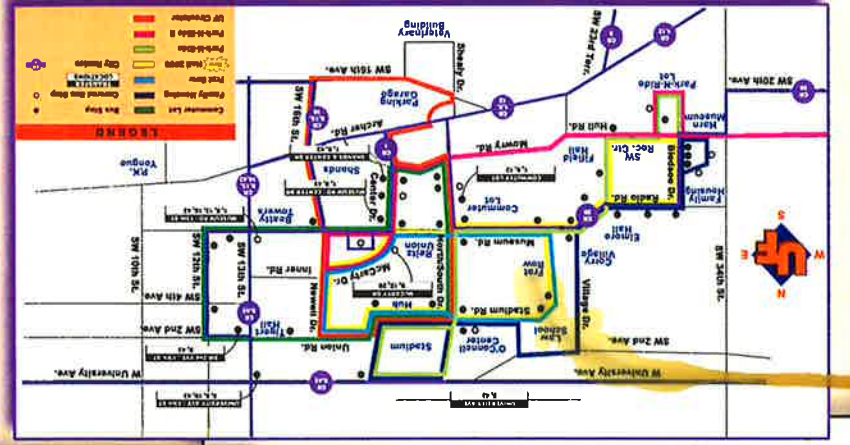
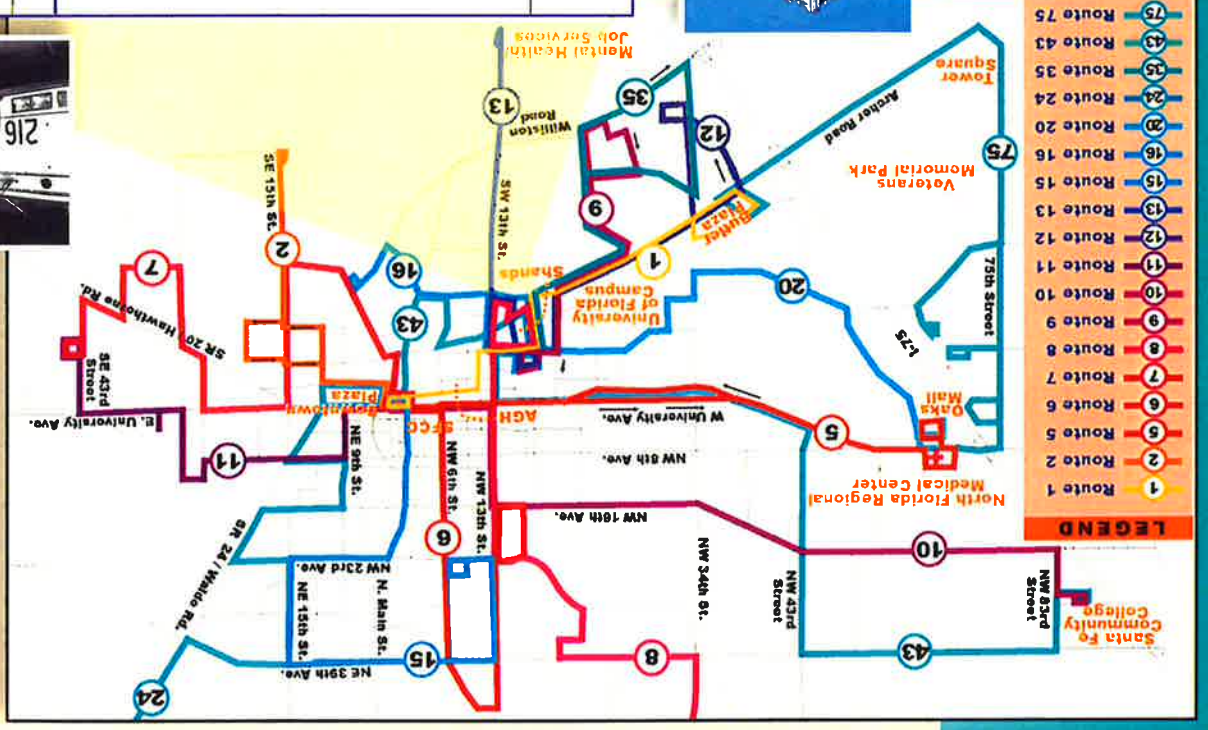


Subm. # 6/10/02 #020045

# Gainesville Regional Transit System Comprehensive Operational Analysis

Executive Summary prepared for

- The City of Gainesville
- The University of Florida
- North Central Florida Regional Planning Council



Prepared by

Pertect Engineering, Inc.  
2707 Colby Avenue, Suite 900  
Everett, Washington 98201  
(425) 252-7700  
1-800-615-9900  
May 2002

Pertect Engineering, Inc.  
Everett, Washington

425-252-7700  
1-800-615-9900  
www.pertect.com



- The Downtown Plaza Transit Center is operating significantly above its design capacity, creating periodic traffic congestion and potentially hazardous pedestrian conditions at the existing site.
- Some minor modifications have been identified for individual routes but there were not identified any major problems with existing route alignments or schedules other than overcrowding on selected trips.
- There is a need to improve north-south connectivity in the western portion of the RTS service area.
- Future expansion of the RTS service area needs to be accompanied by the identification of a dedicated funding source and the development of a more regional governing body.

A number of additional capital facilities have been identified to better support existing and future transit operations. Among these are:

- A new transfer center in the downtown vicinity is needed to replace the existing Plaza Transit Center. The existing location should continue as a major transit destination but no longer function as the focus of system interline transfers.
- Additional transit centers at the University of Florida, Milhopper Square and in the Butler Plaza area are needed to facilitate major transfer movements as well as a number of smaller centers to serve as a focus of neighborhood transit services.
- An expanded maintenance/operations facility is needed to augment the operations currently directed from the existing facility.
- Future park and ride facilities should be developed close to the trip origin locations in outlying communities and developed only as a specific market for park-and-ride services has been identified.
- A consistent program of annual bus purchases should be undertaken to replace aged vehicles in a timely and consistent manner and to provide for an expanded revenue fleet as demand dictates while avoiding the financial impact of large bus purchases at more infrequent intervals.
- Efforts should be made to significantly expand RTS' inventory of passenger shelters at bus stops exhibiting significant (35 or more) daily boardings.

## Acknowledgements

### City of Gainesville

John Barrow

Wayne Bowers

Charles Chestnut IV

Staci Graff

Ralph Hilliard

Shenley Neely

Conchi Ossa

Maria Savoia

### Alachua County

Thomas Bird

Thomas Bussing

Jesus Gomez

Regen Hanrahan

Jeff Logan

Warren Nielsen

Melissa Reno

Paul Starling

### University of Florida

Mike Byerly

Bonnie Hinson

Kenneth McMurry

Robert Hutchinson

Kenrick Pierre

Greg DuBois

Dr. James Scott

### North Central Florida Regional Planning Council

Gerry Dedenbach

Lynn Franson-Godfrey

Marie Sanderson

### Others

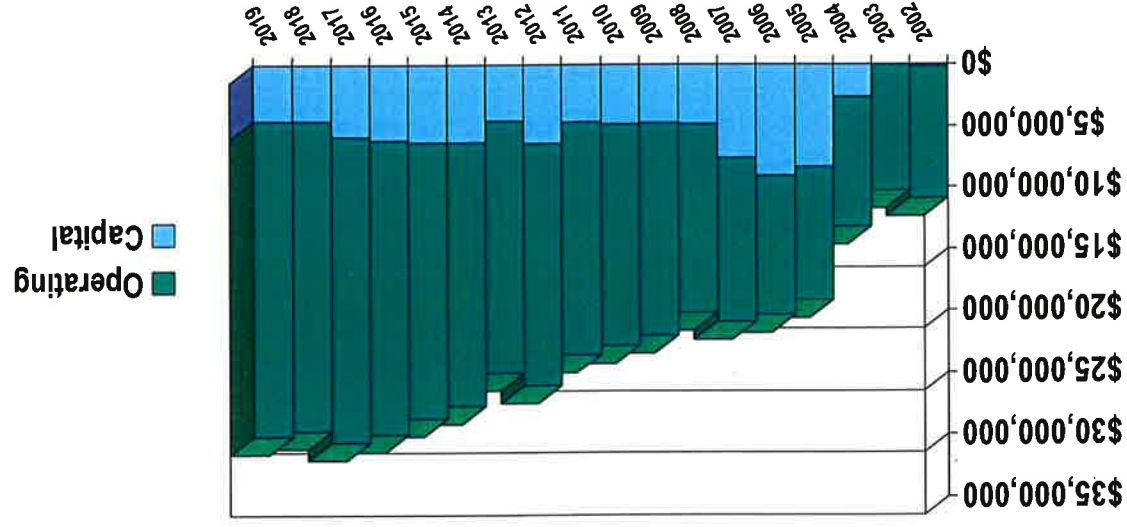
Roland Loog, Visitors and Convention Bureau

Bruce Pagel, City of Archer





**Figure 4** summarizes the estimated operating and capital costs, by year, to support this recommended program through 2019.



**Figure 4**  
Estimated Operating and Capital Costs, 2002 through 2019

### Summary

The RTS has undergone a period of extremely rapid change over the past five years. That rapid growth has outpaced growth in the system's infrastructure to some extent over that period, resulting in some difficulties which, if not addressed in the near future, may negatively impact RTS' ability to continue to meet the growth in demand for new and improved services. The RTS has succeeded in significantly expanding the scope of transit services while being constrained by the number and age of existing buses and the capacity to maintain the operating fleet and provide sufficient space for the operating and administrative staff.

Given those constraints, RTS has done an admirable job of maintaining a high level and quality of public transit services to the public. At the same time, the expectations of the community for a continuing expansion of services over the next decade have given a new urgency to the need to augment the system's operating infrastructure to position RTS for an increasing role in meeting the transportation needs of the greater Gainesville region and ultimately those of Alachua County.

The findings of the Comprehensive Operations Analysis include the following observations:

- The existing fleet of vehicles contains 49 aged vehicles that have exceeded their useful life or are not accessible as mandated by ADA.
- The existing maintenance and operations facility is of inadequate size and capacity to support continued expansion of public transit services by RTS.

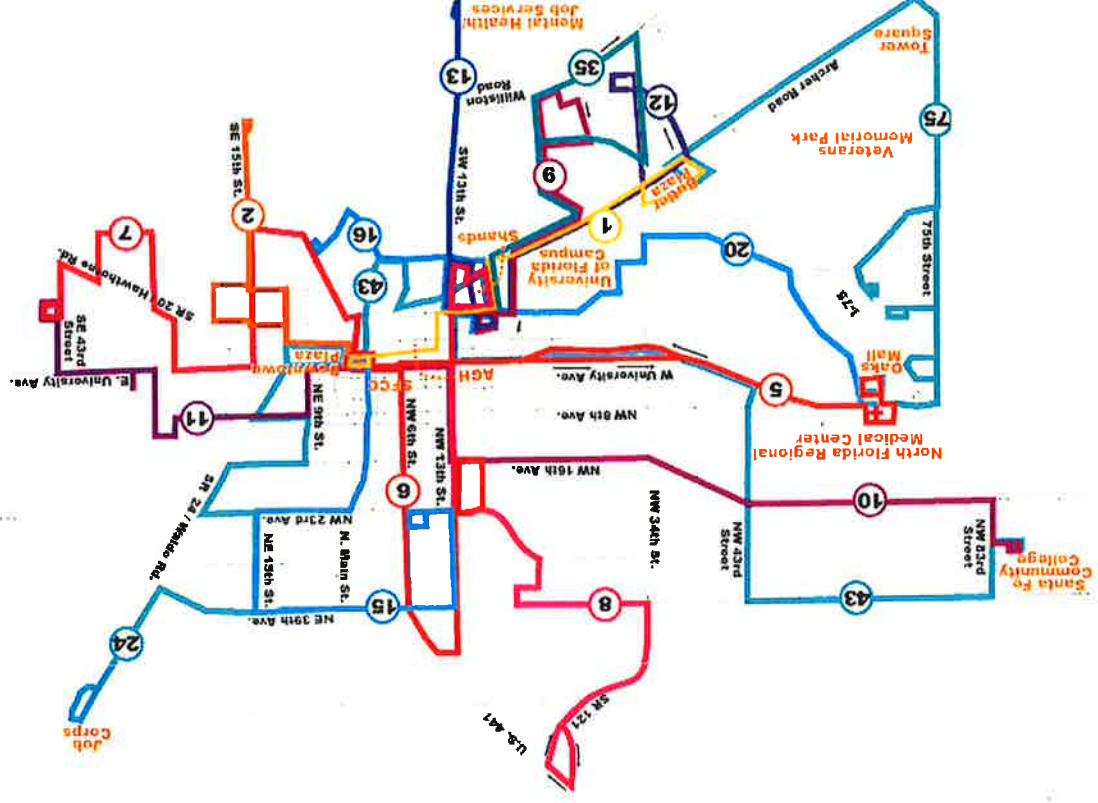
## Executive Summary

### Background

Prior to 1997, RTS operated as a small urban transit system experiencing declining ridership and community support. Routes provided circuitous services at infrequent intervals. The University of Florida and the City of Gainesville then began a partnership to include a provision for universal student access to RTS transit services in the University's student fee. Originally set at 19 cents per semester credit hour, later increased to fifty cents per semester credit hour and then to two dollars per semester credit. Since that partnership was formed, ridership on the system has increased from just over two million annual riders in FY 1996 to more than 6.3 million in FY 2001.

### Project Description

The current RTS system operates as a pulsed network, focused on the downtown city plaza. As a result of the City/UF partnership and a vigorous program of service expansion, RTS is currently experiencing delays and overcrowded conditions on several of its fixed routes.



**Figure 1**  
RTS Bus Route Network  
Source: City of Gainesville RTS



**Passenger Shelters**

It is recommended that all RTS bus stops with at least 35 daily boardings be considered as candidates for placement of passenger shelters. Eighty-three such stops have been identified which meet this criterion. It is recommended that these be constructed over the next ten years at a rate of eight shelters per year.

**Park and Ride Lots**

Although no park and ride facilities have been recommended as part of the COA process, a number of such facilities have been identified in the 2020 Plan. These have been reviewed in the COA project and modifications made to recommended design capacities and implementation priorities as shown in **Table 5**. These design capacities are dependent upon implementation of significant transit improvements in the communities in which they are to be located and upon an aggressive transit marketing campaign both before and after implementation.

*Table 5  
Recommended Park and Ride Facility Implementation*

Year	Facility	Location	Stalls	Cost
2012	Park and Ride	Newberry	120	\$ 1,820,000
2014	Park and Ride	Alachua	100	\$ 1,650,000
2015	Park and Ride	Archer	100	\$ 1,650,000
2016	Park and Ride	Hawthorne	80	\$ 1,480,000
2017	Park and Ride	Waldo	65	\$ 1,352,500

**Revenue Vehicles**

RTS has a number of buses in its fleet that have exceeded their design operating life and/or which are not accessible as mandated by the ADA. It is recommended that RTS begin a program of fleet replacement and expansion to replace existing elderly and non-compliant equipment and to expand the fleet in a coordinated program of purchasing approximately 8 full-sized buses per year until an expanded maintenance facility is completed and at a rate of 14 buses per year thereafter. As the fleet increases over the years, the annual fleet replacement increment will increase proportionally.

Currently, the RTS contracts its demand response service to a third party operator, a practice followed by a majority of mid-size transit operators. It is felt that this policy should continue and that the purchase, maintenance and storage of paratransit vans should continue to be the responsibility of the contracting operations firm.

**Project Policy Recommendations**

Two long-range policies are also recommended for implementation by RTS. These involve the regional expansion of services and the long-range governance of system operations.

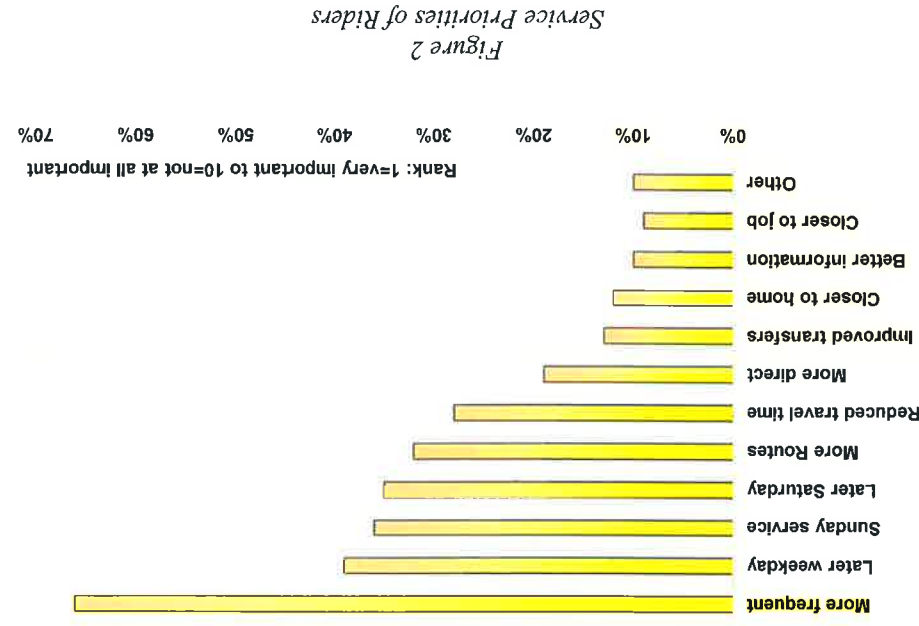
Two years later, in 2000, the RTS was at or near the top of its peer group in many of these same categories, reflecting the rapid growth in system ridership and services over that period. Rankings based upon measured growth during that two-year period consistently placed the RTS at the top of its peer group.

**On-Board Survey**

During the week of October 2, 2001, surveys were handed out to each rider boarding an RTS weekday trip on each route operated during that period. More than 30,000 surveys were tendered to boarding passengers and more than 12,000 surveys were completed and returned. Of those 12,000 returned surveys, many were inadequately responded to and were eliminated from the sample. Of the remaining surveys, a random sample was collected, representing at least 200 completed surveys from each route operated by RTS.

The findings of the survey included the following:

- Most riders walk to and from the bus and most walk 2 blocks or less,
- Most (70+) transfer connections require a wait of 15 minutes or less,
- About 80% of RTS passengers have been riding less than four years, reflecting the student orientation of most riders,
- More than 60% of all riders used a Gator 1 pass to pay their fare,
- More than 70% of RTS riders use the bus 5 or more days per week,
- While more than 79% of RTS riders have a valid driver's license, only about half had access to a personal vehicle,
- Thirty-five percent of riders live in households with two or more working vehicles,
- Eighty-nine percent (89%) or riders expressed satisfaction with RTS services, and
- The most requested service improvements were later service on weekdays and Saturdays, more frequent service and reduced travel times (see **Figure 2**.)



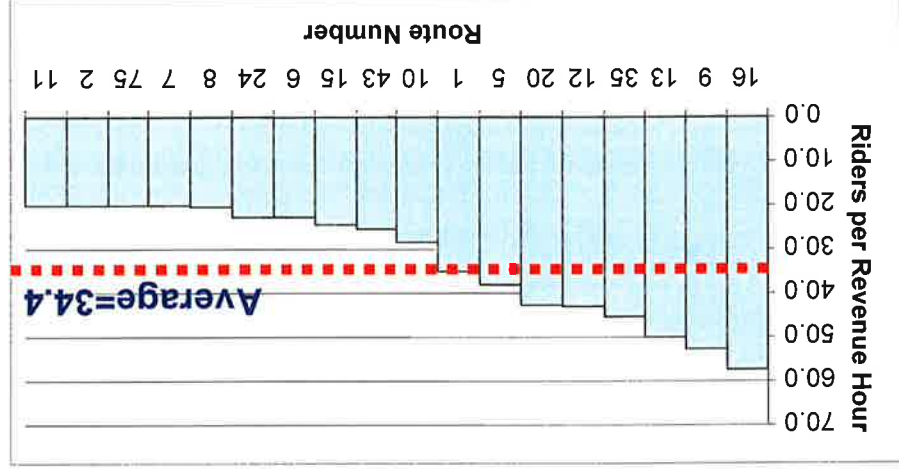


**Ridership Counts**

Ridership data was collected from a number of sources, including automatic passenger counters (APCs) and RTS fare box counts. While APCs have gathered multiple data sets from each RTS route, fare box data is collected daily and constitutes a more precise basis for route-to-route comparisons.

Automatic passenger counter data is, by its nature, superior at describing ridership at the route segment and bus stop level. For this reason, the route-by-route comparisons were developed using the RTS generated-generated rider data, while the descriptions of individual route and route segment levels of rider activity were based upon the APC-generated data.

A fundamental dichotomy exists in the RTS system. Ten of the 18 City routes exhibit annual ridership in excess of 200,000 riders. All ten of these routes serve predominantly the area to the west of 13<sup>th</sup> Street. Seven City routes exhibit annual ridership of less than 115,000 riders. Six of these routes serve predominantly the region to the east of 13<sup>th</sup> Street. Route 43, with an annual ridership of approximately 150,000, occupies an intermediate position between these two disparate route groupings.



**Figure 3** demonstrates the two-tiered nature of RTS routes, with eight routes having productivities of more than 30 riders per hour, all serving the west side of Gainesville; and 8 having productivities of 25 riders per hour or less, all but 1 serving the eastern portion of the City.

**Economics and Demographics**

In evaluating the appropriateness of existing RTS services, a number of demographic characteristics have been identified which often predict transit usage. A number of these descriptive characteristics have been plotted on maps of the Gainesville Urban Area, along with the existing RTS route network to determine whether the existing route network is providing service to communities



**Transfer Centers**

To support expanded and modified RTS services, a number of transfer facilities have been recommended. These include three major transfer centers, designed as a focus of RTS operations in the Greater Gainesville Region:

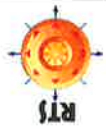
- Downtown Gainesville** - to replace the existing operations at the downtown plaza. The RTS operation has outgrown this site as a major pulsed transfer location. It is anticipated that the existing site will continue to function as a primary transit stop in the downtown area.
- University of Florida** - the existing campus transit center has already exceeded its design capacity. A number of potential sites have been identified as a potential site to replace, or complement the existing facility at McCarty Hall.
- Oaks Mall** - this site can be expected to become a more important transit destination in the future. Additional space is needed to accommodate the anticipated increase in transit bus and passenger trips into this area.

In addition to these three major transfer facilities, a number of neighborhood transit centers have also been recommended at the following locations:

- Santa Fe Community College**
- Butler Plaza** - this facility needs to be developed such that future expansion capability is preserved to meet the increasing regional and sub-regional transit needs
- Gainesville Mall** - to serve as the confluence of several routes serving north and northwest Gainesville,
- Northgate Shopping Center** - serving the neighborhoods of northeast Gainesville
- Millhopper Square**
- Northwood Shopping Center** - to serve future expansion in the area of north Gainesville and along the US 441 corridor to Alachua and High Springs

Recommended 2020 COA	Year	Location	Class	Days	Cost
X	X	2005 Downtown	Major	10	\$ 2,500,000
X	X	2006 Oaks Mall	Major	6	\$ 1,700,000
X	X	2007 UF	Major	8	\$ 2,100,000
X	X	2007 Gainesville Mall	Community	4	\$ 130,000
X	X	2007 Millhopper Square	Community	4	\$ 130,000
X	X	2008 Butler Plaza	Community	6	\$ 170,000
X	X	2008 SFC	Community	4	\$ 130,000
X	X	2010 Northgate SC	Community	3	\$ 110,000
X	X	2011 Northwood SC	Community	3	\$ 110,000
X	X	2009 Shands Medical Center	Community	5	\$ 150,000
X	X	2010 SFC Downtown	Community	4	\$ 130,000
X	X	2014 Royal Park	Community	2	\$ 90,000
X	X	2015 Tower Square	Community	4	\$ 130,000
X	X	2016 Airport	Community	3	\$ 110,000

**Table 4** includes a number of transit center projects identified in the MTPO 2020 Plan documents.



**Long-Term Improvements**

Area comprehensive plans indicate a desire for the RTS to operate on a more regional basis in the future. In response to service enhancements called for in these long-range plans, the COA recommendations have included an analysis of the costs to implement the service and capital elements of the plans. These findings are summarized in **Table 3**.

Year Service	Corridor	From	To	Buses Added	Annual Cost
2006	Circulator	Oaks Mall	Oaks Mall	1	\$ 140,000
2007	Enhanced	UF-Downtown	Downtown	1	\$ 220,000
2007	Enhanced	Newberry Road	Oaks Mall	4	\$ 850,000
2007	Feeder	NW 43rd St.	Newberry Road	2	\$ 420,000
2008	Enhanced	Archer Road	Tower Road	2	\$ 380,000
2008	Feeder	W 34th st.	Farmers' Market	3	\$ 600,000
2009	Circulator	Butler Plaza	Butler Plaza	1	\$ 140,000
2009	Enhanced	US 441	NW 36th Ave.	3	\$ 650,000
2009	Feeder	NW 98th St. & SR 26	Spring Hills	2	\$ 440,000
2010	Feeder	Tower Road & SR 26	Tower Square	3	\$ 610,000
2011	New	NW 8th Avenue	NW 43rd St.	3	\$ 600,000
2012	New	NW 39th Ave.	NW 13th St.	2	\$ 430,000
2012	Park/Ride Express	Newberry Road	Newberry	2	\$ 180,000
2013	Circulator	Spring Hills	E University Ave.	1	\$ 150,000
2013	Enhanced	Hawthorne Road	NE 8th Ave.	2	\$ 410,000
2014	Enhanced	Waldo Road	NE 50th St.	2	\$ 420,000
2014	Park/Ride Express	US 441	NW 43rd St.	2	\$ 220,000
2015	Feeder	NW 83rd St.	Millhopper Road	2	\$ 390,000
2015	Park/Ride Express	Archer Road	Archer	3	\$ 270,000
2016	Feeder	SE 24th St & E 27th St	Airport	3	\$ 650,000
2016	Park/Ride Express	Hawthorne Road	Hawthorne	5	\$ 450,000
2017	Circulator	Halle Plantation	NE 50th ave.	4	\$ 390,000
2017	Park/Ride Express	Waldo Road	Waldo	4	\$ 390,000
Total					\$ 9,160,000

*Table 3*  
Projected Long-Term Service Improvement Implementation

**Project Capital Recommendations**

There has also been identified a need for the development of a number of capital facilities to support future RTS operations.

**Operations / Maintenance Facility**

The most pressing need is for an expanded operations/maintenance facility. Although demand for additional RTS services is expected to remain high over the next few years, RTS' ability to respond to those demands is being significantly constrained by the operations and maintenance capacity of the existing RTS facility.

The existing facility is at its vehicle capacity and office space is inadequate to administer the existing RTS operation. New services requiring additional vehicles must be postponed until the capacity of this facility is expanded or until a new facility can be developed at an alternate location.

containing persons having a high propensity to use transit. These characteristics include the following:

- Income below the poverty level
- Low vehicle ownership
- Age (over 65 or under 16)

In general, the RTS appears to be serving those areas of highest transit ridership potential. However, as growth continues to the south, southwest and west of the City, RTS will be faced with pressures to extend its service area and range of transit services to meet increasing demands for service.

**Project Service Recommendations**

Based on the findings of the data analysis, recommendations have been made in a number of categories.

**Short-Term Modifications**

Short-term service modifications have been recommended based upon the on-board survey responses and the boarding and alighting counts. These recommendations are summarized in **Table 2**.

Year Service	Corridor	From	To	Buses Added	Annual Cost
2003	Modify Route	Route 24	Downtown	Job Corps	\$ -
2003	Modify Route	Route 6	NW 39th St	NW 45th St.	\$ -
2004	Modify Route	Route 2	SE 22nd St.	SE 41st St.	\$ -
2005	Enhanced	Route 75	Butler Plaza	Oaks Mall	\$ 160,000
2006	Enhanced	Route 6	Downtown	Gainesville Mall	\$ 199,000
2007	Enhanced	Route 10	SFCC	Downtown	\$ 165,000
2007	Enhanced	Route 20	Oaks Mall	UF	\$ 145,000
2008	Enhanced	Route 43	SFCC	Downtown	\$ 270,000
2008	Express	SR 26	Oaks Mall	Downtown	\$ 640,000
2009	Enhanced	Route 11	Downtown	Eastwood Meadows	\$ 190,000
2009	Enhanced	Route 24	Downtown	Job Corps	\$ 170,000
2009	Enhanced	Route 7	Downtown	Eastwood Meadows	\$ 180,000
2010	Modify Route	Route 75	Linton Oaks	Cedar Ridge	\$ -
Total					\$ 2,119,000

*Table 2*  
Short-Term Service Improvement Implementation

**Mid-Term Improvements**

In addition, a couple of added links have been recommended to improve system connectivity in West Gainesville. These recommendations include:

- Extend Route 10 from Santa Fe Community College to the Oaks Mall
- Implement direct service between Butler Plaza and the Oaks Mall. The exact alignment of this service may depend on the future construction of a direct roadway link between these two locations