

# Pee Dee Regional Transit Plan



*Prepared by*



and



*for the*

South Carolina Department of Transportation

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# Table of Contents

<b>TABLE OF CONTENTS.....</b>	<b>II</b>
<b>LIST OF TABLES .....</b>	<b>IV</b>
<b>LIST OF FIGURES.....</b>	<b>IV</b>
<b>SECTION 1: INTRODUCTION.....</b>	<b>1</b>
1.1 PURPOSE OF STATEWIDE MULTIMODAL TRANSPORTATION PLAN .....	1
1.2 PURPOSE OF REGIONAL PLAN .....	1
<b>SECTION 2: OVERVIEW OF TRANSIT IN THE REGION.....</b>	<b>3</b>
2.1 EXISTING CONDITIONS .....	3
2.1.1 Overall Population .....	3
2.1.2 Elderly Population.....	3
2.1.3 Persons Below the Poverty Level.....	3
2.1.4 Median Household Income .....	3
2.1.5 Change in Daytime Population .....	4
2.1.6 Demographic Summary.....	4
2.2 FUTURE CONDITIONS .....	4
2.3 LOCAL / REGIONAL TRANSIT SERVICES .....	5
2.3.1 Regional Overview.....	5
2.3.2 Trends in Ridership and Amount of Service Provided.....	6
2.3.3 Trends in Efficiency and Effectiveness.....	8
2.4 STRATEGIC PLANNING EFFORTS .....	10
2.5 STAKEHOLDER INPUT .....	10
2.5.1 List of Interviewees.....	10
2.5.2 Interview Questions .....	10
2.5.3 Summary of Input .....	11
2.6 SUMMARY.....	13
<b>SECTION 3: TRANSIT PERCEPTIONS &amp; ATTITUDES .....</b>	<b>14</b>
3.1 FOCUS GROUPS.....	14
3.1.1 Who Should Be Served by Public Transportation .....	14
3.1.2 Preferred Funding Mechanisms for Public Transportation.....	14
3.2 STATEWIDE SURVEY REPORT .....	15
3.2.1 Purpose and Methodology.....	15
3.2.2 Major Findings .....	15
3.2.3 Other Findings .....	16
<b>SECTION 4: VISION FOR TRANSIT IN SOUTH CAROLINA .....</b>	<b>18</b>
4.1 PURPOSE OF VISION .....	18
4.2 VISION.....	18
<b>SECTION 5: REGIONAL TRANSIT NEEDS .....</b>	<b>20</b>
5.1 METHODS SELECTION FOR SOUTH CAROLINA.....	20
5.2 APPLICATION OF METHODS.....	20
5.2.1 Arkansas Public Transportation Needs Assessment (APTNA) Method.....	21
5.2.2 Mobility Gap Method.....	22
5.2.3 Comparison of Results .....	25



5.3 TRANSIT DEMAND VALIDATION ..... 27

    5.3.1 *Modal Split Analysis* ..... 27

    5.3.2 *Recommended Demand Estimation Methodology* ..... 28

5.4 QUANTIFYING TRANSIT NEED ..... 28

    5.4.1 *Transit Need in the Region* ..... 28

    5.4.2 *Transit Net Operating Costs* ..... 31

    5.4.3 *Capital Needs* ..... 33

    5.4.4 *Total Capital and Operating Costs* ..... 36

5.5 INTERCITY / INTERREGIONAL TRANSIT NEEDS ..... 37

    5.5.1 *Intercity High Speed and Passenger Rail Assessment* ..... 38

5.6 CRITICAL AND POTENTIAL TRANSIT CORRIDORS ..... 39

    5.6.1 *Potential Transit Technologies* ..... 39

    5.6.2 *Corridor Evaluation Criteria* ..... 41

    5.6.3 *Pee Dee Region* ..... 42

    5.6.4 *Other Potential Transit Corridors* ..... 43

**SECTION 6: TRANSIT FUNDING NEEDS ..... 48**

6.1 DISCUSSION OF FUNDING ISSUES FOR THE PEE DEE REGION ..... 48

6.2 POTENTIAL NEW FUNDING SOURCES ..... 48

    6.2.1 *Possible Funding Mechanisms* ..... 49

**SECTION 7: ACTION PLANS ..... 52**

7.1 CLOSE THE GAP BETWEEN FUNDING NEEDS AND AVAILABLE FUNDING LEVELS ..... 52

    7.1.1 *Improve Efforts to Leverage Federal Dollars* ..... 53

    7.1.2 *Allow Greater Flexibility for Local Jurisdictions to Generate Funds* ..... 53

    7.1.3 *Increase State Funding for Transit* ..... 54

    7.1.4 *Engage Non-Traditional Partners* ..... 54

7.2 INCREASE COORDINATION AMONG PROVIDERS ..... 55

7.3 EXPAND TRANSIT SERVICE ..... 56

    7.3.1 *Target Gaps in Rural Areas* ..... 56

    7.3.2 *“Right Size” Urban Systems* ..... 56

    7.3.3 *Increase in Commuter Based Services* ..... 57

    7.3.4 *Needs Incremental Approach with Sustainability* ..... 58

7.4 OTHER ACTION ITEMS ..... 58

    7.4.1 *Coordinating Transportation and Land Use Decisions* ..... 58

    7.4.2 *Upgrade Passenger Rail Service* ..... 59

7.5 CONCLUSION ..... 59



**List of Tables**

Table 1: Pee Dee Region Population Growth Rates..... 4

Table 2: Pee Dee Region Population Projections by County..... 4

Table 3: Total Pee Dee Region Vehicles in Maximum Service (FY 2002 to FY 2005) ..... 5

Table 4: Total Pee Dee Region Passengers (FY 2002 to FY 2005) ..... 7

Table 5: Total Pee Dee Region Vehicle Miles (FY 2002 to FY 2005) ..... 7

Table 6: Total Pee Dee Region Vehicle Hours (FY 2002 to FY 2005)..... 8

Table 7: Rural & Urban Population Groups Used in APTNA Method ..... 21

Table 8: 2001 National Household Transportation Survey (APTNA) Data ..... 21

Table 9: Estimated Annual & Daily Transit Demand: APTNA Method ..... 22

Table 10: Households With No Vehicle Available: 2010 to 2030 ..... 23

Table 11: 2001 National Household Travel Survey Mobility Gap Data ..... 23

Table 12: Mobility Gap Calculations ..... 24

Table 13: Estimated Annual & Daily Transit Demand: Mobility Gap ..... 25

Table 14: Estimated Annual & Daily Transit Demand: Adjusted Needs (Per Formula) ..... 26

Table 15: Comparison of Results for Estimated Rural & Urban Transit Demand ..... 26

Table 16: Estimated Rural & Urban Transit Demand by State Total..... 27

Table 17: 2005 and 2030 Transit Need ..... 30

Table 18: Transit Subsidy for 2005 & 2030..... 32

Table 19: Vehicle Needs for 2008 & 2030 ..... 34

Table 20: Vehicle Needs & Cost Over 25 Years..... 35

Table 21: Facility Needs Assumptions Based Upon Fleet Size ..... 36

Table 22: Vehicle & Facility Capital Costs: 2005 to 2030 ..... 36

Table 23: Total Capital & Operating Costs: 2005 to 2030 ..... 37

**List of Figures**

Figure 1: Location of Pee Dee Region..... 2

Figure 2: Annual Operating Expenses (Region Totals FY 2002 to FY 2005) ..... 6

Figure 3: Ridership per Vehicle Mile (FY 2002 to FY 2005) ..... 8

Figure 4: Ridership per Vehicle Hour (FY 2002 to FY 2005) ..... 9

Figure 5: Operating Cost per Passenger, per Vehicle Mile, and per Vehicle Hour ..... 9

Figure 6: Respondents' Attitudes towards Funding Public Transportation ..... 17

Figure 7: Existing Service & Transit Need ..... 29

Figure 8: Transit Need and Strategy to Meet: 2005 to 2030..... 30

Figure 9: Estimate of Subsidy Needed for 2005 ..... 31

Figure 10: Transit Subsidy & Strategy to Meet: 2005 to 2030 ..... 32

Figure 11: Vehicle Needs for 2008 ..... 34

Figure 12: Vehicle Capital Expenditures Over 25 Years..... 35

Figure 13: Potential Transit Opportunities ..... 47



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## Section 1: Introduction

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### **1.1 Purpose of Statewide Multimodal Transportation Plan**

The South Carolina Statewide Multimodal Transportation Plan is being developed to set a course for future transportation investments in South Carolina. It is a long-range planning effort intended to establish a strategic statewide transportation vision, focusing on the mobility of people and the efficient movement of freight and goods. The overall plan consists of three major components that are connected and coordinated:

- Statewide Corridor Plan;
- Statewide Transit Plan; and
- Statewide Railroad Right-of-Way Preservation Plan.

These elements will be linked to provide a cohesive strategy and vision for transportation investments in the state.

### **1.2 Purpose of Regional Plan**

Public transit is an integral part of the region's transportation network. Transit provides mobility to thousands of residents in the region, and is an important tool to foster personal independence and promote economic development. Transit is more than just buses in cities; some form of transit is available in many parts of the state in both rural and urban areas. However, the extent of service varies greatly from region to region.

The Statewide Plan compiles findings developed throughout the study process, focusing on strategies and action items for South Carolina transit in general. The following elements have been included:

- Service needs and strategies – General descriptions for transit service improvements to meet the identified needs;
- Financial needs and strategies – Funding projections for existing services, as well as proposed services. These costs are compared to funding estimates using existing sources as well as potential new sources.
- Capital / technology needs and strategies – Projections of vehicle needs, technology needs (e.g. ITS applications), and facility needs (e.g. multimodal centers) are given.
- Policy needs and strategies – Suggested policy revisions and general planning guidelines are addressed. Transportation coordination issues regarding human service agencies are included in this discussion.

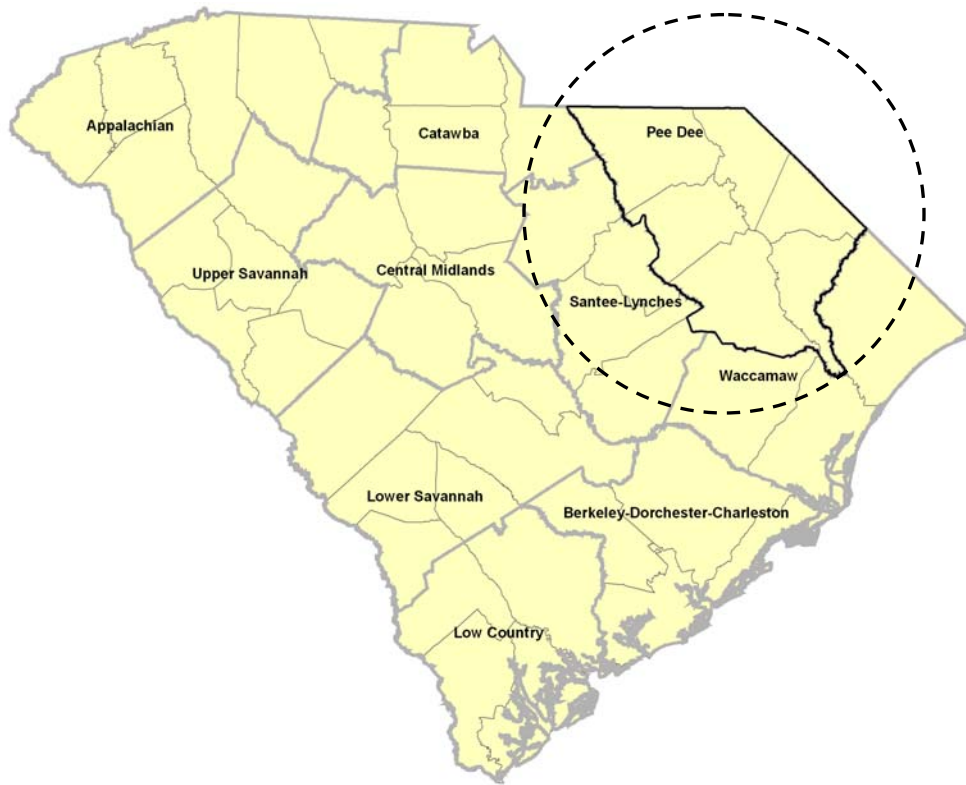
A goal of the transit element of the overall Statewide Plan was to produce recommendations that are geared toward both “statewide” and “regional” interests. At the regional level, strategies and action items were defined that local planners (including



COGs, MPOs, and municipalities) and transit agencies can support and use. These action items vary from region to region, depending on the pertinent concerns and needs in each area. For the purposes of this study, the “regions” are defined as the ten planning regions in South Carolina as defined by COG boundaries. This document is the Pee Dee Regional Transit Plan. A separate overall Statewide Plan and nine other Regional Plan documents that are tied to the overall statewide transit plan examine each of the other regions of the state.

A map showing the location of the Pee Dee Regional Council of Governments, along with the other nine regions, is included as Figure 1.

Figure 1: Location of Pee Dee Region



Source: South Carolina Department of Transportation



## **Section 2: Overview of Transit in the Region**

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South Carolina is primarily a rural state, but one that is rapidly growing and urbanizing in many areas. Although transit needs are significant in both rural and urban areas, existing transit services vary widely in terms of the availability and scope of services. In urban areas, fixed-route services operate on set schedules and routes, and demand-response services operate according to demand within a defined service area. In rural areas, demand-response services cover a wide area, and commuter services enable connections to urban areas in some regions.

### **2.1 Existing Conditions**

Each of the state's ten planning regions has unique conditions and demands related to transit. Key demographic characteristics for the Pee Dee region are presented in this section, along with an overview of current transit operations. The Pee Dee region consists of six counties in northeastern South Carolina: Chesterfield, Darlington, Dillon, Florence, Marion, and Marlboro.

#### **2.1.1 Overall Population**

In 2005, the combined population of the Pee Dee region exceeded 335,000 people. Florence was the region's largest county with 131,000 persons, and Marlboro was its smallest with 28,000. Between 2000 and 2005, all the region's counties grew at a rate less than the state average of 6.1 percent. Florence County, at a rate of 4.2 percent, grew fastest in the region, while Marion and Marlboro counties lost population, declining 1.6 and 2.8 percent, respectively. During this 5-year period, this region as a whole had a modest population growth rate of 1.5 percent.

#### **2.1.2 Elderly Population**

In 2005, seniors aged 65 years and older made up 12.4 percent of South Carolina's population. In the Pee Dee region, Marion County had the highest proportion of elderly people with 12.7 percent. Chesterfield met the state's average of 12.4 percent. Overall, the Pee Dee region's elderly comprised 12.2 percent of its population.

#### **2.1.3 Persons Below the Poverty Level**

In 2003, South Carolina had 13.8 percent of its population at or below the poverty level. All six counties in the Pee Dee region had higher proportions of residents in poverty than the state's average. Marion County had the highest proportion of poverty in the region with 20.5 percent, and Florence County had the lowest with 16.3 percent.

#### **2.1.4 Median Household Income**

Median household income was \$38,003 for South Carolinians in 2003. All six of the region's counties had median household incomes below the state average. Florence County had the region's highest income level at \$34,903, and Marion County had the lowest at \$26,232.



### 2.1.5 Change in Daytime Population

Florence County is the only Pee Dee region county to experience daily increases in daytime population while the rest of the counties have daily decreases. Florence County gains 5.8 percent in daytime population due to commuting, illustrating its role as the region’s economic center. On the other hand, Marlboro, Dillon, and Darlington lose 7.5 percent, 7.1 percent, and 6.4 percent respectively.

### 2.1.6 Demographic Summary

The Pee Dee region is largely rural, with Florence serving as the major economic center. The region as a whole is experiencing only modest growth, with several areas declining in population. Although the percentage of elderly in the Pee Dee region is comparable to that of the rest of the state, the region has a higher percentage of persons below the poverty level. These characteristics illustrate that most of the transit needs in the region are focused on connecting rural residents to basic services.

## 2.2 Future Conditions

Table 1 illustrates projected population changes in the Pee Dee region. The region is anticipated to grow more slowly than South Carolina as a whole. All the region’s counties are expected to increase at a slower pace than the state between now and 2030. In addition, Marlboro County is expected to lose 11.5 percent of its population by 2030. Table 2 shows the projections in absolute numbers. By 2030, only one county (Florence) will have a population greater than 150,000 people.

Table 1: Pee Dee Region Population Growth Rates

County	2000 to 2005 (%)	2005 to 2010 (%)	2005 to 2020 (%)	2005 to 2030 (%)
Chesterfield	1.6	2.7	8.3	13.4
Darlington	(0.1)	3.2	7.3	11.0
Dillon	0.8	(0.3)	0.1	0.6
Florence	4.2	2.6	9.2	15.9
Marion	(1.6)	2.4	5.0	7.0
Marlboro	(2.8)	(1.9)	(6.5)	(11.2)
Pee Dee COG	1.5%	2.1%	6.1%	10.0%
South Carolina	6.1%	4.7%	15.5%	26.2%

Source: Data by SCDOT

Table 2: Pee Dee Region Population Projections by County

County	2000	2005	2010	2020	2030
Chesterfield	42,768	43,435	44,600	47,040	49,270
Darlington	67,394	67,346	69,520	72,230	74,750
Dillon	30,722	30,974	30,880	31,010	31,150
Florence	125,761	131,097	134,450	143,170	151,880
Marion	35,466	34,904	35,750	36,650	37,340
Marlboro	28,818	28,021	27,480	26,190	24,890
Pee Dee COG	330,929	335,777	342,680	356,290	369,280
South Carolina	4,012,012	4,255,083	4,458,920	4,916,900	5,371,150

Source: Data by SCDOT





### 2.3 Local / Regional Transit Services

The Pee Dee Regional Transportation Authority (PDRTA) is the lone public transit provider in the region, serving the entire six-county Pee Dee region and a small portion of Lee County. PDRTA provides a limited fixed route service in the Florence urbanized area, and a substantial number of commuter-oriented routes within the region as well as routes connecting points in the region to employment opportunities in Myrtle Beach. PDRTA also offers demand response services through contractual arrangements with a number of human service agencies in the region.

#### 2.3.1 Regional Overview

PDRTA, the only public transit provider in the region, had 79 vehicles actively providing service in FY 2005, continuing a declining trend from recent years. In FY 2005, the system provided approximately 650,000 passenger trips.

Table 3 illustrates the trends in the number of active vehicles providing service. As show in the table, the fleet size shrank by more than 50% between FY 2002 and FY 2005, due to significant cuts in services. The fleet size has been reduced in all types of services, especially demand response services.

Table 3: Total Pee Dee Region Vehicles in Maximum Service (FY 2002 to FY 2005)

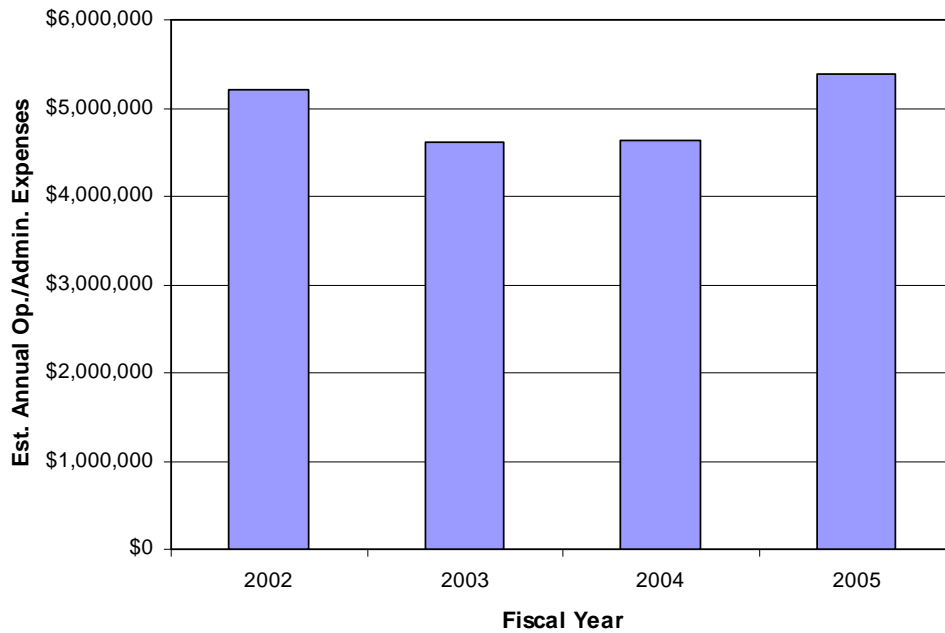
Area	Fiscal Year			
	2002	2003	2004	2005
Fixed Route	12	4	3	1
Demand Response	127	72	80	55
Other	31	24	33	23
Totals	170	100	116	79

Source: Data by SCDOT

The estimated annual operating costs of PDRTA totaled approximately \$5.4 million in FY 2005. As shown in Figure 2, operating costs have remained relatively stable over the four-year period, between FY 2002 and FY 2005, even though the fleet size has been reduced significantly.



Figure 2: Annual Operating Expenses (Region Totals FY 2002 to FY 2005)



Source: Data by SCDOT

### 2.3.2 Trends in Ridership and Amount of Service Provided

Transit ridership has grown in the Pee Dee region during the analysis period. Moreover, the amount of service has actually decreased in terms of hours and miles of service provided, indicating that PDRTA is making better use of its fleet and increasing the efficiency of its existing services. Tables 4 through 6 illustrate composite data for ridership, vehicle miles of service, and vehicle hours of service, broken down by type of service as well as by urban and rural setting.

Table 4 shows ridership by type of service (fixed route, demand response, other) as well as by geographic area (urban versus rural). This table shows that cuts in service for fixed route service occurred between 2002 and 2005, and that ridership growth occurred primarily in the rural areas on demand response and “other” service vehicles.



Table 4: Total Pee Dee Region Passengers (FY 2002 to FY 2005)

Service Type	Fiscal Year			
	2002	2003	2004	2005
Fixed Route	93,628	21,484	9,379	12,956
Demand Response	321,760	370,165	367,710	435,190
Other	60,196	145,468	148,095	199,614
<b>Totals</b>	<b>475,584</b>	<b>537,117</b>	<b>525,184</b>	<b>647,760</b>

Area	Fiscal Year			
	2002	2003	2004	2005
Urban	99,699	50,951	33,154	56,555
Rural	375,885	486,166	492,030	591,205
<b>Totals</b>	<b>475,584</b>	<b>537,117</b>	<b>525,184</b>	<b>647,760</b>

Source: Data by SCDOT

Tables 5 and 6 show the amount of service provided in terms of vehicle miles and hours respectively. Service provided is shown both for type of service (fixed route, demand response, other) and geographic area (urban versus rural). The amount of service provided has fluctuated, although it has been reduced significantly overall, with significant cuts to both fixed route and demand response services.

Table 5: Total Pee Dee Region Vehicle Miles (FY 2002 to FY 2005)

Area	Fiscal Year			
	2002	2003	2004	2005
Fixed Route	494,188	82,182	56,812	65,084
Demand Response	3,173,786	1,221,821	2,228,229	2,183,256
Other	866,754	894,953	897,402	1,005,828
<b>Totals</b>	<b>4,534,728</b>	<b>2,198,956</b>	<b>3,182,443</b>	<b>3,254,168</b>

Area	Fiscal Year			
	2002	2003	2004	2005
Urban	645,172	315,787	201,016	280,309
Rural	3,889,556	1,883,169	2,981,427	2,973,859
<b>Totals</b>	<b>4,534,728</b>	<b>2,198,956</b>	<b>3,182,443</b>	<b>3,254,168</b>

Source: Data by SCDOT



Table 6: Total Pee Dee Region Vehicle Hours (FY 2002 to FY 2005)

Area	Fiscal Year			
	2002	2003	2004	2005
Fixed Route	21,872	8,984	2,272	2,658
Demand Response	139,294	157,016	89,053	89,209
Other	38,138	58,621	35,868	41,102
<b>Totals</b>	<b>199,304</b>	<b>224,621</b>	<b>127,193</b>	<b>132,969</b>

Area	Fiscal Year			
	2002	2003	2004	2005
Urban	28,443	21,677	8,025	11,450
Rural	170,861	202,944	119,168	121,519
<b>Totals</b>	<b>199,304</b>	<b>224,621</b>	<b>127,193</b>	<b>132,969</b>

Source: Data by SCDOT

### 2.3.3 Trends in Efficiency and Effectiveness

Figures 3 through 5 present regional trends in revenue and expenses, as well as measures of key cost efficiency and service effectiveness. These measures include the following:

- Ridership per vehicle mile
- Ridership per vehicle hour
- Operating cost per rider, per mile, and per hour.

Figures 3 and 4 illustrate that PDRTA’s fixed route services have been no more efficient than their demand-response services. These trends may help explain the reductions in the fixed route services that have been offered. This finding is also indicative of the long-haul commuter services that typically do not fare well in these types of efficiency measures.

Figure 3: Ridership per Vehicle Mile (FY 2002 to FY 2005)

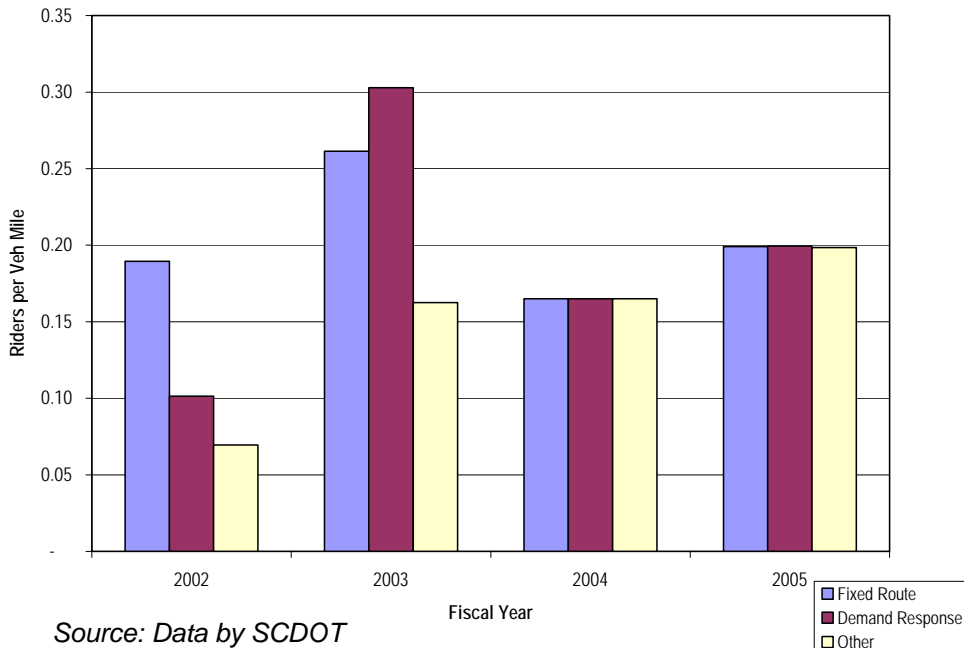
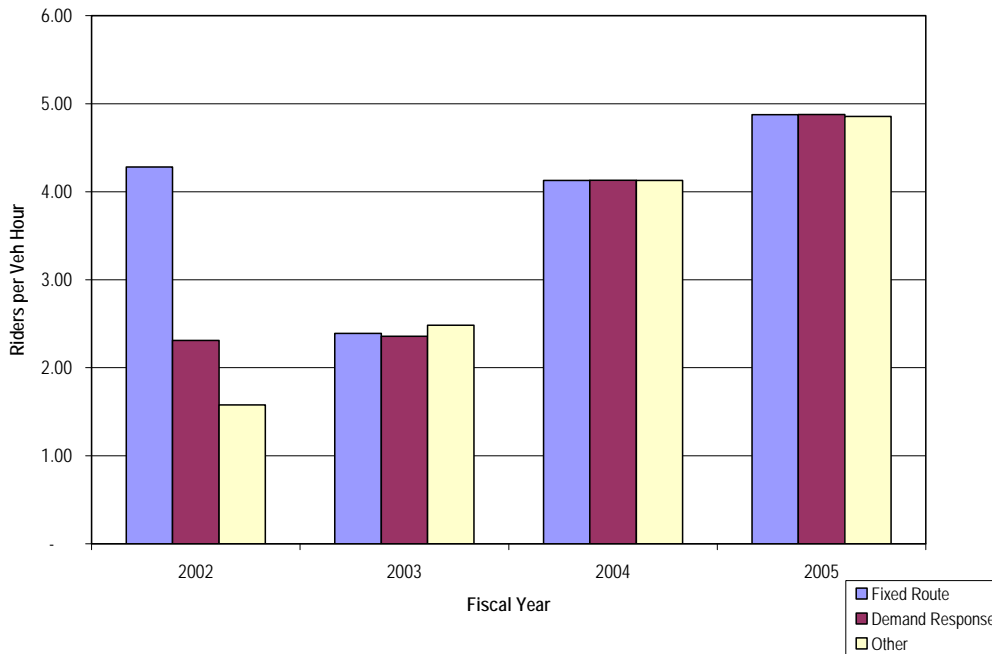


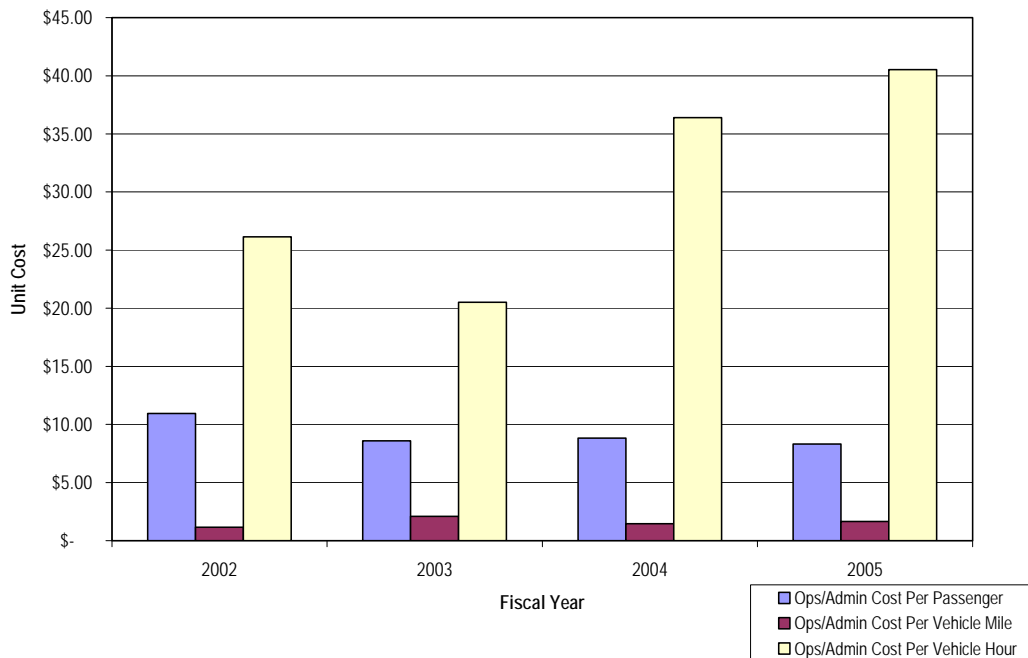
Figure 4: Ridership per Vehicle Hour (FY 2002 to FY 2005)



Source: Data by SCDOT

Although the cost per passenger has remained stable, as shown in Figure 5, the operating cost per vehicle hour continues to increase.

Figure 5: Operating Cost per Passenger, per Vehicle Mile, and per Vehicle Hour (FY 2002 to FY 2005)



Source: Data by SCDOT



## **2.4 Strategic Planning Efforts**

There has been only a limited focus on strategic transit planning efforts in the Pee Dee region in recent years. Currently, the region is working on a study of regional transit coordination strategies, in response to the Federal Transit Administration's emphasis on increased coordination of transit services. No other major transit-specific studies have been conducted, but transit has been addressed to some extent as part of comprehensive transportation planning efforts completed by the Pee Dee Council of Governments. As a primarily rural region, no formal studies have been conducted on commuter rail or other high-capacity transit options.

## **2.5 Stakeholder Input**

A series of interviews was conducted with key regional leaders in the planning community, to understand the needs, issues, and goals related to transit in each region from the individual perspectives of the stakeholders. This input is a valuable tool in the assessment of existing attitudes toward transit and the potential roles of transit in the future.

### **2.5.1 List of Interviewees**

Personal interviews were conducted with several community leaders, including representatives of the following agencies and organizations:

- Darlington County Planning;
- Marion County Economic Development;
- Pee Dee Council of Governments; and
- Pee Dee Regional Transit Authority.

### **2.5.2 Interview Questions**

Each of the interviewees was asked the same set of questions:

1. What is your agency's role in public transportation?
2. How is transit perceived in your community?
3. What are the primary mobility issues in your region? How can transit help improve the situation?
4. What are major gaps in transit service locally?
5. What are the top opportunities facing transit in your area – now, over the next five years, and long-term (10 to 20 years)?
6. What are the top challenges / potential barriers facing transit in your area - now, over the next five years, and long-term (10 to 20 years)?
7. What is the level of local support for transit (financially, politically, and otherwise)?
8. What should the role of transit be in your community in the next twenty years? How does transit fit into the region's vision for the future?
9. What steps can be taken to help meet regional goals for transit?
10. What should the role of the State of South Carolina be in transit?



- i. Is the state doing enough? If not, what should it be doing? If yes, is it doing too much?
- ii. What are examples of positives coming from State? What are areas in need of improvement?

### 2.5.3 Summary of Input

General responses to each of the questions are summarized below. The paraphrased comments are not linked to specific individuals, but are indicative of the array of comments received.

- **How is transit perceived in your community?**

Generally, transit is perceived as a social service that is used only by a small segment of the region's population. The general public does not understand how transit works, and views it as being "used by someone else".

- **What are the primary mobility issues in your region? How can transit help improve the situation?**

There are no major issues related to congestion in the region. Transit is viewed not as a remedy for improving traffic congestion, but as a service for those residents who have limited travel options. The elderly population was specifically mentioned as a group with special transit needs. Some stakeholders indicate that public transportation options are too limited, and service is not affordable for travel between counties.

- **What are major gaps in transit service locally?**

Stakeholders note that the rural nature of the region makes it difficult to provide service efficiently in many areas, and that transit is not affordable if a passenger needs to ride a long distance. Low income persons live in rural areas throughout the region. Better connections to activity centers need to be provided.

- **What are the top opportunities facing transit in your area – now, over the next five years, and long-term (10 to 20 years)?**

Transit opportunities are centered on providing better service in recognition of the unique challenges of rural transit. Regional transportation providers and users are now meeting on a more regular basis to address issues like coordination and funding. Dillon, Marlboro and Marion Counties are beginning joint efforts to establishing employment centers along I-95, which could be supported by transit. Stakeholders also specifically mentioned the possible need for more intercity connections to Columbia and the Grand Strand, and noted the fact that expanding medical centers in the region will need better transit service.



- **What are the top challenges / potential barriers facing transit in your area - now, over the next five years, and long-term (10 to 20 years)?**

Stakeholders identified a variety of challenges, including the fact that funding is extremely limited at the local level. In addition, many human service agencies currently provide some sort of transportation service to their clients, and a stronger push for coordination is needed to provide more effective transportation services. In some counties, stakeholders believe that local officials do not understand transit needs and risk being “blindsided” by transportation issues without strong planning.

- **What is the level of local support for transit (financially, politically, and otherwise)?**

Stakeholders state that in general, local governments do not support transit enough, and are too dependent on the State and federal programs. The region will need to increase its support for transit to become a viable alternative. However, government and non-profit agencies are meeting on a regular basis to help enhance transit coordination efforts.

- **What should the role of transit be in your community in the next twenty years? How does transit fit into the region’s vision for the future?**

In the short term, the major focus should be in continuing to coordinate services and optimize the number of trips provided for the available resources. There is a need to concentrate on commuter-based services; the region remains a major labor pool for hotels and restaurants in Myrtle Beach, and transit plays a key role in connecting workers with jobs on the coast. Looking further into the future, the area is urbanizing slowly but as population and employment density increase, transit will play a more vital role.

- **What steps can be taken to help meet regional goals for transit?**

Several specific action items were noted by stakeholders:

- The area needs to advertise the benefits of transit.
- Additional planning is needed, focused on the future needs of transit.
- Transit should be marketed better to churches, employers, and the elderly.
- Continued coordination with adjacent regions is needed.
- Local jurisdictions need to heighten the emphasis on transit issues and funding.





- **What should the role of the State of South Carolina be in transit?  
Is the state doing enough? If not, what should it be doing? If yes, is it doing too much?  
What are examples of positives coming from State? What are areas in need of improvement?**

The Pee Dee region's stakeholders provided several responses to these questions, indicating that they think that additional funding and technical assistance needs to be provided, and programmatic changes need to be made. The following specific comments were offered:

- The State must start creating a vision for regions and help identify needs and opportunities.
- The State needs to do a better job in standardizing policies and their application across the State. Creating an evaluation process for grant funding based on cost effectiveness and providing trips.
- Vehicle Acquisition Programs works well.
- Need State assistance on inter-regional coordination and intercity service.
- Need State assistance with planning/studies to determine future needs.
- Financial training and guidance on funding sources.
- Need more information on the benefits of technology.

## **2.6 Summary**

The Pee Dee region is at a point in their growth where transit needs to begin making the transition from being a public service for disadvantaged populations to also serving choice riders. The region is just beginning to recognize the need to guide development because of its impact on transportation, which will increase the viability of transit. Several business sectors have identified Florence as a potential location for expansion (medical, some manufacturing) and as employment density increases; there will be a need for more commuter based transit service. The area still serves as a major labor pool especially for seasonal jobs in Myrtle Beach, so inter-regional transportation is a critical issue.

There remain expansive rural areas that are growing slowly and must continue to focus on providing human service transportation as cost effectively as possible. The region looks to the State to continue their support on coordination and doing more with limited funding.



## Section 3: Transit Perceptions & Attitudes

As part of the Statewide Transit Plan, market research was conducted consisting of focus groups and statistically valid surveys for each of the state’s ten regions. The purpose of the market research was to obtain information about attitudes and perceptions of transit in the State as well as to identify areas for improvement.

### 3.1 Focus Groups

During September 2006, ETC Institute facilitated a total of 20 focus groups for the South Carolina Department of Transportation. The purpose of the focus groups was to gather input from residents and community leaders about public transportation issues.

Two focus groups (one with residents and one with community leaders) were conducted in each of the State’s 10 regions. For the Pee Dee region, the focus groups were conducted in Florence. Elsewhere in the state, focus groups were conducted in Greenville, Columbia, Aiken, Greenwood, Rock Hill, Walterboro, Georgetown, North Charleston and Sumter.

#### 3.1.1 Who Should Be Served by Public Transportation

Participants were asked to identify the most important groups that public transportation in South Carolina should serve.

The five most important groups that community leaders and residents attending the Florence focus group thought public transportation should be designed to serve for the Pee Dee region are listed below.

#### *Pee Dee*

##### **Among LEADERS**

<u>Rank</u>	<u>Groups to Serve</u>
1.	Elderly/senior citizens
2.	Low income (those without cars)
3.	Persons with disabilities
4.	College students
5.	Commuters

##### **Among RESIDENTS**

<u>Rank</u>	<u>Groups to Serve</u>
1.	Persons with disabilities
2.	Elderly/senior citizens
3.	Everyone
4.	Commuters
5.	Low income (those without cars)

#### 3.1.2 Preferred Funding Mechanisms for Public Transportation

Participants in each focus group were given time to brainstorm a list of possible funding sources for new or expanded public transportation services in South Carolina. The five sources of funding that were preferred most by residents and leaders in the Pee Dee region are listed below.



***Pee Dee***

***Among LEADERS***

<u>Rank</u>	<u>Funding Mechanisms</u>
1.	Gas tax
2.	User fees
3.	Tolls
4.	Gambling/Lottery
5.	Hospitality tax

***Among RESIDENTS***

<u>Rank</u>	<u>Funding Mechanisms</u>
1.	Reallocation of DOT funds
2.	User fees
3.	Lottery
4.	Use current funds better
5.	Grants

**3.2 Statewide Survey Report**

**3.2.1 Purpose and Methodology**

ETC Institute conducted a statewide public transportation survey for the South Carolina Department of Transportation (SCDOT) during March of 2007. The purpose of the survey was to gather input from the state’s residents to help improve public transportation services in South Carolina.

**3.2.2 Major Findings**

This section provides the major findings provided by respondents from the Pee Dee region.

**Availability of Public Transportation (at the community level).** Over one-third (44%) of respondents reported that public transportation services are currently available in their community. When asked to rate the overall availability of public transportation in the community where respondents live most (39%) gave a “poor” rating. Nearly one-third (32%) of respondents could not give a rating because they were not familiar with the services available in their community; 13% of respondents indicated that the availability of public transportation in their community was “average” and 16% either “excellent” or “good.”

**Availability of Public Transportation (statewide).** When asked to rate the overall availability of public transportation throughout the state of South Carolina most respondents (39%) indicated that they could not give a rating because they were not familiar with the services available. Sixteen percent (16%) of respondents indicated that the availability of public transportation in South Carolina was either “excellent” or “good;” 19% indicated “average” and 26% “poor.”

**Public Transportation Usage in South Carolina.** Nineteen percent (19%) of respondents reported that they have used public transportation services in the state of South Carolina. More than three-fourths (80%) of respondents have not used public transportation services in South Carolina. The remaining one percent (1%) did not have an opinion.



**Types of Groups Public Transportation Should Serve.** When asked to choose the groups that public transportation should serve in the state of South Carolina most respondents selected persons without cars and low income individuals. The next most important group respondents felt public transportation should serve was seniors, followed by persons with disabilities, commuters, and students.

**Types of Public Transportation Household Members Would Likely Use.** More than half (53%) of respondents indicated that members of their household would be “very likely” or “likely” to use door-to-door shuttle service. Forty-eight percent (48%) of respondents also indicated that members of their household would be “very likely” or “likely” to use intercity bus service. Other types of public transportation services household members would “very likely” or “likely” use include: commuter rail service (47%), park-and-ride service (45%), bus service that operates on fixed routes (42%), and high speed trolley (41%).

**Public Transportation Priorities.** More than ninety percent (94%) of respondents indicated that maintaining existing roads and highways were either “very important” or “important.” In addition, maintaining existing roads and highways was selected by fifty-nine percent (59%) of respondents as the most important transportation priority. Improving transportation services was the second most important transportation priority followed by adding capacity to existing roads and highways.

**Public Transportation Funding.** Sixty-three percent (63%) of respondents indicated that they thought the level of funding for public transportation in South Carolina should increase over the next five years. Twenty-three percent (23%) of respondents thought funding should stay the same, 4% thought it should be reduced and 10% did not have an opinion. See Figure 6.

In addition to the high percentage of acceptance for increasing public transportation funding over the next five years, respondents were also generally supportive of the three types of funding mechanisms discussed in the survey. For example, nearly two-thirds (59%) of respondents were either “very supportive” or “supportive” of the State government funding the expansion of public transportation services in South Carolina. High levels of support were also evident for utilizing user fees (51% of respondents were “very supportive” or “supportive”) and for local governments i.e. cities and counties (49% of respondents were “very supportive” or “supportive”) funding the expansion of public transportation services in South Carolina.

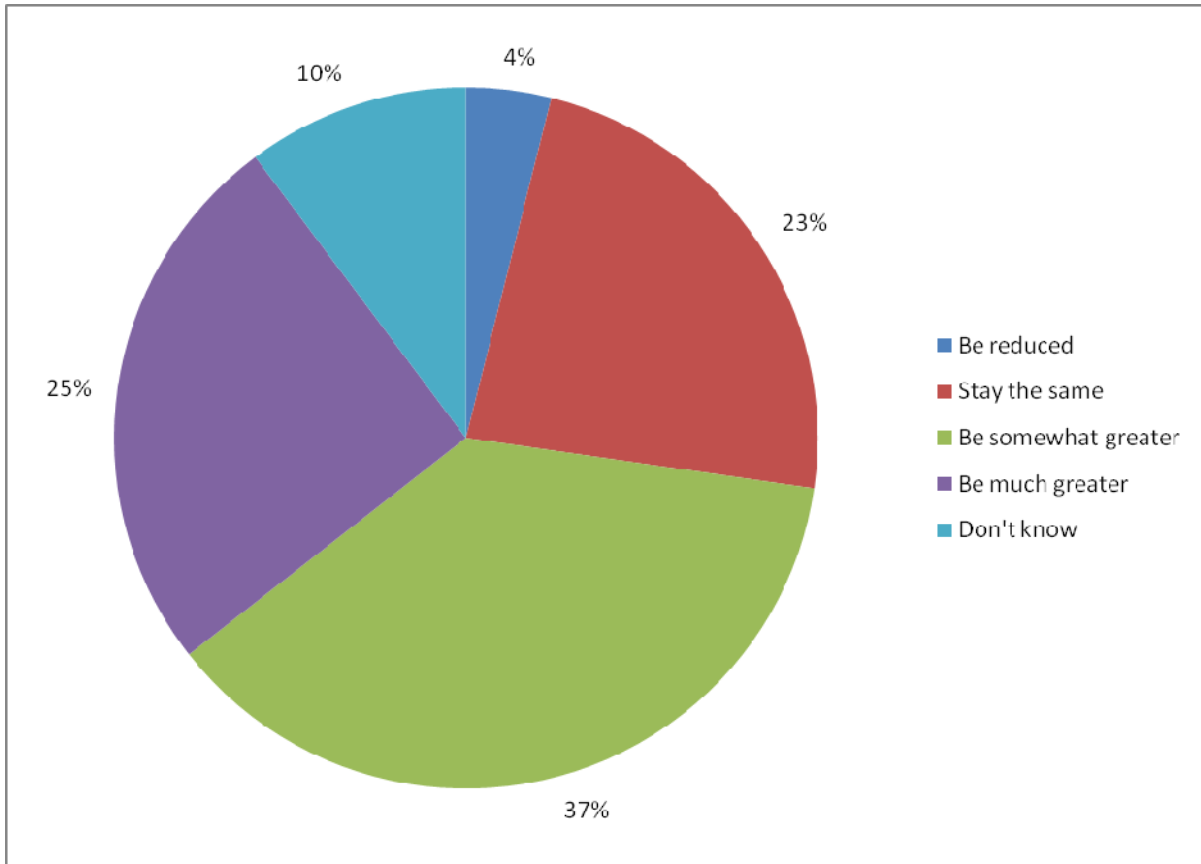
### 3.2.3 Other Findings

- **Increasing Usage.** More than half (55%) of the respondents reported that if transit stops were located closer to their home it would “very likely” or “likely” encourage them to begin using public transportation.
- **Locations Public Transportation Serve.** Only fourteen percent (14%) of respondents indicated that the locations public transportation serves are adequate.



Figure 6: Respondents' Attitudes towards Funding Public Transportation

How do you think the current level of funding for public transportation (e.g., bus, rail) in South Carolina should change over the next five years?



Source: ETC 2007

- **Safety of Public Transportation.** Sixty-six percent (66%) of respondents indicated that they thought public transportation is safe to use in the state of South Carolina.



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## Section 4: Vision for Transit in South Carolina

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### 4.1 Purpose of Vision

The development of a statewide plan is much more than simply a compilation of regional plans. As part of the statewide plan, the regional differences in goals and visions were acknowledged, but emphasis was placed on the visions that are common to all regions in South Carolina. In addition, “statewide” goals were identified that are not related to specific regions. For example, a “statewide” goal could be to establish general public transit service in every county, which must occur before “seamless transportation” can be a reality. Other goals could relate to establishing new funding sources, improving the image of transit, developing a framework for additional coordination of services, and other common interests. A focus must be placed on common themes across the state that stakeholders can use as rallying points. Regional initiatives should reflect local needs as well as support the overall statewide vision. The following section is the resulting “vision” for the State of South Carolina that was developed as part of the study process.

### 4.2 Vision

#### *Public Transit—Connecting Our Communities*

Public transit, connecting people and places through multiple-passenger, land or water-based means, will contribute to the state’s continued economic growth through a dedicated and sound investment approach as a viable mobility option accessible to all South Carolina residents and visitors.

#### *Economic Growth*

- Recognize and promote public transit as a key component of economic development initiatives, such as linking workers to jobs, supporting tourism, and accommodating the growth of South Carolina as a retirement destination through public / private partnerships.
- Enhance the image of public transit through a comprehensive and continuing marketing / education program that illustrates the benefits of quality transit services.

#### *Sound Investment Approach*

- Ensure stewardship of public transit investments through a defined oversight program.
- Increase dedicated state public transit funding to \$35 million annually by 2030.
- Make public transit reasonable and affordable by encouraging more local investment and promoting coordinated land use / transportation planning at the local level.



- Utilize an incremental approach to new public transit investments that recognizes funding constraints and the need to maintain existing services.

#### *Viability of Transit*

- Provide quality, affordable public transit services using safe, clean, comfortable, reliable, and well-maintained vehicles.
- Increase statewide public transit ridership by 5 percent annually through 2030.
- Utilize different modes of public transit including bus, rail, vanpool / carpool, ferry, and other appropriate technologies, corresponding to the level of demand.

#### *Accessibility to All*

- Provide an appropriate level of public transit in all 46 South Carolina counties by 2020 that supports intermodal connectivity.
- Develop and implement a coordinated interagency human services transportation delivery network.



## **Section 5: Regional Transit Needs**

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In this section, an overview of five methods for estimating rural and urban transit demand are discussed and applied. “Need” is expressed for South Carolina’s COG regions. In the individual regional plans “needs” will be expressed at the county level.

### **5.0.1 Arkansas Public Transportation Needs Assessment (APTNA) Method**

The APTNA method represents the proportional demand for transit service by applying trip rates to three population groups: the elderly, the disabled, and individuals living in poverty. The trip rates from the method are applied to population levels in a given community.

### **5.0.2 Mobility Gap Method**

The Mobility Gap method measures the mobility difference between households with a vehicle(s) and households without a vehicle. The concept assumes that the difference in travel between the two groups is the demand for transit among households without a vehicle.

## **5.1 Methods Selection for South Carolina**

Based upon the methodology selection criteria, the available data resources, and the timeframe and resources acceptable for conducting the demand estimate model, the Mobility Gap and APTNA methods tied and were recommended as the preferred methodologies for estimation of transit demand in the State of South Carolina. The data used for both methods is by and large realistically obtainable for the State of South Carolina. The method is also best suited for future State monitoring of transit demand.

## **5.2 Application of Methods**

The APTNA and Mobility Gap methods rely on reliable demographic and traveler information. The demographic characteristics of specified incorporated areas were summed to derive the urban populations within all South Carolina counties and these urban areas were subtracted from the total county population to derive the rural population.

2000 Census Summary Files,

- SF1, Table P12: Sex by Age.
- SF3, Table PCT 26: Age by Types of Disability.
- SF3, PCT 34: Sex by Age by Disability Status by Poverty Status.
- SF3, Table P87: Poverty Status by Age.
- SF3, Table H45: Vehicle Availability.

The assumptions for population trends were for all population groups in this method. These figures came from the South Carolina Department of Transportation. The results of the following methods are discussed.





### 5.2.1 Arkansas Public Transportation Needs Assessment (APTNA) Method

The Arkansas Public Transportation Needs Assessment (APTNA) method represents the proportional transit demand of an area by applying trip rates to three key markets: individuals greater than 65 years old, individuals with disabilities above the poverty level under age 65, and individuals living in poverty under age 65. Table 7 below shows the population groups.

Table 7: Rural & Urban Population Groups Used in APTNA Method

	Elderly (Over 65)			Disabled (Under 65)			Poverty (Under 65)		
	2010	2020	2030	2010	2020	2030	2010	2020	2030
Chesterfield County	5,439	5,737	6,009	2,090	2,204	2,309	7,668	8,087	8,471
Darlington County	8,439	8,768	9,074	3,408	3,541	3,665	12,113	12,586	13,025
Dillon County	3,611	3,627	3,643	1,680	1,687	1,694	6,451	6,478	6,507
Florence County	10,894	11,601	12,306	6,157	6,556	6,955	13,562	14,442	15,321
Marion County	4,419	4,530	4,616	1,623	1,664	1,695	7,187	7,368	7,507
Marlboro County	3,382	3,224	3,064	1,215	1,158	1,100	4,878	4,649	4,419
Rural	36,185	37,486	38,712	16,172	16,810	17,418	51,860	53,611	55,249
Urban - Florence Count	5,002	5,327	5,651	1,341	1,428	1,514	5,468	5,823	6,177
Pee Dee COG	41,188	42,813	44,362	17,513	18,237	18,933	57,329	59,434	61,426

In the APTNA method, trip generation rates represent the resulting ridership if a high quality of service were provided. The trip rates for the APTNA method were calculated using the 2001 National Household Travel Survey (NHTS). The trip rates came from the South Region (Alabama, Arkansas, Delaware, Georgia, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Virginia and West Virginia excluding Florida, Kentucky, Maryland and Texas). Table 8 shows the sample size used for each population group.

Table 8: 2001 National Household Transportation Survey (APTNA) Data

	Rural			Urban		
	Household	Person	Day Trip	Household	Person	Day Trip
Disabled	343	381	2,787	127	139	1,209
Elderly	681	1,114	3,732	387	600	2,226
Poverty	197	518	1,485	86	227	778
<b>Sample</b>	1,221	2,013	8,004	600	966	4,213
<b>Population</b>	1,858	4,290	16,367	3,090	6,850	29,343

Source: Data by NHTS

The original APTNA trip rates were 8.4 for the population above 65 years of age, 3.0 for people from five to 65 years of age with disabilities above the poverty level, and 14.0 for people from five to 65 years of age below the poverty level. The NHTS gave trip rates of 5.8 (rural) and 6.2 (urban) for the population above 65 years of age, 12.3 (rural) and 12.2 (urban) for people from 5 to 65 with disabilities above the poverty level, and 13.8 (rural) and 11.8 (urban) for people below the poverty level.



To derive transit demand, the following equations are used:

$$D_{(Rural)} = 5.8(P_{65+}) + 12.3(P_{DIS<65}) + 13.8(P_{POV})$$

$$D_{(Urban)} = 6.2(P_{65+}) + 12.2(P_{DIS<65}) + 11.8(P_{POV})$$

Where, *D* is demand for one-way passenger trips per year,

*P*<sub>60+</sub> is the population of individuals 65 years old and older,

*P*<sub>DIS<60</sub> is the population of individuals with disabilities under age 65, and

*P*<sub>POV</sub> is the population of individuals under age 65 living in poverty.

After applying the trip rates for each population group, the population below 65 years of age and living in poverty is projected to have the highest ridership potentials for both rural and urban Pee Dee counties. The second highest projected ridership levels come from the elderly population, except for Florence County and Dillon County where Florence has the disabled population as the second highest and Dillon County has the elderly and disabled tied for the second highest. The disabled population has the highest trip rate but the least population for the rural and urban Pee Dee, thus giving this population group the least projected ridership potential, yet this population group may be the most reliant on transit.

Table 9 shows the daily and annual ridership projections. The daily transit trips are 3,387 for the year 2010 and 3,637 for 2030. The annual transit trips are projected to be 1.24 million for 2010 and 1.33 million for 2030.

Table 9: Estimated Annual & Daily Transit Demand: APTNA Method

	Annual			Daily		
	2010	2020	2030	2010	2020	2030
Chesterfield County	163,072	171,993	180,147	447	471	494
Darlington County	258,033	268,092	277,445	707	734	760
Dillon County	130,629	131,179	131,772	358	359	361
Florence County	326,078	347,226	368,350	893	951	1,009
Marion County	144,774	148,419	151,213	397	407	414
Marlboro County	101,883	97,100	92,280	279	266	253
Rural	1,124,470	1,164,010	1,201,207	3,081	3,189	3,291
Urban - Florence Count	111,897	119,154	126,403	307	326	346
Pee Dee COG	1,236,367	1,283,164	1,327,611	3,387	3,516	3,637

### 5.2.2 Mobility Gap Method

The Mobility Gap method measures the difference in the household trip rate between households with vehicles available and households without vehicles available. Because households with vehicles travel more than households without vehicles, the difference in trip rates is the mobility gap. This method shows total demand for zero-vehicle household trips by a variety of modes including transit.



This method uses data that is easily obtainable, yet is stratified to address different groups of users: the elderly, the young, and those with and without vehicles. The data may be analyzed at the county level, and based upon the stratified user-groups; the method produces results applicable to the State at a realistic level of detail.

The primary strength of this method is that it is based upon data that is easily available: household data and trip rate data for households with and without vehicles. Population and household data were obtained from 2000 U.S. Census. Table 10 shows the rural and urban households (by age group) in Pee Dee without vehicles, based upon Census information.

Table 10: Households With No Vehicle Available: 2010 to 2030

	Households (15 to 64)			Households (Over 65)		
	2010	2020	2030	2010	2020	2030
Chesterfield County	1,237	1,304	1,366	699	737	772
Darlington County	2,068	2,149	2,224	1,032	1,072	1,109
Dillon County	1,090	1,094	1,099	602	605	607
Florence County	2,196	2,338	2,481	1,162	1,237	1,313
Marion County	1,482	1,519	1,548	630	646	658
Marlboro County	1,313	1,251	1,189	489	466	443
Rural	9,385	9,656	9,907	4,614	4,763	4,902
Urban - Florence Count	1,267	1,349	1,431	612	651	691
Pee Dee COG	10,652	11,005	11,338	5,225	5,414	5,593

For the purposes of this study, a household that is in the 15 and 64 years of age group has no one residing in the household who is over 65 years of age. A household in the over 65 years of age group has at least one person over the age of 65 living in that household (even if other members are less than 65 years of age).

Rural and urban trip rate data were derived from the National Household Travel Survey (NHTS) at the South Region level to be consistent in the way the APTNA trip rates were derived. Table 11 shows the total sample size in the South Region for vehicles available.

Table 11: 2001 National Household Travel Survey Mobility Gap Data

	Rural			Urban		
	Household	Person	Day Trip	Household	Person	Day Trip
No Vehicle (15 to 64)	30	46	85	87	130	432
No Vehicle 65+	38	46	86	82	96	216
Vehicle (15 to 64)	1,423	2,743	9,255	2,340	4,370	16,830
Vehicle 65+	367	619	4,229	581	953	7,165
<b>Total</b>	1,858	3,454	13,655	3,090	5,549	24,643
<b>Area Totals</b>	1,858	4,290	16,367	3,090	6,850	29,343

Source: Data by NHTS



For the Mobility Gap method, the trip rates for households with vehicles serves as the target for those households without vehicles, and the “gap” (the difference in trip rates) is the amount of transit service needed to allow equal mobility between households with zero vehicles and households with one or more vehicles. The assumption of this method is that people without vehicles will travel as much as people who have vehicles, which is the transit demand. The basic equation used in the Mobility Gap method is:

**Mobility Gap = Trip Rate<sub>HH w/Vehicle</sub> – Trip Rate<sub>HH w/out Vehicle</sub>**

Where, “HH w/ Vehicle” represents households with one or more vehicles, and “HH w/out Vehicle” represents households without a vehicle.

Table 12 shows that for households with people age 65 and older, a rural mobility gap of 5.88 and an urban mobility gap of 7.40 person-trips per day per household exist between households with and without an automobile. For households with individuals between the age of 15 and 64, a rural mobility gap of 5.99 and an urban mobility gap of 0.74 person-trips per day per household exists between households with and without an automobile.

Table 12: Mobility Gap Calculations

	Vehicle Trip Rates				Mobility Gap	
	Rural		Urban		Rural	Urban
	None	One or More	None	One or More		
Age 15 to 64	4.09	10.09	7.62	8.36	5.99	0.74
Age 65 or Older	1.76	7.64	2.57	9.97	5.88	7.40

Source: Data by NHTS

Using this methodology, the number of transit trips needed to serve the demand is therefore equivalent to the mobility gap multiplied by the number of households without a vehicle and adjusted by the estimated share of those trips (63 percent) that could be met by transit. The 63 percent is based on Census Journey-to-Work mode share data for the state, which tells us that 0.63 percent of all work related trips for South Carolina are transit related (specifically bus or trolley). The mode share is then multiplied by a factor of 100 to obtain the 63 percent (100 percent service) used to estimate rural transit demand. The formula, therefore, is:

**Estimated Transit Demand = (Mobility Gap) x (#HH w/o Vehicle) x (Unmet Need)**

Using the Census 2000 household data (Table 10) and the appropriate Mobility Gap trip rate (Table 12), the estimated demand was calculated for each county in the Pee Dee region. Table 13 shows daily demand for 2010, 2020 and 2030. Pee Dee demand is 55,983, 57,783 and 59,469 person-trips per day respectively. This Table also shows that the Mobility Gap method estimates Pee Dee transit demand (based upon 365 days of service) at 20.4 million person-trips per year for 2010, 21.1 million for 2020 and 21.7 million for 2030.



Table 13: Estimated Annual &amp; Daily Transit Demand: Mobility Gap

	Annual			Daily		
	2010	2020	2030	2010	2020	2030
Chesterfield County	2,649,838	2,794,807	2,927,299	7,260	7,657	8,020
Darlington County	4,246,122	4,411,642	4,565,558	11,633	12,087	12,508
Dillon County	2,316,218	2,325,969	2,336,470	6,346	6,373	6,401
Florence County	4,598,667	4,896,922	5,194,835	12,599	13,416	14,232
Marion County	2,894,629	2,967,501	3,023,369	7,930	8,130	8,283
Marlboro County	2,471,625	2,355,599	2,238,673	6,772	6,454	6,133
Rural	19,177,099	19,752,440	20,286,204	52,540	54,116	55,579
Urban - Florence Count	1,256,860	1,338,376	1,419,799	3,443	3,667	3,890
Pee Dee COG	20,433,959	21,090,816	21,706,003	55,983	57,783	59,469

### 5.2.3 Comparison of Results

The transit demand results estimated by the two methods show a substantial difference in the range of transit service required in rural South Carolina. The APTNA method estimates annual transit demand at 1.24 million person-trips per year for 2010 and 1.33 million for 2030, while the Mobility Gap method estimates annual transit demand at 20.4 million person-trips per year for 2010 and 21.7 million for 2030. Both estimates, however, indicate that the current level of reported transit service provided in Pee Dee (647,760 person-trips per year) falls short of the estimated transit demand. Based upon the APTNA estimate, Pee Dee COG is currently providing transit service for 53.4 percent of the estimated demand.

Key differences exist between the two model's assumptions. The APTNA Method was derived specifically for the estimation of transit demand, assuming a high-quality level of service is provided. Transit demand, as estimated by the APTNA method is based upon three population groups: the elderly, the disabled and those living in poverty.

Conversely, the Mobility Gap method estimates the additional trips that might be taken by households without a vehicle if an additional mode of transportation were provided, such as transit. The Mobility Gap method estimates transportation demand that could be served by transit. However, these trips might also be served by other modes. Therefore, the Mobility Gap method estimates an "ultimate" demand.

The APTNA method's estimate for urban transit need is not realistic, and the Mobility Gap method for estimating urban transit need is too overstated. After much consideration, it was decided to modify each method's estimate of urban need to produce a more realistic estimate. Using professional judgment, this was done by multiplying the APTNA method urban county estimates by 75 percent and the Mobility Gap urban county estimate by 25 percent for Florence County. Since rural transit needs were more realistic, the APTNA method rural estimates were used. Table 14 shows the results of the adjustments made to Pee Dee's transit needs.



Table 14: Estimated Annual & Daily Transit Demand: Adjusted Needs (Per Formula)

	Annual			Daily		
	2010	2020	2030	2010	2020	2030
Chesterfield County	163,072	171,993	180,147	447	471	494
Darlington County	258,033	268,092	277,445	707	734	760
Dillon County	130,629	131,179	131,772	358	359	361
Florence County	326,078	347,226	368,350	893	951	1,009
Marion County	144,774	148,419	151,213	397	407	414
Marlboro County	101,883	97,100	92,280	279	266	253
Rural	1,124,470	1,164,010	1,201,207	3,081	3,189	3,291
Urban - Florence Count	398,138	423,960	449,752	1,091	1,162	1,232
Pee Dee COG	1,522,607	1,587,970	1,650,960	4,172	4,351	4,523

The Adjusted Needs (Per Formula) projects daily demand to be 4,172 for 2010, and 4,523 for 2030. The annual demand is about 1.52 million for 2010 and 1.65 million for 2030. As mentioned earlier, Pee Dee had 647,760 person-trips per year for 2005. The Adjusted Needs (Per Formula) estimate for 2005 shows that current level of reported transit service provided in this region still falls short. However, the percent of need met for urban demand changed from 51.8 percent (APTNA) and 4.6 percent (Mobility Gap) to a more reasonable 14.6 percent. This also made the overall needs being met to 43.4 percent instead of 53.4 percent (APTNA) and 3.2 percent (Mobility Gap). The rural needs being met remained the same at 53.6 percent.

Table 15 summarizes the two methodologies' results and primary assumptions and the adjusted method as well.

Table 15: Comparison of Results for Estimated Rural & Urban Transit Demand

Demand	APTNA Method			Mobility Gap Method			Adjusted Needs (Per Formula)			
	2010	2020	2030	2010	2020	2030	2010	2020	2030	
Rural	Daily	3,081	3,189	3,291	52,540	54,116	55,579	3,081	3,189	3,291
	Annual	1,124,470	1,164,010	1,201,207	19,177,099	19,752,440	20,286,204	1,124,470	1,164,010	1,201,207
Urban	Daily	307	326	346	3,443	3,667	3,890	1,091	1,162	1,232
	Annual	111,897	119,154	126,403	1,256,860	1,338,376	1,419,799	398,138	423,960	449,752
COG	Daily	3,387	3,516	3,637	55,983	57,783	59,469	4,172	4,351	4,523
	Annual	1,236,367	1,283,164	1,327,611	20,433,959	21,090,816	21,706,003	1,522,607	1,587,970	1,650,960
Data Sources	65 Years Old or Older Under 65 Years Old With A Disability Under 65 Years Old Living In Poverty			Individuals With A Vehicle Not Available Individuals With A Vehicle Available			Rural: APTNA (100%) & MG (0%) Small Urban: APTNA (75%) MG (25%) Large Urban: APTNA (50%) MG (50%)			
Quality	Trips If All Groups Were Served			Additional Trips Filled By Transit Service			Advantages of Both Methods			
Type of Demand	Elderly, Disabled & Poverty Demand			Persons Without Vehicles Demand			Percentage of Both Methods			

A comparison with the current level of transit service in Pee Dee (647,760 person-trips per year) suggest that the Adjusted Needs (Per Formula) method represents a realistic estimate for existing transit demand, while the estimate provided by the APTNA method is a low-end goal and the Mobility Gap method is a "high-end" goal for the region. To verify the legitimacy of the model's estimated results for transit demand, a transit mode share analysis and a comparison of ridership statistics were performed.



### 5.3 Transit Demand Validation

Two techniques were used to help validate the results for calculating rural and urban transit demand. First, the transit demand estimates for the APTNA and Mobility Gap methods were compared with transit mode-splits for rural and urban Pee Dee. Second, per capita ridership was compared with states deemed, respectively, as having well regarded rural transit programs and urban services.

#### 5.3.1 Modal Split Analysis

The mode-split analysis compared the transit demand estimates with the estimated regional annual transportation mode share for Pee Dee for bus and trolleys. In this manner, the estimated demand for rural and urban transit (i.e. Pee Dee’s estimated transit mode share for rural and urban areas) was compared with the Pee Dee’s total rural and urban travel patterns.

The first task was to estimate the State’s total rural and urban travel demand for all modes. The statewide travel demand for all transportation modes was estimated at 6.77 billion one-way person-trips per year. This estimate reflects travel for all individuals age 15 and older for *all modes* of travel in South Carolina. The estimate was based upon the trip rates produced from the 2001 Nationwide Household Travel Survey (NHTS) data for all South Carolina households.

Census 2000 estimates show that the rural Pee Dee population consists of approximately 29,065 people age 15 and older, and the urban population of 274,602. Based upon the statewide annual travel estimate of 6.77 billion one-way person-trips per year and weighting by the total state rural and urban population, people in rural areas take approximately 8.87 trips per day, while people in urban areas take about 17.22 trips per day, a reasonable estimate for the rural and urban Pee Dee average.

Table 16 compares the recommended range of estimated transit demand (for 2005) with the statewide travel demand estimate in annual person trips. As the table shows, the preliminary results of the rural APTNA method and the Mobility Gap method represent a mode split of 0.017 and 0.283 percent, respectively, while the urban mode split is 0.002 and 0.019 percent respectively. The Adjusted Needs method’s rural mode split is the same as the APTNA’s because no changes were made to rural transit estimates, but the urban portion reflects the changes made resulting in a more realistic mode split of 0.006 percent.

Table 16: Estimated Rural & Urban Transit Demand by State Total

	<b>APTNA</b>	<b>Mobility Gap</b>	<b>Adjusted Needs</b>	<b>Means of Transportation</b>
Rural Need	1,124,470	19,177,099	1,124,470	NA
Urban Need	111,897	1,256,860	398,138	NA
South Carolina Person Trips	6,771,409,100	6,771,409,100	6,771,409,100	NA
<b>Demand to Person Trips (Rural)</b>	<b>0.017%</b>	<b>0.283%</b>	<b>0.017%</b>	<b>0.029%</b>
<b>Demand to Person Trips (Urban)</b>	<b>0.002%</b>	<b>0.019%</b>	<b>0.006%</b>	<b>0.004%</b>



Various mode-split statistics for Pee Dee COG were used for comparison with the mode split ratios for transit demand and are shown in Table 16. A work trip mode-split from Census 2000 as well as an estimation of transit mode split for total rural and urban trips derived from the NHTS (Statewide) was calculated. The Census 2000 indicates that rural and urban transit travelers in Pee Dee make up 0.029 and 0.004 percent respectively of total *work* trips in the rural and urban parts of the state. The NHTS analysis shows that rural travels make up 0.80 percent of *total* rural trips, while urban trips make up 0.56 percent.

For the work trip mode split, the Mobility Gap is significantly higher for rural and urban areas; the APTNA is slightly lower than the rural and urban level, while the Adjusted Needs is slightly higher for urban areas. For the total trip mode split, the Adjusted Needs, APTNA and Mobility Gap are significantly lower for both rural and urban.

This review of the mode split statistics suggests that the Adjusted Needs method is a more realistic approximation of Pee Dee travel characteristics.

### **5.3.2 Recommended Demand Estimation Methodology**

The Adjusted Needs method produces results more in line with current experience, and appears to be logical with both the modal split comparison provided in Table 16 and the comparison with model states provided in Table 15 of the Statewide Multimodal Plan. Therefore, it is recommended that the Adjusted Needs method be used for quantifying rural and urban transit demand in the Pee Dee Region.

## **5.4 Quantifying Transit Need**

Based on the transit demand projections provided in section 5.3, this section analyzes the strategies to meet the current and future demand, and estimates the costs involved, including operating cost, vehicle expansion and replacement cost, and facility cost.

Operating cost is defined based on transit subsidy, or the cost of operating services less fare box revenue. The vehicle cost is defined in terms of numbers of vehicles purchased and the cost of each purchase. The facility cost is assumed to be related to the number of vehicles an operator has, and whether the operator is an existing one or a newly started one.

All the cost calculations use year 2005 constant dollars.

### **5.4.1 Transit Need in the Region**

For the purpose of estimating costs, a targeted level of transit need was required based on the predicted level of demand. Demand was forecasted using three methods described in Section 5.2: Mobility Gap method, Arkansas Public Transportation Needs Assessment (APTNA) method, and the Adjusted Needs (Per Formula) method. The Adjusted Needs method was selected as the targeted level of demand in cost calculation. This method is selected because it is somewhat in the mid-range of the other two methods and represents a significant increase in transit services in most of

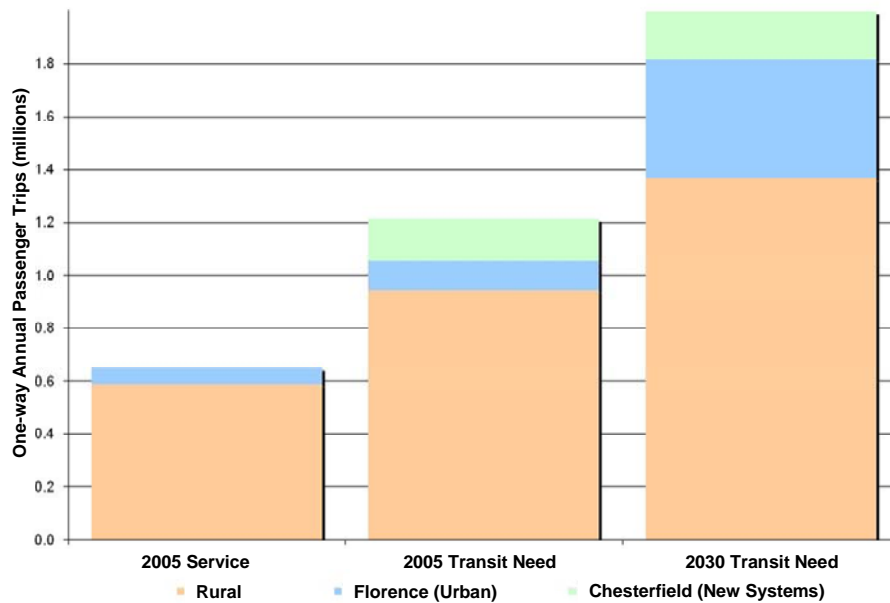




the counties compared with existing services. The Adjusted Needs estimate would seem to present an achievable goal in comparison with the much higher, upper limit of the transit demand predicted by the Mobility Gap method.

Based on the Adjusted Needs forecast, the total transit demand in 2005 was estimated at 1.2 million one-way person trips. In the same year, 650,000 trips were provided. The average percentage of demand met is 53 percent. To meet the current transit need, 945,000 trips are needed among the existing rural transit systems, 110,000 trips are needed among the existing urban systems, and 160,000 trips are needed among the newly started transit systems.<sup>4</sup> This is shown in Figure 7.

Figure 7: Existing Service & Transit Need



The demand forecast shows that by 2030, the estimated transit demand will exceed 2 million trips. Among those trips, 1.4 million will be demand for the existing rural transit systems, about 450,000 will be demand for existing urban transit systems, and about 180,000 trips will be demand for the newly started systems.

Table 17 shows the 2005 estimated and 2030 forecasted transit need for the rural and urban portions of Pee Dee. The existing service is based on data provided by SCDOT for FY 2005. The 2005 and 2030 transit needs are from the Adjusted Needs forecast. The 2005 unmet need is the difference between predicted transit need and the existing service. Using the data in the table, about 52 percent of the Pee Dee’s urban needs and 63 percent of the Pee Dee’s rural needs are being met.

Since the demand is forecasted on a county level, the distribution of the demand to each individual transit operator was based on the year 2005 SCDOT data reports.

<sup>4</sup> For purpose of this report, transit need in counties with existing Section 5311 transit services is assigned to those existing systems within each county. This will not necessarily be the case during the development of service alternatives and solutions.



These reports give the information on the counties an operator serves and the current ridership.

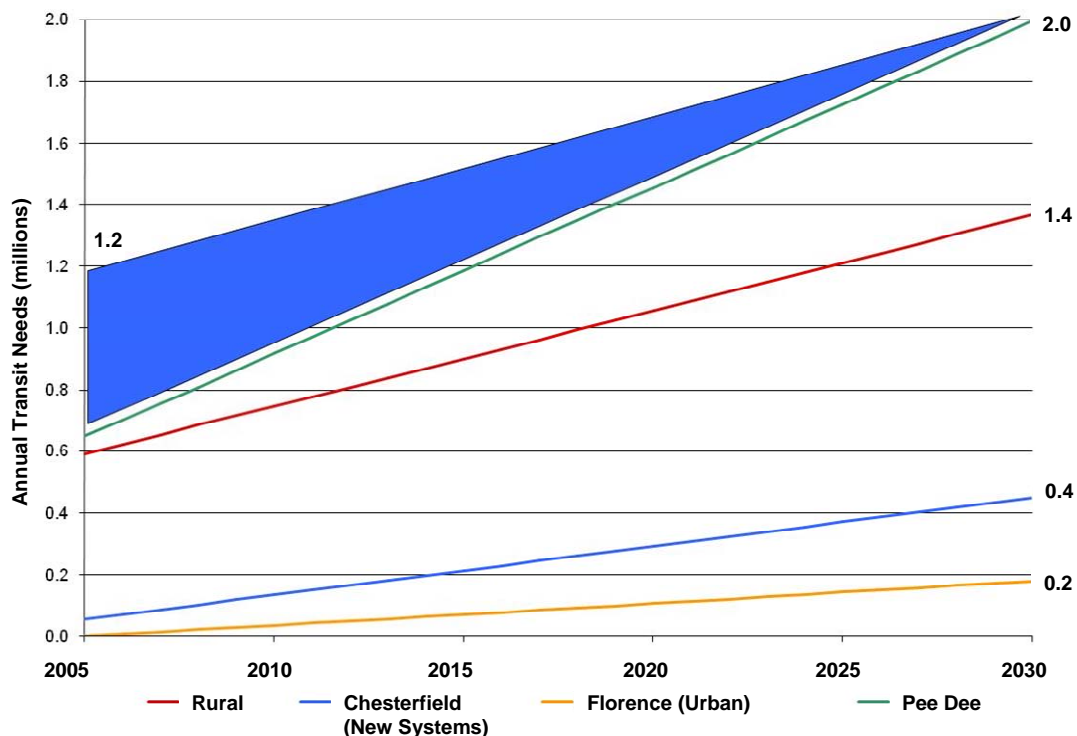
Table 17: 2005 and 2030 Transit Need

	2005 Service	2005 Transit Need	% of Need Met	2030 Transit Need
Darlington County	156,518	249,964	63%	367,154
Dillon County	82,044	131,027	63%	182,000
Florence County	199,086	317,946	63%	478,832
Marion County	88,507	141,348	63%	203,272
Marlboro County	65,051	103,889	63%	134,967
Rural	591,206	944,174	63%	1,366,226
Chesterfield (New Systems)	0	158,812	0%	180,147
Florence (Urban)	56,555	109,107	52%	449,752
Total PDCOG	647,761	1,212,093	53%	1,996,125

(In One-Way Annual Passenger Trips)

To meet the unmet demand, our general assumption is that service will not decrease, even if demand goes down. For counties for which the current predicted demand is higher than the service provided, services gradually increase between years 2005 and 2030 until needs are met, as shown in Figure 8. This is accomplished by a uniform annual increase. To meet the goal, for the existing systems, overall, they should provide an equivalent of 54,000 additional one-way person trips service annually; for the new systems, 16,000 annually.

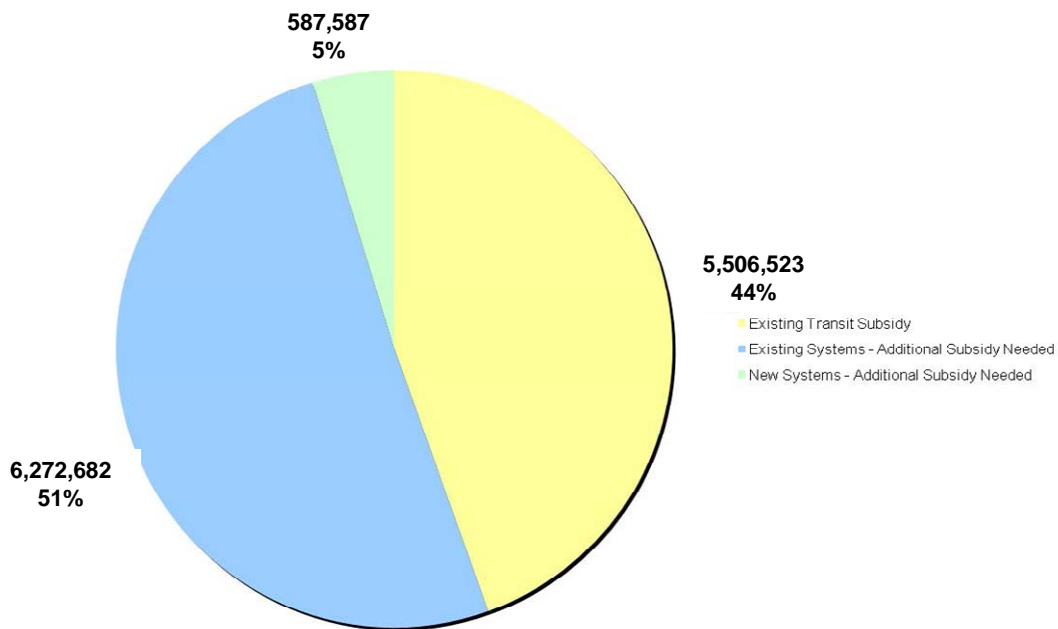
Figure 8: Transit Need and Strategy to Meet: 2005 to 2030



### 5.4.2 Transit Net Operating Costs

For the existing systems, to meet all their demand in 2005, \$12.4 million in operating subsidies (operating costs minus fare revenue) are needed. Comparing to the current subsidy of \$5.5 million, \$6.9 million in additional subsidy is required. For the new systems, \$600,000 in subsidy is required to meet all their 2005 demand. This is shown in Figure 9. It must be noted that this only gives the estimation to meet all the demand in 2005. In terms of implementation, not all the subsidy is required in place at the beginning, as discussed later.

Figure 9: Estimate of Subsidy Needed for 2005



In the year 2030, to meet all the demand, the predicted subsidy is \$18 million (\$14.3 million for the existing rural transit systems, \$3.1 million for existing urban transit systems and \$650,000 for the new systems).

Table 18 shows the year 2005 estimated and year 2030 forecasted transit subsidy for the rural and urban counties. The existing subsidy is estimated based on the data provided by SCDOT for FY 2005. The 2005 subsidy is based on the predicted transit need, and the unit subsidy per person-trip from the existing subsidy estimation. Similarly, 2030 subsidy is also calculated based on the unit subsidy and the predicted demand at that time.



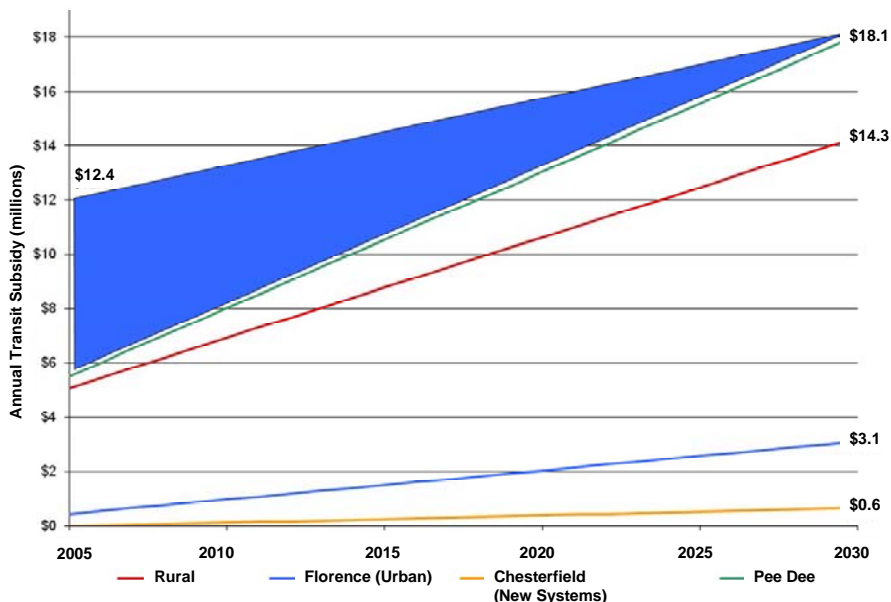
Table 18: Transit Subsidy for 2005 & 2030

	2005 Existing	2005 Need	% of Need Met	2030 Need Subsidy
Darlington County	\$1,305,623	\$2,214,374	59%	\$3,189,640
Dillon County	\$777,327	\$2,138,617	36%	\$2,578,829
Florence County	\$1,506,004	\$2,140,934	70%	\$3,318,989
Marion County	\$838,558	\$2,306,692	36%	\$2,908,139
Marlboro County	\$643,124	\$2,205,110	29%	\$2,325,161
Total Rural	\$5,070,637	\$11,005,727	46%	\$14,320,758
Chesterfield County	\$0	\$587,587	0%	\$647,109
Florence County (Urban)	\$435,886	\$773,478	56%	\$3,095,518
Total PDCOG	\$5,506,523	\$12,366,792	45%	\$18,063,385

(Subsidy = Operating Cost – Farebox Revenue)

The total \$12.4 million in operating subsidy is estimated to meet all the 1.2 million one-way trips for 2005, and \$18 million (in year 2005 dollars) is projected to meet all the 2 million one-way trips to meet the expected 2030 transit need. However, as assumed, not all the demand is going to be met at the beginning. The actual subsidy required for 2008 (since 2005 is past, the unmet subsidy is distributed from 2005 through 2030, by a 25-year period) is \$7 million (\$6.2 million for existing rural systems, \$760,000 for existing urban systems and \$80,000 for new systems). Then the subsidy is increased by a uniform rise annually to reach the goal of meeting all the demand in the year 2030. In this case, the annual subsidy increase should be \$500,000 (\$370,000 for existing rural transit systems, \$100,000 for existing urban transit systems and \$30,000 for the new transit systems). Figure 10 shows how the transit need would be met by increasing subsidy gradually, consistent with the sound, incremental approach to transit investments expressed previously in the statewide Vision for Transit (Section 4.2).

Figure 10: Transit Subsidy & Strategy to Meet: 2005 to 2030



### 5.4.3 Capital Needs

This section examines major capital needs including vehicles and facilities.

#### 5.4.3.1 Vehicle Needs

The following data and assumptions are used in vehicle estimation:

- The existing number of vehicles is based on data provided by SCDOT (FY 2005).
- Total vehicle requirement: based on transit demand forecast and vehicle production.
- A vehicle is added for every 15,300 new riders per year, which is based on the following assumptions:
  - Vehicle utilization is 5 riders per vehicle hour.<sup>5</sup>
  - Each vehicle operates 12 hours per day for 255 days per year.<sup>6</sup>
- Vehicles need to be replaced after 5 years in service.
- Between 2005 and 2030, the vehicle fleet size is increased as the level of transit service is increased. The fleet size is expanded at a rate that corresponds with the uniform annual demand increase according to the strategy to meet all the demand gradually from 2005 to 2030. This assumes that there will be no fleet size decrease over the 25-year period.
- The cost of each new vehicle purchase is assumed to be \$275,000 for Fixed Route vehicles, \$60,000 for Demand Response vehicles and \$30,000 for Human Resource vehicles and remain constant from 2005 to 2030.
- Vehicles are assumed to be body-on-chassis type with diesel engines.

Based on these assumptions, the overall vehicle needs for each year, the vehicles needed to be purchased and replaced, and the related costs were calculated and summarized as follows:

Through 2005, the existing service providers had 72 vehicles (62 rural and 10 urban) in total. To meet all the predicted demand in 2008, about 93 vehicles will be needed. Since the strategy is not to meet all the demand at once, the actual vehicles required in 2008 will be about 93 vehicles (79 for existing rural systems, 10 for existing urban systems and 4 for new systems). This equates to the number of vehicles needed to meet the level of 2008 need. The following Figure 11 shows the vehicle needs for 2008.

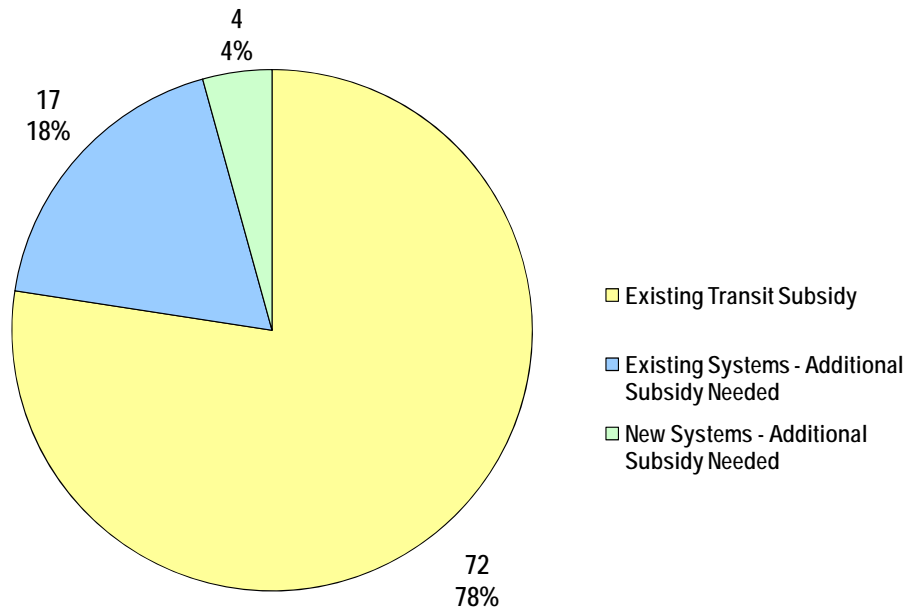
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<sup>5</sup>Consistent with existing Section 5311 operations

<sup>6</sup>3,060 vehicle hours annually



Figure 11: Vehicle Needs for 2008



The vehicles required to meet all the predicted need in 2030 will be 153 (124 for existing rural systems, 15 for existing urban systems and 14 for new systems).

Table 19 shows the vehicle needs to meet the predicted 2030 transit demand, and the vehicles needed in 2008.

Table 19: Vehicle Needs for 2008 & 2030

	2005 Existing	Needed in 2008	% of Need Met	Needed in 2030
Darlington County	16	21	77%	33
Dillon County	9	11	84%	17
Florence County	20	27	75%	43
Marion County	9	11	84%	18
Marlboro County	7	9	80%	13
<b>Total Rural</b>	<b>62</b>	<b>79</b>	<b>78%</b>	<b>124</b>
Chesterfield County	0	4	0%	14
Florence County (Urban)	10	10	100%	15
<b>Total PDCOG</b>	<b>72</b>	<b>93</b>	<b>77%</b>	<b>153</b>

From 2005 to 2030, 81 vehicles should be purchased for fleet expansion, while 311 vehicles should be purchased for fleet replacement. This adds up to the total purchase of 392 vehicles. The purchases and related costs are shown in Table 20.

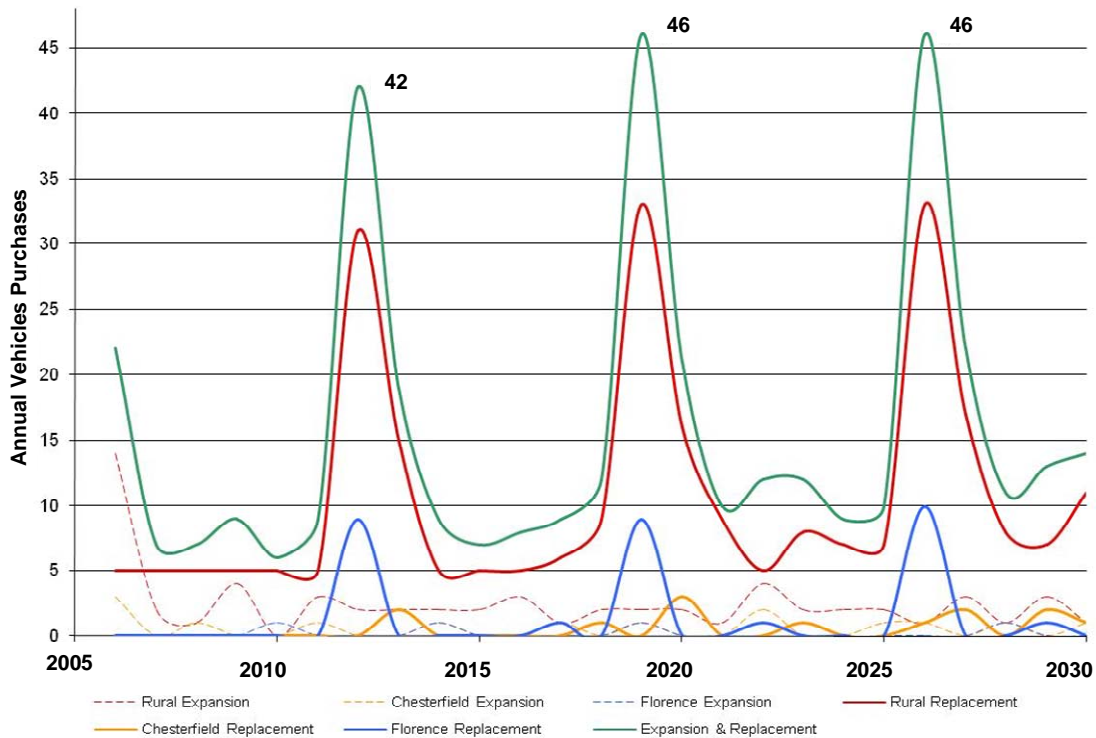


Table 20: Vehicle Needs & Cost Over 25 Years

Units	Fleet Expansion Vehicles	Fleet Replacement Vehicles	Total Purchased Vehicles	Total Cost Millions of Dollars
Darlington County	17	70	87	\$9,660,000
Dillon County	8	39	47	\$5,135,000
Florence County	23	91	114	\$12,665,000
Marion County	9	39	48	\$5,410,000
Marlboro County	6	28	34	\$3,710,000
Total Rural	62	267	329	\$36,580,000
Chesterfield County	14	13	27	\$4,910,000
Florence County (Urban)	5	31	36	\$3,825,000
Pee Dee	81	311	392	\$45,315,000

Figure 12 shows the vehicle capital expenditures between 2005 and 2030.

Figure 12: Vehicle Capital Expenditures Over 25 Years



**5.4.3.2 Facility Needs**

This analysis assumes that facility expansion or construction will be needed between 2005 and 2030 for existing and newly started transit systems. The amount of facility expansion or construction is assumed to be proportional to the number of vehicles required by each system. The capital costs for facility expansion and construction were categorized as having different level of cost requirements. Expansion is for the existing



systems while construction is for the new systems. An exception is that an existing system expanding by 41 or more vehicles would be calculated at the construction cost. Table 21 gives the approximate cost based on the above assumptions:

Table 21: Facility Needs Assumptions Based Upon Fleet Size

Fleet Size	Expansion System	New Systems
0	\$0	\$0
1-10	\$875,000	\$1,750,000
11-40	\$1,500,000	\$3,000,000
41-80	\$2,750,000	\$5,500,000
81-160	\$4,625,000	\$9,250,000
161-320	\$8,375,000	\$16,750,000
Over 321	\$15,875,000	\$31,750,000

Facility costs are assumed at about \$280 a square foot for new construction. This assumes masonry or similar construction material and includes design fees, contingencies, project management as well as an allowance for land purchase at about \$44,000 an acre. A cost of about \$42 a square foot for expansion has been assumed and includes space for parking and fueling vehicles. No expansion of maintenance bays are assumed except in the expansion of a fleet by 41 or more vehicles.

Table 22 summarizes the total vehicle costs and facility costs.

Table 22: Vehicle & Facility Capital Costs: 2005 to 2030

	Vehicle Purchases	Vehicle Cost	Facility Cost	Total Cost
Darlington County	87	\$9.7	\$7.4	\$17.0
Dillon County	47	\$5.1	\$4.3	\$9.4
Florence County	114	\$12.7	\$7.4	\$20.0
Marion County	48	\$5.4	\$4.3	\$9.7
Marlboro County	34	\$3.7	\$4.3	\$8.0
<b>Total Rural</b>	<b>329</b>	<b>\$36.6</b>	<b>\$27.5</b>	<b>\$64.1</b>
Chesterfield County	27	\$4.9	\$3.3	\$8.2
Florence County (Urban)	36	\$3.8	\$5.8	\$9.6
<b>Total PDCOG</b>	<b>392</b>	<b>\$45.3</b>	<b>\$36.5</b>	<b>\$81.8</b>

*(in millions)*

#### 5.4.4 Total Capital and Operating Costs

The total capital and operating costs are summarized below in Table 23.





Table 23: Total Capital &amp; Operating Costs: 2005 to 2030

	Vehicle Purchases	Operating Costs	Vehicle Cost	Facility Cost	Total Cost
Darlington County	87	\$58.4	\$9.7	\$7.4	\$75.5
Dillon County	47	\$43.6	\$5.1	\$4.3	\$53.0
Florence County	114	\$62.7	\$12.7	\$7.4	\$82.8
Marion County	48	\$48.7	\$5.4	\$4.3	\$58.4
Marlboro County	34	\$38.6	\$3.7	\$4.3	\$46.5
Total Rural	329	\$252.1	\$36.6	\$27.5	\$316.2
Chesterfield County	27	\$8.4	\$4.9	\$3.3	\$16.6
Florence County (Urban)	36	\$45.9	\$3.8	\$5.8	\$55.5
Total PDCOG	392	\$306.4	\$45.3	\$36.5	\$388.2

*(in millions)*

The Pee Dee region is projected to have costs of up to 388.2 million dollars over the next 25 years. About 79 percent of this cost is attributed to operating costs, while about 12 percent of the costs are projected to come from vehicle costs and about 9 percent from facility costs.

### 5.5 Intercity / Interregional Transit Needs

For residents and visitors who have limited travel options, intercity bus will continue to provide an important mobility service. However, for intercity bus service to have an increased role in transportation in South Carolina, the service must be provided in a way to attract more people who could otherwise fly or drive. It is difficult for intercity bus to be time-competitive with air travel or driving directly between an origin and a destination, but budget-conscious travelers may be more receptive to bus service if it is provided at a deeply-discounted fare. The “no frills” business model being used by Megabus.com and other similar providers is attempting to use low fares to attract customers who would otherwise fly or drive, but the long-term sustainability of this operation remains unproven.

As part of the focus group sessions conducted for this planning process, several community leaders and members of the general public made comments regarding the need for more public transportation options between cities or across state lines. Although the need for improved intercity transportation was recognized in the focus group sessions, there was a greater emphasis on local and regional (commute-oriented) transit needs. The same thought process was also reflected in the stakeholder interviews with regional planners and transit officials, in which most of the comments received addressed regional transit needs as opposed to intercity concerns.

Intercity rail transportation, particularly high speed rail service, has a greater potential than intercity bus to significantly impact how South Carolina residents and visitors travel between cities in the future, due to the reduced travel times, level of comfort, and direct service. Several attempts have been made in the State to use intercity bus service to connect residents to Amtrak service (such as the former Amtrak “Thruway” bus connection between Florence and Columbia that was operated by the Pee Dee Regional Transportation Authority). Although this type of service was previously unsuccessful due largely to the unreliability of Amtrak, using intercity bus service to



connect patrons to high speed rail service could serve to extend the reach of the high speed rail corridor. This type of connection should be considered in future high speed rail planning.

Several public transit agencies in the State offer what can be described as “intercity bus service”, designed to connect inland communities to employment opportunities in coastal resort areas like Myrtle Beach (with trips traveling distances of 50-100 miles or more one-way). Because these trips are daily, commute-oriented trips, they are not specifically included in this “intercity bus” assessment. However, this travel pattern reflects one of the unique transit issues in South Carolina, and considering the rapid growth rate of coastal areas along with high unemployment rates in inland counties, this long-distance transit connection will likely grow in importance over the coming years. Therefore, providing enhancements in these long-distance commuter connections is identified as a focus area for intercity-type travel.

The State of South Carolina currently provides no subsidies for intercity bus service, but these needs should be considered in the future, especially if additional service cuts are made to current operations. If necessary, state investment in intercity bus service should be considered to maintain key connections across the State. Current State funding sources are used by public transit agencies to support the intercity commute-oriented services to jobs along the coast, but additional support for these services may be needed in the future. Additionally, as high speed rail services are developed, the State should examine its role in not only the rail operation, but any connecting bus service as well.

Service to and from the adjacent regions constitutes a substantial portion of the services provided by the Pee Dee Regional Transit Authority (PDRTA), especially to and from the rural areas in the northern part of the Region. In the near term, PDRTA will need to continue enhancing these types of services, as residents need access to medical facilities and employment outside the Region.

### **5.5.1 Intercity High Speed and Passenger Rail Assessment**

Although there is not, as yet, a funded national program for the actual construction of high speed rail passenger corridors, the United States Department of Transportation (USDOT) has designated a network of corridors for the development of high speed rail service in this country. These corridors are generally focused on regional trips that could be competitive with commercial air service from a schedule standpoint. To date, only small amounts of Federal funding have been provided, adequate only for studies. South Carolina is a member of the Southeast High Speed Rail Coalition, along with its neighbors, North Carolina, Georgia, Florida and Virginia. Two corridors that pass through South Carolina have been adopted as part of the Southeast High Speed Rail Coalition plan. These corridors were added to the Southeast Corridor network designated by the USDOT as future high speed rail passenger routes on December 1, 1998.



A connection between major regional activity centers and a HSR Station in Florence, or connecting services to an HSR Station in Columbia via rail or bus would be very important for access to and from the Pee Dee Region.

## **5.6 Critical and Potential Transit Corridors**

In addition to the needs-based assessment of transit demand, potential for commuter-based transit and other services designed to attract choice riders was also analyzed across the State. Developed in conjunction with the development of the Strategic Corridor System, there were several corridors in the Pee Dee Region identified as having transit supportive characteristics. These corridors could have been selected for any number of reasons including but not limited to: projected traffic congestion; other traffic or development patterns; currently served by successful transit service poised for expansion or enhancement; and/or the implementation is included in regional long range transportation plans and has a defined transit-supportive commuting or land use pattern. Beyond the scope of this plan, more detailed transit propensity analyses in congested corridors must be performed as part of the Advanced Planning Project Report (APPR) phase of project development, in adherence to the requirements of Section 57-1-370 of the Code of Laws of South Carolina.

The purpose of this section is to evaluate potential transit technologies for consideration in the South Carolina Multimodal Transportation Plan, and to identify those that may be most suitable for potential transit applications. A map of these corridors is depicted in Figure 13 at the end of the section.

### **5.6.1 Potential Transit Technologies**

Five transit technologies were identified for evaluation as potential corridor application options. The technologies analyzed include:

1. Local Bus;
2. Express Bus;
3. Enhanced Bus / Intelligent Transportation Systems (ITS);
4. Bus Rapid Transit (BRT); and
5. Commuter Rail

#### **Local Bus**

Local bus service represents the most common and most flexible type of public transportation and is commonly referred to as fixed route as service operates along a defined route and on a pre determined schedule. Service can be provided with vans, small buses, traditional transit buses including low floor configuration, or articulated buses. Stops are typically as placed as frequent as every one to two blocks, or every one-eighth mile. When operated within a smaller area, local service may be called circulator, feeder, neighborhood, trolley, or shuttle service. Complementary paratransit service for eligible persons with disabilities who cannot access or use the local service must be provided as required under the Americans with Disabilities Act of 1990.



### ***Express Bus***

Express bus service provides direct point-to-point service over longer service routes utilizing high-occupancy vehicles. Buses are usually equipped with high-back seats, reading lamps, and other passenger amenities. Service typically operates between central business districts and suburban areas, primarily on weekdays, and during peak hours, however limited midday trips are not uncommon. Suburban terminals may include customer parking and covered waiting areas.

### ***Enhanced Bus/ITS***

Enhanced bus service uses low-floor, low or zero-emission buses with Intelligent Transportation Systems technology such as traffic signal priority and coordination along the entire alignment and on board customer information displays. Enhanced bus service typically operates in mixed-flow traffic along major arterial streets except in congested segments where peak period transit lanes or “queue jump” lanes may be provided. Queue jump lanes allow buses to bypass traffic queues at major intersections and advance more quickly through traffic signals. Bus pull off areas and bus stop passenger amenities may also be included.

### ***Bus Rapid Transit (BRT)***

Bus Rapid Transit uses a number of features to reduce delays and improve customer convenience. BRT systems typically use dedicated busways or bus lanes, although they can also operate in HOV lanes, dedicated guideway facilities, or in mixed traffic on arterial streets with various ITS applications including traffic signal priority. Other features can include improved passenger waiting areas, high-capacity/low-floor buses; fare collection prior to boarding; and advanced customer information systems. BRT systems can improve passenger convenience by using the same vehicle for the collection/distribution portion of the trip and for the faster line-haul portion of the trip; reducing the number of required transfers is a major advantage of BRT systems.



Busways which provide a high level of service and allow high hourly passenger capacities are typically grade separated from cross streets, and have on-line stations with spacing comparable to light rail. Low volume busways often are characterized by at-grade intersections with cross streets. Buses may operate non-stop along the busway/bus lanes or make selected stops based on passenger demand. Buses may also exit the specially designated busway and operate along streets to provide local area circulation and distribution. BRT is considered a viable option for upgrading bus service performance.

### ***Commuter Rail***

Commuter rail is a mode of passenger transportation using vehicles with steel wheels on steel rails using tracks that are part of a general rail network. The name "commuter rail" covers a multitude of rail system elements to carry



passengers. Service typically operates between a central city terminal and outlying suburbs and trains can be diesel powered or use electric-powered rail cars. Commuter rail services may share track with railroad freight trains, or have separate tracks. Some commuter lines are primarily used for peak hour work trips while others have extended off-peak and weekend services. Commuter trains can vary in length from one car to 14, but are generally limited to the length of the platforms at the stations. Some systems use locomotives for power and others have self-propelled cars.

**5.6.2 Corridor Evaluation Criteria**

***Technology Compatible with Existing Development***

The corridors being considered for transit options vary widely in regards to existing development and adjacent land uses. The transit technologies described above can be strategically employed to alleviate congestion, provide mobility options, and/or enhance existing roadway capacities. The attributes of the transit technology should be consistent with the existing characteristics of the corridor. This criterion is qualitative and ratings were determined by assigning the most reasonable score based on existing development characteristics and staff knowledge of the area.

<p><b><u>Scoring Method:</u></b>  <b>Appropriate: +1</b>  <b>Somewhat Appropriate: 0</b>  <b>Not Appropriate: -1</b></p>
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***Technology Compatible with Level of Service Needs***

This criterion examines the future level of service needs for the corridor. The 2030 Average Daily Traffic (ADT) figures were utilized by assuming a ten percent transit mode split. Lower ADT scores in a corridor were assumed to indicate the need for lower capacity transit options, such as local bus, and higher scores indicating the need for higher capacity options, such as BRT or commuter rail. Note: Along highways with multiple segments, the highest ADT along that roadway was used.

<b><u>Scoring Method:</u></b>	
<b>ADT less than 2000 then Local Bus Assigned Score: 1</b>	<b>Other Modes: -1</b>
<b>ADT 2000-5000 then Local, Enhanced &amp; Express Bus Assigned Score: 1</b>	<b>Other Modes: -1</b>
<b>ADT greater than 5000 then BRT &amp; Commuter Rail Assigned Score: 1</b>	<b>Other Modes: -1</b>

***Technology Compatible with Roadway Improvement Plans***

This criterion evaluates the technology as compared against the Statewide Multimodal Transportation Plan. The technologies were assessed for various roadway improvement categories including capacity, Intelligent Transportation Systems (ITS), operations (e.g. signal timing), and access management. If the roadway type improvement has potential for promoting the technology, then the technology was considered compatible and assigned a rating of +1. It is important to note that the proposed roadway improvements were not considered to have potential to promote commuter rail. For this reason, commuter rail was assigned a score of 0 to represent its lack of compatibility to this criterion.



Scoring Method	Roadway Improvement			
	Capacity	ITS	Operations	Access Mgmt.
Technology				
Local Bus	1	1	1	1
Express Bus	1	0	0	1
Enhanced Bus	0	1	1	0
BRT	1	0	0	0
Commuter Rail	0 or 1	0	0	0

***Railroad Right-of Way Adjacent to the Corridor***

This criterion considers the advantage of existing exclusive rail right of way for Commuter Rail. For the technologies other than Commuter Rail, the score is 0.

**Scoring Method:**  
***Available or Planned: +1***  
***Available or planned along a Portion of the Corridor: 0***  
***Not Available: -1***

***Technology Compatible with Existing Plans***

It is important for the candidate transit technology to be compatible with the existing local, regional, and statewide plans. For this criterion, the Long Range Transportation Plan was utilized, as well as mode specific plans from relevant transit authorities and Metropolitan Planning Organizations (MPOs).

**Scoring Method:**  
***Compatible: +1***  
***Somewhat Compatible: 0***  
***Not Compatible: -1***

***Roadway Parallel to the Corridor***

This criterion considers the advantage of existing/planned roadways parallel to the corridor.

**Scoring Method:**  
***Available or planned roadway/HOV: +1***  
***Available or planned along a Portion of the Corridor: 0***  
***Not Available or Planned: -1***

**5.6.3 Pee Dee Region**

This region contains a Critical Corridor segment from the Trans-Carolina corridor.

**Trans-Carolina Corridor**

Segments TC19-1 and TC-30 to TC-31 are within this corridor. The following matrices provide applicability ratings for transit technologies along these segments.



**Segment TC19-1**

*SC 9 (McGregor Street) from SC 151 Bypass (South Pearl Street) to S-43 (Airport Road)*

Pee Dee  
Trans Carolina  
TC 19-1

Guideline	LOCAL BUS	EXPRESS BUS	ENHANCED BUS/ITS	BUS RAPID TRANSIT	COMMUTER RAIL
Technology compatible with existing development	Compatible	Compatible	Somewhat Compatible	Incompatible	Incompatible
<i>Rating</i>	1	1	0	-1	-1
Technology compatible Level of Service needs	Compatible	Incompatible	Incompatible	Incompatible	Incompatible
<i>Rating</i>	1	-1	-1	-1	-1
Technology compatible with roadway improvements	Compatible	Somewhat Compatible	Compatible	Somewhat Compatible	Somewhat Compatible
<i>Rating</i>	1	0	1	0	0
Railroad right of way adjacent to the corridor	Partially Adjacent	Partially Adjacent	Partially Adjacent	Partially Adjacent	Not Adjacent
<i>Rating</i>	0	0	0	0	-1
Technology compatible with existing plans	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible
<i>Rating</i>	0	0	0	0	0
Parallel roadway/facility	Partially	Not Present	Not Present	Partially	Partially
<i>Rating</i>	0	-1	-1	0	0
<b>Overall Rating</b>	<b>3</b>	<b>-1</b>	<b>-1</b>	<b>-2</b>	<b>-3</b>
<b>Carry Forward?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>

*Rating scale: Desirable/Positive Rating = +1  
Neutral Rating = 0  
Negative Rating/Less Desirable = -1*

Local bus service performed highest among all evaluated modes. The sub-corridor includes primarily rural residential and light commercial land use, and is sparsely developed outside of the town center of Pageland. Operational enhancements recommended for the sub-corridor in this Statewide Multimodal Transportation Plan include improvements at four intersections and turn lane additions. Future transit considerations may include rural intercity fixed-route service between major municipalities in Chesterfield County, via the Pee Dee Regional Transportation Authority (PDRTA), a shuttle bus promoting tourism among county municipalities connected by SC 9 (Cheraw, Chesterfield, Mount Croghan, Pageland, and Ruby), or a special shuttle connecting Pageland residents and visitors with dragway racing venues in South Carolina and North Carolina during major events.

**5.6.4 Other Potential Transit Corridors**

Not all corridors have either current or projected issues with critical traffic congestion, as is the case with the Critical Corridor identified in Section 5.6.3. However, many of these corridors can benefit from future enhancements to coordinated public transportation, and/or new transit services. The methodology detailed in the preceding section is applied to an additional set of segments located within the Mid-Carolina and Trans-Carolina corridors. Among non-critical corridors, these were identified to pose the greatest potential for transit.



**Florence-Conway**  
 Corridor(s): *Mid-Carolina*  
 Region(s): *Pee Dee, Waccamaw*

Region Pee Dee - Waccamaw  
 Corridor Mid-Carolina  
 Sub Corridor Florence to Conway

Guideline	LOCAL BUS	EXPRESS BUS	ENHANCED BUS/ITS	BUS RAPID TRANSIT	COMMUTER RAIL
Technology compatible with existing development	Compatible	Compatible	Compatible	Incompatible	Incompatible
<i>Rating</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>-1</i>	<i>-1</i>
Technology compatible Level of Service needs	Compatible	Compatible	Compatible	Incompatible	Incompatible
<i>Rating</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>-1</i>	<i>-1</i>
Technology compatible with roadway improvements	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible
<i>Rating</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Railroad right of way adjacent to the corridor	Partially Adjacent	Partially Adjacent	Partially Adjacent	Partially Adjacent	Not Adjacent
<i>Rating</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-1</i>
Technology compatible with existing plans	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible
<i>Rating</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Parallel roadway/facility	Partially	Not Present	Not Present	Partially	Partially
<i>Rating</i>	<i>0</i>	<i>-1</i>	<i>-1</i>	<i>0</i>	<i>0</i>
<b>Overall Rating</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>-2</b>	<b>-3</b>
<b>Carry Forward?</b>	<b>Yes</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>No</b>

*Rating scale: Desirable/Positive Rating = +1  
 Neutral Rating = 0  
 Negative Rating/Less Desirable = -1*

Local bus services performed highest among evaluated modes, followed by express bus service along with enhanced bus service featuring ITS technology. The sub-corridor connects the rural areas of southern Florence County with the City of Conway in the Myrtle Beach urbanized area. Transit services and coordination in the Pee Dee region are provided by the Pee Dee Regional Transportation Authority (PDRTA), while the Waccamaw Regional Transportation Authority (Coast RTA) coordinates transit services in the Waccamaw region. PDRTA provides a shuttle service to the Myrtle Beach area during peak travel periods.

Potential transit opportunities include extending PDRTA services to the planned Coast RTA Conway Terminal, with automatic vehicle locator systems enhancing timed transfers with Coast RTA express routes heading east to Myrtle Beach. A park-and-ride facility in the vicinity of Lake City can offer intermodal connections with PDRTA services for residents of south Florence County as well as neighboring Clarendon and Williamsburg Counties.





**Marion-Conway**  
 Corridor(s): *Trans Carolina*  
 Region(s): *Pee Dee, Waccamaw*

Region Pee Dee, Waccamaw  
 Corridor Trans Carolina  
 Sub Corridor Marion to Conway

Guideline	LOCAL BUS	EXPRESS BUS	ENHANCED BUS/ITS	BUS RAPID TRANSIT	COMMUTER RAIL
Technology compatible with existing development	Compatible	Compatible	Compatible	Incompatible	Incompatible
<i>Rating</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>-1</i>	<i>-1</i>
Technology compatible Level of Service needs	Incompatible	Incompatible	Incompatible	Compatible	Compatible
<i>Rating</i>	<i>-1</i>	<i>-1</i>	<i>-1</i>	<i>1</i>	<i>1</i>
Technology compatible with roadway improvements	Compatible	Compatible	Somewhat Compatible	Compatible	Somewhat Compatible
<i>Rating</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>1</i>	<i>0</i>
Railroad right of way adjacent to the corridor	Partially Adjacent	Partially Adjacent	Partially Adjacent	Partially Adjacent	Not Adjacent
<i>Rating</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>-1</i>
Technology compatible with existing plans	Compatible	Compatible	Compatible	Somewhat Compatible	Somewhat Compatible
<i>Rating</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>
Parallel roadway/facility	Partially	Not Present	Not Present	Partially	Partially
<i>Rating</i>	<i>0</i>	<i>-1</i>	<i>-1</i>	<i>0</i>	<i>0</i>
<b>Overall Rating</b>	<b>2</b>	<b>1</b>	<b>0</b>	<b>1</b>	<b>-1</b>
<b>Carry Forward?</b>	<b>Yes</b>	<b>Yes</b>	<b>No</b>	<b>Yes</b>	<b>No</b>

Rating scale:

Desirable/Positive Rating = +1

Neutral Rating = 0

Negative Rating/Less Desirable = -1

Local bus service performed highest among evaluated modes, followed by express bus and bus rapid transit (BRT) services. Development patterns along this sub-corridor are predominantly rural, with development levels highest in the urban city of Conway, part of the Myrtle Beach urbanized area. Roadway improvements recommended in the Statewide Multimodal Transportation Plan include the provision of a grass median and access control strategies, along with facilities supporting bicycle and pedestrian travel. Projects identified within the long-range transportation plan for the Myrtle Beach urbanized area include the widening of US 501 to six lanes in Horry County, frontage roads and intersection improvements.

Transit services in the Pee Dee region are provided by the Pee Dee Regional Transportation Authority (PDRTA), while the Waccamaw Regional Transportation Authority (Coast RTA) provides transit services in the Waccamaw region. PDRTA provides shuttle service to the Myrtle Beach area during peak travel periods.

Potential transit opportunities include extending PDRTA services to the planned Coast RTA Conway Terminal, with automatic vehicle locator systems enhancing timed transfers with Coast RTA express routes heading east to Myrtle Beach. A park-and-ride facility in the vicinity of the City of Marion can offer intermodal connections with PDRTA services for residents of Marion County as well as neighboring Dillon, Florence and Marlboro Counties.



**Florence-Kingstree-Charleston**

Corridor(s): *Pee Dee*

Region(s): *Pee Dee, Waccamaw, Berkeley-Charleston-Dorchester*

Region Pee Dee, Waccamaw, and Berkeley-Charleston-Dorchester  
 Corridor Pee Dee  
 Sub Corridor Florence to Kingstree (Williamsburg County) to Charleston (at end of Pee Dee Corridor)

Guideline	LOCAL BUS	EXPRESS BUS	ENHANCED BUS/ITS	BUS RAPID TRANSIT	COMMUTER RAIL
Technology compatible with existing development	Compatible	Compatible	Somewhat Compatible	Incompatible	Incompatible
<i>Rating</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>-1</i>	<i>-1</i>
Technology compatible Level of Service needs	Incompatible	Incompatible	Incompatible	Compatible	Compatible
<i>Rating</i>	<i>-1</i>	<i>-1</i>	<i>-1</i>	<i>1</i>	<i>1</i>
Technology compatible with roadway improvements	Compatible	Compatible	Compatible	Compatible	Somewhat Compatible
<i>Rating</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>0</i>
Railroad right of way adjacent to the corridor	Partially Adjacent	Partially Adjacent	Partially Adjacent	Partially Adjacent	Adjacent
<i>Rating</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1</i>
Technology compatible with existing plans	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible	Somewhat Compatible
<i>Rating</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Parallel roadway/facility	Partially	Not Present	Not Present	Partially	Partially
<i>Rating</i>	<i>0</i>	<i>-1</i>	<i>-1</i>	<i>0</i>	<i>0</i>
<b>Overall Rating</b>	<b>1</b>	<b>0</b>	<b>-1</b>	<b>1</b>	<b>1</b>
<b>Carry Forward?</b>	<b>Yes</b>	<b>No</b>	<b>No</b>	<b>Yes</b>	<b>Yes</b>

Rating scale:

Desirable/Positive Rating = +1

Neutral Rating = 0

Negative Rating/Less Desirable = -1

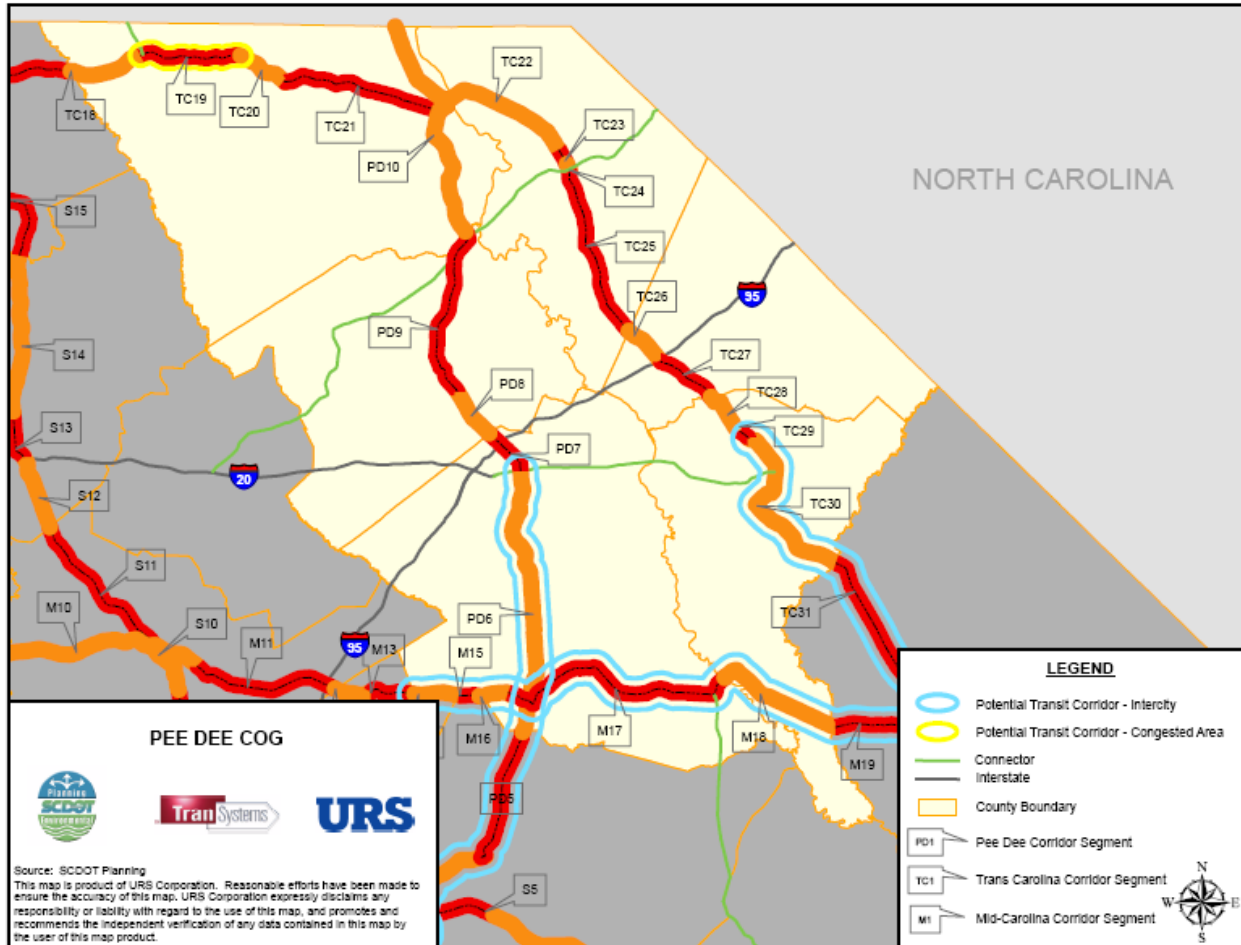
Local bus, bus rapid transit (BRT) and commuter rail services performed highest among evaluated modes. This extensive corridor connects the Florence urbanized area with the northern suburban reaches of the Charleston urbanized area, via rural centers of Moncks Corner, Kingstree, and Lake City. Current transit services within this sub-corridor are operated by the Pee Dee Regional Transportation Authority (PDRTA) in Florence County, the Williamsburg County Transit Authority (WCTA) in the center of the sub-corridor, and Tri-County Link rural shuttles by the Berkeley-Charleston-Dorchester Rural Transportation Management Association, with services extending south to the Charleston urbanized area. In addition to coordinated transit services, a combination of capacity enhancement and access management strategies are recommended in the Statewide Multimodal Transportation Plan, including the introduction of a grass median and access control strategies, a context sensitive solutions process, and facilities supporting bicycle and pedestrian travel.

Potential transit opportunities include the expansion of transit services and service hours in the PDRTA area, as well as the expansion of Tri-County Link rural transportation services by the BCDRTMA. Commuter rail services on the southernmost end of this sub-corridor are under consideration by the Berkeley-Charleston-Dorchester Council of Governments. Strategic growth in land use mix and population and employment densities along this corridor should precede consideration for future northward extensions to this proposed line. More concentrated growth patterns and dedicated right-of-way may also improve the future feasibility for BRT service along this sub-corridor, particularly in Berkeley County on the southern end and between Florence and Williamsburg Counties on the northern end.



Figure 13 presents potential transit opportunities along the Strategic Corridor System within the Pee Dee region. Transit opportunities beyond the Strategic Corridor System are detailed at a regional level under separate cover from this plan.

Figure 13: Potential Transit Opportunities



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## **Section 6: Transit Funding Needs**

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### **6.1 Discussion of Funding Issues for the Pee Dee Region**

Along with the assessment of current and future transit needs, the other major component of illustrating future conditions is the identification of funding needs to support operating and capital expenses. Given a multitude a city and county governments to appease annually for funding support, a stable regional funding approach could help PDRTA avert service impacts due to annual fluctuations in municipal financial support.

According to the needs analysis, the region will require over \$18 million in annual operating costs, which constitutes an increase several times the amount of local funding being generated today. Service in Florence is also due for expansion and is attributable to population growth and new employment centers.

The focus groups of residents and community leaders (Section 3.1.2) agreed that user fees and lottery/gambling proceeds are among the most preferable sources for transit funding. While user contributions fully supporting any public service is ideal, excessive reliance on this source for transit can result in increased fares, reduced ridership and severe cuts in service, and hampers the ability of the system to expand. As the benefits of transit extend beyond the mobility improvements of its users, alternative and reliable funding sources must supplement user revenue. Meanwhile, public sentiment and political concerns may hinder the pursuit of funding from state lottery revenues that currently support public education.

### **6.2 Potential New Funding Sources**

To fully address transit needs in the state, new revenue sources will need to be tapped. Potential new funding sources could come from a variety of levels, including federal, state, and local governments, transit users, and private industry contributors. Based on the level of transit need in the state, a combination of sources will be needed to make significant enhancements in the level of service that is available. In many communities, transit has been regarded as a service funded largely from federal grants, state contributions, and passenger fares. However, with the strains on the federal budget and restrictions on use of funds, coupled with a lack of growth in state funding, communities are recognizing that a significant local funding commitment is needed not only to provide the required match to draw down the available federal monies, but also to support operating costs that are not eligible to be funded through other sources.

Historically, local governmental funding in South Carolina has been allocated on a year-to-year basis, subject to the government's overall fiscal health and the priorities of the elected officials at the time. Local funding appropriated to a transit system can vary significantly from year to year, making it difficult for systems to plan for the future and initiate new services. To reduce this volatility, systems have been pushing for local dedicated funding sources that produce consistent revenues from year to year. For



example, Charleston County has a dedicated half-cent transportation sales tax, a portion of which is allocated to the Charleston Area Regional Transportation Authority (CARTA) and the Berkeley-Charleston-Dorchester Rural Transportation Management Association (BCDRTMA). Richland County has implemented an increased vehicle registration fee, with the proceeds of the increase supporting the Central Midlands Regional Transit Authority (CMRTA) system until it expires in 2008.

For both local leaders and residents, there appears to be a growing realization that transit funding should come from all levels of government, in addition to transit users and other sources. As part of the input gathered through the focus group process, participants were asked if they would be willing to have local taxes used to fund public transportation services. Of the community leaders that were surveyed, 89% indicated that they would be willing to have local taxes used for public transportation; likewise, 80% of the residents who participated in the focus groups stated that they would be willing to have their local taxes used to fund public transportation.

### **6.2.1 Possible Funding Mechanisms**

Participants in the focus groups were asked to brainstorm a list of possible funding sources for new or expanded public transit services in South Carolina. The list generated by the participants includes potential sources from all levels of government, as well as user fees and private contributions. The complete list as identified by focus group participants is as follows:

- Advertisement
- Alcohol tax
- Bonds
- Business license
- Business tax
- Cigarette tax
- County funds
- City funds
- Corporate investment
- Dedicated state fuel tax
- Employer tax
- Energy tax
- Environmental credits
- Federal government
- Fee option over parking spaces
- Gambling/Lottery
- Gas tax
- Grants
- Hospitality tax
- Impact fees
- Local sales tax



- Lottery/gambling
- Medicare tax
- New dedicated tax
- Non-profit donations
- Parking fee in urban areas
- Private contributions
- Property tax
- Reallocation of DOT funds
- Rental car tax
- Sales tax
- State infrastructure bank
- Tax incentives to industrial parks
- Tax on beneficiaries
- Tire/oil tax
- Tobacco tax
- Tolls
- Traffic fines
- Trailer tax
- Unemployment tax
- Use current dollars better
- User fees
- Vehicle registration fees
- Vehicle sales tax

A number of these potential revenue sources are already used by various states for transit funding. Major sources of state-level transit funding include the following:

- Vehicle license/registration fees<sup>\*</sup>;
- Motor fuels tax<sup>\*</sup>;
- General fund monies<sup>\*</sup>;
- Sales tax on vehicle sales<sup>\*\*</sup>;
- Bond funds<sup>\*\*</sup>;
- Retail tax (CA, IN, MA, NY, PA);
- Rental car tax (AR, FL, PA);
- Interest income (CT, NV, WY);
- Corporate taxes (MD, NY);
- Casino revenues (NJ);
- Cigarette tax (OR);
- Lottery funds (PA);
- Oil company tax (CT); and
- Bridge tolls (DE).

\*Many States

\*\*Several States



As illustrated by this list, states are using a variety of different sources of revenue for transit purposes, and many states use a combination of multiple sources. Conversely, South Carolina currently uses only one revenue source (proceeds from the state motor fuels tax). This list is not intended to imply that all of these potential sources may be appropriate in South Carolina; however, this list does indicate the breadth of transit funding streams that are being used at the state level.



## Section 7: Action Plans

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Transit in South Carolina, in its current form, generates numerous benefits for its residents and visitors as well as to its economic health and quality of life. Transportation providers in the State form a comprehensive system despite weak funding streams and non-conducive land use patterns. It is not without its gaps and issues, but public transportation in South Carolina is comprised of a comprehensive network of rural services, human service transportation programs and several urban systems that could be poised for growth. The information and analysis within this Plan indicates, however, that there is considerable unmet demand in the State, given the prospect of continual growth in population, especially in transit dependent sectors of the population. There is also a need for more connectivity, opportunities for improved efficiencies, greater emphasis on commuter transportation and a substantial need for increases in the overall funding for transit.

The Pee Dee Region represents a cross-section of the rural networks, human service transportation programs and urban service. However, the public perception of transit is not good. Whether this perception stems from past improprieties with the system or the more common stigma of transit as a public service for the indigent and transit dependent; the fact remains that traffic issues, mobility problems and/or the need to continue stimulating growth and economic development will continue to heighten the benefits that can be realized through the implementation of transit. For this reason, many of the action items included in the statewide plan apply to the Pee Dee Region.

### ***7.1 Close the Gap between Funding Needs and Available Funding Levels***

As identified in Section 6, two significant findings in the Statewide Transit Plan are the gap of about \$60 million between the current level of transit service and estimated annual transit needs in the State, and the shortfall in revenue exceeding \$1 billion over the course of the Plan (2007-2030). These are substantial investment shortfalls in transit and require a broad spectrum of strategies to increase the level of funding from existing sources and identifying new sources so that more of the needs are met. These strategies need to be aggressive, offer transit providers flexibility and should be sustainable in order to facilitate bonding capacity and other long range financing techniques.

Like multi-jurisdictional transit providers in Greenville, Columbia, Myrtle Beach, and throughout the state, PDRTA faces an uphill battle every year as they propose funding levels through the various municipal general budgeting process. This problem stems from the lack of confidence on the part of elected officials in transit providing tangible and equitable benefits.





### 7.1.1 Improve Efforts to Leverage Federal Dollars

First and foremost, greater financial participation at both the State and local government level is critical to the success of transit as a mobility solution. South Carolina ranks a distant fourth among Southeastern States (VA, NC, TN, GA, MS, AL) in terms of state contribution per capita for transit service and only Charleston has a semi-permanent local funding mechanism directly targeting transit improvements. Many of the transit systems in South Carolina struggle on an annual basis to generate the matching funds for federal formula dollars. There has been little instance of returning federal formula dollars back to FTA, however, so systems are generally achieving the required matching requirements in spite of their struggles. But it raises the question of how many federal *discretionary* dollars could the State have collected if more flexibility and capacity to match federal funds were afforded the State's transit systems.

The number of discretionary programs actually declined after SAFETEA-LU but FTA and other US DOT programs are available to fund transit initiatives and require 20-50% non-federal match. SAFETEA-LU has also included new provisions under Section 5310, 5316 and 5317 which allow the use of non-FTA federal dollars to match funds under these programs. These are generally small sums of funding but target transportation disadvantaged populations. Existing transit and human service transportation providers work in collaboration with the Pee Dee Regional Council of Governments and SCDOT to establish the federally-required and coordinated human service transportation-public transit coordination plan for this region.

### 7.1.2 Allow Greater Flexibility for Local Jurisdictions to Generate Funds

A number of potential local funding mechanisms are outlined in Section 6.4 of the Plan that could be implemented at the local (some at the State) level to generate funds. Most of these methods require substantial political capital in order to implement them. Adding to the difficulty of establishing these mechanisms is the fact that there are legislative restrictions against them. A concerted effort among transit providers and SCDOT, perhaps in conjunction with TASC, should be undertaken to research these barriers and approach the State Legislature about changes in the restrictions placed on local funding mechanisms. TASC annually prepares a legislative agenda for law makers regarding transit and relaxing these restrictions could be included with the agenda.

#### *Provide Local Control Options for Transit Funding Sources*

Broad flexibility with local control for funding options must also be made available such as sales and gas taxes, vehicle registration fees, property taxes and tax allocation districts. Municipalities within South Carolina and elsewhere in the Southeast (including Atlanta, Charlotte and now Charleston) have used local sales tax revenues to pay for transit services. Richland County is currently using part of a vehicle registration fee to



fund transit in the short term until the revenue source expires in 2008. The General Assembly should provide flexibility in local control for additional transit revenues.

All six counties in the Pee Dee Region and the central City of Florence seem to be many years away from considering a local funding mechanism dedicated to transit.

### **7.1.3 Increase State Funding for Transit**

State funding support for public transit should be increased to expand service and provide increased mobility and travel choices. As is the case with local funding mechanisms, legislation has restricted the use of State motor fuel user fee receipts for transit to  $\frac{1}{4}$  of a cent out of 16.8 cents per gallon. This translates to about \$6 million per year for transit programs. This fee is based purely on the level of fuel consumption, and is not indexed to inflation. Therefore, if consumption remains flat, the proceeds from this user fee will also experience little variation from the 18 cents per capita made available for transit funding. In addition to increasing the percentage of the user fee dedicated to transit, the State will need to explore methods to provide incremental increases to account for inflation.

### **7.1.4 Engage Non-Traditional Partners**

Transit's role in economic development and supporting tourism is on the rise and transit providers and the state transit association have taken a more visible approach to engaging chambers and economic development agencies in the planning process. A number of transit systems especially those just inland depend heavily on routes that serve the coast and transport many workers to and from jobs on the Strand, as well as other coastal areas. The ridership on these routes has steadily increased in the recent past and the trend should continue. Critical to the expansion of transit as well as the introduction of premium service transit, like bus rapid transit and rail service, will be how well the transit community engages the tourism and development communities into the design of service and ultimately the funding of new service.

PDRTA has demonstrated an ability to extend transit to areas of high commuter demand beyond the Pee Dee region, including Horry County destinations in the Waccamaw Region. Much of the Pee Dee Region remains devoid of fixed-route transit service, however. PDRTA should redouble its efforts to approach the business community and tourism industry for their support of transit.

Regional mobility providers can expand partnerships with private employers, non-profit organizations and government agencies to promote the federally-sponsored tax-free commuter benefits program. Often called "Commuter Choice," the program is authorized under Section 132 in the Internal Revenue Code, Title 26 of the United States Code, and currently allows employers to pay for their employees to commute by transit or vanpool for up to \$115 per month in exchange for a tax deduction. Alternatively, employers may allow employees to exchange up to \$115 monthly in



taxable salary for tax-free transit or vanpool benefits, or may share the costs with employees. Additional information is provided by the Association for Commuter Transportation at [www.commuterchoice.com](http://www.commuterchoice.com), or from the Federal Transit Administration and the National Transit Benefit Association.

## **7.2 Increase Coordination among Providers**

A number of other key findings from the coordination planning process speak to methods for improving transit in the State. Although the specifics of transportation needs from region to region differ greatly, the primary findings in the process indicate that the needs of each region can be classified under the following:

- Increase service (more days, hours, geographic coverage including rural areas)
- Targeting populations that may not qualify for existing programs (like Medicaid and TANF) but are still low/fixed income and have unmet transportation needs
- Access to jobs many of which are across county or regional boundaries
- Improve response time for return trips through centralized and/or real-time scheduling
- Coordinate fleet replacements and expansion in an effort to reduce capital costs
- Develop programs that increase the utilization of existing services
- Improve the distribution of information to the riding public, human service agencies about available services through the use of a mobility manager (this is underway in the Lower Savannah Region).
- Expense pooling program (fuel, insurance, training etc.)
- Address cost allocation among operators to facilitate greater coordination/cooperation

These issues constitute the commonalities among the regions, but the coordination plan development process did show significant differences in the primary transportation needs of each region. Given the differences in the provision of service and the different evolution of relationships among agencies from region to region, potential strategies to address these issues will vary across the State. Each plan does place the responsibility of developing actual projects to the human service agencies and transportation providers and for the COGs to develop an evaluation process to identify which of these projects will receive funding.

A major goal for the Coordination Plan is to establish a methodology to evaluate potential projects at the Regional level so that limited resources are optimized. Based on the plan development process in the Pee Dee Region the following criteria should be considered when selecting projects.

1. The need for a mechanism to disseminate information about available transportation services was reiterated throughout the development process and is clearly a high priority for the region. Projects that establish marketing programs or information dissemination to potential clients to encourage ridership should receive priority but are difficult to quantify in terms of their effectiveness. These projects should be developed such that they involve multiple agencies and



include some level of local financial participation to ensure sustainability before they are considered.

2. Projects that specifically target access to jobs. It was determined by the regional steering committee that the access to jobs was under-emphasized during the development of the plan and therefore added as a part of the comments to the draft plan.
3. Projects that target new rural inter-community services should receive favorable ratings in the evaluation process.
4. Projects that relax eligibility requirements or increase the number of individuals eligible for service should be considered.

### **7.3 Expand Transit Service**

There is little doubt that transit can be expanded in its role as a mobility option in South Carolina. Even though there is heightened awareness about the benefits of transit, expansion of service will be predicated upon identifying new service that is cost effective with defined benefits that warrant sustainability and funding.

Demand estimates for the Catawba Region suggest there will be at least a 3% increase in transit demand in rural areas, and 6% in urban areas, every decade between now and 2030 (see Table 12 in the Statewide Transit Plan). This growth will need the implementation of transit to, at the very least, maintain mobility.

#### **7.3.1 Target Gaps in Rural Areas**

The needs assessment for the Statewide Plan focused on transit dependent populations which showed that only 34% of the total transit need is being accommodated currently in counties with existing service. This equates to over 4 million trips and the number nears 6 million if those counties without service are included in the estimate. Rural transportation is a core function of transit in South Carolina and service in these areas should be expanded. Situated within a far-reaching regional service area, PDRTA is among the top demand responsive transportation providers in the United States, based on passenger mileage. Growing demand for mobility options in this extensively rural region is anticipated over the next two decades.

#### **7.3.2 “Right Size” Urban Systems**

The evolution of the urban systems in South Carolina has led to several of them being undersized given the population in these areas. Many of them were originally operated by power companies and were reduced in scope as the power companies relinquished control to public authorities. Other factors have also affected the size of these systems like the density of population and the general difficulty in maintaining local funding for these systems. Columbia has recently faced service cuts as the funding agreement between the Authority and SCE&G has sunset. Charleston was forced to make drastic cuts in service prior to the introduction of a dedicated sales tax. Given the population of these cities along with Greenville and Myrtle Beach, their systems would probably be



quite larger if they were in another part of the country or there was a different culture toward transit. The primary issue is funding, but these cities could support larger more intensive transit systems.

Some cursory research shows that on average cities between 200,000 and 400,000 in population have systems with peak bus requirements in the 60-100 range. Knoxville, a city with approximately 180,000 in population, has a peak requirement of 72, while comparable cities in South Carolina have much smaller fleets. Continuing to keep in mind that sustainable funding is the core problem inhibiting expansion of these systems, these cities could realize an order of magnitude difference in ridership just by increasing the frequency on existing routes and without increasing their service area. One of the key issues for these systems as they attempt to attract choice riders is that hourly headways on a route fails to provide the convenience necessary for non-dependent riders to choose to ride the system. Growth in the urban areas continues to move these regions closer to the densities and travel patterns more conducive to transit as a commute option and it will be critical to expand these systems to a level commensurate to the size of the jurisdictions they serve.

Even though Florence is not as large as some of the other cities in South Carolina, some consideration to increasing the level of service of the fixed route is recommended. There may be more opportunities to increase access to employment and the major medical facilities within the city limits.

### **7.3.3 Increase in Commuter Based Services**

Even though the needs assessment in the Plan centers on the needs of transit dependent populations, there is a need to attract choice riders. From the Statewide Plan's perspective, development of regional commuter based systems will be left up to the individual regions since they are better equipped to produce ridership estimates and must identify long term funding programs. However, the State should support the implementation of regional commuter based transit through increased funding support, especially for capital expenditures, such as the implementation of formal park and ride facilities, purchase of rolling stock, corridor preservation; as well as the introduction of pilot programs like the SmartRide program.

A key finding in the Plan is that the change in daytime population indicates significant travel patterns between regions and from the suburbs into the urban areas. The State of South Carolina currently provides no subsidies for intercity bus service, but these needs should be considered in the future, especially if additional service cuts are made to current operations. If necessary, state investment in intercity bus service should be considered to maintain key connections across the State and these services could augment commuter based services into the urban areas. Current State funding sources are used by public transit agencies to support the intercity commute-oriented services to jobs along the coast, but additional support for these services may be needed in the future. Additionally, as high speed rail services are developed, the State should examine its role in not only the rail operation, but any connecting bus service as well.



As a part of the development of the Statewide Transportation Plan, a corridor plan was developed to identify deficiencies in the roadway network that connects key cities and activity centers. Several of these corridors present opportunities for transit to play a role in attracting choice riders and potentially encourage a modal shift away from the automobile. There were several corridors identified in the Pee Dee Region that exhibit the characteristics necessary for transit to become a viable option. Table 24 shows the transit options to address these corridor issues and the Corridor Plan contains more detailed information.

Table 24: Potential Transit Options

SC Region	Corridor	Project ID/Sub-Corridor	Route	Segment Length (miles)	Potential Transit Option(s)
Pee Dee	Trans-Carolina	TC19-1	SC 9 (MacGregor Street)	1.63	Local Bus
Pee Dee	Mid-Carolina	M-16 to M-20	US 378	57.03	Local Bus, Express Bus, Enhanced Bus/ITS
Pee Dee	Trans Carolina	TC-30 to TC-31	US 501	49.84	Local Bus, Express Bus, BRT
Pee Dee	Pee Dee	PD-1 to PD-6	US 52	86.25	Local Bus, BRT, Commuter Rail

### 7.3.4 Needs Incremental Approach with Sustainability

Another important component of the Plan is the Vision and Goals included in Section 4 which speak to the potential of transit as a catalyst for economic growth, and its role in maintaining mobility and the quality of life in South Carolina. One key ingredient in realizing this Vision will be to concentrate on core service as the transit network incrementally grows. It will be important to maintain momentum for transit growth by avoiding the pitfalls of growing too fast and spreading services too thin. Planning transit expansion must hinge on the quantification of benefits and designing cost effective service so that they can be justified to funding entities and gain better support from the public and just as important, improve the image of transit in the public’s eye. Sustainability is a very important concept to the growth of the PDRTA transit network because the system must take every precaution for new service to be successful.

## 7.4 Other Action Items

### 7.4.1 Coordinating Transportation and Land Use Decisions

South Carolina has the fifth worst sprawl rating in the country and ranks fourth in the amount of land being developed on a per capita basis. Even more remarkable is that South Carolina, one of the smallest states (40th in size), ranks ninth in the country in the total number of acres that are being developed. A statewide study conducted by the Center for Urban Policy Research, Rutgers University entitled, *South Carolina Infrastructure Study: Projection of Statewide Infrastructure Costs 1995-2015* (1997), determined that through compact growth, South Carolina would reduce its infrastructure costs for a 20-year period (1995 to 2015) by nearly \$5 billion.

In South Carolina, the State is responsible for transportation and local governments are responsible for land use and zoning. Frequently there are inadequate incentives for municipalities to cooperate with one another and the State on transportation and land use issues. There is a need to take voluntary but cumulative steps toward improving transportation and land use planning in the State.



Access management techniques provide a way to manage access to transportation facilities, typically highways. These techniques can help increase public safety, extend the life of major facilities, reduce congestion, support alternative transportation modes, and improve the appearance and quality of the built environment while ensuring appropriate access to adjacent businesses and other land uses. Managing access to transportation facilities and services is one way to preserve the operational integrity of the transportation system while ensuring its compatibility with adjacent land uses.

#### **7.4.2 Upgrade Passenger Rail Service**

Develop an integrated Statewide Rail Plan that includes coordination of all entities relative to passenger rail service, including freight interests and Amtrak. Address future growth and development opportunities facilitating passenger rail service. Identify options for a sustainable source of state funding with which to support capital and operating costs of passenger rail and/or other incremental transportation services. Work with the railroad companies to ensure that upgrades are made to track and other equipment that benefit both passenger and freight rail:

- Work with both public and private sector interests to improve the State's rail infrastructure and passenger and freight rail service.
- Continue to support the interstate efforts to implement high speed rail in the Southeast. Florence has a real opportunity to be considered as one of the stops along the HSR initiative in the I-95 corridor.

### **7.5 Conclusion**

This plan provides a framework for collaborative, continuous actions on the part of SCDOT, the metropolitan planning organizations, councils of governments, and regional stakeholders to move toward effective implementation of a multimodal transportation network along the Strategic Corridor System.

The need for collaborative efforts at all levels is evident considering that the scale of cumulative transit funding needs in South Carolina through 2030 (\$3.88 billion) significantly outstrips unconstrained projections of available funding (\$2.15 billion) over the same period. Financial deficits for current, planned and projected transit operations are anticipated in each region. The urgency for action becomes more essential as rising fuel and travel costs, socioeconomic and environmental impacts, right-of-way limitations for roadway expansion, and demographic changes collectively suggest the growing need on South Carolina's critical corridors for viable alternatives to personal single-occupant motorized transportation, now and into the future. If shortfalls at the state and regional levels continue unabated, the state's citizens and leaders will have to come to terms with the prospect of substandard transit service levels that fall short of meeting a diverse range of intra-regional and inter-regional needs.



While the challenges ahead may appear insurmountable, this plan lays out action items which can be tailored to help address many of the burdens to be placed on current and future transit providers and those who will rely on their coordinated services. A balance can be struck between anticipated transit demand and the minimum acceptable corridor levels of service to reflect the quality of life expected within each region. State and regional partners may build on the focus group findings and other analyses in this plan to help articulate the purpose and need for enhanced transit services and pursue the most acceptable mechanisms to fill gaps in funding.

