

St. George to Springdale Public Transit Feasibility Study

Final Report

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Prepared for
The Five County Association of Governments
And
Dixie Metropolitan Planning Organization



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Table of Contents

Chapter 1 – Introduction and Executive Summary

Study Process.....	1-1
Key Issues	1-3
The Plan – Summary	1-3

Chapter 2 – Existing Conditions

Introduction	2-1
Existing Transportation Service Providers	2-3

Chapter 3 – Market Analysis

Introduction	3-1
Outreach Activities and Community Input.....	3-1
Market Analysis- Demographics and Land Uses	3-18

Chapter 4 – Unmet Needs and Potential Transit Ridership

Introduction	4-1
Review of Recent Transit Studies.....	4-1
Corridor Analysis	4-4
Potential Partners	4-13
Sponsorships and Partnerships	4-14
Regional Planning Process- One Network of Services	4-17

Chapter 5 – Development of Organizational Service Alternatives

Introduction	5-1
Organizational and Service Alternatives	5-2

Chapter 6 – Implementation Plan

Introduction	6-1
Service Plan.....	6-1
Organizational and Administrative Approach	6-9
Financial Plan	6-10
Cost Benefit Analysis of Transit	6-22
Implementation Activities	6-26

Appendix A – Trip Generators

Chapter 1

Introduction and Executive Summary

The St. George to Springdale Transit Feasibility Study and subsequent Implementation Plan were developed to determine the feasibility of transit and provide a transit implementation blueprint for decision makers to rely on when considering service implementation to connect the corridor.

The feasibility study clearly demonstrated that there is a need for this service, concurring with previous studies that examined segments of the corridor, but did not look at the entire corridor. This study connects both end of the corridor and can serve to provide mobility to a wide range of residents and visitors for a wide variety of purposes.

The reality certainly supports the feasibility findings in that transit is very successful both in St. George which sees excellent ridership and in Springdale and Zion National Park where transit need extends beyond the already robust transit system in the area.

STUDY PROCESS

This plan was developed over the past eight months and included a wide range of efforts including surveys, two rounds of public meetings, business focus groups, field observations, interviews with stakeholders and presentations to committees. The process included the methodical development of a series of technical memoranda (now chapters) that provide extensive detail into the study process. The plan includes the following chapters:

- Chapter 2: Existing Conditions
- Chapter 3: Market Analysis
- Chapter 4: Unmet Needs and Potential Transit Demand
- Chapter 5: Development of Organizational and Service Alternatives
- Chapter 6: Implementation Plan

KEY ISSUES

Central to the implementation planning are a number of key themes.

1. **Expanding local population** – Population continues to grow at a rapid pace, particularly in Washington City and Hurricane.
2. **Visitor numbers continue to increase** – The popularity of Zion National Park is demonstrated by its explosive growth over the past three years. 2016 will see record numbers of visitors.

3. **Flexible plan** – A flexible plan is called for in this environment as there are a number of viable administrative and financial options. Therefore, as part of the implementation plan, the other viable options will be identified as a “back-up plan” in the event the first option is not viable.
4. **Support from all jurisdictions** – Washington County, St. George, Washington City, Springdale, Hurricane, La Verkin, Rockville and Virgin are included in the service. Each jurisdiction should support the service. Jurisdictions that do not engage in the system will not receive service.
5. **Bus stops, bicycles and pedestrians** – All bus riders are either pedestrians or bicycle riders and efforts should be made to ensure accessibility to bus stops. Bus stops should conform to standards that will be discussed in the plan. Buses will have bicycle racks.
6. **Ensure seamless connectivity and integration of service modes** – Connectivity between the new service and the systems at each end are essential. Passengers do not care about institutional boundaries. Regardless of who operates service, providers should act as one coordinated network.
7. **Building ridership** – As with any business it may take a few years to build ridership. Marketing efforts, quality service, good looking buses and a proper fare structure will help build ridership.
8. **Visitor ridership should pay for itself** – The potential for visitor ridership is excellent. Visitors come from all over the world and many of them expect to have good public transportation and are willing to pay for the service. Fares and promotional efforts with hotels will be designed to maximize revenue for transit.
9. **Sponsorships and partnerships** – There is no question that businesses benefit from transit. Transit takes customers and/or employees to their business and the distances that have to be traveled for both employees and customers make transit an attractive option. Advertising on transit is a service that is more than 100 years old. There are a variety of public/private partnerships that can be developed.
10. **Marketing** – Marketing efforts need to encompass the wide range of potential riders and supporting businesses. There are many people, businesses, medical facilities, other facilities and Dixie State University that will benefit from the service.



2016 will see record numbers of visitors in Springdale

THE PLAN – SUMMARY

The plan calls for a modest bus system to meet the potential ridership between St. George and Springdale, Utah. There are a wide range of needs and markets for service and ridership estimates break out ridership between local residents (most of the year between 80 – 90% of ridership) and visitors (during the peak season usage is evenly split).

Markets Served

There are a large number of markets to be served by this transit service. Local residents will be able to use the service for commuting, shopping, school and many other needs. Visitors will be able to take the bus to Springdale and leave their cars at the hotel. Local businesses also gain from this service by bringing commuters to their employment site and bringing customers to their door. These markets include the following by sub corridor:

1. **St. George to Hurricane/La Verkin** – This sub-corridor focuses on potential ridership for commuters between the two areas as well as a variety of needs for local residents in Washington City. These communities are currently interconnected but lack transit connectivity. This sub-corridor also accounts for visitors going to Springdale.
2. **Washington City** - Considering the ridership stated by SunTran, there is potential for a local component of this service that would meet the needs of local residents to local destinations for work, school, shopping, and personal business.
3. **Hurricane and La Verkin** – As with Washington, there is potential for a local component of this service that would meet the needs of local residents to local destinations for work, school, shopping, and personal business.
4. **Hurricane/La Verkin to Springdale** – This sub-corridor will address local needs along this corridor including commuter's needs to and from Springdale as well as the visitor population which has been increasing in unprecedented numbers. Businesses in Springdale need this service for their employees.



There are a large number of markets to be served by this transit service

Service Description

A fixed route service will operate between St. George Transfer Center and the northern edge of Springdale, a distance of 40 miles, without additional routing in St. George. The final routing within St. George will address critical destinations such as Dixie Regional Medical Center, and major destinations such as clusters of shopping and/or hotels, convention center and destinations based on sponsorships and partnerships. Basic routing will be along St. George Boulevard, Red Cliff Drive, and Telegraph Road through Washington City and SR 9 through Hurricane to Springdale.

There will be two types of service proposed:

1. **Local service** – While this service can be used by commuters to all destinations and visitors going to Springdale, it should also be of benefit to local residents in Hurricane, Washington City and La Verkin, who will have access to local bus service with stops every $\frac{1}{4}$ mile, or more as appropriate. This service would operate throughout the day. Two buses will operate all year on this route.
2. **Express service** – This is a limited stop service designed for commuters along the route and those wanting to get to Springdale or St. George for a variety of purposes. Summer will require two buses and off peak season will have one bus.

Financial Issues

The service, modestly funded at \$1.9 million annually for operations, will be paid through a local option or sales tax if approved by voters. The backup plan would be to use as many federal funds as possible, have local governments provide local support, and have system sponsors. Using a combination of sales tax, sponsors, federal funds and fares will result in no additional funds from local governments.

Capital funding will initially require \$2.5 million for five buses, 80% of which should be paid by the federal government and the rest would be paid through the sales tax.

Chapter 2

Existing Conditions

INTRODUCTION

Chapter 2 reviews the existing conditions of transit and other public and private transportation services in the corridor. This is the first of three chapters that includes the background work necessary to make informed decisions regarding the design of a transit service between St. George and Springdale.

Taken together, these three chapters will form the analysis needed to determine the feasibility and scope of a St. George to Springdale transit service.

EXISTING TRANSPORTATION SERVICE PROVIDERS

There are several public and private transportation providers currently providing service in the study area that are open to at least some segments of the public. These services include:

- SunTran, the City of St. George's public transit system
- Zion Shuttle System, operated in Springdale and Zion National Park
- Senior Dial-A-Ride services in St. George and Hurricane
- Shuttle and intercity bus services
- Taxi services
- Commercial air service

Each has been contacted and invited to participate in the planning process. These existing services are described in this section of the report.

SunTran

SunTran is the public transit service provided by and for the Cities of St. George and Ivins. SunTran operates six fixed routes complemented by paratransit service for those unable to ride fixed route due to a disability.



SunTran's fixed routes (Figure 2-1) operate Monday through Saturday, 5:40 a.m. to 8:40 p.m., excluding major holidays.

Fares for the fixed route service as follows:

- Single cash fare: \$1.00 general public / \$0.50 discounted fare for seniors (65+), people with disabilities, and Medicare cardholders
- One-day pass \$2.50, good for unlimited rides on a single day
- 10-ride card: \$10.00 general public/ \$5.00 for those eligible for discounted fares
- Monthly pass: \$30, good for unlimited rides during the calendar month
- Dixie State students ride free with university ID.

Fares between connecting routes are free. Transfer points include:

- Transit Center, 957 East 100 South, where Routes 1, 2, and 3 connect; every 40 minutes beginning at 6:00 a.m. The last trips of the day for all three routes depart the Transit Center at 8:00 p.m.
- Sunset Corner, 1091 North Bluff, where Routes 3 and 4 connect, and Routes 5 and 6 alternate; every 40 minutes beginning at 5:40 a.m. Headways for Routes 5 and 6 are 80 minutes. The last trips of the day depart from Sunset Corner as follows: 7:00 p.m. for Route 5, at 7:40 p.m. for Routes 4 and 6, and 8:20 p.m. for Route 3.

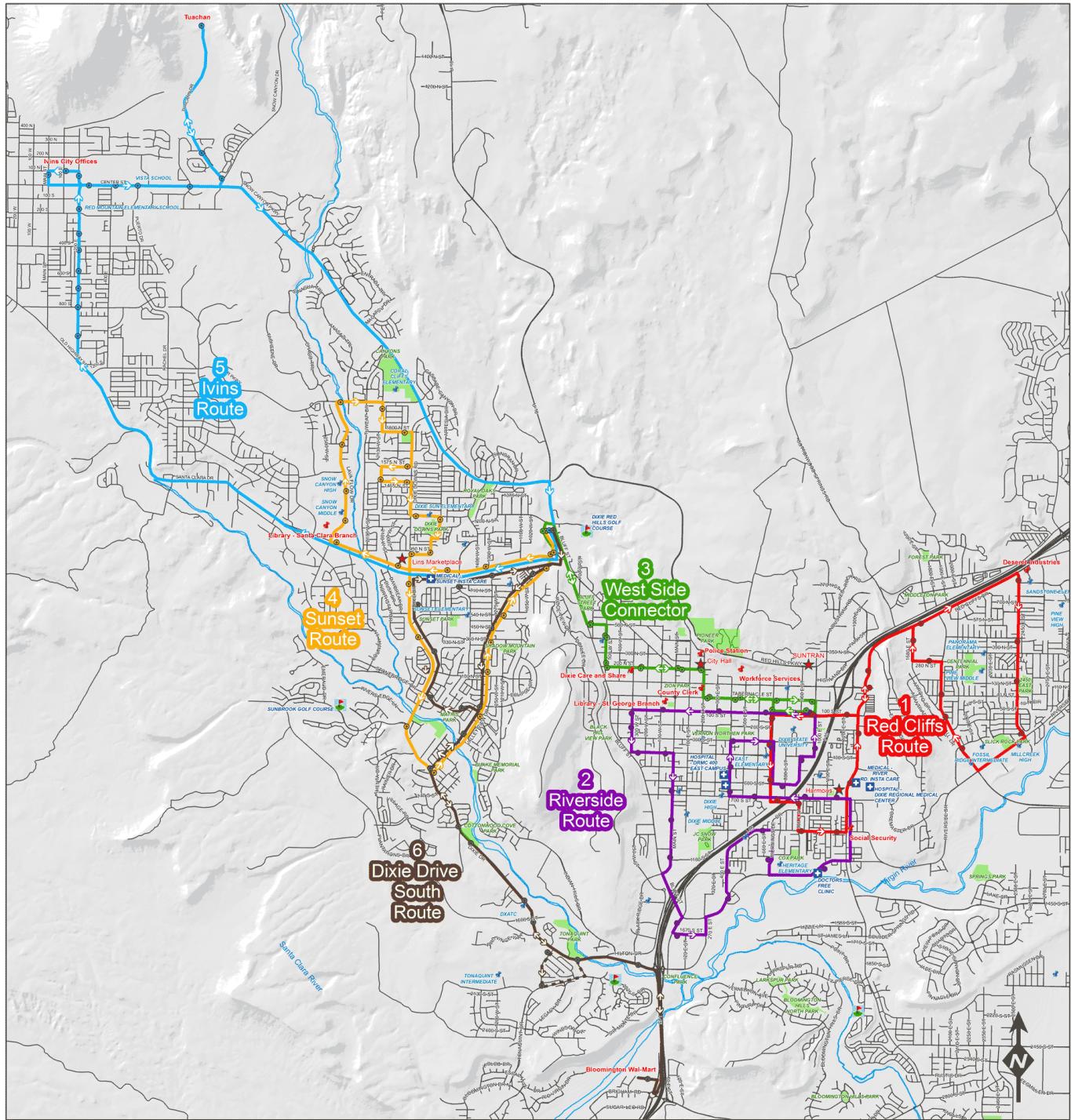
Five buses are operated in peak fixed route service. SunTran's vehicle fleet is comprised of seven Gillig buses (low-floor, heavy-duty, diesel, ADA-accessible transit coaches), and for the paratransit service, two accessible vans and two accessible cutaway buses.

SunTran's paratransit service operates within the same days and hours as fixed route service, serving origins and destinations within $\frac{3}{4}$ mile of fixed routes. This service is limited to individuals who, because of a disability, are unable to use fixed routes, and involves an eligibility certification process. Rides must be scheduled one day in advance by calling the SunTran office. Fares for paratransit service are \$2.00 each way, or \$18.00 for a 10-trip pass.

SunTran's funding sources include Federal Section 5307 small urbanized transit funding, City of St George, passenger fares, sale of advertising space, agreements to provide transportation, and the City of Ivins.

FY 2015 operating statistics are provided in Table 2-1. SunTran posts unusually high ridership and productivity numbers for a service of its size.

Figure 2-1: SunTran Fixed Routes



Source: City of St. George website, as accessed 4/29/16

(<https://www.sgcity.org/cityforms/publicworks/transit/suntran/maps/2015-Suntran-Route-Map--All.png>)

Table 2-1: FY 2015 Operating Statistics for SunTran

	Fixed Route	Paratransit
Passenger Trips	453,824	10,577
Vehicle Revenue Miles	300,381	55,945
Vehicle Revenue Hours	22,659	6,332
Trips per Hour	20.03	1.67

Source: SunTran

Zion Shuttle System

Two seasonal shuttles are operated in Zion National Park and the town of Springdale. McDonald Transit Associates, Inc. operates these two routes under contract to the National Park Service (Figure 2-2).

- Springdale (Town) Shuttle operates along SR 9 between Majestic View and the Zion Canyon Giant Screen Theater, stopping at 4 fixed stops and 3 flag stops in between. The Springdale Shuttle stops at park and ride locations and hotels as well as other locations in town.
- Zion Canyon (Park) Shuttle operates entirely within the park, starting at the Zion Canyon Visitor Center and making stops along a linear route through the upper canyon.

Transfers between the two shuttles are made by way of a footprint connecting the Visitor Center and Giant Screen Theater (a five minute walk).

The Zion Shuttle system operates daily from March 12 through the end of October and weekends in November. Schedules peak during the summer months, when both shuttles operate every day from 6:30 a.m. to 11:00 p.m., with frequencies peaking every six minutes during the middle of the day in summer. Both shuttles are fare-free to passengers. To ride the Canyon Park Shuttle, park visitors first pay an entrance fee at the Visitor Center.

The Zion Shuttle system is operated using a fleet of El Dorado medium duty buses with trailers. The buses are fully accessible. Table 2-2 summarizes the number of vehicles operated in peak

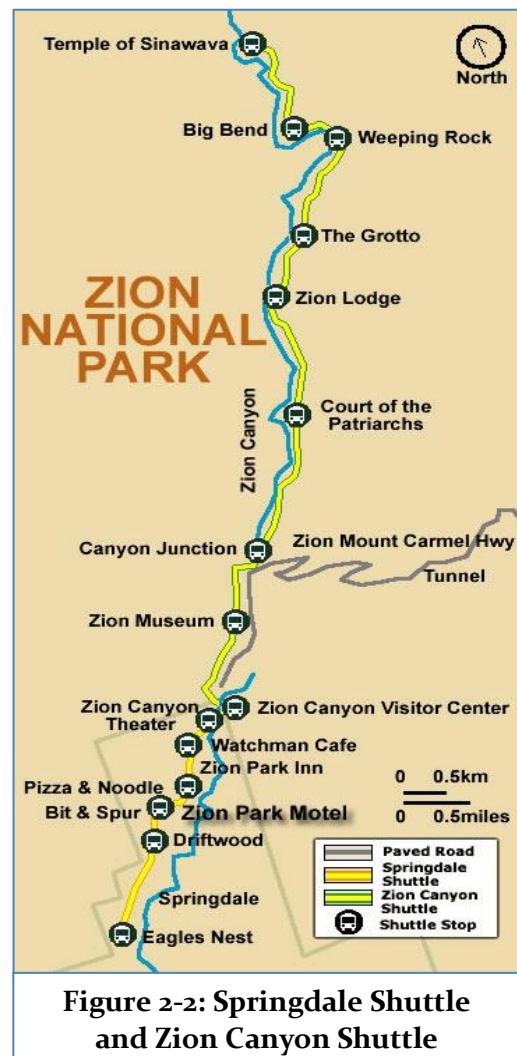


Figure 2-2: Springdale Shuttle and Zion Canyon Shuttle

service on each of the two routes, varying by time of year. The Town Shuttle operates three buses in peak service from mid-March to late September, and two buses during the remainder of the regular fall season. The Canyon Shuttle peak operations range from 13 to 18 vehicles in service. In 2015, at the request of the Park and due to overcrowding, the Shuttle operated on a smaller scale during the first week in November.

Table 2-2: Zion Fleet Operated in Peak Service

			Town Shuttle	Canyon Shuttle		Total System	
Season	Span of Season		Mon-Sun	Mon-Thu	Fri-Sun	Mon-Thu	Fri-Sun
Spring	Mid-March through Mid-May		3	13	15	16	18
Summer	Mid-May through late September		3	17	18	20	21
Fall	Late September through last weekend in October		2	13	15	15	17
November*	End of October through November 6, 2015*		1	9	9	10	10

*Park requested restart due to overcrowding

FY 2015 operating statistics are provided in Table 2-3. Growth has mirrored growth in park usage which has greatly expanded. Ridership numbers are extremely high and demonstrate the potential for expanding service beyond Springdale.

Table 2-3: FY 2015 Operating Statistics for the Zion Shuttle System

Month	Passenger Trips			Vehicle Revenue Miles			Vehicle Revenue Hours			Trips Per Hour		
	Town	Canyon	Total	Town	Canyon	Total	Town	Canyon	Total	Town	Canyon	Total
Mar	56,339	266,622	322,961	7,387	31,640	39,027	664	2,712	3,376	84.85	98.31	95.66
Apr	103,344	510,779	614,123	13,902	58,606	72,508	1,242	5,030	6,272	83.21	101.55	97.92
May	99,248	579,611	678,859	14,400	67,755	82,155	1,294	5,848	7,142	76.70	99.11	95.05
June	115,159	666,887	782,046	13,343	73,484	86,827	1,198	6,358	7,556	96.13	104.89	103.50
July	129,859	735,131	864,990	14,604	77,603	92,207	1,313	6,705	8,018	98.90	109.64	107.88
Aug	99,507	649,411	748,918	13,876	76,596	90,472	1,245	6,619	7,864	79.93	98.11	95.23
Sep	95,277	567,641	662,918	13,395	71,881	85,276	1,199	6,201	7,400	79.46	91.54	89.58
Oct	46,106	412,424	458,530	7,247	48,431	55,678	666	4,160	4,826	69.23	99.14	95.01
Nov	5,137	141,351	146,488	1,830	18,766	20,596	196	1,739	1,935	26.21	81.28	75.70
Total	749,976	4,529,857	5,279,833	99,984	524,762	624,746	9,017	45,372	54,389	83.17	99.84	97.08

Figure 2-3: Springdale Town Shuttle Route



Source: National Park Service website, as accessed 4/29/16

(<https://www.nps.gov/zion/planyourvisit/upload/Springdale%20Shuttle%20Parking%20Map.pdf>)

This shuttle system has been in operation since 2000, when, to eliminate traffic congestion, the National Park Service restricted access by private vehicles in the upper Zion Canyon. As the number of visitors to the park continues to grow, so does transit ridership.

Senior Dial-A-Ride Services in St. George and Hurricane

The Washington County Council on Aging provides dial-a-ride transportation services for seniors, age 60 years and older, in St. George, Hurricane, and Enterprise.



- In St. George, demand response transportation provides access to medical appointments and shopping within the St. George area, including Ivins, Santa Clara, Sun River, Bloomington, Bloomington Hills and Washington City. Daily trips are made to the St. George Senior Center, 245 N 200 W, for lunch. The St. George dial-a-ride service operates Tuesday through Friday from 9:30 a.m. to 3:30 p.m.
- In Hurricane, demand response transportation provides access to medical appointments and shopping within the Hurricane area with daily lunch trips to the Hurricane Senior Center, 95 North 300. Hours of operation in Hurricane are Monday through Thursday from 10:00 a.m. to 2:00 p.m. Weekly trips are made from Hurricane to St. George for shopping and medical appointments on Wednesdays from 12:30 p.m. to 4:00 p.m.

There is no fare for seniors, but for both services, there is a suggested donation of \$3.00 one-way, \$5.00 round-trip and \$1.00 for lunch rides in St. George. Rides must be scheduled in advance by calling the dispatcher at the local senior center.

Other Shuttle and Intercity Bus Services

Several intercity and shuttle services stop at one or more cities in the study area, including the St. George Shuttle, Salt Lake Express, and Greyhound.

St. George Shuttle

St. George Shuttle is a locally-based private transportation operator that provides several services in the study area:

- **Springdale Shuttle between St George and Springdale –** St George Shuttle operates two round trips per day between St. George and Springdale, stopping at the following locations along its Springdale Route:
 - St George - St. George Shuttle Office: 1275 E Red Hills Pkwy
 - Hurricane - Chevron: 687 W State St, Hurricane
 - La Verkin - Maverik: 460 N State St, La Verkin
 - Virgin - Fort Zion: 1000 UT-9, Virgin
 - Springdale: 2401 Zion – Mount Carmel Hwy, Springdale



Trips are timed so that riders can be in Springdale between 8 a.m. and 4 p.m. or St George between 9 a.m. and 3 p.m.

- The morning trip departs St George at 7:00 a.m., arrives in Springdale at 8:00 a.m., and makes the return trip from 8:05 a.m. -9:00 a.m.
- The afternoon trip departs St George at 3:00 p.m., arrives in Springdale at 4:00 p.m., and makes the return trip from 4:05 p.m.-5:00 p.m.

Advanced reservations are required to ride. One-way fares for this service range from \$5 between La Verkin and Hurricane or Virgin, to \$20 for St George to Virgin or Springdale.

- **St. George Taxi** – Described later in this report under “Taxi Services.”
- **Airport shuttles between St George and Las Vegas and Salt Lake City** - St George Shuttle operates 13 round trips per day between St George and Beaver Dam, AZ and Las Vegas (\$25 each way to Las Vegas), and 4 round trips per day between St George and Salt Lake City (\$49 each way).

Salt Lake Express

Salt Lake Express is the parent company for two airport shuttle services that serve St. George.



- Aztec Shuttle operates daily shuttle service from St George to Salt Lake City (2 round trips per weekday - \$49 each way)
- St George Express operates daily service from St George to Beaver Dam, AZ and Las Vegas (8 round trips per weekday - \$25 each way to Las Vegas)
- In St George, the shuttle stops at America's Best Value Inn (615 S Bluff St); it also stops at riders' doors. Drop offs can be arranged at Zion National Park and anywhere in St George.
- Salt Lake Express also operates charter service.

Greyhound Lines, Inc.

Greyhound Lines stops in St. George at the Texaco Minute Mart, 1572 S. Convention Center.



- To/from Salt Lake City, a typical fare is \$48, travel time is about 5 hours and 40-55 minutes.
 - Northbound buses depart at 1:10 a.m. and 11:30 a.m.

- Southbound buses arrive at 2:25 p.m. and 12:05 a.m.
- To/from Las Vegas, a typical fare is \$24, travel time is about 2 hours and 5 minutes
 - Westbound buses depart at 12:10 a.m., 11:40 a.m., 1:40 p.m., and 2:35 p.m.
 - Eastbound buses arrive at 4:45 a.m., 11:00 a.m., 5:45 p.m., and 1:05 a.m.

Taxi Services

Five taxicab companies were identified as serving the St. George area:

- **St. George Taxi**, a service of St. George Shuttle, operates anywhere in St. George and the surrounding areas. Up to four passengers can be accommodated. Fares are \$2.50 per mile with a \$6 minimum, plus any wait time (\$1.10 per minute when traveling 6 miles an hour or slower). Rides can be requested by telephone 24 hours a day, 7 days a week.
- **Three River Cabulance and Taxi** provides demand response transportation service in St. George, Washington City, Ivins, Santa Clara, Hurricane, Washington County and Southern Utah. Both traditional taxi service and advance-reservation wheelchair-accessible van service are available. Taxi fares start at \$2.50 and are \$2.50 per mile with a \$0.43 per minute waiting fee. The minimum fare in St. George is \$6 and in Hurricane is \$30. The pick-up fee for cabulance service is \$20 for ambulatory passengers and \$28 for non-ambulatory passengers. Additional fees for cabulance service include \$2.50 per mile and fees for waiting, assisted care, and evening, weekend, or holiday service. Rides can be requested by telephone 24 hours a day, 7 days a week.
- **Taxi USA** operates in St George 24 hours a day, 7 days a week and covers Southern Utah with service to Las Vegas. Fares have a \$2.50 flag drop charge plus \$2.75 per mile, with a \$6 minimum in St George, \$35 minimum to Hurricane, and \$300 minimum to Las Vegas. Taxi USA's wait time charge is \$1 per minute and there is a \$1.00 extra charge for credit card transactions. Taxi USA offers a 10% senior discount.
- **Ready Cab** operates in St George, 24 hours a day, 7 days a week with prior appointment. In-town rates are \$2.50 per mile with a \$6.00 minimum, and a \$1 wait time per minute. Ready Cab offers prepaid Zion trips for \$80 one-way for up to 4 people.
- **AAA Quality Cab** is based in St. George, serving Southern Utah since 1997. (No additional information was found through an internet search.)

Commercial Flights Serving the St. George Municipal Airport

An important transportation service in the region is daily commercial flights service to and from Salt Lake City (Delta Airlines) and Denver (United Airlines) at the St. George Municipal Airport, 4550 S. Airport Parkway. Flights are very limited at this time.

Chapter 3

Market Analysis

INTRODUCTION

This is the second of three chapters that includes the background work necessary to make informed decisions regarding the design of a transit service between St. George and Springdale. This chapter includes the Market Analysis, consisting of outreach activities/community input and the review of demographics and land uses.

OUTREACH ACTIVITIES AND COMMUNITY INPUT

This section of Chapter 3 details the first round of public outreach efforts for the St. George to Springdale Public Transit Feasibility Study. The first outreach phase of this project consisted of three major activities:

1. **Business Focus Groups** - Three business focus groups were conducted in the region and allowed for private sector stakeholders to provide input on the potential service and to understand ways in which they could support the service. Focus groups were conducted on January 25, 2016 in Hurricane and Springdale and on January 26, 2016 in St. George.
2. **Public Listening Sessions and Expo** - Three listening sessions were conducted in the region that provided opportunity for stakeholders and the public to provide input on the community's vision for transit services along the St. George – Springdale corridor. These sessions were conducted in Hurricane and Springdale on February 8, 2016, and in St. George on February 10, 2016. Very significant, input was obtained at the Dixie Regional Transportation Expo on February 9, 2016.
3. **Public Survey** - The public survey was administered online and distributed at listening sessions. It was available for over a month. The survey was sent to all stakeholder groups including major employers, colleges and universities, human service providers, senior services, medical facilities, Zion National Park, chambers of commerce, and local residents.

The overall response from the public to transit services between St. George and Springdale was extremely positive. Many stakeholders and residents expressed hope that transit services along the corridor would result from the planning process, and were looking forward to seeing further details such as where bus stops would be located and hours the bus service would operate. Many participants noted the degradation of the local resident and visitor experience in Springdale and Zion due to traffic and parking related issues. They also mentioned that a

transit route between St. George and Springdale would expand mobility options for Hurricane, La Verkin, and communities along State Route 9.

The input received from the community is organized in the following sections:

1. Results from Listening Sessions and Transportation Expo
2. Results from Business Focus Groups
3. Public Survey Results
4. Summary - Outreach

1. Results from Listening Sessions and Transportation Expo

The listening sessions in Springdale, Hurricane and St. George began with introductions and a brief presentation that included discussion of the planning process, study objectives, and anticipated outcomes. The majority of each session was focused on obtaining input from participants on possible transit service between St. George and Springdale. The Springdale and Hurricane meetings were well attended, while the St. George meeting was sparsely attended in large part due to the fact that over 80 residents visited the consultants at the Expo on the previous day providing a wealth of comments. This reduced the need for the public meeting on the following day. This section provides a summary of feedback on the possible transit service between St. George and Springdale, segmented by common themes.

Needs to Be Addressed

Regional stakeholders expressed a variety of transportation needs that service between St. George and Springdale could be designed to meet. Several noted that while it would be ideal if the service could serve tourist and visitors to the area, the primary focus should be on needs of local residents.

Specific needs expressed at listening sessions included:

- **Greater transportation options for older adults.**
 - The need for a bus route from the Hurricane area to St. George. Currently there is only limited service provided by the senior center.
 - Seniors in the St. George area have no means to visit Zion National Park. At the Expo, there were 10 Sun River residents who expressed a desire for service to Springdale and Zion.
 - Older adults expressed concerns about driving at night. It was noted that many people are retiring to the region or living part of the year in the county.
- **Greater transportation options for employment trips.** Due to the distance, many commuters have difficulty accessing jobs in Springdale. Local businesses in Springdale

commented on the difficulty of attracting employees to their businesses. The need for transportation for service workers to major employment sites was a consistent theme. One session participant (in Hurricane) noted his need to travel from Washington City to Springdale for his job.

- **Alternatives that would reduce traffic and parking problems in Springdale.** Numerous stakeholders noted major backups to Zion National Park along State Route 9 during peak tourist seasons (over 2 miles long according to park officials). Once parking became a major issue, many local residents stated that they reduced visits to Springdale and Zion National Park.
- **Transportation options from hotels and other lodging in St. George, Hurricane and along the State Route 9 corridor.** Local businesses noted that they hear from many visitors who would prefer to leave their cars at their hotel and take public transit to Springdale and to access Zion National Park.
- **Access to St. George from Springdale and Hurricane.** Listening session participants expressed desire for services that would allow:
 - Access to shopping in St. George.
 - Access to St. George Airport (and to shuttle service from St. George to Las Vegas).
 - Ability to attend evening events and participate in recreational activities in St. George.
- **Local Needs.** Some residents in Hurricane were in need of local access for shopping and medical services.
- **Residents of Toquerville** (over 3 miles from Rt. 9 to Toquerville City Hall) expressed a need for local service to access shopping and other needs in Hurricane.
- **Environmental Issues.** Some participants noted the need for transit services that would reduce the number of cars traveling on the State Route 9 corridor and the environmental impact. One participant mentioned that Hurricane is under review by EPA. Social and environmental responsibility was a theme throughout each session.

Service Design and Routing

Many participants provided input on the potential design of transit services between St. George and Springdale. The following is an overview of their suggestions and comments:

- The possibility of both express and local service was received favorably, especially since there are different needs along the corridor.

- The placement of stops along a St. George – Springdale route would be critical. Suggested stops include:
 - St. George: Costco, grocery stores, Dixie Regional Medical Center, Dixie State University, transfer hub
 - Hurricane: Walmart, Motor Vehicle Office, downtown
 - Springdale: Multiple stops
 - Washington City – multiple stops as well
 - Purgatory Correctional Facility
 - La Verkin
 - Virgin
- Service should operate through Springdale and provide direct connection to the Zion Canyon Shuttle, and not require a transfer to the Springdale Shuttle.
- Need to offer services from St. George and stops at key locations so that visitors can leave cars at their hotels.
- Park and ride lots should be located along the corridor, possibly at retail locations with sufficient parking lots. Some noted they would drive to a park and ride in Washington City and then take bus to Springdale to access Zion National Park. A common theme was the need to have people leave cars outside of Springdale.
- Any transit service must be an effective alternative to driving – services have to be frequent enough, operate on Saturdays and evenings. Wi-Fi and other amenities would be crucial to the success of the service.
- Some participants expressed concern about how seasonal lulls would be handled.
- Stakeholders noted that it was important to interface biking with any future transit services. Several expressed the need for bike racks on vehicles and other options that allow people to bring their bikes.

Fare Structure

- Many listening session participants asked about the potential fare structure for the potential St. George – Springdale service. There was agreement that there should be reduced cost options such as monthly passes for local residents and frequent riders. Some mentioned the use of an employer reimbursement for workers or transit subsidy programs that help offset fare costs. One noted the need for a “family” rate.

- Some stakeholders noted that an integrated fare system was needed so that customers could buy one ticket that would enable seamless transfers and allow use of all transit systems.
- Hotels may be able to offer packages that include a room and tickets for the family.

Bus Design

Participants asked about the type of vehicles that would be used in operation of the service, and offered the following input:

- Participants do not want buses that exhibit an urban vibe. It is important that the vehicles are consistent with rural area feel.
- Buses need to be able to accommodate multiple bikes and have adequate space to allow people to bring backpacks and other belongings.
- In line with the environmental theme, only low-polluting buses should be used in the operation of the service.

Partnerships with the Private Sector

There was strong agreement that the private sector along the corridor must be fully engaged in any new service, especially hotels and resorts. Comments included:

- Hotels could market availability of the route through a stop at their location. Hotels in St. George, Hurricane and along corridor could encourage customers to leave their car and take bus. Discounts by hotels to encourage guest to use services, and package deals, could be explored.
- Participants liked the possibility of using sponsor programs of ride guides, shelters, etc. They agreed that good business deals should be pursued that encourage public-private partnerships for free fare days and bus wraps.
- It was important to take advantage of the fact that a significant number of visitors to the region are from Europe and Asia and are predisposed to using transit services. While there is no definitive data on the subject, news reports and anecdotal statements provide evidence of this increasing trend.
- Sponsorship programs in conjunction with cultural events in St. George were suggested.

Marketing and Outreach

Session participants noted the need for an extensive outreach and marketing campaign when any services were implemented. Specific suggestions included:

- Some participants noted that more extensive outreach was needed on where SunTran operates and the opportunities that would be available through connections with any new services.
- In conjunction with the environmental aspect the marketing needs to stress reduction in cars and pollution.
- Marketing options included tapping into volunteer spirit in area and having them serve as tour guides on buses.

Funding and Financing

- Many stakeholders expressed support for funding the possible St. George – Springdale service through a hotel “bed tax.”
- There was lukewarm reception to a possible sales tax increase to support the service.

2. Results from the Business Focus Groups

The focus groups (one each in Springdale, Hurricane and St. George) began with introductions and a brief presentation that included discussion of the planning process, study objectives, and anticipated outcomes. The majority of each session was focused on obtaining input from participants on possible transit service between St. George and Springdale. There was also discussion of the potential economic impact of transit services in the region and how such service could positively affect local business. This was followed by a discussion of how local private sector stakeholders can help support the service.

This section provides a summary of the feedback on the possible transit service between St. George and Springdale, segmented by common themes.

Needs to be Addressed

Business stakeholders expressed a variety of transportation needs that service between St. George and Springdale could be designed to meet. Several noted the need to transport resident and seasonal workers to places of employment.

Specific needs expressed at the listening sessions included:

- **Greater transportation options for low income families and service workers** - It was noted that many low income workers do not have access to an automobile and have to find employment that is within walking or biking distance from their residence. Greater regional mobility option could give these workers many more employment options and allow them to pursue better jobs.
- **Greater transportation options for employment trips** - The Springdale area in particular was noted as having many service jobs that could be accessed through a public transit route along the corridor, and the need for transportation for service workers at the hotels and resorts in the region was a consistent theme. Limited parking is a major issue in Springdale and any service that could help keep employee vehicles out of Springdale would be of great benefit to local businesses.
- **Alternatives that would reduce traffic problems in Springdale** - Numerous stakeholders noted the major backups to Zion along State Route 9 during peak tourist seasons. Traffic and parking issues in Springdale were the primary concern of businesses in Springdale.
- **Transportation options from hotels in St. George and Hurricane that welcome the idea of transportation services for their customers** - Many were open to the idea of supporting the transit service in exchange for a stop at their hotels or other advertising benefits.
- **Major employers in Hurricane noted that their employees would be likely to use a regional transit service** - These employers also have second and third shifts with employees that could benefit from increased transportation options.

Service Design and Routing

Many stakeholders provided input on the potential design of transit services between St. George and Springdale. The following is an overview of their suggestions and comments:

- The possibility of both express and local service was received favorably, especially since there are different needs along the corridor.
- The placement of the stops along a St. George – Springdale route would be critical. Proposed stops included:
 - St. George: Hotels, Dixie Regional Medical Center, Dixie State University
 - Washington City
 - Several in Hurricane: Walmart, Walmart Distribution Center, hotels, shopping and government services
 - Commuter stops in Springdale for peak times and limited stops for off peak hours

- La Verkin
- Virgin (particularly seasonal worker housing and the RV park)
- Service should operate through Springdale and provide direct connection to the Zion Canyon Visitor Center.
- Need to offer services that allow visitors staying at hotels in St. George, Hurricane and La Verkin to access Zion National Park without a personal automobile.
- Park and ride lots should be located along the corridor, possibly at retail locations with sufficient parking space. A common theme was the need to have people leave cars outside of Springdale. Washington City, Virgin and Hurricane were noted as potential locations for park and ride lots.
- Service should change throughout the year to accommodate for major seasonal shifts in employment and visitors.

Fare Structure

- The business focus groups supported the idea of selling tickets at local business.
- Stakeholders noted the need for discounted monthly passes and discounted rates for low income and senior residents.
- Some stakeholders noted that an integrated fare system was needed so that customers could buy one ticket that would enable seamless transfers and allow use of all transit systems.

Bus Design

- During the business focus groups participants noted that buses should be attractive to visitors. Modern attractive buses with comfortable seats, places for luggage and Wi-Fi are preferred by business stakeholders.

Partnerships with the Private Sector

There was strong agreement that the private sector along the corridor must be fully engaged in any new service, especially major employment sites such as hotels and other lodging. Comments included:

- Hotels could market availability of the route through a stop at their location. Hotels in St. George and along corridor could encourage customers to leave their car and take the bus. Discounts by hotels to encourage guest to use services, and package deals, could be explored.
- Participants liked the possibility of using sponsor programs for private businesses. They agreed that good business deals should be pursued that encourage public-private partnerships for free fare days and bus wraps.
- There has been an increase in the numbers of foreign visitors to Zion who are predisposed to using transit services.

Funding and Financing

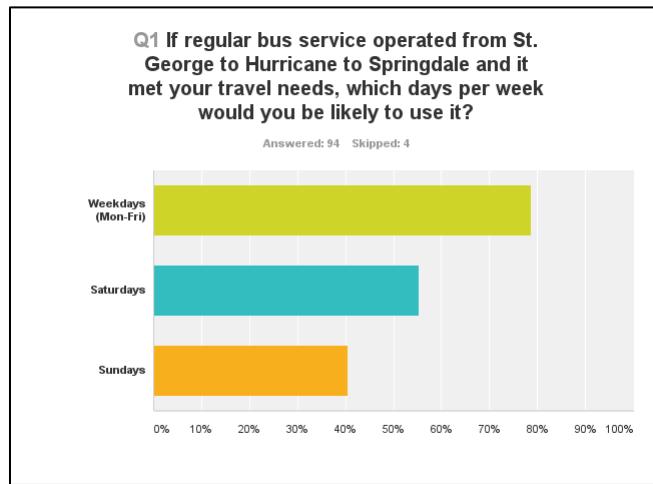
- Some stakeholders expressed support for funding the possible St George – Springdale service through a hotel “bed tax.”
- During the business focus groups participants noted that many of the communities in the region are unlikely to give financial support to the service.

3. Public Survey Results

This section summarizes the results of the public survey. The public survey was administered online and distributed via email and at the public listening sessions. The purpose of the survey was to gather information to help guide design of the service. Ninety-Eight surveys were completed.

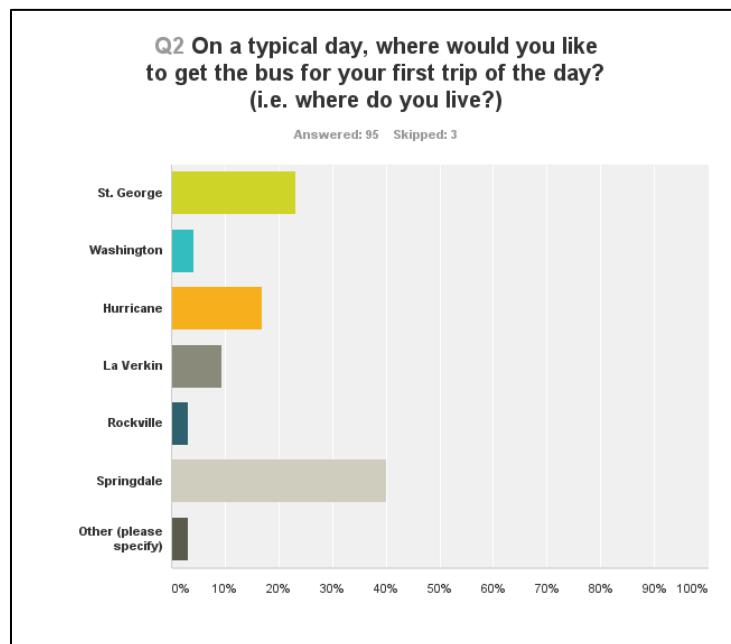
Question 1, shown in Figure 3-1, asked participants which days they were likely to use the service. Respondents were allowed to choose multiple answers. 78% of respondents would use the service on weekdays, 55% on Saturdays and 40% on Sundays.

Figure 3-1: Question 1



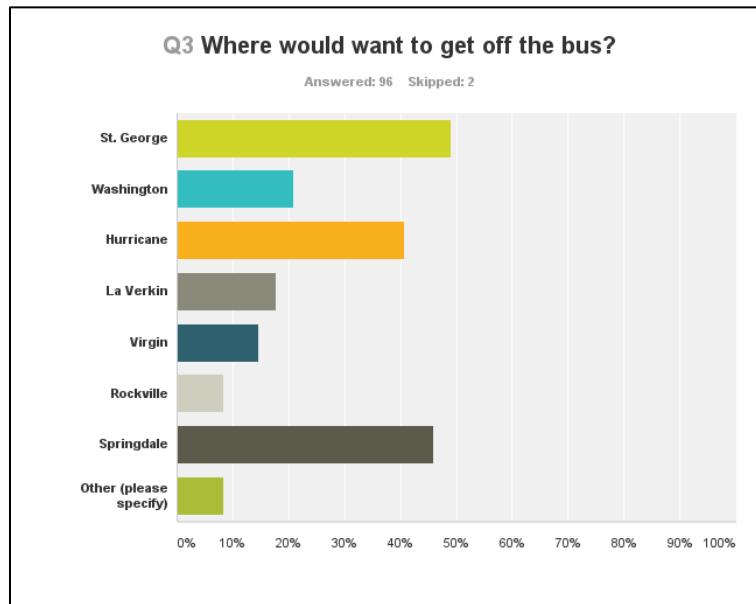
The second question asked about the respondent's trip origin. The most popular trip origins (in order of popularity) are Springdale, St. George and Hurricane. Clearly there is a very significant interest from people in Springdale. This can be seen in Figure 3-2.

Figure 3-2: Question 2



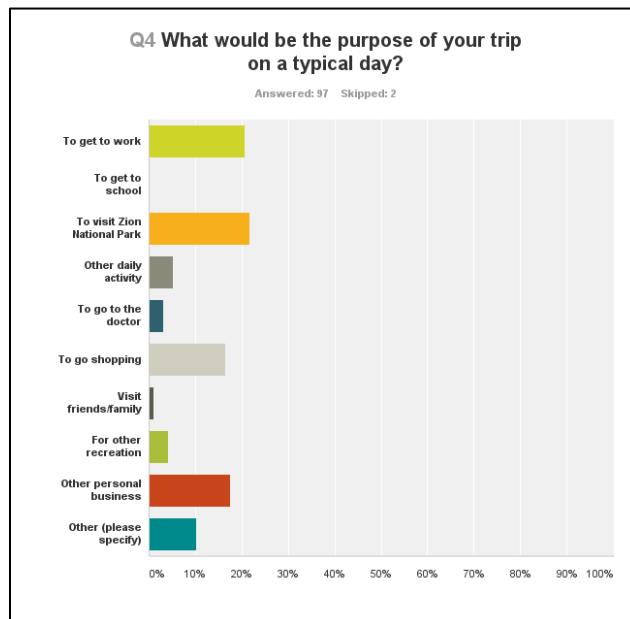
Next the survey asked about potential trip destinations. Respondents were allowed to choose multiple answers. The most popular trip destinations (in order of popularity) were St. George, Springdale and Hurricane, as demonstrated in Figure 3-3.

Figure 3-3: Question 3



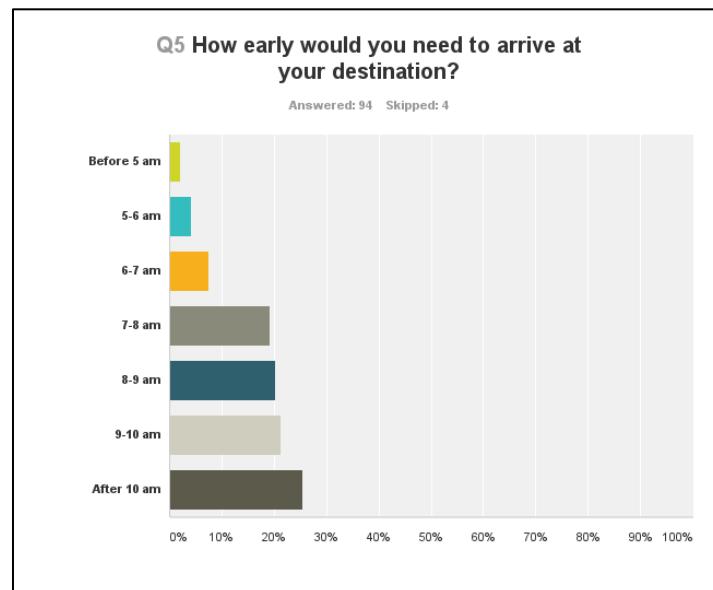
Question No. 4, shown in Figure 3-4, asked about trip purpose. The most common answers included getting to work, visiting Zion National Park, shopping and personal business.

Figure 3-4: Question 4



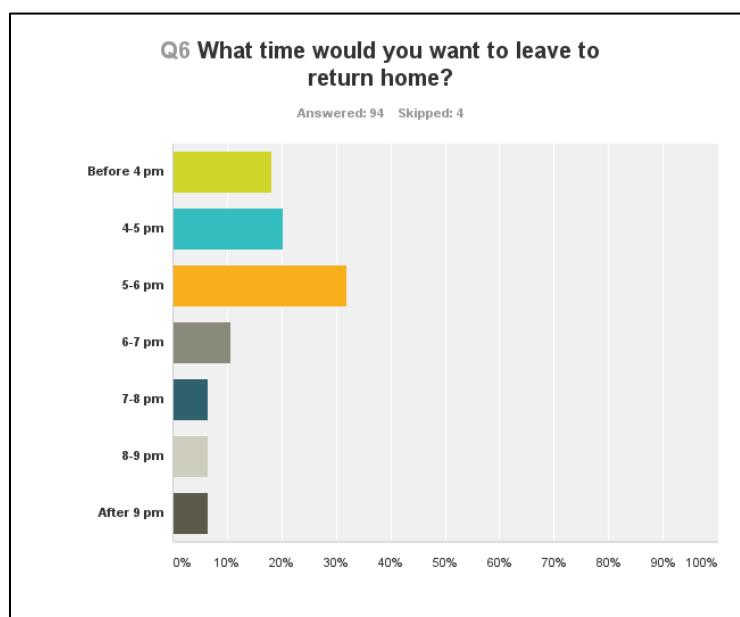
Desired arrival time is an important indicator in service design and frequency. Commuters often need to arrive early in the morning while shoppers may need services later in the day. Responses to this question detail the needs for arrival times (Figure 3-5).

Figure 3-5: Question 5



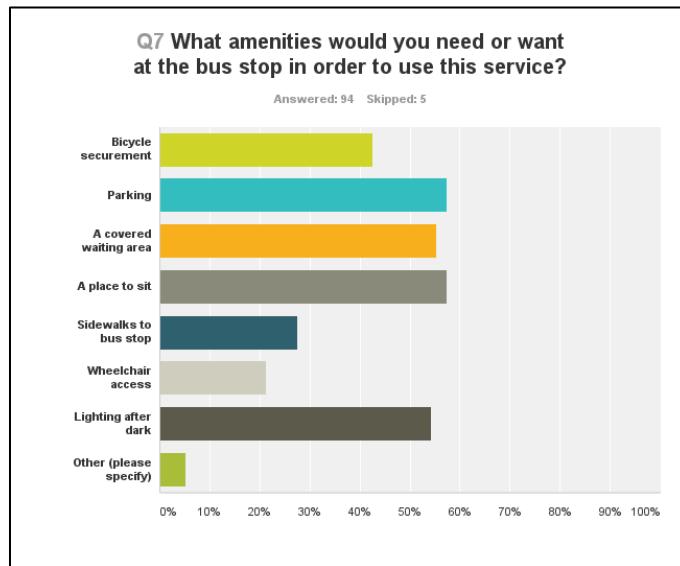
Return trips times are very important. Commuters will often need to leave after 5:00 p.m. while visitors and shoppers often desire return trips earlier in the day. These responses detail the desired return trip times of respondents, Figure 3-6.

Figure 3-6: Question 6



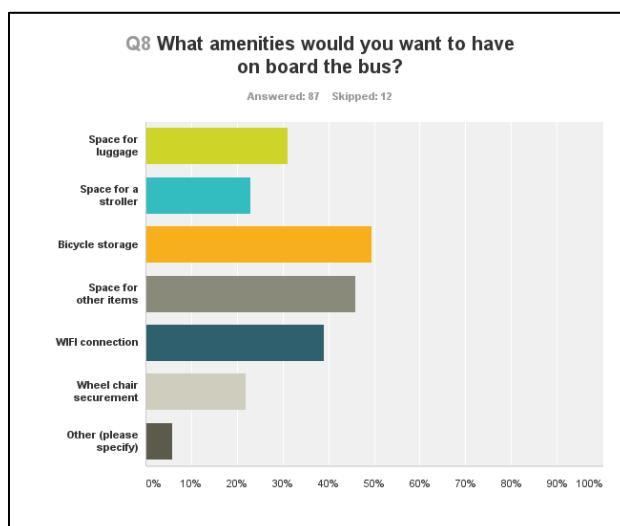
The bus stop is transit's front door. Amenities at the bus stop can create a comfortable environment for riders and ensure use of service. Answers to Question 7 (Figure 3-7) detail the desired amenities for bus stops within the corridor. Respondents were allowed to choose multiple answers. As shown, a safe, comfortable and well-lit bus stop with a place to sit, cover from the elements, adequate parking and bicycle storage are important to respondents.

Figure 3-7: Question 7



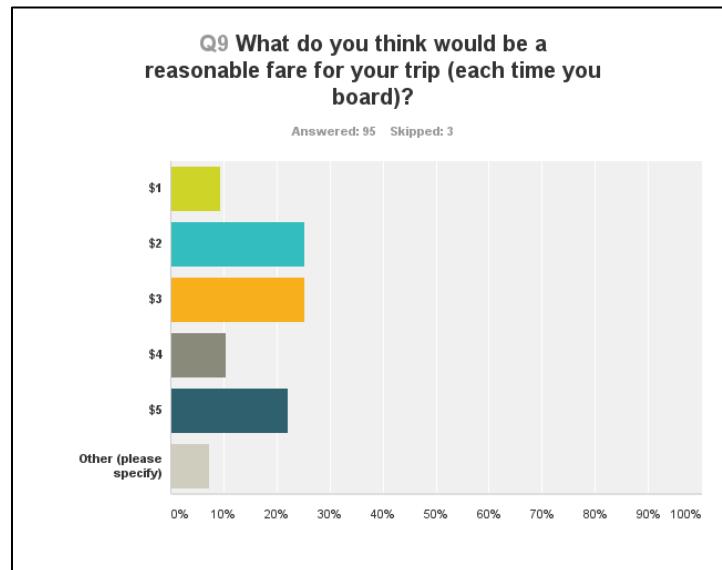
Like bus stops, amenities on the bus can improve the customer experience depending on the purpose of the trip. Question No. 8 details the desired on-board amenities on a St. George to Springdale service. As shown in Figure 3-8, space for personal items, bicycles and internet connection are important to respondents.

Figure 3-8: Question 8



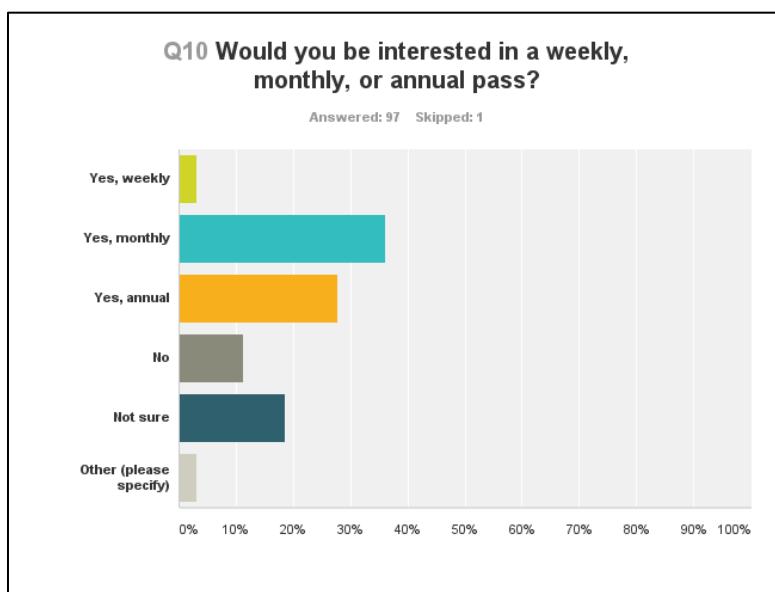
Fares can help cover some of the costs of public transit services. While a good fare box recovery is desired, setting the fare too high can inhibit use of the service. Figure 3-9 details what respondents felt a reasonable fare would be. The most common answers were from \$2 - \$5. Other answers included higher than \$5 and discounted fares for low income riders, elderly riders, and riders with a disability.

Figure 3-9: Question 9



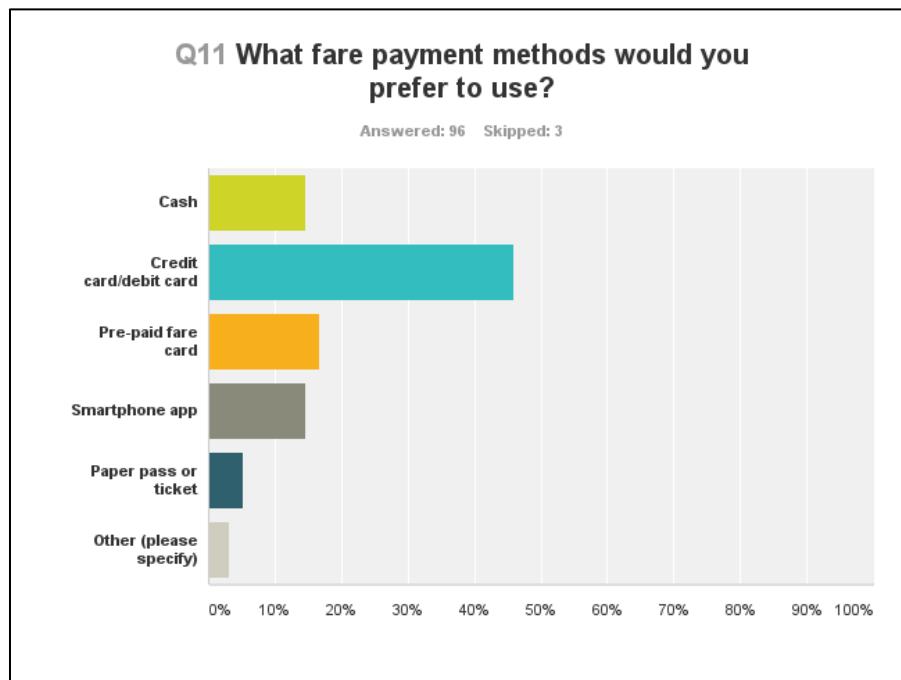
Question No. 10, displayed in Figure 3-10, shows the level of interest of respondents to weekly, monthly or annual passes. As shown, monthly and annual passes were a popular idea.

Figure 3-10: Question 10



Fare payment methodology is an evolving system in the transit industry. Question No. 11 details the respondents' preferred method of payment for fares. Credit cards and debit cards were the most desirable. Responses are shown in Figure 3-11.

Figure 3-11: Question 11

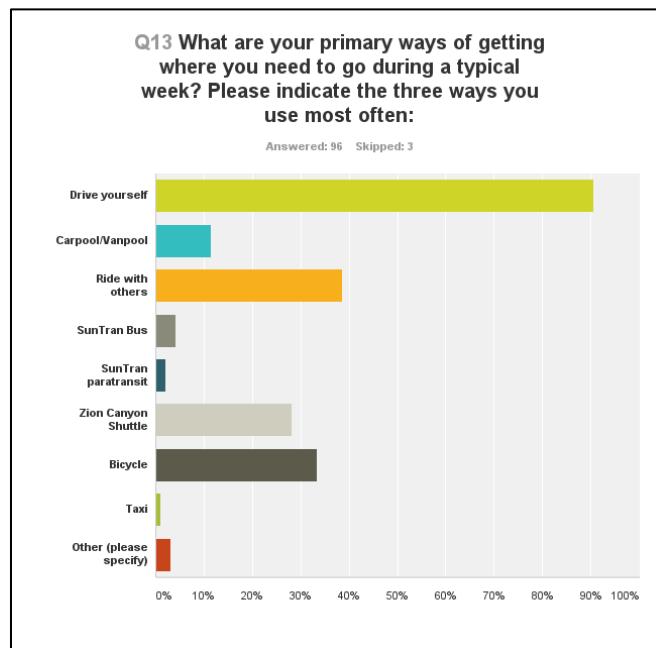


Question 12 asked respondents to provide suggestions for transit service between St. George and Springdale (open ended). Suggestions included:

- Commuter service for employees
- Comfortable seating
- Several shopping stops in Washington City and St. George
- Extra capacity for peak season holidays
- Public/private partnerships to help defray costs
- Express route from St. George to Springdale in less than 1.5 hours one-way
- Park and ride service
- Do not duplicate existing transit services
- Coordination with existing transit services
- Service to special events in the community
- Direct service to Zion National Park
- Service to St. George airport
- Comfortable and friendly service so that senior citizens are comfortable using the service

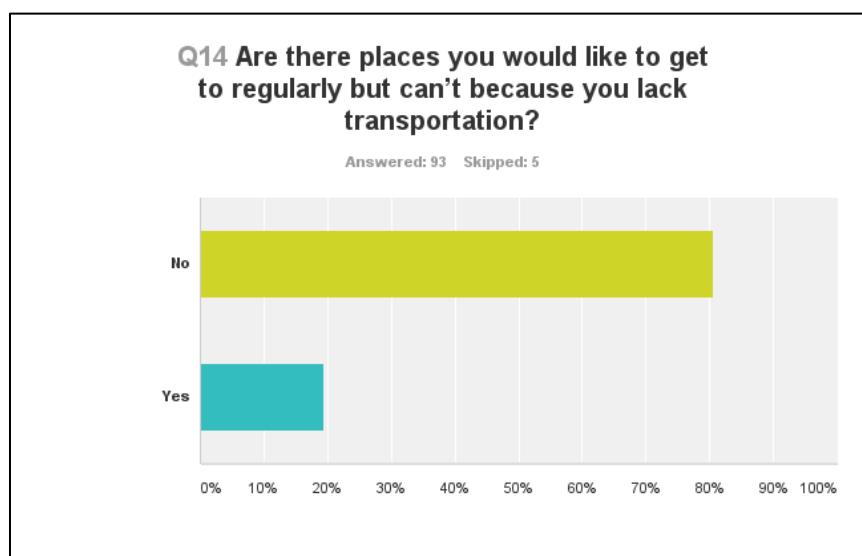
Question 13 detailed the mode split among survey respondents (Figure 3-12). Most respondents drive themselves as there are few options, however transit registers significant ridership at Zion National Park.

Figure 3-12: Question 13



Question 14 asked respondents if there is anywhere they would like to get to on a regular basis but are not able to because they lack transportation. A follow up question asked for locations of these places. Responses are shown in Figure 3-13.

Figure 3-13: Question 14



The locations of those that responded “yes” include:

- St. George
- Zion National Park
- Cedar City
- La Verkin
- Salt Lake City
- Washington City
- Hurricane
- Sun River
- Coral Canyon

The survey concluded with demographic questions indicating that most respondents were full-time employees (65%), year round residents (90%), English speaking (94%), and fully ambulatory (97%).

4. Summary – Outreach

There is significant interest in service between St. George and Springdale.

1. Business community and residents in Springdale:
 - a. Provide service for residents to get to St. George for shopping, personal business and recreation
 - b. Provide transit for employees who live outside of Springdale
 - c. Reduce congestion and parking issues for visitors
2. Business community and residents in St. George:
 - a. Employment transportation into and out of St. George
 - b. Significant interest from active elderly (Sun River) to go to Zion
 - c. Hotels see opportunities for partnering
 - d. Transportation to Zion from hotels
 - e. Need for commuter service from Washington City to Springdale
3. Business community and residents in Hurricane and La Verkin:
 - a. Local travel within the two communities for work, school, shopping, medical and other needs
 - b. Commuter service to other parts of Hurricane, St. George and Springdale
 - c. Service to Dixie State both within Hurricane and the main campus
 - d. Need for service in Toquerville
4. Funding issues:
 - a. Reluctance to support a tax voiced among some participants
 - b. Need to get the private sector involved in partnerships and sponsorships

Like the meetings, Expo, and interviews, the survey responses were very positive about a potential service and indicated that respondents would use this service. The survey indicated that the most popular trip purposes include work, Zion National Park and business/shopping, each receiving about 20% of the responses. The demographics were overwhelmingly local residents with origins in St. George, Washington, Hurricane/La Verkin and Springdale.

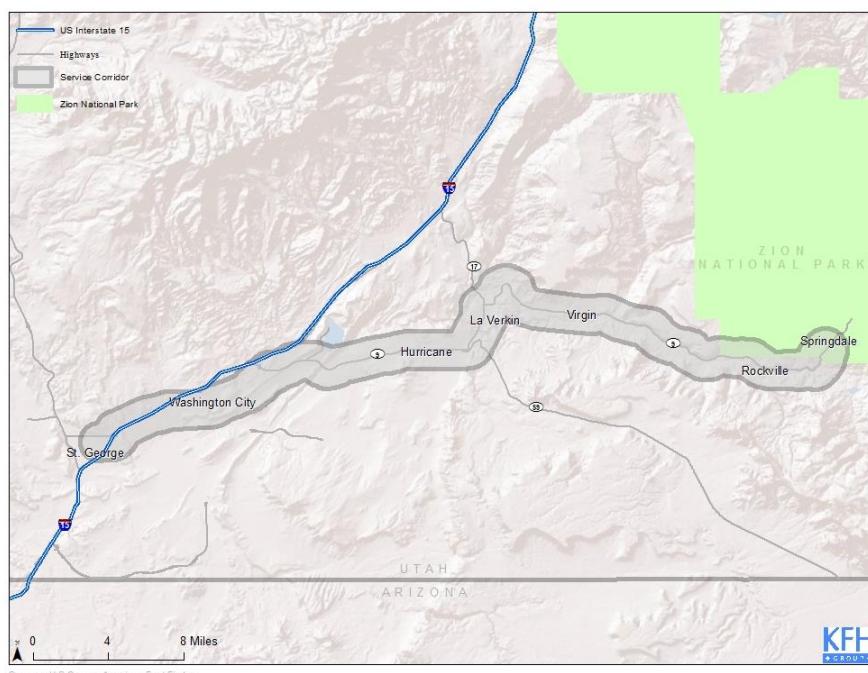
MARKET ANALYSIS – DEMOGRAPHICS AND LAND USES

This section of the Chapter 3 analyzes the market for public transportation along the St. George to Springdale corridor. Elements to this analysis include review of demographic data and identification of major trip generators.

Analysis of Demographic Data

This section provides a general population profile for Washington County, with a focus on the study corridor, and identifies where demographic groups that are likely to depend on public transportation reside. The specific corridor of focus is between St. George and Springdale, following State Route 9 east of Washington City. Data ranging from major trip generators to underserved and unserved population subgroups are documented and analyzed. Data sources include the 2010 Census and American Community Survey (ACS) 2010-2014 5-year estimates, supplemented by internet research and stakeholder guidance regarding important transit destinations. Figure 3-14 presents a map of the study area, with geographic boundaries of municipalities highlighted.

Figure 3-14: St. George to Springdale - Project Study Area



Population Profile

Table 3-1 summarizes population data for each of the cities and towns along the study corridor, as well as Washington County as a whole.

As shown in this table, the corridor population is growing at a rapid pace – 57% overall from 2000 to 2010, and another 10% estimated increase between 2010 and 2014. Cities and towns experiencing the highest percentage of growth are Washington City (which has tripled in population since 2000), Hurricane, Virgin, and St. George. La Verkin is also growing rapidly.

Table 3-1: Population Profile for Washington County, Utah and the St. George to Springdale Corridor

Cities and Towns Along the Study Corridor	Total Population			Percentage of Population Change	
	2014 Estimate	2010 Census	2000 Census	2000-2010	2010-2014
St. George	78,505	72,897	49,663	47%	8%
Washington	23,360	18,761	8,186	129%	25%
Hurricane	15,032	13,748	8,250	67%	9%
La Verkin	4,163	4,060	3,392	20%	3%
Virgin	605	596	394	51%	2%
Rockville	255	245	247	-1%	4%
Springdale	548	529	457	16%	4%
Subtotal	122,468	110,836	70,589	57%	10%
Washington County	151,948	138,115	90,354	53%	10%

Source: U.S. Census, American Fact Finder

Visitor Impact on Population

The residential population only tells a part of the story, since visitors to the Springdale/Zion area exponentially increase the area's population, particularly during peak tourist season (March through October). While visitors may be in the area for only a short stay, they dramatically increase the traffic congestion on Route 9, demand for parking, and the need for alternatives to the private automobile. In addition, with the influx of visitors, there is a corresponding increase in employee transportation as most workers in Springdale cannot afford to live in the area and must commute long distances (typically between 20 and 40 miles). These visitor locations will be detailed in the following discussion of land uses.

The National Park Service reports that more than 3.6 million people visited Zion National Park in 2015, peaking at 481,398 visitors in July 2015. Table 3-2 presents 2014 and 2015 visitation statistics for Zion National Park. It should be noted that the vast majority of these visitors require at least a one night stay in the area.

Table 3-2: Visitors to Zion National Park, 2014-2015

Month	2014	2015	Percent Increase
January	72,722	80,178	10%
February	76,305	107,994	42%
March	228,284	292,978	28%
April	314,181	394,217	25%
May	393,829	401,908	2%
June	399,553	460,346	15%
July	409,013	481,398	18%
August	393,833	457,347	16%
September	342,655	396,001	16%
October	305,968	316,826	4%
November	171,407	182,190	6%
December	103,846	90,837	-13%
Total	3,211,596	3,662,220	14%

Source: <https://www.nps.gov/zion/learn/management/upload/ZION-VISITATION-2006-2016-2.pdf>, as accessed April 2016.

As can be seen in this table, visitation levels increased significantly in 2015. Based on NPS reports, this has been the trend in recent years.

Visitors per peak day determine the actual level of potential need. Table 3-3 indicates the average daily visitors to Zion by month. Peak months see 15,000 visitors per day, with virtually all of them coming from or leaving on Rt. 9 west. About 65% of the visitors enter at Springdale.

Population Density

Population density is typically a good indicator of the types of public transit services that are feasible within an area. While exceptions exist, an area with a density of 1,500 persons per square mile will generally be able to sustain, daily fixed-route transit service. Figure 3-15 portrays the population density of the study area at the census block group level. The census block groups with the highest population density (greater than 1,000 persons per square mile) are predominantly located in St. George, Washington, Hurricane and La Verkin. The rest of the corridor has relatively low population density.

Table 3-3: Average Daily Visitors to Zion National Park, 2015

Month	Average Visitors Per Day
January	2,586
February	3,857
March	9,451
April	13,141
May	12,965
June	15,345
July	15,529
August	14,753
September	13,200
October	10,220
November	6,073
December	2,930
Total	10,033

Source:

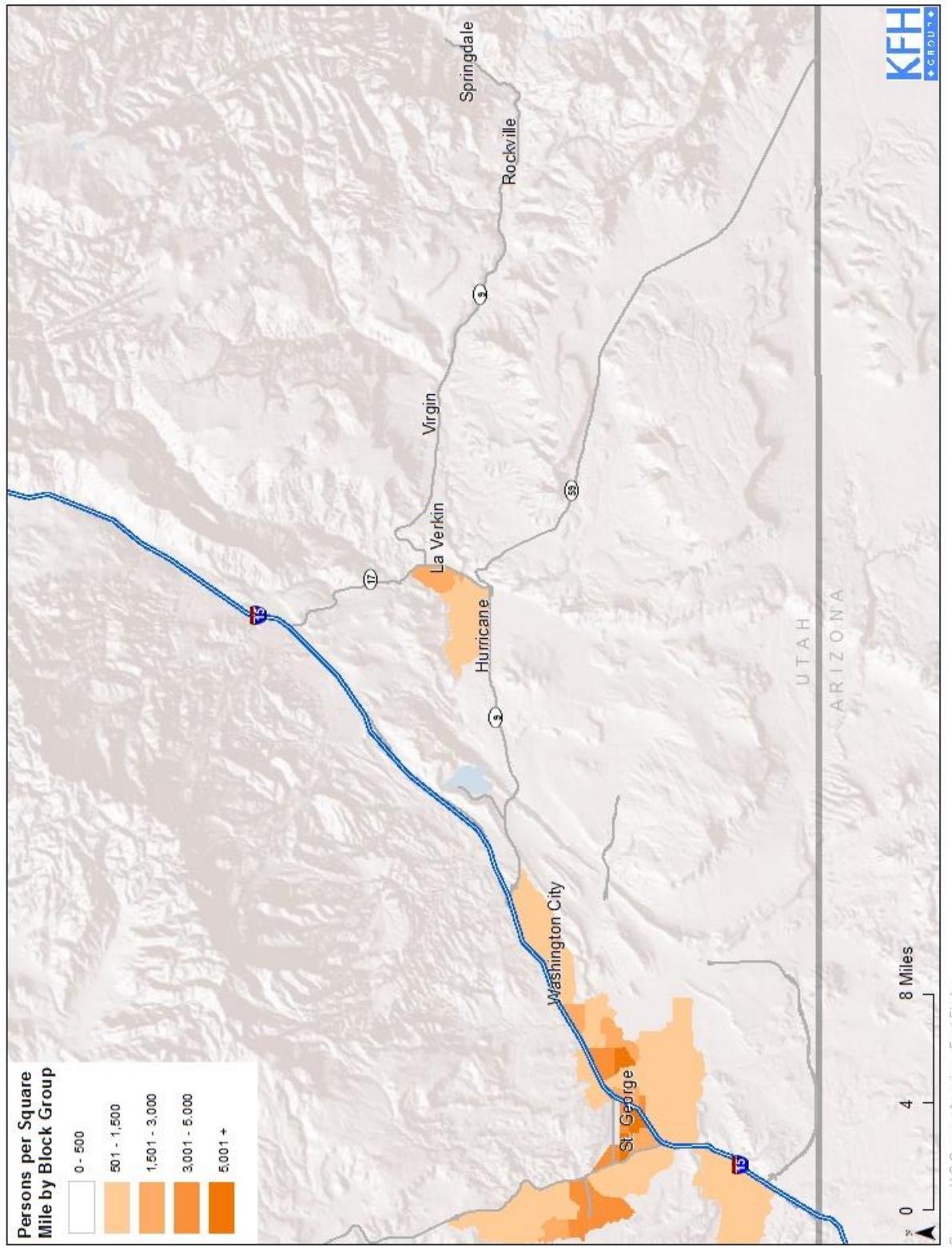
<http://www.nps.gov/zion/learn/management/upload/ZION-VISITATION-2005-2015-3-2.pdf>, as accessed 1/14/16.

Transit Dependent Populations

A major component in determining public transportation needs is to identify the relative size and location of segments of the general population that are more likely to be dependent on public transit services. Transit dependent populations include individuals who may not have access to a personal vehicle or are unable to drive themselves due to age or disability. Determining the location of these populations assists in the prioritization of where transit services may be the most used.

The Transit Dependence Index (TDI) is an aggregate measure displaying relative concentrations of transit dependent populations. Five factors influence the TDI calculation: population density, autoless households, older adult populations (age 65 and over), youth populations (ages 10-17), below poverty populations, and people with disabilities. The population of people with disabilities is derived from the most recent five-year American Community Survey data (currently 2010-2014), while the other populations are derived from the 2010 Census.

Figure 3-15: Washington County - Population Density (Persons per Square Mile) at the Census Block Group Level



In addition to population density, the factors above represent specific socioeconomic characteristics of residents within the study area. For each factor, individual block groups were classified according to prevalence of the vulnerable population relative to the county average. The factors were then put into the TDI equation to determine the relative transit dependence of each block group.

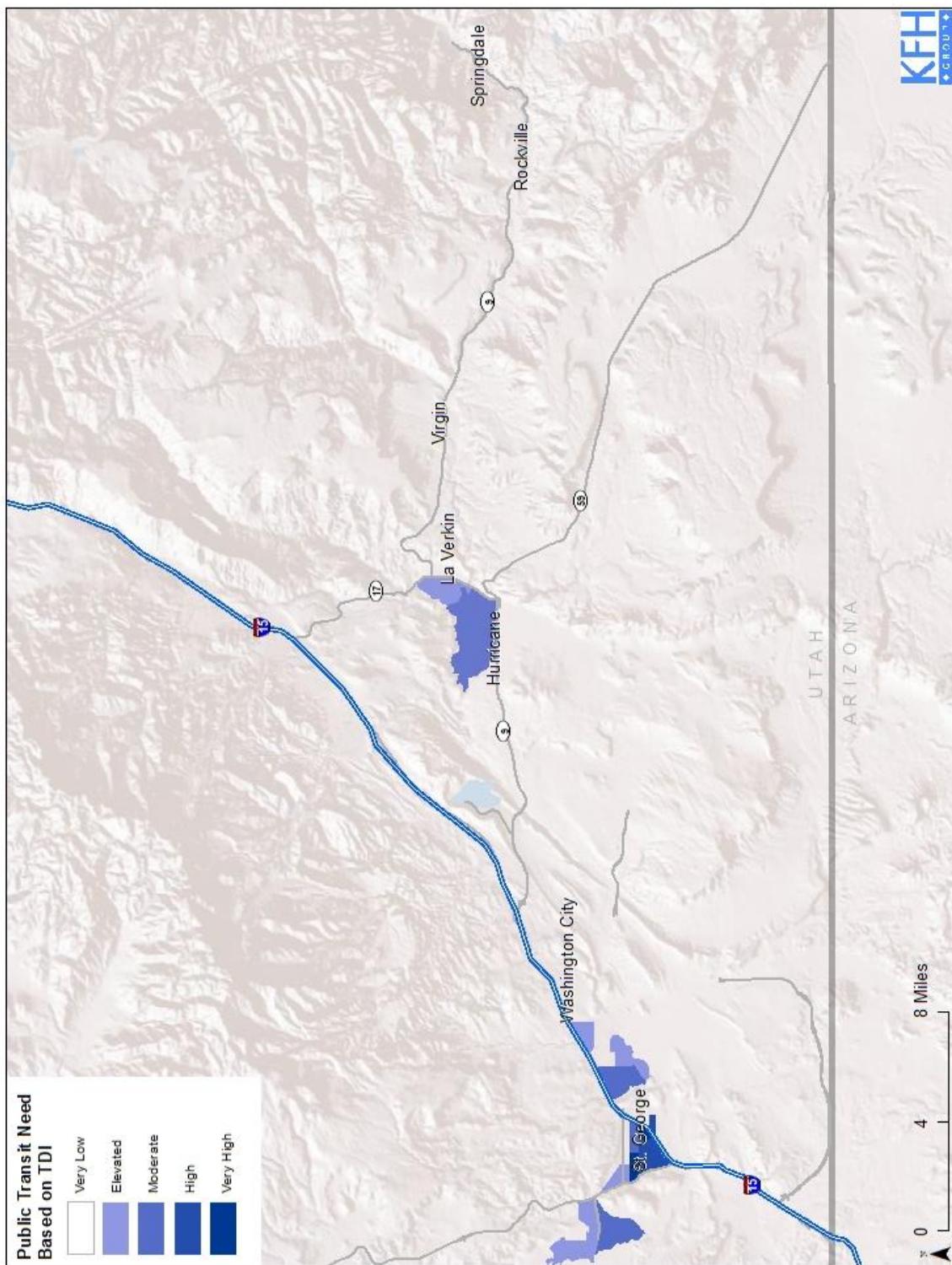
The relative classification system utilizes averages in ranking populations. For example, areas with less than the average transit dependent population fall into the “Very Low” classification, where areas that are more than twice the average will be classified as “Very High.” The classifications “Low, Moderate, and High” all fall between the average and twice the average; these classifications are divided into thirds.

Figure 3-16 displays the TDI rankings for the study area. Only St. George contains block groups with a Very High transit need relative to the study area, while La Verkin and Washington City contain block groups with an elevated need.

In addition to the overall TDI, the relative levels of need based on each transit dependent population (autoless households, older adults, youth populations, below poverty populations, and people with disabilities) were identified separately.

When analyzing each transit dependent population, it is important to consider the geographic size of each census block group, since in the study area, as is typical in many rural areas, the land area (square miles) varies widely across the study area corridor. For this reason, population density of each demographic group is presented in addition total population.

Figure 3-16: Washington County - Relative Need for Public Transit at the Census Block Group Level Based on an Aggregated Transit Dependence Index (TDI)



Autoless Households

Households without access to a personal vehicle are more likely to depend on the mobility offered by public transportation than households that have at least one personal vehicle. Although autoless households are reflected in the TDI measures, displaying this segment of the population separately is important since most land uses in the study area are located too far away from one another for non-motorized travel.

Figure 3-17 displays the relative number of autoless households in the region. The greatest numbers of autoless households occur in St. George and Washington.

Figure 3-17: Washington County - Number of Autoless Households per Census Block Group

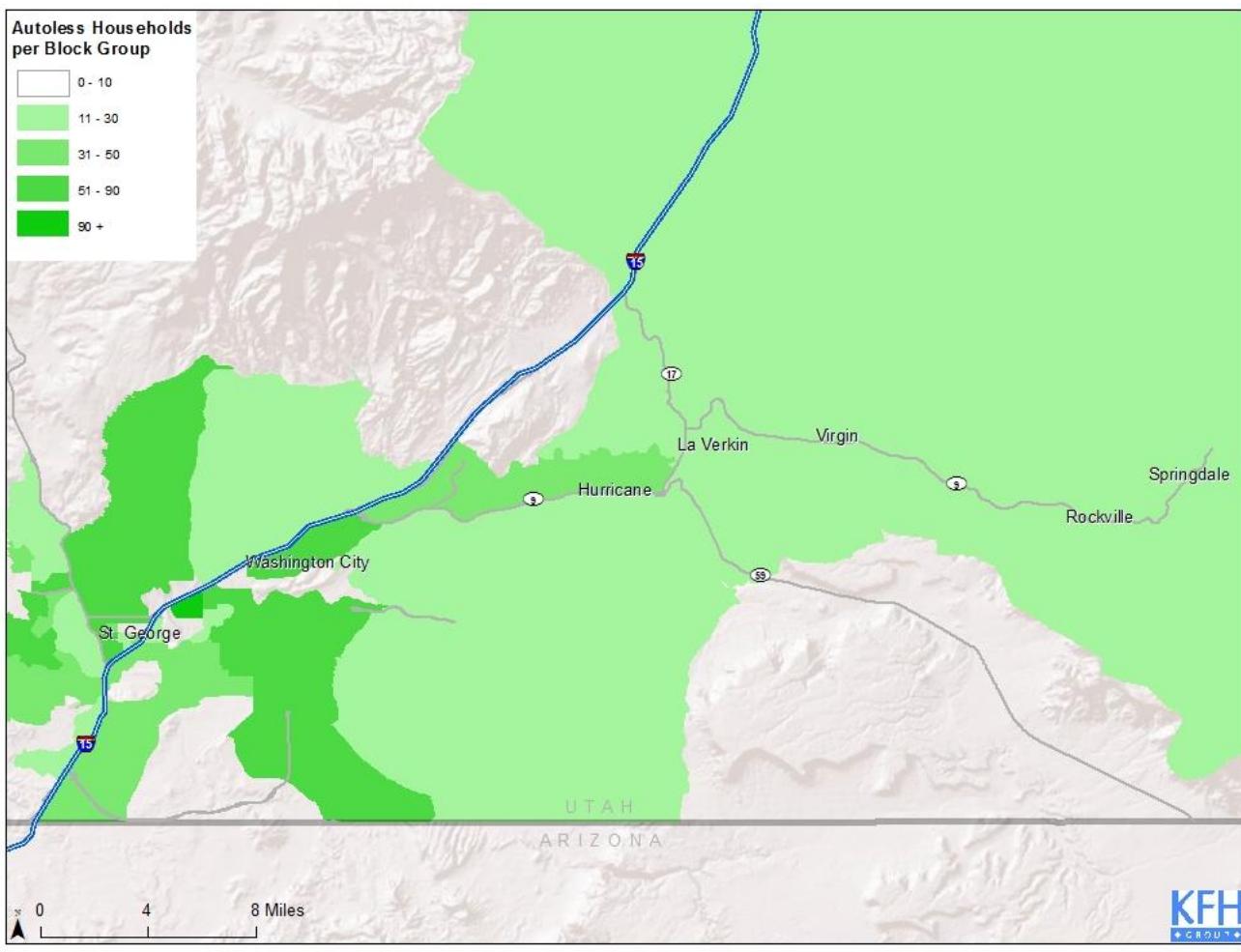
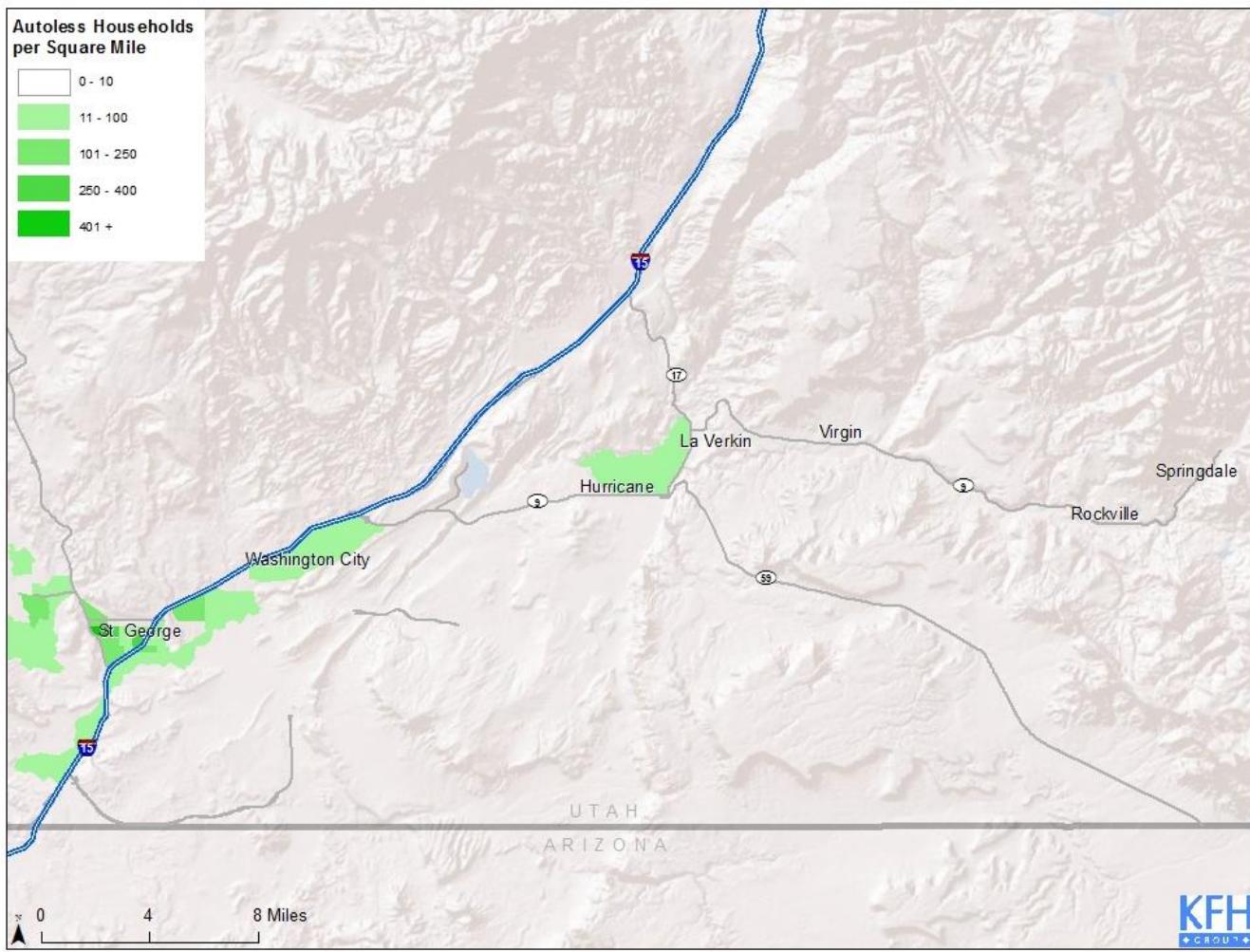


Figure 3-18 displays the number of autoless households per square mile (density). The block groups with the highest densities of autoless households occur in St. George, with elevated densities in Washington and La Verkin.

Figure 3-18: Washington County - Number of Autoless Households per Square Mile



Senior Adult Population

A second group analyzed by the TDI index is the senior adult population. Individuals age 65 and older may begin to decrease their use of personal vehicles as they age, leading to greater reliance on public transportation compared to those in other age groups.

Figure 3-19 displays the relative concentration of seniors in the study area. The highest concentrations of the senior population within the study area are in Washington City and Hurricane, with the area east and southeast of Hurricane also having a relatively high senior adult population.

Figure 3-19: Washington County - Number of Older Adults (Age 65+) per Census Block Group

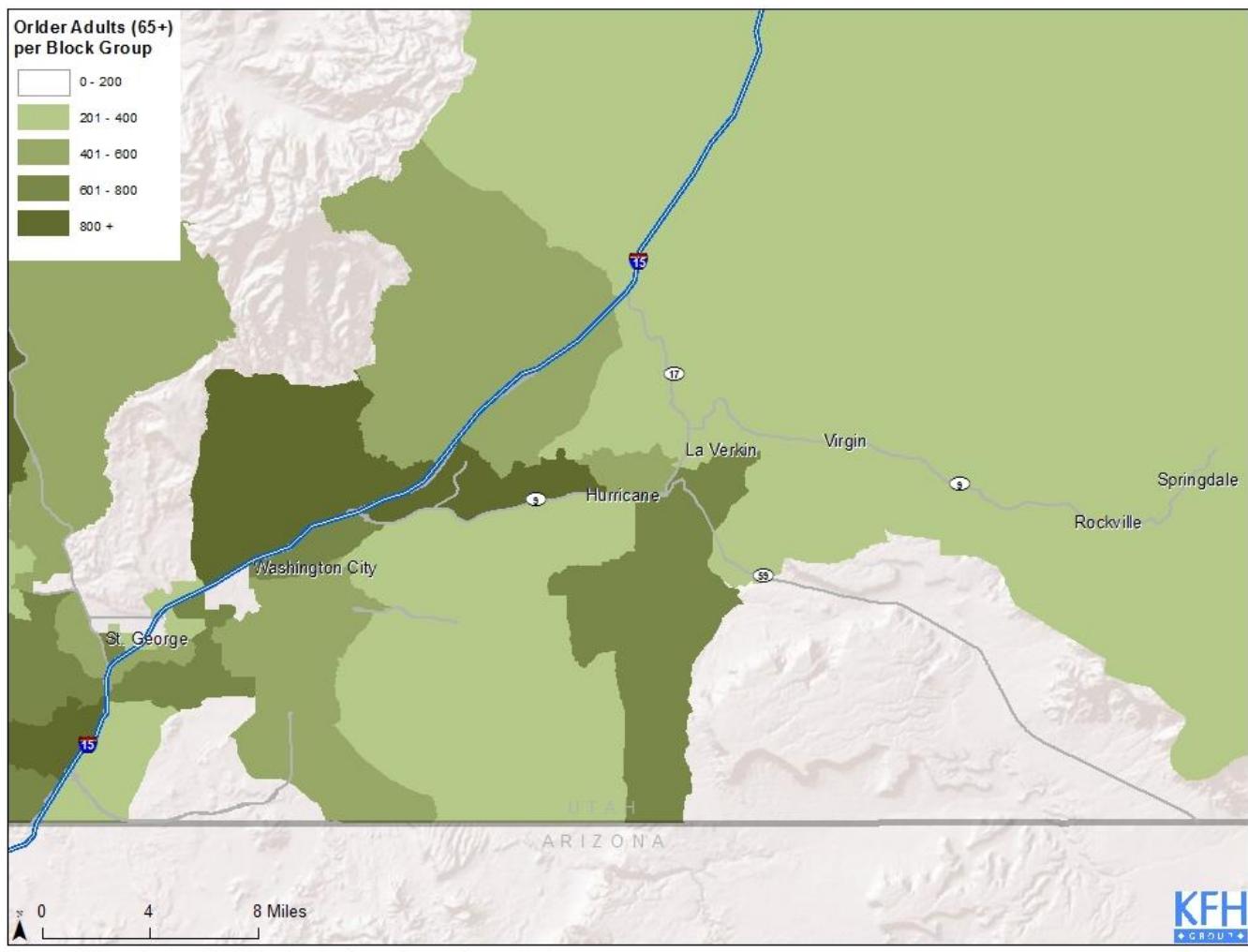


Figure 3-20 displays the relative density of senior adults in each block group; block groups with the highest densities occur in St. George, with elevated densities in Washington City and La Verkin.

Figure 3-20: Washington County - Number of Older Adults (Age 65+) per Square Mile



Youth Population

Youths and teenagers, ages 10 to 17 years, who cannot drive or are just beginning to drive but may not have an automobile available, appreciate the mobility offered through public transportation.

Figure 3-21 illustrates the areas with high concentrations of youth populations. Areas with the highest youth populations include St. George, the area south of Washington City, and the area east and southeast of Hurricane. Hurricane also has a significant number of residents ages 10-17.

Figure 3-21: Washington County - Youth Population (Ages 10-17 years) per Census Block Group

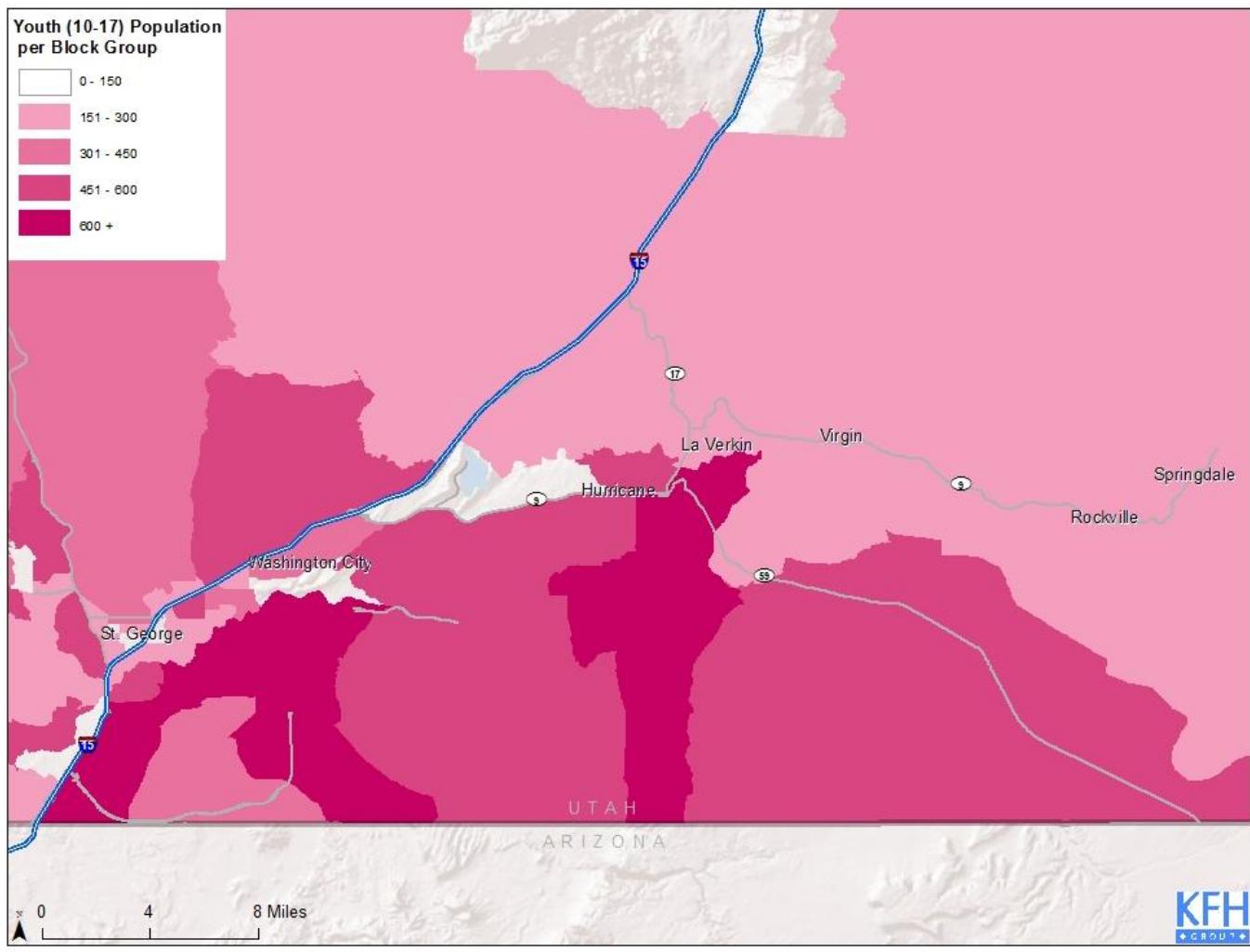
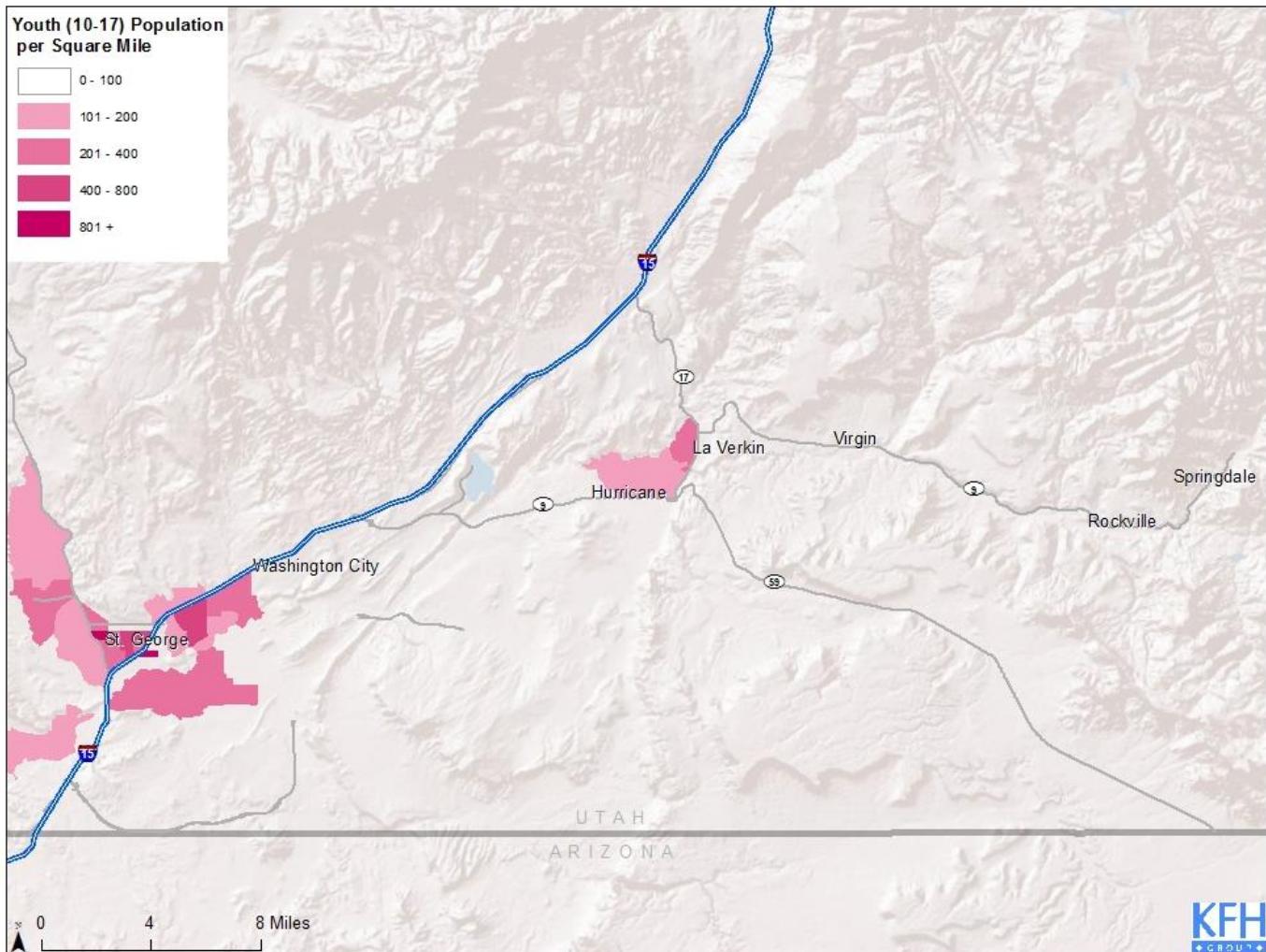


Figure 3-22 displays the youth population per square mile (density). The block groups with the highest densities of young people ages 10-17 occur in St. George, Washington, and La Verkin.

Figure 3-22: Washington County - Youth Population (Ages 10-17 years) per Square Mile



Population Living Below the Poverty Line

People with limited economic means may be unable to afford to own or operate their own vehicles, and thus are likely to have a greater need for public transportation than the general population.

Figure 3-23 displays the relative concentration of households in the study area that are below the poverty level. The highest concentration of households living in poverty within the study area is in Washington City, with elevated areas also occurring in La Verkin, the area southeast of Hurricane, and St. George.

Figure 3-23: Washington County - Number of Households Living below Poverty per Census Block Group

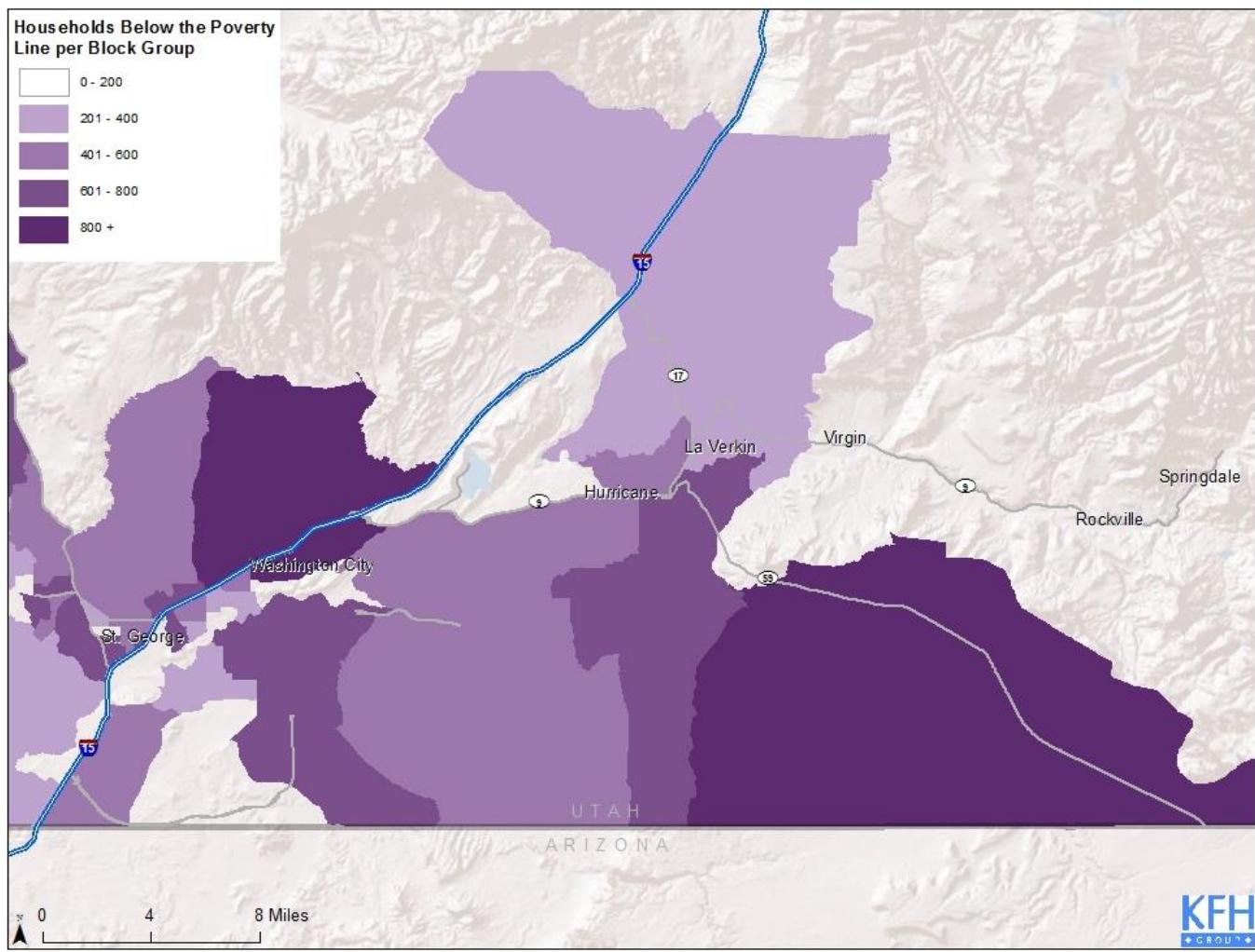
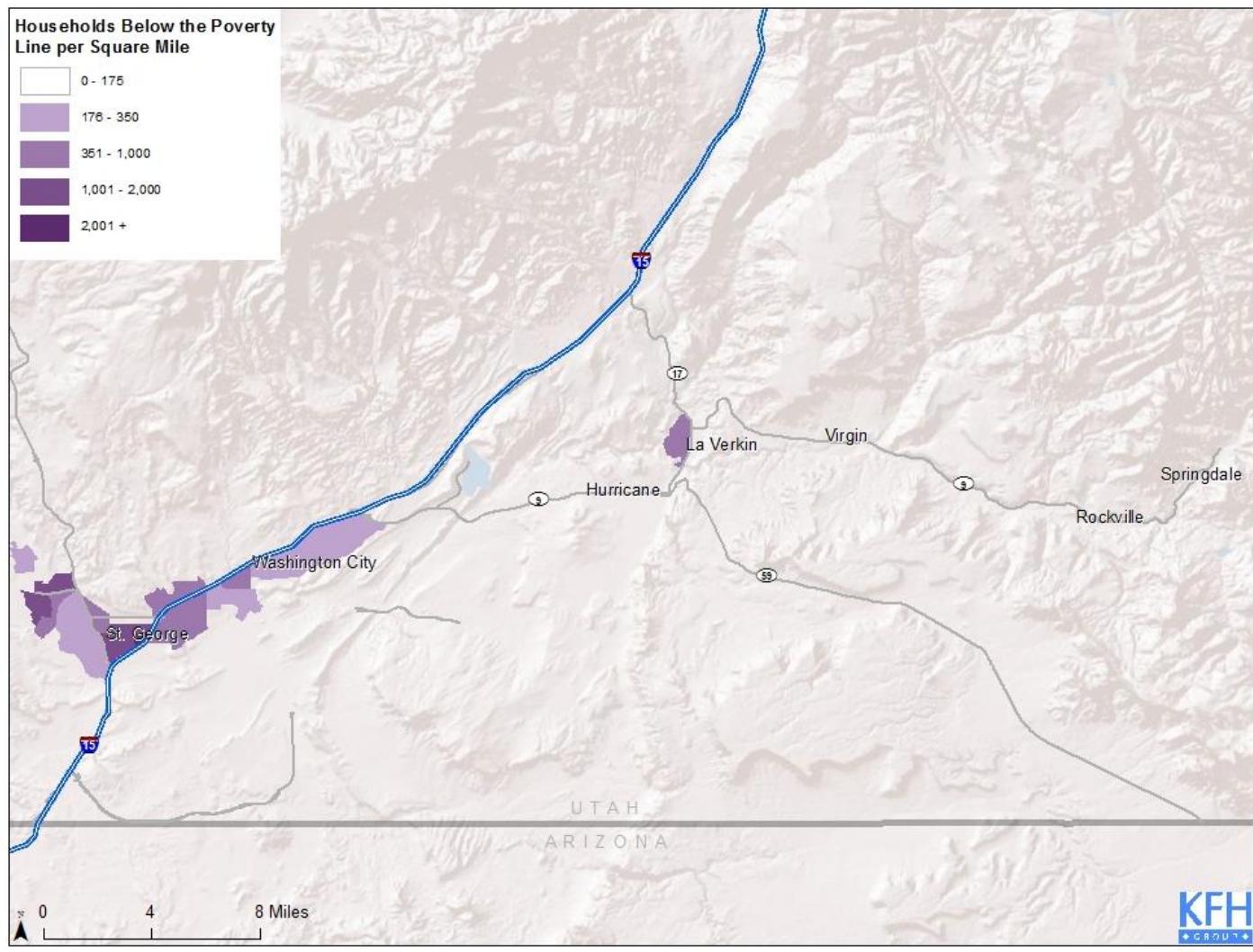


Figure 3-24 displays the number of households living below poverty per square mile (density). The block groups with the highest densities of households in poverty occur in St. George, with elevated densities in Washington City and La Verkin.

Figure 3-24: Washington County: Number of Households Living Below Poverty per Square Mile

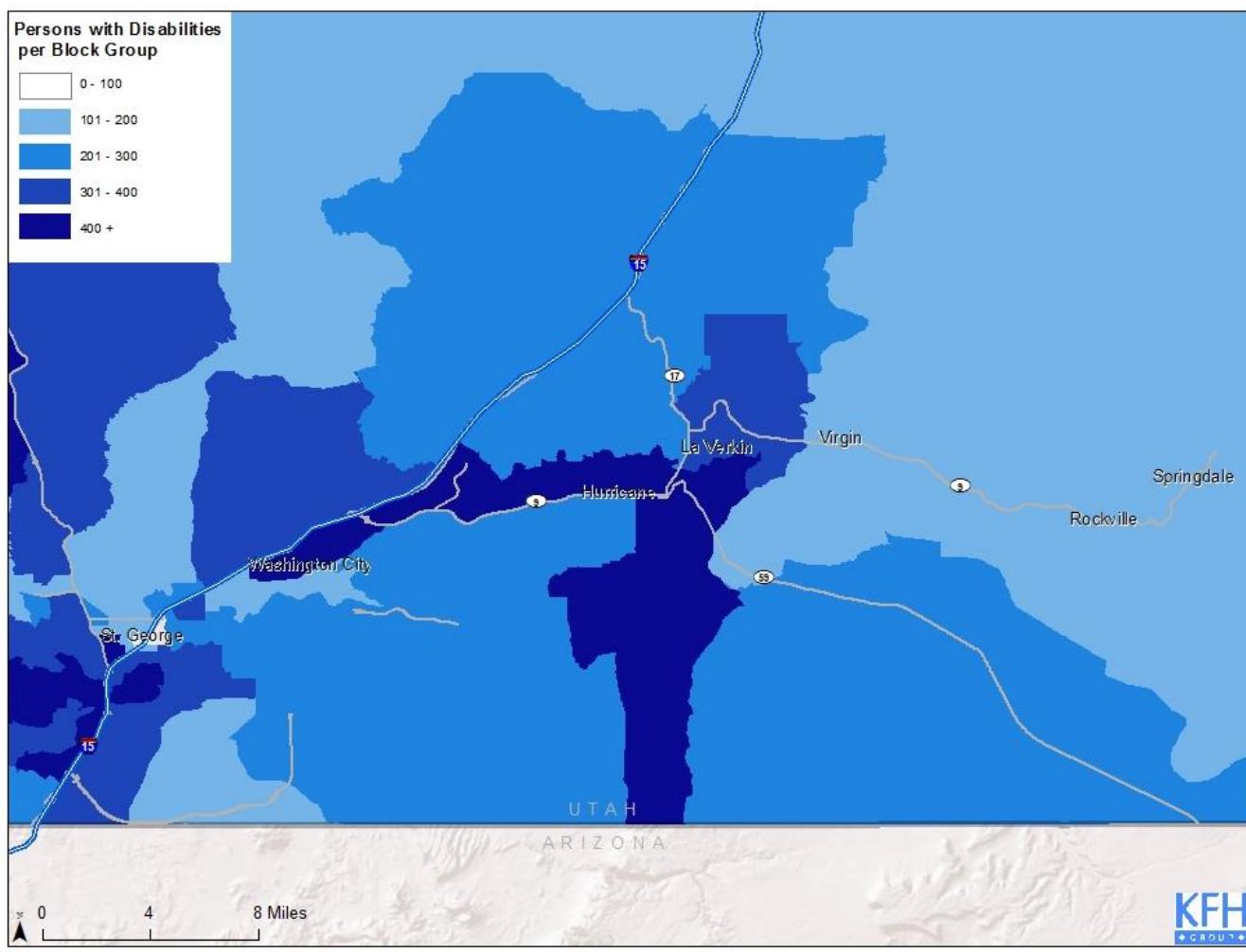


Individuals with Disabilities

It is important to identify areas where concentrations of people with disabilities live, since individuals with disabilities may be unable to operate a personal vehicle and consequently more likely to rely on public transportation. While data on the preceding population groups is available from the 2010 Census, population data on people with disabilities is derived from the 2010-2014 American Community Survey (ACS).

Shown in Figure 3-25, block groups in St. George, Washington City, Hurricane, and the area east and southwest of Hurricane have the highest number of individuals with disabilities, with a significant population also living in La Verkin.

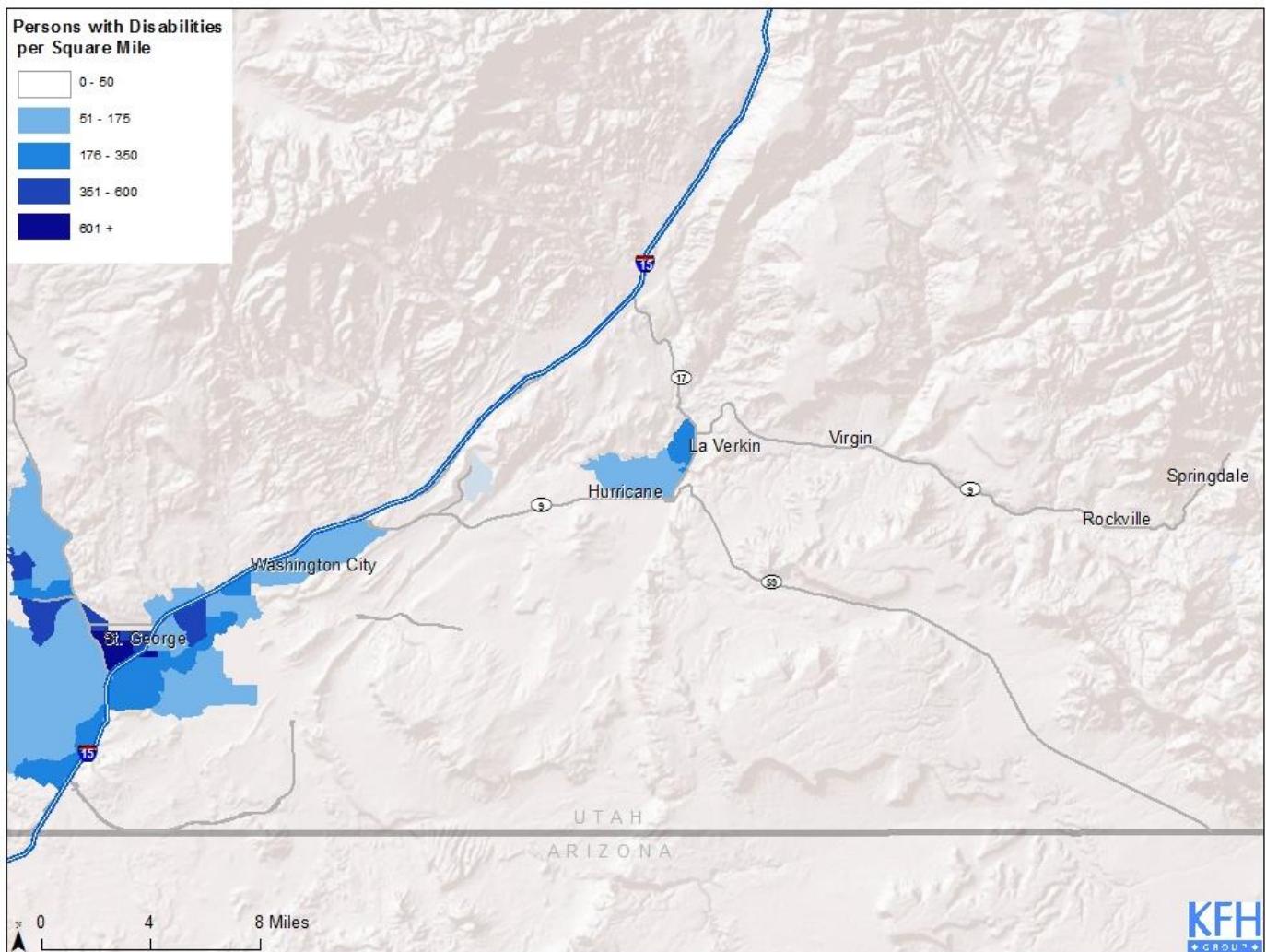
Figure 3-25: Washington County People with Disabilities per Census Block Group



Sources: U.S. Census American Fact Finder, American Community Survey 5 year estimates

Figure 3-26 displays the relative density of people with disabilities in each block group. Block groups with the highest densities occurring in St. George, with elevated densities in Washington City and La Verkin.

Figure 3-26: Washington County: Number of People with Disabilities per Square Mile



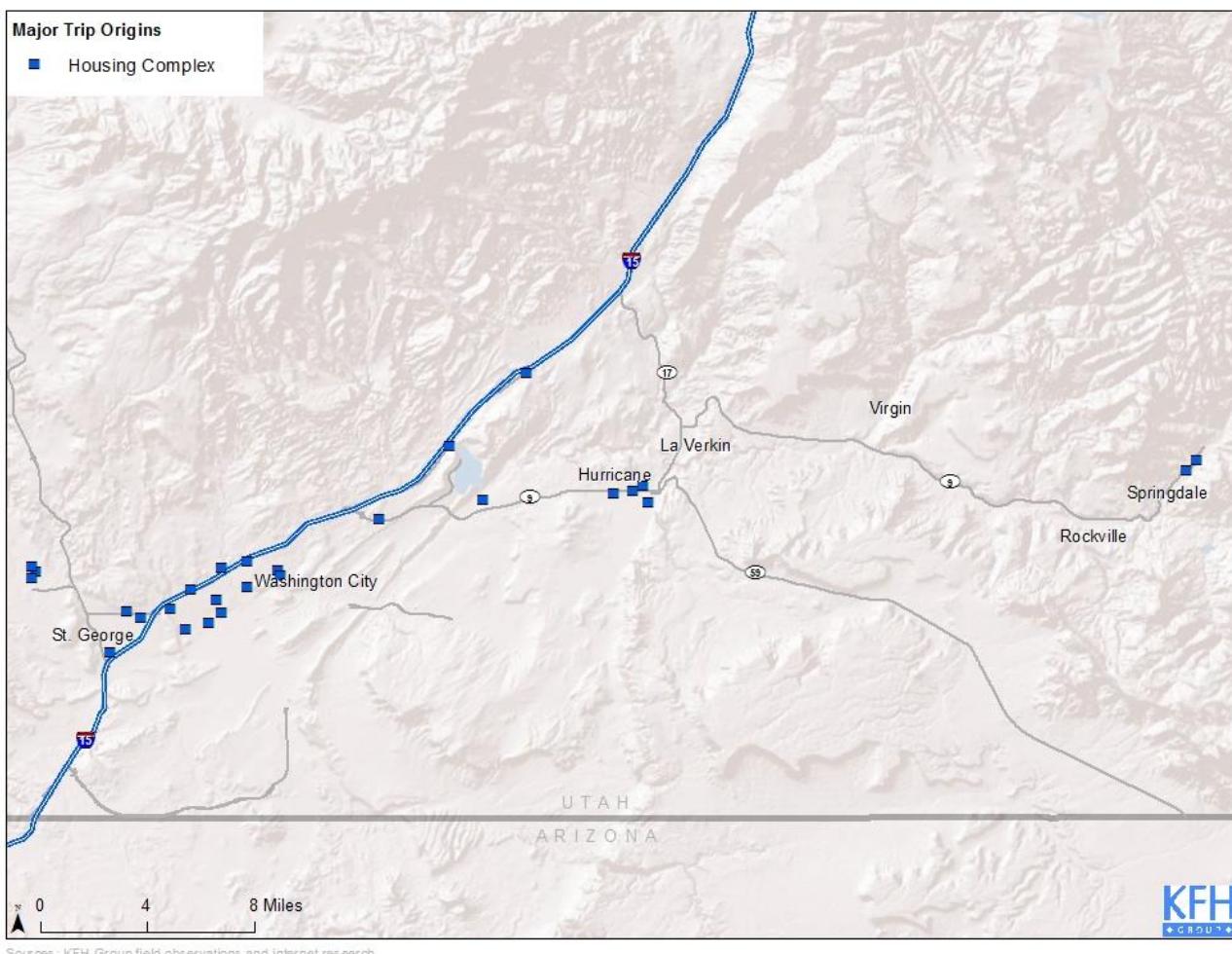
Major Trip Generators

Identifying major trip generators – where larger concentrations of people are more likely to travel – complements the above demographic analysis. Trip generators that attract transit demand include common origins and destinations, like multi-unit housing, major employers, medical facilities, educational facilities, human services and shopping centers. The largest of course would be Zion National Park. A list of the trip generator locations identified to date is provided in Appendix A.

Trip Origins

Figure 3-27 presents a map of where concentrations of people live. This map includes long-term housing such as apartments, mobile home parks, retirement communities, assisted living facilities, rehabilitation hospitals, and nursing homes. These sites are major trip origins.

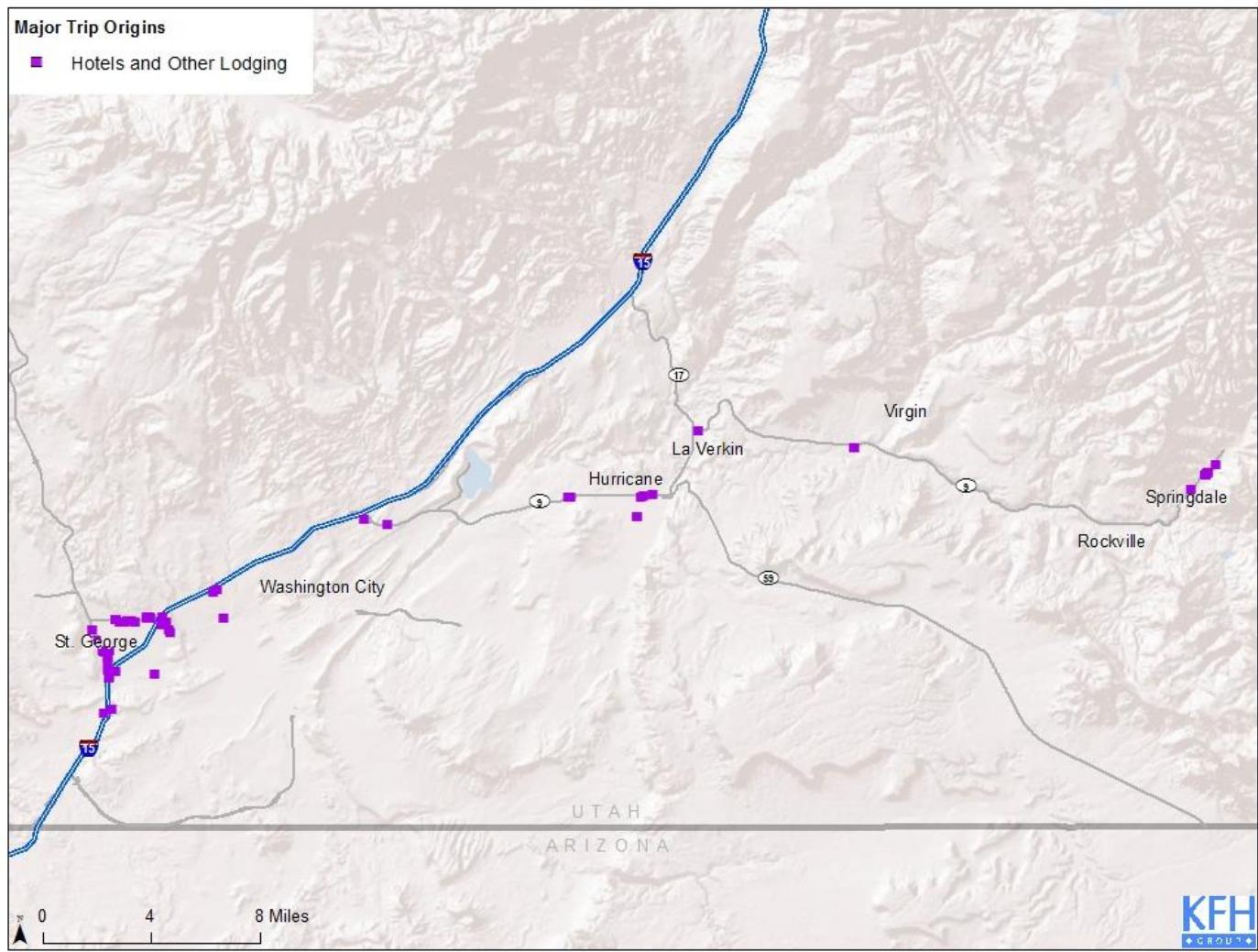
Figure 3-27: Housing along the Study Corridor



As can be seen in Figure 16, long-term housing is mostly concentrated in St. George, Washington City, and Hurricane, with apartment communities identified in Springdale.

Figure 3-28 shows the location of hotels, motels, R.V parks, and other visitor lodging areas. These locations represent a different need for local residences as many visitors are coming to the region with the expressed purpose of visiting Zion National Park. Hotels and RV parks are spread across the corridor, in St. George, Washington City, Hurricane, La Verkin, Virgin, and Springdale.

Figure 3-28: Lodging along the Study Corridor



It is useful to look at trip origins separately from destinations when designing transit routes, since trip origins are the locations where riders will start and ultimately end their local travel each day because these are the locations which would need service earliest in the morning and latest in the evening.

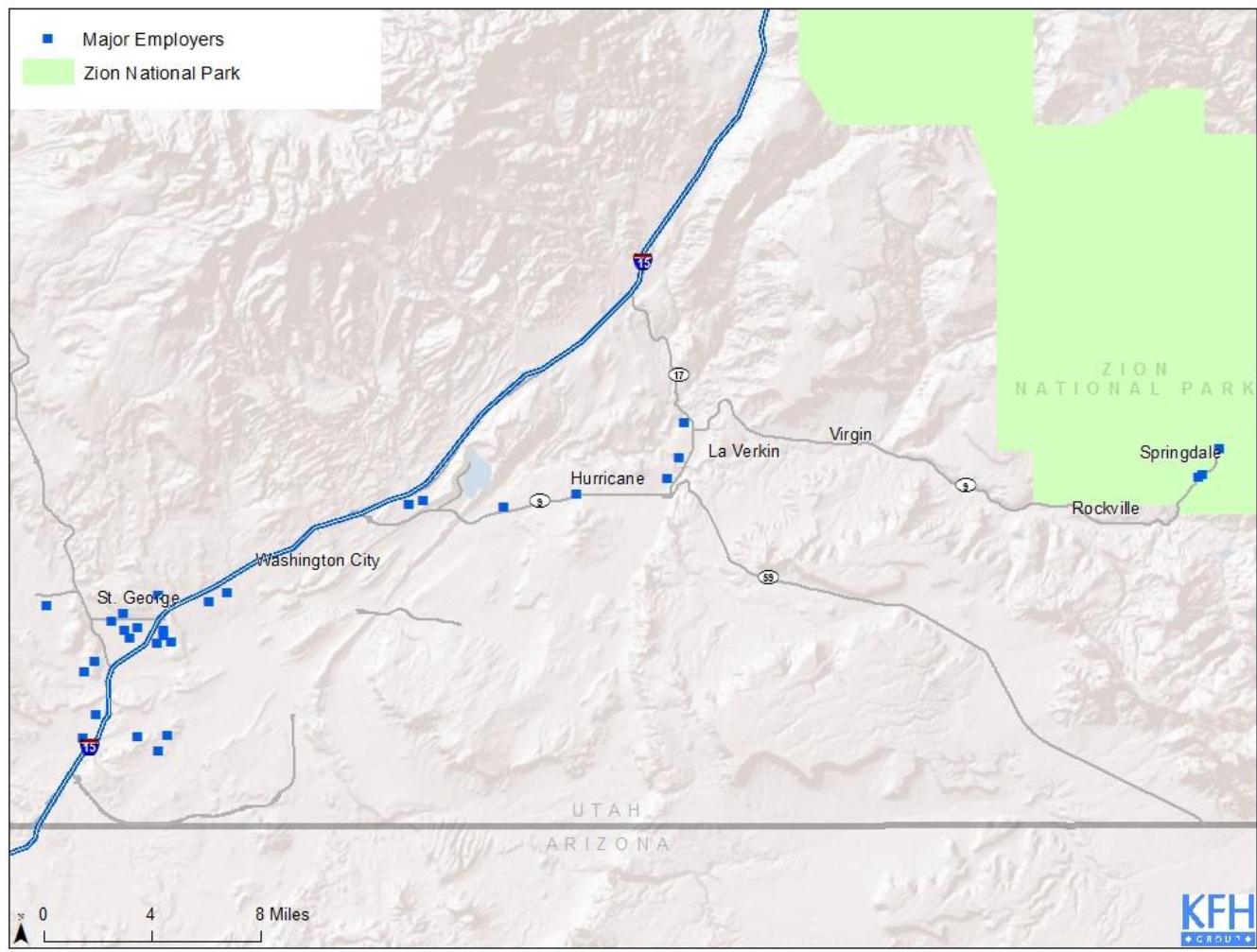
Trip Destinations

For this study, we focused on local trip destinations along the corridor that would be most frequently used by local residents.

Major Employers

Figure 3-29 shows the location of major employment sites along the service corridor. St. George is the primary employment center with many employers also in Hurricane and Springdale.

Figure 3-29: Major Employers along the Study Corridor



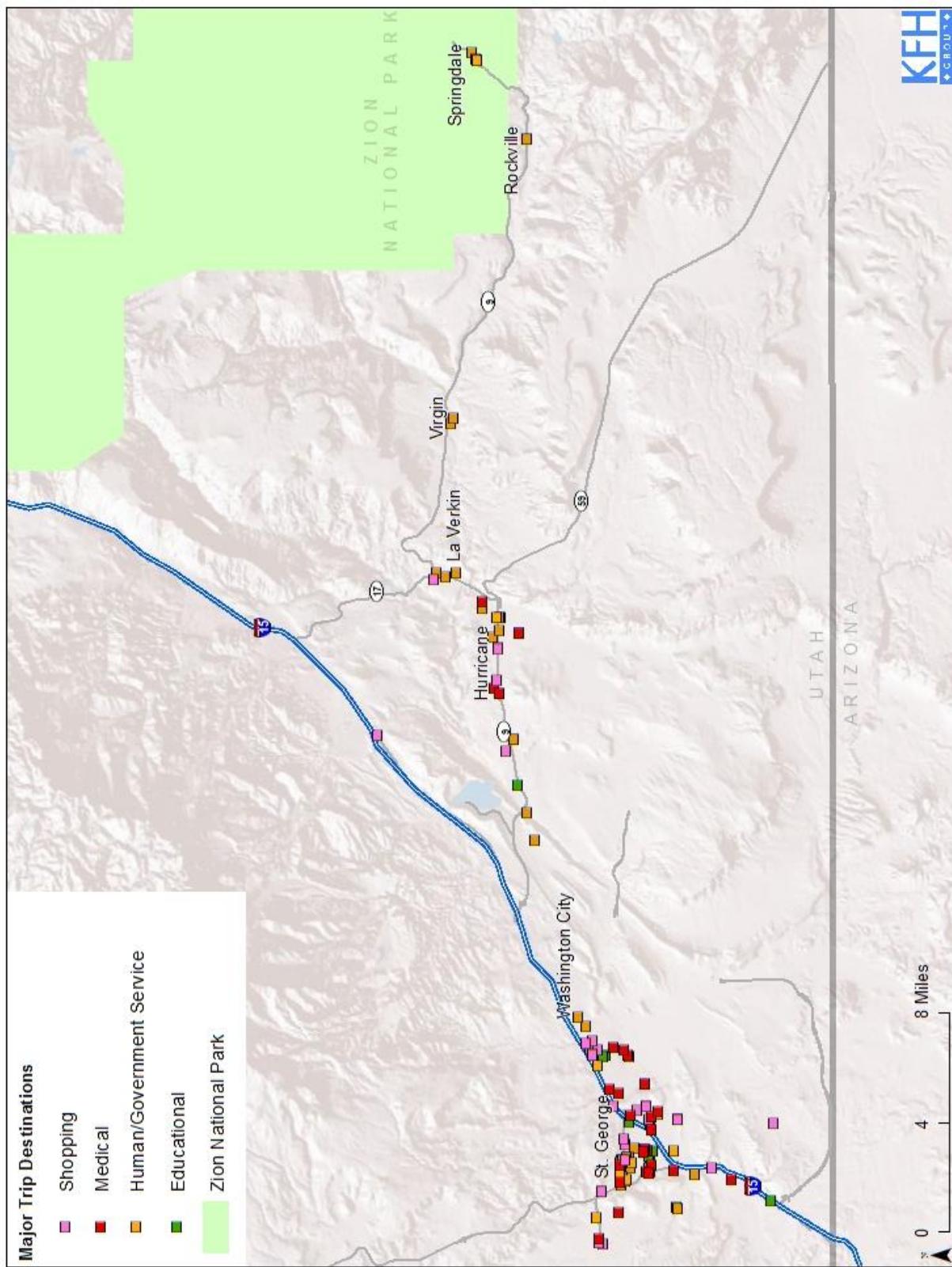
Other Trip Generators

Figure 3-30 displays:

- Shopping destinations (grocery stores, pharmacies, major retail centers such as Walmart and shopping malls),
- Medical destinations (hospitals, clinics, specialists and in outlying areas, individual doctors),
- Human services and government services (senior centers, services for people with disabilities, libraries, city and town offices, justice centers, correctional centers, and transfer points to other transportation providers), and
- Education destinations (high schools, colleges/universities, seminaries, and technical schools).

Destinations are predominantly clustered in St. George and Washington City, with limited destinations in Hurricane and La Verkin, and only one or two human/government services (e.g., post office and library) in Virgin, Rockville, and Springdale.

Figure 3-30: Major Trip Generators in the Study Area



Chapter 4

Unmet Needs and Potential Transit Ridership

INTRODUCTION

Chapter 4 (in addition to Chapters 2 and 3) includes the background work necessary to make informed decisions regarding the design of a transit service between St. George and Springdale. This chapter follows the chapter on assessment of existing transportation service providers and the market analysis, consisting of outreach activities/community input and the review of demographics and land uses. This chapter includes:

- Unmet Needs and Potential Transit Demand
 - Review of Recent Transit Studies
 - Corridor Analysis
 - Potential Partners

REVIEW OF RECENT TRANSIT STUDIES

This section reviews recent studies and reports that may be pertinent to the current feasibility study. The first two studies: The Dixie MPO Regional Transit Study completed in 2012, and the 2015 – 2040 Regional Transportation Plan completed in 2015 are general in nature and do not focus on the S.R. 9 corridor. The S.R. 9 corridor is the subject of this study, although the financial and governance discussion is germane to the S.R. 9 study. The second two studies: the St. George to Hurricane Dixie BRT study and the Hurricane to Springdale Transit Study, both completed in 2010, are focused on the S.R. 9 corridor, albeit separate sections of the corridor. Other studies either did not address the proposed service or are outdated at this time.

Dixie MPO Regional Transit Study – January 2012

The purpose of this study was to evaluate the governance and funding options available to the Dixie region as it seeks to expand and diversify transit service. The identification of strategies for developing, gauging and maintaining public support was also an important part of that study.

There were a variety of governance/organizational approaches discussed such as expanding SunTran through interlocal agreements with other cities and the county and developing a separate operating entity. The local funding options assumed there would continue to be a small amount of urban transit funding available to the St. George area. The S.R. 9 service would

be mostly rural in nature and would have to compete for scarce federal rural transit funding. Those funding assumptions have changed as will be discussed in Chapter 5.

This 10 – 15 year plan is a good baseline for development of funding options and potential organizational structures. Efforts will be updated for 2016 and will include small urban transit funding and private sector options.

Regional Transportation Plan (RTP) – 2015-2040

The RTP objective is to foster coordination of community leaders, the public, and stakeholders to plan for the transportation of people, goods, and services through goals centered on safety, air quality, congestion management, corridor preservation, public transit, pedestrian movement, and respect for environmental constraints. The plan is guided by ten principles that address regional approaches balanced with public transit, air and water quality, preservation landscapes and open space, connectivity between modes and economic issues.

The plan is updated every four years in coordination with other plans in the region. The cities of Ivins, Hurricane, La Verkin, Leeds, St. George, Santa Clara, Toquerville and Washington City, are included in the planning boundary. Service to Springdale and Zion was mentioned when reviewing the plans along the S.R. 9 corridor.

Dixie Bus Rapid Transit Study - June 2010

This study evaluated the feasibility of establishing bus rapid transit (BRT) service between St. George, Hurricane City, and a spur to St. George Airport. The study did not include service to Springdale or Zion, the largest trip attractors in the county. The study, conducted six years ago, concluded that BRT service would be justified in 2035 when it was estimated that there would be a mode split of 2.5 percent that would generate 7,000 daily trips. This study indicated that BRT transit service to Hurricane would be viable when the county population reached 160,000 in about 2016, but that such service would need some kind of predecessor service to establish ridership numbers before a full BRT line could be introduced. The Springdale service line would provide that basis.

Short term mode split, far more pertinent to this study, is calculated at 1.8 percent or about 4,000 trips daily between St. George and Hurricane. This calls for 400 one-way trips during peak hours, enough to fill up 7 - 10 40-foot buses, depending on the primary direction of travel (for example, in the morning the primary direction of travel would be from Hurricane to St. George). The service calls for eight peak buses.

The suggested route through St. George recommends stops along St. George Boulevard to Red Cliffs and then Telegraph Rd. to S.R. 9. There is no stop at the transfer center. While these destinations are important for the current study, other destinations/origins will be required. Financing options are discussed in the context of a far more expensive BRT type service and

most other aspects of the proposed service would be more appropriate for a BRT service (station and vehicle designs for example) rather than a simple standard or express bus route.

Hurricane to Zion – August 2010

This study, coupled with the St. George to Hurricane study, while quite dated due to the unexpected surge in park visitation, should give us insights that can be used in this current study. For example, the study estimates that Zion National Park's attendance would reach 3.3 million by 2035, but in 2015 attendance was 10 percent beyond the 3.3 million, making the need and urgency greater than depicted. This unprecedented growth was not anticipated by experts and these types of anomalies can render predictions inadequate. The study predicts a 5 percent mode split, assuming there is service between St. George and Hurricane and somewhat constrained parking and traffic.

This study anticipated that most growth in trip-taking would be generated by population growth. With the very high visitor numbers this past year, the growth balance will skew toward visitor traffic. Since this Hurricane to Zion study was completed, visitation has increased 36 percent in five years, with 30 percent growth in the past two years. Traffic on S.R. 9 is expected to fluctuate up to 30 percent between peak and off-peak seasons, but as local growth continues the study expects that percentage to narrow.

Ridership estimates for this service in 2010 was at 450 one-way trips per day with a split of approximately 30 percent local residents and 70 percent visitors. Applying the 36 percent increase in park visitation since these estimates were made and the increase of population of about 10 percent, daily ridership will increase to about 577 daily trips, an increase of 28 percent in five years.

Summary – Recent Plans

The long range plan sets the stage by addressing ten principles for planning which include a balanced use of public transportation. Other principles require some level of public transportation as well. Most pertinent for this effort are the two studies that looked at service along the S.R. 9 corridor. Two separate studies, both completed in 2010, focused on different parts of the same corridor. The first was a study of bus rapid transit service between Hurricane and St George for residents along the corridor and the second was a tourist and commuter oriented service between Hurricane and Springdale that assumes the St. George service will be in place.

These two studies were conducted separately, however when put together they do not complete the picture. The first study misses commuters and visitors from St. George and Washington City to Springdale, a major employment and tourism zone, while the second study does not address the needs of persons coming from or going to areas west of Hurricane. Neither study identifies the local market, most specifically residents of Washington City,

Hurricane and La Verkin that have local needs for school, shopping medical, recreation and business.

The Dixie MPO Regional Transit Study is an excellent starting point for the development of funding solutions and as a governance structure. These plans have been valuable in providing background information and an historical context for the current effort. The rapid growth of the area combined with the significant increase in visitation to Zion has rendered the ridership estimates outdated, while the concepts themselves remain valid.

CORRIDOR ANALYSIS

For the purposes of these ridership estimates and data availability, the corridor is broken out into four sub-corridors. These are depicted in Figure 4-1 and include:

1. **St. George to Hurricane/La Verkin** – This sub-corridor focuses on potential ridership for commuters between the two areas as well as other needs for local residents in Washington City. This sub-corridor accounts for visitors going to Springdale.
2. **Washington City Local** - Considering the very significant ridership stated by SunTran, there is potential for a local component of this service that would meet the needs of local residents to local destinations for work, school, shopping, personal business and other activities.
3. **Hurricane and La Verkin Local** – As with Washington City, there is potential for a local component of this service that would meet the needs of local residents to local destinations for work, school, shopping, personal business and other activities.
4. **Hurricane/La Verkin to Springdale** – This sub-corridor will address the needs for commuters to Springdale as well as the visitor population which has been increasing in unprecedented numbers.

Ridership Estimates

Each of these sub-corridors has a differing set of needs. Based on the data available, the study team will use a variety of techniques to estimate ridership for service. Ridership estimates will be calculated on a daily basis as that determines the most appropriate level of service. Due to the lack of consistent data across the different corridor segments, the study team used a variety of estimation methods depending on data availability and appropriateness for that segment which will then be compared to estimates provided by previous studies.

Figure 4-1: Corridor Analysis Map



For the purposes of this analysis there are a number of assumptions that will be applied:

- Basic service will include peak-hour express commuter service and all-day hourly service throughout the corridor.
- Seasonal fluctuations for visitors and employment in Springdale will have an influence on service levels.
- The segment to Springdale will be considered in two “seasons”: constrained parking (June, July, August and September) and unconstrained parking.
- Constrained parking will have a significant impact on transit usage. Future efforts toward a bus lane in Springdale will make transit very attractive by ensuring a significantly shorter trip to Springdale and the park.
- Persons with disabilities, seniors and low income resident ridership will be based on their percentage of the population. The ridership range will be at the same usage rates as the rest of the general public.

1. St. George to Hurricane/La Verkin

Commuters may find this proposed service valuable as well as a wide variety of local Hurricane and La Verkin residents needing service to St. George for a variety of reasons. In this segment of the corridor there are average daily vehicle counts between I-15 and Hurricane on S.R. 9. Taking those numbers and applying a factor of 1.5 persons per vehicle can generate an estimate of the number of travelers. The 2010 Dixie MPO BRT Study indicated a factor of 1.42, however due to the increased use of the park (over 30 percent increase) vehicle load factors have increased and we will use a factor of 1.5. Using this number, a mode split of one percent is used at the low ridership months and two percent during June through September to generate a higher end ridership. A one percent mode split is also calculated for all year.

Table 4-1 indicates the potential daily ridership by month for that segment of the service corridor using 2015 numbers which will almost assuredly increase from 2016 - 2020. Ridership would be 300 – 400 one-way trips daily in the months of January through May and 700 plus during peak months, assuming the continued highly constrained parking in Springdale. The average will be 467 one-way trips at the high end and 346 daily riders at the low end. This compares reasonably well to the short term estimates of 1,148 riders for a BRT service as the proposed BRT service would be a much more intensive level of service. Annually the estimates range from 126,000 to 170,000.

Table 4-1: Mode Split Analysis 2015 - S.R. 9 St. George to Hurricane

Month	2015 Vehicles	2015 Persons	Mode Split 1% - 2%	Mode Split 1%
January	19,386	29,079	291	291
February	22,152	33,228	332	332
March	23,717	35,576	356	356
April	24,643	36,965	370	370
May	23,697	35,546	355	355
June	23,714	35,571	711	356
July	23,392	35,088	702	351
August	24,988	37,482	750	375
September	24,323	36,485	730	365
October	23,628	35,442	354	354
November	22,535	33,803	338	338
December	20,881	31,322	313	313
Average	23,088	34,632	467	346

Source: UDOT Traffic Bulletins for 2015

Visitor Ridership Segment 1

Determining an estimate of visitors traveling to Springdale/Zion in Segment 1 is calculated as follows. Examining the daily increase in traffic/passenger counts on S.R. 9 indicates that the number of daily passengers increases 8,000 one-way trips per day between the lowest travel month (January) and the peak month of August. While much of that is locally generated traffic and commuters, about one-half of the increase each month is estimated to be visitors to Springdale and the Park (4,000 daily trips in August).

For the purposes of this estimate, January will serve as a baseline where few trips are attributed to visitors. Table 4-2 used to calculate visitor and local service to Springdale/Zion, estimates the number of daily trips in this corridor that can be attributed to visitors to the Park (one-half of the increase from the baseline). As can be seen in a one percent mode split scenario, visitor ridership accounts for less than 10 percent throughout almost the entire year. At the 1 – 2 percent scenario, visitor ridership is typically below 10 percent in this segment, with increases up to 30 percent during the four summer months.

Table 4-2: Potential Daily Ridership Hurricane to Springdale

	Monthly Park Visitation	Entry at Springdale 65%	Estimated return Trip 50%	Charter Bus Pasengers*	Average Daily Visitors from and returning to Hurricane and West	Average Daily Commuters	Average Daily Transit Mode Split Low	Average Daily Transit Mode Split High
January	80,178	52,116	40,089	1,240	1,253	500	70	70
February	107,994	70,196	53,997	1,680	1,688	500	88	88
March	292,978	190,436	146,489	2,280	4,652	700	214	214
April	394,217	256,241	197,109	4,800	6,204	1,000	288	288
May	401,908	261,240	200,954	9,720	6,169	1,500	307	307
June	460,346	299,225	230,173	8,280	7,158	2,200	936	1872
July	481,398	312,909	240,699	6,680	7,549	2,200	975	1950
August	457,347	297,276	228,674	6,320	7,173	2,200	937	1875
Sept	396,001	257,401	198,001	12,080	5,997	2,200	820	1639
October	316,826	205,937	158,413	8,240	4,844	1,000	234	234
November	182,190	118,424	91,095	2,600	2,855	1,000	154	154
December	90,837	59,044	45,419	1,320	1,423	1,000	97	97
Totals	3,662,220	2,380,443	1,831,110	65,240				

*Assumes 40 passengers per bus

Source: NPS

Summary

The numbers generated in this report are conservative by the estimate standards of the 2010 BRT study. The BRT study used mode split estimates of 2.5 and for the purposes of BRT with high frequency service, those numbers seem reasonable and in line with the ridership generated in this study for a less frequent service.

2. Washington City - Local

Washington City currently does not have public transit service as SunTran stops about one mile from the heart of Washington City and $\frac{3}{4}$ - mile from Walmart. At this time, SunTran is conducting its planning process and service and Washington City is being considered as an option. If SunTran is selected to operate their service, then the service described in this plan would be express only with 1 – 2 stops in Washington City.

This area is comparable to St. George in demographics and as a result should see similar ridership patterns. Using the comparative to St. George and assuming hourly service, it is possible to generate 5 – 10 one-way trips per hour in local service in each direction. This is considerably lower than St. George, but over time the system will see similar numbers within St. George. Ridership will go to destinations in Washington City (most notably Walmart) and into St. George. Assuming hourly service, ridership in one-way trips within Washington City should be between 120 trips (5 trips per hour) to 240 one-way trips daily (10 trips per hour).

Annually this would range from 37,000 to 74,000 one-way trips. None of these riders would be visiting Zion by definition.

3. Hurricane and La Verkin - Local

Hurricane and La Verkin do not have an existing public transit service for their rapidly growing community. This area shows similar demographic traits to St. George and Washington City. As a result the study team uses the comparative analysis similar to that done for Washington City. There are considerable local needs that can be filled by a corridor route that makes multiple stops. Based on St. George's ridership productivity of 20 one-way trips per hour, we will use a starter ridership of 5 - 10 one-way trips per vehicle hour as was done for Washington City. The results should be similar to the 120 – 240 one-way trips per day within the Hurricane and La Verkin area. Again, by definition this is only local riders.

4. Hurricane/La Verkin to Springdale

Visitors and commuters to Springdale drive this estimate, with ridership potential shared with employees in the Springdale area. Lacking vehicle counts, for this effort the study team relied on visitor numbers counted by the National Park Service (NPS) and daily commuter estimates to Springdale by UDOT.

Table 4-2 details potential ridership by month for this segment of the corridor.

1. This analysis starts with the number of visitors to the park on a daily basis. According to officials for the NPS, 65 percent of those entering the park do so at the Springdale entrances.
2. Approximately one-half of the entrants depart at the same entry point and these are the most likely candidates for transit usage.
3. The number of charter bus riders coming through Springdale and into the park is estimated based on data supplied by the National Park Service. Each bus is calculated at 80 percent full (40 passengers). This averages to approximately 3 percent of the potential trips with a monthly high of 6 percent in September. This is subtracted from the total.
4. The resulting daily visitor usage figures represent the number of visitors that can potentially use a transit service to Springdale and Zion.
5. The average daily number of commuters is calculated based on the average daily commute numbers.
6. The visitor and commuter travel (daily visitors and commuters multiplied by two for both legs of the trip) are added together to determine the mode split. At the low end a

mode split of 2 percent is used during off-peak months and 5 percent during peak. The high end scenario uses 10 percent for peak months and 2 percent for the lower mode split. These numbers are then turned into one-way trips and the results depicted in Table 4-2. Table 4-2 depicts a low end usage of about 156,000 one-way trips annually. The high end usage is about 268,000 trips.

When compared to the visitor ridership calculated in the Hurricane to Zion Transit Study – 2010 (increased by 28 percent to account for visitor increases), that ridership estimate is 155,000 trips. That estimate is closely aligned with the estimates generated in this study.

Local resident needs will include commuters from Hurricane (and points west) and some Springdale residents. Using a mode split approach can allow us to identify potential ridership for these commuters. Using State of Utah estimates¹ there are about 1,330 employees averaged throughout the year of which over 2,000 employees commute daily during peak season and as few as 500 during the winter. Using the mode split discussed above, this can result in an additional 10,000 to 24,000 riders annually.

Ridership Estimates: Persons with Disabilities, Elderly and Low Income Residents

Estimating ridership among these three transit dependent populations will be based on potential use by these groups. In each case, the estimates are based on each group's percentage of the population in that segment. Due to the level of information available, these three groups are not mutually exclusive. That is, an individual may be counted more than once in any combination of low income, elderly and/or person with disabilities.

Potential ridership is developed by segment:

1. **St. George to Hurricane** – Potential ridership is based on the average percentage of population for this corridor and is detailed above. Table 4-3 details this potential ridership, accounting for a significant portion of the total ridership.

Table 4-3: Potential Annual Transit Dependent Demand Segment 1

User Group*	User Group Percent of Population **	Total Annual Ridership High	Total Annual Ridership Low	Total User Group Annual Demand High	Total User Group Annual Demand Low
Elderly	0.22	170,455	126,290	37,500	27,784
Persons with Disabilities	0.13	170,455	126,290	22,159	16,418
Low Income	0.13	170,455	126,290	22,159	16,418

*Each group is not mutually exclusive

**Based on American Community Survey 2014

¹ Utah Department of Workforce Services, Workforce Research & Analysis, Annual Report of Labor Market Information, 2014

2. **Washington City** – Table 4-4 illustrates the potential ridership for service in the city. The total numbers are derived from the narrative above and are based on estimated one way trips per service hour (low of 5 one way trips per hour and a high of 10 trips per vehicle hour). It is expected that seniors who make up a significant portion of the population will use the service for local needs and to access St. George.

Table 4-4: Potential Annual Transit Dependent Demand Segment 2

User Group*	User Group Percent of Population**	Total Annual Ridership High	Total Annual Ridership Low	Total User Group Annual Demand High	Total User Group Annual Demand Low
Elderly	0.12	87,600	43,800	10,512	5,256
Persons with Disabilities	0.1	87,600	43,800	7,884	4,380
Low Income	0.09	87,600	43,800	6660	3,942

*Each group is not mutually exclusive

**Based on American Community Survey 2014

3. **Hurricane and La Verkin** – This segment ridership is illustrated in Table 4-5. The total numbers are derived from the narrative above and are based on estimated one way trips per service hour (low of 5 one way trips per hour and a high of 10 trips per vehicle hour). This area has high numbers of seniors who will use the service frequently.

Table 4-5: Potential Annual Transit Dependent Demand Segment 3

User Group*	User Group Percent of Population**	Total Annual Ridership High	Total Annual Ridership Low	Total User Group Annual Demand High	Total User Group Annual Demand Low
Elderly	0.18	87,600	43,800	15,768	7,884
Persons with Disabilities	0.12	87,600	43,800	9,636	4,818
Low Income	0.11	87,600	43,800	8,140	4,070

*Each group is not mutually exclusive

**Based on American Community Survey 2014

4. **Hurricane to Springdale** – Table 4-6 looks at local residents only. The total ridership figures for local residents is calculated above and is based on a mode split percentage of commuters. Zion has not conducted an analysis of numbers of visitors by user group.

Table 4-6 Potential Annual Transit Dependent Demand Segment 4 (Local Residents)

User Group*	User Group Percent of Population**	Total Annual Ridership High	Total Annual Ridership Low	Total User Group Annual Demand High	Total User Group Annual Demand Low
Elderly	0.18	24,000	10,000	4,320	1,800
Persons with Disabilities	0.11	24,000	10,000	2,640	1,100
Low Income	0.11	24,000	10,000	2,640	1,100

*Each group is not mutually exclusive

**Based on American Community Survey 2014

Table 4-7 provides potential totals for persons with disabilities, elderly and low income persons, typically numbering between 10 and 24 percent of the population. Potential ridership should mirror those numbers.

Table 4-7 Potential Ridership Transit Dependent*

Segment	Elderly	Persons with Disabilities	Low Income
Segment 1 High	37,500	22,159	22,159
Segment 1 Low	27,784	16,418	16,418
Segment 2 High	10,512	8,760	7,884
Segment 2 Low	5,256	4,380	3,942
Segment 3 High	15,768	10,512	9,636
Segment 3 Low	7,884	5,256	4,818
Segment 4 High	4,320	2,640	2,640
Segment 4 Low	1,800	1,100	1,100

*Each group is not mutually exclusive

Summary – Ridership

Ridership is estimated based on the very active 2015 season. As the population of the area increases at a rapid pace and as visitors continue to flock to the area, ridership for service will increase 5 percent or more per year. If Zion National Park continues to see unprecedented growth, ridership may increase even more rapidly. As is typical of a new business, ridership will not immediately manifest itself and there will be a need to market the service in conjunction with the NPS, and local businesses. The ridership reflected here may take a few years to meet these targets.

Table 4-8 summarizes the potential ridership by corridor segment. It should be noted that there may be some duplication of estimates between Segment 1 and Segment 4. This table demonstrates the potential for transit in the S.R. 9 corridor. This includes Washington City, however if Washington City opts to join SunTran, the local estimates should be subtracted out. While much of the ridership is driven by the large number of visitors, it is equally driven by the rapid growth in Hurricane, Washington City, Springdale and St. George, which continues at this time.

Table 4-8: Average Daily Peak Season Demand Estimates by Corridor Segment 2016

Segment	Average Daily Low	Average Daily High	Annual Low	Annual High
1	346	467	126,000	170,000
2	120	240	43,800	87,600
3	120	240	43,800	87,600
4	427	732	155,855	267,180
Totals	1,013	1,679	369,455	612,380

POTENTIAL PARTNERS

The success of this service will be, to some degree, dependent upon partners and sponsors. Public/Private Partnerships (P3) are becoming popular in transit and should be a good fit for this corridor. For many years public transit and the private sector have partnered in advertising. P3 takes this a step further and offer a variety of partnership/sponsorship packages. Following are potential sponsors and partners.

1. **Cities and the county** – Having a vibrant transit system between St. George and Springdale will bring significant advantages to those cities as well as to Washington City, Hurricane, La Verkin and the county. Annual contributions will be required based on service levels for each city. Contributions can include in-kind support such as maintenance, placement of signs and shelters. Those that do not contribute will not receive service.
2. **Two existing transit systems** – There are many synergies to a partnership with timed meets, coordinated training and maintenance, all the way to having one of the entities operate the service.
3. **Human service agencies** – Agencies can offer additional transportation options for clients and possible funding for services.
4. **Hotels and visitor attractions** – As long as constrained parking exists in Springdale, hotels in St. George and Hurricane would have an advantage in having a stop by their facility. There are opportunities for sponsorships among this group of potential partners.
5. **NPS** – This corridor service has the potential to reduce traffic to the entrance of Zion National Park thus enhancing the park experience.
6. **Major employers** – Employers in Springdale have consistently stated that there is a need for transportation for employees. Additionally, this service will open up employment options for residents from St. George to Springdale. Major employers could become sponsors.
7. **Major retailers** – Walmart will have two stores on the route and they have been known to support transit with funding.
8. **Dixie State** – There is a small Hurricane campus and residents of the corridor may have a need for service into the main campus.

9. **Medical facilities** – Most major medical services are in St. George. There are many ways that these entities can participate with transit to ensure their employees and patients have excellent access.

SPONSORSHIPS AND PARTNERSHIPS

There are a number of types of public/private partnerships where all parties gain. Most appropriate for these purposes is the sponsorship program designed for P3 efforts between the private sector and transit.

Transit has a long history of providing advertising on and in buses for additional revenue. Many systems have engaged in advertising over the years, but a sponsorship program is more than simply advertising. Instead of the usual selling of just one form of advertising, the transit system should sell sponsorship packages. Since sponsorship and advertising funds are an important source of local funding, this program can help expand the service.

Identifying Service

As discussed above, the program is designed to sell a service to both public and private sponsors. Possible services for sale can include (but should not be limited to):

Sponsorship Services at Any Level

- Recognized as a sponsor on the system's how to ride guide (system map and schedule).
- Recognized as a sponsored on all system literature and advertising.
- Decal on side or back of the bus.
- Dedicated shuttle.
- Special promotions sponsorship.

Higher Level Sponsorship Services

- Company logo on route map.
- Placing of a shelter for customers and/or employees.
- Placing of a stop conducive to customers and/or employees - This could include going into a parking lot and stopping next to the facility.
- Route named for sponsor.
- Bus Wrap.

If properly packaged, these services have considerable value to businesses such as:

1. **Large retailers** – Walmart, Target, supermarkets, malls and big box stores are excellent examples.
2. **Hospitals** – There are a number of examples of wrapped buses for hospitals, medical groups, and pharmacies.
3. **Hotels and other visitor attractions** – There are many opportunities here.
4. **Large local based corporations** – Are there any large corporations based in the area?
5. **Small local based companies** – Any local company can participate at a number of levels.
6. **Fast food restaurants** – Wrapped buses are popular with some of the largest chains.
7. **Television, radio stations, and local newspapers** – There are opportunities with these organizations. They can give transit valuable advertising.

Develop Sponsorship Levels and Packages

After determining what will be for sale, the following activities should be accomplished.

- **Price items** – Attach value to each item for sale. Check with firms that wrap buses to determine the cost of a wrap. Items should be priced competitively with similar types of advertisements, such as billboards, and television and radio advertising. Think big! Both large and small firms should have opportunities. Set up multi-year packages for semi-permanent advertising such as bus wraps, shelter and bench signs.
- **Develop sponsorship packages** – After pricing the various services to be provided, the system should put them in sponsorship packages to maximize revenue. Each level of sponsorship should have a name to it. For example gold, silver, or bronze, or a name to connote transit. Examples can include:
 - **High End Sponsor (e.g., Five Star, or Platinum)** – The value of these services is significant. High end services should only go to sponsors willing to pay over \$10,000 per year (with 3 year contracts). Packages can be combined based on a customer/sponsors need. These high end services include bus wraps, bus stop and shelter in front of a facility, routing conducive to the sponsors business, and logo on the route map. Each service should be worth up to \$10,000 per year and more if they are combined.
 - **Mid-Level Sponsors** – These sponsors should have access to a variety of packages that include advertising on a shelter(s), bench(s), internal advertising, decal on back of the bus, and name in the riders guide are available. Other opportunities can include sponsoring special promotions.
 - **Entry Level Sponsor** – Small local sponsors have a place in sponsorship as well. Packages can include advertising on benches and internal advertising. Certain special promotions should be priced for the entry level sponsor, and recognition as a sponsor should be on promotional material

Sponsorship Implementation Tasks

- **Create promotional material** – Develop materials to sell the sponsorships. The material should be of high quality.
- **Recruit supporters** – Community and political leaders can be recruited to help sell the packages. Attempt to get local media outlets to assist.
- **Sell sponsorships** – After the preparation has been completed, sales can be initiated. Both large and small sponsors should be sought. For larger firms, first attempts should be with local contacts. If attempts with large firms fail at the local level, contact regional or corporate offices.

Standards for Advertising

The system should set up standards for advertising on transit vehicles. Advertising should be tasteful, within the normal bounds of advertising accepted in the community. It is recommended that the system refuse any advertising of a political, religious, or adult oriented content or intent. This will only cause controversy where none is wanted.

Advertising should be of a quality design and application. All advertising should meet quality standards developed through the communities served. It should be professionally designed and installed; it must look good.

Funding Potential

With an aggressive, professional sales approach this program has the potential to generate significant unencumbered cash for the organization. The vehicles, serving as rolling billboards, can generate more than \$500 per month per vehicle (after expenses). Assuming ten vehicles are wrapped, this approach can generate \$60,000 per year in revenue. Additional sponsorships can generate additional funds.

Development and Implementation of the Program

The system will need to determine if it wants to develop and implement this program in-house or work through an advertising/marketing firm to sell the sponsorships on a percentage agreement. Developing and implementing the program is a considerable effort, and therein lays the trade-offs of the two approaches. While the work is harder and time consuming, potential revenues are greater if properly implemented.

If outside assistance is sought, they should first meet with a number of firms to determine their interest, and then seek quotes through a competitive procurement.

REGIONAL PLANNING PROCESS – ONE NETWORK OF SERVICES

Once service is identified, all planners representing the other transit systems (St. George and Zion) can work together to operate as one network of services rather than three different transit services. By planning together, residents and visitors can benefit from a seamless network.

It is essential that each system work together to ensure regional connectivity because unlike transit systems, people do not travel only within their political jurisdiction. Therefore, while in the future there may be three systems, there should be only one network of services. Regular meetings between management and planning staff of each system will help ensure that the region's transit services truly form one network of services.

It is recommended that once this service is in place, a regional transit working group be formed into an official, formal committee that meets quarterly in order to:

- Discuss potential changes with other systems so they can ensure connectivity between services.
- Work together to solve mobility problems.
- Conduct joint planning efforts.
- Resolve to institute a regional transit web site, google transit (as region), next bus technology all as one regional network.

Chapter 5

Development of Organizational and Service Alternatives

Chapter 5 was a working document designed to initiate a collaborative approach among stakeholders in order to select and prioritize alternatives and strategies that should guide development of St. George to Springdale public transit service. This chapter is based on the previous review of existing services, demographics, land uses, travel patterns and an assessment of overall need. This included meetings with stakeholders and the general public.

The alternatives focus on major and minor decision points for determining the ultimate direction of the study. These are potential strategies that can be employed to address an issue. The study committee should select the alternatives to be included in the plan. Selections can include alternatives as presented, modified or strategies not included here. Decisions made as a result of this chapter, discussions and outreach should guide the final plan.

INTRODUCTION

Having established an understanding of existing conditions, needs, potential demand and opportunities for partnerships in the three previous chapters (2, 3, and 4), the alternatives for transit service in the corridor are presented in this chapter. This critical chapter addresses potential strategies to be employed to:

- Focus on unmet needs now and in the future
- Ensure regional/county connectivity
- Ensure sustainability for the future
- Present a variety of service opportunities

The study team completed an analysis of needs and existing services in Springdale and St. George. Needs, compiled in Chapter 4 were determined through input and observation including:

- Demographic data and analysis of land uses
- Review of plans and reports
- Direct communication with over 150 potential customers and businesses
- Discussions with advocates, human service agencies and others
- Extensive field observation
- Extensive surveys of riders and non-riders
- Public meetings and business focus groups
- Discussions with current transit management

Alternatives and strategies address the following requirements:

1. Markets Served - Identification of markets served including local residents, commuters and visitors, all of whom benefit from reduced visitor traffic. Local businesses gain by making their services more attractive.
2. Organization and Management – What entity will oversee the service? A new separate entity or part of an existing entity? Should the operation be contracted?
3. Service Type – Each alternative addresses a fixed route service. Key decision points include how to provide service for persons with disabilities and the routing within St. George.
4. Service Levels, Costs and Other Characteristics
 - Headways
 - Service levels
 - Seasonality
 - Costs of scenarios
 - Connections with existing services – both Springdale and St. George
5. Potential Ridership – Based on level of service
6. Capital Requirements and Costs
 - Vehicles
 - Facilities
 - Technology
 - Infrastructure needs
 - Costs.
7. Potential Funding Sources
 - Local
 - State
 - Federal opportunities
 - Public and private partnership opportunities

ORGANIZATIONAL AND SERVICE ALTERNATIVES

1. Markets Served

There are a large number of markets to be served by this transit service. These were detailed in Chapter 4 and are summarized here to ensure the reader understands the diverse markets in need of service.

1. St. George to Hurricane/La Verkin – This sub-corridor focuses on potential ridership for commuters between the two areas as well as other needs for local residents in Washington City. These communities are now interconnected but lack transit connectivity. This sub-corridor accounts for visitors going to Springdale.
2. Washington City - Considering the ridership stated by SunTran, there is potential for a local component of this service that would meet the needs of local residents to local destinations for work, school, shopping, and personal business.
3. Hurricane and La Verkin – As with Washington City, there is potential for a local component of this service that would meet the needs of local residents to local destinations for work, school, shopping, and personal business.
4. Hurricane/La Verkin to Springdale – This sub-corridor will address the local needs along this corridor including commuter's needs to and from Springdale as well as the visitor population which has been increasing in unprecedented numbers.

2. Organization and Management

There are multiple ways to configure operations and oversight of service. The first step is to outline potential overall organizational structures. Each option can be effective and all should have similar costs. Operating costs of labor, fuel, insurance and other elements should be consistent across each structure as well.

Organizational Structures

The responsible organization and subrecipients (if FTA 5311 and/or 5307 funds are used) can be:

1. An existing governmental entity such as Washington County or one of the cities;
2. A new entity such as a transit district formed for this purpose. This could be housed at FCAOG, one of the cities or the county.

Requirements and functions would include the minimum as listed below. Other functions can, include all of the Other Critical Requirements listed below.

Minimum Requirements

The responsible entity must conduct some tasks directly under any scenario. These functions should not be contracted out:

- Ensuring compliance with FTA and UDOT rules and regulations
- Budgeting and financial management – The responsible entity/subrecipient will be responsible for all aspects of the finances.

- Service monitoring and oversight – The responsible entity should continually monitor service. Complaints and commendations should be in-house.
- Seeking sources of funding – This is a constant effort.
- Long range planning – Long range guidance should come from the responsible entity.

Other Critical Requirements

These functions can be contracted out or operated in-house. In each case the process and procedures must follow state and federal regulations and rules:

- Grant administration
- Procurement
- Marketing
- Recruitment, hiring and training
- Operations management
- Operations planning
- Facility management

Costs should be similar under any operating scenario. The decision points revolve around:

- Representation and political issues – Ensuring all governmental entities that contribute to the service are properly represented.
- Capabilities – Administrative and operational capabilities require different approaches. Some entities while capable of administrative functions are not suited to operating service. There are some entities that would be suited to operate the service, but not conduct administrative functions.
- Coordination and consolidation – If there are two transit systems, decisions will have to be made regarding consolidating operations with one of the other entities.

Organizational Alternatives – Administration

The first two alternatives address administration of the service, operational and financial oversight, fundraising, and grant administration. Options are limited due to the small size of potential service. Operation of service is addressed in the next section.

Start-Up Efforts

Under any scenario, there will be need for a start-up effort by hiring a manager and contracting for or securing legal and financial management services. Vehicles should be procured and operational plans finalized. The demands of service should require having a team in place eight to twelve months prior to implementation. Initial planning and applications should be the responsibility of the support entity.

Organizational Alternatives – Management and Oversight

One entity should be the system manager. This entity should have a board or other stakeholder group to ensure the cities are able to have a measure of control over the service.

1-A: Administrative Management and Oversight – Existing Entity

If it is determined that the managing entity should be selected based on their ability to represent all jurisdiction and their administrative capabilities, Washington County or the City of St. George (SunTran) could be a logical choice. If it is determined that SunTran should have administrative and management oversight, then there should be a mechanism allowing the partnering communities to have control of the service.

This would require one full- time management staff person as a contract manager and support in financial management, procurement and administrative functions. An advantage for SunTran is that it would provide additional management/planning staff and support.

1-B: Administrative Management and Oversight – New Entity

A new transit district would be formed by the consortium of cities and the county ensuring appropriate representation of all parties. The new transit district would be housed and supported by one of the political jurisdictions capable of providing administrative support in a manner similar to Alternative 1-A.

Organizational Alternatives – Operation of Service

These alternatives examine options for operation of day-to-day services. Direct operation of service requires a different set of skills and tasks that are often contracted to a professional management firm. For the operation of service, it is recommended that service be operated by an existing entity skilled in transit management.

1-C: Operation of Service – Contracted

Just as frequently as keeping service in-house, many entities contract out service to a professional transportation operator. This places the burdens of operation on an experienced firm. Services will be small by contract standards, limiting contracting opportunities due to economies of scale. An existing operator may have an advantage by sharing costs with other service. There are two basic options to consider:

1. Interlocal agreement –SunTran to operate service and allow St. George and the new transit service to gain economies of scale.
2. Contract with private sector – The responsible entity would craft a request for proposals (RFP) that would meet service needs. This RFP could attract local, regional and national firms.

Key Decision Point No. 1: Administration and Operation of the Service

The first decision revolves around how the service will be organized. Should the service be a standalone transit district able to accept federal and state funds independently? Should it be part of a district with SunTran? Should the entire service be operated by SunTran?

The key decision point is how to address administration and management of service to ensure all cities have some measure of decision-making control.

3. Service Type

A fixed route service is most appropriate. Basic routing will be along Telegraph Road through Washington City and SR 9 through Hurricane to Springdale. Figure 5-1 details the route with conceptual stops for local and express service. If Washington City does not participate, it may be advantageous to operate on I-15 directly to SR 9, bypassing Washington.

There will be two types of service proposed:

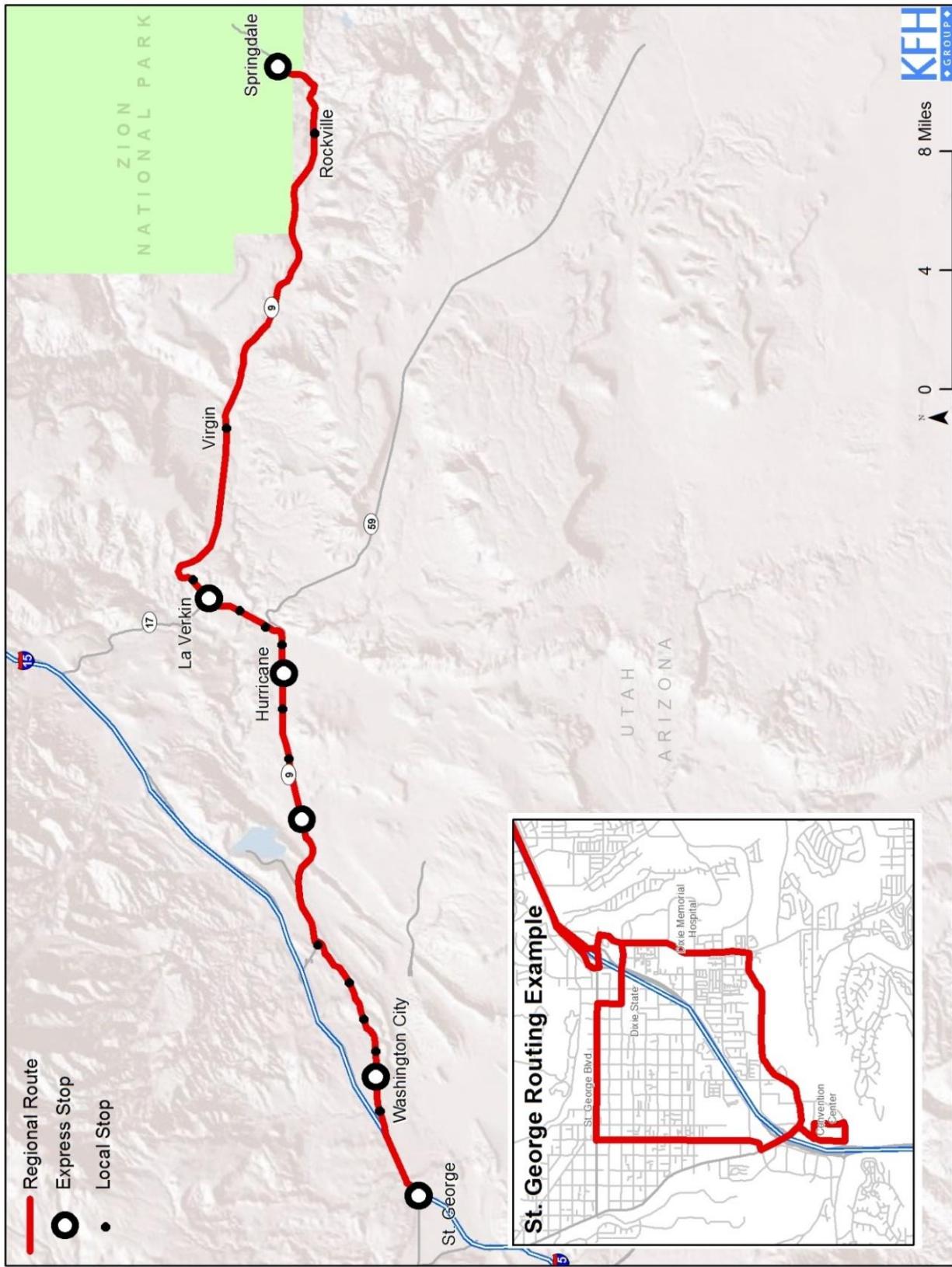
1. Express service – A limited stop service designed for commuters along the route and those wanting to get to Springdale or St. George for a variety of purposes. This service will not be required to adhere to complementary paratransit requirements as it is a limited stop, limited times, commuter oriented service.
2. Local service – While this service can be used by commuters and visitors to Springdale, it should be a primary benefit to local residents of Hurricane, Washington City (if they do not select SunTran service) and La Verkin who should now have access to local bus service. This service would operate throughout the day. To meet the requirements of the ADA, this will be a flex bus, going up to $\frac{3}{4}$ mile off route to transport qualifying persons with disabilities.

Run Through Service

As is typical of transit systems across the country, it is proposed that while operating in the SunTran service area that service be limited to only those desiring to come into or leave the SunTran service area. It is recommended that the new service operate to a number of key destinations such as the medical complex(s) transfer station at Dixie State, sponsoring hotels, major employers and other businesses.

In Springdale, the bus should operate through the city to the Giant Screen Theater at the northeastern edge of Springdale. It should make multiple stops. Stops should be dependent on need and sponsorships (which will be discussed in detail in Section 10 below).

Figure 5-1: Basic Route with Conceptual Stops for Local and Express Service



Americans with Disabilities Act (ADA) Requirements

All buses must be accessible to persons with disabilities as are all SunTran and Springdale/Zion buses. There are two choices for how to serve persons with disabilities that cannot get to a bus stop:

1. ADA Complementary Paratransit – This door-to-door service is separate from the fixed route and will require 2 – 3 vehicles to meet the needs in Springdale, Hurricane/La Verkin and, if desired, Washington City.
2. Flex Route Service – In this approach, the regular local bus will flex off route for up to $\frac{3}{4}$ mile for approved persons with disabilities. This service will slow local service by a few minutes, but should relieve the costly burden of adding 2 – 3 vehicles to the fleet. Flex route is strongly recommended for this service area.

4. Service Levels, Costs and Other Characteristics

There are three service levels proposed which should drive the costs to different levels: high, medium and low, described in detail in the following section. These can represent service growth over time, with low level of service a potential “starter” system with growth keeping up with ridership.

Service Assumptions

Following are service assumptions designed to guide the level of service:

- Washington County, St. George, Washington City, Springdale, Hurricane and La Verkin are included in the service.
- If Washington City chooses to become part of SunTran, then only express service should be offered in Washington City if the city approves.
- Four month peak season: June- September (based on Zion usage). This could change over time.
- Shoulder season: April-May, and October – November.
- Express service: 1.5 hours each way including stops in St. George.
- Local service: 2 hours each way. Accounts for St. George, flex service for ADA. Multiple stops including local service in Washington and Hurricane/La Verkin.
- Assume a range of costs: \$102/hour to \$122/hour. This includes the use of a facility and capital depreciation.

Operating Scenarios

Three service levels are described in this section. These levels are good depictions of the potential service; with low level being the least that should be done (to do less would guarantee failure). Table 5-1 depicts service levels and Table 5-2 depicts costs and service hours by type of service.

High Level of Service

High level of service depicts the highest level of service that could be justified based on potential ridership. This level of service should generate the highest ridership as indicated in the demand analysis, but not the highest level of productivity. It is anticipated that over time this level of service would be justified. In this service level express and local service are operating on hourly service most of the day. The peak bus requirement is 7 vehicles, requiring procurement of 9 vehicles, including necessary spares.

Mid-Level of Service

This service level is slightly lower than the high level scenario. This is most practical as part of a step-by-step process.

Lower Level of Service

The lower level of service may be most appropriate for a start-up service, without requiring a major commitment to service. The incremental approach may prove most effective. Five vehicles would be needed initially.

Service Costs

Service costs including costs associated with operation, vehicle depreciation, facilities and other associated costs are typically in the range of \$100 - \$120 per vehicle hour plus start-up costs. Annual costs range from \$1.6 million to over \$3 million as depicted in Table 5-2. Service costs should be broken into three separate components:

1. Start-up costs –Legal and accounting support to set up the organization, secure agreements, secure capital equipment and complete implementation. Management should be hired and policies and procedures should be put into place.

Table 5-1: Service Levels - High, Medium and Low

		Summer Season			Shoulder Seasons			Winter Season		
		Express	Local	Express	Local	Express	Local	Express	Local	
High Level										
Hours of Service										
Peak Hrs.	6am-8pm	6am-9am, 4pm-7pm	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-10am, 3pm-7pm	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-9am, 4pm-7pm	6am-9am, 4pm-7pm	
Off-Peak	N/A	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	9am-4pm	
Headways										
Peak Hrs.	1 Hour	1 Hour	1 Hour	1 Hour	1 Hour	1 Hour	1 Hour	1.5 Hour	1 Hour	
Off-Peak	N/A	1 Hour	3 Hour	1 Hour	3 Hour	1 Hour	3 Hour	3 Hour	1 Hour	
Vehicles										
Peak	3	4	3	4	4	4	2	1	4	
Off-Peak	N/A	4	1	4	4	4	1	4	4	
Mid Level										
Hours of Service										
Peak Hrs.	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-9am, 4pm-7pm	
Off-Peak	10am-3pm, 7pm-8pm	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	9am-4pm	
Headway										
Peak Hrs.	1 Hour	1 Hour	1.5 Hour	1 Hour	1 Hour	1 Hour	1 Hour	3 Hour	1 Hour	
Off-Peak	3 Hour	1 Hour	3 Hour	1 Hour	3 Hour	1 Hour	3 Hour	3 Hour	1 Hour	
Vehicles										
Peak	3	4	2	4	4	4	1	1	4	
Off-Peak	1	4	1	4	4	4	1	1	4	
Lower Level										
Hours of Service										
Peak Hrs.	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-10am, 3pm-7pm	6am-9am, 4pm-7pm	6am-9am, 4pm-7pm	
Off-Peak	10am-3pm, 7pm-8pm	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	10am-3pm, 7pm-8pm	9am-4pm	9am-4pm	
Headway										
Peak Hrs.	1.5 Hour	2 Hour	3 Hour	2 Hour	2 Hour	2 Hour	2 Hour	3 Hour	2 Hour	
Off-Peak	3 Hour	2 Hour	3 Hour	2 Hour	2 Hour	2 Hour	2 Hour	3 Hour	2 Hour	
Vehicles										
Peak	2	2	1	2	2	2	1	1	2	
Off-Peak	1	2	1	2	2	2	1	1	2	

Table 5-2: Service Costs - High, Medium and Low Level Scenarios
 (continued on next page)

Service	Peak Hours				Off Peak Hours			
	Daily Vehicle Hours	Vehicles	Headways	Cost Per Year	Daily Vehicle Hours	Vehicles	Headways	Cost Per Year
Express - Summer Season (June - Sept)	42	3	1 Hour	\$512,400 - \$614,880	*	-	-	-
Express - Shoulder Season (April-May & Oct-Nov)	24	3	1 Hour	\$329,400 - \$351,360	6	1	3 Hour	\$73,200 - \$87,840
Express - Winter Season (Dec-March)	16	2	1.5 Hour	\$193,600 - \$234,240	6	1	3 Hour	\$73,200 - \$87,840
Local Service	24	4	1 Hour	\$876,000 - \$1,051,200	28	4	1 Hour	\$1.0 Million - \$1.2 Million
Scenario Totals					Costs Per Year			
System Total	Service Hours Per Year			30,426	Peak Vehicles			\$3 Million - \$3.7 Million

Service	Peak Hours				Off Peak Hours			
	Daily Vehicle Hours	Vehicles	Headways	Cost Per Year	Daily Vehicle Hours	Vehicles	Headways	Cost Per Year
Express - Summer Season (June - Sept)	24	3	1 Hour	\$329,400 - \$351,360	6	1	3 Hour	\$73,200 - \$87,840
Express - Shoulder Season (April-May & Oct-Nov)	16	2	1.5 Hour	\$193,600 - \$234,240	6	1	3 Hour	\$73,200 - \$87,840
Express - Winter Season (Dec-March)	8	1	3 Hour	\$96,800 - \$117,120	6	1	3 Hour	\$73,200 - \$87,840
Local Service	24	4	1 Hour	\$876,000 - \$1,051,200	28	4	1 Hour	\$1.0 Million - \$1.2 Million
Scenario Totals					Costs Per Year			
System Total	Service Hours Per Year			27,018	Peak Vehicles			\$2.7 Million - \$3.2 Million

Table 5-2: Service Costs - High, Medium and Low Level Scenarios
 (continued from previous page)

Service	Low Level Scenario				Peak Hours				Off Peak Hours			
	Daily Vehicle Hours	Vehicles	Headways	Cost Per Year	Daily Vehicle Hours	Vehicles	Headways	Cost Per Year	Daily Vehicle Hours	Vehicles	Headways	Cost Per Year
Express - Summer Season (June - Sept)	16	2	1.5 Hour	\$193,600 - \$234,240	6	1	3 Hour	\$73,200 - \$87,840				
Express - Shoulder Season (April-May & Oct-Nov)	8	1	3 Hour	\$96,800 - \$117,120	6	1	3 Hour	\$73,200 - \$87,840				
Express - Winter Season (Dec-March)	8	1	3 Hour	\$96,800 - \$117,120	6	1	3 Hour	\$73,200 - \$87,840				
Local Service	12	2	2 Hour	\$438,000 - \$525,600	14	2	2 Hour	\$511,000 - \$613,200				
Scenario Totals					Peak Vehicles				Costs Per Year			
System Total	Service Hours Per Year 15,576				4				\$1.6 Million - \$1.9 Million			

1. Operations costs –Costs to operate service. Typically, services are contracted and a good way to estimate costs is on a per hour basis. For the purposes of this effort, operating costs should range between \$100 and \$120 per hour for heavy duty bus service, including facility space and capital depreciation costs.
2. Capital costs should include funding required to procure vehicles, shelters and possibly facilities. This will be discussed in the next section.

Start-Up Costs

At least one year before anticipated start-up, the new entity should be formed and vehicles will have to be procured. At least six months prior to start-up, a manager will have to be employed to conduct grant writing, contract procurement, and planning. Legal and accounting fees should need to be included. Start-up costs including staffing, support and facilities should be approximately \$300,000 - \$400,000.

Key Decision Point No. 2: Determine Service Level

The key decision is to determine the service level and resultant costs. As part of that decision will be an assessment of potential ridership (below) and funding sources including local funding requirements (Section 7 below).

5. Potential Ridership

Potential ridership is to some degree dependent on a number of factors:

- Overall need for service – There are a variety of needs that can be served by this transit system, including needs for local businesses.
- Level of service – For this estimate, we will focus on the lower level of service and ridership estimates.
- Vehicle size –Ridership estimates produced here and in Chapter 4 call for a 40- foot transit coach to maximize potential ridership.
- Fare – The higher the fare, the lower the ridership. The \$2 fare for regular riders should not be an impediment and the \$5 fare for visitors and occasional riders can be built into the cost of the hotel (for example) and not be noticed by many customers.
- Parking in Springdale –Constrained summer parking environment in Springdale
- Seasonal Needs – Due to the seasonal nature some of primary activities in the region, service levels should fluctuate based on the seasons: summer season, shoulder seasons and winter season. Estimates are averages.

Using estimates for potential ridership in Table 5-3 (taken from Chapter 4), potential ridership for the high level of service should be approximately 350,000 annual riders (the low estimate)

with as many as 2,500 one-way trips per day in the summer and far less in the winter. Applying this ridership estimate to the low level scenario should call for a lower number of riders. Using service elasticities (estimates of service changes based on experience), every 10 percent reduction in service level should result in a 5 percent reduction in ridership. Results are applied to Table 5-3.

Table 5-3: Potential Ridership by Service Level

Level of Service	Percentage Reduction of Hours	Potential Annual Ridership
High	NA	350,000
Medium	11%	330,750
Low	50%	262,500

6. Capital Requirements and Costs

Transit Vehicles

Different transit conditions require different transit vehicles. Service area characteristics may require smaller more nimble vehicles or larger vehicles with more capacity. Potential vehicle needs are discussed in the following section. All vehicles should be accessible to persons with disabilities. There should be a 20 percent spare vehicle requirement.

Fuel typologies have benefits and come with costs. Compressed natural gas and electric vehicles require significant facility investment if facilities are not available, and can require additional spare vehicles.

Bus Typologies

Cutaway – Small Bus

Cutaway chassis are smaller than buses and usually have a high floor (Figure 5-2). These vehicles customarily have a seating capacity of between 8 and 30 seats and their size can vary significantly from 15 to 30 feet long. These vehicles have a 5-7 year life as a front line vehicle, less if used in heavy duty service.

Cutaway chassis buses are used in a wide variety of applications. They are most often used as feeder buses, dial-a-ride, ADA paratransit service and

Figure 5-2: Cutaway Bus



lightly traveled fixed routes. All vehicles must have lifts or a low floor with ramp. These vehicles range from \$125,000 to \$175,000 in cost depending on size and configuration.

Low Floor Heavy Duty Bus

SunTran uses heavy duty low floor buses for its regular fixed route service (Figure 5-3). These buses are generally 35 – 40 feet in length and designed to last 12 years or more in heavy duty service. The low floor and two doors allow for rapid boarding and alighting. These vehicles seat 30 to 40 with additional room for standing. This vehicle typology is useful for systems needing large capacity vehicles to meet demand. These buses would be appropriate for the corridor service. They can range from \$500,000 to \$700,000 per vehicle.¹

Figure 5-3: Low Floor Bus



Articulated / High Capacity Bus

Articulated and/or high capacity buses would be used in the service area for future bus rapid transit (Figure 5-4). Articulated buses are typically 60 feet long and bend in the middle. These vehicles are used throughout the world in regular and BRT service. Their capacity is over 120 passengers depending on the configuration. These buses could be used in the future if warranted.

Figure 5-4: Large Capacity Bus



Alternative Fuel Types

In today's market, there are a variety of fuel and battery choices for transit vehicles. Decisions on the type of fuel chosen are based on a number of factors that decision makers should consider:

- Environmental policy – Alternative fuels and batteries can make a difference in the local environment. Decisions are often made on this basis alone.
- Operational – There are a number of operational issues and costs associated with alternative fuels, including:
 - Infrastructure – Fueling facilities and maintenance equipment
 - Expertise – Maintenance staff with specialties in electric and hybrid technologies would need to be hired.

¹ 2013 Tri-county District of Oregon Contract with Gillig LLC. For the Purchase of 40' Diesel Buses

- Availability of specialty repair vendors
- Financial – Vehicle and on-going costs vary and are a major consideration to the type of vehicle used.

Biodiesel

Transit fleets including Park City Transit have been able to use biodiesel vehicles successfully. Biodiesel is a renewable, clean-burning diesel replacement made from a diverse mix of feedstocks including recycled cooking oil, soybean oil, and animal fats. Just like petroleum diesel, biodiesel operates in diesel engines. Essentially no engine modifications are required, and biodiesel maintains the payload capacity and range of diesel. Generally, transit fuel is a mixture of diesel and biodiesel. This is necessary for areas with colder climates as biodiesel can be difficult to use in colder climates. Manufacturer costs for biodiesel buses are the same as regular diesel buses.²

Compressed Natural Gas (CNG)

CNG can be used in place of other fossil fuels. CNG combustion produces fewer undesirable gases. It is safer than other fuels in the event of a spill, because natural gas is lighter than air and disperses quickly when released. The cost and placement of fuel facilities is the major barrier to adoption of CNG as a fuel. It is also why municipal government public transportation vehicles were the most visible early adopters of it, as they can more quickly amortize money invested in new (and usually cheaper) fuel. If a fueling facility is available to transit this is a viable alternative. Santa Fe is an example of an all CNG fleet. A typical 40 foot low-floor CNG vehicle should cost between \$500,000 and \$750,000.³

Electric-Hybrid

A heavy duty hybrid electric bus combines a conventional diesel internal combustion engine propulsion system with an electric propulsion system. Bus batteries store energy and recharge when the bus decelerates. When demand for power exceeds battery capacity, the diesel engine provides extra energy. Hybrid buses have lower emissions than other propulsion types. Hybrid buses are best suited to stop-and-go routes where average speed is 8 miles per hour. A typical hybrid 40 foot low-floor vehicle should cost between \$600,000 and \$900,000.⁴ This technology would require a major investment in infrastructure.

Electric Battery

Electric battery technology has been improving over the last few years to the point where heavy duty fully electric buses are viable transit vehicles under certain conditions. As charging times decrease and battery ranges increase these vehicles are becoming more attractive. Fuel and

² 2013 Tri-county District of Oregon Contract with Gillig LLC. For the Purchase of 40' Diesel Buses

³ 2013 Tri-county District of Oregon Contract with Gillig LLC. For the Purchase of Compressed Natural Gas Buses

⁴ 2013 Tri-county District of Oregon Contract with Gillig LLC. For the Purchase of Hybrid Buses

preventative maintenance costs are much lower on these vehicles but initial costs are often greater depending on vehicle size and battery configuration. Denver is an excellent example of the use of this technology. Electric battery bus prices vary greatly depending on the size and battery configuration. Buses can range from \$400,000 to \$2 million.⁵

Facilities

Infrastructure needs should include bus stops and amenities. In some cases, the bus stop sponsor in a public/private partnership, may supply the facilities (shelter, parking, lighting or other amenities, however they would still need to be maintained and improved upon over the next seven years:

1. Transit Center – The St. George transfer center at Dixie State may not have enough space to allow for a seamless transfer of customers.
2. Bus Stops – Stops should be examined for pedestrian access, safety and security with considerations for stop improvements/enhancements. Review and prioritize safety, accessibility, pathways, shelters, benches, lighting and other improvements.
3. Park and Ride Lots – Arrangements with sponsors should include parking access for customers. Larger facilities such as Walmart should be recruited.
4. Operations Facility – This facility can be owned by the transit district, a local government or leased or owned by a contractor.

It is recommended that shelters be installed at major stops. It is estimated that between 6 and 8 shelters should be needed for express and local service, some of which may be paid for and built by a sponsor.

Capital Costs

Capital costs are dependent on the types of vehicles procured. The need for federal funding at an 80 percent federal match is imperative. This makes the cost difference between heavy duty and medium duty vehicles low. This scenario assumes that vehicles should be heavy duty transit coaches similar to those used by SunTran (and recommended by the consultant). These vehicles cost between \$500,000 and \$700,000 depending on size (35 to 40 foot) and fuel, with alternative fuels and hybrids costing more than diesel. It is further assumed that capital equipment, most importantly vehicles, should be purchased with 80 percent federal funds. Table 5-4 reviews capital costs.

Additional equipment, computers and software should include transit specific software. It is recommended in most cases that the new transit system procure and retain ownership of transit software such as maintenance software and transit specific software.

⁵ Range of costs for E-Bus and Proterra electric battery buses. <http://ebus.com/> and <http://www.proterra.com/>

The low level scenario calls for \$522,000 of local share (20 percent) support for capital equipment, shelters and equipment, assuming the 80 percent is an FTA capital grant.

Table 5-4: Capital Costs

Capital Need	Number	Estimated Cost	Local Share
Buses – High and Medium Scenario	9	\$4.5 million	\$900,000
Buses – Low Scenario	5	\$2.5 million	\$500,000
Shelters	6	\$60,000	\$12,000
Office Equipment		\$50,000	\$10,000

7. Potential Funding Sources

The current FTA funding programs appropriate for urban and rural transit are discussed in the first section, followed by a section on potential sources of essential local funding. Typical of an area that draws significant numbers of visitors is the need for sources of local funds either through a dedicated funding sources or through city general revenue funds. An important part of this funding source should be local businesses that have an opportunity to benefit from the service in a public private partnership (P3). The review of potential funding concludes with a summary of potential funding sources, area appropriateness and relative advantages and disadvantages of each source.

FTA Grant Programs

Several FTA grant programs administered by UDOT PTT could potentially fund a St. George to Springdale bus route. The most appropriate candidates include:

- Section 5311 - Formula Grants for Rural Areas
- Section 5339 - Grants for Buses and Bus Facilities

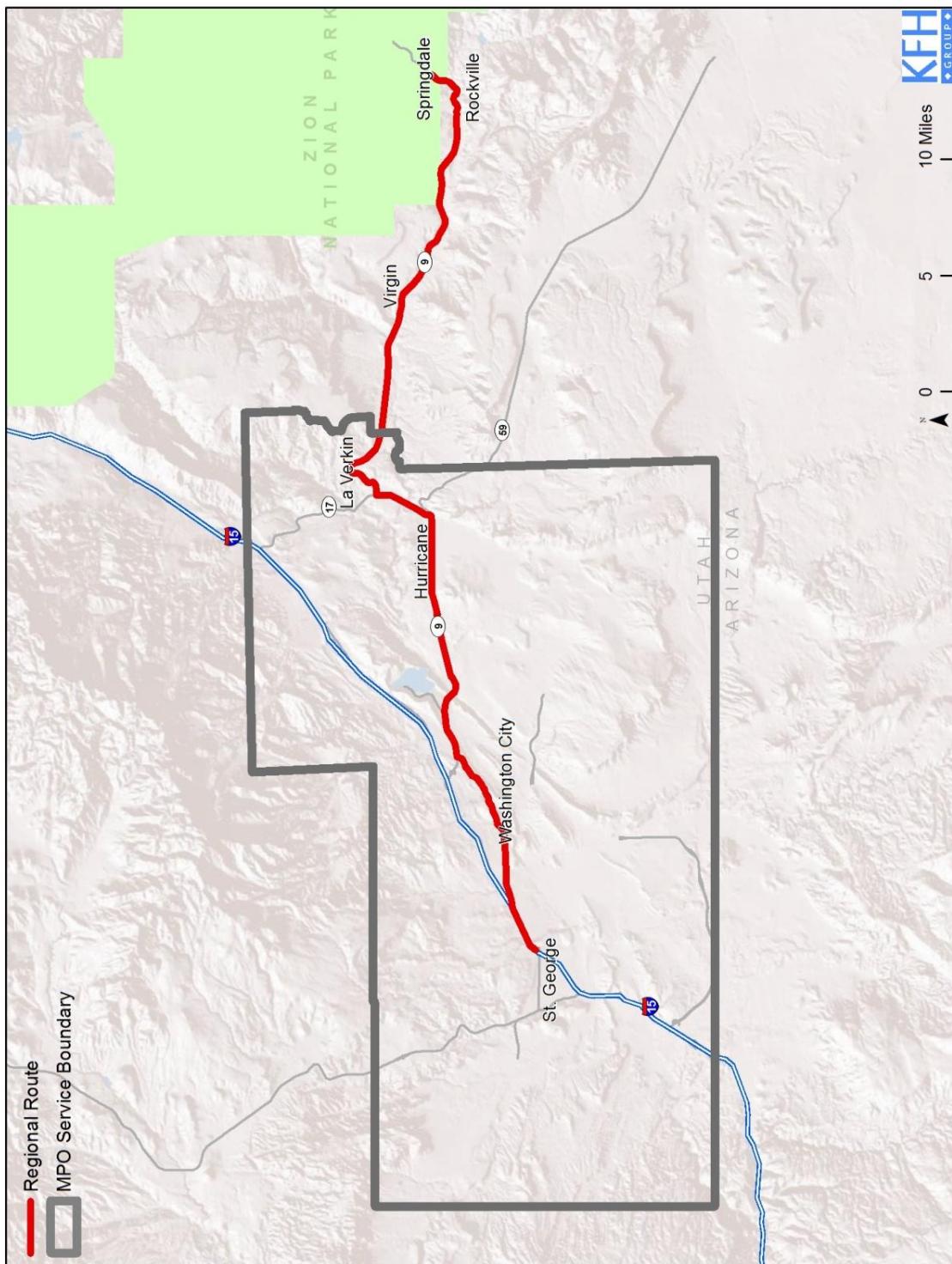
A critical piece of the funding can be available directly from the Federal government. A recent ruling by FTA gave the region permission to use the Dixie MPO planning boundary as the defining boundary for Section 5307 funding.

- Section 5307 - Urbanized Area Formula Grants – For any portion of the route that falls within the Dixie MPO area (i.e., to the eastern end Hurricane) as depicted in Figure 5-5

Those less directly applicable but still potentially feasible for partial funding include:

- Section 5310 - Enhanced Mobility of Seniors and Individuals with Disabilities – Potentially to support aspects of the service designed to better serve seniors and people with disabilities

Figure 5-5: Dixie MPO Planning Area



Eligibility for any of the above grants through UDOT requires applicants have:

- **Local cash match at the minimum levels required for each program**, with documentation that it will be available (in-kind match is not accepted) – at least 20 percent of capital project costs and 50 percent of net operating project costs. Allowable sources for local match are discussed following the FTA program descriptions.
- A locally-adopted, PTT-approved Title VI plan prior to submitting the application.

Section 5307 – Formula Grant Program for Small Urban Areas

The City of St. George is eligible for (and receives) small urbanized Section 5307 funding. These funds are used to support public transit (capital and operating expenses) in the St. George Urbanized Area. About one-half of the funding is used, causing up to a two year backlog in spending the funds. These funds are for operating (50 percent FTA match) and/or capital (80 percent match). For FTA Section 5307 funding purposes, the St. George Urbanized Area is now defined as the Dixie MPO boundary, reaching to the eastern edge of Hurricane as determined by FTA recently.

SunTran management indicates that for the foreseeable future, even if Washington City joins, there will be a significant surplus of funds that can be used for the corridor service. FTA will fund 50 percent of the operating deficit (operating costs minus fare revenue) for the portion including and between St. George and Hurricane. At this time, the MPO has calculated that about 57.5 percent of the route is in the urbanized area and 42.5 percent is in the rural area.

The maximum federal share is 80 percent for capital (with higher amounts allowed under federal policies for certain ADA-compliance and Clean Air Act-related equipment). Capital funds would be allocated in the same percentage as the operating funds above.

Section 5311 - Formula Grants for Rural Areas

The Section 5311 program provides formula funding for supporting public transportation for people living in areas with populations less than 50,000. Eligible subrecipients for this program in Utah, as outlined in UDOT PTT's 2015 State Management Plan, include:

- A political subdivision of the state
- An authority or political subdivision of the state
- An Indian tribe, federally recognized and others
- A public corporation, board, or commission established under Utah laws
- Private non-profit organizations
- Operators of public transportation or intercity bus service that receive FTA grant funds indirectly through a recipient

Section 5311 funds may be used for public transportation projects and intercity bus transportation projects in any area outside of an urbanized and small urban area. Section 5311 funded services in Utah must be designed to maximize use by members of the general public who are transportation disadvantaged, including seniors and individuals with disabilities. Since the goal of Section 5311 is to enhance overall mobility of people living in rural areas, Section 5311 projects may include transportation to and from urbanized areas.

Eligible expenses are capital, operating, and project administrative expenses. Capital expenses are eligible for projects that include the acquisition, construction, improvement of public transit facilities and equipment and mobility management activities.

UDOT PTT awards Section 5311 funds on an annual basis. The application process begins with submitting a letter of interest to UDOT PTT in September, and completing the application by mid-November. UDOT approves applications in early February. At this time, according to state officials, Section 5311 funds are allocated to existing services. This proposed service would have to compete for these funds and if selected, funds would most likely be taken from other systems.

Section 5311 Tribal Transit Grants

If a St. George to Springdale bus route might be of interest/benefit to the Paiute Indian Tribe (Tribe) of Utah, Five Counties AOG (or whoever would be the lead agency in starting up the service) may want to explore the possibility of partnering with the Tribe to seek federal Section 5311 Tribal Transit funding to help support the service. Federally recognized Indian tribes may be subrecipients of the state's Section 5311 program, or may elect to apply to FTA as direct recipients for Tribal Transportation funds.

Should the Tribe develop a cultural center in or near Springdale, applying for Tribal Transportation funds to support transportation between the Shivwits Band of Paiutes headquarters in St George and the cultural center near Springdale could potentially be of interest to the Tribe. Tribal Transit funding, as with other Section 5311 FTA funding, requires local matching funds (20 percent for capital grants and 50 percent of net operating cost for operating grants), which must be provided in cash.

In addition to local match, becoming a direct recipient or subrecipient of Section 5311 funds would obligate the Tribe to comply with the myriad FTA grant program requirements associated with Section 5311.

Section 5339 - Grants for Buses and Bus Facilities

The Section 5339 program provides federal funding to support the continuation and expansion of public transportation through capital projects to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities. UDOT PTT administers and

provides Section 5339 funding for small urban and rural areas (areas with populations less than 200,000). UDOT PTT policy is to prioritize projects that replace existing vehicles or expand on existing services as well as projects that include bus-related facilities.

Eligible subrecipients in Utah include public agencies or private non-profit organizations engaged in public transportation, including those providing services open to a segment of the general public, as defined by age, disability, or low income.

With the passage of the FAST Act, two new discretionary programs were created under the Section 5339 federal program:

- **Bus Program discretionary funding** – With at least 10 percent per fiscal year to be awarded to projects in rural areas.
- **Low and No Emissions Bus Program discretionary funding** – Funds purchase or lease of zero-emission and low-emission transit buses, including acquisition, construction, and leasing of required supporting facilities such as recharging, refueling, and maintenance facilities. A low or no-emission bus is defined as a passenger vehicle used to provide public transportation that significantly reduces energy consumption, air pollution, or direct carbon emissions, when compared to a standard vehicle.

At the federal policy level, the federal funding share for these vehicles can be up to 85 percent, and up to 90 percent for related “Low-No” equipment and facilities such as recharging or refueling facilities; however, UDOT may elect to limit the federal share to a lower level (such as 80 percent).

Section 5310 - Enhanced Mobility of Seniors and Individuals with Disabilities

Section 5310 provides capital funding to improve mobility for seniors and individuals with disabilities by removing barriers to accessing transportation services and expanding transportation mobility options available. Eligible projects are limited to either:

- Public transportation capital projects that are planned, designed, and carried out to meet the specific needs of seniors and individuals with disabilities.
- Additional public transportation projects that:
 - Exceed ADA minimum requirements
 - Improve access to fixed route service and decrease reliance by individuals with disabilities on ADA-complementary paratransit service
 - Provide alternatives to public transportation that assist seniors and individuals with disabilities with transportation

In order to be eligible for Section 5310 program funding, a project must be included in the appropriate locally developed coordinated human service transportation plan.

If some aspect of the St. George to Springdale route is planned, designed and carried out to meet the specific needs of seniors and individuals with disabilities, or exceed ADA minimum requirements, it may be worth including the project within the local coordination plan and then applying for Section 5310 funds to support this aspect of the route.

UDOT PTT's 2015 State Management Plan limits applicants for Section 5310 program funds to private non-profit entities or to governmental authorities as "coordinators of services for seniors and individuals with disabilities" (e.g. for mobility management services). Passage of the FAST Act clarified that, at the federal policy level, local governmental entities that operate a public transportation service are eligible to apply for Section 5310 funds to support eligible services. It is possible that UDOT will change its subrecipient eligibility policy; however, state DOTs that administer FTA funds to subrecipients can be more restrictive regarding subrecipient eligibility.

UDOT PTT awards Section 5310 funds on an annual basis through a competitive process. The application process begins with submitting a letter of interest to UDOT PTT in October, and completing the application by mid-December. Following UDOT's review of applications for completeness, accuracy, and eligibility, each AOG and MPO ranks the application in its respective region (including Five County AOG for the non-urbanized portions of Washington County and the Dixie MPO for the St. George urbanized area). UDOT scores and prioritizes applications by mid-March, determining by the end of March which applications it intends to award. As with Section 5311, Five County AOG has received Section 5310 funds in previous years.

Other Federal Funds

FTA periodically announces new one-time or annual grant opportunities for targeted purposes, most of which could be applied to this corridor service due to the wide variety of needs it can serve. Most notable are TIGER grants. Since 2009, Congress has dedicated nearly \$4.6 billion for seven rounds of TIGER to fund projects that have a significant impact on the Nation, a region or a metropolitan area. - See more at:

<https://www.transportation.gov/tiger/about#sthash.KEixnxhN.dpuf> . About 28 percent of this funding has gone to transit projects, including rural areas. This on-going grant process (if continued under the next Federal administration) provides an excellent opportunity to procure vehicles, facilities and other capital needs.

There are regular grant opportunities for a variety of needs, such as serving job access needs (Ladders of Opportunity grants for example) or targeted funds for alternative fueled vehicles. These regular opportunities can help launch the system by securing 80 percent of the funding for vehicles.

FTA recipients may use funds from other federal agencies (in many cases) for the entire local match if the other funding agency makes funds available to the recipient for the purposes of the project. Eighty federal programs were identified in 2011 that fund transportation services, many for specific populations or programs, which could be used toward local match for FTA Section 5311 grants. A 21-page report listing them can be downloaded through this web page: <https://www.transit.dot.gov/node/1166>.

Given the predominant generator of likely riders – Springdale and Zion National Park – the resounding success of the existing Zion shuttle system, and the significant cost to the environment in Springdale due to the many visitors who currently have no choice but to drive to Springdale, the potential for additional funding under USDOT's Federal Lands Highway Program to share in the cost of the proposed St. George to Springdale route should be explored.

Should Section 5311 Tribal Transit funding be pursued by the Paiute Indian Tribe of Utah, there are funding programs focused on tribal needs that may be candidates for local match.

Fare Revenue

Fare revenue, including cash fares and sales of bus tickets or passes, is considered operating revenue that cannot be used as local match for FTA grants. Grantees must first deduct fares collected from their operating expenses in order to calculate net operating deficit, and the 50 percent local match is calculated from the net deficit.

Setting Fares

In determining fares for the proposed route, it will be important to balance revenue goals with ensuring service is affordable to transportation dependent individuals. That is, maximize revenue while ensuring all can ride. The recommended approach has three levels of fares:

1. Single Ride Fare – This fare would be the “full price fare” of \$5 with ½ fare for seniors, and children available for those making just a few trips (visitors for example). Hotels and other businesses can buy tickets for customers. It may be worth exploring funding from non-DOT human service funding sources to partner in subsidizing fares for transportation disadvantaged riders.
2. Monthly and Multi-Ride Tickets – This would be a deeply discounted fare (\$2 for example, or \$1 for local Hurricane/La Verkin service).
3. Children, Seniors and Persons with Disabilities – Children and senior fares should be ½ fare and persons with disabilities that are eligible for ADA services would ride for free. Flex service fare would at least \$2 – 4.

Fare revenue can be significant in a constrained environment as is the case in Springdale. In a best case scenario, assuming a \$3 one-way fare (on average), fares for a high level of service could be as high as \$786,000 in a mature service. For purposes of this review and assuming a starter system revenue on 260,000 one way trips, assuming a \$2 average fare will yield about \$520,000 annually, also a significant sum.

Local Funding Sources

Unlike most modest rural transit systems that use local funding as critical Federal match, the proposed service is typically more robust due to the visitor economy generating far more jobs in concentrated locations and bringing more people and money into the region than their population would otherwise suggest. Utilizing a combination of Section 5311 and 5307 funding will still require a sizeable local commitment on an annual basis, funded through a mass transit tax or other local mechanism.

Mass Transit or Local Option Tax

The most sustainable approach to funding a transit system would be to secure a local sales tax. A local option tax is expected to be on the ballot in the near future. The option of a mass transit sales tax allows for a voter approved city, town or countywide transportation tax of 0 .25 percent, of which 0.1 percent is used to enhance public transportation.

Revenue generated from this tax, specifically dedicated to public transit would generate well in excess of \$3 million, far more than would be needed for the local share in procuring vehicles and operating the system. This tax would greatly reduce or eliminate the need for other local funding sources for both SunTran and a new corridor service.

A tax can be applied county wide or by city, town or unincorporated area. Those communities that choose not to participate should not receive service. These funds can be used for purchasing capital and/or for operations of the service. To the maximum extent, these funds can be used as match for federal dollars (most importantly, capital). This may be the best option for funding this and other transit in the county and cities. The 2012 Dixie MPO study recommends this tax as the best option for funding transit. Further, it allows the region to access the unused portion of the Section 5307 allocation which has been left unspent due to lack of additional local funding.

Municipal Funds

Table 5-5 summarizes how each municipality along the corridor is likely to benefit from the proposed St. George to Springdale route. Given the extent to which this route is likely to benefit both residents and business in St. George, Washington City, Hurricane, La Verkin, Virgin, and Springdale, it is reasonable to ask each municipality to share the cost to operate the

route (as well as the cost to purchase or lease vehicles). Since the beneficiaries are located within Washington County (and many within the rural areas of the county), asking for support from the county would be reasonable.

Communities that do not contribute their fair share, do not receive service. For example, while the vehicle may travel through an area that does not contribute, the vehicle should operate in “closed door” mode.

Sponsorships – Public/Private Partnerships (P3)

Sponsorships imply an agreement that benefits all parties. In a sponsorship program, one side receives revenue and support, while the other side receives advertising and promotional benefits commensurate with the cost. As indicated in Table 5-5, numerous businesses along the corridor and within St. George stand to benefit from the proposed routes, because the route is likely to:

- **Increase business at hotels, campgrounds and RV parks beyond Springdale—** Businesses on the route would have an advantage in allowing visitors to leave their vehicles parked at their hotel, campground, or RV Park, and ride transit to Springdale. Those businesses that can access the service should be at an advantage.
- **Increase retail, restaurant and medical business in St. George, Washington City and Hurricane** - By bringing county residents (and potentially visitors) to town to shop, obtain health care (supporting medical businesses), and dine, for example.
- **Increase pool of potential employees** -For employers in cities and towns along the corridor, particularly for service sector employers.

It is reasonable to ask businesses who will benefit from service to become system sponsors.

- **Hotels:** 34 hotels are located in St. George, 2 in Washington City, 8 in Hurricane, 1 in La Verkin, 1 in Virgin and growing.
- **Campgrounds and RV Parks:** 4 campgrounds are located in St. George, 1 in Washington City, 4 in Hurricane, and 1 in Virgin.
- **Major Retail:** Walmart stores located in St. George, Washington City, and Hurricane. St. George has Kmart, Target, and Red Cliffs Mall.
- **Other Major Employers:** St. George, Washington, Hurricane, and Springdale have numerous employers with 100 or more employees.
- **Other Businesses** that wish to advertise their services or company – If desired, parts or all of a bus can be wrapped for advertising purposes.

Table 5-5: Municipality Benefits from the Proposed St. George to Springdale Route

Municipality	Route's Potential Benefits to Residents	Route's Potential Benefits to Businesses
St. George	<ul style="list-style-type: none"> Provides access to jobs in Washington City, Hurricane, La Verkin, Virgin, and Springdale Provides access to Zion National Park for local residents and visitors 	<ul style="list-style-type: none"> Increases attractiveness of St. George hotels to area visitors – approximately 34 hotels By encouraging hotel stays, also supports St. George restaurants and retail Makes it easier for residents in smaller towns to shop and dine in St. George Increases pool of potential employees
Washington City	<ul style="list-style-type: none"> Provides access to jobs in St. George, Hurricane, La Verkin, Virgin and Springdale Provides access to health care, government services, major retail, and education in St. George Provides access to Zion 	<ul style="list-style-type: none"> Increases attractiveness of Washington hotels and RV parks to Zion visitors By encouraging hotel stays, also supports Washington restaurants, retail Makes it easier for residents in other towns to shop at Washington Walmart Increases pool of potential employees
Hurricane	<ul style="list-style-type: none"> Provides access to jobs in St. George, Washington City, La Verkin, Virgin, and Springdale Provides access to health care, government services, major retail, and education in St. George Provides access to Zion 	<ul style="list-style-type: none"> Increases attractiveness of Hurricane hotels and RV parks to Zion visitors By encouraging hotel stays, also supports Hurricane restaurants, retail Makes it easier for residents in other towns to shop at Hurricane Walmart Increases pool of potential employees
La Verkin	<ul style="list-style-type: none"> Provides access to jobs in St. George, Washington City, Hurricane, Virgin, and Springdale Provides access to health care, government services, major retail, and education in St. George Provides access to Zion 	<ul style="list-style-type: none"> Increases attractiveness of La Verkin hotel and restaurants for Zion visitors Increases pool of potential employees
Virgin/Rockville	<ul style="list-style-type: none"> Provides access to jobs in St. George, Washington City, Hurricane, La Verkin, and Springdale Provides access to health care, government services, major retail, and education in St. George 	<ul style="list-style-type: none"> Increases attractiveness of Zion River Resort for Zion visitors Reduces traffic congestion and parking demand in Virgin and Rockville Increases pool of potential employees for Zion River Resort
Springdale	<ul style="list-style-type: none"> Reduces traffic congestion and parking demand in Springdale Provides access to health care, government services, major retail, and education in St. George Provides access for workforce in Springdale, St. George, Washington, Hurricane and La Verkin 	<ul style="list-style-type: none"> Reduces traffic congestion and parking demand in Springdale Increases pool of potential employees

Transit Sponsorships Opportunities

Transit has a long history of providing advertising on and in buses, on brochures, signage and other avenues for additional revenue. Many systems have engaged in advertising over the years, but a sponsorship program is more than simply advertising. Instead of the usual selling of just one form of advertising, the new entity should sell sponsorship packages. Since sponsorship and advertising funds are an important source of local funding, this program can help expand this effort.

Sponsorship Services at Any Level Identifying Service

The program is designed to sell a service to both public and private sponsors. Possible services for sale can include:

- Recognize sponsor on the how-to-ride guide (system map and schedule), website and other venues.
- Recognize sponsorship on system literature and advertising.
- Decal on side or back of bus.
- Dedicated shuttle.
- Special promotions sponsorship.
- Package tickets to customers such as a hotel offering a package that includes tickets for service to Springdale.

Higher Level Sponsorship Services (in addition to the above benefits)

- Company logo on system map.
- Placing a shelter for customers and/or employees.
- Placing a stop conducive to customers and/or employees - this could include going into a parking lot and stopping next to the facility.
- Bus wrap or other advertising inside the bus.

Tourism Taxes

As discussed in the January 2012 *Dixie MPO Regional Transit Study*, tourism taxes could potentially help finance transit, including the Transient Room Tax (currently 4.25 percent in Washington County – the maximum allowable under Utah Code §59-12-301) and Municipal Transient Room Tax (currently 1 percent in St. George, Hurricane, La Verkin, and Springdale – the maximum allowable §59-12-352; not charged in Washington City).

Under Utah Code §59-12-353, the governing body of a municipality may impose an Additional Municipal Transient Room Tax (0.5 percent maximum) if the municipality has paid off its debt service on bonds or other indebtedness, including lease payments under a lease purchase agreement.

Restaurant tax within Tourism, Recreation, Cultural, and Convention Taxes (currently 1 percent in Washington County) might also have potential. These tax revenues must be used “solely for the purposes of financing, in whole or part, tourism promotion, and the development, operation, and maintenance of tourist, recreation, cultural, and convention facilities.” Given the likely ridership by tourists and employees of tourist destinations, transit expenses could arguably be considered to be promoting tourism and helping to operate/maintain tourist destinations, and it may be worth approaching jurisdictions regarding the potential for use of some portion to support operation of the proposed route.

Possible Funding Scenarios

Table 5-6 summarizes FTA/UDOT funding programs discussed in this funding review, including appropriateness for the proposed St. George to Springdale route. Table 5-7 summarizes potential local funding sources, including relative advantages and disadvantages.

Key sources of funding for this project include:

- FTA Section 5307 – The recent determination by FTA that these funds can be used throughout the MPO, is a very valuable source of funding. About 57.5 percent of the corridor is in the urban area as defined by FTA. This will require full cooperation of St. George and the other cities.
- Sales Tax – These funds would be available for all communities that vote to approve a tax. These funds can potentially provide most if not all of the local match for Sections 5307 and 5311 funding.
- Fare Revenue – Fare revenue will depend on ridership, and will also be a function of a public/private partnership that should include ticket sales. Marketing services to visitors at a higher single ride fare can provide significant revenue and ensure that this segment of the service is not significantly subsidized.

While not as large a source of funds, the following can supplement the above major sources:

- FTA Section 5311 – These funds may be available for up to 42.5 percent of the corridor. These funds are limited and very competitive.
- Sponsorships and Partnerships – In addition to ticket sales, there are opportunities for sponsors at any level. Advertising, promotions and joint marketing efforts can benefit all and generate revenue for the system.

It will be up to the study committee to determine the best combination of funds to be applied to this service. This includes the likely necessity of using local government funding if the sales tax is not utilized. Table 5-8 summarizes dollars that could be available as potential funding sources for transit. The three scenarios offered are examples that can be applied. There are

other combinations as well and the committee should select the approach most appropriate for Washington County.

Table 5-8 illustrates three examples of funding scenarios that can be applied. These are as follows:

1. Using Section 5307 Funding – Under this minimal scenario, 5307 funds are available for about 57.5 percent of the service. This scenario assumes there will be no funding for rural service nor a sales tax. The local share (after sponsorships) could be \$883,000 allocated to each locality based on mileage and other factors.
2. Using Section 5307 and 5311 Funding – In this scenario, funding is available for both urban and rural segments of the service area using a combination of rural and small urban funds. No funding is available from a sales tax in this scenario. Federal funds come to one half of the operating deficit and combined are \$690,000. Local share after sponsorships would be \$590,000 annually.
3. Section 5307 and Sales Tax – In this alternative, sales tax revenue would generate all of the local match requirements with FTA funding for 57.5 percent (of one half of the operating deficit).

Initial year funding will require startup funds, estimated at \$300,000 and capital funds for vehicles and equipment assuming an 80 percent federal match and comes to about \$500,000 in a one-time cost.

Key Decision Point No. 3: Funding Decisions

Funding for this service can come from a variety of sources. Much of the service (57.5 percent) can be supported with FTA Section 5307 small urban funds, which is available and might otherwise be lost to the region if not used here. These funds will be shared with St. George. While, the system should also seek Section 5311 rural funds, there will be direct competition with other systems and funding is limited at best.

The key decision point here is to determine if a Mass Transit Sales Tax Referendum should be placed before voters to provide the local funding needed to draw down the rest of the Section 5307 funding available to the community. This decision must take into account SunTran's needs, and plans coordinated to ensure a coherent message to the voters.

Table 5-6: Summary of FTA/UDOT Programs that Could Potentially Support Transit Services in the Study Corridor

FTA Program Name	Eligible Subrecipients	Eligible Projects	Minimum Local Match	Other Considerations
Section 5311 - Formula Grants for Rural Areas	Public entities, Indian tribes, private non-profits, operators of public transit or intercity bus service	<ul style="list-style-type: none"> • Public transportation and intercity bus transportation in rural areas, including service into the urbanized area • Eligible expenses include vehicles, equipment, facilities, administration, and operations 	<ul style="list-style-type: none"> • 20% for capital projects (vehicles, equipment, facilities) • 20% for administration • 50% of net operating deficit 	In Utah, S. 5311 services are to be designed to maximize use by members of the general public who are transportation disadvantaged, including seniors and individuals with disabilities. Section 5311 funds could pay up to 42.5% of the federal share.
Section 5339 - Grants for Buses and Bus Facilities	Public agencies or private non-profit organizations engaged in public transportation, including those providing services open to a segment of the general public, as defined by age, disability, or low income	<ul style="list-style-type: none"> • Buses and vans, related equipment, and facilities related to operating bus transportation • A portion of this program is exclusively for low and no emissions buses and supporting facilities 	<ul style="list-style-type: none"> • 20% for capital projects • 15% for low and emissions buses 	Reduced local share for “low-no” program is federal policy; UDOT may require a higher match.
Section 5307 - Urbanized Area Formula Grants (Small Urban Program)	Designated recipient for the St. George urbanized area (i.e. City of St. George)	<ul style="list-style-type: none"> • Public transportation in urbanized areas. • Eligible expenses include vehicles, equipment, facilities, and operations 	<ul style="list-style-type: none"> • 20% for capital projects • 50% of net operating deficit 	In the case of a St. George to Springdale route, only the portion of the route that falls within the MPO are about 57.5% of the route.

FTA Program Name	Eligible Subrecipients	Eligible Projects	Minimum Local Match	Other Considerations
Section 5310 - Enhanced Mobility of Seniors and Individuals with Disabilities	Private non-profits or governmental authorities as coordinators (per UDOT); FTA policy now allows governments that operate public transportation	<ul style="list-style-type: none"> • Public transportation capital projects that are planned, designed, and carried out to meet the specific needs of seniors and individuals with disabilities • Additional public transportation projects that exceed ADA minimum requirements, improve access to fixed route service and decrease reliance by individuals with disabilities on ADA-complementary paratransit service • Provide alternatives to public transportation that assists seniors and individuals with disabilities with transportation 	20% for capital projects	<ul style="list-style-type: none"> • While not appropriate for fixed route public transit, could potentially support specialized services tailored to needs of seniors and people with disabilities • Must first be included in the locally developed coordinated human service transportation plan
Frequent Federal Funding Opportunities	Tiger Grants and Regular funding opportunities	Variety of capital, operations and targeted needs funding available on a regular basis, but not guaranteed with a new administration.	Capital is an 80% federal match, and operations is typically a 50% match	Very competitive grant application process.

Table 5-7: Potential Sources of Local Funding

Type	Description	Basis	Relative Advantages	Relative Disadvantages	Other Considerations
Local Option or Mass Transit Tax	A 0.25% sales tax designed for transportation projects	Requires passing a vote	<ul style="list-style-type: none"> The best chance for a sustainable transit system Funding for all transit in the county 	<ul style="list-style-type: none"> Requires passing of tax by electorate Service cannot be provided where vote is not passed. 	<ul style="list-style-type: none"> Allows room for expansion. Can help bring in additional unspent Federal funds to the local economy.
Cash Support / Sponsorship from Businesses	Businesses could provide support through a variety of approaches: advertising, promotions, purchase of unsubsidized bus tickets for their customers or employees, sponsoring a vehicle or bus stop/shelter	Proposed route will benefit businesses by making it easier for customers and employees to get there (or in the case of hotels, from there to Springdale). Business can advertise their services and support.	<ul style="list-style-type: none"> This is a business transaction Business support could result in cross-marketing for transit service and business 	Will need to sell sponsorships. May need to contract for this service	<ul style="list-style-type: none"> Depending on schedule and stop locations, route would support the following businesses: <ul style="list-style-type: none"> Hotels and RV parks/campgrounds outside of Springdale Retail, restaurant, medical-related providers in St. George, Washington, & Hurricane Employers in St. George, Washington, Hurricane, and Springdale

Type	Description	Basis	Relative Advantages	Relative Disadvantages	Other Considerations
Tourism Taxes	<ul style="list-style-type: none"> Transient Room Tax Municipal Transient Room Tax Additional Municipal Transient Room Tax Restaurant tax within Tourism, Recreation, Cultural, and Convention Taxes 	Proposed route will make it easier for guests to stay in hotels outside of Springdale without driving to Zion, and for employees to get to hotels and restaurants in all towns	Could be a significant source of support	<ul style="list-style-type: none"> Would require a governing body action (and potentially an election) to implement/ increase room taxes May not provide a reliably steady level of support 	May require reprioritization of public service needs in county and those cities that already impose these taxes
Municipal Funds	Funding from St. George, Washington City, Washington County Hurricane, La Verkin, Virgin, and Springdale	Residents and businesses within these cities, towns and county are the beneficiaries of proposed route service	Typically flexible in how funding is used (typically not tied to specific demographic group, capital vs. operating)	May be difficult for municipalities to find room in their budgets to support the route	<ul style="list-style-type: none"> The relative contribution could be shared equitably based on total population, population of transit dependent populations, number of hotel beds in hotels along the route, and/or some other formula, Sharing the burden of the local match is more equitable and may be easier than securing necessary match from one or two jurisdictions

Type	Description	Basis	Relative Advantages	Relative Disadvantages	Other Considerations
Other Federal Funds	Federal Lands Highway Program funds and non-DOT grants	<ul style="list-style-type: none"> A wide variety of federal programs support transportation services, often for specific demographic groups who are likely to ride the route. Proposed route would help reduce traffic congestion 	<p>One or more grant programs could provide substantial support</p>	<ul style="list-style-type: none"> Requires applying for other grants Each grant will have its own requirements and limitations May not provide a reliably steady level of support 	May be able to support specialized transportation needs of particular demographic groups and fill some transportation dependent gaps in service while opening service to the general public

Table 5-8: Potential Annual Funding Sources

Scenario	Operating Costs	Fare Revenue	Section 5307*	Section 5311**	Local Cash	Sponsorships	Mass Transit Tax
1. Using 5307 Funds	\$1,900,000	\$520,000	\$397,000	\$0	\$883,000	\$100,000	\$0
2. Using 5307 and 5311	\$1,900,000	\$520,000	\$397,000	\$293,000	\$590,000	\$100,000	\$0
3. Mass Transit Tax and 5307	\$1,900,000	\$520,000	\$397,000	\$0	\$0	\$100,000	\$883,000

* 57.5% of the service area is eligible for 5307 funding equal to 1/2 of the operating deficit

** 42.5% of the service area is eligible for 5311 funding (if available)

Chapter 6

Implementation Plan

INTRODUCTION

The St. George to Springdale Transit Implementation Plan was developed to provide a transit implementation blueprint for decision makers to rely on when considering service implementation to connect the corridor. This chapter presents a complete implementation plan for this service.

Study Process

This plan was developed over the past eight months and included a wide range of efforts: surveys, two rounds of meetings, field observations, interviews with stakeholders and presentations to committees. The process included the methodical development of a series of technical memoranda (now chapters) that provide extensive detail into the study process. The plan includes an introductory chapter and the following chapters:

- Chapter 2: Existing Conditions
- Chapter 3: Market Analysis
- Chapter 4: Unmet Needs and Potential Transit Demand
- Chapter 5: Development of Organizational and Service Alternatives
- Chapter 6: Implementation Plan

Critical elements of the St. George – Springdale service are contained in this implementation plan and include:

- Service Plan
- Organization and Administration Requirements
- Financial Plan
- Cost Benefit Review
- Implementation Activities

SERVICE PLAN

The service plan describes the type and level of service to be provided. Initially, service themes and assumptions are reviewed. This is followed by service description, service levels, costs and service characteristics.

Key Themes

1. **Flexible plan** – A flexible plan is called for in this environment as there are a number of viable administrative and financial options. While it is clear which scenarios are preferred, there are a number of options available and viable. Therefore, as part of the implementation plan, the other viable options will be identified as “back-up plans” in the event the first option is not viable.
2. **Support from all jurisdictions** – Washington County, St. George, Washington City, Springdale, Hurricane, La Verkin, Rockville and Virgin are included in the service. Each jurisdiction should support the service. Jurisdictions that do not engage in the system will not receive service.
 - o If Washington City chooses to become part of SunTran, then only express service should be offered in Washington City unless city officials authorize additional funding for additional surface routes.
3. **Bus stops, bicycles and pedestrians** – All bus riders are either pedestrians or bicycle riders and efforts should be made to ensure accessibility to bus stops. Bus stops should conform to standards that will be discussed in the appropriate section below. Buses will have bicycle racks.
4. **Ensure seamless connectivity and integration of service modes** - Connectivity between this new service and the systems at each end are essential. Passengers do not care about institutional boundaries. Regardless of who operates service, providers should act as one coordinated network.
5. **Building ridership** – As with any business it may take a few years to build ridership. Marketing efforts, quality service, good looking buses and proper fare structure will help build ridership.
6. **Visitor ridership should pay for itself** – The potential for visitor ridership is excellent. Visitors come from all over the world and many expect to have good public transportation and are willing to pay for service. Fares and promotional efforts with hotels will be designed to maximize revenue for transit.
7. **Sponsorships and partnerships** – There is no question that businesses benefit from transit. Transit takes customers and/or employees to their business and the distances that have to be traveled for both employees and customers make transit an attractive option. Advertising on transit is a service that is more than one-hundred years old. There are a variety of public/private partnerships that can be developed.



Connectivity between this new service and the systems at each end are essential.

8. **Marketing** – Marketing efforts need to encompass the wide range of potential riders and supporting businesses. There are many people, businesses, medical facilities, other facilities and Dixie State University that will benefit from the service.

Service Description

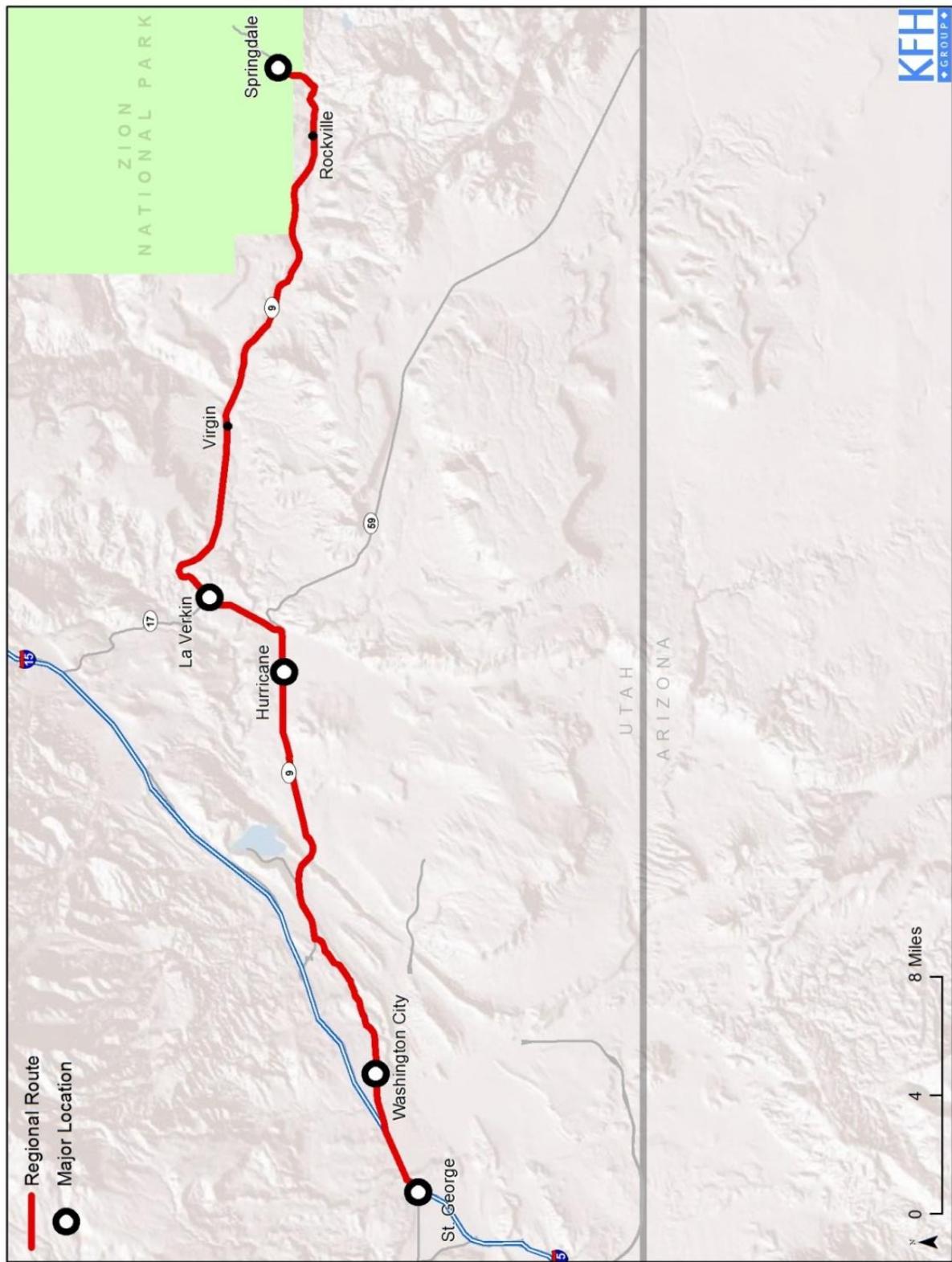
A fixed route service will operate between the St. George Transfer Center, adjacent to Dixie State University, and the northern edge of Springdale (see Figure 6-1), a distance of 40 miles without additional routing in St. George. The final routing within St. George will address critical destinations such as Dixie Regional Medical Center, and major destinations such as clusters of shopping, hotels, the convention center and other destinations based on sponsorships and partnerships.

These stops will ultimately determine the route in St. George. The number of destinations will be dependent on how many stops the bus can make and stay within its scheduled running time; 1.5 hours for express and 2 hours for local. Other passengers may have to transfer to a SunTran bus.

Basic routing will be along St. George Boulevard, Red Cliff Drive, and Telegraph Road through Washington City and SR 9 through Hurricane to Springdale. If Washington City does not participate, it may be advantageous to operate on I-15 directly to SR 9.

There will be two types of service proposed:

1. **Local service** – While this service can be used by commuters and visitors to Springdale it should also benefit local residents (for other than commute trips) in Hurricane, Washington City (if they do not select SunTran service) and La Verkin residents (who will now have access to local bus service with stops every $\frac{1}{4}$ mile or more as appropriate). This service would operate throughout the day. The service, outside of SunTran's service area, will operate in flex route (route deviation) mode as required under the Americans with Disabilities Act (ADA). Riders that qualify for flex service can request the bus to go off route for up to $\frac{3}{4}$ of a mile. Riders can call the dispatcher for this service. One-way ride time from end to end is two hours and includes multiple stops in St. George as well as flex route service outside of St. George. This timing may be adjusted seasonally.
2. **Express service** – This is a limited stop service designed for commuters along the route and those wanting to get to Springdale or St. George. This service will not be required to adhere to ADA complementary paratransit requirements as it is a limited stop, limited times, commuter oriented service. One-way ride time is one hour and 30 minutes and includes limited stops in each community as well as multiple stops in St. George.

Figure 6-1: St. George to Springdale Regional Transit Route

Service Levels

The corridor service will operate from 6 a.m. to 10 p.m. daily in order to meet the needs of local residents for commuter, medical and recreational needs. Service levels will vary by season and are summarized in Table 6-1 and described in detail below.

- **Summer Season (June – September):** In this season, local service and express service would be provided (requiring a total of four buses). Local service will require two buses operating on two hour headways all day and evening – 16 hours for each bus daily. In addition, express service will require one bus for base service (16 hours) on three hour headways with a second bus (eight hours) serving the morning and evening peak periods. Four buses will be needed during peak hours. Local and express buses will be set up in a staggered manner to avoid duplicate travel times.
- **Other Seasons (October – May):** These seasons will use three vehicles all day, similar to the summer season with the reduction of the peak hour express bus. One bus will serve express all day on 3 hour headways and two buses will provide local service on two hour headways. As an option, express service can be eliminated during the months where the Zion shuttle is not operating, reducing service hours by 1,952 hours or about \$200,000.



Demand For transit service will vary throughout the year

Table 6-1: Seasonal Service Levels

Season	Express Service		Local Service		Service Totals	
	Service Hours	Service Miles	Service Hours	Service Miles	Total Hours by Season	Total Miles by Season
Peak (June - September)	2,928	78,060	3,904	78,080	6,832	156,140
Shoulder (April-May, October-November)	1,952	52,040	3,904	78,080	5,856	130,120
Winter (December-March)	1,952	52,040	3,904	78,080	5,856	130,120
Total	6,832	182,141	11,712	234,240	18,544	416,381

Note: Assumes average operating speed of 27 mph for express service and 20 mph for local service

Potential Performance

As with any business, ridership will take a few years to build to its predicted level of 262,500 annual one-way trips as detailed in Chapter 5. Table 6-2 describes key indicators of ridership, one-way trips per vehicle hour and cost per one way trip. It is estimated that during the peak season, visitor ridership to Springdale will be about $\frac{1}{2}$ of the ridership, while the rest of the year will see over 80 – 90% of ridership as local residents. Ridership among local persons with disabilities, elderly and low income residents will be approximately 10 – 20% of the local resident ridership as detailed in Chapter 4.

Table 6-2 assumes ridership will build over three years, starting at 60% of the estimated potential ridership, building to 80% in year two and in the third year it would reach its potential. Annual costs are expected to rise 2% annually over the three year period. Table 6-2 demonstrates that as ridership increases, productivity improves and cost per trip goes down.

Table 6-2: Ridership and Performance Measures

Year	Annual One Way Trips*	Annual Vehicle Service Hours	One Way Trips/Hour	Annual Cost**	Cost/One-Way Trip
1	157,500	18,544	8.5	\$ 1,891,488	\$12.01
2	210,000	18,544	11.3	\$ 1,929,318	\$9.19
3	262,500	18,544	14.2	\$ 1,967,904	\$7.50

* Ridership reaches estimated level in Year 3, with Year 2 at 80% and Year 1 at 60% of estimated ridership

** Includes 2% annual increase for inflation

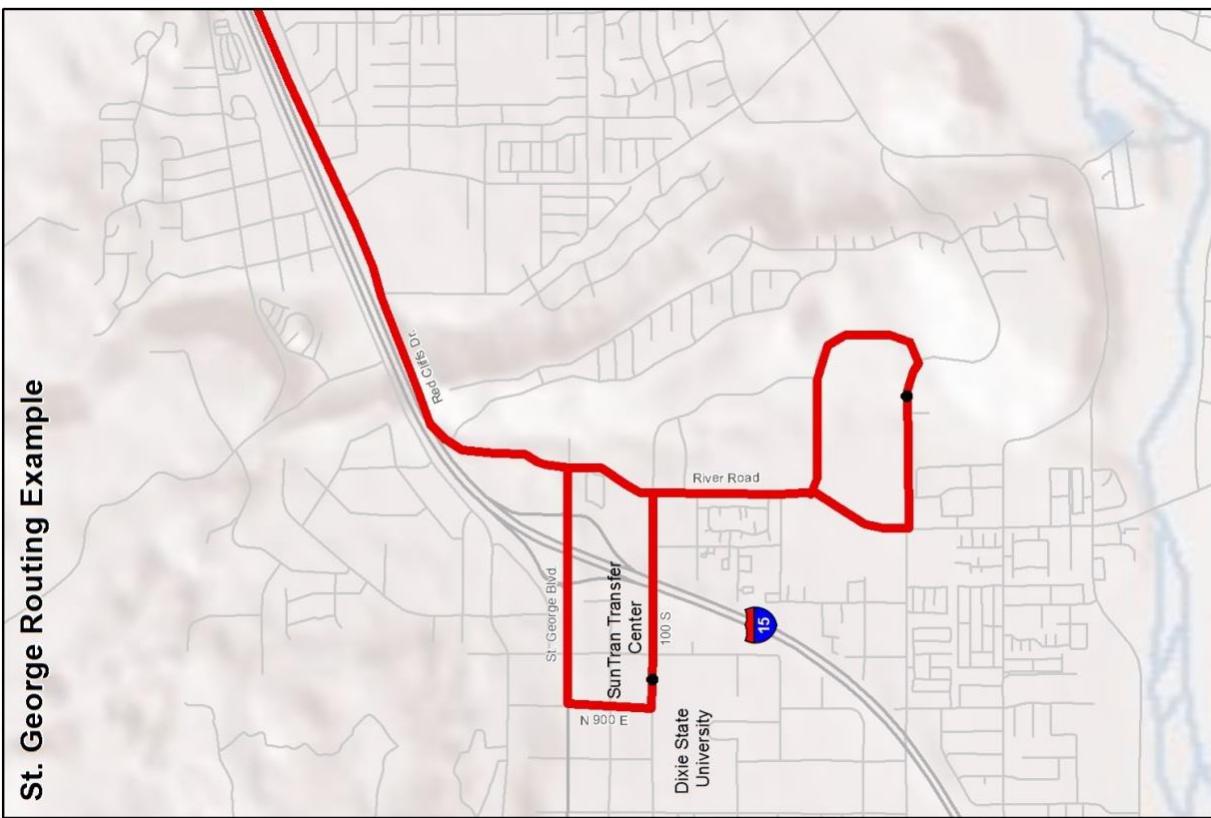
Run Through Service

As is typical of transit systems across the country, it is recommended that new service operate into a number of key destinations at each end of the service area, rather than transferring at the end of the line. In St. George, destinations can include medical complex(s), hotels, major employers and the transfer station at Dixie State. Stops will be dependent on need and sponsorships (which will be discussed in detail in the marketing section).

In Springdale, it is recommended that the bus operate through town to the Giant Screen Theater at the northeastern edge of Springdale, making multiple stops through town.

The study examined a “single point” stop in Springdale. Attempting to end service where the Springdale shuttle begins on the western edge of Springdale would reduce ridership by forcing all riders to transfer to a crowded bus after waiting in line to make the transfer. Both the city and the shuttle operator agreed that requiring transfers would make for suppressed ridership, crowded buses and less efficient and effective service.

Figure 6-2: Local Routing Options



Americans with Disabilities Act (ADA) Requirements

All buses must be accessible to persons with disabilities as is SunTran and Zion's service. There are two choices for how to serve persons with disabilities that cannot get to a bus stop. Flex route service was chosen as the most effective approach. In this approach, the regular local bus will flex off route for up to $\frac{3}{4}$ mile for approved persons with disabilities. This service will slow local service by a few minutes, but will eliminate the costly burden of adding and operating two to three vehicles to the fleet.

Capital Equipment: Vehicles, Technology and Bus Shelters

Capital equipment will include five buses, one supervisory vehicle, five shelters (other shelters will be paid for by sponsors) and technology including computers, radio/cellphone, digital and voice communication, automatic vehicle locator and other necessary tools. If a new technology bus is selected, there will be considerable capital expense associated with equipment and tools.

Heavy Duty Transit Coaches

Transit bus technology is evolving rapidly. Beyond standard diesel technology (such as is operated by St. George), there are alternative fueled vehicles, hybrid buses and pure electric buses. These buses are detailed in Chapter 5. The plan calls for standard diesel technology but with the rapid evolution of electric bus technology, the decision should not be made until it is time to procure buses. In addition, if the federal commitment remains, FTA has been offering grant assistance to procure alternative fueled or electric buses. Park City recently took advantage of this and ordered electric buses. Alternative bus technology will require a new commitment to maintaining completely different technologies with different equipment, tools and training.



**Heavy duty transit coaches
are needed for this service**

Five 35 – 40 foot transit coaches should be procured, four peak vehicles and one spare. The cost will range from \$500,000 for a standard diesel bus to over \$800,000 for an alternative fuel, hybrid or electric bus. For purposes of this plan, standard diesel buses will be selected, however this will serve as a placeholder, as technology and costs may shift rapidly. The potential for additional federal funding for these technologies remains.

ORGANIZATIONAL AND ADMINISTRATIVE APPROACH

Organization

Consensus among key stakeholders is that this new service should be the product of an interlocal agreement among all jurisdictions with service administered and operated by the City of St. George's SunTran service. This would require additional efforts in management, supervision, planning and administration for SunTran, which would stretch its service area 40 miles to the east.

Organizational Structure

Chapter 5 discusses the possibility of a transit district to oversee all aspects of transit in the county. This would require a new independent entity with the potential to receive sales tax revenue. Currently, there is little interest in this approach and it is not necessary for this service to be successful. However, once the organization is determined, a board selected and service operating successfully for a number of years, it would be a worthwhile effort to revisit the possibility of a transit district. For now, the recommendation is to develop an interlocal agreement among all of the cities and the county.

Service will be organized through an interlocal agreement that identifies each issue that the consortium of cities and the county must address in order to ensure an equitable relationship among consortium members.

Minimum Requirements

Service should be operated by SunTran in a "turnkey" manner – meaning that SunTran will operate, manage and administer the program, guided by an interlocal agreement, with a board composed of representatives from each jurisdiction. SunTran will be responsible for conducting all system requirements (administrative, management and operating). These functions include:

- Ensuring compliance with FTA and UDOT rules and regulations.
- Budgeting and financial management – SunTran will be responsible for all aspects of the finances.
- Seeking funding sources – This is a constant effort.
- Long range planning – Long range guidance should come through SunTran.
- Grant administration – As it does currently with its own grants, SunTran will take on this responsibility for the new service.
- Procurement – This will be conducted through SunTran.
- Marketing – Marketing is an essential function prior to and during implementation. SunTran should expand this effort with professional expertise (in - house or contracted).

- Operations:
 - Recruitment, hiring and training
 - Operations management
 - Operations planning
 - Service monitoring and oversight – SunTran should continually monitor service. Complaints and commendations should be in-house as well.
 - Facility management

Interlocal Agreement

An interlocal agreement should be developed by the jurisdictions. The agreement must be designed to ensure each entity receives equitable treatment in the following areas:

1. **Routing and bus stops** – The consortium should ultimately determine routing. Bus stops should be determined by locality, based on rules set in the agreement. This includes limits to placement, minimum distance between stops and number of stops.
2. **Cost allocation** – A fair and equitable arrangement for each community must be agreed upon, based on both quantifiable and non-quantifiable criteria.
3. **Consortium rules and bylaws** – The consortium should set up bylaws that describe activities of the consortium and how to resolve issues and differences.
4. **Delineation of responsibilities** – The interlocal agreement will clearly delegate certain responsibilities to SunTran. At the same time, agreement must be reached on what decisions should be made by the consortium.

Staffing Needs

Once service is in operation, it will require a road supervisor to cover the 40 mile route, one manager and parts of administrative and maintenance staff. These costs are factored into the operating costs discussed in the financial section. It is estimated that there will be a peak need of 13 drivers during the summer as well as at least two to three back-up drivers to meet all of the schedule needs.

FINANCIAL PLAN

The financial plan for the new service reviews the budget, potential funding sources and overall funding scenarios. There are a number of funding options largely dependent on voters approving a transit sales tax as permitted under Utah law. A second scenario will be offered as a back-up plan in the event new sales tax revenue is not available to the new service.

Operating and Capital Budgets

There are a number of components to the operating budget. These include:

- Operating costs
- Start-up costs
- Capital costs

Operating Costs

The operating budget is based on a per hour cost typical of a service that operates heavy duty transit coaches. The per hour cost will be calculated at \$102 per hour for operating, administration, management/supervisory, capital depreciation and facility expenses. The actual price may be slightly higher or lower depending on the arrangement and which entity operates the service.

Based on a per hour rate of \$102 and 18,544 annual service hours, the annual operating cost will be **\$1,891,488**.

Start-Up Costs

Start-up activities begin after agreement between jurisdictions is reached and signed and funds have been secured. These basic planning and grant writing activities can be conducted by SunTran staff with support from local entities as needed. The next step, as soon as funding is available, will be to procure vehicles as this process typically takes over one year.

Activities can begin slowly; and at least 10-12 months prior to the projected start date, a manager will have to be hired to conduct grant writing, contract procurement, and perform operations planning. Administrative support staff will need to be hired about six months prior to implementation. Legal, accounting and technology support fees should be included.

Start-up costs will begin after funding has been secured and vehicles procured. These costs will include the following:

- System Manager one year (\$60,000) and Administrative Support six months (\$20,000), Marketing/Sponsorship specialist six months (\$25,000) with fringe of 30% (\$31,500)
- Legal, accounting and technology support (\$30,000)
- Office space, photocopying, support, and furniture (for start-up only) (in-kind)

Start-up costs, including staff, support and facilities, should be approximately **\$166,500** (plus in-kind support).

Capital Costs

Capital costs identified include five buses, one supervisor vehicle, five bus shelters, AVL technologies and communication equipment. Costs are shown in Table 6-3.

Table 6-3: Capital Costs

Vehicle	Cost
Five 40-foot diesel buses	\$2,500,000
One supervisory vehicle	\$50,000
Five installed shelters	\$75,000
Technology and communication	\$25,000
Total	\$2,650,000

Funding Transit

Reviewing Funding Sources

While each potential funding source was detailed in Chapter 5, for the sake of clarity, funding sources having the most potential are summarized in this section.

An important aspect of this financial plan is the recently permitted use of Section 5307 funds within the entire Dixie Metropolitan Planning Organization (DMPO) planning area which extends to the eastern border of La Verkin, constituting 57.5% of the planned route. Section 5307 funds will be available for 57.5% of the service area and if available, Section 5311 funds for 42.5% of the service area, both with a local funding requirement of 50% of the operating deficit and 20% for capital needs (with higher amounts allowed under current federal policies for certain ADA-compliance and Clean Air Act-related equipment).

Section 5307 – Formula Grant Program for Small Urban Areas

The City of St. George is eligible for (and receives) small urbanized Section 5307 funding. These funds are used to support public transit (capital and operating expenses) in the St. George urbanized area. According to SunTran management, about one-half of the funding is used, causing up to a two year backlog in spending funds. SunTran management indicates that for the foreseeable future, even if Washington City joins, there will be a significant surplus of funds that can be used for the corridor service.

Section 5311 - Formula Grants for Rural Areas

The Section 5311 program provides formula funding for supporting public transportation for people living in areas with populations less than 50,000 (in this case service, east of La Verkin). Since the goal of Section 5311 is to enhance overall mobility of people living in rural areas, Section 5311 projects may include transportation to and from urbanized areas.

Eligible expenses are capital, operating, and project administrative expenses for Section 5311 funding. Capital expenses are eligible for projects that include the acquisition, construction, improvement of public transit facilities and equipment and mobility management activities.

At this time, according to state officials, Section 5311 funds are allocated to existing services. This proposed service would have to compete for these funds and if selected, funds would most likely be taken from other systems.

Section 5339 - Grants for Buses and Bus Facilities

The Section 5339 program provides federal funding to support the continuation and expansion of public transportation through capital projects to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities. UDOT PTT administers and provides Section 5339 funding for small urban and rural areas (areas with populations less than 200,000).

With the passage of the FAST Act, there are two new discretionary programs created under the Section 5339 Federal program:

- **Bus program discretionary funding** – With at least 10% per fiscal year awarded to projects in rural areas.
- **Low and no emissions bus program discretionary funding** – There are targeted funds for the purchase or lease of zero-emission and low-emission transit buses, including acquisition, construction, and leasing of required supporting facilities such as recharging, refueling, and maintenance facilities. A low or no-emission bus is defined as a passenger vehicle used to provide public transportation that significantly reduces energy consumption, air pollution, or direct carbon emissions, when compared to a standard vehicle.

At the federal policy level, federal funding share for vehicles can be up to 85%, and up to 90% for related “Low-No” equipment and facilities such as recharging or refueling facilities. However, UDOT may elect to limit the federal share to a lower level (such as 80%).

Other Federal Funds

FTA periodically announces new one-time or annual grant opportunities for targeted purposes, most of which could be applied to this corridor service due to the wide variety of needs it can serve. Most notable are TIGER grants. Since 2009, Congress has dedicated nearly \$4.6 billion for seven rounds of TIGER grants to fund projects that have a significant impact on the nation, a region or a metropolitan area. - See more at:

<https://www.transportation.gov/tiger/about#sthash.KEixnxhN.dpuf>. About 28% of this funding has gone to transit projects, including rural areas. This on-going grant process (if

continued under the next federal administration) provides an excellent opportunity to procure vehicles, facilities and other capital needs. Lastly, the system should attempt to partner with the National Park Service and seek financial support for this service.

Fare Revenue

Fare revenue, including cash fares and sales of bus tickets or passes, is considered operating revenue that cannot be used as local match for FTA grants. Grantees must first deduct fares collected from their operating expenses in order to calculate net operating deficit, and the 50% local match is calculated from the net deficit.

Setting Fares

In determining fares for the proposed route, it will be important to balance revenue goals with ensuring service is affordable to transportation dependent individuals, in other words, to maximize revenue while ensuring all can ride. The recommended approach has three levels of fares:

1. **Single ride fare** – This fare would be the “full price fare” of \$5 (with half price fare for seniors and children) available for those making just a few trips (visitors for example). Hotels and businesses can purchase tickets for customers. It may be worth exploring funding from non-DOT human service funding sources to partner in subsidizing fares for transportation disadvantaged riders.
2. **Monthly and multi-ride tickets** – This would be a deeply discounted fare targeted to local residents (\$2 for example, or \$1 for local Hurricane/La Verkin service).
3. **Discounted fares** for children, seniors and persons with disabilities – Children and senior fares should be half fare and persons with disabilities that are eligible for ADA services would ride for free. Flex service fare would be at least \$2 to \$4.

Fare revenue can be significant in a constrained environment as is the case in Springdale. In a best case scenario, assuming a \$3 one-way fare (on average), fare revenues for a high level of service could be as high as \$786,000 in a mature service. First year estimates for fares are \$420,000 with the potential for \$700,000 in 3 years.

Identifying Funding Levels by Sources

Assuming operating costs as calculated above, (\$1,891,488), Table 6-4 details the overall cost breakdown for this service by funding scenario. This is a typical representation of one year after ridership has been built to predicted levels. Under the two non-tax scenarios, one includes Section 5307 urban funds only. This will pay for 57.5% of one-half of the operating deficit. The second scenario includes Section 5311 funding (limited availability) for the remainder of the federal portion. In each case there will be a considerable local match:

- Section 5307 funds only – local match: \$748,935

- Section 5307 and 5311 - local match: \$495,744

Table 6-4: Funding Scenarios – Full Ridership

Scenario	Operating Costs	Fare Revenue	Section 5307*	Section 5311**	Local Cash	Sponsorship	Transit Tax
Using 5307 Funds	\$1,891,488	\$700,000	\$342,553	\$0	\$748,935	\$100,000	\$0
Using 5307 and 5311 Funds	\$1,891,488	\$700,000	\$342,553	\$253,191	\$495,744	\$100,000	\$0
Transit Tax and 5307	\$1,891,488	\$700,000	\$342,553	\$0	\$0	\$100,000	\$748,935
Transit Tax, 5307, 5311	\$1,891,488	\$700,000	\$342,553	\$253,191	\$0	\$100,000	\$495,744

* 57.5% of the service area is eligible for 5307 funding equal to 1/2 of the operating deficit

** 42.5% of the service area is eligible for 5311 funding (if available)

Cost Allocation

Cost allocation is often a difficult issue that requires careful consideration. Transit service is dependent on most, if not all, of the jurisdictions in the service area to join the service. In order to do this, an equitable cost allocation formula should be developed to identify costs for each jurisdiction.

The allocation of costs by jurisdiction is only an issue if a transit tax is not available. If a transit tax is available, local communities would not have to pay for the service directly.

In the event a tax is not available, the simplest approach is based on a percentage of route miles. Figure 6-3 identifies the mileage for each jurisdiction and the corresponding Table 6-5 quantifies the percentages.

While the formula is simple, there are always exceptions based on a variety of equity and political needs that often cannot be quantified. For example, percentages based on mileage in Table 6-5 indicate an inequity that is not accounted for in the simple mileage formula. Several things are clear in this formula: Virgin and Rockville, because of their large service area but low population size, would pay far more than justified; while Springdale would pay far less, although it has much to gain and will be a destination for many.

Therefore, some form of normalization is necessary. A population-based approach would skew the results, as Springdale would again be under-represented due to its population. It is the recommendation of the consultants, that this issue be addressed by the consortium formed to oversee this service. Using this and other input, they can negotiate the most appropriate rates. As will probably be agreed upon by the board, the normalization process would account for those anomalies.

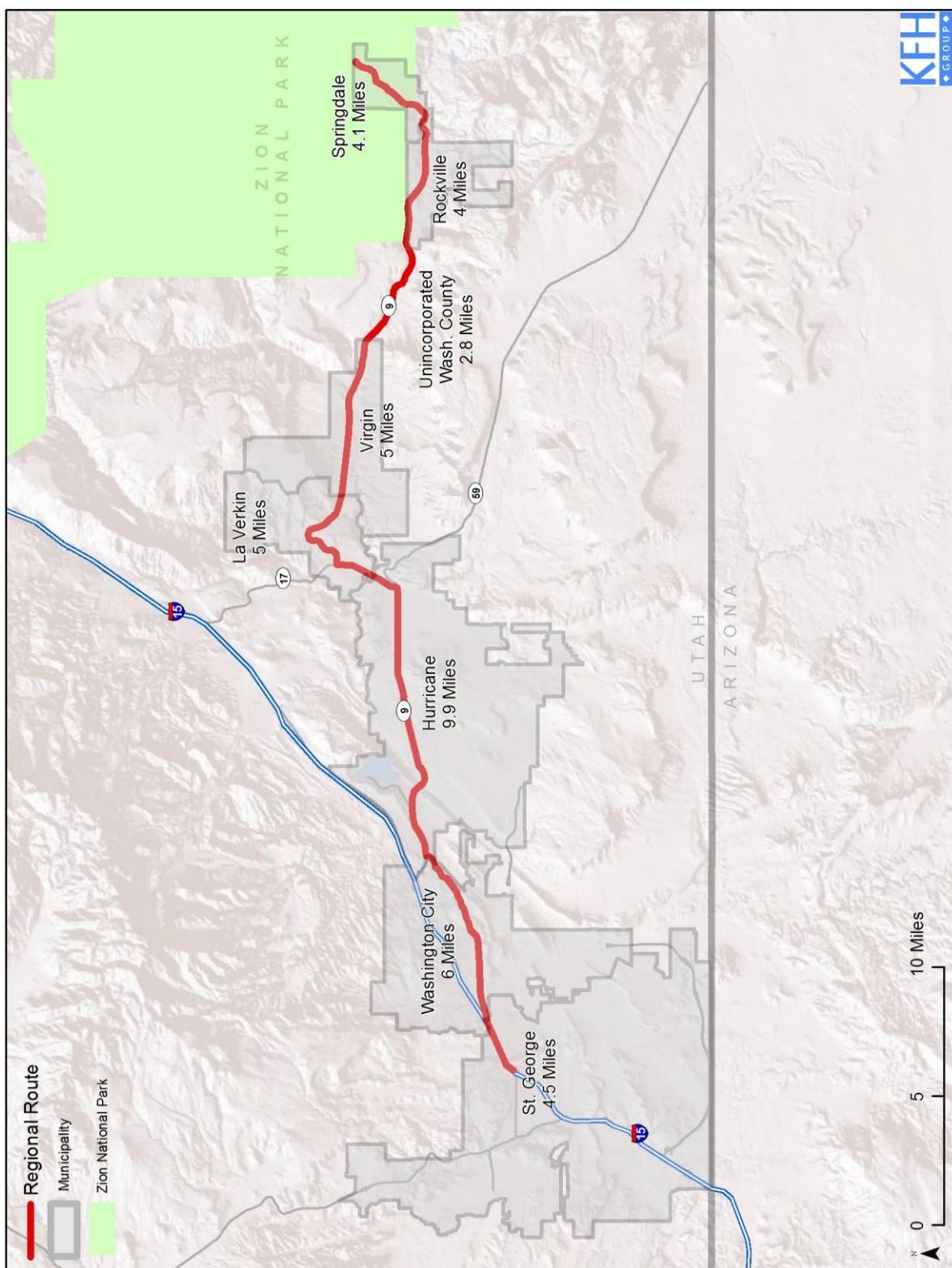
Figure 6-3: Jurisdictional Mileage

Table 6-5: Mileage by Jurisdiction

Jurisdiction	Miles of Service	Percentage of Total
Hurricane	9.9	23.97%
La Verkin	5	12.11%
Rockville	4	9.69%
Springdale	4.1	9.93%
St. George	4.5	10.90%
Virgin	5	12.11%
Washington City	6	14.53%
Unincorporated Washington County	2.8	6.78%
Totals	41.3	100.00%

The final decision on cost allocation will be made by the consortium. The following example is intended as a starting point for discussion. In the no-tax scenarios, Tables 6-6 and 6-7 both normalize the allocation formula to reduce Rockville's and Virgin's percentage to 1% and 2% respectively, while increasing Springdale by 10%. La Verkin is reduced by 5% and the additional percentage is spread over the remaining cities, with the bulk going to Washington City where local service is proposed, resulting in a more equitable distribution.

Table 6-6 illustrates an allocation methodology and resulting cost by jurisdiction for the first year. As ridership grows and fare revenue increases, costs for each jurisdiction will be reduced. Table 6-7 shows lower costs for year three when full ridership and fare revenue are expected. This is a starting point for the final negotiations.

Table 6-6: Cost Allocation – Normalized – First Year (No Tax)

Jurisdiction	Normalized Percentage	Annual Cost without 5311	Annual Cost with 5311	One Time Capital Cost
Hurricane	27.38%	\$259,683	\$174,067	\$145,114
La Verkin	8.84%	\$83,842	\$56,200	\$73,352
Rockville	1.00%	\$9,484	\$6,357	\$21,200
Springdale	19.93%	\$189,023	\$126,704	\$79,129
St. George	12.46%	\$118,175	\$79,214	\$66,038
Virgin	2.00%	\$18,969	\$12,715	\$21,200
Washington City	21.61%	\$204,957	\$137,384	\$88,033
Unincorporated Washington County	6.78%	\$64,304	\$43,104	\$35,934
Totals	100.00%	\$948,435	\$635,745	\$530,000

Table 6-7: Cost Allocation – Normalized – Third Year, Full Ridership (No Tax)

Jurisdiction	Normalized Percentage	Annual Cost w/o 5311	Annual Cost with 5311	One Time Capital Cost
Hurricane	27.38%	\$205,058	\$135,735	\$145,114
La Verkin	8.84%	\$66,206	\$43,824	\$73,352
Rockville	1.00%	\$7,489	\$4,957	\$21,200
Springdale	19.93%	\$149,263	\$98,802	\$79,129
St. George	12.46%	\$93,317	\$61,770	\$66,038
Virgin	2.00%	\$14,979	\$9,915	\$21,200
Washington City	21.61%	\$161,845	\$107,130	\$88,033
Unincorporated Washington County	6.78%	\$50,778	\$33,611	\$35,934
Totals	100.00%	\$748,935	\$495,744	\$530,000

It is expected that if there is no transit tax, this may be negotiated by the board as the interlocal agreement is being settled.

Marketing, Sponsorships and Promotion – Key Elements to Success

Marketing functions serve multiple purposes in this system:

- Marketing the service
- Branding the service
- Public/private partnerships and sponsorships

Marketing is a critical function in any retail or service business and transit is no different. This is particularly true in the St. George to Springdale service where there are a number of significant markets.

Marketing Service

Different audiences require different marketing approaches. The service should attempt to attract a variety of potential customers:

- Commuters
- Local day-to-day riders
- Students
- Visitors
- Businesses
 - Customers
 - Employees



The service should attempt to attract a variety of potential customers

Branding the Service

As with any business, branding is an important function. The service should have its own name, logo and color scheme separate from SunTran. The overall theme and colors should be indicative of the area and system identifiers should allow anyone to quickly identify the bus and its purpose.

While the color scheme and logo should be professionally designed and applied, the name can be the subject of a contest among elementary and secondary school, and college students. It is an excellent way to get students engaged. Perhaps a design contest or workshop with local Dixie State students would generate interest.

Public/Private Partnerships and Sponsorships

Transit has a long history of providing advertising on and in buses for additional revenue. Many systems, including SunTran, have engaged in advertising over the years, but a sponsorship program is more than simply advertising. Instead selling just one form of advertising, the service should sell sponsorship packages. Sponsorship and advertising funds are an important source of local funding.

SunTran has had success in securing advertising dollars, typically in the form of a wrapped bus. This plan intends to build on SunTran's efforts by calling for a more expansive public/private sponsorship program (P₃). The P₃ approach offers more than advertising and wrapping buses for a sponsor or partner. In this region with its high number of visitors from around the world, there are numerous visitor based businesses and organizations that would be interested in partnering and sponsoring transit services.

The opportunities to expand local revenue through partnerships are significant and building on SunTran's efforts provides that opportunity. The management entity should make a commitment to expend resources to develop this program. Based on the work SunTran has done with a limited program, this will more than pay for itself.

Identifying the Service

The program is designed to sell a service to both public and private sponsors. Possible services for sale can include:

- **Sponsorship services at any level**
 - Recognized as a sponsor on the service how-to-ride guide (system map and schedule)
 - Recognized as a sponsor on system literature and advertising
 - Decal on side or back of bus
 - Dedicated shuttle
 - Special promotions sponsorship

- **Higher level sponsorship services**
 - Company logo on service map
 - Placing a shelter for customers and/or employees
 - Placing a stop conducive to customers and/or employees. This could include going into a parking lot and stopping next to the facility.
 - Route named for sponsor
 - Bus wrap

If properly packaged, these services have considerable value to businesses such as:

- **Large retailers** – Walmart, Target, supermarkets, malls and big box stores are excellent examples.
- **Hospitals** – There are a number of examples of wrapped buses for hospitals, medical groups, and pharmacies.
- **Hotels, museums and visitor attractions** – There are many opportunities here.
- **Large local based corporations** – Walmart is an excellent example of a company with a major presence in the area.
- **Small local based companies** – Any local company can participate at a number of levels.
- **Fast food restaurants** – Wrapped buses are popular with some of the largest chains.
- **Television, radio stations, and local newspapers** – There are opportunities with public service media organizations. They can give the service valuable advertising.

Develop Sponsorship Levels and Packages

After determining what will be for sale, the following activities should be accomplished:

- **Price the items** – Attach value to each item for sale. Check with firms that wrap buses to determine the cost of a wrap. Items should be priced competitively with similar types of advertisements, such as billboards, television and radio advertising. Think big! Both large and small firms should have opportunities. Set up multi-year packages for semi-permanent advertising such as bus wraps, shelter and bench signs.
- **Develop sponsorship packages** – The service should put items in sponsorship packages to maximize revenue. Each level of sponsorship should have a name to it. For example gold, silver, bronze, or a name to connote transit. Examples can include:

- **High end sponsor (Five Star, Platinum)** – The value of these services is significant. High end services should only go to sponsors willing to pay over \$10,000 per year (with three year contracts). Packages can be combined based on a customer/sponsors need. High end services include bus wraps, shelters in front of facilities with advertising, routing conducive to the sponsors business, and logos on the service map. Each service should be worth up to \$10,000 per year and more if they are combined.
- **Mid-level sponsors** – These sponsors should have access to a variety of packages that include advertising on a shelter(s), bench(s), internal advertising, decal on back of the bus, and name in the riders guide. Opportunities can include sponsoring special promotions.
- **Entry level sponsor** – Small local sponsors have a place in sponsorship as well. Packages can include advertising on benches, and internal advertising. Special promotions should be priced for the entry level sponsor, and recognition as a sponsor should be on promotional material.

Sponsorship Implementation Tasks

- **Create promotional material** – Develop high quality materials to sell sponsorships.
- **Recruit supporters** – Community and political leaders, and local media outlets can be recruited to help sell packages.
- **Sell sponsorships** – After preparation has been completed, sales can be initiated. Both large and small sponsors should be sought. For larger firms, first attempts should be with local contacts. If attempts with large firms fail at the local level, contact regional or corporate offices.

Limits on Advertising

The service should set up standards for advertising on service transit vehicles. Advertising should be tasteful, and within the normal bounds of advertising accepted in the community. It is recommended that the service refuse advertising of political, religious, or adult oriented content or intent. This will cause controversy where none is wanted.

Advertising should be professionally designed and applied, and should meet quality standards developed through the service.

Funding Potential

With an aggressive, professional sales approach this program has the potential to generate significant unencumbered cash for the organization. Vehicles serving as rolling billboards can

generate more than \$800 per month per vehicle (after expenses). Assuming five vehicles are wrapped, this approach can generate \$50,000 per year in revenue. Additional sponsorships can generate approximately \$50,000 annually for a net revenue of \$100,000 annually.

Development and Implementation

The service will need to determine if it wants to develop and implement this program in-house or work through an advertising/marketing firm to sell sponsorships on a percentage agreement. Developing and implementing the program is a considerable effort, and therein lays the trade-offs of the two approaches. While work is harder and more time consuming, the potential revenues are greater if properly implemented.

If the service chooses to seek outside assistance, they should meet with a number of firms to determine interest, and then seek quotes through a competitive procurement.

COST BENEFIT ANALYSIS OF TRANSIT

The cost benefit analysis of transit for small urban and rural areas is not an exact science. Some benefits can be directly quantified, while others become an exercise in economics, and an effort beyond the scope and purpose of this study.

For this effort, the cost to the local community has been quantified based on Federal Transit Administration funding source(s). At the same time the benefits in terms of federal dollars coming into the community are also quantified based on an 80% FTA match for capital and 50% match (of the operating deficit) for operations.

Monetary Cost - Benefits

Based on the analysis conducted above, there will be more federal dollars coming into the service area than local government expenditures in each of the four scenarios. For every dollar expended by local governments in capital costs (\$530,000), the federal government will spend \$4 (\$2,120,000).

Analyzing the on-going operating costs only, local expenditures (excluding fares and sponsorships) will vary depending on the use of Section 5311 funding. Without Section 5311 funding, local government expenditures will be \$748,935, while funding available would be \$342,000. If Section 5311 funds are available, local government expenditures will be \$494,255 while federal dollars will more than match that (\$597,000).

For every dollar spent by local governments, between \$0.57 and \$1.20, additional federal funds will be available from FTA operating dollars. For every dollar spent on capital, an additional \$4 is potentially available from FTA.

Quantifying Economic Benefits

There is a long list of benefits that accrue to a community that provides public transit. While it is beyond the scope of this project to conduct an economic assessment to specifically quantify the benefits, a Transportation Research Board (TRB) study through the Transportation Cooperative Research Program (TCRP) stated that rural transit brings back \$3.35 on every \$1 investment in transit.¹

This study focused on the 268 rural commuting zones across the country that included counties both with and without transit systems. This analysis showed that, within a given commuting zone, average net earnings growth differential between rural counties with and without transit systems was 11%.

While not specifically targeting rural and small urban areas in a visitor based economy, where there are additional economic benefits, this percentage growth differential could be higher. Most certainly the return on investment, previously calculated as 3.35: 1 for a rural area is higher in this economy where there are many jobs 30 – 40 miles from where potential employees live. For purposes of this review we will use the \$3.35 return on investment factor.

Identifying Benefits

There are a wide variety of benefits to the local community that transit brings, for a wide variety of people and businesses. These are summarized in Table 6-8.

Benefits can be found for community businesses and residents. The benefits to each community are broken out by local residents, visitors, businesses and other entities. Access to goods and services, jobs, medical care and other activities benefit the economy. The vast bulk of benefits accrue to the local community, while visitors can reduce their transportation costs and time to get to Springdale.



Benefits of a regional transit service can be found for each community's businesses and residents

¹ TCRP Report No. Assessment of the Economic Impacts of Rural Public Transportation, Washington DC, 1998, http://onlinepubs.trb.org/onlinepubs/tcrp/tcrp_rpt_34.pdf

Additional benefits include improving the environment, with lower emission buses and reduced traffic congestion, the potential for pollutants in the air and water are reduced. This is particularly important in Springdale as the gateway to one of America's great national parks.

Through the analysis in Chapter 4, ridership will include about 50% local residents and 50% visitors.

Table 6-8: Benefits from the Proposed St. George to Springdale Route: Residents, Visitors and Businesses

Municipality	Route's Potential Benefits to Residents	Route's Potential Benefits to Businesses and Visitors
St. George	<ul style="list-style-type: none"> Provides access to jobs in Washington City, Hurricane, La Verkin, Virgin, and Springdale Provides access to Zion National Park for local residents 	<ul style="list-style-type: none"> Makes it easier for residents in smaller towns to shop and dine in St. George Increases pool of potential employees Increases attractiveness of St. George hotels to area visitors – approximately 34 hotels By encouraging hotel stays, also supports St. George restaurants and retail
Washington City	<ul style="list-style-type: none"> Provides access to jobs in St. George, Hurricane, La Verkin, Virgin and Springdale Provides access to health care, government services, major retail, and education in St. George Provides access to Zion National Park 	<ul style="list-style-type: none"> Makes it easier for residents in other towns to shop at Washington Walmart Increases pool of potential employees Increases attractiveness of Washington hotels and RV parks to Zion visitors By encouraging hotel stays, also supports Washington restaurants, retail
Hurricane	<ul style="list-style-type: none"> Provides access to jobs in St. George, Washington City, La Verkin, Virgin, and Springdale Provides access to health care, government services, major retail, and education in St. George Provides access to Zion National Park 	<ul style="list-style-type: none"> Makes it easier for residents in other towns to shop at Hurricane Walmart Increases pool of potential employees Increases attractiveness of Hurricane hotels and RV parks to Zion visitors By encouraging hotel stays, also supports Hurricane restaurants, retail
La Verkin	<ul style="list-style-type: none"> Provides access to jobs in St. George, Washington City, Hurricane, Virgin, and Springdale Provides access to health care, government services, major retail, 	<ul style="list-style-type: none"> Increases attractiveness of La Verkin hotel and restaurants for Zion visitors Increases pool of potential employees

Municipality	Route's Potential Benefits to Residents	Route's Potential Benefits to Businesses and Visitors
	and education in St. George • Provides access to Zion National Park	
Virgin/Rockville	• Provides access to jobs in St. George, Washington City, Hurricane, La Verkin, and Springdale • Provides access to health care, government services, major retail, and education in St. George	• Increases attractiveness of Zion River Resort for Zion visitors • Reduces traffic congestion and parking demand in Virgin and Rockville • Increases pool of potential employees for Zion River Resort
Springdale	• Reduces traffic congestion and parking demand in Springdale • Provides access to health care, government services, major retail, and education in St. George • Provides access for workforce in Springdale, St. George, Washington, Hurricane and La Verkin	• Reduces traffic congestion and parking demand in Springdale • Increases pool of potential employees

Cost Benefit

The benefits that accrue to a community from implementing transit are significant and are summarized below.

- **Federal Funding** – For every local government dollar spent in supporting transit, there is a return of an additional \$0.57 to \$1.20 in federal funding that comes to the corridor. The return on capital is far greater at \$4 return for every \$1 spent.
- **Direct Employment** - This money will be used to create and pay for 12 - 16 new transit jobs in the corridor.
- **Economic Benefits** can be calculated as \$3.35 for every dollar spent for transit based on extensive research. Assuming \$2 million is spent annually for transit, the return on investment brings \$6.7 million to the region in areas such as:
 - Additional employment as people will be able to get to jobs in Springdale and all other communities in the service area, allowing businesses to fill their jobs.
 - Access to healthcare, as studies (and intuitive knowledge) have demonstrated this access reduces overall healthcare costs by making it easy for people to get to the doctor.

- Independence for low income residents, seniors and persons with disabilities; transit is often essential for independence.
- Reduced congestion has significant value both in time and quality of life.
- Environmental quality; a low emissions transit vehicle can reduce auto traffic and the resultant emissions.

In Summary – Transit Brings an Excellent Return

The benefits are clear, both quantifiable and qualitative for full connectivity across the region. On a simple calculation of funding, FTA funds return almost dollar for dollar the local government's investment in transit, by itself, without the additional benefits of jobs and access to employment, improved access to medical care, independence for residents, and businesses operating at capacity. The pollution and congestion mitigation offered by transit are also significant benefits for the corridor.

IMPLEMENTATION ACTIVITIES

Implementation activities include a step-by-step timeline of activities from the point a consortium is formed through implementation. This plan, with SunTran as the turnkey operator, will be relatively simple by implementation standards because the facility, maintenance structure, administrative support and processes and policies are already in place to a large degree.

The step-by-step process is followed by a series of issues that the system will have to address.

First Steps

1. **Forming the organization** - Forming the consortium will be the first step along with the developing a guiding interlocal agreement.
2. **Determine funding sources** – Determining what funds are to be used/available to the system. Primary among this will be the decision on a transit tax or local funding.
3. **Ordering buses** – Ordering buses is the very first operational task. This process will take more than one year in most cases. Delivery of vehicles will ultimately determine the start date.
4. **Hiring key staff** – Hiring the first staff should be the implemented; manager/planner and a marketing specialist (or contract that to a private firm). These positions could ultimately be shared with SunTran. Administrative support staff would be hired six months prior to implementation.

Operations Planning and Marketing Requirements

Marketing efforts should begin 8 – 12 months prior to implementation, while operations planning functions should begin six months prior to implementation.

Marketing

The following efforts should begin up to 12 months prior to implementation:

- **System branding** - There are a variety of marketing efforts that should begin 6 – 12 months prior to implementation with the kick-off of the system branding. A contest is an excellent way to get the community engaged and is a great marketing approach at a low cost.
- **Develop and sell sponsorship and partnership packages** - At the same time that branding efforts are proceeding (at least 8 months prior to implementation), sponsorship and partnership packages should be developed and sold throughout the region. The marketing specialist should be working with hotels to set up packages that include bus service.
- **Marketing service** – Once branding is complete and service is about 3 months away, marketing service to the wide range of potential customers should begin and continue through implementation.
- **Develop schedule, map and how-to-ride guide** – Rider tools should be available online and as a simple three fold brochure. There should be two guides: one for summer and one for other seasons.

Operations Planning

Operations planning efforts include determining exact routing of the bus on a turn-by-turn basis, placement of stops and shelters and development of schedules and driver runs.

- **Finalize the route** – After sponsorships have been established and required stops determined, routing in St. George can be established.
- **Establish bus stops and shelters** – Placement of bus stops is essential to success and is discussed below. Shelters should be placed in each jurisdiction, with additional determined by sponsors.
- **Determine schedules** – Conducting simulations and computing average speeds will be required in developing schedules. Timing points for public use will be every 5 – 7 minutes (not every stop).

Service Assumptions

Basic service assumptions are stated below. (These are subject to change.)

1. **Four month peak season:** June- September (based on Zion usage). This could change over time.
2. **Shoulder season:** April-May, and October – November.
3. **Express service:** 1.5 hours trip time each way including stops in St. George.
4. **Local service:** 2 hours each way. Accounts for St. George and the need for ADA flex service. Multiple stops including local service in Washington City and Hurricane/La Verkin.

Guiding this plan is the commitment to ensuring that the overall transportation system will become *accessible, interconnected, sustainable and multi-modal*.

Route Planning

The route is straight forward and by staying on Red Cliffs Drive, Telegraph Street and SR 9 typically avoids unprotected left turns, narrow streets and difficult to maneuver areas. Key decisions will be to determine the exact routing in St. George, which will ultimately be decided by sponsors. Key stops should be at medical centers, transfer center and a stop on St. George Boulevard just west of I-15. Other stops can include sponsors such as hotels, shopping and businesses.

Schedules should be tested multiple times, ensuring about 10% recovery time. Different schedules will be needed for different seasons as traffic can have an impact on schedule time.

Bus Stops – Transit's Front Door

The placement of the bus stop is an important function that should be specifically determined by planners. It is recommended that bus stops be located at corners where there is pedestrian access, and where there are possibly traffic signals and crosswalks. The corner selected should be where the most activity is generated.

The selection of bus stops should be based on potential ridership and sponsors. Those businesses sponsoring a stop will have one placed where they desire if it meets all other criteria.



Bus Shelter Placement and Accessibility

- **Size of pad** - The pad must be at least 8 feet wide – wide enough to be able to deploy the lift and allow a passenger to board from the shelter pad.

- **Placement of pad/shelter** – While the service is not responsible for pathways leading up to the shelter, there is a direct responsibility to ensure that once at the stop, a person with a disability could access the bus.
- **Location of shelter** - The location and side of street where shelters are placed is important. Some stops only see origins, while others across the street only see destinations. Usually these are near the end of the route. For example on an east/west route where there is a stop $\frac{1}{4}$ mile from the eastern beginning/end of the route for westbound buses, nobody would ever get off there, but many could board. On the eastbound leg at the stop across the street, passengers would get off the bus, but almost never wait there for a bus to go $\frac{1}{4}$ mile.

Recruitment, Hiring and Training Staff

While primary hires will be drivers, SunTran will also need to hire staff to meet maintenance, supervisory, planning and management needs. These staff will be paid for out of the calculated costs which account for all needed staff. Drivers can be hired 2 – 3 months prior to implementation giving them enough time for a full training program. Other staff should be hired 1 – 2 months prior to implementation depending on needs.

Implementation Event

Some of the most visible and least expensive marketing is having a major kick-off event with media present (a local radio station broadcasting from the event is always good). By getting key employers, sponsors and the National Park Service engaged it could be an excellent media event.

Another excellent and effective marketing tool is to offer fare-free service for up to the first month. This can attract riders to the service.

Monitor Service

During implementation, staff should be monitoring service. In addition to ridership and on-time performance issues, monitors must check bus stop activity and conduct brief surveys of riders to determine who is riding.

As with all transit systems there may be a need to tweak the service from time to time, especially after implementation.

Appendix A

Trip Generators

Appendix A

Trip Generators

Type	Name	Street Address	City	State	Zip
Apartments	Desert Rose Apartments	2929 E 450 N	St. George	UT	84790
Apartments	Falls At Mesa Point Apartments	368 S Mall Drive	St. George	UT	84790
Apartments	Hurricane Apartments	165 N 200 W	Hurricane	UT	84737
Apartments	Mesa Manor Apartments	28 S 900 E	St. George	UT	84770
Apartments	Red Cliff Manor	1768 E 280 N	St. George	UT	84790
Apartments	Red Hawk Apartments	100 Winderland Lane	Springdale	UT	84767
Apartments	Renee Ann Apartments	6325 W 25 N	Hurricane	UT	84737
Apartments	Ridge View Apartments	245 Playa Della Rosita	Washington	UT	84780
Apartments	Riviera Palms	179 S 2700 E	St. George	UT	84790
Assisted Living / Residential Treatment / Nursing Home	Beehive Homes of Coral Canyon	1078 N Coral Canyon Blvd	Washington	UT	84780
Assisted Living / Residential Treatment / Nursing Home	Beehive Homes of Hurricane	831 S 700 W	Hurricane	UT	84737
Assisted Living / Residential Treatment / Nursing Home	Beehive Homes of Little Valley	2397 S River Road	St. George	UT	84790
Assisted Living / Residential Treatment / Nursing Home	Cliff View Assisted Living	134 W 2025 S	St. George	UT	84770
Assisted Living / Residential Treatment / Nursing Home	Comfort Cottage	155 N 300 W	Washington	UT	84780

Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Assisted Living / Residential Treatment / Nursing Home	ElderberryCare	43 N 1250 W	St. George	UT	84770
Assisted Living / Residential Treatment / Nursing Home	Falcon Ridge Ranch	633 UT-9	Virgin	UT	84779
Assisted Living / Residential Treatment / Nursing Home	Heritage Home Assisted Living	45 N 100 W	Hurricane	UT	84737
Assisted Living / Residential Treatment / Nursing Home	Hurricane Health and Rehabilitation	416 N State Street	Hurricane	UT	84737
Assisted Living / Residential Treatment / Nursing Home	Kolob Care & Rehabilitation	178 South S 1200 E	St. George	UT	84790
Assisted Living / Residential Treatment / Nursing Home	Lion's Gate Recovery	561 E Tabernacle Street	St. George	UT	84770
Assisted Living / Residential Treatment / Nursing Home	Meadows Retirement Community	950 S 400 E	St. George	UT	84770
Assisted Living / Residential Treatment / Nursing Home	Red Cliffs Health and Rehab	1745 E 280 N	St. George	UT	84790
Assisted Living / Residential Treatment / Nursing Home	Ridgeview Gardens of St. George	1078 N Coral Canyon Blvd	Washington	UT	84780
Assisted Living / Residential Treatment / Nursing Home	Rosecrest Manor	48 W 700 S	St. George	UT	84770



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Assisted Living / Residential Treatment / Nursing Home	Season's Nursing & Rehabilitation	242 N 200 W	St. George	UT	84770
Assisted Living / Residential Treatment / Nursing Home	Spring Gardens Senior Living	2654 Red Cliffs Drive	St. George	UT	84790
Assisted Living / Residential Treatment / Nursing Home	Sunrise Residential Treatment Center– Hurricane Campus	65 N 1150 W	Hurricane	UT	84737
Assisted Living / Residential Treatment / Nursing Home	The Retreat at Sunriver	4480 S Arrowhead Canyon Drive	St. George	UT	84790
Assisted Living / Residential Treatment / Nursing Home	Therápia Addiction Healing Center	120 W 1470 S	St. George	UT	84770
Education	Desert Hills High School	828 Desert Hills Drive E	St. George	UT	84790
Education	Diamond Ranch Academy	433 S Diamond Ranch Pkwy	Hurricane	UT	84737
Education	Dixie Applied Technology College	1506 S Silicon Way	St. George	UT	84770
Education	Dixie High School	350 E 700 S	St. George	UT	84770
Education	Dixie State University	225 S 700 E	St. George	UT	84770
Education	Hurricane High School	W 100 S & S 300 W	Hurricane	UT	84737
Education	Pine View High School	2850 E 750 N	St. George	UT	84790
Education	Seminary - The Church of Jesus Christ of Latter-day Saints	2833 E 750 N	St. George	UT	84790
Education	Seminary - The Church of Jesus Christ of Latter-day Saints	822 S 400 E	St. George	UT	84770
Education	Seminary - The Church of Jesus Christ of Latter-day Saints	310 W 100 S	Hurricane	UT	84737
Education	Stevens-Henager College	720 S River Road #130	St. George	UT	84790
Education	University of Phoenix	965 E 700 S	St. George	UT	84790



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Education	University of Utah	1071 E 100 S	St. George	UT	84770
Education	Utah State University Ext	197 E Tabernacle Street	St. George	UT	84770
Government Services	Adult Probation & Parole	620 S 5300 W	Hurricane	UT	84737
Government Services	Brookdale Southgate	W. 134 2025 S Cir	St. George	UT	84770
Government Services	City of St. George Recreation Center	285 S 400 E	St. George	UT	84770
Government Services	Five County Association of Governments	1070 W 1600 S	St. George	UT	84770
Government Services	Hurricane City Offices	147 N 870 W	Hurricane	UT	84737
Government Services	Hurricane Community Center	63 S 100 W	Hurricane	UT	84737
Government Services	Hurricane Justice Court	80 S 700 W	Hurricane	UT	84737
Government Services	Hurricane Valley Library	36 S 300 W	Hurricane	UT	84737
Government Services	Indian Affairs Paiute Field	180 E 200 N	St. George	UT	84770
Government Services	Juvenile Justice Services	330 S 5300 W	Hurricane	UT	84737
Government Services	Juvenile Justice Services	251 E 200 N	St. George	UT	84770
Government Services	La Verkin City Community Center	111 S Main Street	La Verkin	UT	84745
Government Services	La Verkin City Office	435 N Main Street	La Verkin	UT	84745
Government Services	Purgatory Correctional Facility	750 S 5300 W	Hurricane	UT	84737
Government Services	Rockville Community Center	43 E Main Street	Rockville	UT	84763
Government Services	Springdale Library and Canyon Community Center	126 Lion Blvd	Springdale	UT	84767
Government Services	Springdale Town Offices	118 Lion Blvd	Springdale	UT	84767
Government Services	St. George Housing Authority	975 North 1725 West	St. George	UT	84770
Government Services	St. George Library	88 W 100 S	St. George	UT	84770
Government Services	US Post Office	625 Zion Park Blvd	Springdale	UT	84767
Government Services	US Post Office	43 E Main Street	Rockville	UT	84763
Government Services	US Post Office	25 W Telegraph Street	Washington	UT	84780
Government Services	US Post Office	55 N State St	La Verkin	UT	84745
Government Services	US Post Office	545 N Main St	Hurricane	UT	84737
Government Services	US Post Office	1150 E Riverside Drive	St. George	UT	84790



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Government Services	US Post Office	160 N Bluff Street	St. George	UT	84770
Government Services	US Post Office	180 N Main Street	St. George	UT	84770
Government Services	US Social Security Administration	923 S River Road	St. George	UT	84790
	Utah Department of Workforce Services	40 S 200 E	St. George	UT	84770
Government Services	Virgin Town Office	114 Mill Street	Virgin	UT	84779
Government Services	Washington Branch Library	220 N 300 E	Washington	UT	84780
	Washington County Department of Motor Vehicles	100 S 5300 W	Hurricane	UT	84737
Government Services	Washington County Government	197 E Tabernacle Street	St. George	UT	84770
Government Services	Washington County Justice Court	87 E 200 N #301	St. George	UT	84770
Grocery	Albertsons	915 Red Cliffs Drive	Washington	UT	84780
Grocery	Albertsons	745 N Dixie Drive	St. George	UT	84770
Grocery	Canyon Market	95 Zion Park Blvd	Springdale	UT	84767
Grocery	Corona Flores Latino Market	18 N 500 E	St. George	UT	84770
Grocery	Costco	835 N 3050 E	St. George	UT	84790
Grocery	Davis Food and Drug	495 N State Street	La Verkin	UT	84745
Grocery	Harmons Dixie	1189 E 700 S	St. George	UT	84790
Grocery	Leeds Market	261 N Main Street	Leeds	UT	84746
Grocery	Lin's Fresh Market	1120 W State Street	Hurricane	UT	84737
Grocery	Lin's Fresh Market	1930 W Sunset Blvd	St. George	UT	84770
Grocery	Natural Grocers	624 W Telegraph Street	Washington	UT	84780
Grocery	Real Foods Market	695 South 100 West	St. George	UT	84770
Grocery	Smith's Food and Drug	20 N Bluff Street	St. George	UT	84770
Grocery	Sol Foods Supermarket	995 Zion Park Blvd	Springdale	UT	84767
Grocery	Traders Discount Markets	855 S Bluff Street	St. George	UT	84770
Grocery	Utah Food Bank	4416 S River Road	St. George	UT	84790
Hotel	Ambassador Inn	1481 Sunland Drive	St. George	UT	84790
Hotel	America's Best Inn & Suites	245 North Red Cliffs Drive	St. George	UT	84770



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Hotel	Americas Best Value Inn	915 S Bluff Street	St. George	UT	84770
Hotel	Best Western Coral Hills	125 E St. George Blvd	St. George	UT	84770
Hotel	Best Western Coral Hills	125 E St. George Blvd	St. George	UT	84770
Hotel	Best Western Plus Abbey Inn	129 S Bluff Street	St. George	UT	84770
Hotel	Best Western Plus Zion West Hotel	44 W 500 N	La Verkin	UT	84745
Hotel	Best Western Travel Inn	316 E St. George Blvd	St. George	UT	84770
Hotel	Bumbleberry Inn	97 Bumbleberry Lane	Springdale	UT	84767
Hotel	Cable Mountain Lodge	147 Zion Park Blvd	Springdale	UT	84767
Hotel	Canyon Vista Lodge	2175 Zion Park Blvd	Springdale	UT	84767
Hotel	Claridge Inn	1187 S Bluff Street	St. George	UT	84770
Hotel	Clarion Suites	1239 S Main Street	St. George	UT	84770
Hotel	Cliffrose Lodge & Gardens	281 Zion Park Blvd	Springdale	UT	84767
Hotel	Comfort Inn at Convention Center	138 East Riverside Drive	St. George	UT	84790
Hotel	Comfort Inn Saint George North	974 N 2720 E	St. George	UT	84790
Hotel	Coral Springs Resort	98 N 6680 W	Hurricane	UT	84737
Hotel	Coronada Inn & Suites	559 E St. George Blvd	St. George	UT	84770
Hotel	Courtyard St. George	185 S 1470 E	St. George	UT	84790
Hotel	Crystal Inn Hotel & Suites St. George	1450 Hilton Drive	St. George	UT	84770
Hotel	Days Inn Hurricane/Zion National Park Area	40 N 2600 W	Hurricane	UT	84737
	Days Inn St. George	150 North 1000 E	St. George	UT	84770
Hotel	Desert Pearl Inn	707 Zion Park Blvd	Springdale	UT	84767
Hotel	Dixie Palms	185 E St. George Blvd	St. George	UT	84770
Hotel	Econo Lodge	460 E St. George Blvd	St. George	UT	84770
Hotel	Fairfield Inn St. George	1660 S Convention Center Drive	St. George	UT	84790
Hotel	Flanigan's Inn	450 Zion Park Blvd	Hurricane	UT	84737



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Hotel	Hampton Inn & Suites Springdale/Zion National Park	1127 Zion Park Blvd	Springdale	UT	84767
Hotel	Hampton Inn St. George	53 S River Road	St. George	UT	84790
Hotel	Hilton Garden Inn St. George	1731 S Convention Center Drive	St. George	UT	84790
Hotel	Holiday Inn Express & Suites St. George North - Zion	2450 N Town Center Drive	Washington	UT	84780
Hotel	Holiday Inn Express Springdale - Zion National Park Area	1215 Zion Park Blvd	Springdale	UT	84767
Hotel	Holiday Inn St. George Convention Center	1808 South Crosby Way	St. George	UT	84790
Hotel	Howard Johnson Inn And Suites Saint George HWY I-15 Exit 6	1040 S Main Street	St. George	UT	84770
Hotel	Inn on The Cliff St. George	511 S Airport Road	St. George	UT	84770
Hotel	Knights Inn St. George North	175 N 1000 E	St. George	UT	84770
Hotel	La Quinta Inn & Suites at Zion Park/Springdale	792 Zion Park Blvd	Springdale	UT	84767
Hotel	La Quinta Inn & Suites St. George	91 East 2680 South	St. George	UT	84790
Hotel	Lexington Hotel and Conference Center	850 S Bluff Street	St. George	UT	84770
Hotel	Majestic View Lodge	2400 Zion Park Blvd	Springdale	UT	84767
Hotel	Motel 6	205 N 1000 E	St. George	UT	84770
Hotel	Quality Inn & Suites Montclair	1516 Zion Park Blvd	Springdale	UT	84767
Hotel	Quality Inn At Zion Park	479 Zion Park Blvd.	Springdale	UT	84767
Hotel	Quality Inn I-15 Red Cliffs	912 W Red Cliffs Drive	Washington	UT	84780
Hotel	Quality Inn Zion	43 N. 2600 W.	Hurricane	UT	84737
Hotel	Ramada St. George	1440 E St. George Blvd	St. George	UT	84790
Hotel	Rockville Rose Inn	E Main Street	Rockville	UT	84763
Hotel	Rodeway Inn	650 W State Street	Hurricane	UT	84737



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Hotel	Rodeway Inn Red Hills	999 E Red Hills Pkwy	St. George	UT	84770
Hotel	St. George Inn & Suites	1221 S Main Street	St. George	UT	84770
Hotel	Suntime Inn	420 E St. George Blvd	St. George	UT	84770
Hotel	Super 8 Hurricane Zion National Park	65 S 700 West	Hurricane	UT	84737
Hotel	Super 8 St. George UT	260 East St. George Blvd	St. George	UT	84770
Hotel	Terrace Brook Lodge	990 Zion Park Blvd	Hurricane	UT	84737
Hotel	The Chalet Motel	664 E St. George Blvd	St. George	UT	84770
Hotel	The Novel House Inn	73 Paradise Road	Springdale	UT	84767
Hotel	Towne Place Suites St. George	251 S 1470 E	St. George	UT	84790
Hotel	Travelodge Hurricane Zion National Park Area	280 West State Street	Hurricane	UT	84737
	Wingate by Wyndham St. George	144 Brigham Road	St. George	UT	84790
Hotel	Zion River Resort	551 UT-9	Virgin	UT	84779
Human Services	Blind & Visually Impaired Services	515 W 300 N	St. George	UT	84770
Human Services	Child & Family Services	377 E Riverside Drive	St. George	UT	84790
Human Services	Deseret Industries	2480 Red Cliffs Drive	St. George	UT	84790
Human Services	Dixie Care & Share	131 N 300 W	St. George	UT	84770
Human Services	Hurricane Senior Center	95 North 300 West	Hurricane	UT	84737
Human Services	Red Rock Center for Independence	168 N 100 E #101	St. George	UT	84770
Human Services	Rise Inc	50 E 100 S #302	St. George	UT	84770
Human Services	Southern Utah Down Syndrome Association	1055 W Red Cliffs Drive	Washington	UT	84780
	Springdale Senior Center	126 Lion Boulevard	Springdale	UT	84767
Human Services	St. George Senior Center	245 North 200 West	St. George	UT	84770
Human Services	Switchpoint Community Center	948 N 1300 W	St. George	UT	84770
Human Services	Turn Community Services	334 Tabernacle Street	St. George	UT	84770
Major Retail	Kmart	745 S Bluff	St. George	UT	84770
Major Retail	Red Cliffs Mall	1770 Red Cliffs Drive	St. George	UT	84790



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Major Retail	Target	275 S River Road	St. George	UT	84790
Major Retail	Walmart Supercenter	2610 Pioneer Road	St. George	UT	84790
Major Retail	Walmart Supercenter	625 W Telegraph Street	Washington	UT	84780
Major Retail	Walmart Supercenter	180 N 3400 W	Hurricane	UT	84737
Medical	Canyonland Pediatrics	1240 E 100 S	St. George	UT	84790
Medical	Central Utah Clinic - Hematology & Cancer Center	2019 E Riverside Drive Suite	St. George	UT	84790
Medical	Dixie Dialysis Center	720 S River Road	St. George	UT	84790
Medical	Dixie Endocrine and Diabetes Clinic	348 E 600 S	St. George	UT	84790
Medical	Dixie Maternal Fetal Medicine	544 S 400 E	St. George	UT	84770
Medical	Dixie Regional Medical Center	1380 S Medical Center Drive	St. George	UT	84790
Medical	Dixie Regional Medical Center 400 E Campus	544 S 400 E	St. George	UT	84770
Medical	Doctors' Volunteer Clinic: Chafi Jafar MD	1036 E Riverside Drive	St. George	UT	84790
Medical	Family Healthcare - St. George Millcreek Clinic	2408 E Riverside Drive	St. George	UT	84790
Medical	Foot and Ankle Institute	754 S Main Street	St. George	UT	84770
Medical	Gamma West Cancer Services	1308 E 900 S	St. George	UT	84790
Medical	Hurricane Dialysis Center	48 S 2500 W	Hurricane	UT	84737
Medical	Hurricane Valley Counseling Center	100 North 1015 West	Hurricane	UT	84737
Medical	Hurricanes Behavioral And Mental Health Clinic	586 N 120 E	Hurricane	UT	84737
Medical	Instacare	3257 Swaps Drive	St. George	UT	84770
Medical	Intermountain Healthcare Medical Center	75 N 2260 W	Hurricane	UT	84737
Medical	Intermountain Psychiatry and Counseling -- St. George	320 E 600 S	St. George	UT	84770
Medical	Intermountain St. George WorkMed	385 N 3050 E	St. George	UT	84790



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Medical	Liberty Dialysis St. George	1173 S 250 W #406	St. George	UT	84770
Medical	Planned Parenthood - St. George Health Center	595 S Bluff Street, Suite 1	St. George	UT	84770
Medical	Revere Health Coral Desert Orthopedics	1490 Foremaster Drive	St. George	UT	84790
Medical	Revere Health St. George Family Medicine & Urgent Care	736 S 900 E #203	St. George	UT	84790
Medical	River Road Family Practice, Instacare, Internal Medicine	577 S River Road	St. George	UT	84790
Medical	Southern Utah Eye Care	10 Diagonal Street	St. George	UT	84770
Medical	Southern Utah Women's Health Center, PC	515 S 300 E	St. George	UT	84770
Medical	Southwest Behavioral Health Center	474 W 200 N	St. George	UT	84770
Medical	Southwest Cardiology - St. George	1380 S Medical Center Drive	St. George	UT	84790
Medical	Southwest Regional Cancer Clinic	544 S 400 E	St. George	UT	84770
Medical	St. George Endoscopy Center	368 E Riverside Drive	St. George	UT	84790
Medical	St. George Surgical Center	676 S Bluff Street #101	St. George	UT	84770
Medical	St. George Detox Hospital	120 West 1470 South	St. George	UT	84770
Medical	Sunset Instacare	1739 W Sunset Blvd	St. George	UT	84770
Medical	Tracy D Kvarfordt, MD OBGYN	515 S 300 E	St. George	UT	84770
Medical	Traditions Health Care	1490 Foremaster Drive	St. George	UT	84790
Medical	University of Utah Health Care	48 S 2500 W	Hurricane	UT	84737
Medical	Urology Associates	736 S 900 E	St. George	UT	84790
Medical	VA St. George Clinic	230 N 1680 E	St. George	UT	9070
Medical	Zion National Park Emergency Operations Center	UT-9	Hurricane	UT	84737
Pharmacy	Acme Sav-On Pharmacy	915 W Red Cliffs Drive	Washington	UT	84780
Pharmacy	Hurricane Family Pharmacy	25 N 2000 W	Hurricane	UT	84737
Pharmacy	Rite Aid Pharmacy	615 East Saint George Blvd	St. George	UT	84770



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
Pharmacy	River Road Clinic Pharmacy	577 S River Road	St. George	UT	84790
Pharmacy	Stapley Pharmacy	102 E City Center Street	St. George	UT	84770
Pharmacy	Stucki Family Pharmacy	568 W Telegraph Street	Washington	UT	84780
Pharmacy	Walgreens	1235 W State Street	Hurricane	UT	84737
Pharmacy	Watson Dixie Pharmacy	1380 S Medical Center Drive	St. George	UT	84790
RV and Mobile Home Park	Canyon View Mobile Home Park	1450 N Dixie Downs Road	St. George	UT	84770
RV and Mobile Home Park	Dixie Downs Resort	1225 N Dixie Downs Road	St. George	UT	84770
RV and Mobile Home Park	Hillside Palms RV & Mobile Home	215 N 600 E	St. George	UT	84770
RV and Mobile Home Park	Hinton Trailer Park	666 W State Street	Hurricane	UT	84737
RV and Mobile Home Park	King's Row Estates	180 N 1100 E	Washington	UT	84780
RV and Mobile Home Park	Palms RV Resort	150 N 3050 E	St. George	UT	84790
RV and Mobile Home Park	Pleasant View Mobile Home Park	200 E 400 S	Washington	UT	84780
RV and Mobile Home Park	Red Shadows Mobile Home Park	1574 N Dixie Downs Road	St. George	UT	84770
RV and Mobile Home Park	Robert's Roost RV Park	113 W 400 S	Hurricane	UT	84737
RV and Mobile Home Park	Saint George RV Park Campground	2100 E Middleton Drive	St. George	UT	84770
RV and Mobile Home Park	St. George / Hurricane KOA	5800 Old Hwy 91	Hurricane	UT	84737
RV and Mobile Home Park	Temple View RV Resort	975 S Main Street	St. George	UT	84770
RV and Mobile Home Park	Washington Heights Mobile Home	501 N 200 E	Washington	UT	84780



Appendix A – Trip Generators

Type	Name	Street Address	City	State	Zip
RV and Mobile Home Park	Willow Wind RV Park	1150 W 80 S	Hurricane	UT	84737
RV and Mobile Home Park	Winter Haven RV Resort	1160 E Telegraph Street	Washington	UT	84780
RV and Mobile Home Park	Zion Canyon Campground	479 Zion Park Blvd	Springdale	UT	84767
RV and Mobile Home Park	Zion River Resort	551 UT-9	Virgin	UT	84779
RV and Mobile Home Park	Zion West RV Park	175 Valley Road	Leeds	UT	84746
RV and Mobile Home Park	Zions Gate RV Resort	150 N 3700 W	Hurricane	UT	84737
Transfer points for other trans services	Greyhound stop - Texaco Minute Mart	1572 S Convention Center	Saint George	UT	84790
Transfer points for other trans services	Springdale Shuttle - Zion Canyon Theater	145 Zion Park Blvd	Springdale	UT	84767
Transfer points for other trans services	St. George Express Shuttle Service	915 S Bluff Street	St. George	UT	84770
Transfer points for other trans services	St. George Municipal Airport	4550 S Airport Pkwy	St. George	UT	84770
Transfer points for other trans services	St. George Shuttle Airport Shuttle Service	1275 E Red Hills Pkwy	St. George	UT	84770
Transfer points for other trans services	SunTran Transit Center	957 East 100 South	St. George	UT	84770
Transfer points for other trans services					