avenue/Parkside	Stone Mill Plaza (Elm Avenue)	East Orange Street and Parkside (Stevens College Dormitories)
5 Grandview/Rossmere	Queen Street Station	Lancaster Shopping Center (Michaels)
Historic Downtown Trolley	County Courthouse/Queen Street Station	Amtrak/Clipper Magazine Stadium Park-n-Ride Lot
County Routes		
10 Lititz	Queen Street Station	Newport Road and Tollgate Road (Lititz)
11 Ephrata	Queen Street Station	Ephrata Wal-Mart (U.S. Routes 222 & 322)
12 New Holland	North Queen Street - Bulova Technology	Tower Road & State Route 23 (New Holland)
13 White Horse	East Chestnut and N. Duke Streets	Old Philadelphia Pike & Cains Road (Cains)
14 Rockvale Square/Paradise	East Chestnut and N. Duke Streets	Rockvale Square *or* U.S. Route 30 & Slaymaker Hill Road (Kinzers)
15 Willow Street	Queen Street Station	Rees Drive & Willow Street Pike
16 Millersville	Queen Street Station	Hillview Drive & Lee Avenue (Millersville)
17 Columbia	Queen Street Station	3rd & Linden Streets (Columbia) *or* Marietta Square - Market Street (Marietta)
18 Mount Joy/Elizabethtown	Queen Street Station	Market & Spring Garden Streets (Elizabethtown)
19 Manheim	Queen Street Station	Market Square (Manheim)
Metro Region Route		
20 Greenfield	East Chestnut and N. Duke Streets	Jefferson Drive & William Penn Way *or* East Towne Center
Circulator/Shuttle Routes		
Millersville University Express	Student Memorial Center	Student Memorial Center
Millersville - Park City Express	Student Memorial Center	Park City Kohl's Mall Depot

Route Descriptions

This section describes each of the RRTA routes listed in Table 7.

City Route Network - The following six bus routes comprise RRTA's full-service Lancaster City fixed bus route network:

- Route 1 - Park City A/Southeast - This bus route operates two separate legs, the first operates between RRTA's Queen Street Station and South Ann & Chesapeake Streets in the Southeast, and the second leg operates between the RRTA's Queen Street Station and Park City Kohl's Mall Depot in Park City. However, all trips are through-routed offering direct service between the Southeast and Park City. Route 1 operates twenty-seven (27) round-trips on weekdays, twenty-five (25) round-trips on Saturdays and eight (8) round-trips on Sundays. The Southeast leg of the route provides service to the RRTA Queen Street Station, Clermont Apartments, Neighborhood Services Center, and the Church Street Towers. The Park City leg provides service to Franklin & Marshall College, Park City Mall, and the Parkview Plaza.

- Route 2 - Park City B/6th Ward - This bus route operates two separate legs, the first operates between RRTA's Queen Street Station and Hamilton & Franklin Streets in the 6th Ward, and the second leg operates between the RRTA's Queen Street Station and Park City Kohl's Mall Depot in Park City. However, all trips are through-routed offering direct service between the 6th Ward and Park City. Route 2 operates twenty-six (26) round-trips on weekdays, twenty-three (23) round-trips on Saturdays and eight (8) round-trips on Sundays. The 6th Ward leg provides service to McCaskey High School, Grandview Shopping Center and Lancaster General Hospital. The Park City leg of the route provides service to the Lancaster Regional Medical Center, Franklin & Marshall College, Lancaster Post Office, Park City Mall, and the Lancaster General Hospital Health Campus.

- Route 3 - Park City C/8th Ward - This bus route operates two separate legs, the first operates between RRTA's Queen Street Station and Wabank & Union Streets in the 8th Ward, and the second leg operates between RRTA's Queen Street Station and the Park City Kohl's Mall Depot in Park City. However, all trips are through-routed offering direct service between the 8th Ward and Park City. Route 3 operates twenty-three (23) round-trips on weekdays, twenty (20) round-trips on Saturdays and seven (7) round-trips on Sundays. The 8th Ward leg of the route provides service to the Lancaster County Courthouse, Chamber of Commerce, Sterling Place, Hershey Heritage Village, Department of Welfare, and the Umbrella Works. The Park City leg of the route provides service to the Lancaster General Hospital, Amtrak/Greyhound Station, RRTA's office, Park City Mall, and Parkview Plaza.

- Route 4 - Elm Avenue /Parkside - This bus route operates two separate legs, the first operates between East Orange & Parkside Streets (Stevens College Dormitories) and North Queen Street at Bulova Tech. The second leg operates between North Queen Street at Bulova Tech. and the Stone Mill Plaza at Elm Avenue. However, all trips are through-routed offering direct service between the Stevens College Dormitories and Stone Mill Plaza. Route 4 operates eleven (11) round-trips on weekdays and four (4) round-trips on Saturdays. The Elm Avenue leg of the route provides service to Wheatland Jr. High School, Ivy Ridge Apartments and Umbrella Works. The Parkside leg of the route provides service to Bulova Technology, McCaskey East High School and the Stevens College Dormitories.

- Route 5 - Grandview Heights/ Rossmere - This bus route operates between RRTA's Queen Street Station and the Lancaster Shopping Center. Route 5 provides sixteen (16) round-trips on weekdays and four (4) round-trips on Saturdays. The route also serves Bulova Technology, Lancaster General Hospital, Goodwill Industries, Lancaster County Social Services, Catholic High School, Golden Triangle Shopping Center, Calvary Fellowship Homes and the Lancaster County Courthouse.

- Historic Downtown Trolley - This bus route operates between the Amtrak/Greyhound Station in the North and the Visitors Center on South Queen Street connecting with RRTA's Queen Street Station. The Historic Downtown Trolley route provides twenty-six (26) round-trips on weekdays only. The route also serves Liberty Place, RRTA Clipper Magazine Stadium Park-n-Ride Lot, Lancaster General Hospital, Lancaster County Courthouse and the Central Market.

County Route System - The following ten routes comprise RRTA's County fixed bus route network.

- Route 10 - Lititz - This bus route operates between RRTA's Queen Street Station and Newport and Tollgate Roads in the Borough of Lititz. Route 10 provides fifteen (15) round-trips on weekdays and eight (8) round-trips on Saturdays. The route also serves City Hall, Lancaster General Hospital, Amtrak/Greyhound Station, Golden Triangle Shopping Center, Lancaster Shopping Center, Overlook Golf Course, Brethren Village, Shoppes of Kissel Hill, Heart of Lancaster Hospital, Lititz Borough Hall and Sauder Eggs.

- Route 11 - Ephrata - This bus route operates between RRTA's Queen Street Station and the Ephrata Wal-Mart. Route 11 provides eleven (11) round-trips on weekdays and five (5) round-trips on Saturdays. The route also serves Bulova Technology, Lancaster General Hospital, Amtrak/Greyhound Station, Lancaster Shopping Center, Eden Resort, Oregon Dairy, Schaum's Corner, Dutch Lanes, Akron Borough Hall, Akron K-Mart and the Ephrata Borough Hall.

- Route 12 - New Holland - This bus route operates between North Queen Street at Bulova Tech. in Lancaster and Tower Road & Route 23 in New Holland. Route 12 provides twelve (12) round trips on weekdays and five (5) round-trips on Saturdays. The route also serves the Grandview Shopping Center, Burle Industries, Lancaster Labs, The Worship Center, Dart, The Jay Group, Tyson Foods, and Yoder's Country Market.

- Route 13 - White Horse - This bus route operates between North Duke & East Chestnut Streets in Lancaster and Old Philadelphia Pike & Cains Road in Cains. Route 13 provides eight (8) round-trips on weekdays and four (4) round-trips on Saturdays to Cains. In addition, Route 13 also provides limited service to the Greenfield Industrial Park with one trip during the A.M. weekday and Saturday peak period. Route 13 also serves the Conestoga View Nursing Home, PA Department of Health, Bird In Hand Farmers Market, Plain & Fancy, and the Kitchen Kettle.

- Route 14 - Rockvale/Paradise - This bus route operates between North Duke & East Chestnut Streets in Lancaster and Rockvale Square or U.S. Route 30 & Slaymaker Hill Road in Kinzers. Route 14 provides twenty-six (26) round trips on weekdays and Saturdays between Lancaster and Rockvale Square, with six (6) trips extending to Leaman Place and Kinzers on weekdays and five (5) on Saturdays . In addition, Route 14 operates eleven (11) round-trips between Lancaster and Rockvale Square on Sundays. Route 14 provides service to YMCA, Conestoga View Nursing Home, Wal-Mart, East Towne Centre, Tanger Outlet at Mill Stream, Dutch Wonderland and the Quality Outlet Shopping Center.

- Route 15 - Willow Street - This bus operates between the RRTA's Queen Street Station in Lancaster and Rees Drive & Willow Street Pike. Route 15 provides eleven (11) round-trips on weekdays and nine (9) round-trips on Saturdays. The route also serves Willow Valley Lakes Manor, Willow Valley Manor, Willow Valley Square, Willow Valley Inn, Kendig Square, and K-Mart.

- Route 16 - Millersville - This bus route operates between RRTA's Queen Street Station in Lancaster and Hillview Drive & Lee Avenue in Millersville. When Millersville University is in session, Route 16 provides twenty-eight (28) round-trips on weekdays and thirteen (13) round-trips on Saturdays. When Millersville University is not in session, weekday service is reduced to twenty-six (26) round trips and Saturday service is provided with eleven (11) round-trips. Four (4) round-trips are provided on all Sundays. The route also serves the Manor Center/Weis Market, St. Phillip's Catholic Church and Millersville University.

- Route 17 - Columbia - This bus route operates between RRTA's Queen Street Station in Lancaster and 3rd & Linden Streets in Columbia or Marietta Square in Marietta. Route 17 provides twenty-one (21) round-trips on weekdays and eleven (11) round-trips on Saturdays between North Queen Street and 3rd & Linden Streets, with six trips extending to Marietta Square in Marietta on weekdays and four on Saturdays. In addition, Route 17 operates five (5) round-trips on Sundays to Columbia and 3rd and Linden Streets. Route 17 also provides service to the Stone Mill Plaza, Hempfield Industrial Park, K-Mart Park-N-Ride, Columbia Shopping Center, Columbia Borough Hall, and the Village of Rivermore.

- Route 18 - Mount Joy/Elizabethtown - This bus route operates between RRTA's Queen Street Station in Lancaster and Market & Spring Garden Streets in Elizabethtown. Route 18 provides eight (8) round-trips on weekdays, with seven (7) on weekdays and five (5) on Saturday traveling to Elizabethtown. One weekday trip stops at Donegal Springs. Route 18 also serves Lancaster Regional Medical Center, Windsor Court Apartments, Oyster Point Medical Center, QVC, and Mt. Joy Borough Hall

- Route 19 - Manheim - This bus route operates between RRTA's Queen Street Station in Lancaster and Market Square in Manheim. Route 19 provides sixteen (16) round-trips on weekdays and seven (7) round-trips on Saturdays. On weekdays, the first four trips outbound trips of the day and two of the PM outbound trips are diverted onto Commerce Drive. Only one inbound trips serves this area. Route 19 also serves Amtrak/Greyhound Station, Red Rose Commons, K-Mart Plaza, Hawthorne Plaza, Foxshire Plaza, Granite Run Industrial Park, and Chelsea Square Shopping Center. Trips that use the Commerce Drive diversion also serve Crystal Springs and Arnold Logistics.

Metro Region Route System - The following bus route is considered as RRTA's full-service metro region fixed route:

- Route 20 - Greenfield - This bus route operates between North Duke & East Chestnut Streets in Lancaster and the intersection of William Penn and Jefferson drive. Route 20 provides sixteen (16) round-trips per day on weekdays. Route 20 also provides two (2) round trips on Saturdays. Route 20 serves Stevens College of Technology, Conestoga View Nursing Home, HAAC, Donnelley Printing, Social Security Office and the Greenfield Corporate Center.

Circulator/Shuttle Services - In August, 2000, RRTA began operating two Millersville University shuttle routes, which provide public transit service throughout the University as well as provide service to the Park City Mall. Millersville University students may access these routes at no charge by showing the bus drivers proper student identification. These routes only operate during the academic school year.

- MU Park City Express - This bus operates between the Student Memorial Center (SMC) and the Park City Mall. The MU Park City Express provides ten (10) round-trips on weekdays and ten (10) round-trips on Saturdays, which also serves Regency Square and the LGH Health Campus. There are six (6) round trips provided on Sundays.

- MU Express - This bus operates as an on-campus shuttle between the Student Memorial Center (SMC) and the intersection of Duke and West Cottage Streets. The MU Express provides twenty-one (37) round-trips on Mondays through Thursdays with twenty-four (24) provided on Fridays. The route serves various student facilities throughout the university.

Frequency of Service - Table 8 indicates the frequency of service or how often the bus on a particular bus route is operated for each of RRTA's bus routes. As Table 8 shows, the peak period frequencies of RRTA's full service routes range from every 15 minutes for the Historic Downtown Trolley to every 130 minutes on the PM peak service on Route 18. Frequencies fall off in the midday hours and during the evenings. The city routes operate less frequent service on Saturdays as during the midday period of the weekdays. Those city routes which run on Sundays operate at about the same frequencies as weekday evening service.

The county routes operate at lower frequencies and are geared more towards providing commuting options from various areas. Typically, the frequency of service for the inbound and outbound service is about the same.

Route 20 provides 50 minute service for the AM peak period and 60 minute service for the PM peak period. Midday service is more frequent at about every 41 minutes with only one trip operated during the evening and two trips on Saturday.

The MU Express provides service every 15 minutes during weekdays. The MU Park City Express provides 55 minute service on weekdays and weekends.

Table 8
Frequency of Service (Headway in Minutes)

Route	Weekday				Saturday	Sunday
	AM Peak	Midday	PM Peak	Evening		
City Routes						
1	28	33	34	57	37	57
2	32	35	43	50	40	57
3	30	35	37	65	44	66
4	27	89	65	--	113	--
5	39	45	45	--	113	--
Trolley	15	40	15	--	--	--
County Routes (Inbound/Outbound)						
10	38/34	72/71	43/43	--	90/90	--
11	57/46	90/88	105/100	--	143/143	--
12	53/60	90/90	43/50	--	163/163	--
13	70/85	120/132	78/75	--	182/182	--
14	41/42	31/32	36/33	49/54	37/38	54/54
15	50	93	60	--	60	--
16	33/32	30/30	33/33	65/76*	30/30	137/137
17	46/42	41/43	43/37	50/67	58/56	95/96
18	63/55	148/148	130/130	--	134/115	--
19	49/47	49/43	52/53	--	98/98	--
Metro Region Route						
20	50	41	60	1 trip	2 trips	–
Circulator/Shuttle Routes						
MUX*	15**	15	15**	--	--	--
MUPC*	--	55	55	55	55	55

* Operates only when Millersville University is in Session
** No Peak service on Fridays

Span of Service - Table 9 indicates the span of service for each of RRTA's bus routes. As the table shows, about half of the RRTA weekday service stops before 7:00 PM. Eight routes provide later evening service, with six routes providing service after 10:00PM. All of RRTA's city routes except the Trolley provide service on Saturdays, and three provide Sunday service. All of RRTA's county routes provide Saturday service, and three provide Sunday service. Route 20 provides service on Saturday service but does not operate on Sundays.

MU Express and MU Park City operate only when Millersville University is in session. The service span is reduced on the MU Express on Fridays. The MU Park City operates only in the afternoon and evenings on weekdays and as well as on weekends.

Fixed Route System Fare Structure

RRTA has a comprehensive fare structure for the fixed route bus service. Fares can differ depending on whether a patron uses cash, 10-Trip tickets, or a monthly pass. The fare can also differ depending on whether or not the patron belongs to certain groups. RRTA's fixed route fare structure is also distance based, which is determined by the number of zone boundaries that are crossed along each route. The service area is broken into 4 zones, not including the base fare zone within the City of Lancaster. There is a $0.15 charge for the first zone, $0.30 for the second zone, $0.35 for the third zone and $0.40 for the fourth zone. Therefore, full fare could range from $0.15 to $1.20 above the base fare of $1.35. RRTA's city routes all operate within the base fare zone. Fares are paid when passengers board any of these routes. The fare for Historic Downtown Trolley is also $1.35.

The county routes all cross zones and passenger fares will vary depending on the distance traveled. Fares are paid when passengers depart the bus when traveling from the City of Lancaster. When traveling towards the City of Lancaster on a county route, fares are paid when passengers board the bus. RRTA's Route 20, the metro region route, operates like a county route in that it crosses a fare zone. Fares are paid in the same manner as county routes. Passengers transferring from one RRTA route to another can purchase a transfer for $0.05 plus zone charges. Table 10 provides a summary of the RRTA's fare structure.

Table 9
Span of Service

Route	Weekday		Saturday		Sunday	
	Start	End	Start	End	Start	End
City Routes						
1	6:05AM	10:35PM	6:50AM	10:35PM	11:10AM	6:55PM
2	6:05AM	10:25PM	7:10AM	10:25PM	11:05AM	6:45PM
3	6:00AM	10:40PM	7:45AM	10:40PM	10:50AM	7:00PM
4	6:00AM	5:45PM	9:00AM	3:35PM	--	--
5	6:15AM	6:05PM	8:10AM	2:35PM	--	--
Trolley	7:10AM	6:20PM	--	--	--	--
County Routes (Inbound/Outbound)						
10	5:55AM/5:25AM	6:35PM/6:00PM	7:30AM/6:45AM	6:35PM/6:00PM	--	--
11	5:50AM/5:15AM	6:50PM/6:05PM	8:35AM/7:50AM	6:45PM/6:05PM	--	--
12	5:45AM/5:10AM	6:40PM/6:00PM	7:05AM/6:30AM	6:35PM/5:55PM	--	--
13	6:10AM/5:30AM	5:15PM/4:25PM	7:20AM/6:30AM	5:15PM/4:25PM	--	--
14	5:55AM/5:20AM	10:10PM/9:35PM	7:10AM/6:30AM	10:10PM/9:35PM	8:40AM8:10AM	6:50PM/6:20PM
15	5:50AM	6:10PM	8:20AM	5:15PM	--	--
16	6:00AM/5:40AM	9:10PM/8:45PM *or* 11:10PM/10:40PM*	7:45AM/7:30AM	6:20PM/7:50PM	11:25AM/11:00AM	6:45PM/6:15PM
17	5:40AM/4:55AM	8:40PM/9:25PM	6:55AM/6:15AM	7:05PM/6:20PM	11:45AM/11:00AM	6:40PM/6:05PM
18	5:40AM/5:05AM	7:10PM/6:20PM	7:20AM/6:30AM	5:15PM/4:10PM	--	--
19	5:50AM/5:15AM	6:50PM/6:05PM	8:25AM?7:45AM	6:50PM/6:05PM	--	--
Metro Region Route						
20	5:20AM	11:25PM	6:55AM	3:40PM	--	–
Circulator/Shuttle						
MUX*	7:45 AM or 9:00AM**	5:00 PM or 3:00PM**	--	--	--	--
MUPC*	1:10 PM	10:15 PM	1:10 PM	10:15 PM	1:10PM	6:35PM

* Operates only when Millersville University is in Session
** Limited service span on Fridays

Table 10
Fixed Route System Fare Structure

Category	Fare			
Cash Fare	$1.35			
Elderly and Disabled with Proper Identification	No Charge			
Children Age 5 and Under	No Charge			
Students Grades K-12	$1.10 Plus Zone Charge			
Transfers	$0.05 plus Zone Charge			
Zone Charge (charged by number of zones entered, maximum fare is $2.55)	**1 Zone**	**2 Zones**	**3 Zones**	**4 Zones**
	$0.15	$0.45	$0.80	$1.20
Monthly Pass (unlimited rides for $30) Base Zone $30.00	**Zone 1**	**Zone 2**	**Zone 3**	**Zone 4**
	$35.00	$42.00	$50.00	$59.00
10 Trip Tickets (10 rides for $9.50) Base Zone $ 9.50	**Zone 1**	**Zone 2**	**Zone 3**	**Zone 4**
	$11.00	$13.00	$16.00	$19.50
Downtown Trolley	$1.35			
Day Pass	Base and up to two zones $3.00 All Zone Day Pass $5.00			

Transit System Description

This section describes RRTA and the assets that the system utilizes to provide and operate its various public transportation services throughout Lancaster County.

Transit Administration - RRTA is a public corporation established under Pennsylvania state law. In 1973, the Lancaster City and County Joint Transit Authority, was formed to support continuing operations of the Conestoga Transportation Company. In 1976, the authority began operating the fixed route bus system using the name the Red Rose Transit Authority. RRTA is administered by an executive director who reports to a nine member board appointed by the Lancaster County Commissioners.

Management personnel as well as all other transit employees are employed by the Authority. RRTA management staff has the internal capacity to fulfill its planning needs including the design and implementation of bus routes and operational changes, construction

projects, the preparation of state and federal grant applications and monitoring compliance with regulatory requirements. RRTA also initiates, performs, or oversees studies of potential improvements or expansions of local transit service.

Fleet Inventory - The RRTA fleet utilized to provide the fixed route transit service consists of 40 diesel powered vehicles as shown in the chart below. Of these, 34 are needed to satisfy the peak service requirement on weekdays. The resulting spare ratio is 17.6 percent. This is a sufficient number of spares to allow for buses to be taken out of service for preventive maintenance or running repairs. The average age of the fleet is 5.2 years which is under the 12 year useful economic life generally associated with a transit bus. Only the three 1994 TMC's, the one 1997 NOVA and the four 1998 NOVA buses are at or exceed this 12 year life. RRTA plans to replace these eight buses within the next few years. Table 11 provides a detailed inventory of RRTA's current transit fleet. Most buses are equipped with bike racks.

Table 11
Fixed Route Fleet Inventory

Year	Make	Type	Passenger Seats	Wheelchair Lift Equipped?	Number in Fleet
1994	TMC	35' Diesel	37	Yes	3
1997	NOVA	35' Diesel	37	Yes	1
1998	NOVA	35' Diesel	37	Yes	4
2003	OPTIMA	35' Diesel	37	Yes	12
2003	OPTIMA	30' Diesel	30	Yes	4
2005	GILLIG	35' Diesel	37	Yes	8
2006	GILLIG (LOW FLOOR)	30' Diesel	30	No (Ramp)	2
2007	GILLIG (LOW FLOOR)	35' Diesel	30	No (Ramp)	6
Average Age of Current Bus Fleet: 5.2 Years					40

Staffing Levels - As shown in Table 12, RRTA has a total of 107 employees. More than half (58%) of RRTA's employees are fixed-route bus drivers. The vehicle maintenance function accounts for 12 percent of all employees, while the remainder of RRTA's employees (30%) are involved in administrative functions. RRTA employs three part-time administrative employees.

Table 12
RRTA Employees

Category	Full-Time Number	Part-Time Number	Percent
Fixed-Route Drivers	62	0	58
Maintenance	13	0	12
Administrative	29	3	30
Total	**104**	**3**	**100**

Administrative and Maintenance Facility - The main operational facility for RRTA is located in the north side of the City of Lancaster at 45 Erick Road. The facility accommodates the RRTA bus operations including administrative offices, vehicle maintenance, vehicle servicing and vehicle storage. The facility was constructed in 1979 and is now nearly 30 years old. A study by RRTA indicates that it is showing its age with many areas in poor condition.

The location of the RRTA main operational facility is well suited to its fixed route service area. The facility is approximately two miles from downtown Lancaster where 18 of the 19 RRTA fixed route buses emanate. This allows RRTA to minimize its "deadhead" time, that is, the time RRTA buses operate out of revenue service while traveling to the starting point of a route.

Passenger Amenities - RRTA provides more than 20 waiting shelters, located throughout the system. The shelters are equipped with benches, and typically are positioned to provide protection from the elements. RRTA also provides eight Park-N-Ride lots throughout suburban Lancaster which are free of charge and are served by various RRTA bus routes. In addition RRTA operates the downtown transit center known as the Queen Street Station (QSS), which offers an inside waiting area and a ticket and pass sales window. Lastly, RRTA is proposing to expand the QSS terminal with a mixed use development adjacent to the current terminal site.

Public Information - RRTA's public information program contains most of the elements necessary to fully inform the public of the services offered and how to use them. Route timetables are distributed on buses and are displayed at many activity centers throughout the area including on their website *redrosetransit.com*. Further, RRTA provides telephone information services which are available during RRTA hours of operation.

Fixed Route System Performance and Efficiency Trends

To determine operating and ridership trends during the past five years, relevant statistics were compiled for fiscal years 2003 through 2007.

Fixed Route System Operating Statistics - As Table 13 shows, vehicle miles and the number of vehicles required to provide peak period service have decreased by 2.7 percent and 8.1 percent, respectively from 2003 to 2007. The slight increase in vehicle hours is minimal. Part of the reason for the decrease in vehicle miles and peak vehicles is the loss of the Lancaster City school service. However, it is significant to note that even with the cut back in service, ridership increased by over four percent during the review period. Ridership during the five year period reached its highest level in 2006 and declined the next year due to the school service loss.

Table 13
Fixed Route System Operating Statistics and Ridership Trends by Fiscal Year

Criteria	2003	2004	2005	2006	2007	Total % Change	Annual % Change
Operating Statistics (Vehicle Miles and Passengers in Thousands)							
Vehicle Miles	1,539.2	1,502.8	1,538.4	1,531.0	1,497.9	(2.7)	(0.7)
Vehicle Hours	110,736	108,348	114,428	112,712	111,174	0.4	0.1
Peak Vehicles	37	37	37	37	34	(8.1)	(2.0)
Passenger Trips	1,851.4	1,893.3	1,946.0	1,976.6	1,927.6	4.1	1.0

Fixed Route Productivity Trends – Table 14 demonstrates that the productivity trends of the RRTA have improved in all three review categories throughout the five year review period. This is primarily due to the increasing ridership trend while the vehicle miles, vehicle hours and peak vehicles required to place the service on the street either declined or remained about the same.

Table 14
System Productivity Trends

Criteria	2003	2004	2005	2006	2007	Total % Change	Annual % Change
Productivity							
Passengers per Vehicle Mile	1.20	1.26	1.26	1.29	1.29	7.5	1.9
Passengers per Vehicle Hour	16.7	17.5	17.0	17.5	17.3	3.6	0.9
Passengers per Peak Vehicle	50,038	51,170	52,595	53,422	56,694	13.3	3.3

Financial Trends - As seen in Table 15, between 2003 and 2007, RRTA's cost attributable to the bus system increased by 39.3 percent. This is due to some major increases in cost that are outside the control of a transit operator including fuel, health care and pension. There has been a 42.3 percent increase in costs associated with vehicle operations. This category includes all costs for driver wages and fringe benefits, which are typically the single largest transit system expenditure. Maintenance costs increased by 18.1 percent between 2003 and 2007. This represents an average annual increase of 4.5 percent. Operating costs attributable to the administration of the RRTA system increased by 33.0 percent over the same period, which represents an average annual increase of 8.2 percent. Operating revenue increased each year throughout the five year period shown in Table 15. Revenue from passenger fares reached its highest level during FY 2006 when RRTA collected $2.290 million. Revenue from passenger fares dropped slightly from FY 2006 to FY 2007. However, during the five year period, revenue from passenger fares increased by 9.1 percent. A larger increase of 57.9 percent occurred in revenue from other sources that included advertising, rental of a radio tower and other miscellaneous revenue.

The increase in revenue coupled with the larger increase in operating costs resulted in a lower farebox recovery rate (which is revenue from passenger fares/total operating costs) for RRTA in 2003 than in 2007. RRTA's farebox recovery rate dropped from 42.4 percent in 2003 to 34.8 percent in 2007. This is a drop of 17.9 percent.

Total operating assistance provided to RRTA increased by 62.0 percent between 2003 and 2007. This is due to an 84.5 percent increase in local funding; and a 145.8 percent increase in State operating assistance; and, a 19.5 percent increase in federal operating assistance. In 2007, the State of Pennsylvania provided $2.345 million in operating assistance to RRTA. This was approximately $1.391 million higher than the level of funding provided in 2003. Overall, the State provides about 48.2 percent of the RRTA deficit; the federal government provides about 47.6 percent; while the local contribution is only about 4.2 percent.

Table 15
System Financial Trends by Fiscal Year

Criteria	2003	2004	2005	2006	2007	Total % Change	Annual % Change
Operating Costs (In Thousands of Dollars)							
Operations	3,423,778	3,642,917	4,032,406	4,561,096	4,870,557	42.3	10.6
Maintenance	1,026,914	1,100,172	1,141,717	1,296,855	1,212,926	18.1	4.5
Administration	919,377	1,111,310	1,166,102	1,333,026	1,222,606	33.0	8.2
TOTAL	**5,370,069**	**5,854,399**	**6,340,225**	**7,190,977**	**7,480,055**	**39.3**	**9.8**
Operating Revenue (In Thousands of Dollars)							
Regular Fares	2,039,338	2,149,828	2,193,238	2,290,172	2,225,689	9.1	2.3
Other Revenue	239,210	223,124	361,557	279,817	377,594	57.9	14.5
TOTAL	**2,278,548**	**2,373,092**	**2,554,795**	**2,569,989**	**2,603,283**	**14.3**	**3.6**
Financial Performance							
Farebox Recovery (%)	42.4	40.5	40.2	35.7	34.8	(17.9)	(4.5)
Deficit	3,002,000	3,431,000	3,613,000	4,594,250	4,864,114	62.0	15.5
Operating Assistance (In Thousands of Dollars)							
Local	111,000	69,000	127,000	132,000	204,802	84.5	21.1
State	954,000	1,671,000	1,085,000	2,856,000	2,345,273	145.8	36.5
Federal	1,937,000	1,691,000	2,401,000	1,078,000	2,314,039	19.5	4.9
TOTAL	**3,002,000**	**3,431,000**	**3,613,000**	**4,594,250**	**4,864,114**	**62.0**	**15.4**

Individual Route Performance – Table 16 presents the route by route performance for the RRTA routes. It should be noted that the statistics for the Downtown Trolley are included in Route 3 – Park City 8th Ward and the statistics for the MU Park City Express and the MU Express are included in Route 16 – Millersville.

Table 16
Route Performance
(July 2007 to December 31, 2007)

Route	Passengers	Expenses ($)	Revenue ($)	Hours	Passengers per Hour	Farebox Recovery
PCA/Southeast	96,026	282,141	106,983	4,576	20.98	37.92
PCA/6th Ward	103,167	286,767	121,930	4,669	22.10	42.52
PCA/8th Ward	117,211	455,555	149,657	6,852	17.11	32.85
Elm/Park	16,378	142,138	29,325	1,937	8.46	20.63
GVR	26,608	106,383	29,029	1,640	16.22	27.29
Lititz	36,565	227,524	61,736	3,176	11.51	27.13
Ephrata	33,740	198,147	63,250	2,508	13.45	31.92
New Holland	43,407	212,699	68,191	2,691	16.13	32.06
White Horse	27,897	153,033	42,551	1,881	14.83	27.81
Rockvale	148,155	348,164	183,952	5,307	27.92	52.83
Willow St.	18,957	110,478	24,893	1,563	12.13	22.53
Millersville	109,739	343,100	150,014	5,033	21.80	43.72
Columbia	111,692	382,056	158,601	5,642	19.80	41.51
E-Town	26,848	196,447	48,858	2,369	11.33	24.87
Manheim	50,841	246,648	75,784	3,501	14.52	30.73
Greenfield	39,631	122,698	46,532	1,839	21.55	37.92
TOTAL/AVG.	1,006,862	3,813,978	1,361,286	55,184	18.25	35.69

As seen above, the best performing RRTA route in terms of both passengers per hour and farebox recovery is the Rockvale Square route. Of note, only Route 4- Elm Avenue/Parkside performs below 60 percent of the system average performance (18.25) in terms of passengers per hour. This same route also performs below 60% of the system average performance (35.69) in terms of farebox recovery. This is the only RRTA that perform below the 60% threshold that is used to identify the need for a service change.

Red Rose Access

RRTA also operates a shared-ride, paratransit program, known as Red Rose Access. This door-to-door transportation service is available to senior citizens and persons with disabilities in Lancaster County who are unable to access RRTA's regular fixed route bus system. Trips on the Red Rose Access system are provided to these individuals under one of the following programs:

- Senior Citizen Program - This program is for senior citizens age 65 or older who travel to or live within 1/4 mile of an existing bus route or have a disability which prevents them from using regular RRTA bus service. Passengers pay 15 percent of the fare while the remainder is funded by the Pennsylvania Lottery.

- Medical Assistance Program - This program provides transportation to medical appointments for those persons who receive medical assistance from the Department of Public Welfare, and live or must travel more than 1/4 mile to access a RRTA fixed route.

- Office of Aging Program - This program funds transportation for eligible persons age 65 and older to travel to area senior centers, and to medical appointments.

- American with Disabilities Program - This program, known as RRTA's ADA Services Program, has been instituted in accordance with the American with Disabilities Act of 1990. The program provides paratransit service for those persons who live or can travel to within 3/4 of a mile of a RRTA fixed route but cannot access the fixed route service. Fares for this service are no more than twice the fixed route bus fares.

- Human Service Agency Programs - Over 40 human service agencies sponsor transportation for their clients on Red Rose Access.

RRTA leases its paratransit vehicles at no cost to two private transit operators. These operators provide wheelchair lift equipped demand response service throughout Lancaster County and maintains and stores the vehicles at their own separate facility. The fleet used for this service includes 53 vehicles as described in Table 17. The average age of the fleet is 4.2 years which is under the 5 year useful economic life generally associated with a small mini-bus. The 15 mini-buses built from 2000 to 2002 exceed this 5 year life. RRTA plans to replace these most of these mini-buses within the next few years.

Table 17
Paratransit Fleet Inventory

Year	Make	Passenger Seats	Wheelchair Positions?	Number in Fleet
2000	Ford	14	3	2
2001	Ford	14	3	11
2002	Ford	14	3	2
2003	Ford	14	3	7
2004	Ford	14	3	8
2005	Ford	14	3	9
2006	Ford	14	3	8
2007	Ford	14	3	4
2007	Ford	12	4	2
Average Age of Fleet = 4.2 Years				53

Summary

This chapter provided a comprehensive inventory of the current fixed route transit services in Lancaster County as well as the equipment, facilities and personnel involved in the service provision. A transit trend analysis showed that ridership on current fixed route system has remained fairly stable over the last five years. However, with increases in the cost of providing service outpacing growth in passenger revenue, system productivity and farebox recovery have decreased slightly. During this period, the average fare paid by each passenger has increased resulting in a higher level of passenger revenue collected.

COMMUNITY PARTICIPATION PROGRAM

The study to determine a Long Range Transit Plan for the RRTA in Lancaster County included a community participation program designed to elicit input from current and potential passengers as well as the general public. The community participation program included three separate components, including a passenger survey, meetings with an advisory committee as well as a mail-out/mail-back survey of Lancaster County residents. This chapter presents the findings from rider and the resident survey components of the community participation program.

Rider Opinion Survey

The first component of the RRTA community participation program was a rider opinion survey. This survey was intended for two purposes. First, to identify the types of service changes that would influence the riders to travel more. Second, the survey gave riders an opportunity to provide input on a variety of local issues such as on-the-street amenities, financial needs of transit and implementation of a downtown streetcar. This section describes the conduct of the survey and highlights the results.

Survey Method - A survey of RRTA fixed route riders was undertaken the week of April 7, 2008. A key dimension of the survey was the use of RRTA customer service representatives at the Queen Street Station to issue and collect survey cards from patrons. The customer service representatives would hand the survey questionnaire to customers waiting at the Station and request that they complete the survey form.

Survey Questions - The survey form, provided in Appendix A, consisted of 15 questions. With the exception of four open-ended questions, riders were only required to check off a box to answer most questions. For the first two questions, the rider provided background on their travel habits. The next group of questions requested attitudinal information regarding factors that could be implemented to influence their riding habit as well as suggested improvements. The third group of questions focused on street amenities and public information. The next group requested opinions regarding financial issues and the possibility of having a streetcar in the City of Lancaster. The final group of questions focused on socioeconomic characteristics of the respondent such as age, occupation and family income.

Survey Results – There were a total of 151 survey forms completed by the RRTA riders during survey week. The survey forms were tabulated and the results are presented below.

Length of Time Riding RRTA - The first question asked how long the passenger has been riding RRTA buses. As can be seen in the chart on the following page, over 60 percent of those that responded have been riding for *five years or more*. This is a significant number of long time riders. Surveys performed by the consultant at other systems generally indicated that fewer than 50 percent of the riders had been riding for that extended length of time. In fact, in the prior rider survey performed in 2002, about 49 percent of the riders were long time users. With the significant number of long time

users, there is only a small number (8.1% of riders) that have been riding for *less than a year*. This indicates that transit ridership in the Lancaster metropolitan area is stable and experiences only a small turnover, that is, some people stop riding while others become new riders. However, even with this small turnover, there is still the need to continually provide public information on transit services and perform marketing activities to attract new riders.

Length of Time Riding

Response	Percent
Less than 1 Year	8.1
1 to 2 Years	14.2
3 to 4 Years	15.5
5 years or More	62.2
Total	**100.0**

Service Usage - The next question asked how many trips the passenger makes on RRTA services in a week. As seen in the chart below, most riders use RRTA on a frequent basis. About 58.2 percent of the users travel *ten or more* times a week. Only 4.8 percent make *one trip or less* per week. This frequent usage is consistent with the finding from the rider survey done in 2002 that work is the most frequent trip purpose.

Service Usage

One Way Trips Per Week	Percent
1 or Less	4.8
2 to 5 Times	24.7
6 to 9 Times	12.3
10 or More	58.2
Total	**100.0**

Influencing factors – Riders were asked to identify the factors that would influence them to ride RRTA services more. There were 12 service change options that riders were asked to review. As seen in the chart on the following page, responses varied widely.

Factors to Influence More Travel (Percentage)

Influencing Factor	Very Important	Important	Not Important
Service closer to my home	69.7	22.5	7.8
Service closer to my work	66.2	17.7	16.1
Service closer to shopping	64.2	28.5	7.3
Service to more places	64.5	29.0	6.5
More frequent service	69.9	23.5	6.6
More information	42.7	37.1	20.2
Lower fare	48.5	26.1	25.4
More evening service	65.9	22.0	12.1
More Saturday service	70.4	20.0	9.6
More Sunday service	64.7	21.0	14.3
More door-to-door service	32.0	26.4	41.6
More park-n-ride service	27.0	31.2	41.8

More door-to-door and *more park-n-ride* services were indicated as the least favorable improvement options. *More information* and *lower fares* were also not identified as strong options. All of the remaining eight options were considered important or very important factors to influence more travel by about 85 percent or more of those that responded. *More Saturday service* had the highest percent of those that said it was very important while *service to more places* had the highest percent of combined very important and important responses.

New Places to Travel – The next question asked the rider if there were places in Lancaster County or in the surrounding areas that they would travel if bus service were available. There were 88 people that responded *yes* to this question and 44 said *no*. Of those that said *yes*, the table on the next page lists the places that were mentioned by two or more RRTA riders. As seen in the chart on the following page, *Quarryville* was the top choice with seven responses followed by Strasburg with six and *Elizabethtown, Green Dragon and Ephrata/Lititz* each with four.

New Places to Travel

Response	Number
Quarryville	7
Strasburg	6
Elizabethtown	4
Green Dragon	4
Ephrata/Lititz	4
York	3
Harrisburg	3
Harrisburg Airport	2
Marietta	2
Columbia	2
Moravian Manor	2

Service Changes or Improvements – Question 5 asked the rider to identify changes or improvements that they would like to see accomplished. There were a large number of responses to this question with many people writing in several comments. The accompanying table lists the changes or improvements that were mentioned by two or more RRTA riders. As seen in the chart on the following page, *issues with RRTA drivers* and *more evening service* were the largest comment by 17 riders. Most of the driver comments requested that RRTA drivers be more polite and more considerate. However, a few also said that the drivers were great. *More Sunday service* was requested by 10 people while *more frequent service* was requested by nine. *Better customer service* was noted by seven people and specifically referred to improvements needed in customer service at the Queen Street Station. There were several people that requested more service to *Park City, Elizabethtown, Willow Street and Lititz.*

Service Changes or Improvements

Response	Number
Driver Issues	17
More Evening Service	17
More Sunday Service	10
More Frequent Service	9
Better Customer Service	7
More Weekend Service	5
Earlier AM Service	4
More Park City Service	3
More Elizabethtown Service	2
More Willow Street Service	2
More Lititz Service	2

Improved On-the-Street Amenities – Question 6 asked the rider to list the on-the-street amenities that they would like to see improved. They were given three examples of types of amenities that they could list. As seen below, these three amenities comprised the majority of responses with *more benches* obtaining the largest response followed by *more shelters* and *more and better bus stop signs*. It should be noted that 10 people listed places where additional shelters or benches should be installed.

On-the-Street Amenities

Amenity	Number
More benches	39
More shelters	32
More and better bus stop signs	26
All ok	3
Cleaner shelters	2
Cars parked at bus stops	2

Rating of Public Information – The next questions asked the rider to rate how RRTA provides public information on five categories. As seen below, *public timetables* and *system map* obtained the greatest number of favorable responses in the excellent, very good and good categories, each greater than 88 percent. *Waiting shelters* were rated poorly with only 56.7 percent rating this category favorably. Over 85 percent of those completing the survey form provided a favorable response to the first four categories list in the table. Less than 70 percent provided a favorable rating of the *park-n-ride lot* category. This indicates that many RRTA riders either have limited knowledge or limited experience in using the RRTA park-n-ride lots.

Rating of Public Information (Percentage)

Category	Excellent	Very Good	Good	Fair	Poor
Public Timetables	40.2	25.7	22.7	7.6	3.8
System Map	37.0	25.2	28.4	9.4	0
Bus Stop Signs	25.0	30.3	28.8	11.4	4.5
Waiting Shelters	19.2	13.1	24.4	30.8	11.5
Park-n-ride Lots	23.3	19.4	36.9	14.6	5.8

Public Information Improvements – Question 8 required a write-in response to list the changes or improvements that they would like to see accomplished in the area of public information. There were very few responses that addressed the specific topic. There were a number of responses regarding suggested service improvements that duplicated what they answered for a prior question. For those that responded to this question, as seen in the chart below, *more advertising/public information* obtained the largest response but only by four people. Three indicated that there should be *more information on service delays* while two indicated that the *bus stop signs should be more visible*.

Public Information Improvements

Improvement	Number
More advertising/public information	4
More information of service delays	3
More visible bus stop signs	2

Financial Solutions – Riders were asked to suggest ways that RRTA should respond to its financial problems. Twenty-three people did not answer this question. Of those that did, nearly half (47.6 percent) indicated that RRTA should *increase fares*. About one-third (35.2 percent) said they *don't know*. *Reducing service* was noted by only 4.7 percent while both reducing service and increasing fares was noted by 12.5 percent. Clearly, the RRTA riders would rather pay more for their trip than to have their service either reduced or eliminated.

Financial Solutions

RRTA Action	Percent
Increase Fares	47.6
Don't know	35.2
Reduce Service	4.7
Increase fares and reduce service	12.5
Total	100.0

Streetcar Service – Riders were questioned regarding having streetcars operated in the City of Lancaster. As seen below, the majority (61.4 percent) *liked* the streetcar idea. Less than 20 percent *disliked the idea* while 18.9 percent had *no opinion*. As in many questions, about 12 percent did not provide an answer.

Streetcar Service

Streetcar Possibility	Percent
Like the idea	61.4
Don't like the idea	19.7
No Opinion	18.9
Total	100.0

Funding Increase – The next question asked if they would favor a small increase in public funding to pay for expanded or improved public transportation services. As seen in the chart on the following page, over three-quarters of the respondents answered *yes*. This compares with only 5.4 percent that answered *no*. There were 18.3 percent that said they *don't know.*

Increased Public Funding

Increase Local Funding	Percent
Yes	76.3
No	5.4
Don't know	18.3
Total	100.0

Sex – Responses to this survey were about 30.4 percent *male* and 69.6 percent *female*. This is a similar response to the prior RRTA rider survey where about 34.4 percent RRTA users are *male* and 65.6 percent *female*. A decisive *female* majority is typical of other system's rider make-up.

Age – As seen below, the highest single majority age group was the *45 to 64 year* old range with 47.0 percent of the riders. It is surprising that the senior citizen population segment accounts for only 16.9 percent of the riders. This group generally comprises a much larger segment of the typical transit ridership. However, even in the past RRTA rider survey, only about 15 percent of the riders were in the *65 years of age and older* group.

Respondent's Age

Response	Percent
Less than 18	3.7
18 to 29	12.5
30 to 44	19.9
45 to 64	47.0
65 and older	16.9
Total	**100.0**

Occupation – As seen in the chart on the following page, over one-third of the respondents listed *other* as their occupation. *Retired* was the next largest category at 15.3 percent that corresponded with the age group category where 16.9 percent were 65 years and older.

Occupation

Response	Percent
Other	35.9
Retired	15.3
Service Industry	14.5
Homemaker	9.9
Student	7.6
Clerical	6.9
Technical/Skilled	6.1
Manager/professional	3.8
Total	**100.0**

Service industry workers were the next often mentioned category followed by *homemaker* and *student*.

Income Level - Riders were asked to note their total family income. More than 15 percent provided no answer to this question. For those that did respond, the chart below summarizes the results. The major finding was that 74.2 percent of the respondents had total family incomes of *less than $25,000*. This compares to the total median family income in Lancaster County of $45,507 based on the 2000 Census. This indicates that lower-income households make up a disproportionately larger percentage of the RRTA ridership base than of the metropolitan area population as a whole. This demonstrates the strong transit dependency of RRTA riders.

Total Annual Household Income

Response	Percent
Below $10,000	34.7
$10,000 to $24,999	39.5
$25,000 to $39,999	12.1
$40,000 to $54,999	4.8
$55,000 to $69,999	2.4
More than $70,000	6.5
Total	**100.0**

Resident Mail Survey

One key element of the RRTA Long Range Plan is to quantify the attitudes of non-regular users towards public transportation services in Lancaster County. It was determined that a mail-out/mail-back survey would be the most appropriate method to gather this data from residents of Lancaster County. This technique allows residents to complete the survey questionnaire at their convenience without facing an interruption associated with a telephone survey. The process involved several steps that were performed both prior to and after the conduct of the mail-out/mail-back survey. Each of these topics, including questionnaire development, sample selection, and the coding of the results are discussed below. It should be noted that DHF Associates, a professional direct mail communications firm located in Lancaster, Pennsylvania, was used to develop the random survey sample, as well as package and mail out the surveys.

The initial step in survey preparation was drafting survey questions. For some questions, all possible responses were identified, while other questions were open-ended. The amount of information to be gathered was weighed against the length of the survey form. Typically, longer questionnaires result in a reduced response rate. The questions were developed in cooperation with RRTA staff. The development of the survey instrument considered the screening of adult residents, the topics to be covered, and the questions to obtain the necessary information. The form used in the mail-out/mail-back survey is included in Appendix B, along with a copy of the letter that was sent to each resident advising them of the survey and informing them of the importance of their response.

Sample Selection - The object of the survey was to acquire a sufficient sample size of residents that results in acceptable accuracy. The goal for the survey was to obtain enough valid survey returns to allow for a 5.0 percent error rate, which would require approximately 370 valid returns. The survey actually obtained 364 valid survey forms. Therefore, this was a very successful survey effort. Based upon the relationship between sample size and error, the survey has an allowable rate of about 5.0 percent at a 95 percent confidence interval. The implication of this relationship is that the survey measure of an attribute (i.e., personal use of public transportation service), plus or minus 5.0 percent, will include the actual measure of the attribute in the study area 95 percent of the time. In essence, this defines how close the survey results from a sample of adult residents are to those that would have been obtained if all adults in Lancaster County had been surveyed.

The next important step in the conduct of the survey was the selection of a random sample. The requirement of randomness is that the probability of selecting a particular household be equal for all households in the study area. Households to be sampled were determined from a random sample of households selected by a professional direct mail communications firm from a database of all addresses in Lancaster County. The actual mail-out/mail-back questionnaire was mailed to a sample of 1,500 residents during the last week in April 2008. The response rate of 364 valid returns versus the 1,500 mailed is 24.3 percent. This exceeded the target of 15 to 20 percent (225 to 300 responses), which is the typical response rate for mailed surveys.

Coding - The number of surveys judged to be valid was determined by carefully scrutinizing each survey form for accuracy and consistency. Those deemed invalid were discarded. The next step was to convert all responses to codes for subsequent computer processing. The survey form included in the appendix was used to identify appropriate codes for each question. The coded data were then processed for each question. The subsequent sections present the results and key findings of the survey.

Survey Results - This section presents the results for the 18 questions that were asked in the resident mail-out/mail-back survey. An analysis of the results of each question is provided along with a discussion of the significance of the findings.

Personal Use of Public Transportation - The first question of the survey asked if respondents have used RRTA bus services within the past year. As shown in the chart below, just over 10 percent of the responding population has used RRTA in the past year. Therefore, the sample of residents that responded to the survey truly represents a non RRTA user group.

Use of RRTA in the Past Year

Response	Percent
Yes	11.6
No	88.4
Total	**100.0**

Household Use of Public Transportation - The second question asked if a member of the respondent's household uses RRTA services once a month or more. The chart below shows that about 8.4 percent of the respondents have a member in their household who does use the service at least once a month. The responses to this question and the prior one indicate that the sample is a representation of non-transit users.

Household Use of RRTA

Response	Percent
Yes	8.4
No	91.6
Total	**100.0**

Proximity to Public Transportation - Question three asked how close the respondent lives to one of RRTA's bus routes. This question is important in determining how much of the county's population is within reasonable walking distance of RRTA services. As the table on the following page shows, over 47 percent of the respondents live within an acceptable ten minute walk of a RRTA bus. Only about 23.5 percent of the respondents do not know where the nearest RRTA bus stop is to their home. This is a reasonable number considering the rural nature of some parts of the County.

Proximity to Service

Response	Percent
On route	10.8
5 minutes or less	22.2
10 minutes or less	14.7
Further than 10 minutes	28.8
Don't Know	23.5
Total	**100.0**

Importance of Bus Service to the Community - The fourth question of the survey asked respondents how important local bus service is to the residents of their community. This question forces respondents to not only think about their needs, but to take into consideration the community as a whole.

Importance of Bus Service to the Community

Response	Percent
Very Important	24.1
Important	22.7
Somewhat Important	13.3
Not Important	16.6
Don't Know	23.3
Total	**100.0**

The results show that 60.1 percent of the responding population felt that bus service is important (the total of *very important*, *important*, and *somewhat important* responses*)* to their community. Only 16.6 percent felt that bus service is not important, while an additional 23.3 percent felt they did not know. In other similar surveys conducted by the consultant, response rates for those stating that service is *not important* varied between 1.7 and 27.7 percent, with an average of about 13 percent. Lancaster County residents view public transportation along similar lines as the respondents from these other communities.

Reasons for Not Using Public Transportation - The fifth question asked for those people who have not used RRTA services to check off the reasons why they have not used the service. Those who have used RRTA were asked to skip the question. The table on the following page details the response.

Reasons for Not Using RRTA

Statement	Agree	Disagree	Total
I have a car available	97.3	2.7	100.0
I don't live near a bus stop	54.2	45.8	100.0
No service to where I want to go	38.1	61.9	100.0
No service when I want to go	44.2	55.8	100.0
I don't like traveling with strangers	15.5	84.5	100.0
Bus service is too slow	37.2	62.8	100.0
I don't like waiting for a bus	51.2	48.8	100.0
I don't have information on service	51.2	48.8	100.0
I don't feel safe on a public bus	9.6	90.4	100.0
Bus service fares are too expensive	14.3	85.7	100.0
I make multiple stops on my trips	71.1	28.9	100.0
I am unfamiliar with the bus service and how to use it	52.8	47.2	100.0

As can be seen in the table, 97.3 percent of the responding population who had not used RRTA had access to a car, by far the largest reason as to why people do not use RRTA. Other reasons with a majority of the respondents agreeing with the statement include nearly 71.1 percent who make multiple stops on their trips, precluding them from using RRTA; about 54.2 percent stated that they don't live near a bus stop; 52.8 percent who are unfamiliar with the service and how to use it; about 51.2 percent who don't have enough information on the available service; and 51.2 percent don't like waiting for a bus. Two of the six major reasons why people do not use RRTA are related to the information available to Lancaster County residents and the potential transit users.

On the positive side, over 90 percent of the respondents feel that buses are a safe mode of transportation; over 85 percent feel that fares for the service are reasonable; and nearly 85 percent do not mind traveling with strangers.

Effect of Rising Gasoline Prices on Transportation Choice – The next question asked the resident if the price of gasoline rising to $4.00 per gallon would influence them to utilize or increase their utilization of RRTA services. It should be noted that when the question was developed in early spring of 2008, gasoline prices ranged between $3.25 and $3.50 per gallon. It was not anticipated that the prices would reach the $4.00 level during the course of the survey. As seen in the table on the following page, about 44 percent indicated that they would or possibly would utilize or increase their utilization of RRTA bus services. This is a substantial finding that could have a major impact on RRTA services in terms of ridership increases. On the other hand, 45.3 percent indicated that higher gasoline prices would not influence them to utilize RRTA bus service.

Effect of $4.00 per Gallon Gasoline on Use of RRTA Bus Service

Use RRTA Service	Percent
Yes	16.7
No	45.3
Maybe	27.5
Don't Know	10.5
Total	**100.0**

Factors Influencing Public Transportation Use - The seventh question in the survey offered a variety of influencing factors and asked the respondent how important each factor was in getting them to use the service or to increase their use of the service. The response to these factors will give some insight into which area's need to be improved for use of the service to increase. The table below details the response to these factors.

Influencing Factors for Use of RRTA

Influencing Factors	Very Important	Important	Not Important	Total
Service closer to my home	38.4	24.1	37.5	100.0
Service closer to my work	28.0	18.8	53.2	100.0
Service closer to shopping	23.8	29.7	46.5	100.0
More frequent service	30.4	32.3	37.3	100.0
More information about existing service	31.1	31.4	37.5	100.0
Reasonable cost of the service	35.8	33.8	30.4	100.0
Having more evening service	20.7	30.4	48.9	100.0
Having more Saturday service	21.6	30.9	47.5	100.0
Having Sunday service	18.2	21.9	59.9	100.0
More door-to-door service	17.7	22.7	59.6	100.0
More park-n-ride service	23.2	32.1	44.7	100.0

The most important factor for potential riders to use the service, or for current riders to increase their use of RRTA, was a *reasonable cost of the service*, having nearly 70 percent of the "very important" and "important" responses. The second highest response was for *more frequent service* at 62.7 percent followed by *service closer to home* and *more information about existing service*, both at 62.5 percent of the "very important" and "important" responses. Again, having more information about RRTA was noted as an important issue with Lancaster County residents.

On the contrary, nearly 60 percent indicated that *having Sunday service* or *more door-to-door service* would not influence them to use RRTA more often. Further, about 53.2 percent indicated that *service closer to work* was not important meaning either that a majority of the trip generators in regards to businesses being served are being met or that people would not use RRTA to get to work.

Best Places for Public Information - Question eight deals with how RRTA could better serve the community in regards to dispersing public information. To assist in efforts to market new or existing public transportation services, Lancaster County residents were asked to indicate the best way to reach them with information regarding services. The table below presents these results. It is important to note that the survey did not indicate how many answers each respondent could select, so all choices were included in the total count. The respondents indicated that their preferred source for information is *newspapers*, with 34.7 percent of the total responses. The second most popular choice, with 21.5 percent of the responses, was *schedules/brochures*. Other responses with a higher percent of the responses include *radio/TV* (17.9 percent) and *website* (16.0 percent). This result is consistent with responses that we have seen in other resident surveys.

Preferred Information Sources

Contact Method	Percent
Newspaper	34.7
Schedules/Brochures	21.5
Radio/TV	17.9
Website	16.0
Friends/Relatives	2.8
Posters	1.6
Bus Driver	1.1
Other	4.4
Total	**100.0**

Purpose for the Use of RRTA - The ninth question in the survey asked respondents to check off a box that represents the most likely purpose for their use of RRTA bus services. The table on the following page shows that *work* was the biggest reason for people using the bus, with over 27 percent of the responses. *Shopping* was the second most popular reason for use of the RRTA bus services, with 16.9 percent. When looking at this response in regards to the previous sub-section of this report (influencing factors), it can be ascertained that many of the businesses are receiving service and people would use the bus to get to work. This, however, does not mean people are currently using the service for this purpose, or that there are not some other businesses that would benefit greatly from new or increased service.

Purpose for Use of RRTA

Purpose	Percent
Work	27.9
Shopping	16.9
Personal Business	12.5
Medical/Dental	10.8
Recreational/Social	8.6
School	0.7
Other	2.5
None	20.1
Total	**100.0**

On the opposite end of things, 20.1 percent of the responding population felt that they would not use RRTA services for any purpose. Also, they would least likely use the service for going to and from school, with only 0.7 percent checking off the box for school. This response is customary for a survey of this type, which is geared towards adults 18 and older.

The *other* purposes for use of the service include automobile malfunctions, loss of the ability to drive, and to get to and from the airport/train station.

Perception of Service Performance - The next question was asked for those who have used RRTA (only 34 responded) to rate its overall service and performance across 12 different performance measures. The question provided a list of possible ratings to choose from. The table on the next page provides the results. It shows differences occur between the specific responses in the various categories. For example, *vehicle cleanliness* obtained the largest percentage of "excellent" responses (46.9 percent), while *cost of ride* received the smallest percentage (19.4 percent).

For survey questions of this type, a response is considered favorable if the total number of responses of "excellent," "very good," and "good" is greater than or equal to 90 percent. As shown in the table, a *total favorable* response of 90 percent or above exists in seven out of the 12 categories. The attribute with the highest favorable rating is *safety*, which attained a 97.1 percent favorable rating. *Vehicle cleanliness, driver courtesy* and *driver driving habits* all received the same favorable ratings of 93.8 percent, while a rating 91.2 percent was attained by *overall satisfaction.* *Service in general* and *ride comfort* were the final two attributes to reach the total favorable threshold, both having achieved 90.3 percent.

Service Evaluation

Performance Attribute	All Responses in Percent					
	Excellent	Very Good	Good	*Total Favorable*	Fair	Poor
Vehicle cleanliness	46.9	9.4	37.5	***93.8***	6.2	0.0
Driver courtesy	37.5	6.3	50.0	***93.8***	3.1	3.1
Driver driving habits	43.8	15.6	34.4	***93.8***	6.2	0.0
Service information	35.5	9.7	38.7	***83.9***	9.7	6.4
Buses are on-time	28.2	15.6	40.6	***84.4***	12.5	3.1
Service frequency	25.8	9.7	35.5	***71.0***	16.1	12.9
Places served	26.7	10.0	30.0	***66.7***	23.3	10.0
Service in general	29.0	9.7	51.6	***90.3***	6.5	3.2
Cost of ride (fares)	19.4	9.7	51.6	***80.7***	16.1	3.2
Ride comfort	32.3	16.1	41.9	***90.3***	6.5	3.2
Safety	41.2	14.7	41.2	***97.1***	0.0	2.9
Overall satisfaction	29.4	20.6	41.2	***91.2***	5.9	2.9

The attributes with the lowest total of "excellent," "very good," and "good" responses were *places served* (66.7 percent) and *service frequency* (71.0 percent). The system's *cost of the ride*, *on-time performance* and the *availability of public information* regarding the service are significant factors influencing the riding public's view of the overall service provided. All five measures were rated below the favorable threshold and should be considered areas of concern and targeted for improvement.

Statements Regarding Public Transportation - The survey asked residents for their opinions regarding seven statements concerning public transportation. Respondents were given five response choices – *strongly agree*, *agree*, *disagree*, *strongly disagree* and *don't know*. The overall results are provided in the table on the next page.

Sentiment Regarding Public Transportation

Statement	All Responses in Percent				
	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
A good local bus system is essential to the growth and prosperity of the area	39.0	45.6	4.1	2.0	9.3
Local bus service has not kept pace with growth in the area	14.7	29.3	17.4	2.1	36.5
More public funds should be provided to improve bus service	17.6	34.6	11.3	7.5	29.0
Bus service should be oriented only to people who don't have a car available	3.3	8.0	51.2	27.4	10.1
A good bus system should be beneficial to the environment	37.3	51.8	2.4	2.6	5.9
A bus system is essential for the well being of people within the community it serves	35.2	50.7	2.9	1.5	9.7
The plan should consider other options, e.g., Streetcars, Light Rail & Commuter Rail	24.7	35.2	13.6	4.5	22.0

Some of the key observations from the responses include the fact that there was substantial agreement (*strongly agree* and *agree*) on the following:

- A good local bus system is essential to the growth and prosperity of the area (84.6 percent);
- A good bus system should be beneficial to the environment (89.1 percent);
- A bus system is essential for the well being of people within the community it serves (85.9 percent); and
- The plan should consider other options such as streetcars, light rail and commuter rail (59.9 percent).

There was substantial disagreement (*disagree* or *strongly disagree*) that bus service should only be oriented to people who do not have a car available (78.6 percent).

Another key finding is that a large number of residents were unable to respond and cited *don't know* on whether local bus service has kept pace with the growth of the area (36.5 percent) and whether more public funds should be provided to help offer improved bus service (29.0 percent). However, for those that did provide a response to these two statements, a majority of the respondents agree rather than disagree. It is a positive sign of community support that nearly three times as many residents agree (52.2 percent) rather than disagree (18.8 percent) that more public funds should be provided to improve the bus service.

Changes and Improvements - Question 12 asked survey respondents to suggest what changes or improvements they would like to see accomplished. The table below details the response. The most suggested improvement was the request for *more routes*, with 13 mentions, followed by the request for *more service outside the City of Lancaster*, which had 17 mentions. Other suggestions with a strong response include *more information/promotions* (8 responses), *use of smaller vehicles* (8 responses), *no new taxes* (6 responses), and *improved frequency* (6 responses).

There were 30 other comments that were mentioned only one or two times and included such suggestions as *more stops, more night service, express routes, lower fares* and *commuter service.*

Suggested Changes and Improvements

Additional Comments	Responses
More routes	13
More service outside the City of Lancaster	10
More information/Promotions	8
Use smaller vehicles	8
No new taxes	6
Improved frequency	6
More rural service	5
Good, no changes	5
Expand service hours	5
More weekend	4
Better Elderly and Handicapped service	3
Establish crosstown services	3

Use of Local Tax Dollars to Expand of Improve Public Transportation - The residents surveyed were asked whether or not they favor a small increase in public funding to pay for expanded or improved public transportation services. The results of this question, as shown in the table on the following page, indicate that while only 40.6 percent of the responding population felt that more public funds should go towards public transportation, this number was greater than those who disagreed with the statement (25.1 percent). The other 34.3 percent felt that they did not know how to answer this question. Without taking into account *don't know* responses, 61.8 percent agreed that more public funding should be directed towards public transportation versus 38.2 percent who disagreed.

Support for Increased Public Funding

Response	Percent
Yes	40.6
No	25.1
Don't Know	34.3
Total	**100.0**

The results from nine other recent surveys where similar questions were asked are summarized below and compared to the results from this survey. When compared to the other surveys, Lancaster County's results are skewed a bit by the larger than average *don't know* response. The percentage of Lancaster County residents in favor of increased public funding was the same as the group average of 41 percent. Similarly, the Lancaster County residents who did not favor an increase in public funds for public transportation was lower than the group average of 25 percent. The fact that *don't know* response is high is another indicator of the need to educate the public on the RRTA services that are available and the benefits provided.

Support for Increased Funding Elsewhere

Study Area	Figures in Percent		
	Yes	No	Don't Know
Berks County, PA	43	22	35
Charleston, WV	31	54	15
Erie, PA	42	20	38
Lancaster, PA	37	51	12
Mankato, MN	55	30	15
Pike County, PA	25	52	23
St. Cloud, MN	59	27	33
Lebanon County	35	29	36
Stevens Point, WI	40	27	33
Group Average	**41**	**35**	**24**
Lancaster County	41	25	34

Additional Funding for Transportation – Question 14 requested that respondents identify from a list of options, the best source of funding that they would suggest to meet the funding shortfall for highways and bridges. As seen in the table on the following page, the *alternative options* were identified as the preferred source achieving a 28.4 percent response. A *user fee* was next with 26.8 percent followed by *highway tolls* at 18.0 percent. Only 5.2 percent cited *gasoline tax* as the best option.

Options to Meet Transportation Funding Shortfall

Funding Options	Percent
Alternative Options (surcharge on tires, parking fee, liquor tax)	28.4
User Fees (vehicle registration, license fees, miles traveled fee)	26.8
Highway tolls	18.0
Gasoline tax	5.2
Other	21.6
Total	**100.0**

Gender - The respondent group was 52.1 percent female, and 47.9 percent male. A female majority is typical for this type of survey.

Age Group - The respondents were asked to identify the age group in which they belong. As shown in the table below, the ages of the survey respondents were skewed towards the higher age groups, with the *45 to 64* year old age group representing the largest category at 40.8 percent. The second largest group was *65 and above*, accounting for 31.3 percent. The *18 to 29* year old group represents the smallest grouping at 4.7 percent. This heavy representation of the age groupings of *45 to 64* year old and *65 and above* is common in these types of surveys. Residents in these groups tend to be less transient, more settled, and more apt to participate in civic matters such as this survey.

Distribution by Age Group

Respondent's Age	Percent
18 to 29	4.7
30 to 44	23.2
45 to 64	40.8
65 and above	31.3
Total	**100.0**

Occupation - Survey respondents were asked to identify their occupation. The general occupation category of the residents contacted and the response rates are listed in the table on the next page. Due to the heavy representation of the respondents who were over 65, it is not surprising that the single largest occupation category was *retired* (29.8 percent). The second highest selected professional group was the *manager/professional* accounting for an additional 25.3 percent. The lowest responding group was the *students*, with 1.1 percent. This is also not surprising as students are usually younger adults, and the younger adults merely accounted for 4.7 percent of the survey population.

Occupation of Respondent

Occupation	Percent
Manager/Professional	25.3
Technical/Skilled	9.8
Student	1.1
Homemaker	10.1
Clerical	5.1
Retired	29.8
Service Industry	4.8
Other	14.0
Total	**100.0**

Household Income - Survey respondents were then asked to indicate the range in which their annual household income belongs. Often times, recipients of surveys such as this one find this question to be too personal and are not comfortable answering. A total of 45 people (12.4 percent) of the responding population chose not to answer this question. A response rate of above 85 percent is high for this type of question when compared to other recent surveys in which the same question was asked. The question is included to determine whether or not the sample compares well with the overall population in a socioeconomic manner. As shown in the table on the following page, about one half of the respondents have total family income above $55,000. This compares favorably to the population of Lancaster County overall that had a median household income of $44,507 based on the 2000 U.S. Census. Considering that the Census results are about nine years old, and with inflation at about 2.5 percent over this period, the median household income in Lancaster County would now be about $55,000 or very similar to the survey results. However, the table shows major differences in the results of the household income between the resident and the rider survey presented in the earlier part of this chapter. In the rider survey, about 15.6 percent of the residents that responded had family incomes below $25,000 compared with 74.2 percent of the riders. On the other side of the income scale, about 51.4 percent of the residents that responded to the survey had annual total family incomes above $55,000 compared with 8.9 percent of the riders. In summary, the survey sample is a reasonable representation of the household income of the entire county. However, the household income of the residents that responded is much greater than RRTA riders.

Distribution by Income Range

Annual Family Income	Figures in Percent	
	Resident Survey	Rider Survey
Less than $10,000	4.1	34.7
$10,000 to $24,999	11.3	39.5
$25,000 to $39,999	17.6	12.1
$40,000 to $54,999	15.7	4.8
$55,000 to $69,999	15.7	2.4
$70,000 or greater	35.7	6.5
Total	**100.0**	**100.0**

Summary

The discussion above provides a description of the process and results of the residential mail-out/mail-back survey performed for Lancaster County. The survey effort was successful with 364 valid responses, achieving the goal of about 370 responses to achieve statistical significance.

Most of those that responded to the survey were non RRTA users; slightly more females than males; with about 30 percent 65 years old or older and retired; and with total family incomes representative of the County population. Over 60 percent felt that bus service is important to the community. The vast majority indicated that they do not use RRTA because they have a car available for the trip. The other dominant reason for not using RRTA is that they make multiple stops. About 44 percent stated that they would or possibly would switch to RRTA if gasoline reaches $4.00 per gallon. Besides the price of gasoline, other important factors to attract them to bus services are reasonable cost, frequent service, service closer to their home and more information about bus service. If they were to use RRTA services, work would be the primary trip purpose followed by shopping and personal business. The best way to contact them about RRTA services is the newspaper.

Those that have used RRTA services identified placed service and service frequency as the least favorable aspects of RRTA services.

Most agreed that a good bus system is an important asset for a community for a number of reasons with about 60 percent stating that other modes such as streetcars, light rail and commuter rail should also be considered. The major suggestions for better services included more routes and more service outside the City of Lancaster. In terms of funding improved transit services, about 41 percent said that they would support a small increase in tax dollars to improve and expand transit services while 25 percent said they would not. The remaining said

that they didn't know. These results are similar to those from other similar surveys in terms of the *yes* response. However, the response in the Lancaster survey showed a much smaller number that said *no*. A similar question was asked regarding funding for highway and bridge improvements. The largest response was to fund these improvements with alternatives options such as surcharge on tires, parking fees and liquor tax. The next response was for user fees such as vehicle registration, license fees and a mile traveled fee.

LONG RANGE SERVICE IMPROVEMENT PROPOSALS

This chapter presents a description of the long range service change proposals developed for the Red Rose Transit Authority (RRTA). The service proposals described in the following sections were prepared in consideration of a variety of service inputs that are discussed below. They are followed by the long range goals and objects that are developed from a series of Guiding Principles. Next long range service proposals for RRTA system are summarized and grouped into several implementation categories. The recommended plan including the impact of each recommendation on peak period buses as well as vehicle hours and an implementation schedule is provided in the following chapter.

Service Proposal Inputs

Seven major inputs were considered while preparing the long range transportation plan proposals. Each of these inputs is briefly described below.

- Business Community Survey – A survey was conducted through the Lancaster County Chamber of Commerce where firms were issued a questionnaire regarding how the RRTA could better serve their needs. Eleven firms responded and provided a variety of suggestions including for RRTA to provide more service throughout the City and County. Most indicated that transportation is a major concern for hiring new employees. Several indicated that they would even consider proving employees an incentive for using transit service.

- RRTA Board Member, Staff and Community Leader Survey – There were 18 individuals that responded to a comprehensive survey that addressed the future of public transportation service in Lancaster County. Questions were asked in terms of future service needs, future capital needs, funding of transportation services and the possibility of the RRTA assuming other roles. Some of the responses to the service needs questions included more park-n-ride sites, better bus and rail connections and possible York and Reading services. In terms of capital needs, the respondents were very positive with RRTA continuing to use replica trolleys; said that RRTA should consider alternative fueled buses in the future; identified the need to improve on-the-street amenities; and suggested that technology could be incorporated in terms of on-line computer services and information at bus stops. Several indicated the need for a local dedicated funding source for transit. Most indicated that RRTA should partner with a variety of agencies for revenue sharing or cost containment. Many indicated that non-service related revenue could be increased by selling more advertising and by leasing space at the Queen Street Station. Finally, the respondents indicated that the only other roles that RRTA could assume would possibly be to perform vehicle maintenance and become the call/dispatch center for other agencies.

- RRTA Board Retreat – An RRTA board retreat was held on February 20, 2008. A presentation was given by PADOT on the new transportation legislation (ACT 44) and funding program in Pennsylvania. Another presentation was given by the RRTA Executive Director on the poor condition of their operating facility. A final presentation was given that suggested Guiding Principles for RRTA to follow in terms of mobility, fiscal responsibility, land use and economic development and the planning process. This presentation also summarized the findings from the Business Community and the Board, Staff and Community Leader surveys discussed above. It should be noted that at a subsequent RRTA Board meeting, the guiding principles were adopted.

- Community Characteristics – An interim report presented an analysis that identified residential areas and major activity centers that warrant transit service as well as municipalities in the RRTA service area with the greatest potential need for transit. Seven factors (such as population, population density, income levels, automobile ownership rates, etc.) were utilized to rate each municipality in terms of its transit potential. Results indicate that most areas of Lancaster County that should receive transit service are served. Six types of transit trip generators (such as major employers, hospitals, retail shopping centers, etc.) were inventoried and compared to current RRTA service. Results showed that RRTA provides good service coverage to the transit trip generators in Lancaster County.

- Resident Survey – A survey of Lancaster County residents which was conducted during April and May 2008. The results were analyzed to determine community opinions regarding usage of bus service and potential system improvements. A total of 364 Lancaster County residents participated in the survey, 88.4% of whom had never used or had not used RRTA service in the past year. Of the 364 Lancaster County residents surveyed, 24.1 percent rated local bus service as "very important" to Lancaster County, another 22.7 percent rated local bus service as "important" and another 13.3 percent rated the service as "somewhat important". This is a favorable response from a group of residents who are not users of the transit system.

- Passenger Opinion Survey – A survey of RRTA riders of the fixed route system was conducted the week of April 7, 2008 at the Queen Street Station transit center. RRTA station staff distributed survey forms to all passengers that were willing to complete a survey form. Passengers were provided the option of either completing the survey form at the transit center and returning it to the station staff or completing it at a later time. The form was prepared with English on one side and Spanish on the reverse. A total of 151 valid surveys were returned. The primary questions of the survey asked passengers to identify the factors that would influence them to travel more.

  Having *more frequent service* and *service to more places* was identified as the most important improvement options. Service to Quarryville and Strasburg were identified as most the often mentioned new places for bus service. Most (61.4 percent) liked the idea of a downtown streetcar.

There were 47.6 percent that stated that the best action to solve a financial problem would be to raise fares while only 4.7 percent said reduce service.

- Advisory Committee Meetings – An advisory committee was formed to obtain insights from its members on long range transportation needs in Lancaster County. Two meetings were held with the committee where service, capital, public information and marketing ideas were discussed.

Guiding Principles

Guiding Principles have been developed for the RRTA Long Range Public Transportation Plan based on those used by other transit systems, in particular the Dallas Area Rapid Transit (DART) system. These Guiding Principles were adapted for transportation services operated in Lancaster County. They were presented to the Advisory Committee and the RRTA Board for review and comment. The Guiding Principles are presented below:

Mobility

- Identify future market needs and new market opportunities
- Provide a system that attracts new customers while serving transit dependents
- Provide an integrated transportation system with appropriate level of capacity, accessibility and performance
- Consider opportunities to preserve right-of-way options for future transit use

Fiscal Responsibility

- Provide a system that is efficient, cost-effective and affordable

Land Use and Economic Development

- Promote a region that is transit-oriented and places a priority on transit
- Support transportation and land use planning that helps achieve a better quality of life within Lancaster County
- Provide a system that is compatible with the community it serves and minimizes environmental impacts
- Support Lancaster County's economic development objectives by coordinating improved transit services
- Encourage initiatives to invest at or near transit facilities

Planning Process

- Establish a common vision for transportation that is regionally accepted, progressively implemented through a comprehensive system plan and periodically revisited
- Develop and enhance coalitions with all organizations that have a vested interest in regional transportation issues
- Develop a system plan that provides a sound basis for subsequent, more detailed planning studies

It should be noted that these Guiding principles have been officially adopted by the RRTA Board.

Goals and Objectives

Using the above Guiding Principles as a foundation, a comprehensive set of goals and objectives has been developed to guide the Long Range Plan activities for the RRTA and are listed below in ten categories.

Safety and Security

- Integrate safety and security elements into the transit system to reduce risk and enhance emergency procedures
  - Employ safety and security conscious planning in all planning studies
  - Apply safety oriented design to eliminate or reduce safety hazards and to protect major agency assets
- Deter and detect criminal and terrorist activity
  - Incorporate physical design features such as access management and surveillance that discourage crime
  - Employ crime prevention strategies through appropriate design features

Public Outreach

- Develop partnerships
  - Strengthen ties with all of the Chambers of Commerce in the County, human service agencies, local municipalities and inter-municipal groups
  - Develop and enhance coalitions with all organizations that have a vested interest in local and regional transportation issues

Financial

- Maintain and enhance fiscal responsibility
  - Evaluate fare structure annually to determine appropriate revenue levels in accordance with performance measures
  - Increase local share funding in line with Act 44 requirements
  - Explore alternative sources of revenues such as advertising, leasing of space, partnerships, etc.

- Provide a transportation system that is efficient, cost effective and affordable
  - Maintain staff levels at appropriate levels and wage rates
  - Insure that labor contract provisions provide for reasonable work rules
  - Follow purchasing procedures that result in quality products at a reasonable price

Bus Service

- Increase transit ridership
  - Enhance passenger amenities throughout the system including bus stop signs, benches and passenger waiting shelters

- Utilize Transportation System Management (TSM) and Intelligent Transportation Systems (ITS) elements to improve transit travel time
- Incorporate service information at bus stops and facilities
- Develop branding for key services to improve customer recognition
- Provide incentives to attract new riders
- Promote benefit of transit service usage in terms of energy savings and the environment
- Advertise available bus and paratransit services in local media (newspapers, radio and TV)
- Convince employers to encourage employee use of transit service

➢ Improve service in core bus corridors
- Reallocate service to strengthen and feed core routes
- Monitor and actively seek other funding sources and partnerships for capital improvements in core corridors

➢ Strengthen cost-effectiveness of the bus network
- Focus on reallocation of resources where appropriate
- Implement innovative, demand-based service where fixed-route bus service is not effective

➢ Monitor market conditions and developments
- Conduct surveys of both riders and residents to understand customer needs
- Monitor new land developments and implement new services as appropriate

➢ Explore regional inter-connectivity with surrounding transit systems
- Evaluate journey to work data to identify need for express services to neighboring employment destinations
- Determine service adjustments that would be made to provide improved coordination with Amtrak services

Paratransit Services

➢ Meet ADA requirements
- Provide demand response services that comply with ADA requirements
- Review ADA eligibility process to insure that it is consistent and thorough
- Provide services to only those that meet ADA eligibility

➢ Implement cost-effectiveness measures
- Re-evaluate, strengthen and enforce no-show and cancellation policies

➢ Improve operations efficiencies
- Re-evaluate and update paratransit service standards based on peer reviews
- Identify and change services that do not meet the service standards
- Determine scheduling and other strategies for improving productivity
- Use Mobile Data Recorders (MDR's) to record trip information

➢ Create a more user friendly system
- Perform periodic customer satisfaction surveys
- Develop performance measures to rate and monitor customer service and satisfaction

➢ Expand services to other customers
- Increase coordination with human service and retirement communities

System Accessibility

- Enhance vehicle and facility accessibility for persons with disabilities and the general public
  - Utilize low floor buses with ramps
  - Ensure that all buses are equipped with proper wheelchair tie down features
  - Confirm that all drivers are properly trained in wheelchair tie down procedures through annual certification
  - Ensure that all RRTA facilities are accessible including restrooms
  - Enhance access to all transit bus stops and facilities
- Ensure that there is clear and accurate information available in both visual and audio forms for persons with disabilities
  - Utilize technology to provide various types of communications to all groups
- Coordinate RRTA accessible transit services with those operated by other public transit and human service providers

Transportation System Management (TSM)

- Strengthen TSM program
  - Focus on transit priority projects to enhance transit ridership, operations, safety and security
  - Work with MPO and other agencies to identify, plan and implement operational and physical transit priority treatments for identified rapid and enhanced bus service corridors
  - Encourage the establishment of transit priority policies and regulations
  - Continue to pursue additional funding sources through local, regional, state and federal agencies for all TSM programs, providing local match as appropriate

Intelligent Transportation Systems (ITS)

- Enhance the transit trip making experience through extensive use of ITS
  - Pursue smartcard based technology for fare collection and vehicle log-in
  - Provide customer with a range of travel information through of a variety of techniques including:
    - personal communication devices such as a Blackberry cell phone
    - kiosks
    - dynamic message systems
    - public address systems
    - next stop announcements
  - Implement trip planning software on web site for customer use
  - Improve situational awareness of operators to respond and detect incidents
  - Pursue funding opportunities for ITS deployment

Bicycle/Pedestrian

- Accommodate bicycle and pedestrian needs into transit system

- Maximize bicycle and pedestrian connectivity to transit facilities, including at bus stops and transit centers
- Provide bicycle amenities (such as bike racks) at transit centers and major bus stops commensurate with demand
- Maintain a close and "customer friendly" policy for bicyclists by encouraging transit use and insure that all buses are equipped with operating bike racks

Service Planning

- Ensure that services meets the needs of the County residents
  - Conduct an independent review of the transit system services at least every five years and prior to the County's Long Range Plan update
  - Establish relationships with county and municipal agencies so as to be kept informed of land use changes and new development
- Investigate the appropriateness of other transportation opportunities
  - Determine the need for ridesharing programs such as car pooling and van pooling that may eventually lead to new transit opprotunities
  - Actively pursue and encourage employers to participate in employee transportation benefit programs
- Re-evaluate and expand current policy regarding on the street amenities
  - Pursue establishing central transit stations at outlying boroughs
  - Partner/work with local municipalities to change local ordinances regarding locating benches and shelters as well as outdoor advertising
  - Explore possibility of more park-n-ride facilities associated with express bus service

These goals and objectives have been incorporated, in varying degree, into the development of the Long Range Service Improvement Plan presented below. The following sections describe the specific proposals and how they build upon the analyses performed and the goals and objectives described above.

Long Range Service Improvement Plan

This section presents the service proposals on a route level or a corridor basis for the Long Range Service Improvement Plan. These proposals suggest enhancements to the current routing while maintaining the current route schedule structure. These proposals are designed to improve the efficiency of service and ridership performance by building upon the prior inputs and research. The following sections provide these proposals for the RRTA's fixed route system. The proposals are grouped into of three phases – short term (1 to 5 years), medium term (6 to 15 years) and long term (15 or more years).

Short Term Service Proposals – The following short term proposals can be accomplished without any major capital investment and with the same service delivery method currently employed by the RRTA. It should be noted that the size of the current RRTA operating base would made it difficult to expand its bus fleet size by more than five vehicles. Therefore, any major increase in services would have to wait until the garage facility can be improved and

expanded. RRTA is in the process of addressing its facility improvement and expansion needs. However, it is unlikely that such facility changes could be completed within the next three years. Therefore, the short term improvements should be constrained by limiting the overall fleet size expansion by no more than five peak period buses. Several alternative are identified that could be operated in the near term before the garage facility expansion is completed or shortly thereafter.

Improve Service Frequency of Some County Routes – RRTA should consider improving the service frequency on four County Routes including Route 11 – Ephrata, Route 12 - New Holland, Route 13 – White Horse and Route 18 – Elizabethtown. Each of these four county routes has a frequency of service during the midday period that ranges from 90 minutes to 148 minutes. Service during the AM and PM peak period is typically 60 minutes or more. This is not very attractive service. Adding one bus to the service on each route would greatly improve the service.

New Route to the Hempfield Industrial Park – The industrial areas along Old Tree Drive and Hempland Road are currently served by four outbound and three inbound trips on Route 17 - Columbia. Due to running time issues, the Old Tree Drive portion of the route is only served in the outbound direction. There is a heavy concentration of employment along these roads and the development pattern in the area is much more amenable to transit use than at newly developed campus style industrial/business parks. A short term option would be to establish a new route modeled after the Route 20 – Greenfield Industrial Park. However, because of the longer travel distance from downtown to the Park, there will be about a 90 minute round trip cycle time. Therefore, two buses should be used to provide service from about 5:30AM to 6:30PM on weekdays only. The route would begin in downtown Lancaster near or at the Queen Street Station and proceed to the Park. The headway on the route would be about every 45 minutes with the two buses.

Paradise/Strasburg - This new circulator route has been designed to extend RRTA service to the Borough of Strasburg and to provide a more efficient service model to Paradise. Trips along this route would follow current Route 14 routing between Paradise and Rockvale Square. From Rockvale Square the route would then travel south on Highway 896 (Eastbrook Road - Hartman Bridge Road), south on Decatur Road, west on Franklin Street, north on Fulton Street, east on Main Street, north on Decatur Road, and north on Highway 896 (Hartman Bridge Road - Eastbrook Road) to Rockvale Square from where the route would resume current Route 14 routing to Paradise and Kinzers. Passengers traveling to Lancaster could transfer to Route 14 at Rockvale Square. Also, the Paradise leg of the route could be extended to Gap if it were deemed feasible at any time in the future. Schedules should be designed to facilitate this transfer. This new route would have a cycle time of 80 minutes. This would allow 80 minute frequency to be provided with one vehicle throughout the day. This is an improvement over the six peak only trips currently provided to Paradise.

Denver Park-n-Ride Service - RRTA should renew its efforts to implement a park-n-ride service between Denver and downtown Lancaster using U.S. Route 222, U.S. Route 30 and Highway 501. A minimum of two inbound trips should be provided during the

AM peak and two outbound trips should be provided during the PM peak. This service will provide an express service from Lancaster for work trips to Denver as well as a park-n-ride service for commuters traveling to Lancaster. One bus should be designated for this service. It should be noted that a park-n-ride site in Denver could be the starting point for new inter-jurisdictional services between Lancaster and Berks County.

Lancaster Amtrak Station - Lancaster receives a high level of Amtrak train service at 28 arriving trains per weekday (14 westbound trains and 14 eastbound trains). One issue that has been sited as a problem through various surveys conducted in this project is the lack of coordination by RRTA with the Amtrak train service. This could be just a perception since RRTA does provide 15 minute peak period and 40 minute midday service to the station with its Historic Downtown Trolley. However, the trolley service does begin later in the morning than other RRTA routes and also does not operate in the evening. This results in six westbound and five eastbound Amtrak trains with no Trolley service coordination. There is also no Trolley service on weekends and therefore no coordination with train service. A short term option would be for the RRTA to begin service on the Trolley route by at least 6:30AM so that the 6:41AM and 7:29AM westbound and the 7:06AM eastbound trains could be met. Further, extending service to 7:30PM would permit the 6:48PM westbound and the 7:12PM eastbound trains to be met. This extended service will provide a connection for work trip travel to Harrisburg and to the Philadelphia area. New signage should be placed inside and outside the station directing passengers to the RRTA stop and explaining the expanded service and applicable fare.

U.S. Route 30 - Convention Center Shuttle - The new route is proposed to address the mobility needs of visitors to Lancaster and attending activities at the new Convention Center. This service has been designed to connect the downtown convention center and its hotel with the other hotels and retail establishments along U.S. Route 30. One possible routing for the service would be to exit the convention center and travel north on Queen Street, east on King Street and then east on U.S. Route 30 to Rockvale Square. Inbound trips would travel west on U.S. Route 30, west on King Street, north on Broad Street, west on Orange Street, south on Duke Street, west on Vine Street and north on Queen Street to the convention center. This service could be operated when the convention center opens and only when the center is active with events.

Commuter Service of South Central Pennsylvania – This is a program of the non-profit Susquehanna Regional Transportation Partnership, whose Board includes many south central PA organizations including the RRTA, the Lancaster Chamber of Commerce and Industry and the Lancaster County Metropolitan Planning Organization (MPO). Commuter Services is the coordinating agency to promote alternatives for single occupancy vehicle commuting. It processes ridesharing applications for car pooling and van pooling as well as a free Emergency Ride Home program. With the dramatic rise in gasoline prices it has become very active in establishing successful rider sharing opportunities. In the short term, RRTA should become more active in promoting this service as a commuting alternative. This would be especially true for outlying areas that RRTA does not service such as Denver, Gap and Quarryville.

Medium Term Service Proposals – The following medium term service proposals either require a major capital investment or are less of a priority.

Elizabethtown Industrial Park – There is an industrial park to the west of Elizabethtown that is current not served by RRTA. An option would be to expand the Route 18 – Elizabethtown service to this industrial park.

Morgantown – The Morgantown area just inside the Berks County border is a growing area that currently has a number of major employers. An option would be for RRTA to extend the Route 12 – New Holland to this area to accommodate peak period work trip service.

Gap Service – There are two options for service to this community. One option would be to extend the Route 14 service beyond Kinzers to Gap. The second alternative would be to extend the Paradise/Strasburg route listed as a short term option along highway 741 to Gap.

Quarryville Service – In the past, RRTA had little success with fixed route service to Quarryville. Perhaps as a medium term option fixed route bus service should be again tried. However, another option would be for the RRTA to encourage workers from the Quarryville area to contact Commuter Service of South Central Pennsylvania to participate in either a car pooling or a van pooling program.

Route 30 Corridor BRT – Each of the past five years the Route 14 – Rockville service has shown an increased ridership. In fact, in the past five years, ridership has grown by more than 25 percent. It is the best performing route. Many trips on Saturdays experience standing loads. The Route 30 corridor continues to grow in terms of both retail and business establishments. However, traffic along the corridor continues to worsen. An attractive transportation option for this corridor would be Bus Rapid Transit (BRT). BRT is where bus service is placed on a higher level in terms of speed and convenience to the passenger. This is accomplished through a number of features including ITS technology along the bus route to provide preemptive traffic signals for speedier bus movement; bus only lanes where possible; convenient and attractive bus loading stations along the route; very frequent service with a bus every 10 minutes or less; and new, quick loading and distinct buses. A BRT requires a major capital investment in terms of highway improvement, new bus stations and new vehicles.

Denver Park-n-Ride – Many Lancaster residents make commuter trips to Berks County. It is proposed that the park-n-ride lot noted as a near term improvement be also used as a park-n-ride lot for service to downtown Reading. The concept would be for the RRTA to partner with the Berks County transit system (BARTA) to have them provide commuter express service to downtown Reading or for the RRTA to provide the service. It is anticipated that a similar arrangement would be developed where there would be express service from the park-n-ride lot to downtown Lancaster for Berks County residents. The operator of these services would also have to be determined.

Columbia Park-n-Ride – Many Lancaster residents make commuter trips to York County. While there is a connection with the York County bus service in Columbia, it has not attracted many riders. Therefore, it is proposed that a park-n-ride lot be established in the Columbia area to make the service to York more attractive. The concept would be for the RRTA to partner with the York County transit system (rabbittransit) to have them provide commuter express service to downtown York or for the RRTA to provide the service. It is anticipated that a similar arrangement would be developed where there would be express service from the park-n-ride lot to downtown Lancaster for York County residents. The operator of these services would also have to be determined.

Long Term Service Proposals – The following long term service proposals are developed in anticipation of continuing growth in certain areas and would require a major operating and/or capital investment.

Harrisburg Pike BRT – Route 2 – Park City B/6th Ward is the second best performing RRTA route. It serves the growing Harrisburg Pike corridor. As with growth comes increasing traffic and congestion. An attractive transportation option for this corridor would be Bus Rapid Transit (BRT). BRT is where bus service is placed on a higher level in terms of speed and convenience to the passenger. This is accomplished through a number of features discussed in the Route 30 BRT alternative discussed above.

Local Borough Services – By 2030, it is projected that Elizabethtown, Ephrata, and Lititz boroughs will have over 10,000 people. At this population level, local fixed route service could be an attractive option. The long range plan would be to implement a local circulator route in each borough. The route would circulate within the boroughs serving residential areas as well as employers, shopping centers, medical facilities and recreation facilities while connecting with the RRTA County route that serves that borough and connect with downtown Lancaster.

Summary

The service proposals described above build in the service input, Guiding Principles and Goals and Objectives discussed at the beginning of the chapter. The Long Range Service Improvement Plan provides various changes that can be made to improve the convenience of the system without major disruptions to the current route network. It would result in significant improvements to the convenience of RRTA services to all County residents. However, the plan would require a major operating and capital investment. The following chapter provides a recommended plan for the fiscal and capital impacts of that plan and recommendations for other non-service related capital improvements for RRTA operations.

RECOMMENDED PLAN

Previous chapters of this report presented considerable information on the Red Rose Transit Authority (RRTA) and the transportation setting in which it operates. An examination of existing service both at the route and system level was performed. Based on this examination, a review of projections of future community characteristics and various surveys and other input, long range service improvement proposals for the RRTA's system were developed and presented in the previous chapter. This chapter specifically summarizes the financial and capital impacts of the Long Range Improvement Plan presented in the previous chapter. This impact analysis includes estimates of service levels and operating costs as well as expected patronage and revenue.

Also presented in this chapter is a capital improvement program that has been specified to reflect current needs and those attributable to various service proposals. It includes recommendations for revenue equipment, park-n-ride lot, garage facility expansion, facility upgrades, new stations and other transit facilities.

Two points should be noted regarding all financial forecasts. First, all dollar amounts are presented in current dollars in the year that cost and revenue occur. Actual outlays and revenues have been adjusted to reflect inflation. Second, a conservative approach has been followed throughout the analysis. Due to uncertainties associated with forecasting future events, a conservative approach is prudent. Forecasts presented in this chapter reflect a conscious effort to avoid understating costs and overestimating revenue.

The following sections provide an impact analysis for the proposals presented in the previous chapter.

Long Range Service Improvement Proposals and Impacts

The previous chapter presented a set of proposals within three time periods which addressed each of RRTA's long range transit needs. These proposals call for varying degrees of service expansion and new services.

The accompanying Table 18 summarizes the recommended long range service plan for the RRTA system divided into short term, medium term and long term improvements. Additional bus requirements to implement the service proposals are also noted. The short term recommendations require nine additional peak buses, the medium term also require nine buses and the long term requires six more buses. This is an addition of 24 buses to the RRTA existing fleet of 45 buses. Considering the need for spare buses for the long term service plan elements, the RRTA fleet could increase by 30 buses to about 75 buses in the next 15 to 20 years.

Table 18
Long Term Recommendations

Route	Improvement	Peak Bus Impact
Short Term Improvements		
11	Add to Service Frequency	1
12	Add to Service Frequency	1
13	Add to Service Frequency	1
18	Add to Service Frequency	1
New	Hempfield Industrial Park	2
New	Paradise/Strasburg	1
New	Denver Park-n-Ride	1
Trolley	Added early AM and evening trips	No Change
New	Rt.30/Convention Center	1
New	Ridesharing Program	None
Medium Term Improvements		
18	Expand to Industrial Park	1
12	Expand to Morgantown	1
New	Quarryville Ridesharing Program	No Change
New	Rt. 30 BRT	3
New	Express service to Reading	2
New	Express service to York	2
Long Term Improvements		
New	Harrisburg Pike BRT	3
New	Local service in Elizabethtown, Ephrata and Lititz	3

Revenue Hours – The additional service requirements in terms of revenue hour were projected for each service improvement element. It should be noted that the hours were developed based on the assumption that RRTA will operate 255 weekdays, 52 Saturday and 48 Sunday type services in one year. As shown in Table 19, if RRTA operates all the recommended plan elements, the service hours would be expanded by 77,241. Based on RRTA data for nine months of Fiscal Year 2008 (July 1, 2007 to March 31, 2008) they will operate about 111,000 hours of service. This long range plan would increase the hours by about 70 percent.

Table 19
Vehicle Hour Additions

Service Change	Service Period	Hours Impact
Short Term Improvements		
More Frequent Route 11	Weekday and Saturday	3,684
More Frequent Route 12	Weekday and Saturday	3,684
More Frequent Route 13	Weekday and Saturday	3,684
More Frequent Route 18	Weekday and Saturday	3,684
New Hempfield Industrial Park	Weekday Only	2,765
New Paradise/Strasburg	Weekday Only	3,060
New Denver Park-n-Ride	Weekday Peak Period Only	2,550
Trolley	Extend Weekday Span	510
New Rt.30/Convention Center	During Active Conventions	1,000
New Ridesharing Program	Information Only	None
	Total Short Term	24,621
Medium Term Improvements		
Expand to Route 18 to Industrial Park	Weekdays Only	1,020
Expand to Route 12 to Morgantown	Weekdays Only	1,020
New Quarryville Ridesharing Program	Information Only	None
New Rt. 30 BRT	Weekdays & Weekends	19,170
New Express service to Reading	Weekdays Only	1,530
New Express service to York	Weekdays Only	1,530
	Total Medium Term	24,270
Long Term Improvements		
New Harrisburg Pike BRT	Weekdays & Weekends	19,170
New Local service in Elizabethtown, Ephrata and Lititz	Weekdays Only	9,180
	Total Long Term	28,350
	Grand Total	77,241

Ridership Projections – The ridership projections were developed for each of the long term plan elements. The primary determinant of ridership was based on the performance of existing RRTA routes for similar services. The tool used was passengers per hour since this measure was determined for each service improvement element. Table 20 presents the projections of RRTA ridership for each service improvement based on FY 2008 productivity results. These ridership levels will be updated to reflect the year that they will be implemented. The projections indicate that ridership will increase by about 1.4 million. This compares to about 2.0 million riders that RRTA now carries. The service improvement plan would increase RRTA ridership by about 70 percent.

Table 20
Ridership Projections

Service Change	Additional Hours	Added Riders
Short Term Improvements		
More Frequent Route 11	3,684	47,892
More Frequent Route 12	3,684	58,944
More Frequent Route 13	3,684	51,576
More Frequent Route 18	3,684	42,366
New Hempfield Industrial Park	2,765	58,065
New Paradise/Strasburg	3,060	30,600
New Denver Park-n-Ride	2,550	25,500
Trolley	510	5,100
New Rt.30/Convention Center	1,000	10,000
New Ridesharing Program	None	None
	Total Short Term	330,043
Medium Term Improvements		
Expand to Route 18 to Industrial Park	1,020	10,200
Expand to Route 12 to Morgantown	1,020	10,200
New Quarryville Ridesharing Program	None	None
New Rt. 30 BRT	19,170	479,250
New Express service to Reading	1,530	15,300
New Express service to York	1,530	15,300
	Total Medium Term	530,250
Long Term Improvements		
New Harrisburg Pike BRT	19,170	479,250
New Local service in Elizabethtown, Ephrata and Lititz	9,180	91,800
	***Total Long Term**	571,050
	Grand Total	1,431,343

Implementation Plan - The implementation plan for the long range service improvements is identified for the next 20 years. Improvements are phased in with consideration of the capital needs that are required for implementation. The major capital needs include revenue equipment and an expansion of the RRTA garage facility to accommodate the increase in overall fleet size. As note in Table 21, the RRTA fleet size is projected to grow to 75 vehicles in 2028 to meet the long range service improvements.

Table 21
Implementation Phase-In Plan

Fiscal Year	Service Change	Additional Buses	Total Fleet Size
SHORT TERM IMPROVEMENTS			
2009	Add early and later Trolley trips	0	45
2009	Ridesharing program	0	45
2010	More Frequent Route 11 More Frequent Route 12 More Frequent Route 13 More Frequent Route 18	4 + 1 spare	50
2010	Add Route 30/Convention Center Service	1	51
2011	Hempfield Industrial Park Route	2	53
2012	Paradise/Strasburg Route	1	54
2013	Denver Park-n-Ride Route	1	55
MEDIUM TERM IMPROVMENTS			
2015	Expand Route 18 to Industrial Park	1 + 1 spare	57
2016	Expand Route 12 to Morgantown	1	58
2016	Quarryville Area Ridesharing	0	58
2017	Route 30 BRT	3 + 1 spare	62
2018	Express to Reading	2 + 1 spare	65
2018	Express to York	2	67
LONG TERM IMPROVMENTS			
2023	Local Service in Elizabethtown	1	68
2024	Local Service in Ephrata	1	69
2025	Local Service in Lititz	1 + 1 spare	71
2028	Harrisburg Pike BRT	3 + 1 spare	75

Financial Impacts - Financial impacts of the changes included in the Long Range Plan have been analyzed for the year on implementation. This analysis includes the Plan's impact on operating costs, farebox revenue, farebox recovery and operating deficit.

Operating Costs - To calculate the impact of the Long Range Service Improvement Plan on RRTA's annual operating costs, an operating cost model has been developed using RRTA data for the first nine months of FY 2008 (July 1, 2007 to March 31, 2008). RRTA operated 83,434 revenue hours during that period while incurring $5,766,283 in

operating costs. Using these figures, a simple cost model of $69.11 per revenue hour was calculated. The additional revenue hours were then inserted into the operating cost model to determine the annual operating cost impact for each element of the Service Improvement Plan. In order to account for inflation, an assumption is made that RRTA costs will increase at a level of seven percent per year. The projected cost for the next 20 years with the service elements added is set forth below in Table 22. As can be seen, the costs will increase from about $8.2 million in FY 2009 to about $50.3 million in FY 2028. Much of the cost increase is due to the assumption that inflation will increase costs by an average of seven percent per year. For example, if costs increased by just an average of five percent per year, the total cost for the year 2028 would be $36.2 million or about $14.1 million less.

Table 22
Operating Cost Summary

Fiscal Year	Service Change	Annual Current Hours	Additional Hours	Total Hours	Unit Cost/Hour ($)	Annual Total Cost ($000's)
2009	Trolley and Ridesharing	111,000	510	111,510	73.95	8,246.2
2010	More Frequent Rts. 11,12,13 &18	111,510	14,736	126,246	79.13	9,989.9
2010	Route 30 Convention Ctr.	126,246	1,000	127,246	79.13	10,069.0
2011	Hempfield	127,246	2,765	130,011	84.67	11,008.0
2012	Paradise/Strasburg	130,011	3,060	133,071	90.60	12,056.2
2013	Denver Park-n-Ride	133,071	2,550	135,621	96.94	13,147.1
2014	None	135,621	0	135,621	103.73	14,068.0
2015	Expand Route 18	135,621	1,020	136,641	110.99	15,165.8
2016	Expand Route 12	136,641	1,020	137,661	118.76	16,348.6
2017	Route 30 BRT	137,661	19,170	156,831	127.07	19,928.5
2018	Express to Reading & York	156,831	3,060	159,891	135.97	21,740.4
2019	None	159,891	0	159,891	145.49	23,262.5
2020	None	159,891	0	159,891	155.67	24,890.2
2021	None	159,891	0	159,891	166.57	26,633.0
2022	None	159,891	0	159,891	178.22	28,495.8
2023	Local Elizabethtown	159,891	3,060	162,951	190.70	31,074.8
2024	Local Ephrata	162,951	3,060	166,011	204.05	33,874.5
2025	Local Lititz	166,011	3,060	169,071	218.33	36,913.3
2026	None	169,071	0	169,071	233.62	39,498.4
2027	None	169,071	0	169,071	249.97	42,262.7
2028	Harrisburg Pike BRT	169,071	19,170	188,241	267.47	50,348.8

Passenger and Operating Revenue – The projected ridership and revenue for the long range plan are identified in Table 23. Ridership projections from Table 3 were used for the base year FY 2009 with ridership increased by three percent a year to reflect an increasing ridership trend. Data reported by RRTA for the first nine months of Fiscal Year 2008 (July 1, 2007 to March 31, 2008) indicates that revenue per rider average about $1.39. This was increased by 10 percent every five years to reflect fare increases.

Table 23
Ridership and Revenue Projection

Fiscal Year	Service Change	Annual Riders (000's)	Additional Riders (000's)	Total Riders (000's)	Revenue per Rider ($)	Annual Revenue ($000's)
2009	Trolley and Ridesharing	1,995.4	5.1	2,000.5	1.39	2,780.7
2010	More Frequent Rte. 11,12,13 &18	2,065.2	206.8	2,272.0	1.39	3,158.1
2010	Route 30 Convention Ctr.	2,272.0	10.3	2,282.3	1.39	3,172.4
2011	Hempfield	2,350.8	61.6	2,412.4	1.39	3,353.2
2012	Paradise/Strasburg	2,484.8	33.4	2,518.2	1.39	3,500.3
2013	Denver Park-n-Ride	2,593.7	28.7	2,622.4	1.39	3,645.1
2014	None	2,701.1	0	2,701.2	1.53	4,132.7
2015	Expand Route 18	2,782.2	12.2	2,794.4	1.53	4,275.4
2016	Expand Route 12	2,878.2	12.4	2,890.6	1.53	4,422.6
2017	Route 30 BRT	2,977.3	607.2	3,584.5	1.53	5,484.3
2018	Express to Reading & York	3,692.0	39.9	3,731.9	1.53	5,709.8
2019	None	3,843.9	0	3,843.9	1.68	6,457.7
2020	None	3,959.2	0	3,959.2	1.68	6,651.5
2021	None	4,078.0	0	4,078.0	1.68	6,851.0
2022	None	4,200.3	0	4,200.3	1.68	7,056.5
2023	Local Elizabethtown	4,326.3	46.3	4,372.6	1.68	7,346.0
2024	Local Ephrata	4,503.8	47.7	4,551.5	1.85	8,420.3
2025	Local Lititz	4,688.0	49.1	4,737.2	1.85	8,763.8
2026	None	4,879.3	0	4,879.3	1.85	9,026.7
2027	None	5,025.7	0	5,025.7	1.85	9,287.5
2028	Harrisburg Pike BRT	5,176.5	840.5	6,017.0	1.85	11,131.5

As seen in Table 23, ridership will increase from about 2.0 million riders in FY 2009 to about 6.0 million riders in FY 2028. At the same time, revenue is projected to increase from about $2.8 million in FY 2009 to about $11.1 million in FY 2029.

Operating Deficit and Farebox Recovery – Table 24 presents the projection of operating deficit for the long term plan. It is based on the information contained in the prior two tables. Over the 20 year period, the need for operating assistance grows from about $5.4 million to about $39.2 million. The farebox recovery ratio declines from

about 33.7 to 22.1. It should be noted that if costs were to only increase by five percent a year rather than by seven percent, in FY 2028 the need for operating assistance would only be $25.1 million and the farebox recovery would be 30.7.

Table 24
Needed Operating Assistance and Farebox Recovery

Fiscal Year	Service Change	Annual Total Cost ($000's)	Annual Revenue ($000's)	Annual Deficit ($000's)	Farebox Recovery
2009	Trolley and Ridesharing	8,246.2	2,780.7	5,465.5	33.7
2010	More Frequent Rte. 11,12,13 &18	9,989.9	3,158.1	6,831.8	31.6
2010	Route 30 Convention Ctr.	10,069.0	3,172.4	6,896.6	31.5
2011	Hempfield	11,008.0	3,353.2	7,654.8	30.5
2012	Paradise/Strasburg	12,056.2	3,500.3	8,555.9	29.0
2013	Denver Park-n-Ride	13,147.1	3,645.1	9,502.0	27.7
2014	None	14,068.0	4,132.7	9,935.3	29.4
2015	Expand Route 18	15,165.8	4,275.4	10,890.4	28.2
2016	Expand Route 12	16,348.6	4,422.6	11,929.0	27.1
2017	Route 30 BRT	19,928.5	5,484.3	14,444.2	27.5
2018	Express to Reading & York	21,740.4	5,709.8	16,030.6	26.3
2019	None	23,262.5	6,457.7	16,804.8	27.8
2020	None	24,890.2	6,651.5	18,238.7	26.7
2021	None	26,633.0	6,851.0	19,782.0	25.7
2022	None	28,495.8	7,056.5	21,439.3	24.8
2023	Local Elizabethtown	31,074.8	7,346.0	23,728.8	23.6
2024	Local Ephrata	33,874.5	8,420.3	25,454.2	24.9
2025	Local Lititz	36,913.3	8,763.8	28,149.5	23.7
2026	None	39,498.4	9,026.7	30,471.7	22.9
2027	None	42,262.7	9,287.5	32,975.2	22.0
2028	Harrisburg Pike BRT	50,348.8	11,131.5	39,217.3	22.1

Local Share Contribution – The funding to support this operating deficit will be shared by three sources – federal and state and local. In the recent past, the Federal government contributed about 47.5 percent, the State contributed about 48 percent and 4.5 percent was contributed locally. The current State transit legislation (Act 44) requires that all transit systems contribute about 15 percent of the State's contribution. Currently the local contribution is only about 8.7 percent or about half of what the law requires. For those that are not in compliance, the law states that the local share will have to be increased by at least five percent per year. With the uncertainty of the continuation of federal operating assistance for the RRTA, both the State and Local governments may be required to provide much larger financial support. In this regard, many areas are now considering a local dedicated funding source to support their transit system.

Long Range Capital Improvement Proposals

This section describes the capital requirements associated with the implementation of the Long Range Service Plan as well as other capital needs associated with replacement of equipment and facility improvements.

New Buses - The Recommended Plan would increase RRTA's fleet size from 45 to 75 vehicles. With a peak vehicle need of 39, RRTA would have a spare ratio of approximately 15 percent. The Federal Transit Administration (FTA) recommends a maximum spare ratio of 20 percent and therefore RRTA is well within the spares ratio. However, in the long range plan, different fleet types will be required. For example, special vehicles are often used for BRT services; commuter oriented express services; and local community services. Therefore, RRTA may be required to reach and even exceed the 20 percent goal.

If the implementation schedule detailed in Table 21is followed, six more spare buses are required. The peak fleet size would grow to 63 buses (39 for current service and 24 for new services. Besides obtaining buses for the new services, RRTA will be required to replace the existing buses as they exceed their useful life age.

As seen in Table 25, a year by year bus acquisition plan is set forth describing how RRTA will be required to replace its existing fleet and to obtain new additions to the fleet to provide the expanded services noted in the long range service plan. There are 30 additional buses required to implement the service plan. Due to bus replacements of both the current RRTA fleet as well as replacing the buses for service expansion once they reach their 12 year expected life, a total of 65 more buses will need to be obtained during the 20 year period. Due to the rising cost of new buses, it is assumed that the purchase cost of a new bus will increase by about five percent a year. Based on this assumption, the 95 buses that RRTA will obtain in this 20 year period will cost about $51.2 million dollars or an average price of about $539,000 per bus. RRTA should obtain alternative fueled buses such as hybrid buses.

Table 25
Fleet Addition and Replacement Plan

Fiscal Year	Service Change	Current Fleet Exceeding 12 Years	Additional Buses	Total New Buses	Unit Cost/Bus ($000's)	Total Cost ($000's)
2009	Trolley and Ridesharing	3	0	3	325.0	975.0
2010	More Frequent Rts. 11,12,13 &18	1	5	6	342.0	2,052.0
2010	Route 30 Convention Ctr.	0	1	1	342.0	342.0
2011	Hempfield	4	2	6	359.0	2,154.0
2012	Paradise/Strasburg	0	1	1	377.0	377.0
2013	Denver Park-n-Ride	0	1	1	396.0	396.0
2014	None	0	0	0	416.0	0
2015	Expand Route 18	0	2	2	437.0	874.0
2016	Expand Route 12	18	1	19	459.0	8,721.0
2017	Route 30 BRT	0	4	4	500.0	2,000.0
2018	Express to Reading & York	9	5	14	525.0	7,350.0
2019	None	2	0	2	550.0	1,100.0
2020	None	8	0	8	577.0	4,616.0
2021	None	0	0	0	600.0	0
2022	None	3	0	3	630.0	1,890.0
2023	Local Elizabethtown	7	1	8	670.0	5,360.0
2024	Local Ephrata	6	1	7	700.0	4,900.0
2025	Local Lititz	1	2	3	735.0	2,205.0
2026	None	1	0	1	780.0	780.0
2027	None	0	0	0	820.0	0
2028	Harrisburg Pike BRT	2	4	6	850.0	5,100.0
TOTAL		65	30	95	-	51,192.0

Bus Shelters - As a means to increase RRTA's recognition and prevalence in the service area as well as improving passenger information and amenities, RRTA should plan to install at least ten additional bus shelters in Lancaster City. Also, a shelter should be placed in each town center served by a County Route, which would require approximately fifteen additional shelters. Each shelter should include a bench, a map and timetable of the route or routes serving the shelter as well as a map of the specific town in which the shelter is located. The photo on the next page shows a new bus shelter in downtown Columbia, and is a prime example of how transit can be an attractive part of the community.

Bus Garage - The condition of the RRTA bus garage is very poor. RRTA has recognized this and is in the process of developing plans for a major renovation and expansion program. When the renovation and expansion is completed, the garage facility will be able to accommodate an additional 10 buses. This will be sufficient to address the fleet size increase that is projected for the first five years of the long range plan (up through 2014). However, thereafter, the RRTA fleet is projected to increase by about 20 more vehicles. The current complex is not large enough to accommodate this many more vehicles. Therefore, RRTA must either, obtain more land at the current site or construct another facility to handle the fleet increase.

As an option, RRTA might consider obtaining a larger complex to also accommodate the paratransit fleet. At the current time the RRTA uses a private contractor to operate its paratransit service. This contractor (Easton Coach Company) uses its own facility to house and maintain the paratransit fleet. This new facility could be leased to the paratransit operator for its use. If at some future time the RRTA decides to assume in house operation of the partransit of the service, obtaining a facility to operate the service would not be an issue.

Phase II – Queen Street Station – RRTA is in the process of expanding its downtown transit center, which is shown in the photo on the next page. This expansion will permit all its services to be accommodated in its downtown transit station. It will also improve the bus flow into and out of the complex.

Bus Stop Signs – RRTA should upgrade its bus stop signage program to include more information at each stop including the route number/name that services the stop as well as the times that the bus serves the stop. The photo below shows an example of a bus stop sign that conveys this information to passengers.

Park-n-Ride Lots – The service plan identified a number of services that would require park-n-ride lots included the Denver Express/Reading service and the York Express services. Also, a park-n-ride lot could be constructed near the Mt. Joy or Elizabethtown Amtrak station.

Other Capital Needs – There are a number of other capital needs that are required to keep the fleet properly maintained and serviced such as a new bus vacuum system, automatic bus washer, mobile bus lifts and shop and garage equipment. There are also capital items needed to improve the delivery of service on the street such as an upgrade to the Automatic Vehicle Locator (AVL) system including expansion to paratransit service, new two way radios, new fare collection equipment, new mobile data terminals and replacement of service vehicles. Furniture and office equipment such as new computers will also be required. Finally, a new security system should be implemented at all RRTA facilities.

Table 26 on the accompany page lists the RRTA long range capital plan for from 2010 to 2028. The total cost of the capital plan varies by year from a low of $250,000 in 2027 to nearly $10 million in 2016. The total capital program is about $92 million over the 19 year period.

Table 26
Long Range Capital Program
($000's)

ITEM	YEAR																		
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Buses	2,394	2,154	377	396	0	874	8,721	2,000	7,350	1,100	4,616	0	1,890	5,360	4,900	2,205	780	0	5,100
Garage Facility Expansion		1,500	2,233	2,267															
Bus Shelters	70	70	70	70						90	90	90	90						
Bus Stop Signs				20	20	20	25	25	25	25	25	30	30	30					
Park-n-Ride Lots			2,000	500	2,000			2,500	700										
Phase II QSS	6,000	6,000	4,000																
*	200	100	200			220	120	220			240	140	240			250	150	250	
Furniture & Office	50	50		60	60		70	70		80	80		90	90		100	100		
Garage Equipment	50	100	100	100			60	60			70	70			300	80			
Security Equipment												250							
New Garage						4,000	1,000	1,000											
Facility Upgrade																2,500			
QSS Upgrade													1,500						
TOTAL	8,764	9,974	8,980	3,413	2,080	4,114	9,996	5,875	8,075	1,295	5,121	580	3,840	5,480	5,200	5,135	1,030	250	5,100

* Includes Two Way Radios, MDT, Fare Collection Equipment, AVL System Upgrade and Service Vehicles

Summary

This chapter provided an impact analysis for the RRTA Long Range Service Improvement Plan. Impacts for peak period vehicle needs and projections for annual operating costs, ridership, passenger revenue, farebox recovery and operating deficit were provided. The 20 year projections demonstrated that in FY 2028, RRTA services would cost between $36.2 and $50.3 million compared with about $8.2 million today. This is due to increases in service to about 187,000 hours compared with 111,000 hours today as well as inflation. Ridership would increase from about 2.0 million to about 3.4 million. The farebox recovery rate would decline from a ratio of 33.7 to a range of 30.7 to 22.1 depending on the level of cost increase. A capital needs program has been developed for new buses, replacement buses, garage renovations and expansion, a new garage facility, expansion of the QSS and other capital items. Overall, the capital will cost about $92.0 million from 2010 to 2028. This program will require substantial federal, state and local financial support.

It should be noted that the MPO's Long Range Transportation Plan update for 2009 to 2035 estimates total financial assistance for RRTA at about an average of $12 million per year. This plan requires about $17 to $22 million on average a year depending on the level of cost increase. This is about $5 to $10 million more a year on average than the MPO's plan.

Appendix A

Red Rose Transit Authority (RRTA)
2008 TRANSPORTATION SURVEY

The RRTA is developing a Long Range Transit Plan. The purpose of the plan is to guide RRTA's policy and decision making in the future. Your input to this plan is very important.

****

1. How long have you been riding RRTA services? ☐ Less than a year ☐ 1-2 years ☐ 3-4 years ☐ 5 or more years

2. How many one way trips do you make each week? (Count a round trip as two trips) _____ Trips

3. How would you rate the following factors to influence you to ride RRTA more?

	Very Important	Important	Not Important
Service closer to my home	☐	☐	☐
Service closer to my work	☐	☐	☐
Service closer to shopping	☐	☐	☐
Service to more places	☐	☐	☐
More frequent service	☐	☐	☐
More information	☐	☐	☐
Lower fare	☐	☐	☐
More evening service	☐	☐	☐
More Saturday service	☐	☐	☐
More Sunday service	☐	☐	☐
More door-to-door service	☐	☐	☐
More park-n-ride service	☐	☐	☐

4. Are there places in Lancaster County or in the surrounding areas that you would travel to if bus service were available? ☐ Yes ☐ No If yes, what are these places?

_____

_____

5. What changes or improvements in the bus services would you like to see accomplished? (*Please specify*) _____

_____

6. Please list the on-the-street amenities (e.g., bus stop signs, passenger waiting shelters, bus stop benches, etc.) that you would you like to see improved? _____

_____

7. Please rate how you feel RRTA provides public information in the following areas?

	Excellent	Very Good	Good	Fair	Poor
Public Timetables	☐	☐	☐	☐	☐
System Map	☐	☐	☐	☐	☐
Bus Stop Signs	☐	☐	☐	☐	☐
Waiting Shelters	☐	☐	☐	☐	☐
Park-n-Ride Lots	☐	☐	☐	☐	☐

8. What other changes or improvements in public information would you like to see accomplished? (*Please specify*) _____

9. RRTA has financial problems. How would you suggest that they respond to this situation?
☐ Increase fares ☐ Reduce service ☐ Both ☐ Don't know

10. How do you feel about the possibility of having Streetcar service operated in and around the City of Lancaster? ☐ I like the Idea ☐ I don't like the idea ☐ I have no opinion

11. Would you favor a small increase in public funding to pay for the operating costs of expanded or improved public transportation in your community and surrounding area?
☐Yes ☐No ☐ Don't know

12. Your sex: ☐Male ☐ Female

13. In what group would be your age? ☐Under 18 ☐18 to 29 ☐30 to 44
☐ 45 to 64 ☐ 65 and older

14. What is your occupation? ☐ Manager/professional ☐ Technical/skilled
☐ Student ☐ Homemaker ☐ Clerical ☐ Retired ☐ Service industry
☐ Other _____

15. And finally, which of the following categories includes your total annual family income?
(we want combined income of <u>all</u> wage earners in the household)
☐ Less than $10,000 ☐ $10,000 to $24,999 ☐ $25,000 to $39,999
☐ $40,000 TO $54,999 ☐ $55,000 TO $69,999 ☐ $70,000 and above

THANK YOU VERY MUCH FOR YOUR TIME AND ASSISTANCE

APPENDIX B

April 25, 2008

Dear Citizen:

You can help shape the future of public transportation services in Lancaster County to better serve you and your family and meet the needs of all residents throughout the area.

We would appreciate it if one adult member (age 18 years or older) of your household would answer this questionnaire. Your household is one of only a small sample of homes to receive this questionnaire. Therefore, it is very important to have this questionnaire completed and returned. Even if you never use public transportation services, or never will, your response is needed. In fact, the purpose of this survey is to obtain the opinion of all Lancaster County residents. In addition, your opinions and thoughts regarding your transportation needs and the needs of others in your community will be very helpful in providing input to the Red Rose Transit Authority (RRTA) Long Range Transit Plan. This Plan will be completed later this year and is focused on identifying improvements to your local public transportation system operated by the RRTA.

This is your opportunity to have a direct voice in the planning of local public transportation services. All surveys returned will be held in strict confidence. Nowhere in this questionnaire are you required to provide your name or address. Please complete the enclosed questionnaire and return it by mail in the prepaid envelope provided by May 16, 2008. We sincerely appreciate your participation.

Sincerely,

RED ROSE TRANSIT AUTHORITY – LONG RANGE TRANSIT PLAN
2008 RESIDENT SURVEY

1. Have you <u>personally</u> used RRTA bus service in the past <u>year?</u> □ **Yes** □ **No**

2. Does <u>anyone</u> in your immediate household ride the buses <u>once</u> <u>a</u> <u>month</u> <u>or</u> <u>more</u>?
□ **Yes** □ **No**

3. How close do you live to a bus route? □ **Right on a bus route**
□ **Within a 5 minute walk** □ **Within a 10 minute walk** □ **More than a 10 minute walk**
□ **Don't know**

4. How important is local bus service to residents of your community?
□ **Very important** □ **Important** □ **Somewhat important** □ **Not important**
□ **Don't know**

5. This question is only for those who do <u>not</u> use local bus service. Please indicate whether you agree or disagree that the following are reasons you do <u>not</u> use bus service? If you use local bus service, skip to question 6.

	<u>Agree</u>	**<u>Disagree</u>**
I have a car available	□	□
I don't live near a bus stop	□	□
No service to where I want to go	□	□
No service when I want to go	□	□
I don't like traveling with strangers	□	□
Bus service is too slow	□	□
I don't like waiting for a bus	□	□
I don't have information on service	□	□
I don't feel safe on a public bus	□	□
Bus service fares are too expensive	□	□
I make multiple stops on my trips (e.g., day-care, errands)	□	□
I am unfamiliar with the bus service and how to use it	□	□

6. Will gasoline prices at $4.00 per gallon influence you to utilize or increase your utilization of RRTA bus service? □ **Yes** □ **No** □ **Maybe** □ **Don't know**

7. How important are the following factors in influencing you to utilize or increase your utilization of RRTA bus service?

	Very Important	Important	Not Important
Service closer to my home	☐	☐	☐
Service closer to my work	☐	☐	☐
Service closer to shopping	☐	☐	☐
More frequent service	☐	☐	☐
More information about existing services	☐	☐	☐
Reasonable cost of the service	☐	☐	☐
Having more evening service	☐	☐	☐
Having more Saturday service	☐	☐	☐
Having Sunday service	☐	☐	☐
More door-to-door service	☐	☐	☐
More park-n-ride service	☐	☐	☐

8. What is the best way for RRTA to reach you with information about promotions and services? ☐ Newspapers ☐ Radio/TV ☐ Posters ☐ Schedules/brochures ☐ Bus drivers ☐ Friends/relatives ☐ RRTA website (redrosetransit.com) ☐ Other _____

9. For what purpose would you be most likely to use RRTA bus service? (*Provide only one answer*)
☐ Work ☐ School ☐ Shopping ☐ Personal business ☐ Medical/dental ☐ Recreation/social ☐ Other _ ☐ None

10. This question is only for those who use local bus service. How do you rate RRTA's overall service and performance? If you do <u>not</u> use local bus service, skip to Question 11.

	Excellent	Good	Very Good	Fair	Poor
Vehicle Cleanliness	☐	☐	☐	☐	☐
Driver Courtesy	☐	☐	☐	☐	☐
Driver Driving Habits	☐	☐	☐	☐	☐
Service Information	☐	☐	☐	☐	☐
Buses are On-Time	☐	☐	☐	☐	☐
Service Frequency	☐	☐	☐	☐	☐
Places Served	☐	☐	☐	☐	☐
Service in General	☐	☐	☐	☐	☐
Cost of Ride (Fares)	☐	☐	☐	☐	☐
Ride Comfort	☐	☐	☐	☐	☐
Safety	☐	☐	☐	☐	☐
Overall Satisfaction	☐	☐	☐	☐	☐

11. Please rate the following statements.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
A good bus system is essential to growth and prosperity of the area.	☐	☐	☐	☐	☐
Local bus service has not kept pace with growth in the area.	☐	☐	☐	☐	☐
More public funds should be provided to improve bus service.	☐	☐	☐	☐	☐
Bus service should be oriented only to people who don't have a car available.	☐	☐	☐	☐	☐
A good bus system is beneficial to the environment.	☐	☐	☐	☐	☐
A bus system is essential for the well being of people within the community it serves.	☐	☐	☐	☐	☐
The plan should consider other options, e.g., Streetcars, Light Rail & Commuter Rail	☐	☐	☐	☐	☐

12. What changes or improvements in the bus system would you like to see accomplished? (*Please specify*) _____

_____

13. Would you favor a small increase in public funding to pay for the operating costs of expanded or improved public transportation in your community and surrounding area?
□ Yes □ No □ Don't know

14. Lancaster is a growing County facing a massive transportation funding shortfall (highways and bridges) over the next 20 years, upwards of $500 Million. Which option would you choose to best meet this need for additional funding of transportation systems? □ Highway tolls
□ User Fees (vehicle registration, license fees, vehicle miles traveled fee) □ Gasoline tax
□ Alternative funding options (surcharge on tires, parking, liquor) □ Other _____

15. Your sex: □ Male □ Female

16. In what age group are you? □ 18 to 29 □ 30 to 44 □ 45 to 64 □ 65 and Over

17. What is your occupation? □ Manager/professional □ Technical/skilled □ Student
□ Homemaker □ Clerical □ Retired □ Service industry □ Other _____

18. And finally, which of the following categories includes your total annual family income? (*we want combined income of <u>all</u> wage earners in the household*)
□ Less than $10,000 □ $10,000 to $24,999 □ $25,000 to $39,999
□ $40,000 to $54,999 □ $55,000 to $69,999 □ $70,000 and above

THANK YOU VERY MUCH FOR YOUR TIME AND ASSISTANCE