RFTA Regional Bicycle, Pedestrian and Transit Access Plan 2015

RFTA

alta PLANNING + DESIGN

DESIGNWORKSHOP

LORIS

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Chapter One:

Introduction

Overview

Bicycling and walking are integral parts of people's lives in the Colorado and Roaring Fork River Valleys. 300+ days of sunshine, the scenic nature of the area and the outdoor enthusiasm displayed by residents all support an expanded and interconnected network of walking and bicycling facilities. There have been several projects completed at a regional level providing transportation options from Glenwood Springs, south to Aspen. However, similar efforts have been slower to develop along the Interstate 70 (I-70) corridor west of Glenwood Springs to Parachute.

The Roaring Fork Transit Authority (RFTA) has been involved in leading the charge for planning, designing and maintaining bicycle and pedestrian facilities like the Rio Grande Trail. Recent transit oriented development (TOD) planning efforts emphasize first and final mile connections to destinations. Additionally, RFTA is conducting an internal study to assess better bicycle and pedestrian connections to bus rapid transit stations (BRTs) and the communities they serve. These are some of the ways RFTA is supporting and encouraging active transportation options within the Roaring Fork and Colorado River Valleys.

Purpose of the Plan

The demand for a safe, accessible and functional active transportation network is apparent throughout the region. The purpose of this plan is to provide a clear framework for the development of new facilities, that in combination with existing facilities, will support safe and efficient bicycling and walking throughout the region including Parachute, Silt, New Castle, Glenwood Springs, Carbondale, El Jebel and Willits, Basalt, Snowmass Village and Aspen. The plan

Figure 1.1: Existing Rio Grande Trail Wayfinding - Basalt

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also includes an examination of existing facilities as well as the tremendous opportunities to provide an enhanced bicycle and pedestrian network within the region.

Towns and cities around the country are recognizing the economic and health benefits of a more bicycle and pedestrian friendly region. A region that is bicycle and pedestrian friendly has the potential to attract new businesses, increase tourism, fight public health issues, enhance air quality, and provide locals and visitors transportation options and new recreational facilities.

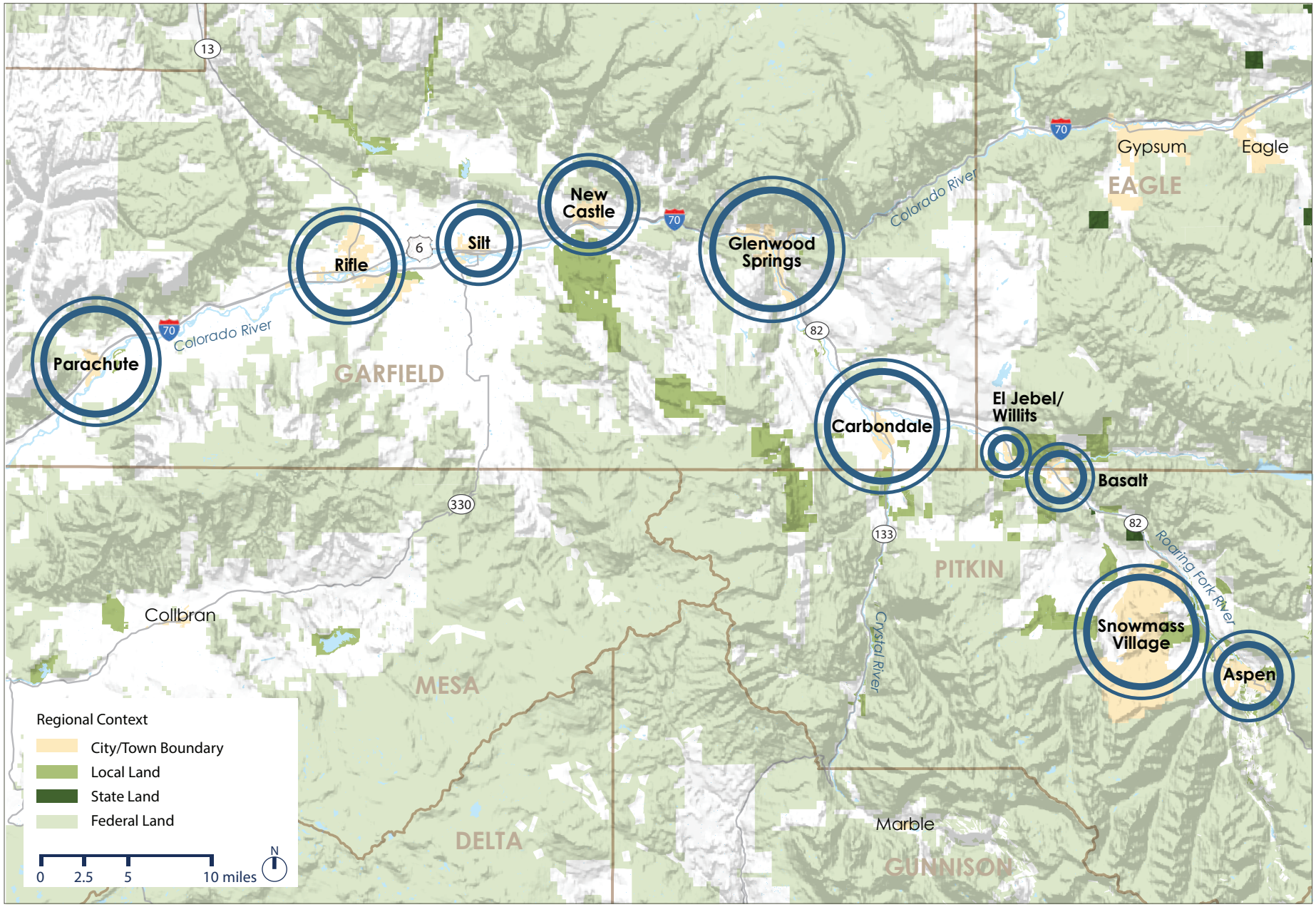
The chief outcome of this plan establishes a region-wide 25-year prioritized list of projects that integrate the bicycle and pedestrian system with the overall transportation system. These projects shall improve bicycle and pedestrian accessibility to home, education, employment, training, health care, shopping, entertainment, recreation, and other daily necessities; with a particular focus on access to major transit stations.

Figure 1.2: VelociRFTA BRT Station - Woody Creek

The RFTA Regional Bicycle, Pedestrian and Transit Access Plan aims to consistently and efficiently coordinate goals and criteria among state, regional and local efforts that are aligned with both the Colorado Department of Transportation ("CDOT") Statewide Bicycle and Pedestrian Plan and the forthcoming 2040 Statewide Transportation Plan. While this plan is crafted to adhere to CDOT guidelines, it also provides a good framework for additional grant funding opportunities.

These goals include:

- Enhance safety
- Provide transportation equity
- Improve multimodal mobility and accessibility
- Maximize transportation, transit investments, and assets
- Improve statewide and regional economies
- Increase bicycling and walking activity
- Expand recreational opportunities to enhance quality of life
- Improve public health
- Improve the environment and air quality by reducing fossil fuel dependence



Map 1.1: Study Area Map

Project background

According to a recent study completed by the Roaring Fork Transit Authority (RFTA), the Colorado River and Roaring Fork River Valley region experience bicycle and pedestrian transportation activity that is five to ten times more than the national average for rural areas. RFTA believes that walking, bicycling and transit will capture an even greater share of mode split in the future due to the constricted nature of the study area, its current land use constraints, shifting national demographics striving for livable communities and the convenience of the new VelociRFTA Bus Rapid Transit ("BRT") system.

In an effort to promote a better quality of life for locals, provide more active transportation options, and enhance the region's economic growth, RFTA has funded this Regional Bicycle, Pedestrian, and Transit Access Plan. This plan encompasses the Interstate 70 ("I-70") and State Highway 6 ("SH-6") corridor, and State Highway 82 ("SH–82") from Glenwood Springs to Aspen. Ultimately this plan aims to provide an active transportation framework of hard surface facilities for connecting the ten communities found within the project study area.

Figure 1.3: Sidewalk Connection to Rio Grande Trail - Glenwood Springs

This project was a collaborative regional effort with initial funding from a FTA 5304 Planning Grant, which RFTA secured grant funding and managed the project. Local matching funds were provided by: Pitkin County, Eagle County, Garfield County and LiveWell Garfield County. Local governments across the three counties will be responsible for implementing and maintaining most of the priority projects mentioned in this regional plan.

This plan is an amalgamation of many previous and ongoing multimodal transportation planning efforts occurring throughout the region.

Study area description

The region as defined in this plan includes the three counties of Garfield, Eagle, and Pitkin. The region is rich in natural and cultural heritage. The physical variation and unique natural destinations that are found

throughout the region characterize the towns, cities, ranches, farms, and mining communities that traverse its mountainous terrain and valley floors. In physical terms, the region is divided into two river valleys. The major analysis and recommendations sections of this plan are structured by these valleys, which are the Roaring Fork and Colorado River Valleys.

Planning Process

Development of the RFTA Regional Bicycle, Pedestrian and Transit Access Plan began in July of 2014 and concluded in September 2015. Public participation (through Stakeholder Focus Groups and Technical Advisory Committee Team meetings) played a key role in this plan's development. Opportunities for public and stakeholder input were provided throughout the planning process, from the data-gathering stage to the final recommendations stage. For more information on the public involvement process for the Regional Bicycle, Pedestrian, and Transit Access Plan, see Chapter 4.

Figure 1.4: RFTA Bus - Glenwood Springs

14 stakeholder focus groups meetings were held as part of the planning process during the existing conditions/data-gathering stage. Over 50 staff and community members participated in the meetings. Except for a few communities, good turnout occurred throughout the stakeholder focus group meetings. City, town, and county staff, as well as key members of the community representing larger groups of citizens participated in these meetings.

A steering committee with representation from RFTA, all three counties, and CDOT met regularly to review draft documents and generally guide development of the RFTA Regional Bicycle, Pedestrian, and Transit Access Plan. The committee met bi-monthly during the course of the project.

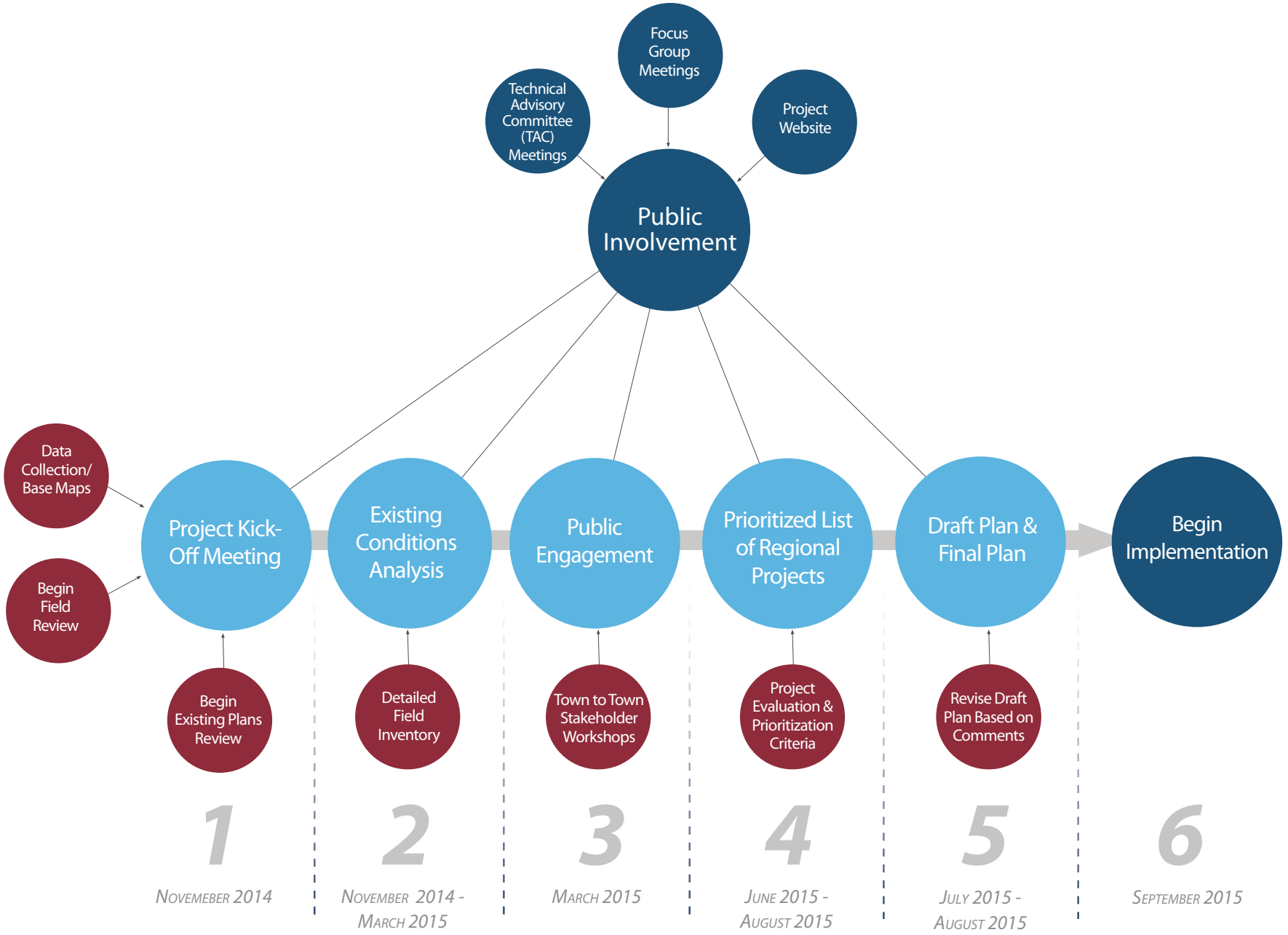


Figure 1.5: Planning and Process Summary

Top Priority Projects

An equitable prioritization process was used to develop the priority projects in the RFTA Regional Bicycle, Pedestrian, and Transit Access Plan. Implementation of the priority projects identified in this plan can provide a wide range of benefits to the residents from Garfield, Pitkin, and Eagle County. These projects provide needed regional connections or fill critical gaps that facilitate regional travel for bicycles, pedestrians, and access to transit.

Over the last few years local governments and community trail advocates have met to support each other in grant cycles and regional trail planning. Throughout these meetings the group decided that there was a need to produce a regional plan that organized their efforts in a centralized manner. RFTA was identified as the logical lead for this endeavor. RFTA, working with the support of the study area communities aim to implement a regional active transportation network.

Garfield County

In terms of numbers, Garfield County identified the most priority projects throughout the plan area. Size of county and lack of infrastructure were likely contributing factors. The most regionally significant project identified is the LoVa Trail which focuses on building a 47-mile regional non-motorized route through the Colorado River Valley and the I-70 corridor from Glenwood Springs west to the Garfield County Line. In addition, a grade-separated crossing at Highway 133 for the Rio Grande Trail near the Carbondale BRT station was noted to enhance safety, connectivity, and access tor transit.

Eagle County

A shared-use path connection from Crown Mountain Park to the Rio Grande Trail and a grade-separated crossing of SH-82 were identified as a critical gaps in the active transportation network in Eagle County.

Pitkin County

Pitkin County historically has lead the region in planning and implementation of bicycle, pedestrian and trail projects. The Crystal Trail from South Bill Creek Road to Redstone, and a shared-use trail connection between the Intercept lot and the AABC were two priority projects that were identified within the planning process that would add to an already robust active transportation network within Pitkin County.

Figure 1.6: Existing Segment of the LoVa Trail - Glenwood Springs

Table 1.1 outlines the top priority projects from this plan, generated from the prioritization process for each community. Projects are listed by county from down valley to up valley. A complete inventory of Regional Priority Projects is contained in Chapter 5.

Table 1.1 Top Priority Projects

County	Project Lead	Type	Project Description	From	To
Garfield	Garfield County	Shared-Use Path	LoVa Trail - Connect existing segments of LoVa Trail through South Canyon. Add shared-use path Garfield County's west Boundary	Garfield County West Boundary	LoVa Trail Segment in West Glenwood Springs
Garfield	Parachute	Trail	Riverfront extension - LoVa Trail link	CR 215	Cottonwood Park Rodeo Grounds
Garfield	Rifle	Bicycle lanes	Add Bicycle Lanes to 16th Street	East CR-293	CO-13/Railroad Ave
Garfield	Silt	Shared-Use Path	Add 10' shared-use path (LoVa Trail) along Colorado River	I-70	East Town Boundary
Garfield	New Castle	Shared-Use Path	Complete 10' shared-use path to Canyon Creek Rd and through South Canyon to Glenwood Springs	Castle Valley Blvd.	Glenwood Springs
Garfield	Glenwood	Shared -Use Path	Add 10' shared-use path from Lowe's to the 114 Exit	Lowe's	114 Exit
Garfield	Carbondale	Grade-separated crossing	Grade-separated crossing at Highway 133 for Rio Grande Trail connection; near BRT	Rio Grande Trail west side of Highway 133	Rio Grande Trail east side of Highway 133
Garfield	Garfield County	Shared-Use Path	Utilize Highway 6 right-of-way or the railroad right-of-way to develop shared-use trails (such as the Rio Grande Trail), especially between each community in the corridor.	Parachute	New Castle
Eagle	El Jebel/ Willits	Shared-Use Path/Bridge Connection	Add 10' shared-use path and bicycle and pedestrian bridge from Crown Mountain to Rio Grande Trail	Rio Grande Trail	Crown Mountain Park
Eagle	Basalt	Grade-separated crossing	Construct a grade-separated crossing at BRT station	Up Valley BRT Station	Down Valley BRT Station
Pitkin	Snowmass Village	Sidewalk	Add sidewalks along Brush Creek Road	Wood Rd.	Owl Creek Rd
Pitkin	Aspen/Pitkin County	Shared-Use Path	Create connection to Community School/ Music School (Construction 2017)	Aspen Valley Hospital	School Property/ CR15
Pitkin	Pitkin County	Shared-Use Path	Shared use trail connection (s) between Intercept lot and the AABC. This may include partial use of the Rio Grande Trail	Intercept lot	Rio Grande Trail
Pitkin	Pitkin County	Shared-Use Path	Add 10' shared use path	S. Bill Creek Road	Redstone

The Value of the Plan

Improvements that encourage bicycling and walking can provide a wide range of benefits to a community and its residents. Better bicycling and pedestrian facilities improve safety and encourage more people to ride and walk, which in turn improves health, provides a boost to the local economy, creates a cleaner environment, reduces congestion and fuel costs, and contributes to a better quality of life and sense of community.

Communities across the country are experiencing the benefits of providing a supportive environment for bicycling and walking. With a better bicycle and pedestrian network, the region can create stronger, more vibrant communities and take advantage of the many benefits such as:

Improved Health through Active Living

Regular physical activity is recognized as an important contributor to good health. The Centers for Disease Control and Prevention (CDC) recommend 30 minutes of moderate physical activity each day for adults and 60 minutes each day for children.[1] Unfortunately, many people do not meet these recommendations because they lack environments where they can be physically active. The CDC reports that "physical inactivity causes numerous physical and mental health problems, is responsible for an estimated 200,000 deaths per year, and contributes to the obesity epidemic."[2]

Having accessible bicycle and pedestrian facilities available, such as bike lanes and shared—use paths, can help people more easily incorporate physical activity into their daily lives. Regular physical activity, such as bicycling or walking, is shown to have numerous health benefits:[3]

- Reduces the risk and severity of heart disease and diabetes
- Reduces the risk of some types of cancer
- Improves mood
- Controls weight
- Reduces the risk of premature death

Figure 1.7: Colorado River Shared-Use Path Bridge - New Castle

Improved Environmental Quality

Providing the option of bicycling as an alternative to driving can reduce the volume of car-related emissions, which in turn improves air quality. Cleaner air reduces the risk and complications of asthma, particularly for children, the elderly, and people with heart conditions or respiratory illnesses.[4] Lower automobile traffic volumes also help to reduce neighborhood noise levels and improve local water quality by reducing automobile-related discharges that are washed into local rivers, streams, and lakes.

Transportation Benefits

Many Coloradans do not have access to a vehicle or are unable to drive. Providing a well-connected bicycle and pedestrian network provides those who are unable or unwilling to drive with a safe transportation option. Bicycle and pedestrian improvements can increase access to important destinations for the young, the elderly, low-income families, and others who may be unable to drive or do not have a motor vehicle.

Investing in bicycle and pedestrian facilities can also help to reduce congestion and the pollution, gas costs, wasted time, and stress that comes with it. Each person who makes a trip by bicycle or by foot, is one less car on the road or in the parking lot. A network of wide shoulders, bike lanes, sidewalks and shared-use paths gives people the option of making a trip by bicycle or on foot, which helps to alleviate congestion for everyone.

Bicycle and pedestrian facilities can also help to substantially reduce transportation costs by providing a way of getting around without a car for some trips. About half of all trips taken by car are three miles or less, equivalent to a 15-minute bike ride.[5] With a safe, convenient bicycle and pedestrian network, some of these shorter trips could be comfortably made by bicycle or on foot, saving money on gas, parking costs, and vehicle wear and tear over time.

Figure 1.8: RFTA BRT Station - Carbondale

Better Quality of Life

Increasingly, citizens are demanding a cleaner, safer, more enjoyable community that provides amenities for adults and children alike. Trails for biking and walking are considered one of the most important amenities a neighborhood can have. Communities with quality greenways, trails, and bicycle routes attract new residents as well as new businesses and industries. Getting outdoors and being physically active also helps to relieve stress, improve mood, and foster social connections between residents.

Transportation and recreation options will be especially important for older Americans in the coming years. According to the Brookings Institution, the number of older Americans is expected to double over the next 25 years. Seniors who find themselves unable to drive or who become uncomfortable with driving will find that their mobility is severely limited if another transportation option isn't available. Trails and paths will provide seniors with a place to take a low-intensity bike ride or a stroll around the neighborhood, or a way to get to nearby shops and services. Paths and trails are also valuable transportation connections for the elderly because they accommodate motorized wheelchairs, which can provide many seniors with the independent mobility that they would not have otherwise.

Figure 1.9: Shared-Use Path - Rifle

Children can also benefit greatly from a safe, well connected bicycle and pedestrian network in their neighborhoods. In recent years, increased traffic and a lack of pedestrian and bicycle facilities have made it less safe for children to travel to school or to a friend's house. In 1969, 48 percent of students walked or biked to school, but by 2001, less than 16 percent of students walked or biked to or from school. By reevaluating and improving the regional bicycle and pedestrian network, children in the region could once

again safely bicycle or walk in their communities. According to the National Center for Safe Routes to School, "Walking or biking to school gives children time for physical activity and a sense of responsibility and independence; allows them to enjoy being outside; and provides them with time to socialize with their parents and friends and to get to know their neighborhoods."5 Ensuring that children have safe connections to their schools and throughout their neighborhoods can encourage them to spend time outdoors, get the physical activity they need for good health, and offer a higher quality of life.

Implementation of the facilities in this plan can provide a wide range of benefits to a region, communities, and its residents. This plan is a guide for the region to use to grow in an effective and coordinated way, by making best use of limited available resources. It is intended to provide an understanding of current conditions, build community interest, and provide a clear path forward. The recommendations proposed in this plan are intended to be guidance that is flexible in nature, by allowing for the changing landscape and needs of the region. Most importantly, this master plan is intended to drive immediate and long term progress.

Endnotes

1.http://www.cdc.gov/physical activity/everyone/guidelines/index.html

2. U.S. Department of Health and Human Services. Centers for Disease Control and Prevention. (1996). Physical Activity and Health: A Report of the Surgeon General

3. National Prevention Council. (2011). National Prevention Strategy: America's plan for better health and wellness. Retrieved from http://www.healthcare.gov/prevention/nphpphc/strategy/report.pdf

4. Health Effects Institute (2010). Traffic-Related Air Pollution: A Critical Review of the Literature on Emissions, Exposure, and Health Effects. Special Report 17.

5. U.S. Department of Transportation and Federal Highway Administration. (2009). National Household Travel Survey.

6. National Center for Safe Routes to School. (2006). National Center for Safe Routes to School Talking Points.

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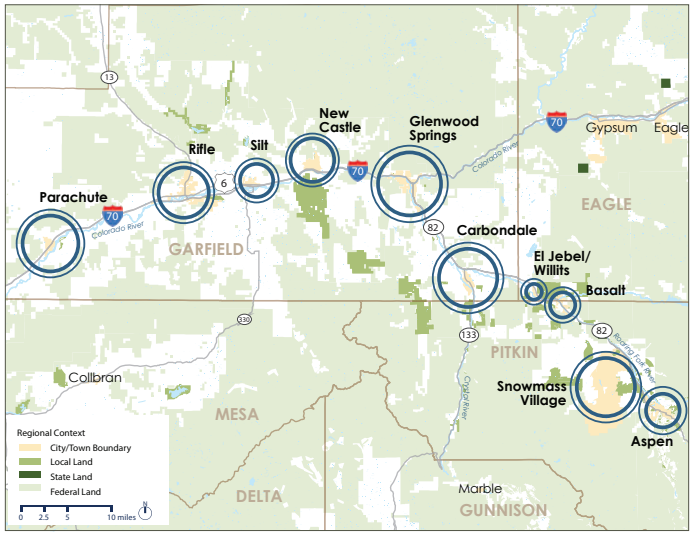
Chapter Two:

Existing Conditions

Overview

This chapter provides a brief overview of the physical and cultural characteristics across the region, as well as their relevance to bicycling and walking today. This overview is presented in a series of narratives, graphics and maps. Finally, relevant planning initiatives and a brief description of the existing network relevant to bicycling and walking in the region are summarized.



Map 2.1: Study Area Map

Regional Setting

Located over 180 miles west of Denver along I-70, the project study area encompasses the Colorado River and Roaring Fork River valleys and is largely surrounded by rural landscape, national forest, and private lands. The region's steep valleys has limited development to the flatter, gentler terrain found in the compact cities highlighted in Map 2.1. The geographic size and topography of the cities are indicative of high potential for active transportation modes such as bicycling and walking. A recent RFTA regional travel survey found that total number of walking and biking trips remains relatively constant in the summer and winter months.

The region has historically been known for its scenic beauty and access to abundant outdoor recreation opportunities. Large numbers of tourists visit the region throughout the year for multi-season sports and leisure. Major destinations include downtown areas, the Rio Grande Trail, Glenwood Hot Springs, Snowmass Village, and other resorts towns.

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Figure 2.1: Rio Grande Trail

Relevant Plans

Plans and documents prepared by local and regional agencies provide a background on current and past goals, efforts, and projects for bicycling and walking as well as a framework for future planning and development. Review of relevant plans is a crucial link to previous planning efforts. Related recommendations were considered during this planning process and were included in this plan's recommendations.

Decades of regional and local planning and policy documents were reviewed as part of this planning effort. Many of the communities have completed or are working on related planning efforts that deal specifically with bicycle and pedestrian transportation and recreation. The following is a list of plans that were reviewed as part of the existing conditions analysis:

Garfield County:

- Comprehensive Plan Update - 2013
- BLM Red Hill SMRA Alternative Transportation Study - 2013
- Live Well Garfield County Community Strategic Plan - 2014

- New Castle Comprehensive Plan - 2009
- New Castle Master Plan for Parks, Trails and Open Space - 1999
- Rifle Downtown Transit Oriented Development Strategic Plan - 2013
- Rifle Bicycle Master Plan - 2013
- Glenwood Springs Comprehensive Plan - 2011
- Glenwood Springs Parks & Recreation Comprehensive Master Plan
- Carbondale Comprehensive Plan Update - 2013

Eagle County:

- Comprehensive Plan - 2005
- Mid-Valley Area Community Plan - 2013
- Mid-Valley Trails Plan - 2006
- Crown Mountain Park Map and Information
- Basalt Area Parks, Open Space and Trails Master Plan - 2013
- Two Rivers Greenway Master Plan - 2015
- Basalt Master Plan Update - 2007
- Crown Mountain Park Map and Information

Pitkin County

- Aspen Area Community Plan (AACP) - 2012
- Aspen Bicycle Plan - 1991
- Aspen Area Community Plan - 2012
- Aspen Civic Master Plan - 2006
- Roaring Fork Gorge Plan - 2013
- Rio Grande Trail Management Plan Draft - 2015
- The Crystal River Trail Study - 2004
- Snowmass Comprehensive Plan Update - 2010

RFTA:

- Rio Grande Rail-Trail information
- Bikes on Buses
- Regional Travel Patterns Study (RTPS)

Trails Groups:

- Lower Valley (LOVA) Trails Master Plan - 2003

Figure 2.2: Bicycle and Pedestian Underpass - Aspen

Figure 2.3: Roaring Fork River Valley - Glenwood Springs

Overall Network Description

The Roaring Fork River Valley's bicycle, pedestrian and transit facilities generally offer convenient and safe connections between communities and to destinations within the valley. These networks are less complete in the Colorado River Valley and connectivity within and between the communities is incomplete. Maps 2.2 and 2.3 illustrate the regional bicycle, pedestrian and transit network. A more extensive review of existing conditions for each community is found in Appendix A and includes an inventory of bridges, underpasses, identified travel sheds, pedestrian and bicycle facilities and land use.

Major east-west vehicular travelways include Interstate 70 and State Highway 6. State Highway 82 serves as the main north-south route. The existing Rio Grande and planned LOVA shared use paths parallel portions of these major routes to provide pedestrian and bicycle connections throughout much of the study area. These regional networks also draw tourists to the area.

In addition to regional shared-use paths, Glenwood Springs, Carbondale, Rifle and Aspen offer on- and off-street bicyle and pedestrian facilities. Existing bicycle facilities include shared-use paths, bike lanes, shared roadways, paved shoulders, and on-street bike routes.

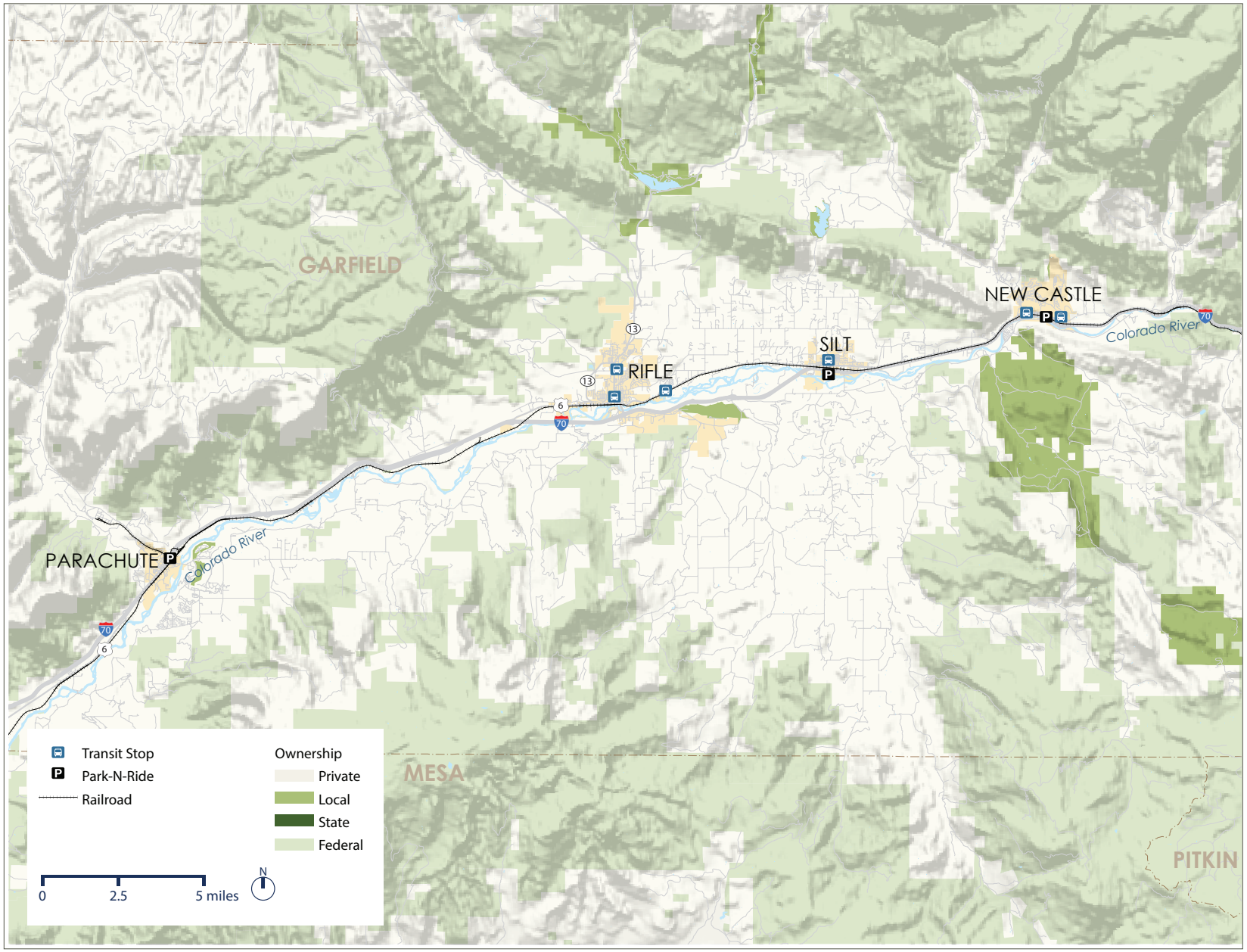
While many of the historic downtowns, commercial districts, and new residential developments within the Roaring Fork River Valley communities offer safe bicycle and pedestrian infrastructure, sidewalk networks are often incomplete and fail to provide continuous connections to the larger community. Communities within the Colorado River Valley largely lack pedestrian and bicycle facilities.

Figure 2.4: Bike parking at BRT Station - Carbondale

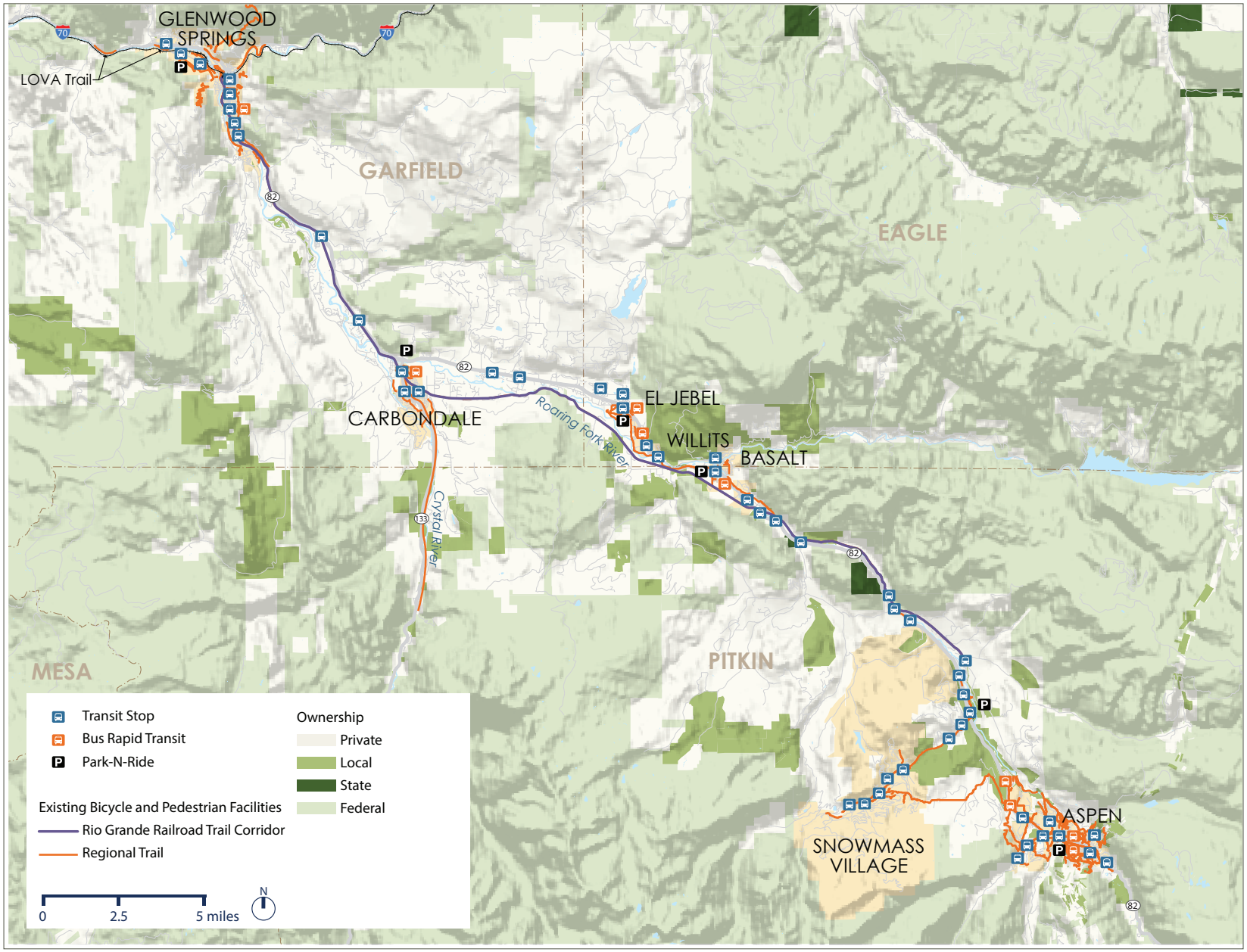
The region has a highly functional bus system serviced by RFTA. RFTA provides commuter bus service from Aspen to Glenwood Springs and Glenwood to Rifle. Transit stops are located in Rifle, Silt, New Castle, Glenwood Springs, Carbondale, El Jebel, Willits, Basalt, Snowmass Village, and Aspen. Additionally, Bus Rapid Transit (BRT) is offered in Glenwood Springs, Carbondale, El Jebel, Willits, Basalt, Aspen, along SH 6, SH 82, and in unicorporated areas of all three counties.

The condition of existing bicycle and pedestrian access to BRT stations and other major stations in the valleys is variable. Communities, such as Aspen, have grade seperated bicycle and pedestrian access while others are fairly isolated. Many rely on access via automobile.

In addition, several Park-N-Ride locations can be found and are highly utilized throughout the study area and maintained by both RFTA and CDOT.



Map 2.2: Existing Conditions - I-70 Corridor



Map 2.3: Existing Conditions - Highway 82 Corridor

Existing Bicycle and Pedestrian Facilities

The study area's existing bicycle and pedestrian network includes both on- and off-street facilities. To reduce confusion and provide a consistent naming framework for the region's network as it potentially expands to include additional facility types, a nomenclature system based on national precedent, design guideline documents, and previous planning studies was developed and will be used throughout this plan.

Following are descriptions of each facility type, including those that currently exist and those that are proposed as part of this plan.

Shared Roadways (On-Street)

On shared roadways, bicyclists and motor vehicles use the same roadway space. These facilities are typically used on roads with low speeds and traffic volumes, however they can be used on higher volume roads with wide outside lanes or shoulders. A motor vehicle driver will usually have to cross over into the adjacent travel lane to pass a bicyclist, unless a wide outside lane or shoulder is provided.

Shared roadways employ a large variety of treatments from simple signage and shared lane markings to more complex treatments including directional signage, traffic diverters, chicanes, chokers, and/or other traffic calming devices to reduce vehicle speeds or volumes.

Signed Shared Roadway

Signed shared roadways are facilities shared with motor vehicles. They are typically used on roads with low speeds and traffic volumes, however can be used on higher volume roads with wide outside lanes or shoulders. A motor vehicle driver will usually have to cross over into the adjacent travel lane to pass a bicyclist, unless a wide outside lane or shoulder is provided.

Marked Shared Roadway

A marked shared roadway is a general purpose travel lane marked with shared lane markings (SLM) used to encourage bicycle travel and proper positioning within the lane.

In constrained conditions, the SLMs are placed in the middle of the lane. On a wide outside lane, the SLMs can be used to promote bicycle travel to the right of motor vehicles.

In all conditions, SLMs should be placed outside of the door zone of parked cars.

Figure 2.6: Typical marked shared roadway

Figure 2.7: Sharrows - Aspen, CO

Bike Boulevards

Bicycle boulevards are low-volume, low-speed streets modified to enhance bicyclist comfort by using treatments such as signage, pavement markings, traffic calming and/or traffic reduction, and intersection modifications. These treatments allow through movements of bicyclists while discouraging similar through-trips by non-local motorized traffic.

Figure 2.8: Typical bike boulevard marking and signage

Separated Bikeways (On-Street)

Designated exclusively for bicycle travel, separated bikeways are segregated from vehicle travel lanes by striping, and can include pavement stencils and other treatments. Separated bikeways are most appropriate on arterial and collector streets where higher traffic volumes and speeds warrant greater separation.

On-Street Bike Lanes

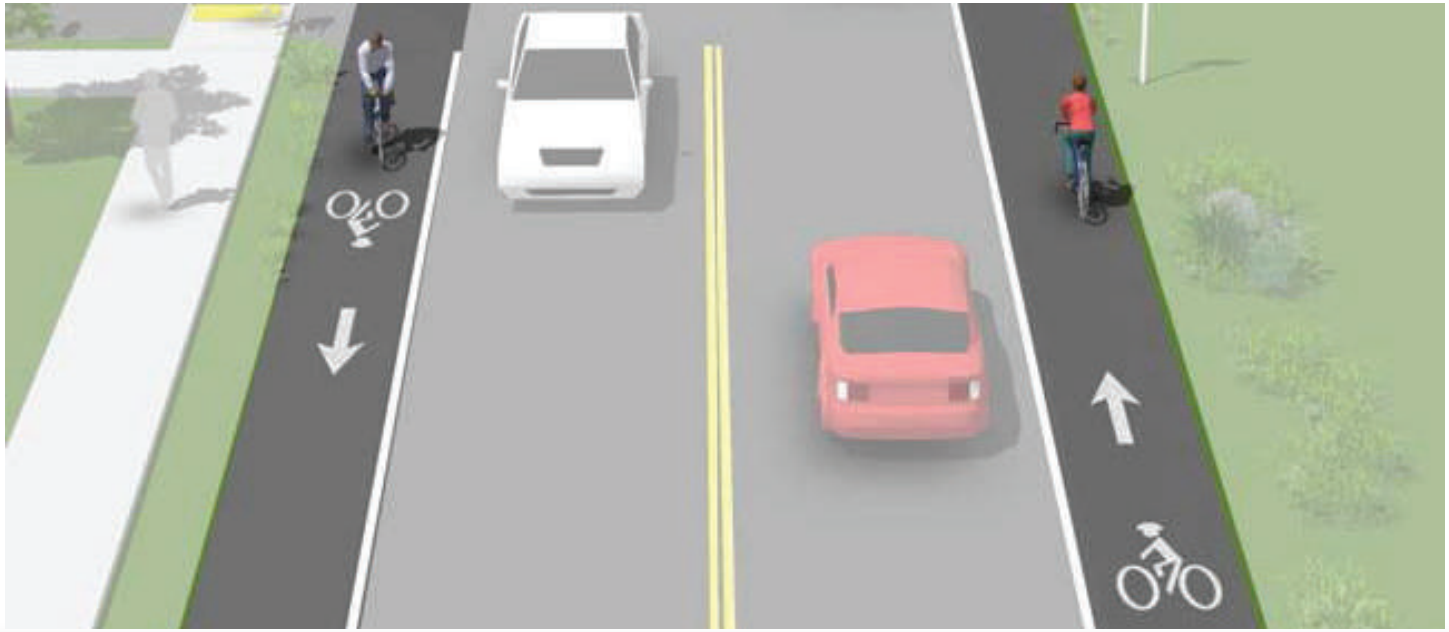
On-street bicycle lanes designate an exclusive space for bicyclists through the use of pavement markings and signage. The bike lane is typically located on the right side of the street, between the adjacent travel lane and curb, and is used in the same direction as motor vehicle traffic.

An on-street bike lane width of 7 feet makes it possible for bicyclists to ride side-by-side or pass each other without leaving the bike lane, thereby increasing the capacity.

Shoulder Bikeways

Typically found in less-dense areas, shoulder bikeways are paved roadways with striped shoulders (4'+) wide enough for bicycle travel. Shoulder bikeways often, but not always, include signage alerting motorists to expect bicycle travel along the roadway. In some cases, shoulder bikeways may be considered a temporary treatment, with full bike lanes planned for construction when the roadway is widened or completed with curb and gutter. This type of treatment is not typical in urban areas.

Figure 2.9: Typical shoulder bikeway



Shared Use Paths (Off-Street)

Shared use path is a category of facilities that includes off-street trails, sidepaths, and subdivision trails. These facilities are two-way facilities that are intended for the shared use of bicycles, pedestrians, and other human-powered forms of transportation such as roller blading, wheelchair use and jogging.

Off-Street Shared Use Path

Off-street trails, sometimes referred to in this document as just "trails" are shared use paths that are in an independent right-of-way (they are not in the roadway right-of-way) and are often along utility, railroad, drainage, or nature corridors. They offer non-motorized transportation and recreation opportunities not provided by the road system. While they are generally considered the most comfortable bicycle facility for most of the public, they are often less direct than on-street facilities.

Figure 2.10: LOVA Trail - Glenwood Springs

Figure 2.11: Shared Use Path along Roadway - Glenwood Springs

Shared Use Paths Along Roadways

Shared Use Paths along roadways, also called Sidepaths, are a type of path that run adjacent to a street.

Because of operational concerns it is generally preferable to place paths within independent rights-of-way away from roadways. However, there are situations where existing roads provide the only corridors available.

Along roadways, these facilities create a situation where a portion of the bicycle traffic rides against the normal flow of motor vehicle traffic and can result in wrong-way riding where bicyclists enter or leave the path.

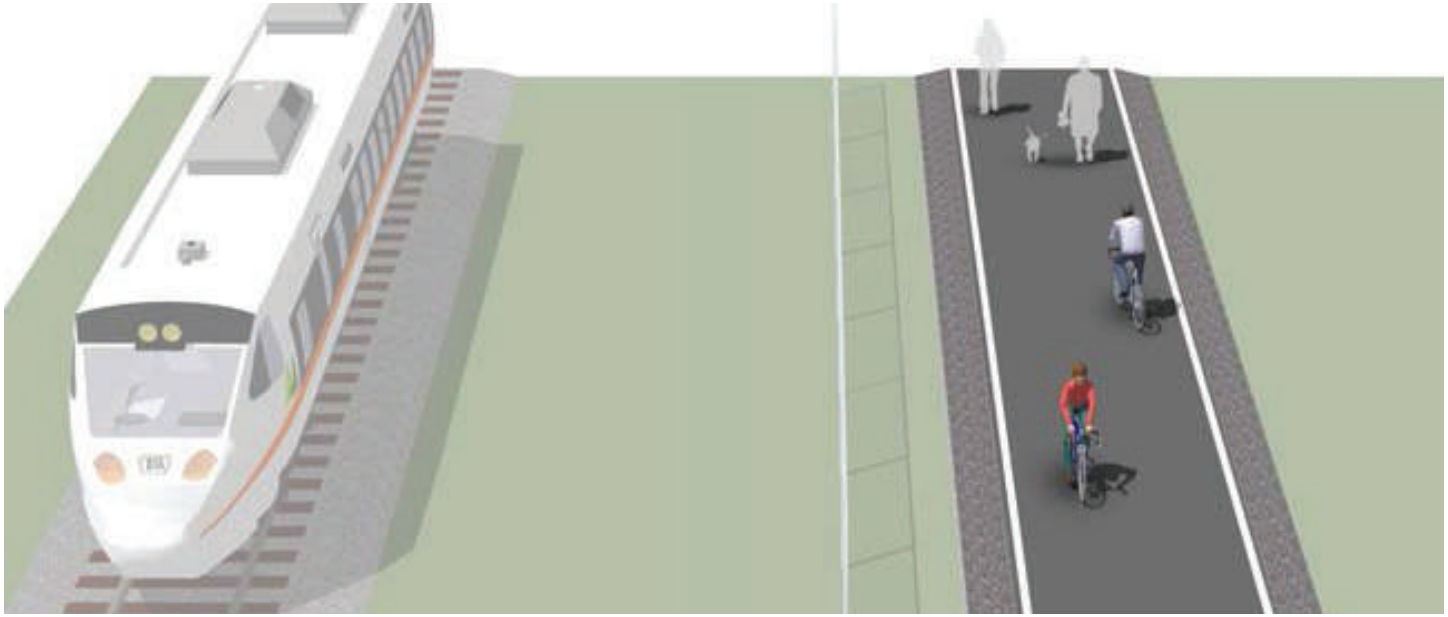


Figure 2.12: Typical rails-with-trails

Rails-with-Trails

Rails-with-Trails are paths adjacent to active railroads. It should be noted that some constraints could impact the feasibility of rail-with-trail projects.

Subdivision Trails

Subdivision trails are shared use paths not managed by the city that are constructed as part of a specific development (usually a residential neighborhood). These trails are sometimes not designed to a particular width or material standard and, although they can serve as critical connections in a bicycle and/or pedestrian network, are generally used as connector trails that allow residents to make beginning and end of trip connections from the city network to their place of residence.

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Juicy Lucy's
STEAKHOUSE
ROOFTOP DINING
the pullman
NO PARKING

Chapter Three:

Opportunities and Constraints

Overview

Opportunities, constraints and priority projects for each community map were sourced from feedback gathered through the public engagement process. Comments were logged, mapped and presented with their respective community section and map. Detail maps in this chapter summarize the opportunities and constraints pertinent to each community.

Throughout the project area there are varying opportunities and constraints that affect the region as a whole, each sub-region, and each community. The region covers a very large area and development throughout the region differs based on the geographical characteristics of both the Colorado River Valley as well as the Roaring Fork River Valley. Geographical characteristics and economic differences are the drivers behind most of the opportunities and constraints for the region.

Figure 3.1: Substandard Pedestrian Conditions on US-6 - New Castle

Chapter Contents

Opportunities and Constraints

Bicycle, Walking, and Transit Access Opportunities

The region is composed largely of rural farmland, ranchland, public land (BLM, USFS), and oil and gas operations with small historic towns. Despite a lack of bicycle facilities and walking facilities, some existing roadway and traffic conditions do create opportunities for bicycling:

- Lower-volume, two-lane roadways such as Highway 6, CR 100, Two Rivers Road and CR 16 offer calm, scenic long-distance bicycling.
- The communities are fairly compact featuring grid roadway networks that are connected and accessible by bicycle and walking. In addition, some of these communities have and continue to make investments in active transportation.
- The Colorado and Roaring Fork River corridors offer natural features that are uninterrupted between the communities that could serve as locations for a bicycle and pedestrian facility, like a shared-use path.
- Union Pacific Railroad corridor, similar to the Rio Grande Railroad corridor, is an opportunity for a rail with trail in the future.
- Implementation of a regional wayfinding system would be a cost effective way to direct bicyclists and pedestrians to RFTA facilities.

Figure 3.2: Union Pacific Railroad Possible Future Corridor - Parachute

- Reconfiguring angled parking to parrallel can accommodate parking protected bicycle lanes.
- Removing a few automobile parking spaces can provide a suitable space for bicycle corral parking.
- Future transit service and associated infrastructure (BRT, enhanced bus services) could serve as a financial mechanism to implement bicycle and/or pedestrian facility improvements. The recent BRT stations along the corridor create opportunities for first and final mile connections to enhance transit access.

Bicycle, Walking, and Transit Access Facility Implementation Opportunities

Conditions between the Roaring Fork and Colorado River Valleys vary greatly but there are opportunities for implementation with the following strategies:

- Add paved shoulders during resurfacing/ reconstruction along commonly-used roadways such as Highway 6, CR 100, Two Rivers Road and other county roads.
- Stripe, restripe, or implement lane reductions to incorporate bicycle facilities where sufficient roadway width exists and volumes are low, especially in Parachute, Silt, New Castle, Carbondale, El Jebel, and Basalt.
- Utilize roadway right-of-way or railroad right-of-way to develop multi-use trails (such as the Rio Grande Trail), especially between each community in the study area.
- Include bicycle and walking facility space with bridge reconstruction over Interstate 70 and SH 82.
- Identify better first and final mile connections to the Rio Grande Trail and BRT stations from key origins and destinations within the communities.
- Provide enhanced trail/intersections crossings treatments where the Rio Grande/or other trails cross roadways or driveways

Physical Barriers/Constraints to Bicycling and Walking

Generally, there are more barriers than opportunities for bicycling. Key barriers include:

Bridge Barriers:

Multiple bridges serve as barriers due to a lack of paved shoulder, lack of connected sidewalks, and high-speed traffic. Key bridge barriers include:

- CR 215 Bridge (Parachute) – Limited paved shoulder, high traffic speeds, discontinuous sidewalks.
- Highway 6 Bridge (Between Parachute and Rulison) – Although it contains wide travel lanes, there is no separated space for people bicycling.
- 9th Street Bridge (Silt) – Limited paved roadway, low railings, and no sidewalks.

Figure 3.3: Pedestrian Bridge - Parachute

At Grade Crossings:

Multiple at grade crossings serve as barriers, as many users feel uncomfortable crossing major roadways with traffic. Key crossing barriers include:

- State Highway 133 and Rio Grande Trail – Dated infrastructure and limited wayfinding signage make it difficult for trail users to navigate through the Carbondale BRT station and across State Highway 133.
- Southside Drive and Rio Grande Trail (Basalt High School) – Although it contains a stop sign, the location of the stop bar along Southside Drive is located such that cars now stop in the trail crossing zone.
- Upper River Road/County Road 17 trail crossing – Even though this is a low volume roadway crossing, no advanced warning, warning signs, or trail crossing markings (crosswalk markings) exist.
- Connectivity issues: Due to the overall lack of bicycle and pedestrian facilities in the I-70 corridor, limited connectivity exists between communities and to key origins and destinations. However, the presence of the Rio Grande Trail in the SH 82 corridor provides great connectivity between communities, but first and final mile connections to Rio Grande Trail, RFTA transit stops, and other key destinations need improvement to make these trips safer and more comfortable for users.

Figure 3.4: Narrow Shoulders on US-6 between Parachute and Rulison

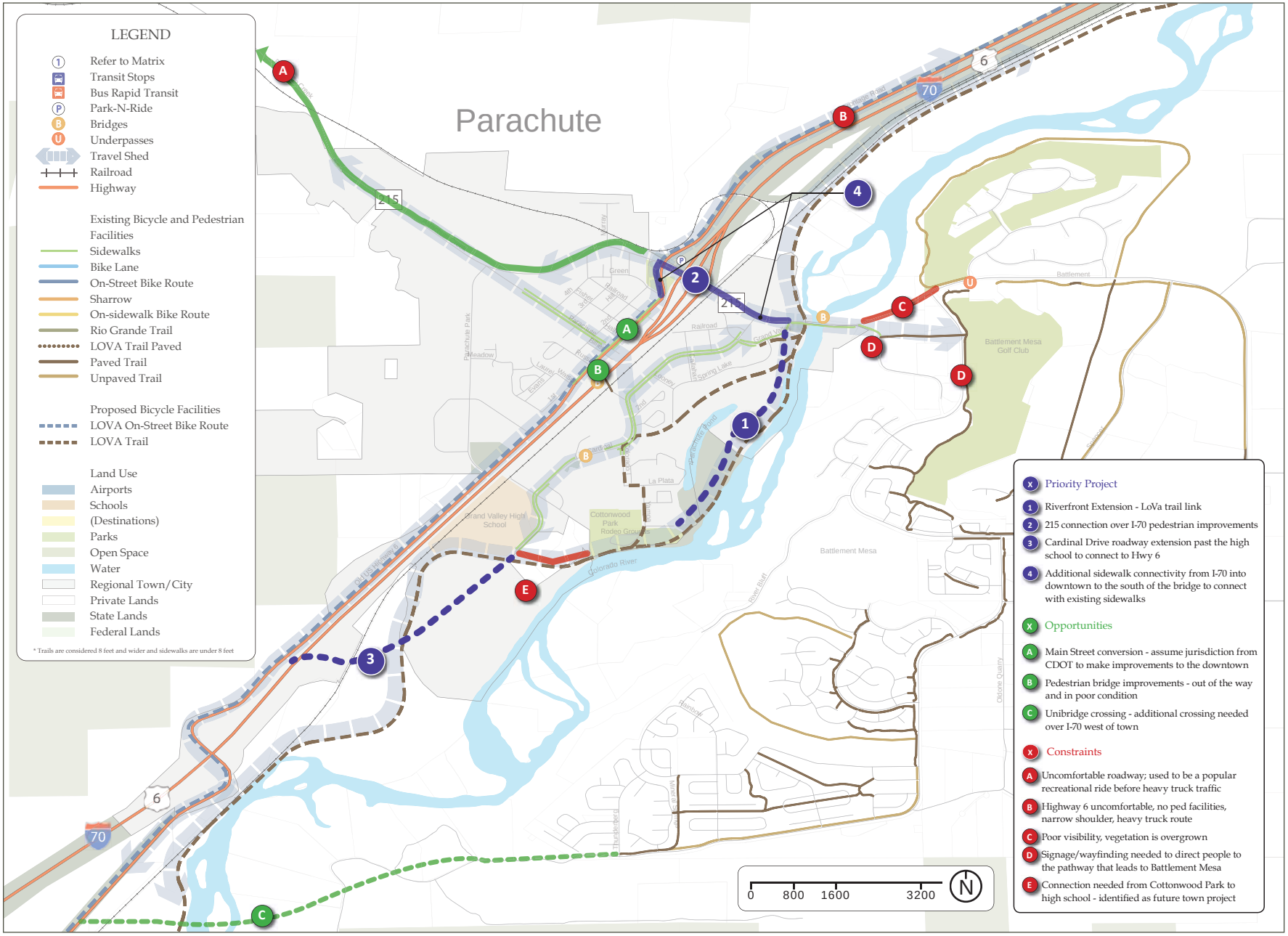
- Crossing high-volume, high-speed roadways: There are numerous busy roadways within the region that are difficult or uncomfortable for bicyclists and pedestrians to cross (I-70, SH 82, and Highway 6).
- Narrow roadways and lanes: There are many roadways throughout the region that are too narrow for bicyclists to share the lane with vehicles. These roads have little or no shoulder, often contain blind curves, have relatively high vehicle travel speeds, and large percentage of heavy vehicles which pose multiple hazards for bicyclists.

Barriers/Constraints to Bicycle Facility Development

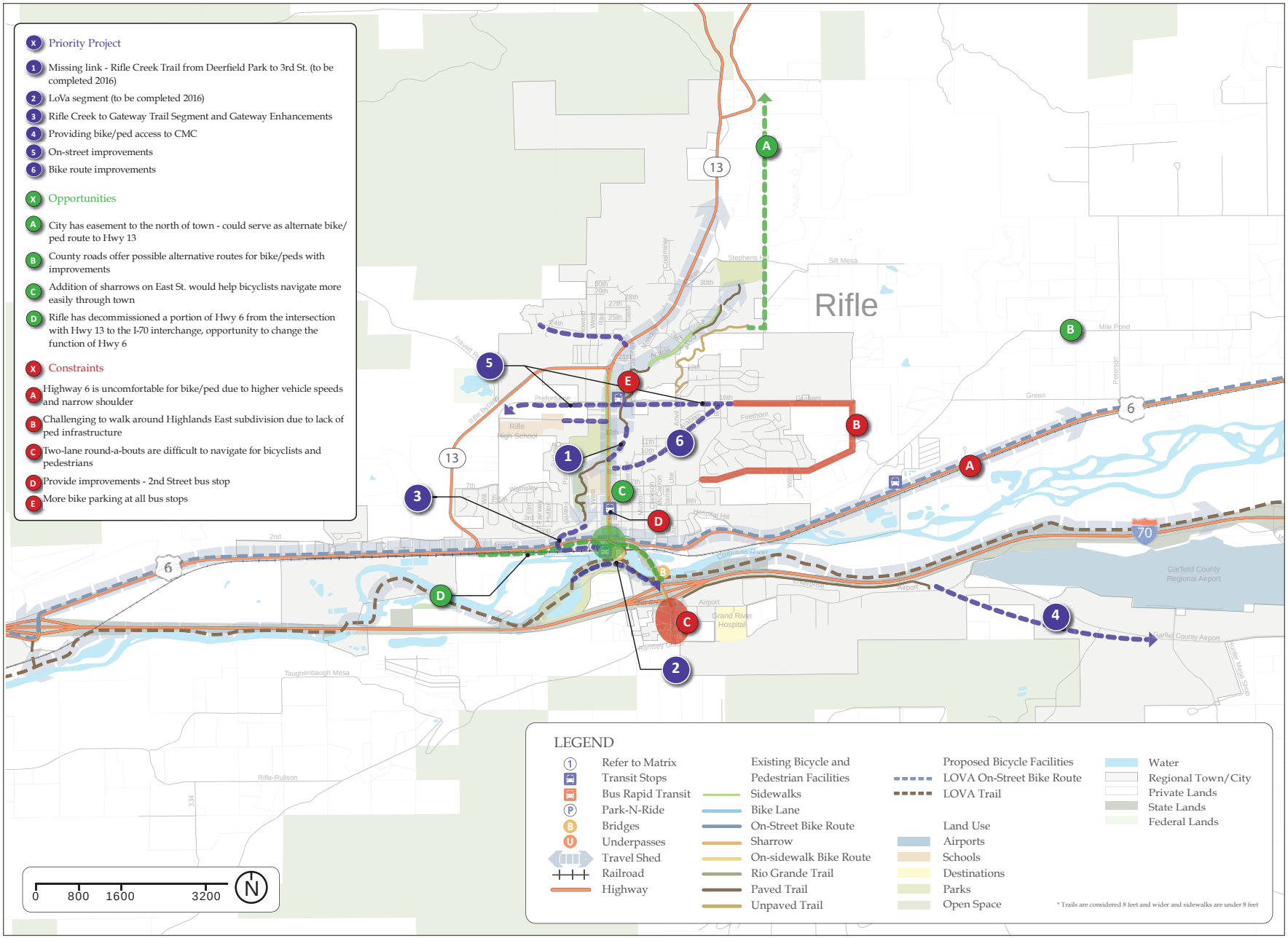
- Bridge barriers: Bridges in Colorado have an average lifespan of 50-75 years. Reconstruction and/or the addition of bicycle facilities can be costly endeavors.
- Environmental constraints: Environmentally-sensitive areas are scattered throughout the region, including the Colorado River and Roaring Fork River, which can have flood plains and other limiting factors. Micro-scale barriers may include ditches and macro-scale barriers include large wetlands.
- Land ownership/right-of-way: Land acquisition can be a difficult and costly process. Shared-use paths can be constructed within existing rights-of-way or often require new easements of land acquisition. Physical constraints such as existing development envelopes or topography can complicate the provision of bicycle and pedestrian facilities.
- Roadway reconstruction: Roadway reconstruction is a costly process for the large distances within and between communities. Bicycle and pedestrian facilities on this scale can be a significant portion of the overall improvement cost.
- Topography: Topography can greatly increase construction costs for trails in narrow canyons. Often it is necessary to construct costly retaining walls, perform significant grading and slope stabilization.

Despite the challenges that face the region as a whole, great efforts have been made at tying the communities together with transportation alternatives for transportation and recreation. Within each community however, there are also lists of opportunities and constraints to address in order to develop a complete network.

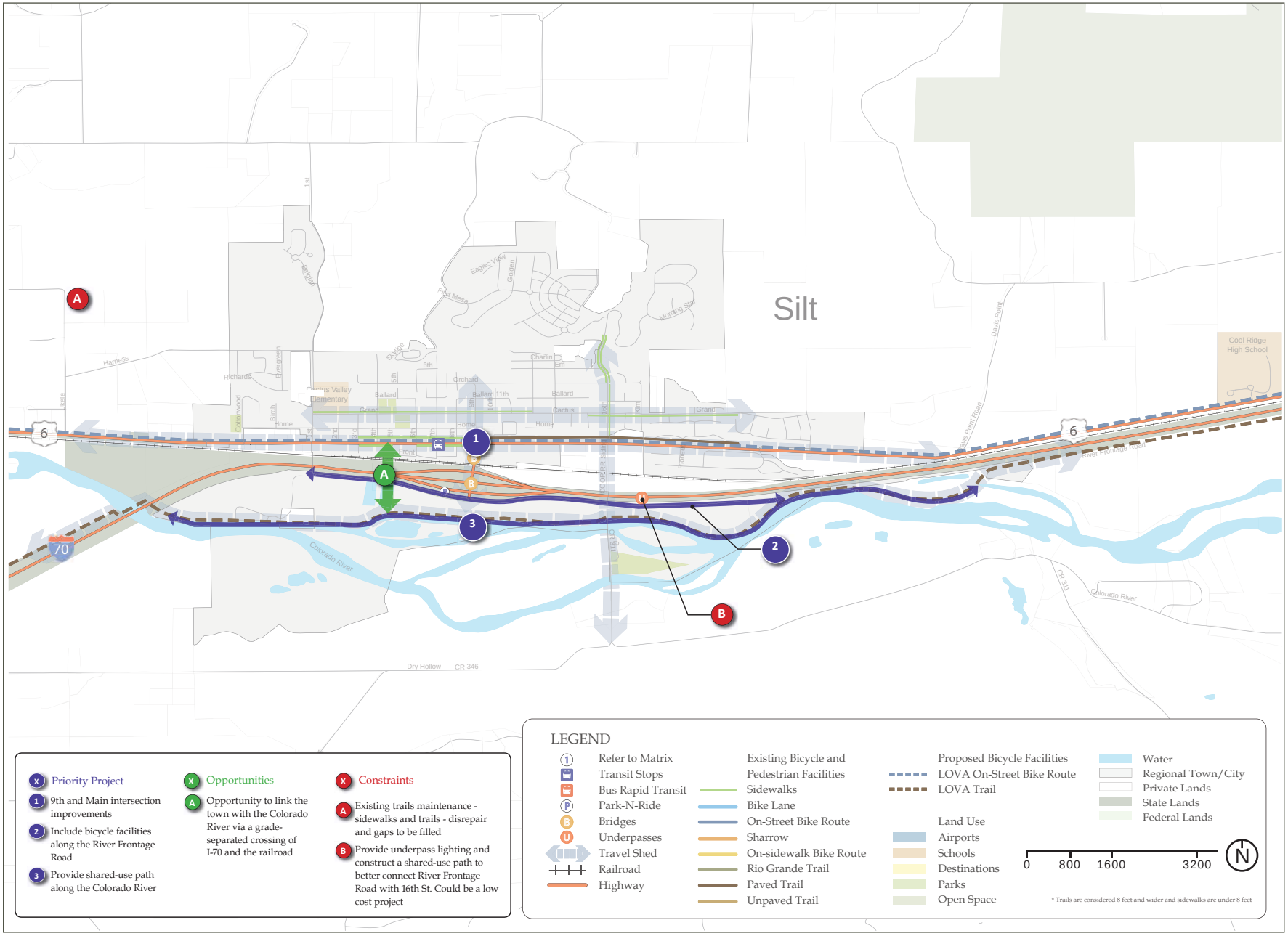
Figure 3.5: Shared-Use Path Bridge over I-70/Colorado River/Railroad - New Castle



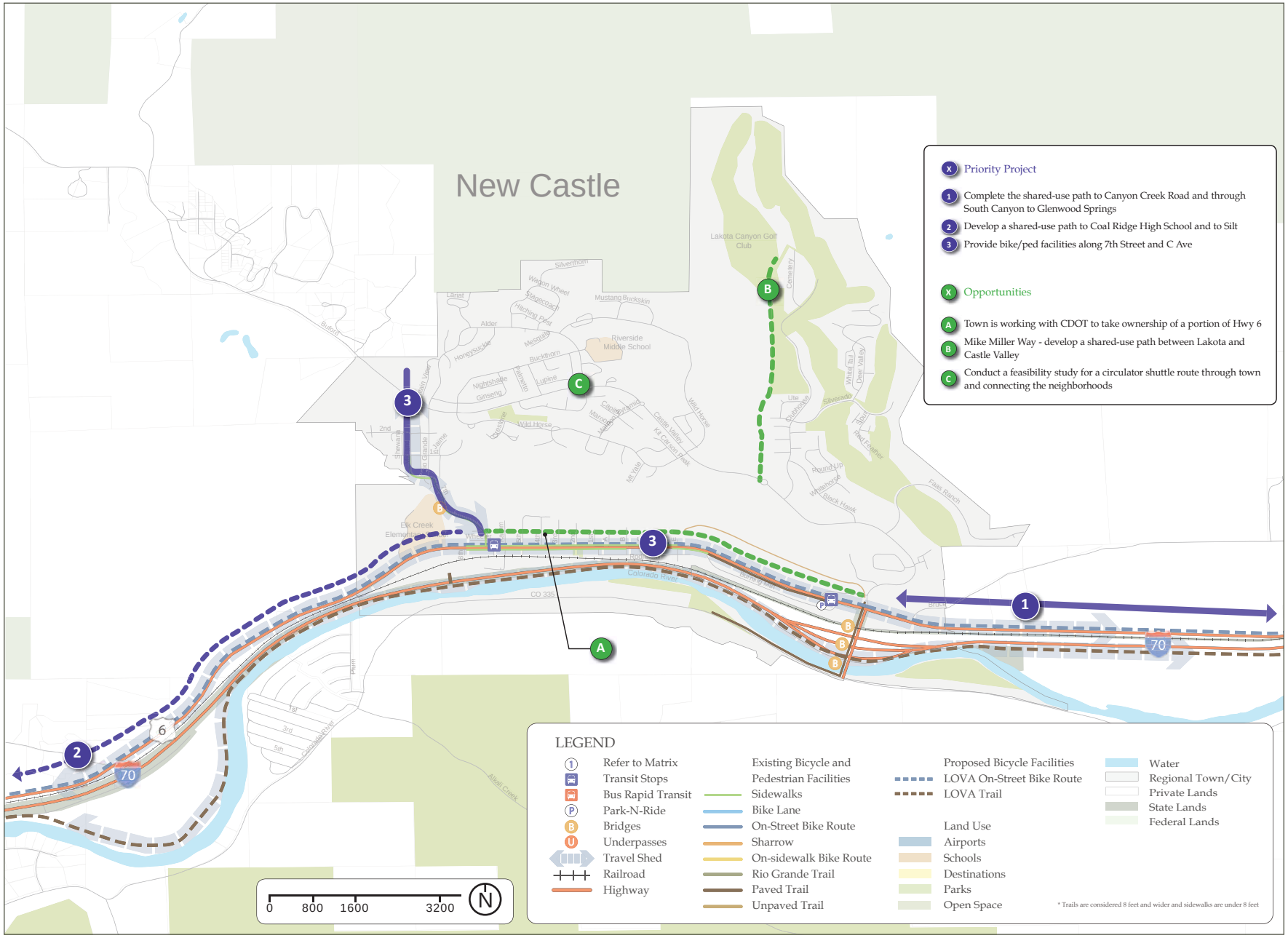
Map 3.1: Parachute Opportunities and Constraints Map



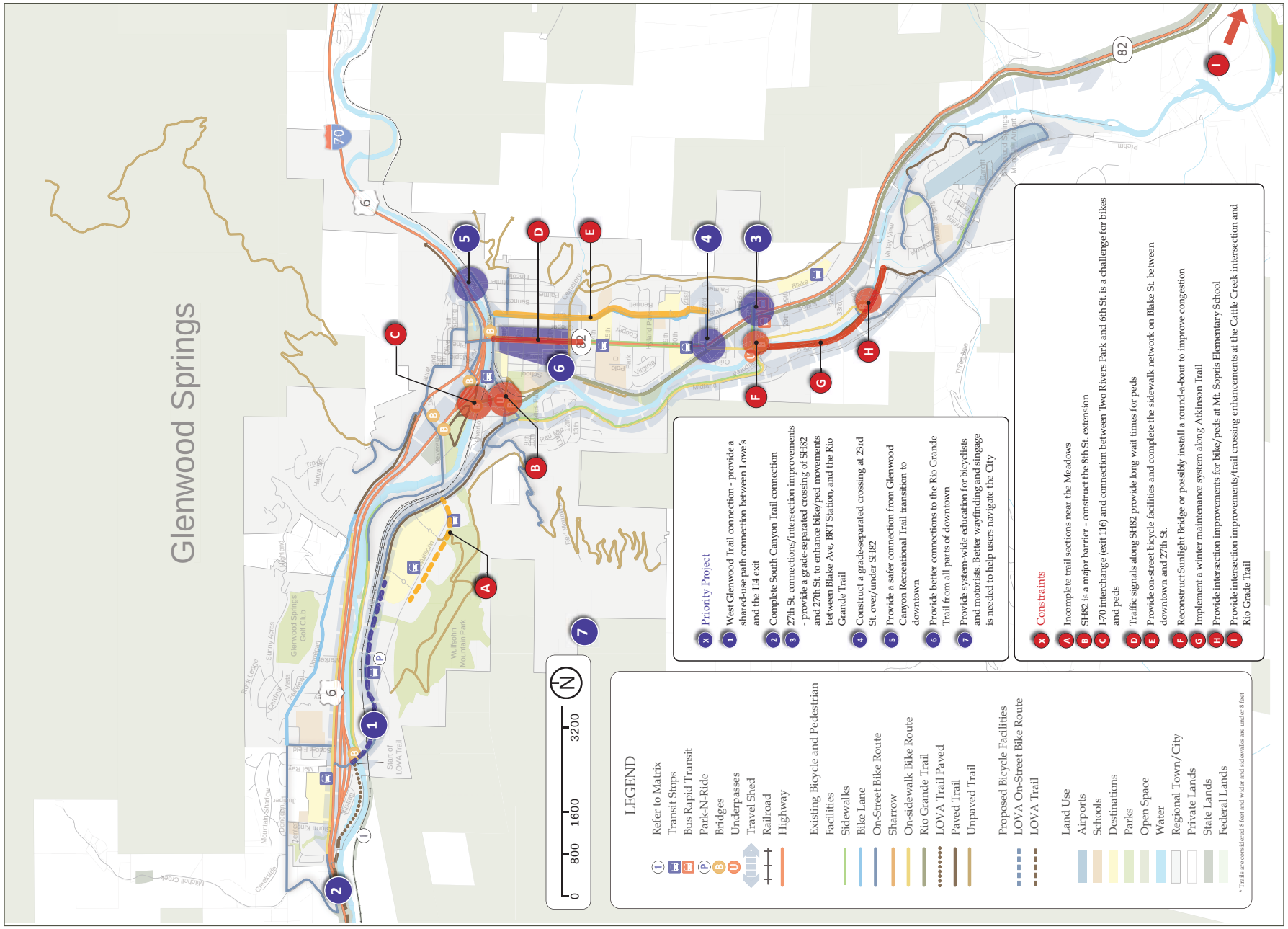
Map 3.2: Rifle Opportunities and Constraints Map



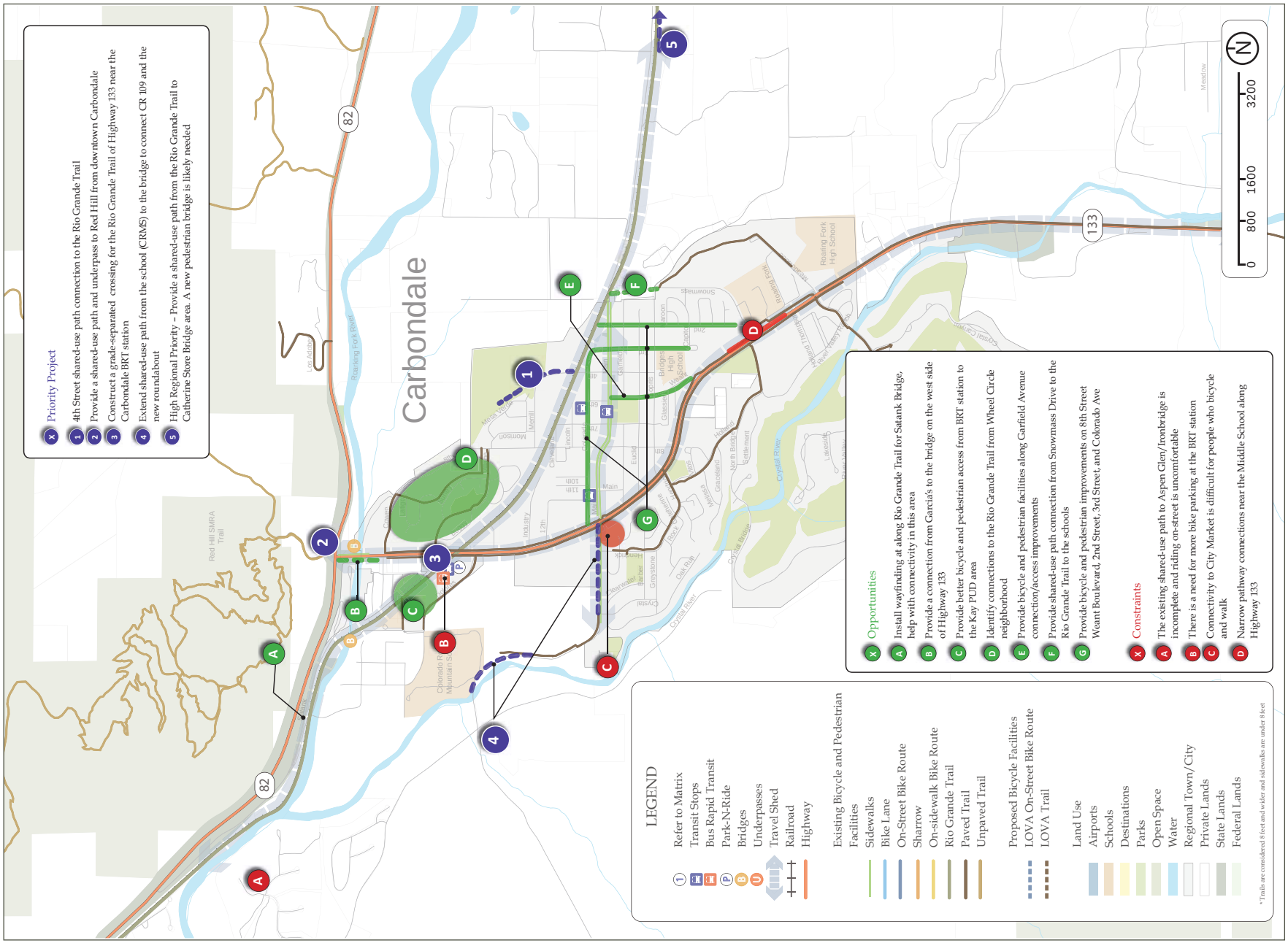
Map 3.3: Silt Opportunities and Constraints Map



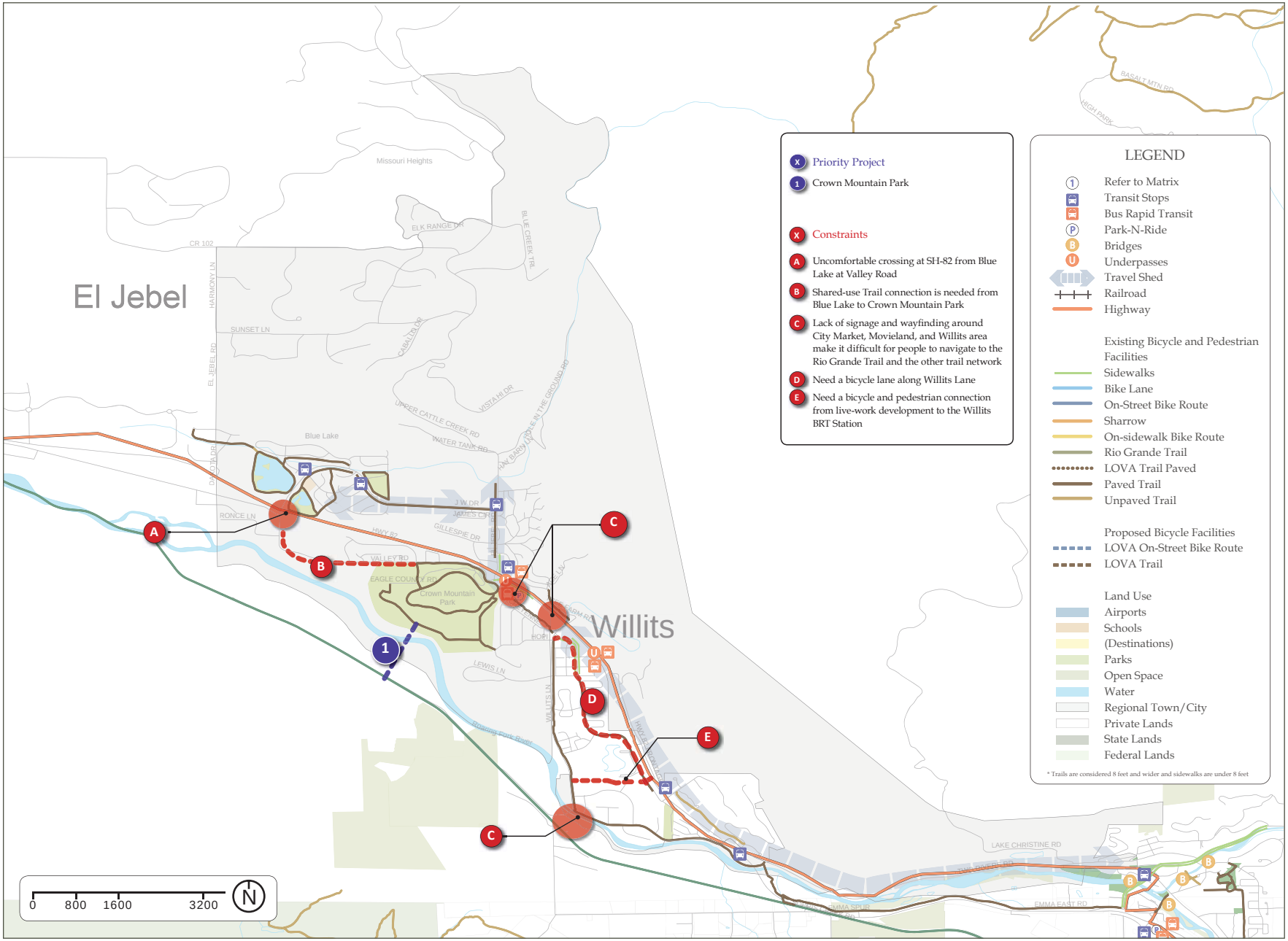
Map 3.4: New Castle Opportunities and Constraints Map



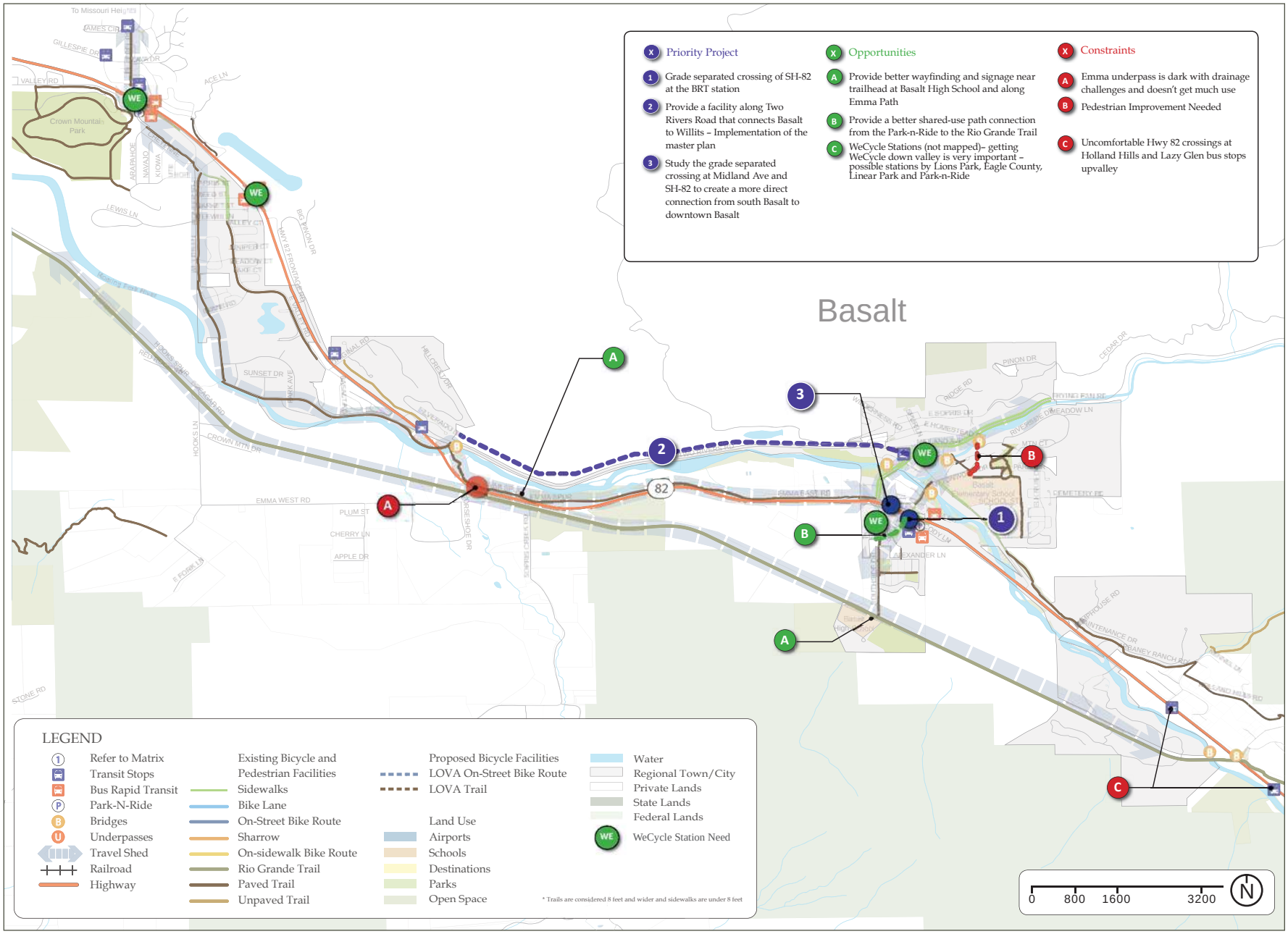
Map 3.5: Glenwood Springs Opportunities and Constraints Map



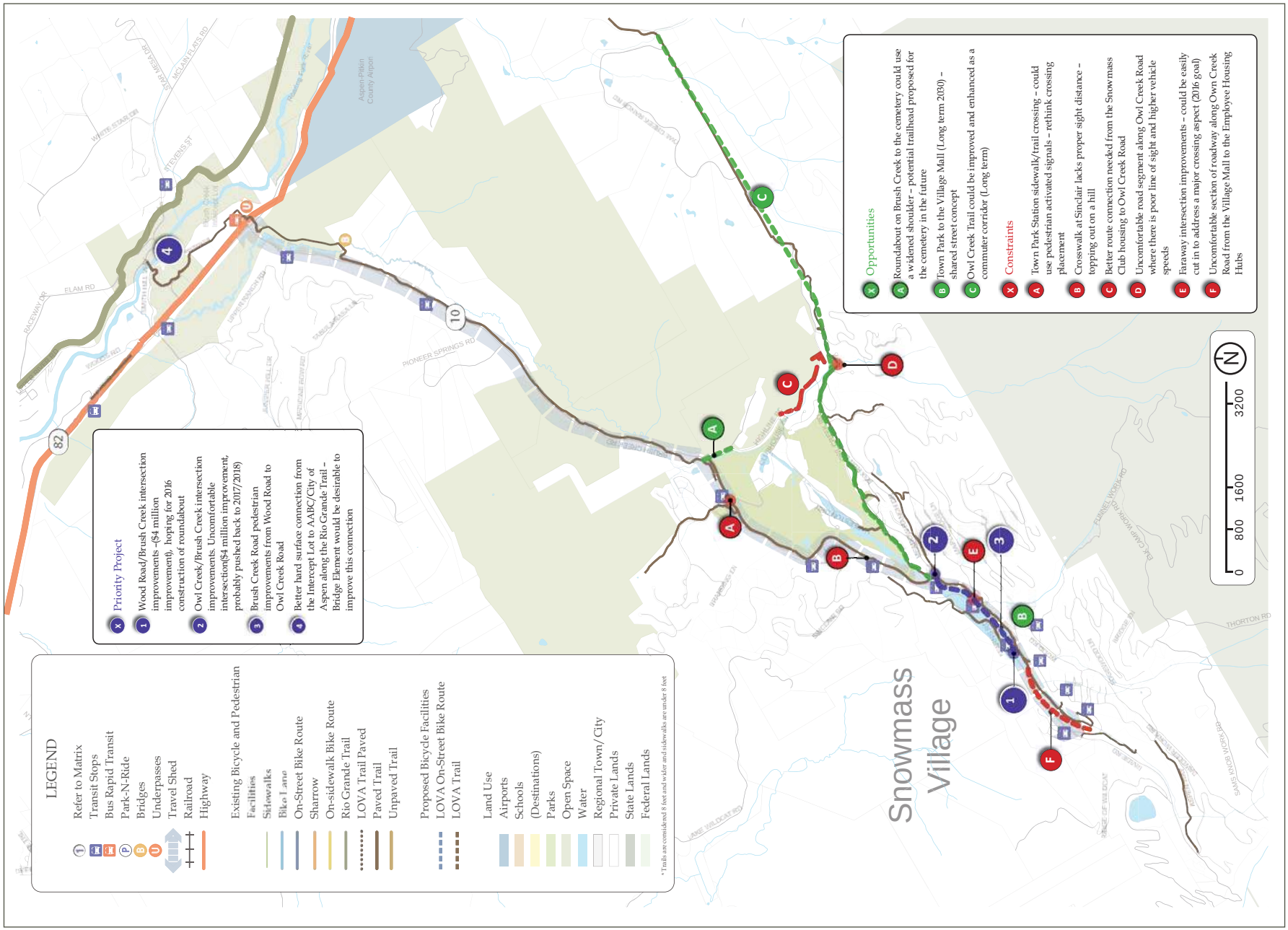
Map 3.6: Carbondale Opportunities and Constraints Map



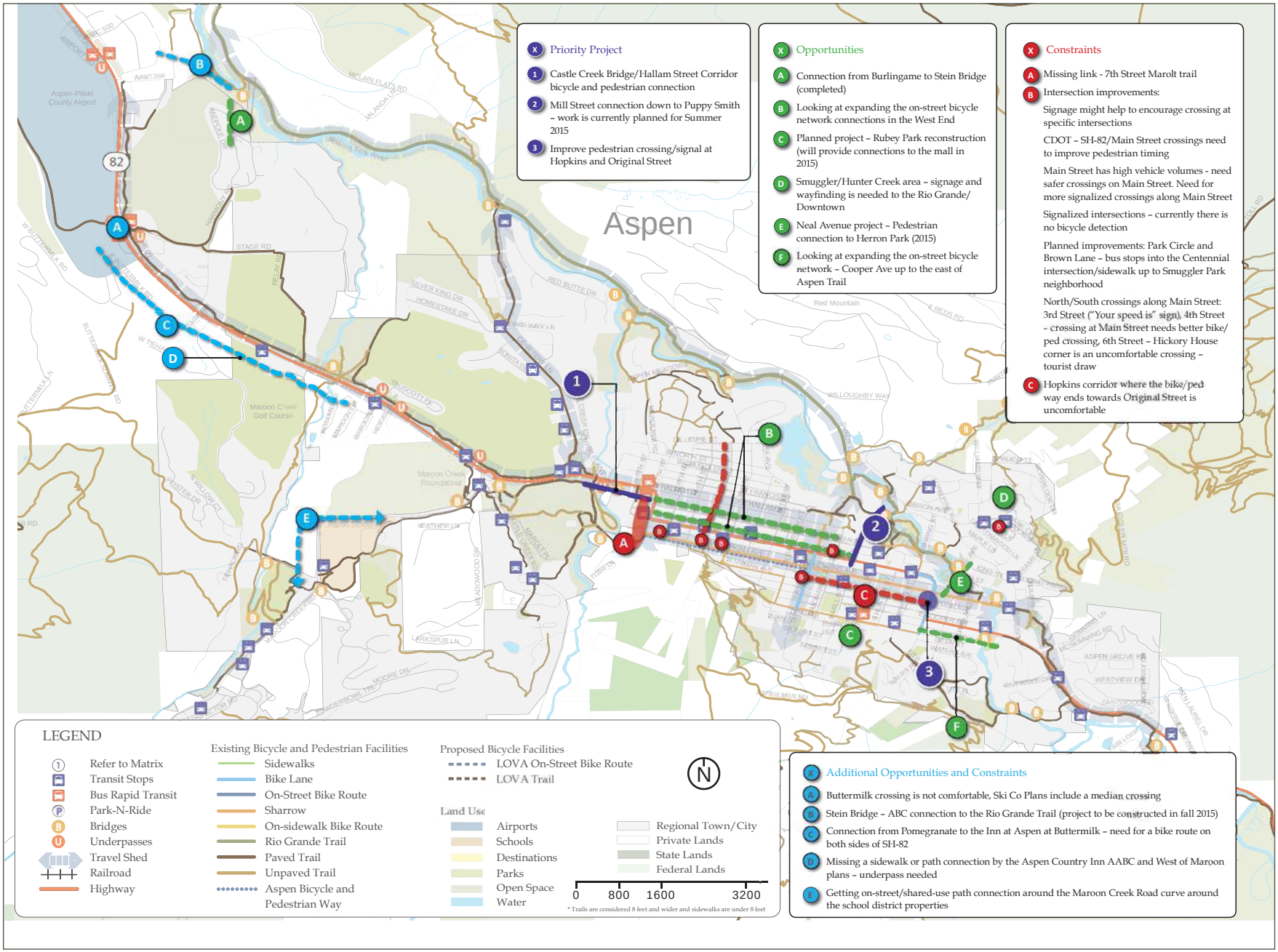
Map 3.7: El Jebel/Willits Opportunities and Constraints Map



Map 3.8: Basalt Opportunities and Constraints Map



Map 3.9: Snowmass Village Opportunities and Constraints Map



Map 3.10: Aspen Opportunities and Constraints Map


Rio Grande
Trail
MANDATORY
LEASH LAW

Chapter Four:

Community Engagement

Overview

Stakeholder input was an important element in understanding the local bike and pedestrian context of each community within the project study area. A concentrated and focused process was undertaken which generated meaningful involvement from staff and stakeholders in each community.

Engagement Activities

Town to Town Stakeholder Worksessions

Town to Town Stakeholder Worksessions were held in late February 2015 over 2½ days. Beginning with the communities at the western end of the 1-70 corridor, the team met with Parachute/Battlement Mesa, Rifle, New Castle, Glenwood Springs, Carbondale, Basalt, Snowmass Village and Aspen as well as representatives from Garfield, Eagle and Pitkin counties. In each jurisdiction a meeting was held with city, town and county staff members followed by a stakeholder meeting in which key members of the community representing larger groups of citizens were invited to come and share their input. Both of the meetings followed a similar format with a facilitated discussion and a mapping exercise in which the meeting facilitator walked through a prepared set of general questions and identified opportunities and constraints on individual maps of each community. The goals of the meetings included:

- Assessing the general awareness of alternative transportation options such as walking, biking and transit
- Gauging opinions on existing conditions for bicycle and pedestrian system connectivity and access to regional transit facilities
- Understanding biking and walking infrastructure gaps or hazards
- Identifying either existing plans, upcoming projects or desires for future enhancements to the regional bicycle-pedestrian system (infrastructure, education, incentives, etc.)
- Identifying public and political support for future funding of enhancements to the regional multimodal system

A total of 50 individuals participated in the worksessions including 28 stakeholders and 22 staff members. The stakeholders included representatives from trails groups, economic development agencies, non-

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Figure 4.1: Focus Group Meeting

profits, school districts, and citizens who represented larger interest groups within different communities. For jurisdictions that were unable to attend individual meetings, such as Silt and Eagle County, questionnaires were distributed to staff members and collected via email with follow up conversations over the phone.

Mock Grant Activity

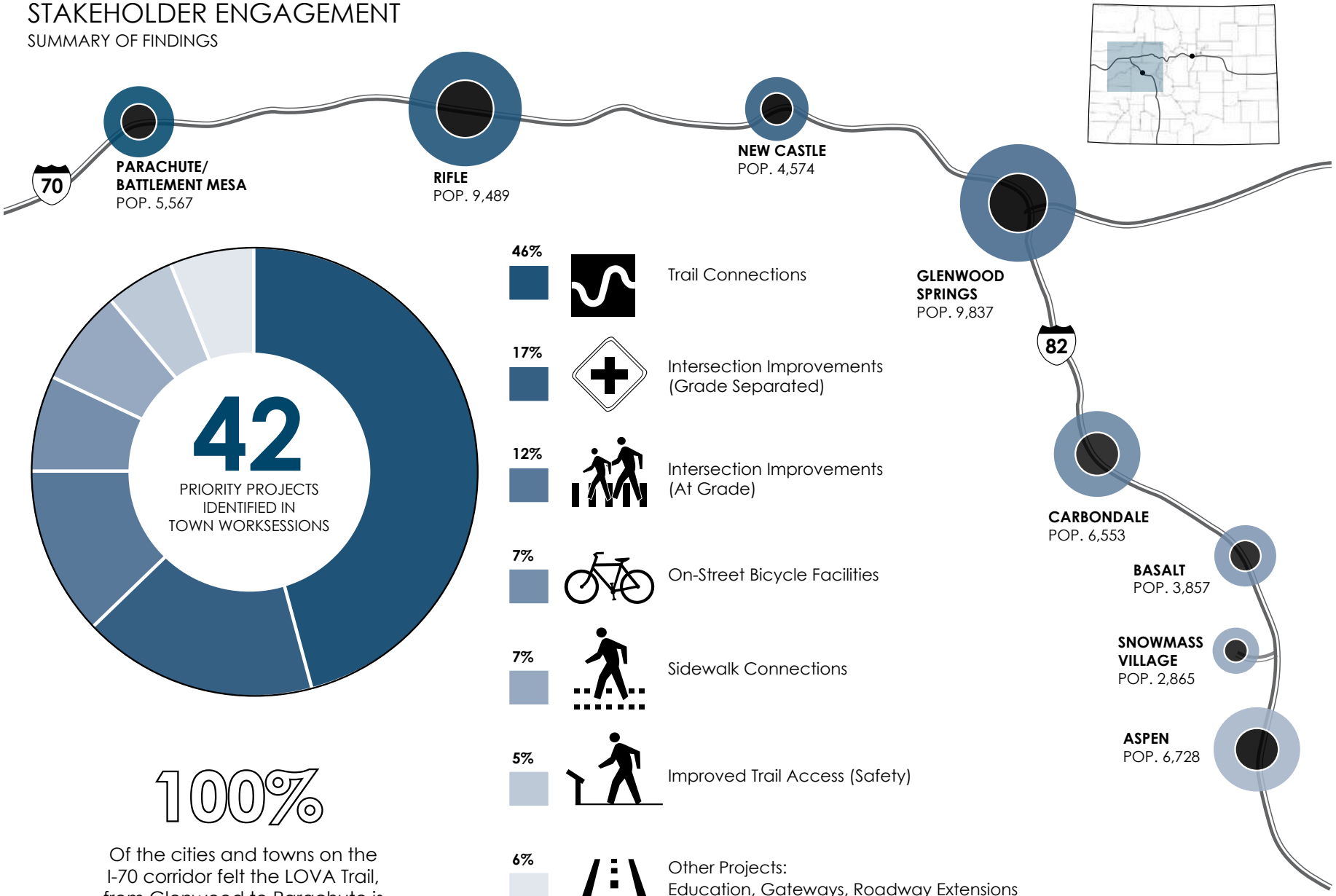
Additional input and more detailed project information was collected through a mock grant/ project assistance application distributed to city, town and county staff in each jurisdiction. A copy of the grant activity can be found in Appendix B. This exercise was intended to help the project team as well as staff members prioritize the projects within their communities that are most important to connecting and improving the regional bicycle and pedestrian system. Mock grant applications were collected from New Castle, Rifle, Basalt, Snowmass Village, Aspen and Pitkin County. For jurisdictions that did not return their applications, information collected through the worksessions was used to determine their priority projects.

Overall Results Summary

The information from the work sessions and the grant activity was compiled to create the draft opportunities and constraints maps found in Appendix B. These maps and the summary text reflects the findings of both the meeting with staff and the stakeholder meetings and identified priority projects within each jurisdiction, places where there are safety concerns or missing links in the bicycle and pedestrian system and places where there are opportunities to improve infrastructure for walking and biking such as adding new trails or safety enhancements. Additionally, the guided discussion with stakeholder groups in each community (with the exception of Basalt and Snowmass Village) revealed the following trends represented in Figure 4.1 and 4.2:

STAKEHOLDER ENGAGEMENT

SUMMARY OF FINDINGS



100%

Of the cities and towns on the I-70 corridor felt the LOVA Trail, from Glenwood to Parachute is a priority project

Figure 4.2

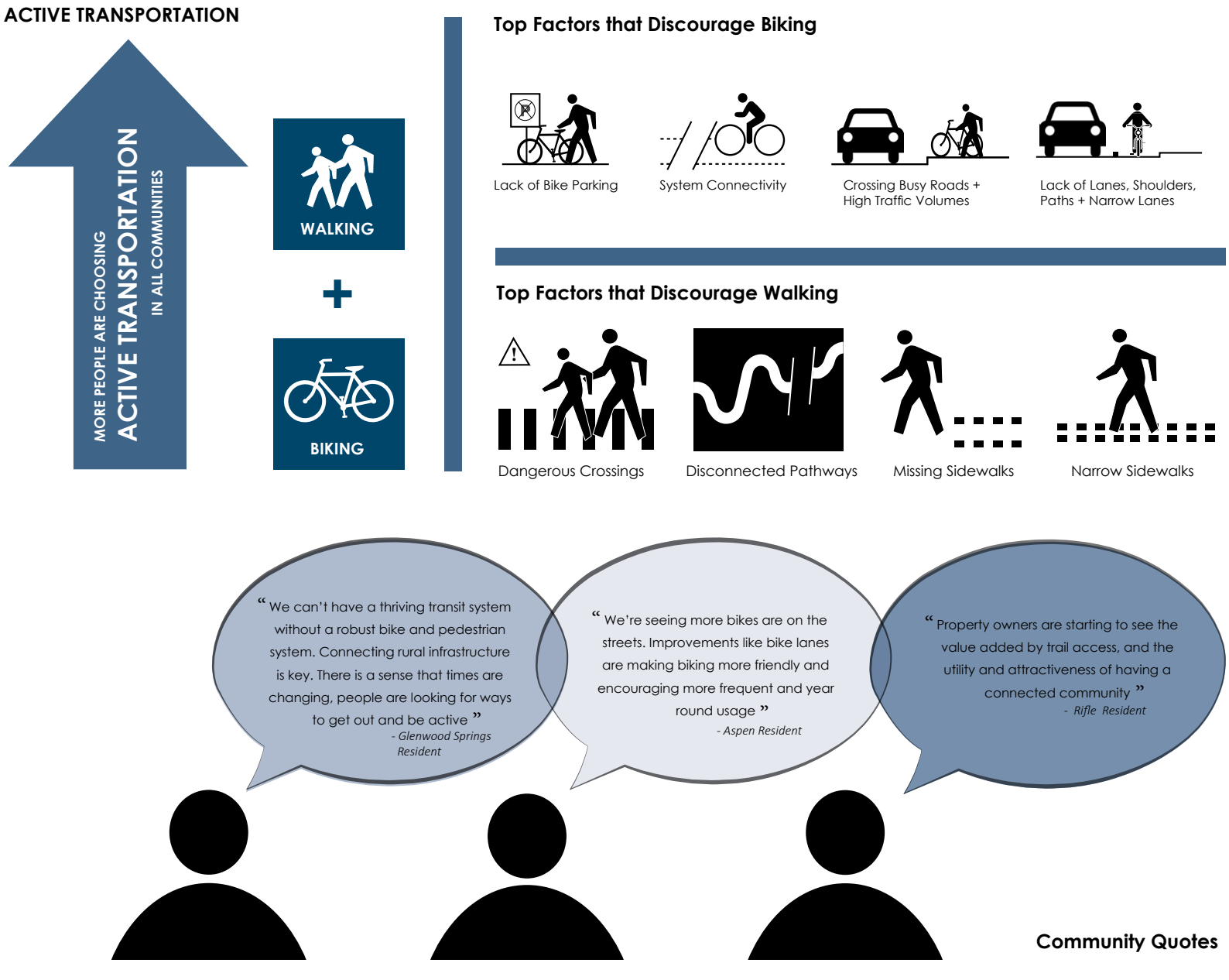

ACTIVE TRANSPORTATION
MORE PEOPLE ARE CHOOSING
ACTIVE TRANSPORTATION
IN ALL COMMUNITIES
WALKING
+
BIKING
Top Factors that Discourage Biking
Lack of Bike Parking
System Connectivity
Crossing Busy Roads + High Traffic Volumes
Lack of Lanes, Shoulders, Paths + Narrow Lanes
Top Factors that Discourage Walking
Dangerous Crossings
Disconnected Pathways
Missing Sidewalks
Narrow Sidewalks
" We can't have a thriving transit system without a robust bike and pedestrian system. Connecting rural infrastructure is key. There is a sense that times are changing, people are looking for ways to get out and be active "
- Glenwood Springs Resident
" We're seeing more bikes are on the streets. Improvements like bike lanes are making biking more friendly and encouraging more frequent and year round usage "
- Aspen Resident
" Property owners are starting to see the value added by trail access, and the utility and attractiveness of having a connected community "
- Rifle Resident
Community Quotes

Figure 4.3

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STOP

Chapter Five:

Regional Project Recommendations

Overview

This plan recommends future bicycle and pedestrian facilities for the communities located within the Roaring Fork and Colorado River Valleys that will link neighborhoods, schools, businesses, major transit stations, and the communities themselves. The regional projects consist of existing and proposed on and off-street facilities such as sidewalks, bridges, paved shoulders, signed routes, and shared-use paths. It also includes ancillary facilities like bike parking at transit stops/station and intersection improvements.

This section covers the methodology for developing the bicycle and pedestrian project recommendations, descriptions of the facility types that make them up, and project maps by community.

Regional Priority Projects

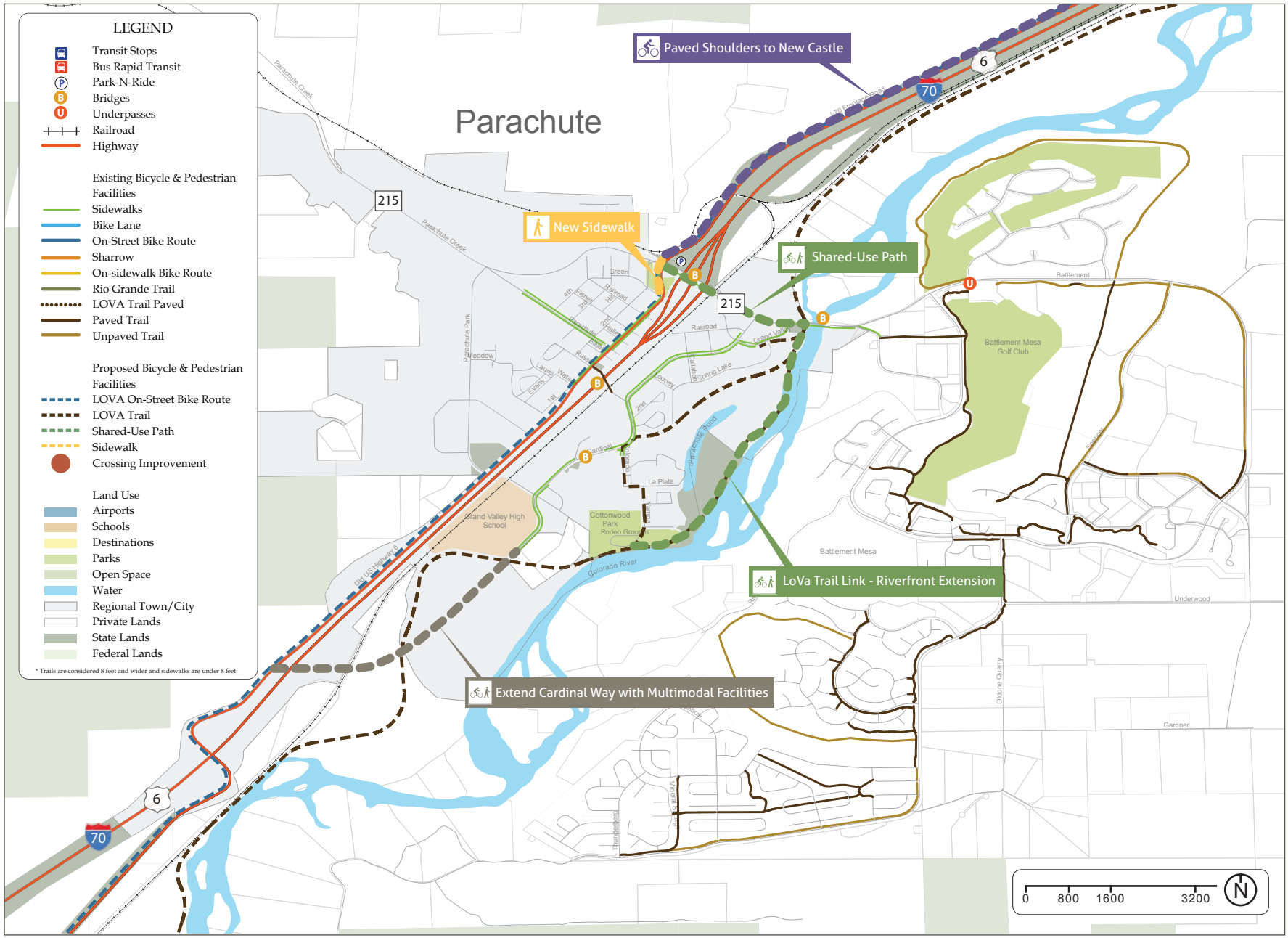
The Lower Valley Trails Group has been working to promote a regionally connected bicycle and pedestrian route for Garfield County along the Colorado River Corridor since 1999. The 2003 LoVa Trail Master Plan focuses on building a 47-mile regional non-motorized route through the Colorado River Valley and the I-70 corridor from Glenwood Springs west to New Castle, Silt, Rifle, Parachute and the Garfield County Line. However, high construction costs have prohibited full development of the trail.

Once implemented, the LoVa Trail will provide connections to the Rio Grande Trail and Glenwood Canyon Trail, providing an additional spine to the regional active transportation network. A trail connection of this magnitude would provide wide ranging economic (tourism dollars), transportation, public health, and recreational benefits for the Garfield County communities within the corridor.

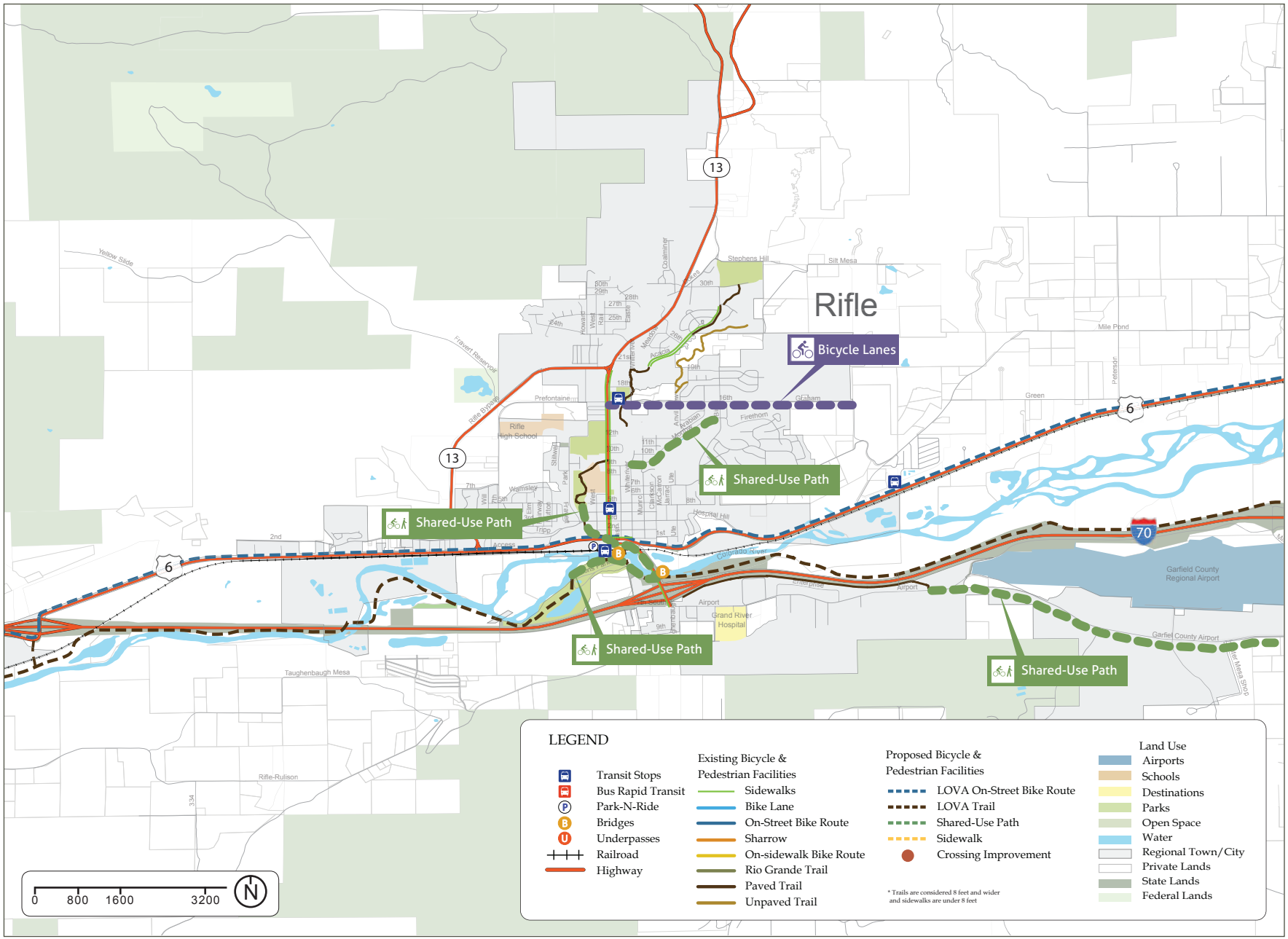
Maps 5.1 - 5.10 geographically illustrate priority projects across the study area and Table 5.1 outlines the regional priority projects generated from the prioritization process.

Figure 5.1: Rifle Creek Trail Amenities - Rifle

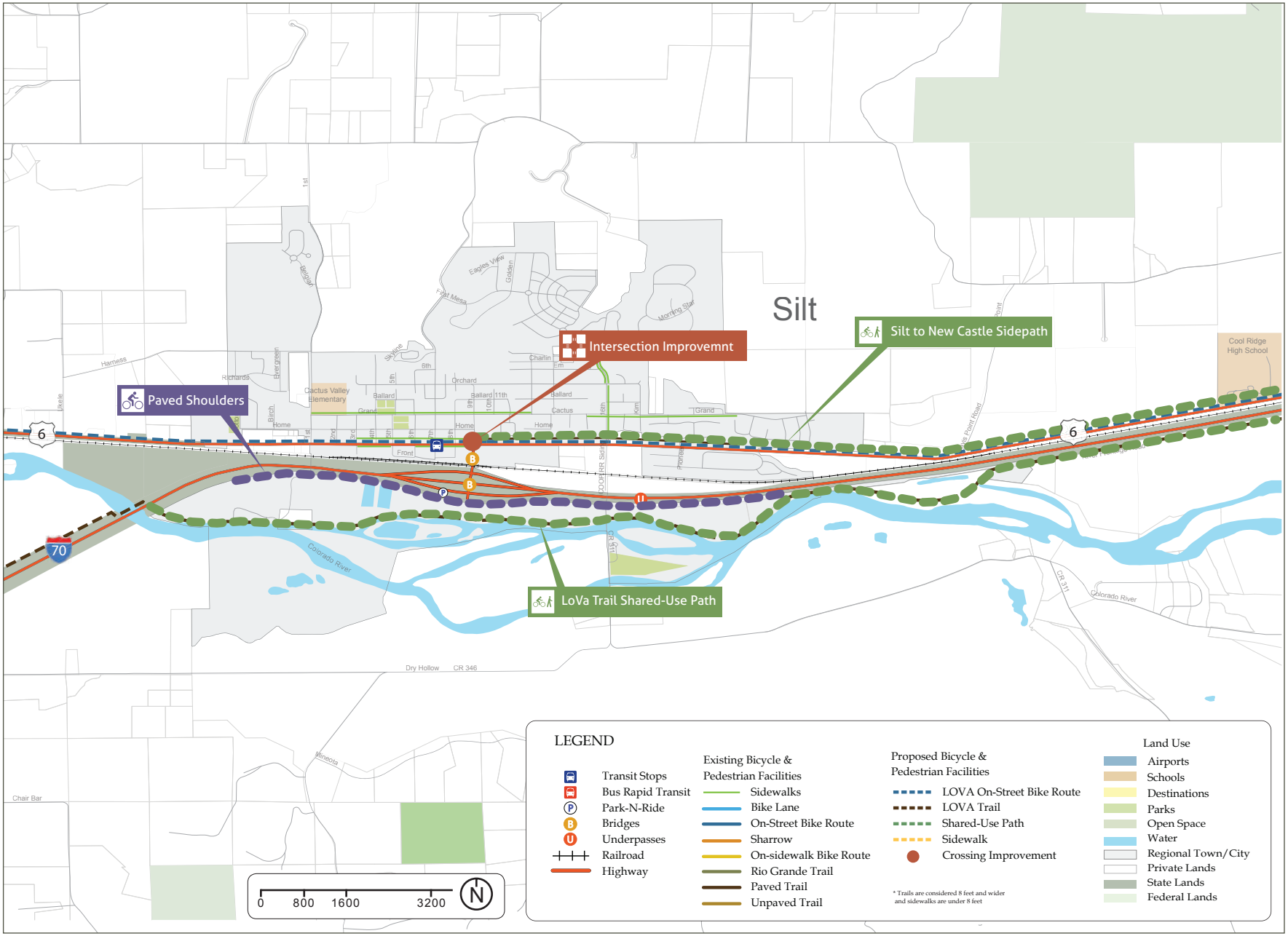
Summary Contents



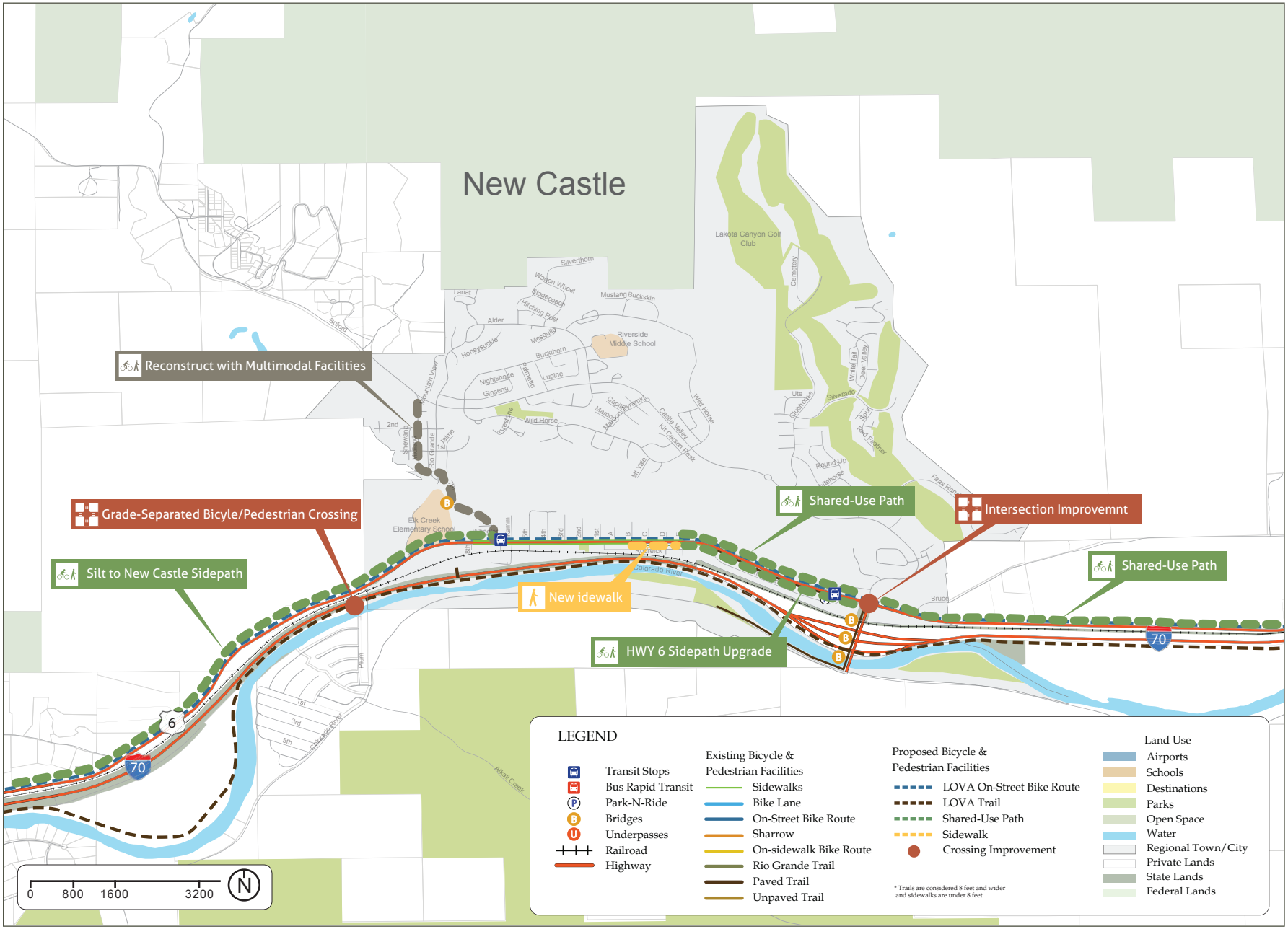
Map 5.1: Parachute Priority Projects Map



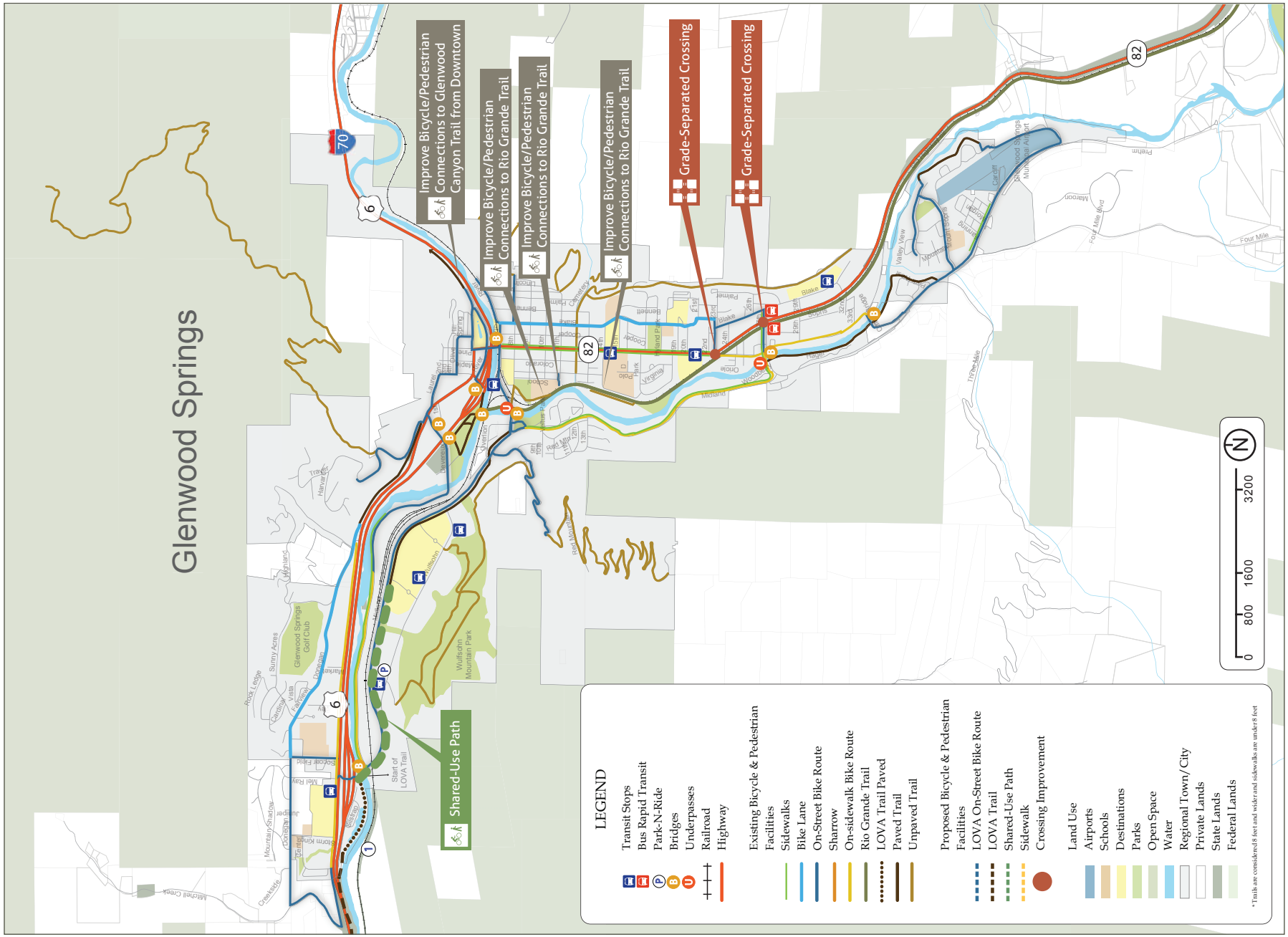
Map 5.2: Rifle Priority Projects Map



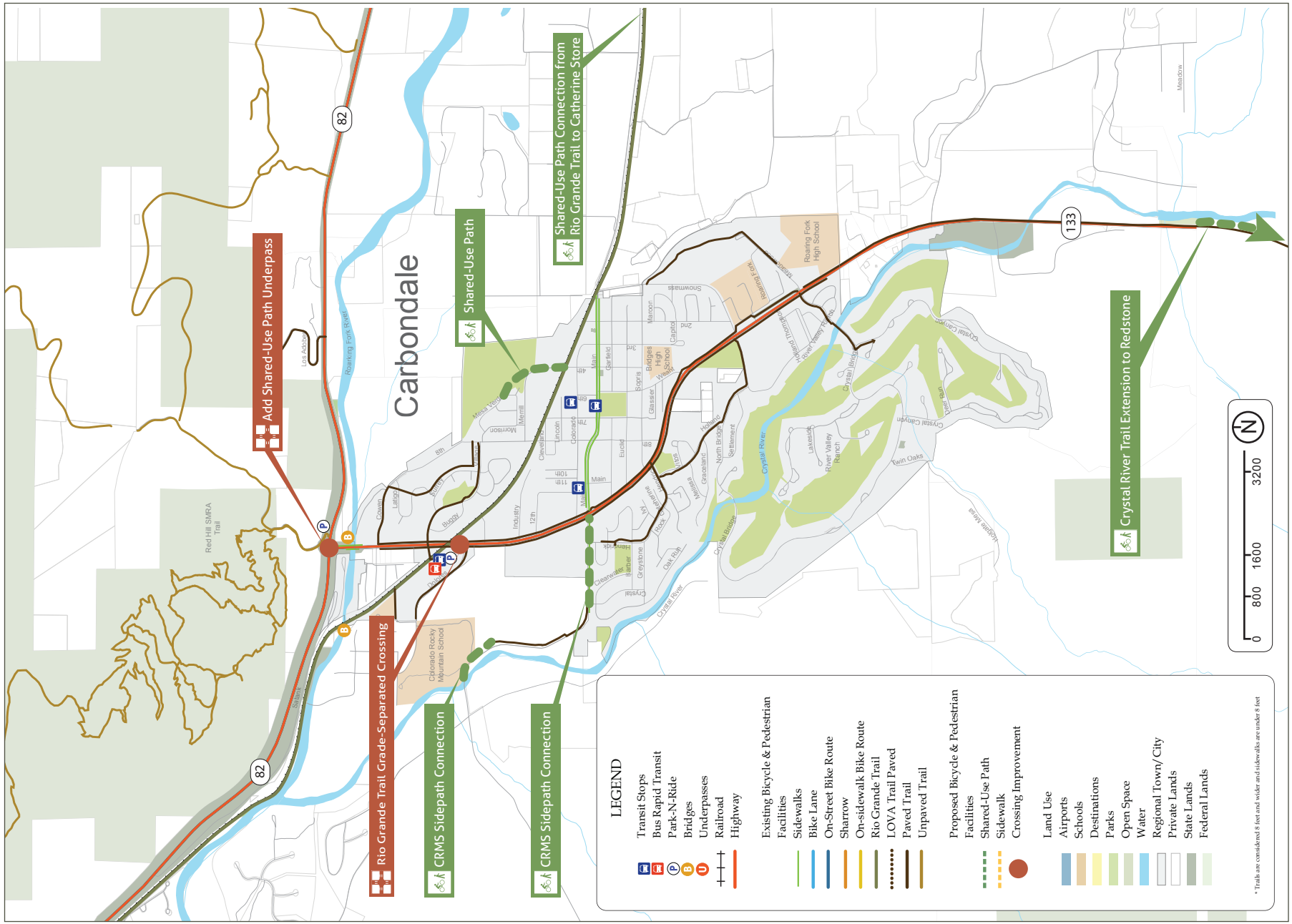
Map 5.3: Silt Priority Projects Map



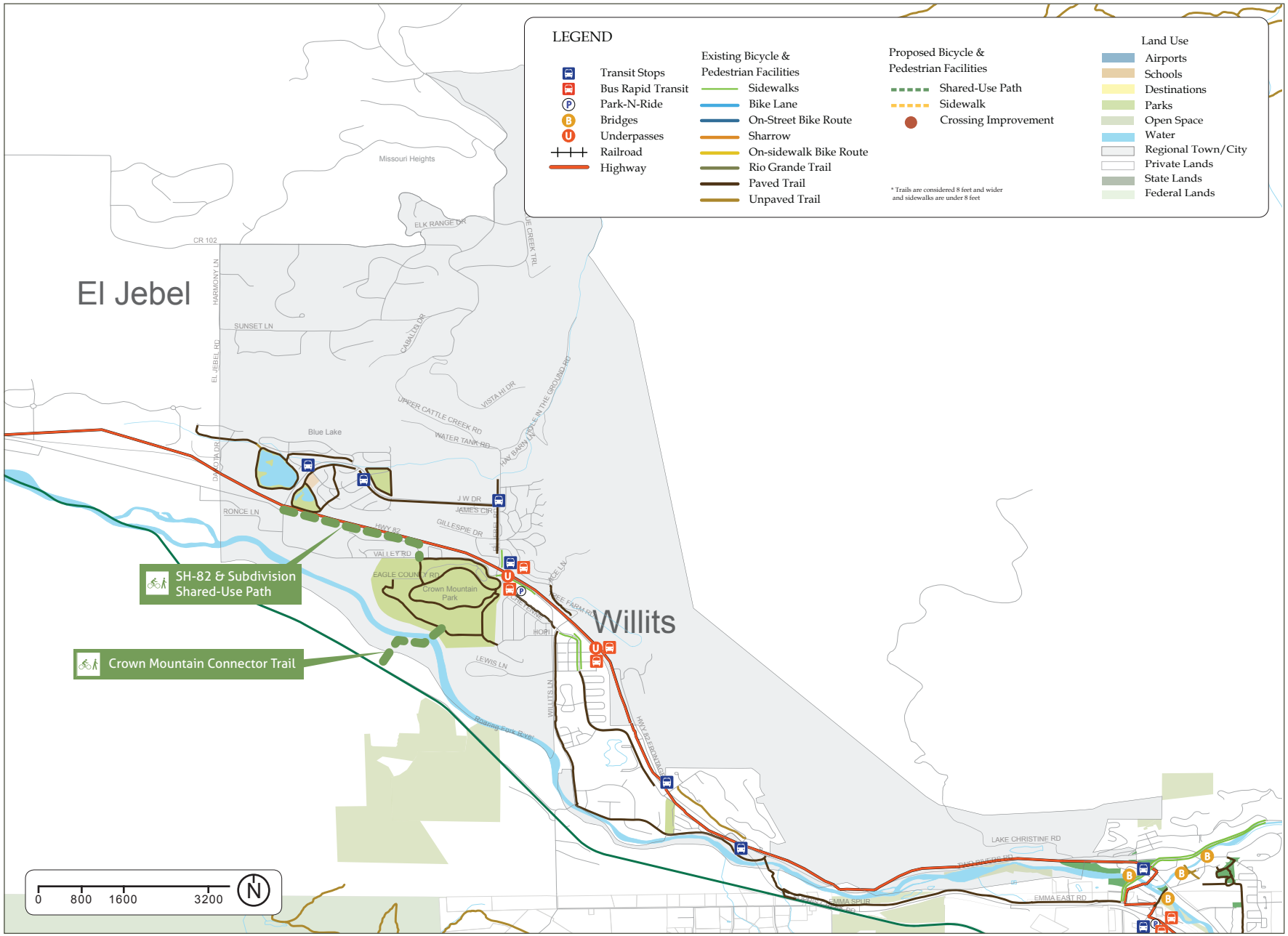
Map 5.4: New Castle Priority Projects Map



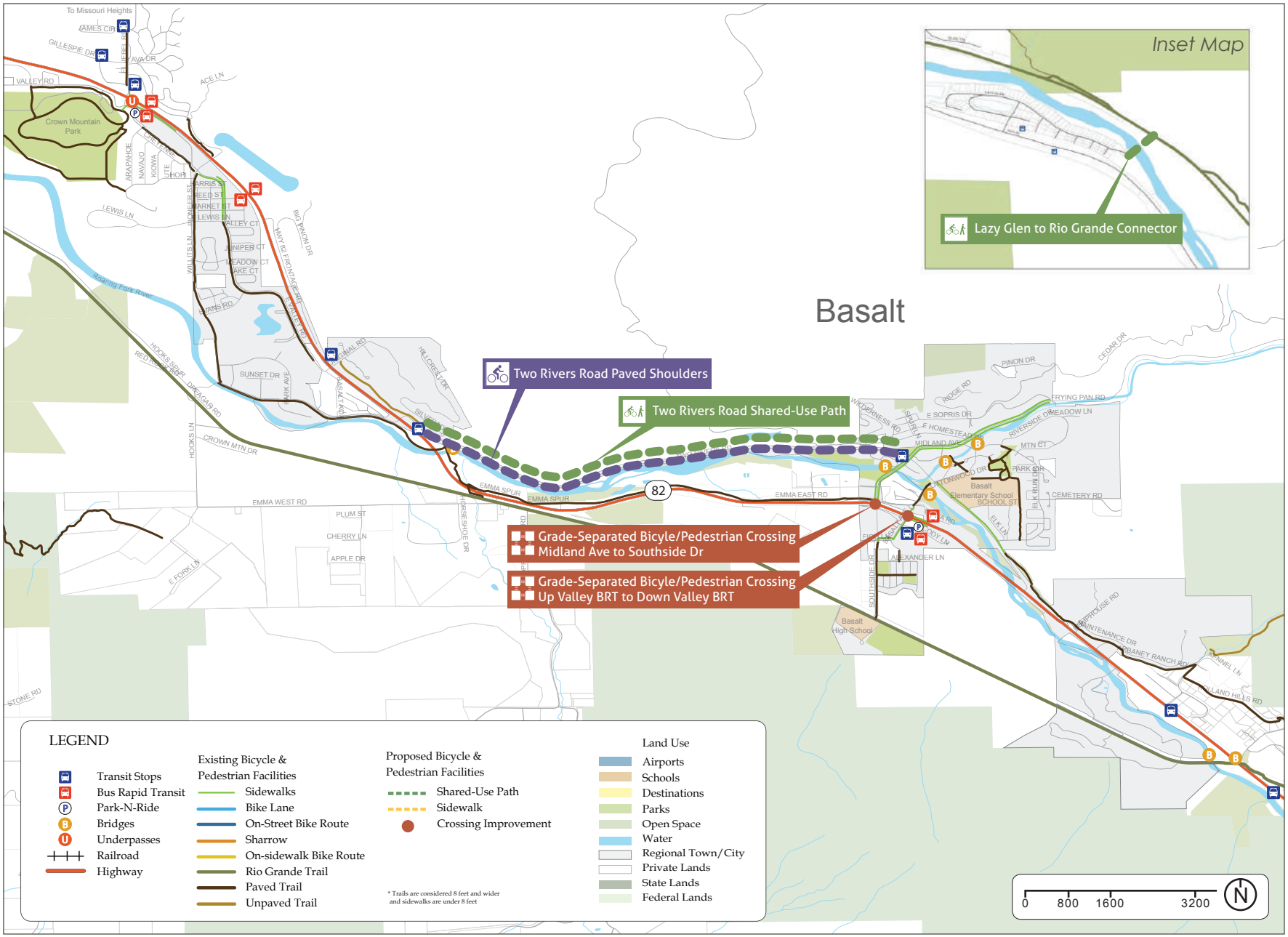
Map 5.5: Glenwood Springs Priority Projects Map



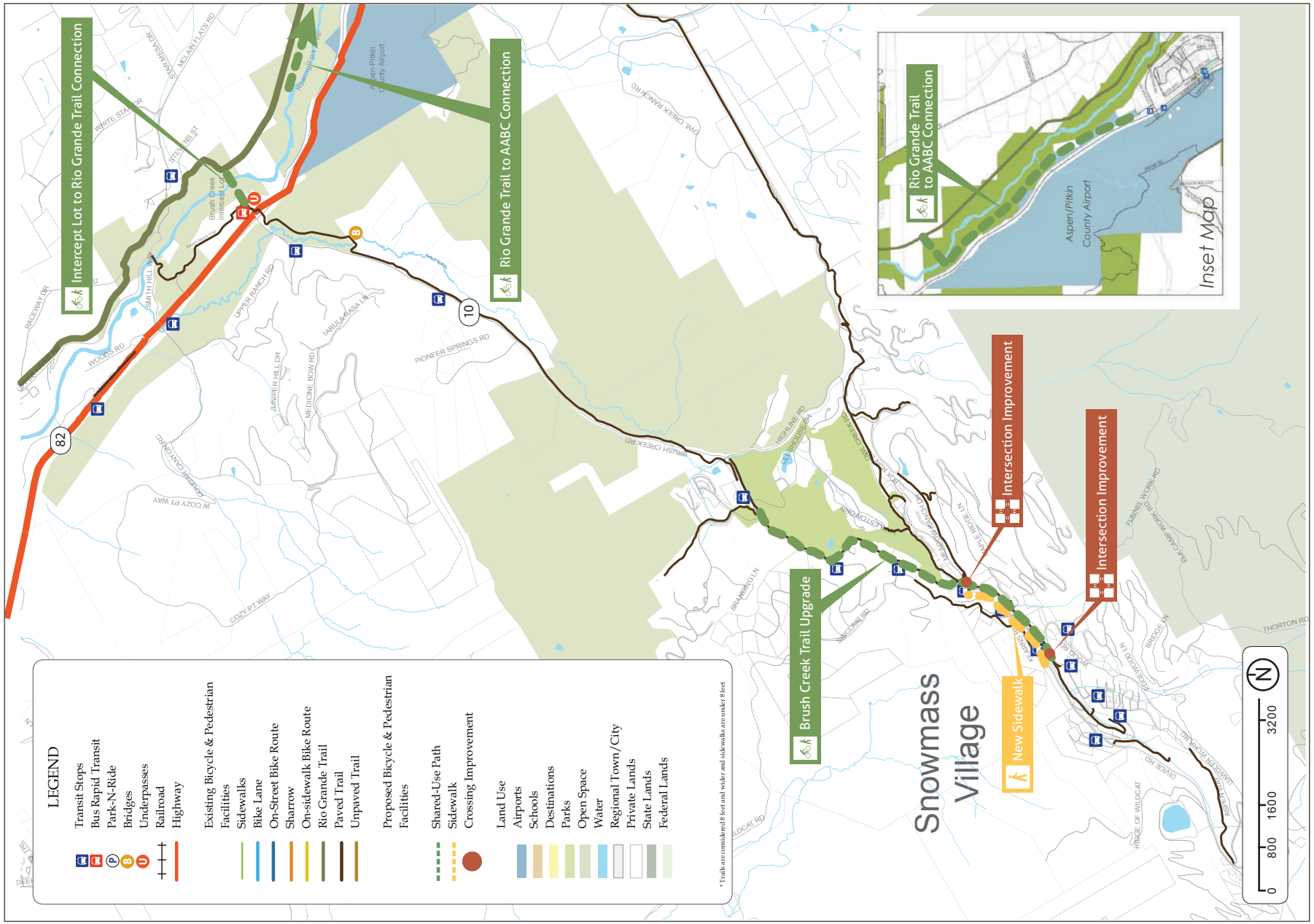
Map 5.6: Carbondale Priority Projects Map



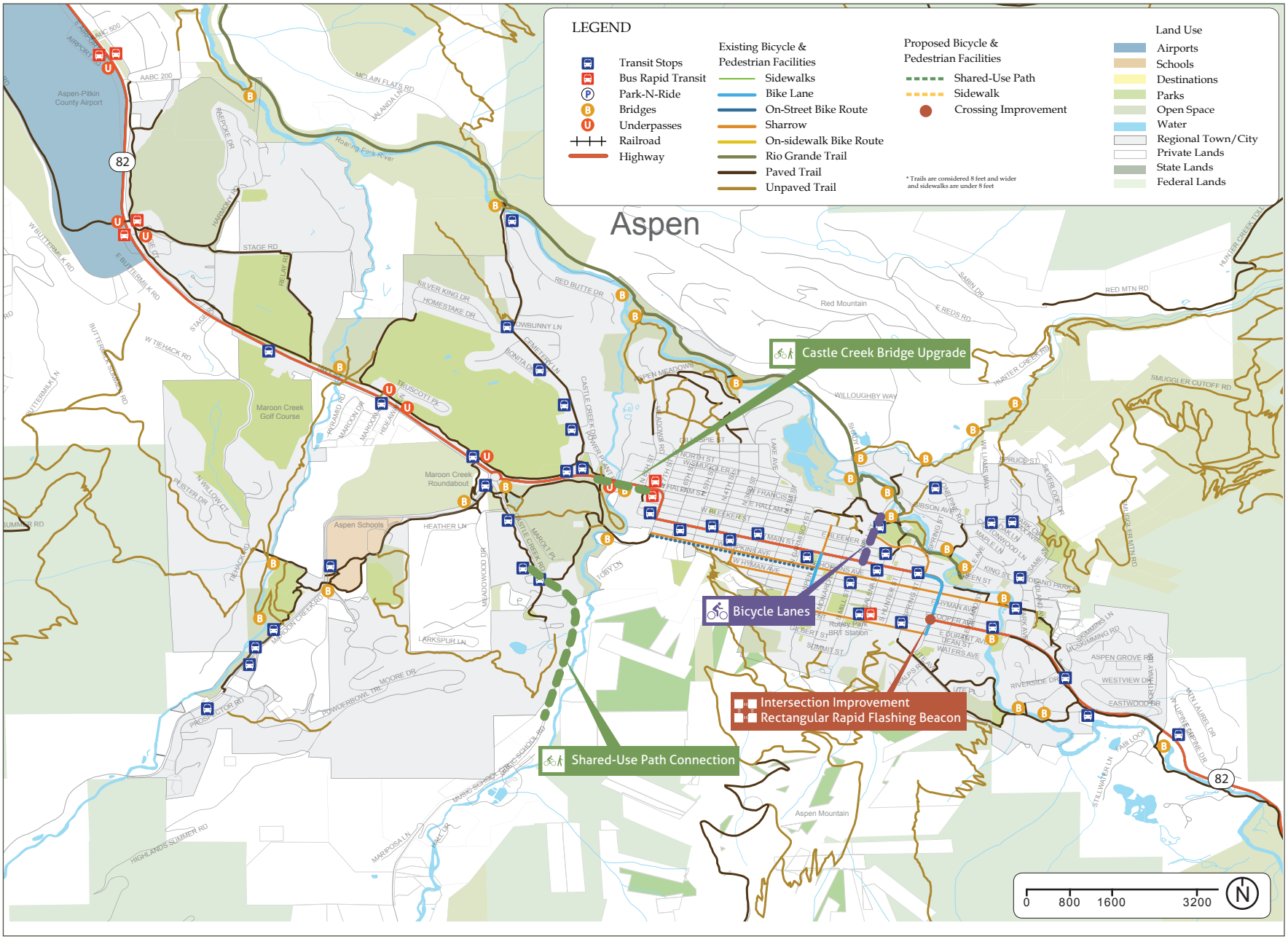
Map 5.7: El Jebel/Willits Priority Projects Map



Map 5.8: Basalt Priority Projects Map



Map 5.9: Snowmass Village Priority Projects Map



Map 5.10: Aspen Priority Projects Map

Prioritization Process

Along with the Internal Review Team, the project team completed a prioritization process to help identify the infrastructure projects that will create the most impact and that best aid in achieving the project goals and objectives. Table 5.1 presents the regional priority projects that have a significant value to the community. These projects will have a larger impact on the overall community than simply developing an isolated bicycle lane or pathway. All projects considered for prioritization are included in Appendix C.

Ranking Methodology

Projects in Table 5.1 are listed by county from down valley to up valley and were split into "high", "medium" and "low" categories based on natural breaks in scoring based on the prioritization process. Projects scoring 24-30 received a "high" classification. Projects scoring 15-23 received a "medium" classification. Projects scoring 0-14 received a "low" classification. For more details on this process refer to Appendix C.

The ranking methodology and rating was developed by the project team in conjunction with stakeholders using a "weight 'em and rate 'em" process of developing ranking criteria, assigning weights to each criteria, and rating each project in relation to the developed criteria. This process is described in detail in Appendix C.

Figure 5.2: velociRFTA BRT Station - Glenwood Springs

Table 5.1 Garfield County Priority Projects

County	Project Lead	Type	Description	From	To	Priority
Garfield	Parachute	Trail	Riverfront extension - LoVa Trail link	CR 215	Cottonwood Park Rodeo Grounds	Medium
Garfield	Parachute	Roadway	Extend Cardinal Way (with multimodal facilities) to connect to Highway 6	High School	Old Highway 6	Low
Garfield	Parachute	Shared-Use Path	Provide a 10' shared-use path on the east side of 215 over I-70	Grand Valley Way	East S2nd Street	Low
Garfield	Parachute	Sidewalk	Add 6' sidewalks on both side of roadway from Highway 6 and CR 215 interchange to downtown	Green Street	CR 215	Low
Garfield	Rifle	Bicycle lanes	Add Bicycle Lanes to 16th Street	East CR-293	CO-13/Railroad Ave	High
Garfield	Rifle	Shared-Use Path	Add 10' shared-use path along Lions Park Circle/ Colorado River (LoVa segment)	CO-13	Parking Lot	Medium
Garfield	Rifle	Shared-Use Path	Add a 10' shared-use path to provide bicycle and pedestrian access to Colorado Mountain College Campus	Existing asphalt path (west of Baron Lane)	CMC Campus	Medium
Garfield	Rifle	Shared-Use Path	Add 10' shared-use path along Rifle Creek. Gateway Trail segment enhancements	Centennial Park	Steel Bridge	Medium
Garfield	Rifle	Shared-Use Path	Add a 10' shared-use path on Morrow Drive	Birch Ave	Whiteriver Ave	Medium
Garfield	Silt	Shared-Use Path	Add 10' shared-use path (LoVa Trail) along Colorado River	I-70	East Town Boundary	Medium
Garfield	Silt	Intersection	Intersection improvements	9th and Main	9th and Main	Low
Garfield	Silt	Paved Shoulder	Add 6' paved shoulder to River Frontage Road	Western Boundary	Eastern Boundary (LoVa Alignment)	Low
Garfield	New Castle	Shared-Use Path	Complete 10' shared-use path to Canyon Creek Rd and through South Canyon to Glenwood Springs	Castle Valley Blvd.	Glenwood Springs	High
Garfield	New Castle	Bicycle Lanes and sidewalks	Reconstruct N. 7th St. to add bicycle lanes and sidewalk on east side of 7th St.	Front St.	Main Street	High
Garfield	New Castle	Shared-Use Path	Develop a 10' shared-use path along Highway 6 to Coal Ridge High School from Silt and New Castle	New Castle and Silt	Coal Ridge High School	Medium
Garfield	New Castle	Shared-Use Path	Add 10' shared-use path in the Jolly Trail alignment to create a shared-use path to the east side of town	E Ave	Castle Valley Blvd	Medium

Table 5.1 Garfield County Priority Projects (continued)

County	Project Lead	Type	Description	From	To	Priority
Garfield	New Castle	Grade-separated crossing	Construct bicycle and pedestrian bridge over I-70, railroad and river to connect the Appletree neighborhood to Highway 6	CO-335	Highway 6	Medium
Garfield	New Castle	Pedestrian Facilities	Provide pedestrian facilities (crosswalks, ped refuge islands, etc) at the intersection of I-70 off-ramp and Hwy 6 to compliment recent improvements	Intersection	Intersection	Low
Garfield	Glenwood	Shared -Use Path	Add 10' shared-use path from Lowe's to the 114 Exit	Lowe's	114 Exit	High
Garfield	Glenwood	Grade-Separated Crossing	Grade-separated crossing of SH82 and 27th St to enhance bicycle and pedestrian movements between Blake St., BRT, and Rio Grande Trail	Intersection	Intersection	High
Garfield	Glenwood	Bicycle facilities	Create a safer connection between Downtown and Glenwood Canyon Recreation Trail	Downtown	Glenwood Canyon Recreational Trail	Medium
Garfield	Glenwood	Grade-separated crossing	Construct grade-separated crossing under SH82 at 23rd St.	Intersection	Intersection	Medium
Garfield	Glenwood	Bicycle and Pedestrian	Provide better connections to Rio Grande Trail at 10th, 11th, and 14th St.	City Streets	Rio Grande Trail	Medium
Garfield	Glenwood	Program	System-wide education for bicyclists and motorists	City-wide	City-Wide	Medium
Garfield	Carbondale	Grade-separated crossing	Grade-separated crossing at Highway 133 for Rio Grande Trail connection; near BRT	Rio Grande Trail west side of Highway 133	Rio Grande Trail east side of Highway 133	High
Garfield	Carbondale	Shared-Use Path	Extend shared-use path from CRMS to the bridge to connect CR 109 and the new roundabout (Fills in the gaps between the school property and roundabout)	CRMS	Main Street round-about	Medium
Garfield	Carbondale	Shared-Use Path	Add 10' shared-use path to connect Mesa Verde Avenue (neighborhood) to Rio Grande Trail	Rio Grande Trail	Mesa Verde Avenue/ Neighborhood	Medium

Table 5.1 Garfield County Priority Projects (continued)

County	Project Lead	Type	Description	From	To	Priority
Garfield	Carbondale	Shared-Use Path	Add 10' shared-use path and underpass from Downtown to Red Hill per Red Hill Alternative Transportation Study	Downtown Carbondale	Red Hill Trailhead	Medium
Garfield	Carbondale	Shared-Use Path	Add 10' shared-use path along CR-100	Rio Grande Trail	Catherine Store Bridge	Low
Garfield	Garfield County	Shared-Use Path	Utilize Highway 6 right-of-way or the railroad right-of-way to develop shared-use trails (such as the Rio Grande Trail), especially between each community in the corridor.	Parachute	New Castle	High
Garfield	Garfield County	Paved Shoulder	Add 6'paved Shoulders along Hwy 6/Frontage Road	Parachute	New Castle	High

Table 5.2 Eagle County Priority Projects

County	Project Lead	Type	Description	From	To	Priority
Eagle	El Jebel/ Willits	Shared-Use Path/Bridge Connection	Add 10' shared-use path and bicycle and pedestrian bridge from Crown Mountain to Rio Grande	Rio Grande Trail	Crown Mountain Park	High
Eagle	Basalt	Grade-separated crossing	Construct a grade-separated crossing at BRT station	Up Valley BRT Station	Down Valley BRT Station	Medium
Eagle	Basalt	Paved Shoulder	Two Rivers Road	Willits Lane	SH-82	Medium
Eagle	Basalt	Shared-use Path	Provide 10' shared-use path along Two Rivers Rd	Basalt	Willits	Medium
Eagle	Basalt	Grade-separated crossing	Construct a grade-separated crossing of SH-82	Midland Ave	Southside Dr	Medium

Table 5.3 Pitkin County Priority Projects

County	Project Lead	Type	Description	From	To	Priority
Pitkin	Snowmass	Sidewalk	Add sidewalks along Brush Creek Road	Wood Rd.	Owl Creek Rd	Medium
Pitkin	Snowmass	Intersection	Wood Road/Brush Creek intersection improvements	Wood Rd.	Brush Creek Rd	Medium
Pitkin	Snowmass	Shared-Use Path	Rebuild Brush Creek Trail to 10' shared-use path (currently is 8' width)	Downtown Snowmass	Round about	Medium
Pitkin	Snowmass	Intersection	Owl Creek Road & Brush Creek Road intersection improvements	Owl Creek Rd	Brush Creek Rd	Medium
Pitkin	Aspen	Shared-Use Path	Modify the Castle Creek Bridge to create a comfortable bike/ped connection to the Hallam St Corridor	Cemetery Lane	7th St	Medium
Pitkin	Aspen	Signal	Provide Rectangular Rapid Flashing Beacon	Hopkins Intersection	Original Intersection	Medium
Pitkin	Aspen	Bicycle lanes	Create connection Mill St. to Puppy Smith St		Mill Street	Medium
Pitkin	Aspen/Pitkin County	Shared-Use Path	Create connection to Community School/ Music School (Construction 2017)	Aspen Valley Hospital	School Property/ CR15	High
Pitkin	Pitkin County	Shared-Use Path	Add 10' shared use path	S. Bill Creek Road	Redstone	High
Pitkin	Pitkin County	Shared-Use Path/Bridge Connection	Shared-use path and Bridge connection	Lazy Glen	Rio Grande Trail	Medium
Pitkin	Pitkin County	Shared-Use Path/Bridge Connection	Shared-use path and/or Bridge connection	Hwy 82 pedestrian underpass at Gerbaz Way	Rio Grande Trail	Medium
Pitkin	Pitkin County	Shared-Use Path	Shared use trail connection (s) between Intercept lot and the AABC. This may include partial use of the Rio Grande Trail	Intercept lot	Rio Grande Trail	High

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Chapter Six:

Implementation Plan

Implementation Strategies

The projects recommended in Chapter 5 of this document, if implemented, detail the improvements and changes that will benefit the region over the next 25 years. This chapter provides guidance on how to make the facility improvements in this document a reality. Not all of these improvements can be made quickly; it will take many years of steady, incremental progress to achieve this vision. This chapter will be a tool to further the study area evolution as a multi-modal community by identifying 'low hanging fruit' costs and funding opportunities. Implementation of this plan will take place in small steps over many years. The following strategies will guide the region toward developing and implementing the projects identified in the plan.

Complete inexpensive **"low-hanging fruit"** projects first to gain a more connected bicycle and pedestrian network. Such projects could include:

- Increase Bicycle Parking at RFTA Bus Stops and BRT Stations
- Enhance street crossings and driveways along the Rio Grande Trail to improve user comfort and safety

Opportunistically pursue projects such as bike lanes or shoulder bikeways in conjunction with roadway resurfacing or other maintenance projects as they occur.

Strategically pursue high-priority projects and programs with local or federal grant funding.

Incrementally pursue projects based on **available resources** with the goal of eventually completing the project in full.

Incrementally pursue projects based on opportunities associated with **new development.**

Revisit the RFTA Regional Bicycle, Pedestrian and Transit Access Plan every year to evaluate progress on project implementation and every five years to fully review project list, priority, and applicability of programs and projects in the current mobility environment. Elevate implementation priority for projects that will significantly enhance the transportation network as it matures.

Chapter Contents

Priority Project Cost Estimates

Planning level cost estimates were prepared for 10 ranked projects resulting from the prioritization process are listed below. The 10 projects were selected by stakeholder input as no design data or cost estimates currently exists. Table 6.1 shows a summary of the total opinion of probable cost for each project included in Table 5.1. To assist the municipalities in moving forward quickly with their highest ranking and with additional projects, project information for these projects including costs, notes, distances, and type are found in Appendix C.

Planning level cost estimates include likely construction bid items, a 30 percent contingency, construction start-up items, construction engineering, and design. Costs for right-of-way and/or easements (if applicable) are not included. Unit costs for the construction bid items were based on recent actual construction bids, cost data from CDOT and professional engineering experience. The construction bid item quantities represent planning level assumptions and are not based on design plans.

Cost estimates included in this document are in 2015 dollars, based on the typical cost for similar projects in 2015. Future use of this information should consider inflation and changes in construction cost trends at the time of use, compared to 2015.

Figure 6.1: Shared-Use Path - El Jebel

Table 6-1 Top Project Planning Level Cost Estimates

PROJECT	COUNTY	PROJECT LEAD	COST
Rio Grande Trail - Grade Separated Crossing at Carbondale BRT STation	Garfield	Carbondale	$1,975,774
Colorado Rocky Mountain School Connector Shared-Use Path to Main Street Roundabout	Garfield	Carbondale	$509,197
Silt to New Castle Shared-Use Path along Highway 6	Garfield	Silt/New Castle	$11,115,468
New Castle Sidewalk and Shared-Use Path Upgrade	Garfield	New Castle	$829,331
New Castle - Highway 6 & Castle Valley Blvd. Intersection Improvement	Garfield	New Castle	$242,910
Crystal River Trail	Pitkin	Pitkin County	
- Option 1: Rail to Trail Path			$13,170,315
- Option 2: CDOT ROW Path			$25,311,132
Brush Creek Intercept Lot to AABC Shared-Use Path and Bridge Connections	Pitkin	Pitkin County	$6,403,789
Lazy Glen to Rio Grande Trail Shared-Use Path	Pitkin	Pitkin County	$941,024
Gerbaz Way to Rio Grande Trail Connection	Pitkin	Pitkin County	
- Option 1: Connector Bridge			$1,096,128
- Option 2: Paved Shoulders			$733,680
Crown Mountain to Rio Grande Trail Connector	Eagle	El Jebel/Willits	$1,067,472
El Jebel Shared-Use Path - Valley Road to Crown Mountain Park Connector	Eagle	El Jebel/Willits	$713,188

Funding Resources

Federal Formula Grants

The Federal Transit Administration (FTA) apportions certain federal funds based on formulas stipulated in the Moving Ahead for Progress in the 21st Century Act (MAP-21). These formula funds are used only for transit projects. For the RFTA Study Area, FTA formula funds flow through CDOT. A locally-based transit program is eligible under the following federal formula grant programs:

- **Surface Transportation Program Funds.** Surface Transportation Program (STP) funds could be an eligible funding source for the communities. These funds are referred to as "flexible" because they may be used for an array of eligible projects, including transit. Aside from its highway uses, the STP program can be applied to the capital cost of any public transportation project eligible for grant assistance under the transit title of the U.S. Code (49 U.S.C. Chapter 53 - Public Transportation).
- **Formula Grants for Other than Urbanized Areas (5311).** Administered through CDOT, eligible recipients may use the funding for capital, operating, administrative expenses for public transportation projects that meet the needs of rural communities; capital projects; operating costs of equipment and facilities for use in public transportation; and the acquisition of public transportation services, including service agreements with private providers of public transportation services.
- **Alternatives Analysis (5339).** Funds may be used to assist the municipalities in conducting alternatives analyses when at least one of the alternatives is a new fixed guideway systems or an extensions to an existing fixed guideway system.
- **Statewide Planning (5304).** Funds may be used for a variety of transit planning activities, including: transit technical assistance, planning, research, demonstration projects, special studies, training and other similar projects. Funds are not available for capital or operating expenses of public transit systems.

Federal Discretionary Grants

The federal government awards discretionary grants to states and other eligible recipients through competitive application processes. Unlike formula grants, there is no set allotment for a given geographic area and individual projects compete against other projects nationwide. These programs typically allow for a federal share of up to 80 percent of the project capital cost and require a local match for the remaining 20 percent.

- **National Infrastructure Investments (TIGER).** The Transportation Investment Generating Economic Recovery (TIGER) grant program is a discretionary grant program established under the American Recovery and Reinvestment Act. In theory, TIGER funds may be used for virtually any transportation infrastructure investment that would have a significant impact on the nation, a region, or a metropolitan area. Eligible projects include transit, highways, airports, and freight facilities.

  The U.S. Department of Transportation (DOT) administers the TIGER program and may award grants covering up to 80 percent of a project's construction costs, although successful applications in urban areas generally request no more than $20 million and less than 35 percent of project costs from this program. Funds are required to be obligated within two years of award and are typically allocated to projects that have completed the National Environmental Policy Act (NEPA) process.

  TIGER is not a statutory program, but given the overwhelming demand for the funding program to date, it is probable that future rounds of funding will be made available. To date there have been six rounds of TIGER funding with announcements on awards for the seventh round expected son. Most TIGER grant projects have been large ($10 million+) projects with a national or interstate commerce benefit.

HUD Discretionary Grants

- **Sustainable Communities Regional Planning (SCRP) Grant Program.** The US Department of Housing and Urban Development offers discretionary grants to local efforts to target housing, economic and workforce development, and infrastructure investments to create more jobs and regional economic activity. These HUD grants have been used for infrastructure projects in the past; however, grants through this program have not been awarded since FY 2011.

State Sources

- **Great Outdoor Colorado (GOCO) Trail Grants.** The Colorado State Recreational Trails Grant Program helps develop trails for non-motorized activities including hiking, biking, wildlife-watching, horseback riding, cross-country skiing and snowshoeing. Trail Grants for large and small trail projects and trail planning and maintenance are available through this program, which is a partnership among the Colorado Division of Parks and Wildlife, Great Outdoors Colorado, the Colorado Lottery, the federal Recreational Trails Program, and the Land and Water Conservation Fund. Trail grants are offered once a year through the Colorado State Trails Program.
- **Great Outdoor Colorado (GOCO) Planning Grants.** Planning Grants are designed to help eligible entities develop strategic master plans for outdoor parks and recreation projects, trails or site-specific plans. Local governments are eligible to apply for Planning Grants. Planning Grants have a maximum limit of $75,000; there is no maximum for the total project cost. Applicants must provide at least 25% of the total project cost in matching funds, at least 10% of which must be a cash match. Due to the high level of competition for these grants, 75% of the proposed match for the project must be secured at the time of application.
- **Highway Users Tax Fund (HUTF)**. Colorado's Highway Users Tax Fund collects revenues from motor fuel excise taxes, annual vehicle license and registration fees, and passenger-mile taxes on vehicles. Revenues from the fund are disbursed to recipients based on a formula prescribed by statute.
- **State Highway Fund (SHF).** The State Highway fund is a subset of the HUTF that is administered by CDOT for the maintenance of the state's highway system. The fund also generates revenue through interest earnings on the fund balance. The SHF can also be used for matching available federal highway construction funding.

- **State General Fund.** The State General Assembly has provided mechanisms that can be used to allocate General Fund revenues for transportation projects, including direct transfers. Another mechanism, passed in 2009 by the General Assembly, creates a trigger of transfers from the General Fund to the HUTF when Colorado personal income grows 5 percent or more in a calendar year.

- **FASTER Transit Grants.** FASTER Transit Grants are awarded by the CDOT Division of Transit and Rail for the purchase of transit vehicles; construction of multimodal stations, and acquisition of equipment for consolidated call centers. Local recipients are required to provide a minimum 20% local match.

Local Sources

At the local level, each municipality could fund projects through existing revenue streams or a variety of other local sources. Options include:

- **County/City/Town General Funds.** Municipalities could choose to earmark funds from its general fund sources to allocate towards transportation projects.

- **Development Impact Fees and Excise Taxes.** Fees or taxes assessed on new commercial and residential property by local governments to help for all or some of the costs of providing public services.

- **Open Space and Trails Programs.** Pitkin, Eagle and Summit Counties, Colorado Springs and others fund trails and open space programs through a property tax and/or sales tax levies.

- **Other Special Sales Taxes.** Revenue from temporary or permanent sales taxes dedicated to transportation uses is increasingly utilized for transportation investments. Special purpose sales taxes can provide funding streams for a variety of programs, and since they are implemented at a city/town level, they would apply only within a city/town. This of course would require a public vote.

- **Special Assessments.** Special assessments are additional property taxes that are self- imposed on properties close to a new transportation facility or service. They can be used as a dedicated annual revenue stream for funding operations or bonded against under the right set of circumstances. The assessment is levied against parcels in an area that receive a special benefit that can be clearly identified and measured. Implementation of special tax districts can be challenging and before this mechanism can be considered an

option, affected local landowners and businesses would need to buy into the premise that the tax is worth the value that the infrastructure or service improvement provides. Nationally, special tax districts are one of the most common forms of value capture for transportation projects.

- **Real Estate Transfer Tax.** Taxes imposed by states, counties and municipalities on the transfer of the title of real property within the jurisdiction.

- **Joint Development.** This refers to the development of a transportation facility and/or adjacent private real estate development, in which a private sector partner: (1) with respect to the transportation facility either provides the facility or makes a financial contribution to offset its costs; and/or (2) incorporates a profit sharing mechanism into the private portion of the project that enables the public sector to share in the private returns. Joint development is more commonly used to provide up front capital funding, but operations funding based on a lease revenue stream could be considered. There are shopping centers and other large land owners that could donate land or station area amenities to help promote the rider experience at their station stops.

- **Transportation Demand Management Strategies.** Transportation Demand Management (TDM) is the application of strategies and policies to reduce travel demand (particularly, that of the solo-occupant auto) or to redistribute this demand in space or time. There are a number of strategies in the TDM field. Hypothetical TDM strategies include the imposition of parking charges in downtown street locations and parking lots and time limits on downtown parking to ensure more frequent turnover of close-in spaces for shoppers and to encourage all-day parkers to utilize transit instead. Of course, each city/town would need to weigh the advantages and disadvantages of these programs in the larger context of downtown commercial activity.

- **Private contributions.** These include donations from private entities in exchange for a specific benefit (i.e. advertising). An example would be advertising by local merchants on the outside of a bus. Like naming rights, private sector contributions could potentially be structured to provide a predictable annual revenue stream for funding operations but the magnitude of these payments is likely to be relatively small. Local civic or cultural organizations often contribute funding for sidewalk or park

improvements in situations where the organization can be recognized for its contributions with an engraving or placard.

- **Parking Revenues.** A city/town can use revenues from parking to fund transportation projects. Like naming rights and private contributions, the magnitude of these revenues is likely to be small and unlikely to cover a large portion of costs.

- **SIDs and BIDs.** Special Improvement Districts (SIDs) and Business Improvement Districts (BIDs) are special assessment districts within a city/town, formed by property and/or business owners as a means of funding and implementing local improvement projects. Establishment of a SID/BID offers low-interest financing, funded through the sale of bonds, for district-wide improvement projects. Incremental assessments are collected over several years for the collective costs of projects in the district. Projects are typically infrastructure based and can include construction and maintenance of sidewalks, street lighting, roads, and utility lines. The benefits of SIDs/BIDs are that they provide a means of funding public projects that a city/town can't fund, they offer project financing for property owners, they spread the costs of projects over all affected property owners, and the owner assessments directly reflect the costs of the projects. The drawbacks of SIDs/BIDs are that they take a significant amount of time to establish and the project approval process can be tedious.

- **Tax Increment Financing (TIF).** A method to use future gains in taxes to subsidize current improvements, which are projected to create the conditions for said gains. The completion of a public project often results in an increase in the value of surrounding real estate, which generates additional tax revenue. Sidewalk and other streetscape improvements are typically popular uses of TIF funding.

Appendix A

Existing Conditions Maps

Existing Conditions Maps

The maps contained is this Appendix were presented to stakeholders during the community focus group meetings to solicit input towards establishing the opportunities and constraints for this plan. These maps are provided as a reference.

Figure A.1: Shared-Use Path - El Jebel

Figure A.2: Worn Footpath - Glenwood Springs

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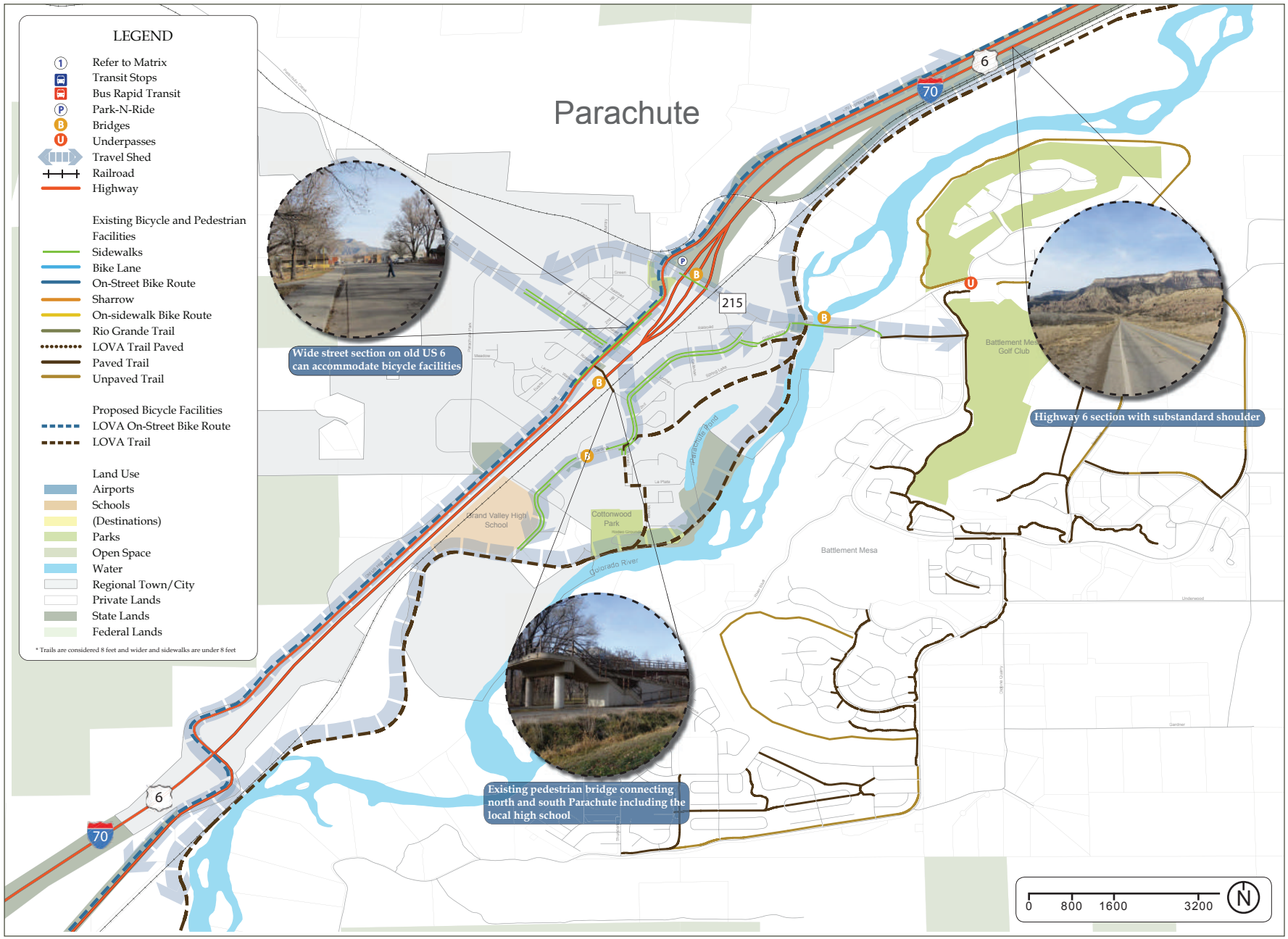
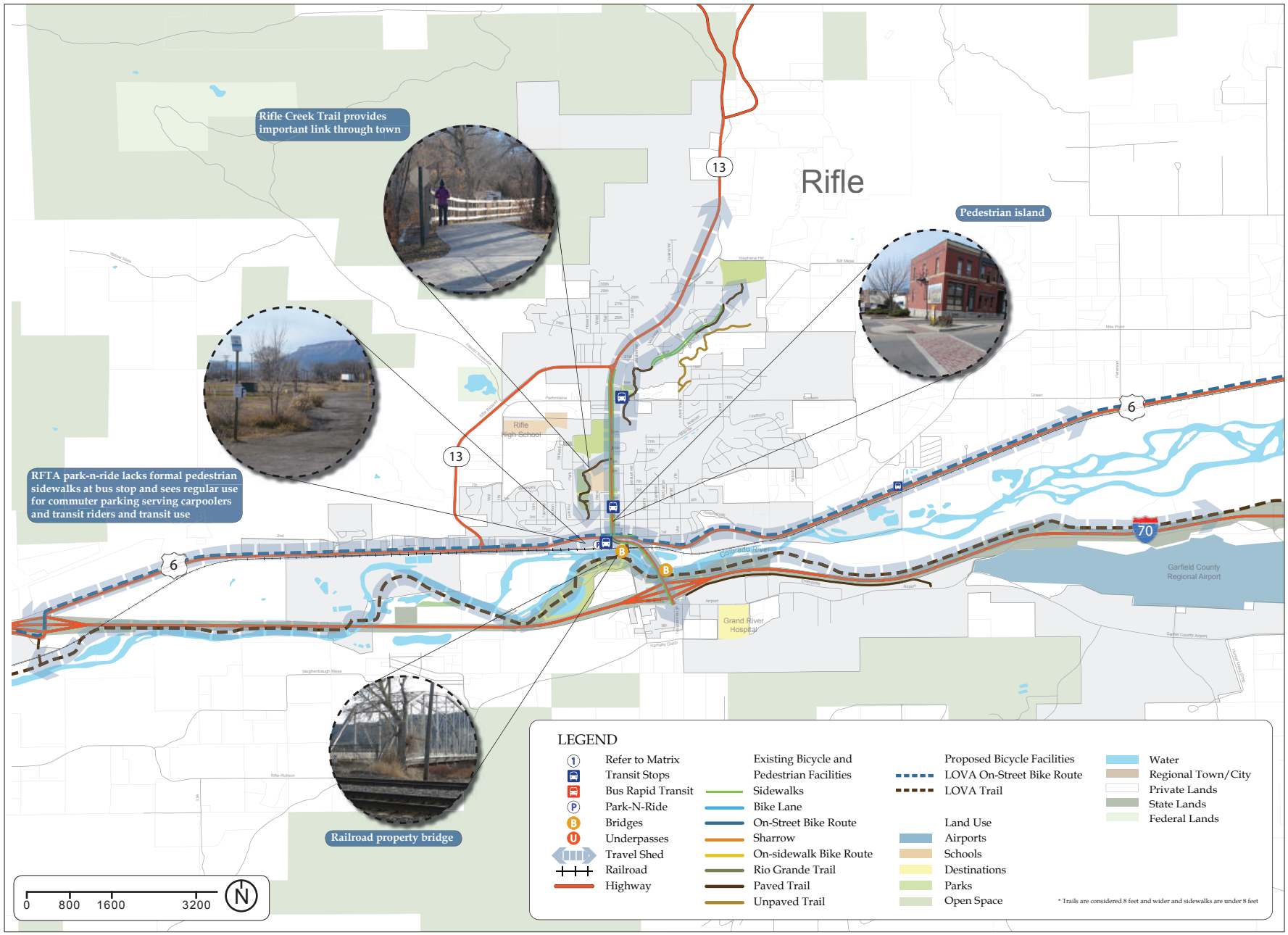
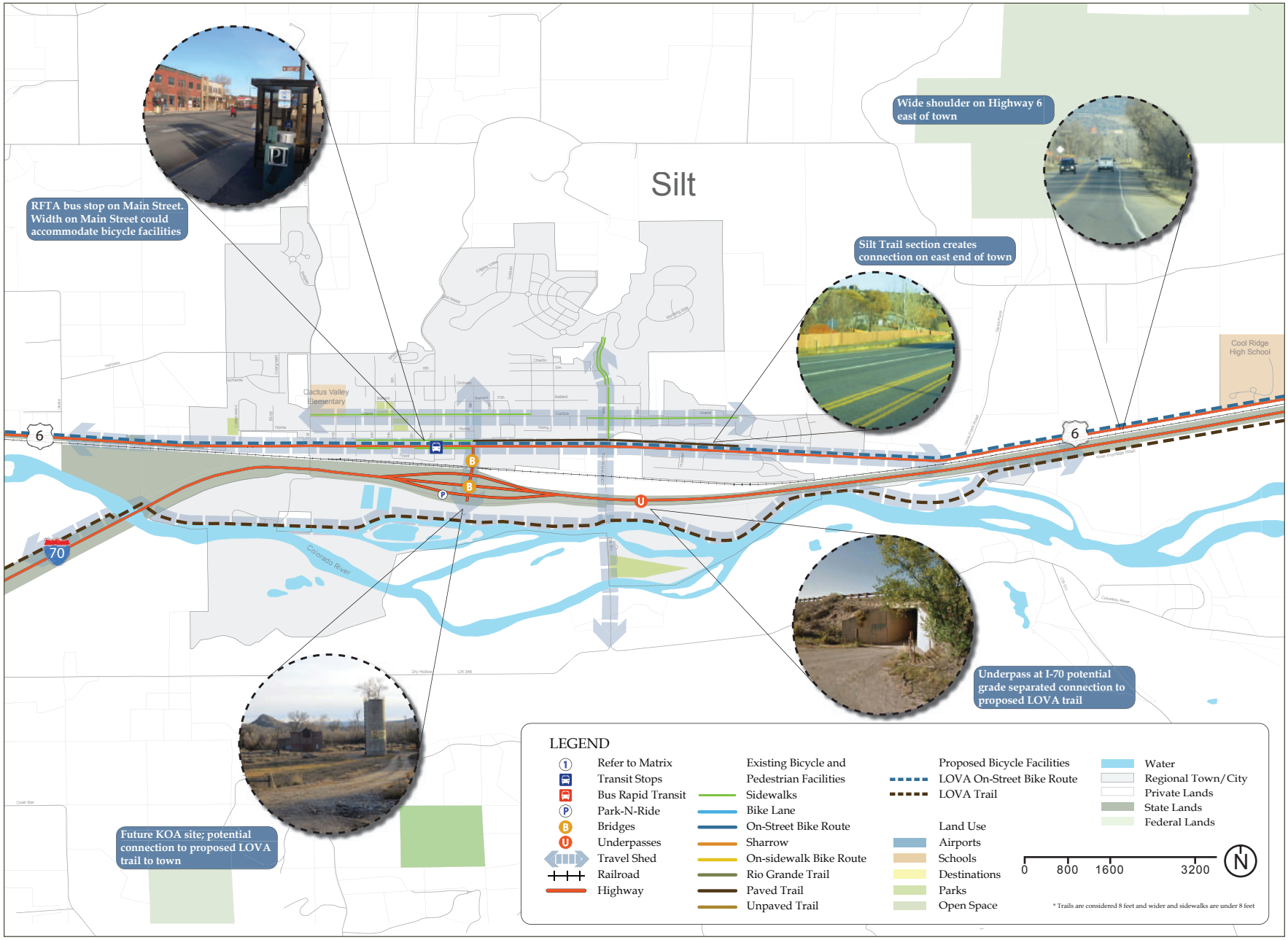


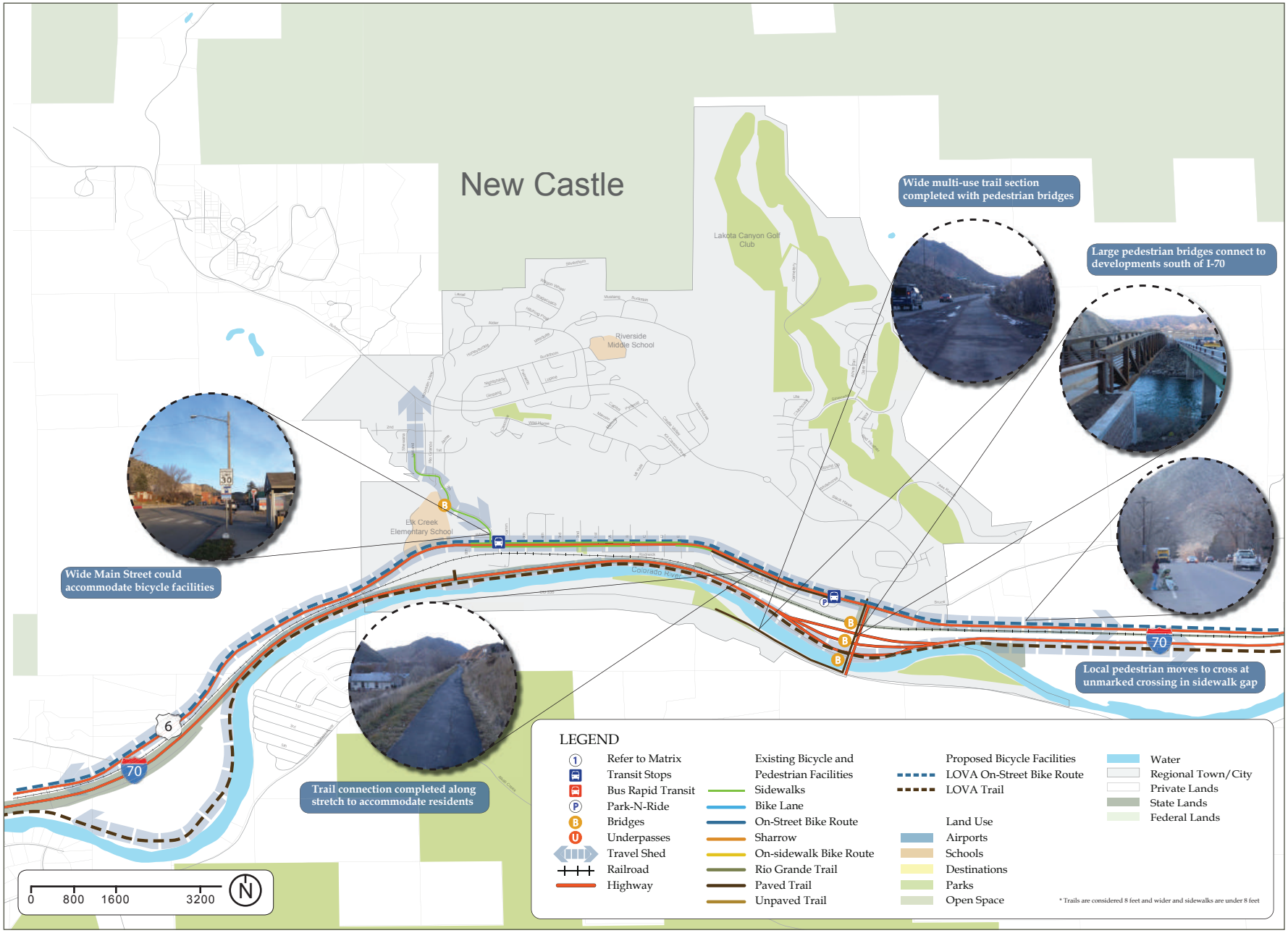
Map A.1: Parachute Existing Conditions Map



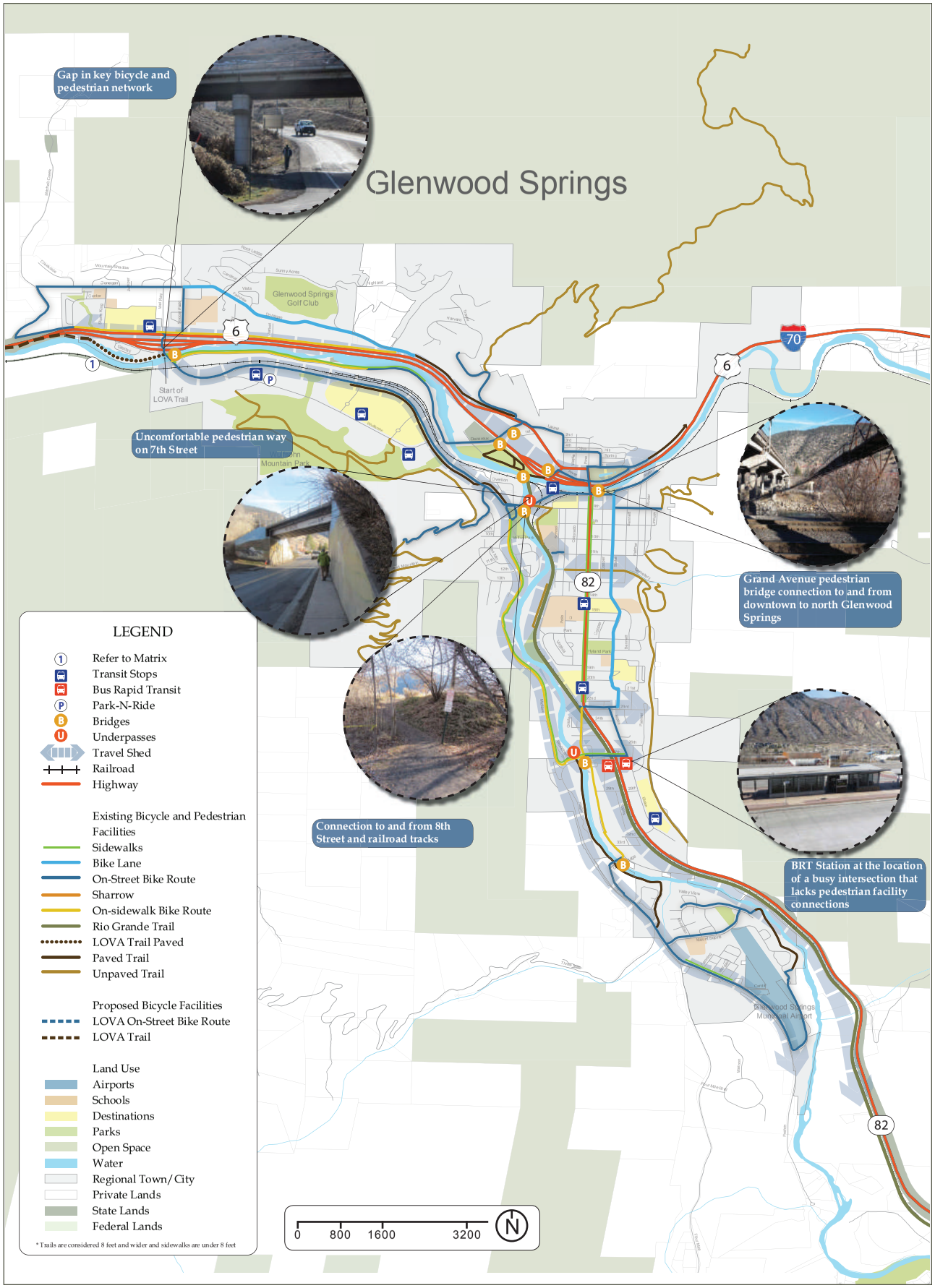
Map A.2: Rifle Existing Conditions Map



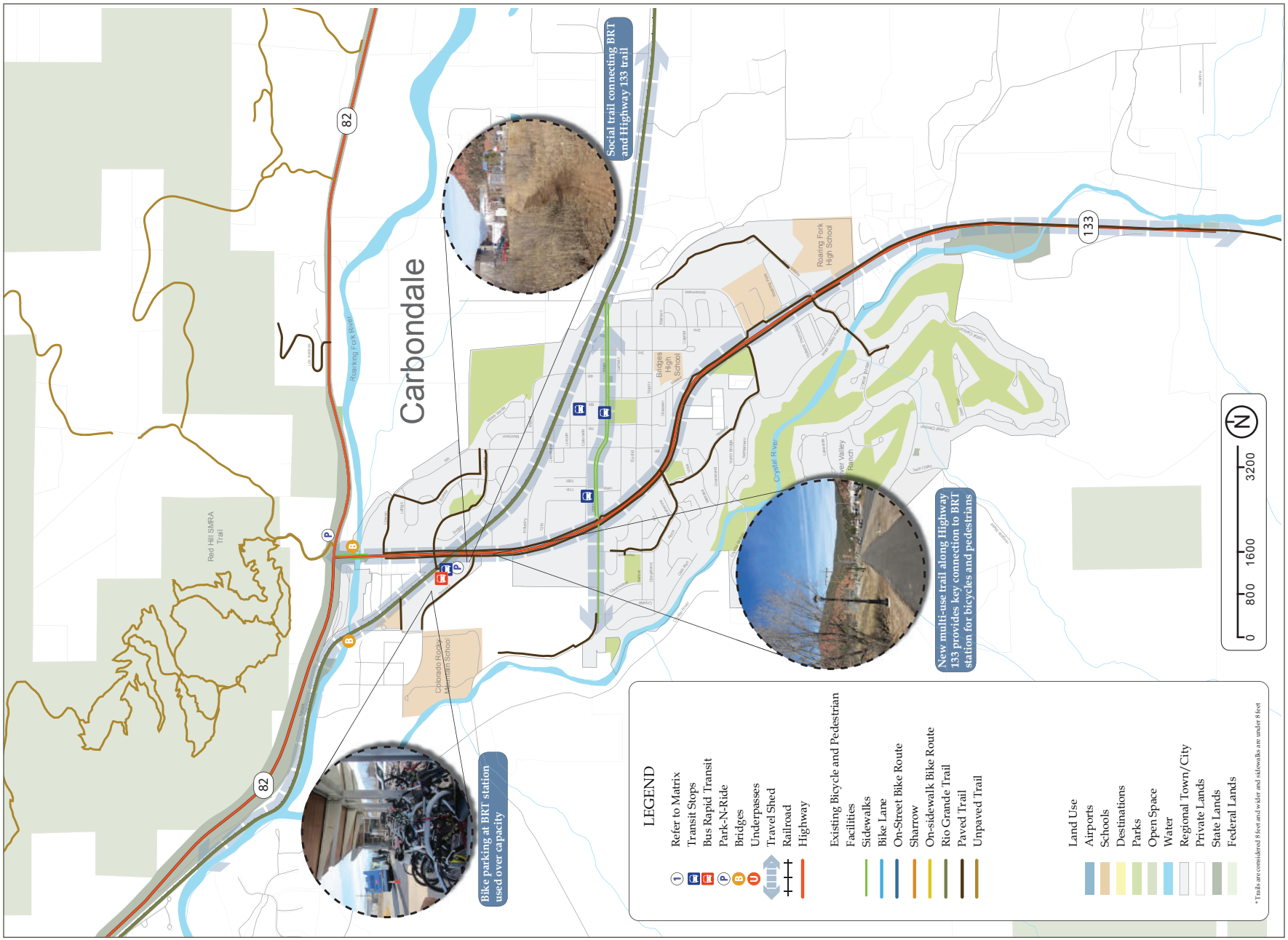
Map A.3: Silt Existing Conditions Map



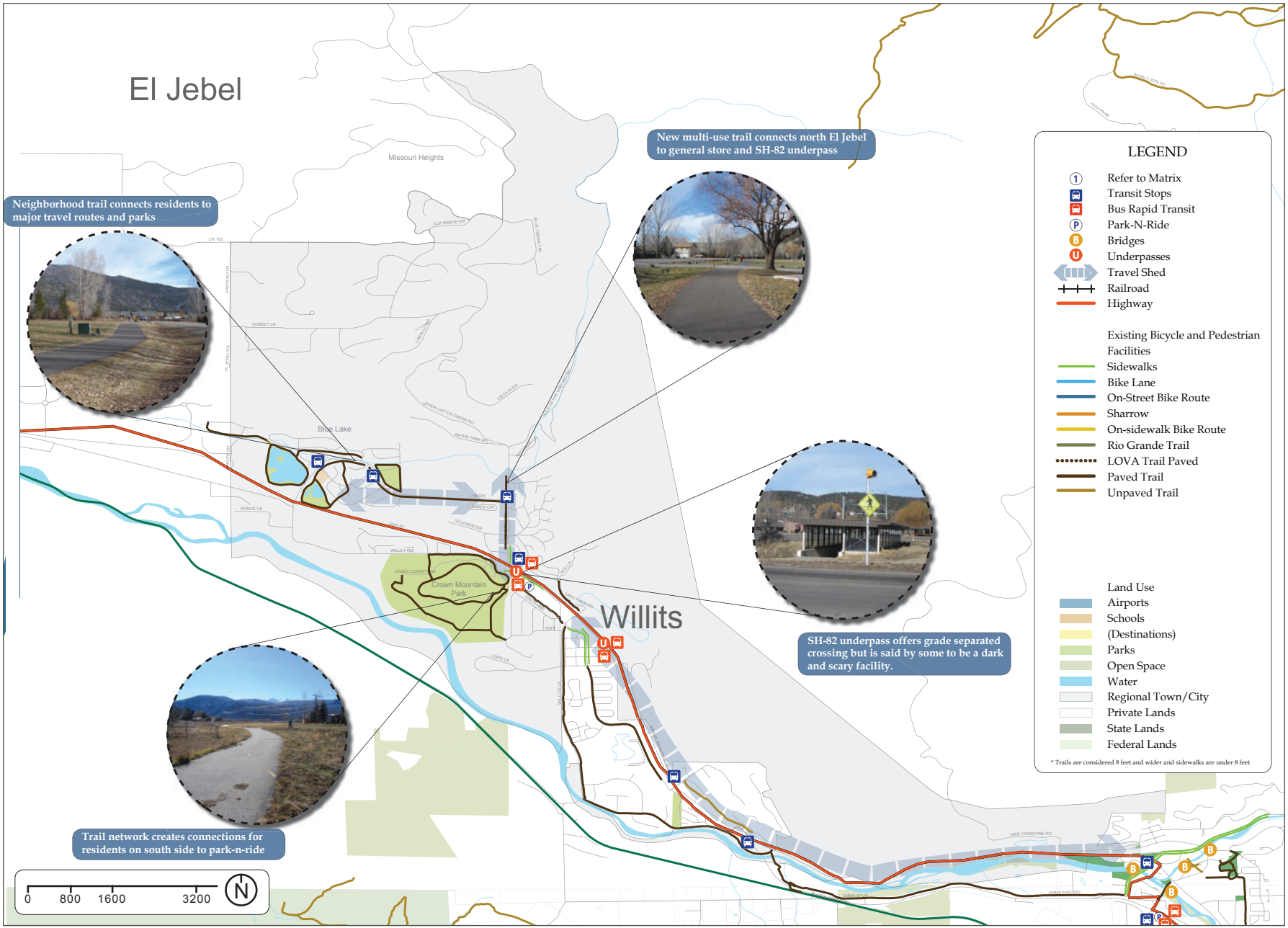
Map A.4: New Castle Existing Conditions Map



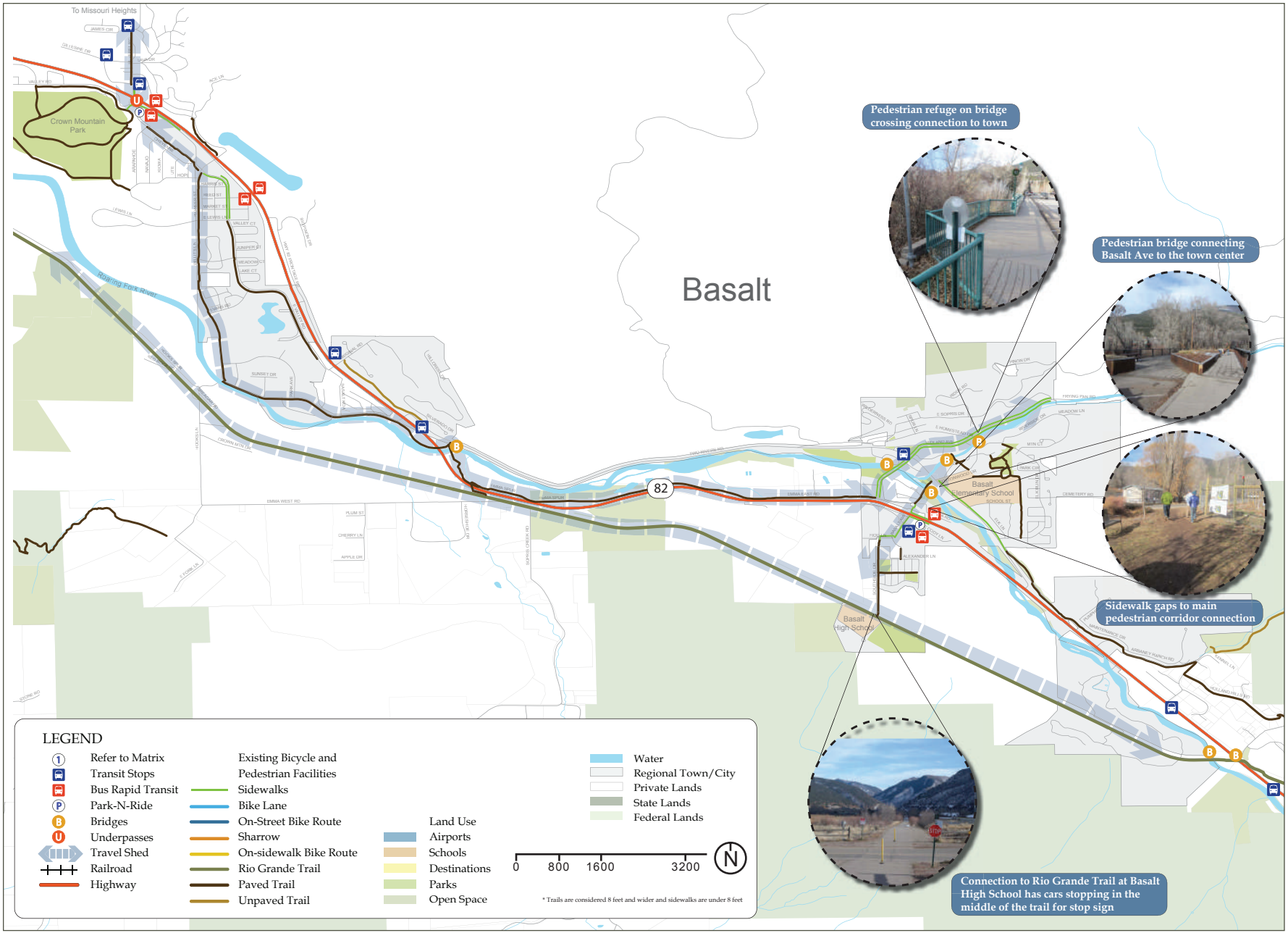
Map A.5: Glenwood Springs Existing Conditions Map



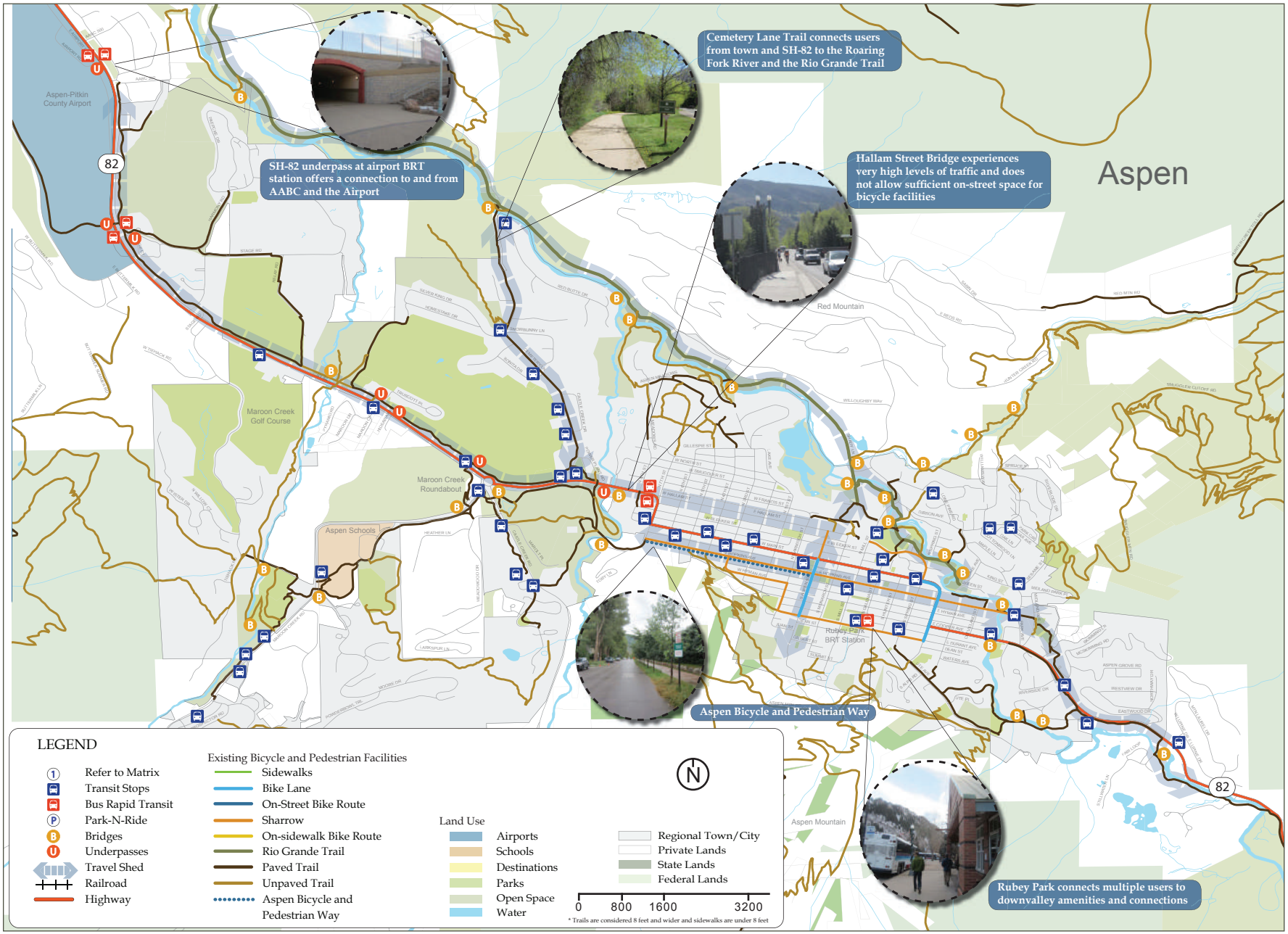
Map A.6: Carbondale Existing Conditions Map



Map A.7: El Jebel/Willits Existing Conditions Map



Map A.8: Basalt Existing Conditions Map



Map A.9: Aspen Existing Conditions Map

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ride
our trails

Appendix B

Focus Group Summary

Community Summaries + Maps.

The information from the work sessions and the grant activity was compiled to create the opportunities and constraints maps found in this Appendix. These maps and the summary text reflects the findings of meetings with staff and the stakeholders. Priority projects, areas of safety concerns, missing links in the bicycle and pedestrian system and places where there are opportunities to improve infrastructure for walking and biking were identified within each jurisdiction.

Figure B.1: 3rd Street - Rifle

Figure B.2: Rio Grande Trail Wayfinding - Basalt

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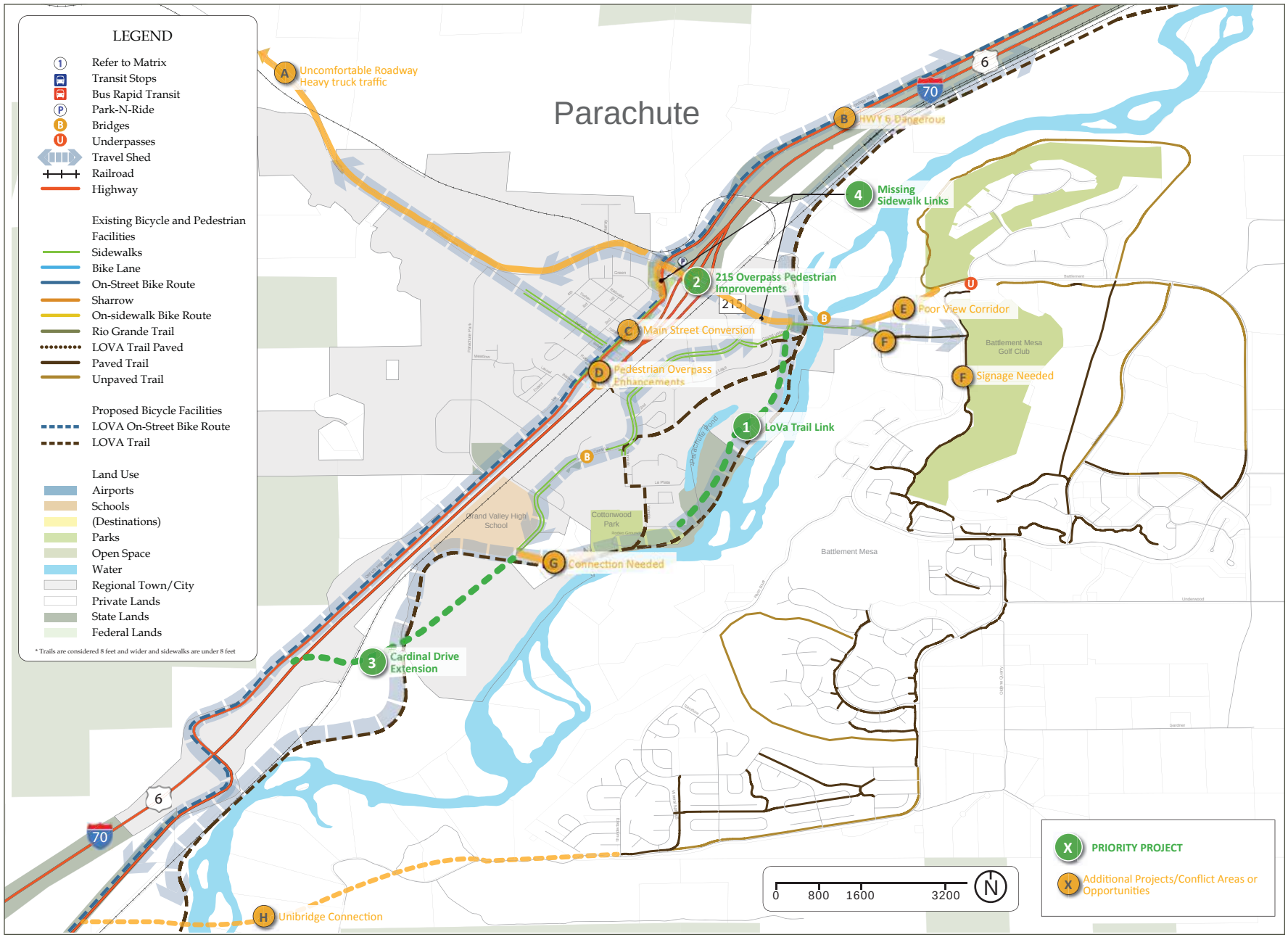


Map B.1: Parachute Focus Group Summary Map

Parachute Priority Projects:

#1 Riverfront Extension – LoVa Trail Link Portion

- They have a soft surface start to the LoVa trail between the pond and river on public land - the Town is working on land acquisition to extend this segment.

#2 Exit 215 Connection over I-70 Pedestrian Improvements

- Overpass on I-70 is a challenge – narrow sidewalk, high truck traffic, vibrations, ugly, not maintained and uninviting.
- People go out of their way to cross over on the pedestrian overpass rather than going over the exit at 215. An additional concern is that even after you cross there is no sidewalk to get you to Town or to connect on the southern side to the existing sidewalk/ trail network.
- Even though it's a narrow space, a barrier between the road and the sidewalk would improve the feeling of safety.
- Connects the 4500 people in Battlement Mesa with the 1000 people in the Town of Parachute.

#3 Cardinal Drive Extension

- Potential connection which would extend past the high school to connect with HWY 6 to create connectivity and route options for all modes of travel.

#4 Sidewalk Connectivity

- I-70 Crossing into downtown and to the south where the sidewalk begins.
- This is a challenging section - no sidewalk connection to the downtown or to the existing sidewalk to the south of the bridge currently exists - which deters pedestrians from using this route.

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. 215 to the north of town

- Uncomfortable, noisy roadway
- 11 miles to the gas fields, heavy truck traffic deters non-automobile travel.
- Used to be a popular recreational ride before it became such a heavy truck route.

B. Highway 6 to the east

- People use Hwy 6 for some recreational uses, although currently there is no pedestrian infrastructure, an insufficient shoulder, and high truck traffic.
- Stretch of HWY 6 towards Rulison is in poor condition - would be good to improve the bicycle and pedestrian connections.
- Though the truck traffic has tapered a bit, widening the road so there are a few feet on either side would certainly improve the safety and could provide some incentive to use that stretch of roadway for biking or walking.

C. Historic Main Street Conversion

- The Town would like to take historic Main Street/State Highway 6 over from CDOT so that they could make improvements in the downtown area.
- They currently have the truck route in place to bypass the downtown on Parachute Blvd. which would eliminate the need to accommodate trucks on 1st Street (the main street through downtown).

D. Pedestrian Bridge Improvements

- Kids and others use the pedestrian bridge even though it is out of the way and is in poor condition because the 215 crossing is so challenging (CDOT owns the bridge).
- Needs mitigation of safety hazards /improvement of aesthetics
- Bridge is in disrepair, ugly – needs maintenance to make it look like someone cares – could add some eye appeal to encourage users.

E. Conflict Area

- Insufficient view corridor/vegetation overgrowth.

F. Signage/Wayfinding

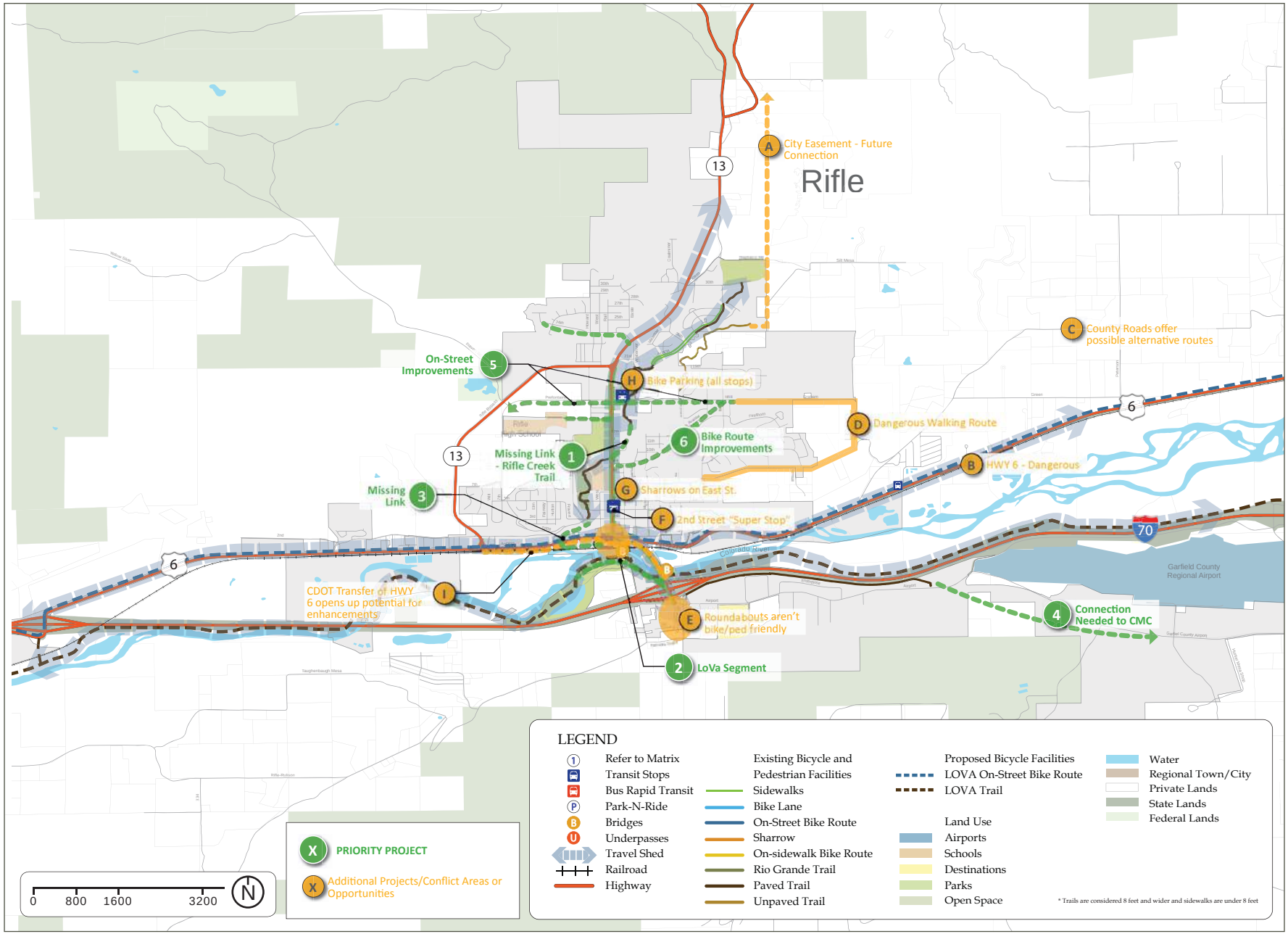
- Direct people to the pathway.

G. Future connection from Cottonwood Park to the high school

- The Town has identified this as a future project to help with connectivity.

H. Unibridge Crossing

- An additional crossing over I-70 at Unibridge to the west of town would be an asset to the community by improving the connections across the Interstate and enhancing access.
- Stone Quarry Road goes down to an access road at Unibridge where there is a river crossing (11 mile bike ride wrapping to the other side of I-70 into Town).
- Possibly more of a recreational connection than a transportation improvement.



Map B.2: Rifle Focus Group Summary Map

Rifle Priority Projects:

#1 Rifle Creek Trail (2016)

- Filling the gap/missing link to connect Deerfield Park to 3rd Street
- Funds are mostly in place and work is underway (going after grants), Council supports this project.
- Connects the park to the ball fields and bridges the HWY 13 barrier to connect the east and west sides of town with existing infrastructure.
- Eventually, the goal would be to connect south to a future LoVa Alignment.

#2 LOVA Segment (2016)

- In the boat ramp area, the project involves relocating the boat ramp and extending a section of the future LoVa trail.

#3 Rifle Creek to Gateway Trail Segment and Gateway Enhancements

- Gateway Area is dangerous/unwelcoming to alternative modes and isn't currently connected to the trail network.
- The Town is applying for Tiger Grants for this area. CDOT decommissioned the HWY 6 segment in this area to Rifle and gave the Town $5 million to help with improvements.
- It will be challenging to get a trail across the railroad crossing.

#4 Accessing CMC (Colorado Mountain College)

- Bike lanes would be a good addition if the width of the street can accommodate lanes.
- Longer range project – Garfield County would need to step up to help with improving connections to the campus.

#5 On Street Improvements

- Railroad Avenue (HWY 13) to the high school – social trail is there now.
- Or a sidewalk connection along Prefontaine Avenue.
- Bike lanes on 16th Street where there is a 36 foot roadway to connect to the bus stop.

#6 Bike Route Improvements

- New route potential along the unpaved road cut near the cemetery. Preferred location for a separate access route because of grade challenges on alternative routes.
- 9th Street could be improved for biking – it doesn't have a shoulder, and is the most dangerous roadway in the downtown area.

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. Opportunity – City Easement north of town

- City has an easement to the north of town which could serve as an alternate route for biking/walking along HWY 13.

B. Challenge - Highway 6 is dangerous in this area

- To go to Harvey Gap or New Castle, people do everything they can to stay off of HWY 6.
- HWY 6 dangerous, has a dangerous reputation
- People would likely use it if it were safer/improved

C. Infrastructure Improvement – County Roads as alternative routes

- Signage enhancements to mark an alternative route on the County roads towards New Castle would be a shorter time frame improvement that could help connect the two communities.
- The signs could identify a recommended route which would likely avoid HWY 6.

D. Challenge - Walking around the Highlands East subdivision

- Used to be really popular, however the shoulders are too narrow and with more traffic the roads are too dangerous to use for walking now.
- There was a cyclist in this area who was hit by a car.

E. Challenge - Roundabouts are an impediment to get to and around south Rifle

F. Infrastructure Improvement - Second Street Super Stop

- The Town is planning to move the park-n-ride to the south and move the downtown bus stop to 2nd Street – would need some of the private property to make it work.
- This would create an improved "Super Stop" for transit users with more of a plaza area.

G. Infrastructure Improvement - Sharrows

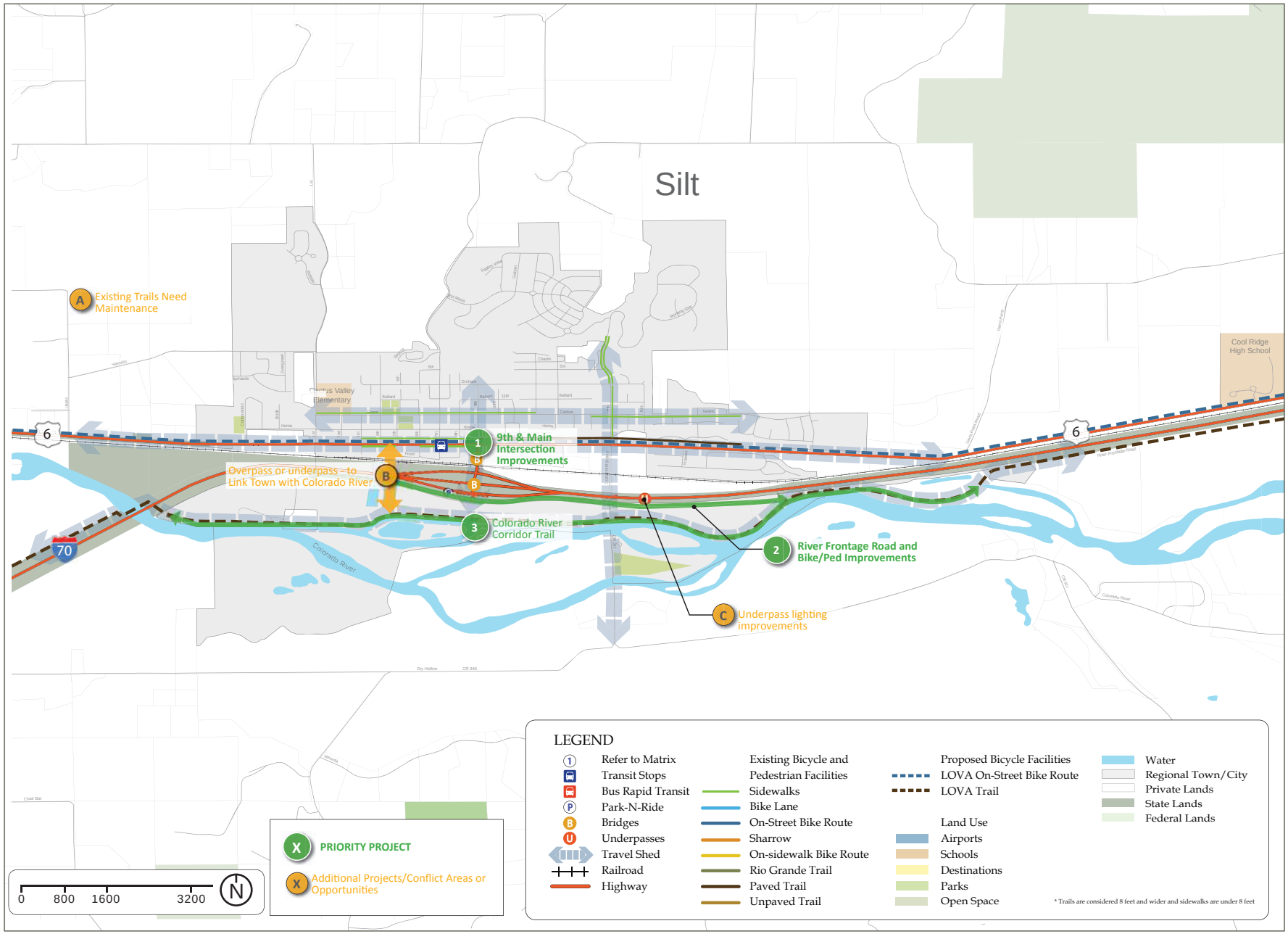
- Add sharrows on East Street to improve bike facilities.

H. Infrastructure Improvement – Bike Parking

- There is a need for bike parking at all of the RFTA stops to encourage riders.

I. Opportunity – Transfer of HWY 6

- Rifle has recently decommissioned a portion of HWY 6 from the intersection with HWY 13 to the I-70 interchange.



Map B.3: Silt Focus Group Summary Map

Silt Priority Projects:

1. Priority Intersection for Improvements - 9th and Main Streets

2. Priority Corridor for Improvements – River Frontage Road

3. Priority Corridor for Improvements – Colorado River Corridor

- The Town of Silt would like to add the Colorado River Trail for all those properties that have been annexed to the Town and are adjacent to the river. The Town is also planning to install a whitewater park by the Town's Island Park, and would like to add spurs from all directions to link this amenity. Further, the Town would like to add the trail on the Town's conservation easement property, Silt River Preserve, across the river from the Town's water plant. These trail improvements will enhance recreational opportunities in the region.

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. Infrastructure Improvement – Existing trails maintenance

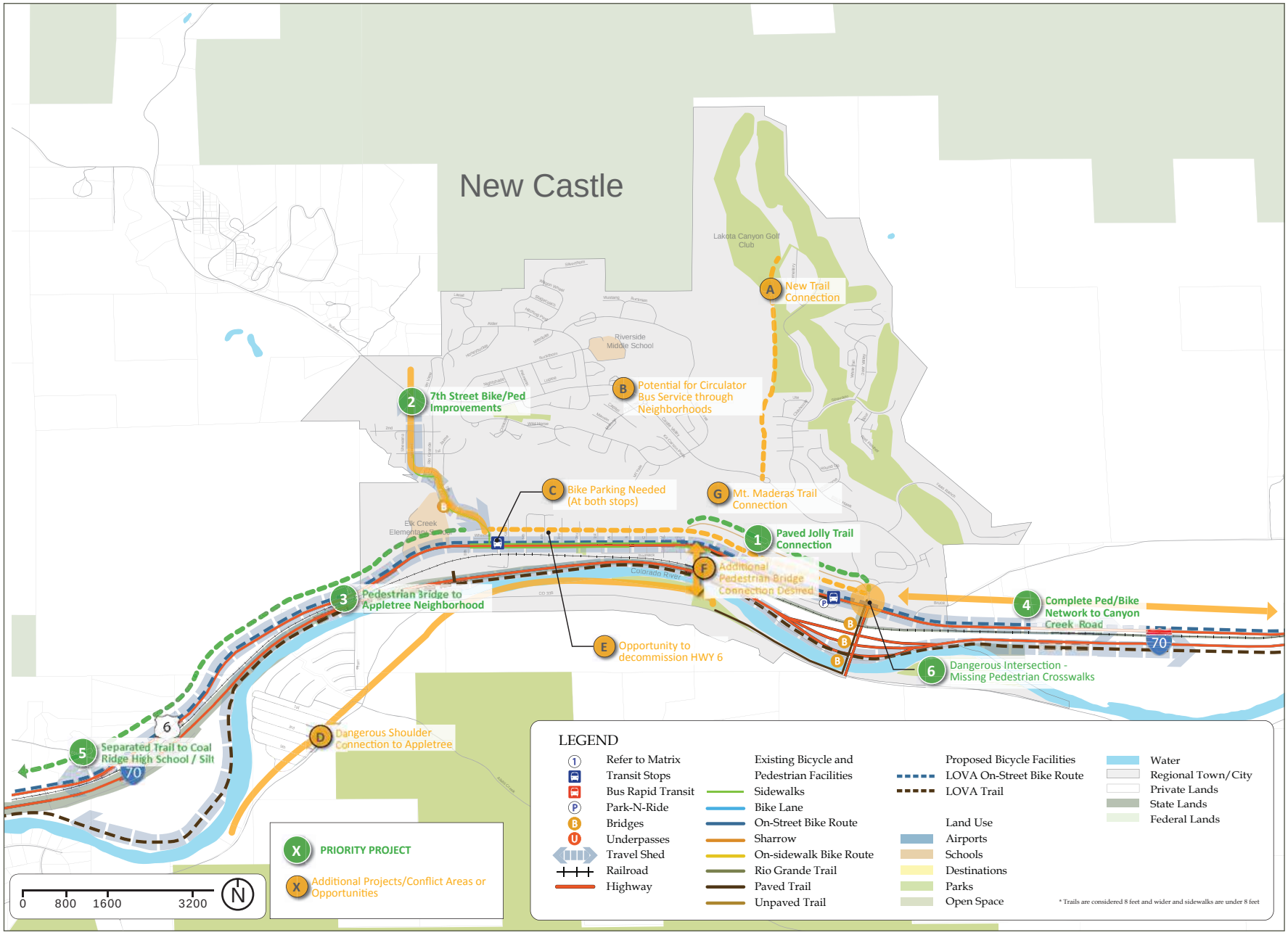
- Maintenance of existing sidewalks and trails - many of the current trails are not in good repair, and have ceased to function as a pedestrian or bicycle alternative. Sidewalk gaps need to be filled in.

B. Opportunity - North to south trail (overpass or underpass)

- To link Town with Colorado River.

C. Infrastructure Improvement – underpass lighting and trails

- Underpass lighting and trail (links River Frontage Road with 16th Street) is a fairly inexpensive project.



Map B.4: New Castle Focus Group Summary Map

New Castle Priority Projects:

#1 Paved Jolly Trail Connection create a multi-use trail/pathway (east side of town).

- Currently single track trail, completed in 2014, from the west end of Walters Lane Road into town (Roaring Fork Outdoor Volunteers helped build it)
- Doesn't see a lot of usage yet, but is an important connection that can be improved for more use.
- There is potential to have more of an east to west network from the Jolly Trail to Maderas Trail that could open up connectivity for the community.
- Would be a very good biking/pedestrian trail to connect to the LoVa trail along the north side of downtown instead of the existing paved route (better visual/safer connection).
- Improvements would create an incentive for people to walk or bike from Lakota (a connection from Lakota's entrance to the trail).

#2 Improve 7th Street and C Avenue

- 7th Street is heavily used by the community, yet it isn't adequate for bikes/pedestrians. Currently doesn't have sidewalks or curb and gutter – there is room to walk off of the roadway – but the pedestrian connections are less than ideal.
- Originally platted with a 75 foot right of way – so there is room for improvements.

#3 Appletree Neighborhood/I-70 Pedestrian Bridge over I-70 and Colorado River

- To connect this dense, unincorporated neighborhood to the town of New Castle.

#4 (#1 Regional Priority) East trail connection to South Canyon via Canyon Creek Road

- While the South Canyon portion is a challenge to connect all the way through to Glenwood, an interim goal could be to extend a trail to Canyon Creek, which is not as difficult as the South Canyon piece.
- The opportunity to connect New Castle and Glenwood opens up New Castle as a destination to increase ridership
- Connections to the east towards Glenwood are more important to the Town than those to the west, if they built to Canyon Creek, it might put pressure on the GarCo to build South Canyon.
- There are cyclists and joggers that use HWY 6 until Canyon Creek Road and then get on the interstate. Usage increases during bike month - would anticipate a huge increase in usage/bike trips if the South Canyon trail were developed.
- This is currently a dangerous stretch of road with an incomplete pedestrian network connecting town to Canyon Creek Road.

#5 West trail connection towards Silt/Coal Ridge High School

- Existing connection along HWY 6 is the only option and is dangerous, very narrow, with high speeds (across the river speeds are 35)
- Trail to the west (towards Rifle) would be a viable connection and a lot cheaper than building a trail towards Glenwood Springs - can be framed as a "safe route to school" project to get out to Coal Ridge High School, and could include the 7th street improvements.
- Coal Ridge High School students all drive – too dangerous to ride bikes or walk
- Would likely involve two safe routes to school projects – 7th street to the elementary school and the trail to the west to Coal Ridge High School.
- Applied for a mini-grant to look at options going east of New Castle or going west to Coal Ridge High School and on to Silt – roughly following LoVa.
- Town feels that they will have better luck going west with trail development due to the high cost of trail development in South Canyon.
- Land owner to the west of town wants the Town to annex his property and is open to trail development - big land owner, big biker supporter.
- -Rail connection to the west - Alignment would be along HWY 6, but it would be a separated trail that might cross the highway before getting to Davis Point, where there is a pinch point on the northern side. Discussions haven't really started with Silt - it would be nice to meet with Silt and Rifle to kick off the conversation.
- People use Peach Valley Road as an alternative.

#6 Dangerous – I-70 off-ramp and HWY 6 Intersection

- Roundabout/pedestrian connections or at least crosswalks north of the I-70 off ramp are needed.
- Intersection north of the I-70 interchange.
- Crosswalks needed at the intersection where the interchange is. Future roundabout is going in, but currently this area is unsafe - needs crosswalks/safety improvements.
- Crosswalks haven't been installed yet due to CDOT jurisdictional authority.

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. Planned Project - Mike Miller Way – new trail connection

- Eventually building a trail between Lakota and Castle Valley - named in honor of Mike Miller who donates his time to keep up the cemetery - path would go to the north where the cemetery is located.

B. Potential Transit Project

- Potential for a circulator route through town also could see large use form Appletree residents.
- Even with the senior population there is not much demand for the Traveler (senior transportation option).

C. Community Need (Bike parking at RFTA stations)

D. Community Need

- County Road 335 safety enhancements near Appletree neighborhood
- The road is too close to the asphalt trail - needs a guard rail along the trail to Appletree.
- At night or in snowy conditions trail doesn't feel safe, especially where it transitions to at grade towards the west.
- Trying to change the speed limit along the road from 45 to 35.

E. Constraint Town is trying to take ownership from CDOT of a portion of HWY 6.

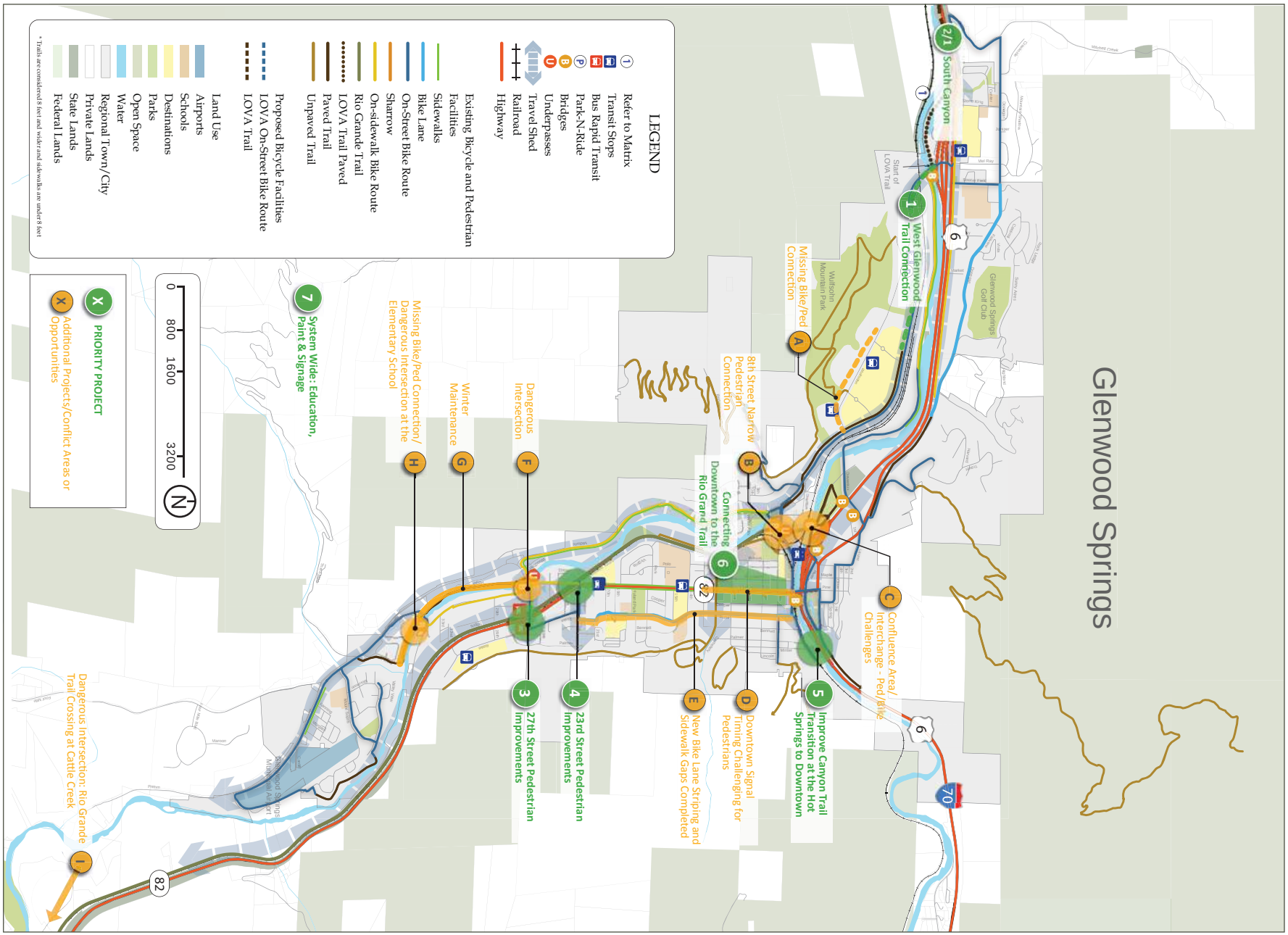
- They have made a first proposal, however CDOT wanted them to take the road all the way to Canyon Creek but that wouldn't make sense for the Town, so they did not accept the agreement at that time. The primary benefit would be to get more parking downtown.
- Perception is that there is a parking problem.
- Could also replace some of the sidewalks along the main street.

F. Potential Project – Long Term Vision – additional pedestrian bridge

- Additional pedestrian bridge connection is desired from Coal Ridge Park to the downtown area.

G. Planned Project

- Trail connection going up and over Mt. Maderas is a 2015 Goal
- Head west to Mt. Maderas, head east to connect to the future senior housing – compacted gravel surface would include switchbacks – fairly challenging construction.
- Working with the youth core to construct the trail in 2015.
- Ongoing maintenance of Mt. Maderas trail – use mostly crusher fines.



Map B.5: Glenwood Springs Focus Group Summary Map

Glenwood Springs Priority Projects:

#1 West Glenwood Trail Connection

- West Glenwood Trail Connection - hoping to connect the portion between Lowes and the 113 exit.
- $3 million – ties up the city's resources and reduces their capacity to do other things. – They want to get the West Glenwood connection done before the bridge reconstruction is implemented.
- This provides an important connection from downtown to West Glenwood - Alta has been doing some work for the city on this project, trying to get the connectivity right from downtown out to the west. Project involves wayfinding, connectivity, pavement markings, and incremental efforts.
- Also in this area, RFTA received funding for 600 ft. of trail to connect the trail from The Meadows around to the park-n-ride; the grant funding was tied to improvements to the park-n-ride. They are writing a Tiger Grant for the separate bus barn/maintenance facility.
- GarCo applied for a FMLD grant to connect to RFTA trail in the west Glenwood area.

#2 (#1 for Garfield County) – South Canyon Trail Connection

- The city has connections in all the other directions, but South Canyon is the biggest challenge.
- The City has a huge interest due to the presence in South Canyon. Though there are a lot of other high priority projects on their priority list, they foresee that at some point they would be a financial partner.
- Will eventually be completed through grants and partnerships.
- Have to consistently send the message to the state and federal level to get the trail built – The money involved and complexities of working on this trail need to move up to a higher level. The real problem is that CDOT needs to step up and put this connection at the top of their statewide plan.
- GarCo may have committed funding for another 600 feet of the trail to be developed

#3 27th Street Connections / Intersection Improvements

- 27th intersection is the most challenging, most conflict intensive area, important in connecting the two primary north/south bike/ped routes of the Rio Grande and Blake Avenue.
- Blake Ave corridor and Rio Grande trail serve the primary north to south connections – need to work on strategies to connect these two corridors.
- Issues were addressed in the long range transportation plan – potential to be dangerous intersections at 27th there have been multiple auto-pedestrian conflicts.
- RFTA / City are looking into the possibility for a grade separated crossing.
- Blake Avenue needs a formalized bike lane and/or sharrow signs – from downtown to 27th street – Blake doesn't have sidewalks on significant portions of it - by City Market from 23rd to 27th.
- Blake Avenue – is going to be opened up, the gate is going to be taken down which will enhance connectivity for all modes.
- Glenwood's potential growth is up 4 mile and to the south – where more trips will be generated for all modes including cars/bikes/pedestrians. People don't always respecting traffic laws in these areas.
- From 4 mile neighborhoods residents have to drive to take the bus. Parking is a huge challenge at the station so improving connectivity along this stretch of roadway would help.
- Need for Grade Separated Crossings across HWY 82 at both 23rd and 27th Street intersections
- Having the BRT station where it is doesn't solve the downtown traffic issue.
- 27th Street BRT Station– needs promotion and signage to help encourage alternative modes.

#4 Grade Separated Crossing at 23rd Street and HWY 82

- City just did a land swap at 23rd so they can straighten out the intersection.
- 23rd Street intersection improvements / Rail Road Crossing of the RGT - 23rd Street has the same issue as 27th Street where it crosses the rail road tracks creates a conflict and is dangerous for bikers.
- Need to improve wayfinding signage at the Rio Grande Trail and 23rd to help travelers follow the trail alignment.

#5 Glenwood Canyon Trail connection into Downtown

- Could help improve connectivity all the way to Eagle
- Point where the Glenwood Canyon stops at Yampa Spa it's very awkward, dumps you out without clear direction.
- Potential need to relocate the pedestrian bridge.

#6 System Connectivity – Connecting downtown to Rio Grande Trail

- One of the sections of town that is most challenging for bike/peds is getting from downtown to 11th or 12th which is the last point where you can easily get on the Rio Grande Trail
- Connectivity to the Rio Grande Trail isn't that effective for commuters, because it doesn't go to all the right places (like downtown).
- Getting from downtown GWS to the Rio Grande trail is identified as a priority.

#7 System Wide – Education of cyclists and motorists, paint and signal

- Important throughout the city and to connect to other communities.
- Importance of the on-street network – need for improved signage. Mileage indicators. Etc.

(Glenwood Springs Constraints And Opportunities For Pedestrian/Bicycle Improvements continued on next page)

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. Incomplete trail sections by the Meadows – missing bike/ped connections

- In the West Glenwood Area there is a 1,500ft trail section by Glenwood Meadows, RFTA is working with GWS and some grant money to complete the section and improve the access to the park n ride.
- Midland Ave by the Target area – housing development – kids walking on the hillside to the west – down the hill where there lacks pedestrian infrastructure.
- Underpasses at the Meadows don't connect to the trails going to the downtown.

B. HWY 82 Barrier - 8th Street Connection

- Walkability downtown is terrible due to crossing HWY 82 - 8th Street provides an important connection opportunity but needs to be improved for bike/pedestrian use. Sidewalks are too narrow under the railroad bridge.
- There isn't a way to travel from the east side of town to the west, underpass under the rail road is an impediment to getting to the west, dangerous connection with too narrow of a sidewalk.
- 8th Street mitigation project is underway - could this improvement improve this area? CDOT will be punching through for the detour and then putting it back again.

C. Pedestrian/Bike Challenges - Confluence Area

- There are serious pedestrian/bike transportation issues/urban redesign issues that RFTA will have to address at the confluence area. Confluence is the biggest redevelopment opportunity but is tied up by the Union Pacific.
- Confluence Area/Interchange 116 – CDOT bridge project is addressing the north side which will greatly improve the area, however the river side will still need to be addressed.

D. Intersection Improvement - Downtown Intersections Signal Timing

- Timing on the lights was changed (used to be better) and now the signal timing doesn't support pedestrian crossings.
- Conflict with this road being both CDOT's HWY 82 and Grande Avenue for the Downtown.
- It would be nice if there were somewhere in the downtown for an on-demand pedestrian signal.
- Crossing can be dangerous and is undesirable due to poor timing and high traffic volume.
- Can we eliminate left hand turns to make up some time and allow for pedestrian signals?

E. Bike Lane

- Could put sharrows in on the side streets without a major investment
- Sidewalk Gaps connecting downtown to 27th street BRT

F. Perpendicular to the 27th Street Station

- Dangerous intersection
- Needs a grade separated crossing
- Railroad crossing of the RGT - Rio Grande Trail isn't transparent for visitors where it stops and starts

G. Winter Maintenance – River Trail

- City has a great trail down by the river which gets people off of busy Midland Avenue, however it's not maintained in the winter and ices up
- There is potential along the Atkinson Ditch Trail which could tie into the other trails to increase safety and connectivity and get people off of 4 Mile Road, needs winter maintenance. This was the connection to the west side of the river until the late 1960s.
- Improving connectivity between the Atkinson Ditch Trail and the Rio Grande is on the long range transportation plan.

H. Intersection Improvement, Bike/Ped Connection – Elementary School

- Near the elementary school the path dumps people out on a busy street, crossing issues, used to be a bike path, but there isn't anymore. Parent's drive their kids to the schools. There is a 1 to 2 block area around the school that needs improvement.
- Safe routes to school have lost a lot of their funding especially for infrastructure related projects
- Can we get some CDOT mitigation funds to help with the congestion

I. Intersection Improvement

- From a safety/connectivity perspective, the Cattle Creek intersection (Rio Grande Trail, crossing HWY 82) for bicyclists is especially hazardous.

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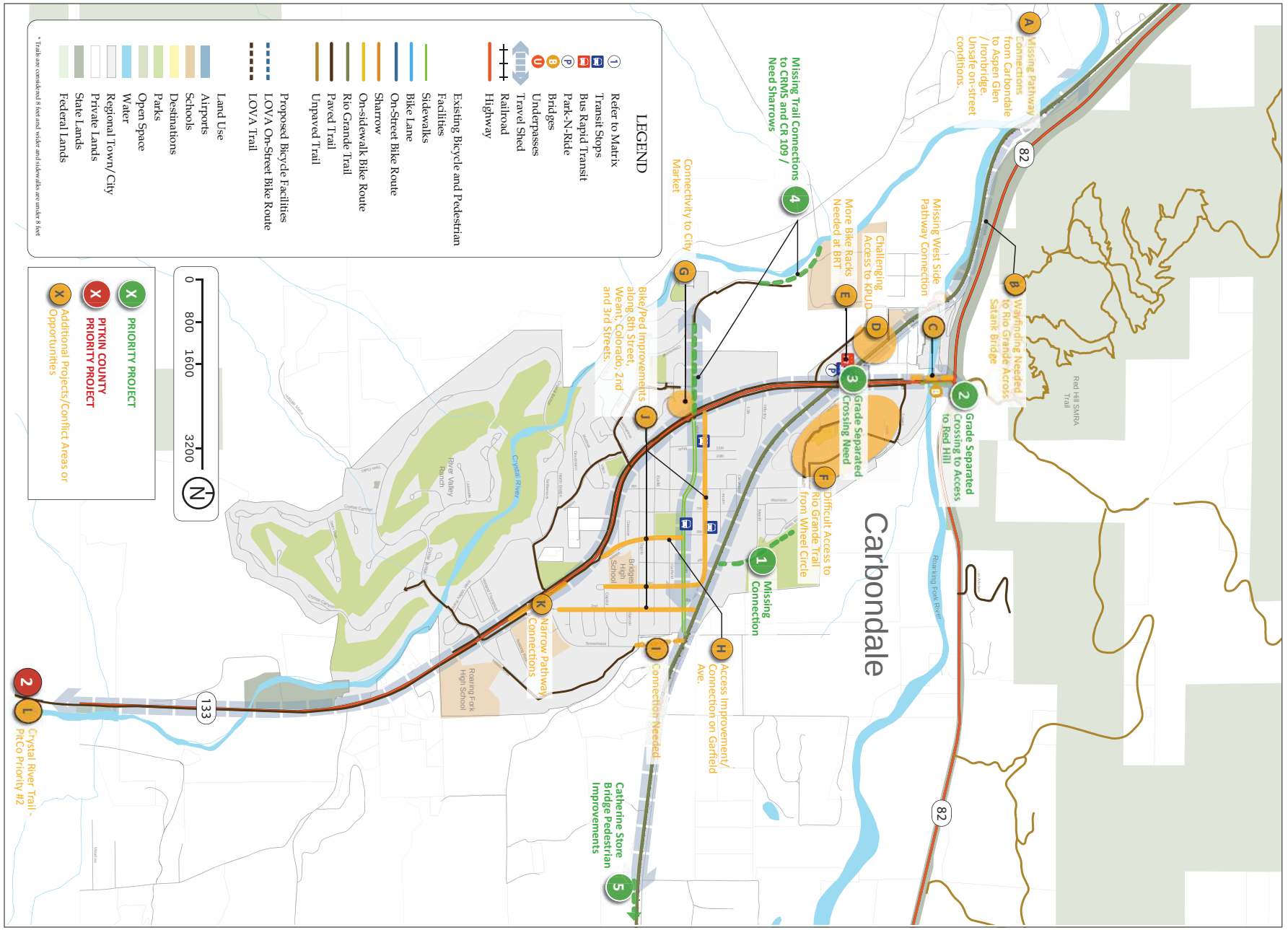


Map B.6: Carbondale Focus Group Summary Map

Carbondale Priority Projects:

#1 Snowmass Trail Connection

- Adding connection on the east side going south on Snowmass Trail will help with connectivity of the neighborhoods on the east side of town to downtown and the Rio Grande Trail.

#2 Red Hill Access / HWY 82 Underpass

- More recreation focus than transportation, but an important community connection with heavy existing bike/pedestrian traffic.
- Background - GarCo had over $1 million directed to this project, but due to initial cost under-estimating they decided to put the money towards the New Castle Pedestrian Bridge instead. This is still high on the priority list for projects to do, 85k users per year at the trail head. Pretty big need, parking lot is filled typically with park-n-ride carpoolers. Bike parking at the parking lot could help. Educational piece of encouraging people to bike to the lot. Lot needs some major repairs to make it more efficient.
- Have so many projects within Town – don't really have the funds to do the Red Hill Project – needs to be pushed by GarCo and CDOT – isn't really a priority for the Town of Carbondale.

#3 HWY 133 Grade Separated crossing

- HWY 133 divides the town. Need for a grade separated crossing by the park-n-ride. Signal timing improvements on 133.
- Most affordable option would be an underpass rather than an overpass.
- There is some concern about the sewer and utilities, but there is a fairly easy design solution to relocate the sewer although there are cost implications – approx. 500k to relocate the sewer.
- Would require some creative solutions with the RFTA park-n-ride entrance on the northern side.
- Accessing the park-n-ride off of Dolores Way – CDOT says they screwed up by allowing that access point for the park-n-ride. Would probably save money to relocate the entrance when a future grade separation comes into play.
- Interim – potential for a mid-block safety island at the Rio Grande Trail crossing.

#4 Extending trail from the school (CRMS)

- Down to the bridge where it would link to County Road 109 as well as to the new roundabout– right now it dumps people right into the traffic.
- Working with Mike Pram at GarCo to address this challenge.
- Main Street on the north side of 133 needs sharrows in this area as well.
- Historically trails have not been a priority for Garfield County, could get the FMLD Grant application for the two trails (HWY 133 Crossing and CRMS Connection)

#5 HIGH REGIONAL PRIORITY

- Catherine Store Bridge area is a bike/ped conflict zone GarCo has an RFP out right now to redesign the bridge, there is a need to make sure pedestrian connections are included in the new bridge design, as well as the need to add or move the bridge alignment. There is a Mid Valley Metro District in this area that serves as a trail entity in addition to utilities.
- There is a potential need for a separate pedestrian bridge connection.

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. Bike path to Aspen Glen/Ironbridge is disconnected.

- Missing Pathway Connections from Carbondale to Aspen Glen / Ironbridge. Unsafe on-street conditions.
- From West Bank towards Carbondale – need for improved bike/pedestrian facilities on Route 109. – Bike path is segmented and degraded.

B. Low Hanging Fruit

- Wayfinding at Satank could help with better connectivity in this area.
- Wayfinding and signage improvements to direct people to the bridge and to the Rio Grande Trail through Satank. There is an existing heavily used social trail from Satank to the Rio Grande in the County.

C. Missing Pathway Connection - Garcia's to the bridge

- Missing sidewalk/pathway link within Garfield County on the north side of HWY 133.

D. Challenging to access the Kay PUD Area

- Kay PUD (behind the park-n-ride) is a bit of a mess – getting access into and around the park-n-ride is challenging.

E. Need for more bike parking/racks at the BRT station.

- Bike entrance to the park-n-ride is challenging to get onto the platform.

F. Connections to the Rio Grande trail from Wheel Circle neighborhood

- Wheel Circle neighborhood has no connection to the Rio Grande Trail/BRT.
- The Town owns triangle parcel that could serve as the connection at the ditch to the Rio Grande.
- Better connectivity is needed to the Rio Grande trail – people that live along Village Road/Wheel Circle don't have great access. Potential connection at 8th Street where the Town owns a bit of land – there is a platted trail easement on Wheel Circle at the back of Crown Drive where there is a 15 ft. pedestrian access point

G. Connectivity to City Market

- A lot of bikes/peds cut the corner to get into the City Market lot from Euclid Ave. There is a bike path from City Market up past the bank that could be connected.

H. Garfield Avenue Connection/Access Improvement

- a great road to bicycle on but it doesn't go through – needs a curb cut to get into Sopris Park so a wheelchair or bikes can get through.

I. Missing Link from Snowmass Drive on the Rio Grande trail

- Connecting to the schools, within Garfield County's Jurisdiction – shoulder on the east side of the road, simple asphalt or compacted gravel could greatly improve the usability. Provides connection to White Hill and the high school.

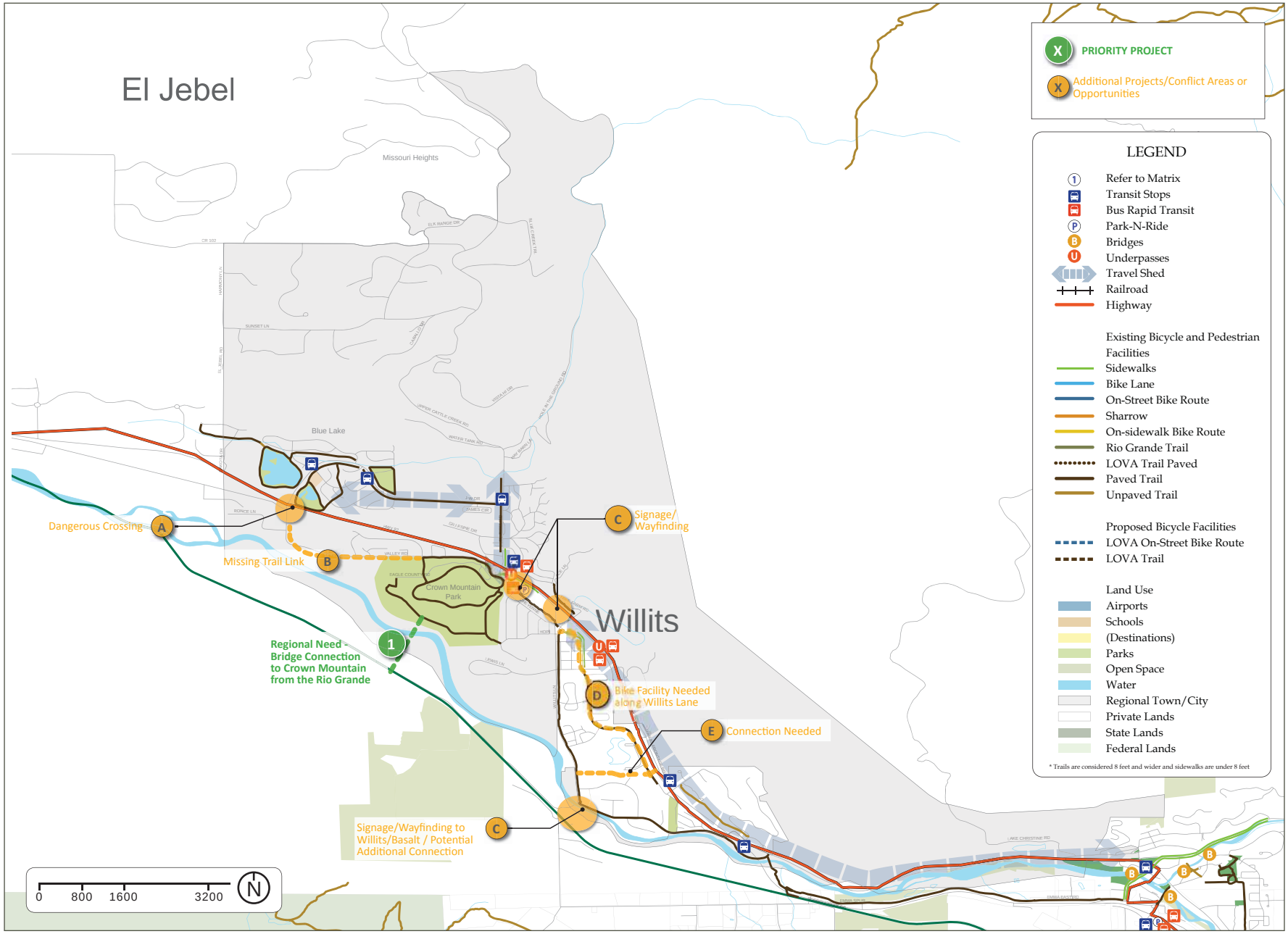
J. Bike/Pedestrian Improvements

- 8th Street/Weant , 2nd Street, 3rd Street, and Colorado Ave
- Connector trail on Wendt Blvd. across 8th Street to the Highway Trail.
- Low Hanging Fruit - Improve 8th Street connections from Cowen Drive – limit parking to one side.

K**. Narrow Pathway Connections** near the Middle School along HWY 133

L. Long Term priority for Pitkin County – Crystal River Trail

- Continue to build the Crystal River Trail towards Marble



Map B.7: El Jebel/Willits Focus Group Summary Map

El Jebel Priority Projects:

#1 Crown Mountain to the Rio Grande Trail

- One of the biggest missing connections identified both in Carbondale and Basalt.
- It would be incredible to be able to link Crown Mountain Park with a bridge over the river to the general vicinity of Rock Bottom Ranch/Rio Grande Trail. Carbondale people ride up to Hooks Spur Bridge, and then back track (down a busy street) to access the park. This could also serve as a great detour when the path closes at Rock Bottom for winter.
- A big regional need, this would also tie in Willits and Blue Lake neighborhoods – all of the needed connections in that area. Challenge would be the seasonal closure. Wetlands would need to be crossed which would necessitate a pretty big bridge connection to span both the river and the riparian zone.

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. Dangerous Crossing HWY 82 from Blue Lake at Valley Road.

B. Trail connection needed from Blue Lake to Crown Mountain Park.

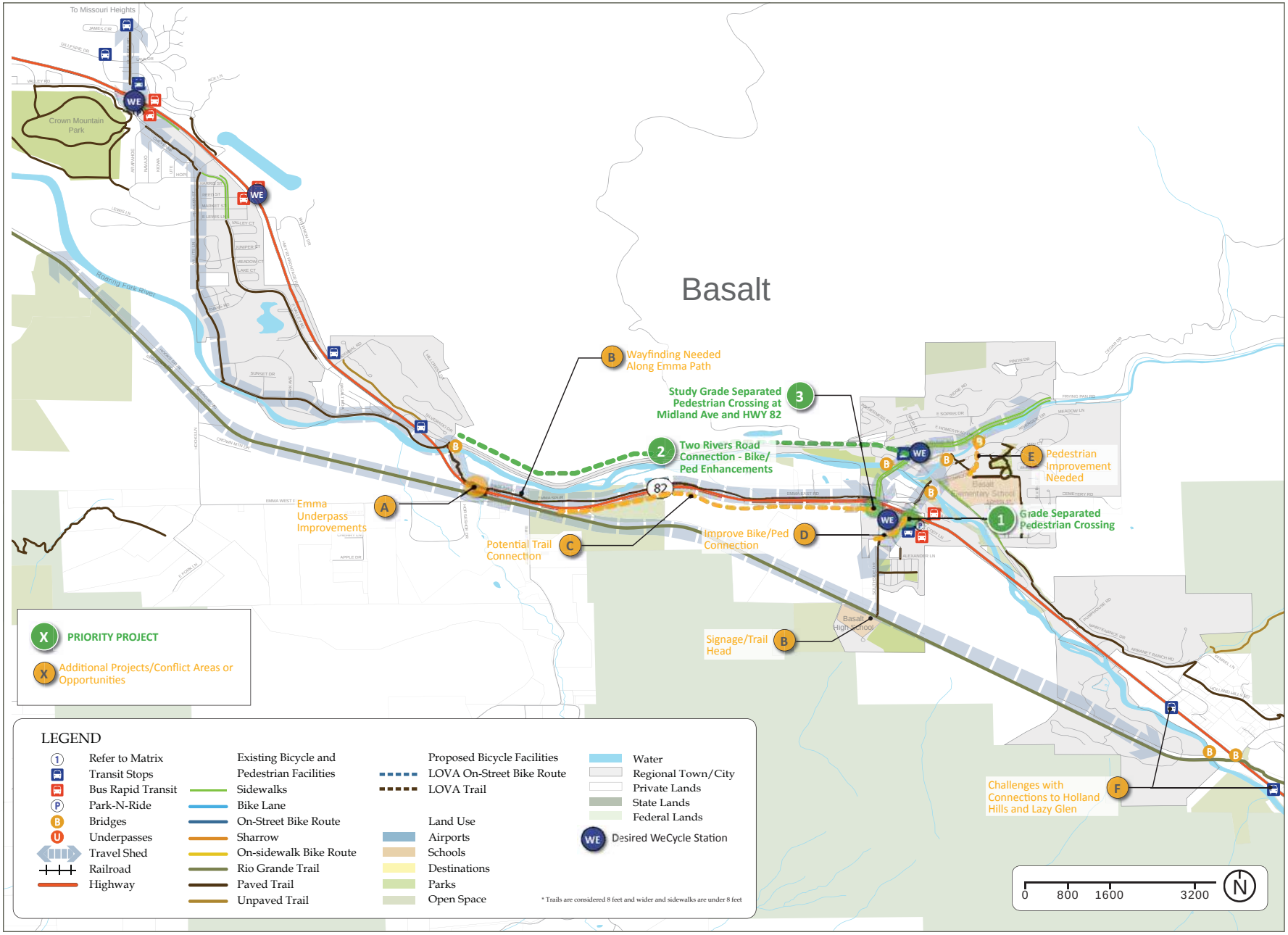
C. Signage issue around City Market/Willits area

- Direct people to the Rio Grande as well as to connect Willits behind Movieland and City Market to the trail network.
- There is currently no good way to get from City Market to the Rio Grande Trail.

D. Need an official bike lane along Willits Lane

- In the spring time bikes detour from the Rio Grande Trail to Willits Lane, to the frontage road towards Catherine Store. Amazing at how much bike traffic Willits Lane gets.
- PitCo studying potential connections between the Rio Grande and Willits.

E. Connection needed from live-work area through to the Bus Stop on HWY 82



Map B.8: Basalt Focus Group Summary Map

Basalt Priority Projects:

#1 HWY 82 underpass at the BRT Station

- HWY 82 is a significant barrier, dividing the community and creating accessibility challenges.
- Separates schools and trails.
- Have to cross the highway to get to the Rio Grande from downtown.
- Received 250k for the HWY 82 underpass connection at Basalt Avenue
- Project is being funded by FASTER funds and town funds
- Basalt is committed to the project and is trying to get the final funding for the total of $4.8 million project cost.
- This is the town's immediate implementation goal

#2 Reworking the Two Rivers Road connection to Willits

- Implementation of the master plan
- Two Rivers Road/Original Crossing – stripping or signing a "share the road" sign along the Two Rivers Road, potentially widen the road. Need wayfinding signage to direct people to Willits.
- Two Rivers Road Greenway Master Plan – was 2014 Council priority. Has been adopted, but needs to be reevaluated
- Original plan was phased, has an urban cross-section in town transitions into a more rural one
- Want to have more public process to decide what to do.
- River trails are planned in the redevelopment area
- Could really increase the traffic between Basalt and Willits via Two Rivers Road.

#3 Study the Grade Separated Crossing at Midland Ave and HWY 82

- To create a more direct connection to downtown Basalt.
- Have taken strides in other areas including the El Jebel underpass and Willits underpass.

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. Emma Underpass

- Dank and dark – drainage challenges – doesn't see much use.
- Connections between the local governments – old CDOT bridge to access Emma Road needs improvement

B. Low Hanging Fruit - Wayfinding/Signage Improvements

- Create a Map of the Basalt loop – design concept – as a start of getting people used to using the roads – traveling on foot and by bicycle. Marketing the connections for car free concepts.
- Trail Head/Kiosk at Rio Grande/Basalt High School
- Wayfinding needed along the Emma Path
- Need to work with Pitkin County for the intersection at the High School to be improved.

C. Potential for a possible additional connection parallel to HWY 82

- Between the big church in Emma and the park-n-ride.
- Connecting Willets to Basalt – Would create a more direct connection. Getting to and along the Rio Grande Trail takes people out of the way in this area.

D. Connection from the park-n-ride to the Rio Grande.

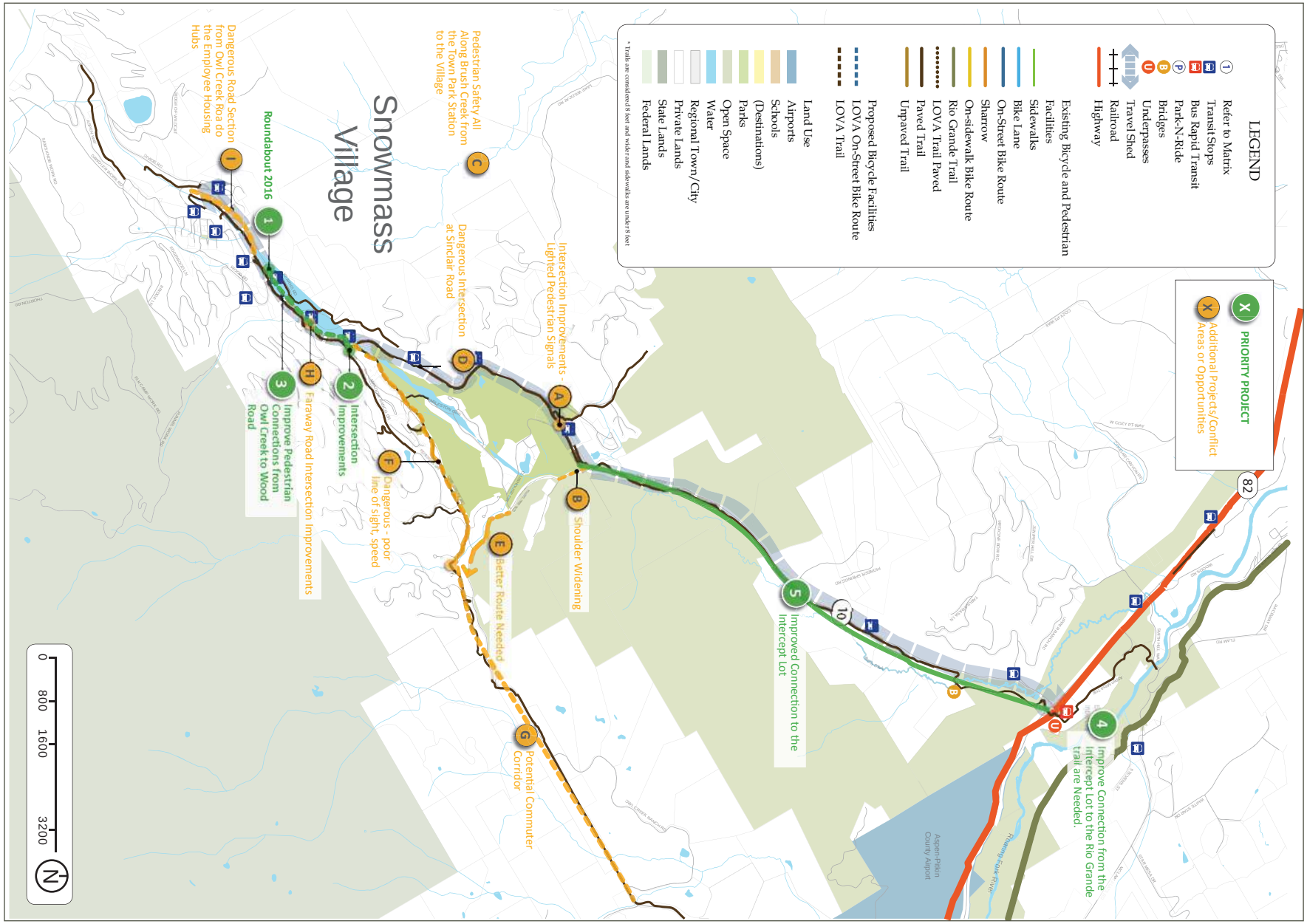
- Filling in the trail and sidewalk gaps, nice 10 ft. walk,
- Safe Routes to School – Need a better bike connection/path from the Rio Grande/High School to the downtown area.
- There is a need for a separate facility for commuter bikes and more family/beginner bikers on the pathway
- Would need to study what would be best for that on street connection - whether sharrows or bike lanes – this area needs to be rethought.
- Opportunities arise as the properties in this area develop to get these areas improved according to the established design guidelines.

E. Pedestrian Improvements Needed

- Cottonwood to Riverside Drives
- Cottonwood Drive to Riverside Drive, needs ROW acquisition to increase the sidewalk

F. Dangerous HWY 82 Crossings

- Holland Hills and Lazy Glen bus stops.
- Holland Hills – dangerous crossing area – people walking down the highway at night, crossing 82 to access the local bus stop.
- WE WeCycle Stations
- Getting WeCycle down valley is important, would like to have stations by Lions Park, Eagle County, one in the linear park, one by the park-n-ride.



Map B.9: Snowmass Village Focus Group Summary Map

Snowmass Priority Projects:

Intersection Improvements (Notes 1-4)

- Hoping to use funds from the Elected Officials Transportation Committee (EOTC) for bus stop improvements – at Wood Road/Brush Creek and Owl Creek and Brush Creek – hard surface sidewalks are potentially planned for these areas. Roundabouts/ pedestrian improvements are the preferred approach – already have sketch plans in place.

#1 Wood Road/Brush Creek intersection

- $4 million – due to retaining walls/cut and fill – hoping for 2016 construction of a roundabout.
- One of the most dangerous intersections – especially at night – confusing – no line of site, higher speed traffic.
- Pedestrian Safety on Brush Creek Road is coming up as a key goal for the community. Especially between Owl Creek Road and Wood Road which is their core. Have fairly specific, 80% sketch preliminary design concepts for four key areas.

#2 Owl Creek / Brush Creek intersection

- $ 4 million – probably pushed back to 2017/2018.
- Dangerous – Owl Creek/Brush Creek Intersection – risky vehicle behavior. #3 Pedestrian connections from Owl Creek – Wood Road
- Heavy Pedestrian Traffic to Employee Housing

#3 Brush Creek Road Pedestrian Improvements

- From Wood Road to Owl Creek Road.
- Regionally - connections to the Intercept Lot and over to the Rio Grande trail are important.

#4 Better connection from the Intercept Lot to the Rio Grande Trail

- Bridge Element would be desirable to improve this connection.
- A main issue with up-valley connectivity is the area surrounding the Intercept Lot. There are great bike/ped paths that lead from Snowmass Village into Aspen and the bike path down Brush Creek Rd is a great amenity, but all can be improved.
- The issue is linking into the Rio Grande trail from the Brush Creek Trail. Right now, bikers must cross Highway 82 and then bike down the shoulder until they hit the road that drops them into Woody Creek. (JY – this is actually not the only way – there is an underpass and a steep paved connection – not ideal, but is an alternate route) They can then bike up the hill at Wink Jaffee to pick up the Rio Grande or continue out towards Woody Creek on a narrow, windy road that has a lot of rock fall during most of the year. Both solutions are treacherous and diverting bikers onto Highway 82 is extremely dangerous.
- There really needs to be a better, safer option linking the Intercept Lot to the Rio Grande Trail a bridge is the best option, albeit expensive. This could be one of the largest connectivity issues in the entire valley and one that needs to be solved in order to properly connect Snowmass Village to the rest of the valley.
- Longer term for Pitkin County - Bridge at the Intercept Lot to the Rio Grande.
- Aspen Mass Trail – will be realigned (City trail in the county) 2015 – Source Gas is paying for the realignment.

#5 LONG TERM - Brush Creek Trail

- Going downhill the trail feels too narrow/tight, also is a winter maintenance issue as this connection is closed in the winter due to wildlife – part of the Sky Mountain Park Management Area – in the winter there is no off-street pedestrian/bicycle connection to the Intercept Lot.
- This stretch will be too narrow if utilization goes up over time
- Owl Creek Connections – down by the airport – addressing the switchbacks – for commuters.
- Along this stretch PitCo is anticipating a 2015/16 project to resurface Brush Creek Road might be an opportunity to make some improvements.

Constraints And Opportunities For Pedestrian/Bicycle Improvements:

A. Town Park Station

- A lot of pedestrian movement – high transit dependent population – some sidewalk/ trail crossing – could use the lighted / pedestrian activated signals, rethink crossing placement. Town Park Station – study the pedestrian elements – RFTA bus stop/Town Park bus stop, employees going to the housing area.

B. Roundabout on Brush Creek to the cemetery

- Could use a widened shoulder. Potential trail head proposed for the cemetery in the future.

C. Long Term 2030 – from Town Park to the Village Mall

- Shared street concept will be important.
- Pedestrian Safety along Brush Creek from the Town Park Station to the Village is really important yet challenging due to the rural character and resident's desire to maintain this though population density is increasing.

D. Dangerous Crosswalk at Sinclair

- Topping out on a hill 2016 Improvement Goal - Sinclair Intersection – medians before coming in, crosswalk enhancements, traffic calming. Activated signal.

E. Better Route Connection Needed

- From the Snowmass Club housing to Owl Creek Road.

F. Dangerous road segment along Owl Creek Road

- Where there is poor line of sign and higher speed vehicles.

G. Long Term - Owl Creek Trail

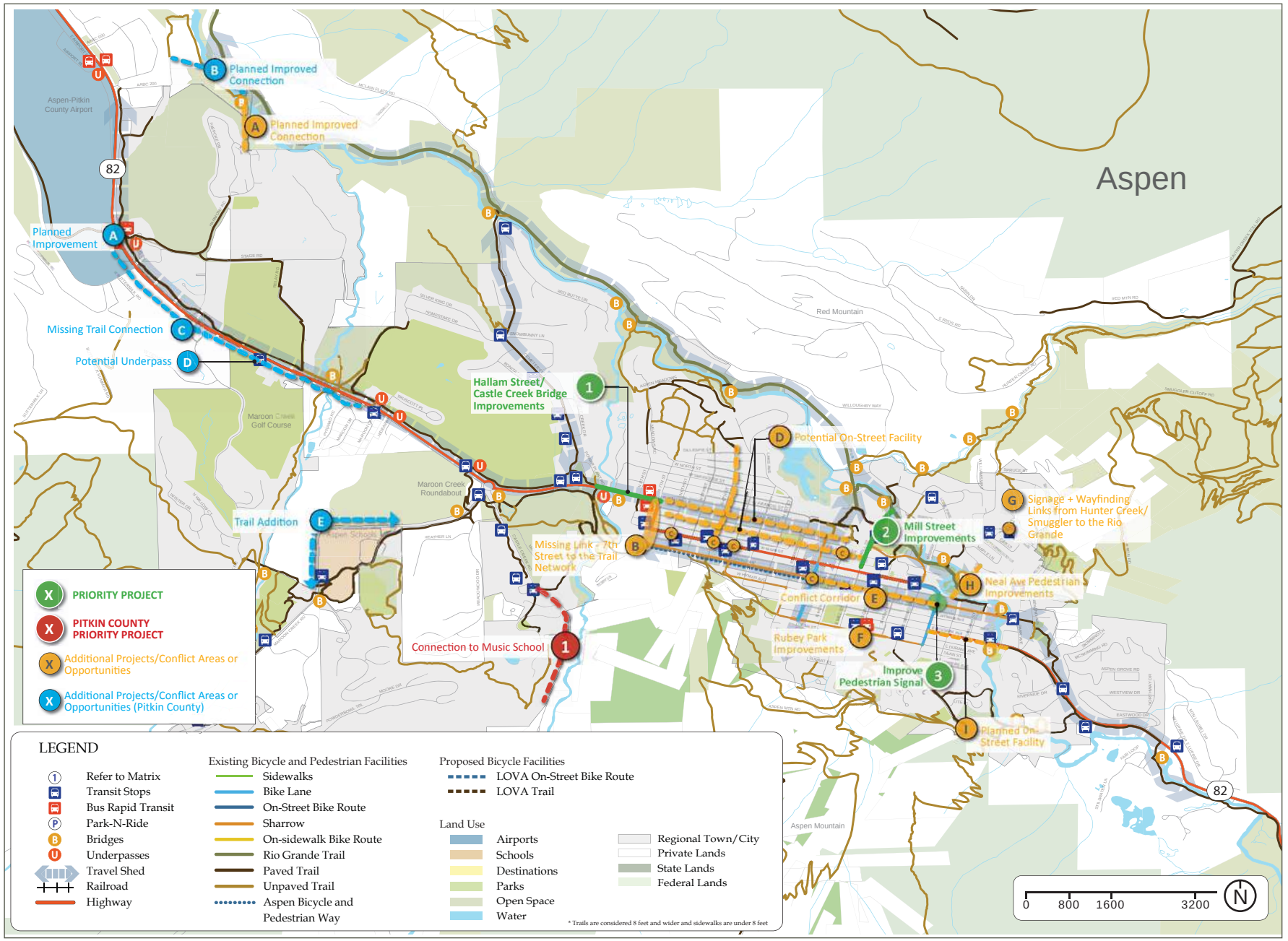
- Could be improved and enhanced as a commuter corridor
- Owl Creek Road – bike safety – could use a wider shoulder for road bikers. – Changes to the pathway on both ends – although facilities are in place, improvements down the road will be important.

H. Faraway intersection

- Could be easily cut in to address a major crossing aspect. (2016 goal)

I. Most Dangerous

- Along Owl Creek Road from the Village Mall to the Employee Housing Hubs– Not good for Pedestrian Travel – Paved trail for a portion – people don't use it at night so they walk down Brush Creek Road – which is also a dark, dangerous and narrow roadway, take this option to avoid elevation challenge. The path is not maintained in the winter due to the Nordic grooming.
- From Mountain View Employee Housing people are walking around dead man's curve to access the Village Mall.
- Pushing the idea of an on-road sidewalk from Owl Creek Road to the Village.
- Last year – they narrowed the driving lanes to 12 foot – which increased the shoulder from 2 feet to 4 feet, they could go down to an 11 foot lane.
- Beyond shoulders and the widening – have explored lighting options – need to keep on looking at these.



Map B.10: Aspen Focus Group Summary Map

Aspen Priority Projects(Green Dots):

#1 – Castle Creek Bridge/Hallam Street Corridor

- In addition to the bridge and pathway challenges in this area, there is also the challenge of this being a big transfer area with the connectivity to the schools and the hospital occurs here for the BRT but it isn't transparent for the user.
- Signage and Wayfinding is needed to direct people to the schools and the hospital from the passage way through the villas to the pedestrian bridge – needs signage and bike lanes to hook you into the bike pedestrian way/pedestrian bridge.
- Castle Creek Bridge Connection / Hallam Street – earliest is 2016
- Transit access point – 8th Street is important.
- Huge number of complaints from transit riders, conflicts with Cars/Pedestrians and bikes.
- Proposing to align the north and south stop to make a more direct pedestrian crossing. Moving pathway behind the stop.

#2 – Mill Street - Dangerous

- Connection down to Puppy Smith. Currently in the works for 2015 summer.
- Mill Street in the works – bike lanes, wider sidewalks – main street to the river. Puppy Smith to Rio Grande Place – 2015 completion in June. CDOT is redoing signal poles at Main Street. Moving up to Main is probably 2016.
- Connection from the end of the Rio Grande Trail into the downtown needs improvement – (addressed by Mill Street Improvements)

#3 – Improve Pedestrian Crossing/Signal at Hopkins and Main Street.

Aspen Constraints And Opportunities For Pedestrian/Bicycle Improvements (Orange Dots):

A. Connection

- From Burlingame to Stein Bridge. (Scheduled for 2015)

B. 7th Street

- To catch the trail to hook into the bridge – have to go onto the highway at the corner.

C. Intersection Improvements: (Multiple Locations)

- Signage might help to encourage crossing at specific intersections.
- CDOT – Main Street crossings – slow to be triggered by pedestrians – pedestrian timing could be improved.
- Heavily traveled routes – on Main Street – safer crossings on Main Street – need for more crossings before the lights on Main Street.
- Signalized intersections – currently there is no bicycle detection
- Planned Improvements:
- Park Circle and Brown Lane – bus stop into the Centennial intersection / Sidewalk up to Smuggler Park neighborhood.
- North South Crossings along Main Street:
- 3rd Street "Your speed is" sign
- 4th and Main - Crossing Main Street – need better pedestrian/bike crossing.
- 6th and Main - Hickory House corner is a dangerous crossing – tourist draw.
- Crossing infrastructure on Maroon Creek Road (WHERE?)

D. Looking at expanding on-street bicycle network Connections in the West End.

- In the West End the options are Hallam and Francis which have been identified as the bike/pedestrian connection
- E. Hopkins corridor where the Bike/Ped way ends towards Main Street is dangerous
- Hopkins through the main section of town is a challenging area for bicycles – works well for pedestrians. Corridor from Garmish to Original Curve is dangerous
- F. Planned Project - Rubey Park Reconstruction
- Connections to the mall – 2015

G. Smuggler/Hunter Creek area

- Signage and wayfinding is needed to the Rio Grande/Downtown.

H. Planned Project - Neal Avenue

- Pedestrian connection to Harren Park – 2015

I. Looking at expanding the on-street bicycle network

- Cooper Ave up to the East of Aspen Trail.

Pitkin County Priority Projects(Red Dots):

#1 Connection to the community school / Music School

- Might be done by the time this project is in action.
- Connection from town to the Music School/Aspen Country Day - 2016

#2 (Carbondale Map) – Crystal Trail

- A 2016 priority – looking at the environmental/engineering – kicking this off.

Pitkin County Constraints And Opportunities For Pedestrian/Bicycle Improvements (Blue Dots):

A. Buttermilk Crossing (recreation based but important)

- Dangerous area, Ski Co Plans include a median crossing.

B. Stein Bridge

- ABC Connection to the Rio Grande Trail – near term – getting redone fall 2015.
- Heard from commuters during the Gorge Plan that the Burlingame trail could serve commuters.
- Longer term - Bridge to the ABC

C. Connection from Pomegranate to the Inn at Aspen at Buttermilk

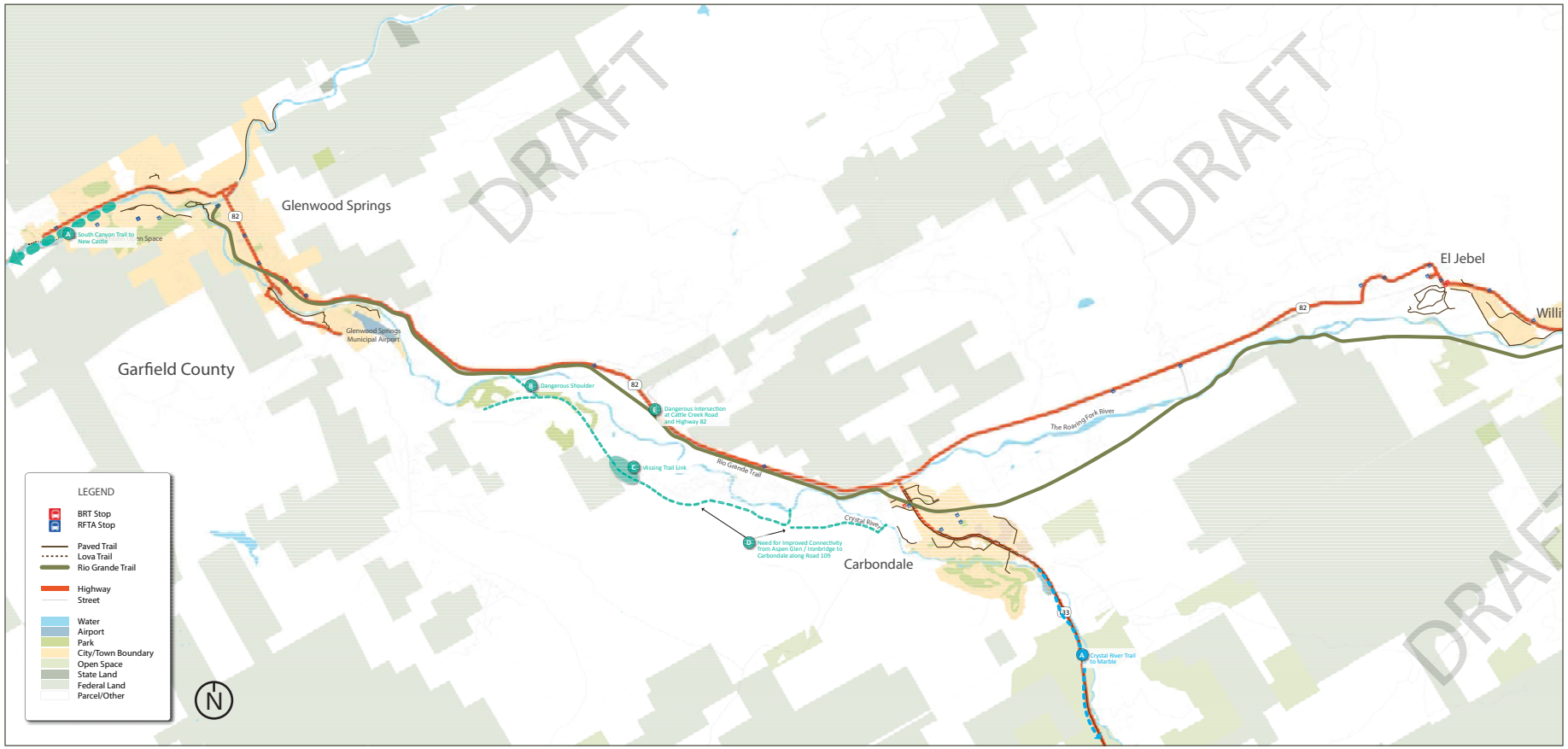
- Need for a bike route on both sides of HWY 82 – high senior/transit depended population in this area with the Country Inn senior housing with limited options to get to the bus stops.
- Trying to get a connection in the WOMP and AACP – bike path along the highway path.

D. Missing a sidewalk or pathway connection

- By the Aspen Country Inn AACP and West of Maroon plans - underpass need – if you're going down valley its dangerous/important need. Identified in Aspen's long range plan.

E. Longer Term - Getting on street connection

- Around the Maroon Creek Road curve around the school district properties. Right now requires going through the school district properties.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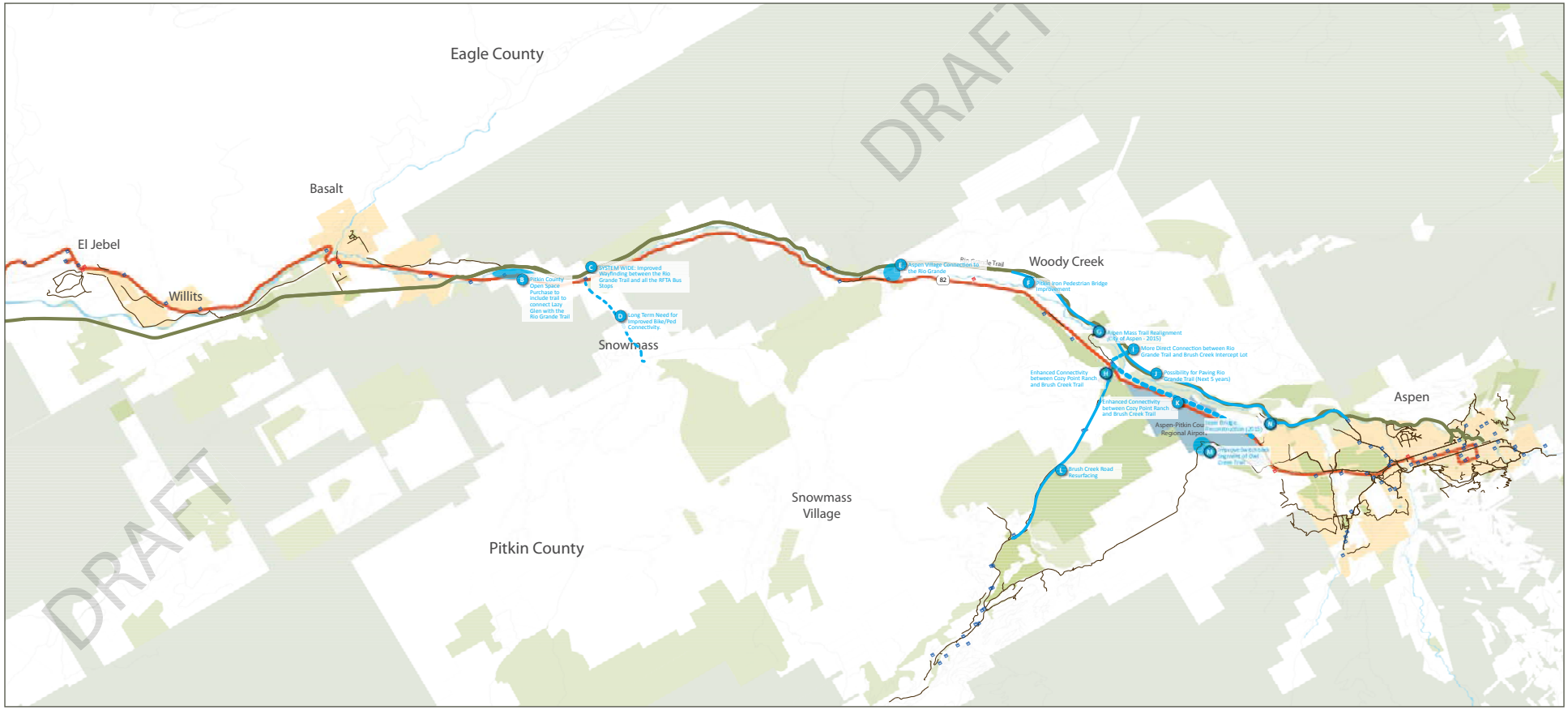
Glenwood Springs
Garfield County
Carbondale
El Jebel
Willi
82
133
A South Canyon Trail to New Castle
Glenwood Springs Municipal Airport
B Dangerous Shoulder
C Missing Trail Link
D Need for Improved Connectivity from Aspen Glen / Ironbridge to Carbondale along Road 109
E Dangerous Intersection at Cattle Creek Road and Highway 82
A Crystal River Trail to Marble
Rio Grande Trail
The Roaring Fork River
Crystal River
LEGEND
BRT Stop
RFTA Stop
Paved Trail
Lova Trail
Rio Grande Trail
Highway
Street
Water
Airport
Park
City/Town Boundary
Open Space
State Land
Federal Land
Parcel/Other
N



Map B.11: Focus Group Regional Summary Map

Regional Map - West:

A – Correlates to Notes Related to Garfield County
A – Correlates to Notes Related to Pitkin County

Garfield County:

A. South Canyon Trail to New Castle

- Need/Demand for a multi-use pathway segment through South Canyon to connect communities to the west. (See notes under Glenwood Springs)

B/C/D. Improve trail linkages/shoulders from Ironbridge and Aspen Glen Communities to Glenwood

- (via the Rio Grande Connection) and to Carbondale (via County Road 109).

E. Dangerous intersection area between the Rio Grande Trail and Highway 82

- Cattle Creek Road to the south of Glenwood Springs. (See Glenwood Springs Notes)

Pitkin County:

A. Crystal River Trail Connection to Marble (and eventually further)

- Pitkin County Planned Project.

B. Lazy Glenn Land Purchase

- One priority of this open space purchase is to provide a connection across the river to the Rio Grande trail for Lazy Glenn residents, when it becomes open space could prioritize this 2016.

C. Wayfinding for RFTA

- Continuity valley wide – same signage for bus stops and bike routes – can allow for individuality between communities but maintain some consistency to direct people from the Rio Grande to the nearest bus stop to create fluidity between the systems.
- Example: Old Snowmass Intersection – needs improved wayfinding – from the Rio Grande to the bus stop.
- Aspen Village – underpass - improved signage from the Rio Grande to Aspen Village.
- Holland Hills – where the bike path crosses HWY 82 it is difficult to understand where Basalt is. Signage to identify how to get to the highway at this area would be useful.
- From a year round standpoint – having the signage for Nordic skiers would be an added bonus.

D. Connection from Old Snowmass down to the Bus Lot/Rio

- Lack of pedestrian/bicycle facility. This is the lowest priority.

E. Connection to Aspen Village for residents to the Rio Grande Trail – bridge?

- Wider shoulder.
- Board has been putting more priority on this connection for this community
- This is a dense place with a dangerous connection.
- Wayfinding/signage is on the books in the next couple of years for this area/Gerbaz Way connection.

F. Transit specific

- Pitkin Iron pedestrian bridge -Woody Creek
- Connection from the bus stop
- County affordable housing.

G. Aspen Mass Trail Realignment

- City of Aspen Project for 2015
- Improve grade of existing trail to connect down to the Rio Grande Trail from the Intercept Lot

H. Demand for enhanced connectivity

- Likely an underpass between Cozy Point Ranch and the Brush Creek Trail.

I. Need for a more direct connection between the Rio Grande trail and the Brush Creek Intercept Lot.

J. Paving the Rio

- Hard surface connection on the Rio Grande Trail into town
- 2015 they will do additional outreach for the last two miles and come to a decision point – if they are not going to pave it they will decide how to bridge the river.
- Decision might become a much higher priority with the additional activity around Cozy Point that the City is currently undertaking.

K. Connection from ABC to the Intercept Lot

- An important missing link parallel to HWY 82
- Monarch and Bleaker intersection is dangerous for pedestrians – should be a four way stop. This area to Mill Street is bad for pedestrians.
- Alley by the Library/Mill Street is dangerous.
- If people could park at the intercept and bike into town more easily there might be more people parking there and biking.
- Longer term - Hard surface trail following Hwy 82 – CDOT – doesn't want the County to tie into their infrastructure so it would require a whole separate structure.

L. Road Resurfacing along Brush Creek – 2015 Project?

- Potential to include wider shoulders for bikes to utilize year round.

M. Improve existing switchback segment of the Owl Creek Trail to improve usability/safety.

N. Stein Bridge Reconstruction (2015) Planned Project.

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Appendix C:

Prioritization and Cost Details

Prioritization Process

Along with the Internal Review Team, the project team completed a prioritization process to help identify the infrastructure projects that will create the most impact and that best aid in achieving the proposed facilities.

Ranking Methodology

The ranking methodology and rating was developed by the project team in conjunction with stakeholders using a "weight 'em and rate 'em" process of developing ranking criteria, assigning weights to each criteria, and rating each project in relation to the developed criteria.

Scoring and Ranking

The criteria discussed on the next page were applied to each facility. The facility was first assigned a numeric value (score) to the degree it meets the criteria requirements. Each project's score in each category was then multiplied by the category's weight which was established by the review team with public input. Then the project's weighted scores for each criteria were added up to give a total score. These total scores were compared, and the projects ranked according to total score. This tool can be used and modified as necessary by the city as additional projects are desired or as criteria emphasis preferences change. It should be noted that this process is a tool to be considered when determining next project priorities, but is not the determining factor in which projects will be constructed in what order.

RFTA Station - Aspen

Chapter Contents

Enhances Safety

- Reduces crash rate or potential threat of crashes
- Project potentially improves bicycle and pedestrian safety
- Provides facilities appropriate for a wider range of users

Increase bicycling and walking activity

- Improves bicycling or walking conditions
- Provides facilities that are attractive and convenient to a wider range of users
- Reduce disease/obesity in children, adults, seniors
- Improve Environment, Air Quality, and Fossil Fuel Independence
- Provides multi-use pathway near populations

Access to BRT and Major Transit Stations

- The Project provides new or improves upon existing access to a BRT or major transit station
- Complete or connect network or system
- Reduce motor vehicle traffic congestion
- Enhance multimodal efficiency (expand utility of public transportation)
- Identified as a Community Priority/in a Current Planning Document
- Project was identified in the stakeholder outreach process or is identified in a community planning document

Project is Regionally Significant

- Provides connectivity options to multiple communities
- Provides economic benefits to the region

Provide Transportation Equity

- Provide mobility options to underserved populations
- Provide safe active transportation to schools and learning centers
- Provide pedestrian mobility for seniors and disabled populations

Improve State/Regional Economy

- Provide better access to jobs
- Bolster Tourism / provides facilities that would attract visitors from outside the region
- Induce mode shift to bicycling, walking and transit = more household disposable income

Ease of Implementation

- The project is "shovel ready," requires little road reconfiguration, or has an existing funding source/ project that it can be implemented under.
- Utilizes publicly owned land with no need for additional right of way acquisition
- Does not result in significant impacts to the environment and does not require extensive permitting.
- Includes minimal technical challenges and is not expected to have excessive costs compared similar facilities constructed elsewhere (provides good financial value).
- Can be incorporated into other project to reduce project cost compared to independent implementation.
- The project is a strong candidate for funding from outside the region or from private sources (developers, etc.).

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Table C-1 Project Prioritization

County	Project Lead	Type	Outreach Process Priority Project	Description	From	To	
Eagle	El Jebel/ Willits	Shared-Use Path/ Bridge Connection	Yes	Add 10' shared-use path and bicycle and pedestrian bridge from Crown Mountain to Rio Grande	Rio Grande Trail	Crown Mountain Park	
Eagle	El Jebel/ Willits	Wayfinding		Implement wayfinding system in El Jebel & Willits	El Jebel	Willits	
Eagle	Basalt	Wayfinding		Provide wayfinding signage at Rio Grande Trailhead at Southside Drive	Rio Grande Trail	Southside Dr	
Eagle	El Jebel/ Willits	Shared-Use Path		Add 10' shared-use path along Valley Rd	Blue Crown Lake	Crown Mountain Park and BRT Station	
Eagle	Basalt	Bicycle Share Station		Provide WeCycle Station at Lions Park, Eagle County, Linear Park, and Park-n-Ride	NA	NA	
Eagle	Basalt	Grade-separated crossing	Yes	Construct a grade-separated crossing at BRT station	Up Valley BRT Station	Down Valley BRT Station	
Eagle	El Jebel/ Willits	Shared-Use Path		Provide 10' shared use path connecting live-work development to the bus stop on SH -82. This would require trail easement through private property	Willits Lane	SH-82 Bus Stop	

	Enhance Safety	Increase Bicycling and Walking Activity	Access to BRT and Major Transit Stations	Identified as a community priority/ in a current planning document	Project is Regionally Significant	Ease of Implementation	Provide Transportation Equity	Improve State/ Regional Economy	Score
	5.0	**3.8**	**3.7**	**4.3**	**4.2**	**3.3**	**4.2**	**3.3**	
	5	3.8	3.7	4.3	4.2		4.2	3.3	28.5
	5	3.8	3.7	4.3	4.2	3.3		3.3	27.6
	5	3.8		4.3	4.2	3.3	4.2		24.8
	5	3.8		4.3	4.2	3.3		3.3	23.9
		3.8	3.7	4.3	4.2		4.2	3.3	23.5
	5	3.8	3.7	4.3			4.2		21
	5	3.8	3.7	4.3			4.2		21

Eagle	El Jebel/ Willits	Bicycle Lanes		Add bicycle lanes on Wilits Ln when redevelopment occurs	E. Valley Rd	SH-82	
Eagle	Basalt	Paved Shoulder	Yes	Two Rivers Road	Willits Lane	SH-82	
Eagle	Basalt	Shared-use Path	Yes	Provide 10' shared-use path along Two Rivers Rd	Basalt	Willits	
Eagle	El Jebel/ Willits	Intersection		Intersection evaluation needed to understand if signal is warranted.	Valley Intersection	SH-82 Intersection	
Eagle	Basalt	Grade-separated crossing	Yes	Construct a grade-separated crossing of SH-82	Midland Ave	Southside Dr	
Eagle	Basalt			Improve uncomfortable crossings at Holland Hills and Lazy Glen bus stops		SH82	
Eagle	Basalt	Shared-Use Path		Add 10' a shared-use path along Fiou Ln and Basalt Ave to BRT Station	Southside Dr	BRT Station	
Eagle	Basalt	Grade-separated crossing		Provide better lighting/daylighting for the Emma underpass	Emma Underpass	Emma Underpass	
Eagle	Basalt	Intersection		Reconfigure Rio Grande Trail Crossing at Southside Drive	Rio Grande Trail	Southside Dr	
Garfield	Parachute	Shared-Use Path		Add 10' shared-use path along Colorado River to High School	Cottonwood Park Rodeo Grounds	High School	
Garfield	Rifle	Paved Shoulder		Add 6' paved shoulders to Highway 6	West Rifle	East Rifle	
Garfield	Carbondale	Grade-separated crossing	Yes	Grade-separated crossing at Highway 133 for Rio Grande Trail connection; near BRT	Rio Grande Trail west side of Highway 133	Rio Grande Trail east side of Highway 133	
Garfield	County	Shared-Use Path	Yes	Utilize Highway 6 right-of-way or the railroad right-of-way to develop shared-use trails (such as the Rio Grande Trail), especially between each community in the corridor.	Parachute	New Castle	

	5	3.8	3.7	4.3			4.2		21
	5	3.8		4.3	4.2			3.3	20.6
	5	3.8		4.3	4.2			3.3	20.6
	5	3.8		4.3			4.2		17.3
	5	3.8		4.3			4.2		17.3
	5	3.8		4.3			4.2		17.3
	5	3.8	3.7				4.2		16.7
	5		3.7	4.3		3.3			16.3
	5					3.3			8.3
	5	3.8		4.3	4.2	3.3	4.2	3.3	28.1
	5	3.8	3.7	4.3	4.2		4.2		25.2
	5	3.8	3.7	4.3	4.2		4.2		25.2
	5	3.8		4.3	4.2		4.2	3.3	24.8

Garfield	Carbondale	Shared-Use Path		Add 10' shared-use path along Snowmass Drive	Sopris Ave	Rio Grande Trail	
Garfield	New Castle	Shared-Use Path	Yes	Complete 10' shared-use path to Canyon Creek Rd and through South Canyon to Glenwood Springs	Castle Valley Blvd.	Glenwood Springs	
Garfield	Glenwood	Shared -Use Path	Yes	Add 10' shared-use path from Lowe's to the 114 Exit	Lowe's	114 Exit	
Garfield	Glenwood	Grade-separated crossing	Yes	Grade-separated crossing of SH82 and 27th St to enhance bicycle and pedestrian movements between Blake St., BRT, and Rio Grande Trail	Intersection	Intersection	
Garfield	Rifle	Bicycle lanes	Yes	Add bicycle lanes to 16th Street	East CR-293	CO-13/ Railroad Ave	
Garfield	New Castle	Bicycle Lanes and sidewalks	Yes	Reconstruct N. 7th St. to add bicycle lanes and sidewalk on east side of 7th St.	Front St.	Main Street	
Garfield	Glenwood			Traffic signals provide long wait times for peds		SH82	
Garfield	Glenwood	Bicycle facilities	Yes	Create a safer connection between Downtown and Glenwood Canyon Recreation Trail	Downtown	Glenwood Canyon Recreational Trail	
Garfield	Parachute	Trail	Yes	Riverfront extension - LoVa Trail link	CR 215	Cottonwood Park Rodeo Grounds	
Garfield	Carbondale	Rio Grande Wayfinding		Wayfinding at Rio Grande Trail for Satank Bridge	Satank Road/Rio Grande Trail Intersection	Satank Road/Rio Grande Trail Intersection	
Garfield	Carbondale	Sidewalk		Provide sidewalk connections to Kay PUD from BRT station	BRT	Kay PUD	
Garfield	Glenwood			Provide on-street bike facilities and complete sidewalk network on Blake between downtown and 27th St		Blake St	

	5	3.8		4.3	4.2		4.2	3.3	24.8
	5	3.8	3.7	4.3	4.2			3.3	24.3
	5	3.8	3.7	4.3			4.2	3.3	24.3
	5	3.8	3.7	4.3			4.2	3.3	24.3
	5	3.8	3.7	4.3		3.3	4.2		24.3
	5	3.8	3.7	4.3		3.3	4.2		24.3
	5	3.8	3.7	4.3		3.3	4.2		24.3
	5	3.8		4.3	4.2	3.3		3.3	23.9
	5	3.8		4.3	4.2	3.3		3.3	23.9
	5	3.8	3.7		4.2	3.3		3.3	23.3
	5	3.8	3.7			3.3	4.2	3.3	23.3
	5	3.8	4.3	4.3			4.2		21.6

Garfield	Carbondale	Shared-Use Path	Yes	Extend shared-use path from CRMS to the bridge to connect CR 109 and the new roundabout (Fills in the gaps between the school property and roundabout)	CRMS	Main Street round-about	
Garfield	New Castle	Shared-Use Path	Yes	Develop a 10' shared-use path along Highway 6 to Coal Ridge High School from Silt and New Castle	New Castle and Silt	Coal Ridge High School	
Garfield	Glenwood			Complete trail sections near the Meadows		Meadows	
Garfield	Carbondale	Shared-Use Path		Add 10' shared-use path along west side of Highway 133	Garcia's Café	Roaring Fork Bridge	
Garfield	Rifle	Shared-Use Path	Yes	Add 10' shared-use path along Lions Park Circle/Colorado River (LoVa segment)	CO-13	Parking Lot	
Garfield	Silt	Shared-Use Path	Yes	Add 10' shared-use path (LoVa Trail) along Colorado River	I-70	East Town Boundary	
Garfield	Glenwood	Grade-separated crossing	Yes	Construct grade-separated crossing under SH82 at 23rd St.	Intersection	Intersection	
Garfield	Glenwood		Yes	System-wide education for bicyclists and motorists		General	
Garfield	Parachute	Bicycle lanes		Add 5' bicycle lanes on both sides of Main street	Green Street	Watson	
Garfield	Glenwood			Intersection improvements for bike/ped		Mt. Sopris Elem.	
Garfield	Carbondale	Shared-Use Path	Yes	Add 10' shared-use path to connect Mesa Verde Avenue (neighborhood) to Rio Grande Trail	Rio Grande Trail	Mesa Verde Avenue/ Neighbor-hood	
Garfield	Carbondale	Shared-Use Path	Yes	Add 10' shared-use path and underpass from Downtown to Red Hill per Red Hill Alternative Transportation Study	Downtown Carbondale	Red Hill Trailhead	

	5	3.8		4.3	4.2		4.2		21.5
	5	3.8		4.3	4.2		4.2		21.5
	5	3.8	3.7	4.3			4.2		21
	5	3.8	3.7	4.3			4.2		21
	5	3.8		4.3	4.2			3.3	20.6
	5	3.8		4.3	4.2			3.3	20.6
	5	3.8		4.3			4.2	3.3	20.6
	5	3.8		4.3		3.3	4.2		20.6
	5	3.8		4.3		3.3	4.2		20.6
	5	3.8		4.3		3.3	4.2		20.6
	5	3.8		4.3			4.2	3.3	20.6
	5	3.8		4.3	4.2			3.3	20.6

Garfield	Carbondale	Shared-Use Path		Complete gaps in shared-use path	West Carbondale	Ironbridge	
Garfield	Rifle	Shared-Use Path	Yes	Add a 10' shared-use path to provide bicycle and pedestrian access to Colorado Mountain College Campus	Existing asphalt path (west of Baron Lane)	CMC Campus	
Garfield	Rifle	Shared-Use Path		Add a 10' shared-use path to provide a bicycle and pedestrian facility that connects to the Rifle Creek Trail to the shared us path along CR-13	Rifle Creek Trail	Railroad Ave	
Garfield	New Castle	Shared-Use Path	Yes	Add 10' shared-use path in the Jolly Trail alignment to create a shared-use path to the east side of town	E Ave	Castle Valley Blvd	
Garfield	Glenwood	Bicycle and Pedestrian	Yes	Provide better connections to Rio Grande Trail at 10th, 11th, and 14th St.	City Streets	Rio Grande Trail	
Garfield	Rifle	Paved Shoulder		Add 6' paved shoulders to CR-210 and 221 for recreational/non-recreational cyclists	Highway 6	CR-223	
Garfield	Rifle	Shared lane markings		Add shared-lane markings	Morrow Drive	Highway 6	
Garfield	New Castle			Develop shared-use path from Lakota to Castle Valley		Mike Miller Way	
Garfield	New Castle	Grade-separated crossing	Yes	Construct bicycle and pedestrian bridge over I-70, railroad and river to connect the Appletree neighborhood to Highway 6	CO-335	Highway 6	
Garfield	Rifle	Shared-Use Path	Yes	Add 10' shared-use path along Rifle Creek. Gateway Trail segment enhancements	Centennial Park	Steel Bridge	
Garfield	Rifle	Shared-Use Path	Yes	Add a 10' shared-use path on Morrow Drive	Birch Ave	Whiteriver Ave	
Garfield	Carbondale			Provide bike/ped facilities along Garfield Ave		Garfield Ave	

	5	3.8		4.3	4.2			3.3	20.6
	5	3.8		4.3			4.2		17.3
	5	3.8		4.3			4.2		17.3
	5	3.8		4.3			4.2		17.3
	5	3.8		4.3			4.2		17.3
	5	3.8		4.3			4.2		17.3
	5	3.8		4.3			4.2		17.3
	5	3.8		4.3			4.2		17.3
	5	3.8			4.2		4.2		17.2
	5	3.8	3.7	4.3					16.8
	5	3.8		4.3		3.3			16.4
	5	3.8				3.3	4.2		16.3

Garfield	Carbondale			Bike/ped improvements on 8th St, Weant Blvd, 2nd St. 3rd St, and Colorado Ave		East Carbondale	
Garfield	Parachute	Roadway	Yes	Extend Cardinal Way (with multimodal facilities) to connect to Highway 6	High School	Old Highway 6	
Garfield	Silt	Intersection	Yes	Intersection improvements	9th and Main	9th and Main	
Garfield	Silt	Paved Shoulder	Yes	Add 6' paved shoulder to River Frontage Road	Western Boundary	Eastern Boundary (LoVa Alignment)	
Garfield	Parachute	Shared-Use Path	Yes	Provide a 10' shared-use path on the east side of 215 over I-70	Grand Valley Way	East S2nd Street	
Garfield	New Castle	Pedestrian facilities	Yes	Provide pedestrian facilities (crosswalks, ped refuge islands, etc) at the intersection of I-70 off-ramp and Hwy 6 to compliment recent improvements	Intersection	Intersection	
Garfield	Rifle	Sidewalk		Add sidewalks to Highlands East subdivision	E. 16th Street	CR-294	
Garfield	Parachute	Sidewalk	Yes	Add 6' sidewalks on both side of roadway from Highway 6 and CR 215 interchange to downtown	Green Street	CR 215	
Garfield	Carbondale			Improve connectivity to City Market for bikes/peds		City Market	
Garfield	Carbondale			Improve narrow connections near Middle School		Hwy 133	
Garfield	Carbondale	Shared-Use Path	Yes	Add 10' shared-use path along CR-100	Rio Grande Trail	Catherine Store Bridge	
Garfield	Carbondale	Bicycle parking		Provide additional bicycle parking at Carbondale BRT station	Bicycle Parking	Bicycle Parking	
Garfield	New Castle	Bicycle Parking		Provide bicycle parking at RFTA bus stops	Bus Stops	Bus Stops	

	5	3.8				3.3	4.2		16.3
	5			4.3			4.2		13.5
	5	3.8		4.3					13.1
	5	3.8		4.3					13.1
	5	3.8		4.3					13.1
	5	3.8		4.3					13.1
	5	3.8		4.3					13.1
	5	3.8					4.2		13
	5	3.8					4.2		13
	5	3.8					4.2		13
	5	3.8	3.7						12.5
		3.8	3.7	4.3					11.8
		3.8	3.7				4.2		11.7

Garfield	Glenwood	Trail enhancements		Intersection improvements/trail crossing enhancements	Cattle Creek and Rio Grande Trail	Cattle Creek And Rio Grande Trail	
Garfield	County	Paved Shoulder	Yes	Add 6'paved Shoulders along Hwy 6/Frontage Road	Parachute	New Castle	
Garfield	Parachute	Wayfinding		Provide better access/connectivity to pedestrian bridge	Bridge	Bridge	
Garfield	Parachute	Paved Shoulder		Provide a 6' paved shoulder along CR 215	Highway 6	Gate/Fence (approxi-mately 10 miles)	
Garfield	Silt	Grade-separated crossing		Formalize and develop a modern underpass east of 16th Street to provide a connection to River Frontage Road with 16th	Main St	River Frontage Road	
Garfield	County	Trail Intersections		Provide enhanced trail/intersection crossing treatments where the Rio Grande/or other trails cross roadways or driveways.	Trail Crossings	Trail crossings	
Garfield	Parachute	Bridge		Fix aging concrete and other elements of aging bridge for safety	Bridge	Bridge	
Garfield	New Castle			Trail project going up and over Mt. Maderas		Mt. Maderas	
Garfield	Parachute	Wayfinding		Install wayfinding signage to direct users to the pathway that leads to Battlement Mesa	Parachute	CR 300 & CR 301 Junction	
Garfield	Parachute	Urban Design		Main Street conversion assuming jurisdiction (authorization?)from CDOT to make improvements to the character of Downtown Parachute	Green Street	Watson	
Garfield	Parachute	Shared-Use Path		Add a 10' shared-use path on the west side of town that includes a 14' bicycle and pedestrian bridge over the Colorado River	Thunderberg	Highway 6	

	5			4.3					9.3
	5				4.2				9.2
	5	3.8							8.8
	5	3.8							8.8
	5	3.8							8.8
	5					3.3			8.3
	5					3.3			8.3
		3.8		4.3					8.1
		3.8				3.3			7.1
		3.8							3.8
		3.8							3.8

Garfield	Rifle	Pedestrian amenities		Add trash receptacle, bench, and bicycle parking to 2nd Street Transit Stop			
Garfield	Rifle	Bicycle parking		Add bicycle parking to all stops			
Garfield	New Castle	Transit		Conduct feasibility study for a circulator shuttle route through town connecting the neighborhoods	Study	Study	
Garfield	New Castle	Roadway		Take ownership of a portion of Hwy 6 from CDOT	Study	Study	
Garfield	New Castle			Safety enhancements near Appletree		County Rd 335	
Garfield	New Castle	Grade-separated crossing		Provide bicycle and pedestrian bridge from Coal Ridge Park to Highway 6	Highway 6	Coal Ridge Park	
Garfield	Glenwood	Roadway		Construct 8th St extension to bypass SH82	Colorado	8th St	
Garfield	Glenwood			I-70 interchange is a challenging connection between Two Rivers Park and 6th St is challenging for bikes and peds		I-70 interchange	
Garfield	Glenwood	Bridge		Reconstruct Sunlight Bridge or install round-a-bout	27th St.	27th St	
Garfield	Glenwood	Shared-use path		Implement winter maintenance system	Atkinson Tr.	Atkinson Tr.	
Garfield	Carbondale	Sidewalk/Share-use path		Identify connections to Rio Grande from Wheel Circle	Wheel Circle Area	Rio Grande Trail	
Pitkin	Pitkin County	Shared-Use Path	Yes	Add 10' shared use path	S. Bill Creek Road	Redstone	
Pitkin	Snowmass	Signal		Add Rectangular Rapid Flashing Beacon to existing pedestrian crossing	Town Park Station	Town Park Station	

		3.8							3.8
		3.8							3.8
									0
									0
									0
									0
									0
									0
									0
									0
									0
	5	3.8		4.3	4.2		4.2	3.3	24.8
	5	3.8	3.7	4.3		3.3	4.2		24.3

Pitkin	Snowmass	Shared-Use Path	Yes	Shared use trail connection (s) between Intercept lot and the AABC. This may include partial use of the Rio Grande Trail	Intercept lot	Rio Grande Trail	
Pitkin	Snowmass	Sidewalk/Share-use path		Add pedestrian sidewalks or shared-use path along Brush Creek Rd	Wood Rd.	Hawk Ridge Ln	
Pitkin	Aspen	Wayfinding		Improve wayfinding from Downtown to Rio Grande Trail and into Smuggler-Hunter Creek area	Downtown	Smuggler-Hunter Creek area	
Pitkin	Snowmass	Sidewalk	Yes	Add sidewalks along Brush Creek Road	Wood Rd.	Owl Creek Rd	
Pitkin	Aspen	Shared-Use Path	Yes	Modify the Castle Creek Bridge to create a comfortable bike/ped connection to the Hallam St Corridor	Cemetery Lane	7th St	
Pitkin	Snowmass	Intersection	Yes	Owl Creek Road & Brush Creek Road intersection improvements	Owl Creek Rd	Brush Creek Rd	
Pitkin	Snowmass			Shared street concept Town Park to Village Mall		General	
Pitkin	Pitkin County	Shared-Use Path/ Bridge Connection	Yes	Shared-use path and Bridge connection	Lazy Glen	Rio Grande Trail	
Pitkin	Pitkin County	Shared-Use Path/ Bridge Connection	Yes	Shared-use path and/or Bridge connection	Hwy 82 pedestrian underpass at Gerbaz Way	Rio Grande Trail	
Pitkin	Aspen	Signal	Yes	Provide Rectangular Rapid Flashing Beacon	Hopkins Intersection	Original Intersection	
Pitkin	Snowmass	Signal		Add Rectangular Rapid Flashing Beacon to existing pedestrian crossing	Sinclair Rd	Sinclair Rd	
Pitkin	Snowmass	Intersection	Yes	Wood Road/Brush Creek intersection improvements	Wood Rd.	Brush Creek Rd	

	5	3.8	3.7	4.3	4.2			3.3	24.3
	5	3.8	3.7	4.3			4.2	3.3	24.3
	5	3.8		4.3	4.2	3.3		3.3	23.9
	5	3.8	3.7	4.3			4.2		21
	5	3.8	3.7	4.3			4.2		21
	5	3.8	3.7	4.3			4.2		21
	5	3.8	3.7		4.2		4.2		20.9
	5	3.8		4.3	4.2			3.3	20.6
	5	3.8		4.3	4.2			3.3	20.6
	5	3.8		4.3		3.3	4.2		20.6
	5			4.3		3.3	4.2	3.3	20.1
	5	3.8	3.7	4.3		3.3			20.1

Pitkin	Snowmass	Shared-Use Path	Yes	Rebuild Brush Creek Trail to 10' shared-use path (currently is 8' width)	Downtown Snowmass	Round about	
Pitkin	Aspen/Pitkin County	Shared-Use Path	Yes	Create connection to Community School/Music School (Construction 2017)	Aspen Valley Hospital	School Property/ CR15	
Pitkin	Snowmass			Widen shoulder at round-a-bout on Brush Creek to the cemetery	Cemetery	Brush Creek	
Pitkin	Aspen	Bicycle lanes	Yes	Create connection Mill St. to Puppy Smith St		Mill Street	
Pitkin	Snowmass	Shared-Use Path		Add 10' shared-use path along Highline Rd	Snowmass Club Cir.	Owl Creek Rd	
Pitkin	Aspen	Shared-Use Path		Add 10' shared-use trail (Fix missing link at 7th Street and Marolt Trail)	Marolt Trail	7th St	
Pitkin	Aspen			Expand on-street bike network connections in West End		West End	
Pitkin	Aspen			Create pedestrian connection to Harren Park		Neal Ave	
Pitkin	Aspen			Expand on-street bike network Cooper Ave to east of Aspen Trail		Cooper Ave	
Pitkin	Aspen			Intersection improvements at multiple intersections		General	
Pitkin	Aspen			Improvements to Hopkins corridor where bike/ped way ends towards Original Street		Hopkins Ave	
Pitkin	Snowmass	Intersection		Enhance trail crossing at Faraway Rd	Brush Creek Rd	Faraway Dr	
Pitkin	Snowmass	Intersection		Enhance trail crossing at Burnt Mountain Drive	Owl Creek Trail	Brunt Mountain Drive	

	5			3.8	4.2	3.3		3.3	19.6
	5	3.8		4.3			4.2		17.3
	5	3.8	3.7				4.2		16.7
	5	3.8		4.3		3.3			16.4
	5	3.8		4.3					13.1
	5	3.8		4.3					13.1
	5	3.8					4.2		13
	5	3.8					4.2		13
	5	3.8					4.2		13
	5	3.8					4.2		13
	5	3.8					4.2		13
	5			4.3		3.3			12.6
	5	3.8				3.3			12.1

Cost Estimate Details

Planning level cost estimates were prepared for 10 ranked projects resulting from the prioritization process are listed in Chapter 5. The 10 projects were selected by stakeholder input as no design data or cost estimates currently exists. Table 5.x shows a summary of the total opinion of probable cost for each project included in Table 5.x. To assist the municipalities in moving forward quickly with their highest ranking and with additional projects, project information for these projects including costs, notes, distances, and type are found in this Appendix.

Planning level cost estimates include likely construction bid items, a 30 percent contingency, construction start-up items, construction engineering, and design. Costs for right-of-way and/or easements (if applicable) are not included. Unit costs for the construction bid items were based on recent actual construction bids, cost data from CDOT and professional engineering experience. The construction bid item quantities represent planning level assumptions and are not based on design plans.

Cost estimates included in this document are in 2015 dollars, based on the typical cost for similar projects in 2015. Future use of this information should consider inflation and changes in construction cost trends at the time of use, compared to 2015.

Table C-2 Typical Section Descriptions	
TRAIL SECTION	DESCRIPTION
TS-1	10' Concrete Trail, Minor Grading
TS-2	10' Concrete Trail, Moderate Grading Or Limited Buffer W/ Curb Or Removal Existing Trail
TS-3	10' Concrete Trail, Moderate Grading W/ Minor Structures, < 4' Wall And/Or Cut-Fill Slopes
TS-4	10' Concrete Trail, Moderate Grading W/ Minor Structures, Limited Buffer Inc Curb And/Or Guardrail
TS-5	10' Concrete Trail, Significant Grading, < 8' Walls, Barrier And/Or Ped Rail
TS-6	10' Concrete Trail, Significant Grading, < 10' Walls, Road Re-Alignment, Limited Buffer
TS-7A	10' Prefabricated Pedestrian Bridge
TS-7B	10' Prefabricated Pedestrian Bridge, Difficult Install Or Construction Access
TS-8	5' Concrete Sidewalk, Minor Grading
TS-9	5' Concrete Sidewalk, Moderate Grading, Limited Buffer And/Or Minor Structures

Table C-3 Rio Grande Trail - Grade Separated Crossing				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	360	$46,800
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL		$150		$-
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES[1]	LF	$325	400	$130,000
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730	200	$146,000
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865		$-
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
PEDESTRIAN UNDERPASS[2]	LF	$6,500	120	$780,000
TOTAL LENGTH (LF)			1080	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800		$-
CURB RAMP		$850		$-
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500		$-
CROSSWALK STRIPING		$1,200		$-
RAILROAD CROSSING		$20,000		$-
ROADWAY RECONSTRUCTION (INCLUDING REMOVALS)	SF	$12	8250	$99,000
TRAFFIC CONTROL[3]	LS	$120,000		$120,000
UTILITY RELOCATION[4]	LS	$100,000		$75,000
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$1,396,800
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	15%		$209,520
SUBTOTAL				$1,606,320
DESIGN / ENGINEERING	LS	15%		$240,948
CONSTRUCTION MANAGEMENT	LS	8%		$128,506
TOTAL				$1,975,774

1) Includes ramp connections to SH 133 and approach trails at both sides of roadway
2) 9' x 14 Cast in place concrete box, includes drainage, railings, lighting and basic aesthetics
3) Roadway to remain open during construction
4) Existing utilities not fully investigated. Some relocations assumed.

Table C-4 CRMS Connector Shared-Use Path				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	1,020	$132,600
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150	990	$148,500
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325		$-
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL [1]	LF	$410	100	$41,000
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730		$-
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865		$-
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (LF)			2,110	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800	3	$8,400
CURB RAMP		$850	8	$6,800
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500	1	$2,500
CROSSWALK STRIPING		$1,200	2	$2,400
RAILROAD CROSSING		$20,000		$-
FENCE (WOOD)	LF	$25	525	$13,125
TRAFFIC CONTROL	LS	$15,000		$15,000
UTILITY RELOCATION [2]	LS			$-
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$370,325
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	10%		$37,033
SUBTOTAL				$407,358
DESIGN / ENGINEERING	LS	15%		$61,104
CONSTRUCTION MANAGEMENT	LS	10%		$40,736
TOTAL				$509,197

1) Adjacent to ditch
2) Assume no compensable relocations

Table C-5 Silt to New Castle Shared-Use Path				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	19,940	$2,592,200
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL		$150	8,100	$1,215,000
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325	1,420	$461,500
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730	3,000	$2,190,000
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915	950	$869,250
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865		$-
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80	460	$36,800
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (MILES)			6.41	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500	5	$22,500
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800	19	$53,200
CURB RAMP		$850	24	$20,400
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500		$-
CROSSWALK STRIPING		$1,200	12	$14,400
RAILROAD CROSSING		$20,000		$-
CONCRETE BOX CULVERT APPROX 10 FT WIDTH		$1,600	100	$160,000
TRAFFIC CONTROL	LS	$250,000		$250,000
UTILITY RELOCATION[1]	LS	$100,000		$100,000
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$7,985,250
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	20%		$1,597,050
SUBTOTAL				$9,582,300
DESIGN / ENGINEERING	LS	8%		$766,584
CONSTRUCTION MANAGEMENT	LS	8%		$766,584
TOTAL				$11,115,468

1) Allowance, utilities unknown

Table C-6 New Castle Sidewalk and Shared-Use Path Upgrade				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	325	$42,250
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL [1]	LF	$150	2,290	$343,500
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325		$-
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730		$-
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865		$-
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120	450	$54,000
TS 10 [2]	LF	$335	350	$117,250
TOTAL LENGTH (LF)			3,065	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800		$-
CURB RAMP		$850	9	$7,650
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500		$-
CROSSWALK STRIPING		$1,200	5	$6,000
RAILROAD CROSSING		$20,000		$-
RESET BUS STOP SHELTER		$2,500	1	$2,500
TRAFFIC CONTROL	LS	$30,000		$30,000
UTILITY RELOCATION [3]	LS	$0		$-
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$603,150
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	10%		$60,315
SUBTOTAL				$663,465
DESIGN / ENGINEERING	LS	15%		$99,520
CONSTRUCTION MANAGEMENT	LS	10%		$66,347
TOTAL				$829,331

1) Upgrade 6' concrete/asphalt to 10' concrete. Includes removal of existing.
2) Retaining walls/fencing required for steep sideslope
3) Assume no compensable relocations

Table C-7 New Castle Intersection Improvement				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	30	$3,900
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150		$-
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325		$-
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730		$-
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865		$-
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES	LF	$120		$-
				$-
CONCRETE CURB AND GUTTER	LF	$28	730	$20,440
CONCRETE MEDIAN ISLAND PAVING	SY	$80	190	$15,200
CONCRETE RAISED CROSSWALK (COLORED)	SY	$120	200	$24,000
COMMERCIAL DRIVEWAY RECONSTRUCTION	LS	$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION	LS	$2,800		$-
CURB RAMP	LS	$850	16	$13,600
MID-BLOCK CROSSWALK SIGNING AND STRIPING	LS	$2,500	4	$10,000
CROSSWALK STRIPING	LS	$1,200	4	$4,800
RAILROAD CROSSING	LS	$20,000		$-
TRAFFIC CONTROL	LS	$50,000		$20,000
UTILITY RELOCATION	LS	$50,000		$50,000
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$161,940
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	20%		$32,388
SUBTOTAL				$194,328
DESIGN / ENGINEERING	LS	15%		$29,149
CONSTRUCTION MANAGEMENT	LS	10%		$19,433
TOTAL				$242,910

Table C-8 Crystal River Trail Option 1 (Rail to Trail)				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	34,710	$4,512,300
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150	15,780	$2,367,000
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325	4,080	$1,326,000
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$0
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730	1,370	$1,000,100
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915	550	$503,250
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865		$0
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$0
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$0
TOTAL LENGTH (MILES)			10.7	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$0
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800		$0
CURB RAMP		$850		$0
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500		$0
CROSSWALK STRIPING		$1,200		$0
RAILROAD CROSSING		$20,000		$0
TRAFFIC CONTROL[1]	LS	$100,000		$100,000
UTILITY RELOCATION[2]	LS	$150,000		$150,000
EASEMENT ACQUISITION	NIC	$0		$0
Subtotal of Bid Items				$9,958,650
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	15%		$1,493,798
SUBTOTAL				$11,452,448
DESIGN / ENGINEERING	LS	7%		$801,671
CONSTRUCTION MANAGEMENT	LS	8%		$916,196
TOTAL				$13,170,315

1) $100k per mile
2) Allowance. Utilities not investigated.

Table C-8 Crystal River Trail Option 2 (CDOT ROW)				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	2,200	$286,000
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150	30,980	$4,647,000
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325	2,380	$773,500
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410	19,930	$8,171,300
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730	6,110	$4,460,300
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865	100	$286,500
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (LF)			11.7	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500	3	$13,500
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800	18	$50,400
CURB RAMP		$850	14	$11,900
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500		$-
CROSSWALK STRIPING		$1,200	7	$8,400
RAILROAD CROSSING		$20,000		$-
TRAFFIC CONTROL[1]	LS	$1,100,000		$1,100,000
UTILITY RELOCATION[2]	LS	$500,000		$200,000
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$20,008,800
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	15%		$3,001,320
SUBTOTAL				$23,010,120
DESIGN / ENGINEERING	LS	5%		$1,150,506
CONSTRUCTION MANAGEMENT	LS	5%		$1,150,506
TOTAL				$25,311,132

1) $100k per mile
2) Allowance. Utilities not investigated.

Table C-9 Intercept Lot to AABC Shared-Path and Bridge Connections				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	4,235	$550,550
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150		$-
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325		$-
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730	90	$65,700
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865	1,340	$3,839,100
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (LF)			5,665	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800		$-
CURB RAMP		$850	4	$3,400
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500	1	$2,500
CROSSWALK STRIPING		$1,200	1	$1,200
RAILROAD CROSSING		$20,000		$-
TRAFFIC CONTROL	LS	$40,000		$40,000
UTILITY RELOCATION	LS	$20,000		$20,000
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$4,522,450
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	20%		$904,490
SUBTOTAL				$5,426,940
DESIGN / ENGINEERING	LS	10%		$542,694
CONSTRUCTION MANAGEMENT	LS	8%		$434,155
TOTAL				$6,403,789

Table C-10 Lazy Glen Connector Shared-Use Path				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130		$-
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150		$-
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES[1]	LF	$325	900	$292,500.00
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730	80	$58,400.00
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7A: 10' PREFABRICATED PEDESTRIAN BRIDGE [2]	LF	$1,435	190	$272,650.00
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (LF)			1170	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800		$-
CURB RAMP		$850		$-
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500		$-
CROSSWALK STRIPING		$1,200		$-
RAILROAD CROSSING		$20,000		$-
CSP CULVERT APPROX 60" DIA		$600	20	$12,000
TRAFFIC CONTROL	LS	$1,000		$1,000
UTILITY RELOCATION	LS	$1,000		$1,000
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$637,550
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	20%		$127,510.00
SUBTOTAL				$765,060
DESIGN / ENGINEERING	LS	15%		$114,759
CONSTRUCTION MANAGEMENT	LS	8%		$61,204.80
TOTAL				$941,024

1) Will need to climb 45' in elevation. Assume 900' of approach/switchbacks required
2) Assume Single Span, Simple Installation Spans over Floodway

Table C-11 Gerbaz Way Option 1 (Connector Bridge)				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	10	$1,300
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150		$-
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325		$-
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL [1]	LF	$730	650	$474,500
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER [2]	LF	$915	50	$45,750
TS-7A: 10' PREFABRICATED PEDESTRIAN BRIDGE	LF	$1,435	160	$229,600
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (LF)			870	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800		$-
CURB RAMP		$850		$-
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500		$-
CROSSWALK STRIPING		$1,200		$-
RAILROAD CROSSING		$20,000		$-
TRAFFIC CONTROL	LS	$10,000		$10,000
UTILITY RELOCATION [3]	LS	$30,000		$50
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$761,200
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	20%		$152,240
SUBTOTAL				$913,440
DESIGN / ENGINEERING	LS	12%		$109,613
CONSTRUCTION MANAGEMENT	LS	8%		$73,075
TOTAL				$1,096,128

1) Climb approximately 35', assume 700' of approach
2) Includes section directly adjacent to bridge
3) Waterline / Irrigation line conflict

Table C-12 Gerbaz Way Option 2 (Paved Shoulders)				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130		$-
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL [1]	LF	$150	625	$93,750
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES [2]	LF	$325	790	$256,750
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL [3]	LF	$410	300	$123,000
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730		$-
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7A: 10' PREFABRICATED PEDESTRIAN BRIDGE [4]	LF	$1,435		$-
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (LF)			1715	
ASPHALT (6" X 10')	LF	$75		$-
RETAINING WALLS	SF	$35		$-
CURB RAMP		$850		$-
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500		$-
CROSSWALK STRIPING		$1,200		$-
RAILROAD CROSSING		$20,000		$-
CSP CULVERT APPROX 48" DIA		$500	20	$10,000
TRAFFIC CONTROL	LS	$25,000		$25,000
UTILITY RELOCATION	LS	$1,000		$1,000
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$509,500
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	20%		$101,900
SUBTOTAL				$611,400
DESIGN / ENGINEERING	LS	12%		$73,368
CONSTRUCTION MANAGEMENT	LS	8%		$48,912
TOTAL				$733,680

1) Asphalt widening for 5' x 2 shoulder expansion. Cost similar to 10' path.
2) Asphalt widening for 5' x 2 shoulder expansion with retaining walls. Cost similar to 10' path.
3) Asphalt widening for 5' x 2 shoulder expansion with retaining walls. Cost similar to 10' path.
4) Share existing bridge

Table C-13 Crown Mountain to Rio Grande Trail Connector				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING	LF	$130	2290	$297,700
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150		$-
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325	410	$133,250
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730	120	$87,600
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7A: 10' PREFABRICATED PEDESTRIAN BRIDGE [1]	LF	$1,435	130	$186,550
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (LF)			2950	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800		$-
CURB RAMP		$850	2	$1,700
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500	1	$2,500
CROSSWALK STRIPING		$1,200		$-
RAILROAD CROSSING		$20,000		$-
CSP CULVERT APPROX 60" DIA		$600	20	$12,000
TRAFFIC CONTROL	LS	$10,000		$10,000
UTILITY RELOCATION	LS	$10,000		$10,000
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$741,300
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	20%		$148,260
SUBTOTAL				$889,560
DESIGN / ENGINEERING	LS	12%		$106,747
CONSTRUCTION MANAGEMENT	LS	8%		$71,165
TOTAL				$1,067,472

1) This would only span over the 10 year floodplain. The 100 year floodplain is over 1450 feet wide in this location.

Table C-14 El Jebel Shared-Use Path - Valley Road to Crown Mountain Park Connector				
CONTRACT ITEM	UNIT	UNIT COST	QUANTITY	TOTAL
TS-1: 10' CONCRETE TRAIL, MINOR GRADING [1]	LF	$130	3350	$435,500
TS-2: 10' CONCRETE TRAIL, MODERATE GRADING OR LIMITED BUFFER W/ CURB OR REMOVAL EXISTING TRAIL	LF	$150	575	$86,250
TS-3: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, < 4' WALL AND/OR CUT-FILL SLOPES	LF	$325		$-
TS-4: 10' CONCRETE TRAIL, MODERATE GRADING W/ MINOR STRUCTURES, LIMITED BUFFER INC CURB AND/OR GUARDRAIL	LF	$410		$-
TS-5: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 8' WALLS, BARRIER AND/OR PED RAIL	LF	$730		$-
TS-6: 10' CONCRETE TRAIL, SIGNIFICANT GRADING, < 10' WALLS, ROAD RE-ALIGNMENT, LIMITED BUFFER	LF	$915		$-
TS-7B: 10' PREFABRICATED PEDESTRIAN BRIDGE, DIFFICULT INSTALL OR CONSTRUCTION ACCESS	LF	$2,865		$-
TS-8: 5' CONCRETE SIDEWALK, MINOR GRADING		$80		$-
TS-9: 5' CONCRETE SIDEWALK, MODERATE GRADING, LIMITED BUFFER AND/OR MONOR STRUCTURES		$120		$-
TOTAL LENGTH (LF)			3925	
COMMERCIAL DRIVEWAY RECONSTRUCTION		$4,500		$-
RESIDENTIAL DRIVEWAY RECONSTRUCTION		$2,800		$-
CURB RAMP		$850	2	$1,700
MID-BLOCK CROSSWALK SIGNING AND STRIPING		$2,500	1	$2,500
CROSSWALK STRIPING		$1,200		$-
RAILROAD CROSSING		$20,000		$-
TRAFFIC CONTROL	LS	$0		$-
UTILITY RELOCATION [2]	LS	$0		$-
EASEMENT ACQUISITION	NIC	$0		$-
Subtotal of Bid Items				$525,950
MISCELLANEOUS ITEMS & CONTINGENCIES	LS	20%		$105,190
SUBTOTAL				$631,140
DESIGN / ENGINEERING	LS	8%		$50,491
CONSTRUCTION MANAGEMENT	LS	5%		$31,557
TOTAL				$713,188

1) Upgrade 6' asphalt to 10' concrete, including removal
2) Assume no compensable relocations required

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