

# Park City Transit Plan



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# Park City Transit Plan

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## **Executive Summary Highlights/Main Points in Chapters**

### **Chapter One:**

- Park City transit provides free fixed-route and demand response bus service within Park City, and has contracted with Summit County to provide fixed-route and demand response services in the Snyderville Basin area, including Quinn's Junction.
- Ridership by Month and Route: The majority of ridership is experienced during the peak winter months, during which 87.0 percent of total one-way passenger-trips were provided over the 28-week period.
- Ridership Trends by Season: Between Winter 2004/2005 to Winter 2005/2006, Kimball service increased by 85,561 one-way passenger-trips (63.3 percent). There was a jump in ridership between Summer 2005 and Summer 2006, with a 111.7 percent increase on the Kimball routes
- Ridership by Time of Day and Season: The greatest number of stops in the peak winter season occurred during the hours of 4:00 PM and 5:00 PM, with the peak ridership occurring at around 4:00 PM when there was an average of 1,429 stops per hour system wide.
- Ridership by Stop and Season: The Transit Center facility averages the highest passengers per day, with approximately 2,456 average stops per day (21.3 percent of the total stops system-wide). Transit Center is the most popular facility during the peak summer months, as well, with 599 average stops per day (23.5 percent of the total stops system-wide).
- In 2000, 35.6 percent of Summit County workers made an inter-county commute, representing an increase of 4.7 percent from 1980.
- 4,501 Summit County residents reported commuting to Salt Lake County in 2000, an increase of 2,566 since 1990, while 2,678 Salt Lake County residents commuted to Summit County.

### **Chapter Two:**

- Serving Non-Driving Populations
  - Youth
  - Elderly
  - Disabled
  - Low-Income
  - Non-Vehicle-Owning
- Summit County was the fastest growing county within the state of Utah, nearly doubling its size. The population has grown from 10,400 in 1980 to an estimated 31,279 in 2001.

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- Housing

Average Home Prices

Average Home Price in Park City \$ 426,344

Average Condo Price in Park City \$ 337,288

Average Home Price in Salt Lake City \$ 184,756

Average Condo Price in Salt Lake City \$ 132,979

- Income Levels

	Summit	Salt Lake
Median Household Income (2001)	\$64,962	\$47,132
Median Family Income (2001)	\$72,510	\$54,341

- Three of the top four employers are resorts, with the other being the Park City School District. The next largest employers include resorts, as well as City and County government. Grocery and retail businesses are also among the major employers in the County.
- Summit County is averaging an unemployment rate of 3.2 percent this year (the same as the statewide unemployment rate).

## Chapter Three:

- Sensitive and critical lands in the study area are legally protected.
- Summit County ranks among the worst 20% of U.S. counties for air quality, with 67% of pollutants emitted from mobile sources and commuters producing 261.2 tons daily.
- A five-day-per-week commute between Park City and Salt Lake City costs drivers \$834.13 per month in direct expenses, and \$1154.20 when indirect costs are included. Survey respondents indicate a willingness to spend \$28-\$30 on a monthly transit pass, with an average rider traveling 3.4 days per week. UTA express service passes currently cost \$100 per month.
- In 2000, there were 4,501 Summit County residents working in Salt Lake City while 17.3% (2,678 persons) percent of the total work force in Summit County lived in Salt Lake City. A 5% ridership rate would yield 718 daily transit trips among commuters alone.
- A 5.2% average annual growth rate of Summit County's work force projects 59,962 Summit County workers by 2027, and based on the current 10.8% who are commuting alone from Salt Lake City, this will place at least 6,476 single-occupant vehicles on I-80 twice daily.
- More than 64% of surveyed commuters travel to work between 7 and 9 a.m., while over 56% journey home between 4 and 6 p.m., making higher rush-hour frequency extremely viable and enabling a majority to be served within these time windows.

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- 83% of likely riders who commute prefer one of the following Summit County stop locations: Kimball Junction, Pinebrook, Jeremy Ranch, Downtown Park City, and the Canyons Resort.
- 51% of likely riders who commute prefer one of the following Salt Lake County stop locations: I-215/Wasatch Boulevard, the mouth of Parley's Canyon, the University of Utah, Downtown Salt Lake City, and any Trax stop.
- 4-6% of study area commuters have been identified as likely transit users.
- Unique to study area:
  - The two districts have differential demographics
  - Large number of recreation/resort travelers
  - Large number of downtown attraction travelers
  - Large number of special event travelers
- UTA trip purposes are distributed as follows:
  - 45% Work-Related
  - 24% School/College-Related
  - 15% Shopping/Medical/Recreational
  - 16% Other
- Likely transit users in the study area share these characteristics:
  - Fixed schedule
  - Travel during rush hours
  - Sensitivity to time
- 65% of UTA users in our study area's income range use express bus service.
- 5% of 2005's 44,690 average annual daily trips would yield 2235 daily transit trips along the inter-county route.

## **Chapter Four:**

- Federal Funding Sources potentially available to the study area include:
  - Non-Urbanized Area Formula Program
  - Over-the-Road Bus Accessibility Program
  - Rural Transit Assistance Program
  - Job Access and Reverse Commute Program
- A 35.25-mile route linking the two districts' transit centers would take 50 minutes and cost \$184.50 for operation and maintenance.
- Cost distribution should be established according to quantifiable benefit ratio.
- Operating costs are lower for Park City, while UTA is better equipped to maintain equipment.
- Legal, logistical, and management issues that arise when crossing district boundaries should be addressed in an inter-local agreement.

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- Study area population is projected to double by 2050.

How does the Preferred Plan address these Issues?

- The preferred route will operate within the time, schedule, and location as to where the majority of travelers are commuting throughout Salt Lake and Summit County
- The preferred route will operate in areas already developed, so that sensitive lands will be unaffected and may even be protected by reducing the need for roadway expansion.
- A 5% ridership rate would mitigate approximately 13.06 tons of air pollutants daily among commuters alone and would take 648 single-occupancy vehicles off the road daily by 2027.
- A \$100 monthly pass would mean a typical study area commuter traveling 3.4 days per week spends about \$7.35 per day.
- The preferred frequency will be higher during rush hours, but will also accommodate evening and weekend workers and visitors.
- Preferred stops correspond with most rider preferences and cater to a variety of trip purposes, either directly or by linking with existing district transit service:

Salt Lakestops:

- K-mart on Parley's Way/Foothill with desired future park-and-ride
- Foothill Village
- University of Utah Stadium Trax Station with existing park-and-ride
- Trolley Trax Station
- Main Street & 400 South
- Intermodal Transit Hub

Summit Stops:

- Albertsons at Pinebrook
- Jeremy Ranch with potential park-and-ride agreement through the L.D.S. Church
- Walmart/Outlet Stores
- The Canyons Resort
- Main Street – Park City Transit Center with existing park-and-ride
- Preferred vehicles will provide a combination of motor coach and standard service to meet with mixed market preferences.
- Preferred marketing will target the traveler who wants rapid, reliable service using Frontrunner Commuter Rail branding.

# Park City Transit Plan

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## Introduction

### a. Project Description

Development in western Summit County and Salt Lake County has occurred at a brisk pace over recent years. As a result, the projections of only a few years ago have been exceeded, and the demand for transit services has grown substantially. In addition to increased demand within the existing service area, demand is increasing for expansion of service between districts, particularly for commuters. Local decision-makers and the public alike have shown a strong interest in expanding inter-county public transit services.

Recognizing this, Park City Municipal Corporation and UTA have retained senior students Brian Barney, Laura Hughes, and Julianne Sabula in the Urban Planning Program at the University of Utah to research and prepare a Transit Development Plan between Salt Lake City and Park City, Utah. Expanding from recently conducted studies and under the guidance of Hal Johnson, this report looks at factors affecting transit in the region, and provides an opportunity to develop informed plans that will tailor transit services to current and anticipated conditions in the study area.

This study presents and reviews the setting for transportation, including a review of recently prepared plans and studies; demographic factors; transportation data, market conditions, and issues identified by Park City Transit and UTA. Subsequent steps in the study will analyze a wide range of service, capital, institutional, management, and financial alternatives, and develop a transit plan that will guide the connection of Salt Lake City and Park City via express bus service, and an implementation plan to move forward.

This study will afford the leaders and transportation providers of the area an opportunity to take an in-depth look at the transit system currently in place, choose the optimal manner in which transit can meet the public's needs within this dynamic area, and carefully identify where and how transit resources should be allocated. Subsequent steps in the study will analyze a wide range of service, capital, institutional, management, and financial alternatives, and develop a transit plan that will guide the connection of Salt Lake City and Park City via bus, and an implementation plan to accomplish that goal.

### b. Study Area

The study area is located in the Wasatch Mountains east between and in Salt Lake City and Park City. Famous for its skiing, it is increasingly known for a variety of other recreational, cultural, and historic resources and events.

The area surrounding Park City is dominated by a number of distinct destination areas, including Park City's historic Old Town and the multiple ski/resort communities. Park City, Snyderville Basin, and surrounding areas are experiencing rapid growth in recent years, with the trend expected to continue. The area surrounding Salt Lake City is dominated by a number of distinct destination areas, including Temple Square, the region's largest arts, sports, and entertainment venues, major hospitals, colleges, and concentrations of employment, shopping, and nightlife. Because the Salt Lake Area is well established, additional connections with surrounding areas such as Park City will add vibrance and additional vitality to both communities and their surroundings.

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## **c. Purpose Statement**

Due to the recent growth in population, employment, and the increasing demand for alternative transit services, Salt Lake City and the Park City area have an increased need for additional transit bus systems. If implemented, the proposed transit service would provide commuter service between the two areas. With the addition of these services, the two separate transit areas would become united, greatly increasing transit possibilities. This would simplify the commute for a large group of people who could rely upon the services for employment and other transportation needs.

The Utah Transit Authority service ends at the Salt Lake County line. Park City has developed a city bus transit service, which has been extended and serves some areas of Summit County. The purpose of this project is the development of a conceptual plan to connect the two transit service districts, determine potential markets and market share, estimate operating costs, and determine optimal routing in both Summit and Salt Lake Counties.

## **d. Goals & Objectives**

### **Social and Economic**

Goal: Serve the non-driving population

1. To expand transit service for low-income and disabled residents, children, and other non-driving populations

Goal: Serve the commuters and other populations

1. It should be high-speed, efficient and convenient service for the various travelers such as tourists, employees, and residents

Goal: Support local economies by increasing intercity access

1. Provide mutual access to a broader labor pool
2. Provide mutual access to a broader consumer base

### **Transportation**

Goal: Decrease intercity vehicular traffic

1. Address existing and future environmental and congestion issues
2. Alleviate local parking and roadway capacity problems by placing more visitors on transit
3. Accommodate transportation needs under projected growth scenario

### **Feasibility**

Goal: Establish a plan for interagency cooperation

1. Develop strategies to address the legal, operational, financial, and political challenges

Goal: Evaluate project feasibility

1. Identify and analyze potential funding sources
2. Identify the potential market and analyze its characteristics
3. Analyze unique logistical issues, such as seasonal fluctuations

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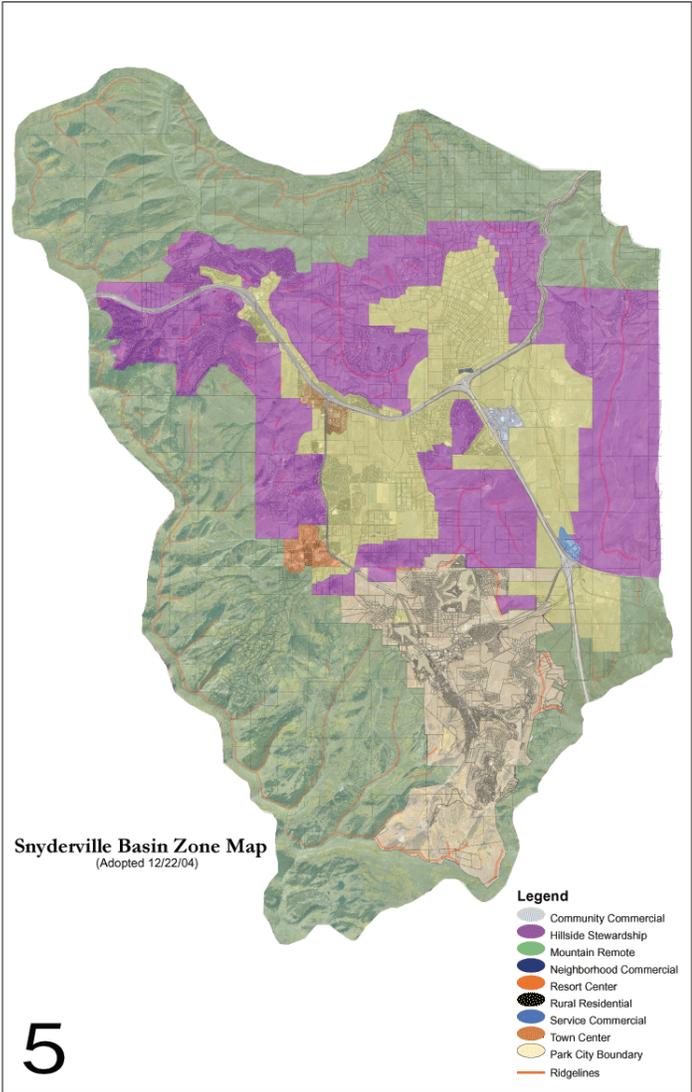
## **Chapter One:** Transportation and Environment

# Park City Transit Plan

## Section 1: The Built Environment

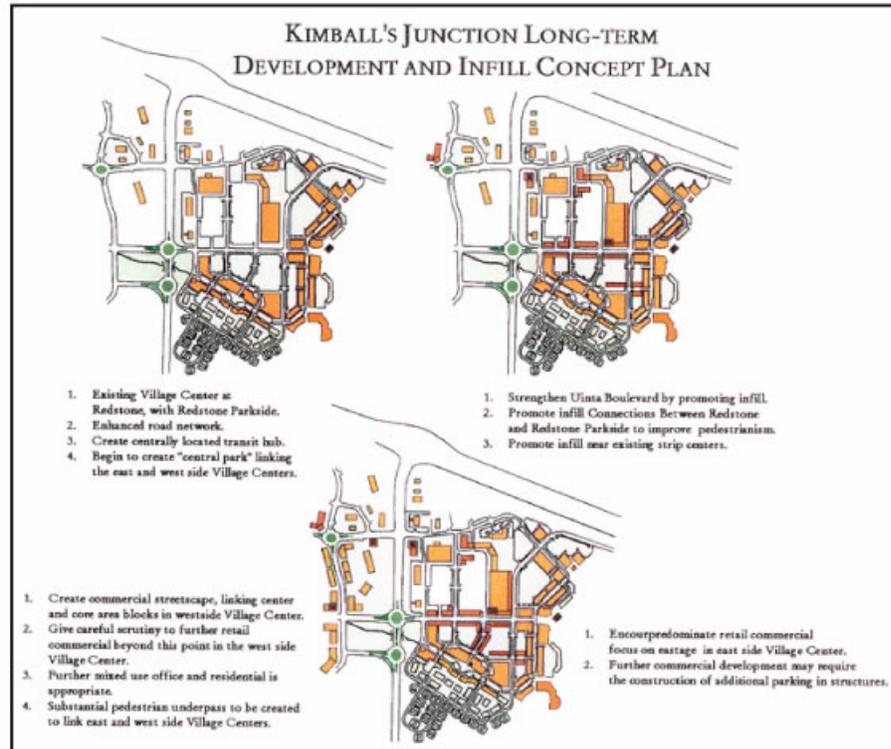
### 1a. Current Land Use

The zoning map below portrays the Snyderville Basin. The majority of the land is mountain remote and hillside stewardship. The area of interest in regard to the proposed express bus system is Kimball Junction which is highlighted as the town center. In designing the bus line, it will be crucial to know the zones of the land in which the bus line will be crossing through.



# Park City Transit Plan

## 1b. Development Plan

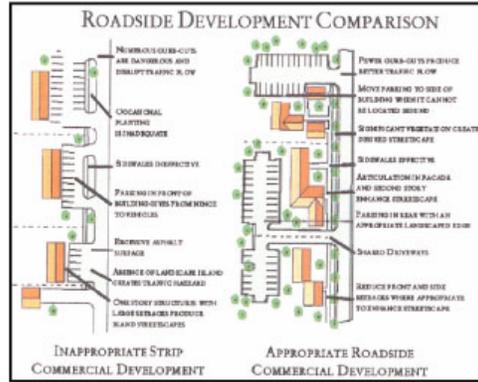


### Analysis:

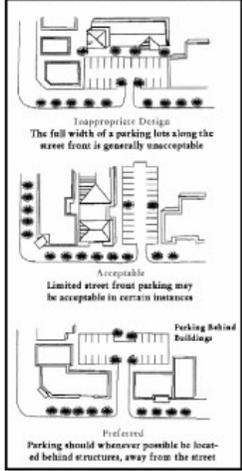
The Snyderville Basin General Plan emphasizes in-fill development, which means that transit plans can focus on existing nodes, which are labeled in the map above. The intent is to blend affordable housing into existing neighborhoods and village centers, so a variety of housing types will be accessible by existing local transit service, as well as by the inter-county linkage system.

# Park City Transit Plan

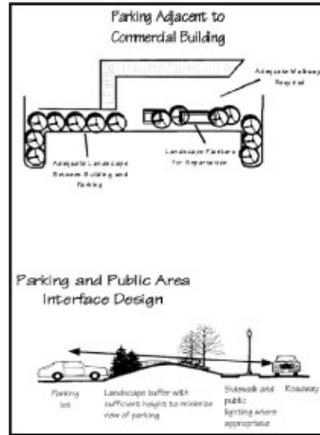
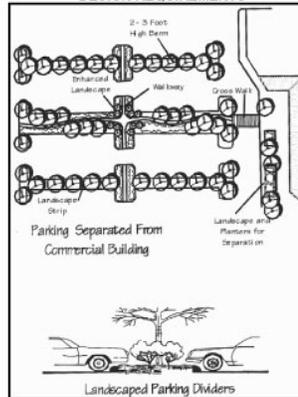
## 1c. Roadside/Parking Development Plans



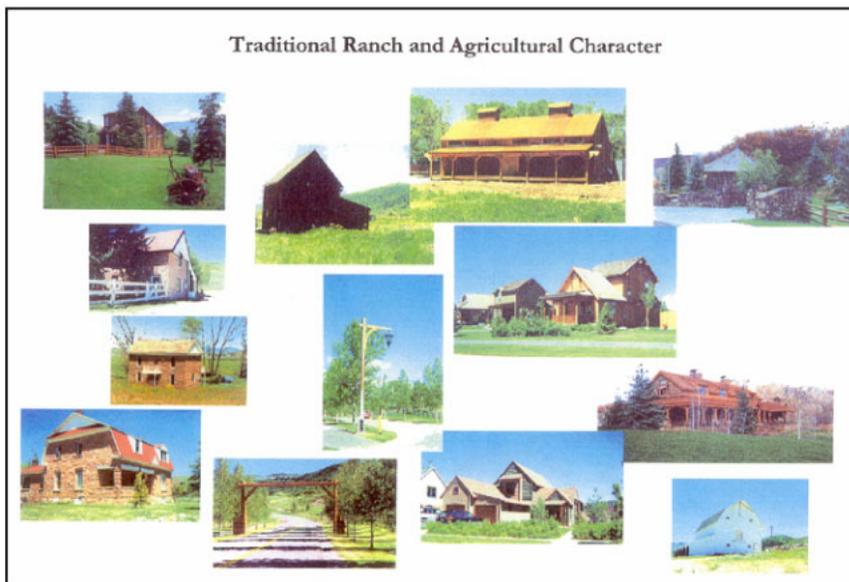
### COMMERCIAL PARKING LOT PLACEMENT REQUIREMENTS



### COMMERCIAL PARKING LOT INTERIOR DESIGN REQUIREMENTS



### Traditional Ranch and Agricultural Character



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This region also places a high priority on maintaining historical design features, which yields two relevant conclusions:

1. Transit stops and/or park-and-ride lots should conform to these characteristics, with rural or ranch-style features and minimal visibility of parking.
2. Rural residential will continue to occupy very large minimum lot sizes, so that a park-and-ride feature will be needed if rural residents are to be served by the transit link.

## **Analysis:**

There will be a need for park and ride lots for transit users to efficiently travel on the express bus. Therefore, the potential roadside and parking development plans will look to accommodate travelers from other areas to park their car and ride the bus instead of driving to and from Summit and Salt Lake County. Determining where such park-and-ride lots will be located depends on the demand and amount of people who will use the express bus system.

## **1d. Park City General Plan, March 1997**

Park City's most current General Plan was adopted in March of 1997. It includes the following transit-related goals:

### **Goal: Maintain the high quality of public services and facilities.**

The community should continue to provide excellence in public services and community facilities to meet the needs and desires of residents and visitors.

Development should continue to pay its fair share of the costs of providing community facilities and services. Current Park City residents should not subsidize new development, inside or outside corporate boundaries.

### **Goal: Develop an integrated transportation system to meet the needs of our visitors and residents.**

The traffic impact of new development is an important measure of the acceptability of proposed projects. The Transportation Element of the General Plan should allow only development with minimal adverse impacts on the transportation system or with acceptable mitigation measures that prevent degradation of the system.

The City should not consider proposed transportation mitigation techniques that decrease existing environmental quality or the quality of life of residents' and visitors.

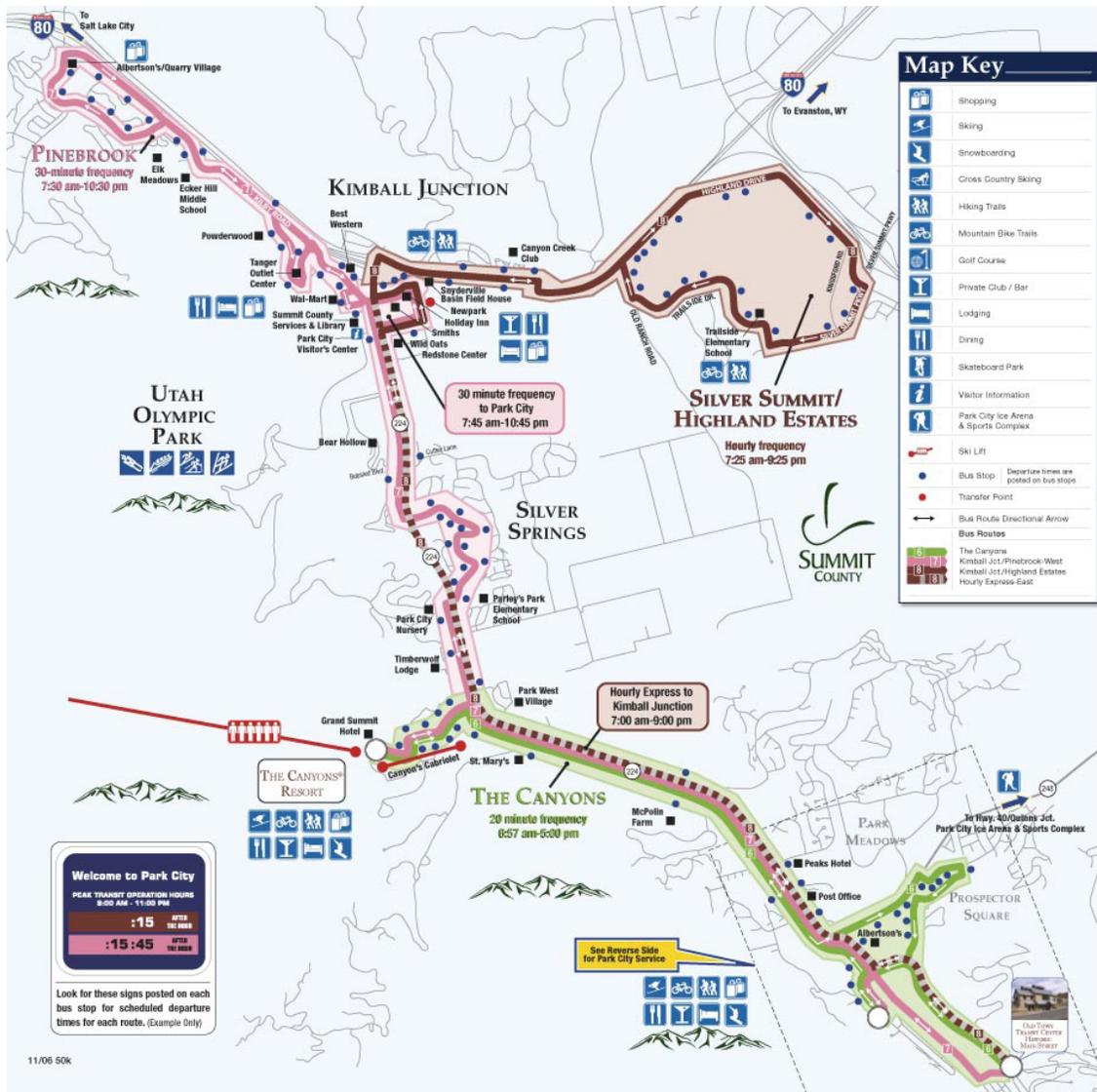
As the transit needs of the community are analyzed, consideration should be given to a wide range of transportation modes, including walking, biking, skiing, and using various mass transit alternatives.

Parking should be developed to serve the needs of businesses, resorts, and residents by integrating and coordinating public and private transit and parking needs. However, parking lots and structures should not dominate or overpower the character of the uses served, or detract from the historic and resort character of the community. This is especially important relative to possible park-and-ride locations.

# Park City Transit Plan

## 1e. Existing Park City & UTA Transit Service

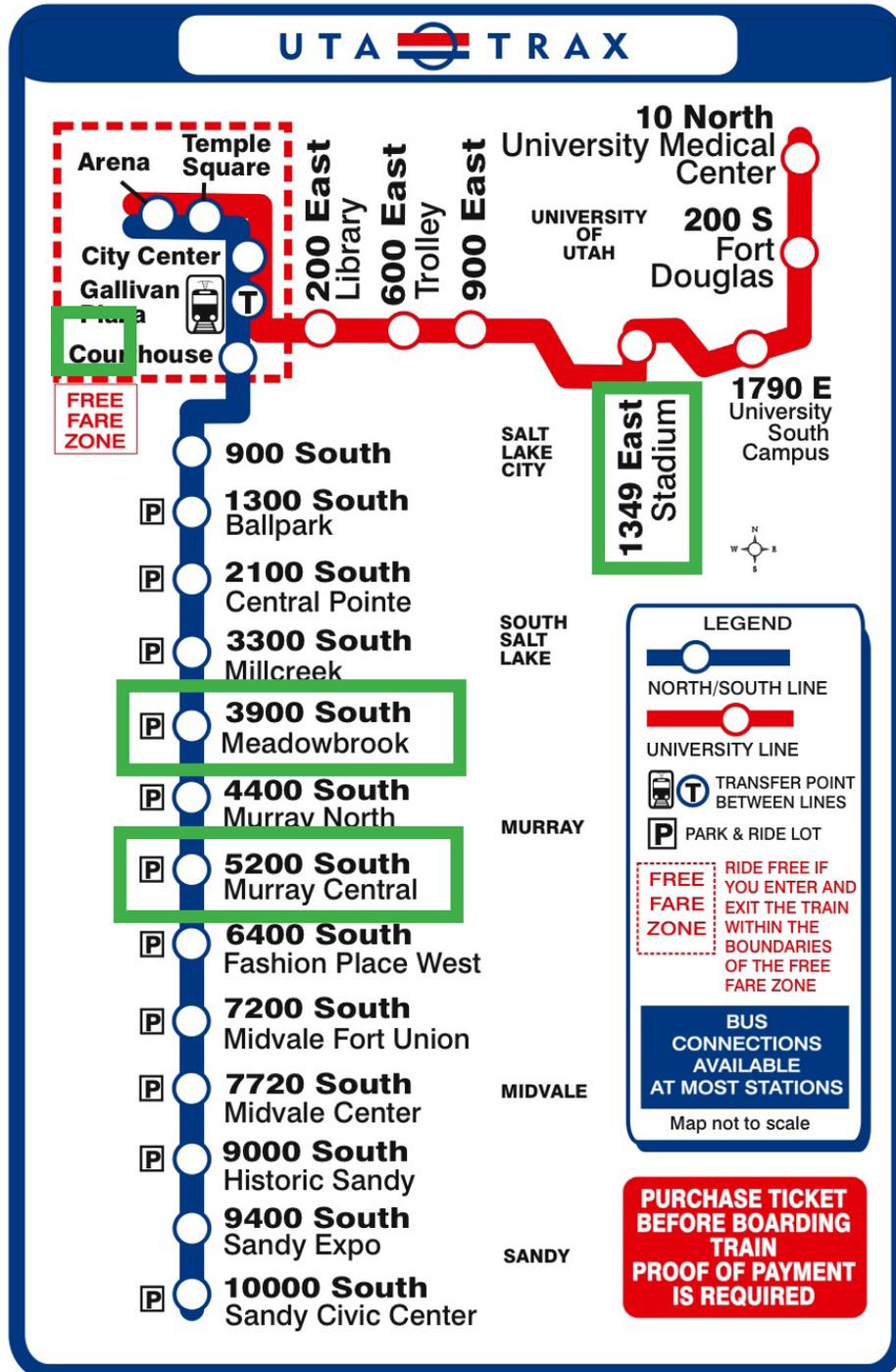
Park City Transit has identified the transit facility near Kimball Junction as a strong linkage point for passengers who wish to transfer to local bus service. It is also important to consider whether the financial and temporal costs of making additional stops within Park City would be justified by minimizing the hassle of transferring that could turn away some riders.



UTA has identified four potential linkage points on the Salt Lake end of the route that are near origin-destination clusters, experience the greatest rider volume, and/or are advantageous for centrality, park-and-ride facilities, connectivity to other routes, and other characteristics. They are (see yellow squares on map below):

1. 5200 South TRAX Station
2. 3900 South TRAX Station
3. Stadium TRAX Station
4. Salt Lake Intermodal Center

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## Section 2: The Natural Environment

### 2a. Critical and Sensitive Lands

#### Summit County Policy:

Environmentally Critical Lands are those which:

- Contain slopes that are predominately twenty-five percent or greater
- Contain geologic hazards and avalanche tracks
- Unstable slopes
- Lands within a 100-year flood plain and riparian areas that are critical to the maintenance of the hydrologic system
- Fisheries

#### Environmentally Sensitive Lands are those which:

- Hillside view sheds
- Meadow view sheds
- Mountain remote areas
- Environmentally significant areas that include:
  - Non-jurisdictional wetlands
  - Significant drainage corridors
  - Ranching, agricultural lands and historic structures
  - Important wildlife habitat

**Source:** Park City General Plan

#### Salt Lake County Policy:

The purpose of the NOS natural open space district (critical lands) is to protect and ensure stewardship over important natural open land areas of citywide or regional importance.

#### Environmentally Critical Lands are those which:

Lands which are principally undeveloped with near native vegetation and may include environmentally sensitive areas; areas of geologic significance; wetlands; stream corridors; foothills; mountains; shore lands; uplands and areas of significant wildlife habitat.

Salt Lake County also has policies regarding Foothill Protection District, Agricultural District, and Open Space District to protect the areas from intensive development in order to protect the scenic value of these areas and to minimize flooding and erosion.

**Source:** <http://www.ci.sl.c.ut.us/CED/planning/pages/masterplans.htm>

#### Analysis:

The objective to preserve sensitive lands is to protect and manage the natural resources of the Summit and Salt Lake County and ensure that all development undertaken is compatible with the surrounding mountain and resort environment. The data above presents the policies implemented in order to protect such lands. Therefore, if the proposed bus line is implemented into the Summit and Salt Lake County, the developers and planners will provide a bus route that will not harm or disturb these sensitive lands.

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## 2b. Air Quality

1999 Emissions Summary of Summit County Criteria Air Pollutants (Expressed in tons of pollutant emitted)

	Carbon Monoxide	Nitrogen Oxides	PM-10	Sulfur Dioxide	VOCs
Mobile Sources	14,643	3,262	4,839	216	1,576
Area Sources	4,437	460	5,156	49	742
Point Sources	342	635	81	63	317
All Sources	19,421	4,358	10,076	328	2,636

In 1999, this county ranked among the dirtiest/worst 20% of all counties in the U.S. in terms of pm-10 emissions (smog and soot).

### Analysis:

After reviewing the amount of pollutants released into the Summit County, the majority of air pollution is caused by mobile sources with 14,643 tons of carbon monoxide, 3,262 tons of nitrogen oxides, and 4,839 tons of PM-10, 216 tons of sulfur dioxide, and 1,576 tons of VOC's of pollutants emitted. Unfortunately, those numbers have increased over the past five years due to the 1999 study. The proposed express bus system is designed to address these issues of air pollutants within the Summit County. The buses will help manage and control such gases released into the air if ridership is promoted and the residents and employees of Summit and Salt Lake County support the alternative transportation system.

**Source:** Scorecard – The Pollution Information Site

[http://www.scorecard.org/community/index.tcl?zip\\_code=84060&fips\\_county\\_code=49043](http://www.scorecard.org/community/index.tcl?zip_code=84060&fips_county_code=49043)

## 2c. Relative Aspects of Pollution

There are approximately 398,816 vehicle miles traveled per day by commuters between Salt Lake City and Park City. The average vehicle exudes 1.31 pounds of pollutants per mile traveled. Therefore the average daily commuter pollution is between these two cities is approximately 261.2 tons of pollutants into the air. If commuter ratios remain the same and Park City employment continues to increase employment by 5.2% and commuting to Salt Lake City also increases at the same rate by the year 2027 there will be 1,156,373 daily VMT and approximately 757.4 tons of pollutants released into the air daily.

Pollutants and Fuel Consumption Per Mile						
Means of Transportation	Hydrocarbons	Carbon Monoxide	Oxides of Nitrogen	Carbon Dioxide	Total	Average Gas Consumption
Car	2.8 grams	20.9 grams	1.3 grams	.9 lbs	.91 lbs	.0465 gal.
Light Truck	3.5 grams	27.9 grams	0.8 grams	1.6 lbs	1.67 lbs	.0581 gal.
Average	3.2 grams	24.4 grams	1.1 grams	1.3 lbs	1.31 lbs	.0573 gal.

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**Source:** U.S. Environmental Protection Agency <http://www.epa.gov/otaq/consumer/f00013.htm> (chart on bottom of pg. 13)

## Section 3: Commute Analysis

### 3a. Park City/Salt Lake City Commute Analysis, 2006

This study included a survey of commuter needs between Park City and Salt Lake City. Residents from both cities were surveyed to determine their commuting patterns and their propensity to use transit service. Based on the findings of the survey and analysis of workforce and census information, a conceptual plan was developed which included the following conclusions:

1. An effective Express Bus service could be implemented between Park City and Salt Lake City, serving substantial commute ridership in both directions.
2. Stops would be limited to provide a fast travel time.
3. Schedules should be developed that, at a minimum, serve work shifts that start at 7:00 AM, 8:00 AM and 9:00 AM, as well as shift end times of 4:00 PM, 5:00 PM and 6:00 PM and other peak travel times. In the downhill direction, service operated beyond the traditional Monday - Friday work week would be of very limited effectiveness. However, demand on weekend days in the "uphill" direction may warrant service seven days a week, depending on the results of more detailed analysis.
4. A reasonable initial service would have a minimum number of runs in each direction during each commute period, year-round. Additional peak-season services could be added.
5. The most effective route could begin at the Old Town Transit Center in Park City, and travel along SR 224-180, Foothill Drive (SR 186), and South State Street to downtown Salt Lake City. At least one stop convenient to TRAX would be served.
6. The route for eastbound commuters would be similar, except that stops would be made at the existing park-and-ride lots along Foothills Drive, and possibly along 1-215 at the interchanges just south of 1-80. Stop locations in both directions would depend in large part on the availability of park-and-ride parking.

Further analysis is needed before finalizing plans for an Express Bus.

Nothing has been implemented to date. The recommendations in this study could be expanded and incorporated in a more thorough and scientifically conducted analysis.

### 3b. VMT

The following data focus on the VMT (vehicle miles traveled) for each county by road ownership. The data researched were between the years 2003 and 2005. Salt Lake County in 2003 had a daily VMT of 21,872,978 miles with an annual VMT rate of 7,983,636,970. In 2005 Salt Lake County projected 22,287,644 daily VMT and 8,140,560,971 annual VMT with an overall increase of 414,666 daily VMT increase and 156,942,001 annual VMT increase. Summit County in 2003 had a daily VMT of 1,784,546 miles with an annual VMT rate of 651,359,290. In 2005 the Summit County projected 1,923,550 daily VMT and 702,576,638

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annual VMT with an increase of 139,004 daily VMT increase and 51,217,348 annual VMT increase.

Source: [www.udot.utah.gov](http://www.udot.utah.gov).

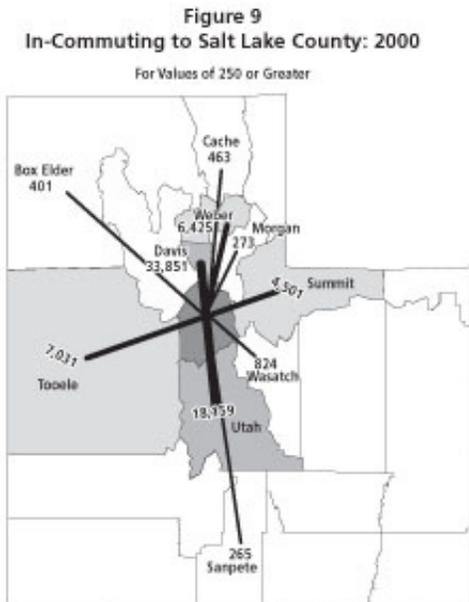
### 3c. Commuting Patterns: 1980 – 2000



Source: Bureau of the Census; and Avenue Script by Adam Sobek, Digit Lab, University of Utah



Source: Bureau of the Census; and Avenue Script by Adam Sobek, Digit Lab, University of Utah



Source: Bureau of the Census; and Avenue Script by Adam Sobek, Digit Lab, University of Utah



Source: Bureau of the Census; and Avenue Script by Adam Sobek, Digit Lab, University of Utah

# Park City Transit Plan

## The Bureau of Economic and Business Research reports that:

- “Increasing shares of Utah workers cross county lines to their jobs. The percent of Utah workers who left their counties of residence to work rose from 13.5 percent (78,482 commuters) in 1980 to 16.6 percent (171,355 workers) in 2000.” (1)
- In 2000, 35.6 percent of Summit County workers made an inter-county commute, representing an increase of 4.7 percent from 1980. (1)
- “Salt Lake County is still the major receiving county for commuters. In 2000, an estimated 73,203 workers commuted into Salt Lake County from other counties.” In addition, “an estimated 27,344 Salt Lake County residents commuted to other counties.” (1)
- 4,501 Summit County residents reported commuting to Salt Lake County in 2000, an increase of 2,566 since 1990, while 2,678 Salt Lake County residents commuted to Summit County. (10)
- “5,808 residents of Summit County report working out of the county while 4,991 nonresidents of Summit County report working in the county for a net difference of 817. Summit County residents out-commute mostly to Salt Lake County while the in-commuters to Summit County come primarily from Salt Lake and Wasatch Counties.” If Summit County’s out-commute rate were due to a job shortage in that area, we would not expect this kind of commuting pattern. (12)
- In fact, total employment in Summit County went up approximately 75 percent between 1980 and 1990, and more than doubled between 1990 and 2000. Summit County only saw about a 50 percent increase in employment held by residents during the earlier period, while resident employment growth was proportional to total employment growth in the latter period. Employment held by nonresidents approximately doubled during both periods, indicating that much of the job growth in Summit County was absorbed was absorbed by workers from without. (13)
- Of Summit County residents working outside the county, the overwhelming majority commute to Salt Lake County. Indeed, the total working in other counties and other states put together equal only 29 percent of the total number commuting to Salt Lake County. (14)

### Means of Transportation to Work by Travel Time to Work in Minutes State of Utah Residents: 2000

	Mean Travel Time to Work	Workers Who Did Not Work at Home	Less Than 10 Minutes	10 to 19 Minutes	20 to 29 Minutes	30 to 44 Minutes	44 or More Minutes
<b>Workers who did not work from home</b>	<b>21.3</b>	<b>989,525</b>	<b>187,215</b>	<b>348,135</b>	<b>205,880</b>	<b>53,715</b>	<b>94,575</b>
	{X}	100	18.9	35.7	20.8	15.5	9.6
	{X}	100	100	100	100	100	100
<b>Drove alone</b>	<b>20.1</b>	<b>779,440</b>	<b>149,370</b>	<b>284,930</b>	<b>169,935</b>	<b>116,240</b>	<b>58,970</b>
	{X}	100	19.2	36.6	21.8	14.9	7.6
	{X}	78.8	79.8	81.8	82.5	25.6	62.4

# Park City Transit Plan

<b>Carpooled</b>	<b>25.6</b>	<b>145,950</b>	<b>20,660</b>	<b>45,315</b>	<b>78,805</b>	<b>28,115</b>	<b>23,050</b>
	{X}	100	14.2	31	19.7	19.3	15.8
	{X}	14.7	11	13	14	18.3	24.4
<b>Public Trans.</b>	<b>42.2</b>	<b>23,200</b>	<b>705</b>	<b>3,305</b>	<b>2,955</b>	<b>6,385</b>	<b>9,850</b>
	{X}	100	3	14.2	12.7	27.5	42.5
	{X}	7.1	0.4	0.9	1.4	4.7	10.4
<b>Bicycle/ Walked</b>	<b>12.5</b>	<b>33,790</b>	<b>14,880</b>	<b>12,630</b>	<b>3,305</b>	<b>1,900</b>	<b>1,070</b>
	{X}	100	44	37.4	9.8	5.6	3.2
	{X}	3.4	7.9	3.6	1.6	1.2	1.1
<b>Motorcycle/ Other</b>	<b>41.2</b>	<b>7,145</b>	<b>1,595</b>	<b>1,960</b>	<b>880</b>	<b>1,080</b>	<b>1,635</b>
	{X}	100	22.3	27.4	12.3	15.1	22.9
	{X}	0.7	0.9	0.6	0.4	0.2	1.2

## Means of Transportation and Travel Time to Work: State of Utah Residents

	1990 Census		2000 Census		Change 1990 to 2000	
	Number	Percent	Number	Percent	Number	Percent
Workers who did not work at home	206,128	100.0%	989,523	100.0%	283,395	40.1%
Less than 5	35,377	5.0%	43,896	4.4%	8,519	24.1%
5 to 9	112,479	15.9%	43,896	14.5%	30,878	27.4%
10 to 14	132,979	18.8%	143,317	17.7%	47,131	31.7%
15 to 19	131,876	18.7%	17,506	17.5%	41,200	31.2%
20 to 29	149,115	21.1%	173,076	20.8%	56,765	38.1%
20 to 44	92,667	13.1%	20,588	15.5%	6,105	65.9%
45 or more	51,685	7.3%	153,717	9.6%	47,892	83.0%
<b>Mean Travel time to work</b>	<b>18.9</b>	<b>N/A</b>	<b>21.3</b>	<b>N/A</b>	<b>2.4</b>	<b>N/A</b>

**Source:** Census Transportation Planning Package 2000 Profiles; Perlich, Pamela S. Commuting Patterns in Utah: County Trends for 1980, 1990, and 2000. BEBR Utah Economic and Business Review, 63(5&6).

### Analysis:

Overall, Salt Lake and Summit Counties are experiencing major population growth. The demand for jobs is now located in two of the most prominent and tourist-attracting areas in Utah, therefore, the number of people traveling between the two counties is increasing and will continue to increase. The projections only display up to the year 2005, however, estimations consider that the daily and annual vehicle miles traveled in Summit and Salt Lake County have increased nearly 20% over 2006. Thus, a transit link will benefit these people who are traveling between the two counties.

It is clear that for more than two decades, both Salt Lake County and Summit County have experienced high levels of both population and job growth. However, it appears that the populations and jobs within each county are not well-matched. Consequently, there is a high rate of commuting between the two counties that is not due to a job shortage in either. Should the trends of the past two decades continue, the demand for transportation along the single

# Park City Transit Plan

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route between these two counties will continue to grow. That demand will be of a different nature in the uphill direction than in the downhill direction, since population characteristics of users at each end differ (as will be elaborated in the chapter on Social and Economic Conditions), and such differences should factor into the transit plan.

### **3d. Traffic Volumes**

The major roadways in Summit County include Interstates 80 and 84, US Highway 40, and State Routes 32, 35, 65, 150, 224, and 248. The Utah Department of Transportation (UDOT) has prepared calculations of traffic volumes for each of these facilities. The table presents the Average Annual Daily Traffic (AADT) volumes for both 2004 and 2005, with the corresponding average annual rate of change between these two years.

Traffic volumes in Summit County are predictably highest on segments of the Interstate 80 corridor and State Route 224. The two highest volumes were seen at 1-80 and the Jeremy Ranch Interstate Exchange (44,000 AADT) and the I-80/Parley's Summit Interchange. Third highest was on State Route 224 at Kimball Junction Interchange with 33,470 AADT.

The greatest increase in traffic volumes occurred on SR 224 at Bonanza Drive, which experienced a growth in AADT of approximately 5,180 average daily vehicles in one year. State Route 224 also experienced higher AADT where it meets State Route 228, with 2,380 additional average daily vehicles each year.

Eastern Summit County experienced significant traffic growth as well, with 1,615 additional average daily vehicles annually at the Interstate 84 interchange in Henefer (a 23 percent increase over the previous year). And while the AADT on State Route 32 only increased by 3.3 percent between 2004 and 2005, it more than doubled since 2001 from 2,360 to 5,835.

### **Analysis:**

Summit and Salt Lake Counties are projected to grow substantially in population over the next twenty years. The demand for alternative transportation will increase. The proposed bus system going between Salt Lake and Summit Counties will provide tourists, businesses, residents, and students an efficient system to reach destinations without driving a car. The bus line will reduce vehicle miles traveled if ridership is promoted and increasing numbers of people support public transportation. Traffic congestion will decrease, reducing travel times for both private and public vehicles. Additionally, as a system gains ridership over time, it can be expanded to accommodate a broader market.

**Source:** LSC Transportation Consultants, Inc., Park City/Summit County Short Range Transit Plan Update, Technical Memorandum Number One

### **3e. Cost per Trip**

The average direct cost to drivers is approximately \$0.86 per mile driven. This includes: insurance, registration finance, fuel and oil, maintenance and tires, residential parking, parking and tolls, travel time and accidents minus travel time and insurance disbursements. The average indirect cost to drivers is approximately \$0.33 per mile driven. This includes: State and Local Construction, Improvements and Repair, State and Local Highway Maintenance and Operations, Parking (commercial and employer-paid, including government tax), Waste Disposal, Air Pollution Damage (health costs, crops, trees, materials, etc.), External Resource Consumption Costs, Road Noise (property value decrease and abatement), CO2 Reduction

# Park City Transit Plan

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(motor vehicles only), Water Pollution and Hydrologic Impacts, Transportation Diversity and Equity, Barrier Effects on Pedestrians and Bicycles, Land Use Impact Costs, Roadway Land Value and Congestion Costs. The average total cost to drivers is approximately \$1.19. This all adds up to about \$57.71 per round trip between Salt Lake City and Park City. Commuting 20 days a month come to \$1154.20.

**Source:** <http://www.commuter-solutions.org/calc.htm> (True Cost of Driving)

## **Section 4: Salt Lake to Summit County Current and Future Transit Plans**

### **4a. Salt Lake City to Park City Service**

With growth both in Summit County as well as along the Wasatch Front, there is an increasing demand for regional transit service between Salt Lake City and the Park City area. While the Park City/Salt Lake City corridor is currently served by a number of private limousine and charter bus providers, these services are primarily designed for visitors. The public has indicated a desire for a public transit connection between Park City/Western Summit County and the Wasatch Front which focuses on commuter transportation, shopping, recreation, and higher education.

### **4b. Salt Lake City/Park City Privately Operated Commuter Service**

December 18, 2006, a privately operated commuter service was initiated through coordination between the Park City Chamber of Commerce and All Resorts Express in order to provide service to Park City area employees traveling from Salt Lake City and Heber City. The service uses a 47 passenger bus and runs on a regular schedule and charges a roundtrip fare of 8\$ per passenger. This service is open to all potential passengers, and is not limited to employees of specific employers.

### **4c. Salt Lake City/Park City Publicly Operated Commuter Service**

It is roughly estimated through census data, workforce data, and survey results presents a strong indication that ridership would be generated on average 5 days a week in the downhill direction and 6 days a week in the uphill direction, annual ridership is estimated to equal 12,060 one-way passenger-trips per year (approximately 33 passenger-trips per day) for service seven days per week.

### **Conclusion:**

There is an existing and growing demand for inter-county transportation that links the Park City and Salt Lake County transit districts. Choices with respect to major linkage points, frequency, scheduling and reliability are key factors. Since ridership appears to be far more active among lower- than higher-income populations, the system should cater first to these potential users. Frequency and scheduling must consider the differences in needs at the top and bottom of the route. Alternative routes should also be contemplated so as to increase the highest productive ridership yield possible. Finally, level of service will likely need to be limited in the early stages, focusing on the largest groups of potential users and attending meticulously to convenience, efficiency, and reliability. This will make possible incremental increases in level of service as population and inter-county commuting continue to grow.

# Park City Transit Plan

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## **Chapter Two:** Socio-Economic Conditions and Market Analysis

# Park City Transit Plan

## Section 1: Population: Summit/Salt Lake County

Utah's population reached 2,233,169 in 2000. This represents a population increase of 510,319 (29.6%) from 1990. Seventy-five percent of the population lives in Salt Lake, Davis, and Weber Counties.

Due to Summit County's close proximity to the Salt Lake metropolitan area, it has experienced major growth in the past twenty-five years. Summit County was the fastest growing county within the state of Utah, nearly doubling its size. The population has grown from 10,400 in 1980 to an estimated 31,279 in 2001.

**Source:** [www.parkcityinfo.com](http://www.parkcityinfo.com)

### 1a. Characteristics of the Population

Characteristics	Summit	Salt Lake	Utah
Median Age	33.3	29.0	26.7
Persons/ Household	2.67	3.00	3.13

**Source:** [www.slco.org](http://www.slco.org)

#### Analysis:

Salt Lake County holds a greater population than Summit County. In relation to the proposed express bus system, the majority of transit users are located within Salt Lake County. This may dictate more frequent service for Salt Lake County riders, however the percentage of this population traveling to Summit County must be considered, as well as those traveling to and from the necessarily higher concentration of jobs and attractions in Salt Lake County.

### 1b. Housing

#### Average Home Prices

Average Home Price in Park City \$ 426,344

Average Condo Price in Park City \$ 337,288

Average Home Price in Salt Lake City \$ 184,756

Average Condo Price in Salt Lake City \$ 132,979

# Park City Transit Plan

## 1c. Median Housing Costs

Housing Costs	Summit	Salt Lake	Utah
Median Rent	\$909	\$638	\$597
Median Home Price	\$296,000	\$157,000	\$146,100

## 1d. Median Selected Monthly Ownership Costs of Specified Owner Occupied Housing Units with Mortgage

Specifically, Salt Lake County average value cost is \$1,156 where as Summit County has an average value cost of \$1,955. Overall, the areas that have a higher monthly payment are located within the Wasatch Front. Areas that have low cost due to low income housing and the lower class population of Utah are located throughout the eastern and southern counties in Utah.

**Source:** [www.parkcityinfo.com](http://www.parkcityinfo.com), [www.census.gov](http://www.census.gov)

## Section 2: Workforce Characteristics

The State of Utah Department of Workforce Services provides labor force data. Summit County is averaging an unemployment rate of 3.2 percent this year (the same as the statewide unemployment rate). Over the past decade, seasonally-adjusted unemployment rates have ranged from a high of 8.8 percent in 2002, to the current low of 3.2 percent. Employment levels fluctuate throughout the year, due to the seasonal nature of employment. Currently, approximately 42 percent of the population is not in the labor force, representative in part of the relatively high proportion of retired residents.

Average annual pay in Utah is expected to remain around 82% of the national average. Bureau of Labor Statistics shows that Utah ranked 47th in the United States at \$25,451 in average annual pay for 2003. In relation, employment levels throughout the Salt Lake and Summit County have increased over past years. Thus, the majority of the Utah population works within Salt Lake and Summit Counties.

The data presented below gives an overview of the average number of employed persons in the Summit County through 1993 to 2003.

# Park City Transit Plan

	Number Employed	% of Change	Utah
1993	9,945	11.0	5.4
1994	11,143	12.0	6.2
1995	12,075	8.0	5.6
1996	13,002	8.0	5.1
1997	13,814	6.0	4.2
1998	14,338	4.7	NA
1999	14,558	1.5	2.4
2000	15,228	4.6	2.5
2001	15,846	4.1	0.9
2002	16,436	3.5	1.6
2003	16,418	.11	0.4

Source: UDWS (Utah Department of Workforce Services and the Economic Report to the Governor, 2005 Updated February, 2005)

## 2a. High/Low Paying Jobs in Utah

### Highest Paying Jobs in Utah ( Per Hour )

Obstetricians & Gynecologists \$66.60

Surgeons \$64.00

Internists, General \$63.20

Pediatricians, General \$59.70

Family & General Practitioners \$56.60

Lawyers \$49.40

Dentists \$48.20

Air Traffic Controllers \$42.30

Engineering Managers \$37.50

### Lowest Paying Jobs in Utah ( Per Hour )

Ushers \$6.50

Fast Food Cooks \$6.70

Dining Room Attendants & Bar Backs \$6.90

Food Prep Workers \$6.90

Dishwashers \$7.00

Pressers & Garment Workers \$7.00

Food Counter Help \$7.00

Amusement & Recreation Attendants \$7.00

Parking Lot Attendants \$7.10

Sewers, Hand \$7.20

**Source:** [www.saltlakecityutah.org](http://www.saltlakecityutah.org)

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## 2b. Income Levels for Year 2001

Looking at median incomes, alongside various types of transit usage, express bus service appears to be well matched with the populations in this study area.

	<b>Summit</b>	<b>Salt Lake</b>
Median Household Income (2001)	\$64,962	\$47,132
Median Family Income (2001)	\$72,510	\$54,341

**Chart displaying the percentage of Utah residents within income levels \$35,000 and \$75,000 interested in an express bus system.**

	LOCAL	EXPRESS	LRT	UTA ALL	COUNTY ALL
<\$10,000	22.43%	2.46%	10.93%	18.16%	5.60%
\$10,000 – \$14,999	11.22%	1.06%	5.93%	9.21%	4.30%
\$15,000 – \$24,999	18.58%	4.23%	13.85%	16.53%	10.90%
\$25,000 – \$34,999	14.60%	9.95%	11.66%	13.53%	12.50%
\$35,000 – \$49,999	13.96%	<b>19.40%</b>	17.34%	15.20%	18.40%
\$50,000 – \$74,999	9.15%	<b>45.48%</b>	24.34%	15.26%	22.90%
\$75,000 – \$99,999	5.63%	12.40%	9.41%	7.04%	12.30%
>\$100000	4.42%	5.04%	6.55%	5.07%	13.00%

**Source:** [www.census.gov](http://www.census.gov)

### Analysis:

This data indicates that affordable housing, and therefore lower-income populations who tend to have a greater need for public transportation, are located in Salt Lake County. This may further justify a higher level of service for this market segment. A large portion of the Utah population works between the median and low income levels due to the average working age of twenty seven years old. Utah has the youngest population in the nation and is expected to continue as the youngest population. Due to the average age, the employment levels and income starts at a low rate, therefore, a majority of Utah residents have to live in areas that are affordable. Also, these residents have to travel further distances in order to reach the job markets. Summit and Salt Lake County provide great job opportunities for such residents, thus the need for transit services to and from these counties will provide residents service to work without having to drive and help them to maintain a steady income.

# Park City Transit Plan

Source: [www.saltlakecityutah.org](http://www.saltlakecityutah.org)

## Section 3: Economy

### 3a. Major Activity Centers

Park City and its surroundings offer the majority of the County's activity centers. Within Park City, the Old Town is the cultural, restaurant, and entertainment center for the Basin. Its unique charm and character are some of the primary reasons why visitors choose to come to the area. In addition, it is also an important source for employment. The small streets and limited parking add to the ambiance but can impede access. Without alternative transportation access, this area's ability to remain an important magnet could be jeopardized.

Ski resorts in the County, including Park City Mountain Resort, The Canyons, Deer Valley Resort, and Utah Olympic Park offer not only winter skiing, snowboarding, and special events, but increasingly offer summer activities and year-round special events.

Numerous parks are available in the Park City area including Rockport State Park, Deer Creek State Park, and Wasatch Mountain State Park. Water sports are available at Echo Lake at Coalville and Jordanelle Dan/Reservoir, and river rafting is available down the Provo and Green Rivers. Trails for hiking, biking, and horseback riding are abundant throughout Summit County and the Wasatch Mountains. During the winter, the ski resorts are major activity centers in Park City. Ski areas include Deer Valley Resort, Park City Ski Area, and Wolf Mountain Resort. Other local attractions include the Utah Winter Sports Park and the Silver Mine Adventure Park.

Another major activity center in the region is the Kimball Junction area near the SR 224/1-80 interchange. In addition to serving as a major retail center (for both residents and visitors), this area includes major lodging properties, recreational facilities, public facilities, and is increasingly becoming a center of residential development.

Since Salt Lake City and surrounding areas are the state's most urbanized locations, they house major hotels and convention centers, restaurants and bars, arts and sports venues, and civic institutions. The vast majority of such sites are located in the downtown area and/or are served by existing UTA service. The goal, then, is to find the most advantageous point to link into UTA's current network, which based on activity center locations, may be right in the heart of Salt Lake City's downtown.

Summit County is a classic example of how a western economy, once reliant upon natural resource extraction, has transformed into a vibrant service economy. Silver mining is gone, replaced by a tourism-based economy, with services, retail trade, and government dominating the current economic base. Additionally, the rapid growth in commercial building and second homes has pushed the construction industry to an all-time high.

### 3b. Major Employers

Below are the major employers in Summit County. As indicated, three of the top four employers are resorts, with the other being the Park City School District. The next largest employers include resorts, as well as City and County government. Grocery and retail businesses are also among the major employers in the County.

**Summit County**

**Salt Lake County**

# Park City Transit Plan

Deer Valley Resort  
Park City Mountain Resort

University of Utah  
State of Utah

The Canyons  
Park City School District  
Park City Municipal Corporation  
Summit County  
Stein Eriksen Lodge  
Triumph Gear Systems  
Premier Resorts of Utah  
South Summit School District

Granite School District  
Jordan School District  
Salt Lake County  
Novus  
Delta Airlines  
LDS Hospital  
Salt Lake City School District  
Salt Lake City Corporation

**Source:** [www.econdev.slco.org](http://www.econdev.slco.org), [www.parkcityinfo.com](http://www.parkcityinfo.com)

## **Analysis:**

Summit County's economy rides on the activity centers and their major employers. However, because there are several tourist spots, hotels, restaurants, as well as major downtown businesses, there is always a need for employment. There are several employees that travel from Salt Lake City to work in Summit County. The express bus service would provide an alternative mode of transportation for those who work and commute five out of the seven days a week to Summit County.

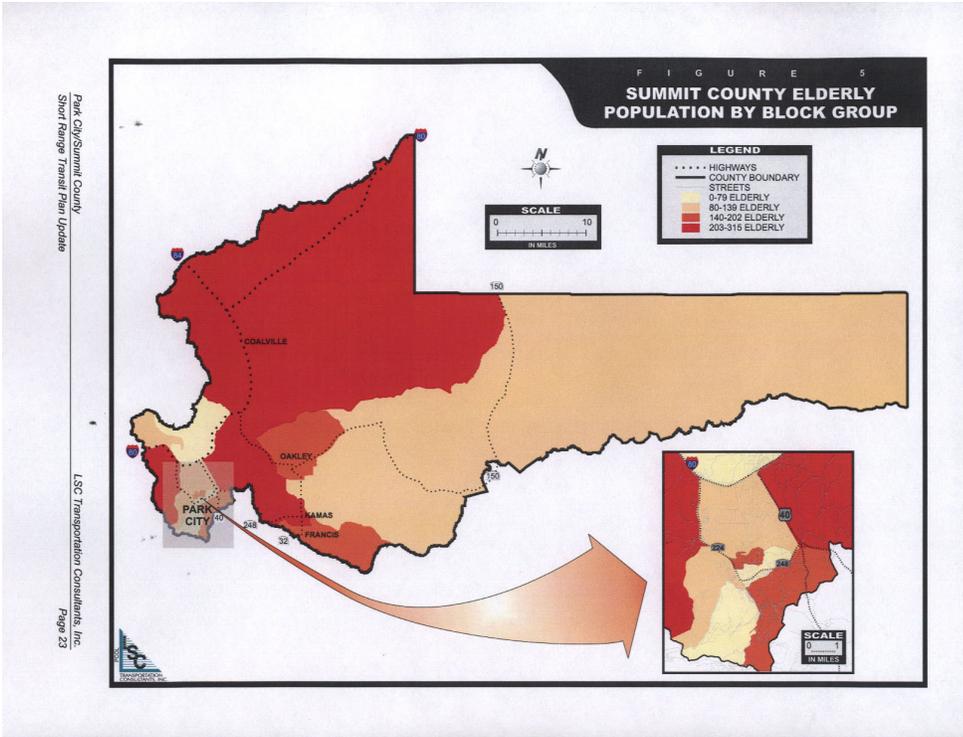
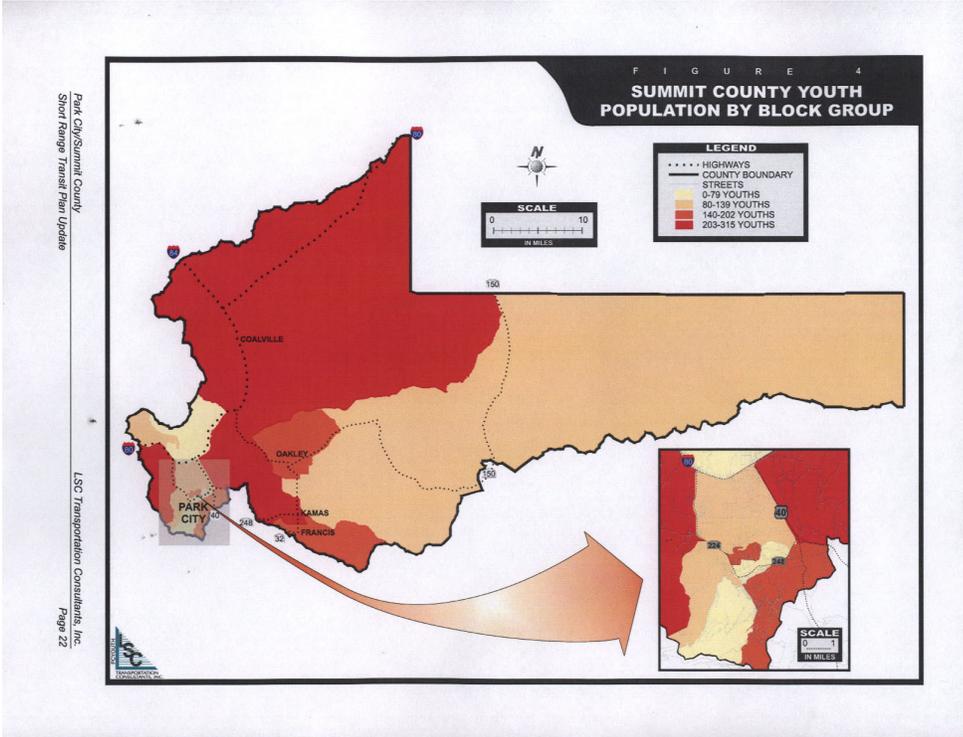
## **Section 4: Serving Non-Driving Populations**

### **4a. Non-Driving Populations**

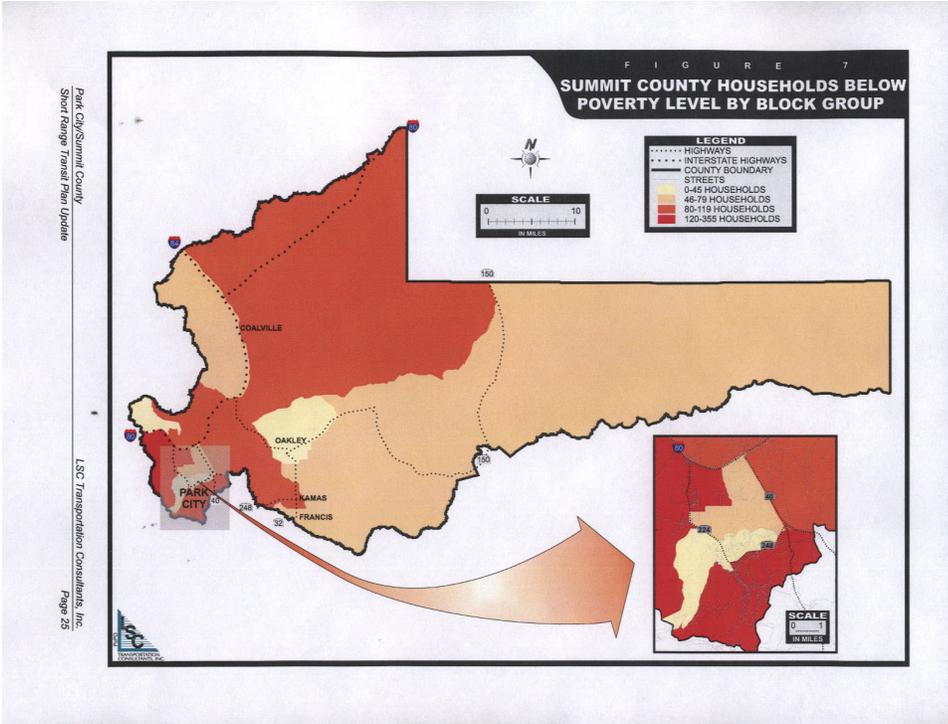
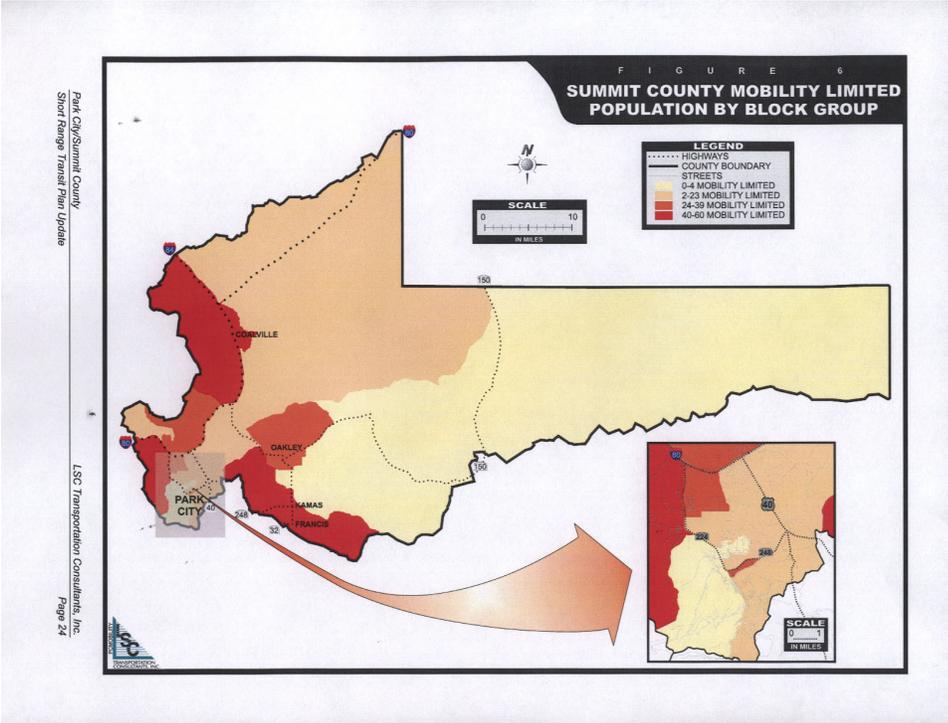
- Youth
- Elderly
- Disabled
- Low-Income
- Non-Vehicle-Ownning

The following maps displayed on the following pages show the locations of each of these non-driving populations throughout Summit County.

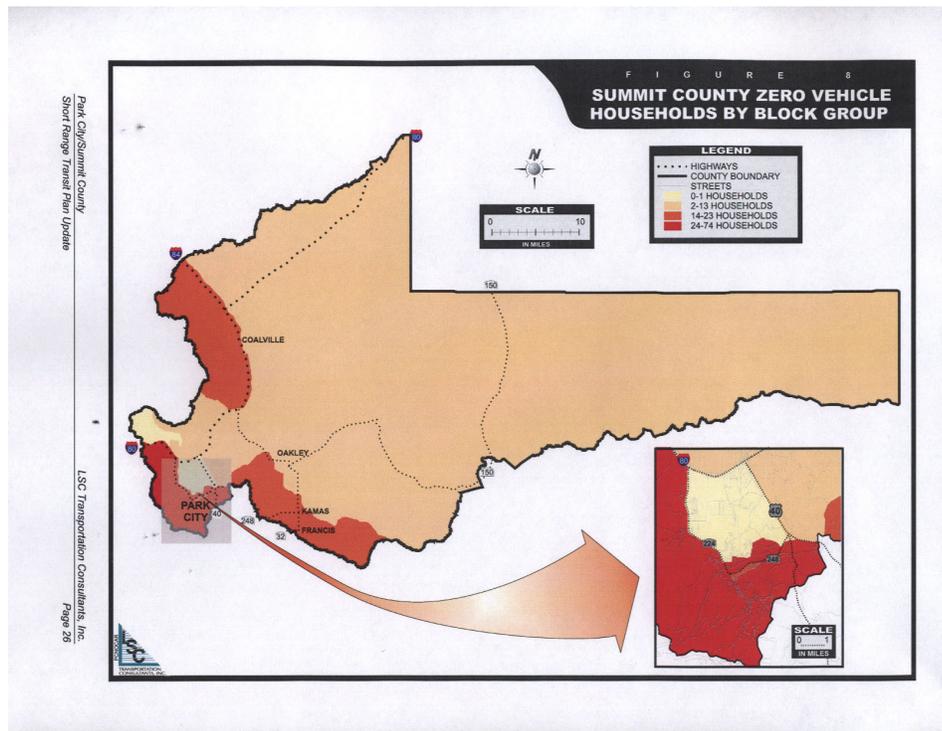
# Park City Transit Plan



# Park City Transit Plan



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Nationwide, public transit ridership is drawn in large part from the “transit-dependent” population – the youths and elderly, the low-income, the disabled, and members of households with no available vehicles.

Youths represent a transportation-dependent population, as those less than 16 are unable to drive and may not have a parent available to transport them. In particular, junior high school students who are independent enough to attend after-school activities, but are unable to drive are a representative group. The best available census data groups youth by ages 10 to 14 and 15 to 17, so the population between 10 and 17 years of age (inclusive), delineated by census block group, is presented in Table 6 and Figure 4. The census block groups with the highest number of youths include the two blocks west of Park City and Kimball Junction, which have 818 and 549 youths, respectively, followed by Kimball Junction, which has 438 youths. In terms of percentage of the census block area, Oakley and the Park Meadows area of Park City both have over 19 percent youths.

As presented in the tables, residents 60 years of age and older comprised 7.6 percent of the overall population in Summit County, and 7.6 percent of Park City. The greatest number of Summit County elderly persons lives in Census Tract Block Group 9943012 (west of Kimball Junction), although the area with the greatest proportion of elderly persons is in Census Tract, Block Group 9944001 (Thaynes Canyon) at 17.9 percent of the area’s population. Figure 5 illustrates the elderly population of the study area. In comparison, the proportion of elderly persons in Utah is 11.3 percent, which is significantly higher than in the study area.

The U.S. Census Bureau defines “mobility limited” as persons having a health condition lasting more than six months that makes it difficult to go outside the home alone. It is estimated there are 448 mobility-limited persons in Summit County, which comprises 1.2 percent of the study area population. In comparison, the statewide average was 2.6 percent. Census Tract Block

# Park City Transit Plan

Group 9942003 (which includes Kamas) had the greatest concentration of mobility-limited persons within the study area, both in terms of absolute numbers (57) and percentage (2.9 percent). This information is presented graphically in Figure 6.

Low-income persons are another likely market for transit services, as measured by the number of persons living below the poverty level. An estimated 1,920 low-income persons reside in the study area, representing 5.2 percent of the total Summit County population. The concentration of those below poverty status was highest in Census Tract 9944002, 944003 and 944004, comprising the southern portions of Park City, including Old Town. Within Park City proper there are 917 persons below the poverty level, or 10.1 percent of the City's population. In comparison, the statewide average was higher at 8.8 percent. See Figure 7 for details.

The number of households without a vehicle available is perhaps one of the strongest indicators of a transit-dependent household. As shown in Table 6, 18.9 percent of the households (72 total) in the Park Meadows tract do not have vehicles available. In Thaynes Canyon, 10.1 percent, or 27 households, do not have vehicles available. Figure 8 shows areas with the highest and lowest concentrations of zero-vehicle households.

## **Analysis:**

The most critically transit dependent populations in all categories are concentrated in the area just west of Park City, suggesting that whether through the local or system or through the transit link, this area must have a high level of accessibility. There is also a broad swath covering the northwestern portion of the county, as well as two smaller areas east of Park City. The challenge in these areas will be to examine the degree to which these populations are dispersed and to seek the best options for meeting their needs while keeping costs reasonable.

## **Section 5: Population and Ridership Trends**

### **5a. Park City Transit**

Park City began providing transit service in the winter of 1975-1976. Since its inception the transportation system has evolved to a well-organized and equipped transit system. Park City Transit provides free fixed-route and demand response bus service within Park City, and has contracted with Summit County to provide fixed-route and demand response services in the Snyderville Basin area, including Quinn's Junction. Service is operated on two different schedules for winter and summer, as well as a reduced, off-season service schedule. All vehicles are wheelchair-lift equipped. The demand response van service is available for senior citizens and those who cannot use the fixed-route transit service and qualify under the eligibility requirements of the American with Disabilities Act (ADA) of 1990. Park City Transit will be an intricate part of the proposed bus routes whether it is a carrier or a receiver.

### **Park City Transit Ridership by Year Calendar Years 2002 - 2005 System-wide Ridership**

Calendar Year	Total #	% Change
2002	1,407,184	
2003	1,456,957	3.5%

# Park City Transit Plan

2004	1,525,633	4.7%
2005	1,691,242	10.9%

**Source:** Park City Transit.

## 5b. Ridership by Month and Route

The Park City transit data summarized for this analysis represents ridership from the period of December 17, 2005 through June 6, 2006, which effectively captures the start of the Kimball Junction Express service. System-wide ridership during this time totaled greater than 1.4 million one-way passenger-trips. As discussed above, the majority of ridership is experienced during the peak winter months, during which 87.0 percent of total one-way passenger-trips were provided over the 28-week period.

The Interlined City routes had the highest ridership, combining for a total of 713,958 one-way passenger-trips during this period (50.4 percent of total system-wide ridership). Among the City routes, the lowest ridership was experienced on the Senior/Paratransit route (3,120 one-way passenger-trips), followed by the Early Morning Service (12,922 one-way passenger-trips), and the Late Night Service (17,458 one-way passenger-trips).

## 5c. Ridership Trends by Season

Given the strong “seasonality” of Park City ridership patterns, it is important to consider ridership trends by season. Kimball Jct. services had the greatest increase in ridership of any other service. Between Winter 2004/2005 to Winter 2005/2006, Kimball service increased by 85,561 one-way passenger-trips (63.3 percent). Similarly, there was a considerable jump in ridership between Summer 2005 and Summer 2006, with a 111.7 percent increase on the Kimball routes. The increase on the Kimball routes can mostly be attributed to the addition of the Kimball Junction Express service in December 2005. The Silver Lake service decreased by 18,183 one-way passenger-trips (19.4 percent) between the Winter 2004/05 and 2005/2006 seasons and 41.5 percent between Summer 2005 and Summer 2006. Ridership is much higher in the winter than in the summer across the board for all routes.

## 5d. Ridership by Time of Day and Season

Representative weeks were selected for winter and summer, which encompassed the weeks of February 20-26, 2006 and July 24-30, 2006. The ridership by time of day evaluation shows the system-wide average stops per hour.

The greatest number of stops in the peak winter season occurred during the hours of 4:00 PM and 5:00 PM, with the peak ridership occurring at around 4:00 PM when there was an average of 1,429 stops per hour system wide. The lowest stops per hour occurred at the 2:00 AM hour, with an average of six system-wide.

The average weekday stops during the peak summer were highest system-wide at the 3:00 PM hour with 303. Route 1 (Prospector) peaked at the 6:00 PM hour, with 85 average stops per hour. This was followed by Kimball West, which had an average of 79 stops at the 3:00 PM hour. Ridership was lowest system-wide at the 7:00 AM hour, with only 20 average stops per hour, as well as at the 10:00 PM hour, which had an average of 33 stops per hour.

# Park City Transit Plan

In general, this data indicates that ridership remains relatively strong throughout the day with relatively little “peaking” during the morning and afternoon commute periods.

## **5e. Ridership by Stop and Season**

As with the ridership by time of day analysis, seasonal weeks were selected for winter and summer, which encompassed the weeks of February 20-26, 2006 and July 24-30, 2006.

Four stops are exceedingly more popular than the others during the peak winter season. The Transit Center facility averages the highest passengers per day, with approximately 2,456 average stops per day (21.3 percent of the total stops system-wide). This is followed by the Park City Resort (2,164 average stops per day), the Park Avenue stop (1,235 average stops per day), and finally the Snow Park Lodge stop (1,030 average stops per day).

Transit Center is the most popular facility during the peak summer months, as well, with 599 average stops per day (23.5 percent of the total stops system-wide). The Resort Center stop, Redstone and the Park Avenue Condominiums also have high passenger activity, with 254, 174, and 168 average alightings per day respectively.

The Old Town Transit Center, Snow Park Lodge, the Resort Center, and the Park City Resort have the most daily passenger activity throughout the year. This information can be useful in prioritizing transit facility improvements.

## **Section 6: Potential Transit Demand**

Park City differs substantially from traditional urban centers which are suited for typical transit demand estimation techniques. Area residents are not the predominant factor affecting transit ridership in Park City; rather, it is the visiting tourist population.

According to the U.S. Census, the 2000 workforce in Park City was 4,379 employees, of which only 151, or 3.4 percent, used transit. The remainder drove or used carpools. County-wide, the number using public transportation is only 1.2 percent, or 192 individuals. While this does not account for non-employment trips, it indicates residents comprise a low proportion of transit trips. Traditional transit demand techniques, which focus upon the characteristics of the resident population, are therefore not appropriate for use when developing strategies for Park City. As employment – and therefore employment transit trips – is also largely a function of visitor activity, it is a realistic conclusion that transit demand can be identified as a function of visitor activity.

Transit demand in Park City has been previously estimated using visitor projections and ridership trends, with both methods missing the mark (the visitor method over-estimated ridership and the ridership trends projections underestimated ridership). Many factors affect tourism, making it difficult to predict the future patterns, and therefore difficult to predict ridership patterns. Nonetheless, by looking at a combination of ridership trends, overnight visitors and skier days, a reasonable estimate of the range of transit demand can be made.

### **6a. Demand Estimation**

The transit trips made by residents of rural areas to and from specific social programs (such as for job training or sheltered workshops) typically comprise approximately half of the total transit demand. This demand differs from other types of demand in that it is specifically

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generated by each program. Specific figures for the number of program participants were not available from all programs; census data was used where participant information is not available. A series of estimation techniques presented in the TCRP report, based upon the demographics of the non-Park City portion of Summit County, were applied to identify program trip demand.

Estimates of total annual one-way transit passenger-trips generated by social service programs in rural Summit County are estimates that are based upon the presence of the various types of social service programs, and information regarding their service area and distribution of program participants. All programs combined are estimated to require 125,540 annual one-way passenger-trips.

## **6b. Intercity Transit Demand**

There are a number of markets for intercity travel in the study area, the primary one being between Park City and Salt Lake City. Residents of Park City and Snyderville Basin travel to Salt Lake City for employment and shopping, and residents and air travelers in Salt Lake City travel to Park City for employment and tourism. Other areas of potential demand include residents of outlying communities such as Kamas and Francis, who travel to Salt Lake City, Park City, or Heber City for employment or services.

In the most recent SRTP, travel demand between Park City and Salt Lake City was estimated using a model presented in Planning Techniques for Intercity Transportation Services. Based on the model, the total demand for intercity service was calculated to equal 12,060 one-way passenger-trips per year (approximately 33 passenger-trips per day) for service seven days per week. More recently, a commute survey and conceptual planning study was conducted for commute service between Park City and Salt Lake City. This study found that there is demand enough to support several express commuter bus trips both eastbound and westbound between these two locations. More specifically, this study found through the combination of census data, workforce data, and survey results, a strong indication that an effective Express Bus service could be implemented between Park City and Salt Lake City, serving substantial commute ridership in both directions. The surveys (conducted outside of the peak tourist seasons) identified a total of 132 specific individuals who indicated an interest in using the service and showed a high likelihood of using a commute service to work locations in the central Salt Lake area, as well as 102 individuals with a high likelihood of using a service to the Western Summit County area. Converted to average daily ridership, these surveyed individuals correspond to an average of 200 passenger-trips generated by persons commuting in the “downhill” direction and 184 passenger-trips in the “uphill” direction. The survey data were not conducted in a controlled manner, and are therefore somewhat anecdotal, but they do give an indication of demand warranting commuter service.

### **Analysis:**

As studies show, there is a major demand for intercity transit services. An express bus system will allow the various traveling groups between Salt Lake and Summit County to travel to and from these areas without driving a car. In relation to the conducted surveys and studies on ridership between Salt Lake and Summit County, the majority of participants stated between the hours of 7:00 a.m. and 5:00 p.m. are the times at which most travelers are starting and leaving work. Therefore, the bus system would predominately start and end at those times. Also, if the demand is great enough and the express bus system is implemented, service to other areas such as Kamas, Francis, and Heber City could potentially be incorporated into the service or other shadowing transit services as future growth and ridership continues to

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increase.

## Section 7: Market Analysis

### 7a. Survey Summary of Resident and Employee Ridership in Summit County

The survey summary consisted of 14,000 respondents throughout the Summit County. The respondents were broken into two groups which were the resident respondents and the employee respondents. This survey was taken in November 2005 and was conducted to study the demand and potential ridership for an express bus system traveling between Salt Lake and Summit Counties. The summary of responses consisted of 200 Summit County employees and 449 Summit County residents who are willing to ride an express bus for commuting purposes. It should be noted that this survey has limited applicability, due to methodological issues (it did not use scientific sampling, had no control group, and was administered in the off-season) and sample size. There were numerous questions included in the survey, however, only the ten that pertain to this report will be presented here.

#### Overview:

##### 1. Place of Residence

Largest portion willing to ride from Salt Lake County to Summit reside in Salt Lake County east of interstate 15 (44%)

Largest portion willing to ride from Summit County to Salt Lake County reside in Park City (30%)

##### 2. Normal Work Hours

Salt Lake to Summit County (top three)

• Start time:	8:00 a.m.: 28.1%	End time:	5:00 p.m.: 26.6%
	9:00 a.m.: 13.6%		6:00 p.m.: 12.6%
	7:00 a.m.: 12.6%		5:30 p.m.: 11.6%

Summit to Salt Lake County (top three)

• Start time:	8:00 a.m.: 35.3%	End time:	5:00 p.m.: 30.5%
	7:00 a.m.: 14.8%		6:00 p.m.: 15.8%
	9:00 a.m.: 14.0%		4:00 p.m.: 10.0%

##### 3. Normal Weekly Work Hours

Summit County

	Employee	Resident
Mon.-Fri	89%	85%
Sat.	57%	14%
Sun.	43%	9%

##### 4. Method of Travel

Summit County

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	Employee	Resident
Drive	88%	90%
Carpool	9%	7%
Dropped off	1%	1.3%
Vanpool		0.4%

- The overwhelming majority of commuters currently travel by single-occupancy vehicle, with the small remainder, 10 to 12%, carpooling, getting dropped off, or vanpooling.
- Survey respondents indicated a low rate of job-related car requirements, but this is likely due to the self-selection of respondents (i.e., those likely and able to use transit are the ones who returned the survey).

## 5. Parking Fees

- Parking per month in Salt Lake County is \$35.54 (average cost)
- Salt Lake to Summit is \$18.22

## 6. Interest in Riding an Express Bus

- 200 out of 225 (89%) employee
- 449 out of 531 (85%) resident

## 7. Days per Week Ride the Express Bus

Summit County

	Employee	Resident
5 days	56%	24%
4 days	19%	21%
3 days	16%	24%
2 days	6%	14%
1 day	2%	10%

- The average rider would use the express bus 3.4 days per week.
- The weekend employees are traveling from Salt Lake to Summit County, while the lower numbers reflect the reverse-direction commute.

## 8. Monthly Passes

Employee: 93% yes	Reasonable Price: \$29.64
Resident: 76% yes	\$28.00

## 9. Desired pick-up locations for Summit-to-SL commuters:

Kimball Junction	34%
Pinebrook	16%
Jeremy Ranch	15%
DT Park City	9%
Prospector Area	7%

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Summit Park	5%
PC	not defined, 5%
Canyons Resort	4%
Quarry Village	2%
Silver Creek	2%

## 10. Desired pick-up locations for SL-to-Summit commuters:

I-215/Wasatch Blvd.	17%
Mouth of Parleys	16%
Sugarhouse	10%
U of U	10%
SLC locations S of I-80	9%
Downtown	6%
Trax, any stop	2%
Murray	2%
Other	25%

- Consideration of non-commuter needs is recommended (such as a skier shuttle), as well as seasonal variation (such as employer-supported increases in winter service).

**Source:** LSC Transportation Consultants, Inc. (March 6, 2006). Park City – Salt Lake City Commute Transit Service: Survey Summary and Conceptual Planning. Park City Municipal Corporation

## 7b. Utah Transit Authority – University of Utah Community Survey, June 2002/June 2005

The data in this study were collected from the students, faculty, and staff members of the University of Utah and addressed modes of getting to campus, use of UTA Bus and TRAX, future use of UTA Bus and Light Rail, and factors that would increase the use of UTA services. The final data in the 2002 study contains 201 students, 204 staff members, and 154 faculty members which is a total of 559 interviews. However, a total of 2,569 sample records were used in this study due to other research that was conducted. The final data in the 2005 study utilizes 200 completed surveys each from students, faculty, and staff members. Though the information only targets Salt Lake County, it is useful in understanding ridership trends and characteristics, in what is a primary destination for many Park City residents, to promote a new express bus system. Not all the data will be displayed; only material that is relevant to this analysis.

### Overview:

#### Modes of Getting to Campus

##### June 2002 Survey

	Student	Staff	Faculty
Your own car, truck or motorcycle	85%	90%	92%
Taking the bus or light rail	59%	44%	42%

##### June 2005 Survey

Student	Staff	Faculty
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# Park City Transit Plan

Your own car, truck or motorcycle	51%	71%	78.5%
Taking the bus	11.5%	10.5%	6.5%
TRAX	22%	8.5%	6.5%

- During both study periods, students were more likely than faculty or staff to have taken the bus or light rail at some time.
- Since 2002, vehicle use has decreased among all groups, as has UTA use. The implication is that the reduction in the use of private vehicles as a mode has been due to use of transit, walking, cycling, and carpooling as a primary or sole mode for a sizeable number of respondents.

## Reasons for not Using Bus or Light Rail

### June 2002 Survey

Total%	
Bus/Light takes too long	31%
Need to go to other destinations, other commitments	12%
Easier to take car	12%

- Similarly, in 2005, the main factors that would lead people to choose transit as their primary mode are: pick-up location, schedule/frequency/timeliness, express service/speed, flexibility, money/gas savings, and need (various reasons for lacking other modes).

## Trips Using UTA Bus or Light Rail for Other Purposes: Total Population June 2002 Survey

Average # of Trips Per Person	
Fall Semester:	5.71
Spring Semester	6.78

### Fall 2005 Survey

- A higher usage of transit for non-commuting purposes was reported among all groups, especially faculty, whose usage tends otherwise to be low.
- The most oft-cited other purpose was entertainment, which likely involves short trips to the downtown area restaurants, events, and venues.

## Work/Hours Students Use UTA Fall 2005 Survey

- Most respondents are on campus Monday through Thursday, with a slight drop on Fridays and a dramatic drop on weekends.
- 88% arrive on campus before 10 a.m., with more than half of staff arriving prior to 8 a.m.
- "One-third of the students leave campus between noon and 3 p.m. and about one-fourth between 3 p.m. and 5 p.m. A third of the staff is off by 5 p.m. and most others before 7 p.m. The majority of the faculty leaves between 5 and 7 p.m."

# Park City Transit Plan

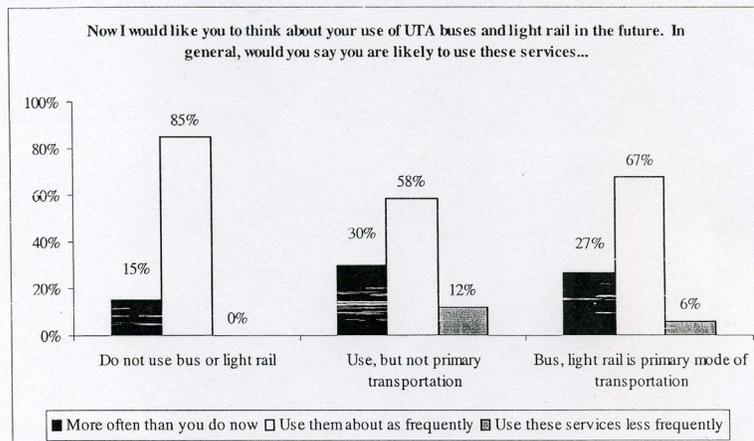
- UTA ridership is fairly consistent throughout the work week, with Tuesdays representing the most heavily traveled day.
- Most people who ever use transit tend to use it about 20 days per 4-week period (indicating a 5-day-per week ridership).

## Commuting Times Fall 2005 Survey

- Most respondents have a commute of less than one hour (using their primary transportation mode, whatever that may be), with 70% traveling 30 minutes or fewer.
- When using transit, people report longer commute times, with 40% at 30 minutes or less, 38% at 30-45 minutes, 18% at 45-59 minutes and 17% at 60-90 minutes.

## Future Use of UTA Bus and Light Rail

The percentage of respondents indicating they were more likely to use UTA services more often in the future was greater than the percentage that indicated they would use these services less often. However, most indicated they would use these services about as frequently as they do now.



The chart above summarizes future likelihoods among these three sub populations. In looking at those who did not use UTA services fall and spring semester, most (85%) indicated they would not use these services in the future. A small percentage (15%) indicated they would use these services in the future for at least some trips. Among those who used UTA services but not as their primary means of transportation, 58% indicated their use would not change. They would continue to use these services infrequently. Twelve percent indicated they would take the bus or light rail less frequently. However, 30% indicated their frequency of use would increase. Among those who indicated the bus or light rail was their primary mode of transport, two-thirds would continue to use these services as frequently as they use them at present. Six percent indicated their use would decrease while 27% indicated their use would increase.

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## Factors that Would Increase Use of UTA Services

	Total%
More routes, run more frequently to and from campus	9%
Faster service to campus, express routes, direct routes	9%
More frequently running routes in the evening	3%

**Source:** Valley Research, Inc. (Fall 2005). UTA/U of U Student, Staff & Faculty Survey.  
Valley Research, Inc. (June 2002). UTA/U of U Student, Staff & Faculty Survey.

### Analysis:

The first survey presents valid information on the percentage of potential riders on an express bus route to Salt Lake and Summit County. The survey states that 89% of employee respondents as well as 85% of resident respondents would be willing to use a bus rapid transit system. Also, the survey shows the percentages and patterns in work days and work hours. Therefore, the information will help design a bus system that will serve the majority of riders Monday through Friday between the hours 7:00 a.m. and 6:00 p.m. Not only will the express bus help serve the people of Summit and Salt Lake Counties, but it will also help lower parking fees as well as other expenses such as gas for carpools and other forms of travel.

Also relevant is the information on desired pick-up destinations throughout Salt Lake and Summit Counties. The preferred route(s) should attempt to link to at least the top three pick-up locations, either directly or through existing local service. Given the high rate of Sugarhouse origin-destination responses, a route that exits I-80 at 1300 South and travels north to the University of Utah area and then downtown may be a viable alternative to one that travels directly down Foothill Boulevard toward downtown.

Although the airport is already well-served by the private sector, this survey lists airport service as the second most important requirement for those who would otherwise utilize transit service. While a link to the airport will ultimately be made through TRAX service, the possibility of providing interim linkage should therefore not be tabled until all relevant factors have been considered.

It is of note that Salt Lake residents (who are less affluent than Park City residents) will pay more for a pass, and also that what seems reasonable for transit expenses falls far short of reported private auto costs. This indicates a greater demand for low-cost transportation among Salt Lake City residents (and lower-income), and a higher demand for convenience among Park City residents (and higher-income). This notion finds further support in the University Survey, where there is lower ridership among faculty, who are on balance more affluent than the other two groups included in that study and can therefore prioritize convenience over cost savings.

The second survey presents valid information on the current trends in how UTA services are used at the University of Utah. In relation, the proposed express bus system would be a great attraction for the university population to commute to Summit County. Current student enrollment at the university is approximately 28,600, and excluding students, there are approximately 16,400 employees. The survey also showed that the large majority of riders using the bus and light rail systems were students, suggesting that students would be especially receptive to opportunities to travel to Park City without driving a car.

Suggestions to increase ridership throughout the UTA services included increasing routes, faster service, evening routes, and so forth. Therefore, the Summit and Park City bus route

# Park City Transit Plan

will accommodate service throughout the Salt Lake and Summit Counties. Several alternative routes are being analyzed and studied as to which route will serve the largest percentage of riders throughout these particular areas, one which includes the University of Utah at the Stadium stop.

While preliminary studies on the market in both Park City and Salt Lake have been conducted, the Park City study was not scientific in nature and was conducted off-season. The following summarizes considerations for a more detailed analysis.

- Park City survey identified 4-6% of commuters as likely transit users
- A past Park City survey of major employers yielded nominal responses
- Unique to area:
  - differential demographics of two districts
  - recreation/resort travelers
  - downtown attraction travelers
  - special event travelers

## **Conclusion:**

There is an existing and growing demand for inter-county transportation that links the Park City and Salt Lake County transit districts. Choices with respect to major linkage points, frequency, scheduling and reliability are key factors. Since ridership appears to be far more active among lower- than higher-income populations, the system should cater first to these potential users. Frequency and scheduling must consider the differences in needs at the top and bottom of the route. Finally, level of service will likely need to be limited in the early stages, focusing on the largest groups of potential users and attending meticulously to convenience, efficiency, and reliability. This will make possible incremental increases in level of service as population and inter-county commuting continue to grow.

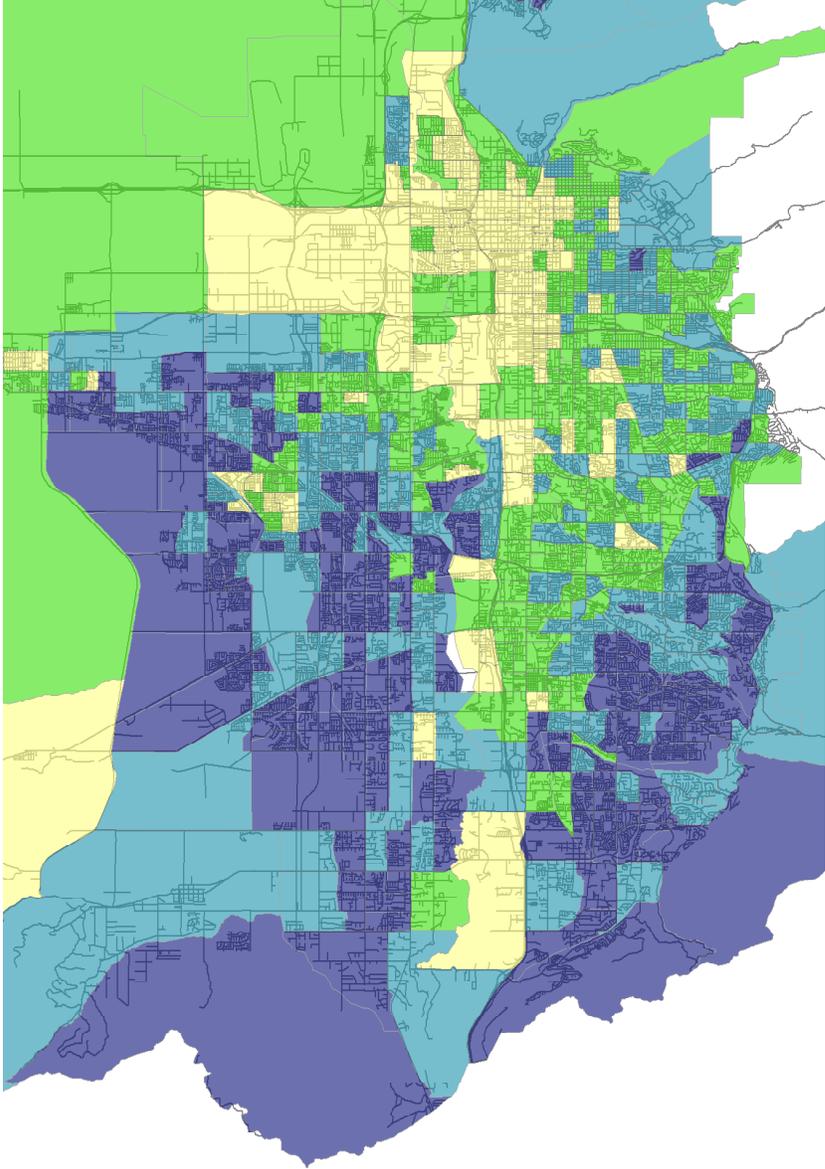
## **7c. UTA Rider Characteristics Data**

The following data from a UTA study provides traveler data that may be applied to our study area in order to estimate potential ridership characteristics.

### **Suburban Travelers Core Attributes**

- High sensitivity to time
- Fixed schedule
- Travel during rush hours
- Willingness to use transit

# Park City Transit Plan

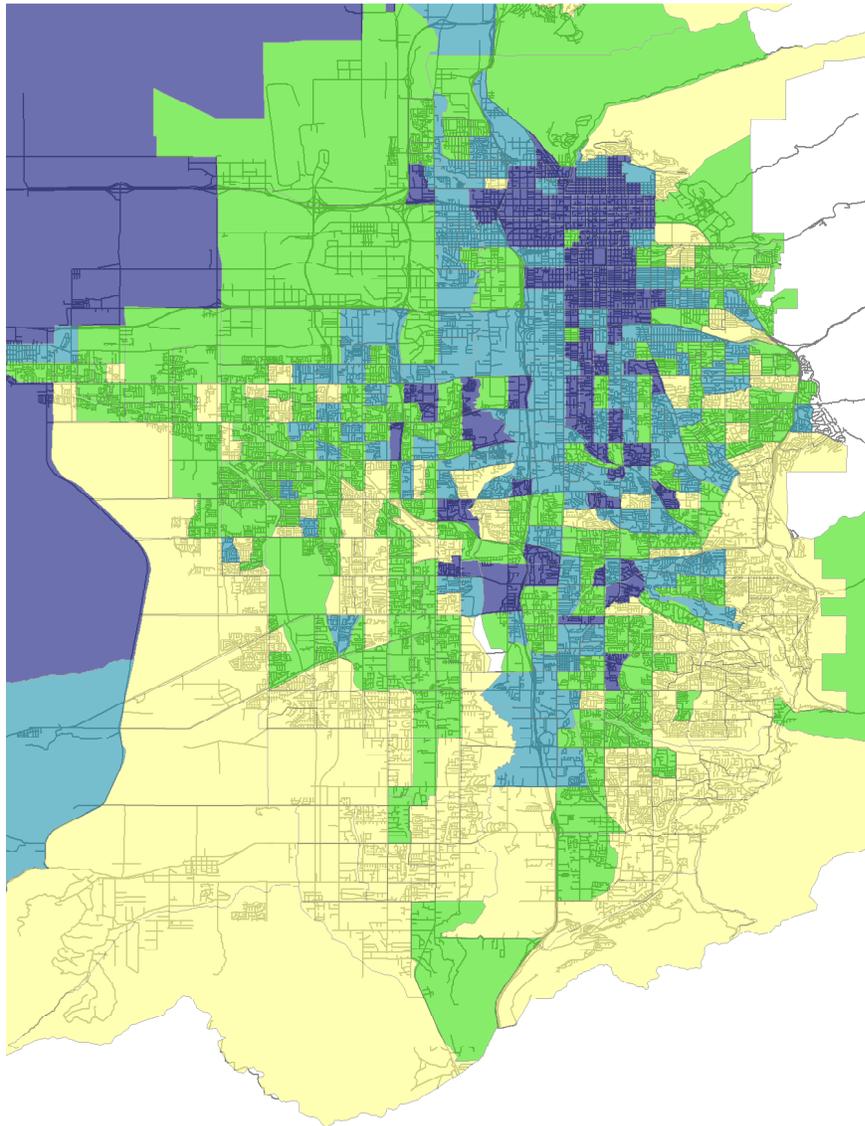


**Purple & Blue Shaded Areas Show Concentrations of Suburban Travelers**

# Park City Transit Plan

## Urban and Corridor Travelers Core Attributes

- Low sensitivity to time
- Fixed schedule
- Travel during rush hours
- Willingness to use transit



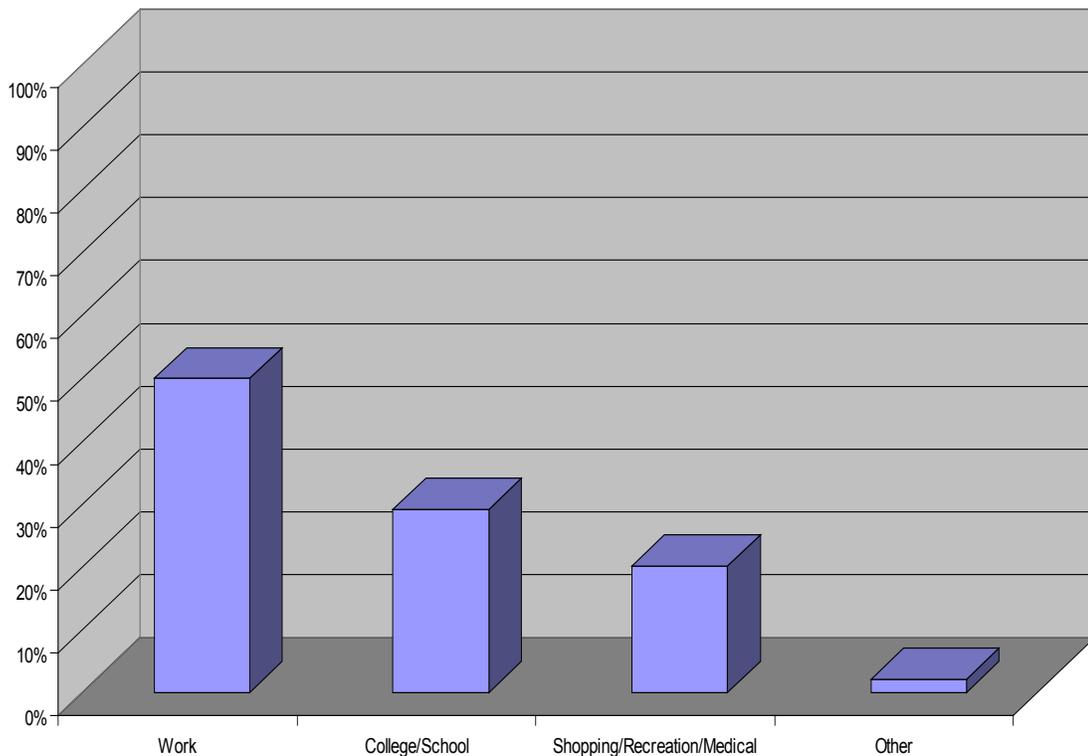
**Purple & Blue Shaded Areas Show Concentrations of Urban & Corridor Travelers**

# Park City Transit Plan

## Analysis:

Among those with a willingness to use transit, shared characteristics are a fixed schedule and high level of travel during rush hours. It may be surmised that those who travel during times of high congestion have the greatest motivation to seek out transportation alternatives. Additionally, the two groups share a fixed schedule, which can be advantageous in terms of providing service to large bodies of users in fewer trips per day because the need for schedule flexibility is lower. An important difference to note is that urban travelers have a lower sensitivity to time. Since uphill travelers are more likely to have urban characteristics, this may indicate that a greater number of stops that will increase overall trip time could be considered, while downhill travelers may share suburban characteristics and have a higher demand for fewer stops – perhaps based on park-and-ride availability – and quicker journeys. It is, however, important to consider that in this study area, there are likely a lower number of overall incidental ‘around-town’ trips than would be typical of urban travelers, so time-sensitivity could be high in both directions.

## Why People Ride Transit



According to the Utah Department of Transportation traffic counts taken at the Salt Lake-Summit County line, there were 39,424 average annual daily trips between Summit and Salt Lake County in the year 2000 and 44,690 in 2005. At this point, all trips are inter-county, though not all inter-county trips are captured here. This means that there are a large number of inter-county trips that are excluded here to avoid blending in travelers who are not crossing the county line. Next, a conservative rate of 5% ridership is applied to the total number of daily trips to derive total rider potential. Finally, the trip purpose shares shown in the chart above are applied to total daily riders. Below are the transit rider counts for each trip category:

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<b>Purpose</b>	<b>Share</b>	<b>2000</b>	<b>2005</b>
Work-related	45%	887	1006
College and School related	24%	473	536
Shopping/Medical/Recreational	15%	25	335
Other	16%	315	358
<b>Total</b>	<b>100%</b>	<b>1,700</b>	<b>2,235</b>

With population and job growth in both counties and the resultant higher traffic volumes, the level of ridership is likely to increase, so that these numbers are apt to experience proportionally greater growth against traffic counts. Understanding trip purposes and what that may mean in real rider numbers can help define service origins, destinations, and schedules in a way that will best meet local needs. These percentages would likely weigh more heavily in the recreational category, given the nature of this study area, and more information about inter-county travelers' origins and destinations would be useful in adjusting these shares.

## **Conclusions:**

Express transit could improve environmental conditions along the I-80 corridor, reduce traffic congestion, and provide a transit alternative for work/school commuters, recreational travelers and tourists, and incidental riders. The Federal Highway Administration reports that 4-6% of commuters use public transit, while the University of Utah reports a 30% transit mode share. This suggests that 5% is conservative, and even at this rate, an inter-county express bus could today generate a minimum of 2,000 transit trips per day. While the traditional commute times will accommodate the needs of a majority of users, there is also a significant market for other times of day. Important to most users is rapidity, convenience, reliability, and access to desired destinations.