



**Town of Hilton Head Island
Circle to Circle Committee Special Meeting
Wednesday, July 1, 2015
8:30 a.m.
Benjamin M. Racusin Council Chambers**

AGENDA

As a Courtesy to Others Please Turn Off All Cell Phones and Pagers during the Meeting.

- 1. Call to Order**
- 2. Freedom of Information Act Compliance**
Public notification of this meeting has been published and posted in compliance with the Freedom of Information Act and the Town of Hilton Head Island requirements.
- 3. Approval of Agenda**
- 4. Approval of Minutes –**
 - June 24, 2015 Meeting
- 5. Old Business**
 - A. Shuttle concepts and options**
 - B. Alternate beach use**
- 6. New Business**
 - A. Marine Delivery**
- 7. Appearance by Citizens**
- 8. Meeting Summary and Topics for Next Meeting**
- 9. Adjournment**

Please note that a quorum of Town Council may result if four or more of their members attend this meeting.

**Circle to Circle Committee
Meeting Minutes
June 24, 2015
8:30 a.m.
Council Chambers, Town Hall**

Circle to Circle Committee Members present:	Jim Gant (Chairman), David Ames, Jack Daly, Joe Kernan, Tom Sharp, Judd Carstens, Mike Thomas, Leslie Richardson, Tom Lennox,
Town Staff present:	Charles Cousins, Shawn Colin, Shea Farrar, Jill Foster, Jennifer Ray, Susan Simmons

- Chairman Gant called the Circle to Circle Committee meeting to order at 8:37 a.m.
- The meeting agenda was approved.
- The meeting minutes from the June 17, 2015 meetings were approved.
- Chairman Gant introduced the first item of business: Communication Strategy.
- The Committee discussed how to follow-up on the May community forums. It was decided that a public meeting would be scheduled the third week in July and those that provided emails during the forums will be notified.
- Chairman Gant then introduced the next agenda item: Parking Options Discussion.
- Chairman Gant began by presenting the findings from the USCB survey that was conducted at the Coligny Beach Parking area.
- Shawn Colin then presented the results of parking counts that were conducted by staff at other beach parks.
- At the previous meeting three Committee Members volunteered to provide information at this meeting on potential parking solutions in the Circle to Circle area. The potential for increasing parking at the current beach parking area as well as the addition of structured parking was discussed. These options will be furthered reviewed by the Committee as it relates to the vision developed for the area.
- The Committee briefly discussed shuttle options and identified the need to determine who the shuttle would serve and potential routes would need to be assessed along with parking for the shuttles.
- The Committee discussed the need to develop the vision for the area prior to formalizing recommendations on these and other issues.
- To assist the Committee in better understanding the market conditions of the area, a guest speaker will be attending the July 8th meeting, which will begin at 10:00 a.m. rather than the normal time. Also, the Committee will meet next week on July 1st at 8:30 a.m. to continue discussions on shuttle options and beach parking.
- Following public comment, Chairman Gant adjourned the meeting at 10:40 a.m.

Meeting date: June 24, 2015

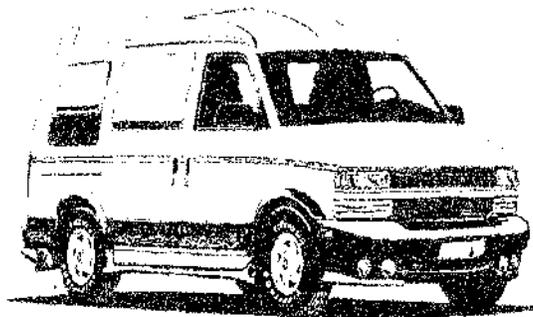
Approved:

Chairman: _____, Jim Gant

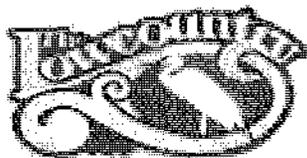
Submitted by: Shea Farrar

DRAFT

Lowcountry Public Transit Coordination Feasibility Study A Public Transportation Strategy



Prepared for



Lowcountry Council of Governments

Prepared by



In association with
SR Concepts, Inc.

May 2003



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Executive Summary

Lowcountry Council of Governments is a regional planning organization formed to provide planning and other services to Beaufort, Colleton, Hampton and Jasper Counties. LCOG recently initiated a study, with the assistance of SCDOT, to assess transit needs and opportunities in the region and how current services are addressing identified needs and to identify opportunities to improve existing or add new services. To accomplish this, more detailed objectives included:

- Determination of the relationship between economic development and the provision of coordinated public transit services in the area;
- Identification of coordination possibilities, including improved and/or expanded services, and
- Formulation of an action plan for implementation which responds to coordination needs and provides additional services.

The study commenced in the Fall of 2002, with the final report completed in May 2003. Study activities were undertaken jointly by LCOG planning staff and Day Wilburn Associates, Inc., in association with SR Concepts, the consultant team retained to provide assistance on the study.

The study was undertaken in four components. Task 1 assessed the transit needs and opportunities for new and enhanced transit services. Current services operated by public transit operators, human service agencies, and private providers were reviewed in Task 2, assessing whether several services are meeting needs. Task 3 identified a wide range of alternatives to address needs and improve the coordination of service. An action plan was developed in Task 4 to guide implementation of the preferred strategies.

Participation from local government agencies, area businesses, social service agencies, employers and transportation providers (see the Appendix for a list of people and organizations) was provided throughout the study to ensure that the strategies reflect local needs and objectives. In addition, coordination with an Ad Hoc Transportation task force occurred at key milestones during the course of the study to obtain input on key issues, including needs, potential markets and alternatives.

The region has experienced unprecedented population growth over the past few years, bringing the four county population to 201,265 in 2000. Economic growth within the region has been uneven, with development and jobs continuing to concentrate in southern Beaufort County, particularly tourism and resort development on Hilton Head Island and commercial and residential development in the Bluffton area. This pattern is reflected in the region's widely varying unemployment rates, with lower unemployment rates in Beaufort and Jasper Counties (2.5% and 4.6% respectively) and higher unemployment rates in Hampton and Colleton Counties (9% and 6.7% respectively). The commuting patterns are following the economic development pattern, with a significant amount of interregional commuting the result of tourism and hospitality industry jobs in southern Beaufort County.

The study revealed that there is a significant population in the region that either needs transit or appears likely to use it if new or enhanced services were available. The potential market segments include groups traditionally identified as needing transit – low income, minorities, and



people 65 years and older, as well as tourists, students and staff at post-secondary education institutions, the military, residents of large residential developments, as well as residents and visitors with out of region destinations or origins.

Lowcountry Regional Transportation Authority (LRTA), and its predecessor the Beaufort-Jasper Regional Transportation Authority, has operated public transit service in the area since the 1970's. Most of LRTA's service is centered on Beaufort County, the home of 60% of the region's population, the most densely populated county, and the location of major tourism and employment facilities, as well as medical, institutional, educational and government services. Service to the other three counties is limited to the rush hour commuter service linking several towns and areas with southern Beaufort County. Both Amtrak and Greyhound provide limited service in the area.

Feedback from human service agencies, local planning officials, and businesses emphasized the important role that LRTA is playing in providing transportation to a number of region's residents to enable them to access employment, human and medical services, and shopping. However, the representatives indicated that there are many unmet transportation needs in the region because of the limited service operated by LRTA and the predominant pattern of the service – one-way commuter service to southern Beaufort County.

Although a number of human services agencies are providing some transportation to clients, it is oriented to providing them with access to specific programs and services. Most of the social service agency representatives reported that a large number of their clients need transportation for a variety of trip purposes which individual agencies are unable to serve. Low-income residents, in particular, were identified as having a great need for transportation services.

There does appear to be some duplication of transportation service in the region, as LRTA, Greyhound, human services transportation agencies and the Medicaid transportation provider are often traveling over the same roads and transporting people to the same destinations. At present, this service duplication is not being addressed as one agency does not have overall responsibility for reviewing public and human and medical service needs in the region and determining the most effective way to respond to the needs.

An expanded role for transit in the region's transportation system is supported by a diverse group of stakeholders and emerged as a key study recommendation. The benefits associated with increased transit in the region are diverse, and would include economic, social, environmental and quality of life improvements.

The strategies to serve the area's transit needs considered these challenges while at the same time attempting to build upon the region's strengths. The strengths include:

- A public transit operator with a long history of providing public transportation service;
- The presence of several successful private transportation programs and providers;
- A number of significant markets for additional transit services - tourism, post-secondary education institutions, the military, large residential developments, and out of region destinations;
- Widespread and growing interest amongst businesses, agencies, institutions and residents in finding solutions to transportation problems, and



Lowcountry Public Transit Coordination Feasibility Study A Public Transportation Strategy

- Established multi-jurisdictional planning bodies with experience in addressing regional issues.

A transit concept for the Lowcountry Region was subsequently developed to provide an overall framework for the development and implementation of service revisions and new services. The following objectives are encompassed in the transit concept:

- Accommodate a broader range of travel needs: origins and destinations served, time of travel and trip purpose;
- Develop services that are more efficient and tailored to the ridership patterns;
- Ensure that cost considerations are addressed and funding strategies are identified;
- Maximize the coordination of services among the various providers to reduce duplication and increase the use of the services; and
- Facilitate the development of public-private partnerships in the service delivery.

The recommended future transit concept includes a wide array of service types to serve the broad range of users as well as be appropriate for the diverse region – the rural, low density areas as well as the more intensive development in Southern Beaufort County. They include:

- Regional rideshare and vanpool program;
- Main line service along the US 278 corridor in Southern Beaufort County;
- Connector service in main travel corridors linking to the US 278 main line service;
- Distributor service into key areas, such as City of Beaufort, Bluffton, and Hilton Head Island;
- Coordinated demand response service throughout the region;
- Out of region service to Charleston and Savannah, Georgia;
- Passenger ferry service, and
- Transportation facilities: park and ride lots, transportation center and transfer hubs.

A new association is recommended to provide a framework for the planning, coordination and support efforts that are presently missing yet so essential to the development of more effective and integrated transit services. A Regional Transportation Management Association (RTMA) is recommended to guide the implementation of the new services and strategies. The organizational focus of the RTMA is to ensure that public transit is an important component of the region's multimodal transportation system. RTMA membership would include LRTA, LCOG, county and local governments, private transportation providers, human service agencies, major employers and State agencies.

LCOG is recommended for the RTMA coordination role because they have the necessary history, relationships, and experience to fulfill this role. The assignment of these functions to LCOG would not preclude them from being undertaken by a metropolitan planning organization or a mobility authority formed in the future.

LRTA would continue in its role as the region's main public transit provider. LRTA would provide several key service elements, including the mainline US 278 service, connector bus service and local bus service.

Efforts to develop coordinated service agreements between the region's human service agencies are recommended to improve the efficiency of the services, and reduce costs for service administration, operations, and vehicles. Developing provisions to include general public



passengers is recommended as a means of accommodating public trips in parts of the region where there is insufficient demand to warrant the implementation of exclusive public transit service.

Providing opportunities for private provider participation in the delivery of services is recommended because of the presence of several successful private transportation providers in the region and the potential for cost savings.

An Action Program to guide efforts in implementing the service and coordination recommendations has been developed. The Action Program outlines the various types of actions that will be required to implement the recommended strategies.

The action program is presented in two phases: an initial phase of the more immediate actions and a second phase of the longer-term actions. The phasing is tentative and is presented as a guide to organize the overall effort. The actual timing for the implementation of the service and coordination improvements will be governed by many factors, including the economic climate, funding opportunities, as well as political considerations. In addition, the timing will be influenced by the overall complexity of the strategies that are adopted.

The following are the main considerations that guided the phasing of the efforts. The need to:

- Implement projects incrementally so that all the necessary actions are undertaken;
- Prioritize projects that have a high probability of achievement over the near-term;
- Relate phasing to funding availability;
- Continue service to users while alternative services are planned and delivered, and
- Incorporate adequate lead time to ensure all the necessary actions are undertaken.

Action Program

Phase I – Years 1 through 3

Initiatives for Phase I focus on establishing the RTMA, launching a regional rideshare/vanpool program, implementing coordinated demand response service, and undertaking planning and funding activities for the mainline/connector/distribution service.

Phase II – Years 4 through 10

Efforts for Phase II activities focus on continued implementation of the mainline, distributor, connector and ferry services and associated facilities, continuing and expanding the vanpool program, implementing enhanced promotional strategies, continuing the planning efforts, and monitoring, evaluating and refining services and programs.



1 Study Background

Lowcountry Council of Governments (LCOG) is a regional planning organization formed to provide planning and other services to Beaufort, Colleton, Hampton and Jasper Counties. LCOG recently initiated a study to assess transit needs and opportunities in the region and how current services are addressing identified needs and opportunities. Finally, recommendations for new or enhanced services, as well as strategies for improving coordination between the agencies and providers, would be developed.

The study commenced in the Fall of 2002. Study activities were undertaken jointly by LCOG planning staff and Day Wilburn Associates, Inc., in association with SR Concepts, the consultant team retained to provide assistance on the study.

Specific study objectives were to:

- Obtain an understanding of current and future goals and objectives for transportation services in the region;
- Provide a clear identification of the area's present and projected transit needs, including the amounts and types of unmet transportation needs;
- Identify current services, the providers of those services and their potential to provide additional services;
- Determine the relationship between economic development and the provision of coordinated public transit services in the area;
- Identify coordination possibilities, including improved and/or expanded services, and
- Formulate an action plan for implementation which responds to coordination needs and provides additional services.

The study included was undertaken in four components. Task 1 assessed the transit needs and opportunities for new and enhanced transit services in the four-county Lowcountry Region. Current services operated by public transit operators, human service agencies, and private providers were reviewed in Task 2, assessing whether several services are meeting needs. Task 3 identified a wide range of alternatives to address needs and improve the coordination of service. An action plan was developed in Task 4 to guide implementation of the preferred strategies which emerged from Task 3.

Input from local government agencies, area businesses, social service agencies, employers and transportation providers was provided throughout the study to ensure that the strategies reflect local needs and objectives. In addition, coordination with an Ad Hoc Transportation task force occurred at key milestones during the course of the study to obtain input on key issues, including needs, potential markets and alternatives. This group includes representatives from planning and development departments of County and local jurisdictions, public and private transportation providers, and state agencies.

Study findings are presented in this report, which is organized to follow the established study work flow.



2 Identification of Transit Needs and Opportunities

The purpose of Task 1 was to identify the types of transit needs in the Lowcountry Region, as well as the opportunities that exist for new or enhanced transit services.

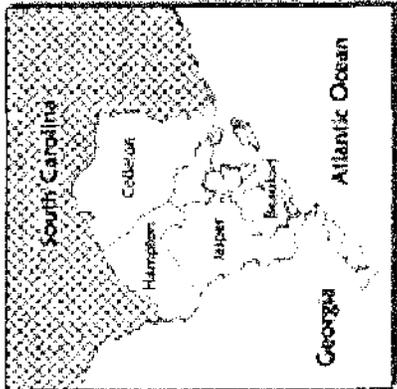
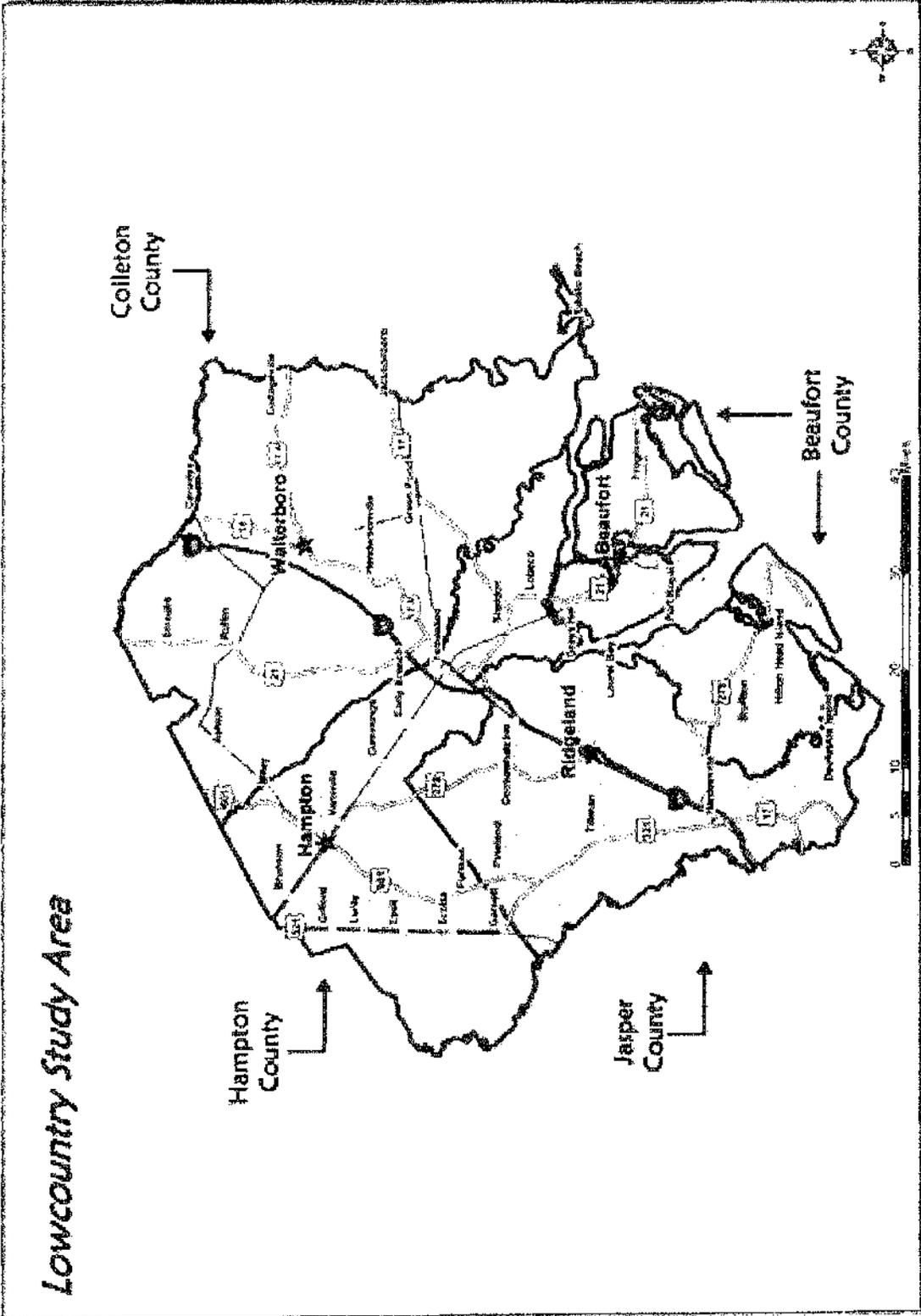
The following activities were undertaken during Task 1:

- Compiled and analyzed socioeconomic data to identify transit market segments within the region, including:
 - Groups that might use transit if new or enhanced services were available.
 - Groups identified as traditionally needing transit.
- Reviewed existing patterns and trends influencing transit, such as:
 - Development patterns, including density.
 - Economic development, including location of major employers and tourism attractions.
 - Development trends.
 - Travel patterns.
- Consulted with a number of groups and agencies to obtain input on the region's transit needs and the types of services that would be beneficial in addressing those needs. Groups contacted included human service agencies, public and private transportation providers, tourism organizations, the military, and post secondary education institutions. A list of the groups contacted is included in the Appendix.

Socioeconomic Information

The Lowcountry Region is home to 201,265 people (2000 US Census). Beaufort County has the largest number of people with 60% of the region's population, followed by Colleton County at 19%. Hampton and Jasper Counties each have slightly more than 10% of the region's population. Figure 1 presents a map of the region.

Socioeconomic data provides an indication of potential needs for transit in an area. Population groups that are typically more likely to need or choose public transit include lower income groups, minorities, and the elderly. The reasons relate to affordability and the inability to operate an automobile. Table 1 presents the relative composition of each of these groups by county based on US Census 2000 data. Statewide information is presented for comparison purposes.



Lowcountry Study Area

- ★ County Seat
- City / Town
- Highway
- State Route
- US Route
- State Road
- County Boundary

Figure 1

Source: National Transportation Atlas Database, AECOM and DWA
 This map is prepared by planning consultant only.



Table 1
Groups Typically Needing Transit
(Percentage of Total Population)

Area	Minority Population *	Persons 65 Years of Age and Older	Persons below Poverty
Beaufort County	32.4%	15.6%	10.1%
Colleton County	45.1%	13.0%	20.9%
Hampton County	58.8%	12.0%	20.0%
Jasper County	59.1%	10.9%	19.3%
Lowcountry Region	40.4%	14.3%	14.2%
South Carolina	33.9%	12.1%	14.1%

Source: US Census 2000

*Minority includes persons reported to be in the following race categories: Black or African American, American Indian and Alaska Native, Asian, Native Hawaiian and other Pacific Islander, two or more races, Hispanic or Latino origin.

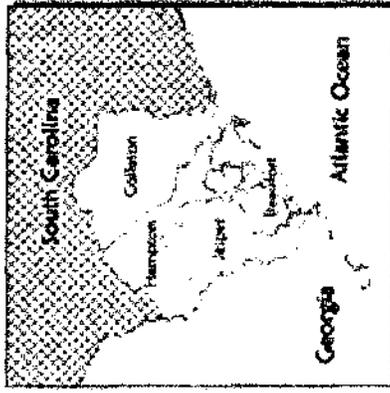
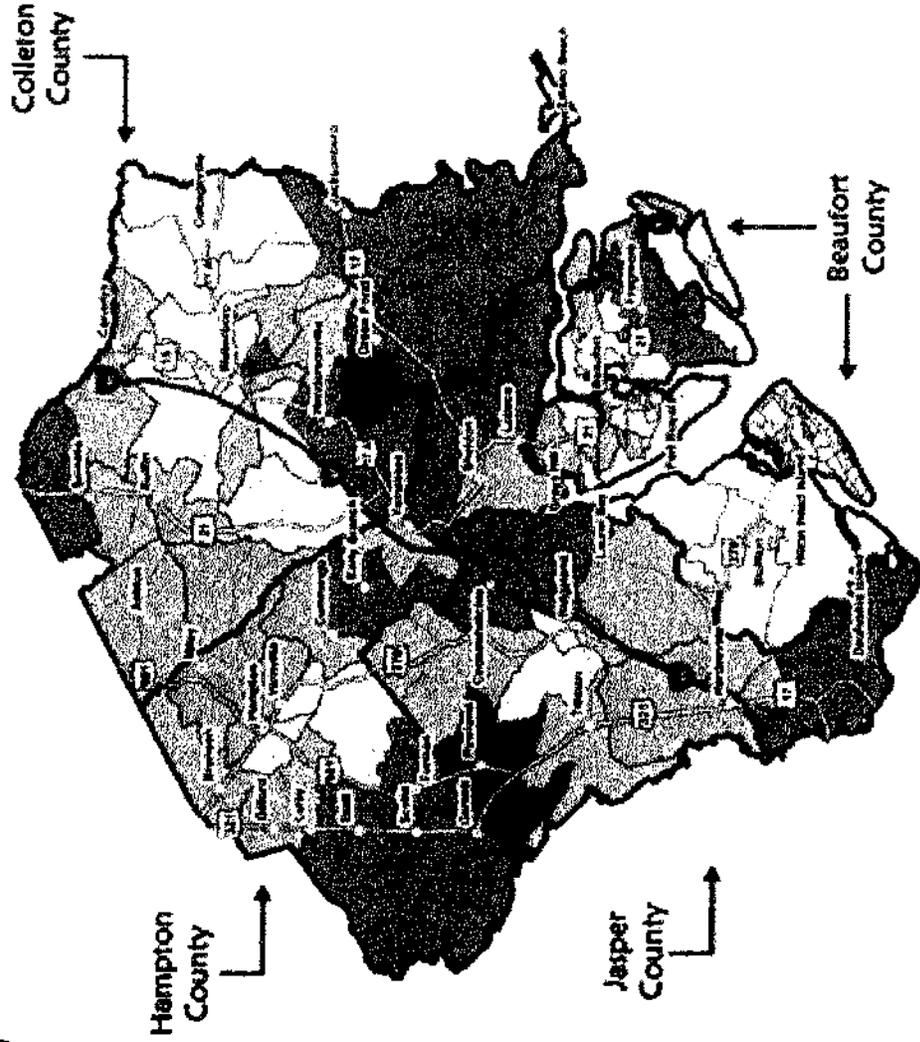
Of the region's residents, 40.4% are minorities. Jasper and Hampton Counties have the highest percentage of minority populations (59.1% and 58.8%, respectively), followed by Colleton County at 45.1%. Beaufort County has the lowest percentage of minorities, at 32.4%. During the last decade, the Hispanic population greatly increased in all four counties. Figure 2 illustrates the distribution of minority population by census block group.

Figure 3 illustrates the percentage distribution of people 65 years of age and older by census block group. The LCOG region has a slightly higher percentage of population in the 65 years of age and older group than the statewide average, with 14.3% for the region versus 12.1% statewide. Beaufort County has the highest percentage of people in this group at 15.6%, while Jasper County has the lowest at 10.9%. Elderly persons aged 65 years and over account for 13% of Colleton residents and 12% of Hampton County residents. Larger concentrations of people over 65 years of age are located in Sun City, Hilton Head Island, Fripp Island, Dataw Island, and Edisto Beach.

Colleton, Hampton and Jasper Counties all have a higher percentage of residents below the poverty level than the South Carolina average of 14.1%, with over 19% of each county's population in this group. In contrast, Beaufort County has the lowest percentage of residents below the poverty level, at 10.1%. Figure 4 illustrates the distribution of people below poverty by census block group. Higher concentrations of people below the poverty level reside in many areas throughout the region, including Lobeco and Yemassee in Beaufort County, Furman and Estill in Hampton County, Tillman and Hardeeville in Jasper County, and Smoaks and Green Pond in Colleton County.



Distribution of Minority Population



Percent of Minority Population by Census Block Group

(Dark Grey)	92.1% and Above	(> 2 Std. Dev.)
(Medium-Dark Grey)	65.4 - 92.0%	(1 - 2 Std. Dev.)
(Medium-Light Grey)	38.7 - 65.3%	(Avg. - 1 Std. Dev.)*
(Light Grey)	12.0 - 38.6%	
(White)	0% and Below	

* Standard Deviation derived from South County Average in LCOG Region

Minority Population Comparative Statistics

Block Group Average - LCOG Region	38.6 %
Total Households - LCOG Region	40.4 %
Total Households - South Carolina	33.9 %

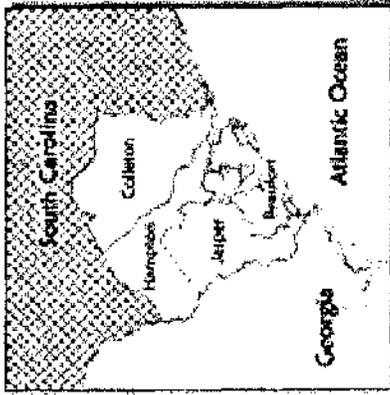
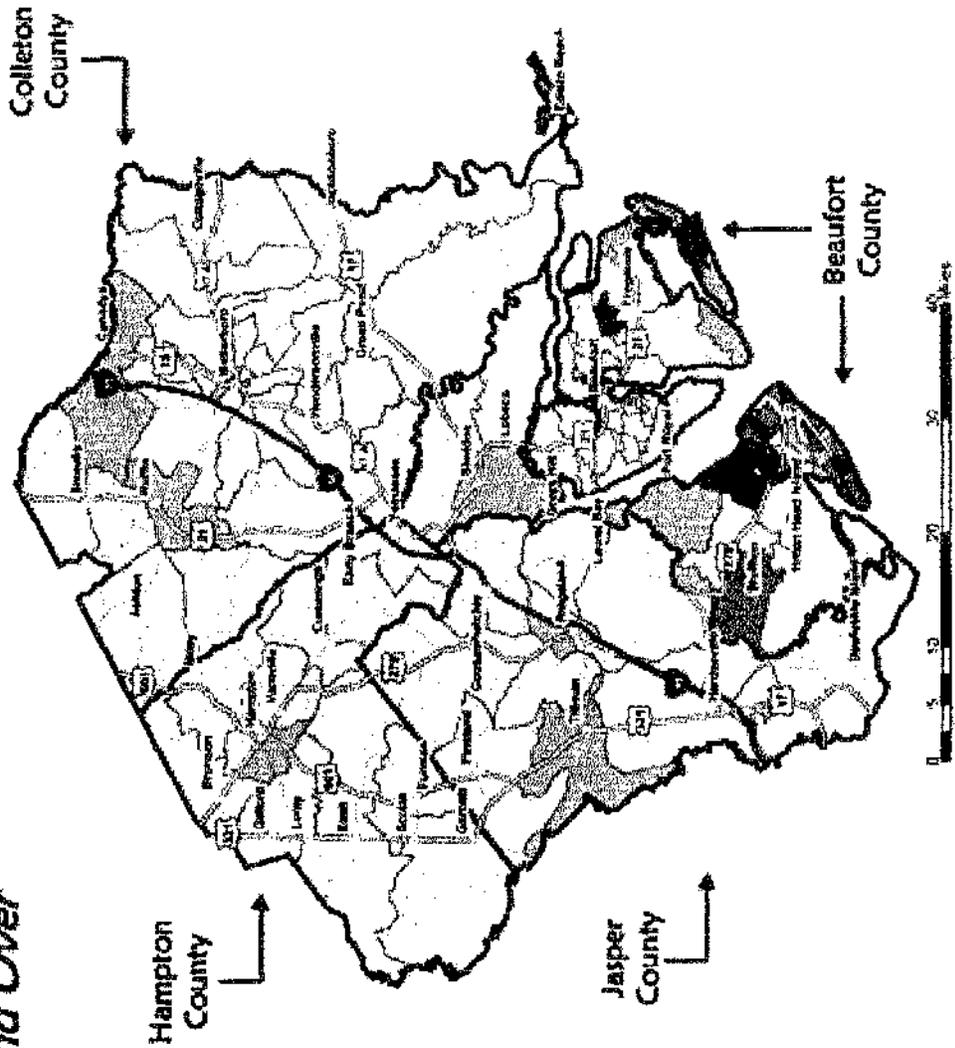
- Cities/Towns
- Interstate
- US Route
- State Route
- County Boundary

Figure 2

Source: US Census Bureau, 2000 and 1990.
This map is provided for reference purposes only.



Distribution of Population 65 Years and Over



Percent of Population 65 Years and Over by Census Block Group

38.9% and Above	(> 2 Std. Dev.)
27.5 - 38.8%	(1 - 2 Std. Dev.)
16.1 - 27.4%	(Avg. - 1 Std. Dev.) ¹
4.7 - 16.0%	
4.6% and Below	

¹ Standard deviation derived from Total Census Average in LCOG Region.

Population 65 Years and Over Comparative Statistics

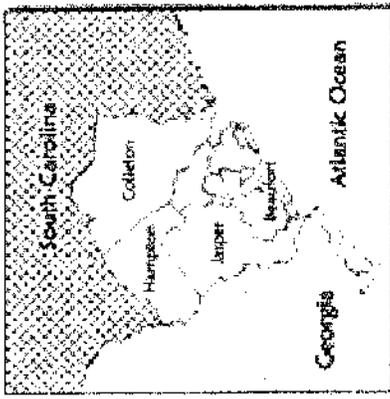
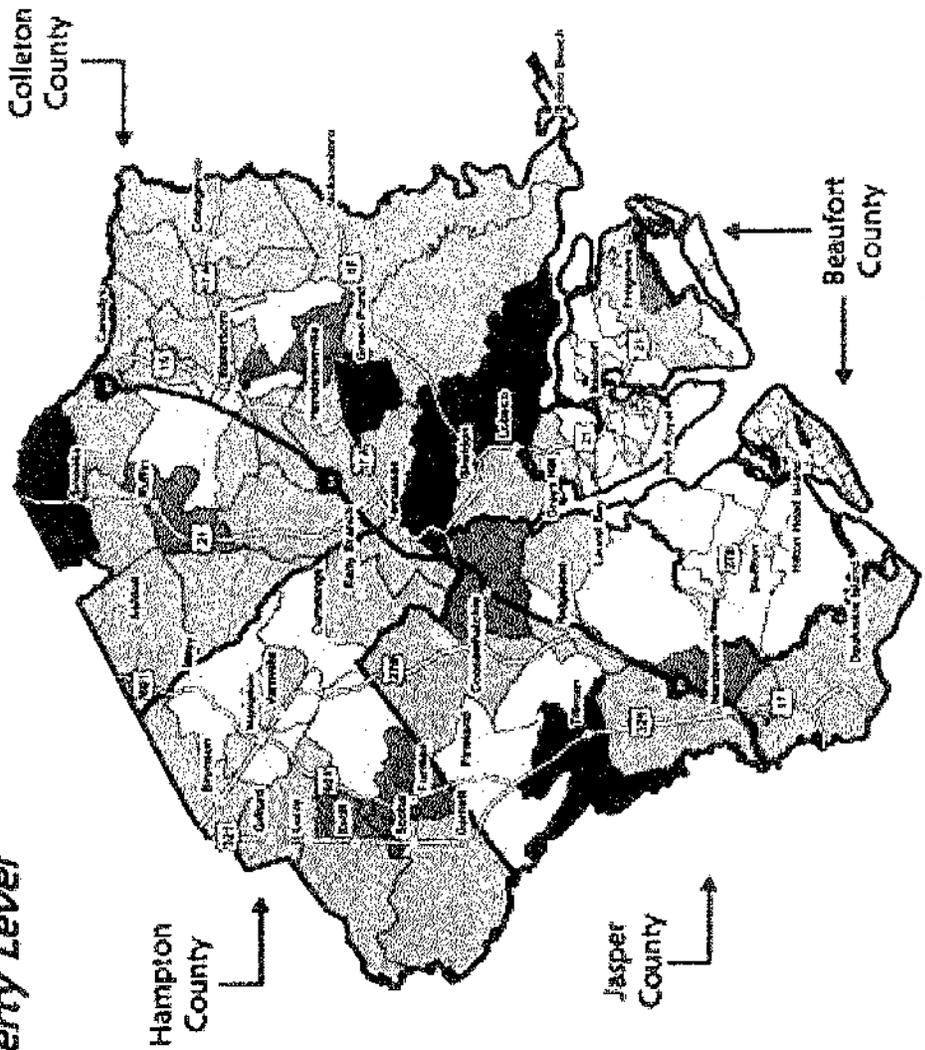
Block Group Average - LCOG Region	16.0%
Total Households - LCOG Region	14.3%
Total Households - South Carolina	12.3%

- County / Town
- State
- County Boundary

Figure 3
Source: US Census Bureau 2000 and 2002.
This map is intended for planning purposes only.



Distribution of Population Below Poverty Level



Percent of Population Below Poverty Level by Census Block Group

35.5% and Above (> 2 Std. Dev.)
25.1 - 35.8% (1 - 2 Std. Dev.)
14.3 - 25.0% (Avg. 1 Std. Dev.)
3.5 - 14.2%
3.4% and Below

* Standard Deviation derived from Block Group Average in LCOG Region

Population Below Poverty Level Comparative Statistics

Block Group Average - LCOG Region	14.2 %
Total Households - LCOG Region	14.2 %
Total Households - South Carolina	14.1 %

Cities / Towns
 Interstate
 US Route
 State Route
 County Boundary

Figure 4

Source: US Census Bureau 2000 and GISL

This map is intended for planning purposes only.



Development Patterns

An area's development pattern is a major influence in transit operations, especially on the type of transit service that would be effective in meeting community needs. The Lowcountry Region is large, encompassing a land area of 2,859 square miles. The region is approximately 60 miles at its widest point and 74 miles at its longest. The region has a very contrasting pattern of development. Beaufort County's coastal areas exhibit a more urban and higher density pattern while Colleton, Hampton, Jasper and northern Beaufort Counties are characterized by rural, low density development. As indicated in Table 2, Beaufort County is the most densely populated, averaging 206 people per square mile of land area. The other three counties have much lower population densities, at 38.2, 36.2 and 31.5 people per square mile of land area for Hampton County, Colleton County and Jasper County, respectively.

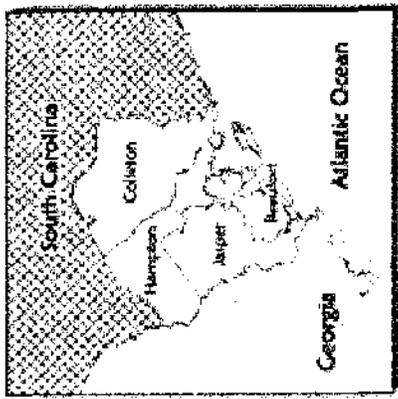
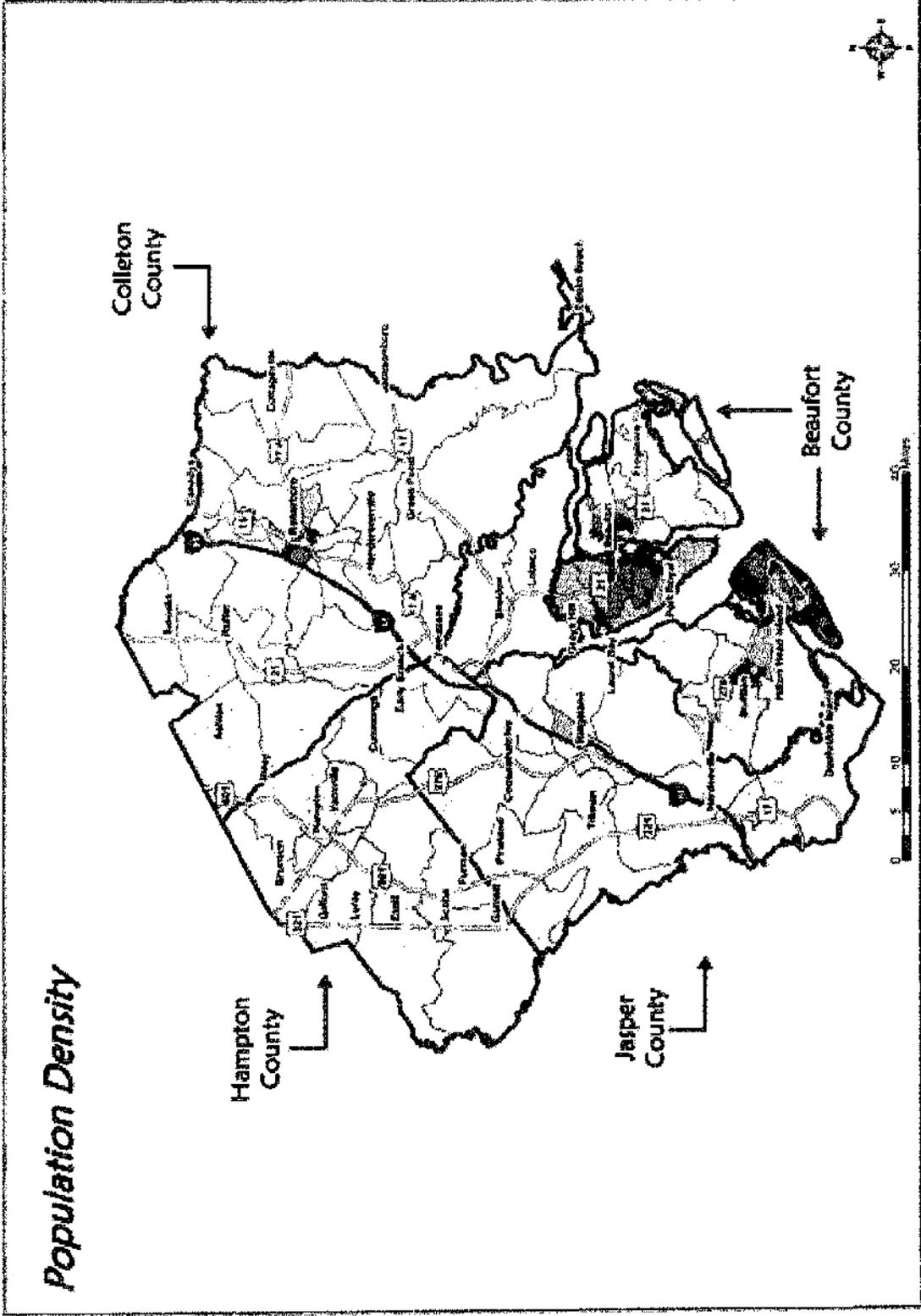
**Table 2
Population Densities**

Area	Persons/Square Mile of Land Area
Beaufort County	206.1
Colleton County	36.2
Hampton County	38.2
Jasper County	31.5
Lowcountry Region	70.4
South Carolina	133.2
Charleston County	337
Horry County	173
Chatham County, GA	528

Source: U.S. Census 2000

Comparative density information for three southeastern coastal areas (Horry County, SC, Charleston County, SC and Chatham County, GA) is presented in Table 2 to provide a perspective on the region's density patterns. Chatham County and Charleston County both have much higher population densities, at 528 and 337 people per square mile of land area, respectively. The population density of Horry County (173 people per square mile of land area) is slightly less than that of Beaufort County.

Figure 5 illustrates population densities by census block group. Population densities are in the low range (less than 100 people per square mile of land area) outside of the main towns in Colleton, Hampton and Jasper Counties. The census block groups with the highest population densities (over 1,600 people per square mile of land area) are in the City of Beaufort, Laurel Bay, sections of Hilton Head Island, Bluffton and Walterboro.



**Population per Square Mile
By Census Block Group**

800.1 and Above
400.1 - 800.0
200.1 - 400.0
100.1 - 200.0
100.0 and Below

**Population per Square Mile
Comparative Statistics**

Block Group Average - LCCG Region	571.8
Total Households - LCCG Region	70.4
Total Households - South Carolina	133.2

Cities / Towns Interstate US Route
 Interstate State Route
 County Boundary

Figure 5

Source: US Census Bureau 2000 and GIS.
The map is intended for planning purposes only.



The settlement pattern in Colleton, Hampton and Jasper Counties is characterized by small towns separated by relatively long distances. The county seats of Walterboro, Hampton and Ridgeland are the largest incorporated areas in each county and serve as important destinations for medical, government, commercial and private business trips.

The northern and southern sections of Beaufort County have a contrasting settlement pattern, with the northern area being more rural, with lower population densities, while the southern section has higher densities. The City of Beaufort, the County seat, is the region's largest city, with a population of 12,950 in 2000. The City of Beaufort and the adjacent community of Port Royal house important services for both Beaufort County and the region as a whole, including major medical facilities, post secondary education, and commercial and human services. The Bluffton/Hilton Head Island area in the southern part of the county has extensive residential, commercial/retail, resort and tourism development.

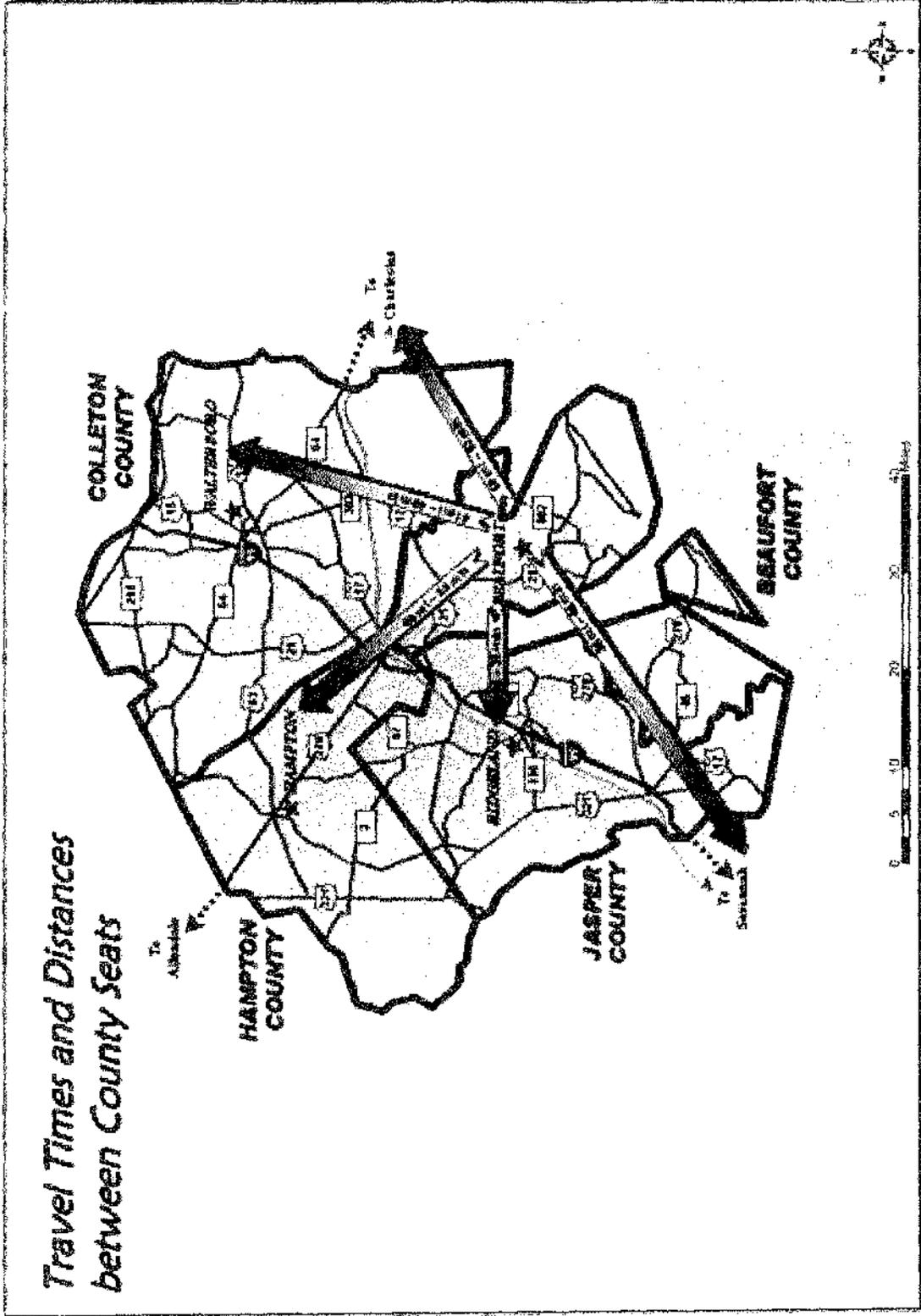
Figure 6 presents the travel times and distances between the City of Beaufort and each county seat, as well as the neighboring cities of Savannah and Charleston. Within the region, mileages vary from 38 miles to Ridgeland to 46 miles from the Town of Hampton. The mileage between Walterboro and the City of Beaufort falls in between, at 41 miles. Savannah is the closest large city, located 38 miles to the south, while Charleston is 69 miles to the northeast.

Economic Development Pattern

Economic development patterns within the region are also highly contrasted. Beaufort County has 64% of the region's jobs. The other three counties have much smaller shares, with Colleton County at 17.2%, Jasper County at 9.9% and Hampton County at 8.7%. Figure 7 illustrates the location of important travel destinations in the region, including major employers and tourism attractions. Employers with a workforce of over 20 employees are noted on the map. Hospitals and medical centers, as well as the other health care services that typically locate within close proximity, also serve as major destinations for regional residents.

Tourism is the region's largest industry, employing significant numbers of people in a variety of businesses. Hilton Head Island generates the largest number of visitors annually, averaging 2.5 million visitors per year between 1998 and 2000. The tourism businesses on Hilton Head Island and along the US 278 corridor to Bluffton include hotels, resorts, restaurants and entertainment facilities. Other primary tourism centers in the region include Hunting Island, the City of Beaufort, and Colleton County's ACE Basin and Edisto Beach.

Over 8,000 people, the region's largest employment concentration, are employed at the three military installations (the Marine Corps Air Station Beaufort, Marine Corps Recruit Depot Parris Island, and the Naval Hospital Beaufort). Hilton Head Factory Stores, located on US 278 between Hilton Head Island and Bluffton, has the largest concentration of retail employees, with approximately 1,000 people employed at the two outlet locations. Area hospitals and health centers are also major employers, with those in the City of Beaufort, Hilton Head Island, and Walterboro having the largest workforces (1,100, 600 and 513 employees, respectively). Smaller centers in other communities, including Ridgeland, Varnville, and Estill, exhibit smaller numbers of workers, ranging between 93 to 200 employees.





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While the area school districts employ a significant number of the region's residents, most of the employees work at the numerous schools dispersed throughout the region. County governments also employ significant numbers of employees, especially Beaufort County with 1,100 employees. Other employment locations with significant numbers of employees include the Federal Prison Center and Correctional Institute in Estill and the Ridgeland Correctional Institute in Ridgeland, as well as numerous small businesses and industries throughout the four counties. The US Marine Corps and Navy together are one of the region's largest employers, providing a total of 6,356 active duty military and 1,693 civilian jobs. The tourism industry is the region's other major employer.

Chatham County, Georgia, and Charleston are the most important out of region destinations for employment. Charleston is the main destination for Colleton County residents, while Chatham County is the main destination for Beaufort County residents.

The unemployment rate varies throughout the region, as indicated in Figure 8 below. Beaufort County always has the lowest unemployment rate; Hampton County has the highest.

**Figure 8
Unemployment Rates**

	July 2001	October 2001	January 2002	April 2002	July 2002	October 2002	January 2003	April 2003
Beaufort County	2.5	2.5	3.5	2.3	2.6	2.4	3.4	2.5
Colleton County	5.4	4.7	5.3	5.4	6.1	5.7	6.8	6.7
Hampton County	6.3	6.0	6.7	7.1	8.0	8.0	8.8	9.0
Jasper County	3.4	3.5	4.7	4.1	4.5	4.0	5.9	4.6
South Carolina	5.0	5.5	5.4	5.8	5.2	5.6	6.3	6.1
United States	4.6	5.4	5.6	6.0	5.9	5.7	5.7	6.0

Source: South Carolina Labor Market Information

Development Trends

Recent and projected development trends were reviewed to provide an indication of existing and future needs for transit services. The Lowcountry Region has experienced extensive development over the past decade, with its population increasing by 30.3% (over 46,000 residents) between 1990 and 2000. This growth rate was twice as high as the state's, which increased by 15.1% over the same period.



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Of the four counties in the region, Beaufort County experienced the highest growth rate, with its population increasing by 34,000 residents, or 39.9%. Jasper County also experienced a high rate of growth rate, adding 5,191 residents for a 33.5% increase. Hampton County's growth rate of 17.6% (3,191 residents) was more in line with the state average of 15.1%. Colleton County is the only county in the region that grew slower than the state average, increasing by 3,887 residents for an 11.3% increase. Table 3 presents the specific population trends experienced by the four counties, the region, and the state.

**Table 3
Population Trends (1990 – 2000)**

Area	1990 Population	2000 Population	Percent Increase
Beaufort County	86,425	120,937	39.9%
Colleton County	34,377	38,264	11.3%
Hampton County	18,191	21,386	17.6%
Jasper County	15,487	20,678	33.5%
Lowcountry Region	154,480	201,265	30.3%
South Carolina	3,486,703	4,012,012	15.1%

Source: US Census 2000

LCOG's planning department monitors development patterns and anticipated development trends in the region. The City of Beaufort and the US 278 corridor between Hilton Head and I95 have experienced the most development activity, with extensive residential and commercial development occurring within the latter part of the past decade. LCOG projects future development in the region will continue to follow current trends.

- **Beaufort County**
 - Continued commercial development along the US 278 corridor from Hilton Head to Sun City.
 - Extensive residential development in southern Beaufort County.
 - Additional residential and commercial development in northern Beaufort County (City of Beaufort, Town of Port Royal, and Lady's Island).
- **Jasper County**
 - Continued residential, commercial and industrial development in the southern portion of the county between Sun City and I95.
 - Development of a new commercial/industrial node near the proposed port.
- **Hampton County**
 - Increased residential development.



- Colleton County
 - Continued tourism development based on ecotourism/ACE Basin.
 - Increased residential development in the rural areas.

- Lowcountry Region
 - Continued commercial and industrial development at key I95 interchanges, including Walterboro, Yemassee, Ridgeland and Hardeeville.

Existing Travel Patterns

Commuting patterns within the region reflect economic development, as depicted by key statistics pertaining to work travel patterns provided in Table 4. Similar to most southeastern states, travel in the Lowcountry Region is primarily oriented to the automobile. Approximately 71% of the region's employees drove to work alone, a rate slightly lower than the South Carolina average of 79.4%. Carpooling rates in Jasper, Colleton and Hampton Counties were higher than the South Carolina average of 14%, at 25.8%, 21.6% and 19.1%, respectively. Although public transit usage is higher than the state average, it is still low compared to carpooling. The low-income level of a large segment of the population, long distances between major employment locations and residences, and limited amount of public transit service available are the probable reasons for the region's high carpooling rate. The large number of people carpooling represents a potential public transit market.

**Table 4
Work Travel Patterns**

Area	Drive Alone	Carpool	Use Public Transit	Average Travel Time	Work at Home	Work Outside County of Residence	Work Outside State of Residence
Beaufort County	71.2%	14.4%	1.2%	23.3 min.	4.7%	2.1%	3.2%
Colleton County	72.0%	21.6%	1.3%	32.7 min.	2.0%	30.0%	2.0%
Jasper County	68.4%	25.8%	1.2%	34.2 min.	1.6%	30.2%	4.3%
Hampton County	73.2%	19.1%	1.6%	33.1 min.	2.1%	42.0%	4.2%
South Carolina	79.4%	14.0%	0.8%	24.3 min.	2.1%	n/a	

Source: US Census 2000

A high percentage of Colleton, Jasper and Hampton County residents work at jobs outside their county of residence (30.0%, 30.2% and 42.0%, respectively). The considerable amount of intraregional commuting focuses on traveling to tourism and hospitality industry jobs in southern



Beaufort County. Table 5 presents the work trip patterns to Beaufort County from the other three counties. As can be seen, an overwhelming majority of the Jasper County residents working outside their county are employed in Beaufort County. A low percentage of all county residents work at out of state jobs, with Chatham County, Georgia being the main out of state work place destination.

**Table 5
Workers Destined to Beaufort County**

County	Work Outside County of Residence	Work in Beaufort County
Colleton County	4,790	1,167 (24.4%)
Hampton County	2,521	1,213 (48.1%)
Jasper County	3,785	3,501 (92.5%)

Source: US Census 2000

The concentration of business and tourism development in the southern Beaufort County area, combined with commuting patterns, results in significant traffic congestion on several roads in Beaufort County, including US 278, US 17 near the Savannah River, SC 46 in and near Bluffton, SC 21, and SC 170 in the Beaufort area. A lack of alternative routes further contributes to the congestion.



3 Existing Service Profile and Assessment

Many transportation services are provided in the Lowcountry Region through a variety of private and public sector organizations. The services include public and private transportation, human service transportation, and Medicaid transportation. These services were reviewed to determine how existing transit needs in the community are being served and identify potential opportunities for new or enhanced services.

Public Transportation

The Federal Transit Act defines public transportation as "transportation by bus or rail, or other conveyance, either publicly or privately owned, providing to the public general or special service (but not including school buses or charter or sightseeing service) on a regular and continuing basis. Public transportation is also synonymous with the terms mass transportation and transit."¹ The three agencies involved in providing public transportation services in the LCOG area are Lowcountry Regional Transportation Authority, Greyhound and Amtrak.

Lowcountry Regional Transportation Authority

Lowcountry Regional Transportation Authority (LRTA) is the public transit provider in the region. LRTA was preceded by the Beaufort-Jasper Regional Transportation Authority, which was formed in 1978 to provide transit service in Beaufort and Jasper Counties. The transit program focused on transporting passengers to jobs on Hilton Head Island and points in-between. In 1984, the Authority was expanded to include Allendale, Colleton, and Hampton Counties, with service continuing to focus on transporting residents of more rural areas to jobs in Beaufort County. To reflect the addition of these counties, the Authority's name was changed to Lowcountry Regional Transportation Authority (LRTA).

Demand response service was initiated by LRTA in 1997 to serve some Beaufort County destinations. Additional service focused on transporting employees to work was initiated under the Federal Job Access and Reverse Commute Program (JARC) in 2001. In addition to public transit service, LRTA provides some limited contract transit service to a number of groups, including Beaufort County Department of Social Services.

LRTA receives federal rural transit funding under the Federal Transit Administration's (FTA) Section 5311 funding program. This funding covers some of the system's operating expenses. Local funding is provided by the five member counties, as well as the Town of Hilton Head Island. Beaufort County and the Town of Hilton Head Island contribute the largest shares, at 42% and 34%, respectively. Additional funding is provided by passenger fares and SCDOT.

Services Operated

LRTA operates three types of service:

- Fixed route commuter service
- Demand response service

¹ NTD Reporting Manual – Glossary of Transit Terminology



- Job Access and Reverse Commute (JARC) and contract service

The following provides an overview of these services.

Fixed Route Commuter Service

LRTA operates eight fixed routes throughout its service area. Two of the routes are seasonal and only operate during the summer months. All of the counties in the Lowcountry Region, as well as Allendale County, are served by the fixed route system.

The fixed route system is illustrated on Figure 9, which delineates the public and private transportation programs operating in the region. The fixed routes provide service in one direction during peak periods: transporting commuters to jobs in Beaufort County in the morning and returning them to their communities in the late afternoon and evening. One daily round trip is provided on each route. The routes connect in Bluffton, with passengers transferring to routes serving different destinations on Hilton Head Island. The current transfer center is located in the Holiday Inn Express parking lot off US 278 in Bluffton. Buses are serviced and cleaned at LRTA's facility in Bluffton during the midday period, prior to embarking on their return trip.

The round trip route mileages range from 73 miles (Route 309 – Dale) to 152 miles (Route 320 – Walterboro). Passenger fares range from \$1.50 from Bluffton to Hilton Head to \$2.80 for service to Colleton County and Hampton County destinations. Passenger fares currently cover approximately 28% of the operating costs. Service is provided seven days a week, 364 days a year, with a fleet of eight large 47 - 49 passenger over-the-road motor coaches.

Demand Response Service

Demand response service is a shared ride service provided on a space available advance reservation basis with small vans. LRTA provides the service to Beaufort County destinations only. The fare charged to passengers is dependent upon the distance traveled, with fares ranging from \$6.00 to \$15.00 for a one-way trip.

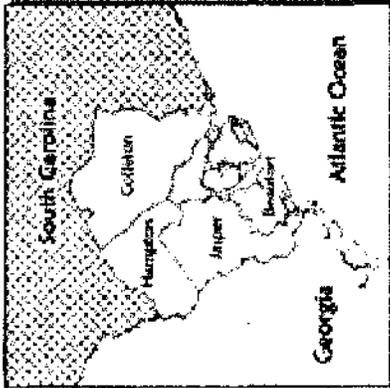
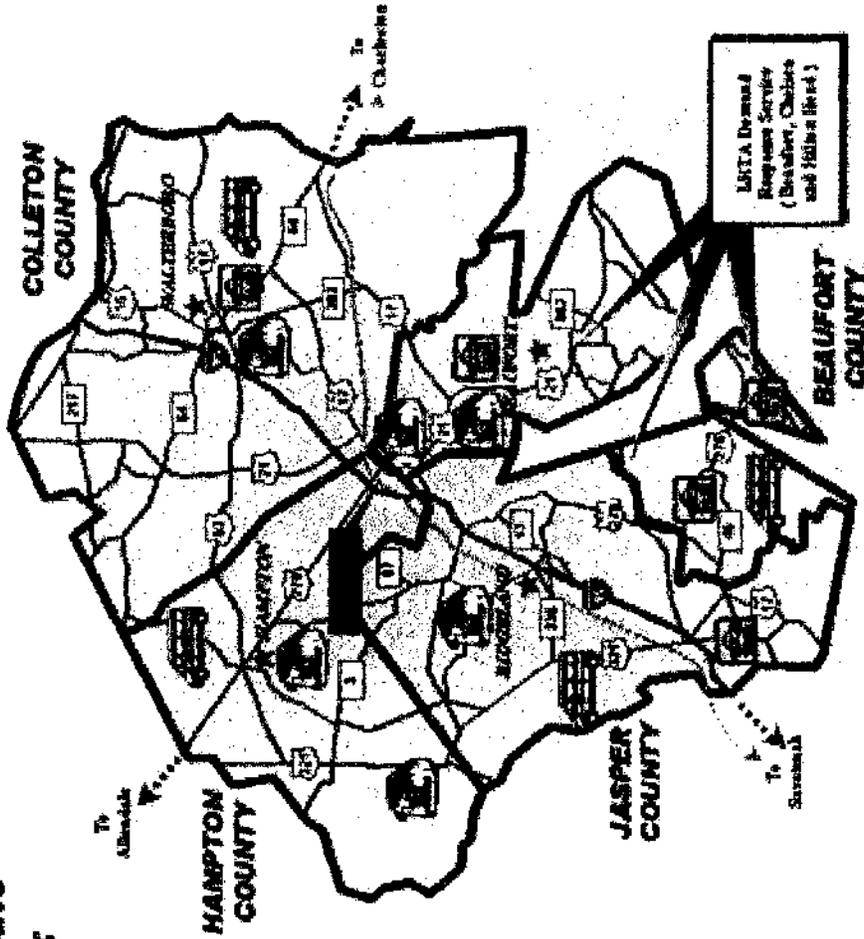
Job Access and Reverse Commute (JARC) and Contract Service

The federal Job Access and Reverse Commute (JARC) Program provides funding for transportation services designed to connect welfare recipients and low-income citizens to employment and support services. LRTA is financing three routes with JARC funds:

- Route 502 – operating between St. Helena Island and Beaufort.
- Route 501 – operating between Dale, Burton and Beaufort.
- Route 503 – operating between Bluffton and Hilton Head Island.



Public and Private Transit Services



Public and Private Transit Services

LEGEND

- LRTA Bus Station (Rapid and Demand)
- ATC Tote-ITX Modified Service
- AMTRAK - Veonary
- Taxi Service
- Commuter Bus Service

- County Seat
- Subway
- Interstate
- US and State Routes
- County Boundary

Figure 9

Source: 100% and Day Services Analysis, Inc.
This map is intended for planning purposes only.



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All three routes operate solely in Beaufort County, with service provided in the morning and afternoon. The routes generally operate as fixed route services along established routes, with the buses making minor deviations to serve destinations off the routes at designated points.

Service Assessment

To assess the services provided by LRTA, the following analyses were conducted:

- Reviewed service, ridership and cost information for each specific service.
- Calculated performance measures for key aspects of the service.
- Calculated a four-year trend for service, ridership and cost parameters as well as the performance measures.
- Compared LRTA's service with a number of similar transit programs.

LRTA Service, Ridership and Cost

Table 6 presents FY 2002 service, ridership, cost and fares information for the three services operated by LRTA.

**Table 6
Hours, Ridership, Cost and Passenger Fares by Service Type
LRTA Services – FY 2002**

Service Type	Fixed Route Service	Demand Response Service	Contract/JARC Service	Total Service
Service Hours (% of Total Service)	14,102 (59%)	872 (3.6%)	8,954 (37.4%)	23,928
Operating Cost (% of Total Cost)	\$845,545 (65.1%)	\$69,169 (5.3%)	\$384,493 (29.6%)	\$1,299,207
Ridership* (% of Total Ridership)	105,811 (82.2%)	3,111 (2.4%)	19,742 (15.4%)	128,664
Passenger Fares (% of Total Fares)	\$238,016 (85.2%)	\$15,612 (5.6%)	\$25,791 (9.2%)	\$279,419

Source: 606 Forms submitted by LRTA to SCDOT

*Ridership is reported as linked passenger trips – one person making a one-way trip from origin to destination.

LRTA's operating expenses were approximately \$1.3 million in FY 2002. The fixed route service accounted for the largest portion of the budget (65.1%), followed by JARC/contract service (29.6%), and demand response service (5.3%).

LRTA is operating approximately 14,000 revenue hours of service annually. Most of the service is being operated on the fixed route system - 60% of the total service. The fixed route service is carrying a greater proportional share of the system's riders - 82% of total system ridership.



Approximately 150 people are being carried on the fixed route service each day, at an annual cost of approximately \$5,800 per passenger.

The least amount of service is being operated on the demand response program – 4% of the total service, or approximately 3.5 hours/day. The demand response service carries the fewest riders of the three services - approximately eight people per day, at a cost of approximately \$44 per day per passenger. The demand response service is also carrying additional passengers as part of the LRTA's contract with the Beaufort County DSS office.

Over one-third of LRTA's service is being operated as contract/JARC service, approximately 9,000 revenue hours annually. The contract/JARC service transports approximately 40 people per day on the three routes. The service costs more proportionally to operate than the number of passengers being carried – 30% of system costs and 15% of system ridership.

Performance Measures

Performance measures are used to evaluate how individual transit programs and services are performing. They provide a mechanism for an assessment of the efficiency, effectiveness, and overall benefit of services or individual programs, and to identify areas for improvement.

Three performance measures used to evaluate LRTA's services are effectiveness, efficiency, and farebox return. **Effectiveness** assesses the productivity of the system or individual route in terms of ridership per unit of service. A standard effectiveness measure in the transit industry is "ridership per revenue vehicle hour," or the number of passengers carried for each hour that the bus is in service.

Efficiency measures indicate how costly a transit system or route is to operate. Measures used to assess transit service efficiency include "cost per revenue vehicle hour," "cost per revenue vehicle mile" and "cost per passenger trip".

Farebox return delineates the amount of operating cost that is covered by passenger fares. Two variables affecting farebox return are the ridership levels and the fare structure. Information on farebox return is important for understanding how the service and the individual routes are being funded, and the amount of subsidy that is being required for costs that are not covered by passenger fares.

Performance measures were calculated for the three services operated by LRTA. Table 7 presents the performance measures for each service type for the FY 2002 year.



**Table 7
Performance Measures by Service Type
LRTA Services – FY 2002**

Performance Measure	Fixed Route	Demand Response	Contract/JARC	All Services
Passengers/Revenue Hour *	7.5	3.57	2.2	5.38
Cost/Revenue Hour **	\$59.95	\$79.31	\$42.94	\$53.89
Cost/Revenue Mile**	\$1.92	\$4.03	\$2.09	\$2.01
Cost/Passenger Trip**	\$7.99	\$22.23	\$19.48	\$10.02
Farebox Return***	28.15%	22.57%	-	21.7%

Source: 606 Forms submitted by LRTA to SCDOT

* Passengers are reported as linked passenger trips (one-way trip from origin to destination)

** Expenses were allocated to the various services in the following way:

- operating costs - used LRTA assignment
- maintenance and administrative costs – based on the number of revenue hours operated

*** Farebox return is the percentage of operating costs that are covered by passenger fares; farebox return is not specified for contract/JARC service because many passengers do not pay a fare

The following summarizes the key findings relating to the performance measures:

Service effectiveness

- the fixed route service is the most productive service, operating at 7.5 passengers/hour
- the demand response and JARC/contract services are operating at lower productivity levels – 3.6 passengers/hour and 2.2 passengers/hour, respectively

Service efficiency

- the demand response service is the most expensive service, with costs averaging \$79.31/hour
- the fixed route and JARC/Contract services are more cost efficient, with costs averaging \$59.95/hour and \$42.94/hour, respectively
- the fixed route service has the lowest unit cost per passenger trip carried and mile of service operated – at \$1.9/mile and \$7.99/passenger trip

Farebox return

- LRTA's overall farebox return is 21.7%
- the fixed route system has the highest farebox return – at 28%, with the demand response service slightly lower at 22.6%



Individual routes on the fixed route system were evaluated from a service effectiveness perspective. There is a wide variation in the performance of individual routes. Three routes are operating at over eight passengers per hour: Route 309 – Big Estates, Route 311- Allendale, and Route 320 – Walterboro. Three routes operate at between five and eight passengers per hour, with the two seasonal routes operating in the very low range, below five passengers per hour. An outline of the ridership, revenue hours, passengers/revenue hour for each route and the overall fixed route system is presented in Table 8.

Trends

LRTA's service patterns, ridership and operating expenses were reviewed over the past four years. Table 9 presents this analysis.

Between 1999 and 2002, the amount of service operated by LRTA was reduced, with service hours declining by 34% (12,000 revenue hours). Most of the service reductions have been made to the fixed route services, with service levels decreasing by 33% or 7,000 hours.

Ridership has decreased by a greater amount - 44%, or approximately 100,000 passenger trips. Most ridership reductions have occurred on the fixed route service; fixed route ridership declined by 43.9% or 82,000 trips.

Although annual operating costs have decreased by 2.8%, the cost per service hour and the cost per passenger trip experienced significant increases, 46.1% and 72%, respectively. Service productivity, as measured by passengers per revenue hour, decreased by 15%. Farebox return declined by 36%, from 33.9% in 1999 to 21.7% in 2002.

Peer Agency Comparison

LRTA services were compared with other transit systems to provide an indication of how the service is performing. It should be noted, however, that there are limitations with performing peer agency comparisons in rural areas for a number of reasons, including:

- There is no national source for service, cost and ridership data for rural systems, similar to the National Transit Database reports for urban transit agencies.
- System wide comparisons are frequently not meaningful as performance measures vary greatly with the type of service operated i.e. fixed route, demand response, and contract service. Information on the individual services is often difficult to obtain because many smaller systems do not compile data by service type. When they do, they often use different methodologies for the assignment of specific costs, such as administrative costs.
- Several factors have a major influence on rural service performance, including the size of the service area, the length of passenger trips, and the transportation characteristics and conditions of the area.



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**Table 8
Fixed Route Services
LRTA – FY 2002**

Route #	Ridership*	Revenue Hours	Passenger Fares Collected	Passengers/Revenue Hour	Average Fare/Passenger Trip	Operating Cost**	Cost Per Passenger Trip
302 St. Helena	11,022	1,884	\$18,940	5.85	\$1.72	\$112,945.80	\$10.247
307 Gifford	14,767	1,993	\$39,336	7.41	\$2.66	\$119,480.35	\$8.09
308 Pineland	10,742	2,135	\$26,543	5.03	\$2.47	\$127,993.25	\$11.92
309 Big Estate	14,872	1,806	\$28,553	8.23	\$1.92	\$108,269.70	\$7.28
310 Hampton	2,117	513	\$5,619	4.13	\$2.65	\$30,754.35	\$14.53
311 Allendale	27,279	2,940	\$65,336	9.28	\$2.39	\$176,253.00	\$6.46
312 Beaufort	6,347	1,921	\$10,758	3.3	\$1.69	\$115,163.95	\$18.14
320 Walterboro	18,665	2,024	\$54,660	9.22	\$2.93	\$121,338.80	\$6.50
Total	105,811	15,216	\$249,745	6.95	\$2.36	\$912,119.20	\$8.62

* linked passenger trips - number of one-way trips made on the service

** based on average operating cost per hour of \$59.95

Source: 606 Forms submitted by LRTA to SCDOT



Table 9
LRTA Service, Ridership, and Cost Trends
(1999-2002)

	1999	2000	2001	2002	% Change 1999-2002
Operating expenses	\$1,336,877	\$1,535,357	\$1,278,171	\$1,299,207	-2.8%
Revenue miles	858,152	1,252,745	616,714	641,401	-25.0%
Revenue hours	36,237	53,277	22,926	23,928	-34.0%
Linked passenger trips*	229,555	269,731	157,493	128,664	-44.0%
Passenger trips/rev. hour	6.33	5.06	6.87	5.38	-15.0%
Cost/passenger trip	\$5.82	\$5.69	\$8.12	\$10.02	72.2%
Cost/revenue mile	\$1.56	\$1.23	\$2.07	\$2.01	28.8%
Cost/revenue hour	\$36.89	\$28.82	\$55.75	\$53.89	46.1%
Farebox return	33.94%	26.10%	29.38%	21.70%	-36.1%

*Linked passenger trips - number of one-way passenger trips
Source: LRTA Biannual 606 Forms submitted to SCDOT

The following summarizes the findings of the peer review by service type:

- LRTA's fixed route service productivity, as measured by passengers/revenue hour (6.95), is low compared to other commuter bus services, as outlined in Table 10. The long routes and additional time associated with the transfer in Bluffton are key factors contributing to the low productivity.
- The productivity of LRTA's demand response service is in the mid-range (3.89 passengers per revenue hour) compared to other South Carolina rural demand response services (Table 11).



**Table 10
Commuter Bus Service Peer Review**

System and Service	Passengers/ Revenue Hour	Total Cost/ Trip*	Notes
LRTA, Bluffton, SC Fixed Route Commuter Bus Service	6.95	\$8.62	- service operates in the peak direction only, with a transfer connection and circulation on Hilton Head Island - 60 mile average trip length - \$59.95/hour cost
PDRTA, Florence, SC Marion -Conway - Myrtle Beach Express	8.31	\$4.41	- service operates in the peak direction with a reverse haul, as well as circulation in Myrtle Beach - statistics are for the complete service - 45-50 mile average trip length - \$37/hour cost
Loudoun County Transit, Loudoun County, Virginia Loudoun Co. - Washington DC Commuter Service	10.74	\$7.56	- service operates in the peak direction only - 40 mile average trip length - \$81.14/hr cost
Charlotte Area Transit, Charlotte, North Carolina Rock Hill -Charlotte Express	17.23	\$2.62	- service operates in the peak direction with a reverse haul - statistics are for the peak direction only - 25 mile average trip length - \$62/ hour cost
Cobb Community Transit, Marietta, Georgia Cobb County - Atlanta Express Bus Service	30.8	\$2.27	- service operates in the peak direction with a reverse haul on most trips - statistics are for the peak direction only - 25 mile average trip length - \$60/hour cost
Average of Five Commuter Services	14.81	\$5.10	

* One-way passenger trips

Sources:

LRTA, 606 forms from January to June 2002

PDRTA, staff based on 2002 information

Loudoun County Transit, 2001 NTD report and Loudoun County Website

Charlotte Area Transit, staff based on January to June 2002 information

Cobb Community Transit, staff based on 2002 information



**Table 11
South Carolina Rural Demand Response Services Comparison**

Agency	Gen. Unlimited	LRTA	Lymo	PDRTA	Spartanburg	Williamsburg	Six Agency Average
Passenger Trips	28,332	1,829	11,609	211,971	46,488	5,570	50,966
Veh. Rev. Hours	9,956	470	8,592	57,725	10,636	1,217	14,766
Veh. Rev. Miles	250,368	8,012	142,760	1,346,441	151,946	11,239	318,461
Trips/Veh. Rev. Hour	2.84	3.89	1.35	3.67	4.37	4.58	3.45
Trips/Veh. Rev. Mile	.113	.229	.008	.157	.306	.496	.16

Source: 608 Reports submitted to SCDOT:
 Generations Unlimited, Barnwell County
 Lowcountry Regional Transportation Authority, Bluffton
 Lymo-Waccamaw Regional Transportation Authority, Conway
 Pee Dee Regional Transportation Authority, Florence
 Spartanburg County, Spartanburg
 Williamsburg County Transit, Kingstree
 Statistics cover a six-month period from January to June 2002

Greyhound

Greyhound's intercity bus service operates in the Lowcountry Region, linking many cities and towns, as well as providing connections to destinations outside the region. The Greyhound service operates out of four stations in the region, where passengers purchase tickets and access routes: Beaufort, Hampton, Walterboro and Ridgeland. In addition, Greyhound has several other stops where passengers can access the service.

Four routes operate through the region:

- Charleston – Jacksonboro – Walterboro – Yemassee - Gardens Comer - Marine Air Station - Beaufort - Savannah
- Branchville - Smoaks – Walterboro – Yemassee – Gardens Comer - Marine Air Station – Beaufort - Savannah
- Bamberg – Hampton - Savannah
- Fairfax - Estill - Savannah

These routes connect a number of communities within the region and also extend to several distant locations outside the region. The amount of service and service hours varies between the various routes. Two daily round trips are operated on the routes operating between Charleston and Savannah and Walterboro and Savannah. One daily round trip operates on the Hampton to Savannah and Estill to Savannah routes.

Some communities are not directly connected with Greyhound's service, such as service



between the City of Beaufort and the Towns of Hampton and Estill. Passengers must first travel to Savannah and then transfer to another bus heading back into the region to travel between the City of Beaufort and these towns.

The round trip adult fares for travel on the routes varies from \$46.50 for service between Hampton and the City of Beaufort and Charleston and the City of Beaufort, \$22.25 for service between Savannah and the City of Beaufort, to \$15.25 for service between Jacksonboro and Walterboro.

Amtrak

The Yemassee Rail Station is the only Amtrak passenger rail station in the LCOG region. Amtrak provides daily passenger rail service to and from Yemassee on the "Silver Meteor", which operates between New York and Jacksonville, Florida on the CSX Rail line. The first stop to the south is Savannah, which is also the most convenient destination for a day trip.

The morning train departs Yemassee at 8:47 AM, arriving in Savannah at 9:39 AM. The evening departure leaves Savannah at 6:29 PM, arriving in Yemassee at 7:17 PM. The current round trip fare is \$27.00.

For destinations to the north, the first stop is Charleston. The service departs at 7:17 PM and arrives in Charleston at 8:14 PM. In the southbound direction, the service leaves Charleston at 7:57 AM, arriving in Yemassee at 8:47 AM. The current round trip fare between Yemassee and Charleston is \$27.00.

Annual ridership at the Yemassee Amtrak station, which includes passengers boarding or alighting at the station, was 7,866 passengers in 2002.

Human Services Transportation

Human services transportation refers to the transportation of clients of human or social service agencies. The service is typically provided for medical, education, employment or recreational needs. The clients frequently represent special groups, such as seniors, people with mental and physical disabilities, and low-income residents.

In the Lowcountry Region, interviews were conducted with 26 human service agencies to obtain information on the type of transportation services they operate as well as input on the transportation needs of their clients. While these organizations do not represent all of the human service agencies located in the region, the sample is large and representative of all the different types of agencies operating in the area. A list of the agencies interviewed and a summary of their transportation programs is outlined in Table 12.

The services provided vary and include physical and mental health services, aging programs, employment assistance, substance abuse programs, rehabilitation and training programs for the disabled, and literacy and language programs. Many of the programs are oriented to groups

Table 12
Human Service Agencies Providing Transportation Services

Agency	County	Function	Location	# Veh.	Trips/ Month	Miles/ Month	Miles/ Trip	Destinations
Department of Social Services	Beaufort	Assistance programs, training, child custody	Beaufort	14 cars, vans	15,000	N/A	N/A	<ul style="list-style-type: none"> • Beaufort County
	Colleton	Assistance programs, training, child custody	Walterboro	6 cars, vans	200 plus	22,000	89	<ul style="list-style-type: none"> • Hampton for training • Within county for dialysis • Charleston, Savannah
	Hampton	Assistance programs, training, child custody	Hampton	8 cars, vans	340	80,000	60	<ul style="list-style-type: none"> • Beaufort, Colleton, Jasper Counties • Savannah, Augusta, Charleston, Columbia, Aiken
	Jasper	Assistance programs, training, child custody	Ridgeland	7 vans, cars	10	2,000	80	<ul style="list-style-type: none"> • Bluffton, Hilton Head, Beaufort • Savannah
Council on Aging	Colleton	Provision of assistance to seniors	Walterboro	11 vans	300	20,000	60	<ul style="list-style-type: none"> • Colleton and other areas • Within region for medical appointments • Charleston, Savannah
	Hampton	Provision of assistance to seniors	Hampton	6 vans	67	20,000	47	<ul style="list-style-type: none"> • Estill, Fairfax, Savannah
	Jasper	Provision of assistance to seniors	Ridgeland	7 cars, vans	250	17,000	61	<ul style="list-style-type: none"> • Mostly Jasper County • Other trips Hampton, Beaufort, Colleton



Table 12 (continued)
Human Service Agencies Providing Transportation Services

Agency	County	Function	Location	# Veh.	Trips/ Month	Miles/ Month	Miles/ Trip	Destinations
Board of Disabilities	Colleton	Provision of services to the disabled: vocational training, residential placement	Walterboro	23 vans	252	134,350	70	<ul style="list-style-type: none"> • Colleton and Beaufort Counties • Charleston for medical
	Jasper	Provision of services to the disabled: vocational training, residential placement	Ridgeland	15 vans	3020	100,757	30	<ul style="list-style-type: none"> • Beaufort County • Savannah, Charleston
Coastal Empire Mental Health		Provision of mental health services	Varnville	2 vans	20-30	34,472	75	<ul style="list-style-type: none"> • To office or Beaufort • Memorial Hospital • Charleston Hospital
Beaufort, Jasper, Hampton Comprehensive Health		Provision of health care services to rural families	Beaufort	1 van	15	10,000	75	<ul style="list-style-type: none"> • Beaufort, Jasper, Hampton Counties • Charleston





typically needing transit services, including seniors, the disabled, low income and unemployed residents. Low-income residents, in particular, constitute a large portion of many agencies' clients, with 22 of the agencies reporting a majority of their clients from this group.

Eleven of the agencies provide transportation to their clients with their agency vehicles. The number of vehicles in these agencies' fleets totals 100 vehicles. The vehicles operated include 15 passenger vans, minivans, and cars. Four of the agencies have over ten vehicles. The two largest fleets are operated by agencies providing services to the disabled – Colleton County Disability Board with 23 vehicles and Jasper County Board of Disabilities with 15 vehicles. Beaufort County DSS and Colleton County Council on Aging have 14 and 11 vehicles respectively.

The trips provided by the agencies are for a variety of purposes, including training, shopping, medical services, social visits, and to enable people to access special programs operated by the agencies. Agency vehicles are traveling to many locations in the region, with many transporting clients to services and programs in other counties. Beaufort County is a main destination for many of the trips, especially for medical appointments. Charleston and Savannah are the two main out of region destinations, with medical services also being the main purpose of these trips. Other out of region destinations are Aiken, Columbia, as well as Augusta and Ricon, Georgia.

Two of the agencies contract with providers for some of their agency transportation needs. Hampton County Department of Social Services contracts with ATC, the third party provider operating primarily out of Walterboro, and Beaufort County Department of Social Services contracts with LRTA. The Medicaid transportation program transports some of the agency clients to the mental and physical health programs and services.

Agency representatives report that clients access agency services and programs through a number of other means, including friends and family members, and volunteers. In addition, a staff member with one agency indicated that he has transported clients in his personal vehicle, and in another case, a staff member travels to see customers when they do not have transportation.

All of the agencies reported that many clients do not have access to transportation for a variety of trip purposes, including health care, employment, training, shopping, socializing, and adult education at all levels. Factors which make the transportation issue more of a challenge to address include the large service area, and the long distance between clients' residences and key destinations.

None of the agencies reported any formalized arrangements with other agencies for the transportation of clients although there is some informal cooperation from time to time.

Title XIX/Medicaid Transportation

Medicaid transportation refers to the provision of transportation for people receiving Medicaid assistance to medical services and facilities. The transportation is a federal requirement, with the service provision responsibility resting with the State.

ATC, a private transportation company, is currently under contract to the South Carolina Department of Health and Human Services (SCDHHS) for the provision of Medicaid



transportation in the Lowcountry Region. This service is administered from ATC's Walterboro office.

The Medicaid service is provided on a reservation, shared ride basis. Client eligibility is determined by South Carolina Department of Social Services (SCDSS) officials, and approved on an individual trip basis. Currently seven vans are used to transport approximately 11,000 passenger trips monthly. Most of the service is provided on weekdays, with some evening and weekend service also provided. The service cost is reimbursed on a passenger mile basis.

Service is provided to medical services and facilities within the region, as well as to medical centers outside the region. The main out of region destinations are Charleston and Savannah. Transportation is also provided to adult daycare centers, with Medicaid reimbursing costs for daycare center trips that exceed 15 miles. The individual adult daycare centers reimburse costs for trips that are less than 15 miles. The main adult daycare centers are in Walterboro, Ridgeland and Beaufort. ATC also provides transportation for Hampton County residents attending an adult daycare center in Allendale County.

Challenges with the Medicaid transportation service include the dispersed location of the origins and destinations, and strict requirements for the actual service provision, such as when the transportation must be provided and the length of time that the passenger can be on the bus. The distance and frequent delays incurred with passengers' appointments creates additional challenges for the out-of-region Medicaid services.

Private Transportation

Private transportation includes all of the other specialized transportation services that are not covered under the definition of public service, including taxi, charter, and sightseeing service.

Taxi service is provided in five areas of the region: Hilton Head, Beaufort, Bluffton, Walterboro and Hardeeville. The taxis also can transport passengers outside of these areas upon request.

Sightseeing and charter services to the tourism and retiree markets are provided by two firms:

- Gray Line Hilton Head, provides sightseeing tours, charter service, transportation to the Hilton Head/Savannah airport. The company also operates shuttle service within the Sea Pines Plantation, under contract with the development company.
- Pointe Tours, based in Beaufort, provides sightseeing tours and a variety of charter services.

A number of private organizations, including resorts, hotels, churches, community organizations, private businesses, such as construction companies, assisted living centers, large residential developments, resorts and the military, operate limited transportation services for their members, clients or employees.

Overall Assessment

The preceding analysis revealed that the Lowcountry Region appears to have a significant population needing transit service. Three counties, Colleton, Hampton, and Jasper Counties, have high concentrations of groups traditionally identified as needing transit service – low-income residents and minorities. Portions of Beaufort County also have significant



concentrations of low-income residents and minorities, including St. Helena Island, small sections of Hilton Head, and the area northwest of the City of Beaufort. Sections of Hilton Head Island, Sun City, Fripp Island and Dataw Island also have higher concentrations of people 65 years of age and older, another group that often relies on transit for their mobility needs.

The economic conditions in the area, with greater employment opportunities in Beaufort County and lower housing costs and higher unemployment rates in the other three counties, have contributed to the prevalent transportation pattern in the region whereby residents are traveling into Beaufort County, and particularly southern Beaufort County, for employment. US Census 2000 statistics reflect this pattern, with a large number of the residents of the three counties employed at destinations outside of their home counties. Two of these counties, Colleton County and Hampton County, also have high carpooling rates. The low-income level of residents, the long commutes, and the limited public transit service available, appear to be the main factors contributing to this pattern. This has been identified as an opportunity for some form of public transit services.

The region has a number of businesses and facilities outside of southern Beaufort County area that employ significant numbers of people. These include hospitals and medical centers in the City of Beaufort, which is becoming a regional medical center, Walterboro and Vamville, the federal prison and correctional center in Estill, and industrial developments in Colleton, Hampton and Jasper counties. The cities and towns dispersed throughout the region also serve as important destinations for the surrounding residents for a variety of trip purposes, including medical, government, commercial and business trips.

LRTA, the region's public provider, operates most of its service in Beaufort County, the home of 60% of the region's population, the most densely populated county, and the location of major tourism and employment facilities, as well as medical, institutional, educational and government services. LRTA's operation includes the JARC service operated in a number of areas in the County, the limited demand response service in the County, as well as the trip end for all of the fixed route commuter services. Service to the other three counties is limited to the fixed route rush hour commuter service linking several towns and areas with southern Beaufort County.

Greyhound's intercity bus service is more oriented toward transporting passengers to destinations outside the region. The limited service and a lack of routes between many communities, more expensive fares, and limited information about the service are some of the factors which limit extensive use of Greyhound for intraregional travel. Amtrak's passenger rail service only accommodates out of region trips and is not available for intraregional travel.

Feedback from human service agencies, local planning officials, and businesses emphasized the important role that LRTA is playing in providing transportation to a number of region's residents to enable them to access employment, human and medical services, and shopping. However, the representatives indicated that there are many unmet transportation needs in the region because of the limited service operated by LRTA and the pattern of the service.

Residents of Colleton, Hampton and Jasper Counties do not have transit service to destinations other than southern Beaufort County, nor can they use transit to travel at times other than the one daily trip provided on LRTA's existing fixed route service. Although there are more transit options available for Beaufort County residents, the service is restricted to in-county destinations and has limited service hours.



Passengers face a number of challenges with the existing services. The limited service operated on the fixed route system - one trip in each peak period, and no midday and evening service, greatly limits passengers' ability to travel at other times. Trips are lengthy because of the distance between the passengers' communities and the region's major employment centers. In addition, the transfer arrangement in Bluffton, where all fixed route buses are routed to the central transfer center to await other buses, imposes additional travel time - approximately 20 minutes for trips in each direction.

The fixed route service pattern that has been in place for many years, with long one-directional routes oriented to southern Beaufort County, has significant cost implications because of the travel time and concentration of staff and capital resources to transporting a fairly small number of passengers. The eight routes, which decrease to six in the fall and winter period, are transporting approximately 150 people to work every day. The cost to the system for each person's transportation is approximately \$4,000 annually, over and above the passenger fares.

The JARC service implemented in 2001 has very low ridership and productivity patterns as well as high costs - 2.2 passengers per revenue hour and nearly \$20 for a one-way trip. Overall system performance has declined because 30% of LRTA's service has been shifted to the JARC service type.

The demand response service in Beaufort County comprises the smallest component of LRTA's program. The low ridership patterns are probably a result of several factors, including the limited amount of service available, high passenger fares, and limited marketing of the service.

LRTA is attempting to address challenges that it faces in providing public transit service. They have been successful in addressing two critical issues: improving the reliability of the commuter bus fleet and repaying most of an outstanding fuel debt to Beaufort County. Additional challenges, however, remain. They include the vast size of the region - 2,859 square miles, the low density and dispersed development pattern, limited technology, extensive service regulations, limited funding, and escalating costs for key components of the service, including insurance and fuel. Although operating costs have remained stable over the last four years, and have actually decreased by a small amount (2.8%), the cost control has been achieved through extensive service reductions. Service hours have declined by 34%, with most of the reductions occurring on the fixed route service. The system has correspondingly experienced significant ridership reductions, with ridership decreasing by approximately 44% or 82,000 passengers annually.

Although a number of human services agencies are providing some transportation to clients, it is oriented to providing them with access to specific programs and services. Most of the social service agency representatives reported that a large number of their clients need transportation for a variety of trip purposes which individual agencies are unable to serve. Low-income residents, in particular, were identified as having a great need for transportation services.

There does appear to be some duplication of transportation service in the region, as LRTA, Greyhound, human services transportation agencies and the Medicaid transportation provider are often traveling over the same roads and transporting people to the same destinations. At present, this service duplication is not being addressed as one agency does not have overall



responsibility for reviewing public and human and medical service needs in the region and determining the most effective way to respond to the needs. In addition, there is limited information available on the specific trip patterns of the individual agencies' services, or the amount of service actually being provided.

Despite these challenges, the region possesses a number of special attributes that present opportunities for an enhanced role for transit. The attributes include:

- A public transit operator with a long history of providing public transportation service;
- The presence of several successful private transportation programs and providers;
- A number of significant markets for additional transit services - tourism, post-secondary education institutions, the military, large residential developments, and out of region destinations;
- Widespread and growing interest amongst businesses, agencies, institutions and residents in finding solutions to transportation problems, and
- Established multi-jurisdictional planning bodies with experience in addressing regional issues.

The strategies for serving the area's transit needs will consider the challenges facing the provision of transit in the region while at the same time building upon these strengths.



4 Strategies for Service Enhancement and Coordination

The following section outlines a number of different alternatives to address transit needs. The alternatives are presented in three categories:

- Service type
- Delivery method
- Organizational structure for planning, administration and operation of transit service

For each category, information is presented on the various alternatives available. This is followed by an assessment of their potential application to the Lowcountry Region.

Alternative Service Types

A wide range of transit service alternatives were identified for potential application in the Lowcountry Region. Each alternative has general characteristics which were considered in determining whether they are appropriate for the area. The characteristics included the market segments served, factors affecting ridership, administrative and operating requirements, equipment and facilities requirements, cost and the implementation complexity. The focus of the assessment was to identify the type of alternatives which appear to have the greatest potential to serve regional transit needs over the next few years.

The alternatives reviewed included rail service, water taxi service, carpooling, vanpooling, and additional bus service. The following is a discussion of the findings.

Rail Service

Rail alternatives move large numbers of people often in exclusive rights-of-way separate from vehicular traffic. Commuter rail transports people from suburban and exurban residential areas into major employment centers. Light rail transit systems involve trains operating singly or in short, usually two-car trains on fixed rails in right-of-way that is not separated from other traffic for much of the way. Light rail vehicles are driven electrically with power drawn from an overhead electric line via a trolley or a pantograph.²

Both rail alternatives involve significant capital expenditures for vehicles and facilities. Whereas commuter rail services often involve implementation of arrangements for shared use of freight lines, light rail systems include capital costs for tracks and support infrastructure, including catenary and stations. Both rail alternatives have high operating costs. The operating costs for commuter rail services are typically increased because the service is provided in one direction in each peak period. Light rail service requires frequent service levels which increases operating costs. Both alternatives require distribution systems, such as local feeder services, to transport passengers to destinations off the routes.

The commuter rail and light rail alternatives do not appear to be economically feasible in the near-term in the Lowcountry Region. The low density, dispersed development patterns and

² American Public Transportation Association 2003 Public Transportation Fact Book



long trip distances, would combine to produce insufficient ridership demand to justify the capital and operating cost.

One corridor that has been cited as a candidate for more intensive transit service, including light rail service, is US 278 from SC 170 to Hilton Head Island. Extensive commercial and residential development has occurred over the past decade along the US 278 corridor from SC 170 to Hilton Head Island. Accordingly, traffic volumes have increased, with significant congestion occurring particularly during rush hours, and on weekends from commuter, business and tourist travel. Despite these conditions, the market area for the light rail service would not generate the required ridership that is needed for the service at the present time. Transportation efforts need to focus on implementing improvements to enable transit and high occupancy vehicles to make more effective use of the corridor. The improvements would include Intelligent Transportation System (ITS) improvements, High Occupancy Vehicle (HOV) lanes, and bus access lanes.

Ferry Service

The implementation of passenger ferry service between Hilton Head Island and other parts of the region, as well as to Savannah, has been proposed a number of times over the past few years. Private sector involvement in the service provision is often included due to the complex nature of the operation, the high operating costs, and the need to incorporate other funding sources in the service financing.

A number of considerations must be addressed for implementation of effective ferry service, including transportation service at the land-water interface, backup service during inclement weather periods, and funding arrangements. These elements are crucial for developing effective passenger ferry service in the Lowcountry Region.

Ridesharing Services

Ridesharing services provide assistance to individuals that are interested in traveling together. Activities associated with ridesharing services include developing and maintaining a database containing lists of people interested in traveling with other people, and then matching applicants based on the origins, destinations, ride times, and other characteristics of their trip. Marketing of the program is a key to its success. Rideshare programs have lower capital and operating costs compared to other transit alternatives.

Carpooling can be a cost effective method of reducing traffic congestion, providing many important benefits to participants, including reduced travel costs and less wear and tear on vehicles. In addition, carpooling provides a transportation option for people that cannot drive, due to disability or affordability reasons.

Typically carpooling is undertaken for employment-based trips. Programs have also been implemented for post secondary education trips. The success of rideshare programs is varied. Some of the factors that appear to be associated with more successful programs include active participation by local employers, concentrated areas of employment, and programs that involve continual promotion, monitoring of matches and updating of databases.



Colleton, Hampton, and Jasper Counties already have high percentages of their labor force in carpooling arrangements. There appears to be opportunities for greater participation in carpooling arrangements by residents of these counties given the long commuting trips, large number of residents employed outside of their county, and the common destinations of the out of county trips:

- Jasper County - 92.5% out of county workers are destined to Beaufort County
- Hampton County - 48.1% out of county workers are destined to Beaufort County
- Colleton County - 30.2% out of county workers are destined to Charleston County

Vanpool Services

Vanpool services involve people traveling together in a van on a regular basis. The travel costs are shared by participants. The van is used exclusively by the participants, with the driver being a member of the vanpool.

A number of agencies operate vanpool programs. The program components include establishing vanpools through outreach and ridematching activities, acquisition of vans, provision of insurance, and setting up programs for maintenance and service administration. Other programs that are frequently offered as incentives to encourage the formation of vanpools include a guaranteed ride home program, subsidies to reduce start-up costs, and offering a greater variety of vehicle types, including smaller vans and cars.

A vanpool is considered mass transit if it is operated by a public entity or if a public entity owns, purchases or leases the vehicles. The costs are eligible for reimbursement under the federal urban and rural transit funding programs. Vanpool participants are eligible for reimbursement of their monthly payments under the Federal Commuter Choice Program, a program authorized under the federal Internal Revenue Code which enables employers to subsidize up to \$100 per month of an employee's transportation cost for bus, rail, ferry or vanpool services.

There appears to be a significant number of people who would vanpool if a program was operational in the Lowcountry Region. Factors contributing to this conclusion are the large number of residents employed outside their counties, the long commuting trips, and the common destinations of the out-of-county trips. Vanpooling has the potential to provide employees with a fairly low cost commuter alternative that provides direct service to their jobs. Parking arrangements at the residential origin may be required to facilitate access to the vans and minimize the amount of travel time required for the van to collect passengers.

Bus Service

There are several alternative operating scenarios for the provision of bus service. The characteristics of the area, including the density and pattern of development, as well as the specific market for the transit service, are important determinants for the type of service that would best meet needs of area residents as well as address efficiency and effectiveness considerations.

- *Fixed Route Service*

Fixed route services are buses or vans operating on established routes, with designated arrival times at stops along the route. The service cost is dependent upon the service frequency, route length and travel time. Significant passenger loads are required to



make the service cost-effective. In rural areas, providing cost-effective fixed route service has additional challenges because of the long distances involved and the diverse origins and destinations of passengers.

LRTA's fixed route services are oriented to transporting passengers to employment opportunities in the Bluffton/Hilton Head Island area. Service area characteristics, including the low density, dispersed development pattern, the long trips between residential locations and workplace, and the predominantly one directional rush hour commuting pattern, combine to make the fixed route service an expensive option for transporting the commuters. In addition, the number of people that are presently being carried on the service, approximately 150 people per day, represents only a small portion of the potential market.

Revisions to the existing fixed route services to address efficiency considerations as well as to increase the number of people served are limited because of the low density, dispersed development and the long trip patterns of commuters. Replacement of these routes with other service types is recommended to address cost, efficiency and customer needs considerations.

There does appear to be a potential for implementation of main line fixed route service along one corridor – US 278 between I95 and Hilton Head Island. The extensive development along the corridor, the high traffic volumes and extensive traffic congestion highlight the need to consider other options for transporting people to the numerous destinations bordering the route. Elements that appear essential for the service's success include regular, frequent service focused along the corridor, the development of connector transit services linking surrounding areas to the corridor, an intercept lot at the west end to enable motorists and other transit services to access the service, and the development of distributor transit services providing access into adjacent major development areas.

- *Demand Response Service*

Demand response service is a shared ride service provided on an advance reservation basis. Passengers are typically transported from residences to activity oriented destinations in small vans. Although the service has lower hourly and per mile operating expenses than fixed route services that operate with large buses, the cost per passenger trip is typically higher than fixed route services because of the lower productivity of the service. Demand response service is better suited to situations where there is not a significant volume of passengers oriented to common destinations to justify fixed route service.

Examples of demand response service in the LCOG region include the Medicaid service and the public reservation-based service operated by LRTA in Beaufort County.

Implementation of additional demand response service to solely serve public trips in Colleton, Hampton and Jasper Counties would be expensive because the low density, dispersed development pattern, long trip distances, as well as multiple destinations, would make the cost per passenger trip expensive and require a large number of additional vehicles. Integrating public trips with other transportation services, such as



human service agency transportation programs, appears to be a more cost-effective way of serving these passengers.

- *Route Deviation Services*

Route deviation services are a blend of fixed route services and demand-response services. They typically operate on a fixed route and schedule for part of the route, with deviations in certain sections to pick up or drop off passengers. Additional time is included in the schedule to allow for the individual pick-ups and/or drop-offs. Passengers picked up or dropped off in the deviated sections are required to make an advance reservation. Reservations are frequently limited for schedule adherence purposes. Additional administrative support is required to receive requests and notify the buses of the passenger requests.

Route deviation service is implemented in rural areas where population densities are not high enough to warrant the operation of fixed route service but demand response service is too expensive to provide due to service productivity reasons. Implementing a route deviation service for human service agency clients as well as general public riders may be feasible in parts of the region. Detailed analysis of trip needs and patterns must be undertaken during the planning for this type of service to ensure that efficiency and cost issues are addressed.

- *Zone Service*

Zone service is a method of providing limited service to an area(s) unable to support the operation of daily service. Service is assigned to zones or geographic areas at specific intervals of time, such as once a week. Passengers are provided a specific amount of time at their destination before the bus returns, ranging from three hours in some programs to six hours in other programs. Sometimes the transit system or agency will have several zones, with service provided to each on a particular day of the week. Passengers are encouraged to schedule their personal or business appointments on the specific days that the service is provided within their zone.

This service appears to have potential application to parts of the region presently not served by LRTA's demand response service. Limited service operated at designated times and connecting specific areas to important regional facilities, such as medical, shopping and business services in the City of Beaufort and Port Royal, could be a lower cost alternative aimed at providing residents with access to essential services. Designing the service to also address human service agency needs has the potential to develop a more effective service.

Transportation Facilities

Facilities are an important element of a public transportation program, and facilitate connections between transit services and other modes. Transfer centers link routes at a central location, enabling passengers to access routes serving other parts of the service area. Park and ride lots, bicycle racks, bus shelters and benches, and sidewalk connections are other facilities that need to be included in the overall program.

Development of a transfer center along US 278 east of I95 with an accompanying park and ride



lot has the potential to link services aimed at residents in the lower density areas of the county, such as vanpool program, with higher performance services, such as a US 278 main line service. In other areas of the region, small transfer hubs could be developed to facilitate the connection of the various services and modes.

Service Delivery Alternatives

Service delivery refers to how transit services are provided. There are a number of alternative ways in which transit is operated.

Public Transit Agency

A transit agency providing public transit service is a common delivery method utilized throughout the country, including South Carolina. Regional Transportation Authorities, such as LRTA, are established in South Carolina to operate public transportation over multi-county regions. The Regional Transportation Authorities receive federal, state, local assistance for their operations.

This subsidization of costs above the passenger fares collected enables agencies to provide many services that the private sector would not be interested in undertaking. It is important for the agencies to develop cost effective services that benefit a large number of people because of the limited resources available.

Coordinated Service Delivery

Coordination refers to the various types of arrangements that agencies, and human service agencies, in particular, implement to improve transportation services. The following are three types of coordination approaches:

- Cooperation involves agreements between two or more agencies for certain elements, such as developing insurance pools, maintenance or training arrangements, or issuance of public transit vouchers. While these types of arrangements are fairly simple to implement and can result in cost savings for certain elements, they do not relieve an agency from providing transportation services or address service duplication issues.
- Joint use arrangements involve two or more agencies adopting agreements for transporting other agency clients. This arrangement often increases vehicle productivity by increasing the number of passengers carried per mile and can reduce agencies' transportation costs. Although it has the potential to reduce service duplication, it does not, however, relieve an agency from providing transportation services.
- The consolidation approach involves the creation of an entity responsible for the provision of service for a number of agencies. The service agency can either directly provide the service or operate as a broker and purchase service from a number of transportation providers. This approach enables agencies to focus on their primary business, such as social service delivery, instead of also having to provide transportation. The consolidation alternative's success is dependent upon finding an



entity that can effectively manage the transportation program and deliver it in a manner that is responsive to individual agencies' needs.

Some states have enacted requirements for coordinated service arrangements between human service agencies in an attempt to achieve a more efficient use of agency vehicles, staff and funding. Provisions also have been adopted to enable the public to ride on agency vans when there is excess capacity. This can be an effective way of accommodating public transportation needs when the creation of a separate public transit program is not feasible.

Private Sector Participation

A number of different methods are used for including private transportation providers in the provision of public transit service. The methods can include, but need not be limited to:

- Contracting directly with the providers. This can include utilizing them to provide service during specific service periods, such as during low ridership periods when operation of full service is not warranted, or for specific types of trips – such as service to a remote part of the service area. When the contracted service is funded by federal and state public transit funds, all of the applicable federal and state requirements apply to the service.
- A brokerage, whereby transportation is provided through a central agency that receives trip requests then contracts them out to a number of different providers. The criteria used to award the service can include a wide range of factors, including cost, vehicle availability, service performance, and qualifications.
- A coupon program with private providers, such as taxi companies. The program typically operates in the form of a reduced price for a book of coupons or vouchers that a passenger purchases for several taxi trips. The passengers are free to use any taxi provider participating in the program, and then provide a ticket or voucher to the taxicab for each trip. The absence of a contract between the transit agency and the taxi companies enables the taxi companies to provide service to the public without having to meet all the traditional requirements associated with federally funded public transportation service, such as Drug and Alcohol Testing Program requirements.
- Major employers operating transit service for their employees and/or clients. The employer-provided services frequently operate as shuttle services, transporting employees or clients from a regional service to their location.

A transit program encompassing all three service delivery methods appears to have considerable merit for application in the Lowcountry Region. The public transit service provided by LRTA would be supplemented by service operated by private providers and coordinated service arrangements. The advantages of utilizing private providers and coordinated service arrangements are that a greater number of people could be served, the service could be provided at a lower cost, and diverse parts of the region could be connected.



Organizational Structure for Planning, Administration and Operation of Transit Services

Public transit service involves undertaking of a wide range of activities to enable the service to be cost-effective, address community needs, and satisfy the numerous requirements associated with federal and state transit funding. The activities include planning, service monitoring and evaluation, promotion, safety, training, and procurement. In addition, developing relationships with other transportation providers and stakeholders is important to ensure that the service is efficient, and the maximum number of people are served with the available resources.

A number of areas have adopted different organizational structures for undertaking planning, and administration functions that are associated with the various services and programs as well as coordinating effect. They include:

Regional Transportation Coalition or Council

Establishment of an informal group comprised of representatives from the transit providers, business community, non-profit organizations, and State agencies, who meet regularly to exchange information and discuss strategies for coordinating service and programs or improving services.

Regional Transportation Management Association

Formation of a formal organization, termed a Regional Transportation Management Association (RTMA) to encourage a multi-jurisdictional coordinated approach to provision of transit services. The RTMA role often focuses on planning and facilitation, with efforts undertaken to develop and oversee programs aimed at encouraging coordination between agencies and improving the efficiency of services.

Lead Agency Responsible for Service Coordination

Establishment of one lead agency that has responsibility for the coordination of service among different providers and agencies.

The RTMA concept appears to have considerable merit for consideration in the Lowcountry Region because a number of functions that are essential to implementing coordinated and effective services are not presently being undertaken in the region. A major focus of the new organization would be to facilitate the involvement of the various public, private and human service agencies and transportation providers in the planning and implementation of the region's public transportation services.



5 Recommendations

The previous review revealed that the Lowcountry Region has a significant population that either needs transit or appears likely to use it if new or enhanced services were available. The review also identified a need to maximize the use of the region's transportation resources through both efficiency improvements to individual services, as well as coordination efforts amongst the various public and private providers.

Policies in existing local, regional and State plans and policy documents as well as input received from a diverse group of stakeholders support an expanded role for transit in the region's transportation system. The benefits associated with increased transit in the region are diverse, and would include the following:

- **Economic**
 - Providing travel options for visitors
 - Serving businesses' needs for employees and clients
 - Reducing infrastructure requirements for roads and parking
- **Environmental**
 - Improving air quality
 - Reducing the consumption of energy resources
- **Social**
 - Providing transportation for those who cannot drive, including the elderly, youth, disabled, and low income groups
- **Quality of life**
 - Reducing traffic congestion
 - Connecting people and places
 - Enhancing the region's livability by reducing congestion

A transit concept for the Lowcountry Region was developed to provide an overall framework for the development and implementation of service revisions and new services. The following objectives are encompassed in the transit concept:

- Accommodate a broader range of travel needs: origins and destinations served, time of travel and trip purpose;
- Develop services that are more efficient and tailored to the ridership patterns;
- Ensure that cost considerations are addressed and funding strategies are identified;
- Maximize the coordination of services among the various providers to reduce duplication and increase the use of the services; and
- Facilitate the development of public-private partnerships in the service delivery.

This section presents the recommended transit concept for the Lowcountry Region. The concept outlines the types of services that are recommended as well as the organizational structure that is suggested to guide the service implementation and delivery.



Future Lowcountry Service Concept - Service Elements

The recommended future transit concept for the Lowcountry Region includes a wide array of service types, as illustrated in Figure 10. The services have been designed to serve the broad range of users, including local residents, commuters, tourists and seasonal visitors, as well as be appropriate for the diverse region – the rural, low density areas as well as the more intensive development in Southern Beaufort County. In addition, they are intended to address both the present and future service needs of this vibrant and contrasting region.

The recommended concept includes the following service elements:

- Regional rideshare and vanpool program;
- Main line service along the US 278 corridor in Southern Beaufort County;
- Connector service in main travel corridors linking to the US 278 main line service;
- Distributor service into key areas, such as City of Beaufort, Bluffton, and Hilton Head Island;
- Coordinated demand response service throughout the region;
- Out of region service to Charleston and Savannah, Georgia;
- Passenger ferry service, and
- Transportation facilities: park and ride lots, transportation center and transfer hubs.

The following discusses each of these elements and how they are interrelated to form the recommended service concept.

Ridesharing and Vanpool Program

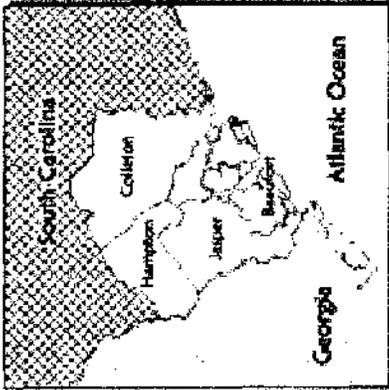
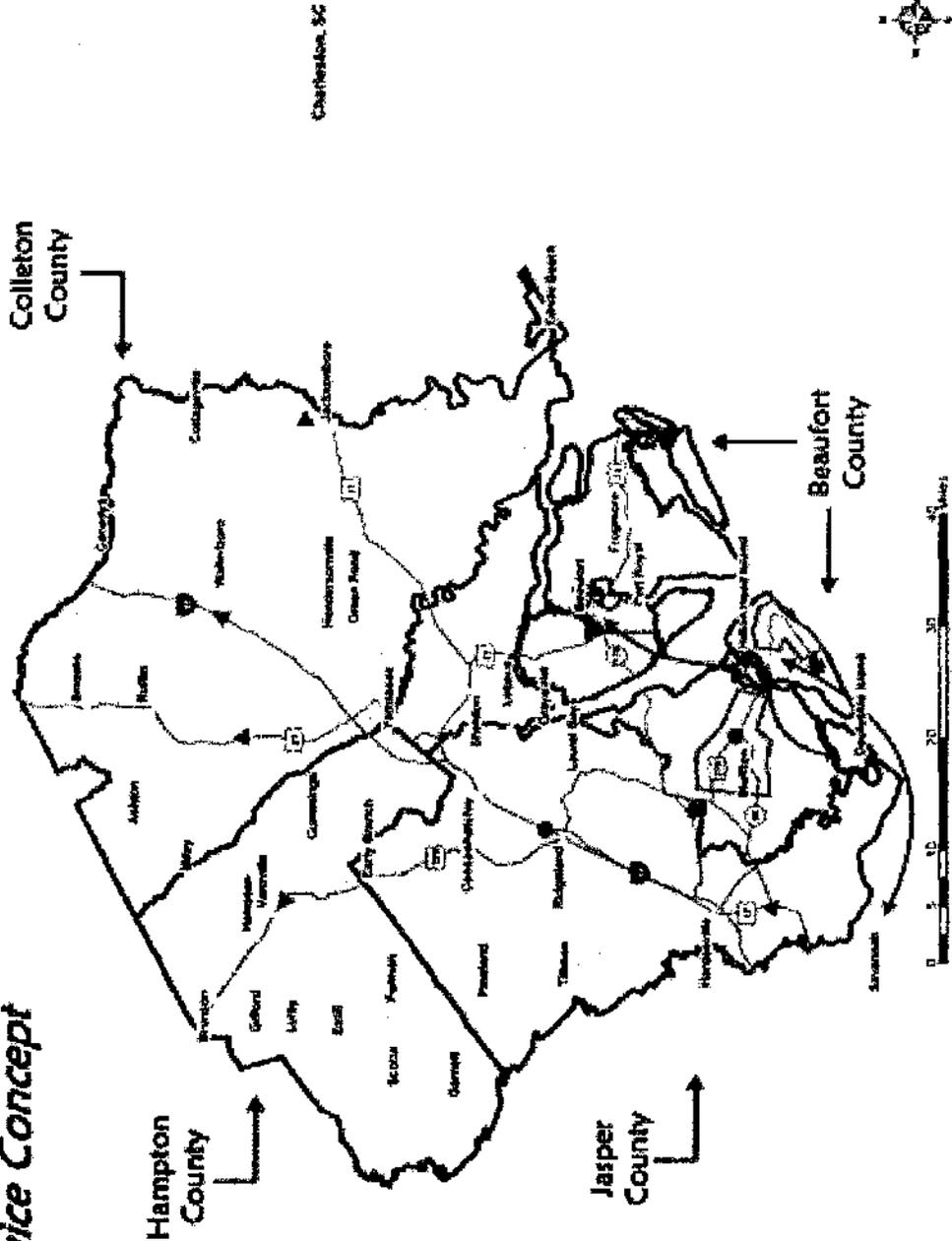
A regional ridesharing and vanpool program is an important element of the recommended transit concept. Ridesharing, through carpools and vanpools, has the potential to provide fairly direct service to participants at a relatively low operating cost. In addition, the program could provide transportation to a greater number of people than presently served by LRTA's fixed route services.

Ridesharing services would be provided to residents and employees in the four-county region. A database would be developed of persons that are interested in ridesharing, and information provided to applicants on persons that have similar trip patterns. Promotion of the program and the benefits of ridesharing is key to the success.

Vanpools would be available for groups of people with similar travel patterns. Ten or fifteen passenger vans could be provided, with participants responsible for providing a volunteer driver and paying the operating costs. The capital costs, as well as some administration costs, could be covered by the program, with these costs eligible for reimbursement under federal rural transit funding program. The operating costs charged to passengers could be subsidized during the initial start-up period as an incentive while the vanpool is being formed.



Future Lowcountry Public Transit Service Concept



Legend

- Major Transit with Transportation Center and Transfer Node (Professional Bus / BRT)
- Regional Commuter Bus (Fixed Schedule / Return Directory)
- ADA Complementary Paratransit (Lift-Van Courier)
- Question / Special Commuter Service
- Request / Unimodal / Demand Response
- Local Fixed-Schedule / Route Operated Service
- Financial Feasible / Ferry Service (if transfer services and remaining transit service)
- Class / Town
- All and More Available
- County Boundary

Figure 10

Source: US Census Bureau 2003 and FRA.
This map is intended for planning purposes only.



An important element of the program is to work with existing LRTA passengers and encourage their participation in the vanpool program. In addition, outreach efforts would need to be undertaken with employers to advise them of the program, the opportunity to finance employee's vanpool costs through the federal Commuter Choice program, and obtain their assistance in promoting the program to employees.

The region has a number of large employers or attractions where the development and implementation of rideshare programs that are tailored to their organizations could be effective. The target groups could include the military, county governments, large resorts and the post secondary education institutions – University of South Carolina - Beaufort and Technical College of the Lowcountry. The efforts to develop the programs would involve several common components, including identifying travel patterns, determining strategies which would best serve the needs, and then developing and administering the programs.

US 278 Main Line Service

US 278 is one of the main transportation facilities in southern Beaufort County, linking Hilton Head Island and Bluffton to I95 as well as SC 170 which connects to the City of Beaufort. The section of US 278 east of SC 170 is bordered by extensive retail and commercial development, as well as large residential communities. The high traffic volumes on the roadway, 47,500 vehicles per day (2000 traffic volumes) just west of Hilton Head Island, reflect the importance of this roadway in the area's transportation system. Traffic congestion is severe in rush hours and during peak tourism periods. A lack of parallel roads contributes to the traffic problems.

The recommended transit concept includes regularly scheduled fixed route transit service along the US 278 corridor to capture some of the numerous daily trips that are made for employment, recreational, social and business travel. The service would be directed at reducing traffic congestion, as well as providing an alternative means of transportation for people living, working and visiting in the area.

Central elements of the service include the following:

- frequent service levels and long operating hours to encourage use and enable it to be a viable alternative to the automobile for choice riders;
- an attractive image with its own identify for vehicles, bus stops, signage and customer information to position the service as high quality, and easy to use;
- extensive marketing of the service and the implementation of joint promotional efforts with the key groups that the service is targeted to serve: businesses, employees, residents, and tourists, and
- a transportation center at the western end of the corridor with a park and ride lot and bus transfer center to enable motorists and other transit services to access the service.

Future improvements in the US 278 corridor to enable transit to be more effective and provide travel time incentives are vital for the service's success. The improvements include ITS improvements at signals, dedicated High Occupancy Vehicle (HOV) lanes for buses and carpools, and bus pull offs at key transfer locations. In addition, pedestrian and bicycle facilities along the corridor and into surrounding developments are important to provide additional access to the service.



Bus rapid transit (BRT) is one concept that appears especially appropriate for this corridor service. BRT is defined as, "a type of limited-stop service developed in the 1990's that relies on technology to help speed up the service. It combines the quality of rail transit and the flexibility of buses. It can operate on exclusive transitways, high-occupancy-vehicle lanes, expressways, or ordinary streets. A BRT line combines intelligent transportation systems technology, priority for transit, rapid and convenient fare collection, and integration with land use policy in order to substantially upgrade bus system performance."²

Complementary paratransit service would be required for disabled people who are unable to use the fixed route service route to address federal Americans with Disabilities Act (ADA) requirements. The specific service area would be a one and one-half mile corridor centered along US 278.

Connector Service in Main Travel Corridors

The US 278 service should be designed as a line haul service that is limited to operating along the corridor to enable it to be provided on a frequent basis. A series of connector routes is recommended to link residents of the surrounding areas to the US 278 service. The connectors would operate along main travel routes and terminate at a transportation center on the west end of US 278 where passengers could access the US 278 main line service. SC 170 is one of the potential routes.

Distributor Service in Key Areas

A series of distributor services are recommended to circulate in the more intensively developed areas, including City of Beaufort/Town of Port Royal, Bluffton, and Hilton Head Island. The distributors or shuttles would connect to the main line and connector services and provide access to specific facilities, attractions or neighborhoods. They could be operated as a fixed route or route deviation service, with the small buses or trolleys traveling off the established route in certain sections to pick up or drop off passengers. Frequent service is a prerequisite to encouraging ridership.

Out of Region Service

The recommended transit concept includes services operating to the key intraregional destinations of Charleston and Savannah, Georgia. The services could include bus service, as well as limousine and charter service.

Passenger Ferry Service

Passenger ferry service would link destinations within the region as well to Savannah, Georgia. Essential elements of the passenger ferry service are terminal facilities and connecting land transportation.

² American Public Transportation Association 2003 Public Transportation Fact Book



Transportation Facilities

Transportation facilities are an integral part of the recommended transit concept and would facilitate connections between the various services and other travel modes. A transportation center on US 278 in the vicinity of the I95 intersection is one of the most important facilities, and would include a bus transfer center linking the various transit services, a park and ride lot for motorists, and secure bike storage facilities. An information kiosk to provide transit information and a ticket sales outlet for the various transit services would also be important elements. Other transportation facilities to be developed in the region would include transfer hubs, bus shelters and park and ride lots.

Coordinated Demand Response Service

The development and implementation of coordinated service arrangements between human service agencies is recommended to increase the efficiency and provide cost savings to the various individual services operating in the region. Developing provisions to enable the public to ride when there is spare capacity is also recommended as a means of serving residents in the lower density areas of the region.

As part of the coordinated service development, alternative service design strategies, in addition to the traditional demand response service, could be explored. One potential strategy could be a type of zone service, where routes link towns to regional destinations, such as medical services and facilities in a larger center. The service would operate at set times on a specific day or days of the week, with arrangements made to transport human service agency clients as well as the general public. This service type has been successfully implemented in a number of rural areas, when agency clients and the public can benefit from regularly scheduled, albeit limited service.

Future Lowcountry Service Concept – Organization

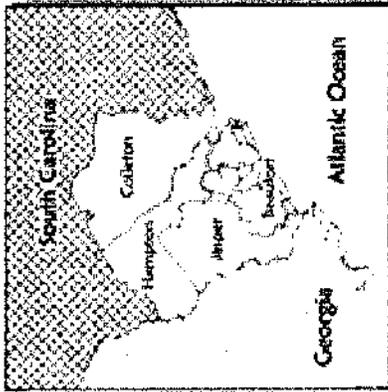
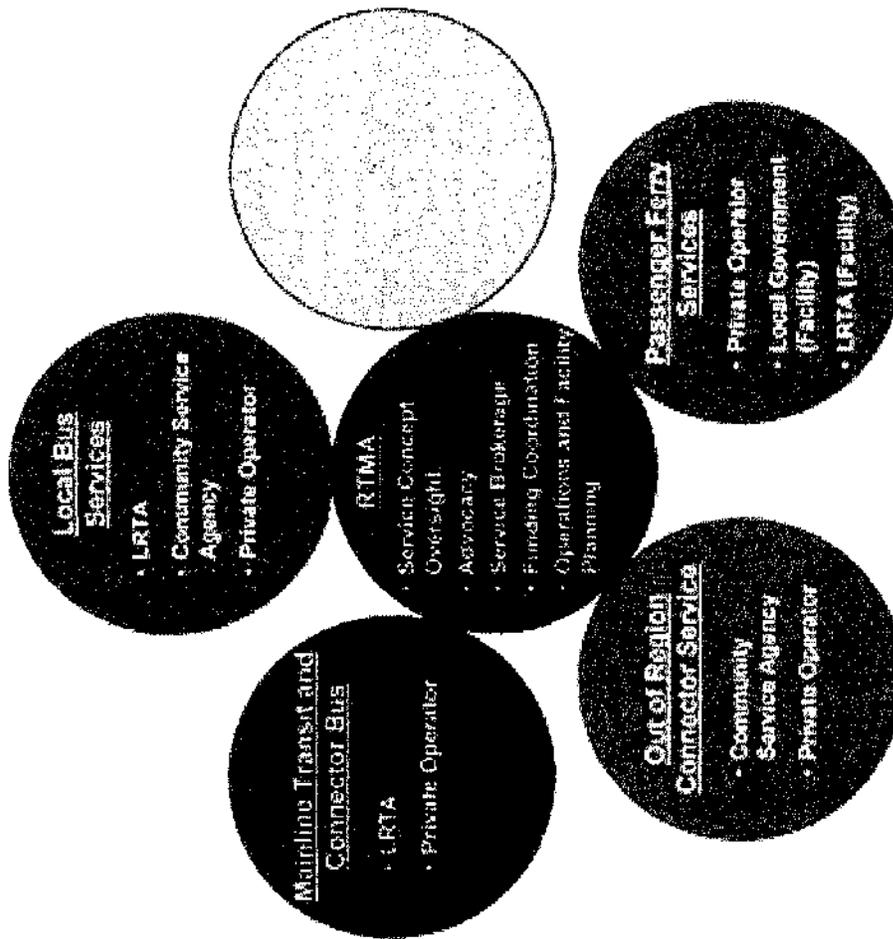
The recommended transit concept includes a range of services aimed at better accommodating the transit needs of Lowcountry residents, businesses, and visitors. Figure 11 presents the recommended organization structure for the transit concept, and the following discusses the roles of each of the agencies and providers.

RTMA

A new association is recommended to provide a framework for the planning, coordination and support efforts that are presently missing yet so essential to the development of more effective and integrated transit services. A Regional Transportation Management Association (RTMA) is recommended to guide the implementation of the new services and strategies. The organizational focus of the RTMA is to ensure that public transit is an important component of the region's multimodal transportation system. This would be the first step towards public transit having an equal consideration with the other transportation modes.



Lowcountry Public Transit Service Concept Organization



Lowcountry Public Transit Service Concept Organization

- Local Bus Service
- Mainline Transit and Connector Bus
- Out of Region Connector Service
- Passenger Ferry Services
- RTMA
- Community Service Agency
- Private Operator
- Local Government (Facility)
- LRTA (Facility)

Figure 11

Source: LCOOC and Dwyer Wilbur Smith Associates Inc.
This map is intended for planning purposes only.



The specific purpose of the Lowcountry RTMA would be to:

- Focus efforts to achieve more efficient and effective public transportation services in the region.
- Create a forum which public and private sectors can work cooperatively to coordinate and leverage resources to serve a broader range of the region's transit needs and enhance the connectivity of the region.
- 'Broker' or provide service options that are typically difficult for any single operator to provide.
- Undertake funding advocacy and coordinate the establishment of regional priorities for services and improvements.
- Coordinate public and private services within the region.
- Promote the region's services.
- Stay alert to technology and service types that might be feasible in the future.
- Plan and implement facilities and improvements that enhance the operation of transit.

RTMA membership would be broad and include representation from all of the groups that have an interest in public transportation in the region: LRTA, LCOG, the counties and local governments, human service agencies, private transportation providers, major employers, and State agencies.

Although LRTA is fulfilling an important transit need in the region, there are limitations to them being the lead agency for the coordination and facilitation effort that is central to the RTMA's role. One of the main reasons is with their orientation – LRTA's experience is with the provision of transit service and not the planning, facilitation and coordination areas. In addition, LRTA does not have representation from two groups that are essential to the successful implementation of the strategies in the Lowcountry Region: human service agencies and private sector.

It is recommended that the RTMA be coordinated by LCOG, with LCOG staff providing administrative and staffing support. LCOG is recommended because they have the necessary history, relationships, and experience to fulfill this role. The assignment of these functions to LCOG would not preclude them from being undertaken by a metropolitan planning organization or a mobility authority formed in the future.

One key program recommended for implementation by the RTMA is the marketing of regional transportation services. This program would be directed at providing residents, employers, as well as visitors with information on the various transportation services operating in the region and to locations outside the region, and how to access them. The outreach methods would include brochures, websites, and informational campaigns with schools, major employers, tourism associations, and chambers of commerce. In addition, kiosks at transportation facilities would provide information on services and how to access them.

LRTA

LRTA is recommended to continue in its role as the region's main public transit provider. LRTA has a long history of providing service in the region, with its staff and Board dedicated to serving passenger needs. In addition, the organization has the operating experience and support



programs that are critical for the provision of public transportation service. LRTA would play an important role in providing key service elements, including the mainline US 278 service, connector bus service and local bus service.

Coordinated Service Provision and Incorporation of General Public Service

It is recommended that efforts be made to develop coordinated service agreements between the region's human service agencies. The benefits of coordination would include improving the efficiency of the services, reducing costs for service administration and operations, and reducing expenditures for acquisition of vans and support. Developing provisions to include general public passengers on the services is recommended as a means of accommodating public trips in parts of the region where there is insufficient demand to warrant the implementation of exclusive public transit service.

There are a number of different types of coordinated service arrangements, including the development of agreements between two or more agencies for provision of some specific trips, one agency providing transportation services under contract to several agencies, or an agency brokering the service between eligible providers. The effort to determine the most appropriate method will require an extensive facilitation effort with the individual agencies as well as the provision of assistance on several steps in the process.

Private Providers

Providing opportunities for private provider participation in the delivery of services is recommended because of the presence of several successful private transportation providers in the region. Utilizing private providers also has the potential to reduce the cost for the service delivery as well as reduce the number of vehicles that need to be acquired. Both of these benefits can be especially applicable for service provision during the low productivity periods, including evenings and on weekends.

Incorporating private providers into the overall transit program can be undertaken in a number of ways. It is recommended that the brokerage alternative be examined for the provision of the coordinated agency service. Directly contracting with the private sector might be appropriate for other services, such as the passenger ferry service and the distributor services. For other services, such as the out of region connector services, the private sector might be totally responsible for the service, with provisions provided for them to use regional transportation facilities.



6 Action Program

An Action Program has been developed to guide efforts in implementing the service and coordination recommendations presented in Section 5. This is intended to show the types of actions that will be required to implement the recommended strategies.

The following are the main considerations that guided the phasing of the efforts:

- Implement projects incrementally so that all the necessary actions are undertaken;
- Prioritize projects that have a high probability of achievement over the near term;
- Relate phasing to funding availability;
- Continue service to users while alternative services are planned and delivered, and
- Incorporate adequate lead time to ensure all the necessary actions are undertaken.

The action program is presented in two phases: an initial phase of the more immediate actions and a second phase of the longer-term actions. The phasing is tentative and is presented as a guide to organize the overall effort. The actual timing for the implementation of the service and coordination improvements will be governed by many factors, including the economic climate, funding opportunities, as well as political considerations. In addition, the timing will be influenced by the overall complexity of the strategies that are adopted.

Phase I – Years 1 through 3

Initiatives for Phase I focus on establishing the RTMA, launching a regional rideshare/vanpool program, implementing coordinated demand response service, and undertaking planning activities for the mainline/connector/distribution service.

RTMA Establishment

- Meet with the state to discuss the formation of the RTMA and ascertain any specific requirements: service area, membership, structure, reporting.
- Conduct outreach meetings with organizations, including state agencies (SCDOT, SCDHHS, SCDSS), counties, cities, LRTA, social service agencies, private transportation providers and the business community to discuss the RTMA: purpose, organization structure, membership, roles, funding.
- Establish the RTMA structure: roles, responsibilities and membership of Governing Body, Committees, Subcommittees, agency support and funding, RTMA administration and management functions.
- Determine the required implementing actions and prepare the necessary materials: resolutions from local jurisdictions endorsing participation and committing to funding, memorandums of understanding, interagency agreements.
- Secure the required approvals from participants: state, LCOG Board, local jurisdictions, agencies.



- Organize and hold RTMA Committee meetings.
- Establish goals and objectives for the RTMA and develop a detailed work program outlining specific tasks and activities to be undertaken by the RTMA over the next two to three years.
- Secure RTMA approval of work program and the necessary funding arrangements.
- Establish performance targets for the various services.
- Develop an image for the RTMA that emphasizes the association's focus: coordinating the various providers and services.
- Research and evaluate potential funding sources for transit services and programs.
- Enact the required legislation for the locally-preferred funding alternative.
- Develop and implement a regional transit information program that provides information on transit providers and services.

Rideshare/Vanpool Program

- Analyze service options, including provision by an agency or contracting with a third party provider.
- Develop program components: staffing levels, responsibilities, rideshare matching software, number and size of vehicles, administration/maintenance, promotion, program costs, funding sources.
- Obtain required approvals, including funding.
- Undertake startup actions.
- Conduct outreach with employers, agencies and LRTA passengers.
- Launch program.
- Monitor program and revise as required.

Coordinated Demand Response Service

- Form a Coordinated Transportation Subcommittee with human service agencies and public and private transportation providers to develop strategies for implementing coordinated service programs.



Lowcountry Public Transit Coordination Feasibility Study A Public Transportation Strategy

- Establish goals and objectives for the Subcommittee and discuss process for developing coordination strategies.
- Determine format for collection of data on agencies' transportation programs:
 - Human Service Agencies:
 - Standardized cost information: fixed and variable costs;
 - Services provided: locations, service days and hours, amount of service;
 - Vehicle inventory;
 - Client requirements: response time, assistance needs, insurance, and
 - Requirements imposed by funding agency.
 - Private Providers:
 - Transportation services provided;
 - Fleet: number of vehicles by size, type, ADA features;
 - Facilities, and
 - Personnel qualifications related to Drug and Alcohol Testing Program requirements, insurance, disability training, other federal and state compliance issues.
- Collect and consolidate information into a comprehensive database on the agency programs and private providers.
- Analyze information to determine potential coordination/consolidation strategies.
- Identify and evaluate potential organizational structures for service coordination/consolidation:
 - Single agency responsible for all aspects of service (reservations, scheduling, dispatch, operation);
 - Single agency acting as broker, and
 - Agencies providing services through individual agreements with other agencies.
- Determine an implementation strategy for the selected method.
- Obtain the required approvals.
- Implement and monitor the program.
- Explore opportunities to include the general public as riders.
- Prepare an annual status report of regional coordination efforts and accomplishments.

Mainline/Connector/Distribution/Ferry Service Planning

- Develop a series of performance measures to guide the planning of the services.
- Conduct outreach with local governments, communities, businesses, and transportation providers to obtain input on transportation needs and considerations that need to be



reflected in the service design.

- Undertake the planning for the services and prepare a detailed operations plan:
 - Description of service – alignments, transfer points, operating hours, frequency;
 - Vehicle requirement;
 - Service delivery, including designated agency and/or provider;
 - Personnel requirement;
 - Service cost;
 - Funding mechanisms, and
 - Support requirements, including promotion, outreach, bus stops, customer information, ADA provisions.
- Develop a plan for implementing the facilities required to support the services: transportation center, transfer hubs, park and ride lots, bus stops and shelters, ferry terminals.
- Sponsor a series of meetings throughout the region to inform existing passengers, the general public, businesses and organizations about proposed revisions to services and the new services and to obtain their input.
- Finalize the program of services and the associated phasing and obtain the required approvals and funding.
- Implement the approved priority services and revise the existing services, as required.
- Monitor the services and make adjustments to address operations and ridership issues, as required.

Phase II – Years 4 through 10

Efforts for Phase II activities will focus on continued implementation of the mainline, distributor, connector and ferry services and associated facilities, continuing and expanding the vanpool program, implementing enhanced promotional strategies, continuing the planning efforts, and monitoring, evaluating and refining services and programs.

RTMA Activities

- Implement enhanced promotional strategies, including provision of real-time transit information, development of regional information kiosks and continued development of employer/business partnerships.
- Conduct a comprehensive evaluation of all of the services and programs to ensure that needs are being addressed in a efficient and cost effective manner.
- Meet with adjacent regions to discuss interregional transportation issues and strategies.
- Continue to coordinate regional funding needs assessments and strategies.



- Research and encourage the implementation of strategies to enhance transit's role in the region's transportation system, including transit supportive and smart growth development and ITS strategies.

Rideshare/Vanpool Program

- Continue to operate and promote the rideshare and vanpool programs, with additional vans being added to accommodate demand.
- Work with major businesses and institutions to develop comprehensive rideshare programs.

Mainline/Connector/Distribution/Ferry Service Planning

- Continue to implement the approved priority services as well as the associated facilities.
- Conduct outreach with communities, businesses, transportation providers and passengers to keep abreast of stakeholders' needs, to obtain input on existing services and potential new strategies, and to encourage the development of partnerships for support services and programs.
- Monitor development and reevaluate the need for more intensive services, including bus rapid transit or light rail transit in the US 278 corridor.

Coordinated Demand Response Service

- Continue to implement the coordinated service program, with a special focus on incorporating public riders on the services.
- Monitor the services to develop a better understanding of needs and patterns, and identify strategies to increase the efficiency of the programs as well as to maximize opportunities for general public usage of the services.



Appendix

Study Participants



Study Participants

The following individuals took part in the study, either through interviews, by participating in focus group sessions, or by attending task force meetings.

Amtrak
Hank Koppelman, Director of Marketing

ATC
Melvin Padgett, General Manager

Beaufort County
Delores Frazier, Planning Department
Bob Klink, County Engineer

Beaufort Department of Social Services
Fred Washington, County Director

Beaufort, Jasper, Hampton Comprehensive
Health
Thaddeus Coleman, Director of Community
Services

Beaufort Memorial Hospital
Peggy Hitchcox, Director of Social Services

City of Beaufort
Libby Anderson, Planning Director
Ross Jones, Finance Director/Deputy City
Manager
Bradd Stuart, Planner

Chatham Area Transit
Scott Lansing, Executive Director

Coastal Empire Mental Health
Linda Chipukites, Area Director
Bill Sherbert, Director

Colleton Council on Aging
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Colleton County
Kevin Griffin, County Planner

Colleton County Disabilities
John Hitchman, Day Program Director

Colleton County Literacy Council
June Dyches, Executive Director

Colleton County Department of Social Services
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Colleton Medical Center
Lisa Langholt, Social Worker

Disney Resort, Hilton Head
Ralph Dahlgren, General Manager

Gray Line Hilton Head
Tim Holbrook, General Manager

Greater Beaufort Chamber of Commerce
Liz Mitchell, Tourism Director

Greyhound
Rex Kemp, General Manager Schedules

Hampton County Board of Disabilities
Suzette Henderson, Program Supervisor

Hampton County Chamber of Commerce
Marie Ellis

Hampton County Council on Aging
Ann Ayers, Executive Director

Hampton County Literacy Council
Hazel Smith, Director

Hampton County Veterans Affairs
Betty Hodges, Veteran Affairs Officer

Hampton Department of Social Services
Bernie Zurenda, Director

Hampton Regional Medical Center
Lynn Bowers, Director of Social Services

Hilton Head/Bluffton Chamber of Commerce
Tim Bennett, Chief Operating Officer

Hilton Head Marriott Resort
Dan Freeland, Resident Manager

Jasper County Council on Aging
Carl Roache, Executive Director



Lowcountry Public Transit Coordination Feasibility Study A Public Transportation Strategy

Jasper County Board of Disabilities
Jenny Crosby, Finance Director

Jasper County Department of Social Services
Samuel Lawton, Economic Service Program
Coordinator

Lowcountry and the Islands Tourism
Commission
Jim Westcott, Executive Director

Lowcountry Regional Transportation Authority
Thomas Heyward, Chairman of the Board
Rochelle Miller, General Manager

Luxury Inns of Beaufort
Michael King, General Manager

Marine Corps Air Station Beaufort
Mary Ellen Smith, Director of Housing

New Life Center
Willie Mae Cohen, Clinical Addiction Counselor
Ray George, Clinical Counselor

Pointe Tours
Wilson Kirvan, Owner

Savannah Chatham Metropolitan Planning
Commission
Mark Wilkes, Transportation Planning Director

South Carolina Employment Security
Commission
Alice Brothers, Assistant Area Manager
Lynette Harley, Area Director
Margie Thomas, Area Director

South Carolina Department of Transportation
Mass Transit Division
Glennith Johnson, Director
Tom Johnson
Kenny Skenes

South Carolina Department of Transportation
Planning Office
Mark Pleasant

South Carolina Vocational Rehabilitation
Paul Mears, Area Supervisor

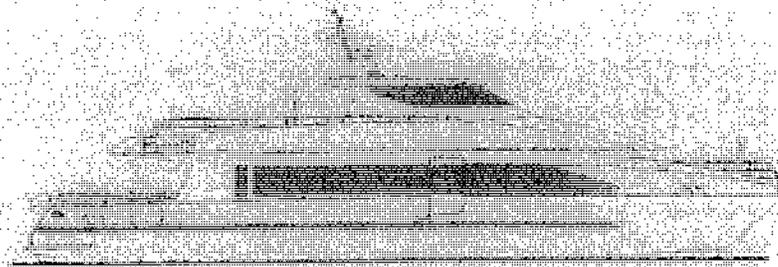
Technical College of the Lowcountry
Ron Jackson, Dean, Student Services

Town of Hilton Head
Charles Cousins, Director of Planning
Randy Nicholson, Planner
Darrin Shoemaker, Engineer

Town of Port Royal
Linda Bridges, Planning Administrator

Town of Ridgeland
Jason Taylor, Manager

University of South Carolina – Beaufort
Judson Drennan IV, Public Relations
Gail Quick, Associate Dean



**Assessing the Feasibility of Investing
in an Integrated Ferry System
Serving Savannah, Georgia
and
the South Carolina LowCountry**

Final Report

January, 2005

Prepared by

Team, Inc.

In conjunction with

Sea Island Consultants

Hilton Head Island

&

IBJ Associates

Shelter Island Heights, NY

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I. Overview

The Chatham Area Transit Authority (CAT) selected Team, Inc. to conduct an initial study of the feasibility of providing high-speed ferry services between Savannah, GA, Hilton Head Island and Beaufort, SC. This includes Daufuskie and Tybee Islands, Bluffton Village and Palmetto Bluff located on the May River, Port Royal and St. Helena Island.

The economies of this region are growing more interdependent. It has a significant visitor industry and is experiencing rapid growth and an influx of manufacturing and distribution centers that is changing patterns of mobility throughout the region. The increase in visitor and commercial activity has a corresponding increase in daily trips that accentuate the travel time and congestion facing motorists. This phenomenon is occurring for travelers who go from Savannah to Bluffton Village and Hilton Head Island, from inland Beaufort and Jasper counties to Bluffton Village and Hilton Head Island, and who travel between Hilton Head Island and Beaufort. Additionally, the economy and residents of Daufuskie Island is totally dependent upon access by water.

Currently, no public ferry services operate on those routes; however private services do operate on portions of the routes. One private operator provides a daily round-trip service between Savannah and Daufuskie Island. The boat departs in the morning and returns to Savannah in the evening. There are also private operators located on Hilton Head Island who provide tourist excursions between Hilton Head Island and Savannah.

Two fleets of boats provide service between Daufuskie and Hilton Head Island. The Daufuskie Island Club and Resort (DICR) operates five boats that carry homeowners, resort guests, and employees who live off the Island, as well as island residents. Haig Point, a residential community, operates a fleet similar to the DICR. The annual number of trips exceeds 300,000 for the combined fleets. The two fleets operate from different docks on Daufuskie Island and on Hilton Head Island.

This analysis focuses on the potential demand for higher-speed ferry service, the potential economic impacts of this service, the benefits that may derive from improved regional mobility and the impact this service may have for improving employment opportunities. The capital and operation costs are based on the type of service that will be required to achieve the initial ridership projections.

During the course of the analysis it became obvious that the ferry service could achieve higher speeds than the existing and more traditional service currently plying the waters

(speeds increasing from 20-22 knots to 30-35 knots.). Hence the reference in the document is to higher-speed ferry service rather than high-speed service which connotes speeds well in excess of 40 knots.

The conclusion of this analysis is that the investment in a higher-speed ferry service is feasible and lends itself to a private/public partnership where the public investment is funding and/or underwriting the initial capitalization. Based on the ridership that can be achieved and related economic activity that a ferry service would engender, service pricing and capturing a portion of related economic value would cover operating and capital costs over the life of the capital investment. The success of the investment is dependent upon an effective link with ground transportation and the development of public policies and private investments that facilitate the types of development that are enhanced by water ferry transportation.

II. Potential Demand for a Ferry Service

A. Ridership Methodology and Assumptions

Demand for ferry service is premised on starting service in 2007. Projections are based on the existing experience of two private fleets serving Daufuskie Island, census data, interviews with local elected officials, business leaders, visitor and tourism officials¹. They are also based on an analysis of other studies and surveys including the Shiftlit Report prepared for the Savannah Chamber of Commerce for the year 2001, and the 2002 Trolley Ridership Survey conducted in Savannah for the Chatham Area Transit Authority. Previous attempts to develop private ferry service were also assessed.

Projections include the anticipated mixed use ridership of commuting workers, permanent residents, visitors and participants in specific special events, such as St. Patrick's Day in Savannah, the Heritage of Golf in Hilton Head and the Water Festival in Beaufort. The initial ridership projections do not take into account additional ridership that would be generated by satellite development that could be associated with the ferry service.

This study concentrated on ferry service to and from established embarkations. While there was initial consideration for including Tybee Island in the study, the use of a higher-speed ferry to serve the island became highly questionable for three reasons. First, the only potential embarkation location is a significant distance from the center of Tybee. Second, the location is not conducive to access by the type of vessel that is required for higher-speed service. Third, there does not appear to be any feasible site readily available for development that could facilitate direct service in the near future for the island. This in no way suggests that there is not significant potential ridership to warrant some type of service or that Tybee would not benefit from access to Savannah, Daufuskie and Hilton Head Islands via ferry service.

There is not a separate analysis regarding service to St. Helena Island. The use of ferry service from Beaufort incorporates projected demand that is generated from the surrounding area, including St. Helena Island. It is quite possible that there is enough demand for limited commuter service from the island to justify its inclusion in the service pattern. Since the provision of this service could easily be accommodated in the proposed service pattern no separate analysis for the island was conducted.

The following key assumptions were used to construct the projected 2006 ridership.

- Less than 1% of the total overnight person days for business and leisure were used to calculate potential ridership from Savannah. The Savannah estimates factored in projected activity at the Hutchinson Island Convention and Trade

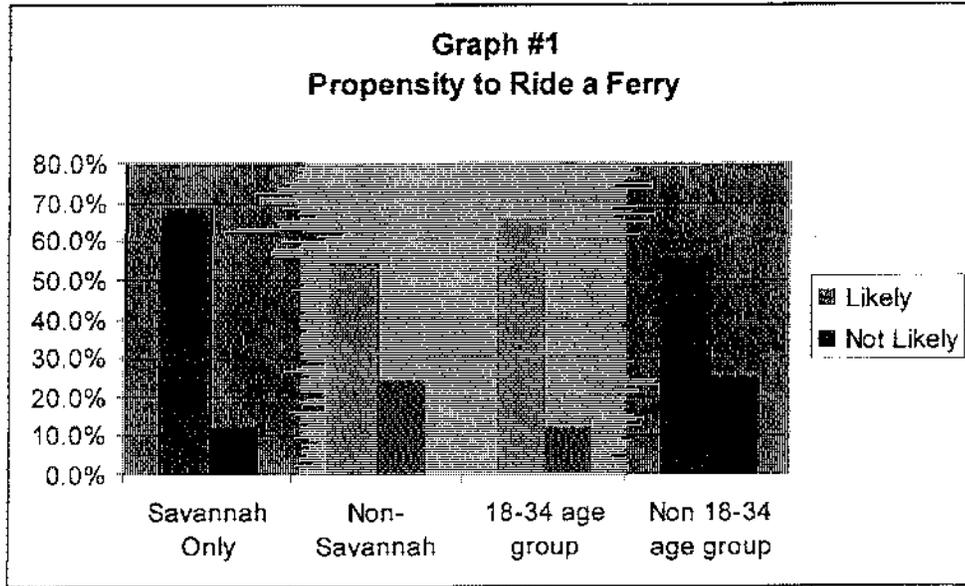
¹ Please see Appendix D for a list of individuals who were contacted regarding this report.

Center, assuming that less than 10% of these visitors would use the higher-speed ferry at least once. Less than 1% of the special event attendees to Savannah were projected to utilize the higher-speed ferry. It is assumed that some 200 workers will use the higher-speed ferry on a regular basis. No estimate of residents who might use the ferry service for any non-work purpose was included in the Savannah projections.

- Projections regarding ridership to and from Daufuskie Island are based on the existing ridership experience and the projected activity and growth for the island.
- Ridership from Hilton Head Island was based on the assumption that 25% of the resident population would use the ferry at least once in the year and that 5% of the annual visitors to the island would use the ferry service at least once. The commuter population using the ferry to and from the island was assumed to be no more than 250. Up to 10% of the special events traffic to the island was assumed to arrive by ferry.
- Fifteen percent of the Bluffton Village residents are assumed to use the ferry service at least once in the year. Approximately 10% of annual visitors to the Bluffton area would use the service at least once. This higher usage by visitors is based on Bluffton being a major shopping destination for the region with its extensive outlet stores. The use of Bluffton as an embarkation for workers is projected at 300 commuters per day. Use by attendees to special events in the Bluffton area is projected to be 5%.
- Development of the Palmetto Bluff community center, including recreation venues and the corollary residential development, is expected to provide a viable node for ferry service. The developer of Palmetto Bluff assumes that 2.5% of all trips to the development will be by ferry.
- The Town of Port Royal ridership projections are based on 20% of the resident population riding the ferry service at least once a year and 15% of visitors to the town using the ferry service at least once a year. It is anticipated that 100 commuters would embark from the ferry dock on a regular basis.
- The City of Beaufort projections are based on 15% of the resident population riding the ferry service at least once a year. The number of commuters that will utilize the ferry service is projected at 250. Annual visitors projected to use the service at least once at a rate of 5% and 10% of special events attendees are assumed to use the ferry service.

The assumptions are also based on the random survey in Savannah completed for the assessment of trolley services on River Street and the downtown area. Some 60% of those surveyed indicated a significant likelihood that they would be traveling to visit

Hilton Head Island, Beaufort, Daufuski Island SC, or Tybee Island. The survey included visitors, Savannah residents who live and work in the city, residents who live but don't work in the city and those who work but don't live in the city. The following graph provides an overview of responses by residency and age grouping.



To test the survey results a focus group of Savannah residents in the 18-34 year age group was conducted. The response from the focus group indicated significant interest in utilizing the ferry primarily as a means of accessing Hilton Head Island for recreational and entertainment purposes. Given timely service and a price point for the excursion that was roughly equivalent to the automobile, their trips to Hilton Head would likely increase by at least 25%.

For more details regarding the market survey, please see Appendix A.

B. Ridership Projections

Based on the assumptions, survey data and extensive interviews, it is projected that over 800,000 round trips or 1.6 million one way trips will be generated in the second full year of operation. Table 1 represents the demand projections for each potential destination. Since it is assumed that most people will leave and return from the same location, the table shows round trips as opposed to one way trips. Table 2 provides a summary of total trips and the percent of total trips by embarkation.

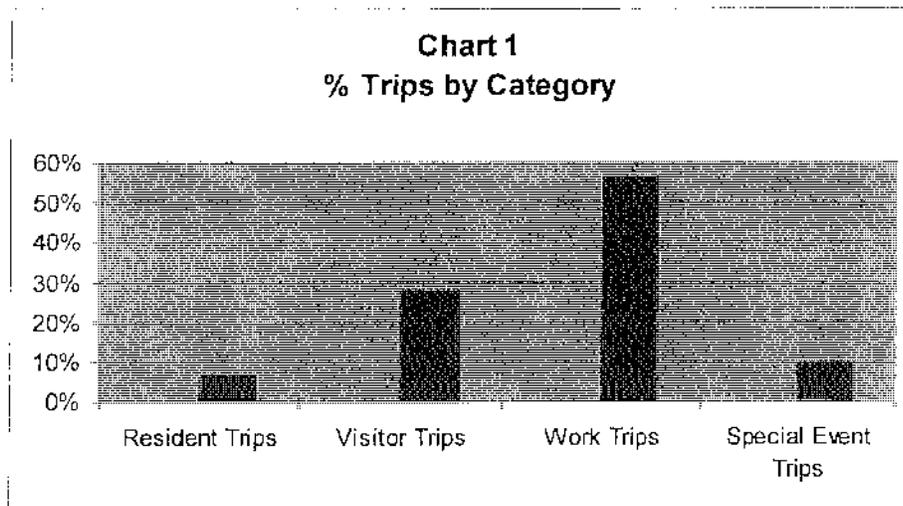
Table 1
Projected Ferry Ridership Between Selected Ports
Round-Trip Rides

To	From							Total
	Savannah	Daufuskie	Hilton Head	Bluffton Village	Palmetto Bluff	Port Royal	Beaufort	
Savannah		3,238	131,750	47,463	4,214	8,288	23,075	218,026
Daufuskie	78,274		109,733	31,965	774	10,755	27,525	259,026
Hilton Head	39,825	2,175		21,325	3,005	10,550	20,300	97,180
Bluffton Village	10,000	1,250	13,625		354	4,000	12,225	41,454
Palmetto Bluff	19,970	376	12,678	3,180		4,214	10,935	51,353
Port Royal	16,100	150	13,938	16,035	142		15,675	62,040
Beaufort	21,275	1,030	47,100	18,620	2,995	1,475		92,495
Total:	185,444	8,219	328,823	138,588	11,484	39,282	109,735	821,573

Table
Projected Annual & Daily One-
by Port &

Yearly Trip	Annu			% total	Dail		
	Departing	Arriving	Total		Departur	Arriva	Tota
Beafo	109,73	92,49	202,23	12	30	25	55
Port	39,28	62,04	101,32	6	10	17	27
Hilton	328,82	97,18	426,00	26	90	26	1,16
Bluffton	138,58	41,45	180,04	11	38	11	49
Palmetto	11,48	51,35	62,83	4	31	14	17
Daufusk	8,21	259,02	267,24	16	23	71	73
Savann	185,44	218,02	403,47	25	50	59	1,10
	821,57	821,57	1,643,1		2,25	2,25	4,50

Sixty-two percent of ridership is projected to have its origin or destination in Savannah, Daufuskie Island and Hilton Head Island. Ridership was assessed by four primary groupings: residents who would use the service, workers, visitors and those attending special events. The following chart depicts the percentage ridership by each category.



For planning purposes the growth of the service is projected at 60% of the annual rate for the first year and 100% of projections for the second year. The following years are projected to grow at 12% annually. This excludes additional growth that can be realized through development associated with increased ferry service for Savannah, Daufuskie Island, Palmetto Bluff, Port Royal and Beaufort.

The ridership projections provide a useful framework to demonstrate the level of ridership that would be required to make the project financially feasible, given the projected pricing for service. Given that the greater community has not experienced the type of ferry service proposed in this report, a much more comprehensive marketing study will be required to pinpoint trip preferences (e.g., choosing ferry service over an auto trip) and the balance between ridership and pricing.

C. Service Characteristics Required to Capture and Retain Ridership

The water trip from Savannah through the inter-coastal waterway and bays to the low country is one of rare beauty and often-unexpected pleasures. Aesthetics of the trip alone offer a significant reason for experiencing the voyage. Feedback from the marketing analysis indicates that there are six characteristics that are critical to capturing and retaining ferry ridership.

1. Speed

While riders may enjoy the ferry service environment, their primary reason for taking the ferry is getting from point to point. The ferry service must provide commute times that are seen as comparable to ground travel times. Travel time is more important on the return segment of any trip according to anecdotal information provided during the research.

2. Novelty

The experience of the ride must provide a sense of uniqueness and produce a value in and of itself. That novelty can come from the physical environment, the ride itself including embarkation and de-embarkation, the service and/or the amenities provided.

3. Flexibility

The service must provide enough opportunity for riders to have a relatively flexible schedule. This translates into frequent headways and options for going to points in a more timely fashion. For example, this may translate into certain runs being made directly to Hilton Head Island from Savannah. Another aspect of flexibility is the ability for the vessel to accommodate passengers, limited cargo and other forms of transport such as bicycles and perhaps motorized scooters.

4. Comfort

Offering outside exposure to the elements during the trip may have value but assuring quality seating that allows outside views is deemed more important. To satisfy regular customers it is likely that other amenities such as newspapers, access to media and entertainment, power outlets and food/beverage service will be desired. Inclusion of residents from private communities and other travelers desiring first class services suggests that part of the comfort package will include two levels of service.

5. Embarkation and Ground Transport

Embarkation and de-embarkation are both vital parts of the ferry experience. If the embarkation site offers a positive and quality experience for the rider, the journey will be perceived as a higher value and more enjoyable. Embarkation locations should offer some novelty, protection from the elements and be readily accessible. That accessibility requires that there be reliable ground transport and/or parking to allow easy and timely transitions to and from the vessel to a final destination. This is perhaps the single most important component of a successful ferry system for this region.

6. Trip Pricing

The survey and discussions with a variety of individuals clearly suggests that the price of the trip will have a substantial bearing on utilization. The pricing appears to be related to the purpose of the trip. Individuals who indicated their use would be for work were less inclined to pay the same price that others whose use was recreational reported they were willing to pay. In addition to convenience, the comparison pricing point was the cost of using an automobile for the same trip.

D. Scheduling to Accommodate Ridership Patterns & Demand

In order to project potential demand, certain assumptions regarding ridership patterns were adopted for this study. It is assumed that the majority of ridership will occur during the peak tourist season and from late Thursday through Sunday evening.

The passenger flow between Savannah and Hilton Head is projected to be at a higher level than those between Hilton Head Island and Beaufort. While that differential suggests that two linked services would achieve higher capacity utilization, the lowest overall service cost is obtained by operating boats in a pendulum service on a route between Savannah and Beaufort with calls at Daufuskie Island (2) and Hilton Head Island (2-3). Service to Palmetto Bluff and Bluffton Village would be served via a separate shuttle service that would interchange passengers with the pendulum service on Hilton Head Island.

To offer optimum service, 60-minute headways during the summer and shoulder season weekends was used as the basis for evaluating service costs. Ninety-minute headways were programmed to serve the winter season and shoulder season weekdays.

The service patterns may require more schedule flexibility, allowing different headways on different routes and establishing certain express runs, such as from Savannah to Daufuskie Island, Hilton Head Island or Bluffton Village.

Two Daufuskie embarkation sites have been factored into this analysis, recognizing that one may suffice. Either two or three embarkation sites on Hilton Head Island would be desirable. Three potential locations include the existing Daufuskie Island Resort Club on the northern part of Hilton Head Island, Shelter Cove for a mid-island location and Harbor Town, primarily to serve tourists and shoppers.

Providing ground transportation/parking access to the embarkation locations is key to the ferry utilization. This will mean a significant investment in circulator service and/or parking for Bluffton Village, Port Royal and Beaufort. A combination circulator service and trolley service for Hilton Head Island will be imperative, given the limitations on parking and the growing traffic congestion. A goal for ground transport should be that a person is able to reach their destination from ferry debarkation in less than twenty minutes.

The number of trolleys or small buses to service Bluffton Village, Port Royal, Beaufort and Hilton Head Island will likely be 28 vehicles (in service and spars) with a mixed seating capacity. These vehicles are in addition to the existing private services offered in these communities. This service should become part of the overall mobility service network. This network, made up of publicly and privately funded/operated services would have at its heart an advanced information system that allows ferry riders as well as other residents and visitors real time access to a series of mobility choices.

The ground transport access for Savannah is equally critical. Overall mobility services will be greatly enhanced by integrating the ferry service with the downtown circulator bus service and easy intercepts with existing fixed route bus service. Access to parking very near the embarkation sight(s) will also be vital.

Another component of the ferry service could be the satellite development of water taxi services that provide shuttle service to locations not directly served, such as Tybec Island. Further, the ferry service should expand the opportunities for private vessel operators to provide more specialized tourist trips, a market that is not the province of the proposed ferry service.

E. Proposed Route

The map in Appendix B outlines the proposed route for the ferry service. The route follows the inland waterway although the types of vessels contemplated could easily operate in the open water from the mouth of the Savannah River to Hilton Head Island.

III. Technical Requirements

A. Navigation Issues

There are no major navigational hazards on the routes being examined. Three general constraints are:

- idle-speed zones;
- relatively shallow water adjacent to channels in some stretches; and,
- a lack of terrestrial objects for piloting.

Idle-speed zones are located in numerous areas along the potential ferry routes. A particular area may be designated an idle-speed zone to reduce bank or shoreline erosion; to minimize the potential negative impact on wildlife; and to keep noise at a minimum. Regulations pertaining to idle-speed zones typically require boats to reduce speed to headway speed, which is defined as the slowest speed a boat is able to operate under control or a maximum of six knots. If a low-wake energy boat design is employed, an exemption from regulations will be required to allow operation at speeds faster than six knots. During the study, we tested three alternative speeds in the idle-speed zones: six, twelve, and 18 knots.

The relatively shallow water adjacent to channels reduces maneuvering room and may require a higher speed boat to reduce speed significantly during times of heavy traffic or reduced visibility. The lack of terrestrial objects for piloting is not a significant problem with the use of GPS navigation systems.

B. Vessel Requirements

Four different boat sizes were selected for evaluation of the considered service. At this initial feasibility phase, specific design details were not considered critical. However, actual boat designs were used because of known speeds, fuel consumptions, and capital costs. The four boat sizes, measured in passenger capacity were: 49, 99, 149, and 250 passengers. The 49 and 99 passenger boats have displacement hulls and maximum speed of 25 knots. The 149 and 250 passenger boats have catamaran hulls and maximum speed of 40 knots. The catamarans would use existing technologies to reduce friction. The reduction in friction, in turn, substantially reduces horsepower requirements and fuel consumption and also would provide a smoother ride. The other critical benefit is that it produces no energy wake, eliminating the need for the vessel to proceed at only headway speeds in the idle-speed zones.

The ideal vessel for this service includes:

- Maximum 149 passenger capacity
- Low-wake design
- Capacity for first class and coach service
- Capacity to handle limited cargo
- Comfortable enclosed seating

Based on these criteria, the 149 passenger capacity catamaran boat is the optimum choice. There are at least two manufacturers of these vessels in the United States. The technology is proven and these boats can be built in less than two years. Appendix C provides drawings of one such boat produced by All American Marine.

IV. Operating Characteristics

A. Travel Times

Table 3 presents a range of travel times for a Savannah-Beaufort direct voyage and a Savannah-Hilton Head via Daufuskie voyage.

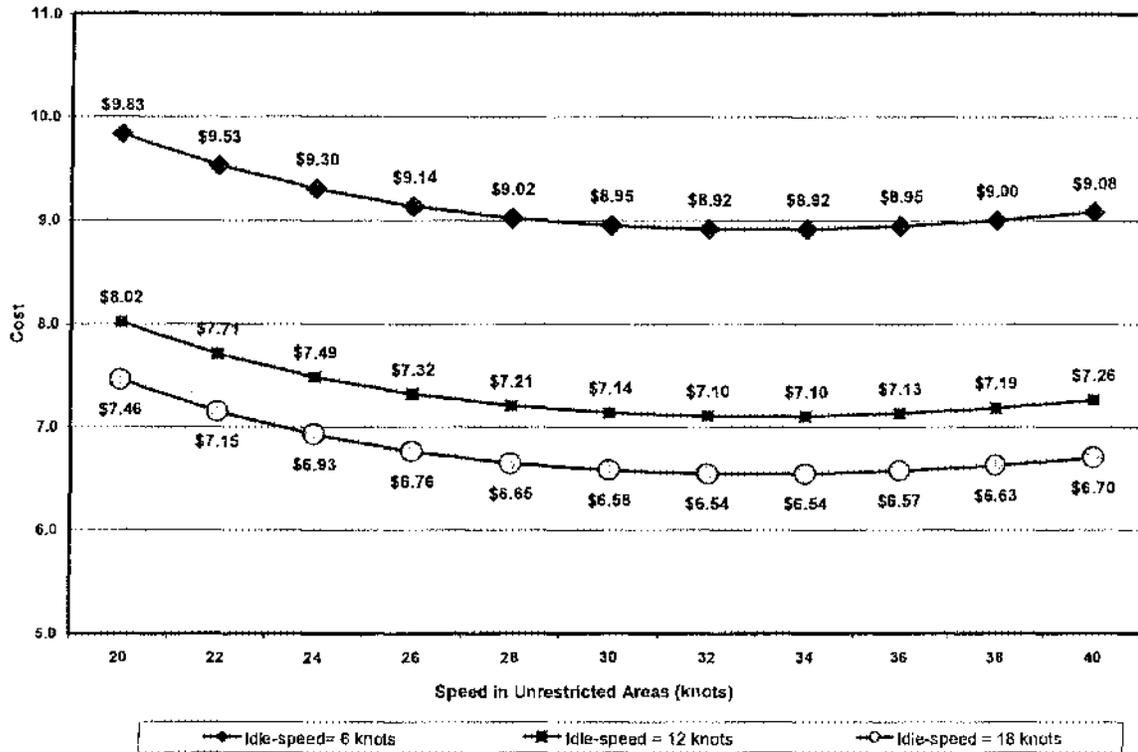
Table 3
One-way Voyage Times on Selected Routes at
Different Operating Speeds and No-wake Zone Speeds
(hours)

Unrestricted Operating Speed (knots)	Savannah-Beaufort (direct)				Savannah-Daufuski-Hilton Head			
	Idle-Speed speed (knots)				Idle-Speed Zone speed (knots)			
	6	12	15	18	6	12	15	18
20	3.39	2.66	2.51	2.41	2.67	2.15	2.04	1.97
22	3.23	2.50	2.35	2.26	2.56	2.03	1.93	1.86
24	3.10	2.37	2.22	2.13	2.46	1.93	1.83	1.76
26	2.99	2.26	2.11	2.02	2.38	1.85	1.75	1.68
28	2.90	2.17	2.02	1.92	2.30	1.78	1.67	1.60
30	2.82	2.08	1.94	1.84	2.24	1.72	1.61	1.54
32	2.74	2.01	1.86	1.77	2.19	1.66	1.56	1.49
34	2.68	1.95	1.80	1.70	2.14	1.62	1.51	1.44
36	2.63	1.89	1.75	1.65	2.10	1.58	1.47	1.40
38	2.57	1.84	1.69	1.60	2.06	1.54	1.43	1.36
40	2.53	1.80	1.65	1.55	2.03	1.50	1.40	1.33

There is an obvious benefit in terms of time to increasing the idle-speed in restricted zones. With two stops on Hilton Head Island and Daufuskie Island, traveling at 32 knots in unrestricted water, a trip from Savannah at 6 knots vs. 18 knots idle-speed is a difference of 45 minutes.

The relative operating costs of operating at current speeds in the idle-speed zones and increased speeds without causing an energy wake are also substantial. The following chart depicts the cost differential, allowing policy makers to judge the impact.

Chart 2
Savannah-Hilton Head Voyage Times at
Selected Operating and Idle-Speed Zone Speeds



V. Financial Considerations

A. Capital and Operating Costs

1. Capital Costs

Purchase costs for the four different sizes of boats are estimated to be:

49 passenger	Monohull	\$850,000
99 passenger	Monohull	\$1,400,000
149 passenger	Catamaran	\$3,000,000
250 passenger	Catamaran	\$6,500,000

In this analysis, the 149 passenger catamaran was used to develop financial projections. The projections assumed a six percent interest rate and a 15-year financing period for the full purchase price.

Table 4

Annual Financing Costs for 149-passenger
High-speed (40 knot) Catamaran Ferries

Description	Value
Purchase Cost per ferry	\$3,000,000
Financing period (years)	15.0
Annual Interest rate	6.00%
Annual payment (P&I)	\$308,888
No. of boats acquired	10
Total annual payment (P&I)	\$3,088,883

While the capital cost projections assume 100 percent financing, should the Chatham Area Transit Authority or other governmental entities decide to jointly invest in this service it is possible that some portion of the capital costs could be obtained through federal funds.

The number of vessels projected for this service is 10, including spares. In constant dollars the capital expenditure is \$30,000,000. While existing embarkation sites are all functional and adequate to accommodate the proposed vessels, the financial projections include \$1 million as a precaution to mitigate any potential upgrades that may be

necessary. This projection does not take into account the development of new embarkation locations. It is assumed that if a new embarkation location were developed it would be funded separately.

The additional ground transportation capital investment, depending upon service configurations could reach \$4,000,000.

2. Operating Costs

Operating costs were calculated using a proprietary model developed and used on other projects by IBJ Associates. Costs were calculated on a per-voyage basis that then translated to daily, monthly, and annual costs. Operating and cost inputs to the model include the following.

Crewing inputs:

- Normal Crew Shifts per day
- Crew, minimum callout (hours)
- Crew, maximum Straight Time hours/shift
- Crew, maximum total hours/shift
- Captain's hourly rate, Straight Time and Overtime
- Mate's hourly rate, Straight Time and Overtime
- Benefits as a percent of Straight Time
- Training cost per employee/year
- Uniform cost per employee/year

Boat characteristics inputs:

- Transfer rate (riders/minute)
- Maximum passenger capacity
- Number and horsepower of engines
- Speed, maximum (knots)
- Speed, operating (knots)
- Speed, No-wake (knots)
- Fuel consumption, idle (gph)
- Fuel consumption, max speed (gph)
- Average maneuvering minutes per stop

Voyage information inputs:

- Route, unrestricted mileage
- Route, No-wake mileage
- Number and location of stops

Cost inputs:

- Fuel cost per gallon
- Lube oil cost per quart
- Insurance, H&M, annual cost
- Insurance, Pollution, annual cost
- Insurance, P&I, annual cost
- M&R, cost per month
- Boat supplies, cost per month
- Miscellaneous costs, per month
- Management fee as Percent of operating costs
- Boat acquisition cost
- Financing, mortgage term
- Financing, mortgage interest rate

Voyage costs were analyzed based on an operating speed in unrestricted areas of 32 knots and 12 knots in no-wake zones.

Included in the costs are bus and landside operations. The bus operation costs are premised on \$3.50 per mile. The landside costs assume 2.5 staff per embarkation location. The annual capital costs for vessels and buses are included in the operations cost. Table 5 provides a summary of all operations costs.

Table 5

Item	Annual Costs
Ferry Operations	\$9,983,736
Landside Operations	\$562,500
Bus Operations	\$5,367,566
Marketing	\$400,000
Depreciation	\$2,333,333
Total	\$18,647,135
Cost per Trip	\$11.35

B. Revenue & Funding Sources

The projected revenue is premised on the farebox receipts of riders and ancillary sales of confectionery items. There is also value generated to other stakeholders in terms of access to employees and the increase in either economic activity or land value due to the improved access afforded by the ferry and related transport investments.

Currently, Hilton Head Island to Daufuskie Island commuters pay \$35 for a round trip. The survey of Savannah visitors and residents (Appendix A) done as part of the street car study indicated that about 21% considered a price range of between \$5 and \$6 fair while another 23% indicated that a price range of \$10 was reasonable. Fourteen percent of

respondents replied that a fee above \$11 was equitable. Nearly 15% of those responding said the fare should be less than \$5.

There was also a significant gap in what people thought was an equitable price between the \$5 dollar and \$10 dollar level. Further, Savannah residents consistently registered higher on the fares than any other sub-group with nearly 30% indicating that a \$9 - \$10.99 fee was equitable. With little fixed preconception about what the service should cost, developing a fare is problematic given the nearly equal responses to distinct fare ranges. This could suggest that a price point that is on the upper or lower edge of either bulge would be viewed as insignificant. It also indicates that a two tiered pricing service may be well received. The survey did not ask the perceived value of the ferry trip tied with ground transportation.

The feedback from individuals in various communities to a fee structure of \$10 to \$12 is generally considered very reasonable for visitors but not for commuters, especially service workers who would rely on the ferry service for job access. Several sources interviewed encouraged creating a tiered fee structure that provides incentives for workers to use the ferry. Another concern that was voiced was attracting families by using a significant discount for children.

One key to assuring that there is perceived value in the ferry service is integrating it into the overall mobility network to provide seamless service for anyone who chooses to use one component of the network service.

Additional revenue sources for the service include the current and future resorts/residential complexes on Daufuskie Island. The Daufuskie Island Club and Resort and Haig Point residential communities currently expend over \$4 Million just on waterline operating costs. There is the potential for the ferry service to replace and enhance some of these existing services.

Another source of revenue could come from businesses that would subsidize their employees to ride the ferry service and use the related ground transportation. Revenue from lease fees to vendors at the various embarkation locations is yet another potential source of income for the service.

The investment in ground transport for the South Carolina embarkation locations should also generate additional ridership revenue, beyond those who use the ferry service. For planning purposes there was no assessment of what this revenue source could generate.

For purposes of this analysis only revenues from riders and concession fees generated from the sale of vendor items was estimated. Table 6 provides a one year summary of these revenues. The fees are grouped in three categories to reflect riders who would use the service on a regular basis, occasional riders and those riders desiring premium service.

Table 6
Revenue Estimates

Fares	% Ridership	
Ferry		
\$6	50%	\$4,929,438
\$12	35%	\$6,901,213
\$18	15%	\$4,436,494
		\$16,267,145
Bus		
\$1	75%	\$1,232,360
Vendor		Surcharge
		10%
Sales		
\$2	30%	\$98,589
\$5	20%	\$164,315
\$8	10%	\$131,452
		\$394,355
	Revenue	\$17,893,860

C. Financial Projections

Table 7 provides a seven year projection of the revenues and costs associated with the ferry service.

**Table 7
Financial Projections**

Revenue	60%	100%	112%	112%	112%	112%	112%
% growth							
Trips	985,888	1,643,146	1,840,324	2,061,162	2,308,502	2,585,522	2,895,785
Year	1	2	3	4	5	6	7
Fares							
Ferry							
\$6	\$2,957,663	\$4,929,438	\$5,520,971	\$6,183,487	\$6,925,505	\$7,756,566.13	\$8,687,354.06
\$12	\$4,140,728	\$6,901,213	\$7,729,359	\$8,656,882	\$9,695,708	\$10,859,192.58	\$12,162,295.69
\$18	\$2,661,897	\$4,436,494	\$4,968,874	\$5,565,138	\$6,232,955	\$6,980,909.51	\$7,818,618.66
	\$9,760,287	\$16,267,145	\$18,219,203	\$20,405,507	\$22,854,168	\$25,596,668.22	\$28,668,268.41
Bus							
\$1	\$739,416	\$1,232,360	\$1,380,243	\$1,545,872	\$1,731,376	\$1,939,142	\$2,171,839
Vendor							
Sales							
\$2	\$59,153	\$98,589	\$110,419	\$123,670	\$138,510	\$155,131.32	\$173,747.08
\$5	\$98,589	\$164,315	\$184,032	\$206,116	\$230,850	\$258,552.20	\$289,578.47
\$8	\$78,871	\$131,452	\$147,226	\$164,893	\$184,680	\$206,841.76	\$231,662.77
	\$236,613	\$394,355	\$441,678	\$494,679	\$554,040	\$620,525.29	\$694,988.32
Total	\$10,736,316	\$17,893,860	\$20,041,123	\$22,446,058	\$25,139,585	\$28,156,335	\$31,535,095
Expenses							
% cost increase	0	106%	106%	107%	107%	107%	107%
Year	1	2	3	4	5	6	7
Ferry Operations	9,983,736	10,582,760	11,217,726	12,002,966	12,843,174	13,742,196	14,704,150
Landside Operations	562,500	596,250	632,025	676,267	723,605	774,258	828,456
Bus Operations	5,367,566	5,689,620	6,030,997	6,453,167	6,904,889	7,388,231	7,905,407
Marketing	400,000	424,000	449,440	480,901	514,564	550,583	589,124
Depreciation	2,333,333	2,333,333	2,333,333	2,333,333	2,333,333	2,333,333	2,333,333
Total	18,647,136	19,625,965	20,663,524	21,946,638	23,319,570	24,788,608	26,360,477
Cost per Trip	\$18.91	\$11.94	\$11.23	\$10.65	\$10.10	\$9.59	\$9.10
Net Annual	(\$7,910,820)	(\$1,732,105)	(\$622,401)	\$499,420	\$1,820,015	\$3,367,728	\$5,174,618
Cumulative	(\$7,910,820)	(\$9,642,926)	(\$10,265,327)	(\$9,765,907)	(\$7,945,893)	(\$4,578,165)	\$596,453

These projections assume that only 60% of the estimated first full year ridership will be achieved. The first year costs are premised on the ridership being 100% of the projection. With ridership increasing at an annual rate of 12% for years three through seven, the service begins to cover expenses in year four and the cumulative debt by year seven.

These projections are heavily dependent upon the ferry service generating significantly increased ridership. If the annual growth rate were about 9% it would take until year seven (7) before revenues exceeded expenses and until year eleven (11) until the cumulative debt of over \$14.4 Million would be eliminated.

D. Related Economic Development Opportunities

While the higher-speed ferry service must be viewed in terms of its ridership potential and enhancement to overall mobility in the region, another primary benefit to investing in

this service is the impact that it will have on related development opportunities that directly benefit from its presence. Four opportunities stand out.

1. Savannah River Street and Hutchinson Island

Increased access to and from River Street and Hutchinson Island should have a positive impact on ongoing development of this area. One aspect of this development is the potential transformation of Daufuskie Island's front door from Hilton Head Island to Savannah. Daufuskie residents and resorts may perceive that Savannah better fits their need to easily reach the island. This is especially likely for visitors arriving via air, rather than having them travel to Hilton Head Island to then travel back to Daufuskie Island.

2. Redevelopment of the Port Royal Port Authority Property

The town of Port Royal has an underutilized waterfront property that is now being master planned and could be developed to become a major destination and activity center for the region. With the access provided by quality ferry service, this site could also provide additional commercial value for the Town of Port Royal. This in turn would have a positive impact on the overall property values of the town.

3. Downtown Beaufort Parking and Commercial/Housing Development

The advent of higher-speed ferry service coupled with a local circulator system could viably be tied into investments in a desired downtown parking garage with accompanying commercial/housing space.

4. Future Development on Daufuskie Island

While increased traffic throughput has been identified as a major benefit for existing Daufuskie Island developments, the ferry service will likely play a key factor in enhancing other planned developments that are already permitted on the island. The value of this service in facilitating the investments should be captured.

Capturing a portion of the fair value added to the economic activity or property value by the ferry service should be part of the basis for funding the system. This can be accomplished through a variety of proven methods including the creation of special districts and tax increment financing.

The benefits of the higher-speed ferry service to Hilton Head Island do not reside in increased development. The primary benefits will be derived by improving access to the island, helping mitigate growing automobile traffic congestion and providing a reasonable means of getting a percentage of employees to their job sites and expanding job access for residents in the region who would use the service.

E. Ferry Service Economic Impact

The purpose of using an economic impact assessment is to quantify the value of introducing the new ferry service in terms of jobs, income and taxes generated. It not only shows the direct ferry operations impact but also identifies the total economic effect on the local region, the state, and the nation. This indicates the economic implications of the potential investments and changes in business activity.

The following analysis uses the U.S. Maritime Administration's *Port Economic Impact Kit (December 2000)* to measure how direct impacts of vessel and terminal expenditures are extended to indirect purchases by the suppliers of goods and services to the ferry fleet that ripple through the other industries in the local economy. Additionally, the workers employed by the ferry industry and by the above suppliers, when spending their wages and salaries, are making induced purchases that also ripple through the local economy.

The analysis applies state-of-the-art techniques in input-output and regional analyses to describe the interrelationships among 500 industry sectors of the economy and to calculate the total impacts and multiplier effects of expenditures by the ferry service upon the economy.

There are four economic measurements that are calculated by the model:

Output is the value of production exchanged between firms and/or other organizations. In the case of ferry services it is the value of the service provided.

Employment is the number of jobs provided by the ferry service.

Income is the wages, salaries and proprietor's incomes. It excludes non-wage compensation and transfer payments.

Gross State Product is the total regional wealth generated by the economic activity of the ferry service. It is the difference between the value of goods and services purchased for production inputs and the value of the service provided by the ferry.

Multipliers are indicators of the economic ripple effect resulting from the direct expenditures. They are calculated for each of the four above economic measurements in terms of the ratio of the total impact divided by the direct impact. For example, an employment multiplier of 2.0 means that for every direct ferry job, one other job equivalent is created in the region. This is not a real full additional position, but the economic aggregate of many position fractions located in many sectors of the local economy.

The MarAd kit has predefined regional definitions for state and national assessments. Since the ferry system operating area covers parts of both Georgia and South Carolina, analyses were performed for each state. The resulting impact figures were relatively close and can be best interpreted as a range of impact values.

Table 8 shows the result of the economic impact analysis over a ten year period for each ferryboat introduced into service on the coastal route.

Table 8

COMPOSITION OF GROSS STATE PRODUCT	\$000		
	Georgia	South Carolina	Mean
Wages Net of Taxes	319.82	295.23	307.53
Local Taxes	20.71	18.35	19.53
State Taxes	22.05	35.85	28.95
Federal Taxes	75.34	70.26	72.80
<u>Profit, Dividends, Rents, Etc.</u>	<u>202.43</u>	<u>172.64</u>	<u>187.54</u>
Total	640.35	592.33	616.34

Given a fleet of ten vessels, the economic return in terms of gross mean product to the region would be in excess of \$6 million. This analysis also concludes that the size of investment in ferry service would produce over one hundred additional jobs in the region.

The addition of ferry service to the region has the potential to encourage more visitors to travel throughout the area rather than stay in one or possibly two locations. In turn that should translate to visitors extending their stay. Assuming that only half of the visitors taking the ferry in a year (114,000) were to extend their stay by one-half day, the economic impact would be in excess of an additional \$5 Million annually to the region, if each visitor were to spend an average of \$95 per day.

VI. Institutional Considerations

A. Environmental or Permitting Requirements

There are three likely environmental and permit requirements that will have to be negotiated.

1. US Coast Guard permits to approve vessel construction and operation in the Savannah River and inter-coastal waterway will be required. Preliminary discussions with the Coast Guard regarding the concept of using higher-speed ferries suggest there should be no difficulty in obtaining the necessary approvals.
2. Relief from the "idle-speed" requirements imposed on significant segments of the service run is critical. This is both a state and local jurisdiction concern that will require proof that boats with existing technology satisfy the no-wake issues that arise from traditional boats operating at higher speeds.
3. Local jurisdiction permits and private party agreements to use embarkation facilities will be necessary.

B. Institutional Issues

The major institutional issues revolve around working with local jurisdictions to obtain the necessary permits to use embarkation locations and develop a private/public framework to finance and operate the higher-speed ferry system. The other challenge will be establishing the ground transportation network and associated parking to compliment the ferry service and interface with existing transportation services and enhance community objectives.

VII. Conclusions

The investment in and operation of a higher-speed ferry service for the bi-state region encompassing Savannah, GA and Hilton Head Island and Beaufort, SC holds significant potential for enhancing the long term mobility and viability of the region. To become successful it can not be conceived of as simply a ferry service. It must be part of a complete ferry and ground circulation system that has quality communications to provide customers with the ability to easily get to and from their destinations.

Implementing this system is challenging in that to generate the necessary ridership to make this venture feasible, the system needs to be built out immediately. It does not lend itself to an incremental buildup without a significant increase in capital to underwrite the operations.

The fundamental question is whether the risk involved with this venture should be born by a private entity, a public entity like the Chatham Area Transit Authority (CAT), or a private/public partnership. The key financial risk is achieving adequate ridership to maximize the asset utilization of the system to keep fares reasonable. One corollary risk is the ability to capture the value of the service to non-riding stakeholders who benefit economically from its presence.

Based on the level of risk involved with the project, it is recommended that the project should be underwritten by a private sector investment, in conjunction with public funding in the form of bonding the initial capitalization of the system. This should be complemented by the cooperation of CAT and the Lowcountry Regional Transit Authority to seek federal capital funds to cover at least 50% of the capital costs for the ferry and associated bus services.

Using this approach, the private partner would assume the risk for operational costs, thus limiting the exposure of local jurisdictions. The involvement of the private sector should also assist in speeding the implementation of the ferry system. A goal of having the system operational by the summer of 2007 is not unreasonable, should local governments indicate a willingness to create a private/public framework to make this service a reality.

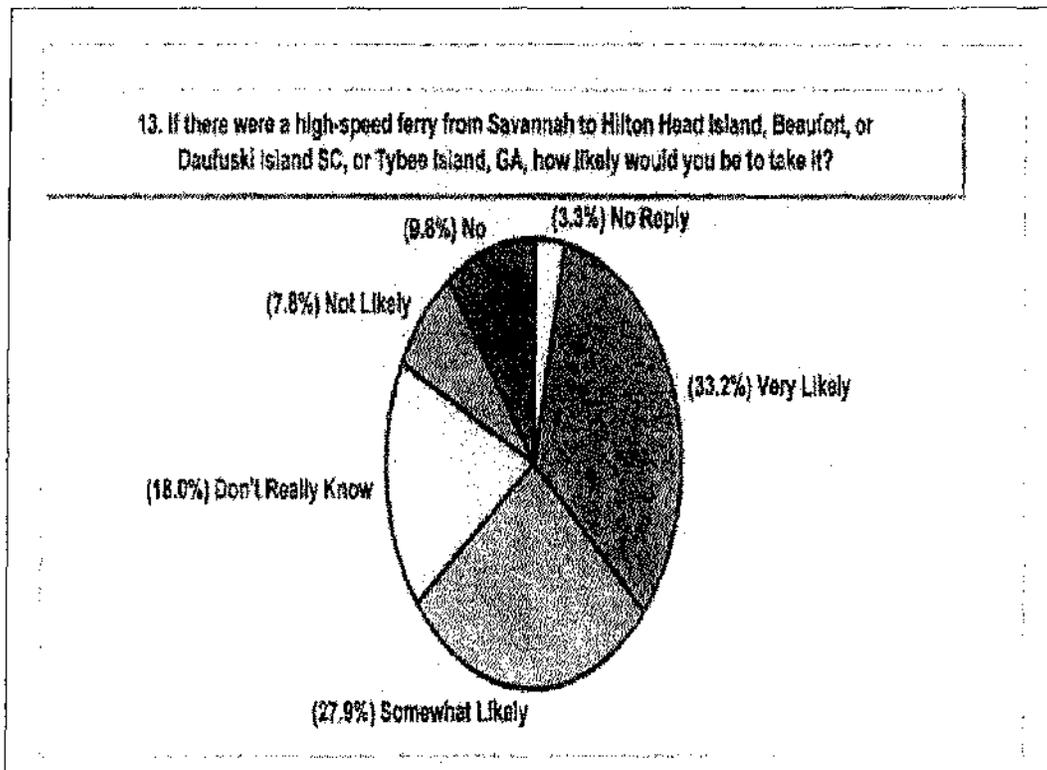
For this project to be realized the following steps need to be undertaken..

- Gain agreement from local governmental jurisdictions regarding establishment of the ferry system.
- Identify a least one private sector investor to partner with the development of the ferry system.
- Secure agreement with an experienced operations company to run the service, agreeing to cover the risk associated with operating the service for a given period of time.
- Negotiate with existing ferry service stakeholders to participate in the long-term support of the ferry service.
- Proceed with a detailed implementation and operations plan for both ferry and ground related services, accompanied by a comprehensive marketing assessment to determine pricing strategies.
- Implement a public education program identifying the benefits and service provided by investing in the higher-speed ferry system.
- Open discussions with state and local officials to modify idle-speed zones for vessels that have a public purpose and produce a low energy wake.
- Identify and secure Federal funding for a portion of the ferry and ground transport component of the service.
- Secure arrangements for the embarkation points.
- Develop specifications for the vessels and proceed with construction negotiations.

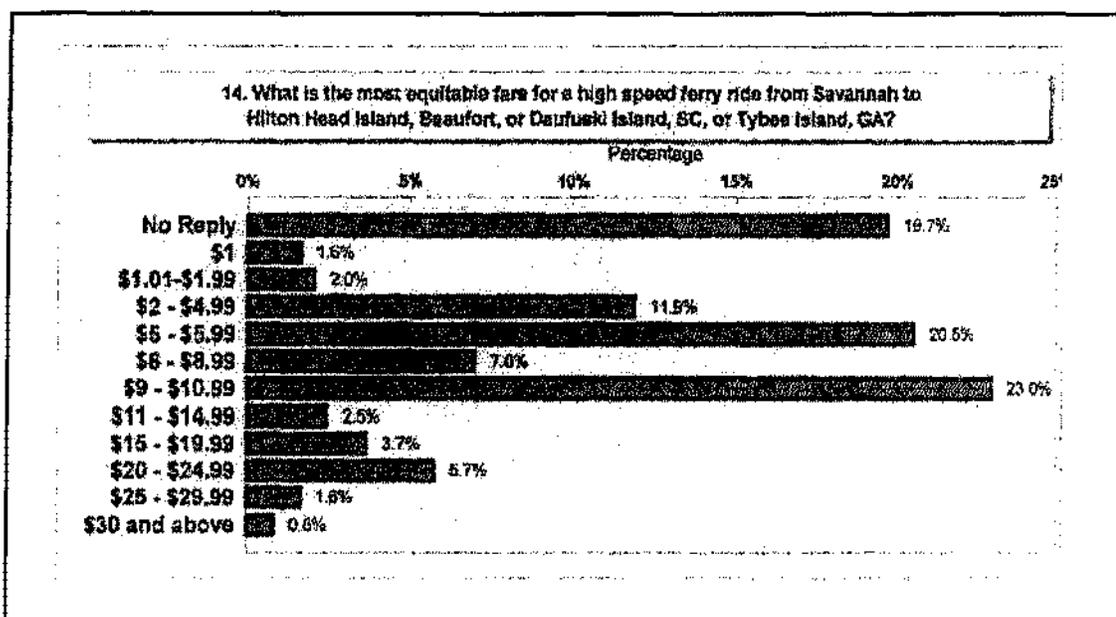
This project offers a creative opportunity to enhance mobility within this region. In addition to providing a highly functional service, it can add unique character to the region, enhancing economic activity and job opportunities plus providing improved north-south connectivity for a region that is continually becoming more interdependent. Finally, the project can be accomplished without placing a burden on local taxpayers or businesses that do not directly benefit from the service.

APPENDIX A Market Survey Information

The following information was generated from a survey conducted by Stone Consulting to aid in determining the feasibility of street car service in Savannah. Two specific questions were included in the survey to assess the viability of ferry service between Savannah and Lowcountry destinations.



Thirty-three percent were very likely, 27.9% were somewhat likely, and only 17.6% replied "Not likely" or "No". The responses from this question were actually slightly more favorable than the streetcar and indicate a very favorable market.

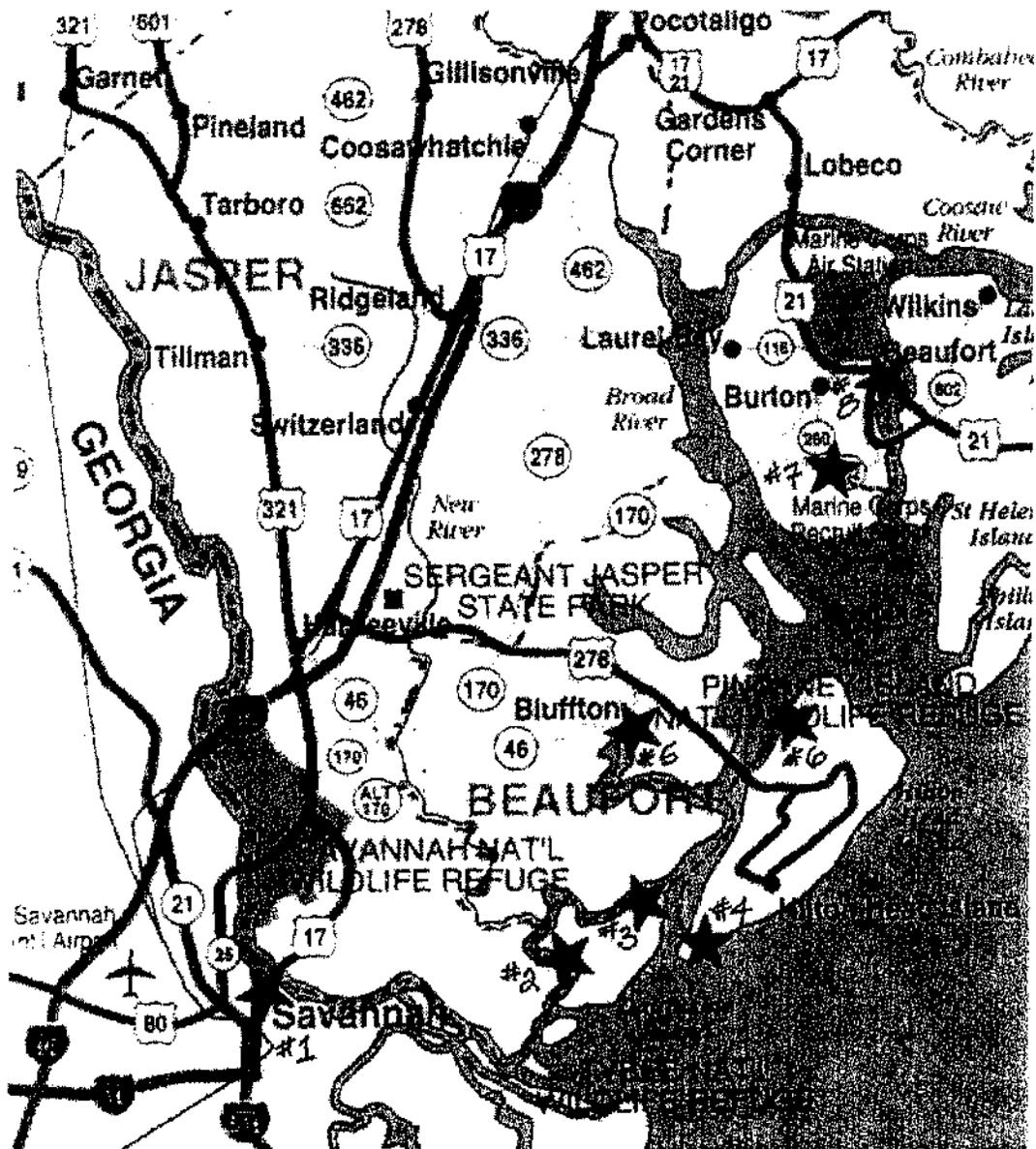


There were two distinct 'bulges' in survey responses, with the expected minorities at the ends. Only 3.6% felt that it should be under \$2.00, and another 11.9% felt it should be under \$5.

Twenty-one percent replied in the \$5-5.99 range, with a peculiar 7% response gap all the way between \$6 and \$9. Another major group of 23% replied they felt a fair price is between \$9 and \$10.99. The balance of 14.3% respondents replied they were willing to pay above \$10.99. In that group, six responses (2.4%) actually replied above \$25.

There is obviously little fixed preconception about what this service should cost. Fare development may be problematic when groups are equally split between a \$5 ticket and a \$10 ticket. Interestingly enough, Savannah residents consistently registered higher on the fares than any other sub-group, with nearly 30% in the \$9-10.99 fare response group.

Appendix B Ferry Service Route

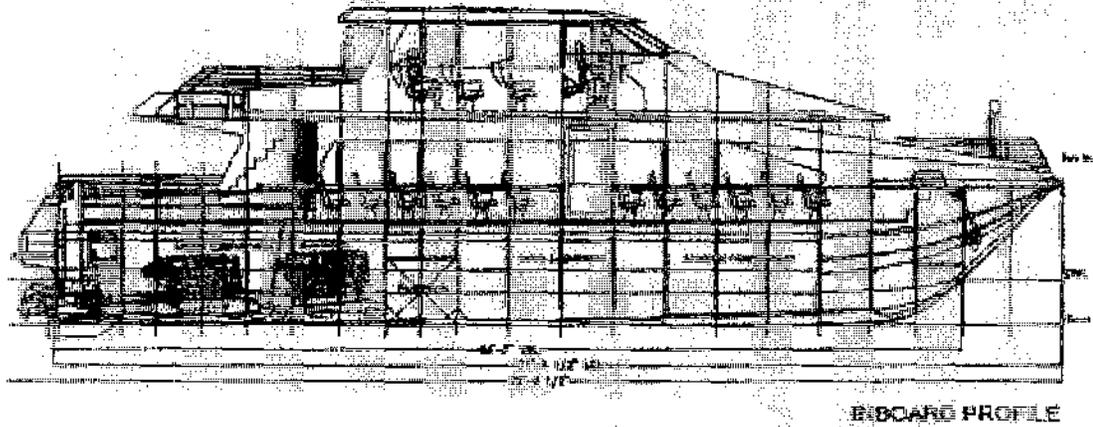


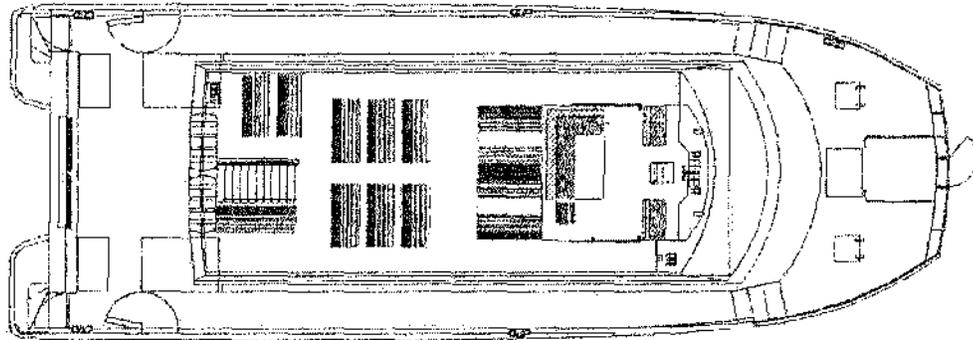
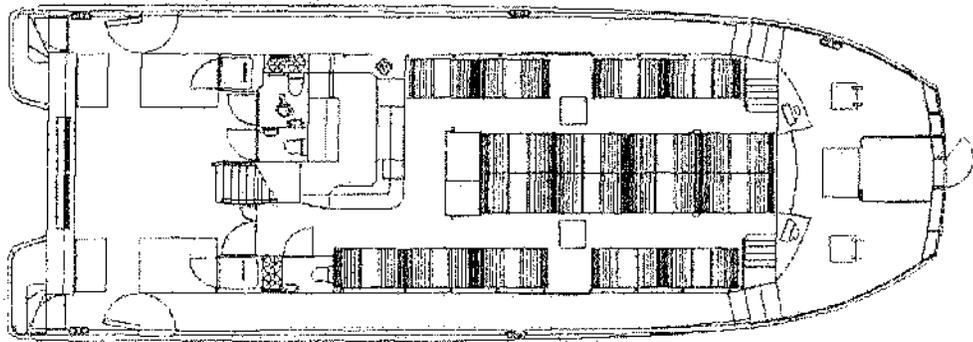
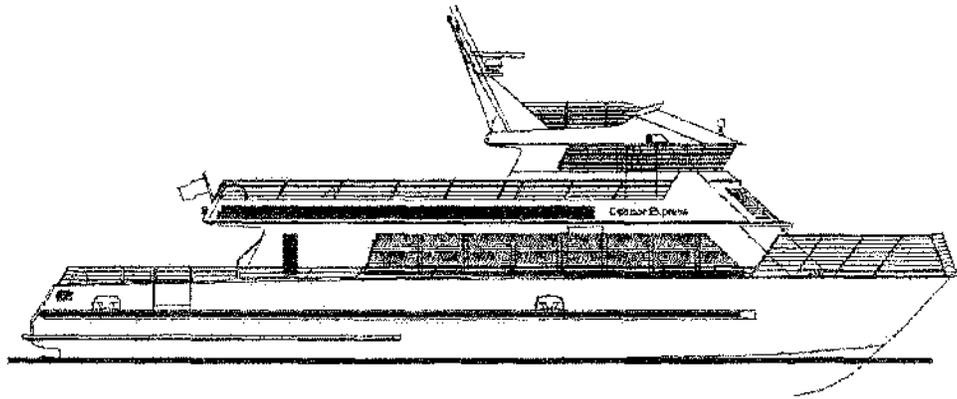
Ferry Destination Chart

- | | |
|--|--------------------------|
| 1. Savannah (Includes Hutchinson Island) | 5. Bluffton Village |
| 2. South End Daufuskie Island | 6. North End Hilton Head |
| 3. North End Daufuskie Island | 7. Port Royal Village |
| 4. South End Hilton Head Island | 8. City of Beaufort |

Appendix C Vessel Design Options

The following vessel designs were produced by All American Marine.





Specifications similar to the vessel envisioned for the ferry service

Designer: **Teknicraft Design Ltd, New Zealand**

Crew/ Passenger capacity: **3/149**

General Specifications:

Length overall: **75'**

Breadth overall: **26.5'**

Draft: **3.3'**

Displacement: **118,200 lb Full**
77,000 lb Light

Tonnage: **Gross 86.75 t**
Net 69.16 t

Type: **Catamaran**

Hull Plate Type: **AA5083-H321**

Hull Plate Thickness **.190"** Above L/W/L, **.250"** Below L/W/L

Number of Decks **2**

Number of Main Engines: **4**

Horsepower of each Main Engine: **740 bhp/2300 rpm**

Fuel type of Main Engines: **Diesel**

Propulsion Type: **Waterjet**

Number of Auxiliary Engines: **1**

Type of Auxiliary Engines: **Isuzu Diesel Generator**

Fuel Capacity: **2000 Gallons**

Hydraulic oil Capacity: **5Gallons**

Potable water capacity: **150 Gallons**

Equipment Specifics

Main Engine(s)

Make & Model **Detroit Series 60, 14 liter**

Engine Controls

Make & Model **ZF/ Mathers**

Drive lines

Make: **Driveline Services, Inc.**

Jet Drives

Make & serial number(s) **Hamilton 362 Water Jet**

Generator(s) / Auxiliary power unit(s)

Make & Model **Nor Pro 20 KW Isuzu**

Paint

Topside Paint: **Awlgrip**

Topside Primer: **Awlgrip**

Bottom Pain: **International Intersleek**

Bottom Prime: **International Intersleek_**

Deck Coating(s): **Awlgrip**

Steering System

Make: **Hamilton / Jastram**

Main help pump: **Jastram**

Miscellaneous

Fire Pump system: **Oberdofer Pump Inc.**

Relief valve: **Kunkle**

Appendix D Resource Contacts

Contacts

The following individuals were either contacted regarding information that was used to construct this analysis, review portions of the analysis or provide their perspective regarding the feasibility of the ferry system. This does not represent the complete list of individuals with whom this analysis was discussed.

Albert Gnesin, Hilton Head Island
Anthony Schopp, President, The Savannah Area Convention & Visitors Bureau
Bill Ferguson, Hilton Head Island Town Council
Bill Mottel, Hilton Head Island Town Council
Bill Rauch, Mayor, City of Beaufort
Bob Hohman, Hilton Head Island
Bob Klink, Beaufort County Engineer
Bob Sharp, General Manager, Palmetto Dunes Resort
Bruce Behrens, Former Bluffton Town Manager
Bruce Brown, formerly with Palmer Johnson Yachts, Savannah
Charles L. Cauthen, The Daufuskie Company, Hilton Head Island
Chris Bickley, Executive Director Lowcountry Council of Governments
Chris Hutton, Hutton Brothers' Contracting, Inc., Daufuskie Island
Chris Morrill, Assistant City Manager, City of Savannah
Chuck Hoelly, Assistant Town Manager, Hilton Head Island
Darren Smith, General Manager, Daufuskie Club and Resort
Dick Knowlton, President, White Branch Consultants, Inc.,
Dr. Jules Paderewski, Partner, JBP Development
Frank Glover, Councilman, City of Beaufort
Gene Quance, Technical Director, All American Marine
George Williams, Hilton Head Island Town Council
Hank Johnson, Major, Town of Bluffton
Hank Skipper, Chatham Area Transit Authority
Harvey Ewing, Hilton Head Island
Jacki Martin, Director, Coastal Conservation League, Beaufort County
James D. Comerford, McGuire Woods LLP, Atlanta
Jim Carlin, Hilton Head Island Town Council
Joe Niggel, Director, Municipal Securities Group, UBS, Charlotte, NC
John F. McDonough, City Manager, City of Beaufort
John Safuy, Hilton Head Island Town Council
Josh Martins, Assistant Community Development Director, Town of Bluffton
Julian Pafford, Savannah Electric Company
Keene Reese, Palmetto Bluff
Ken Heitzke, Hilton Head Island Town Council
Libby Anderson, Planning Director, City of Beaufort
Linda Bridges, Planning Dir. Town of Port Royal
Lise R. Sundrila, Executive Director, Savannah Development & Renewal Authority

LT Brian K. McCaul, US Coast Guard, Marine Safety Office Savannah
Mark King, President, The Club Group, Hilton Head Island
Mark Wilkes, Director of Transportation Planning, Chatham County-Savannah MPC
Matt Mullett, CEO, All American Marine, Bellingham, Washington
Michael B. Brown, City Manager, City of Savannah
Miles Hadley, Acting Beaufort City Manager
Nic deWall, Teknicraft Design Ltd., New Zealand
Pam McFarland, Community Development Director, Town of Bluffton
Patty Richards, Environmental Services Manager
Reed Annstrong, Coastal Conservation League, Beaufort County
Richard H. Stewart, Beaufort County Council
Robert Sullivan, Hilton Head Island
Shaw Henry, Planner, Town of Bluffton
Steve Riley, Hilton Head Island Town Manager
Steve Shields, General Manager, Haig Point, Daufuskie Island
Tom Henrickson, Finance Director, Beaufort County
Tom Peeples, Mayor, Town of Hilton Head Island
Tommy Browne, Master Pilot, Savannah Pilots Association
Van Willis, Town Manager, Town of Port Royal
W. Ross Lysinger, Hilton Head Island
Weston Newton, Chairman, Beaufort County Council
William Hubbard, President & CEO, Savannah Area Chamber of Commerce

Hilton Head Mobility Discussion Group

Jill Foster, Planner, Town of Hilton Head Island
Darrin Schoemaker, Traffic & Transportation Director, Town of Hilton Head Island
Charles Cousins, Director of Planning, Town of Hilton Head Island
Troy Ashe, Hilton Head Island
Rochelle Ferguson, Executive Director, Lowcountry RTA
George Breed, Director of Security, Sea Pines Plantation, Hilton Head Island
Arlene Williams, East-West Resorts, Hilton Head Island
Tim Bennett, Hilton Head Island – Bluffton Chamber of Commerce
Alan Herd, Chairman, Greater Island Transportation Committee, Hilton Head Island
P.J. Tanner, Sheriff, Beaufort County

This group met on three different occasions to discuss the feasibility of utilizing a ferry service to address mobility challenges associated with gaining access to and circulating on Hilton Head Island.

Based on a 2002 transportation study conducted for the town of Hilton Head Island, the projected traffic counts showed a gap of some 55,000 trips a day that could not be addressed with the current infrastructure and still maintain a "D" level of service by 2020.

The group identified the differences in travel patterns that must be taken into consideration for residents, visitors and workers on the island.

One of the premises established by the group was that there must be a ground transportation component that is integrated into the ferry service for it to be effective on the island. Likewise, the service must be usable and perceived as desirable for people who would not be using the ferry.

Characteristics of the service included:

- frequency and easy access to the service
- reasonable price point
- incentives for using it offered by employers
- off island park and rides, car pools and van service should be added
- users need to feel the service is safe and comfortable
- should become part of the "island" experience
- discounts offered by stores for using the service
- premium services should be part of the overall system

Ferry System Focus Group

Savannah
July 21, 2004

Savannah Residents
Holly Tompkins
Caine Cortellino
Todd Lynch
Kevin Kelly
Cory Vaillawcourt
Lisa Semple

These individuals fit a profile of urban professionals whose range equaled roughly that of the demographic reported in the street car survey that were most likely to utilize the ferry.

Three major items were explored

What service characteristics / amenities would attract their ridership?

- Level of service should be at least similar to a train with comfortable seats being a priority.
- Communications capability and on board video w/ news or entertainment
- Frequency of service and late hours on the weekend
- Ground transportation to get around on Hilton Head Island imperative.
- Travel time would have to be comparable to a car trip.

What use would they make of the ferry service?

- Most trips would be for recreation or entertainment on Hilton Head Island.

- Access to Beaufort would likely increase visits.
- Outlet malls in Bluffton would be an attractive destination.
- Number of trips to the Lowcountry would increase by at least 3 fold, depending on service and price.

What price – value relationship did they perceive if service standards were met?

- The price-value relationship ranged on one way trips being from \$3-5, \$10 and up to \$15.
- Most of the value derived was based on these being discretionary trips for purposes of recreation, shopping or entertainment.

The feedback from this focus group mirrored the results from the street car survey and fit into a pattern of responses received from anecdotal conversations and feedback from individuals with whom the project was discussed.

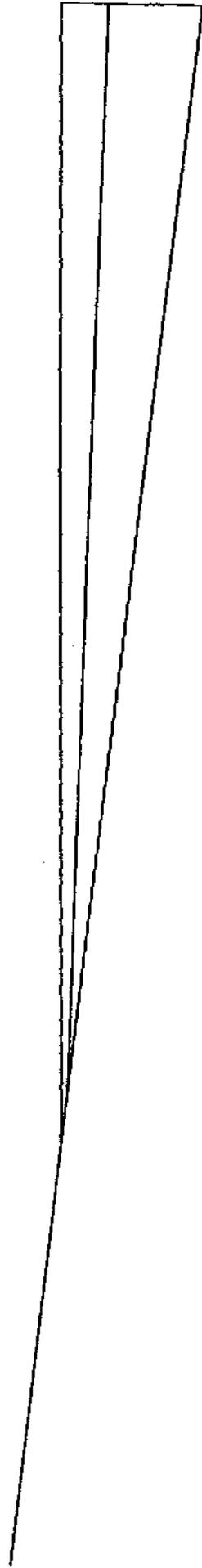
Document Review

The following documents were reviewed as part of the analysis.

- Hilton Head Island Chamber "Visitor Profile Study"
- Hilton Head Island Statistics and 2000 Census Report
- Clemson LRTA Traffic Study
- Hilton Head Island Chamber "Skills Assessment Study"
- 2002 Beaufort Transportation Plan
- Hilton Head Employee - Employer Statistics
- Traffic Counts by Sheriffs Office Summer 2002 Highway 278
- Traffic Counts by Hilton Head and SCDOT
- LRTA Transportation Development Plan
- Daufuskie Island / St. Helena Island Public Transportation Needs Assessment, May 1995
- Savannah Domestic Travel Report, 2000
- Savannah Convention and Visitors Bureau Conversion Study for 2000
- Savannah Ferry Feasibility Study, May 2000
- US Census Tract Information, 2000

Daufuskie Ferry

3 / 17 / 09



Ferry Service Conclusions

Sav - Daufuskie - HH

Economically Viable

Daufuskie Traffic &
HH / Savannah Tourists

Existing Demand / No Bridge

RT Ticket \$16=>\$7

1 ½ Hr Schedule
Ft Freemont 2x Daily
Beaufort 1x Daily (9 months)
HHI & Beaufort Cruises (9
months)

HH - St Helena - Beaufort

Not Viable (w/o Large
Subsidy)

St Helena Commuters &
Beaufort Tourists

Bridge / No HHI & St H Transit

\$30 RT Ticket

Savannah – Daufuskie – HHI

	<u>Current</u>	<u>Proposed</u>
Ferry Companies:	4	1
Destinations:	HH	HH & Savannah
Boats:	14	4
Weekday RTs:	34 => 22	11
Weekend Day RTs:	29 => 17	9
Frequency (Hours):	1&2 => 2&3	1 ½
RT Ticket:	High	\$16=>7

Ferry Companies

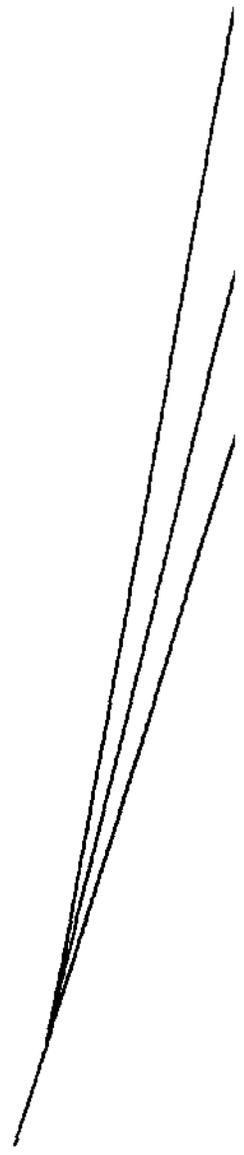
Proposal

Benefits

Form the Ferry Company

Solid Investment

Liquidate Current Boats



Savannah

Proposal

Provide Terminus:
Hutchinson Island
Terminal
Docks
Parking
Funding Thereof

Benefits

Daufuskie Gateway
Economic Activity
Employment for Georgia
Residents
Increased Tourism:
HHI Tourists
Added Attraction for
Savannah Tourists

Hilton Head

Proposal

**Provide Terminus:
Lands End Development
Planning
Promoting
Partial Funding Thereof**

Benefits

**New Tourism Activity:
Savannah Connection
Beaufort Connection
Cruses**

**Increased Tourism:
Hilton Head Tourists
Savannah Visitors**

**Increased Service to:
Daufuskie Residents &
Guests**

Beaufort County

Proposal

Develop:

Docks & Terminals at
Lands End
Daufuskie County Landing
Melrose Landing
Ft Freemont

Lead:

Planning
Promoting
Fund Solicitation

Benefits

Increased Daufuskie Tax Base
Mass Transit Initiative
St Helena Commuter Service
Profitable Enterprise Fund
Profit Sharing

Haig Point

Proposal

LLC Owner of 2 Boats
Ferry Company Investor?

Benefits

Protected through
Ownership of 2 Boats
Enhanced Property
Values
Water Taxi Retained
Good Investment
Ferry Cost Reduction

Daufuskie Island Club

Proposal

LLC Owner of 2 Boats

Benefits

Restored Ferry Service is
Key to Reorganization

Enhanced Property
Values

Protected through
Ownership of 2 Boats

Remaining Daufuskie PUD's

Proposal

Ferry Company
Investors

Benefits

Solid Investment
Daufuskie
Development
Enhance Property
Values

Daufuskie

Needs

Ferry Service
Master Plan
Zoning
Critical Mass
Governance

Improvements

Community
Services
Quality of Life
Property Values
Ferry Service

Proposed Structure

Private – Public Partnership

Private Ferry Company (Newco):

Operate Ferry Service

Lease Boats

Investors:

Daufuskie Development Interests

Current Ferry Companies

Private Boat LLC:

Investors: Daufuskie Development Interests

Ownership Protects their Development Interests

Public:

Docks & Terminals: Savannah, HHI & Daufuskie

Investors: Beaufort County, SCDOT, Savannah & HHI

Daufuskie Ferry

12 / 2 / 08

Ferry Service Conclusions

Sav - Daufuskie – HH

Economically Viable

**Daufuskie Traffic &
HH / Savannah Tourists**

Existing Demand / No Bridge

25% ROI on \$12 RT Ticket

**Contingent on
Daufuskie Participation**

HH - St Helena – Beaufort

Not Viable w/o Subsidy

**St Helena Commuters &
HH / Beaufort Tourists**

Bridge / Develop Demand

25% ROI on \$20 RT Ticket

**Contingent on Beaufort
County Participation**

5 Boat Schedule

Savannah - Daufuskie - HH

a.m. & p.m. Commute (3x)

Boats # 1, # 2 & # 4

3/4 Hr Interval

HH Intermodal

Harbourtown

Daufuskie

Jasper Port

Savannah

Off-Peak

Boat # 1 # 2

1 ½ Hour interval

Spare / Excursions: Boat # 3

Beaufort – HH

Boat # 5

a.m. & p.m. Commute (2x)

Ft Freemont - HH

1 ½ Hr Interval

Off-Peak

HH Intermodal

Ft Freemont

Parris island?

Port Royal

Beaufort

Bluffton – HH – Shelter Cove

Boat # 4

1 ½ Hr interval / 10 - 4

Schedule

11/30

Savannah Line
Savannah
Port
Daufuskie
Harbourtown
Hilton Head
Harbourtown
Daufuskie
Port
Savannah

c	c	c	Weekdays									
530	615	700	830	1000	1130	1300	1430	1600	1730	1900	2030	
630	715	800	930	1100	1230	1400	1530	1700	1745	1830	2000	2130
S	S	S	S	S	S	S	S	S	S	S	S	S
700	745	830	1000	1130	1300	1430	1600	1730	1815	1900	2030	2200
S	S	S	S	S	S	S	S	S	S	S	S	S
730	815	900	1030	1200	1330	1500	1630	1800	1845	1930	2100	2230
830		1000	1130	1300	1430	1600	1730	1900	1945	2030	2200	2330
Weekdays			c c c									

Bluffton Line
Hilton Head
Shelter Cove
Bluffton
Shelter Cove
Hilton Head

April 15 - Oct 15	1000	1130	1300	1430	1600	
	850	S	S	S	S	
	915	1045	1215	1345	1515	1645
	S	S	S	S	1710	
	1000	1130	1300	1430	1600	

S = Stops

Beaufort Line
Beaufort
Port Royal
Ft Freemont
Hilton Head
Ft Freemont
Port Royal
Beaufort

c	c							
		1000	1300	1600	2030			
		S	S	S	S			
615	745	S	S	S	1815	S		
700	830	1130	1430	1730	1900	2200		
745	S	S	S	1815	S	2245		
	S	S	S		S			
	1000	1300	1600		2030			
		c c						

Passenger Round Trips / Day

Sav - Daufuskie - HH

5th Year

700 Savannah / Daufuskie

700 HH / Daufuskie

230 Georgia / HH

170 HH to Sav Tourists

120 Sav to HH Tourists

150 Resident Day Trippers

2,070

1st Year

960 Current Daufuskie

420 All Other

1,380

Beaufort - HH

5th Year

230 Northern County / HH

60 HH Tourists

60 Beaufort Tourists

90 Resident Day Trippers

440

1st Year

270 All

Passengers

11/30

Daufuskie	Current RT's / Year (000's)		Sav %	Commute %	Projected RT Passengers (000's)				
					Daufuskie - Savannah		Daufuskie - HH		
					Commuter	off-Peak	Commuter	off-Peak	
DIC & Resort	113	100%	113	50%	5%	3	54	3	54
Employees	49	100%	49	50%	33%	8	16	8	16
Haig Pt Members & Guests	138	50%	69	50%	5%	2	33	2	33
Employees	22	100%	22	50%	33%	4	7	4	7
J&W / Freeport	72	100%	72	50%	75%	27	9	27	9
Palmetto Ferry & Dolphin +	27	100%	27	50%	75%	10	3	10	3
	421		352			54	122	54	122
			100%			15%	35%	15%	35%

Homes / Units	'08	'10	'12	'15	'20
	519	809	1,139	1,534	2,284

Residents New Demand	Per Day	Sav %	Projected RT Passengers (000's)		
			Savannah HH	Beaufort HH	Total
Hilton Head	75	60%	16	11	27
Bluffton	75	75%	21	7	27
Beaufort	25			9	9
St Helena / Fripp	25			9	9
Savannah	50	100%	18		18
	250		55	36	91

HH Bridge Traffic	Current RT's / Yr (M's)	Ferry Mkt Share		Projected RT Passengers (000's)			
		Riders / Car	Riders / Car	Total	GA %	GA Riders	SC Riders
Weekday Commute	1.8	1.5%	2	54	50%	27	27
Off-Peak	7.4	1.0%	1.5	111	50%	56	56
	9.2			165		83	83

Season Bridge Variation	
Jul / Apr / Jun	27%
May / Aug / Mar	26%
Oct / Sep / Feb	24%
Nov / Dec / Jan	23%

Tourists	Current				Projected RT Passengers (000's)			
	Jul/Jun/Apr	May/Aug/Mar	Oct/Sep/Nov	Feb/Jan/Dec	Total	Sav	Beaufort	Total
Total (000's)	723	642	498	375	2,238			
Market Share	5.0%	4.0%	3.0%	2.0%	Sav %	HH	HH	
HH Ferry Passengers	36	26	15	8	75%	63	21	84
New Beaufort Demand	9	6	4	2			21	21
New Savannah Demand	18	13	7	4		42		42
						105	42	147

Total Demand	Growth	Projected RT Passengers (000's)					B %
		Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	
Daufuskie	10%	352	387	426	469	515	
Bridge	15%	94	108	125	143	165	50%
Tourists	10%	101	111	122	134	147	29%
Residents	15%	52	60	69	79	91	40%
Savannah - HH		503	557	617	684	758	
Beaufort - HH		97	110	124	141	161	
		599	666	742	825	919	

Calculations

11/30

Total Demand		Projected RT Passengers (000's)				
	Growth	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
Daufuskie	15%	352	405	466	535	616
Bridge	10%	113	124	136	150	165
Tourists	10%	101	111	122	134	147
Residents	10%	62	69	75	83	91
Savannah - HH		503	557	617	684	758
Beaufort - HH		97	110	124	141	161
		628	708	799	902	1,019
Per Day		1,720	1,940	2,190	2,472	2,793

Schedule	Boats	Boats	RTs / Week	
	Sav - HH	HH - B'fort	Sav - HH	HH - B't
Savannah Line	3		87	
Bluffton Line			21	
Beaufort Line		1		49
Spare	1			
	4	1	108	49

Morning Commute		RT / Yr (000's)		Sav-Dau	Dau-HH	Dau-HH	HH-B'fort
From		GA	SC	S.B.	S.B.	N.B.	N.B.
To Daufuskie		78	78	78		78	8
To Hilton Head		27	27	27	27		27
				105	27	78	35
Morning Commutes / Day				405	104	301	134
Operating Trips				3	3	3	2
Ave Passengers / Trip				135	35	100	67

Run Time / Wk	Per RT	Sav - HH	HH - B'fort
Savannah Line	2.4	209	
Bluffton Line	1.2	8	
Beaufort Line	2.4		118
	/ Day	217	118

Fuel	Gals / Hr	22	22	
	Positioning	5%	5%	
	Gals (000's) / Yr	261	141	402

Round Trips (excl Commute)		RT / Yr (000's)		Sav-Dau	Dau-HH	HH-B'fort
Between		GA	SC	Sav-Dau	Dau-HH	HH-B'fort
Daufuskie		179	179	179	179	18
HH Bridge		56	56	56	56	56
Tourists		105	42	105	105	42
Residents		55	36	55	55	36
				395	395	152
Average RT Passengers / Day				1,083	1,083	415
Average Boat RTs / Wk				93	93	39
Ave Passengers / Trip				82	82	75
Originate HHI						55%

Crew		RTs / Wk	Hrs / RT	Manning	Sav - HH	HH - B't
Sav Line		87	3.0	3	783	
B'ton Line		21	1.5	2	63	
B'fort Line		49	3.0	2		294
	Idle			10%	85	29
Hrs / Wk					931	323
Hrs (000's) / Yr					48	17
Hrs (000's) / EE					2.3	2.3
Duty					21	7
Personal					3	1
					24	8

Costs

Sav - Daufuskie – HH

Daily Passenger Round Trips:

1,380 - Yr 1 (53 Passengers)

2,070 - Yr 5 (80 Passengers)

3 Boats (+ 1 Spare)

Annual Cost:

\$2.3 M Payroll

.9 Fuel

.5 Depreciation

.6 Ins, Maint, Mkt etc

.6 Contingency

(.2) Mail & School

\$4.7 M

Beaufort – HH

Daily Passenger Round Trips:

270 - Yr 1 (38 Passengers)

440 - Yr 5 (63 Passengers)

1 Boat

Annual Cost:

\$.8 M Payroll

.5 Fuel

.1 Depreciation

.2 Ins, Maint, Mkt etc.

.2 Contingency

\$1.8 M

Expenses
11/30

Payroll	Sav EEs	B'fort EEs	Salary	O/T	Sav Cost	B'fort Cost
Captains	12	4	50	10%	660	220
1st Mates	12	4	40	15%	554	198
Dockmasters	6	3	35	15%	242	121
Administration	4		60		240	
Maintenance	2	1	50	15%	115	58
	36	12			1,810	597
Fringes	25%				453	149

Fuel	\$/Gal 3.60
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Savannah	Gals (000's) 261
----------	---------------------

Beaufort	Gals (000's) 141
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Other

	Sav Cost	B'fort Cost
Maintenance	150	50
Custodial	120	40
Marketing	120	40
Insurance	150	50
Misc	75	25

Depreciation

	Life	Savannah	Beaufort	Cost	Sav Cost	B't Cost	Sav Depr	B't Depr
Boats	20	4	1	1,800	7,200	1,800	360	90
Terminals	25	2		750	1,500		60	0
Docks	15	2	1	500	1,000	500	67	33
					9,700	2,300	487	123

Mail & School

Contingency

15%

Savannah	Beaufort	Total
2,263	746	3,009
939	509	1,448
615	205	820
487	123	610
(200)		
616	237	853
4,719	1,820	6,739

Observations

Sav - Daufuskie - HH

ROI:

10% ROI on \$10 TR Ticket

25% ROI on \$12 RT Ticket

Comments:

No Bridge Alternative

\$12 RT Ticket is Reasonable

Existing Demand

Partner w/ HH, Beaufort Cty &
Savannah on the Docks

Time is of the Essence

Contingent on Daufuskie
Participation

Beaufort - HH

ROI:

10% on \$17 Ticket

25% on \$20 Ticket

Comments:

Bridge Alternative

\$20 Ticket Problematic

Demand to be Developed

Partner w/ Beaufort County on Docks

Time is not of the Essence

Contingent on Beaufort County
Participation

Return on Investment
11/30

Round Trips / Yr ('000's)
Savannah - HH
Beaufort - HH

Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6
	503	557	617	684	758	
	97	110	124	141	161	
Per Day	1,642	1,826	2,032	2,281	2,518	

Savannah - HH	Capital	(9.7)					4.8	(4.9)
	Cost	(0.5)	(4.7)	(4.7)	(4.7)	(4.7)	(4.7)	(24.1)
	Depreciation		0.5	0.5	0.5	0.5	0.5	2.4
		(10.2)	(4.2)	(4.2)	(4.2)	(4.2)	4.8	(26.6)

Break Even	Revenue	9.90
	Cash Flow	
	PV Factor	10%
	PV	

		5.0	5.5	6.1	6.8	7.5		30.9
		(10.2)	0.7	1.3	1.9	2.5	3.3	4.8
		1.00	0.95	0.87	0.79	0.72	0.65	0.62
		(10.2)	0.7	1.1	1.5	1.8	2.1	3.0

Good Case	Revenue	11.95
	Cash Flow	
	PV Factor	25%
	PV	

		6.0	6.7	7.4	8.2	9.1		37.3
		(10.2)	1.8	2.4	3.1	3.9	4.8	4.8
		1.00	0.89	0.71	0.57	0.46	0.35	0.33
		(10.2)	1.6	1.7	1.8	1.8	1.8	1.8

Beaufort - HH	Capital	(2.3)					1.2	(1.1)
	Cost	(0.2)	(1.8)	(1.8)	(1.8)	(1.8)	(1.8)	(8.3)
	Depreciation		0.1	0.1	0.1	0.1	0.1	0.8
		(2.5)	(1.7)	(1.7)	(1.7)	(1.7)	1.2	(9.8)

Break Even	Revenue	17.40
	Cash Flow	
	PV Factor	10%
	PV	

		1.7	1.9	2.2	2.5	2.8		11.0
		(2.5)	(0.0)	0.2	0.5	0.8	1.1	1.2
		1.00	0.95	0.87	0.79	0.72	0.65	0.62
		(2.5)	(0.0)	0.2	0.4	0.5	0.7	0.7

Good Case	Revenue	20.10
	Cash Flow	
	PV Factor	25%
	PV	

		1.9	2.2	2.5	2.8	3.2		12.7
		(2.5)	0.2	0.5	0.8	1.1	1.5	1.2
		1.00	0.89	0.71	0.57	0.46	0.38	0.33
		(2.5)	0.2	0.4	0.5	0.5	0.6	0.4

Combined	Capital	(12.0)					6.0	(6.0)
	Cost	(0.7)	(6.5)	(6.5)	(6.5)	(6.5)	(6.5)	(33.4)
	Depreciation		0.6	0.6	0.6	0.6	0.6	3.1
		(12.7)	(6.9)	(6.9)	(6.9)	(6.9)	6.0	(36.3)

Break Even	Revenue	11.15
	Cash Flow	
	PV Factor	10%
	PV	

		6.7	7.4	8.3	9.2	10.2		41.8
		(12.7)	0.8	1.5	2.3	3.3	4.3	6.0
		1.00	0.95	0.87	0.79	0.72	0.65	0.62
		(12.7)	0.7	1.3	1.8	2.3	2.8	3.7

Good Case	Revenue	13.31
	Cash Flow	
	PV Factor	25%
	PV	

		8.0	8.9	9.9	11.0	12.2		49.9
		(12.7)	2.0	2.9	3.9	5.1	6.3	6.0
		1.00	0.89	0.71	0.57	0.46	0.36	0.33
		(12.7)	1.8	2.1	2.2	2.3	2.3	2.0

Cum Cash Flow (pre-Interest)

(M's - \$)

	<u>Daufuskie Line @</u>		<u>Beaufort Line @</u>	
	<u>\$10</u>	<u>\$12</u>	<u>\$17</u>	<u>\$20</u>
Yr 0	(9.7)	(9.7)	(2.3)	(2.3)
Yr 1	(9.0)	(7.9)	(2.3)	(2.1)
Yr 2	(7.7)	(5.5)	(2.1)	(1.6)
Yr 3	(5.8)	(2.4)	(1.6)	(.8)
Yr 4	(3.3)	1.5	(.8)	.3
Yr 5	-	6.3	.3	1.8

Ideal Structure

Sav - Daufuskie - HH

Newco (Private):

Daufuskie & Other Investors
Purchase Boats (w/ Subsidy if Possible)
Operate Ferry Service
Existing Boats/Docks to Start?
Private- Public Partnership

Public Partners:

Sav Terminal: GADOT & CAT
HH Terminal: HH & County
Daufuskie Terminal: County & SCDOT

Beaufort – HH

Newco:

Expand Public - Private Partnership (Phase II)
No Additional Investment
Purchase Boats w/ Subsidy
Subsidized Fare by Cty
Start when Docks Ready

Public Partners:

Beaufort Terminal: City & Cty
Port Royal Terminal: City & Cty
Ft Freemont: SCDOT & Cty

Beaufort County Ferry ?

October 2008

Beaufort County Ferry Schedule

Mainline

1 ½ Hour Intervals

Beaufort

Port Royal

Ft Freemont

HH Intermodal →

Dusfuskie

Jasper Port

Savannah

Water Taxi

¾ Hour Intervals

Dusfuskie

Harbourtown

Shelter Cove

HH Intermodal

Bluffton

Skull Creek

Beaufort County Ferry

Breakeven Revenue:

500,000 RT / Yr @ \$12

Passengers / Day

Daufuskie	700
Commute to HH	200
Others to HH	200
Tourists	200
Residents	<u>100</u>
	1,400

Cost (M's - \$)

Payroll	2.5
Fuel	1.8
Depreciation	.6
Interest	.5
Maint / Ins	.4
Misc / Cont	.4
Misc Income	<u>(.2)</u>
	6.0

Beaufort County Ferry Operations

Mainline Boats

4 + 1 Spare
2 crew (3 Commute)

Water Taxi

2 + 1 Spare
2 Crew
1st Boat am
Last Boat pm
1 Overnight in Beaufort
1 Overnight in Savannah

Commute

2 Spares
1 Overnight in Beaufort
1 overnight in Savannah

Operations

High Season
Low Season

Personnel (43)

Captains (16)
1st Mates (14-17)
Dockmasters (6)
Admin (4)
Maintenance (3)

Fuel

500,000 Gallons Diesel

Plan (000's - \$)

9/16 (000's - \$)

Round Trip

Passengers (000's)	878
% of Potential	
Average Fare	

5 Yr Total

Yr 0	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5
	439	483	527	571	615
	50%	55%	60%	65%	70%
	12.00	12.00	12.00	11.50	11.00

Pre-Tax Income

Passengers		
Concessions	1	
Sales Tax	8%	
School		
Mail		
Operating Expenses		
Operating Subsidy		
Interest	8%	
Depreciation	20	

30,715
1,317
(2,563)
700
300
(25,978)
900
(2,773)
(2,250)
369

	5,269	5,796	6,323	6,565	6,762
	220	242	263	285	307
	(439)	(483)	(527)	(548)	(566)
	140	140	140	140	140
	60	60	60	60	60
(250)	(5,146)	(5,146)	(5,146)	(5,146)	(5,146)
	450	300	150		
	(640)	(597)	(555)	(512)	(469)
	(450)	(450)	(450)	(450)	(450)
(250)	(536)	(138)	259	394	639

Cash Flow

Investment		
LOC	1,500	
Boat Purchase		
Federal Subsidy		
Boat Loan	15	
Pre-Tax Income		
Depreciation		
Ending Balance		

1,500
0
(12,000)
3,000
5,333
369
2,250
452

1,500	500				(500)
	250	150	(150)	(250)	
(12,000)					
3,000					
8,000	(533)	(533)	(533)	(533)	(533)
(250)	(536)	(138)	259	394	639
	450	450	450	450	450
250	381	309	335	396	452

Expenditures (000's - \$)

10/26

Payroll		Employees	Salary	O/T	Cost
	Captains	16	45	10%	792
	1st Mates	14	40	15%	644
	Dockmasters (HH)	6	35	15%	242
	Admin	4	60		240
	Maintenance	3	45	15%	155
		43			2073
	Fringes			20%	415

Fuel	Gals (000's)	\$/Gal
	503	3.60

Docks	Amount
Beaufort	75
Contribution	(75)
Port Royal	75
Contribution	(75)
Savannah	75
Contribution	(75)

Other	Amount
Maintenance	200
Insurance	200
Misc	100

Contingency	Amount
	15%

Depreciation	Terminals	Boats	Cost	Life
	Beaufort Cty			
				1,500
				(1,500)
	Ferry Boats	5	1800	9,000
	Water Taxi	3	1000	3,000
	Subsidy			(3,000)
		8		9,000
				12

Expense	Cash
2,487	2,487
1,812	1,812
500	500
347	347
5,146	5,146
750	

Passengers

10/26

Daufuskie Island	
Daufuskie Club & Resort	
Employees	
Haig Point Members & Guests	
Employees	
J&W / Freeport	
Palmetto Ferry & Dolphin Plus	
Daily Ferry Commuters	
All Other Daily	
RT Passengers / Yr (000's)	

Total / Ave ADDT (000's)	Jul / Apr / Jan	May / Aug / Mar	Oct / Sep / Feb	Nov / Dec / Jan
	53	51	48	45
	54	52	49	46
	11	10	10	9
	30	29	27	25
	5	5	4	4
	15	15	14	13
	6	6	5	5
	469	452	425	399
	987	950	894	836
	120	116	109	102

RT Passengers Per Year (000's)

447

HH Weekday Commuters (6-9 am)	
Eastbound a.m. Daily Vehicles	
Market Share	
Daily Vehicles Captured	
Passengers per Vehicle	
Daily Ferry Commuters	
RT Passengers / Yr (000's)	

	7,500	7,200	6,800	6,400
	3.0%	2.5%	2.0%	1.5%
	225	180	136	96
	2.7	2.6	2.5	2.4
	608	468	340	230
	39	30	22	15

107

Non-Commuter Island Traffic	
Eastbound Daily Vehicles Excl Commute	
Market Share	
Daily Vehicles Captured	
Passengers per Vehicle	
Daily Ferry Commuters	
RT Passengers / Yr (000's)	

	21,143	20,357	19,143	17,929
	2.0%	1.5%	1.0%	0.5%
	429	305	191	90
	2.3	2.2	2.1	2.0
	973	672	402	179
	63	44	26	12

145

Tourists	
Total (000's)	
Market Share	
RT Passengers / Day	
RT Passengers / Yr (000's)	

Total / Ave	Jul/Jun/Apr	May/Aug/Mar	Oct/Sep/Nov	Feb/Jan/Dec
2,238	723	642	498	375
5%	6.0%	5.0%	4.0%	3.0%
292	477	353	219	124
	43	32	20	11

107

Residents (excluding commuters)	
RT Passengers / Day	
Hilton Head	
Bluffton	
Beaufort	
St. Helena	
Savannah	
RT Passengers / Day	
RT Passengers / Yr (000's)	

	75			
	50			
	50			
	50			
	100			
	325	240	149	84
	30	22	14	8

73

RT Passengers / Yr (000's)

	296	244	191	148
--	-----	-----	-----	-----

878

Weekly RT Passengers	
Commuters (Mon-Fri)	
Non-Commuters (7 Days)	

	5,385	4,599	3,826	3,145
	19,327	15,502	11,647	8,575

Weekly Segments'	
Commuters (Mon-Fri)	
Non-Commuters (7 Days)	

	AA	AB	AB	BB
	60	60	60	40
	451	435	435	401

Passengers / Segment	
Commuters (Mon-Fri)	
Non-Commuters (7 Days)	

	179	153	128	157
	86	71	54	43

Operations

10/26

	SS Summer	SW Mid	WW Winter	
Wks	13	26	13	52

B-Sav Segments				
Commuter	60	60	40	
Non-commute	304	288	268	
Per Wk	364	348	308	
Per Yr	4,732	9,048	4,004	17,784

Taxi Segments				
Per Wk	147	143	133	
Per Yr	1,911	3,718	1,729	7,358

Crew Hrs / Seg	Commuter	Non-Commuter	Taxi
Crew	3.0	2.0	2.0
Hrs / Segment	1.5	1.5	0.8
	4.5	3.0	1.5

Staffing			
Crew Hrs / Wk	1,403	1,349	1,184
Work Week (Hrs)	47	45	44
Working	30	30	27
Personal	3	3	3
Captains	16	16	16
1st Mates	17	17	14
	33	33	30

4 Large Ferry Boats	
# 1- 4	Beaufort / Savannah

Beaufort / Savannah Segments		
	S	W
Large Boats	44	40
Water Taxis	8	4
Commuter	12	8
Non-Commuter	40	36
	52	44

4 Small Water Taxis	
# 6 & 7	Roundabout 1st Morning to B&S Last Evening to B&S
# 8	Peak Commute/Spare

Water Taxi Segments	S	W
	21	19

Fuel	B/Sav	Taxi	
Segments / Yr	17,784	7,358	
Hrs/Segment	1	0.5	
Gallons / Hr	22	18	
Contingency	10%	10%	
Gals (000's) / Yr	430	73	503

Daufuskie Ferry

3/11/09



Ferry Service Conclusions

Sav - Daufuskie - HH

Economically Viable

Daufuskie Traffic &
HH / Savannah Tourists

Existing Demand / No Bridge

RT Ticket \$16=>\$7

1 ½ Hr Schedule
Ft Freemont 2x Daily
Beaufort 1x Daily (9 months)
HHI & Beaufort Cruises (9
months)

HH - St Helena - Beaufort

Not Viable (w/o Large
Subsidy)

St Helena Commuters &
Beaufort Tourists

Bridge / No HHI & St H Transit

\$30 RT Ticket

Savannah – Daufuskie – HHI

	<u>Current</u>	<u>Proposed</u>
Ferry Companies:	4	1
Destinations:	HH	HH & Savannah
Boats:	14	4
Weekday RTs:	34 => 22	11
Weekend Day RTs:	29 => 17	9
Frequency (Hours):	1&2 => 2&3	1 ½
RT Ticket:	High	\$16=>7

Ferry Companies

Proposal

Form the Ferry Company

Benefits

Solid Investment
Liquidate Current Boats



Savannah

Proposal

Provide Terminus:
Hutchinson Island
Terminal
Docks
Parking
Funding Thereof

Benefits

Daufuskie Gateway
Economic Activity
Employment for Georgia
Residents
Increased Tourism:
HHI Tourists
Added Attraction for
Savannah Tourists

Hilton Head

Proposal

Provide Terminus:

**Lands End Development
Planning
Promoting
Partial Funding Thereof**

Benefits

New Tourism Activity:

**Savannah Connection
Beaufort Connection
Cruses**

Increased Tourism:

**Hilton Head Tourists
Savannah Visitors**

Increased Service to:

**Daufuskie Residents &
Guests**

Beaufort County

Proposal

Develop:

Docks & Terminals at
Lands End
Daufuskie County Landing
Melrose Landing
Ft Freemont

Lead:

Planning
Promoting
Fund Solicitation

Benefits

Increased Daufuskie Tax Base
Mass Transit Initiative
St Helena Commuter Service
Profitable Enterprise Fund
Profit Sharing

Haig Point

Proposal

LLC Owner of 2 Boats
Ferry Company Investor?

Benefits

Protected through
Ownership of 2 Boats
Enhanced Property
Values
Water Taxi Retained
Good Investment
Ferry Cost Reduction

Daufuskie Island Club

Proposal

LLC Owner of 2 Boats

Benefits

Restored Ferry Service is
Key to Reorganization

Enhanced Property
Values

Protected through
Ownership of 2 Boats

Remaining Daufuskie PUD's

Proposal

Ferry Company
Investors

Benefits

Solid Investment
Daufuskie
Development
Enhance Property
Values

Daufuskie

Needs

Ferry Service
Master Plan
Zoning
Critical Mass
Governance

Improvements

Community
Services
Quality of Life
Property Values
Ferry Service

Proposed Structure

Private – Public Partnership

Private Ferry Company (Newco):

Operate Ferry Service

Lease Boats

Investors:

Daufuskie Development Interests

Current Ferry Companies

Private Boat LLC:

Investors: Daufuskie Development Interests

Ownership Protects their Development Interests

Public:

Docks & Terminals: Savannah, HHI & Daufuskie

Investors: Beaufort County, SCDOT, Savannah & HHI

