ST. GEORGE URBANIZED AREA SHORT RANGE TRANSIT PLAN Fiscal Years 2003-04 to 2007-08

FINAL REPORT

Prepared for the

Dixie Metropolitan Planning Organization &
City of St. George, Utah

Prepared by

LSC Transportation Consultants, Inc.

TRANSPORTATION
CONSULTANTS, INC.

St. George Urbanized Area

Short Range Transit Plan
Fiscal Years 2003-04 to 2007-08

Final Report

Prepared for the

Dixie Metropolitan Planning Organization & The City of St. George

under contract with

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Chapter 1
Introduction

INTRODUCTION

Transportation considerations play a key role in the quality of life provided by any community. Access to social services and medical services, employment opportunities, educational resources and basic necessities are topics of universal concern, as they have a strong impact on the economy, ease of movement, and quality of life for the residents of an area. In addition to providing mobility to residents without easy access to a private automobile, transit services can provide a wide range of economic development and environmental benefits.

On January 2, 2003, the City of St. George assumed operation of public transit services in St. George. The previous public transit system, known locally as Dixie Area Rapid Transit Systems (DARTS), was operated by the Five County Association of Governments (FCAOG).

The FCAOG and the City of St. George have retained LSC Transportation Consultants, Inc., to prepare a transit service analysis outlining the performance of the new SunTran system for the Dixie Metropolitan Planning Organization (Dixie MPO). This Plan document updates the findings of the previous Short Range Transit Plan developed in 2002 and provides planning compliance for the flow of transit funding to the St. George Urbanized Area.

BACKGROUND

The 1999 Dixie Transit Feasibility Study by Fehr and Peers Transportation Consultants was funded jointly by the Utah Department of Transportation, the Five County Association of Governments, and the participating cities of St. George, Washington, Hurricane, Ivins, Santa Clara, Leeds, LaVerkin, Toquerville, as well as Washington County. This study evaluated transit demand in the area, which was expected to be designated an urbanized area as a result of the 2000 Census. In summary, annual potential transit demand was identified as approaching 500,000 passenger-trips per year. In addition, the study reviewed potential funding sources and institutional issues with regard to provision of service.

The 1999 study recommended that checkpoint service using two buses be implemented initially, and that traditional fixed route service replace the checkpoint service after 3 or 4 years if demand exceeds checkpoint service capacity. In addition, demand response service was planned to be provided (using two buses) and an intercity service would be provided between Santa Clara, Washington and Bloomington (using one bus). Total estimated operating costs during the Plan period ranged from $475,000 in Year 1 to $665,000 in Year 5.

In comparison, both traditional fixed route and complementary paratransit services were implemented in November 2000, in lieu of the recommended checkpoint / demand response / intercity service mix originally recommended in the 1999 Plan. For this reason, the total operating cost in the first full year of service exceeded $700,000 – well above the initial cost estimate of $445,000. Total ridership (and therefore fare revenues), moreover, have been substantially below the plan forecast levels. As a result, the transit service faced substantial funding shortfalls.

At a special meeting on July 23, 2002, the St. George City Council elected to not adopt the service plan recommendations made in the June 14 City of St. George Transit Service Analysis report. This decision effectively ended St. George funding for DARTS service on August 31, unless financially-feasible service plan reductions were developed and adopted. In short, the June 14 City of St. George Transit Service Analysis report assumed that the City would be willing to contribute up to $250,000 per year in local funds to the transit program. However, recent projections dictate that the maximum amount of local public funding that could be allocated to the transit program is on the order of $128,500 per year from the 1/4 percent local transportation sales tax revenue source.

Chapter 2
Existing Transit Services

SUNTRAN FIXED ROUTE SERVICE

SunTran currently operates three fixed routes, which begin and end at the Dixie State College Transit Center. Service is provided between 6:00 A.M. and 6:00 P.M. Monday through Friday. There is no service on weekends or major holidays. These three routes are presented in Figure 1, and are described below:

- **Route 1** serves central and eastern St. George, including Dixie State College, River Road, Zion Factory Stores, Red Cliffs Mall, Deseret Industries, Costco, Zion Medical Center, Target, and the IHC Health Center.

- **Route 2** serves the central and southern portion of the City, including Dixie State College, the library, K-Mart, McDonald's, Greyhound Bus Station, the DMV, Doctor's Free Clinic, Harmons, Dixie High School, and the Church of Jesus Christ of Latter Day Saints Temple.

- **Route 3** serves the central and northwestern portion of the service area, including Dixie State College, City Offices, Museum and Opera House, Sunset Boulevard, Dixie Downs Road, Lin's Shopping Center, Green Valley Mall, Valley View Drive, Smith's, and the County offices.

Routes 2 and 3 connect at 300 West and 100 South to provide passengers with the opportunity to transfer between routes.

Current Fare Media

The base fare for a one-way passenger-trip is $1.00, $0.50 for seniors (65+) and persons with disabilities, and free for children under 6 years with a fare-paying adult. SunTran recently implemented fixed route bus passes including a One-Day Pass ($2.50), Work-Week Pass ($10.00), a Month Pass ($30.00), a Ten-Ride Pass ($10.00), and a Semester Pass ($90.00 for fall/winter and $45.00 for summer). A 50 percent discount on all passes is offered to seniors and passengers with disabilities. Transfers between buses are free, and are honored at the transfer points.

Ridership

SunTran monthly ridership by route from January 9, 2003 through July 31, 2003 is presented in Table 1 below. Over the seven-month period, ridership increased slightly to a total of 36,167 one-way passenger-trips by July 2003. However, due to service reductions, current monthly totals are roughly half of DARTS ridership. Ridership is fairly evenly distributed among the three routes. Route 1 and Route 2 each account for 31 percent of the system total and Route 3 (which serves a larger portion of the City) accounts for 37 percent of the system total.

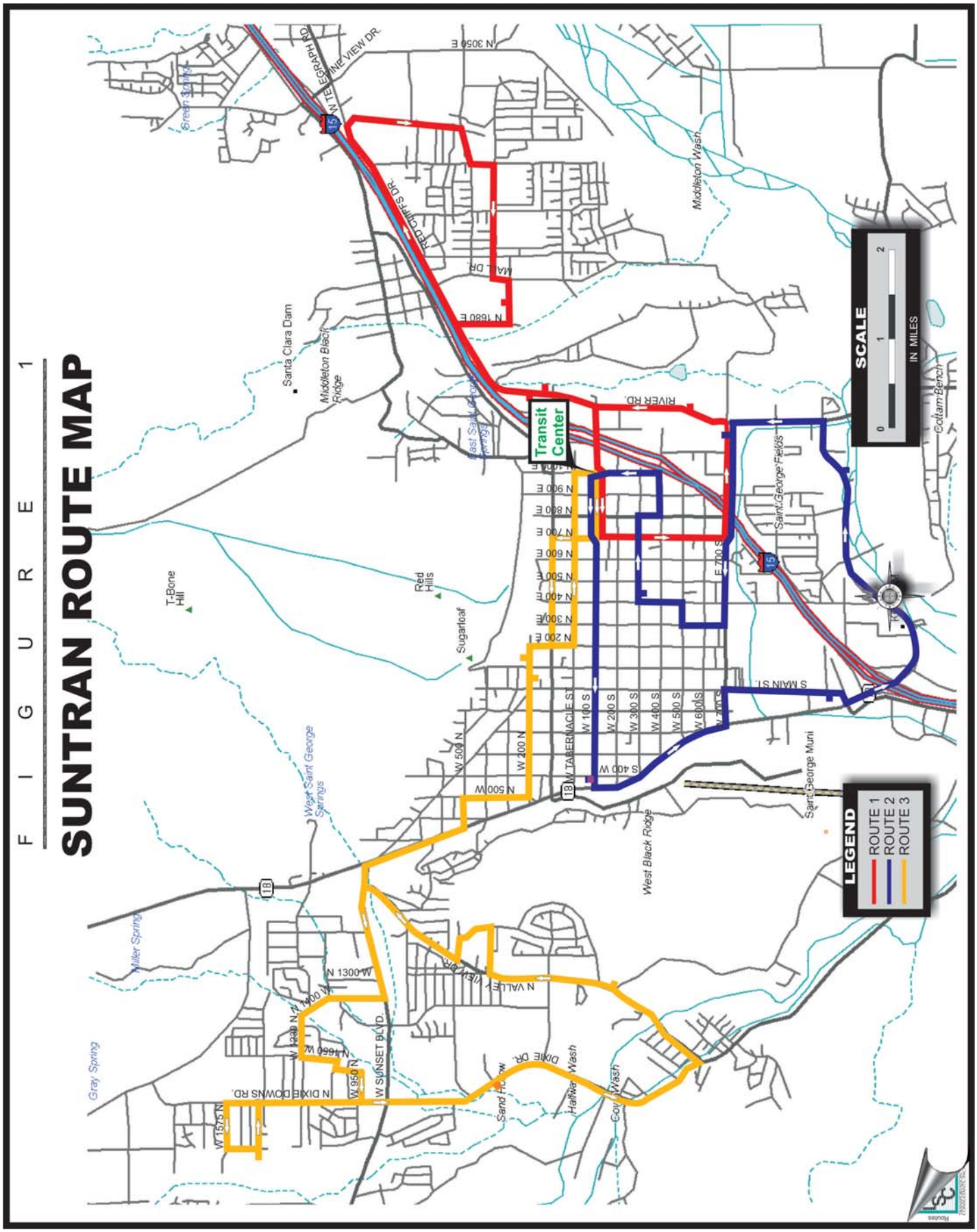

SUNTRAN ROUTE MAP
FIGURE 1
Transit Center
SCALE
0
1
2
IN MILES
LEGEND
ROUTE 1
ROUTE 2
ROUTE 3
Green Springs
Santa Clara Dam
Middleton Black Ridge
Middleton Wash
Cottam Bench
Saint George Fields
Saint George Muni
T-Bone Hill
Red Hills
Sugarloaf
West Saint George Springs
West Black Ridge
Miller Spring
Gray Spring
Sand Hollow Wash
Halfway Wash
Cow Wash
N TELEGRAPH RD.
NINE VIEW DR.
RED CLIFFS DR.
MALL DR.
RIVER RD.
S MAIN ST.
W TABERNACLE ST
N DIXIE DOWNS RD.
W SUNSET BLVD.
N VALLEY VIEW DR.
DIXIE DR.
N 3050 E
N 1680 E
N 900 E
N 800 E
N 700 E
N 600 E
N 500 E
N 400 E
N 300 E
N 200 E
E 700 S
W 100 S
W 200 S
W 300 S
W 400 S
W 500 S
W 600S
W 700S
S 400 W
W 500 N
W 200 N
N 500W
N 1300 W
W 1575 N
W 950 N
N 1660 W
15
16
18

TABLE 1: SunTran Total Fixed Route Ridership by Month

Month	Total Ridership by Fixed Route 1	2	3	Total	Percent of Average
January 2003	1,281	1,158	1,743	**4,182**	**80.9%**
February	1,736	1,731	1,799	**5,266**	**101.9%**
March	1,508	1,580	2,304	**5,392**	**104.4%**
April	1,520	1,541	1,938	**4,999**	**96.8%**
May	1,679	1,666	1,799	**5,144**	**99.6%**
June	1,890	1,859	1,996	**5,745**	**111.2%**
July	1,731	1,758	1,950	**5,439**	**105.3%**
Sub Total	**11,345**	**11,293**	**13,529**	**36,167**	
Monthly Average	*1,621*	*1,613*	*1,933*	*5,167*	
% of System Total	*31.4%*	*31.2%*	*37.4%*		

Note: SunTran ridership data from January 9, 2003 through July 31, 2003.
Source: SunTran.

As presented in Table 2 below, SunTran ridership remains relatively steady throughout the Monday through Friday schedule, with a very slight spike on Thursdays. Table 3 below presents average boardings by hour of day for the period covered by March 10 through 21, 2003. This data is also presented graphically in Figures 2 through 5 below. As presented, ridership spikes from the 10:00 A.M. hour to the 4:00 P.M. hour, with fewer riders in the morning and early evening. The average number of one-way passenger-trips per vehicle service hour (commonly referred to as "productivity") is 6.9 for both Route 1 and Route 2 and 8.3 for Route 3. These figures represent an improvement over DARTS productivity rates in December 2001, although they are still slightly lower than typical levels (10 passenger-trips per vehicle service hour) observed in other small urban fixed route transit systems.

Evaluation of SunTran ridership by route is presented in Figures 2 through 5, and is discussed below:

- **Route 1** – the average boardings per 30-minute run on Route 1 was 6.6 during the survey period. The greatest number of boardings was recorded during the 11:00 A.M. and 2:00 P.M. departures, as presented in Figure 2 below.

- **Route 2** – the average boardings per 30-minute run on Route 2 was 6.6 during the survey period. This route experiences the highest peaks in ridership at 12:00 P.M., 10:00 A.M., and on the last run at 5:00 P.M.. See Figure 3 below for details.

TABLE 2: SunTran Fixed Route Average Ridership by Route and Day of Week

January 9, 2003 through July 31, 2003

	Route 1		Route 2		Route 3		Systemwide	
	Total	% of Total	Total	% of Total	Total	% of Total	**Total**	**% of Total**
Monday	319	19.7%	323	20.0%	388	20.1%	**1,029**	**19.9%**
Tuesday	323	19.9%	317	19.6%	371	19.2%	**1,011**	**19.6%**
Wednesday	316	19.5%	322	20.0%	396	20.5%	**1,034**	**20.0%**
Thursday	335	20.6%	332	20.6%	387	20.0%	**1,054**	**20.4%**
Friday	329	20.3%	319	19.8%	392	20.3%	**1,039**	**20.1%**
Total	**1,621**	**100%**	**1,613**	**100%**	**1,933**	**100%**	**5,167**	**100%**

Note: SunTran ridership data from January 9, 2003 through July 31, 2003.
Source: SunTran.

TABLE 3: SunTran Fixed Route Average Weekday Boardings by Hour

March 10-21, 2003

Hour Beginning	Route 1	Route 2	Route 3	Total
6:00 AM	1.4	--	5.0	6.4
7:00 AM	5.7	3.5	6.2	15.4
8:00 AM	6.0	5.5	6.8	18.3
9:00 AM	7.1	5.3	8.4	20.8
10:00 AM	6.8	7.4	13.0	27.2
11:00 AM	8.6	6.6	9.6	24.8
12:00 PM	7.9	8.8	8.8	25.5
1:00 PM	7.9	6.8	9.0	23.7
2:00 PM	9.2	7.2	10.0	26.4
3:00 PM	8.2	7.3	8.8	24.3
4:00 PM	7.2	6.4	11.0	24.6
5:00 PM	3.3	7.7	3.4	14.4
Average Daily	79.3	72.5	100.0	251.8
Average Per Hour	6.9	6.9	8.3	21.0

Source: SunTran and LSC Transportation Consultants, Inc.

FIGURE 2: SunTran Route 1 Ridership by Hour of Day
March 10 through 21, 2003

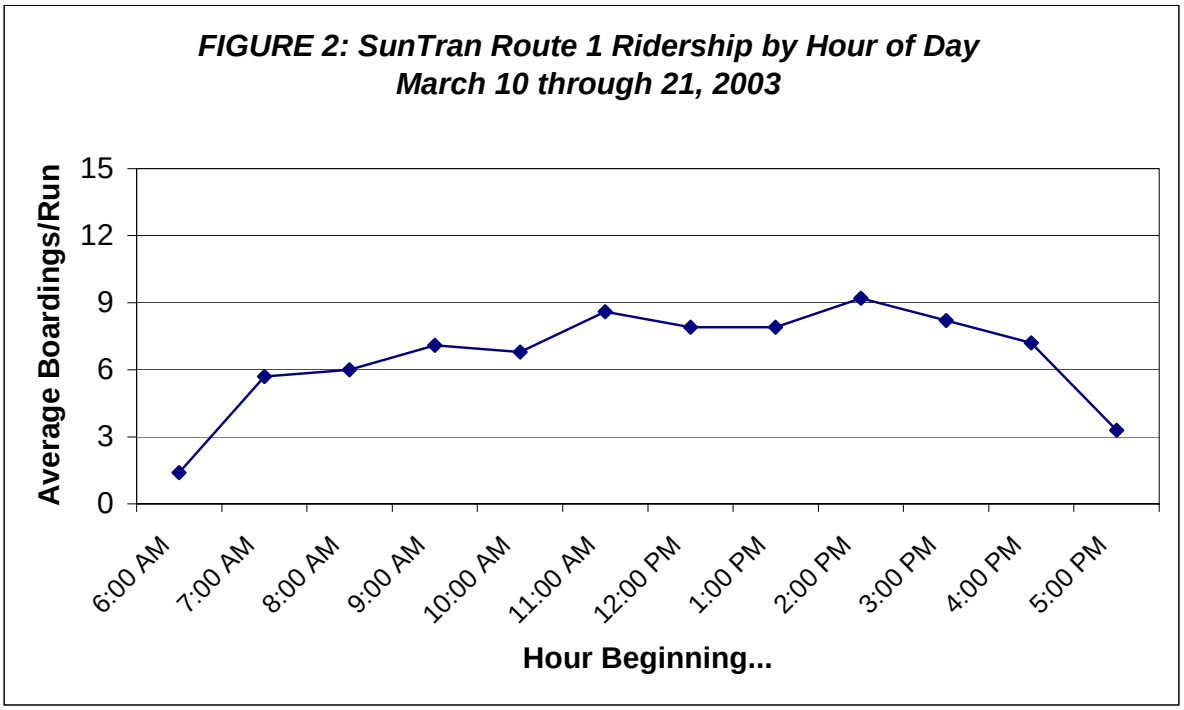
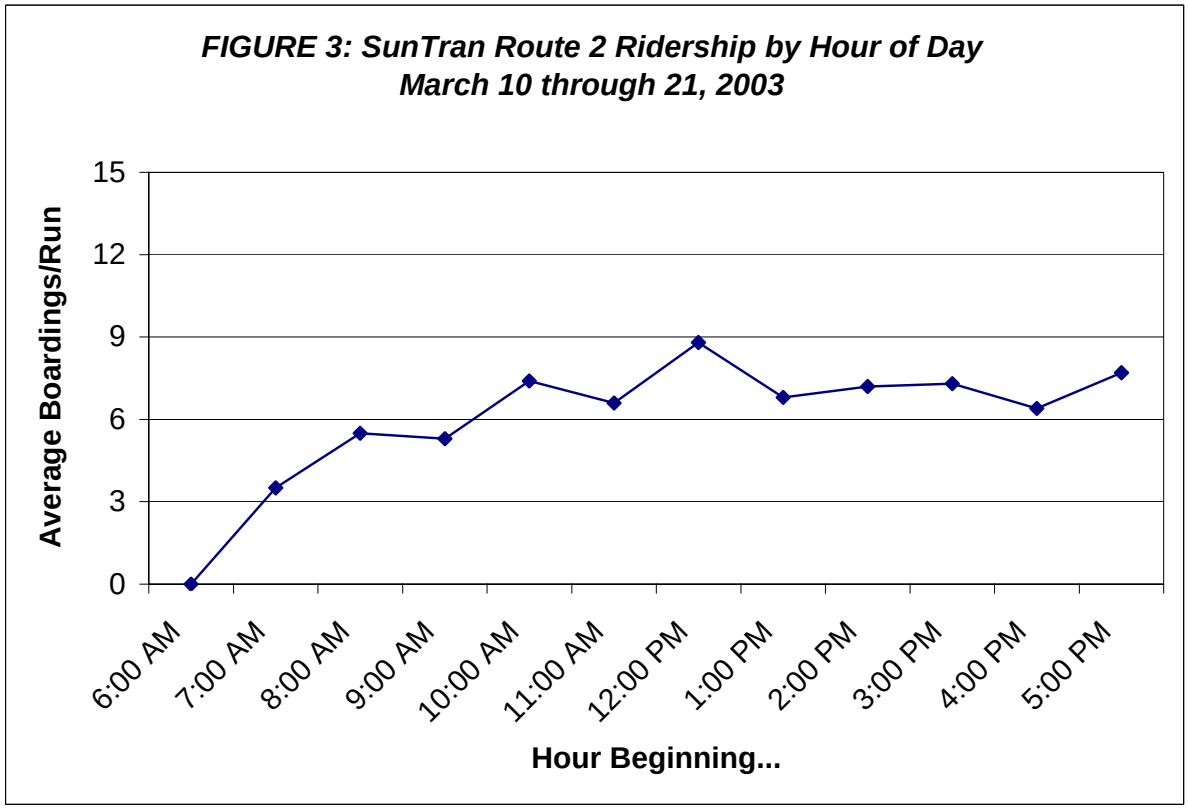


FIGURE 3: SunTran Route 2 Ridership by Hour of Day
March 10 through 21, 2003



- **Route 3** – the average boardings per hour during the survey period on this route was 7.7. As presented in Figure 4 below, ridership demonstrates a large peak at 10:00 A.M., followed by another slightly lower peak at 4:00 P.M.

- **Fixed Route Systemwide** – as presented in Figure 5 below, ridership peaks are experienced during the 10:00 A.M. and 2:00 P.M. periods. Given the relatively low boardings during the early morning and evening runs, it is assumed that SunTran does not provide transportation for a large number of commuters with traditional 8:00 A.M. to 5:00 P.M. work schedules. Furthermore, the ridership patterns suggest that SunTran caters primarily to seniors, social service agency clients, students (primary, secondary and Dixie College) and workers with non-traditional work schedules. The reader should be cautioned, however, that these assumptions are based on rider characteristics at other similar transit agencies with midday ridership peaks – the only way to determine trip purpose with any degree of certainty would be to conduct an on-board survey of existing riders.

SUNTRAN ADA SERVICE

As required by the Americans with Disabilities Act, SunTran provides complementary paratransit services to persons with transportation disabilities, to anywhere within one mile of the fixed route, using 20-passenger minibuses. This service is known as the "ADA Service" program. During the period from February to July 2003, the ADA Service provided 2,567 one-way passenger-trips. The base fare for this service is $2.00 per one-way passenger-trip. A discounted 10-ride bus pass is available for $18.00.

FIGURE 4: SunTran Route 3 Ridership by Hour of Day
March 10 though 21, 2003

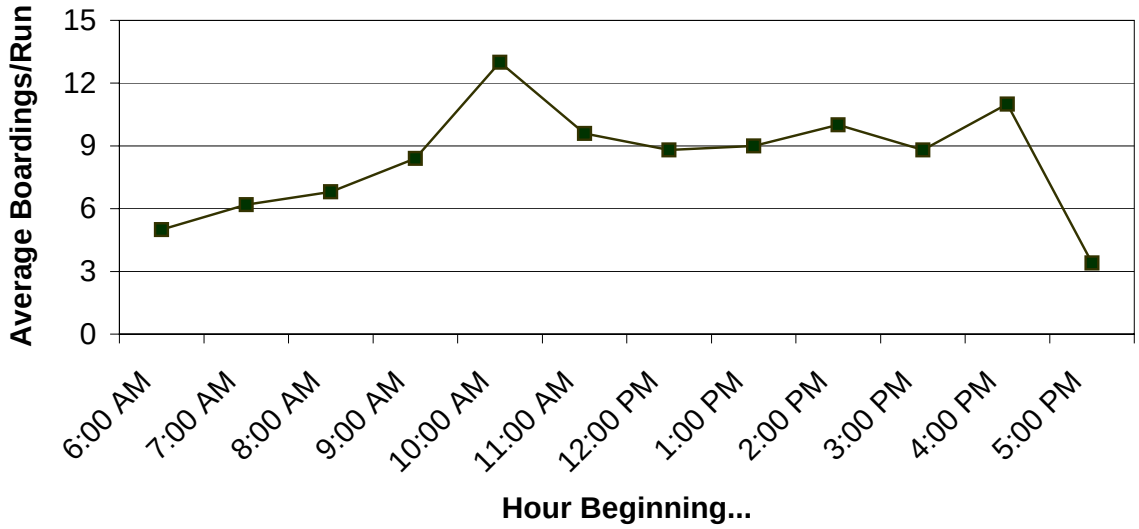
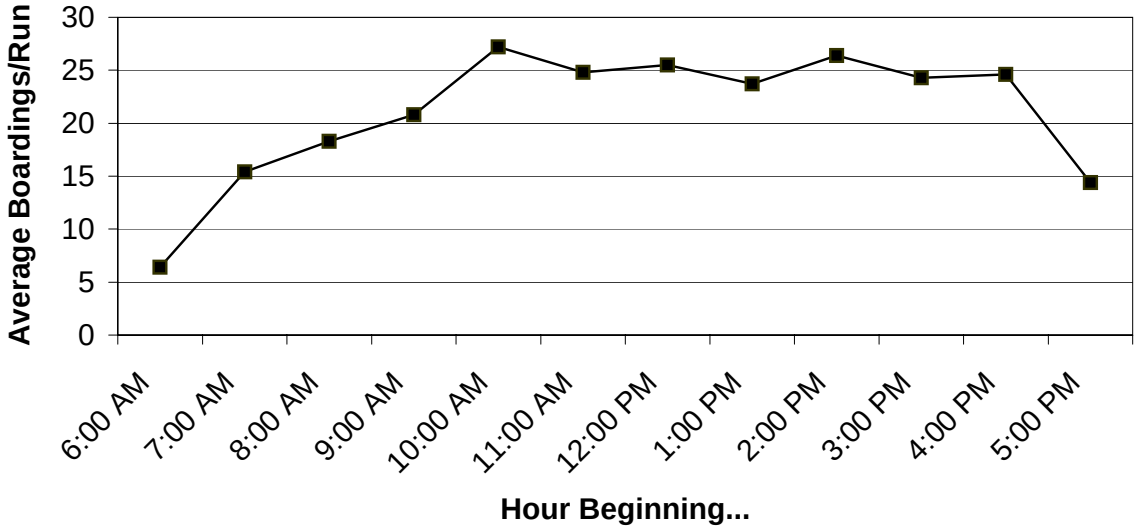


FIGURE 5: SunTran Systemwide Ridership by Hour of Day
March 10 through 21, 2003



Chapter 3
Existing SunTran Capital Assets

VEHICLE FLEET

Vehicle Inventory

As presented in Table 4 below, SunTran has a fleet of five 20-passenger minibuses. In addition, two staff cars are used for system oversight, one of which (the van) is occasionally used to transport paratransit passengers. The five 20-passenger vehicles are diesel-powered, wheelchair accessible, and feature a two-position Sportworks bike rack. All of the vehicles were partially funded with Federal Transit Administration Section 5311 funds administered through the Utah Department of Transportation. As such, these vehicles will not be eligible for replacement using Federal funds until UDOT-adopted life cycle requirements are met, unless the FTA Section 5311 funding is "bought out" using local funds.

TABLE 4: SunTran Revenue Vehicle Fleet Roster

Revised 12-10-03

Year	Make	Model	Fuel Type	Mileage	Seating Capacity	Wheelchair Accessible?	Funding Source	Planned Replacement Year
Non-Revenue Vehicles								
2003	Ford	Grand Marquis	Gasoline	19,000	6	No	FTA 5311	2011
2003	Ford	Windstar Van	Gasoline	25,000	7	No	FTA 5311	2011
Revenue Vehicles								
2001	Ford	E-450 SNT	Diesel	124,331	20	Yes	FTA 5311	2006
2001	Ford	E-450 SNT	Diesel	133,562	20	Yes	FTA 5311	2006
2001	Ford	E-450 SNT	Diesel	134,226	20	Yes	FTA 5311	2006
2002	Ford	E-450 SNT	Diesel	87,200	20	Yes	FTA 5311	2007
2002	Ford	E-450 SNT	Diesel	57,979	20	Yes	FTA 5311	2007

Source: SunTran.

SUNTRAN BUS STOPS

As presented in Table 5 below, the SunTran fixed routes each have between 6 and 8 timed stops, and 60 stops systemwide. The Dixie State College Transit Center serves as the beginning and end point for all the routes and there is an additional transfer point for Routes 2 and 3 located at 300 West and 100 South All of the bus stops are signed. According to SunTran staff, passenger benches and shelters are planned for bus stops with high passenger activity.

TABLE 5: SunTran Fixed Route Schedules & Bus Stops

Route 1 (Red Cliffs) – Serves Dixie State College, 700 East, Harmons, Target, Zion Factory Stores, Deseret Industries, Pineview High School, Red Cliffs Mall, and Promenade.

TIME:	TRAVELING ON:	BUS STOP:
30	N/A	Dixie State College Transit Center
35	River Rd.	IHC Health Center
37	River Rd.	Ramada Inn
41	Red Cliffs Dr.	Deseret Industries
47	450 North	Zion Medical Center
50	River Rd.	Promenade
54	100 South	Dixie State College Transit Center

Route 2 (Riverside) – Serves Dixie State College, The Library, 300 West, KMART, Greyhound Bus Station, DMV, Doctor's Free Clinic, Post Office, Harmons, Dixie High School, Recreation Center, Dixie Reg. Med. Center, and The LDS Temple.

TIME:	TRAVELING ON:	BUS STOP:
00		Dixie State College Transit Center
04	100 South	100 South / 300 West
08	Main St.	McDonald's / Greyhound Bus Station
11	Riverside Dr.	Doctor's Free Clinic
15	River Rd.	Harmons
20	700 South	Recreation Center
25	1000 East	Dixie State College Transit Center

Route 3 (Valley View) - Serves Dixie State College, City Offices, Museum & Opera House, SW Center, Sunset Blvd., Dixie Downs Rd., Lin's Shopping Center, Green Valley Mall, Valley View Dr., Smith's, and The County Offices.

TIME:	TRAVELING ON:	BUS STOP:
30		Dixie State College Transit Center
34	200 North	City Offices
41	State Route 15	Sunset Corner
00** and 49	2100 West	Sierra Pointe Apts.
05** and 54	Dixie Dr.	360 North / Dixie Dr.
07** and 56	Valley View Dr.	Valley View / Indian Hills
15** and 04	100 South	100 South / 300 West
20** and 09	200 North	Main St. Post Office
27** and 16	Tabernacle St.	Dixie State College Transit Center

** Times only for the 6:00 A.M. hour.

Source: SunTran and LSC.

SUNTRAN FACILITIES

There are plans for a new enhanced bus stop to be constructed adjacent to the Dixie State College campus, which will provide enhanced passenger amenities and improved access for SunTran buses. Passenger amenities will include shelters, seating, information displays, a public payphone and restrooms. Currently, administrative offices are located at the SunTran Mobile Building. Expansion or replacement of this facility is planned in the immediate future. SunTran vehicles are parked and maintained at the St. George City Corporation Yard, located at 953 East Skyline Drive.

Chapter 4
SunTran Financial and Performance Analysis

SUNTRAN REVENUE

Table 6 below presents actual SunTran operating revenues by source for the first six months of 2003. As indicated in the table, the sources of operating revenue are passenger fares, City of St. George local funds and FTA Section 5307 funds. SunTran expects to receive $320,046 in FTA Section 5307 funds for the six-month period, which can be used for either capital needs (with a local match requirement of 20 percent), operating needs (with a local match requirement of 50 percent) or a combination of both. Passenger fares accounted for 4.1 percent of the revenue from January to June 2003. The majority of funding during this period came from FTA Section 5307 funds (68.4 percent), followed by the City of St. George (27.5 percent).

TABLE 6: SunTran Operating Revenues

Revised 12-10-03

Source		Acutal 6 Months in 2003	% of Total
Local Funds			
Transit Service Fares		$19,021	4.1%
City of St. George		$128,500	27.5%
	Subtotal	*$147,521*	*31.6%*
Federal Funds			
FTA Section 5307		$320,046	68.4%
	Subtotal	*$320,046*	*68.4%*
	Total Revenue	**$467,567**	**100%**

Source: SunTran

SUNTRAN EXPENSES

Total estimated SunTran operating expenses for January 2003 though June 2003 are presented in Table 7 below. As presented, expenses for the period totaled $293,5135. Employee salaries and benefits accounted for the greatest proportion (61.4 percent) of total operating costs, followed by fleet maintenance (10.7 percent), professional/technical (6.0 percent), and special department supplies (5.0 percent). It should be noted that employee salaries and benefits for this period include up-front labor costs involved in starting up this new transit system. SunTran has decreased total operating costs in comparison to the previous DARTS system (by greater than 50 percent).

TABLE 7: SunTran Operating Costs

Expense Item	Estimated January to June 2003 Total	% of Total
Salaries and Benefits	$180,100	61.4%
Memberships/Publications	$6,525	2.2%
Travel & Training	$2,907	1.0%
Office Expense	$8,280	2.8%
Safety Equipment	$522	0.2%
Equipment Supplies/Maintenance	$487	0.2%
Fuel	$8,175	2.8%
Fleet Maintenance	$31,496	10.7%
Special Dept. Supplies	$14,735	5.0%
Utilities	$9,225	3.1%
Professional/Technical	$17,547	6.0%
Uniforms	$4,302	1.5%
Insurance & Bonds	$9,212	3.1%
Claims Paid	$0	0.0%
Rental	$0	0.0%
Total Operating Costs	***$293,513***	***100%***

Source: SunTran.

SUNTRAN COST ALLOCATION MODEL

When developing and evaluating service alternatives, it is useful to have a cost model which can easily show the financial impact of any proposed changes. Table 8 below presents the estimated Fiscal Year 2003-04 cost allocation model for SunTran, based on the Council-adopted budget. Due to the short period of time SunTran has been in existence, the annual vehicle service hour and vehicle service mile data presented in Table 8 is estimated according to information provided by SunTran. The cost allocation model can be summarized as follows:

Total Annual Operating Costs = **$21.75** *per vehicle service hour* +
$0.27 *per vehicle service mile* +
$8,533 *per peak vehicle* +
$119,272 *annually for fixed costs*

The fully-allocated operating cost of SunTran service per vehicle service hour is $44.47 in Fiscal Year 2003-04. In comparison, the fully-allocated operating cost for the DARTS system was

TABLE 8: SunTran Cost Model

Fiscal Year 2003-04 *Revised 12-10-03*

Expense Item	Budgeted FY03-04	Vehicle Service Hours	Vehicle Service Miles	Peak Vehicle	Fixed Costs
Salaries and Benefits	$247,653	$179,381	--	--	$68,272
Memberships	$1,000	--	--	--	$1,000
Publications	$1,000	--	--	--	$1,000
Travel & Training	$6,000	--	--	--	$6,000
Office Expense	$6,000	--	--	--	$6,000
Safety Equipment	$2,000	--	--	--	$2,000
Equipment Supplies/Maintenance	$2,000	--	--	--	$2,000
Bldgs/Grounds/Utilities	$1,000	--	--	--	$1,000
Fuel	$20,000	--	$20,000	--	--
Fleet Maintenance	$27,000	--	$27,000	--	--
Special Dept. Supplies	$5,000	--	--	--	$5,000
Telephone	$3,000	--	--	--	$3,000
Rental	$3,000	--	--	--	$3,000
Power Bills	$1,000	--	--	--	$1,000
Professional/Technical	$20,000	--	--	--	$20,000
Uniforms	$4,302	$4,302	--	--	--
Insurance & Bonds	$24,600	--	--	$24,600	--
Claims Paid	$1,000	--	--	$1,000	--
Total Operating Costs	*$375,555*	*$183,683*	*$47,000*	*$25,600*	*$119,272*
Anticipated FY03-04 Unit Quantities (1)		***8,445***	***171,874***	***3***	***N/A***
Cost Per Unit		***$21.75***	***$0.27***	***$8,533***	***$119,272***

Note 1: Annual vehicle service hours and miles estimates based on operating data from February to July 2003 data.

Source: SunTran and LSC Transportation Consultants.

$27.36 in Fiscal Year 2001-02. The increase in cost for SunTran can be attributed to annual inflation, start up costs and the lower service level provided (as fixed costs are spread out over a fewer number of vehicle service hours, the fully-allocated cost increases). Compared to other transit operators in the area, SunTran's cost efficiency is relatively good. The fully-allocated operating cost of the Logan Transit District is $36.78 per vehicle service hour, $77.11 for Park City Transit and $78.44 for the Utah Transit Authority.[1] (The Logan system is operated through a contractor, while the other two systems are operated directly by municipal/district employees.) This indicates that the cost-efficiency of the SunTran system is relatively good.

[1] The operating cost per hour for the Logan Transit District, Park City Transit and the Utah Transit Authority were estimated by applying a 3.0 percent inflation factor to Fiscal Year 1999-2000 data.

SUNTRAN SYSTEM PERFORMANCE

To gain further insight into the efficiency and effectiveness of SunTran services, it is necessary to conduct an analysis of ridership and operating data on a service category basis. Ridership and operating statistics for a six month period of SunTran operation were reviewed to identify average passenger activity, fares, and operating quantities. Fares can then be subtracted to identify the average daily subsidy required to fund each service. Finally, this data can be used to evaluate a number of productivity and service measures.

Table 9 below presents overall operating and performance data for all SunTran public transit services over a six-month period. As presented, ridership was estimated to total 38,734 one-way passenger-trips. Of this total, the fixed route service provided a total of 36,167 one-way passenger-trips. Total estimated ridership by route/service is depicted graphically in Figure 6 below. Of the three fixed routes, Route 3 provided the greatest number of annual one-way passenger-trips (13,529), followed by Route 1 (11,345) and Route 2 (11,293). The ADA Service, provided approximately 2,567 one-way paratransit passenger-trips, based on estimates provided by SunTran.

Also presented in Table 9 are the total estimated operating cost and farebox revenues by route/service. The operating cost is derived by assigning the total operating cost (as presented in Table 7 above) to each service, based on the proportion of total vehicle service hours provided. In total, the fixed route service required $208,324 to operate, and the ADA Service required $74,510. It should be noted that these estimates are based upon the proportional number of vehicle service hours operated on each route/service. SunTran does not currently track farebox revenues by fixed route or service. Therefore, total farebox revenues for the period was allocated to each route based on the proportion of one-way passenger trips per route. Fares for the ADA Service were estimated by applying an estimated average fare of $1.90 per trip fare charged (to account for the discounted 10-ride bus passes available on the ADA Service).

Figure 7 below presents the operating subsidy required for six months during 2003 for each route/service. Operating subsidy is defined as the operating cost of providing service, less farebox revenues. The total operating subsidy for the fixed route service was $178,239. Of this total, the greatest amount was required for Route 3 ($74,757), followed by Route 1 ($46,793) and Route 2 ($42,545). The ADA Service required $99,719 in annual operating subsidy.

The financial efficiency of a system can be measured by its farebox recovery ratio, defined as the proportion that passenger fares cover operating costs. Systemwide, SunTran achieved a farebox recovery ratio of 6.7 percent. As a comparison, however, the State of California requires a minimum farebox ratio of 10 percent for rural systems and 20 percent for urban systems in order to receive state-administered/locally-generated transit funding.[2] As depicted in Figure 8 below, Route 2 achieved the highest estimated farebox recovery ratio (9.4 percent), followed by Route 1 (8.7 percent), Route 3 (6.6 percent) and the ADA Service (4.7 percent).

[2] Caltrans allows local transportation planning agencies to apply a two-year grace period for new services in order for full transit demand potential to be realized.

TABLE 9: SunTran Operating Data and Performance Indicators

January 2003 through June 2003

	Fixed Routes			***Total Fixed Route Total***	**ADA Service**	**System Total**
	1	2	3			
Operating Data						
One-Way Passenger Trips [1]	11,345	11,293	13,529	***36,167***	2,567	**38,734**
Total Operating Cost	$53,165	$48,734	$83,070	***$184,969***	$108,544	**$293,513**
Farebox Revenues [2]	$4,437	$4,416	$5,291	***$14,144***	$4,877	**$19,021**
Subsidy Required	$48,728	$44,318	$77,779	***$170,825***	$103,667	**$274,492**
Vehicle Service Hours [3]	714	654	1,115	***2,483***	1,457	**3,941**
Vehicle Service Miles	11,185	10,516	21,659	***43,361***	8,317	**51,678**
Performance Indicators						
Farebox Recovery Ratio	8.3%	9.1%	6.4%	**7.6%**	4.5%	**6.5%**
Operating Cost Per Trip	$4.69	$4.32	$6.14	***$5.11***	$42.28	**$7.58**
Subsidy Per Trip	$4.30	$3.92	$5.75	***$4.72***	$40.38	**$7.09**
Trips Per VSH	15.9	17.3	12.1	***14.6***	1.8	**9.8**
Trips Per VSM	1.01	1.07	0.62	***0.83***	0.31	**0.75**

Note 1: Ridership from January 9, 2003 to July 31, 2003.

Note 2: Farebox revenues allocated based on the number of passenger-trips by route/service; the average fare on the Special Needs program assumed to be $1.90 to account for discounted 10-ride bus pass.

Note 3: Vehicle service hours estimated using the proportion of total VSH (Feb-Jul) to the VSH on each route. DAR VSH were estimated using data for two weeks in March 2003.

Source: SunTran Transit and LSC Transportation Consultants, Inc.

FIGURE 6: SunTran Total Ridership
January 2, 2003 through June 30, 2003

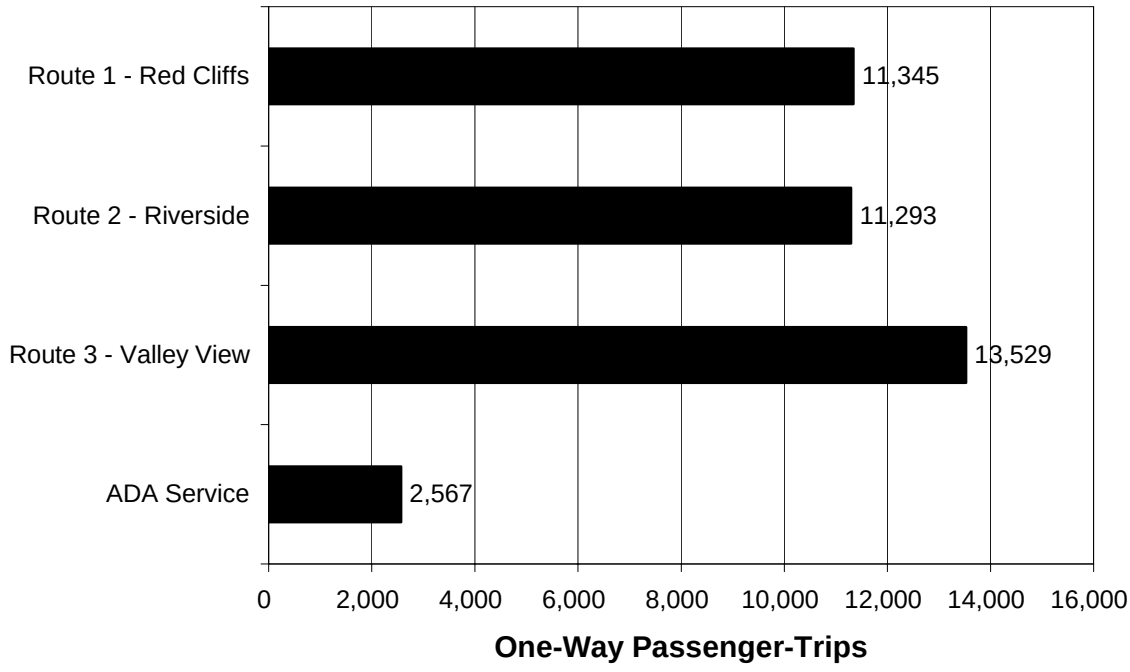


FIGURE 7: SunTran Operating Subsidy
January 2, 2003 through June 30, 2003

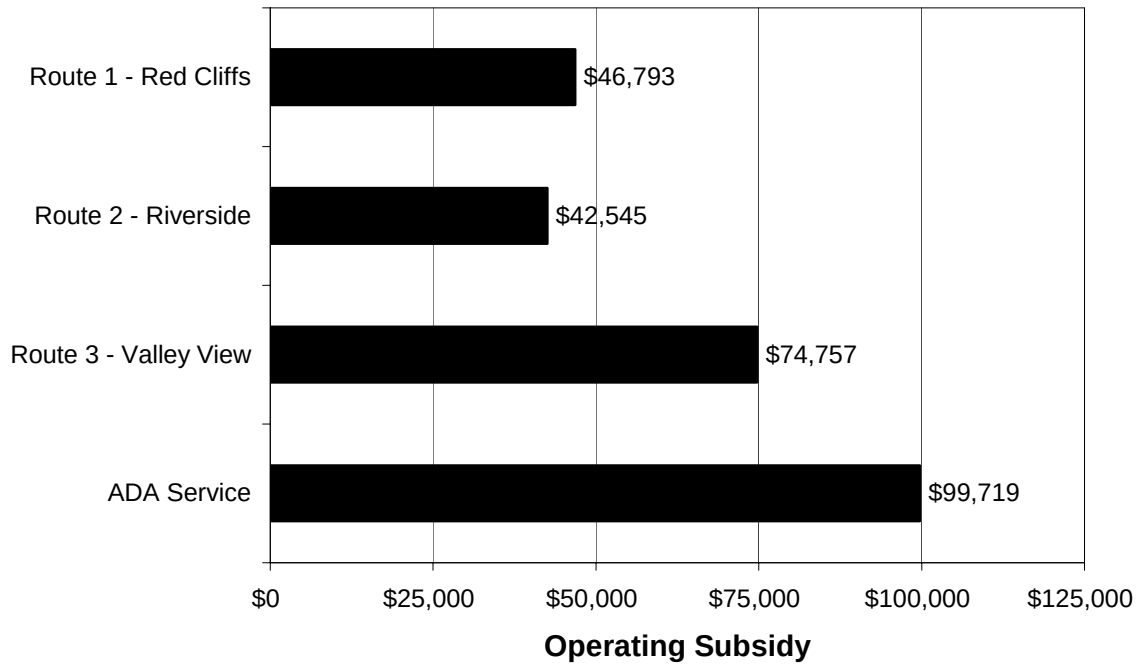


FIGURE 8: SunTran Farebox Recovery Ratio
January 2, 2003 through June 30, 2003

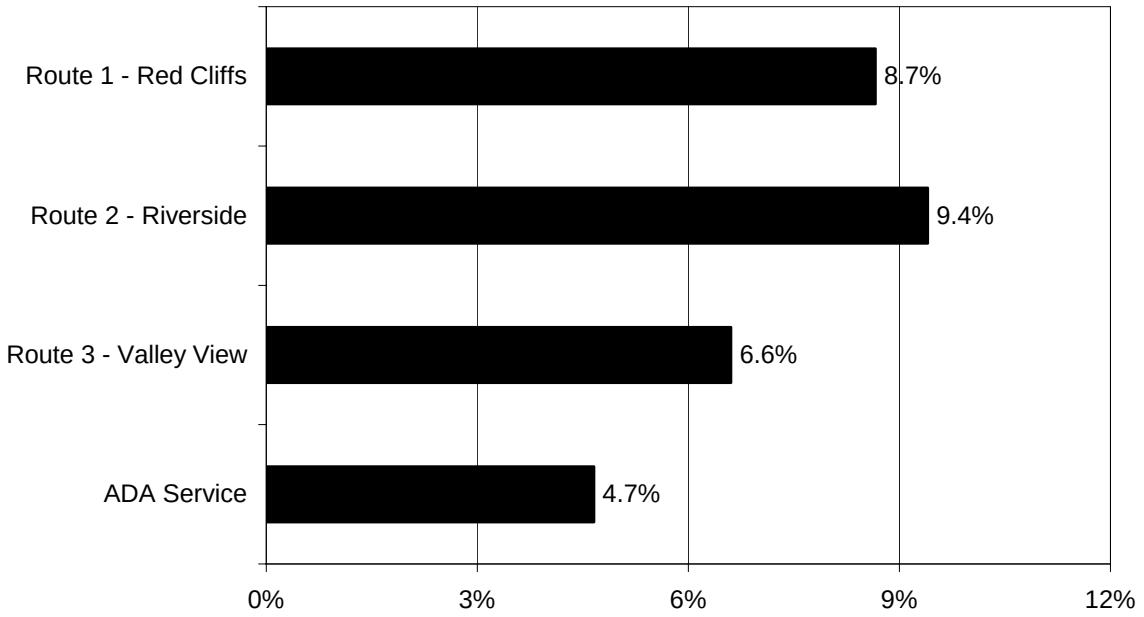
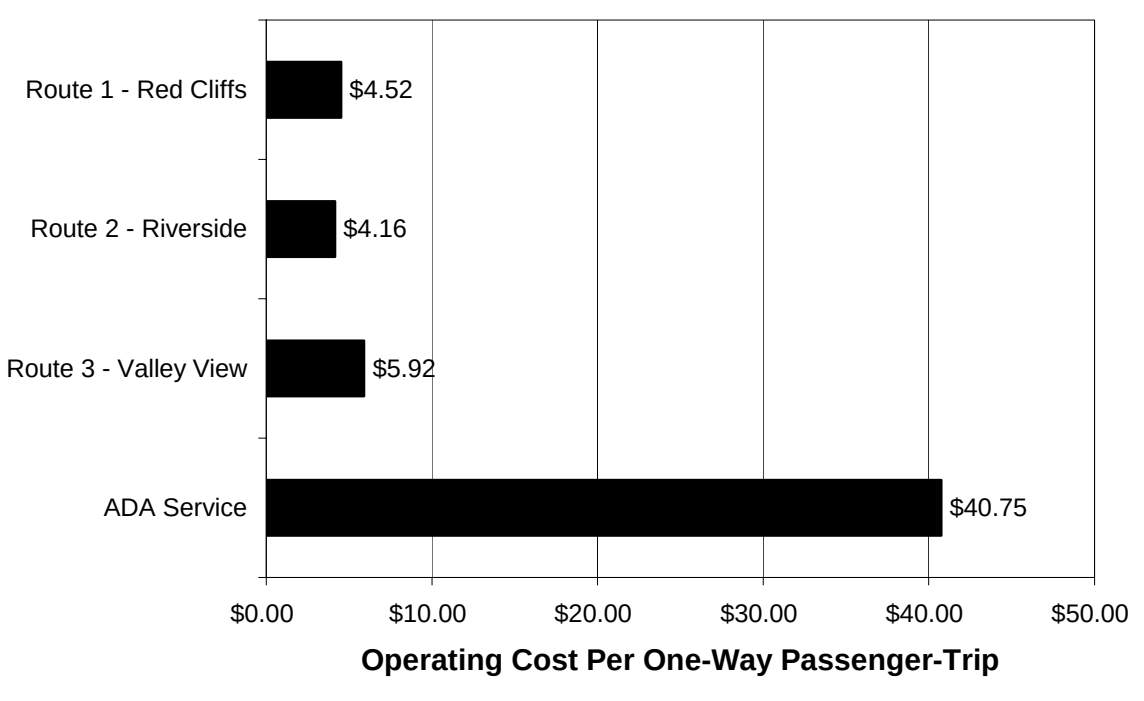


FIGURE 9: SunTran Operating Cost Per Passenger-Trip
January 2, 2003 through June 30, 2003



Another measure of each route's efficiency is provided by the operating cost per one-way passenger-trip. Systemwide, the average operating cost per one-way passenger-trip is estimated to be $7.30. The operating cost per one-way passenger-trip on the fixed route system as a whole is $4.93, in comparison to $40.75 per one-way passenger-trip on the ADA Service. As depicted in Figure 9 above, Route 2 required the lowest operating cost per one-way passenger-trip, at only $4.16.

When fare revenue is subtracted from the operating cost per one-way passenger-trip, the amount remaining is the subsidy required per one-way passenger-trip. The average SunTran subsidy per passenger-trip is $6.81, and the subsidy per one-way passenger-trip by route/service is depicted in Figure 10 below. As presented, ADA Service requires the greatest subsidy per one-way passenger-trip ($38.85), and Route 3 requires the least ($3.77). Overall, the fixed route program required $4.54 in subsidy per one-way passenger-trip.

A measure of a system's effectiveness can be provided by its productivity – the number of one-way passenger-trips provided per vehicle service hour. The systemwide productivity is estimated to be 9.8, and the fixed route productivity averaged 14.6. As presented in Table 9 above and in Figure 11 below, Route 2 provided the greatest number of passenger-trips per vehicle service hour (17.3), followed by Route 1 (15.9), Route 3 (12.1), and the ADA Service (1.8). The productivity of other Utah systems are as follows:

- Logan Transit District
  - fixed route – 36.9
  - dial-a-ride – 2.0

- Utah Transit Authority
  - fixed route – 18.0
  - dial-a-ride – 2.1

- Park City Transit (systemwide) – 32.7

However, the reader is reminded that a number of factors contribute to a system's effectiveness – area served, level of service, fare levels, convenience and cost when compared to other modes of transportation, number of transit trip generators, etc. Thus, absolute comparisons are not advisable, particularly in light of the high levels of ridership generated by visitors in Park City, and by Utah State University students in Logan. In addition, it typically takes a system two full years of service to reach full potential demand.

Another measure of a system's effectiveness is provided by the number of passenger-trips per vehicle service mile. As depicted in Figure 12 below, Route 2 achieved the greatest number of one-way passenger-trips per vehicle service mile (1.07). Conversely, the ADA Service only provided 0.31 one-way passenger trips per vehicle service mile.

Shortcomings of Existing SunTran Service

Due to the service cuts required to ensure financial constraint, service was eliminated on Saturdays and demand response service was cut back to only serve persons with ADA transportation disabilities. In addition, the service area was reduced in order to achieve better

FIGURE 10: SunTran Operating Subsidy Per Passenger-Trip
January 2, 2003 through June 30, 2003

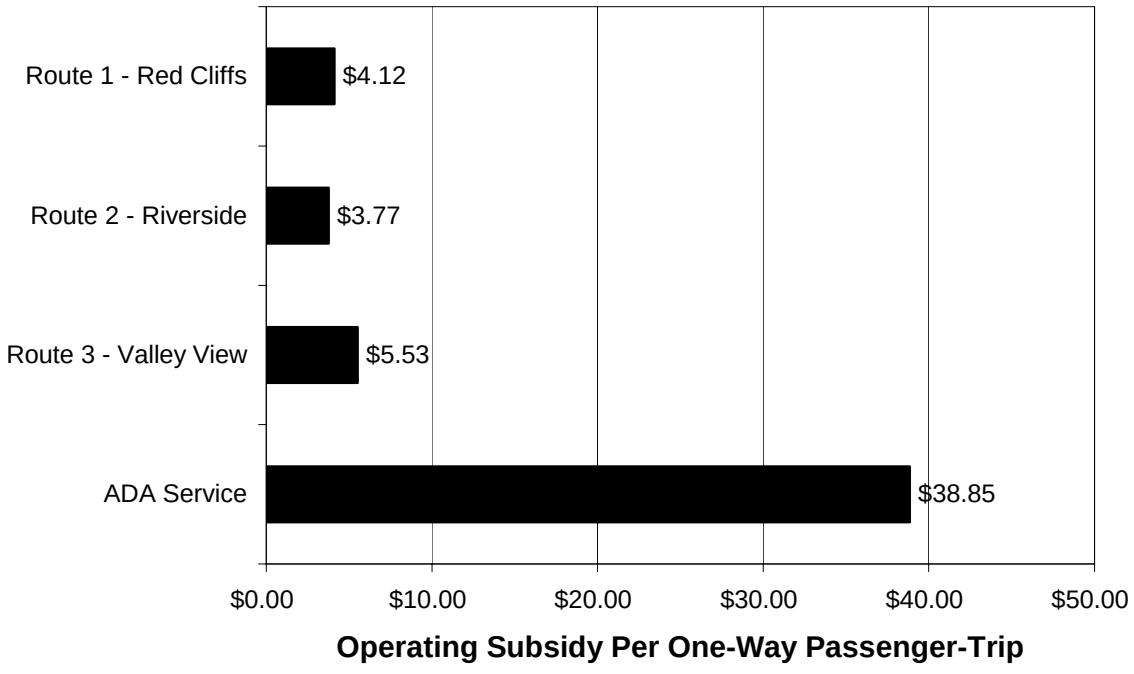


FIGURE 11: SunTran One-Way Passenger-Trips Per VSH
January 2, 2003 through June 30, 2003

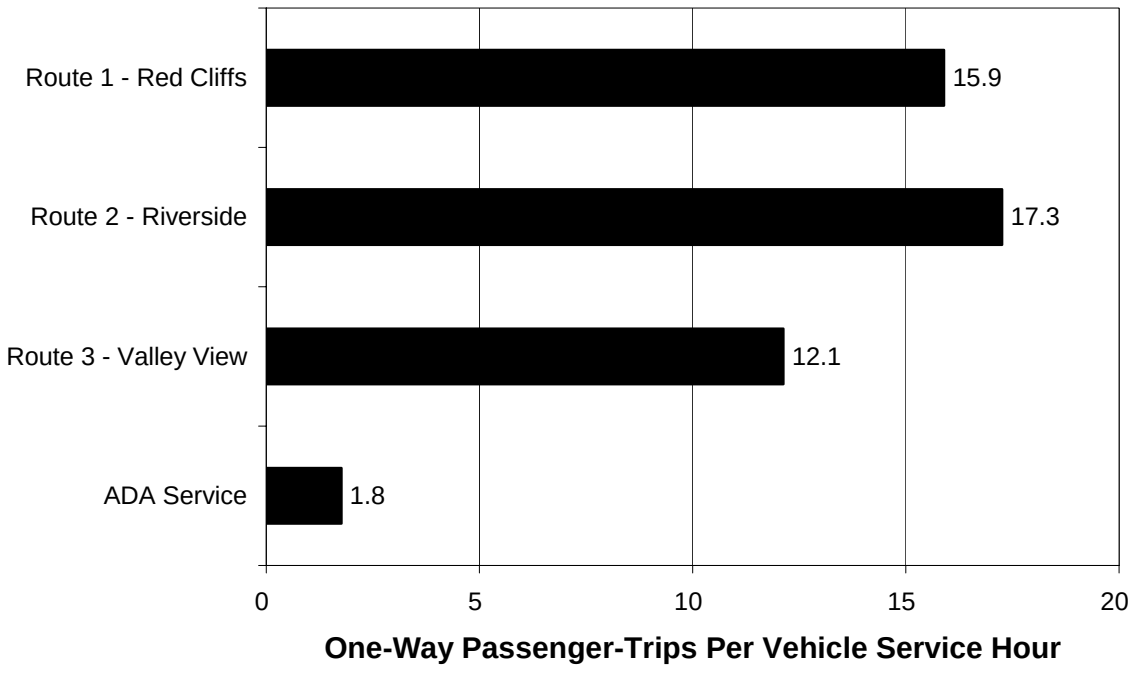
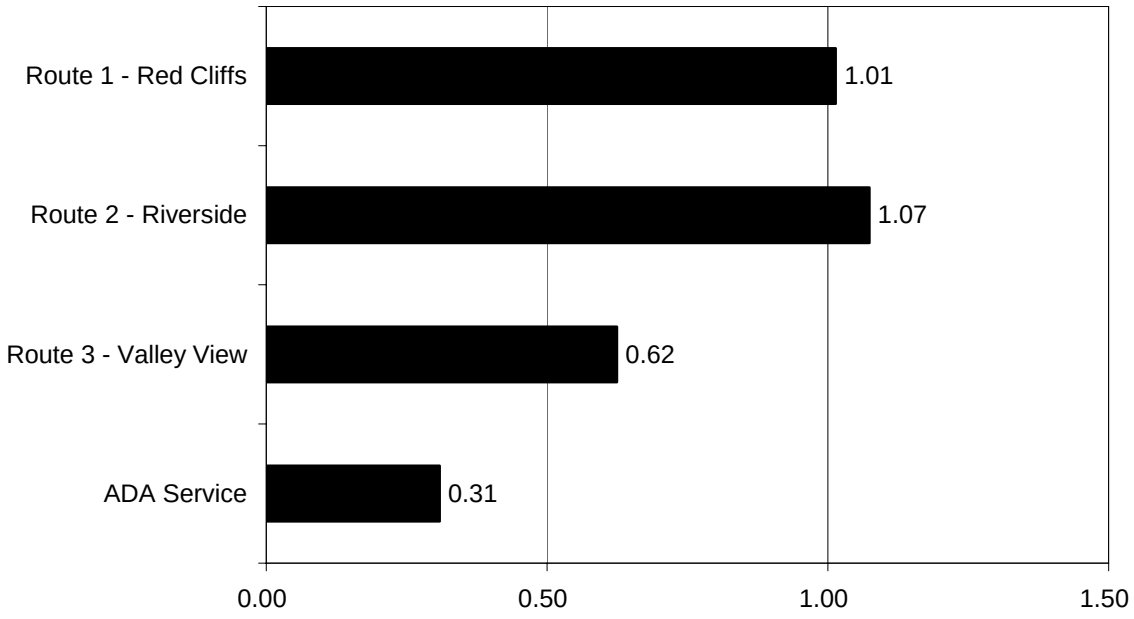


FIGURE 12: SunTran One-Way Passenger-Trips Per VSM
January 2, 2003 through June 30, 2003



on-time performance and to reduce operating costs. While these cuts were financially necessary, they resulted in reduced access to transit services. If additional funds become available, the City of St. George should attempt to reinstate services; local officials should survey riders and the general public to determine which services could be provided in a cost-effective manner or should be reinstated to meet other goals of the City.

There is one route design issue improvement that would improve the attractiveness of local fixed route service, but would require additional capital and operations funding – replacing the single-bus one-way loop Route 2 service with two-way service. In particular, one-way loops (especially in the "middle" of a route) can dissuade all but the most transit-dependent riders from using the service, since riders are required to travel out-of-direction as part of their roundtrip.

Chapter 5
SunTran Service Alternatives

The City of St. George has effectively addressed the financial imbalance that faced the previous DARTS service by implementing services that are affordable. However, to some degree, service quality suffered due to the elimination of Saturday service and elimination of service in the southeastern and northwestern portions of the City. Finally, demand response service was curtailed to only service persons who meet the eligibility requirements of the ADA – seniors are no longer automatically eligible for demand response services due to age (many seniors do, however, qualify for ADA Service due to the mobility-limitations coincident with advanced age). A number of potential service alternatives are detailed below.

STATUS QUO SERVICE LEVEL

A good starting point for the evaluation of transit service alternatives for Fiscal Year 2003-04 is the consideration of the impacts of the "status quo" – if current public transit service levels remain unchanged in the near future. Increasing ridership over the past several months dictates that this is a viable alternative, since increasing ridership necessarily equates to increasing farebox revenues. Indeed, as presented in Table 10 below, ridership in Fiscal Year 2003-04 is forecasted to reach 77,470 annual one-way passenger-trips. This figure is based upon ridership during the first six months of service, recent growth patterns and total potential demand for services under the current service plan. Total fixed route ridership is anticipated to reach 72,340 and total ADA Service ridership is anticipated to reach 5,130 under this service alternative. Assuming the same average fares by service estimated in Table 9 above, these ridership levels would equate to approximately $37,960 in farebox revenues in Fiscal Year 2003-04. The total operating cost under this alternative is anticipated to be $375,560. Thus, after subtracting the anticipated farebox revenues of $37,960, approximately $337,600 in annual subsidy would be required.

SERVICE IMPROVEMENT ALTERNATIVES

The Consultant originally developed and evaluated five service reduction scenarios, as presented in the June 14 City of St. George Transit Service Analysis report. These service alternative scenarios provided cost-savings ranging from $14,510 to $220,120 in annual public subsidy required. Now that the transit funding and ridership situation in St. George has stabilized, it is prudent to develop potential service improvement alternatives that could be implemented if additional funding sources became available.

Improve Fixed Route Service Frequency to 30-Minutes

A straightforward method to improve the attractiveness of transit services would be to halve the service headways from service every 60 minutes to service every 30 minutes, using two additional buses. Two options are explored below: full-day 30-minute service, and peak hour 30 minute service.

TABLE 10: SunTran Service Alternatives

Estimated Fiscal Year 2003-04 Ridership and Cost Analysis

Alternative Option/Details	Operating Characteristics: Additional Vehicles [1]	Runs Per Day	Route: Length (Miles)	Route: Time (Hours)	Total Annual: Veh. Serv. Miles	Total Annual: Veh. Serv. Hours	Total Annual: Operating Days	Total Annual: Operating Cost [2]	Ridership Impact (One-Way Trips): Daily	Ridership Impact (One-Way Trips): Annual	Annual: Farebox Revenue	Annual: Subsidy Required
Status Quo Service Level												
Route 1	0.5	12.0	15.7	0.50	47,665	1,518	253	$50,320	90	22,690	$8,850	$41,470
Route 2	0.5	11.0	16.1	0.50	44,806	1,392	253	$46,800	89	22,590	$8,810	$37,990
Route 3	1	12.5	19.4	0.75	61,353	2,372	253	$76,900	107	27,060	$10,550	$66,350
ADA Service	1	12.5	5.7	1.00	18,050	3,163	253	$82,270	20	5,130	$9,750	$72,520
Fixed Costs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$119,270	N/A	N/A	N/A	$119,270
Subtotal	*3*	*48*	*56.9*	*2.75*	*171,874*	*8,445*	–	*$375,560*	*306*	*77,470*	*$37,960*	*$337,600*
Improve Fixed Route Service Frequency to 30-Minutes												
All-Day 30-Minute Fixed Route Service												
Route 1	0.5	12.0	15.7	0.50	47,665	1,518	253	$50,320	35	8,960	$3,490	$46,830
Route 2	0.5	11.0	16.1	0.50	44,806	1,392	253	$46,800	35	8,910	$3,470	$43,330
Route 3	1	12.5	19.4	0.75	61,353	2,372	253	$76,900	42	10,680	$4,170	$72,730
Subtotal	*2*	*35.5*	*51.2*	*1.75*	*153,824*	*5,282*	–	*$174,020*	*112*	*28,550*	*$11,130*	*$162,890*
Peak Period 30-Minute Fixed Route Service												
Route 1	0.5	4.0	15.7	0.50	15,888	506	253	$19,620	17	4,260	$1,660	$17,960
Route 2	0.5	4.0	16.1	0.50	16,293	506	253	$19,730	15	3,680	$1,440	$18,290
Route 3	1	4.0	19.4	0.75	19,633	759	253	$30,410	20	5,110	$1,990	$28,420
Subtotal	*2*	*12*	*51.2*	*1.75*	*51,814*	*1,771*	–	*$69,760*	*52*	*13,050*	*$5,090*	*$64,670*
Implement Saturday Service												
Route 1	0	9.0	15.7	0.50	7,206	230	51	$6,970	23	1,170	$460	$6,510
Route 2	0	9.0	16.1	0.50	7,390	230	51	$7,020	22	1,120	$440	$6,580
Route 3	0	9.0	19.4	0.75	8,905	344	51	$9,920	27	1,380	$540	$9,380
ADA Service	0	9.0	5.7	1.00	2,620	459	51	$10,700	5	260	$490	$10,210
Additional Dispatch Costs	N/A	N/A	N/A	N/A	N/A	N/A	N/A	$10,200	N/A	N/A	N/A	$10,200
Subtotal	*0*	*36*	*56.9*	*2.75*	*26,121*	*1,263*	–	*$44,810*	*77*	*3,930*	*$1,930*	*$42,880*

Note 1: Excluding spares, which can only be calculated for the system as a whole.

Note 2: The operating costs for these service alternatives are based upon the cost model presented in Table 8.

Source: LSC Transportation Consultants, Inc.

All-Day 30-Minute Fixed Route Service

Under this service option, an additional two vehicles (not including spare buses) would be used to double the service frequency on all three fixed routes throughout the entire service day on weekdays. In short, this option would reduce the wait time between buses from every 60 minutes to every 30 minutes.

As presented in Table 10 above, this option would increase annual vehicle service miles by 153,824 and vehicle service hours by 5,282. This equates to an additional annual operating cost of $174,020. The ridership impact can be estimated by conducting an elasticity analysis. The measure "headway elasticity" indicates the percentage change in ridership expected in response to a 1.0 percent change in the headway (or frequency of service). A headway elasticity of -0.50, for example, indicates that a 1.0 percent decrease in headway is expected to cause a 0.50 percent gain in ridership.[3] In general, the headway elasticity measure is higher for those services that currently have a relatively low service frequency. Since the existing SunTran fixed routes operate on hourly headways, a headway elasticity of -0.58 is appropriate for this analysis. As such, this option is estimated to increase annual ridership by 28,550 one-way passenger-trips, or 112 per service day. This additional ridership would increase passenger farebox revenues by $11,130. The resulting annual subsidy would be $162,890.

The advantages of this service option are the convenience of the service would be greatly enhanced and the ridership would be "distributed" over a greater number of runs, thereby reducing the instances of late buses. The disadvantages are the additional operating and capital funding required.

Peak Period 30-Minute Fixed Route Service

Under this option, 30-minute service on all three routes would only be provided during the morning and afternoon peak periods on weekdays. For the purposes of this analysis, the peak periods are defined as 6:30 A.M. to 8:30 A.M. and 2:30 P.M. to 5:00 P.M.

As presented in Table 10 above, this option would increase annual vehicles service miles by 51,814 and vehicle service hours by 1,771. This increased service level would require an additional $70,060 in annual operating revenues. Ridership under this option is estimated at 13,050 one-way passenger-trips, or 52 per day. Annual farebox revenues under this option are estimated at $5,090, resulting in an annual subsidy requirement of $64,970. This option would require an additional two vehicles, not including spares.

The advantages of this service option are the convenience of the service would be greatly enhanced, at a lower cost than under the all-day option discussed above. The greatest disadvantage is the additional operating and capital funding required for this service option. In addition, as presented in Table 3 in Chapter 2 above, the fixed route ridership is relatively flat – no significant peaks are experienced. Thus, the expected benefit of enhanced fixed route peak period service is less than would otherwise be expected for a transit system with significant peak period ridership. In addition, operating peak period service results in a relatively poor use of

[3] *Traveler Response to Transportation System Changes (Project B-12)*, Transit Cooperative Research Program, March 2000.

capital resources, as buses would remain idle during the majority of the day. Finally, an inconsistent schedule can confuse some riders who are accustomed to a consistent schedule throughout the service day.

Implement Saturday Service

A reasonable alternative is to re-institute Saturday service if additional operating revenues can be secured. It is common for Saturday service to be operated over a more limited schedule in comparison to weekday service, reflecting the substantially lower demand for employee transportation service. A reasonable schedule would be to operate Saturday service from roughly 8:30 A.M. to 5:30 P.M.

Using the same analysis procedures presented above, the annual operating cost of this service would be $44,810, including additional dispatching costs that would be incurred. See Table 10 above for details. Considering the ratio of average Saturday to average weekday transit ridership seen on other transit services serving small urban communities, ridership on Saturday service is estimated to be an additional 3,930 one-way passenger-trips per year, or an average of 77 passenger-trips on each Saturday. As these passengers would generate a total farebox revenue of $1,930, total annual subsidy requirements would equal $42,880. This subsidy level could be reduced if dispatch services could be provided by the ADA Service driver using a cellular telephone while providing the relatively low number of anticipated daily trips; staff is currently investigating this issue further

The advantages of this alternative are that access to transit services would be enhanced, no additional vehicles would be required, and the subsidy required is relatively low. The greatest disadvantage is the additional operating subsidy required.

COMPARISON OF SERVICE ALTERNATIVES

Table 10 above and Table 11 below present a series of "performance indicators" for the various service alternatives discussed above. In addition, a series of figures will be presented subsequently that demonstrate graphically the impacts of each service scenario.

The ridership impact of the various alternatives, as measured in marginal one-way passenger-trips per year, is presented in Table 11 above and Figure 13 below. As presented, the *Status Quo Service Level* option would provide approximately 77,470 annual one-way passenger-trips per year (72,340 on the fixed route service and 5,130 on the ADA Service). The *All-Day 30-Minute Fixed Route Service* option would provide the greatest number of additional one-way passenger-trips (approximately 28,550), followed by the *Peak Period 30-Minute Fixed Route Service* option (13,050) and the *Implement Saturday Service* alternative (3,390).

A very straightforward financial comparison of these alternatives – total required operating subsidy – is presented in Table 10 above and Figure 14 below for the various alternatives. Remember that operating subsidy is measured by deducting the anticipated annual farebox revenues of each service alternative from the respective annual operating cost. As presented, the *Status Quo* would require a public subsidy of approximately $337,280 ($145,810 for the fixed route service, $71,520 for the ADA Service and $119,270 in fixed costs). The *All-Day 30-Minute Fixed Route Service* option would require an additional $162,890 in additional annual operating subsidy, the *Peak Period 30-Minute Fixed Route Service* option would require

TABLE 11: SunTran Service Alternative Performance Analysis

Estimated Fiscal Year 2003-04 Ridership and Cost Analysis

Alternative Option/Details	Performance Analysis: Marginal Farebox Recovery Ratio	Marginal Operating Cost Per Pass. Trip	Marginal Operating Subsidy Per Pass. Trip	Marginal Passengers Per Veh. Serv. Hour	Marginal Passengers Per Veh. Serv. Mile
Status Quo Service Level					
Route 1	17.6%	$2.22	$1.83	14.9	0.48
Route 2	18.8%	$2.07	$1.68	16.2	0.50
Route 3	13.7%	$2.84	$2.45	11.4	0.44
ADA Service	11.9%	$16.04	$14.14	1.6	0.28
Subtotal	*10.1%*	*$4.85*	*$4.36*	*9.2*	*0.45*
Improve Fixed Route Service Frequency to 30-Minutes					
All-Day 30-Minute Fixed Route Service					
Route 1	6.9%	$5.62	$5.23	5.9	0.19
Route 2	7.4%	$5.25	$4.86	6.4	0.20
Route 3	5.4%	$7.20	$6.81	4.5	0.17
Subtotal	*6.4%*	*$6.10*	*$5.71*	*5.4*	*0.19*
Peak Period 30-Minute Fixed Route Service					
Route 1	8.5%	$4.61	$4.22	8.4	0.27
Route 2	7.3%	$5.36	$4.97	7.3	0.23
Route 3	6.5%	$5.95	$5.56	6.7	0.26
Subtotal	*7.3%*	*$5.35*	*$4.96*	*7.4*	*0.25*
Implement Saturday Service					
Route 1	6.6%	$5.96	$5.56	5.1	0.16
Route 2	6.3%	$6.27	$5.88	4.9	0.15
Route 3	5.4%	$7.19	$6.80	4.0	0.15
ADA Service	4.6%	$41.15	$39.27	0.6	0.10
Subtotal	*4.3%*	*$11.40*	*$10.91*	*3.1*	*0.15*

Source: LSC Transportation Consultants, Inc.

FIGURE 13: SunTran Alternatives Performance Analysis
Total Estimated Ridership

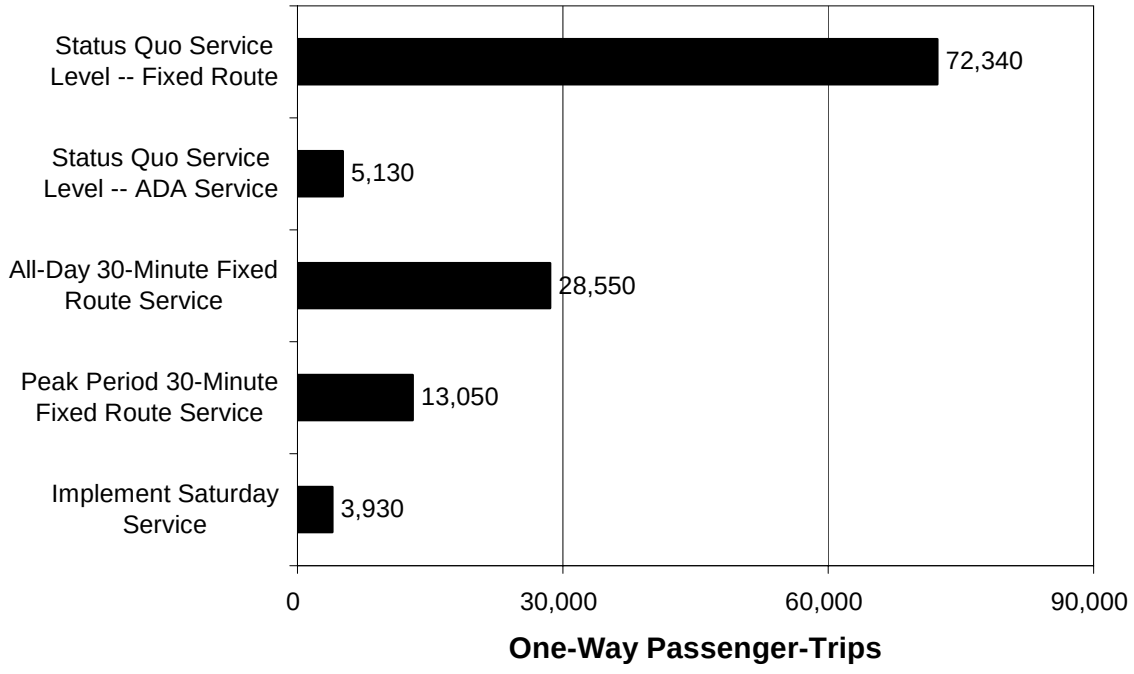
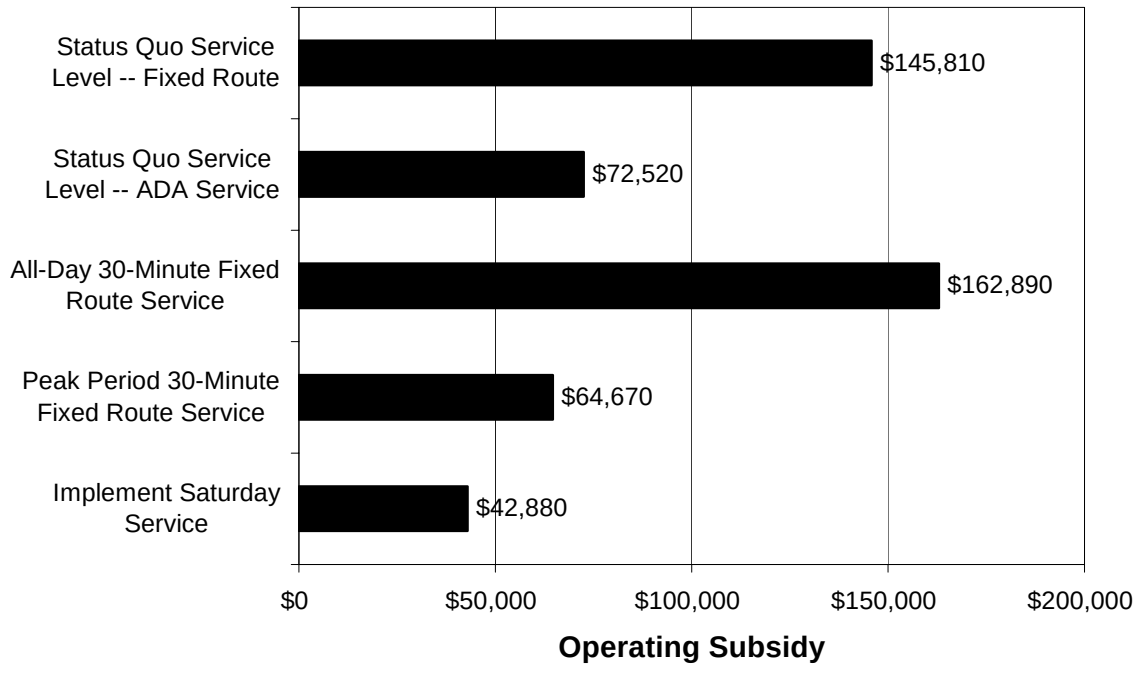


FIGURE 14: SunTran Alternatives Performance Analysis
Annual Operating Subsidy



approximately $64,670, and the *Implement Saturday Service* alternative would require approximately $42,880.

Table 11 above and Figure 15 below depict the annual operating farebox recovery ratio for the various service alternatives. This measure depicts the proportion of total operating costs that passenger fares cover. As presented, the *Status Quo* alternative would net the greatest overall farebox recovery ratio at 10.1 percent (16.2 percent for the fixed route service and 11.9 percent for the ADA Service). It should be noted that the overall 10.1 percent figure for the *Status Quo* alternative includes annual fixed costs. The *Peak Period 30-Minute Fixed Route Service* option would achieve a farebox recovery of 7.3 percent, followed by the *All-Day 30-Minute Fixed Route Service* option (6.4 percent) and the *Implement Saturday Service* alternative (4.3 percent).

Table 11 above and Figure 16 below present the operating cost per one-way passenger-trip for the status quo and the three service alternatives. As presented, the projected overall cost per passenger-trip under the *Status Quo* is $4.85 ($2.41 for the fixed route and $16.04 for the ADA Service). The *Peak Period 30-Minute Fixed Route Service* option would require $5.37 in additional operating funds per one-way passenger-trip, followed by the *All-Day 30-Minute Fixed Route Service* option ($6.10) and the *Implement Saturday Service* alternative ($11.40).

Table 11 above and Figure 17 below present the net subsidy per one-way passenger-trip provided for the various alternatives. This "performance indicator" is probably the single best means of measuring transit alternatives, as it directly relates the "goal" of public transportation (to provide passenger-trips) to the basic resource required (public dollars). As indicated, the "best" option as measured by this criteria is the *Status* Quo alternative, which would only require an overall subsidy of $4.36 per one-way passenger-trip (the fixed route service would require $2.02 and the ADA Service would require $14.14). The *Peak Period 30-Minute Fixed Route Service* option would require $4.96 in additional operating subsidy per one-way passenger-trip, followed by the *All-Day 30-Minute Fixed Route Service* option ($5.71) and the *Implement Saturday Service* alternative ($10.91).

An overall assessment of financial impact also requires consideration of capital needs. Both of the service frequency improvement options would require two additional buses each. Vehicles similar to the ones currently used by SunTran cost on the order of $85,000 each and typically take 120 days for delivery once the order has been placed. However, given the increasing population trend in St. George, heavier-duty buses with a larger passenger capacity might be required. This issue will be discussed in greater detail in the Capital Alternatives section in a subsequent chapter. The *Implement Saturday Service* alternative would not require additional vehicles, since the existing vehicles would be used.

The operating effectiveness of the alternatives, measured in terms of marginal one-way passenger-trips per vehicle service hour, is depicted in Table 11 above and Figure 18 below. The *Status Quo* alternative would provide approximately 9.2 one-way passenger-trips per vehicle service hour. As presented in the table and figure, the productivity of each service under the various service scenarios varies considerably. For example, the productivity of the fixed route service under the *Status Quo* alternative is 13.7, although it would be 7.4 under the *Peak Period 30-Minute Fixed Route Service* option and 5.4 under the *All-Day 30-Minute Fixed Route Service* option. This is intuitive, since ridership is more "distributed" under an operating plan with a greater number of annual vehicle service hours in comparison to an operating plan with relatively few annual vehicle service hours.

FIGURE 15: SunTran Alternatives Performance Analysis
Farebox Recovery Ratio

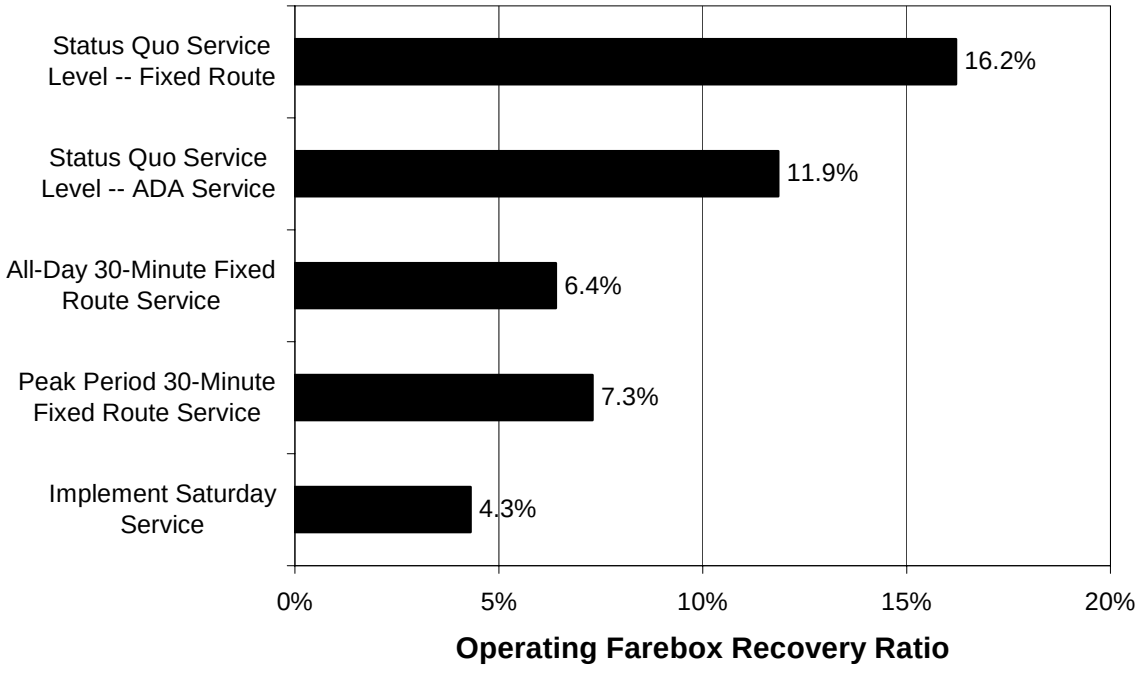


FIGURE 16: SunTran Alternatives Performance Analysis
Operating Cost Per Passenger-Trip

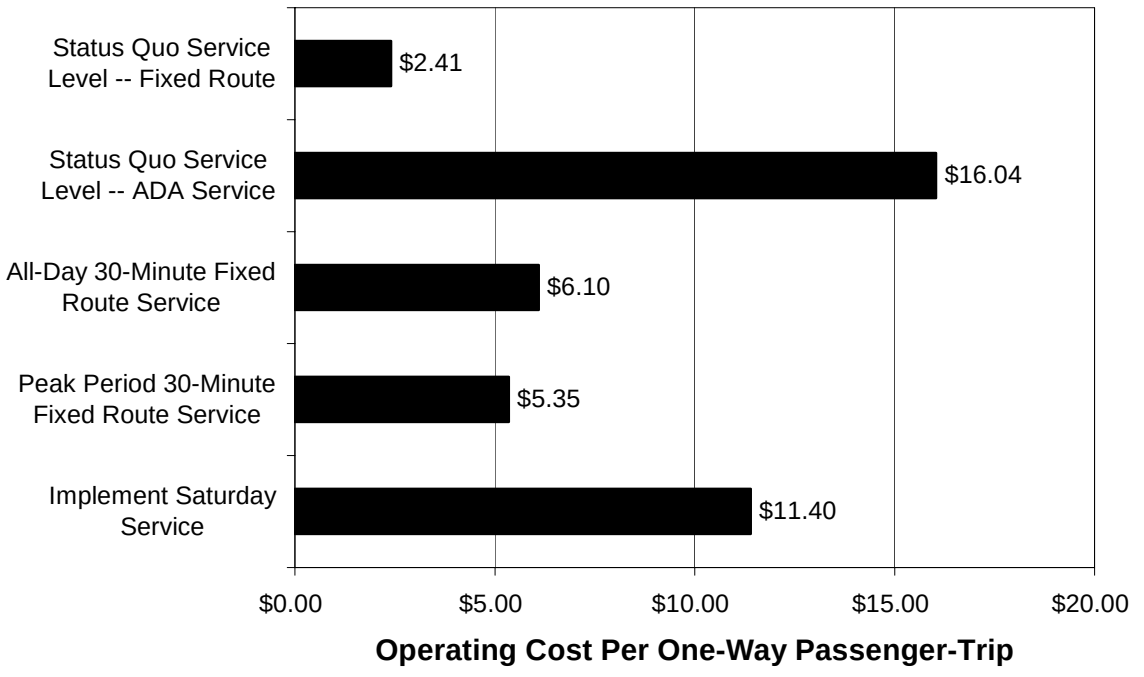


FIGURE 17: SunTran Alterantives Performance Analysis
Operating Subsidy Per Passenger-Trip

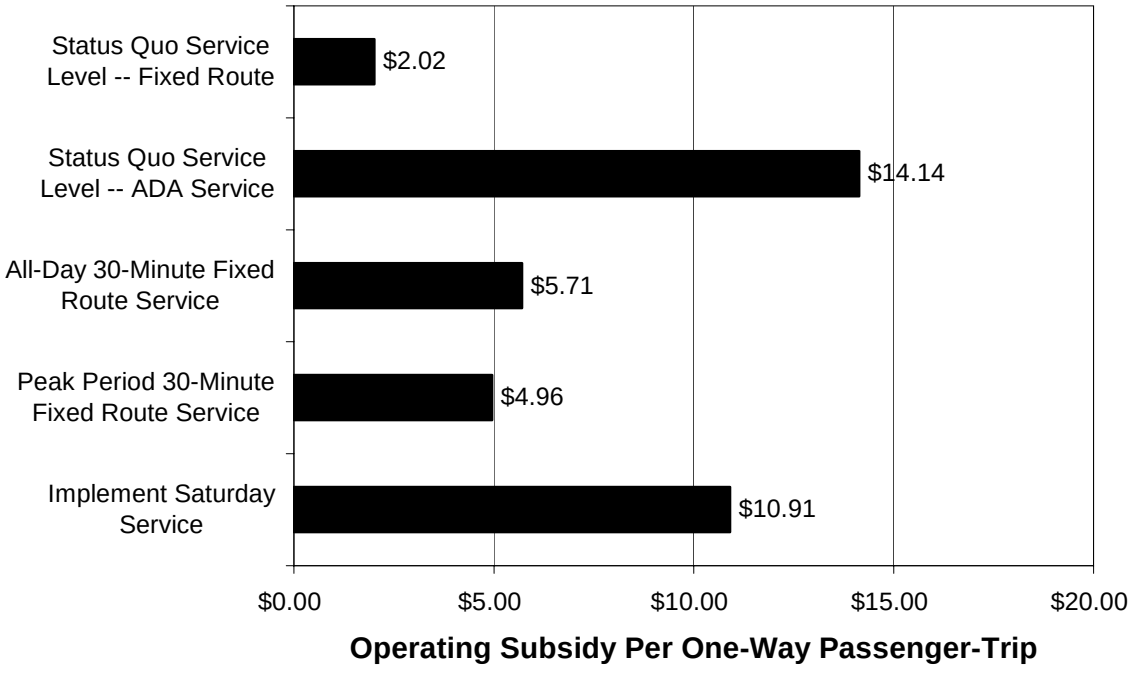
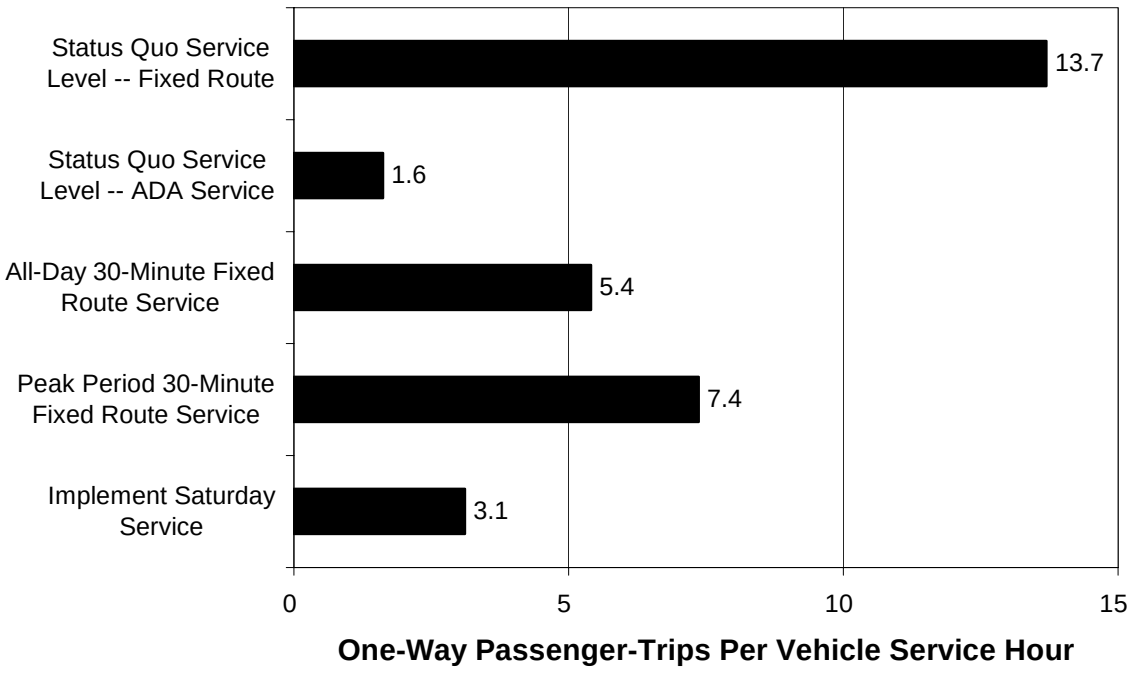


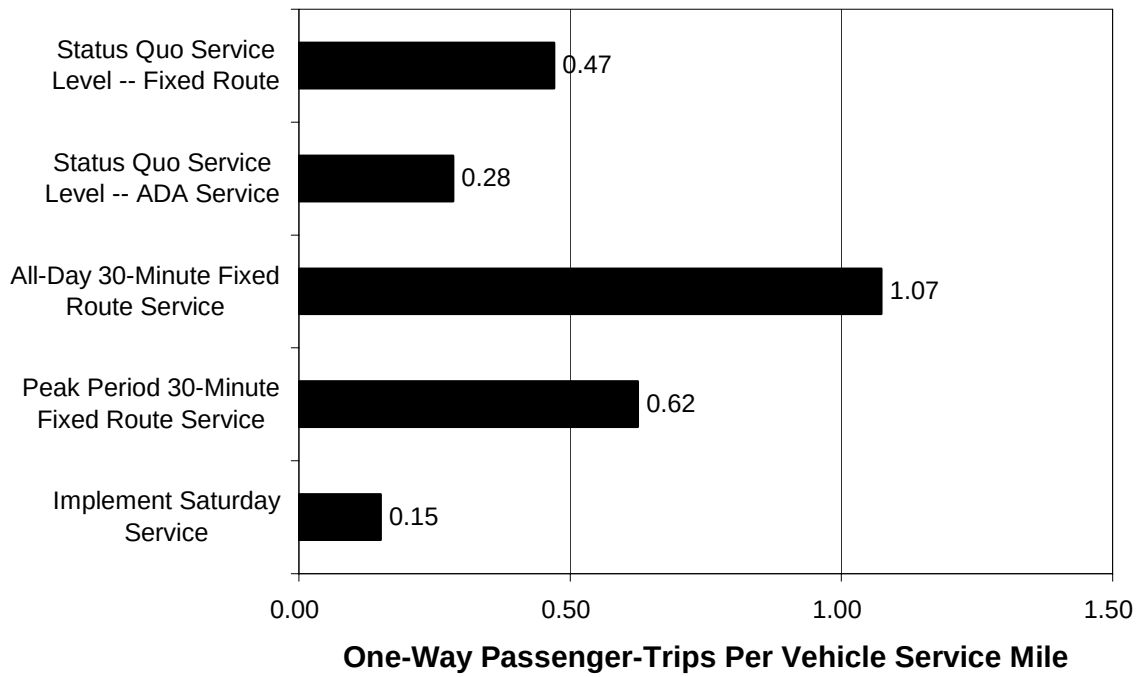
FIGURE 18: SunTran Alternatives Peformance Analysis
One-Way Passenger-Trips Per VSH



Finally, Table 11 above and Figure 19 below depict the number of one-way passenger-trips per vehicle service mile. As presented, the *Status Quo* alternative would provide approximately 0.45 one-way passenger-trips per vehicle service mile (0.47 on the fixed route and 0.28 on the ADA Service). The *Peak Period 30-Minute Fixed Route Service* option would provide 0.25 one-way passenger-trips per vehicle service mile, followed by the *All-Day 30-Minute Fixed Route Service* option (0.19) and the *Implement Saturday Service* alternative (0.15).

As presented in Tables 10 and 11, and in Figures 13 through 19, the advantages and disadvantages of each alternative differ substantially. These performance indicators should be studied carefully before deciding which, if any, of these service alternatives should be implemented in the short term or the long term. The relative effectiveness of each service needs to be weighed against their ability to achieve the goals of the transit service, and against funding limitations.

FIGURE 19: SunTran Alternatives Performance Analysis
One-Way Passenger-Trips Per VSM



Chapter 6
Capital Alternatives

The primary challenges facing transit services in the St. George area with regard to capital requirements include the need to replace the existing fleet once the economically useful lives of each bus is reached, and the need for a long-term operations/maintenance facility. A number of potential service alternatives are detailed below.

VEHICLE ALTERNATIVES

As presented in Table 4 in Chapter 3 above, SunTran currently has five wheelchair-accessible vans in its fleet. Typically, a 20 percent spare ratio is maintained by transit agencies for fleets greater than 20 vehicles, or at least one spare vehicle for each service category. Spare vehicles are provided in case of a mechanical failure, damage caused by a vehicle accident and/or to sufficiently schedule vehicles for routine maintenance. As such, the existing fleet of public transit vehicles in St. George is sufficient given current service levels.

Cutaway vans appropriate for this service, based on current ridership levels, cost on the order of $85,000 for the fixed route service and $65,000 for the ADA Service, in 2003 dollars. The fixed route vehicles are assumed to be similar to an ElDorado National Aero Elite 7-year/200,000 mile vehicle, with an approximate seating capacity of 20 ambulatory and two wheelchair positions. However, given the projected population growth in St. George, local officials could decide to pursue larger, heavier-duty transit coaches. These vehicles cost on the order of $250,000 each, not assuming a low-floor design or use of alternative fuels. These vehicles have a life expectancy of 12 years or 500,000 miles (whichever comes first), and generally have a lower life-cycle cost than lighter-duty vehicles that must be replaced more often in the long-term.

It should be noted that the FTA Section 5311 grant agreement between the Five County Association of Governments and the Utah Department of Transportation (UDOT) details the vehicle use and replacement requirements of the SunTran fleet. Failure to comply with these requirements could result in sanctions by the UDOT up to and including repossession of the vehicle(s). As such, any attempt to replace any of the vehicles prior to the end of its economic useful life would require concurrence by UDOT.

FACILITIES

Operations/Maintenance Facility

Temporary office space exists for short-term needs. A Consultant's site visit to St. George was beyond the scope of this study. Nevertheless, according to discussions with City of St. George staff, the current facilities are inadequate for the long-term needs of the transit program. Furthermore, existing St. George public works facilities are inadequate for the future needs of the program. A reasonable short-term strategy seems to be to pursue construction of an additional maintenance bay at the St. George Fleet Yard. This facility would provide near-term permanent bus storage and an operations facility, and would allow enhanced fleet maintenance. Approximately $1.3 million is an appropriate amount for this facility, according to City of St. George staff.

Chapter 7
St. George Urbanized Area Short Range Transit Plan

In light of the characteristics, transit needs, and goals of the community, as documented in previous sections, the Consultant has developed the following Short Range Transit Plan for the St. George Urbanized Area.

The Plan is intended to address the following factors:

- The requirements of the Americans with Disabilities Act.
- Challenges and opportunities with regard to the designation of the St. George urbanized area.
- The limited funding available for public transit services in the City of St. George's budget.

The various components of the Plan are presented in Table 12 and Figure 20 (both of which are located at the end of this document). Together, these Plan elements will increase the effectiveness of services in the short and long term, and ensure the sustainability of transit services to the community in the long-term.

SERVICE PLAN

This section provides a discussion of recommended fixed route and ADA services that should be provided by the City of St. George, given existing financial conditions. Total ridership and cost projections for the recommended service plan elements are presented, as well as a recommended implementation schedule.

Operate Status Quo Services

To meet anticipated budgetary constraints, public transit services in St. George will be operated under the existing service levels and service area, as detailed below.

Three-Bus Weekday Fixed Route / ADA Service

Under this Service Plan element, two fixed route buses and one ADA complementary paratransit van would operate on weekdays from roughly 6:30 A.M. to 6:15 P.M. This scenario will provide hourly headways on those corridors with the highest potential ridership. No service would be provided on Saturdays or Sundays.

Figure 20 at the end of this document presents the recommended routing for this service plan element. These three routes would provide service to the major activity centers in St. George, including the following:

Route 1 – Red Cliffs

- Dixie State College
- Harmons
- IHC Health Center
- Target
- Ramada Inn
- Promenade
- Zion Factory Stores
- Red Cliffs Mall
- Deseret Industries
- Costco
- Pineview High School
- Zion Medical Center

Route 2 – Riverside

- Dixie State College
- Library
- LDS Tabernacle
- K-Mart
- McDonald's / Greyhound Bus Station
- Dixie Center / Museum
- Department of Motor Vehicles
- Doctor's Free Clinic
- Harmons
- Dixie High School
- City Swimming Pool
- Dixie Regional Medical Center
- LDS Temple

Route 3 – Valley View

- Dixie State College
- State Workforce Offices
- Hall of Justice
- County Health Department
- City Hall
- Post Office
- Museum / Opera House
- SW Center
- Sunset Corner
- Snow Canyon High School
- Sand Hollow Aquatic Center
- Lin's Shopping Center
- Green Valley Mall
- Smith's Shopping Center
- County Offices

Route 2 would essentially provide two-way service in the southern portion of the city. Two-way service minimizes out-of-direction travel by riders, and can minimize confusion by potential riders when reviewing marketing materials. Balloon-type service maximizes service coverage, but can cause out-of-direction travel for riders on either their outgoing or their inbound return trip. Routes 1 and 3 essentially provides out-and-back service, with balloon service at the ends of the routes. Although balloon service is not as convenient as traditional two-way service, given the relatively low number of activity centers on the outer portions of these two routes, this service plan element is deemed adequate.

It should be noted that the Consultant did not perform an on-site review of these routes and their running times, which were developed by City of St. George staff. Should schedule adherence become a problem in the future, the Consultant recommends that City staff amend the routes to eliminate service to those areas with low ridership and/or with significant traffic delays. A recommended standard by which to judge on-time performance is that 95 percent of all runs should operate between 0 and 5 minutes behind the scheduled service times. This standard should not be applied until after the second full month of service so that the normal transitional "growing pains" of implementing a new service can be addressed.

Potential Future Service Enhancements

Implement Saturday Service

If future financial conditions permit, the City of St. George could consider implementing Saturday service. Under this option, the Saturday fixed route and ADA complementary paratransit service would be provided from roughly 8:30 A.M. to 5:30 P.M. using two fixed route buses and one paratransit van. This potential future Service Plan element would increase annual operating costs by approximately $44,810. Annual ridership is estimated to be approximately 3,930, equating to $1,930 in annual farebox revenues. This would result in an increase in annual public subsidy of $42,880. It should be noted that it typically takes two full years for a new service to reach full ridership potential. As such, it is prudent to assume only 65 percent of full potential ridership in the first year of a new service, and 90 percent in the second year.

Implement 30-Minute Fixed Route Service

If future conditions permit, the City of St. George could consider implementing either the all-day or peak period 30-minute frequency options presented in Chapter 5 above. This potential future Service Plan element would require procurement of two additional buses (not including spares) and would cost on the order of $174,020 for the all-day service or $69,760 for the peak period service. Ridership would total approximately 28,550 one-way passenger-trips on the all-day service or 13,050 on the peak period service, once full potential ridership is achieved. Similar to the discussion above about building ridership over time, it typically takes one full year for an enhanced service to reach full potential ridership. As such, it is prudent to assume only 90 percent of full potential ridership in the first six months of service, and 100 percent at the end of the full year.

CAPITAL PLAN

This section provides a discussion of the capital needs over the Plan period. The total cost of, and the expected revenue sources for, the capital program are presented in the financial plan below.

Vehicle Fleet Replacement

The recommended Service Plan discussed above will require a total of three fixed route minibuses (two peak plus one spare) and one ADA complementary paratransit van. In addition, two passenger automobiles will be used for staff purposes. It should be noted that transit agencies typically maintain a minimum of one spare vehicle for each service. However, given the relatively small transit program recommended herein, it is recommended that the City of St. George negotiate an agreement with one of the FTA Section 5310 providers in the St. George area that identifies the use of a bus on a short-term basis in case more than one bus is off-line during the service day. All four of the City's transit vehicles will require replacement during the Plan period, beginning in Fiscal Year 2005-06.

Given the current and anticipated ridership levels in the St. George area, it is recommended that when the existing vehicles meet their economic useful life requirements the City of St. George pursue heavy-duty buses for fixed route services. Specifically, a recommended maximum

seating capacity, based upon existing and foreseeable passenger activity, is 30 ambulatory seats plus two wheelchair positions for fixed route services. These vehicles cost on the order of $250,000 each, in 2003 dollars. In addition, the City of St. George should pursue slightly heavier-duty vehicles for the ADA complementary paratransit service (similar to the buses currently used for the fixed route and ADA Services program, although sized to accommodate 10 ambulatory seats plus two wheelchair positions). These smaller vehicles cost on the order of $65,000 each, in 2003 dollars.

The City of St. George could consider leasing the retired vehicles to area taxicab providers in order to provide accessible transportation to area citizens and visitors during those hours and days that SunTran does not operate. This scenario would be particularly useful in providing additional contracted paratransit services, particularly if capacity constraint patterns begin to emerge on the ADA Service. Additionally, SunTran staff could contract with taxicab providers to provide ADA complementary paratransit services on Saturdays, if Saturday service is ultimately implemented.

Potential Future Fleet Expansion

If additional operating funding can be secured to implement 30-minute service on one or more of the SunTran fixed routes, additional vehicles will be required. SunTran staff is currently investigating the potential for implementing more-frequent fixed route service, including the need for additional vehicles. However, operating and capital funding is not currently available.

Construct a New Operations/Maintenance Facility

As the current operations facility is inadequate for the long-term needs of the transit program, the City of St. George should construct an additional maintenance bay at the St. George Fleet Yard, along with provision of offices at this site. Approximately $1.3 million is an appropriate amount for this facility, according to City of St. George staff. This project includes the purchase of a vehicle lift system appropriate for raising the types of buses discussed above.

With recent changes in federal regulations regarding hazardous waste contamination, a thorough review of relevant environmental regulations is warranted prior to serious consideration of obtaining an alternative facility site. Prior to design and construction proceedings, it is strongly recommended that an environmental inspection and assessment be obtained by the City of St. George on any site it is seriously considering. Responsibility for cleaning up environmental contamination conveys with ownership of land. The cost of clean up is often extremely expensive; it is not uncommon for the cost of clean up to exceed the land and project costs combined. Detailed federal requirements to determine impacts to the surrounding environment can be found in FTA Circular 5620 (available from the FTA Region 8 office in Denver).

It is assumed that the City of St. George would provide temporary space at the St. George Fleet Yard for the transit program until such time that longer-term facility improvements can be completed. At a minimum, a small office for the operations manager, an office for dispatch/clerk needs, storage space for operations equipment and an unfenced parking area for the fleet of vehicles will be provided. It should be noted that the service reductions implemented in January 2003 will allow the City of St. George transit staff to better schedule periodic maintenance, since an adequate number of spare vehicles will now be provided (under the previous service plan, on

occasion all operations vehicles were scheduled and no spare vehicles were provided). This project will be funded using a combination of FTA Section 5307 and 5309 funds.

Enhance Passenger Amenities

As detailed in the financial plan below, the City of St. George should budget $10,000 in each year of the Plan period for bus stop improvements, shelters, benches and other passenger amenities.

Adequate shelters and benches are particularly important in attracting ridership among the non-transit-dependent population – those that have a car available as an alternative to the bus for their trip. Preference should be given to locations with a high proportion of elderly or disabled passengers and areas with a high number of daily boardings. Lighting and safety issues are equally important at bus stops, particularly along major highways.

The cost of modern glass and steel shelters averages approximately $8,000 including installation, and appropriate transit benches range from $350 for a recycled plastic bench to $550 for a vinyl-clad "stretched" steel bench not including installation. Concrete benches also represent a viable alternative, and their cost depends largely on the size and type selected. Maintenance and repair of vandalism to bus benches and shelters is a very minor cost since they are designed to be very resistant to vandalism. As a result, cleaning and maintenance costs are minor.

City of St. George staff should work closely with developers to plan passenger amenities and other transit-friendly features during the development phase of a project. In addition, staff should work with existing businesses and housing developments to provide passenger amenities in areas of existing or anticipated high transit passenger activity. A good "rule of thumb" is to plan benches at bus stops with 5 or more passenger boardings per day and shelters at bus stops with 15 or more passenger boardings per day. Consideration could also be given to bus stops that serve activity centers targeted toward the senior or disabled community. These persons often have difficulty standing for long periods of time, especially in harsh weather conditions.

Enhance Bicycle/Pedestrian Facilities

At one end of their trip or the other, virtually all transit passengers also travel on foot or on bicycle as part of their transit trip. A key element of a successful transit system, therefore, is a convenient system of sidewalks and bikeways serving the transit stops. City of St. George staff should review construction plans and scheduling priorities for pedestrian and bicycle improvements to best coordinate with transit passengers' needs. No specific public funding is planned at this time for transit-related bicycle and pedestrian facilities, as these projects will be funded by developers as part of a development agreement.

INSTITUTIONAL AND MANAGEMENT PLAN

City of St. George-Provided Service

Under this Plan, the City of St. George will be directly responsible for the provision of public transit services in the St. George area. Specifically, the following is recommended:

- The City of St. George will provide all management and operations of public transit services. Under this arrangement, the City will recruit and train all staff necessary, utilizing its existing human resource policies and procedures. The City should work with the Utah Department of Transportation and Utah's *Urban, Rural and Specialized Transportation Association* to determine if training resources are currently available to bolster the City's training program.

- Marketing will be conducted by City of St. George staff, utilizing the December 2002 Marketing Plan for guidance. Although a marketing budget was not identified in the Marketing Plan, the City should plan on approximately 1.0 percent of its annual operating budget for marketing purposes.

- City of St. George staff will provide major transit stop maintenance functions and routine stop maintenance.

Need for Enhanced Record-Keeping

Recipients of FTA Section 5307 funds must submit annual National Transit Database (NTD) reports, although recipients that operate nine or fewer vehicles can obtain a waiver from the FTA for these reporting requirements. NTD reports require random samples of passenger boarding and alighting counts, safety records and a detailed accounting of hour, mile and financial data. In order to prepare for this reporting requirement, the City of St. George should become familiar with FTA Circulars 2710 and 9030, both of which detail methods to ensure compliance. As noted above, FTA Circulars can be obtained from the FTA Region 8 office in Denver. Although the City of St. George could be exempted from NTD reporting, the data gathered can provide a valuable management analysis tool, and it is therefore recommended that the City begin collecting and evaluating this data as soon as practicable.

Potential Future Institutional Plan Element – Provision of Regional Transit Services

SunTran staff has received inquiries from adjacent communities regarding potential expansion of the SunTran service area. As determining the optimal institutional arrangement is outside the scope of this current study, it is recommended that SunTran staff continue corresponding with other Utah transit providers to determine potential management scenarios.

One potential scenario is to follow the lead of Logan is developing an institutional framework for regional transit services. In short, the operation of transit services in the Cache Valley area is provided by the Logan Transit District (LTD), while oversight, local subsidy funding, and policy decisions for transit services outside of Logan city limits are provided by the Cache Valley Transit District (CVTD). Actual day-to-day management, marketing and operation of the CVTD service is contracted to the LTD. While there are other groups that might be capable of operating the service, contracting with the LTD allows CVTD service costs to be minimized (by

sharing facilities and staff with the LTD), and also minimizes the level and associated cost of administration required to oversee transit services. Furthermore, this aids coordination between CVTD and LTD services, which are important in developing a convenient regional transit system.

The board of directors for the CVTD consists of the appointees from each of the nine jurisdictions within the statutorily-formed district. The responsibilities of the board are to develop and monitor the contract for transit service, receive and respond to passenger's complaints regarding the service, and make modifications to the service plan (routes, stop locations, and schedule) as needed. The advantage of this institutional plan is that the smaller communities within the district retain complete control, through contract, over CVTD services. This arrangement also makes accounting of CVTD income and expenses more straightforward. This institutional arrangement is similar to the one used by Park City and the recently-formed Kimball Area Special Services District.

FINANCIAL PLAN

Provide Transit Services Through Existing Local, State, and Federal Funding Programs

It is recommended that existing City of St. George funding programs be relied upon over the five-year Plan period to fund ongoing operating costs and capital improvements. A year-by-year Transit Plan is presented in Table 12 below. The following methodology was utilized in developing this Transit Plan:

- First, the Operating Plan was developed, assuming the *Status Quo Service Level*. In total, ridership over the five-year period is anticipated to be 420,300 one-way passenger-trips. Annual increases are based upon the projected annual population growth rate, as stated in the May 2000 State of Utah Long Term Economic and Demographic Projections report.[4]

- Next, forecasts of annual operating costs were developed. These cost forecasts were estimated assuming a 4.9 percent annual inflation rate above current operating costs in the absence of any change in services. The operating costs over the five-year period will total approximately $2,071,300. Operating revenues will be derived from the following sources:

    - FTA Section 5307 – approximately $207,000 in capital maintenance funds and $932,000 in operating funds. FTA Section 5307 funds account for approximately 55.0 percent of total operating funds.

    - St. George 1/4 Cent Roadway Tax – approximately $576,600, or 27.8 percent of total operating funding.

    - Farebox revenues – approximately $205,700 over the five-year plan period. This operating and administrative subsidy equates to 9.9 percent of total operating funds.

[4] State of Utah, Governor's Office of Planning and Budget, Demographic and Economic Analysis Section.

TABLE 12: St. George Short Range Transit Plan

All Figures in Thousands

Revised December 10, 2003

Project Description	Projected FY03-04	Projected FY04-05	Projected FY05-06	Projected FY06-07	Projected FY07-08	5-Year Total
OPERATING PLAN (Status Quo Service Level)						
Ridership	77.5	80.6	84.0	87.4	90.9	**420.3**
Operating Costs	***$375.6***	***$394.0***	***$413.3***	***$433.6***	***$454.8***	***$2,071.3***
Operating Revenues						
Farebox Revenues	$38.0	$39.5	$41.1	$42.7	$44.4	**$205.7**
Advertising	$30.0	$30.0	$30.0	$30.0	$30.0	**$150.0**
St. George 1/4 Cent Sales Tax	$101.0	$108.1	$114.9	$122.6	$130.0	**$576.6**
FTA Section 5307 Capital Maintenance	$37.6	$39.4	$41.3	$43.3	$45.4	**$207.0**
FTA Section 5307 Operating Funds	$169.0	$177.0	$186.0	$195.0	$205.0	**$932.0**
Total	***$375.6***	***$394.0***	***$413.3***	***$433.6***	***$454.8***	***$2,071.3***
CAPITAL PLAN (Status Quo Service Level)						
Capital Projects Costs						
Fixed Route Buses [1]						
Number of Vehicles	*0*	*0*	*2*	*1*	*0*	***3***
Total Cost	$0.0	$0.0	$546.4	$281.4	$0.0	**$827.8**
ADA Service Buses [2]						
Number of Vehicles	*0*	*0*	*1*	*1*	*0*	***2***
Total Cost	$0.0	$0.0	$71.0	$73.2	$0.0	**$144.2**
Operating/Maintenance Facility	$0.0	$800.0	$500.0	$0.0	$0.0	**$1,300.0**
Bus Stop Improvements [3]	$10.0	$10.3	$10.6	$10.9	$11.2	**$53.0**
Total	***$10.0***	***$810.3***	***$1,128.0***	***$365.5***	***$11.2***	**$2,325.0**
Capital Revenues						
St. George 1/4 Cent Sales Tax	$2.0	$15.3	$238.0	$73.1	$2.2	**$330.6**
Land Donation for O/M Facility	$0.0	$150.0	$0.0	$0.0	$0.0	**$150.0**
FTA Section 5307 Capital Funds [4]	$8.0	$245.0	$490.0	$292.4	$9.0	**$1,044.4**
FTA Section 5309 Capital Funds	$0.0	$400.0	$400.0	$0.0	$0.0	**$800.0**
Total	***$10.0***	***$810.3***	***$1,128.0***	***$365.5***	***$11.2***	***$2,325.0***
FUNDING SOURCE SUMMARY						
St. George 1/4 Cent Sales Tax	$103.0	$123.4	$352.9	$195.7	$132.2	**$907.2**
FTA Section 5307 Annual Obligation	$214.6	$461.4	$717.3	$530.7	$259.4	**$2,183.4**
FTA Section 5307 Annual Apportionment [5]	$443.8	$465.6	$488.4	$512.3	$537.4	**$2,447.5**
Cumulative Remaining FTA 5307	***$229.2***	***$233.4***	***$4.5***	***($13.9)***	***$264.2***	

Note 1: This analysis assumes that 30-passenger medium heavy-duty buses will be used for fixed route services, and the cost per unit is $250,000 in 2003 dollars (3.0 percent annual inflation assumed).

Note 2: This analysis assumes that 10-passenger cutaway vans will be used for ADA Service, and the cost per unit is $65,000 in 2003 dollars (3.0 percent annual inflation assumed).

Note 3: Bus stop improvements include bus stop benches, shelters, site improvements and bus stop signs (3.0 percent annual inflation assumed).

Note 4: FY07-08 FTA Section 5307 Funds will be obligated in FY06-07 to complete the multiyear Operations/Maintenance facility and bus procurement projects, although reimbursement will not take place until FY07-08.

Note 5: The FY02-03 apportionment of FTA Section 5307 funds is estimated by UDOT. Subsequent annual apportionments are estimated assuming 3.0 percent annual inflation.

Source: LSC Transportation Consultants, Inc.

- Advertising – approximately $150,000 over the plan period, equating to 7.2 percent of total operating funds. It should be noted that this is a conservative estimate, since this funding source has been budgeted at $75,000 annually in recent years.

- The Capital Plan calls for the replacement of the entire fleet of vehicles, construction of a new operating/maintenance facility and annual bus stop improvements. In total, the five-year needs of SunTran total $2,325,000, assuming 3.0 percent annual inflation for capital projects. Capital revenues will be derived from the following sources:

  - St. George 1/4 Cent Roadway Tax – approximately $330,600, or 14.2 percent of total capital funding.

  - Land Donation for Operations/Maintenance Facility – land worth approximately $150,000 will be used as a portion of the local match required for this project.

  - FTA Section 5307 – approximately $1,044,400 in capital funds, or 44.9 percent of total capital funds.

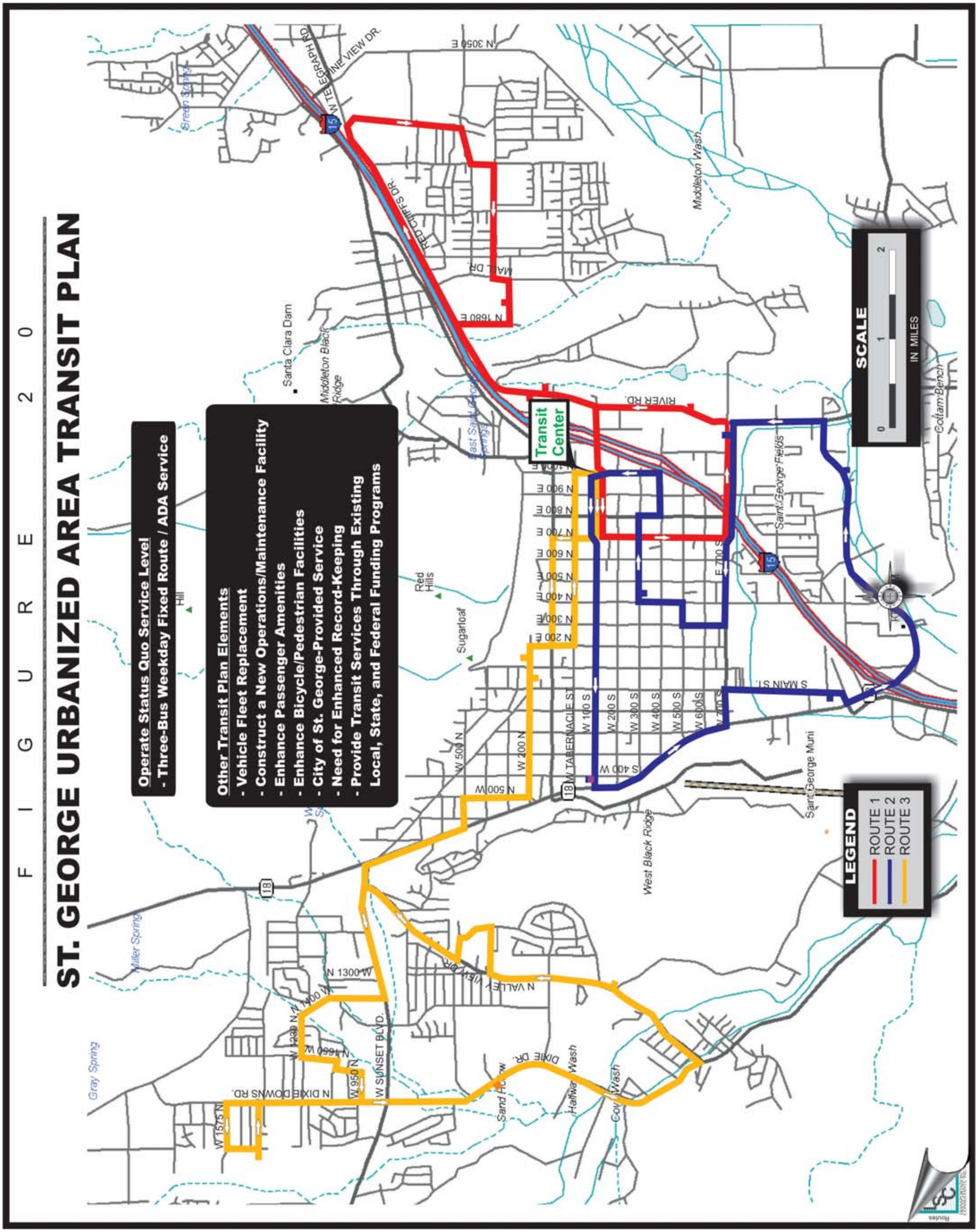
  - FTA Section 5309 – approximately $800,000 in discretionary FTA Section 5309 funds, or 34.4 percent of total capital funds.

- Finally, a funding source summary is presented in Table 12. As depicted, the St. George 1/4 Cent Sales Tax will provide approximately $907,200 to the SunTran program over the five-year Plan period, or 20.6 percent of total systemwide funding. The following should be noted regarding FTA Section 5307 funds:

  - Due to differences in the City of St. George's fiscal year (July 1 through June 30) and the FTA's fiscal year (October 1 through September 30), the City of St. George will need to obligate FTA Section 5307 funds for the Operations/Maintenance Facility and bus procurement projects in Fiscal Years 2004-05 through 2006-07, although reimbursement will not be completed until Fiscal Year 2007-08.

  - Approximately $264,200 in FTA Section 5307 funds will remain unexpended at the end of the five-year Plan period. This suggests that the *Implement 30-Minute Fixed Route Service* and *Implement Saturday Service* potential future Service Plan element discussed above could be implemented if additional local funds can be secured.

This analysis indicates that transit service can continue to be provided in St. George. A summary of the Transit Plan is presented graphically in Figure 20 below. These services can be funded and capitalized using the current funds that are expected to be available.


F I G U R E 2 0
ST. GEORGE URBANIZED AREA TRANSIT PLAN
Operate Status Quo Service Level
- Three-Bus Weekday Fixed Route / ADA Service
Other Transit Plan Elements
- Vehicle Fleet Replacement
- Construct a New Operations/Maintenance Facility
- Enhance Passenger Amenities
- Enhance Bicycle/Pedestrian Facilities
- City of St. George-Provided Service
- Need for Enhanced Record-Keeping
- Provide Transit Services Through Existing
Local, State, and Federal Funding Programs
Transit Center
LEGEND
ROUTE 1
ROUTE 2
ROUTE 3
SCALE
IN MILES
Santa Clara Dam
Middleton Black Ridge
Middleton Wash
West Black Ridge
Saint George Muni
Saint George Fields
Sugarloaf
Red Hills
Gray Spring
Miller Spring
Green Spring
Sand Hollow
Halfway Wash
Cottonwood Wash
Cottam Bench
RED CLIFFS DR.
MALL DR
N 1680 E
N 3050 E
W TELEGRAPH RD.
RIVER RD.
S MAIN ST.
N VALLEY VIEW DR.
DIXIE DR.
W SUNSET BLVD.
N DIXIE DOWNS RD.
N 1300 W
N 500 W
W 500 N
W 200 N
W TABERNACLE ST
W 100 S
W 200 S
W 300 S
W 400 S
W 500 S
W 600 S
W 700 S
S 400 W
E 700 S
N 200 E
N 300 E
N 400 E
N 500 E
N 600 E
N 700 E
N 800 E
N 900 E
N 1000 E
W 950 N
W 1575 N
N 1660 W
18
15

IMPLEMENTATION PLAN

This schedule provides a timeline of the actions necessary to successfully implement the improvements recommended in this plan.

Fiscal Year 2003-04

- Assuming environmental clearance is obtained, the City of St. George will begin design and construction of the Operations/Maintenance Facility using FTA Section 5307, FTA Section 5309 and local funds.
- Implement bus stop improvements.
- Monitor marketing program.
- Monitor system performance to ensure system goals are being achieved.

Fiscal Year 2004-05

- Continue to implement bus stop improvements.
- Continue to monitor marketing program.
- Continue to monitor system performance to ensure system goals are being achieved.
- Begin construction of the new Operations/Maintenance Facility.

Fiscal Year 2005-06

- Replace two existing fixed route and one ADA Service buses, using FTA Section 5307 and local funds.
- Continue to implement bus stop improvements.
- Continue to monitor marketing program.
- Continue to monitor system performance to ensure system goals are being achieved.
- Complete construction of the new Operations/Maintenance Facility.

Fiscal Year 2006-07

- Replace one existing fixed route bus and one ADA Service bus, using FTA Section 5307 and local funds.
- Continue to implement bus stop improvements.
- Continue to monitor marketing program.

- Continue to monitor system performance to ensure system goals are being achieved.

Fiscal Year 2007-08

- Replace the two existing ADA complementary paratransit vans, using FTA Section 5307 funds.
- Continue to implement bus stop improvements.
- Continue to monitor marketing program.
- Continue to monitor system performance to ensure system goals are being achieved.
- Update the transit plan, using FTA Section 5303 funds administered by the Dixie Metropolitan Planning Organization.