

ZION CANYON TRAIL

Feasibility Study



TABLE OF CONTENTS

1.	Executive Summary	1
2.	Introduction.....	3
2.1.	Project Overview	3
2.2.	Steering Committee	3
2.3.	Purpose and Need	4
2.4.	Study Area	4
2.5.	Public Involvement Process.....	4
3.	Existing Conditions.....	6
3.1.	Community Overview.....	6
3.2.	Transportation	10
4.	Alternatives Analysis.....	18
4.1.	Environmental Issues	18
4.2.	Conceptual Alternatives.....	20
4.3.	Alignment Alternatives.....	28
4.4.	Selecting a Preferred Alignment.....	33
5.	Preferred Zion Canyon Trail Alignment.....	36
5.1.	Phase One – SR-9	36
5.2.	Phase Two.....	39
5.3.	Phase Three.....	42
5.4.	Conceptual Trail Design	46
5.5.	Trailheads.....	49
6.	Common Trail Issues	53
6.1.	Property Value Impacts.....	53
6.2.	Crime.....	53
6.3.	Benefits of Trails.....	53
6.4.	Property Owner Liability	54
6.5.	Operations and Maintenance.....	55
6.6.	Footnotes.....	55
7.	Next Steps	56
7.1.	Environmental Clearance.....	56
7.2.	Required Coordination.....	56
7.3.	Funding Strategies	58
8.	Appendix.....	62

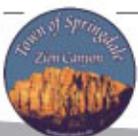


LIST OF FIGURES

Figure 1: Study Area.....	5
Figure 2: Existing Zoning	8
Figure 3: Existing Bicycle and Pedestrian Facilities and Activity Generators.....	12
Figure 4: Transit Stops and Parking Lots	17
Figure 5: Environmental Constraints	19
Figure 6: Rockville Section	21
Figure 7: Orchard Section.....	22
Figure 8: Driftwood Section	23
Figure 9: Town Section.....	24
Figure 10: Zion Section	25
Figure 11: Alignment #1.....	30
Figure 12: Alignment #2.....	31
Figure 13: Alignment #3.....	32
Figure 14: Preferred Trail Alignment, Phase One	38
Figure 15: Preferred Trail Alignment, Phase Two.....	41
Figure 16: Preferred Trail Alignment, Phase Three.....	45
Figure 17: Wayfinding Concepts and Examples	51
Figure 18: Trailheads and Wayfinding	52

LIST OF TABLES

Table 1: 2000 and 2005 Populations.....	6
Table 2: GOPB Population Projections	6
Table 3: Zion National Park Visitation, 2002 - 2005.....	9
Table 4: Journey to Work, Rockville and Springdale.....	10
Table 5: Pa’rus Trail Usage in Zion National Park.....	13
Table 6: Bicycle and Pedestrian Counts	14
Table 7: Traffic Volumes on SR-9.....	15
Table 8: Shuttle Ridership	16
Table 9: Conceptual Cost Estimates for Alignments.....	34
Table 10: Phase One Preliminary Opinion of Probable Costs.....	37
Table 11: Phase Two Preliminary Opinion of Probable Costs	40
Table 12: Phase Three Preliminary Opinion of Probable Costs	44
Table 13: Cost Estimates for Surface Treatment Options	47
Table 14: Summary of Proposed Trailheads.....	50
Table 15: Examples of Operating and Maintenance Activities	55
Table 16: State and Federal Funding Sources.....	61
Table 17: Funding Sources Contact List.....	61



1. Executive Summary

The Zion Canyon Trail Feasibility Study examines trail alternatives and potential usage in Washington County, Utah, near Zion National Park. The study area extends from Rockville, Utah, to Springdale, Utah, and the south entrance of Zion National Park. It includes an area of considerable beauty and numerous constraints. This study is a planning document, combining elements of trail planning, public involvement, funding research, and technical analysis. This study seeks to identify a bicycle and pedestrian facility connecting Rockville to Zion National Park, which would meet an emerging transportation need in the community. Seasonal travel restrictions within Zion National Park limit motor vehicle access, and there is increased need for alternative transportation modes (transit, bicycling, and walking). Such a facility could provide year-round opportunities to meet travel demands during seasonal travel restrictions.

The study began with an assessment of existing conditions, considering traffic volumes, bicycle and pedestrian facilities, transit usage, established land use patterns, and Zion National Park visitation. Zion National Park is a significant force in the local economy, and brought 2.6 million visitors to Springdale in 2006. Many of these visitors enjoy recreational activities in the area such as hiking, biking, rock climbing, and canyoneering; both visitors and residents would benefit from a trail facility connecting destinations in Springdale and Rockville to Zion National Park.

After visiting Springdale and the trail corridor in late 2006 and early 2007, the project team began outlining potential trail alignment alternatives. Conceptual alignment alternatives generally consisted of a roadside alternative and varying riverside alternatives. Several riverside alternatives included existing trail facilities, known trail easements, and existing bridges over the Virgin River. The project team sought feedback from the public in March 2007, to determine the value of the trail concept to both visitors and residents. Responses from the public indicated a high level of support for a trail. The majority of tourists (and residents) felt that a trail that connected various parts of town and provided a facility for walking and bicycling would improve their experience in Springdale, and that they would use such a facility. The project team also held a series of workshops with property owners along the trail alignments in March 2007, to introduce the trail concepts and discuss issues and concerns. Following the March events, the trail alignments were screened based on several factors, including public input, ability to obtain easements, ease of environmental clearance, number of required river crossings, and functionality as transportation amenity or recreation amenity.

Three alignment alternatives advanced for further analysis following the March events and screening process. They include a riverside alignment, a roadside alignment, and a riverside/roadside combined alignment. Each alignment identified potential access points; property owners affected; relationship to floodways and floodplains of the Virgin River; bridges required; and possible locations of cut and fill. In addition, the project team developed conceptual cost estimates for each alignment alternative. The three alignments were shown to the public at an open house in May 2007, again seeking feedback on the alignments and trail concepts. Following the May open house, the three alignment alternatives were screened based on cost, estimated potential usage, functionality, and flagship qualities. This resulted in a preferred trail alignment, divided into three phases:

- Phase One: From Rockville to River Park, along SR-9
- Phase Two: From River Park to downtown Springdale, along the Virgin River



- Phase Three: From downtown Springdale to Zion National Park, either along the Virgin River or through Watchman Campground

Each phase of the Zion Canyon Trail is described in detail, including property negotiations necessary, potential construction cost estimates, and required environmental clearance. These are summarized in the following table.

Table ES1: Preferred Trail Alignment Summary by Phase			
	Phase One	Phase Two	Phase Three
Easements Required	None; contained within UDOT right-of-way	<ul style="list-style-type: none"> • Bulah Hosey • Todd Compagno • Zion Park Inn • Bumbleberry Inn 	<ul style="list-style-type: none"> • Kent and Robin Palmer • David Ferber • Dale Dockstader (Option 3A) • Bud Lee (Option 3A) • Wayne Hamilton (Option 3A) • Brent Heaton (Option 3A) • Zion National Park (Option 3B)
Estimated Cost	\$1,610,000	\$880,000	\$1,630,000, plus \$140,000 for Option 3A or \$720,000 for Option 3B
Proposed Trailheads	<ul style="list-style-type: none"> • Anasazi Way • Majestic View Lodge • River Park 	<ul style="list-style-type: none"> • River Park • Zion Park Inn • Bumbleberry Inn 	<ul style="list-style-type: none"> • Bumbleberry Inn • Watchman Drive • River Station (Option 3A)
Bridges required	None	One	Three, plus additional bridge in Option 3B

While the intent of the Zion Canyon Trail Feasibility Study is to identify and clarify a preferred trail alignment, it is important to remember that this is a study, not a construction document. The preferred trail alignment in 2007 may not be the preferred trail alignment in 2012, but this study should act as a guiding document while moving through the next steps. Springdale will need to work with the Utah Department of Transportation and the National Park Service to obtain environmental clearance for the trail, and to continue to secure funding for the trail through its construction. Coordination with several state and federal agencies will also be necessary, as will on-going negotiations with property owners to secure access and easements for the Zion Canyon Trail.

Appendices to this study include documentation of the public involvement process, letters of support from the community for the Zion Canyon Trail, and a table of comments and questions received from the community regarding the feasibility study.



2. Introduction

2.1. Project Overview

The Zion Canyon Trail Feasibility Study examines trail alternatives and potential usage in Washington County, Utah, near Zion National Park. The Town of Springdale, Utah, has been pursuing the possibility of a bicycle and pedestrian trail for many years, and received funding in 2006 from the Utah Department of Transportation and the Utah State Parks Board to study the trail. The study area extends from Rockville, Utah, to Zion National Park – an incredibly scenic and unique piece of red rock country. These lands are fragile, with many environmentally sensitive areas: precipitous cliffs, steep hillsides, wetlands, wildlife habitat, and rivers prone to flash floods.

The Zion Canyon Trail Feasibility Study is a planning document, combining elements of trail planning, public involvement, funding research, and technical analysis. This study seeks to identify a preferred trail alignment between the Town of Rockville and Zion National Park. At the west end, the alignments evaluated connect to Rockville's existing trail network, and on the east end they terminate at the Visitor Center for Zion National Park. This feasibility study considers various factors in the viability of the alignments analyzed. These include geographic constraints such as unstable soils, flood zones, and steep slopes; intangible issues such as the relative ease of acquiring access, regulatory concerns, and level of community support; and functionality concerns such as directness, connectivity, and design features.



2.2. Steering Committee

The consultant team, led by Fehr & Peers with support from Carter & Burgess, worked in tandem with a Steering Committee. Members of the Steering Committee included:

- Tom Dansie, Springdale
- Rick Wixom, Springdale
- Catherine Cutler, Utah Department of Transportation
- Max Gregoric, Volunteer Trails Coordinator
- Kezia Nielsen, Zion National Park
- Jock Whitworth, Zion National Park
- Lynne Scott, Bureau of Land Management

The Steering Committee provided direction and local knowledge, as well as guidance for the goals of the study. The Steering Committee met several times throughout the course of the study; committee members local to Springdale also worked to achieve property owner buy-in while the consultant team developed conceptual trail alignments and analyzed potential alternatives.



2.3. Purpose and Need

A bicycle and pedestrian facility connecting Rockville to Zion National Park would meet an emerging transportation need in the community. Seasonal travel restrictions within Zion National Park limit motor vehicle access, and there is increased need for alternative transportation modes (transit, bicycling, and walking). Specifically, there is an ongoing need to provide safe travel alternatives in Zion National Park, Springdale, and Rockville. Potential users of the trail include commuters, schoolchildren, and recreationalists. Given the mild climate and topography, it is plausible that such a facility could provide year round opportunities to meet travel demands during seasonal travel restrictions. A trail linking together various destinations in town (lodging, restaurants, and Zion National Park, for example) would be valuable to both residents and visitors to the area.

The preferred alignment of the Zion Canyon Trail should provide an opportunity for both local residents and visitors to travel by walking or bicycling. Chapter 2, Existing Conditions, estimates the need for such a facility, in terms of potential usage. In addition, the intent of the Zion Canyon Trail is to eventually connect to the Pa'rus Trail in Zion National Park, providing an extended outdoor experience for visitors to the area. The Pa'rus Trail is approximately 3.5 miles long, which extends the trail experience for Zion Canyon Trail users.

2.4. Study Area

The study area for the Zion Canyon Trail Feasibility Study extends from Rockville to Zion National Park. Trail alternatives focused on either SR-9 or the Virgin River; alternatives on the north or west side of SR-9 were not considered. Springdale historically supported a riverside trail. For this reason, the alternatives centered on potential Virgin River trail alignments. See Figure 1 for an illustration of the study area.

2.5. Public Involvement Process

Public involvement is a critical component of any planning process. The Zion Canyon Trail Feasibility Study incorporated a variety of public involvement strategies, including:

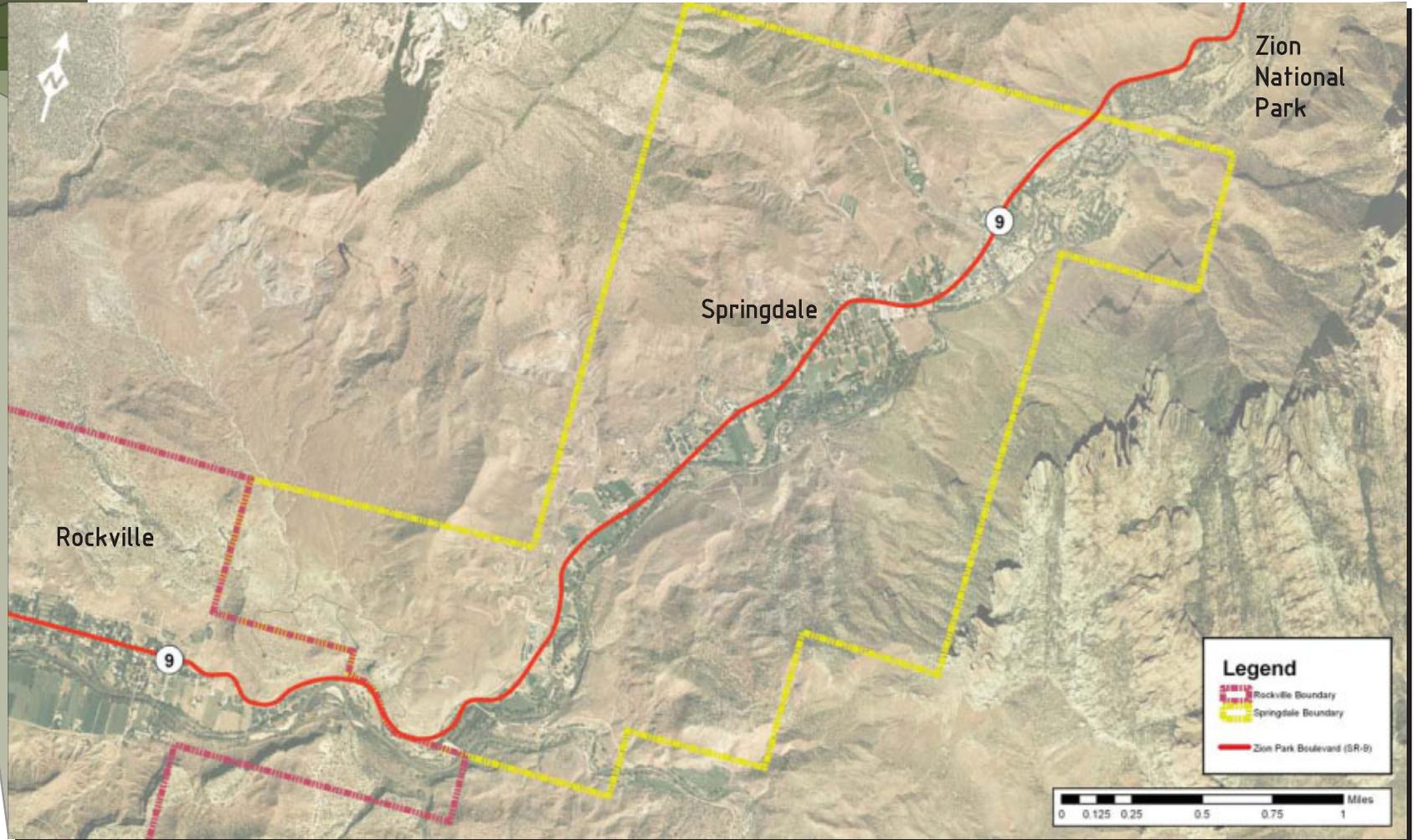
- Regular meetings with a Steering Committee representing local agencies
- One-on-one meetings with property owners
- Workshops for property owner invitees
- Project website, accessible to the public
- Open houses
- Town Council presentations
- Displays oriented toward Zion National Park visitors

Public comments are discussed throughout this report, and summarized in the Appendix.



ZION CANYON TRAIL

Feasibility Study



Study Area
Figure 1

3. Existing Conditions

3.1. Community Overview

This section provides general information on the local and regional populations in the study area, a summary of existing land uses, and historic and current Zion National Park visitation.

Existing Local and Regional Populations

The United States Census Bureau provides 2005 population estimates for Utah municipalities. Table 1 illustrates populations for towns and cities near the study area for 2000 and 2005. The table shows that local jurisdictions in Washington County experienced considerable growth.

TABLE 1: 2000 AND 2005 POPULATIONS			
Municipality	2000 Population	2005 Population	Percent Change
Springdale	457	538	17.7%
Rockville	247	258	4.4%
Virgin	394	493	25.1%
La Verkin	3,392	4,105	21%
Hurricane	8,250	10,989	33.2%
Toquerville	910	1,118	22.9%
St. George	49,663	64,201	29.3%
Washington County	91,104	127,127	39.5%
<i>Source: United States Census Bureau, 2005 Population Estimates</i>			

The Governor’s Office of Planning and Budget (GOPB) also compiles population data for the State of Utah. According to the GOPB, Washington County was the fastest-growing county in the state in 2006. The GOPB also estimates future population growth for local areas in Utah. Table 2 provides GOPB’s population projections for the municipalities shown in Table 1.

TABLE 2: GOPB POPULATION PROJECTIONS				
Municipality	2020	2030	2040	2050
Springdale	932	1,097	1,181	1,518
Rockville	504	708	945	1,124
Virgin	1,058	1,486	1,984	2,551
La Verkin	8,741	12,281	16,391	21,014
Hurricane	22,268	31,216	41,614	53,445
Toquerville	2,343	3,256	4,346	5,587
St. George	132,497	185,809	247,703	317,818
Washington County	251,896	353,922	472,355	607,334
<i>Source: GOPB, 2005 Baseline City Population Projections</i>				



Existing Land Use and Zoning

The corridor embodies a range of land uses, from agricultural to commercial. See Figure 2 for an illustration of existing zoning districts. In addition, Springdale is the gateway to Zion National Park, and home some of Utah's most spectacular scenery. Springdale's economy is based in large part on serving the tourists that visit the park. The highest concentration of activity is in downtown Springdale, between Big Springs Road and Canyon View Road. This area encompasses a dense mix of land uses, including many hotels, restaurants, shops, and galleries. Springdale Elementary sits in the middle of this area. Springdale's core is zoned as Central Commercial; the intent of the Central Commercial zone is to establish a retail and service district meeting the needs of residents and tourists. The character of the Central Commercial zone should include clean, well-lit streets with ample pedestrian spaces. Other commercial uses are spread throughout the study area, located on SR-9 between Rockville and Zion National Park.



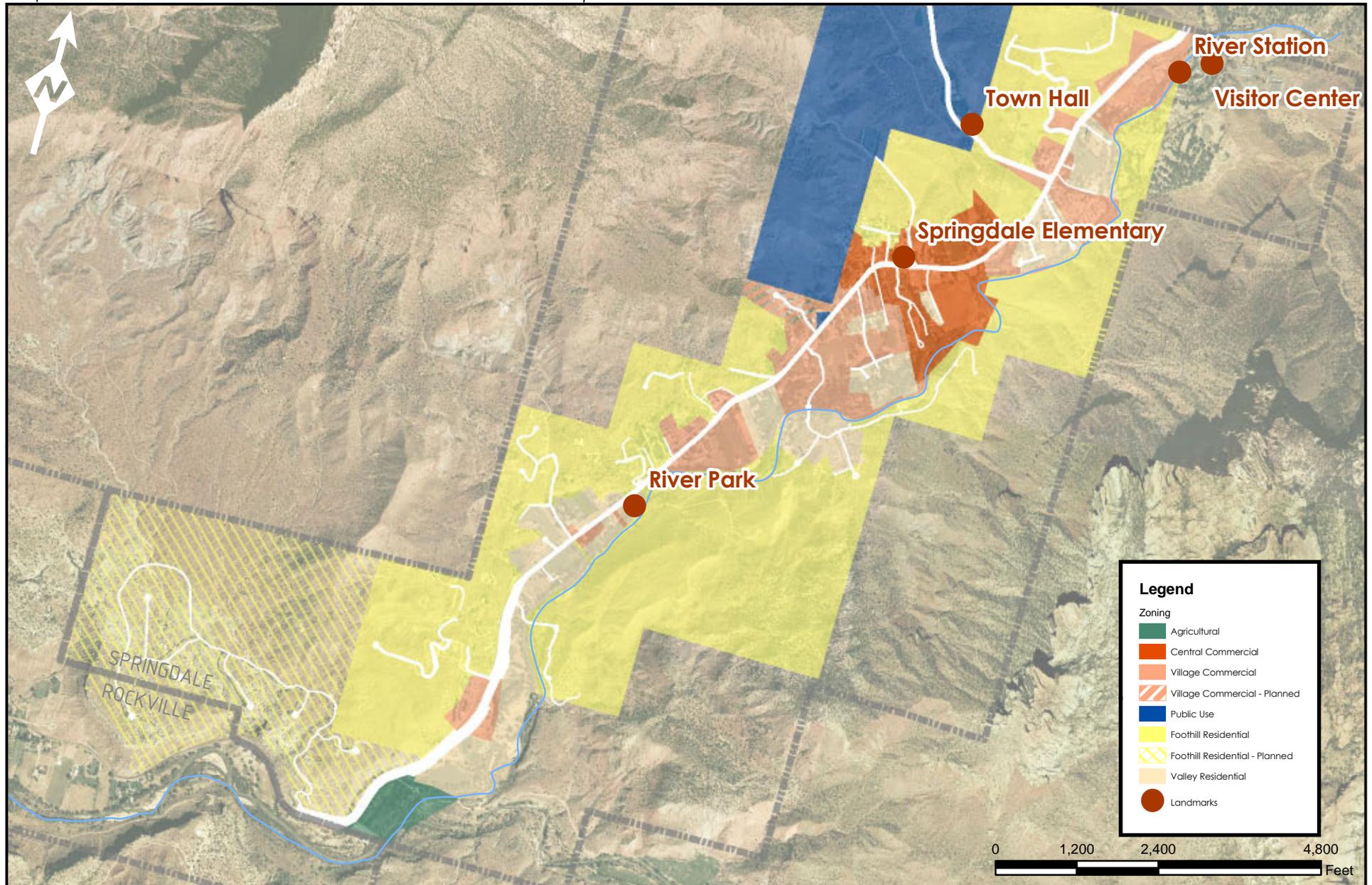
Along the valley floor, interspersed between commercial pockets, Springdale and Rockville have residential neighborhoods. Springdale's Valley Residential zone applies to residential areas in the valley, and allows a minimum lot size of $\frac{3}{4}$ -acre. The zone's intent is to preserve rural settings and allow for residents to keep livestock on their properties, in a manner consistent with single family development. The area also has a significant amount of high-end residential development in its foothills. Springdale's Foothill Residential zone allows "low density, low profile, single family dwellings" while providing protection for the region's fragile environment. The minimum lot size in the Foothill Residential zone is two acres; some areas of the zone have minimum lot sizes of five acres.

Off the SR-9 corridor on Lion Boulevard, Springdale has a cluster of community buildings. The Town's offices are located on Lion Boulevard, adjacent to the Canyon Community Center. The Community Center contains meeting spaces, and houses the Town Library. Outside, children use the playgrounds surrounding the center. Beyond the Town facilities is the O.C. Tanner Amphitheater, used for special events.



ZION CANYON TRAIL

Feasibility Study



Existing Zoning

Figure 2

Existing and Historic Park Visitation

Zion National Park contributes significantly to the local economies of Springdale and Rockville. In 2005, the park had 2.6 million visitors, most of whom accessed the park through its South Entrance in Springdale. Table 3 demonstrates historic visitation patterns for Zion National Park.

TABLE 3: ZION NATIONAL PARK VISITATION, 2002 - 2005				
	2002	2003	2004	2005
January	57,726	73,093	69,773	65,426
February	68,255	74,461	83,650	71,940
March	160,378	145,144	192,779	197,390
April	281,025	246,710	299,706	232,166
May	303,023	306,416	297,164	285,407
June	331,155	310,434	328,299	341,649
July	349,401	296,856	339,005	349,605
August	324,780	314,020	340,759	342,686
September	314,731	282,770	324,956	300,265
October	231,849	231,851	229,192	229,430
November	114,289	121,660	115,425	119,883
December	78,123	77,274	78,533	72,717
Annual Total	2,614,735	2,480,689	2,699,241	2,608,564
<i>Source: Zion National Park</i>				

Springdale’s economy is based on the tourists visiting the park. According to the Springdale’s 2005 General Plan Update, the Town has:

- 19 lodging facilities (660 rooms overall, not including RV parks and campgrounds)
- 16 restaurants
- 103 total businesses.

The General Plan indicates that at least half of Springdale’s General Fund comes from tourist dollars. Specifically, 42.5% of the General Fund comes from the Resort Sales Tax, and 9% comes from the Transient Room Tax. Only tourists contribute to the Transient Room Tax, a 1% tax assessed on all nightly lodging rates. Both tourists and residents pay into the Resort Sales Tax (1.5%) as well as the General Sales Tax (4.5%), but tourists pay more into these funds due to their volumes.

Regional Context

Springdale and Rockville are located in an area of Utah famous for its scenery. As shown in the previous table, park visitation brings millions of visitors to the area every year. As such, recreation is an important part of the region. Other towns in southern Utah have instituted their



own trail systems. Of notable comparison to Springdale are St. George City, in the southwestern corner of the state, and Moab, located in the southeastern part of the state near Arches National Park.

Recently, the municipalities in Washington County, along with the County and many government agencies, began planning the Three Rivers Trail. The Three Rivers Trail will eventually connect several community trails into a network over 80 miles long. It parallels the Virgin River, the Santa Clara River, and Ash Creek. The Zion Canyon Trail represents the easternmost end of the Three Rivers Trail. Each municipality will be responsible for planning the portions of the Three Rivers Trail within its boundaries, and work with each other and the County to ensure continuity in the trail alignments.

3.2. Transportation

Springdale has a multi-modal transportation network that includes a state road (SR-9), local roads (Springdale-owned streets), private subdivision roads, public and private trails, sidewalks, and both publicly- and privately-operated transit systems. This section describes the various modes of transportation in the study area.

Bicycles and Pedestrians

Walking and cycling are viable means of transportation in Springdale, but less so in Rockville. Table 4 provides Census Bureau data on how most people get to work in Springdale and Rockville.

TABLE 4: JOURNEY TO WORK, ROCKVILLE AND SPRINGDALE		
Mode of Transportation	Rockville	Springdale
Drove alone	72%	52%
Carpooled	13%	7%
Bicycled	0%	5%
Walked	5%	25%
Worked at home	11%	11%
<i>Source: 2000 United States Census Bureau</i>		

In downtown Springdale, the town has worked to create a pedestrian-friendly environment, and tourists flock the streets in the peak season. Pedestrians become less concentrated outside the center of town, as destinations get farther apart and facilities become sparser. Cycling is a popular way for Springdale workers to commute into town from Rockville and other residential areas. Tourists also like to ride from the town into Zion National Park, but this tends to carry its own set of issues. Cycling in town can be dangerous: high traffic volumes in the peak season combine with inadequate shoulder widths and frequent driveways to create an unsafe condition for cyclists. In addition, cycling tourists who ride SR-9 into the park frequently do not realize their impact on traffic. During the peak season, vehicle traffic into Zion National Park is restricted to transit vehicles, which are not allowed to pass cyclists in the park unless the cyclists are stopped with one foot on the ground. Signage inside the park and at the Visitor Center explains this policy, but sometimes the message is missed. This leads to cyclists creating traffic jams, as transit shuttles wait for clearance to pass.



Bicycle and Pedestrian Facilities

Existing bicycle and pedestrian facilities are sporadic in the study area. Facilities in place include sidewalks, crosswalks, paved trails, soft-surface trails, and bridges. Sidewalks are more common within Springdale and Rockville than between the two towns. In both towns, they are situated primarily along SR-9, and are not generally found on side streets. Springdale has several pedestrian focal points in town, where transit shelters combine with bulbouts, crosswalks, and special pavement treatments to create a pleasant pedestrian atmosphere. Soft-surface trails accessible to walkers and cyclists can be found near the Zion Park Inn; at the Springdale River Park; extending east- and west-ward across the Virgin River from the River Park; and at the east end of Rockville.

Southern Utah is known nationally as a popular destination for road cyclists and mountain bikers. For instance, the following rides and races are located between Springdale and LaVerkin:

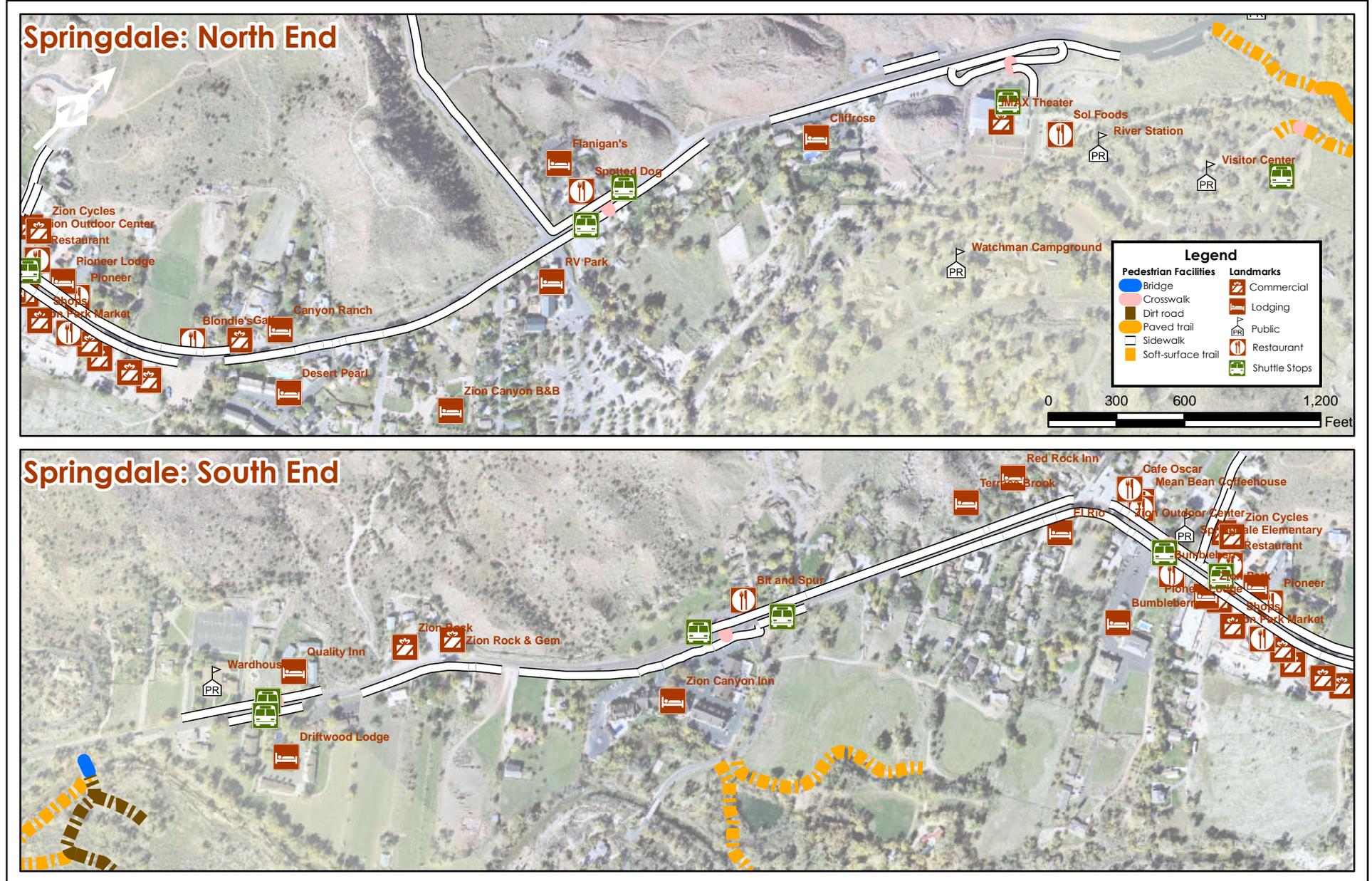
- Gooseberry Mesa, advanced singletrack slickrock trails that can be accessed from Bridge Road in Rockville, and can be altered to include the Gooseberry Mesa White Trail or the Windmill Loop (difficulty levels can vary);
- J.E.M., a 13-mile trail accessed near Virgin that occasionally parallels the Virgin River;
- Hurricane Rim Trail, 7.5 miles of singletrack south of SR-9 near Hurricane;
- Gould's Rim Trail, 9 miles of singletrack between Hurricane Rim and J.E.M.;
- Zion Country Early Spring Century, a late-February road ride along SR-9 into Springdale, with 50-mile, 65-mile, and 100-mile categories;
- Cactus Hugger Cycling Festival, with an annual April ride from Virgin's Town Park to Zion National Park;
- Bike Ride Across Scenic Utah (BRASU), a fully-supported 50-rider tour of the state's scenic areas, held annually in May;
- Southern Utah National Parks Tour, a 5-day September tour

Despite the area's popularity for both mountain and road bikers, there are minimal bicycle facilities on SR-9 or other local roads. See Figure 3 for an illustration of existing bicycle and pedestrian facilities.



ZION CANYON TRAIL

Feasibility Study



Existing Bicycle and Pedestrian Facilities

Figure 3

Bicycle and Pedestrian Activity Generators

As shown in Figure 3, Springdale and Rockville have many centers of pedestrian and bicycle activity. These include:

- Zion National Park’s River Station entrance, where bicycles and pedestrians cross from Springdale into the park;
- The Pa’rus Trail within Zion National Park, beginning near the Visitor Center and extending into the park for several miles;
- Downtown Springdale, with many businesses geared toward tourist services (lodging, boutiques, restaurants, etc);
- Springdale Elementary, in downtown Springdale, home to roughly 20-30 students from Rockville and Springdale;
- Transit stops throughout town, situated near lodging locations and major tourist destinations;
- The Zion Park Inn’s trailhead, popular for tourists and residents using its trail network;
- The River Park, allowing public access to Springdale’s trails and pedestrian bridges, and also providing parking and restroom facilities;
- Central Rockville, where some Springdale workers choose to reside and commute from; and
- Bridge Road in Rockville, the turnoff for both the historic Town of Grafton and the Gooseberry Mesa trails.



Trail alignments linking these destinations together can be a valuable asset for both Springdale and Rockville, providing both residents and tourists with another travel option to reach popular locations.

Bicycle and Pedestrian Usage

Bicycle and pedestrian counts were not available along SR-9. However, similar counts were available inside Zion National Park. The Park installed trail counters at two locations along the Pa’rus Trail:

- Counter #1, near the Canyon Junction shuttle stop
- Counter #2, near the Museum/Headquarters building

While these counts do not differentiate between bicycles and pedestrians, they do provide information on trail usage within the park during its peak season in 2006. This data is shown in Table 5.

TABLE 5: PA'RUS TRAIL USAGE IN ZION NATIONAL PARK		
	Counter #1	Counter #2
Average Weekday Usage	133	136
Average Weekend Usage	198	161
2006 Peak Month Usage	July (9,033)	October (6,908)
<i>Source: Zion National Park</i>		

Park representatives suspect that Counter #2 illustrates trail usage more accurately. This is because Counter #1 reflects many people who disembark from the shuttle at the Canyon Junction stop, walk a short distance down the Pa’rus Trail, then return to the shuttle stop.



In addition, Springdale conducted bicycle and pedestrian counts on both the Pa’rus Trail and SR-9 into Zion National Park. The counts were collected during a two-hour span on a weekday morning in late June 2007, to determine whether bicycles and pedestrians had a preference between using the trail or the road. The results are shown in Table 6.

TABLE 6: BICYCLE AND PEDESTRIAN COUNTS		
	SR-9	Pa’rus Trail
Cyclists	1	32
Pedestrians	4	22
<i>Source: Springdale</i>		

As the table indicates, non-motorized transportation users had a strong preference for an off-road trail compared to SR-9: 97% of cyclists and 85% of pedestrians preferred the trail.

Bicycle and Pedestrian Policy

The 2005 Springdale General Plan addresses non-motorized transportation modes such as bicycling and walking. According to the General Plan,

“Non-motorized transportation is especially important in Springdale. The Town desires to emphasize walking as a special characteristic of visitors’ experience in Springdale. More open areas and amenities would encourage this, as would an extension of the sidewalk throughout town. Similarly, enhancing the bicycling experience (e.g., with bicycle lanes) is sought by residents.”

The General Plan outlines several policy objectives pertaining to bicycles and pedestrians. They include:

- Provide bicycle racks in the central business district
- Provide pedestrian amenities such as plazas, benches, and adequate shade
- Install and maintain sidewalks
- Construct bicycle lanes on SR-9
- Create a riverside trail
- Promote walking and bicycling activities
- Ensure compliance with ADA guidelines for trails and sidewalks

The Zion Canyon Trail can incorporate many of these objectives; indeed, constructing the Zion Canyon Trail can be considered as an implementation measure for major goals and objectives of the Springdale General Plan.

Traffic

State Route (SR-9) is the primary travel corridor in Springdale and Rockville. This route exclusively connects the study area to other surrounding communities and regional travel facilities, such as Interstate 15 and US-89. UDOT collects annual average daily traffic (AADT) for SR-9 in locations throughout the corridor, demonstrating how many vehicles use the road on a daily basis. Table 7 provides AADT information for SR-9 from 2002 through 2006.



TABLE 7: TRAFFIC VOLUMES ON SR-9					
Location	Year				
	2002	2003	2004	2005	2006
Virgin	3,740	3,685	3,835	2,135	2,190
Rockville	3,785	3,735	3,880	2,180	2,215
Springdale	4,180	1,790	1,865	1,920	1,970
Mt. Carmel Junction	1,970	855	890	920	945
Source: UDOT, <i>Traffic on Utah Highways</i>					

Transit

Transit service is available as a seasonal shuttle service provided by Zion National Park and Springdale. Initiated in May 2000, the shuttle service helps reduce vehicle congestion within the park and in town. The shuttles operate from April to October, during the park’s peak visitation period. During this period private motor vehicles are prohibited within the park; visitors are able to access the park via the shuttle, which is free of charge.

Operations

The shuttle service operates using two routes. The Canyon Loop route is inside Zion National Park boundaries, providing transportation between the Zion Canyon Visitor Center and the terminus of Zion Canyon Road. The Town Loop route operates outside the park between the Visitor Center and the southern end of Springdale. The Visitor Center serves as the transfer point between the two shuttle routes.

The shuttles operate between the hours of 6 a.m. and 11 p.m. daily. Headways vary according to time of day and seasonal demand, but schedules are posted at each stop. During the peak demand periods, shuttle headways can be as short as 6 minutes. The eight shuttle stops along the Canyon Loop offer access to trailheads and other park facilities. The Town Loop has six designated stops, located near services such as restaurants and hotels. Shuttles will pick up passengers at three additional flag stops in Springdale.

Zion National Park visitors can find parking within Springdale or at the Zion National Park Visitor Center. Most parking lots in Springdale are privately owned and supply parking to business patrons. For example, visitors staying at a hotel are allowed to leave their cars in the hotel parking lots and access Zion National Park via the shuttle systems. Otherwise, visitors can use designated park-and-rides throughout town, or park on the shoulder of SR-9. A map of shuttle stops and park-and-ride facilities is shown in Figure 4.



Ridership

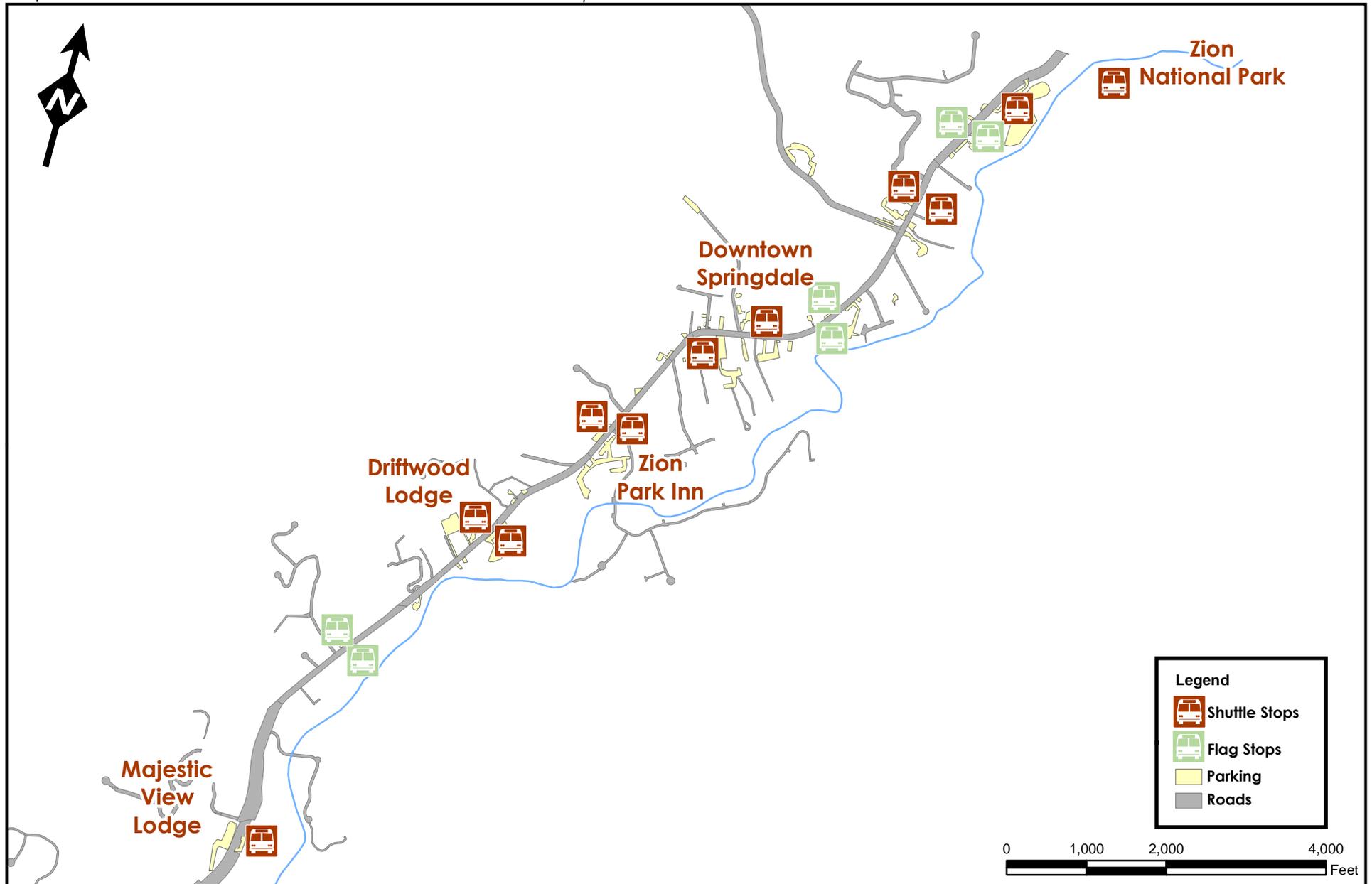
Ridership on the Canyon Loop is higher than on the Town Loop, since visitors are required to use the Canyon Loop route to access the park during the peak season. Table 8 shows ridership on both routes since the shuttle system's inception in 2000.

TABLE 8: SHUTTLE RIDERSHIP			
Year	Town Loop Riders	Canyon Loop Riders	Total Riders
2000	176,245	1,373,587	1,552,113
2001	208,295	1,913,494	2,128,733
2002	241,515	2,107,044	2,356,786
2003	248,761	2,159,146	2,417,477
2004	318,890	2,301,240	2,628,443
2005	341,649	2,326,827	2,677,185
2006	376,932	2,426,455	2,811,263
<i>Source: Springdale</i>			



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Transit Stops and Parking Lots

Figure 4

4. Alternatives Analysis

4.1. Environmental Issues

Wetlands

Wetlands may be encountered along the Virgin River. Wetland areas of concern were originally identified by observing the traditional indicating plant species, and the presence of standing water and water seepage from the surrounding areas. However, a stream alteration specialist from the Utah Division of Water Rights walked the majority of the project site, and felt that trail alignments could be built in a manner compatible with wetland areas. If wetlands are encountered, several options can mitigate any potential impacts. One option would be to realign the trail around the wetland. Another option would be to suspend the trail above wetland areas using a wooden boardwalk, which prevents any potential filling of the surrounding area.

Floodplains

The study area contains an unrestrained waterway (the Virgin River), with the possibility of flood events. Washington County provided the provisional Federal Emergency Management Agency (FEMA) floodplain map, indicating the floodway and 100-year floodplain boundaries. In locations where trail alignments fall within the floodplain, extra precautions can minimize the impact of a flood event on the trail, such as using bridges to cross the Virgin River. Due to the width of the floodplain, it would not be economical for bridges to span the full floodplain width. However, bridges could span the floodway of the Virgin River while having the bridge abutments within the floodplain area. This would cause the bridge deck to be above the water surface during a 100-year flood event, and allow debris to pass below the bridge.



Landslides

Several potential landslide areas have been identified through visual observation. These areas are on slopes underlain by moisture-sensitive clay, known in the region as “blue clay”. Cutting a trail or roadway through the toe or lower portion of a slope may activate an existing mapped landslide area or start a new landslide. A significant amount of investigation, evaluation and possible stabilization may be required if trail alignments extend through these areas.

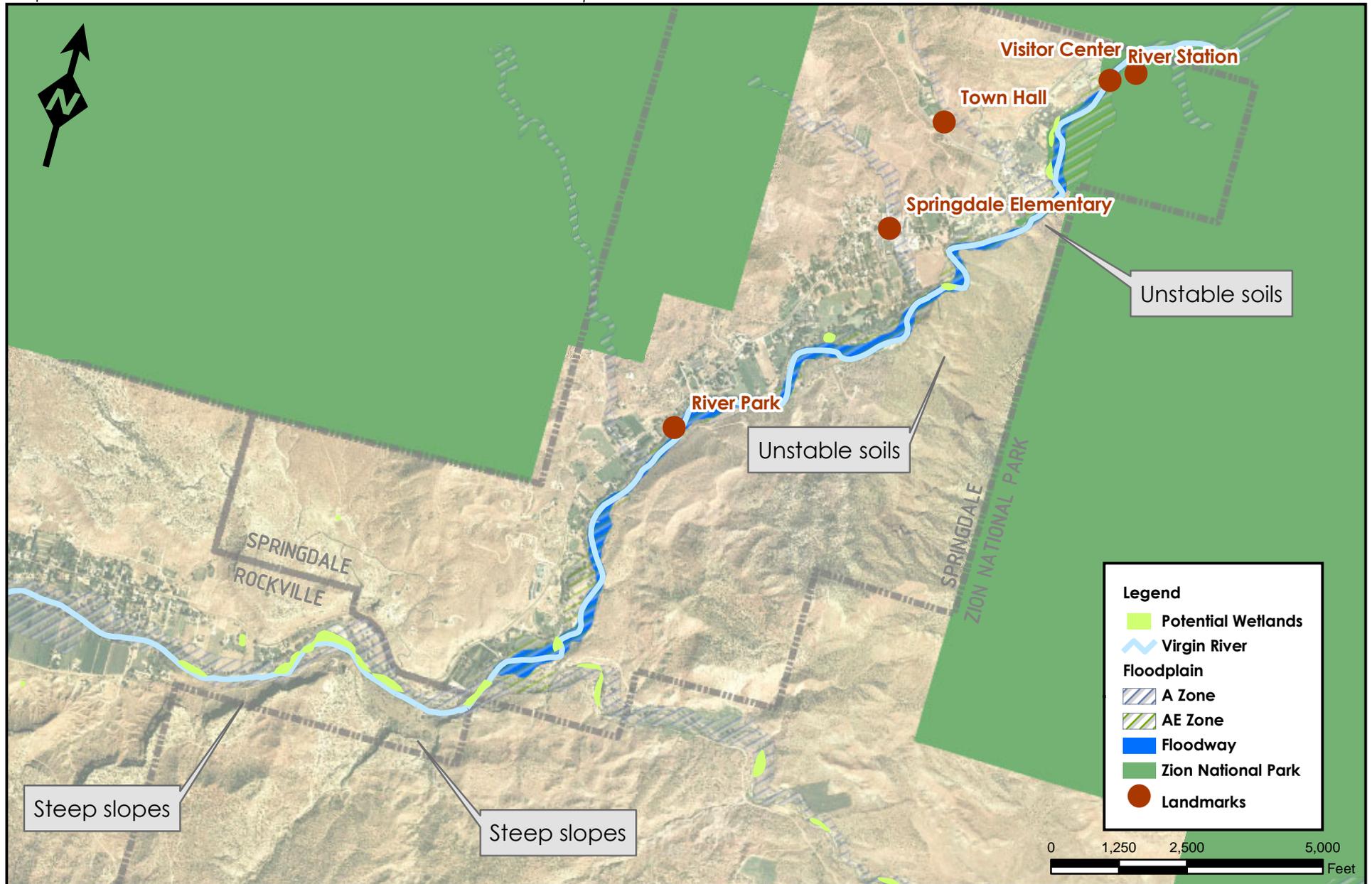
Excessive Cut/Fill Slopes

Due to the geological constraints along the Virgin River and SR-9, areas of potential excessive cut or fill slopes have been identified using an existing contour map of the Springdale area along with visual observations. Several mitigation measures can be adopted to minimize the impacts in these areas. One measure would include the installation of retaining walls to support the surrounding slopes. Another mitigation measure would include realigning the trail to minimize the cut/fill impacts.



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Environmental Constraints

Figure 5

4.2. Conceptual Alternatives

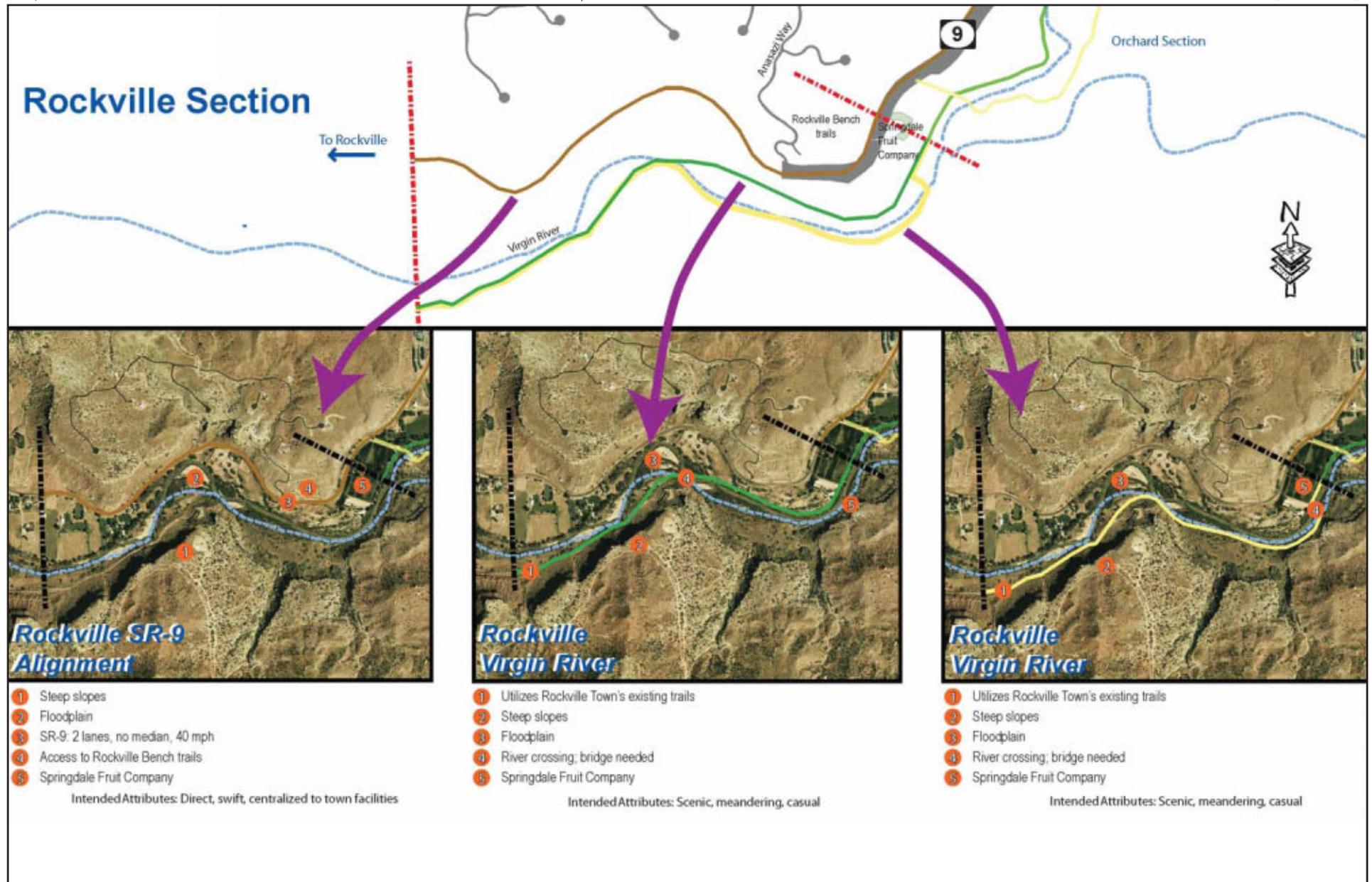
After visiting Springdale and the trail corridor in late 2006 and early 2007, the project team began outlining potential trail alignment alternatives. Town officials expressed a desire for a riverside trail, one that would take advantage of the beautiful natural scenery and also connect to the Pa'rus Trail in Zion National Park. However, a roadside trail could connect many of the existing facilities in town, and might simplify the process of acquiring land for the trail.



In early 2007, the project team divided the study area into sections to be analyzed in further detail. Sections were identified using easily-identified landmarks, and were referred to as Rockville, Orchard, Driftwood, Town, and Zion. Each section had several trail alignments developed for it, generally consisting of a roadside alternative and varying riverside alternatives. Several riverside alternatives included existing trail facilities, known trail easements, and existing bridges over the Virgin River. The Steering Committee participated in defining alignments for consideration, which resulted in a total of 17 sections of potential alignments for consideration. All potential alignments were shown at a March 19th, 2007, public open house. The following figures show the conceptual trail alignments shown to the public in March 2007.

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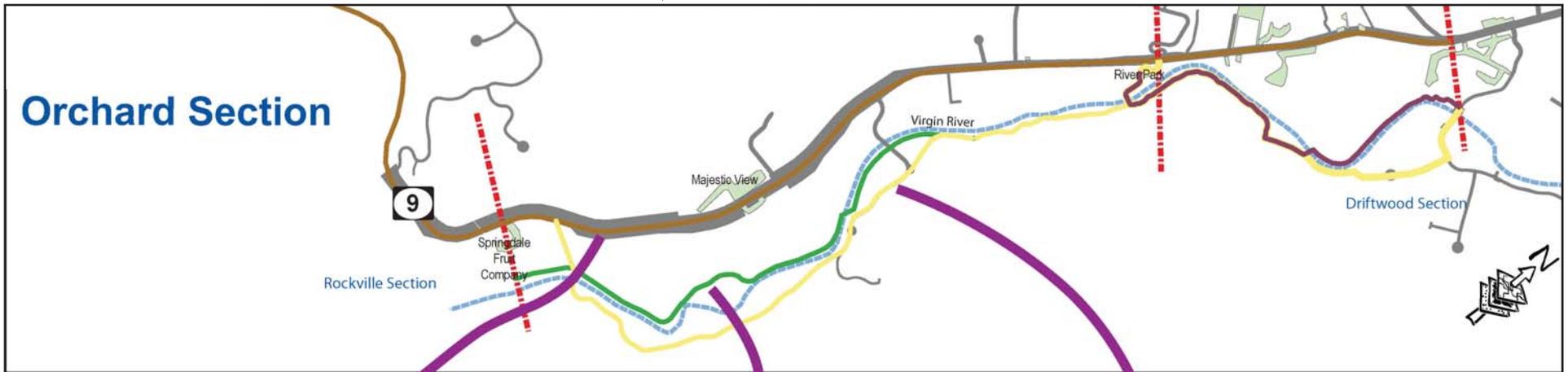
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Conceptual Alignments for Rockville Section

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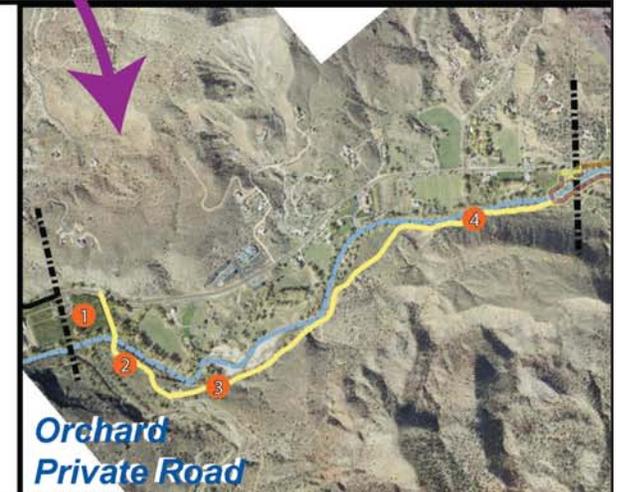
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- ① SR-9: 2 lanes, no median, 40 mph speed limit
 - ② Pedestrian activity center: hotel, transit stop
- Intended Attributes: Direct, swift, centralized to town facilities



- ① Springdale Fruit Company
 - ② Alignment is close to floodplain
 - ③ River crossing; bridge needed
 - ④ Alignment utilizes existing trail network
- Intended Attributes: Scenic, meandering, casual



- ① Springdale Fruit Company
 - ② Alignment utilizes private road and existing bridge
 - ③ Area of steep slopes
 - ④ Alignment utilizes existing trail network
- Intended Attributes: Scenic, meandering, casual

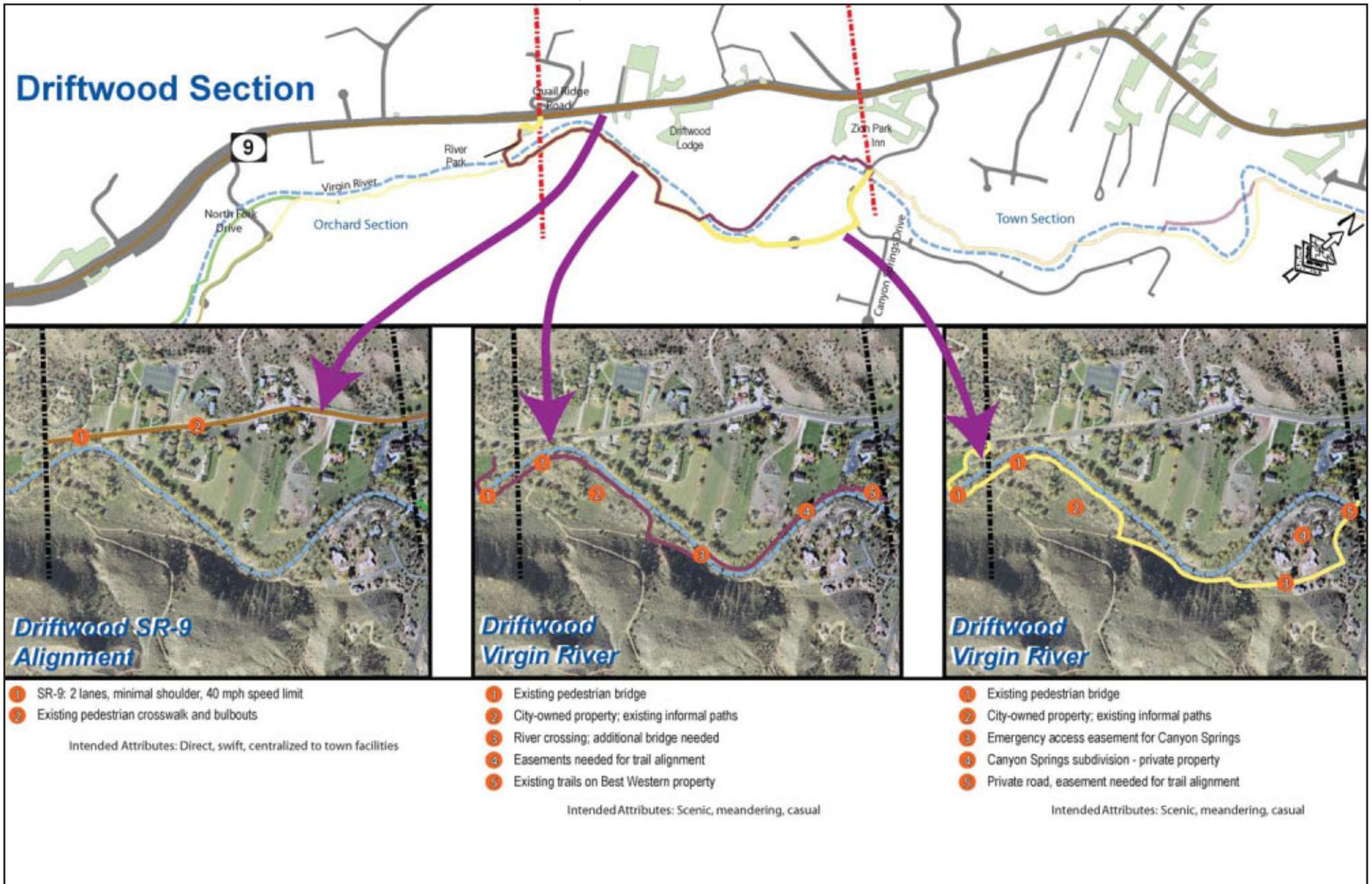


Conceptual Alignments for Orchard Section

Figure 7

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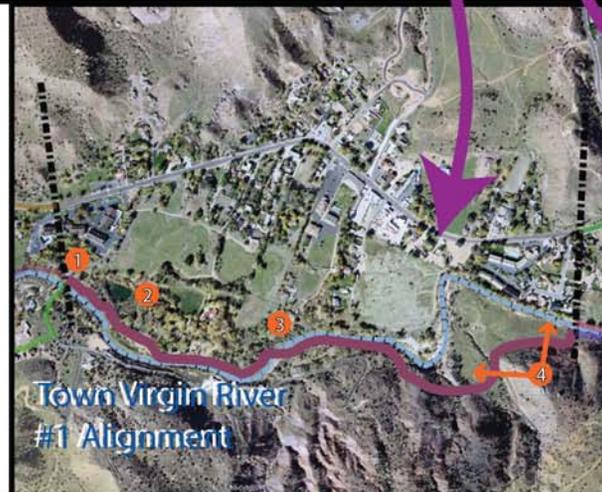
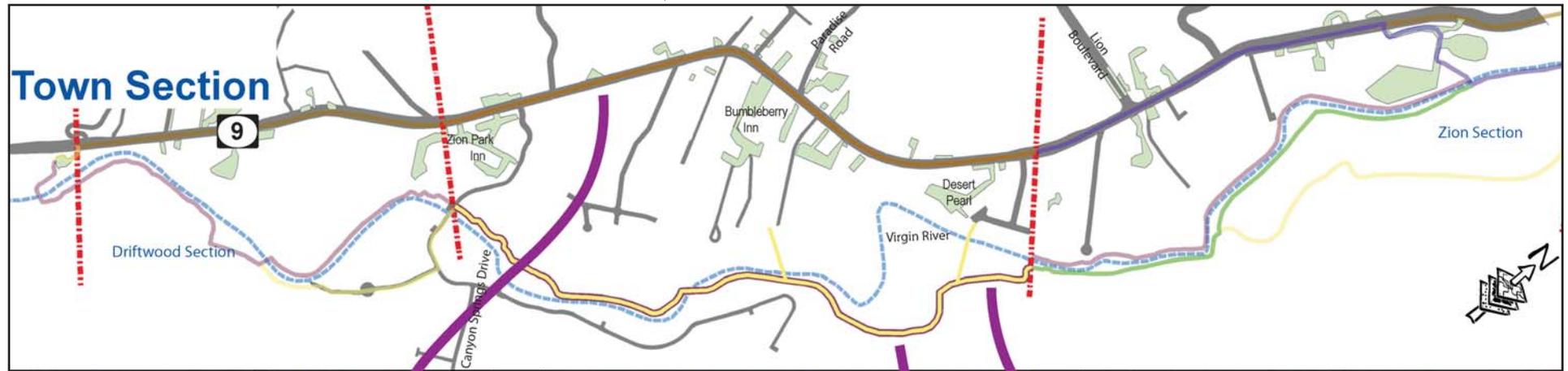
Feasibility Study



Conceptual Alignments for Driftwood Section

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- 1 Pedestrian activity center - transit shelters, designated shuttle parking, crosswalk, bulbouts, and hotel/restaurant
- 2 SR-9: 2 lanes, on-street parking
- 3 Downtown Springdale - pedestrian friendly, but minimal room for cyclists on SR-9
- 4 Springdale Elementary
- 5 On-street parking conflicts with trail users

- 1 Existing trail behind Best Western
- 2 Wetlands (sensitive habitat)
- 3 River crossing; additional bridge needed (1 total)
- 4 Unstable soils

Intended Attributes: Scenic, meandering, casual

- 1 Existing trail behind Zion Park Inn
- 2 Wetlands (sensitive habitat)
- 3 River crossing; additional bridge needed (3 total)
- 4 Unstable soils

Intended Attributes: Scenic, meandering, casual



Conceptual Alignments for Town Section

Figure 9

Public Feedback on Trail Concepts

The purpose of the March 2007 open house was to obtain public feedback on trail concepts and community bicycle and pedestrian needs. In particular, the events were designed to determine:

- Whether a bicycle and pedestrian facility would be valued by tourists and residents
- Whether the community preferred a roadside trail or a riverside trail
- Whether the community preferred a paved trail or a soft-surface trail
- Which trail amenities the community considered important

Responses from the public indicated a high level of support for a trail. The majority of tourists (and residents) felt that a trail that connected various parts of town and provided a facility for walking and bicycling would improve their experience in Springdale, and that they would use such a facility. At the March open house, most participants (86%) preferred a riverside trail over a roadside trail; 59% felt it should be a soft-surface trail, whereas 36% felt it should be a hard-surface trail. Amenities identified as important included pedestrian furniture (such as benches and trash receptacles), trailhead parking, wheelchair accessibility, and trail signage.

The project team also held a series of workshops with property owners along the trail alignments in March 2007, to introduce the trail concepts and discuss issues and concerns. Property owners attending the workshops included Brent Heaton, Wayne Hamilton, Stan Smith, Pat and Brant Warner, Dennis and Pearl Johnson, Barbara Farnsworth, Dean Cook, and Todd Compagno. Some of the property owners had concerns, such as:

- Effect on property of constructing a trail in a floodplain
- Protecting riparian areas along the river
- Receiving incentives in exchange for accommodating the trail
- Property owner liability
- Effect on crime and security
- Effect on privacy

Some property owners were supportive of the general idea of a trail, but not on their property. Others felt that a roadside trail would be a better idea than a riverside trail. Springdale representatives discussed the possibility of providing a lot coverage exemption for property owners affected by the trail, but property owners generally felt other incentives were necessary as well. Several supported the trail as a concept and also supported putting it on their property.

Overall, the March 2007 events provided valuable insights on community sentiment toward the trail project and priorities for potential trail users. The project team also learned important information on property owner concerns, additional geographic and jurisdictional constraints, and possible “fatal flaws” in some conceptual trail alignments. A complete summary of all March 2007 public involvement events can be found in the Appendix of this document.

Refining Conceptual Alignments

Following the March 2007 public involvement events, the project team began refining conceptual alignments to create three corridor-wide alignment alternatives from the 17 pieces of alignment previously identified. The project team screened conceptual alignments using a set of agreed-upon criteria developed by the Steering Committee. The screening criteria are described in the following paragraphs.



Obtainable Easements or Acquisitions

- How many easements must be obtained for each conceptual alignment?
- Do the property owners along the alignment support the trail on their property?
- Are most properties affected by the trail private or public?
- Is there adequate public right-of-way or usable space available (i.e., on SR-9)?

Connectivity to Transit and Activity Centers

- How well does each conceptual alignment connect to transit stops?
- How well does each conceptual alignment connect to centers of pedestrian activity (for instance, the River Station Entrance to Zion National Park, downtown Springdale, or the existing trail system at the City Park)

Required River Crossings

- How many times must each conceptual alignment cross the Virgin River?
- Can the conceptual alignment make use of existing bicycle and pedestrian bridges?

Jurisdictional Coordination

- How many agencies must be involved in approving each conceptual alignment? This includes:
 - Springdale
 - Rockville
 - UDOT
 - Bureau of Land Management
 - Zion National Park and the National Park Service
 - Utah Division of Water Rights
 - U.S. Army Corps of Engineers

Aesthetics

- How visually pleasing is each conceptual alignment?
- Does the conceptual alignment place the user in a location with limited views?

Public Support

- At the March 2007 open house, did the public express a preference for a roadside trail or a riverside trail?
- What feedback did the public provide on the conceptual alignments shown at the March 2007 open house?

Ease of Maintenance

- How might cleaning or trail maintenance crews access the trail?
- Are there roads nearby for accessing the trail, if necessary?

Trailheads and Parking

- Are there places to add trailheads for each conceptual alignment?
- Are there places to provide parking, or negotiate shared parking agreements for trail users in existing parking lots?



Further Investigation of Environmental Issues

- How many and to what level will environmental issues need investigation in the NEPA process? This includes wetlands, wildlife habitat, historical resources, and other environmental components protected by federal and local government regulations.

Functionality as Transportation Amenity

- How well does each conceptual alignment serve long-distance commuters?
- Is it a direct route between locations?
- Will it allow for high cyclist speeds and a low incidence of conflicts between trail users?

Functionality as Visitor Experience Amenity

- Does each conceptual alignment act as an amenity for a visitor to the area?
- Does it connect to lodging and other visitor-related businesses?
- Does it provide an opportunity for a visitor to experience Springdale and Rockville's unique environment?

These criteria helped clarify the conceptual alignments to identify the three trail alternatives for further study, and eliminate inappropriate alternatives. Each conceptual alignment received a ranking for each of the criteria listed previously. Once this process was complete for all the categories described, the scores were tallied for each conceptual alternative. The best-scoring alternatives for each corridor section (Rockville, Orchard, Driftwood, Town, and Zion) were continued for further analysis.

4.3. Alignment Alternatives

Three alignment alternatives advanced for further analysis following the March 2007 public involvement events and ensuing screening process. They were:

- Alignment #1, a riverside alternative
- Alignment #2, a roadside alternative
- Alignment #3, a riverside/roadside alternative

Each alignment was refined in greater detail, including identification of potential access points; property owners affected; relationship to floodways and floodplains of the Virgin River; bridges required; and possible locations of cut and fill. In addition, the project team developed conceptual cost estimates for each alignment alternative.

Alignment #1

Alignment #1 follows the Virgin River for its entirety. At its south end, the alignment ties into existing Rockville trails near River Road, and parallels the east side of the river. It crosses the river twice near the Springdale Fruit Company, and again parallels the east side of the river until another crossing north of the Driftwood Inn. It utilizes existing trail networks owned by Springdale and the Zion Park Inn, as well as a potential trail easement on the Compagno property. The trail parallels the west side of the river until the Desert Pearl property, where it again crosses over to the east side to avoid a series of constraints. In this section, several bridges are proposed to provide access to the trail from near downtown



Springdale. The trail crosses back to the west side of the river near the Zion Canyon Campground and RV Resort, at which point it parallels the river until the River Station entrance to Zion National Park. Overall, Alignment #1 includes six new river crossings, and can be accessed from one of twelve connection points. It takes advantage of existing bridges near the Springdale Fruit Company, the Watchman subdivision access road, River Park, and at the River Station entrance to Zion National Park. Issues of concern for Alignment #1 include the impact proposed bridges may have on adjacent property in a flood event; the possibility of wetlands, which may require study and mitigation of impacts; and obtaining access from property owners. Alignment #1 provides more scenic views of the Virgin River, but is a less direct option for commuters between Rockville and Springdale. Alignment #1 can be seen in Figure 11.

Alignment #2

Alignment #2 parallels the east side of SR-9, from the end of the existing sidewalk system in Rockville to the SR-9 access to the River Station entrance to Zion National Park. Near the



southern end of the study area, sufficient right-of-way exists on SR-9 to include the alignment on UDOT property. Retaining walls may be necessary near the southern end of the alignment due to required cut-and-fill. As the alignment approaches Springdale the right-of-way becomes narrower, and accommodating the trail in downtown Springdale may require relocating utilities and buildings. However, no additional crossings of the Virgin River will be necessary. Alignment #2 is the most direct route for commuters, but creates additional conflict points for bicycles and pedestrians

in town where they must cross the numerous driveways and accesses along SR-9. Alignment #2 is shown in Figure 12.

Alignment #3

Alignment #3 combines elements of both Alignments #1 and #2. It parallels the east side of SR-9 from Rockville's sidewalk system to the River Park in Springdale, where it becomes a riverside trail. Alignment #3 crosses from the Zion Canyon Campground and RV Park into Zion National Park's Watchman Campground, rather than using the River Station entrance into the park. Issues associated with Alignment #3 include potential retaining walls to accommodate cut-and-fill, five new bridge locations, possible wetlands, and additional coordination with the National Park Service to gain access through Watchman Campground. Alignment #3 provides a direct, off-road connection between Rockville and Springdale for commuters, but also takes advantage of the river's natural beauty in the Springdale area. Alignment #3 is shown in Figure 13.

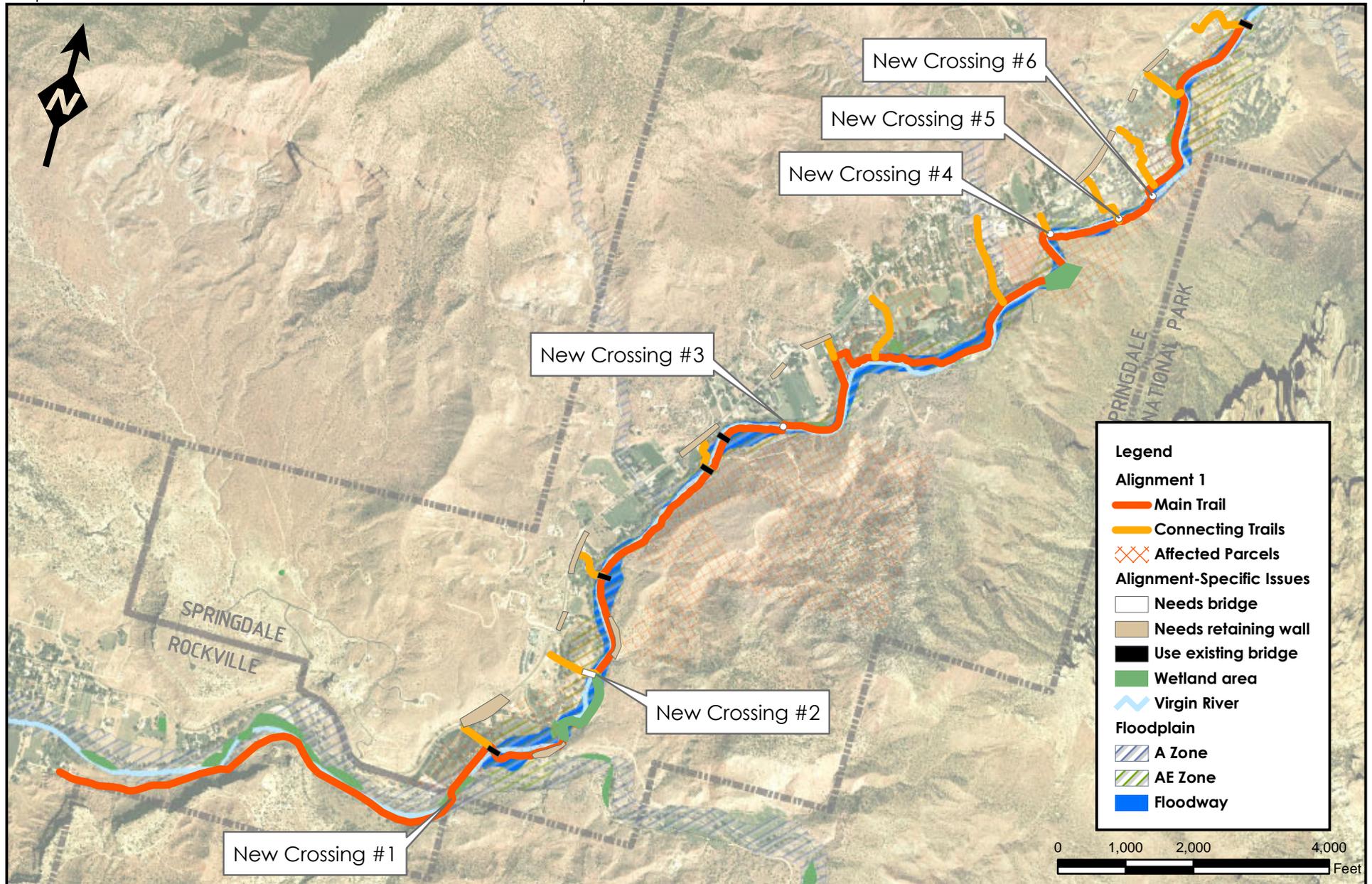
Public Feedback on Alignment Alternatives

On May 31st, 2007, Fehr & Peers hosted a second open house, attended by approximately 45 people. At the open house, attendees could review maps of each trail alignment alternative; indicate their preferred alternative; see case studies of trail projects in other southern Utah communities; and provide written comments on the project. Fehr & Peers provided maps of the three alignment alternatives, and asked participants to place stickers on a chart indicating their preferences. Participants tended to feel strongly that the trail should either be entirely riverside or entirely roadside; 54% preferred a riverside trail, whereas 38% preferred a roadside trail. Due to the strong preference for one versus the other, few participants indicated a preference for Alternative #3, which essentially represents a compromise between the other two alternatives.



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Legend

- Alignment 1**
- Main Trail
- Connecting Trails
- ⊠ Affected Parcels
- Alignment-Specific Issues**
- Needs bridge
- Needs retaining wall
- ▬ Use existing bridge
- Wetland area
- Virgin River
- Floodplain**
- ▨ A Zone
- ▨ AE Zone
- Floodway

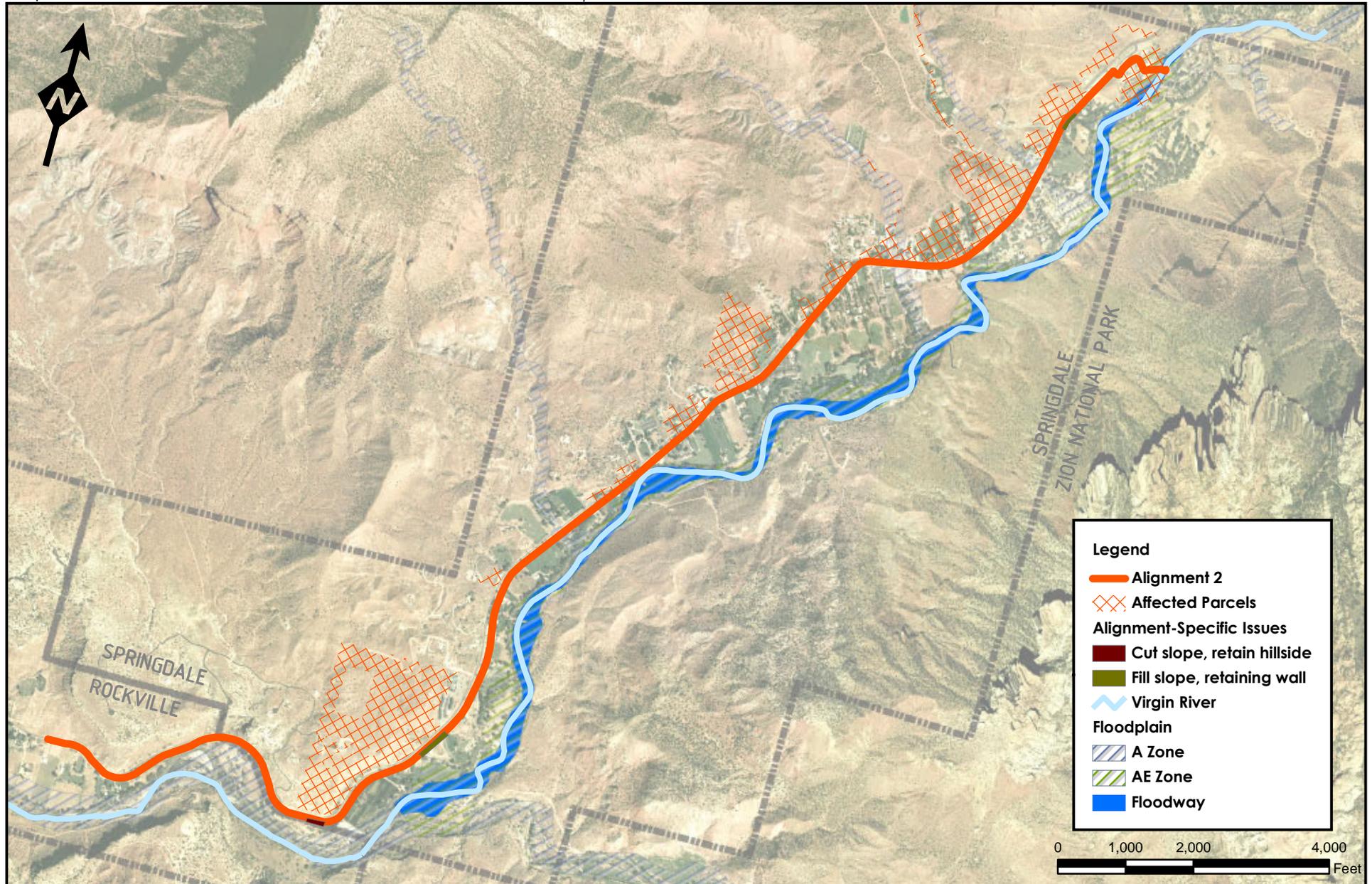


Alignment Alternative # 1

Figure 11

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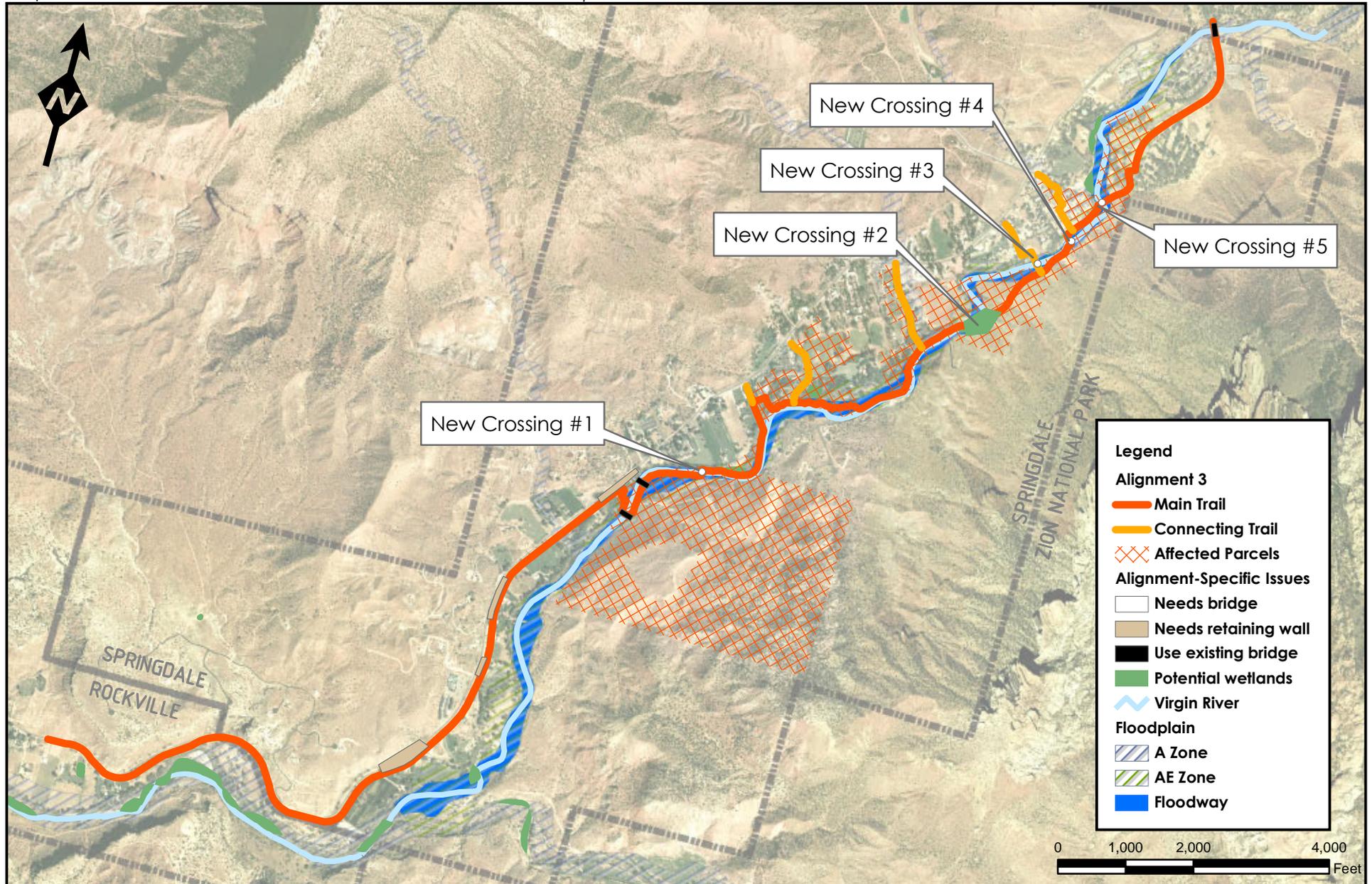


Alignment Alternative #2

Figure 12

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Alignment Alternative #3

Figure 13

4.4. **Selecting a Preferred Alignment**

Upon receiving more public feedback and guidance on the Zion Canyon Trail alignments, the project team evaluated the alignment alternatives to determine which alignment might be the most feasible while meeting established criteria for the trail. Analysis of the alignments was based on potential trail usage, estimated construction costs, functionality, interchangeability, and flagship qualities. These concepts are described in the following paragraphs.

Potential Trail Usage

Potential trail usage was estimated based on the number of potential users located within walking or bicycling distance of the trail alignments. All residential units and lodging facilities in Springdale and Rockville within 1/8-mile of each trail alignment were identified using geographic information systems (GIS). The average household size for Rockville and Springdale (2.19 and 2.14 persons per household, respectively) was multiplied by the number of residential units to estimate maximum potential trail users within 1/8-mile of each alignment. For trail users in lodging units, the same methodology was applied using an occupancy rate of two persons per unit. This is conservative, since many visitors likely come to Springdale with their families in groups of more than two people. This methodology resulted in the following counts of potential trail users within a 1/8-mile radius of the trail alignments:

- 1,170 maximum potential trail users within 1/8-mile of Alignment 1
- 1,190 maximum potential trail users within 1/8-mile of Alignment 2
- 1,130 maximum potential trail users within 1/8-mile of Alignment 3

The number of potential trail users for each alignment varies only minimally, because the valley in which Rockville and Springdale sit is so narrow: virtually every developed parcel in the area is within a 1/8-mile radius of the alignments. However, other considerations help differentiate usage between the alignments. For instance, as shown earlier in this document, trail user counts in Zion National Park indicate a strong preference for an off-road trail over an on-road facility. This would make Alignments 1 and 3 more popular than Alignment 2 with potential users.

Cost

As described in the previous section, the project team developed conceptual cost estimates for the three alignments. Each alignment possesses a unique set of complications and associated costs. Alignment 1, the riverside option, must navigate through six bridges (two which are optional and allow for improved access between the town and the trail), cross potential wetland areas (possibly using a boardwalk network), and could cost approximately \$3.5 million. Alignment 2, the roadside option, can be situated within UDOT's right-of-way (particularly near Rockville) in some areas. Near downtown Springdale, existing utilities may require relocation and it may become necessary to acquire additional property to accommodate a trail downtown. Estimated conceptual costs for Alignment 2 are \$3 million. Alignment 3 proposes five bridges (one of which is optional) and may affect wetland areas, with an estimated cost of \$3.4 million. None of the conceptual cost estimates include "soft costs" such as engineering, survey, or environmental clearance; they also do not include the costs of obtaining right-of-way.



TABLE 9: CONCEPTUAL COST ESTIMATES FOR ALIGNMENTS

Alignment	Cost-Related Issues	Estimated Cost
Alignment #1	Bridges	\$3.6 million
Alignment #2	Retaining walls, utility relocation	\$3 million
Alignment #3	Retaining walls, bridges	\$3.4 million

Source: Carter & Burgess, May 2007
 Note: Conceptual cost estimates do not include “soft costs” such as survey or engineering services, nor do they include the cost of property acquisition.

Functionality

An examination of the comments received in the public process, both in informal polls and in written comments at the open houses, reveals a need for an off-road trail. Locals and tourists alike indicated a preference for a trail facility that makes them feel safe, away from traffic and the associated noise and exhaust fumes. At the same time, the trail needs to connect to origins and destinations within Springdale and Rockville. The functionality factor accounts for how well each alignment meets these needs. Alignment 1 best meets those needs, followed by Alignment 3.

Interchangeability

The interchangeability of the trail alternatives refers to the flexibility in combining portions of alignment alternatives. For instance, some sections of Alignment 1 can be substituted for the same extent of Alignment 3. The preferred alignment should have maximum flexibility for pursuing later trail phases, capitalizing on existing property owners’ support for the trail but without ruling out future options.

Flagship Qualities

The “flagship” portion of an alignment refers to a section that can be built relatively easily, and generate momentum for community support of the remaining sections. For instance, Alignments 1 and 3 both contain a large portion where a trail can either be built immediately or can be incorporated into the development agreements of upcoming projects. Only Alignment 3 has almost universal support among the property owners it impacts, and has the ability to move forward faster than the other alignment options. The along-road portion of Alignment 3 is already under discussion between Springdale and UDOT, and Springdale has allotted funds in its annual budget to begin constructing a trail connecting Rockville to Springdale. In comparison, Alignments 1 and 2 each have large sections where property owners do not support the trail (Alignment 1, at either end of the trail alignment) or where impacts to adjacent property may be considerable (Alignment 2, in downtown Springdale).

Selecting a Preferred Alignment

Each alignment was evaluated using the criteria described above, also taking into consideration input received from the public throughout the process. The Steering Committee, representing a wide range of agency and local interests, agreed that Alignment 3 was the preferred alignment for



the Zion Canyon Trail. The project team then developed more detailed information on the preferred trail alignment, described in the next section of this study.



5. Preferred Zion Canyon Trail Alignment

This section describes the preferred alignment for the Zion Canyon Trail, providing information such as costs, issues, and adjacent property owners by phase. While the intent of the Zion Canyon Trail Feasibility Study is to identify and clarify a preferred trail alignment, it is important to remember that this is a study, not a construction document. Situations change, property changes hands, and flexibility is needed to ensure that the final trail alignment is one that suits the community and its vision. The preferred trail alignment in 2007 may not be the preferred trail alignment in 2012, but this study provides the background research and documentation to begin moving further down the path to construction.

5.1. Phase One – SR-9

Phase One extends from Rockville, at the point where the sidewalk ends in the eastern part of town, to the River Park in Springdale. Phase One is located adjacent to the south side of the SR-9 roadway, with a 10-foot paved trail separated from the roadway by a 6” curb. The cross section was decided in discussions between Springdale and UDOT Region 4. Two segments of Phase One may require retaining walls. One may be needed just south of the Majestic View Lodge (fill slope and retaining wall), and another just south of Springdale Fruit Company (cut slope and retaining wall).

In August 2007, Phase One was identified by the Town Council and the Steering Committee as the most critical link of the Zion Canyon Trail. These representatives felt it was important for schoolchildren in Rockville to be able to use this section of the trail to travel to Springdale, whether for school or for other events. Springdale has \$90,000 allotted in its current budget to begin construction for Phase One. Phase One does not require additional right-of-way acquisition, as it is entirely within UDOT’s right-of-way. It is also an important link for cyclists heading to Springdale on SR-9 who wish to avoid traffic; sections of SR-9 between Rockville and Springdale were identified by cyclists as uncomfortable and dangerous due to vehicle speeds and blind curves.

Phase One has three locations for potential trailheads:

- Anasazi Way. Trail parking is already available off Anasazi Way.
- Majestic View Lodge. The Lodge is already a major pedestrian activity center as one of the larger lodging facilities in town, and it is also adjacent to the southernmost transit stop for the Zion Canyon Shuttle. Springdale may be able to pursue a shared parking agreement with Majestic View Lodge for trail users, and should be prepared to offer an incentive for the lodge to participate.
- River Park. The park is also a major activity center with established trails and pedestrian bridges. In addition, River Park is already equipped with parking and restroom facilities. It also provides an excellent gateway to the trail system and an opportunity for interpretive signage or kiosks, explaining the Virgin River ecosystem, local geology or natural history, or other topics of interest.

An illustration of Phase One is in Figure 14. Preliminary cost estimates are shown in Table 10. Discussion of the amenities needed at each trailhead is provided later in this document, and trailhead locations can be found in Figure 18.



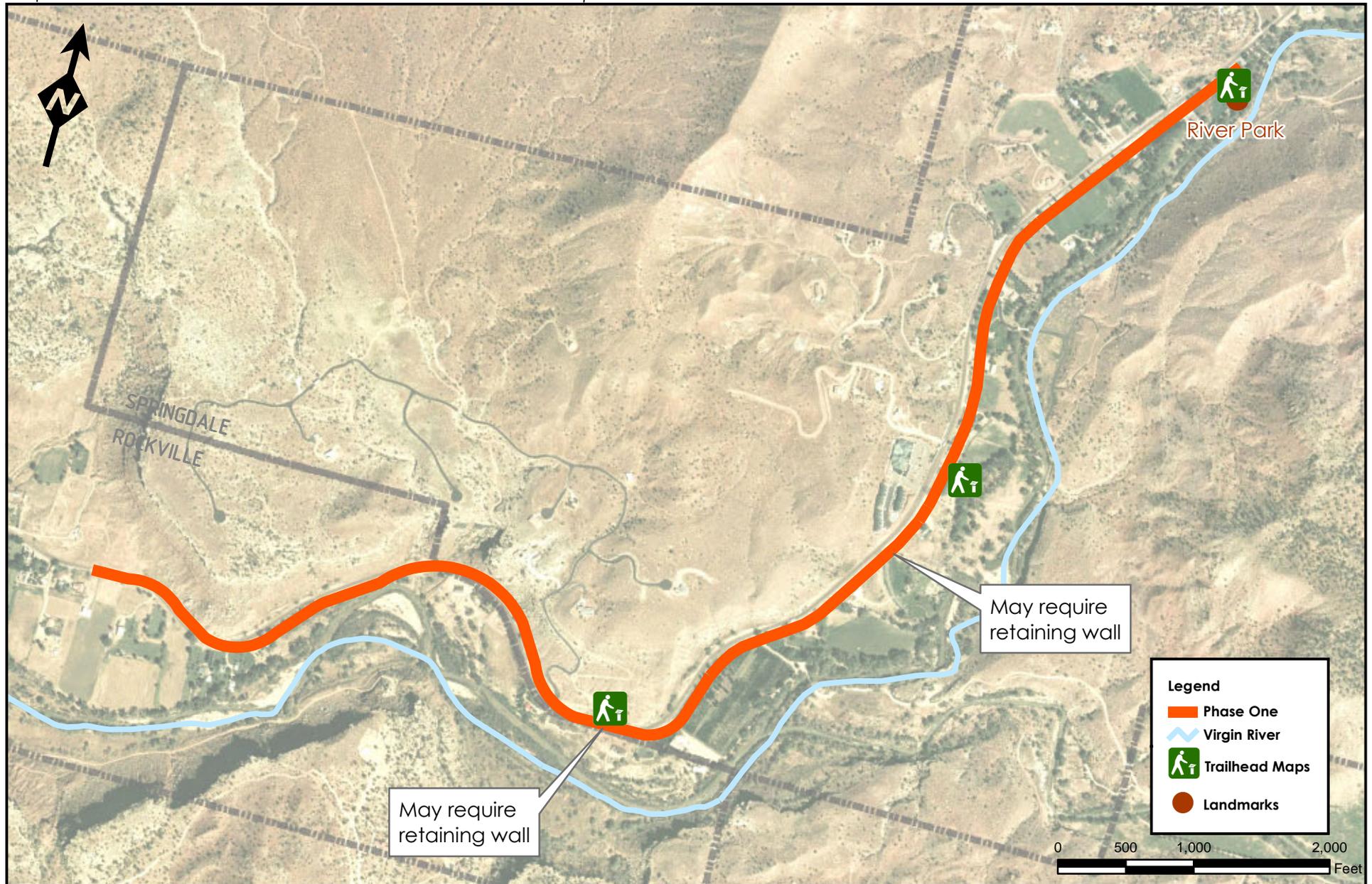
TABLE 10: PHASE ONE PRELIMINARY OPINION OF PROBABLE COSTS

Description	Units	Approx. Quantity	Unit Price	Total
Roadway Excavation	Cubic Yard	3,540	\$5.50	\$19,470
Untreated Base Course, ¾-inch max	Ton	5,161	\$23.00	\$118,712
Hot Mix Asphalt	Ton	1,434	\$80.00	\$114,698
Concrete Curb Type B1	Feet	11,948	\$22.00	\$262,849
Pedestrian Access Ramp	Each	8	\$1,200.00	\$9,600
Signage and Striping	Lump Sum	1	\$30,000	\$30,000
Utility Relocation	Lump Sum	1	\$300,000	\$300,000
Front Yard Restoration	Lump Sum	1	\$100,000	\$100,000
Retaining Walls	Lump Sum	1	\$300,000	\$300,000
Removals	Lump Sum	1	\$75,000	\$75,000
			Subtotal	\$1,330,330
			Mobilization	\$133,033
			Engineering	\$146,336
			Total	\$1,610,000
<i>Source: Carter & Burgess, August 2007</i>				
<i>Note: Estimated costs are in 2007 dollars and do not reflect the cost of inflation (7% per year) or the cost of meeting federal requirements for funding.</i>				



ZION CANYON TRAIL

Feasibility Study



Potential Trail Alignment, Phase One

Figure 14

5.2. Phase Two

Phase Two of the preferred alignment begins at the River Park and extends to the Bumbleberry Inn property in the heart of downtown Springdale. Phase Two utilizes existing trail alignments on property owned by Springdale and by the Zion Park Inn, and requires one bridge near the Canyon Springs subdivision.

Phase Two avoids the Virgin River floodway as much as possible, but crosses into the floodway near the Ferguson property in order to take advantage of the willingness of the Zion Park Inn to locate the trail on their property. Phase Two will require easements from several property owners:

- Bulah Hosey. Springdale will need to negotiate with the Hosey family to obtain an easement.
- Todd Compagno. Mr. Compagno has already submitted subdivision plans for his property, which include a trail easement between the subdivided parcels.
- The Zion Park Inn. The manager of the Zion Park Inn has indicated that the owners support a Zion Canyon Trail alignment on their property.
- The Bumbleberry Inn. Proposed trail alignments across the Bumbleberry Inn property will require negotiations with the property owner.

Phase Two should have trailheads in the following locations:

- River Park. The River Park trailhead will likely have been developed in Phase One of the Zion Canyon Trail. As mentioned previously, parking and restroom facilities are already available at River Park.
- The Zion Park Inn. The Zion Park Inn already has trails developed on its property, and the Zion Canyon Trail alignment can follow these trails where appropriate. Springdale may wish to pursue a shared parking agreement with the Zion Park Inn, and be willing to offer an incentive to the property owner.
- The Bumbleberry Inn property. Although development plans for the property are unknown at this time, it may be an appropriate location for trailhead amenities such as restrooms and parking. The Bumbleberry Inn property is an excellent location for a trailhead, given its proximity to the center of Springdale. Many tourist destinations such as lodging, restaurants, galleries, and shopping are nearby. A trailhead and connection to town at this location provide trail users with the opportunity to travel safely to and from destinations along a facility other than SR-9. Any future trail-related plans for the Bumbleberry Inn property will require negotiation with the owner.

Table 11 illustrates the preliminary estimated costs for Phase Two. These costs do not include property acquisition for the trail right-of-way. Figure 15 provides a map of Phase Two, and trailhead locations and types can be seen in Figure 18.



TABLE 11: PHASE TWO PRELIMINARY OPINION OF PROBABLE COSTS

Description	Units	Approx. Quantity	Unit Price	Total
Roadway Excavation	Cubic Yard	2,958	\$5.50	\$16,267
Untreated Base Course, ¾-inch max	Ton	4,312	\$23.00	\$99,181
Hot Mix Asphalt	Ton	1,027	\$80.00	\$82,137
Pedestrian Access Ramp	Each	6	\$1,200.00	\$7,200
Signing and Striping	Lump Sum	1	\$30,000	\$30,000
Silt Fence	Feet	8,556	\$3.79	\$32,427
Trail Bridge (long span)	Lump Sum	1	\$462,000	\$462,000
Subtotal				\$729,212
Mobilization				\$72,921
Engineering				\$80,213
Total				\$882,348
<p><i>Source: Carter & Burgess, August 2007</i> <i>Note: Estimated costs are in 2007 dollars and do not reflect the cost of inflation (7% per year) or the cost of meeting federal requirements for funding.</i></p>				



ZION CANYON TRAIL

Feasibility Study



Potential Trail Alignment, Phase Two

Figure 15

5.3. Phase Three

Phase Three of the preferred alignment begins where Phase Two ends at the Bumbleberry Inn property, and extends to Zion National Park. The Phase Three alignment has two distinct options when considering the eastern end of the study area:

- Option 3A, which retains the trail on the north/west side of the Virgin River past the Cliffrose Motel and the IMAX Theater, tying into the River Station entrance to Zion National Park
- Option 3B, which crosses the Virgin River from the RV Park and enters Zion National Park via Watchman Campground

The reason for the two eastern-end options is that either option is fairly complicated. 3A requires less infrastructure investment, since it does not need a new bridge to cross into Zion National Park. However, the property owners along the 3A alignment do not support the idea of a trail. 3B crosses into Zion National Park from the Zion Canyon RV Park, requiring a new bridge and possibly a new fee station in Watchman Campground. Zion National Park supports the idea of a trail, but would prefer it to use the existing River Station bridge and fee area. Additionally, 3B will require supplemental environmental clearance from the National Park Service for the bridge, in the form of an environmental assessment. Springdale will need to decide which option to pursue when moving forward with Phase Three. Elsewhere in Phase Three, bridges are required to avoid constraints (unstable slopes, and property yards and fencing adjacent to riverbank), and a historic ditch alignment is located near the toe of slope on the Desert Pearl property on the south/east side of the Virgin River.

Phase Three will require obtaining easements from several property owners. These include:

- Kent and Robin Palmer, owners of the Desert Pearl Inn. The Palmers plan to develop their parcels, but have indicated that a trail alignment could be included in the development plans.
- David Ferber, owner of the Zion Canyon Campground and RV Park. Discussions regarding the trail alignments have taken place with Mr. Ferber's son Stewart. Stewart Ferber tentatively supports the trail alignment, especially if the property is redeveloped. However, specific alignments across the property have not been agreed upon.
- For Option 3A:
 - Dale Dockstader. The Dockstader family owns several parcels along the Option 3A alignment. In discussions with Springdale, family representatives indicated their support for a trail near their Cliffrose Motel property, but not along the family's residential property nearby.
 - Bud Lee. Alan Lee, who controls the property, has concerns about a trail crossing the property given its present use as a cement batch plant.
 - Wayne Hamilton. Mr. Hamilton has indicated many times that he does not support a riverside trail alignment.
 - Brent Heaton. Mr. Heaton participated in the property owner workshops in March 2007 and indicated a willingness to accommodate the trail, if the town could offer incentives in return.



- For Option 3B:
 - Zion National Park. Springdale will need to work through Zion National Park's environmental clearance process, as described above, and help create a solution to address the fee collection issues.

Phase Three has several opportunities for trailheads, in the following locations:

- The Bumbleberry Inn property. This trailhead should already have been developed as part of Phase Two of the Zion Canyon Trail. Accommodating trailheads of the property will require ongoing negotiation with the property owner.
- Watchman Drive. Springdale has a 15-foot-wide right-of-way easement near the eastern end of Watchman Drive, connecting Watchman Drive to the Virgin River.
- River Station entrance to Zion National Park (if Option 3A is chosen). The River Station entrance is adjacent to the Visitor Center for Zion National Park, which is already developed with restroom facilities, visitor parking, and other amenities for trail users.

More information on the types and locations of trailheads is found later in this document, and in Figure 18. Phase Three of the Zion Canyon Trail preferred alignment can be found in Figure 16, and a preliminary cost estimate is shown in Table 12.



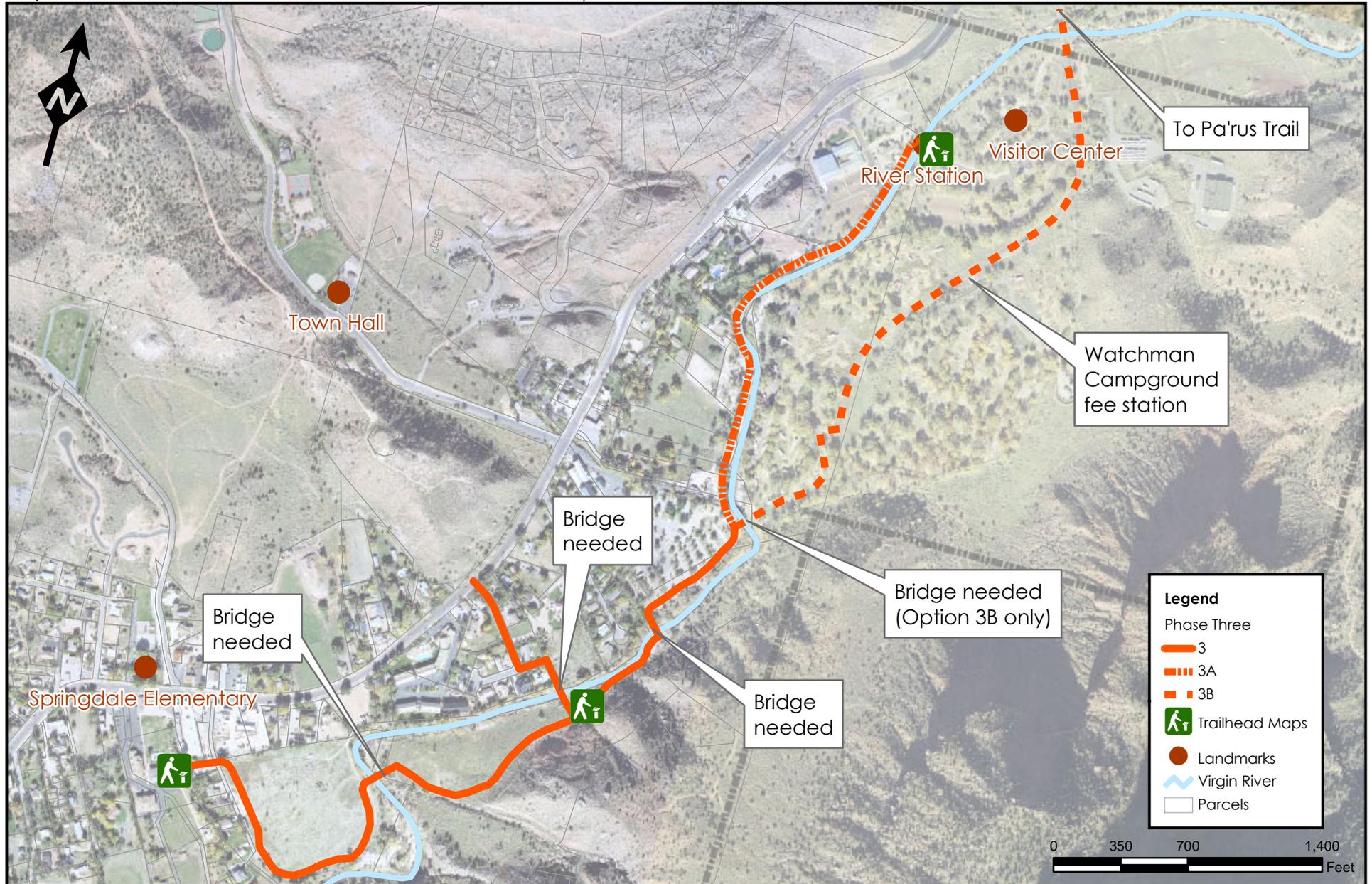
TABLE 12: PHASE THREE PRELIMINARY OPINION OF PROBABLE COSTS

<i>Phase Three</i>				
Description	Units	Approx. Quantity	Unit Price	Total
Roadway Excavation	Cubic Yard	1,630	\$5.50	\$8,963
Untreated Base Course, ¾" max	Ton	2,376	\$23.00	\$54,648
Hot Mix Asphalt	Ton	660	\$80.00	\$52,800
Pedestrian Access Ramp	Each	4	\$1,200.00	\$4,800
Signing and Striping	Lump Sum	1	\$30,000	\$30,000
Silt Fence	Feet	5,500	\$3.79	\$20,845
Trail Bridge (long span)	Lump Sum	2	\$462,000	\$924,000
Trail Bridge (short span)	Lump Sum	1	\$250,000	\$250,000
Subtotal				\$1,346,056
Mobilization				\$134,606
Engineering				\$148,066
Total				\$1,628,728
<i>Phase Three A</i>				
Roadway Excavation	Cubic Yard	767	\$5.50	\$4,217
Untreated Base Course, ¾" max	Ton	1,118	\$23.00	\$25,714
Hot Mix Asphalt	Ton	311	\$80.00	\$24,845
Pedestrian Access Ramp	Each	2	\$1,200.00	\$2,400
Signing and Striping	Lump Sum	1	\$15,000	\$15,000
Silt Fence	Feet	2,588	\$3.79	\$9,808
Removals	Lump Sum	1	\$30,000	\$30,000
Subtotal				\$111,985
Mobilization				\$11,198
Engineering				\$12,318
Total				\$135,502
<i>Phase Three B</i>				
Roadway Excavation	Cubic Yard	1,096	\$5.50	\$6,028
Untreated Base Course, ¾" max	Ton	1,598	\$23.00	\$36,753
Hot Mix Asphalt	Ton	444	\$80.00	\$35,510
Pedestrian Access Ramp	Each	2	\$1,200.00	\$2,400
Signing and Striping	Lump Sum	1	\$15,000	\$15,000
Silt Fence	Feet	3,699	\$3.79	\$14,019
Trail Bridge (long span)	Lump Sum	1	\$462,000	\$462,000
Removals	Lump Sum	1	\$20,000	\$20,000
Subtotal				\$591,711
Mobilization				\$59,171
Engineering				\$65,088
Total				\$715,970
<i>Source: Carter & Burgess, August 2007</i>				
<i>Note: Estimated costs are in 2007 dollars and do not reflect the cost of inflation (7% per year) or the cost of meeting federal requirements for funding.</i>				



ZION CANYON TRAIL

Feasibility Study



Potential Trail Alignment, Phase Three

Figure 16

5.4. Conceptual Trail Design

Typical Cross Section

The typical cross section for the Zion Canyon Trail varies by phase. Springdale and UDOT's Region Four representatives have already agreed upon a preliminary cross section for Phase One, between Rockville and the River Park. Phase One consists of a 10'-wide trail, separated from SR-9 travel lanes by a standard 2.5'-wide, 6"-high curb and gutter. While this does provide some separation between the trail and SR-9 traffic, other treatments may offer a higher level of protection for trail users. In Phases Two and Three of the trail, the 10'-wide portion is paralleled by 2'-wide landscape buffers on each side, with an additional 1' on each side to provide sufficient right-of-way for construction, landscape installation, and ongoing maintenance. This equates to a 16'-wide trail easement or right-of-way for Phases Two and Three.

All phases of the trail will also include pedestrian access ramps. Pedestrian access ramps are typically found in conjunction with a roadway crossing, and are frequently found at intersections. They make the trail accessible for wheelchairs and improve access for strollers, in-line skaters, and bicycles. The ramps can also include detectible warning surfaces for vision impaired users.

Surface Treatments

Three possible surface treatments were examined for the trail. These include a hot mix asphalt pavement on sub-base material, crusher fines surface treatment on sub-base material and a full depth reclamation with a chip seal or micro surface treatment. The treatments are described in detail in the following paragraphs.

Hot Mix Asphalt

The Hot Mix Asphalt (HMA) pavement surface treatment installs asphaltic concrete on an untreated base material. The process of installing HMA includes the over excavation of the existing material to subgrade and installing a predetermined depth of untreated base coarse material (UTBC). Once the UTBC is installed, an asphalt paving machine would install the HMA on top of the UTBC. The depth of UTBC and thickness of HMA would be determined by additional analysis. Advantages of the HMA surface treatment would include:

- A stable hard surface that would allow a wide range of usage (bicycles, pedestrians, strollers, road bikes, inline skaters, etc)
- Reduced erosion during a precipitation event
- Improved accessibility for trail users with disabilities

Some of the disadvantages of the HMA pavement treatment include:

- Unnatural aesthetics: since HMA is a petroleum product, the black color tends to contrast with the surrounding red and tan soils and rocks.
- Requiring large, specialized, heavy equipment for paving and excavation

Crusher Fines

The crusher fines surface treatment combines crushed rock material with stone powder to create a consistent compacted surface. The treatment also requires over excavation, placement, and



compaction of UTBC to a depth of 6” below the crusher fines surface. This UTBC provides a stable base that will ensure stability for the surface treatment. Some of the advantages of crusher fines include:

- Simpler installation that does not require the use of large heavy equipment.
- A natural look achieved by selecting a color of aggregate that closely resembles the surrounding sand and stone

Some of the disadvantages of crusher fines include:

- Limiting the usage of the trail walking, mountain biking, running or similar activities; walking with a stroller, inline skating or riding road bike would be more difficult
- Severely limited accessibility for disabled trail users
- Greater susceptibility to erosion during heavy precipitation events

Full Depth Reclamation

The Full Depth Reclamation (FDR) and Chip Seal is a process that pulverizes the existing ground surface, injects an engineered emulsion, and compacts the emulsified aggregate to provide a stable base for a Chip Seal or Micro Surface treatment. Some of the advantages of the FDR/Chip Seal treatment include:

- Less time required to install than HMA and crusher fines
- Use of existing sub-base materials and minimal import of new material
- A more natural look, achieved by selecting a chip aggregate that closely resembles the surrounding sand and stone
- Improved accessibility for trail users with disabilities

Some of the disadvantages of the FDR/Chip Seal treatment include:

- An abrasive surface which could cause greater injuries to trail users
- Susceptibility to reflective cracking and alligator cracking, since the Chip Seal and Micro Surfacing are applied at a minimal thickness
- Requiring large, specialized, heavy equipment for installation

Surface Treatment Recommendation

As described above, each of the potential surface treatments has advantages and disadvantages. As part of the study process, the project team estimated costs for each of the potential surface treatments for the Zion Canyon Trail preferred alignment. The costs for each surface treatment option are shown in Table 13.

TABLE 13: COST ESTIMATES FOR SURFACE TREATMENT OPTIONS			
	Hot Mix Asphalt	Crusher Fines	FDR/Chip Seal
Phase 1	\$1,610,000	\$1,560,000	\$1,540,000
Phase 2	\$880,000	\$830,000	\$815,000
Phase 3, Option A	\$1,760,000	\$1,730,000	\$1,710,000
Phase 3, Option B	\$2,340,000	\$2,300,000	\$2,290,000
<i>Source: Carter & Burgess, September 2007</i>			



As shown in the table, costs vary only a small amount between the various options for surface treatment. Discussions with the Steering Committee for this project determined a preference for the HMA because of its higher durability in a flood event, lower annual maintenance and repair costs, and greater appeal to a variety of trail users. This study therefore recommends HMA, but recognizes that preferences and priorities may change in the future.

Wayfinding

Wayfinding elements such as maps and signage can be vital to a trail system. The Zion Canyon Trail should have three types of wayfinding elements: trailhead maps, wayfinding signs, and milepost markers. Design of the wayfinding elements should be completed as the trail nears construction, but they should have a unified theme and consistent branding for the trail. See Figure 18 for proposed wayfinding element locations.

Trailhead maps

Trailhead maps should be located at Type 1 and Type 2 trailheads (see the next section for a discussion of trailhead types and locations) to orient trail users. Trailhead maps should include:

- A map of the entire trail system, including any connecting trails (such as the Pa’rus Trail in Zion National Park)
- Identification of major landmarks along the trail (such as Zion National Park, downtown Springdale, River Park, Rockville, the Virgin River, and SR-9)
- Location of other trailheads and the amenities they provide
- Milepost marker locations.

A single trailhead map design can be sufficient for all Type 1 and Type 2 trailheads. Trailhead maps should also include text outlining rules and regulations for the Zion Canyon Trail, such as hours of operation, permitted users, and prohibited activities. The trailhead maps also provide an opportunity to thank funding partners (“The Town of Springdale would like to thank...”). See Figure 17 for examples of other trailhead maps and a conceptual trailhead map for the Zion Canyon Trail.



Wayfinding signs

Wayfinding signs should be used at the Type 3 trailhead at Watchman Drive. The purpose of wayfinding signs is to direct trail users to the trailhead. Wayfinding signs should be located along Watchman Drive and along SR-9 near other trailheads. Wayfinding signs can be fairly simple and consist of the trail’s name and/or logo, with arrows directing users toward the trail. An example of a wayfinding sign can be found in Figure 17.

Milepost markers

Milepost markers help users gauge their location on the trail, and measure the remaining distance to their destination. Milepost markers can begin at either end of the trail; for the purpose of this study, mile marking goes from west to east along the Zion Canyon Trail. Trailhead maps should show milepost marker location, to aid trail users in estimating distance.

5.5. Trailheads

Trailheads provide locations for people to access the Zion Canyon Trail. Trailheads provide a range of services to trail users, and not all trailheads should be similar. This section describes the various types of trailheads, and identifies locations for appropriate trailhead types.

Trailhead Types and Locations

The Zion Canyon Trail should have three types of trailheads, each providing a different level of service to trail users. Table 14 summarizes the trailheads proposed for the Zion Canyon Trail, which can be seen in the map in Figure 18.

Trailhead Type 1

Type 1 trailheads provide the most services and are also the most expensive. Type 1 trailheads provide the following amenities:

- Parking
- Restrooms
- Bicycle racks
- Water fountains
- Waste receptacles
- Trail maps

Type 1 trailheads should be located at River Park, the Bumbleberry Inn property, and the Visitor Center to Zion National Park. These provide fully-developed trailheads at major destinations throughout the study area (the park, downtown, and Zion National Park), and capitalize on already-built public facilities. Trail users may utilize public parking and restroom facilities available at River Park and the Visitor Center; facilities at the Bumbleberry Inn property should be negotiated if the parcel becomes redeveloped.

Trailhead Type 2

Type 2 trailheads provide fewer services than Type 1 trailheads, but should still include several parking spaces, waste receptacles, and maps of the trail system. Given the reduced needs for construction and infrastructure, Type 2 trailheads are less expensive than Type 1 trailheads. Type 2 trailheads should be located at the Zion Park Inn, the Majestic View Lodge, and Anasazi Way. The Anasazi Way trailhead is already equipped with parking facilities; at the Zion Park Inn and Majestic View Lodge, Springdale should pursue shared use agreements with the property owners for trail parking. Springdale should be prepared to investigate other parking options, if the property owners do not wish to participate.

Trailhead Type 3

Type 3 trailheads provide minimal services to users. They include only signage, to indicate to trail users that they can access the Zion Canyon Trail from a given location. A Type 3 trailhead should be located at the Watchman Drive access to the trail. No additional property acquisition should be necessary; signage can consist of trail markers posted along the road right-of-way.



TABLE 14: SUMMARY OF PROPOSED TRAILHEADS

Trailhead Name	Type	Facilities Available	Facilities Needed
River Park	1	Parking, restrooms, water fountain, waste receptacle	Maps, signage
Bumbleberry Inn	1	None	Parking, restrooms, water fountain, waste receptacle, maps, signage
Visitor Center	1	Parking, restrooms, water fountain, waste receptacle	Maps, signage
Anasazi Way	2	Parking	Maps, signage
Majestic View Lodge	2	Parking (shared use agreement)	Maps, signage, waste receptacle
Zion Park Inn	2	Parking (shared use agreement)	Maps, signage, waste receptacle
Watchman Drive	3	None	Maps, signage



ZION CANYON TRAIL

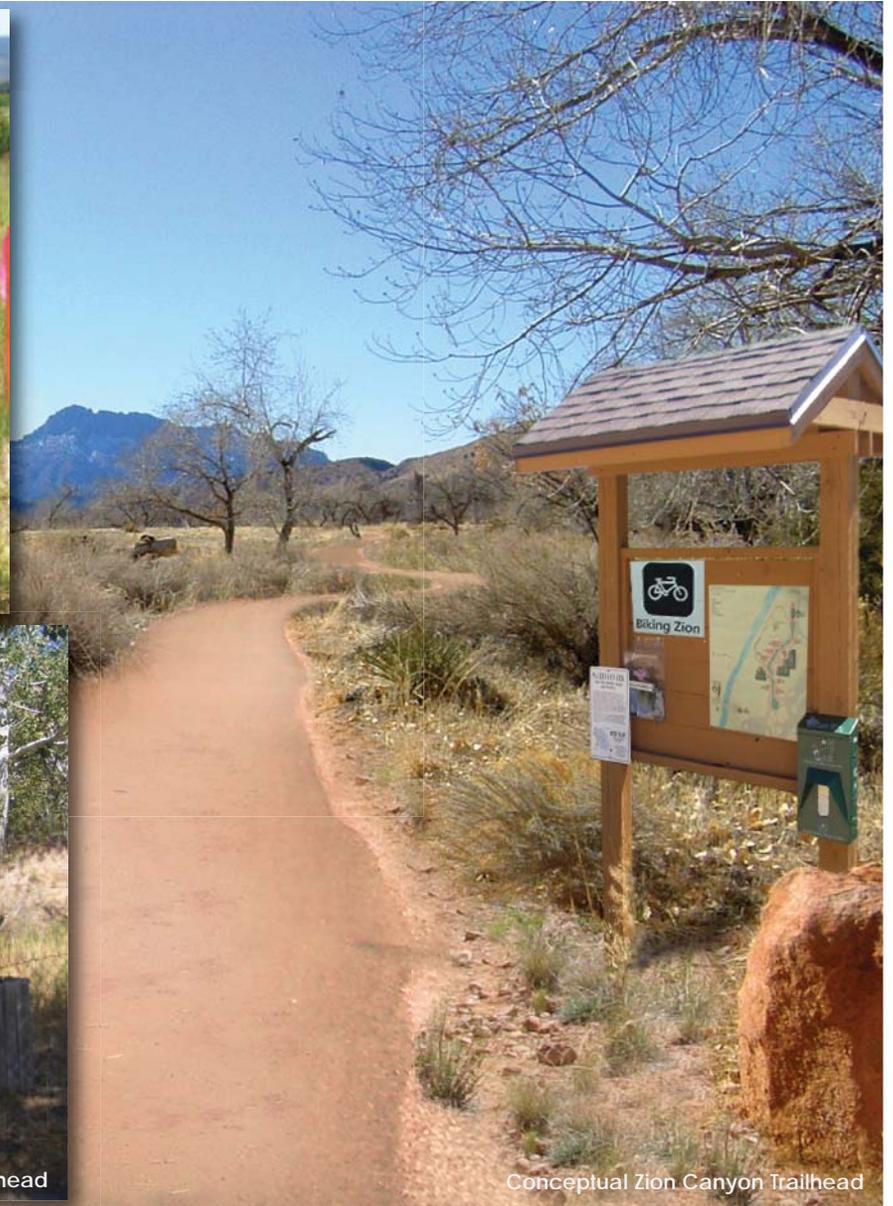
Feasibility Study



Wayfinding on Park City Trails



Trail Signpost Olympic Parkway Trail



Conceptual Zion Canyon Trailhead



Bonneville Shoreline Trailhead

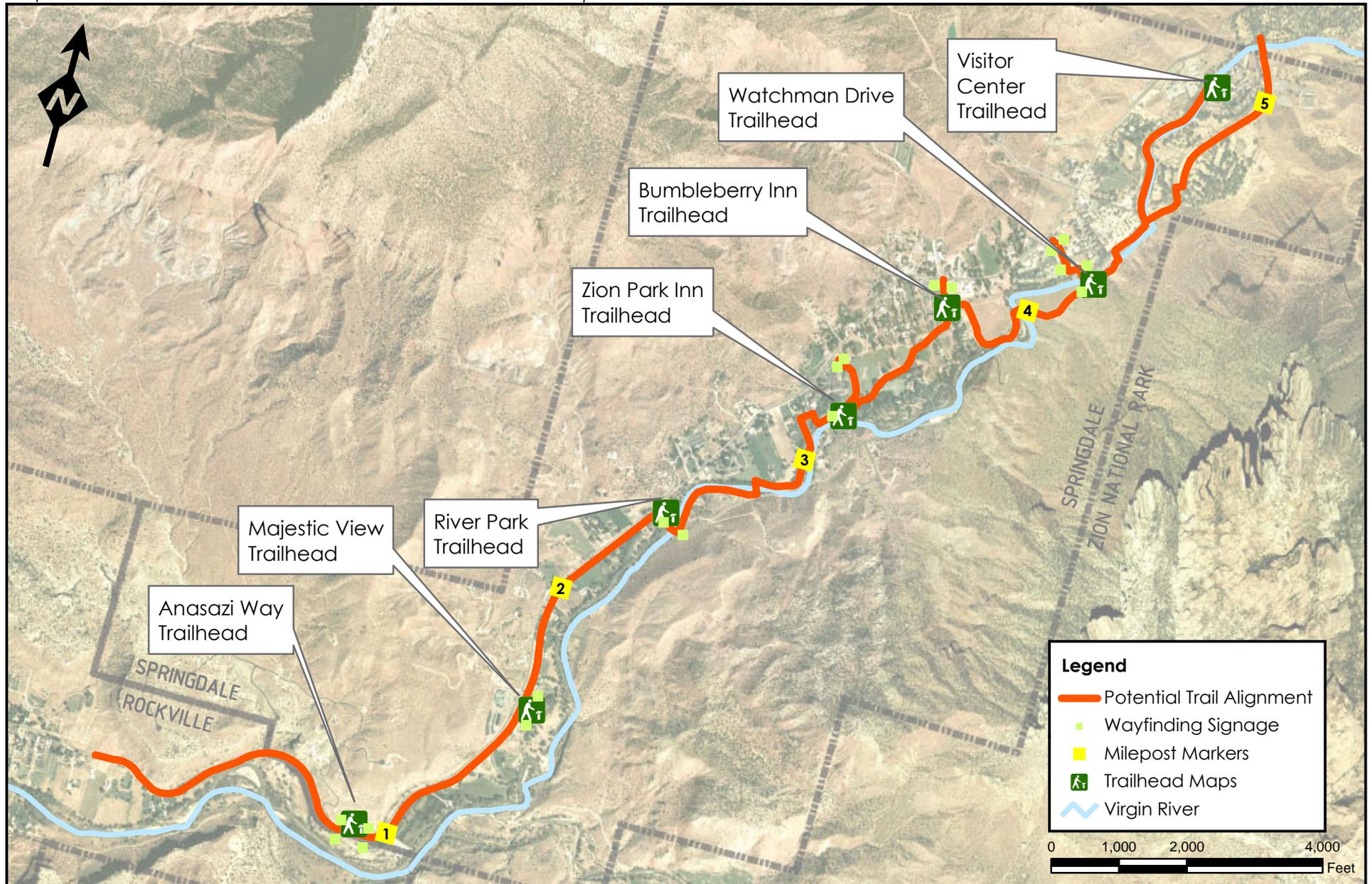


Conceptual Trailhead Signage

Figure 17

ZION CANYON TRAIL

Feasibility Study



Trailheads and Wayfinding

Figure 18

6. Common Trail Issues

6.1. Property Value Impacts

Some landowners along the trail alignment expressed concern that the trail may negatively impact their property values. While this is a common concern, research has shown the presence of a trail generally increases property values of adjacent properties. Adjacency to trails can also have a positive effect on property selling times. For instance, according to the Rails to Trails Conservancy¹, lots adjacent to Wisconsin's Mountain Bay Trail sold for 9% more than similar properties not adjacent to the trail. The same study indicated that in Apex, North Carolina, houses adjacent to a regional greenway sold for \$5,000 more than houses in the same subdivision that were not on the greenway.

In another study of four trails in Nebraska², only 6.2% of homeowners stated that their homes sold more slowly due to presence of a trail and only a few residents perceived that a trail had a harmful economic impact. However, sometimes rural property owners perceive trail impacts differently. The Nebraska study found that 27.5% of rural property owners believed that proximity to trails slowed the sale of their property, while only 10.8% believed proximity to trails increased the speed of sale.

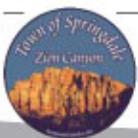
6.2. Crime

Some Springdale property owners expressed concern that trespassing, littering, illegal parking, and other nuisances would become pronounced with the presence of a trail. However, research has shown that trails are relatively safe, and major crimes such as burglary and assault are not generally an issue. The Rails-to-Trails Conservancy and the National Park Service studied 372 trails across the nation³ and found that only 3% of trails had any type of major crime. Furthermore, the same study showed that rates of vandalism, burglary, and trespassing remained the same or decreased on adjacent properties after trail openings. However, rural property owners perceived a higher increase in crime. According to the previously-mentioned Nebraska study, between 22 – 41% of rural Nebraska property owners felt that trails increased crimes such as vandalism, damage to crops, theft, trespassing, and loitering. Overall, for non-rural locations, crime is minimal and, in most all cases, has remained the same or has been reduced.

6.3. Benefits of Trails

Trails can offer many economic benefits to the communities surrounding them. The economic impact of a trail consists of both direct spending and indirect spending. Direct spending represents money spent by visitors coming to a community to use a trail. It could include meals, transportation, goods, or other services. This in turn spurs indirect spending – employees of the industries serving visitors then have more money themselves to spend in the community.

A 2004 report prepared for the Virginia Department of Conservation and Recreation⁴ evaluated expenditures per person per trip to the New River State Park near Galax, Virginia. The report estimates that park users spend \$76 per person per visit on expenses such as lodging, meals,



gasoline, rentals, and other fees when using the park. The study also estimated that local trail users spent over \$200 annually per household on trail-related expenses, most of which went back into the local economy.

Other research compiled by the Rails to Trails Conservancy¹ indicated that:

- The Leadville, Colorado, Mineral Belt Trail increased local sales tax revenues by 19% in the months following the trail's opening;
- The Little Miami Scenic Trail in Ohio generates an economic benefit of \$13 per visitor per visit to the trail, money spent on food, beverages, and transportation;
- 300,000 visitors flock to the Mineral Wells to Weatherford Rail Trail near Dallas annually, bringing \$2 million to the local economy.

Another study conducted in York County, Pennsylvania⁵ polled trail users on whether they made purchases on their last trip to the Heritage Rail Trail. Of those polled, 66% had purchased goods on their most recent trip to the trail. Items included bottled water, snacks, prepared meals, or film. The average amount spent per person per trip was \$8.33 in 2001.

Many communities feel that trails are beneficial, and increasing numbers of property owners recognize the benefits that trails represent. Moab's Mill Creek Parkway has become so popular that it frequently appears in the local high school's "Best of Moab" photo contests, and local hotel and lodging owners advertise their proximity to it on their websites. St. George's well-established local trail system carries such cachet that new real estate developments have named themselves after the trail. Other popular and outdoor-oriented communities in the west are known for their trail systems (for instance, Park City and Moab, Utah; Fruita and Steamboat Springs, Colorado; and Sun Valley and Ketchum, Idaho) and capitalize on the industry that it brings to the region.

6.4. Property Owner Liability

Several property owners along the Zion Canyon Trail alignment expressed concerns related to private property rights and property owner liability. Property owners were concerned that:

- Springdale would use its powers of eminent domain to put a trail on their property without their consent; and
- Property owners would be held liable for injury or actions of trail users, if they were to allow the trail on their property.

State legislation in recent years forbids the use of eminent domain for trail projects, although such powers were formerly allowed. Therefore, Springdale will not be able to force property owners to allow the trail on their land. In addition, statewide legislation also protects landowners from being sued by trail users if trail users injure themselves on a trail crossing private property. Title 54, Chapter 17 of the Utah State Code, "Limitation of Landowner Liability – Public Recreation", states that landowners who allow recreational users on their property free of charge do not assume any responsibility for the safety of those users. In addition, Senate Bill 98 (passed in the 2007 legislative session) provides governmental immunity for trails along canals, rivers, and ditches. Owners or operators of such canals or ditches will not be held liable for the trail, as long as the trail is included in the adopted local general plan.



6.5. Operations and Maintenance

After Springdale builds the Zion Canyon Trail, continued efforts will be necessary to operate and maintain the facility. Often, diligent efforts by the trail’s owner to keep it in good working order are appreciated by adjacent private property owners, and can help increase support for the trail. Table 15 identifies several operating and maintenance activities that will be necessary for the trail, their frequency, and whether they utilize professional or volunteer labor.

TABLE 15: EXAMPLES OF OPERATING AND MAINTENANCE ACTIVITIES		
Activity	Frequency	Labor
Graffiti removal	As necessary	Volunteer
Bridge or trail repair	As necessary	Professional
Trailhead trash pickup and disposal	Weekly	Professional
Weed control	Monthly	Volunteer
Litter pickup	Monthly	Volunteer
Vegetation trimming	Quarterly	Volunteer
Repaint pavement striping	1 – 3 years	Professional
Seal coat pavement	5 – 10 years	Professional
Sign replacement	5 – 10 years	Professional

Springdale may wish to establish a volunteer committee to organize trail maintenance activities, generate momentum and support for future phases, and provide stewardship for the Zion Canyon Trail.

6.6. Footnotes

1. Rails to Trails Conservancy. Economic Benefits of Trails and Greenways. Washington, DC.
2. Greer, Donald L. Omaha Recreational Trails: Their Effect on Property Values and Public Safety. University of Nebraska at Omaha, June 2000.
3. Rails to Trails Conservancy and the National Park Service. Rail-Trails and Safe Communities: The Experience on 372 Trails. Washington DC, January 1998.
4. Virginia Department of Conservation and Recreation. The Waterway at New River State Park: An Assessment of User Demographics, Preferences, and Economics. USDA Forest Service Southern Forest Research Station, December 2004.
5. York County Department of Parks and Recreation. Heritage Rail Trail County Park: 2001 User Survey and Economic Impact Analysis. York County PA, June 2002.



7. Next Steps

7.1. Environmental Clearance

Further phases of study for the Zion Canyon Trail will involve environmental clearance, if the trail receives federal funds. Any construction project receiving any federal funds must comply with the National Environmental Policy Act (NEPA), which is the federal legislation behind categorical exclusions, environmental assessments, and environmental impact statements. A categorical exclusion (CE) is the lowest level of environmental clearance required, using the least amount of study. CE's are used where no significant impact to the environment is expected. Sometimes state and federal agencies having standing agreements on which construction activities can be cleared using a CE.

An environmental assessment (EA) applies when there is either the possibility of significant environmental impact, or significant controversy surrounding the project. An EA will conclude with one of two things:

- A finding of no significant impact (FONSI), meaning that all investigation has determined that the proposed action will not significantly impact the environment, or
- A determination that the proposed action will significantly impact the environment, which triggers an environmental impact statement (EIS).

An EIS identifies all the environmental impacts associated with the proposed action and several alternatives to the proposed action, in order to identify which alternative has the least impact to the environment.

Because the Zion Canyon Trail is a transportation feature, UDOT will most likely be the sponsoring agency for future federal funding. Preliminary review by UDOT's environmental team indicates that a CE may be an appropriate level of environmental clearance for the Zion Canyon Trail, but the level of environmental study should be solidified as the trail project progresses. The Zion Canyon Trail can receive environmental clearance in phases or all at once; if it is cleared and built in phases, each phase of the trail should be able to function independently of one another. It should be noted that Phase Three of the trail may require an environmental assessment from the National Park Service; this is described in more detail in the next section.

7.2. Required Coordination

Springdale will need to work with several agencies and property owners to gain clearance for and build the Zion Canyon Trail. These include UDOT, the Division of Water Rights, the National Park Service, and private property owners along the trail alignment. The steps needed for coordinating with these groups are outlined in the following paragraphs.

UDOT

As mentioned previously, UDOT will most likely be the federal agency granting environmental clearance for the Zion Canyon Trail. Springdale will need to work with UDOT's Region 4 project managers to complete environmental documentation. A UDOT environmental study for



the Zion Canyon Trail may require coordination with several state and federal agencies, including:

- FHWA
- State Historic Preservation Office
- Utah Geologic Survey
- U.S. Fish and Wildlife Service
- State Division of Wildlife Resources
- Division of Environmental Quality
- Natural Resource Conservation Service

UDOT involvement is required on any phase of the trail utilizing federal funds for construction. However, if Springdale chooses to fund the trail locally, UDOT involvement may not be necessary in Phases Two and Three of the trail and federal environmental clearance requirements may not apply.

Division of Water Rights

The Division of Water Rights (DWR) regulates the land along the Virgin River, up to 30' beyond the seasonal high-water mark. The DWR will need to provide clearance for those sections of the trail within the 30' buffer zone. They will also need to approve of any bridges involved with the trail. Members of the project team met several times with a representative from the DWR (including one site visit), who indicated that the Zion Canyon Trail was not likely to have significant impacts. The DWR can coordinate a streamlined 404 permitting process for the trail, provided that the trail does not impact wetlands or threatened or endangered species. If wetlands are impacted, then the U.S. Army Corps of Engineers must be involved. However, the DWR representative felt that no wetlands would be impacted by the trail or the bridges, and a streamlined 404 permit could be completed without Army Corps involvement.

National Park Service

As mentioned previously, Phase 3B of the Zion Canyon Trail requires construction in Zion National Park. If Phase 3A is selected rather than 3B, the National Park Service (NPS) does not need to be involved. However, if Phase 3B is selected, the NPS must approve of the project. The 3B alignment requires a new bridge into the Watchman Campground in Zion National Park, which must receive environmental clearance through the NPS. Zion National Park representatives anticipate the proposed action (a trail in Watchman Campground, and a bridge over the Virgin River continuing the trail from the opposite side of the river) will require an environmental assessment, in addition to any environmental clearance obtained through UDOT. The NPS must also analyze the impacts of any improvements within the park associated with the Zion Canyon Trail, which could include a trail through the Watchman Campground and a new fee station or operation in the campground area.

Private Property Owners

Springdale must coordinate and negotiate with private property owners to get access across private land for the Zion Canyon Trail. Springdale has several options to gain access: purchasing property outright, purchasing an easement, or receiving a donation of an easement. Springdale may purchase the alignment for the trail from private property owners, at an agreed-upon price. Springdale may also purchase an easement, wherein property does not change hands but Springdale buys the right to use a piece of property for a specified purpose – in this case, a trail. Private property owners may also donate an easement to the town. No single method will provide



Springdale with the entire trail alignment; a variety of strategies and negotiations will be needed to obtain access, and the process may take a considerable length of time.

7.3. Funding Strategies

Local Options

Funding will be a critical component of future efforts for the Zion Canyon Trail. Springdale can pursue local funding options, including volunteer efforts for construction. For instance, the cities of Moab and St. George have each instituted their own trails plan, including funding to get projects built. Moab first applied for funding for its Mill Creek Parkway in 1994, and has reapplied on a regular basis for various phases of trail projects. UDOT has provided much of the funding for the trail, but other contributors include the Utah Trails and Pathways Program, FEMA, the Utah Department of Health, the US Army Corps of Engineers, the Utah Riverway Enhancements Fund, Community Development Block Grants, and private foundations. Moab also has an active trail community, which promotes trail-related causes in the area. Trail Mix, a grass-roots coalition, is open to anyone who is interested and also includes representatives from local government agencies. Trail Mix hosts monthly trail building and maintenance activities, and they have been critical in securing trail funding for Moab and the surrounding area. In addition, the Moab Trails Alliance helps secure matching funds for grants, raising money from local businesses.

In contrast, St. George opted to pass local bond initiatives to provide funding for their trail system. In the 1990's, a bond election committed St. George to build 31 miles of trails. Today 35 miles of trail are built, with an additional 35 miles proposed. Funding comes from trail impact fees, the general fund, state grants, federal grants, and statewide transportation enhancement funds. St. George prioritizes trail facilities based on growth patterns, identifying places of new development where there may be demand for trails, and evaluating how such trails might connect to other trails. The City revisits the capital improvements plan on a yearly basis to review priorities and determine whether different trails should be emphasized for construction.

Springdale can also utilize volunteer labor to build sections of trail. Springdale already has a volunteer trail coordinator and a readily-activated citizen group: 80 people attended the August 8th Town Council meeting for the Zion Canyon Trail, in response to an email from the volunteer trail coordinator. This is a considerable showing of support for the trail and represents a resource that Springdale may wish to utilize. Volunteers can help build the trail, raise funds for future phases, monitor for repairs, provide selected ongoing maintenance services, and overall act as stewards for the trail. Springdale could also pursue a volunteer maintenance contract with an advocacy group or cycling club. Many bicycle clubs nationwide provide trail maintenance services in an effort to promote cycling and create goodwill with local agencies. Options local to Springdale could include members of the Utah Bicycle Coalition, Southwestern Utah Bicycle Touring Association, or Color Country Cycling Club.

State and Federal Programs

Several state and federal programs provide trail funding, detailed in the following paragraphs. Table 16 indicates the estimated federal funding available in 2007, 2008, and 2009 for each program, and Table 17 provides contact information for the various funding programs.



Transportation Enhancements

10% of the state's federal Surface Transportation Program funds are designated for transportation enhancements such as bicycle and pedestrian facilities. Funding is discretionary and provides 80% federal share, for projects with construction costs of \$50,000 to \$500,000. Projects are selected by the Enhancements Advisory Committee, which reviews applications and makes recommendations to the State Transportation Commission on which projects to approve. At this writing, Transportation Enhancement grants from UDOT are already obligated until 2009, delaying construction until several years after that. The Transportation Enhancement program requires applicants to register their intent for funding in December annually, with the final application due in February. Springdale should continue to follow the availability of Transportation Enhancement funding in the coming years.

Highway Safety Improvement Program

The Highway Safety Improvement Program funds are intended to significantly reduce traffic fatalities and serious injuries. They can be used on bicycle and pedestrian safety improvements, pavement or shoulder widening, signage improvements, and many other potential projects. The funds are distributed on a discretionary basis, and eligibility will depend on collision data and whether the project meets UDOT's Roadway Safety Improvements Criteria. Submittals of potential safety spot locations are due to UDOT by October 1st annually, for inclusion in the Statewide Transportation Improvement Program in January.

Safe Routes to School

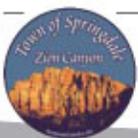
The Safe Routes to School program was initiated with the federal re-authorization of the transportation spending bill, SAFETEA-LU, in 2005. The purpose of Safe Routes to School is to encourage walking and bicycling to school. Eligible projects include sidewalk improvements, traffic calming and speed reduction improvements, pedestrian and bicycle crossing improvements, on-street bicycle facilities, off-street bicycle and pedestrian facilities, secure bike parking, and traffic diversion improvements in the vicinity of schools (within approximately 2 miles). Safe Routes to School projects must already be identified in a school's Student Neighborhood Access Program (SNAP). Funding is discretionary, and state guidelines cap funds at \$150,000 per infrastructure project and \$75,000 for non-infrastructure projects. No local match is required for Safe Routes to School funds. Submittals of potential Safe Routes to School projects are due to UDOT by December 15th annually, and will be recommended for funding by February 15th.

Robert Wood Johnson Foundation's Active Living Research

The Robert Wood Johnson Foundation (RWJF) supports research to examine relationships between policy issues, characteristics of natural and built environments, and personal levels of physical activity. Calls for grant proposals are issued annually, and vary depending on RWJF's priorities. Activities or research regarding the link between childhood obesity and physical activity levels may be eligible, but funding of actual improvements is not likely. As of fall 2007, no current calls for proposals featured topics that would be relevant to the Zion Canyon Trail, but future calls for proposals may provide opportunities for grant applications.

Land and Water Conservation Fund

The Land and Water Conservation Fund (LWCF) provides money to acquire new federal recreation land or develop new recreation projects on property owned by the applicant. Eligible projects must be included on a statewide recreation plan, and ranked compared to other projects on that plan. Funds are distributed to states using a formula, which is based on factors like state



population. LWCF grants require at least 50% local match. In 2007, Utah received \$357,000 for eligible projects. If Springdale were to apply for LWCF grants, they must be for acquiring property for the trail, or to build the trail on property already owned by Springdale; LWCF grants cannot be used to build the trail on property Springdale does not own. LWCF funds may be an appropriate option for Phases Two or Three of the trail, since Phase One can be completed within the UDOT right-of-way. LWCF applications are due October 15 annually.

FHWA National Recreational Trails Program

The National Recreational Trails Program provides funds for developing trails, acquiring easements or property for trails, and building trail-related facilities such as trailheads, bridges, and restrooms. Both motorized and non-motorized trail facilities are eligible, which represents a greater pool of competition for the Zion Canyon Trail. Springdale will be required to provide a 50% match for this program, administered by the Utah State Parks Board. Springdale's match can consist of cash, volunteer labor, donated equipment and materials, or donated real estate. Applications for National Recreational Trails funding are due annually on May 1st, with proposals reviewed during the summer months and grantees notified in the fall.

Utah Trails and Pathways Non-motorized Trail Program

The Utah Trails and Pathways Non-motorized Trail Program is also administered by the Utah State Parks Board. Trails and Pathways funds can be used for planning, acquisition, and development of recreational trails (including construction of trailhead facilities and bridges). Applications are due to the Utah State Parks Board on May 1st annually. As with the Recreational Trails Program, Springdale can include donations of cash, labor, equipment and materials as part of the 50% match required by the Trails and Pathways program. Projects submitted for Trails and Pathways funding should demonstrate innovative or unique design features; links to areas of statewide significance; minimal adverse effects on wildlife, adjacent property owners, and natural areas; and complement existing and planned land uses.

Utah Riverway Enhancement Program

The Utah Riverway Enhancement Program began in 1986, providing funds to develop recreation areas along rivers or streams that are prone to flooding. Eligible activities under the program include property acquisition, trail development, and flood control. The Utah Riverway Enhancement Program is also administered by the Utah State Parks Board, and applications are due May 1st annually. Applicants are required to provide 50% matching funds. Projects submitted for Utah Riverway Enhancement funding should demonstrate innovative or unique design features; links to areas of statewide significance; minimal adverse effects on wildlife, adjacent property owners, and natural areas; and complement existing and planned land uses.

Alternative Transportation in Parks and Public Lands

The Alternative Transportation in Parks and Public Lands (ATPPL) Program is a new program initiated by the federal transportation bill SAFETEA-LU in 2005 and administered by the Federal Transit Administration. ATPPL's purpose is to fund transit and non-motorized transportation projects in or near federal lands (including national parks). Program funds can be used to plan or construct facilities. Non-motorized transportation projects must demonstrate three things: reduction in the number of auto trips, high level of connectivity with existing transportation system, and improved safety for both motorized and non-motorized users of the transportation system. Applications should be submitted by a federal land management agency (such as the National Park Service) or a state or local government with consent of the federal land management agency. Applications are due in February 2008.



TABLE 16: STATE AND FEDERAL FUNDING SOURCES

Program	2007	2008	2009
Transportation Enhancements	\$3M	\$3M	\$3M
Highway Safety Improvement Program	\$7.8M	\$8M	\$8.1M
Safe Routes To School	\$1.2M	\$1.5M	\$1.9M
Robert Wood Johnson Foundation	Funding varies		
Land and Water Conservation Fund	\$66M nationally for 2007; funding allotments annually are declining		
National Recreational Trails Program	\$1.3M		
Utah Trails and Pathways Non-Motorized Trail Program			
Utah Riverway Enhancements Program			
Alternative Transportation in Parks and Public Lands (national funding)	\$23M	\$25M	\$27M

TABLE 17: FUNDING SOURCES CONTACT LIST

Program	Contact Person	Phone	Email
Transportation Enhancements	Matthew Swapp	(801) 965-4366	mswapp@utah.gov
Highway Safety Improvement Program	Michael Kaczorowski	(801) 964-4521	mkaczorowski@utah.gov
Safe Routes To School	Michael Kaczorowski	(801) 964-4521	mkaczorowski@utah.gov
Robert Wood Johnson Foundation	NA	(877) 843-RWJF	NA
Land and Water Conservation Fund	Seth McArthur	(801) 538-7354	sethmcArthur@utah.gov
National Recreational Trails Program	John Knudson	(801) 538-7344	johnknudson@utah.gov
Utah Trails and Pathways Program	John Knudson	(801) 538-7344	johnknudson@utah.gov
Utah Riverway Enhancement Program	Lyle Bennett	(801) 538-7344	nrdpr.lbennett@state.ut.us
Alternative Transportation in Parks and Public Lands	Region VIII, Federal Transit Administration	(720) 963-3300	NA



APPENDIX A: SUMMARY OF PUBLIC INVOLVEMENT EVENTS

Zion Canyon Trail Feasibility Study: Record of Public Events

I. Events Summary

In March 2007, Fehr & Peers organized several events in Springdale to get public feedback on the Zion Canyon Trail Feasibility Study. The events were:

- Display at Sol Foods on Sunday, March 18th, from 12 – 4 p.m.; designed to obtain input from visitors to Zion National Park on whether they would use a trail facility and if it would enhance their experience in Springdale
- Property owner workshops on Monday, March 19th, from 9 – 11 a.m. and 1 – 3 p.m.; designed to show property owners the proposed trail alignments and obtain their feedback on the feasibility of those alignments
- Public open house at the Canyon Community Center in Springdale, from 4 – 7 p.m.; designed to introduce the project and the alignments, and obtain public feedback on future trail usage and characteristics

This document provides a summary of comments and feedback received at these events.

II. Sol Foods Display, 3/18/07

The intent of the Sol Foods Display was to obtain feedback from park visitors. Some local residents participated as well; the data obtained was roughly 2/3^{rds} park visitors and 1/3rd local residents. The display used a large board, on which people placed stickers to indicate their opinions on the following questions:

Would it improve your trip to Zion if there were a trail connecting different parts of town (lodging, restaurants, shopping, etc.)?

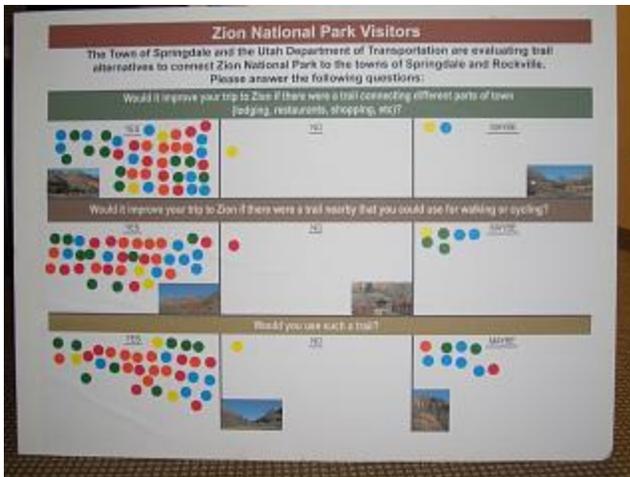
YES	NO	MAYBE
42	1	2

Would it improve your trip to Zion if there were a trail nearby that you could use for walking or cycling?

YES	NO	MAYBE
38	1	6

Would you use such a trail?

YES	NO	MAYBE
35	1	9



Comment sheets were available for people to provide general comments about the project. Comments are summarized below.

Visitors

“We mostly drive around town. We don’t bring our bikes. If we had bikes or rented them, then a trail would be nice. Off the road would be ideal since the main road (SR-9) is narrow and busy.”

“We definitely support improving the bike paths. We rode along the road (SR-9) to Virgin and back yesterday. Some parts had a very wide shoulder, which was nice. The area near Rockville had no shoulder and we rode with traffic. It’s more pleasant biking when you’re not always worried about cars.”

“We ride our bikes along SR-9. We like to turn into the city park area and use the dirt trails. Emerge in Canyon Springs and we use bridge to get back to SR-9. It’d be great to develop that section.” (David Rutz, Pres. HOA, Canyon Springs and Barbara Farnsworth, owns home where city trail enters Canyon Springs.)

“On a previous visit we rented bikes at the south end of town and rode them through the city, which was unpleasant. Now there’s the shuttle to get through town, but a separated bike trail would be a good alternative to busing through town.”

“A riverside trail would be cool. I’m surprised they don’t have bike lanes on SR-9.”

Locals

“I definitely support it. I’m a big fan of walking to places and I think every town ought to incorporate a foot-oriented travel network that isn’t necessarily right next to the street.”

“I think a riverside trail like the Pa’rus would be great, especially if it allowed bikes. When she (referring to baby) is older I’d love to take her on a trail that was away from SR-9.”

“I use the Pa’rus trail a lot. I ride my bike for exercise but usually drive for transportation.”

“Biking between Rockville and Springdale is not safe. There are too many cars traveling very fast. Blind curves, no shoulder. But a lot of people do it, so maybe a designated route off the road would be good.”

III. Property Owner Workshops, March 19th

Fehr & Peers had contacted property owners along the trail corridor prior to the workshops, to secure attendance. Property owners received a mailer, email invites to those owners where email addresses were available, and follow-up phone calls. Fehr & Peers and Springdale met with the Palmers on Friday, March 16th, prior to the sessions

in Springdale. Property owners who attended the workshops on Monday, March 19th, included:

Brent Heaton
Wayne Hamilton
Stan Smith
Pat and Brant Warner
Dennis and Pearl Johnson
Barbara Farnsworth
Dean Cook
Todd Compagno

In general, many of the property owners had similar concerns, including:

Constructing trail in a floodplain – how will it affect my property?
Riparian areas along the river should be protected
Property owners should receive incentives of some kind in exchange for accommodating the trail
Property owner liability
Effect on crime and security
Effect on privacy

Some property owners were supportive of the general idea of a trail, but not on their property. Others felt that a roadside trail would be a better idea than a riverside trail. Springdale representatives discussed the possibility of providing a hardscape exemption for property owners affected by the trail, but property owners tended to feel that other incentives were necessary as well. Several property owners supported the trail as a concept and also supported putting it on their property.

IV. March 19th Open House

The open house was advertised on the project website, through the town newsletter, and by fliers posted around town prior to the event. Attendance is estimated at roughly 40 people; 32 people signed in at the entrance, but several signed only for themselves and not their spouse, and several others didn't sign in.

The first station illustrated conceptual trail alignments for five different sections of the study area: Rockville, Orchard, Driftwood, Town, and Zion. Markers were available for participants to note their comments on each map.

Comments on the Rockville section:

- “River trail should be by the river!” (supported by three other commenters on the map)
- Questions on the validity of claims that the orchard owner supporting the trail (Max later verified that he'd spoken recently with the owner of the orchard, Jim Tree, and he did support the trail)
- “If trail is soft pack then #2 alignment is favored. However if macadam or hard pack is chosen then the alignment by the road is favored.”

- Supporters of river trail liked Rockville Virgin River Alignment #2 the best; this alignment stays on the south side of the river from the Rockville trail network to the orchard, then bridges over to the orchard

Comments on the Orchard section:

- “Cars and bikes don’t mix”
- On Orchard Virgin River Alignment: “Best – allows more access from SR9”
- On Orchard Private Road Alignment: “Like this trail on other side of river” (supported by two other commenters)
- Someone asked whether it was possible to make trail an element of flood control
- Mention of BLM Watchman Wilderness Study Area (Fehr & Peers will look into this), on east side of river at approximate north/south location of the Majestic View

Comments on Driftwood section:

- “Help us experience the river”
- On Driftwood Virgin River #1 Alignment: “Good, no mix of cars with bikes”. Five other commenters indicated this as their favorite alignment
- On Driftwood Virgin River #2 Alignment: “Best – uses bridge”; “Best – uses bridge, but cars will be in Canyon Springs cars can be a problem”; and “no” in regard to using emergency access easement to connect to Canyon Springs road

Comments on Town section:

- “Need more connecting points to downtown for easy access”
- On Town Virgin River #1 Alignment: “OK”; “Prefer fewer tie-ins to town”; “wouldn’t want a trail below slope failure area”
- On Town Virgin River #2 Alignment: “OK”; “Best choice”

Comments on Zion section:

- On Zion Watchman Alignment: “No brainer”; “yes”
- Suggestion to look at SR-9 for trail section between RV park and Zion River Station entrance

Open house participants were also asked to provide feedback on trail characteristics. Their feedback is summarized below.

What do you think the Zion Canyon Trail should be?

Question #1	Along the river	Or	Along the road
	30	4	1
Question # 2	For walkers	Cyclists	Both
	0	1	34
Question #3	Hard surface trail	Or	Soft surface trail
	14	2	23

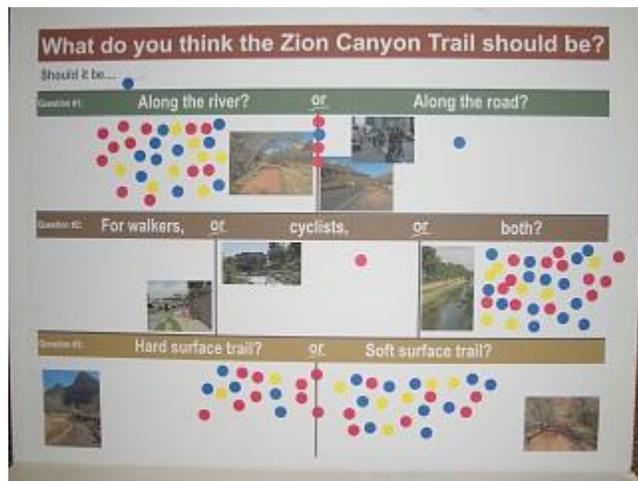
***What kinds of trail features are important for the Zion Canyon Trail?
Please tell us your top three priorities.****

	1st Priority	2nd Priority	3rd Priority
--	--------------------------------	--------------------------------	--------------------------------

Frequent connections to transit stops	3	4	6
Distance markers	4	3	4
Interpretive features (i.e. Nature Walk)	2	3	8
Benches, trash cans, etc.	12	8	3
Trailhead parking	7	3	4
Lighting	3	4	8
Restrooms	5	5	4
Safety call boxes	1	3	6
ADA accessibility	6	6	5
Trail maps and signage	6	6	3

It should be noted that many (at least half) participants ranked more than three priorities. Some ranked every list item. Participants were also provided with blank sheets to provide general comments about the project. These are shown below.

“Trail should be paved entire length so road bikes will use it and stay off the main highway. Zion National Park should complete paving the Pa’rus trail (by each bridge and the ¼ mile near Canyon Junction.) Keep cars and bikes separated – the river trail should be along the river not the road. Don’t go through neighborhoods or between campsites and river in Watchman CG. Don’t bypass park free system. Work with the park. Don’t make them look like the bad guys because they have environmental and social standards.”[Also wrote “no way!” by Lighting on checklist.]



“Top priority would be flood control construction in very evident areas.”

“There is a 75-mile trail system in the Denver metro area along the Highline Canal. It is one of the best amenities in the area. Any home backing up to the trail has greatly appreciated in value. Many high-end homes and developments have been built along the trail. It is a highly sought-after amenity.”

“Basically I’m really excited to see anything. I live in the Rockville church and would commute more often with my 8-year-old if it didn’t involve pedaling along the highway. I like the utilitarian reasons for it and the environmental other than as another tourist trail, i.e. a safe way for myself and the community to pedal to town. Thanks.”

“If trail is soft-pack then the river route is preferred. If hard pack then closer to road. Asphalt doesn’t mix with riparian ecosystems. However, it would be inclusive to have some portions of the trail able to be used by wheelchairs---maybe a section made especially for this option, a 4 or 5 mile section, etc. I prefer soft pack because it allows for water drainage, more natural feel, and slower experience of the land which is one of the main quality of life opportunities of such a trail. Thank you.” [Also wrote “dark sky lighting only” under Lighting]

“Please make bike and dog friendly! Poop bags and trash cans would be great!! Right now I have to drive my car (with bike on my bike rack) from Springdale, where I live, to the end of Rockville, so that I can ride my bike to Virgin. There is no shoulder for most of the Rockville portion, and it is very dangerous to ride, especially because of the many blind curves. Many of the school children that live in Rockville, who would like to ride their bike to the school in Springdale, can’t because of the dangerous conditions in Rockville. I really don’t care what kind of trail is built. Any kind would be a major improvement and add to the quality of life in the Rockville/Springdale area!”

“Bike/hike trail would be great – no pavement please. Keep it natural.”

“Who cares” re: Distance Markers

“No” re: Lighting

“There is one at the River Park” re: Restrooms

“No” re: Safety Call Boxes

“Portions of trail” re: ADA Accessibility

“Pick up bags for pet owners to clean up after them. Pets on leash. Sign to remind/enforce picking up after.”

“No benches.”

Zion Canyon Trail Feasibility Study: Record of Public Events

On May 31st, 2007, Fehr & Peers hosted an open house on the Zion Canyon Trail Feasibility Study. Twenty-two people signed in at the open house, though not all attendees signed in. The event was advertised on the town website, and via direct mailers to property owners along the corridor. The Town of Springdale also sent notices to its “information” email list (a collection of over 350 email addresses for residents, business owners, media personnel, and other interested parties), and also posted fliers in various locations around town. In



addition, Fehr & Peers sent an email notice to attendees from the March 19th open house, when email addresses were available. The May 31st open house was held from 6 – 8 p.m. at the Canyon Community Center in Springdale; Fehr & Peers provided an update of the study’s progress in a PowerPoint presentation at the outset of the open house, and the remainder of the time was spent in an open house format. At the open house, attendees could review maps of each trail alignment alternative; indicate their preferred alternative; see case studies of trail projects in other southern Utah communities; provide written comments on the project; and ask questions of project team members from the Town of Springdale, UDOT, Zion National Park, the National Park Service, Five County AOG, Fehr & Peers, and Carter + Burgess. This document provides a summary of comments and feedback received at these events. The PowerPoint slides are attached as Appendix A to this document, and a list of attendees who signed in at the meeting is provided as Appendix B.



Fehr & Peers provided maps of the three alignment alternatives, and asked participants to place stickers on a chart indicating their preferences. 24 people indicated their preferences: 54% preferred Alternative #1, the riverside option; 38% preferred Alternative #2, the roadside option; and 8% preferred Alternative #3, the riverside/roadside combined option. Participants were also provided with blank sheets to provide general comments about the project. These are shown below.

“I would much prefer plan #1 because it would be closer to the river and be more of a nature trail. Running alongside the main street in Springdale would be a little better than the present sidewalk and could not be used by bicycles, and would interfere with shopping pedestrians.”

J.D.

“I would be adamantly opposed to cutting into any hillsides along SR-9. I also think a trail primarily along SR-9 is defeating the purpose of a public use trail. The idea is to get away from vehicular traffic and exhaust fumes. I like the idea of a ‘river’ trail to connect with the existing Three Rivers Trail. I think a river trail will be of far greater value to the residents of Springdale. The connecting trails into town are also a good idea. I do think a regular and consistent ‘policing’ of the trail will have to be part of it.”

Name Not Provided

“Option 2 seems to be best for cycling. SR-9 is not wide enough for cycling and a pedestrian path is dangerous for cycling. Option 2 is best.”

Name Not Provided

“Love the idea! #3 seems the most feasible!”

Springdale Resident

“Strongly prefer Alternative 2 because it stays with SR-9. The \$3 million price is too high. Suggest the consultant evaluate cost of single-lane up-canyon bike traffic on the right side and down-canyon bike traffic on the left side.”

W.H. and M.H., Springdale Residents

“Alternative #1. Our favored choice as it would be very useful for both recreation and work commute for our family. Alt. #2 would be useless to us as we don't feel safe riding along the highway in the places it would require. Children using the trail would be safer away from the road. Alt. 3 would be our second choice after #1.”

Name Not Provided

“Option 3 [diagram indicating that Option 3 is 50% road, 50% river, splitting at the Town Park]. Option 3.5/4. ‘Weave’ move into Trees Ranch etc – easier walking/riding – flat vs. hillside. Less dangerous – speed alongside is very fast on the Trees Ranch bend.”

Name Not Provided

“Alternative 1 would be my choice. I see it as an educational possibility – maybe some grants could help with the project if there was educational info about wetlands etc. Thanks.”

Name Not Provided

“I prefer Alternative 1. I believe Alternative 2 would get the least use (it is not scenic) and is the most dangerous (vehicle/bicycle collisions). If we bother to put in the effort to build the trail, it's worth the extra hassles to do it right – create a trail that invites use and enhances the beauty of our town.”

Name Not Provided

“3.5 million!!!!???”

Name Not Provided

1. Public notification process not sufficient – all residents of Rockville and Springdale should have been notified in writing. I found out from my neighbors in Canyon Springs!
2. Springdale has decided not to adopt the recent FEMA floodplain map. Fed funds cannot be used for trail.
3. Sufficient amount of controversy and sensitive habitat to require EA/EIS.
4. Cost/benefit analysis should be completed.”

C.F., resident of Springdale



“When the sidewalks in town are not there for all our visitors to enjoy strolling through our town, I believe the first step is to provide this convenience for the masses rather than spend millions for transient bicyclists. Trail is too expensive.”

G. M., property owner

"I think money should be spent to improve the blvd. sidewalks etc. before spending 3.4 mil dollars on a path. If any plan I would consider plan #2."

B.M.

"How will private property owners be compensated for their property? Will there be any fences? Will the town have to pay for part of the building of the trail – will this affect our taxes? Any way we can get some TRT [transient room tax] taxes for this?"

Name Not Provided



Zion Canyon Trail Feasibility Study: Summary of Public Meeting

Introduction

On August 8th, 2007, Fehr & Peers presented the potential alignment for the Zion Canyon Trail to the Springdale Town Council (see attached Town Council Notice and Agenda).

This document provides a summary of the discussion with the Town Council regarding the trail, and public comments received at the meeting.



Meeting Attendance

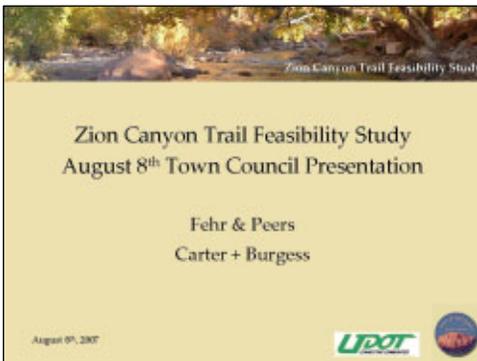
While the typical Town Council meeting draws attendance of 10 to 15 people, there were approximately 80 people in attendance to hear the presentation on the potential trail alignment. From the sign in sheets (attached): Forty citizens signed in indicating their unqualified support of a trail; two were in favor of a trail if it went only north of Rockville; one was in favor of a river trail; four were in favor of a trail on the road and thirty-one indicated no opinion. Tom Dansie, Springdale Director of Community Development provided written and electronic statements of support (attached) from four citizens unable to attend the Council meeting.

Meeting Minutes

The Town of Springdale provided Fehr & Peers with a draft copy of meeting minutes, summarized in this document. Final meeting minutes will be available on the Town's website in the coming months, after the Town Council has officially adopted the minutes.

Presentation to Town Council

Consultants Maria Vyas and Jon Nepstad (Fehr & Peers) and Brett Jensen (Carter+Burgess) addressed and presented information on the Trail Study with a PowerPoint presentation. Technical difficulties with the projector prevented viewing the presentation to the audience but it was available on each of the Town Council's laptops. Paper copies of the presentation slides (attached) were circulated among members of the audience.



Maria reviewed the entire process for the Trail project which consists of the concept, the feasibility study, the environmental studies, engineering design and construction. Maria stated that there is opportunity for public input at every stage of the process. The conceptual stage and the feasibility stage are underway with this Study.



Maria said the Consulting Team had looked at the alternatives, the existing rights of way, had gotten public input and devised three alternatives that addressed the way the trail interfaced with the shuttle and the community's many other needs and constraints. Maria reviewed the preferred alignment as determined by the Study. The final report is neither a construction document nor environmental clearance document. It is a summary of the public process and a proposal of how the trail can be successfully built with costs and phasing identified.

Jon presented information regarding the UDOT process for Federal Highway Administration (FHWA) Transportation Enhancement (TE) Funds. These matching grants are for communities to construct alternative travel ways, are managed by UDOT and must follow certain criteria and guidelines for application by communities. The grant application requires some level of feasibility analysis to ascertain the concept of the project, community need, community support and funding alternatives.

The final report will include options for funding opportunities. Jon said the funding at the state level for TE funds is very competitive and successful applicants often have to apply many times. He stated that it is important for the Council and the community to show continued support throughout the process, which may take several years.

Town Council Comments and Questions

Ms. Excell said she thought the phase from Rockville to Springdale was needed most because there weren't shoulders there and that should be the first phase.

Ms. LaFave agreed stating that safety is the highest priority for that area. Maria said that the phasing and design is still open to revision and review; the Study is a blueprint for future iterations.

Mr. Smith stated that the Bumbleberry was a key area in the Study and he took exception to the public information indicating the trail would go the length of his property and provide landing for a river crossing when he had never been asked if that was feasible.

Next Steps

Jon discussed where the process would go from this stage. The draft feasibility study and final potential alignment will be completed late September for Town Council review. A final report including comments will be presented late October to the Town Council. At that time, the environmental clearances and funding processes could begin.

Comments from Public

Upon conclusion of the presentation and Town Council questions, the Mayor commented that it was one of the largest crowds in attendance to a Town Council meeting and asked those who would like to provide comment for the public record to step forward.



The following are comments from the meeting:

Jerry Healy said he was very in favor of the trail. He recalled the outcry when the Pa'rus trail was built, but now it was a valuable asset to the community and heavily used. This trail would make alternate travel safer and would offer commercial possibilities (as an amenity) as it became well known.

Susan Taylor from Rockville said she had ridden her bike from Rockville to Springdale *once* and would never do it again because it was so dangerous. She expressed her support for the trail.



Stacy Christensen said she had two children and it would be 'amazing' if the kids could ride safely from Springdale to Rockville.

Brant Warner said though he would like to see the trail happen, he thought there would be problems, especially with the bridges. It was now more difficult to get a 404 permit to build along the river. Under FEMA regulations, nothing could be built in the floodway. Manmade structures alongside the river had recently caused flooding in Santa Clara. He urged the town to consider a roadside alternative to avoid the bridge issue.

Marcel Rodriguez said he would probably be the first one on the trail if it were built while he was still alive, but he questioned the high cost. He said if he owned riverside property, he wouldn't want a trail over his property.

Greg Miner said it would be a wonderful advantage to be able to walk from Rockville to Springdale. Ms. Vyas said all the trail along that stretch would be within the UDOT right-of-way. Ms. LaFave said the Town had allocated funds and was trying to start on the stretch of the trail from the River Park to the Majestic View.

The Mayor thanked the public for attending in such large numbers and she thanked the Fehr & Peers team for their presentation.

SPRINGDALE TOWN COUNCIL NOTICE AND AGENDA

THE SPRINGDALE TOWN COUNCIL WILL HOLD A MEETING ON WEDNESDAY, AUGUST 8, 2007 AT 5:00 P.M. AT SPRINGDALE TOWN HALL, 118 LION BLVD., SPRINGDALE, UTAH.

Pledge of Allegiance
Approval of Agenda
General Discussion & Announcements
Visitors Bureau Report – Dean Cook
Zion Park Update – Supt. Whitworth
General Plan Report
Community Questions

New Business

1. Presentation to Citizen of the Season, Summer 2007 – Betina Lindsey
2. Trail Feasibility final report: Fehr & Pehrs
3. Public Hearing:
 - a. Zone Change from Valley Residential (VR) to Valley Residential – Planned Development (VR-PD) on 2.44 acres located at 1343 Zion Park Boulevard
 - b. Preliminary Subdivision Plat: Preliminary subdivision plat for a three-lot subdivision on 2.44 acres located at 1343 Zion Park Boulevard – Todd & Sherry Compagno
4. Public Hearing:
 - a. Zone Change Application: Zone change from Foothill Residential (FR) to Foothill Residential – Planned Development (FR-PD) on 30.39 acres located near the end of Paradise Road
 - b. Preliminary Subdivision Plat: Preliminary subdivision plat for a 15-lot subdivision on 30.39 acres located near the end of Paradise Road. – Nu Team Partners
5. Request to use portion of the Town Park for a Community Garden – Community Garden Committee
6. Discussion about Tree Board Ordinance
7. Ordinance 2007-10: Adding Section 10-1-13 Authorizing the Town to negotiate development agreements
8. Ordinance 2007-11: Amendment to Sections 3-3E-3 and 3-3E-4 revising Municipal Telecommunications License tax rate
9. Ordinance 2007-12: Amending Section 3-3C-2 increasing Resort Community Tax by 0.1% to offset removal of non-prepared food from tax base
10. Resolution 2007-07: Proposing that Springdale join the Mosquito Abatement District

Consent Agenda

Minutes of regular meeting June 13, 2007

Invoices

Council Discussion

Department Reports

Executive Session: Discussion of potential and pending litigation, the character, professional competence or physical or mental health of an individual and property acquisition

Action Required by Executive Session

Adjourn

APPROVAL: _____ DATE: _____

The foregoing agenda was posted at the Springdale Post Office, the Springdale Branch of Zions First National Bank and the Springdale Town Hall by W. Sande at approximately 1:00 A.M./P.M. on 8/3/07.

The Town of Springdale, in compliance with the Americans with Disabilities Act, provides accommodations and auxiliary communicative aids and services for all those citizens in need of assistance. Persons requesting these accommodations for Town-sponsored public meetings, services, programs, or events should call Fay Cope, Springdale Town Clerk, at 772-3434, giving at least 24 hours notice before the meeting.



TOWN OF SPRINGDALE

PO Box 187 118 Lion Blvd Springdale UT 84767

ATTENDANCE RECORD

Please sign

Meeting of _____ on _____

If you'd like to be included on our e-notice list, please give us your email address. Your address will never be sold, though we may have to provide it as public information.

TRAIL
YES NO

name	Bob Citow	email	
name	Peter Stumpel	email	
name	Don Zupp	email	
name	DEAN R Cook	email	
name	Brian Sabbatine Yey	email	
name	Frank Jennings	email	
name	Trish Jennings	email	
name	Lucinda Bonner	email	yes yes
name	ZOE GREGORIC	email	yes yes yes!!!
name	Julie Gregoric	email	yes!!!! Sol Foods@msn.com
name	ZACH GREGORIC	email	yes
name	Jordan Hebner yes	email	
name	Tom Haraden	email	tom-haraden@np.org
name	Fred Pagles	email	
name	Michael J. Evenson	email	YES!
name	Angie Frabasiliu yes	email	
name	Stacy Christensen	email	windancer@infowest.com Yes
name	Mirinda Whitaker	email	girlsrule@infowest.com Yes
name		email	



TOWN OF SPRINGDALE

PO Box 187 118 Lion Blvd Springdale UT 84767

ATTENDANCE RECORD

Please sign

Meeting of _____ on _____

If you'd like to be included on our e-notice list, please give us your email address. Your address will never be sold, though we may have to provide it as public information. TrailX/n

name	<u>Peggy Taylor</u>	email	<u>YES</u>
name	<u>Dan & Roxy Mabbutt (YES)</u>	email	<u>YES</u>
name	<u>Shan Larsen</u>	email	
name	<u>JEFFREY HATTINER</u>	email	<u>PAT 706 6041</u>
name	<u>BARBARA ELLARD</u>	email	<u>Yes</u>
name	<u>BILL ELLARD</u>	email	<u>Yes</u>
name	<u>Brett Jensen</u>	email	<u>brett.jensen@co-jb.com</u>
name	<u>Jon Nepsted</u>	email	
name	<u>Mariz Vyza</u>	email	
name	<u>Mardi Pearson</u>	email	
name	<u>Jack Wittwald</u>	email	
name	<u>Seth De Bellis</u>	email	
name	<u>Sharon & David Halford</u>	email	<u>yes yes</u>
name	<u>Marcel Rodriguez</u>	email	<u>?</u>
name	<u>Bill & Nancy Bergeron</u>	email	
name	<u>Mark & Judith Schraut</u>	email	
name	<u>Regina Pagles</u>	email	
name	<u>Jerry Healey</u>	email	<u>in favor of a river trail</u>



TOWN OF SPRINGDALE

PO Box 187 118 Lion Blvd Springdale UT 84767

ATTENDANCE RECORD

Please sign

Meeting of SPRINGDALE Town Council on 7/8/07

If you'd like to be included on our e-notice list, please give us your email address. Your address will never be sold, though we may have to provide it as public information.

Kirk SCOTT

name Travis Tomlinson email

name Elizabeth McGraw Yes email

name Mike Juman Yes email

name Laura Doty Yes email

name Monie McNeal Yes email

name Travis email

name James Wolken ROAD email

name Bob Ertow (yes) email

name Steve Masfield (yes) email

name Max Gregoric (yes) email

name Julie Hancock (yes) email

name Mark Scurant OW ROAD email

name Judith Schraut Road email

name KATHY DAVIDSON email

name Joe Jennings yes email

name Mary Stults yes email

name CALVIN T. LEE email

name email

For



TOWN OF SPRINGDALE

PO Box 187 118 Lion Blvd Springdale UT 84767

ATTENDANCE RECORD

Please sign

Meeting of _____ on _____

If you'd like to be included on our e-notice list, please give us your email address. Your address will never be sold, though we may have to provide it as public information.

name	Carmel McNeal eaker	email	
name	Gaby Sanchez	email	
name	BRANT WARNER	email	
name	Katherine Takach	email	
name	Deborah Duban	email	yes.
name	M. Honer-Oxton	email	
name	Mike Marriott	email	
name	Anne Weiler Brown	email	no trail on my } north- property } yes
name	Allen Brown	email	
name	Alexis Winsor	email	yes - want a trail!
name	Susan TAYLOR yes	email	utahsue@INFOWEST.COM
name	Fish Knapp	email	yes
name	Frank Jennings	email	yes.
name	M. McMAHAN	email	
name	ROSS CLAY	email	
name		email	
name		email	
name		email	



TOWN OF SPRINGDALE

PO Box 187 118 Lion Blvd Springdale UT 84767

ATTENDANCE RECORD

Please sign

Meeting of Springdale Town Council on August 8th 2007
If you'd like to be included on our e-notice list, please give us your email address. Your address will never be sold, though we may have to provide it as public information.

Table with 2 columns: name and email. Rows include Naomi Snyder, Dan Snyder, Bill Bergeron, Shay Bergeron, Holly Hamilton, Regina Pagles, Fred Pagles, Jordan Hebner, Rebecca Miner, Greg Miner, Sandy Bell, Kevin Hegren, and Scott Williams.

Sign-up sheet remained undiscovered until 10/16/2007 from

Zion Canyon Trail Feasibility Study

Zion Canyon Trail Feasibility Study August 8th Town Council Presentation

Fehr & Peers
Carter + Burgess

August 8th, 2007




Zion Canyon Trail Feasibility Study

Tonight's Presentation

- Planning Process
- Alternatives
- Public Involvement
- Potential Trail Alignment
- Next Steps

August 8th, 2007




Zion Canyon Trail Feasibility Study

Planning Process

- Why study?
- What happens without a study?

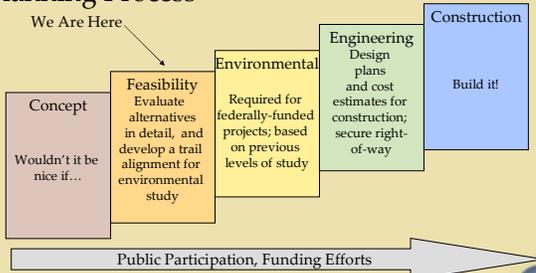
August 8th, 2007




Zion Canyon Trail Feasibility Study

Planning Process

We Are Here.



Concept
Wouldn't it be nice if...

Feasibility
Evaluate alternatives in detail, and develop a trail alignment for environmental study

Environmental
Required for federally-funded projects; based on previous levels of study

Engineering
Design plans and cost estimates for construction; secure right-of-way

Construction
Build it!

Public Participation, Funding Efforts

August 8th, 2007




Zion Canyon Trail Feasibility Study

Alternatives

- Identify opportunities and constraints
- Develop conceptual alternatives
- Understand community vision and need for trail
- Refine alternatives based on pre-established criteria
- Gauge public support for trail concepts and important features
- Select a potential trail alignment

August 8th, 2007




Zion Canyon Trail Feasibility Study

Alternative 1: Riverside



August 8th, 2007




Zion Canyon Trail Feasibility Study

Alternative 2: Roadside



August 8th, 2007




Zion Canyon Trail Feasibility Study

Alternative 3: Riverside/Roadside Combination



August 8th, 2007




Zion Canyon Trail Feasibility Study

Public Involvement

- Gaining input through:
 - Steering Committee
 - Two open houses: March 19th, May 31st
 - Project website
 - Stakeholder outreach and communication

August 8th, 2007




Zion Canyon Trail Feasibility Study

Public Involvement



August 8th, 2007




Zion Canyon Trail Feasibility Study



August 8th, 2007




Zion Canyon Trail Feasibility Study



August 8th, 2007




Zion Canyon Trail Feasibility Study

"...I really don't care what kind of trail is built. Any kind would be a major improvement ..."

What do you think the Zion Canyon Trail should be?

Should it be...
 Along the river? or Along the road?
 For walkers, or cyclists, or both?
 Hard surface trail? or Soft surface trail?

"...it would be inclusive to have some portions of the trail able to be used by wheelchairs—maybe a section made especially for this option..."

"When the sidewalks in town are not there... I believe the first step is to provide this convenience...rather than spend millions for transient bicyclists."

"3.5 million!!!!???"

"...I see it as an educational possibility – maybe some grants could help with the project if there was educational info about wetlands..."

August 8th, 2007




Zion Canyon Trail Feasibility Study

Public Involvement

Important issues

- Effect of bridges on floodplain
 - Potential for bridges to block river, cause flooding
 - Options: span 100-year floodplain with bridges; detachable bridges; bridge base above flood elevation
 - Town adoption of FEMA guidelines
 - Does not effect eligibility of trail for UDOT funding
- Environmental clearance
- Private property rights and liability

August 8th, 2007




Zion Canyon Trail Feasibility Study

Potential Trail Alignment



August 8th, 2007



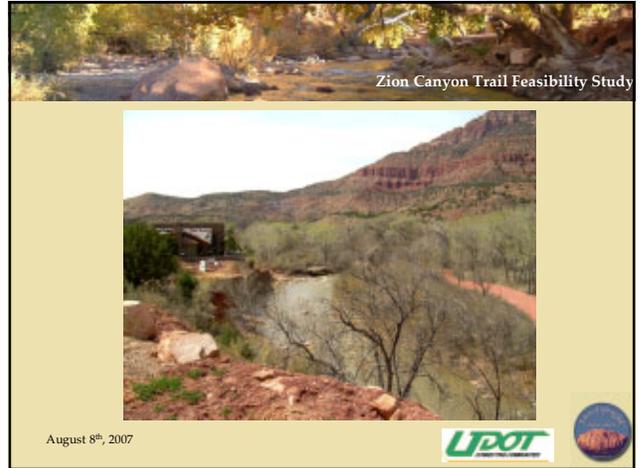

Zion Canyon Trail Feasibility Study

Potential Trail Alignment

- Phase One: River Park to Bumbleberry Inn
 - Estimated Cost: \$902,000
 - Access points: River Park, Zion Park Inn, Bumbleberry Inn
 - Bridge spans floodway
 - Utilizes existing trail alignments
 - 1.4 miles of main trail, 0.5 miles of connecting trail

August 8th, 2007



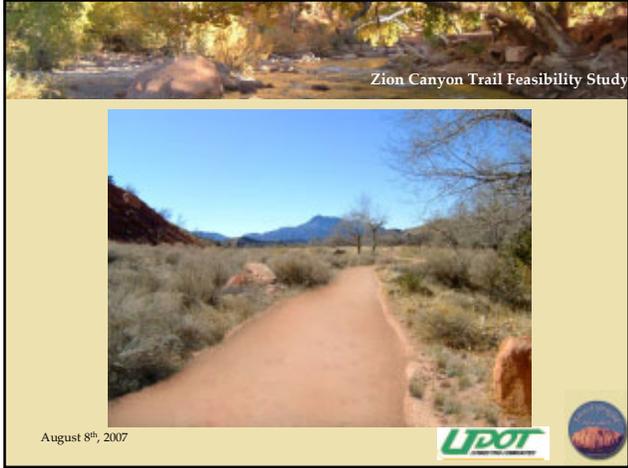
Zion Canyon Trail Feasibility Study

Potential Trail Alignment

- Phase Two: Bumbleberry Inn to Zion National Park
 - Two options for eastern end:
 - 2A: North/west side of Virgin River to River Station entrance
 - 2B: Bridge into Watchman Campground
 - Estimated Cost:
 - 2A: \$1.8 million
 - 2B: \$2.4 million
 - Bridges needed for connectivity, avoid constraints
 - Potential tie-in to Watchman Campground fee station
 - Potential tie-in to River Station entrance

August 8th, 2007



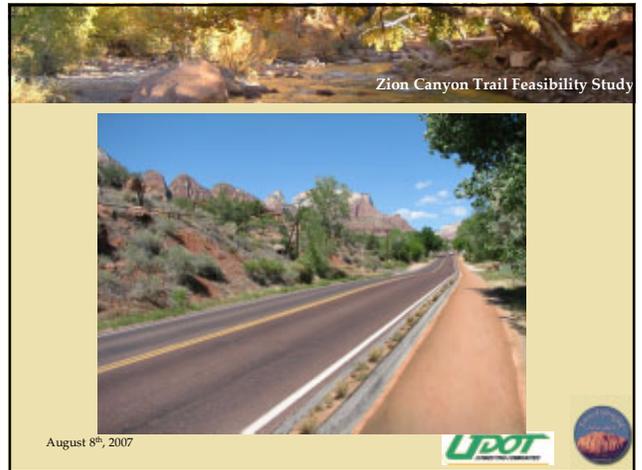


Zion Canyon Trail Feasibility Study

Potential Trail Alignment

- Phase Three: Rockville to River Park
 - Roadside multi-use path in UDOT right-of-way
 - South/east side of SR-9, separated with a 6" curb
 - Estimated Cost: \$1.37 million
 - 2.3 miles of trail
 - Requires retaining walls, utility relocation

August 8th, 2007



Potential Trail Alignment

- Total cost: \$4.1 - \$4.6 million
- Total length: 6.5 miles
 - 5.6 miles of main trail
 - 0.9 miles of connecting trail
- Time frame for completion: varies widely
 - St. George: 35 miles in 20 years
 - Moab: 2 miles in 10 years

August 8th, 2007



Next Steps

- Completion of Feasibility Study
 - Draft in September for Council review and comment
 - Final in October
- Environmental Clearance
 - UDOT, NPS, Army Corps, Division of Water Rights
- Ongoing Funding
 - UDOT, NPS, local, other
 - Example: Clear Creek Canyon Trail

August 8th, 2007



Questions/Discussion

August 8th, 2007



APPENDIX B: LETTERS OF SUPPORT

Maria Vyas

From: Lin Alder [alder@infowest.com]
Sent: Friday, October 12, 2007 1:33 PM
To: Maria Vyas; Lin Alder
Subject: Springdale trail

Follow Up Flag: Follow up
Flag Status: Green

Hi Maria,

As a 21 year resident of Washington County and a 7 year resident of Springdale an avid hiker, runner and cyclist, I wish to express my strong support for the proposed riverside trail in my home town. Safety is my primary reason for supporting the trail, followed closely by healthy lifestyle and economic development values. As a cyclist, I would greatly appreciate the opportunity to ride through Springdale without fear of negative interactions with vehicles and unattentative tourists on Zion Canyon Boulevard. Ultimately it would be much safer for our young children to have a bike/walk path between Rockville and Springdale that avoids S.R. 9.

Thank you for your consideration,

Lin Alder

Maria Vyas

From: codybern@infowest.com
Sent: Friday, October 12, 2007 9:28 AM
To: Maria Vyas
Subject: Springdale/Rockville trail support

Follow Up Flag: Follow up
Flag Status: Green

Hello!

I am writing in support of the proposed trail involving the towns of Springdale and Rockville.

We are a family with three children who would prefer a safer route. What currently exists is not acceptable considering the amount of traffic, both vehicular and bicycle.

We would like to see this happen in a time frame that we could rely on, and hope that means it will be happening soon.

Thank you for the opportunity to voice my support for the trail.

Sincerely,

Bernadette K. Cole
(435)772-0858
codybern@infowest.com

Maria Vyas

From: evenson [mevenson@infowest.com]
Sent: Friday, October 12, 2007 7:34 PM
To: Maria Vyas
Subject: Springdale/Rockville Multi Use Trail
Follow Up Flag: Follow up
Flag Status: Green

To whom it may concern,

This e-mail message is intended to show my strong support for the proposed multi use trail between Zion National Park and Rockville, Utah.

My two young sons, ages twelve and ten have many friends in Springdale and we currently won't allow them to ride their bikes into Springdale from Rockville due the dangerous road way. There are essentially no shoulders on a significant portion of SR-9 and with the twisting nature of the road, it becomes very dangerous.

It seems only reasonable to support such a multi use path if for no other reason than to allow ones children the opportunity to be free to ride into town safely.

Respectfully submitted,

Michael J. Evenson

Maria Vyas

From: maxg@infowest.com
Sent: Friday, October 12, 2007 8:49 AM
To: Maria Vyas
Subject: ZCT

Follow Up Flag: Follow up
Flag Status: Green

To Whom it May Concern,

As a family we would very much like to see the Zion Canyon Trail become a reality. We currently are forced to ride our bikes on the almost non-existent shoulder between Rockville and Springdale. This is an accident waiting to happen and this trail would enable a safe alternate route to commute through the communities. Our children are not of driving age and have no other option besides walking or riding a bike in our community. Please give us a safe alternative.

Max, Julie, Zachary and Zoe Gregoric
Rockville, UT

Maria Vyas

From: Julie Hancock [ccc@infowest.com]
Sent: Friday, October 12, 2007 2:37 PM
To: Maria Vyas
Subject: Bike Trail in Springdale
Follow Up Flag: Follow up
Flag Status: Green

As a citizen of the county I am highly in favor of the trail as it is a much needed asset to the Community. It will add a safe way for bicycles, runners and walkers to commute to Springdale and Zion.

Thank You
Julie Hancock,
CCC Director

Maria Vyas

From: Thomas Dansie [dcd@infowest.com]
Sent: Tuesday, August 07, 2007 12:00 PM
To: 'Louise Excell'; Stan Smith; Pat Cluff; Robert Warren; Kathy LaFave
Cc: Rick Wixom; Fay Cope; Maria Vyas
Subject: FW: Trail

Council Members-

I am forwarding you a letter of support for the Zion Canyon Trail. We have also received some hard copy letters regarding the Trail at the Town Office. Copies of these have been placed in your boxes.

Thanks.

Tom

From: kim konikow [mailto:kim@artservicesandcompany.com]
Sent: Tuesday, August 07, 2007 11:33 AM
To: dcd@infowest.com
Subject: Trail

Tom Dansie, AICP
Director of Community Development
Town of Springdale
PO Box 187, 118 Lion Blvd.
Springdale, UT 84767

Tom;

I am unable to make the meeting on Wednesday, August 8th, but am writing to voice my strong support for the non-motorized trail under consideration. I have lived in several communities around the country where this kind of trail has been a great success, with increased economic development as a different kind of tourist began to use these trails.

{How wonderful it would be to eventually see a decrease in vehicles!}

It would also be great to have a trail connecting Zion with other communities down the hill; I can think of a number of locals and St. George-ans who would use it for walking or biking.

The trail has been fairly well-researched, and has given property owners the right of refusal – hopefully UDOT will see the wisdom of this plan for the entire County, and participate.

Lastly, I understand there has been some concern voiced about the trail hurting the natural habitat for the wildlife. I am sure that should the plans proceed to the next stage, additional assistance and partnerships can be put in place towards these protections.

I am available if you have any questions. Thanks for your consideration.

Kim

kim konikow
artservices & company
Consulting for the Arts
PO Box 496
Springdale, Utah 84767
435.668.7800 Mobile
866.241.3611 Free Fax
kim@artservicesandcompany.com

For Fed Ex and UPS use the following for deliveries:
126 West Main Street, Rockville, UT 84763

Maria Vyas

From: shan larsen [shanlarsen@infowest.com]
Sent: Friday, October 12, 2007 2:56 PM
To: Maria Vyas
Subject: bike trail in Springdale
Follow Up Flag: Follow up
Flag Status: Green

To whom it may concern:

I am a biking granny in Springdale. We need a bike trail. Currently it is dangerous to ride on the narrow road and the traffic just keeps increasing. Currently, I drive into the park so I can ride on the scenic drive with just the Zion Shuttle traffic. A bike trail through town is really needed.

Thank you,

Shan Larsen
3002 Navajo Way
Springdale, Ut 84767

Maria Vyas

From: Steve Masefield [brit@infowest.com]
Sent: Wednesday, October 17, 2007 3:07 PM
To: Maria Vyas
Cc: brit@infowest.com
Subject: Re: Bike path connecting Rockville and Springdale

To Whom It May Concern:

As a six year resident and business owner in the center of Springdale, I have witnessed directly a significant increase in the amount of traffic and the apparent speed at they travel at - with such a flagrant disregard for speed signs that the local police are kept extremely busy issuing citations to offenders. The exact number can be obtained from the monthly Police Reports give to the Council.

The 'quaint and small village atmosphere has long gone and as a community of tourists and locals we need an alternative way of getting about town - a bike/walking path would offer an amazing opportunity to allow both tourists and local community members to enjoy Springdale and it environs once again.

Steve Masefield
Under The eaves B&B
980 Zion Park Blvd.
Springdale
UT
84767

----- Original Message -----

From: "Maria Vyas" <M.Vyas@fehrrandpeers.com>
To: "Steve Masefield" <brit@infowest.com>
Sent: Wednesday, October 17, 2007 9:46 AM
Subject: RE: Bike path connecting Rockville and Springdale

Email to me and I'll add it as an appendix to the final document -
thanks!

Maria Vyas, AICP
Fehr & Peers
2180 South 1300 East, #220
Salt Lake City, Utah 84106
801.463.7600

-----Original Message-----

From: Steve Masefield [mailto:brit@infowest.com]
Sent: Tuesday, October 16, 2007 5:10 PM
To: Maria Vyas
Subject: Re: Bike path connecting Rockville and Springdale

Wall get right on it but send where ?

Steve

----- Original Message -----

From: "Maria Vyas" <M.Vyas@fehrrandpeers.com>
To: <brit@infowest.com>
Sent: Tuesday, October 16, 2007 4:20 PM
Subject: FW: Bike path connecting Rockville and Springdale

Maria Vyas

From: Naomi Wright [naomifernwright@hotmail.com]
Sent: Friday, October 12, 2007 4:16 PM
To: Maria Vyas
Subject: Bike path connecting Rockville and Springdale

Follow Up Flag: Follow up
Flag Status: Green

To whom it may concern,

I am a resident of Virgin who commutes to Springdale and Rockville on my bicycle a few times a week. I would commute to work all the time on my bicycle if I felt safer. I especially am scared from the time I leave Rockville until I get to the river park in Springdale. I just want you to know that there are lots of children and adults who would benefit from the bike path. I also think it would encourage people to get off the couch and see what an active lifestyle is like. Why not encourage safety, getting fresh air and exercise. The bike path has my support.

Thank you kindly,

Naomi Snyder

Get a FREE Web site and more from Microsoft Office Live Small Business!
<http://clk.atdmt.com/MRT/go/aub0930004958mrt/direct/01/>

Maria Vyas

From: climbingtrash@aol.com
Sent: Friday, October 12, 2007 6:56 PM
To: Maria Vyas
Subject: Springdale/Rockville Bike Path
Follow Up Flag: Follow up
Flag Status: Green

To whom it may concern,

As a resident of Virgin and a cyclist, I am in favor of a bike path linking the towns of Springdale and Rockville. (I would one day like to see it run to Virgin)
I think the bike path would serve the community well and increase safety along that stretch of Highway 9. I would like to encourage the two towns to support this endeavor.

Thank you.

Sincerely,

Daniel Snyder

Email and AIM finally together. You've gotta check out free [AOL Mail!](#)

Maria Vyas

From: Bruce VanderWerff [brucevanderwerff@mac.com]
Sent: Friday, October 12, 2007 2:25 PM
To: Maria Vyas
Subject: Zion Canyon / Springdale / Rockville Bike/Walking Trail

Follow Up Flag: Follow up
Flag Status: Green

We are writing in support of the Zion Canyon Trail. We understand the deadline for letters is today.

We believe that the following issues address the positive impact the trail can have on the community:

Financially, it increases property values by having trail access.

The quality of life, reducing pollution, increased health benefits related for exercise.

Safety, taking bikes and walkers off busy SR-9 highway.

Environmentally, the impact is minimal and the experience of being able to travel away from the busy road, in fresh air, to enjoy the canyon scenery away from the noise and in close proximity to the virgin river--the value is irreplaceable.

Other communities who have bike trails are overwhelmingly in support of bike /walking trails.

It would be irresponsible for the community, which has repeatedly in its general plan surveys put a bike trail as one of the top three properties that the community requested. We are a gateway community to a national park. The intention has always been to attach a trail to the Pa'rus Trail, giving easy access to hikers, bikers, runners, and walkers. As stewards of the community, don't let this opportunity pass us by.

Sincerely for the Trail,

Bruce and Shirley VanderWerff
Jakob and Joshua VanderWerff

APPENDIX C: COMMENT RESPONSE FORM

Comment #	Comment	Received From	Response	Location in Document
1	Town meeting minutes from August 8 th Council meeting were missing Appendix A, Powerpoint slides.	Cheryl Frassa	Powerpoint slides are included in Appendix	Appendix A
2	Public process deficient and private agenda operating at Town.	Cheryl Frassa	Study involved two public open houses, two presentations to Town Council, and a project website. Public involvement summary located in Appendix.	Appendix A
3	Cost estimates don't include acquisition of private property for trail.	Cheryl Frassa	Property acquisition costs are generally not known until later in the development process.	Not applicable
4	Max Gregoric used the Canyon Community Center's computer for private interest, along with Julie Hancock.	Cheryl Frassa	Julie Hancock, coordinator for the Canyon Community Center, used her work email address inappropriately in advocating for the trail.	Not applicable
5	Which floodplain would the bridges span?	Cheryl Frassa	There has been some debate in the community over which floodplain is the official floodplain. FEMA conducted a study and identified a floodplain, but the Town has not adopted the FEMA floodplain and has not decided yet whether to adopt it. The floodplain information shown in the feasibility study came from the Town. However, the bridges are designed to span the <i>floodway</i> , not the <i>floodplain</i> .	Section 4.1, page 18
6	What is the UDOT source of funding?	Cheryl Frassa	The feasibility study was funded with project specific federal aid from the Transportation Enhancements fund. UDOT administers several other potential funding sources.	Not applicable
7	Stating that a Categorical Exclusion is the most likely level of environmental study is a predetermination	Cheryl Frassa	Language regarding future environmental study changed.	Section 7.1, page 56

	of NEPA. Start with an EA, then a FONSI, or need for further studies. NEPA does not allow this determination from a feasibility study!			
8	Warner's lot 33 CSE responsible for no bridge [at the Bumbleberry Inn property]. Smith wanted bridge to cross his land adjacent to the Warners so bridge would have brought people to Canyon Springs Estates, and he had the Bumbleberry in escrow. Deal fell through.	Cheryl Frassa	The Warners participated at the first open house in March and demonstrated that the alignment shown on their property was infeasible. Following the open house, conceptual alignments shown on the Warner's property were removed from consideration.	Section 4.2, page 26
9	No phasing of EA. Needs analysis as one project with 3 phases – not 3 EAs.	Cheryl Frassa	The environmental document and phasing of clearance will not be determined with this feasibility study.	Section 7.1, page 56
10	Polls [on project website] didn't work.	Cheryl Frassa	18 people participated in polls.	Not applicable
11	Bridges are to avoid landowners who won't allow trail.	Cheryl Frassa	One bridge is proposed near Canyon Springs Estates to avoid that subdivision; the Town approached CSE in the spring to discuss a trail alignment utilizing the existing road, and was turned down by CSE. One bridge is proposed near the Desert Pearl, because the trail will not fit behind the homes on Watchman Drive on the west side of the Virgin River. One bridge is proposed on Watchman Drive, to provide connectivity to the trail for the community. One bridge is proposed near the Zion Canyon RV Park, to avoid an area of slope failure under Zion National Park jurisdiction; Park policy prohibits construction of any kind on these slopes. Another bridge may be possible to cross into Zion National Park near the RV Park, if trail easements are not provided by	Section 5, page 36

			property owners along the west side of the Virgin River. If easements are obtained, the bridge will not be necessary.	
12	Figure numbers for trail alignment phases referred to in the Town Council August 8 th meeting minutes don't match Figure numbers in draft report.	Cheryl Frassa	In the August 8 th meeting, the Town Council indicated a different order for the phasing; the Figure numbers in the feasibility study reflect the new phasing order.	Not applicable
13	The SR-9 alternative had fewer issues than the riverside alternative.	Cheryl Frassa	The SR-9 alternative had many issues associated with it, including building removal to accommodate additional right-of-way along the road, utility relocation, loss of on-street parking, and numerous conflict points at street intersections and driveway accesses.	Section 4.3, page 29
14	Who's Brett Jensen?	Cheryl Frassa	Brett Jensen is a civil engineer with Carter & Burgess, in their St. George office. Carter & Burgess was a subconsultant to Fehr & Peers for the feasibility study.	Not applicable
15	No more bridges.	Cheryl Frassa	Five bridges are proposed as part of the feasibility study. One may be eliminated if Canyon Springs Estates allows the trail to utilize its bridge; another may be eliminated at the expense of reducing accessibility to the trail; and a third may be eliminated near Zion National Park if property owners opt to allow the trail on their property.	Section 5, page 36
16	Who is the representative from the Division of Water Resources?	Cheryl Frassa	Chuck Williamson, with the Division of Water Rights in the Department of Natural Resources. His phone number is 801-538-7404 and his email is charleswilliamson@utah.gov	Not applicable
17	FHWA agreement with UDOT regarding categorical exclusions does not cover new bridges.	Cheryl Frassa	Correct. UDOT project manager consulted with the UDOT environmental team over whether new pedestrian bridges constituted an environmental assessment rather than a categorical exclusion, and determined that it did not. However, level	Section 7.1, page 56

			of environmental study will be determined at a later time.	
18	Where is the cost/benefit analysis?	Cheryl Frassa	Cost/benefit analysis was not part of the work scope for the feasibility study.	Not applicable
19	Where's the Army Corps of Engineers?	Cheryl Frassa	Army Corps of Engineer's local office participated in a site visit with Carter & Burgess in summer 2007.	Not applicable
20	Please provide access to the "extensive research and study" the trail consultants are working on.	Cheryl Frassa	The draft trail study was available for review via the project website and at the Town offices in October 2007. The final study will be posted on the website and available at the Town in November 2007.	Not applicable
21	Council Presentation summary discusses a "preferred alternative" and is dated June 2007, and therefore public input process meant nothing.	Cheryl Frassa	June 2007 date on the document is an error; the document summarized a presentation to the Town Council that was given on August 8 th , 2007. The document was delivered to the Town of Springdale via email a week prior to the council presentation.	Not applicable
22	GRAMA request to the Town for documentation of the Town's authority to provide incentives to landowners to accommodate the trail.	Cheryl Frassa	Methods of obtaining trail easements are outside the scope of the feasibility study and are not addressed.	Section 7.2, page 57
23	Only 10 people attended the March 19 th open house.	Cheryl Frassa	The sign-in sheet shows 31 names, and not everyone who attended signed in. See the Appendix for a summary of public involvement events.	Appendix A
24	Only 22 people attended the May 31 st open house.	Cheryl Frassa	22 people signed in, although there were others that attended and did not sign in. However, the draft feasibility study's Appendix stated that 45 people attended the event; this has been edited to reflect 22 people. See the Appendix for a summary of public involvement events.	Appendix A
25	Who said that the Town could still receive federal funding for the trail even if it doesn't adopt FEMA's	Cheryl Frassa	Catherine Cutler, UDOT Project Manager.	Not applicable

	floodplain maps?			
26	What will be the operating and maintenance costs for the trail?	Cheryl Frassa	O&M costs were outside the scope of the feasibility study, but can be addressed in later phases.	Not applicable
27	Even if the trail is funded locally and without federal money, the Town will still need to coordinate with federal agencies.	Cheryl Frassa	Yes. Federal and state agencies will need to be involved at various stages, depending on when the phases are built. These agencies include UDOT, the National Park Service, the Division of Water Rights, and the Army Corps of Engineers.	Section 7.2, page 56
28	If the final document is going to have a "Letters of Support" section, it ought to have a "Letters of Non-Support" section also.	Cheryl Frassa	The comments in this table are included as an Appendix to the final report.	Not applicable
29	An SR-9 roadside alternative should be analyzed.	Wayne Hamilton	Alternative 2, the SR-9 alternative, was analyzed as one of three potential corridor-wide alternatives in spring 2007. The three alternatives, including the SR-9 route, were presented at the May 31 open house in Springdale. Each alternative was shown with potential bridge crossings, parcels affected, known associated issues, and conceptual cost estimates.	Section 4.3, page 29
30	The Town should improve the route through town first before adding other trails.	Wayne Hamilton	This issue is separate from the purpose and need of the Zion Canyon Trail Feasibility Study. However, sidewalk connectivity should be improved to create continuous sidewalks throughout Springdale.	Not applicable
31	How many residents expressed an opinion in support of funding a trail feasibility study?	Wayne Hamilton	Because the Town of Springdale sponsored this feasibility study, the Springdale Town Council and Employees directed the work and focus of the Consultant, Fehr & Peers. UDOT's role was to ensure compliance with federal requirements associated with the source of the funds for the study. Many residents	Not applicable

			expressed support for the trail at the open houses that Fehr & Peers held, as well as at the Council meetings. The quantity and level of support from the community for the trail are Springdale government issues and will be one of the determining factors influencing project selection and funding in the future.	
32	Has the Town of Rockville contacted the Town of Springdale expressing an interest in a trail feasibility study?	Wayne Hamilton	The trail feasibility study is not contingent on communication between the towns. It is helpful to have agreements between local governments on matters that could potentially affect both of them. Members of the Town of Rockville have expressed a desire to have a safe route for pedestrians between Rockville and Springdale.	Not applicable
33	Has Zion National Park expressed an interest in a trail feasibility study?	Wayne Hamilton	Representatives of Zion National Park have been involved and consulted with throughout the duration of the feasibility study. Regardless of anyone else's interest (or lack thereof) in the feasibility study, the Town of Springdale requested funding for the Zion Canyon Trail. Based on the application, the Enhancement Advisory Committee (a sub-committee to the Utah Transportation Commission) recommended that a feasibility study be conducted to better define potential trail location, project costs and potential hurdles that may be encountered in design and construction of the trail. The Utah Transportation Commission approved the recommendation to provide funding for this feasibility study.	Not applicable
34	How much is the Town paying?	Wayne Hamilton	The project value listed on the Statewide Transportation Improvement Program is \$125,000. The federal aid portion is \$100,000 with a local match of \$25,000. The Town also received a \$10,000 grant	Not applicable

			from the State of Utah to contribute towards the matching funds requirement.	
35	The potential trail alignment passes through properties that do not have agreements in place to accommodate the trail.	Wayne Hamilton	Correct. The task of this study was to identify the best alignment for a bicycle and pedestrian trail for the community, not the alignment most likely to be accepted by property owners. However, all of Phase One and much of Phase Two of the potential trail alignment have the buy-in from affected landowners.	Section 5, page 36
36	The polling process at the public workshops was unsupervised, and should have met standard voting procedures.	Wayne Hamilton	The polls were to establish user preferences, and weren't used as a vote to choose a final alignment. While public input was one component of identifying a potential trail alignment, it was not the only component.	Not applicable
37	We should look at bike lanes on SR-9.	Wayne Hamilton	Bike lanes were not evaluated as part of this study because the purpose of this study was to evaluate trail alternatives for a variety of non-motorized transportation modes.	Not applicable
38	Natural resources were not accurately identified on maps.	Wayne Hamilton	Natural resource mapping came from available state and local resources. The environmental phase of the project will study relevant environmental issues in greater detail.	Section 4.1, page 18
39	The conceptual trail alignments along the east side of the Virgin River near Canyon Springs Estates will impact private property and will also impact the floodplain and base flood elevations. In addition, the bridges will restrict the 100-year flood flow.	Brant and Patricia Warner, Bruce Jimerson	The conceptual trail alignments were developed prior to the March 19 th open house, which the Warners attended and expressed concern about a trail alignment on the back of their property. After hearing the Warners' concerns and learning more about the site, the conceptual trail alignments in question were removed. There are still several bridges included with the project, and design details will be worked out in later phases of the project.	Section 4.2, page 26
40	Are property owners liable for trail users who injure	Bruce Jimerson	Statewide legislation releases property owners from liability for users of a	Section 6.4, page 54

	themselves on a trail across private property?		recreational trail across their property; this applies whether the trail users are on the trail or are trespassing on private property adjacent to the trail.	
41	Can the Town put the trail across my property without my permission? Will I be compensated if it crosses my property?	Bruce Jimerson, Marcel Rodriguez	No. Eminent domain cannot be applied for trails. If the trail is planned across your property, the Town must negotiate with you for an easement, and you are not obliged to accommodate the trail.	Section 6.4, page 54
42	I am concerned about people trespassing on my property, and I don't want lights, benches, or garbage cans for the trail in front of my home. I don't want loose dogs on my property. I am also concerned that my property will be used to collect storm drainage from the highway.	Filomena Johnson	The Town of Springdale will need to develop a program to police and monitor the trail, discourage trespassing on private property, establish rules about pet control, and perform regular litter pickup services. Waste receptacles are recommended at trailhead locations; see Figure 18 on page 52 for a map of proposed trailheads. While details such as lighting and pedestrian amenities have not yet been identified, lighting the trail was not a high priority for attendees of the public involvement workshops. Storm drainage issues will be addressed in the design phase of the project.	Section 6.5, page 55