



City of Ketchum

# Master Transportation Plan



March 15, 2021



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## Acronyms

|         |  |
|---------|--|
| AADT    | Annual average daily traffic                                       |
| AASHTO  | American Association of State Highway and Transportation Officials |
| ADA     | Americans with Disabilities Act                                    |
| CMF     | Crash modification factor  |
| CRF     | Crash reduction factor   |
| EB      | eastbound  |
| EBL     | eastbound left turn movement                                       |
| EBT     | eastbound through movement   |
| EBL/T   | eastbound left turn/through shared lane                            |
| EBL/T/R | eastbound left turn/through/right turn shared movement             |
| EBR     | eastbound right turn movement                                      |
| FEIS    | Final Environmental Impact Statement                               |
| FHWA    | Federal Highway Administration                                     |
| FY      | Fiscal year  |
| HCM     | Highway capacity Manual  |
| HDR     | HDR Engineering, Inc.  |
| HSM     | Highway Safety Manual  |
| LHJ     | Local highway jurisdictions  |
| LOS     | level of service   |
| mph     | miles per hour   |
| MPO     | metropolitan planning organization                                 |
| MUTCD   | Manual on Uniform Traffic Control Devices                          |
| MEV     | million vehicles entering intersection                             |
| NB      | northbound   |
| NBL     | northbound left turn movement                                      |
| NBL/T/R | northbound left turn/through/right turn shared movement            |
| NBT/R   | northbound through/right turn shared movement                      |
| NBR     | northbound right turn movement                                     |
| NCHRP   | National Cooperative Highway Research Program                      |
| PDO     | property damage only   |
| PTSF    | percent-time spent following                                       |
| RIRO    | Right-in/right-out   |
| ROW     | Right-of-way   |
| SB      | southbound   |
| SBL     | southbound left turn movement                                      |
| SBL/T/R | southbound left turn/through/right turn shared movement            |
| SBT/R   | southbound through/right turn shared movement                      |
| SBR     | southbound right turn movement                                     |
| s/veh   | seconds per vehicle  |
| TEV     | Total entering vehicles  |
| TWLTL   | Two-way left turn lane   |
| v/c     | volume to capacity ratio   |
| WB      | westbound  |
| WBL     | westbound left turn movement                                       |
| WBL/T   | westbound left turn/through shared lane                            |
| WBL/T/R | westbound left turn/through/right turn shared movement             |
| WBT     | westbound through movement   |
| WBR     | westbound right turn movement                                      |





# 1 Introduction

## 1.1 Purpose

The City of Ketchum (Ketchum) is committed to providing a balanced transportation system that serves all users and modes for mobility. This Master Transportation Plan (Plan) is a comprehensive guide that identifies short- and long-range transportation system needs across Ketchum and supports economic development and structured growth.

This document will replace the *Ketchum Transportation Plan (2004)* by updating the existing conditions and presenting a set of updated recommendations based on changes in population growth, development patterns, transportation system needs and economic factors. The 2004 plan outlined local conditions and recommendations for improvements to Ketchum’s transportation system. However, due to changes in development and Ketchum’s vision for enhanced pedestrian, bicycle, and transit connectivity, comfort, and mobility, much of the information and recommendations presented in the previous study needed to be updated. In the late 1990’s and early 2000’s, Ketchum experienced unprecedented development. The previous transportation plan was completed in the midst of this growth and proposed improvements were identified based on the conditions at the time. However, this period of growth was followed by an economic downturn that affected both local and overall national economies, causing dramatic drops in employment rates, construction activity, property values, and city revenues. In 2016, Ketchum received a grant from the Local Rural Highway Investment Program (LRHIP), administered by the Local Highway Technical Assistance Council (LHTAC), for the development of this updated Plan.

| <b>Plan Purpose</b>   |
|---|
| Assist Ketchum policymakers and staff in making sound decisions for the City transportation system to promote a greater quality of life and provide a guide for future development. |

This Plan is designed to assist Ketchum policymakers and staff in making sound decisions for the city transportation system to promote a greater quality of life and provide a guide for future development. It promotes goals and visions that help to identify improvements to the Ketchum transportation system. This Plan should be considered a “living” document that changes with evolving needs and current resources available to Ketchum. This Plan does not incorporate land use objectives. However, land use and transportation should be carefully integrated as part of the planning process. This Plan will focus on transportation-related issues, including:

- Existing population and land use characteristics
- Existing transportation system
- Asset management and maintenance planning
- Future transportation system improvements
- Funding sources for the recommended transportation system improvements



## 1.2 Ketchum's Transportation Vision and Goals

Ketchum policymakers and staff identified a future vision of their transportation system in the *Ketchum Comprehensive Plan (2014)*. The key elements of this vision will be carried through the projects, policies and future plans that are identified for Ketchum's transportation system. The following goals were developed to help achieve Ketchum's transportation vision. These goals and associated objectives are paramount in the land use and transportation planning process and are integral to the success of Ketchum's transportation system:

### Ketchum Transportation Vision

Ketchum will provide a framework for creating a balanced, integrated transportation system that serves a wide variety of users. A range of transportation alternatives will be designed for residents, visitors, and the workforce to travel safely and easily to their destinations.

- An expanded transit system that offers more frequent service and convenient connections within the community and to regional destinations;
- A complete system of bicycle routes and trails for commuter and recreational bicyclists;
- A safe, complete and comprehensive pedestrian circulation system that provides ADA compliant access; and
- Convenient and consistent air transportation to and from the Wood River Valley.

**Goal No. 1** – Provide safe and efficient travel on Ketchum's transportation system now and in the future, including all modes of travel, and identify the necessary transportation network improvements.

- Objectives
  - Collect accurate baseline information about the existing transportation system.
  - Conduct a needs assessment highlighting improvement projects needed for the transportation system by the year 2040.
  - Identify, evaluate, and quantify funding sources that are likely to be available to fund higher priority projects.
  - Identify specific ADA compliance projects to enhance the City's pedestrian network and connectivity, including existing and planned facilities.

**Goal No. 2** – Refine the concepts to primarily focus on multi-modal connections to the Downtown Core Area.

- Objectives
  - Incorporate recommendations in city and regional multi-modal planning documents.
  - Implement a thoughtful evaluation and cost estimation of projects identified in the needs assessment, consistent with the *Ketchum Comprehensive Plan* and other relevant transportation plans.

### 1.3 Executing the Transportation Vision

Much like the transportation planning process, there is a progression that can be followed to evaluate and implement transportation projects included in this Plan. The following steps in **Figure 1** should be considered to continually evaluate and execute the Plan and transportation vision. This process should also be followed for future Plan updates.

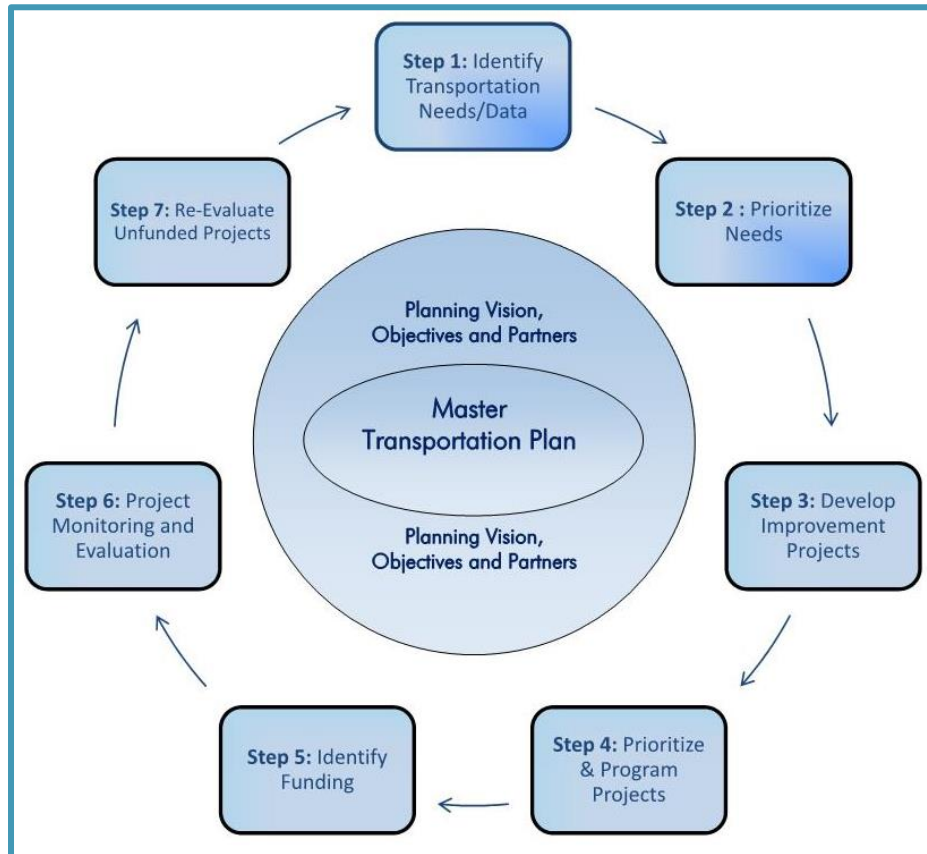


Figure 1. Transportation Planning Process

### 1.4 City Coordination

HDR Engineering, Inc. (HDR) contracted with Ketchum to complete the Plan and HDR coordinated work through regular calls and discussions with the contracted City Engineer, S&C Associates. Specific meetings and conference calls were held with the City Administrator and other members of the Ketchum Traffic Authority (KTA) as needed to identify needs and discuss options to address them. These participants reviewed study findings and documentation and provided feedback that refined the proposed projects to meet the needs of Ketchum.

The Plan was presented to the KTA on November 12, 2020 to explain the purpose and gather KTA’s input. The Plan was formally presented to City Council on December 7, 2020. Comments from the City Council were incorporated into the final Plan. This final Plan was submitted to the City Council for review and discussion on March 1, 2021 and continued to March 15, 2021 when it was adopted following a public hearing on those dates.





## 2 Demographics

### 2.1 City of Ketchum and Surrounding Areas

Ketchum is a mountain resort community located along Idaho State Highway 75 (SH-75) and the Big Wood River in Blaine County, Idaho. The City of Sun Valley is adjacent to Ketchum to the north and east. The Sawtooth and Challis National Forests in the Wood River Valley are nearby, as are several ski areas and resorts. The Sun Valley Company operates a resort on Bald Mountain (Baldy), a world-class ski mountain. The Friedman Memorial Airport is located approximately 11 miles south in Hailey, Idaho, and offers commercial air service. Outdoor recreation opportunities attract thousands of visitors and tourists year-round from all over the world.

### 2.2 Population

As a resort community, Ketchum has a fluctuating population with seasonal peaks. The *Ketchum Comprehensive Plan* describes how the community has grown over time with a developing economy that is attracting year-round employers.

Ketchum experiences peaks in its population during the winter and summer months, especially during holidays and around recreation events. The permanent, year-round populations of Ketchum and Blaine County from the 2000 Census were 3,003 and 19,123, respectively. The city population from the 2010 census was 2,689 and the estimated population for the year 2018 was 2,718, based on data from the American County Survey (ACS) prepared by the US Census Bureau. Overall, the Ketchum population dropped by 10.5 percent between the 2000 census and the 2010 census. **Table 1** lists growth rates for Ketchum and other nearby communities.

**Table 1. Population of Local Communities**

| Community  | Population |        |          |
|------------|------------|--------|----------|
|            | 2000       | 2010   | % Change |
| Ketchum    | 3,003      | 2,689  | -10.5%   |
| Sun Valley | 1,427      | 1,406  | -1.5%    |
| Hailey     | 6,200      | 7,960  | 28.4%    |
| Bellevue   | 1,876      | 2,287  | 21.9%    |
| Twin Falls | 34,469     | 44,125 | 28.0%    |

The annual population growth rate from 1990 to 2009 was found to be 1.33 percent and this was used to estimate Ketchum’s population in the future. By the year 2040, it is estimated the population will be 3,745 individuals, a 38 percent increase from the 2010 population.

Relevant demographic information is shown in the Demographics Snapshot based on ACS data in **Figure 2** and details are provided in the sections below.

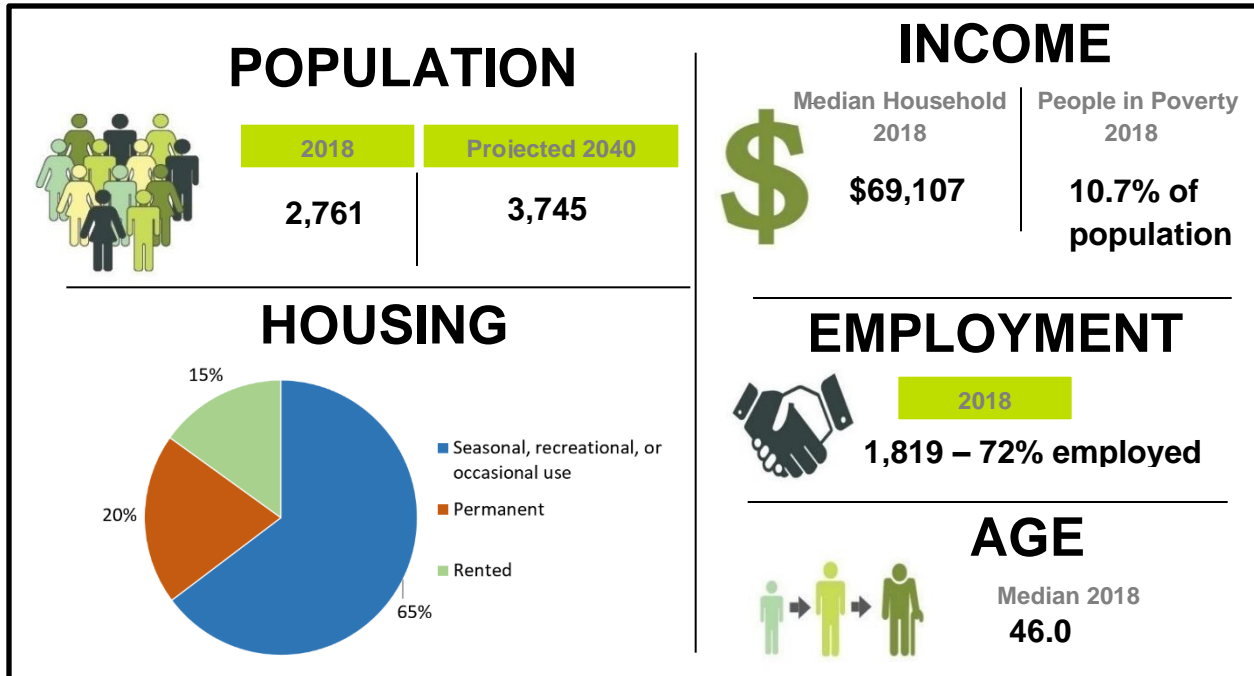


Figure 2. Demographics Snapshot

## 2.3 Housing

The ACS data reported that Ketchum has 3,626 housing units, 36.3 percent of which are single-family homes with 63.4 percent being multi-unit structures and 0.4 percent being mobile homes. Of these total units, 1,213 (33 percent) were occupied, which generally means they were used as a permanent residence. There were 2,413 units (67 percent) that were reported as vacant, meaning they were available for rent; rented and unoccupied; for sale, sold and not occupied; for seasonal, recreational, or occasional use; for migratory workers; or “other.” The average household size of owner-occupied houses was 2.10 and in renter-occupied houses it was 2.59, which is lower than both the United States average of 2.70 and the Idaho average of 2.73. For the years 2014-2018, 90.9 percent of the people at least one-year old living in Ketchum were occupying the same residence one year earlier.

## 2.4 Employment Characteristics

The ACS data for Ketchum reports that the mean annual household income for Ketchum was \$69,107, compared to \$53,089 for the State of Idaho and \$60,293 for the United States (in 2018 dollars). Median earnings for full-time, year-round workers was \$46,146. An estimated 4.2 percent of households had an income below \$10,000 per year and 3.2 percent had an income over \$200,000 or more. Approximately 72 percent of the population over 16 years of age was employed in 2018. Per the *Ketchum Comprehensive Plan*, Ketchum accounts for about 15 percent of the Blaine County population but has the largest concentration of jobs within the county: approximately 4,500 out of a total 10,700 within the communities of Ketchum, Hailey, Sun Valley, and Bellevue. **Table 2** shows the labor force distribution by industry with the arts, entertainment, recreation, and accommodation and food services industries accounting for



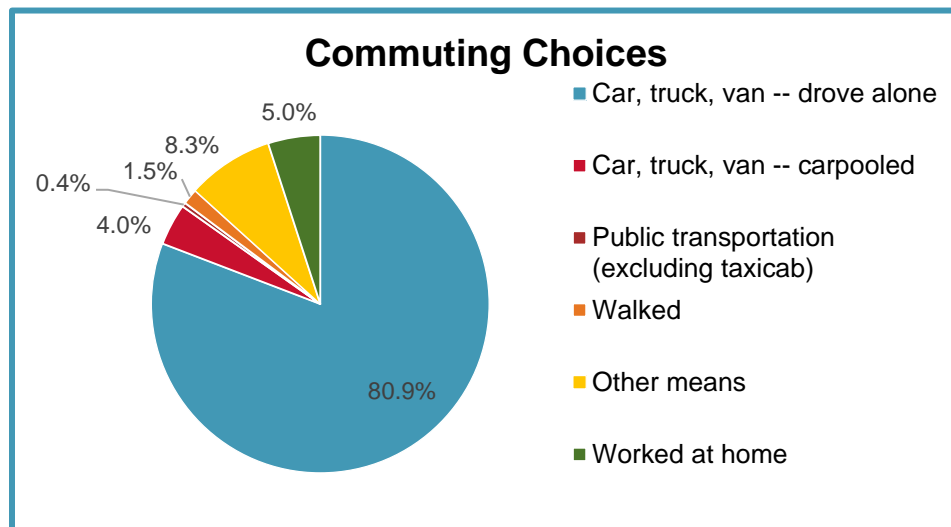
nearly 30 percent of Sun Valley jobs. The major employer in the area is the Sun Valley Company with several resort and related businesses that employ many of these workers.

**Table 2. Employment Distribution**

| Industry   | Percent |
|--|---------|
| Arts, entertainment, recreation, accommodation, and food services                      | 28.3    |
| Professional, scientific, management, and administrative and waste management services | 13.9    |
| Educational services, health care and social assistance                                | 21.9    |
| Retail trade   | 12.9    |
| Construction   | 10.1    |
| Finance and insurance, real estate, rental and leasing                                 | 3.2     |
| Public administration  | 4.6     |
| Other Services, except public administration   | 0.8     |
| Manufacturing  | 3.0     |
| Information  | 0.8     |
| Wholesale trade  | 0.5     |

## 2.5 Commuting Characteristics

Over 80 percent of commuters within Ketchum drive alone to and from work while only 4 percent carpooled. Less than 1 percent used public transit and 1.5 percent walked, as shown in **Figure 3**. These statistics are consistent with other communities within Blaine County, with many people from these communities commuting to Ketchum for work. On average, it took commuters from Ketchum 10 minutes to get to work. For commuters throughout Blaine County, the average commute time was over 19 minutes.



**Figure 3. Commuting Choices**



## 2.6 Disability Characteristics

Per the ACS data, among the civilian non-institutionalized population in 2014-2018, 12.4 percent of the population reported a disability. The likelihood of having a disability varied by age, with 0 percent of people under 18 years old reporting a disability, 6.5 percent of people 18 to 64 years old reporting a disability, and 38.7 percent of those 65 and over reporting a disability. In the State of Idaho, 13.3 percent of the population reported a disability. The likelihood of having a disability varied by age: from 4.4 percent of people under 18 years old, to 11.6 percent of people 18 to 64 years old, and to 36.0 percent of those 65 years old and over.

## 2.7 Current Land Use

Ketchum land use is divided into residential, commercial, industrial, agricultural and forestry, and recreation uses. The Community Core has two sub-districts: one specific for retail and the other for mixed-use developments. Several city parks and open spaces are preserved for recreational purposes, consistent with the *Ketchum Comprehensive Plan*, which calls for preserving and enhancing open space. **Figure 4** presents Ketchum's current zoning within the city limits and designates the land uses by area.

Current zoning districts/land use categories include:

- Agricultural & Forestry (AF)
- Residential
  - General Residential High Density (GR-H)
  - General Residential Low Density (GR-L)
  - Limited Residential (LR)
  - Limited Residential 1 Acre (LR-1)
  - Limited Residential 2 Acres (LR-2)
- Industrial
  - Light Industrial 1 (LI-1)
  - Light Industrial 2 (LI-2)
  - Light Industrial 3 (LI-3)
- Recreation Use (RU)
- Short Term Occupancy
  - 1 Acre (STO-1)
  - 0.4 Acres (STO-4)
  - High Density (STO-H)
- Tourist
  - Tourist (T)
  - Tourist 3000 (T-3000)
  - Tourist 4000 (T-4000)
- Community Core (CC)
  - Retail Core Sub-District
  - Mixed-Use Sub-District

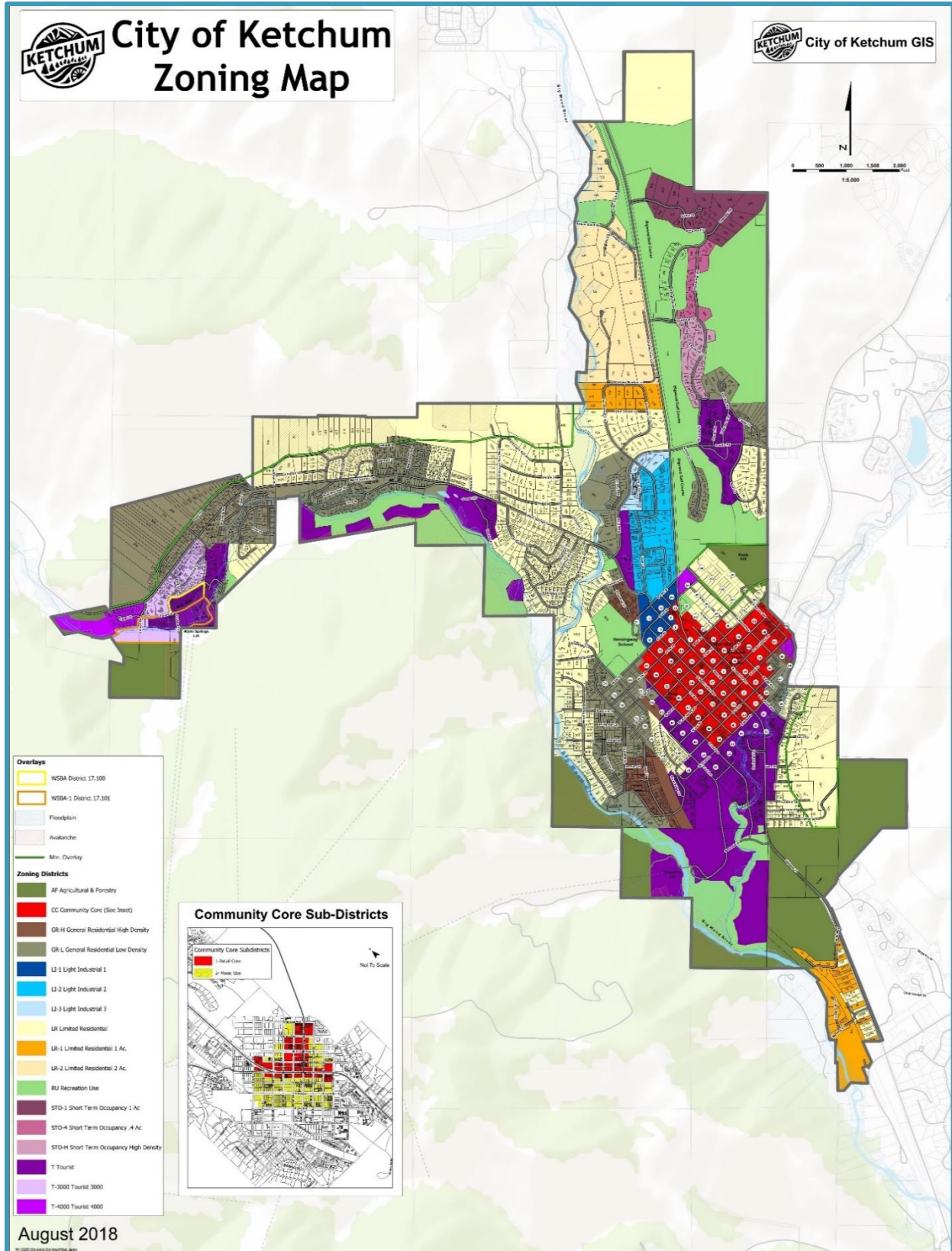


Figure 4. Existing Land Use

Source: <https://ketchumidaho.org/planning-building/page/city-ketchum-zoning-map>





# 3 Existing Transportation System

## 3.1 Street Jurisdiction

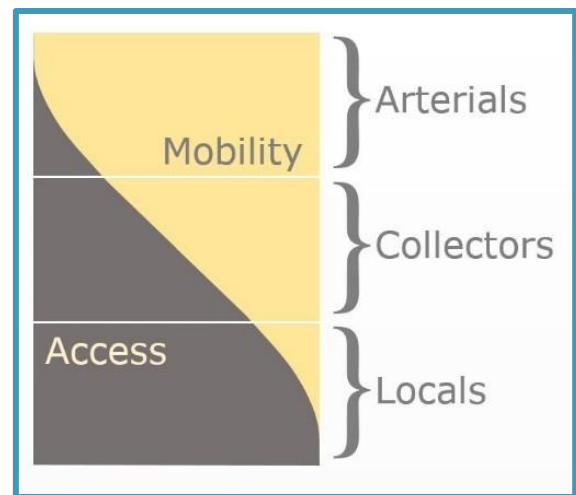
Ketchum owns and maintains most asphalt streets and shared-use pathways within the city limits. There are unpaved alleys in Ketchum’s inventory. The Idaho Transportation Department (ITD) owns and maintains Main Street (SH-75) and Sun Valley Road from SH-75 in Ketchum through Sun Valley, designating it as the SH-75 Spur. There are also many privately-owned streets within city limits.

## 3.2 Functional Classification

Functional classification is the federal system of classifying highways and streets according to their intended purpose in serving traffic vs. providing access to adjacent property. The functional classification system groups streets into three basic categories with some sub-groups:

- **Arterials:** These are usually major thoroughways that move high volumes of traffic at higher speed and connect communities and regional areas.

- **Principal versus Minor:** Principal arterials are major highways of regional and/or statewide significance serving higher traffic volumes traveling relatively long distances at higher speeds. They rarely have direct property access. Minor arterials distribute traffic to smaller geographic areas providing service between and within communities.



- **Collectors:** Collectors provide both access to land uses and traffic circulation within residential, commercial, and industrial areas. They collect traffic from local streets and connect to the arterial system, carrying lower traffic volumes at lower speeds than arterials. They normally connect land uses within communities.
  - **Major versus Minor:** Generally, major collector routes are longer in length, have lower driveway densities, have higher speed limits, are spaced at greater intervals, carry higher traffic volumes, and may have more travel lanes than minor collectors. Major collectors are focused more on mobility while minor collectors provide more access.
- **Local:** Local roads provide direct access to adjacent land uses and connect to other local and collector streets. They normally connect residential areas to collectors over short distances with low speeds and traffic volumes.



The majority of the streets within Ketchum are local roads serving residential areas. **Figure 5** presents the current functional classification of the roads in Ketchum. ITD has identified functional classifications for some roads in Ketchum as the official classifications recognized by the Federal Highway Administration (FHWA) and ITD for funding purposes. Main Street (SH-75) is classified as a Minor Arterial, as it is the connecting route to other communities and for tourists to access Ketchum. It connects to other state and US highways north and south of the Wood River Valley and connects to the Friedman Memorial Airport.

The following streets are classified as Major Collectors by ITD:

- Sun Valley Road beginning at Main Street and continuing through the City of Sun Valley. It provides access to local roads within Ketchum, Sun Valley and National Forest land.
- Warm Springs Road from Main Street to the west city limit and beyond connects several residential and short-term occupancy areas to downtown Ketchum as well as the Warm Springs Day Lodge and ski lifts.

The following streets are classified as Major Collectors by the City of Ketchum:

- 2<sup>nd</sup> Avenue from Serenade Lane to 8<sup>th</sup> Street
- 3<sup>rd</sup> Avenue from Serenade Lane to 8<sup>th</sup> Street, which includes a future connection from north of 4<sup>th</sup> Street to south of 6<sup>th</sup> Street
- 3<sup>rd</sup> Street from 3<sup>rd</sup> Avenue to Main Street

The following streets are classified as Minor Collectors by the City of Ketchum:

- River Street from Wood River Drive to east of Leadville Avenue
- 1<sup>st</sup> Street from Wood River Drive to east of Alpine Lane at Lucy Loken Park
- 5<sup>th</sup> Street from 2<sup>nd</sup> Avenue to Spruce Avenue
- 7<sup>th</sup> Street from 2<sup>nd</sup> Avenue to Main Street
- 10<sup>th</sup> Street from Warm Springs Road to Main Street
- East Avenue from River Street to north of 6<sup>th</sup> Street at the Knob Hill Natural Area
- Lewis Street from Warm Springs Road to Saddle Road

### 3.2.1 Recommendations

Saddle Road north of downtown Ketchum connects SH-75 to local roads in the City of Sun Valley to the east, and to residential and industrial land uses and local roads to west and south. It is recommended that this road be designated a Major Collector within Ketchum, as shown in **Figure 5**. The City of Sun Valley *Transportation Plan* (2015) has the same recommendation for Saddle Road within its city limits extending to SH-75. Functional classification is often a component of qualifying for federal-aid funding programs. Updating the functional classification



of Saddle Road could open opportunities for additional resources to address improvements that may be needed along this street. This process will require Ketchum to prepare and submit an Idaho Functional Classification Change Request Form to ITD, found here:

<https://apps.itd.idaho.gov/Apps/plan/ITDFCChangeRequestForm.pdf>

This request will require a concurrence letter or resolution from the City of Sun Valley as well as information about the roadway and justification for the request. This is required to designate these locally owned streets as collectors to qualify for federal-aid funding for improvements.

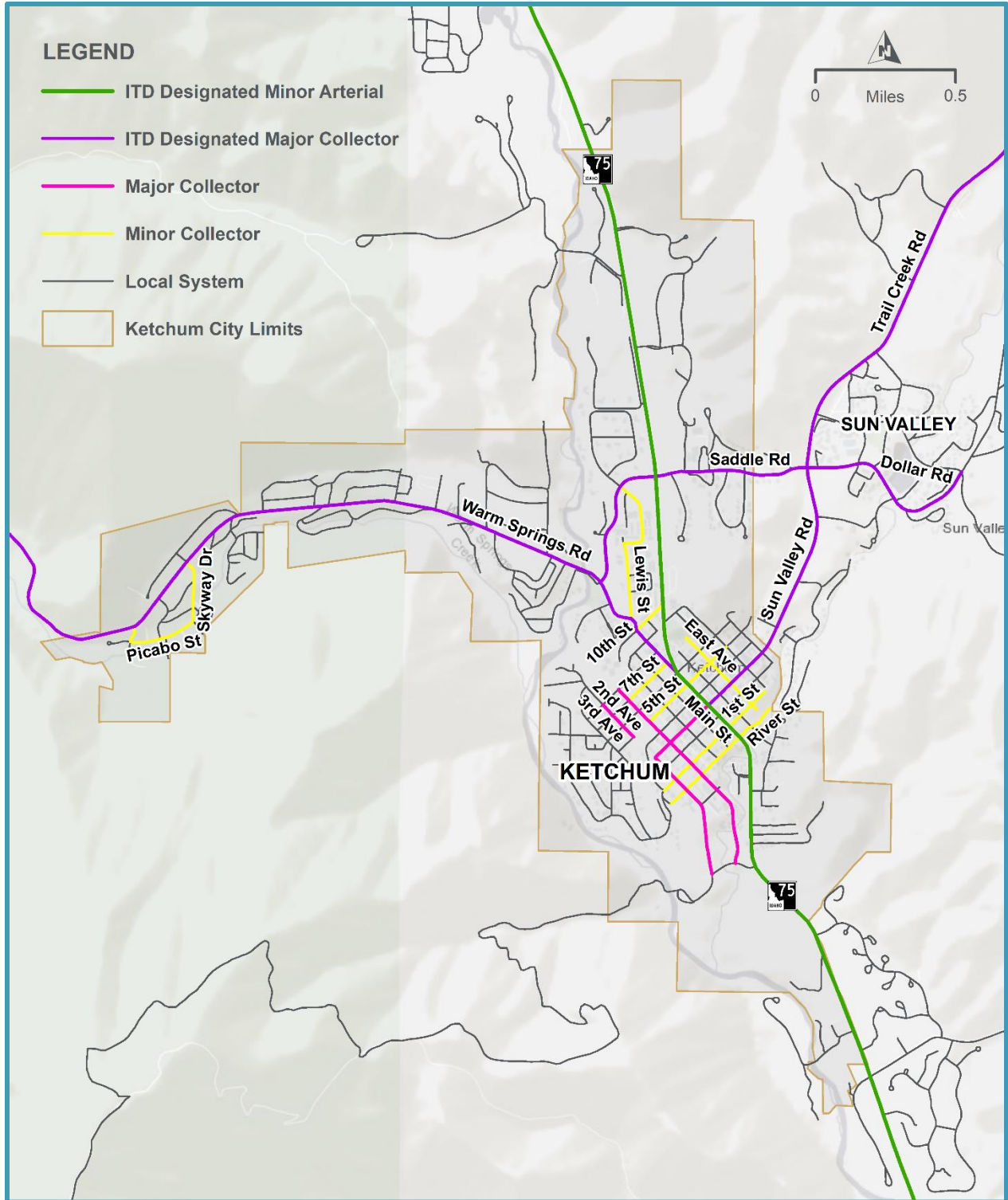


Figure 5. Recommended Functional Classification



### 3.3 Bicycle and Pedestrian Facilities

Bicycle and pedestrian traffic are prevalent in Ketchum, especially during the summer months when tourists and visitors explore the city and surrounding attractions. Existing facilities for these users include sidewalks, shared-use pathways, bike lanes, and designated “sharrows,” or shared lane markings that allow bicyclists to use the entire vehicle traffic lane. Most roadways within Ketchum can be considered shared roadways, as bicycles may legally be used on them except where prohibited by statute or regulation.

Ketchum has recognized the lack of connectivity of existing sidewalks and the need to upgrade existing facilities to current Americans with Disabilities Act (ADA) standards. The Ketchum Walkability Project was conducted in 2013 with the goal of making Ketchum the most walkable resort town in America. A volunteer team identified various missing sidewalks and streetlights



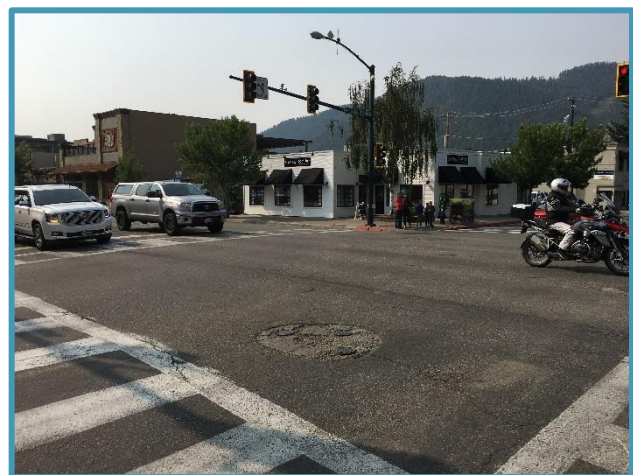
Pedestrian crosswalk of East Avenue at Sun Valley Road

throughout the community core. Ketchum has dedicated funding to continue sidewalk infill and upgrade projects. The city has been pursuing this goal for many years with success and will continue to do so. There are unique challenges with a mountain community that requires a consistent effort each year to identify and implement new ADA-compliant facilities.

There are several dedicated crosswalks for pedestrians across city streets throughout the downtown area. The 1<sup>st</sup> Avenue, Main Street, and East Avenue crosswalks are very long due to the width of the roads because of the on-street parking and the center median parking on East Avenue and 1st Avenue. With on-street

parking, pedestrians are harder to see for drivers on these streets and the long distances increase exposure for conflicts.

The signalized intersections of Main Street with 1<sup>st</sup> Street, Sun Valley Road, and 5<sup>th</sup> Street have dedicated crosswalks with pedestrian signals for all four legs. The 4<sup>th</sup> Street crossing of Main Street has a rectangular rapid flashing beacon (RRFB) to alert drivers of crossing pedestrians and bicyclists. There is also an RRFB at the pedestrian crosswalk of Sun Valley Road at Spruce Street.



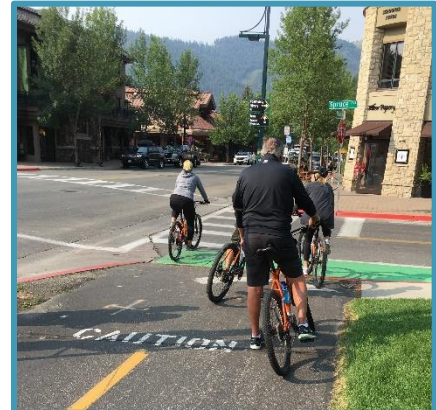
Pedestrian crosswalks and signal indications at Main Street and Sun Valley Road





Existing bike and shared-use facilities are presented in **Figure 6**. Existing sharrows are installed on 1<sup>st</sup> Avenue from River Street to 8<sup>th</sup> Street, on 4<sup>th</sup> Street from 3<sup>rd</sup> Avenue, and a connection the Wood River Trail to Spruce Avenue. There are also sharrows along Spruce Avenue to connect to the Sun Valley Trail and on portions of Washington Avenue and 6<sup>th</sup> Street. A bike lane on Spruce Street from Sun Valley Road to 4<sup>th</sup> Street also connects the Sun Valley Trail with the 4<sup>th</sup> Street sharrows. There is a southbound bike lane on Warm Springs Avenue from Saddle Road to 6<sup>th</sup> Street.

The Wood River Trail connects Ketchum to Bellevue through the Wood River Valley for 20 miles. It travels through the west side of the city parallel to several streets with designated crosswalks across city streets. It connects several community destinations through this area and along Warm Springs Road and then is parallel to Saddle Road and SH-75, continuing north of Ketchum. The multi-use Sun Valley Road Path connects Ketchum to the City of Sun Valley and continues to the north. It is separated from the roadway on its own alignment with connections to intersections and crosswalks along Sun Valley Road.



Trail, crosswalks and bike lane at Sun Valley Road and Spruce Avenue

The two-way cycle track along Warm Springs Road from Saddle Road to Gates Road serves bicyclists and pedestrians and connects to the Warm Springs Base Area. These pathways serve many users, and where they are adjacent to streets, some cyclists will travel in the opposite direction of adjacent vehicle traffic. Drivers normally do not expect to see those cyclists traveling in the opposite direction of traffic and conflicts can occur at intersections. This issue is identified in the *Blaine County Community Bicycle and Pedestrian Master Plan (2014)*. It recommends that if new pathways are constructed, they should be one-way in the direction of adjacent traffic and located on both sides of the street.



Cycle track adjacent to Warm Springs Road and intersection crossing

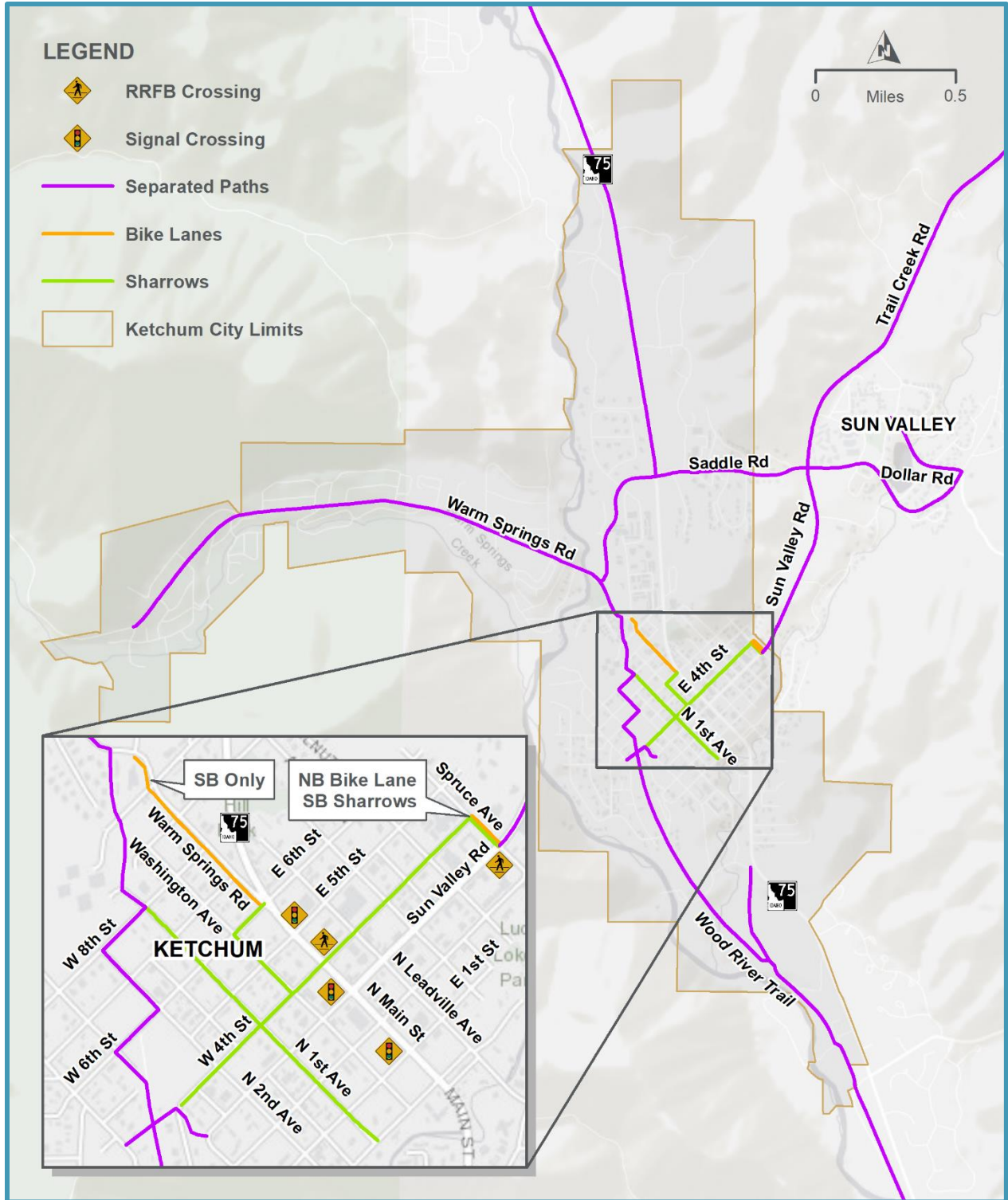


Figure 6. Existing Bike and Shared-Use Facilities



### 3.4 Transit and Intermodal Options

#### 3.4.1 Public Transit

Mountain Rides is the full-service regional public transportation provider in Blaine County, with service in the communities of Sun Valley, Ketchum, Hailey, Bellevue, and Carey.



Mountain Rides provides mobility through the area while reducing single-occupant vehicle trips and serving underrepresented populations. It is jointly operated as a public agency by the participating cities and Blaine County.

Mountain Rides provides several different services, including:

- A free town bus with 3 year-round routes and 2 peak season routes for Ketchum and Sun Valley with a deviated fixed route service for Hailey
- Commuter bus services connecting Bellevue, Hailey, Ketchum, and Sun Valley
- Commuter vanpool routes to the communities of Twin Falls, Shoshone, Gooding, Jerome, and Fairfield
- Ride match services to connect online carpool patrons
- Coordinate Safe Routes to School biking and walking programs and projects for elementary and middle schools in the county
- Special Needs Demand Response for those that qualify under Americans with Disabilities Act (ADA)

There are over 40 bus stops and several bus shelters within Ketchum. More information can be found here: <https://www.mountainrides.org/>

#### 3.4.2 Airport

The Friedman Memorial Airport is jointly owned by the City of Hailey and Blaine County. It is located in Hailey, about 14 miles south of Ketchum along SH-75. It currently has non-stop flights to Salt Lake City, UT; Seattle/Tacoma, WA; Los Angeles and San Francisco, CA; Denver, CO; and Chicago, IL. It has had non-stop flights to Portland, OR in the past.



#### 3.4.3 Other Services

Other transportation services are provided by other agencies and groups to serve special needs populations as on demand services, similar to the Mountain Rides service. These included the Senior Connection for senior citizens and Medical Transport Services for long distance medical appointment needs. Taxi service and Uber are available in the Wood River Valley and school bus service is provided throughout Blaine County.

#### 3.4.4 Non-motorized Trails

This Plan does not address unpaved trails use for non-motorized purposes like hiking and mountain biking.



### 3.5 Daily Traffic & Traffic Patterns

Ketchum has a very high seasonal traffic pattern that is unique to resort communities. Traffic volumes are highest in the summer and winter months, with volumes in the spring and fall being lower. There is a consistent commuter travel pattern on SH-75 north and south of Ketchum throughout the year due to employees from other communities traveling to Ketchum for work in the morning and returning home in the evening.

Average daily traffic (ADT) is the average 24-hour traffic volume at a given location for some period of time less than a year (e.g. 6 months or a season, a month, a week or some days). The ADT for a given day, week, or month can be very different on the same road in Ketchum, especially on Main Street and roads serving seasonal attractions. Annual average daily traffic (AADT) is the total volume of vehicle traffic on a roadway for a year divided by 365 days.

Ketchum has collected traffic counts on their streets over several years for various studies and projects. HDR gathered these counts and applied a historical annual growth rate to increase them to estimate 2019 levels. **Figure 7** displays the 2019 AADT for city streets. The majority of streets within Ketchum carry volumes lower than 500 vehicles per day (vpd) with Main Street/SH-75 north of 6<sup>th</sup> Street, Warm Springs Road from 6<sup>th</sup> Street to 10<sup>th</sup> Street, and Sun Valley Road from Main Street to Spruce Street carrying over 5,000 vpd. Main Street/SH-75 from Elkhorn Road to 6<sup>th</sup> Street, Sun Valley Road east of Spruce Street, and segments of Warm Springs Road carry volumes over 9,000 vpd.

Traffic volumes on SH-75 were analyzed using data from ITD's automatic traffic recorders (ATRs) to see how they fluctuate throughout a given year. The two closest ATRs include:

- ATR #28 – SH-75 @ milepost (MP) 135.95 (7.6 miles north of the SH-75 Spur Junction)
- ATR #68 – SH-75 @ MP 119.4 (2.9 miles north of Bullion Street in Hailey, ID)

The highest volumes were observed at these ATRs in the summer months and averaged over 15,000 vpd in June, July, and August at ATR #68 and around 2,400 vpd at ATR #28. Counts collected in July 2018 showed volumes on Main Street within Ketchum reaching 19,000 vpd. The lowest volumes were observed in the winter months with volumes less than 12,000 vpd at ATR #68 and less than 900 vpd at ATR #28.

Holiday traffic volumes are generally the peak volumes for the year in Ketchum. Reviewing holiday traffic data for the last five years from each ATR, including Memorial Day, the Fourth of July, and Labor Day events showed this variety. During the Memorial Day weekends, volumes on SH-75 increased to about 20 percent higher than the recorded AADT volumes. The highest differentials were during the Fourth of July and Labor Day holidays, when volumes recorded at ATR #68 increased between 30 percent and 40 percent higher than AADT and volumes at ATR #28 increased from two to three times higher than the corresponding AADT.



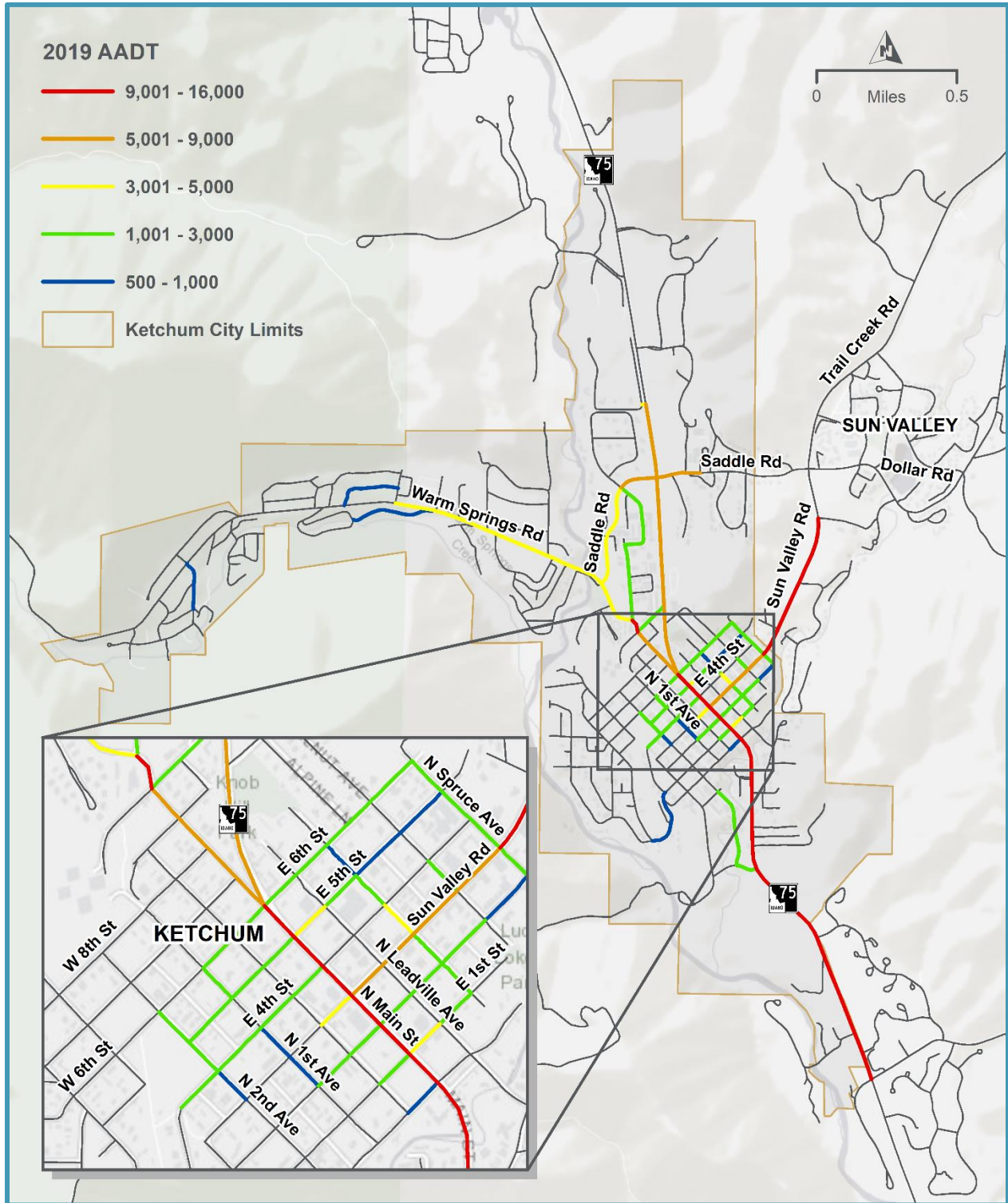


Figure 7. Existing Traffic Volumes



### 3.6 Crash History

Crash data from 2014 to 2018 for Ketchum was obtained from an LHTAC database that compiles crash locations and causes for cities and counties throughout Idaho (<http://gis.lhtac.org/safety/>). A map showing all reported crashes in Ketchum for the analysis period is shown in **Figure 8**. There were no reported crash fatalities within Ketchum during the analysis time period.

#### Injury Types

- **Fatality** – death occurred within one month of crash
- **A Injury** (Serious Injuries) – incapacitating injury (unconscious, transported to hospital)
- **B Injury** (Visible Injuries) – visible signs of injury (cuts, broken bones)
- **C Injury** (Possible Injuries) – no visible signs of injury (whiplash, soreness)
- **Property Damage Only (PDO)** – no reported injuries

There were five reported crash locations involving pedestrians and bicyclists within Ketchum. Both pedestrian crashes resulted in Type A injuries to the pedestrians. One crash was at Main Street and Sun Valley Road in July 2016 when an alcohol impaired driver struck a pedestrian. The other pedestrian crash occurred at Washington Avenue and 4<sup>th</sup> Street when a driver on 4<sup>th</sup> Street failed to yield to a pedestrian at the crosswalk in July 2017. The three bicycle crashes occurred at intersections and resulted in Type B injuries to the bicyclists when drivers failed to yield to bicyclists. The first crash occurred in September 2017 at Main Street and 2<sup>nd</sup> Street. The second crash occurred in July 2018 at Leadville Avenue and 5<sup>th</sup> Street. The third crash also occurred in July 2018 at Main Street and Saddle Road.

Crash summaries for city-wide roads, all state roads, all local roads, and the highest crash roads in Ketchum are presented in **Figure 9**. The majority of crashes occurred on the higher volume, higher speed roads, and most of them are on the state roads (SH-75, Main Street, and Sun Valley Road). The state roads had a higher number of injuries associated with crashes. Crashes identified as occurring on Main Street are from south of River Street to Saddle Road.

The most common crash types on local roads were angle turning (23 percent), vehicles backed into (17 percent), rear-end (12 percent), and striking parked cars (12 percent). On state roads, the most common crash types were rear-end (46 percent), angle and angle turning (13 percent), striking wildlife (10 percent), and side swipe same (10 percent). The state roads include the signalized intersections on Main Street and the other higher speed intersections in the city, so rear-end crashes are more common. The wildlife strikes occurred south of Serenade Lane and north of Saddle Road. The crashes on state roads had a higher rate of injuries, most likely due to higher speeds on those roads.

The most common contributing circumstances for crashes on local roads included improperly backing up (20 percent), failure to yield to traffic with the right-of-way, including bikes and pedestrians (14 percent), driving too fast for conditions (13 percent), and following other cars too closely (10 percent). On state roads, the most common contributing circumstances were following other cars too closely (28 percent), failure to yield to traffic with the right-of-way, including bikes and pedestrians (17 percent), wildlife in the roadway (10 percent), and inattention (9 percent).

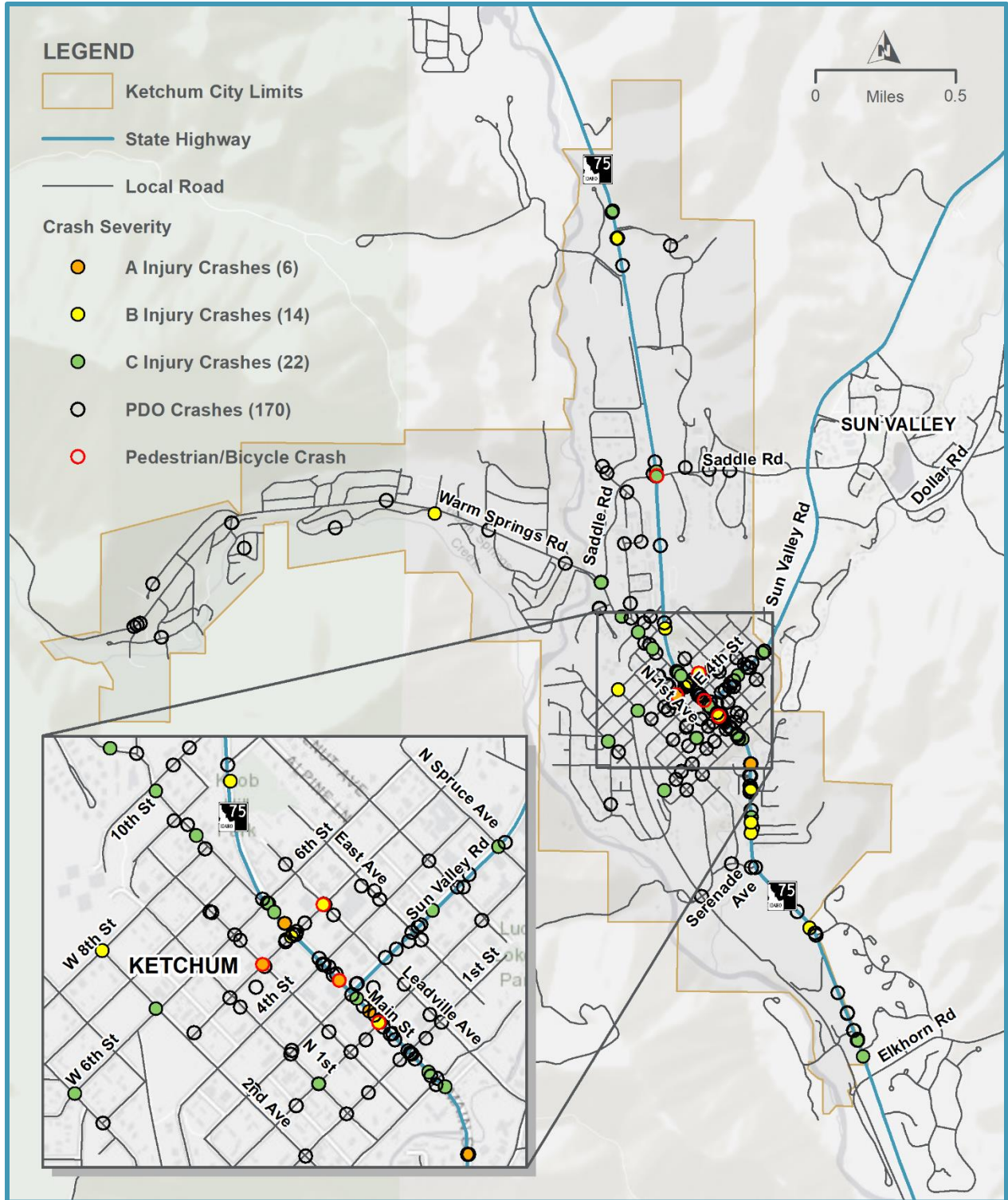
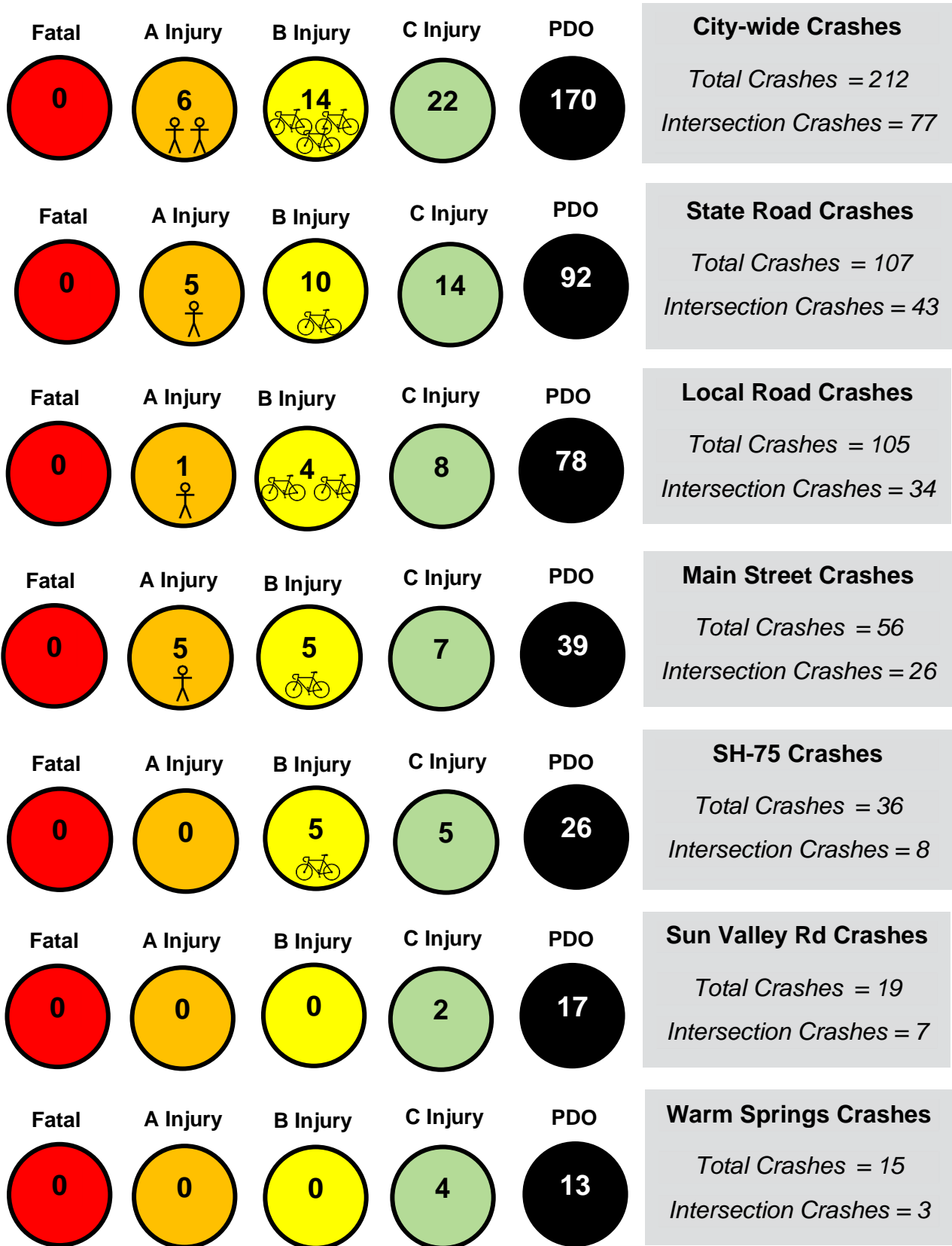


Figure 8. 2014-2018 Crash Locations and Severity

Figure 9. Crash Summaries



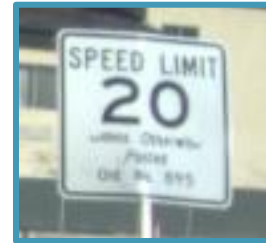


Crashes on the state roads accounted for over half of all crashes in the city limits. Rear-end and angle turning crashes (a crash where two motor vehicles impact at an angle while one or both are turning, e.g., the front of one motor vehicle impacts the side of another motor vehicle) are typically associated with intersections and several were recorded on Main Street with the highest volumes and signalized intersections. Almost half of all crashes on Main Street were intersection related and these indications point to the congested conditions that can occur on this street during the peak traffic summer months, when a large proportion of the crashes occurred. The majority of crashes on local roads were PDO and were associated with low speed conditions, including backing into other vehicles, striking parked cars, and crashes while turning at intersections.

### 3.7 Speed Limits

Galena Engineering, Inc., conducted a *Speed Limit Study* (2017) for the KTA to help establish reasonable and safe speed limit zoning on city streets. They reported on Ketchum's Ordinance Number 895, which establishes the maximum speeds limits within Ketchum, unless posted otherwise:

- 20 mph, on all streets
- 10 mph, on all alleys
- 15 mph, in school zones
- 5 mph, emergence from an alley or private driveway



Main Street and Sun Valley Road east of Main Street within Ketchum are owned by ITD and are posted for 25 mph.

The study reviewed operating speeds on several city streets and found the established 20 mph speed limit on City streets is generally substantiated. They noted "Existing conditions such as driveways, business accesses, obstructions to clear sight distances at intersections, pedestrians, and hills, contribute to a character of the city streetscapes that indicates the reduced speed limit is reasonable on city streets. Retaining this general 20 mph speed limit is recommended, with the exceptions noted..." in the study. Exceptions included increasing the speed limit on several segments due to measured speeds operating higher and lowering speeds on others based on pedestrian activity, proximity to parks and school zones, and bicycle priority.

The KTA should continue to monitor speeds and adjust them as needed, especially as more sidewalks, other pedestrian facilities, and sharrow bike facilities are implemented and installed.

### 3.8 Existing Operations

This section reports the results of existing conditions and operational capacity for key intersections within Ketchum under average conditions and peak conditions. L2 Data Collection collected turning movement counts during the a.m. and p.m. peak hours on a weekday in May and weekend traffic in July and August 2018 at the following intersections:

- Main Street and River Street
- Main Street and 1<sup>st</sup> Street
- Main Street and Sun Valley Road
- Main Street and 6<sup>th</sup> Street and Warm Springs Road
- East Avenue and Sun Valley Road
- Spruce Avenue and Sun Valley Road
- Warm Springs Road and 10<sup>th</sup> Street

Capacity is defined as the maximum rate at which vehicles can pass through a given point in an hour under prevailing conditions. Intersection capacity is measured by evaluating the critical lane groups that experience the most delay for stop-controlled intersections. The concept of level of service (LOS) was developed to correlate numerical traffic operational data to subjective descriptions of traffic performance at intersections. LOS is defined as the system of six designated ranges, from “A” (best) to “F” (worst), used to evaluate performance. **Table 3** presents the *Highway Capacity Manual 6<sup>th</sup> Edition* LOS thresholds at stop-controlled and signal-controlled intersections in average seconds of delay per vehicle. For signalized and roundabout controlled intersections, overall intersection LOS data is reported. For intersections controlled with stop signs on minor road approaches the worst performing movement LOS is reported.

**Table 3. LOS Thresholds for Motor Vehicles at Intersections**

| LOS | Stop-controlled Intersection Control Delay (s/veh) | Signal-controlled Intersection Control Delay (s/veh) |
|-----|--|--|
| A   | <=10   | <=10   |
| B   | 10-15  | 10-20  |
| C   | 15-25  | 20-35  |
| D   | 25-35  | 35-55  |
| E   | 35-50  | 55-80  |
| F   | >50  | >80  |

#### 3.8.1 May 2018 Operations

Overall, the analyzed intersections are estimated to operate well in each peak hour under the May 2018 conditions, which represent typical average operations throughout the year. **Figure 10** presents the estimated LOS for the a.m. and p.m. peak hours at each key intersection. **Table 4** presents the LOS as well as the average delay at each intersection that determined the LOS.





The stop-controlled intersections are reported with the LOS and average delay of the worst performing left turning movement from the stopped legs of the intersection.

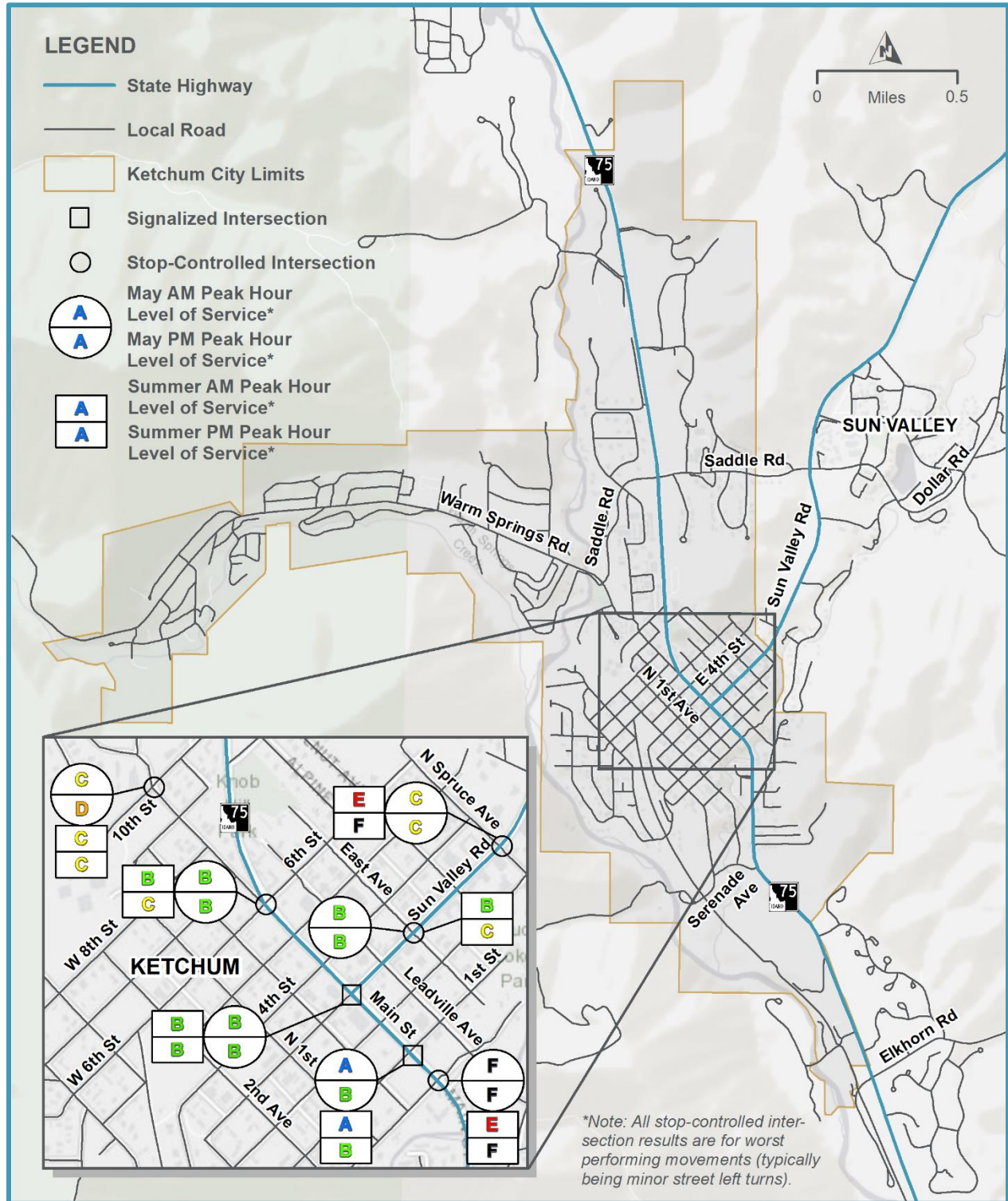


Figure 10. Existing Conditions LOS

**Table 4. 2018 Key Intersection LOS and Average Delay**

| Intersection                    | Control | May 2018     |                       |              |                       | July 2018    |                       |              |                       |
|---------------------------------|---------|--------------|-----------------------|--------------|-----------------------|--------------|-----------------------|--------------|-----------------------|
|                                 |         | AM Peak Hour |                       | PM Peak Hour |                       | AM Peak Hour |                       | PM Peak Hour |                       |
|                                 |         | LOS          | Average Delay (s/veh) | LOS          | Average Delay (s/veh) | LOS          | Average Delay (s/veh) | LOS          | Average Delay (s/veh) |
| 10th Street / Warm Springs Road | Stop    | C            | 25.0                  | D            | 28.1                  | C            | 19.7                  | C            | 24.1                  |
| 6th Street / Main Street        | Stop    | B            | 13.6                  | B            | 14.1                  | B            | 13.4                  | C            | 16.2                  |
| Sun Valley Road / Main Street   | Signal  | B            | 10.0                  | B            | 15.7                  | B            | 11.7                  | B            | 17.4                  |
| 1st Street / Main Street        | Signal  | A            | 7.5                   | B            | 15.5                  | A            | 9.6                   | B            | 16.9                  |
| River Street / Main Street      | Stop    | F            | 64.2                  | F            | 73.0                  | E            | 42.6                  | F            | 76.3                  |
| Sun Valley Road / East Avenue   | Stop    | B            | 10.8                  | B            | 14.1                  | B            | 12.2                  | C            | 17.4                  |
| Sun Valley Road / Spruce Avenue | Stop    | C            | 17.5                  | C            | 17.1                  | E            | 35.8                  | F            | 78.3                  |

Most intersections are estimated to operate at LOS D or better, with the left turning movements at River Street estimated to operate at LOS F with long delays. The estimated queue of vehicles waiting to turn left from River Street onto Main Street is normally 2 vehicles or less. There are significant queues on 10<sup>th</sup> Street for vehicles waiting at the stop sign to turn left onto Warm Springs Road (139 feet long) and on Main Street waiting to travel north through the intersection at 1<sup>st</sup> Street (217 feet long). The queue on Main Street is almost the entire length of the block back to River Street and could impact operations at that intersection. The vehicle queues waiting to make a left turn from Main Street to Sun Valley Road in both directions are estimated to be long. There are no separate left turn lanes, so many drivers wanting to continue on Main Street through this intersection are delayed. The long queue lengths also disrupt operations at the adjacent Main Street intersections at 4<sup>th</sup> Street and 2<sup>nd</sup> Street. The pedestrian crossings of Main Street at 1<sup>st</sup> Street, Sun Valley Road, 4<sup>th</sup> Street, and 5<sup>th</sup> Street are estimated to operate well during May.

### 3.8.2 Summer 2018 Operations

Overall, the analyzed intersections are estimated to operate adequately, at LOS D or better, in each peak hour under the summer 2018 conditions in July and August when traffic volumes are at their peak with the height of tourist season. However, several individual movements experience high delays and queue lengths during the peak hours. **Figure 10** presents the estimated LOS at each key intersection under these conditions next to the May 2018 results.



**Table 4** presents the LOS as well as the average delay at each intersection that determined the LOS. The left turning movements at the intersections of Sun Valley Road and Spruce Avenue, and Main Street and River Street are estimated to operate at LOS F, although fewer vehicles were observed at River Street. It is assumed most of these drivers shift to 1<sup>st</sup> Street to use the signal to access Main Street. The southeast bound left turn queue for vehicles turning from Spruce Avenue onto Sun Valley Road is estimated to be 138 feet long, over half the length of the block back to 4<sup>th</sup> Street. The queue for left turning vehicles on Sun Valley Road to turn onto East Avenue is estimated to extend almost to Alpine Lane. The queues on Main Street for vehicles waiting to turn left at the intersections of 1<sup>st</sup> Street and Sun Valley Road are long and extend over half the length of the block to adjacent intersections. The left turning vehicles queued on Sun Valley Road to turn south onto Main Street are estimated to extend to the East Avenue intersection, which may cause more congestion at this all-way stop intersection. The pedestrian crossings of Main Street at 1<sup>st</sup> Street, Sun Valley Road, 4<sup>th</sup> Street, and 5<sup>th</sup> Street are very busy during the summer months, especially in the afternoon with many visitors and tourists. The competition for time between vehicles and pedestrians is constant and many people wait for the crossing indications. Once they go, the long crossing distance takes time that causes the vehicles on Main Street to queue up.

### 3.8.3 ITD SH-75 Projects

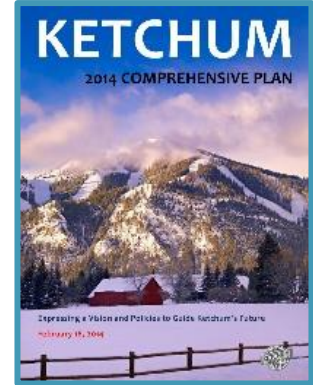
ITD completed the *SH-75 Timmerman to Ketchum: Final Environmental Impact Statement* (FEIS) in 2008, which identified needed improvements for the SH-75 corridor in the Wood River Valley. The improvements were separated into different segments and several have been implemented. The segment leading into Ketchum is the SH-75, Elkhorn Road to River Street, Ketchum (Project No. A020(033), Key No. 20033) federal-aid design project currently being developed by ITD. As ITD identifies improvements to the highway and intersections in this segment, Ketchum should coordinate with ITD on those solutions. The City of Ketchum has strong desires and goals to improve pedestrian and bike facilities in this area to connect the Gem Streets area with the rest of the city. Sidewalks on both sides of Main Street are needed along with bike facility connections and a safe crossing of SH-75 for access to the bus stop in this area.

In addition, ITD has a pavement rehabilitation project planned for Main Street from River Street to Clubhouse Drive in 2026 (Project No. A022(210), Key No. 22210). This project will allow ITD to partner with the City of Ketchum to improve pedestrian ramps to meet ADA requirements and update traffic signal components to provide better pedestrian crossings of Main Street.

## 4 Regional Comprehensive and Transportation Planning

### 4.1 Comprehensive Plan

The *Ketchum Comprehensive Plan* (2014) was adopted by the Ketchum City Council on February 26, 2014. It states Ketchum’s vision, goals and policies for future development within the city and in the surrounding Area of City Impact. Like this Plan, the *Ketchum Comprehensive Plan* is dynamic and meant to respond to changing conditions. The proposed projects in this Plan are consistent with the goals and objectives of the *Ketchum Comprehensive Plan*.



### 4.2 City Design Policies and Standards

Ketchum’s city code identifies the engineering standards for roadways, sidewalk, and other transportation facilities within the city in Title 12: Streets, Sidewalks, Public Utility Easements, and Public Place. Current design standards are published on the City’s website at:

<https://www.ketchumidaho.org/streets-facilities/page/standards>.

### 4.3 Downtown Ketchum Master Plan



The *Downtown Ketchum Master Plan* (2006) identified opportunities to improve downtown Ketchum and enhance opportunities to engage and enjoy it. It includes recommendations for improving circulation and the street system; developing orientation and wayfinding, much of which has been implemented; developing pedestrian oriented streetscapes; and emphasizing alternative transportation and parking system improvements. Some of the key

recommendations included implementing pedestrian and cycling primary routes, updating parking opportunities and implementing fee structure for high demand areas, updating the 2<sup>nd</sup> Avenue and Serenade Lane as a connection to SH-75, and implementing a lane reconfiguration, or “road diet”, along Main Street. This lane reconfiguration would provide a center turn lane with one travel lane in each direction to allow a more pedestrian friendly environment along Main Street and shorten crossing distances. Several of the recommendations in the *Downtown Ketchum Master Plan* have been implemented and some are incorporated into this Plan.

### 4.4 Blaine County Transportation Plan

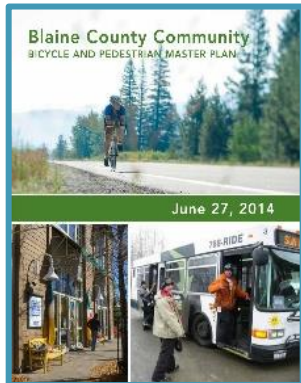
Several of the capital improvement projects listed in the *Blaine County Transportation Plan* (2012) have been completed. This was intended to be a 5-year plan and is most likely in need of being updated. None of the projects were within Ketchum’s city limits.







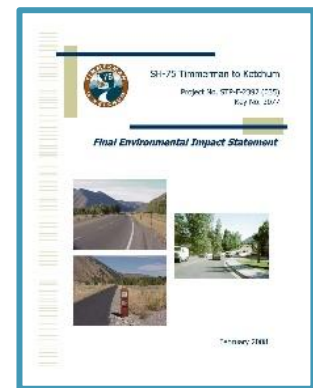
## 4.5 Blaine County Community Bicycle and Pedestrian Master Plan



The *Blaine County Community Bicycle and Pedestrian Master Plan* (2014) recommends capital improvement projects throughout the county, including in Ketchum. Nine projects were identified within the city, some of which have been implemented, including improvements along 4<sup>th</sup> Street and downtown sidewalks. Several additional improvements are recommended to be implemented as part of this Plan. This document also provides guidance on developing bicycle and pedestrian facilities.

## 4.6 SH-75 Timmerman to Ketchum: Final Environmental Impact Statement

The *SH-75 Timmerman to Ketchum: Final Environmental Impact Statement* (2008) and supporting documents identified the preferred alternative for improvements along SH-75 from US-20 at the Timmerman Junction to Ketchum. The improvements were separated into several projects, some of which have been constructed. The segment from Elkhorn Road to River Street in Ketchum is currently being designed. The improvements for this segment described in the FEIS included:



- Provide two lanes in each direction with a two-way left turn lane (TWLTL) as applicable on SH-75 from Elkhorn Road to Serenade Lane. Include sidewalks on each side of the highway.
- Provide one lane in each direction with a TWLTL as applicable on SH-75 from Serenade Lane to River Street. Include sidewalks on each side of the highway in this section.
- SH-75/Elkhorn Road improvements include lane configuration and signal control updates.
- SH-75/Serenade Lane intersection improvements include lane configuration updates.

## 4.7 Mountain Rides Capital Improvement Plan

The *Mountain Rides Capital Improvement Plan FY2016-2020* (2015) provide a plan and estimated budget for capital needs through the current fiscal year 2020. Items within the plan include vehicle upgrades and replacements; street facilities and structures, including bus shelters and bike racks; technology implementation; improvements and upkeep to the existing primary facility in Ketchum; development of a downtown transportation hub in Ketchum; and finishing the maintenance and storage facility in Bellevue.



The transportation hub has been discussed for several years. A concept plan for an option to locate the hub at the intersection of Sun Valley Road and East Avenue was developed in 2014,





but the project did not move forward. While a location has not been determined, it is still an important feature that will provide multi-modal opportunities and focus with Ketchum. This potential facility should be included in transportation planning activities in the future. A workable location should be identified through a robust engagement process with stakeholders, citizens, and patrons of Mountain Rides.

The City of Ketchum has been partnering with Mountain Rides to consider and locate bus stops that will serve residents and visitors alike for many years. In addition, future collaboration could include how to enhance the first and last mile for patrons to access Mountain Rides transit service. This could include bike share programs, car share programs, and the City's continued projects to improve connectivity and ADA-compliant facilities to allow people easier access to fixed transit services.



# 5 Future Conditions Evaluation

## 5.1 Future Traffic Projections

### 5.1.1 Historical Travel Demand Growth

Traffic volumes on SH-75 were analyzed using data from ITD’s ATR’s to see how they have grown over the previous 28 years. The area has seen significant fluctuations in traffic volumes over that time. The average growth rate over the last five years was very aggressive at over 5 percent per year for ATR #28 and over 3 percent per year for ATR #68. **Figure 11** presents the AADT measured at ATR #68 for each year since 1990, and **Figure 12** presents similar data for ATR #28.

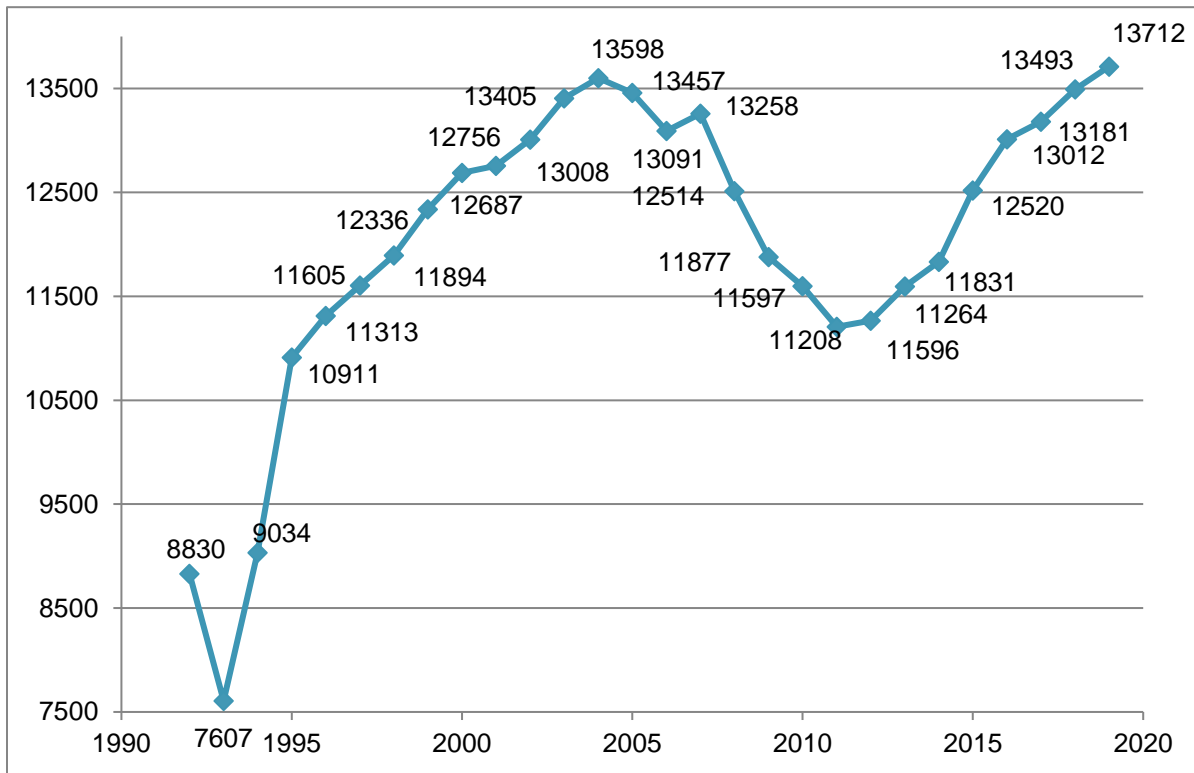


Figure 11. ATR #68 Historic AADT

Both locations show similar patterns of steady rapid growth until the early 2000’s, followed by a steep decline that coincides with the Great Recession. Traffic volumes started to increase again around 2012 and have steadily increased each year to where they are now, approaching the highest volumes since before the Great Recession. Annual growth rates have varied widely from positive to negative year to year, but historically the volumes at ATR #28 have grown at 0.9 percent per year and the volumes at ATR #68 have grown at 1.4 percent per year.

The growth rate of 1.4 percent was used in 2018 to estimate 2040 volumes at the key intersections analyzed under existing conditions and identify future needed improvements. This growth rate is comparable to the population annual growth rate of 1.33 percent identified in Section 2.2.

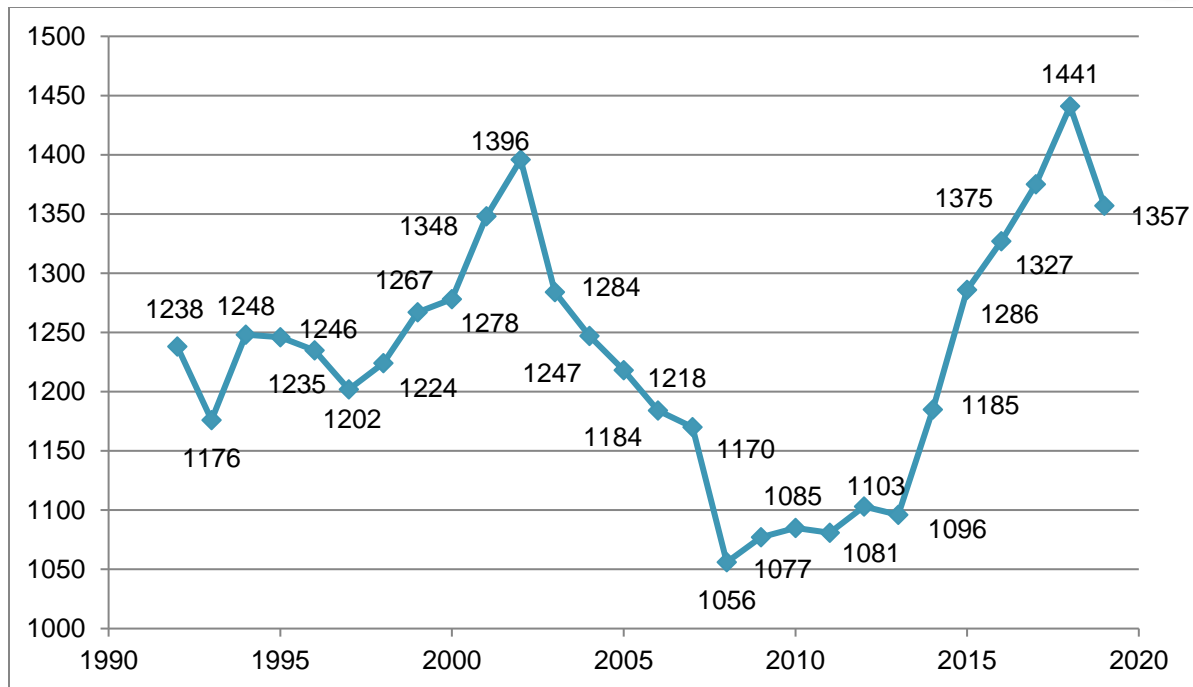


Figure 12. ATR #28 Historic AADT

If the growth and development in Ketchum occurs at a faster pace than the estimated historical traffic growth rates, traffic volumes will follow and increase quickly, and the identified needs and improvements in this Plan may be needed earlier than anticipated. This Plan should be updated to identify and provide those needed improvements as the growth occurs.

## 5.2 Future Employment

No significant changes are expected for the demographics of Ketchum. Future employment distribution is assumed to remain similar to the existing conditions. Examples of significant changes could include a new large employment entity or an employment entity leaving the area. None of these changes are expected to take place in the near future.

## 5.3 Future Land Use

The *Ketchum Comprehensive Plan* identifies "...a land use pattern that represents the sustainable use of land, energy and other resources by encouraging orderly, contiguous growth that maximizes efficiency and respects the "small town" community character." It places more emphasis on infill, redevelopment, and mixed-use development patterns than developing open land.

Ketchum's future land use vision includes six concepts that address the relationship between land use and mobility, open lands, infrastructure, and other future needs:

- Planning for the Areas of City Impact
- A Focus on Downtown and Smaller Commercial Centers
- Infill and Redevelopment to Accommodate Growth



- Land Use Linked with the Transportation System
- Opportunities for Commercial Development, Tourism, and Jobs
- Protection of Natural Features, Open Space, and Rural Character at the Community Edges

A copy of the future land use map is presented in **Figure 13**. This map follows the concepts above and provides for economic growth and transportation enhancements to support all modes and expand transit, walking, and biking opportunities.

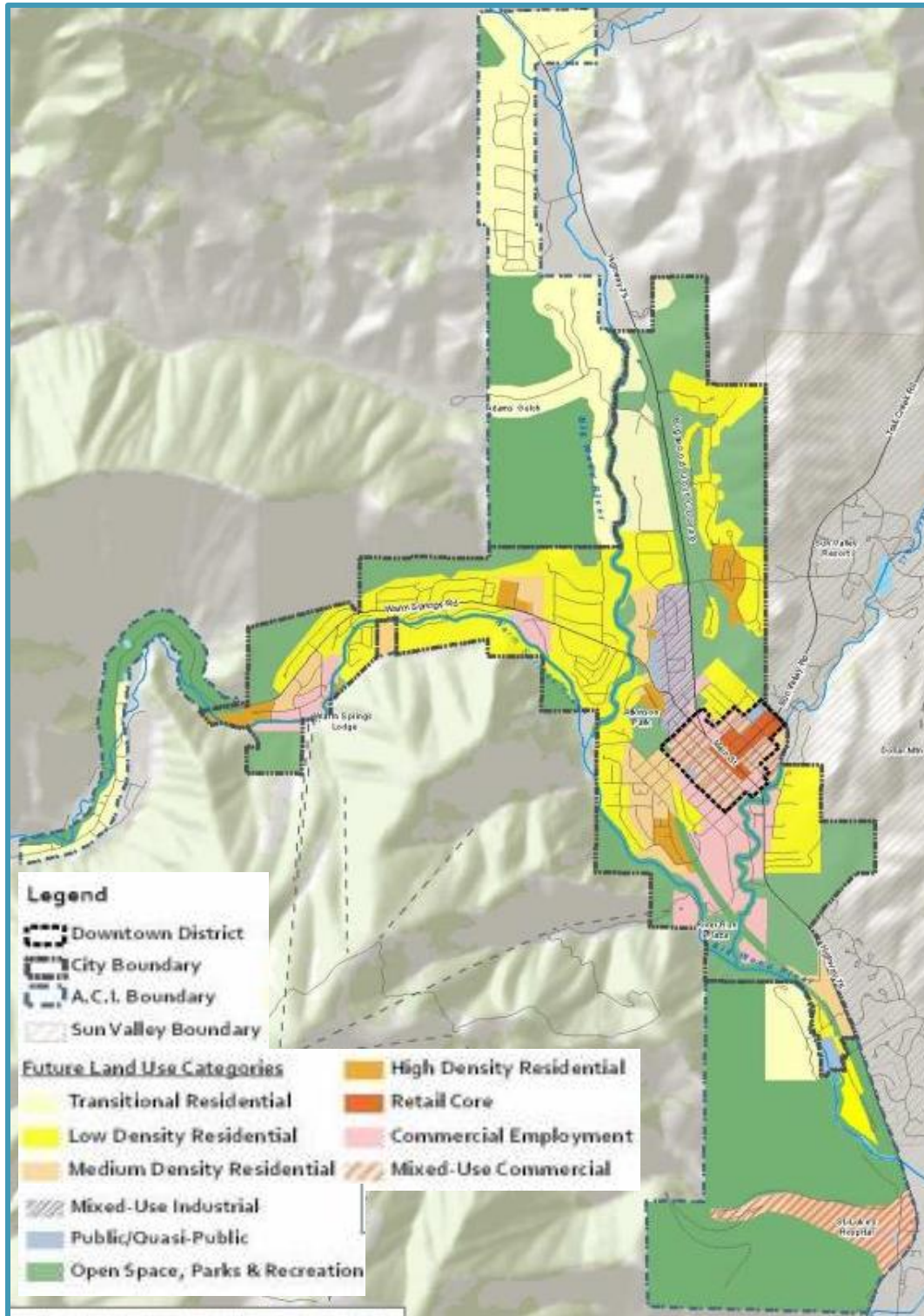


Figure 13. Future Land Use

Source: <https://ketchumidaho.org/planning-buildings/baae/comprehensive-plan>

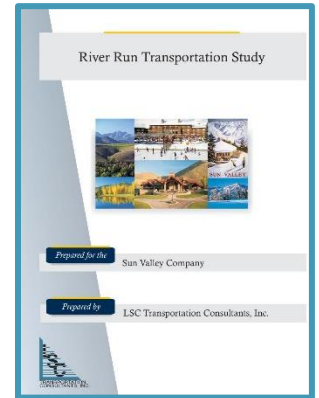




## 5.4 Potential Impacts of Future Development

An existing *River Run Annexation and Development Agreement* (2009) identifies a potential development along Serenade Lane west of SH-75 that will include lodging and residential land uses along with a skier parking structure. The Ketchum Boutique Hotel is proposed for development at the southwest corner of Main Street and River Street. It is proposed to be a 100-room hotel with access to River Street only.

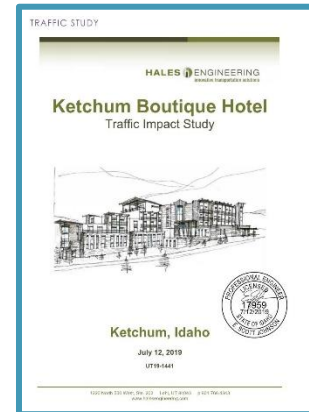
The *River Run Transportation Study* (2009) identified needed improvements with the potential development. The following recommendations for improvements were identified:



- Construct a dual-lane roundabout at the Serenade Lane and Main Street intersection to improve operations and serve demand from the development.
- Add separate left and right turn lanes on the 3<sup>rd</sup> Avenue approach to the intersection with Serenade Lane and update to either all-way stop or single-lane roundabout, depending on ROW availability.
- Eliminated split phasing at the Main Street signalized intersections with 1<sup>st</sup> Street, Sun Valley Road, and 5<sup>th</sup> Street. This would require a reconfiguration of the Main Street lanes to provide separate left turn lanes.
- Potentially add dedicated left and right turn lanes to the 2<sup>nd</sup> Street intersection with Main Street, although this will not relieve the LOS F for left-turning vehicles. More likely, these drivers will reroute to either the 1<sup>st</sup> Street or Sun Valley Road intersections with Main Street to use the signals to turn left.
- This development will increase traffic on 2<sup>nd</sup> and 3<sup>rd</sup> Avenue and, while still within the carrying capacity of the roadways, some traffic calming features are recommended. These would not divert traffic but slow travel speeds to make these roads continue to work well for pedestrians and bicyclists. Some options for traffic calming were given, and Ketchum should work with the development to identify the best features for these streets and implement them.
- Bicycle lanes are recommended along 2<sup>nd</sup> Avenue and Serenade Lane between the development and SH-75.
- Pedestrian features recommended include sidewalks along at least one side of 2<sup>nd</sup> Avenue, 3<sup>rd</sup> Avenue, Serenade Lane, and Ranch Road north of the 3<sup>rd</sup> Avenue intersection. Specific improvements should be coordinated with Ketchum based on several factors and constraints.

The proposed *Ketchum Boutique Hotel Traffic Impact Study* (2019) was reviewed and the following recommendations for improvements were identified:

- Restrict east and westbound left turning movements at the River Street and Main Street intersection.
- Add a right turn acceleration lane for eastbound right turning vehicles at the Serenade Lane and Main Street intersection.
- Conduct a corridor study to analyze Main Street and determine if a reduction from a four-lane cross section to a three-lane cross section and/or a coordinated signal system would be beneficial.



Ketchum should coordinate with these developments to partner on implementing the appropriate recommended improvements consistent with and in addition to those identified in this Plan, if needed. It is recommended that the *River Run Transportation Study* be updated with the latest site plan, trip generation calculations, and needed improvements to the transportation network.

## 5.5 Forecast Operations

### 5.5.1 Key Intersections

The same intersection stop and signal control was assumed to remain in place for the 2040 analysis to estimate how the key intersections may operate with no additional improvements. These results are based on estimating the 2040 July travel demand forecasts.

**Figure 14** presents the estimated LOS for the a.m. and p.m. peak hours at each key intersection with estimated 2040 volumes. **Table 5** presents the estimated LOS as well as the average delay at each intersection that determined the LOS. During the a.m. peak hour, each intersection is estimated to have at least one movement that operates at LOS C or worse. The only intersection estimated to have LOS F movements is at River Street with the left turns onto SH-75 having long delays.

The queues on Main Street for vehicles waiting to turn left at the intersections of 1<sup>st</sup> Street and Sun Valley Street are long and are estimated to extend most of the length of the block to adjacent intersections. The vehicles waiting to turn left from 1<sup>st</sup> Street and Sun Valley Road to travel south on Main Street are estimated to have queue lengths of almost 100 feet.

During the p.m. peak hour, most intersections are estimated to operate at LOS C or worse. Two movements are estimated to have demand that exceeds capacity: the southbound left turn at the Sun Valley Road and Spruce Avenue intersection, and the southbound left turn at Main Street and River Street. The left turn movements at the intersections of Sun Valley Road and Spruce Avenue and Main Street and River Street experience LOS F and may have queue lengths over 100 feet.

The queue for westbound left turning vehicles on Sun Valley Road to turn onto East Avenue at the all-way stop is estimated to extend almost to Walnut Avenue. The queue for eastbound left



turning vehicles on Sun Valley Road to turn onto East Avenue is estimated to extend 100 feet. The left turning vehicles queued on Sun Valley Road to turn south onto Main Street are estimated to extend past the Leadville Avenue intersection.

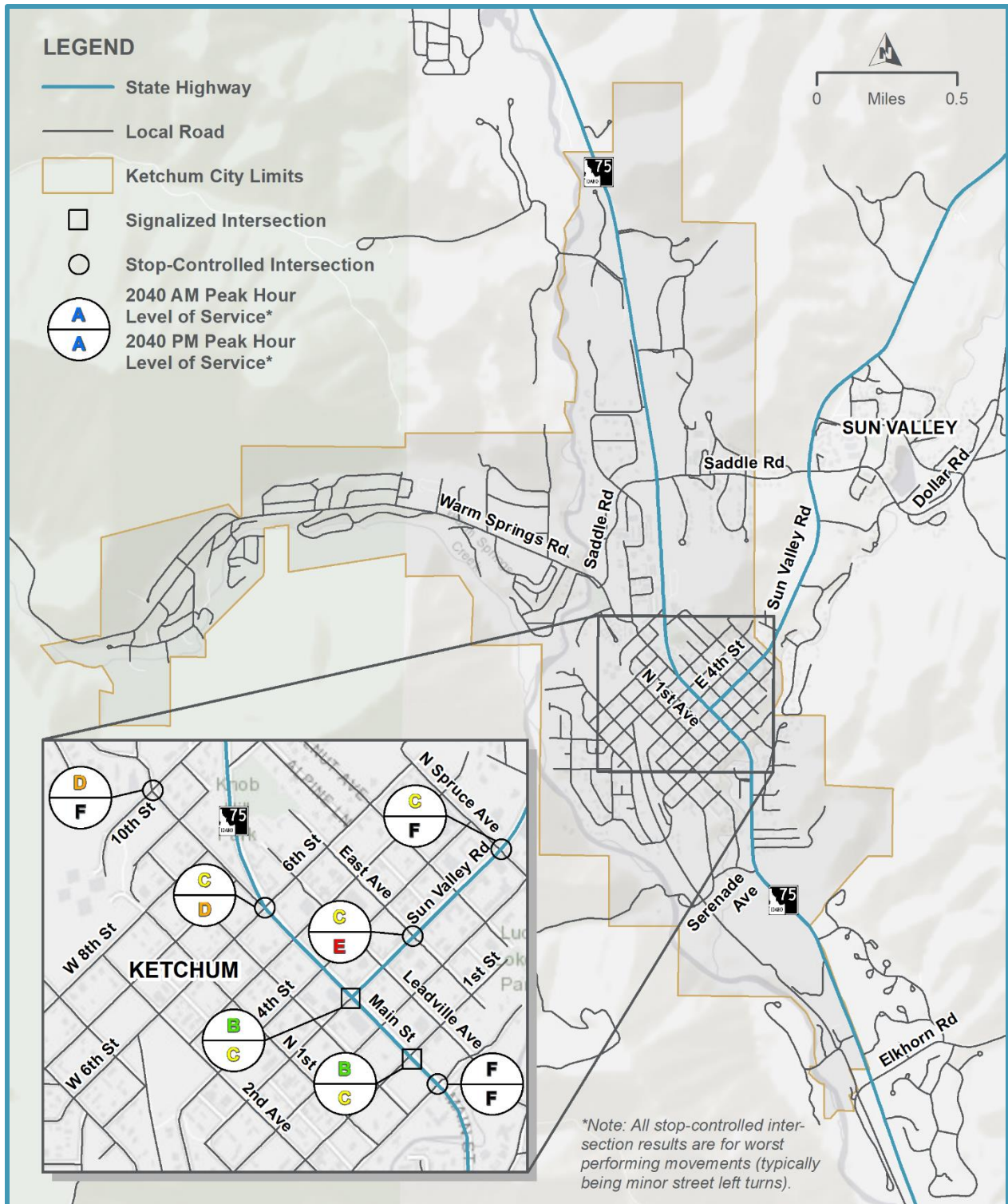
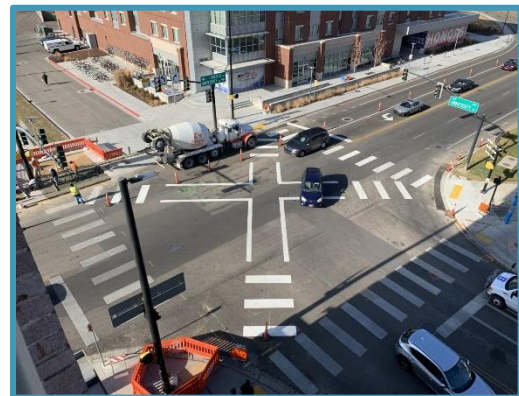


Figure 14. Future Conditions LOS

**Table 5. 2040 No Build Key Intersection LOS and Average Delay**

| Intersection                    | Control | 2040 No-Build |                       |              |                       |
|---------------------------------|---------|---------------|-----------------------|--------------|-----------------------|
|                                 |         | AM Peak Hour  |                       | PM Peak Hour |                       |
|                                 |         | LOS           | Average Delay (s/veh) | LOS          | Average Delay (s/veh) |
| 10th Street / Warm Springs Road | Stop    | D             | 28.5                  | F            | 55.7                  |
| 6th Street / Main Street        | Stop    | C             | 16.3                  | D            | 25.0                  |
| Sun Valley Road / Main Street   | Signal  | B             | 13.4                  | C            | 23.9                  |
| 1st Street / Main Street        | Signal  | B             | 11.5                  | C            | 21.6                  |
| River Street / Main Street      | Stop    | F             | 112.2                 | F            | 400+                  |
| Sun Valley Road / East Avenue   | Stop    | C             | 17.3                  | E            | 46.9                  |
| Sun Valley Road / Spruce Avenue | Stop    | C             | 24.6                  | F            | 310.4                 |

The conflicts between pedestrians will only increase at the Main Street, East Avenue, and 1<sup>st</sup> Avenue intersections with increased traffic volumes. These long crossings take an extended amount of time and require drivers to see and yield to pedestrians. Ketchum has recently discussed updating the pedestrian crossing and signal indications at the Main Street intersections with 1<sup>st</sup> Street, Sun Valley Road, and 5<sup>th</sup> Street with ITD. An option to provide a pedestrian scramble at each intersection is being reviewed, which allows pedestrians to cross the intersection any direction they like in a separate reserved signal. This gives priority to the pedestrians and provides them with more flexibility.



Example of pedestrian scramble recently installed in Boise, Idaho

**5.5.2 Main Street and Warm Springs Road/6<sup>th</sup> Street Intersection**

This intersection has a unique configuration with the primary conflict occurring between vehicles traveling on Main Street and wanting to turn left onto Warm Springs. In the a.m. peak hour count, the volumes waiting to make this turn were equal to those traveling north on Main Street, while the opposing southbound movement involved a lower volume of vehicles. In the p.m. peak hour, the southbound movement is the largest while the northbound left turn movement onto Warm Springs Road is almost as large. The operational analyses for this intersection show it operates adequately, but the unique geometry and observations lead to the conclusion that vehicles attempting to turn from Main Street to Warm Springs Road often have to wait for a gap. A queue can develop behind them for a significant distance, causing delay and congestion south of the Main Street and 6<sup>th</sup> Street intersection. The operations at this intersection would





benefit from a reconfiguration, if possible, and should be reviewed in the future. The pedestrian facilities at this intersection could use an upgrade with a refuge update, including truncated domes, and improved direct pedestrian ramps with truncated domes to provide a better connection to the new sidewalk along Warm Springs Road.

### 5.5.3 Warm Springs Road intersections with 10<sup>th</sup> Street and Lewis Street

Warm Springs Road is an important collector for Ketchum, connecting recreation and residences to Downtown. It carries high volumes of traffic from Main Street to northwest of Lewis Street. The intersection at 10<sup>th</sup> Street was one of the key intersections analyzed. With stop control as currently installed, the left turns from 10<sup>th</sup> Street are estimated to fail in the future. This failure is tied to long delays as the left turning drivers wait for acceptable gaps to turn on Warm Springs Road. Several alternative improvements have been recommended for these intersections, from multi-way stop control and traffic signals in the *Ketchum Transportation Study* (2004) to conventional or mini roundabouts in the *Ketchum: Through the Looking Glass: A Walkability Assessment* (2018). A “dog bone” or “peanut” roundabout has been discussed several times as well. **Figure 15** and **Figure 16** present two concept level alternatives: a signal lane roundabout at the 10<sup>th</sup> Street intersection and a dog bone concept that combines both the 10<sup>th</sup> Street and Lewis Street intersections. Estimated ROW impacts are also shown in each figure.



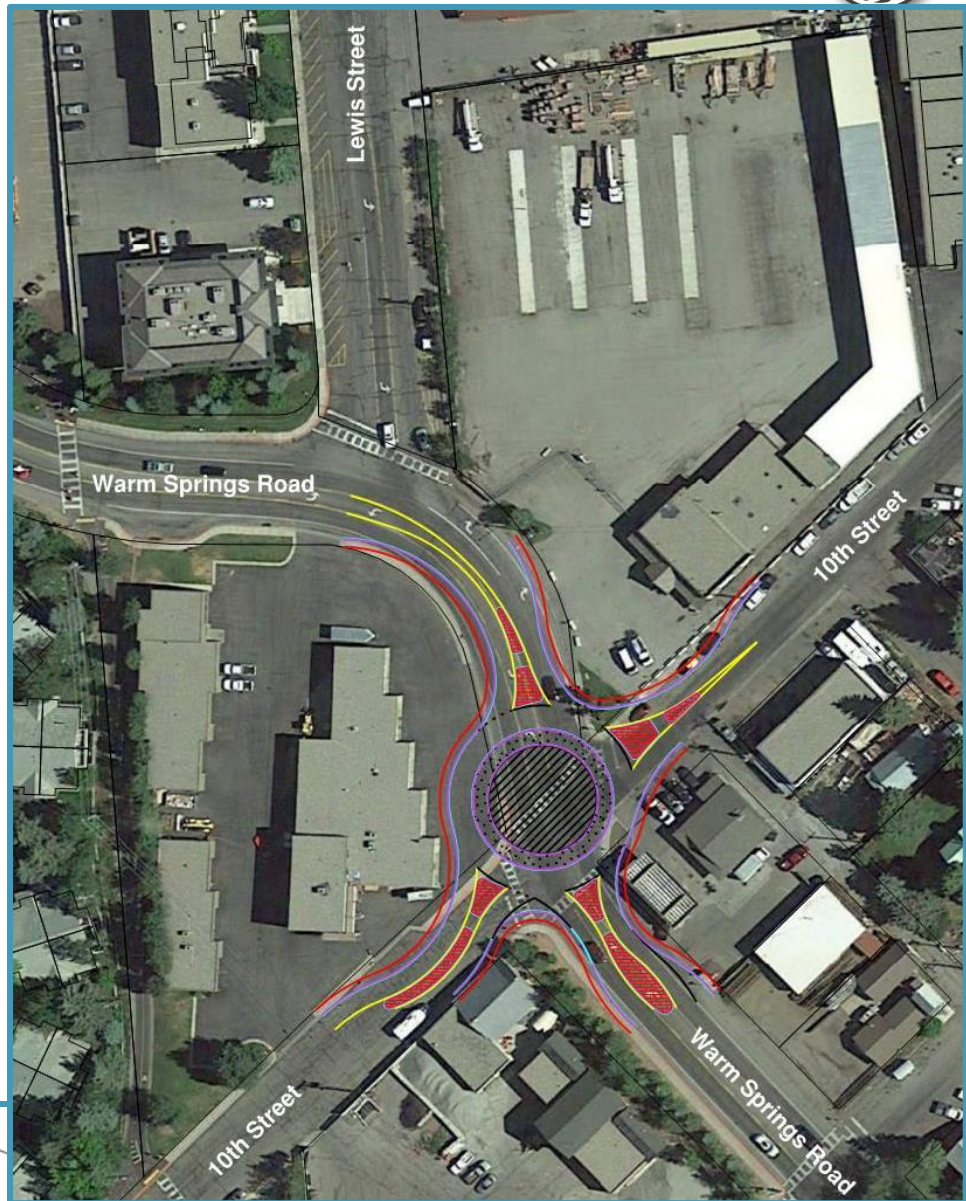
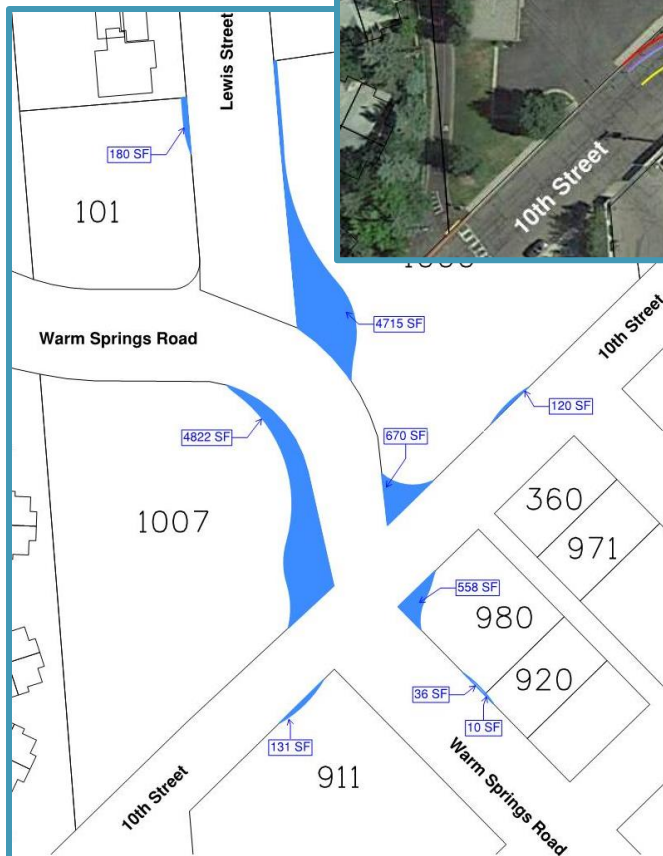
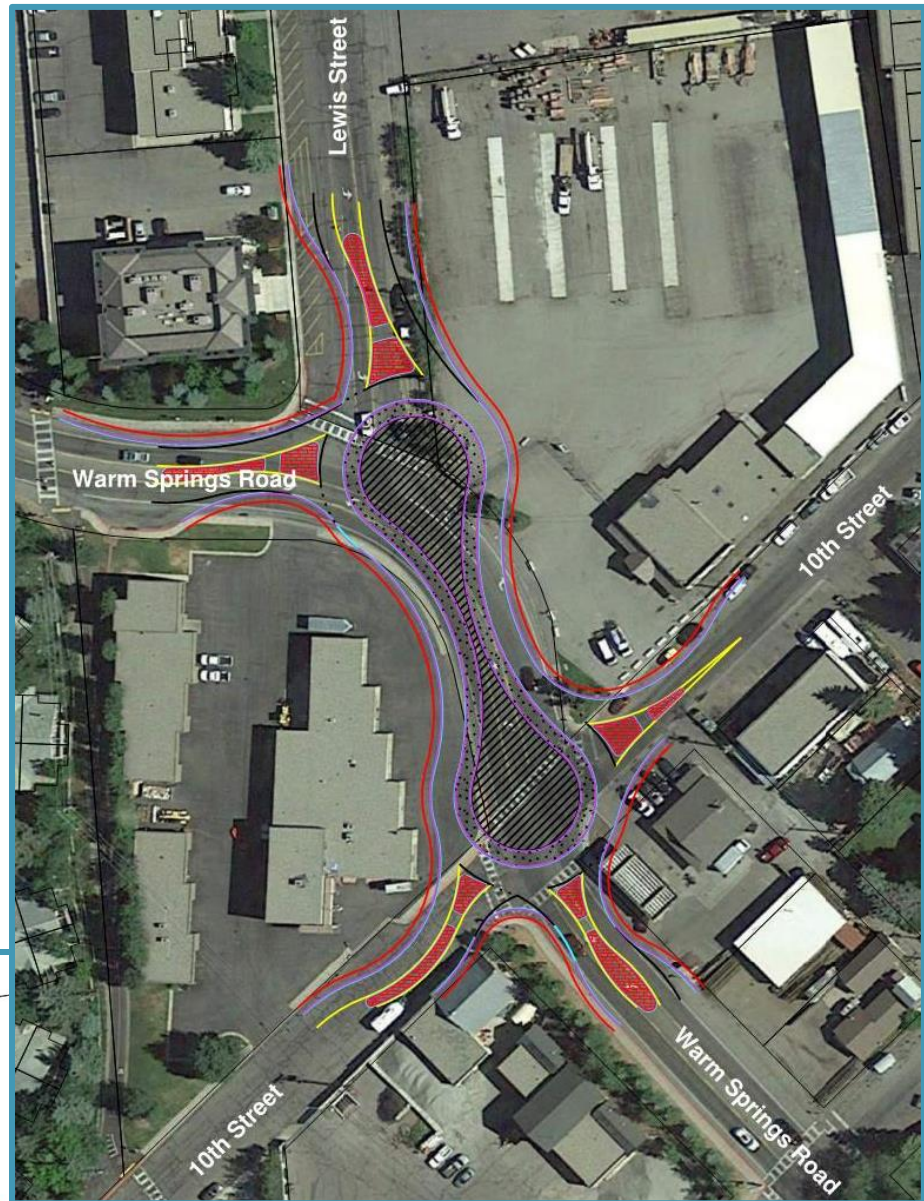


Figure 15. Warm Springs Road and 10th Street Single Lane Roundabout Concept





**Figure 16. Warm Springs Road and 10th Street Single Dog Bone Roundabout Concept**



**Table 6** presents a comparison of the existing two-way stop control, potential multi-stop control, the concept level roundabout, and the concept level dog bone roundabout alternatives.

**Table 6. Warm Springs Road, 10th Street, and Lewis Street Concept Comparison**

| Alternative                                   | Two-Way Stop Control     | Multi-Way Stop Control             | Roundabout         | Dog bone Roundabout |
|---|--------------------------|------------------------------------|--------------------|---------------------|
| 2040 Estimated p.m. Peak Hour LOS & Delay (s) |                          |                                    |                    |                     |
| Overall Intersection                          | C – 7.2                  | F – 65.8                           | A – 8.8            | B – 18.1            |
| Worst performing movement                     | SB Left Turn<br>F - 55.7 | SB Through/Right Turn<br>F – 109.0 | SB Leg<br>B – 10.3 | EB Leg<br>C – 29.3  |
| Average Queue Length (FT)                     | 128                      | 500+                               | 155                | 50                  |
| Estimated ROW Required (SF)                   | 0                        | 0                                  | 4,557              | 11,242              |
| Estimated Parking Spaces Removed              |                          |                                    |                    |                     |
| Private                                       | 0                        | 0                                  | 14                 | 14                  |
| On-Street                                     | 0                        | 0                                  | 13                 | 24                  |

The stop control alternatives are estimated to fail with significant queues on the approach legs. The roundabout and dog bone roundabout are both estimated to operate well with 2040 volumes and serve the demand.

Ketchum should conduct a concept study that looks at these and potentially other alternatives in more detail to investigate important features and constraints, including access, storm water drainage, utility needs and conflict, and ROW impacts and issues, among others.

**5.5.4 Main Street Lane Reconfiguration and Signal Update**

The *Ketchum Transportation Study*, the *Downtown Ketchum Master Plan*, and the *Blaine County Community Bicycle and Pedestrian Master Plan* all identify the opportunity to conduct a road diet lane reconfiguration to reduce the number of lanes on Main Street from a four-lane road section to a three-lane configuration, with a travel lane in each direction and a center median lane that can provide dedicated left turn pockets. An example from a FHWA informational guide is shown in **Figure 17**.

Four-lane undivided highways, like Main Street, often have increased crash numbers as traffic volumes rise. The competition between stopped drivers seeking to make left turning movements and drivers traveling at normal speeds to continue through become more pronounced with higher volumes, and congestion and conflicts increase. Additionally, with more pedestrians and bicyclists on the roads, communities desire more livable spaces, better pedestrian and bicycle facilities, and increased transit options, which are not easily accommodated by a four-lane undivided roadway.





The benefits from such a lane configuration are included in these documents and FHWA documentation to include:

- Improved crash safety by reducing vehicle-to-vehicle conflicts that contribute to rear-end, angle-turn, and sideswipe crashes by removing the four-lane undivided inside lanes serving both through and turning traffic. These crash types represent three of the top four most common crashes on state roads, including Main Street.
- Reduce differential speeds between through and turning vehicles, reducing crash severity and conflict.
- Separating left-turning traffic can reduce delays at signalized intersections.
- Cross street traffic can more comfortably enter Main Street because there are fewer lanes to cross.
- Install wider sidewalks and better streetscapes with opportunities for landscaping, shade and street furniture, as well as better protected crossings, such as at 6<sup>th</sup> Street (see **Figure 18**).
- Slower traffic and a pedestrian-priority can make crossing streets safer and easier.
- Changing from the four-lane to the three-lane configuration will make pedestrians in crosswalks more visible.
- Allow the installation of bulb outs at the crosswalks, reducing the distance pedestrians are exposed to traffic while crossing the street and making them more visible to drivers (see **Figure 19**).



**Figure 17. Lane Reconfiguration Road Diet Example**

Source: [https://safety.fhwa.dot.gov/road\\_diets/](https://safety.fhwa.dot.gov/road_diets/)



**Figure 18. Pedestrian Crossing Road Diet Example**

Source: [http://pedbikesafe.org/PEDSAFE/countermasures\\_detail.cfm?CM\\_NUM=19](http://pedbikesafe.org/PEDSAFE/countermasures_detail.cfm?CM_NUM=19)



**Figure 19. Bulb Out Example**

Source: <https://nacto.org/publication/urban-street-design-guide/street-design-elements/curb-extensions/>

Additionally, the traffic signals at 1<sup>st</sup> Street, Sun Valley Road, and 5<sup>th</sup> Street should be coordinated for more efficient movement of traffic, allowing separate left turn phasing. These improvements can also be coordinated with Ketchum’s desire for pedestrian scrambles at these signalized intersections.

Some potential drawback to the lane reconfiguration could include reduced capacity of the roadway for vehicular traffic, mail trucks and transit vehicles may stop traffic in the single through lane, on-street parking can be reduced, left turn lanes may be difficult to access during high demand periods, and it may create some issues with snow removal.

The lane reconfiguration should be studied and analyzed in detail with the benefits and drawbacks quantified. Ketchum should coordinate with ITD on conducting this study to determine if implementing a lane reconfiguration road diet is the right solution for downtown Ketchum. Main Street could be a good candidate for this type of treatment because typical volumes on the street fall into a range that a three-lane section can typically serve. However, the close spacing of traffic signals and peak summer traffic volume surges should be considered as they can impact how the facility may operate. Detailed modeling of the lane reconfiguration alternative should be conducted under several traffic scenarios to determine how Main Street may function with the variety of specific needs and constraints of this corridor.

FHWA's *Road Diet Informational Guide*

([https://safety.fhwa.dot.gov/road\\_diets/guidance/info\\_guide/](https://safety.fhwa.dot.gov/road_diets/guidance/info_guide/)) recommends considering a range of factors before committing to a road diet, including:

- Vehicle speed
- LOS
- Quality of Service
- Vehicle volume (ADT)
- The operation and volume of pedestrians, bicyclists, transit, and freight
- Peak hour and peak direction traffic flow
- Vehicle turning volumes and patterns
- Frequency of stopping and slow-moving vehicles
- Presence of parallel roadways

## 5.6 Electric Vehicles

The City of Ketchum has three public charging station ports located at the Ore Wagon Museum at 500 East Avenue. The current ports are level 2 charging ports and offer free charges for electric vehicles. As more and more electric vehicles join the fleet nationwide and in Ketchum, additional charging services may be provided. The city should continue to review, discuss, and plan for how electric vehicle support can be expanded as part of future city parking studies.

## 5.7 Neighborhood Traffic Calming

The City of Ketchum has received several requests for neighborhood traffic calming help. The City will formalize a neighborhood traffic calming program to allow citizens to submit requests regarding traffic calming concerns and allow the City to respond and evaluate engineering and enforcement solutions to address those concerns.





## 5.8 Bike Parklets/Corrals

The City of Ketchum is working to provide bike racks/parklets in no parking areas along key roadways for bicyclist use during warmer months. These racks will be removed during winter months to allow snow plowing and maintenance activities to occur. The City also has temporary bike racks that will be made available for use during special events. The City will make requests for these temporary bike racks to be available for events as part of the event permitting process.

## 5.9 Mobile Cameras

In order to obtain accurate pedestrian, bicycle, and motor vehicle counts and data, the City of Ketchum will procure mobile cameras. These can be set up at key locations to determine volumes and movement patterns for all modes of travel at areas of concern, as part of project development, and to support grant applications for specific funding opportunities.

# 6 Asset Management

An asset management plan is a tactical plan for managing infrastructure and other assets to maintain an agreed standard of service over the life cycle of the asset. Ketchum implements specific asset management plans for key assets, including pavement and signage for public streets, using the iWorQ software. iWorQ is a web-based platform that provides a mapping application with tools for inventory, data collection, inspection, and data management. Ketchum should continue to use the Pavement Management and Sign Management programs in iWorQ to track and maintain their infrastructure.

## 6.1 Pavement Management

Ketchum maintains the existing roadway pavement and the pathway pavement for the Wood River Trail, including the trail along Saddle Road, and the cycle track parallel to Warm Springs Road within the city limits. There is a multi-year maintenance schedule in place which can be enhanced with the use of iWorQ software to allow Ketchum staff to better evaluate roadway pavement to determine existing condition, predict future deterioration, and determine what is needed to maintain or improve pavements cost effectively. This will allow a more robust management plan to be developed and identify the most cost-effective maintenance activities to preserve the existing pavement surface.

## 6.2 Sign Management

A sign management system can also be implemented within the iWorQ software for Ketchum as a cost-effective tool inventory to preserve and improve the street sign network. This software will provide a detailed inventory of Ketchum's sign network, including existing condition and treatment methods in a GIS electronic map. It will also provide a needs assessment process to keep signs in compliance with the Manual on Uniform Traffic Control Devices (MUTCD) requirements for conditions and retroreflectivity. MUTCD standards require public agencies to have a sign management plan to ensure signs meet minimum retroreflectivity requirements for traffic signs on public roads. Retroreflectivity can be measured with a retroreflectometer, which



can cost anywhere between \$10,000 and \$22,000, depending on features included, such as GPS and barcode readers. It is recommended that Ketchum invest in the appropriate reflectometer to aid in developing and maintaining their sign asset management system.

## 7 Recommendations

Following the analysis and evaluation of existing and forecast conditions, the review of Ketchum’s visions and goals, and coordination with Ketchum and the KTA, several capital improvements projects were developed. This document and the Capital Improvement Plan are strategic in nature to allow the City to develop prioritized projects each year based on need, funding, and adjacent projects that can be partnered with.

### 7.1 Capital Improvement Plan

**Table 7** presents the capital improvement plan (CIP) with planning level cost estimates in 2020 dollars. A more detailed list is shared in **Appendix A**.

**Figure 20** presents the proposed bicycle and multi-use facility projects in the CIP along with many activity generators in map form. **Figure 21** presents the proposed pedestrian facility projects in the CIP and **Figure 22** presents the proposed roadway and intersection projects.

**Table 7. Capital Improvement Plan**

| ID                       | Project Name   | Description  | Estimated Cost   |
|--------------------------|--|--|------------------|
| <b>Bicycle/Multi-use</b> |  |  |                  |
| A1                       | Bike Wayfinding Plan                                 | Conduct a study to support the proposed sharrow installation and connection with other bike facilities to determine wayfinding sign placement and coordination with current Ketchum wayfinding system. | \$10,000         |
| A2                       | 2 <sup>nd</sup> Avenue Sharrows/Protected Bike Lanes | Install sharrow bike markings and signing along 2 <sup>nd</sup> Avenue from Serenade Lane to 1 <sup>st</sup> Street and protected bike lanes from 1 <sup>st</sup> Street to 6 <sup>th</sup> Street.    | \$86,000         |
| A3                       | Gem Street & Leadville Sharrows                      | Install sharrow bike markings and signing along Gem Street from SH-75 to Leadville and on Leadville Avenue from Gem Street to 6 <sup>th</sup> Street.  | \$15,000         |
| A4                       | Not used   |  |                  |
| A5                       | 1 <sup>st</sup> Street Sharrows                      | Install sharrow bike markings and signing along 1 <sup>st</sup> Street from 2 <sup>nd</sup> Avenue to Alpine Lane.   | \$13,000         |
| A6                       | 6 <sup>th</sup> Street Sharrows                      | Install sharrow bike markings and signing along 6 <sup>th</sup> Street from 2 <sup>nd</sup> Avenue to Washington Avenue and Main Street to Alpine Lane.  | \$13,000         |
| A7                       | SH-75 Pathway  | Install a separated 12' wide paved pathway parallel to SH-75 from 9 <sup>th</sup> street (Knob Hill) to Saddle Road. Include a cost/benefit analysis to verify feasibility of pathway.                 | \$296,000        |
| <b>Total</b>             |  |  | <b>\$433,000</b> |



| Pedestrian   |   |   |  |
|--------------|---|---|--|
| ID           | Project Name                                      | Description   | Estimated Cost   |
| B1           | Main Street and 1 <sup>st</sup> Street            | Add bulb outs on Main Street approaches and rebuild pedestrian ramps.   | \$120,000  |
| B2           | Main Street and Sun Valley Road                   | Provide high visibility crosswalks and update pedestrian crossing signals to automatically provide a WALK signal when crossing side streets parallel to SH-75.                          | \$130,000  |
| B4           | Main Street and 5 <sup>th</sup> Street            |   | \$120,000  |
| B3           | Main Street and 4 <sup>th</sup> Street            |   | Provide high visibility crosswalks and update pedestrian crossing to a pedestrian hybrid beacon (high intensity activated crosswalk [HAWK]) with curb side push buttons for cyclists.<br><br>The existing RRFB equipment may be repurposed to replace the existing beacons at the Wood River Trail/Warm Springs Road crossing. |
| B5           | Main Street and 6 <sup>th</sup> Street            | Upgrade median to be wider and include detectable warnings on each side for ADA compliance.   | \$60,000   |
|              |   | Provide high visibility crosswalk and upgrade pedestrian ramps with the crossings on Main Street and 6 <sup>th</sup> Street to provide accessible route to Warm Springs Road sidewalks. |  |
| C1           | 1 <sup>st</sup> Avenue and 1 <sup>st</sup> Street | Add bulb outs on 1 <sup>st</sup> Avenue approaches and rebuild pedestrian ramps.  | \$130,000  |
| C2           | 1 <sup>st</sup> Avenue and Sun Valley Road        |   | \$110,000  |
| C3           | 1 <sup>st</sup> Avenue and 4 <sup>th</sup> Street |   | \$140,000  |
| C4           | 1 <sup>st</sup> Avenue and 5 <sup>th</sup> Street |   | \$140,000  |
| D1           | East Avenue and 2 <sup>nd</sup> Street            |   | Add bulb outs on East Avenue approaches and rebuild pedestrian ramps.  |
| D2           | East Avenue and Sun Valley Road                   | \$130,000   |  |
| D3           | East Avenue and 5 <sup>th</sup> Street            | \$130,000   |  |
| E1           | Warm Springs Road and Saddle Road                 | Tighten vehicle turning radii with curbing to reduce pedestrian crossing distance and speed of turning vehicles, and update pedestrian ramps.   | \$170,000  |
| S1           | Downtown Core Sidewalk Infill                     | Connect existing sidewalks in Downtown Core. Lump sum to allow Ketchum to be flexible in choosing locations.  | \$2,000,000  |
| S2           | Warm Springs Road Sidewalk                        | Extend sidewalk on west side of road from bus stop to bike path across from YMCA. Includes stormwater upgrades with new curb and gutter.  | \$210,000  |
| S3           | 4 <sup>th</sup> Street Sidewalks                  | Widen existing sidewalk to current standards between Washington Avenue and 2 <sup>nd</sup> Avenue.  | \$370,000  |
| S4           | Main Street Signal Pedestrian Upgrades            | Install pedestrian improvements including new signal hardware to allow pedestrian scramble at each signalized intersection.   | \$500,000  |
| <b>Total</b> |   |   | <b>\$4,780,000</b>   |

| Roadway/Intersection Projects |  |   |                    |
|-------------------------------|--|---|--------------------|
| F1                            | 4 <sup>th</sup> Street Evaluation  | Evaluate and develop alternative designs for the segment from Main Street to East Avenue  | \$100,000          |
| F2                            | Warm Springs Road / 10 <sup>th</sup> Street / Lewis Street Intersection Improvements Concept Study | Conduct an alternatives analysis of various intersection improvements at Warm Springs Road, 10 <sup>th</sup> Street and Lewis Street, including a roundabout at 10 <sup>th</sup> , dog bone roundabout or double roundabout at 10 <sup>th</sup> and Lewis, mini roundabouts at each intersection, or other options. | \$75,000           |
| F3                            | Warm Springs Road / 10 <sup>th</sup> Street / Lewis Street Intersection Construction               | Design and construct the preferred intersection improvements identified in the Concept Study.   | \$2,000,000        |
| F4                            | Main Street Lane Reconfiguration Study   | Conduct a lane reconfiguration study to investigate changing the four-lane Main Street into a three-lane section with one travel lane in each direction and a center median to allow dedicated left turn lanes at public street intersections.  | \$100,000          |
| F5                            | Implement Paid Parking Downtown  | Parking Management  | TBD                |
| <b>Total</b>                  |  |   | <b>\$2,275,000</b> |

One goal of this plan is to implement a bike network through the Downtown Core connecting to the pathways outside of the core. A network of sharrows on lower volume streets (Projects A1-A6) along with protected bike lanes in 2<sup>nd</sup> Avenue from 1<sup>st</sup> Street to 6<sup>th</sup> Street is proposed. The proposed network connects to the Wood River Trail, the Warm Springs Cycle Track, the Sun Valley Trail, and downtown destinations. A plan to supplement the current Ketchum wayfinding system is needed to include the sharrows system. These projects follow suggestions in the *Downtown Ketchum Master Plan* and the *Blaine County Community Bicycle and Pedestrian Master Plan*. The design and installation of these sharrows should follow the recommendations outlined in the *Blaine County Community Bicycle and Pedestrian Master Plan*.

Project A7 proposes installing a 12' wide separated pathway parallel to SH-75 from the Knob Hill Area to connect with the Wood River Trail at Saddle Road. This would provide connections to the proposed sharrows at 9<sup>th</sup> Street, following a suggestion from the *Blaine County Community Bicycle and Pedestrian Master Plan*. This project will need to be coordinated with ITD and it is recommended a cost/benefit analysis be completed as part of the project to verify it is feasible and fundable.

The bulb outs, pedestrian facility updates, and signal updates along Main Street (Projects B1-B5) should be coordinated with ITD to improve the crossing experience and safety for pedestrians. Bulb outs should be designed to coordinate with Ketchum's desired pedestrian scramble signal phasing and other pedestrian improvements (Project S4) at the signalized intersections along Main Street that Ketchum and ITD have begun discussing. Project F5, Implement Paid Parking Downtown, will continue to be investigated and the path forward identified. The City of Ketchum will continue to investigate alternatives to achieve their goals for parking downtown.



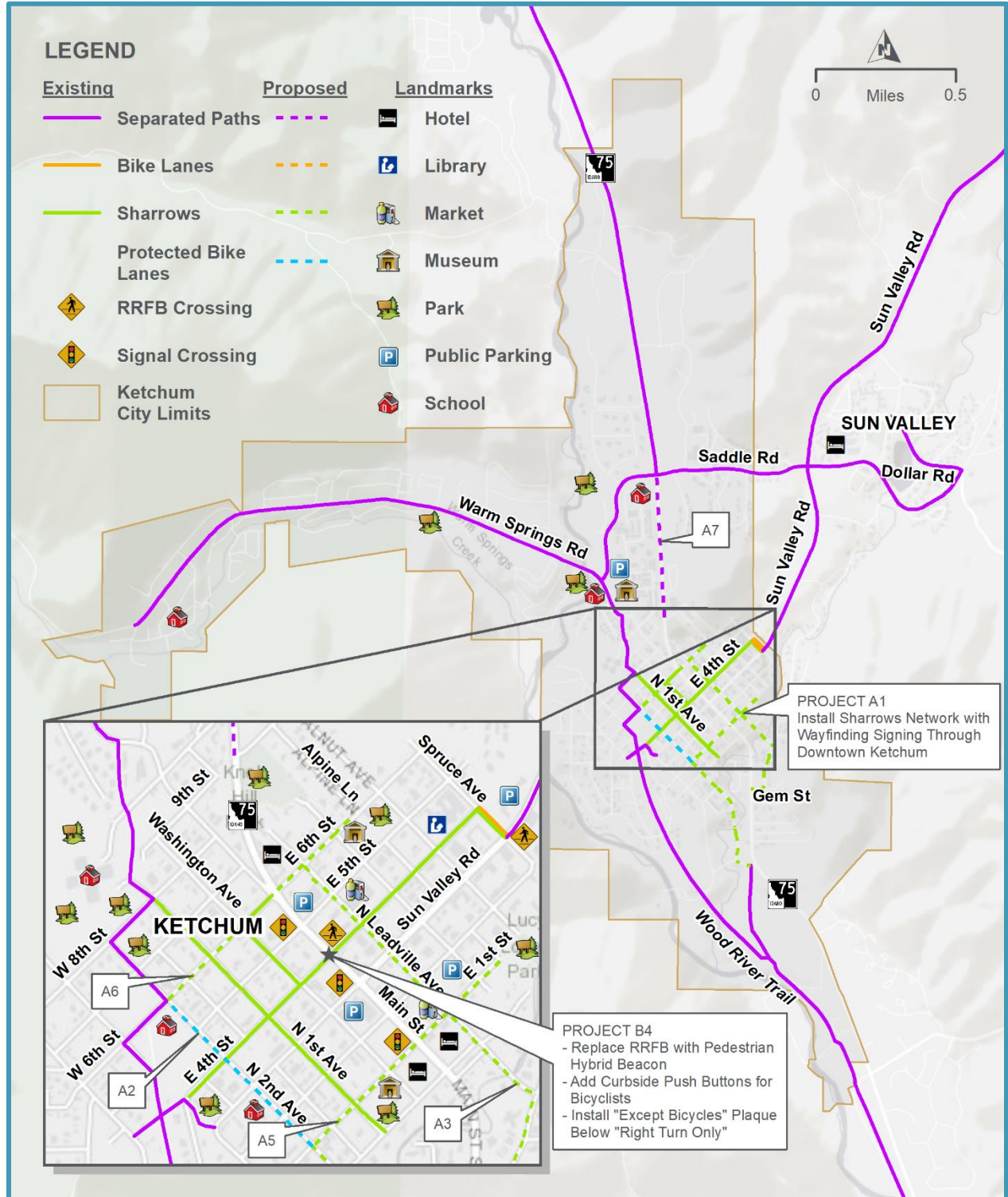


Figure 20. Capital Improvement Plan Map – Bicycle/Multi-Use Path Projects



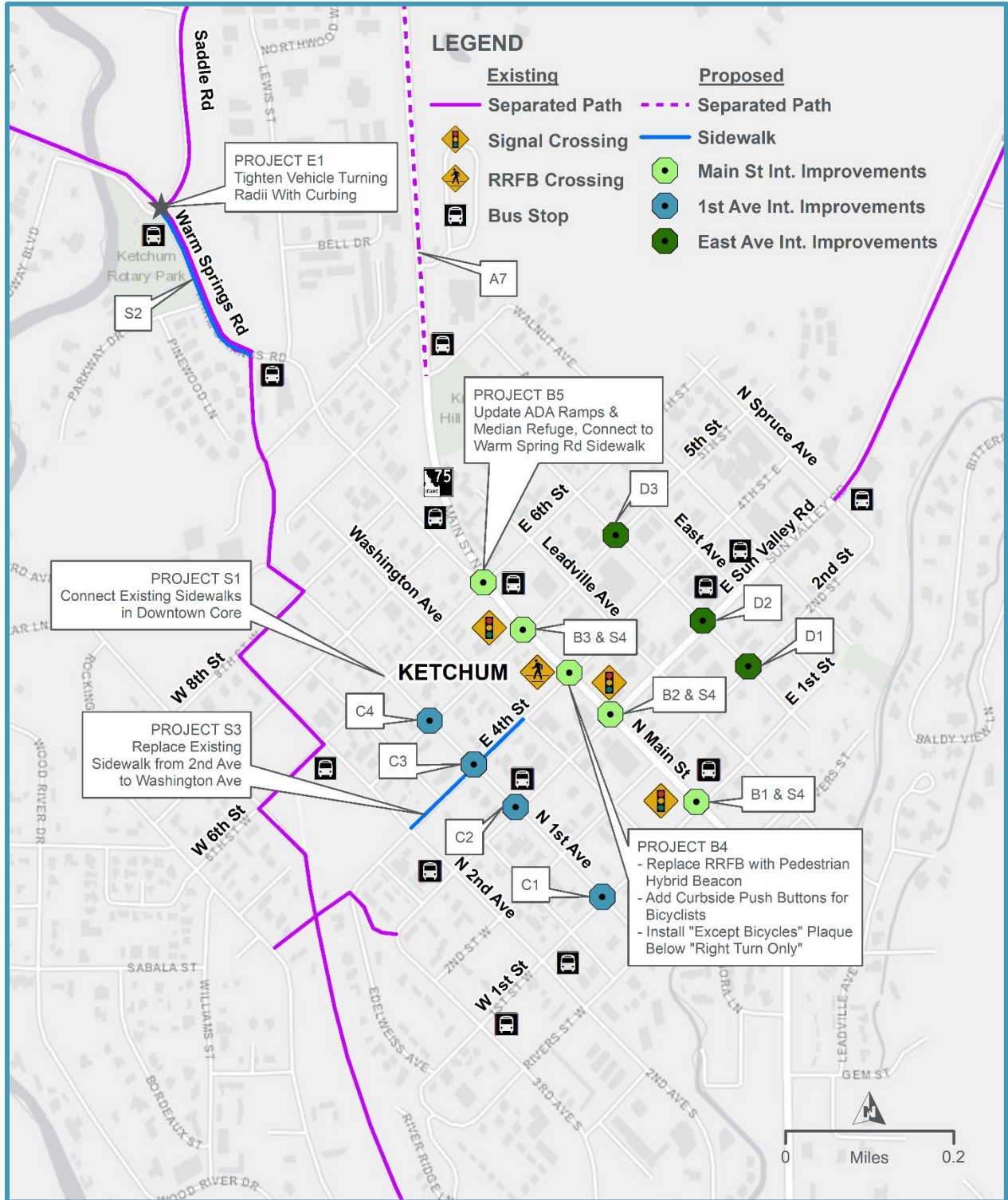


Figure 21. Capital Improvement Plan Map – Pedestrian Projects

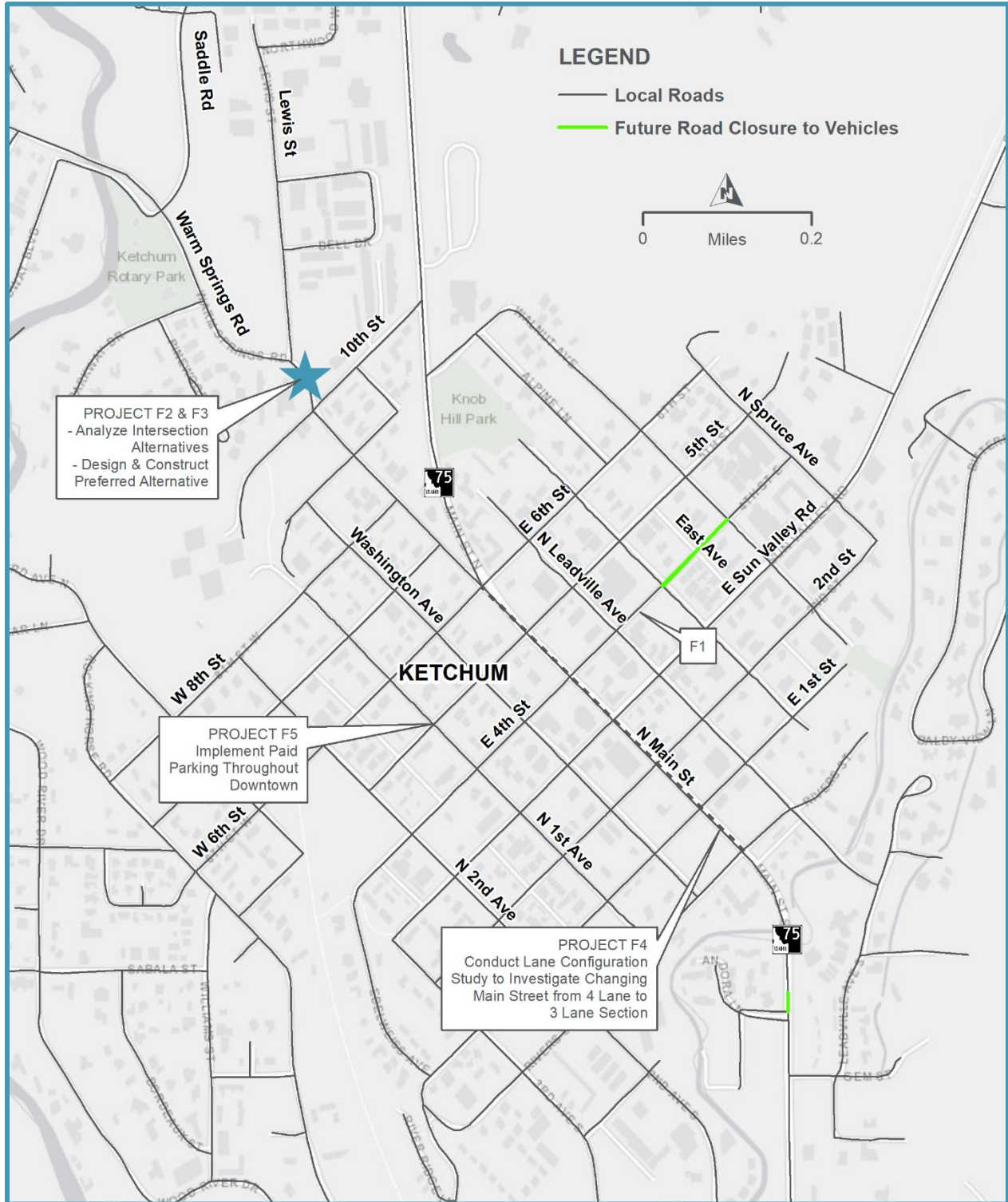


Figure 22. Capital Improvement Plan Map – Roadway/Intersection Projects

The pedestrian hybrid beacon installation at the 4<sup>th</sup> Street crossing will provide a more positive warning to drivers for pedestrians and bicyclists crossing Main Street. Ketchum and ITD have discussed this replacement. The existing RRFB equipment can be repurposed to replace the existing beacons at the Wood River Trail/Warm Springs Road crossing. This crossing currently has the push buttons on the opposite side of the pathway from where pedestrians and cyclists stop at the crossing. This would be a short-term solution to improve the crossing for all users.

The pedestrian improvements at the 6<sup>th</sup> Street crossing will provide more refuge for pedestrians as they cross Main Street and meet ADA standards for access to other pedestrian facilities.

The bulb outs and updated pedestrian ramps at key intersections along 1<sup>st</sup> Avenue west of Main Street (Projects C1-C4) and East Avenue east of Main Street (Projects D1-D3) will reduce the crossing distance for pedestrians and make them more visible to drivers as they wait to cross. These bulb outs will only be installed on the street listed, as they all have 100-foot-wide ROW and on-street parking that the bulb outs can be coordinated with and should not negatively impact snow removal operations.

Project E1 was a recommendation from the *Ketchum: Through the Looking Glass: A Walkability Assessment* to improve the Warm Springs Road and Saddle Road intersection to reduce the speed of turning vehicles and the crossing distance for pedestrians.

Projects S1 through S3 will provide new sidewalks in the Downtown Core as needed to connect or replace existing sidewalks that do not meet the needs of the walking public or current standards. The specific projects for Warm Springs Road and 4<sup>th</sup> Street should be implemented as soon as practical. The lump-sum Project S1 allows the city to be flexible in identifying areas of needed improvement or replacement.

The projects listed in **Table 7** should continue to be evaluated and scheduled as appropriate to address the needs and goals of Ketchum. Project F5, Implement Paid Parking Downtown, has been discussed for several years. Identifying the right structure, turnover rates desired, and locations is important to make it a successful program. Project F1, 4<sup>th</sup> Street evaluation, should develop alternative designs to promote active transportation modes and should be reviewed with the public and nearby stakeholders. An agreed upon alternative to implement these changes to promote pedestrian streetscape and bicycle passage should be designed and installed.

Ketchum should conduct a concept study to thoroughly review the potential Warm Springs Road/10<sup>th</sup> Street/Lewis Street intersection concept alternatives presented in **Figure 15** and **Figure 16** and potentially other alternatives in more detail. Improvements are needed to serve future travel demand; this factor and other important features and constraints, including access, storm water drainage, utility needs and conflict, and ROW impacts and issues, should be evaluated to identify the best solution for improving these intersections for all modes of transportation. Once this solution is identified and approved by Ketchum, the project can move into construction.

The Main Street Lane Reconfiguration Study, Future Project F4, should follow the suggestions and FHWA criteria described in Section 5.5.4 of this Plan and the FHWA's *Road Diet*





*Informational Guide.* This will potentially be a big change to downtown Ketchum and will require support and coordination with ITD as well as other communities and users within Blaine County.

## 7.2 Routine Annual Roadway Maintenance

**Table 8** presents Ketchum’s currently planned roadway maintenance projects.

**Table 8. Roadway Maintenance, Rehabilitation, and Reconstruction Plan**

|   | Project Name                       | Description  | Estimated Cost       |
|---|------------------------------------|--|----------------------|
| <b>Maintenance</b>                            |                                    |  |                      |
| M1  | Sidewalk and Curb & Gutter Repairs | Annual repairs to city sidewalk and curb and gutter  | \$1,000,000 annually |
| M2  | 4 <sup>th</sup> Street Pavers      | Replace pavers along 4 <sup>th</sup> Street for smooth surface   | \$2,000,000          |
| PM1   | Pavement Marking Maintenance       | Refresh pavement margins on all Ketchum owned streets (parking, crosswalks, etc.)<br>Crosswalks and "shark teeth" on Main Street and Sun Valley Road west of Main Street | \$50,000 annually    |
| CH1   | Asphalt Maintenance                | Chip seal Ketchum owned streets following planned multi-year chip-seal cycle   | \$250,000 annually   |
| <b>Total</b>                                  |                                    |  | <b>\$3,300,000</b>   |
| <b>Road Rehabilitation and Reconstruction</b> |                                    |  |                      |
| M3  | Mill and Overlay East Avenue       |  | \$600,000            |
| M4  | Mill and Overlay East Avenue       |  | \$80,000             |
| <b>Total</b>                                  |                                    |  | <b>\$680,000</b>     |

### 7.2.1 Crack Sealing and Patching

Crack sealing and patching are routine maintenance actions that help prolong the life and quality of pavement. Ketchum seals cracks and patches low spots and potholes with asphalt prior to chip sealing. Annually, Ketchum uses about 1.2 tons of crack seal and 2 tons of asphalt for patching prior to chip sealing.

### 7.2.2 Chip Seal Cycle

Ketchum has a multi-year chip seal schedule for the next nine years as shown in **Figure 23**, including the pathways within the city limits. A detailed list of potential scheduled projects is presented in **Appendix B**. As Ketchum develops a chip seal cycle as part of their pavement management system using iWorQ, the entire street network in the city can ideally receive a chip seal within eight years. Roads should receive rehabilitative maintenance with overlay or Cement Recycled Asphalt Base Stabilization (CRABS) or be reconstructed prior to receiving a chip seal if in poor condition. The locations and dates shown in **Figure 23** are approximate and a general guide to maintenance work. Specific needs and projects will be evaluated and maintenance performed based on existing pavement conditions.

### 7.2.3 Sidewalk and Curb and Gutter Repair

Ketchum budgets for annual repairs for sidewalk, curb, and gutter to keep them in good repair for pedestrians and to convey stormwater to the correct treatment locations. In addition, the



pavers along 4<sup>th</sup> Street are chipping and failing, creating a rough surface. These will be replaced.

A key component of this annual maintenance is the ADA ramp replacement that the City plans, budgets, and implements each year. This is a high priority for the City of Ketchum and specific ramp replacement locations are identified to be improved each summer. This will continue as the City works to improve all pedestrian ramps to meet ADA requirements.

An additional component of the City's ADA compliance work is a parking plan that will provide ADA-compliant parking spaces throughout the City. The future ADA parking layout is included as **Appendix C**.

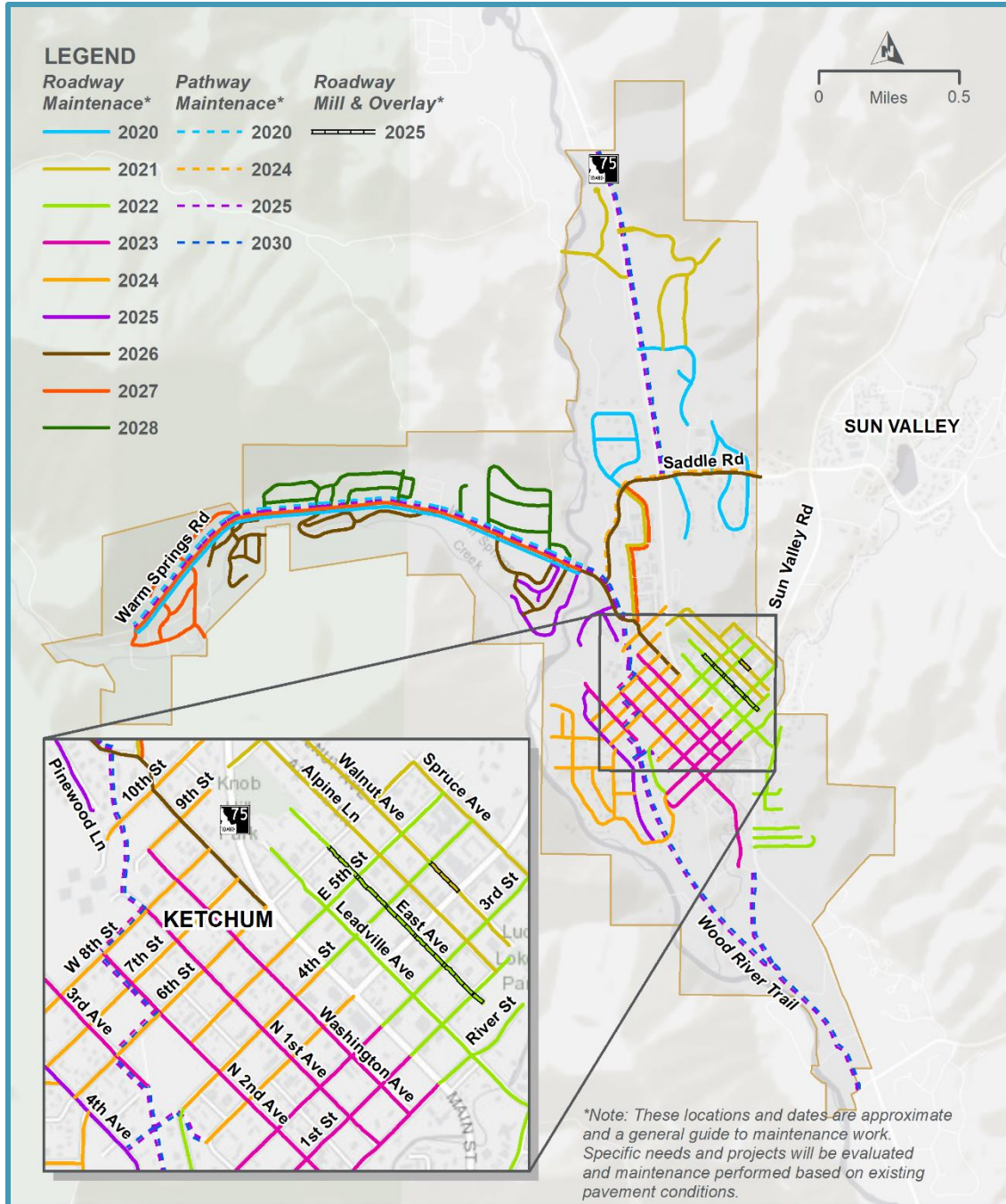
#### **7.2.4 Pavement Marking Maintenance**

Ketchum annually refreshes the pavement markings on city streets as well as the crosswalks and "shark teeth" on Main Street and Sun Valley Road west of Main Street.

### **7.3 Road Rehabilitation and Reconstruction**

Ketchum has plans for two mill and overlay projects, one on East Avenue and one on Walnut Avenue. These are shown in **Figure 23**.





**Figure 23. Road Rehabilitation and Reconstruction Projects**



## 8 Funding

There are several funding opportunities for Ketchum transportation projects, including local, state, and federal sources. These also include grants and matching funds available through state agencies such as the Idaho Commerce and Labor Department and Economic Development, ITD, LHTAC, and Idaho Parks & Recreation. Most funding agencies require Ketchum to identify projects and list them in their CIP to be eligible.

### 8.1 Local Funding

#### 8.1.1 General Fund

Ketchum receives taxpayer dollars and deposits them in the General Fund, along with other funds received. The Mayor and City Council can allocate the funds to programs and services in any area as needed. General fund dollars are used to support Ketchum services including police, fire, and parks, and can be used in planning, community development, and administrative support services.

#### 8.1.2 Idaho Users Revenue Fund

These funds are collected by the state through motor fuel taxes and license fees and are distributed annually to all governmental units responsible for roadway maintenance in the State of Idaho. Distributions are based on a formula that includes population and number of roadway miles in the jurisdiction. This is the primary source for ongoing roadway maintenance and rehabilitation in many local communities.

#### 8.1.3 Vehicle Registration Fees

Vehicle registration fees, which ITD collects on behalf of counties and highway districts, are distributed to each organization to fund transportation improvement projects.

#### 8.1.4 Property Taxes

Property taxes are the main source of funds for local governments to raise money to provide services. These funds are often dedicated for services as well as infrastructure needs.

#### 8.1.5 Sales Tax

A sales tax option to fund public transportation is available in Idaho for resort communities, which can relieve some of the financial burden on the local population.

#### 8.1.6 Impact Fees

Impact fees are imposed by a local government on new or proposed development projects to pay for all or a portion of the costs of providing public services to the development. Ketchum has set impact fee rates for new developments to help pay for needed infrastructure and services, including fire, wastewater, streets, parks, police, and water. Impact fees do not often pay for the full cost of improving the transportation system, but they can be combined with other sources to fund projects.



### 8.1.7 Local Improvement Districts

As federal and state assistance declines, local sources of funding will become more important. A local improvement district (LID) is one avenue for the public to share the cost of transportation infrastructure improvements and other types of public utility improvements, such as sewer and water lines. Property owners agree to form LIDs when the benefits from the improvements outweigh the costs. Oftentimes, property owners in a LID pay an amount proportional to the benefits they receive for the property that is owned. Bonds are sold to cover improvement costs, and payments are made through property assessments with a long-term payment plan, up to 20 years, and relatively low interest rates. The project costs are divided between each of the property owners in the district based on lot front footage, area of lot, benefits derived, or a combination thereof.

In 2006, Ketchum formed the Ketchum Urban Renewal Agency (KURA) to provide improvements supporting downtown revitalization, community housing, and public and private investments. It is an independent organization with its own budget, by-laws and Board of Commissioners. Its activity and investment decisions are guided by an *Urban Renewal Plan* (2006) adopted by the City Council in 2006 and amended in 2010. KURA funding has been used in the past to develop the *Downtown Ketchum Master Plan* (2006), the updated *Urban Renewal Plan* (2010), and the Fourth Street Heritage Corridor. More information is available at the following website: <https://ketchumura.org/kura>.

## 8.2 State and Federal Funding

There are several funding possibilities available from the state and federal government, including some possible funds available through agencies such as the Idaho Commerce and Labor Department and Economic Development, ITD, LHTAC, and Idaho Parks & Recreation. Most of these funding agencies require Ketchum to identify projects and list them in their CIP to be eligible for funding, along with requiring the city to provide a percentage of local funds to match the total funding.

### 8.2.1 LHTAC

In order to assist communities throughout the state in completing their transportation projects, LHTAC, a division of ITD, offers several assistance programs to qualifying agencies. The following is a brief summary of those programs and their qualification criteria. Details and applications can be found at the following website: <https://lhtac.org/programs/>

#### 8.2.1.1 SURFACE TRANSPORTATION PROGRAM (STP) LOCAL RURAL

STP Local Rural funds are available for projects in rural areas and in cities with populations less than 5,000. It is awarded through the local federal-aid incentive program administered by LHTAC and can be used for new construction, reconstruction, or rehabilitation of roadways classified by FHWA as arterials or rural major collectors with a small percentage allowed for minor collectors. This program requires a 7.34 percent match in local funds.



#### 8.2.1.2 LOCAL RURAL HIGHWAY INVESTMENT PROGRAM (LHRIP)

The Idaho Transportation Board, in conjunction with ITD and LHTAC, has developed this program to assist small cities, counties, and highway districts to improve the investment in their roadway infrastructure. The program is funded by an exchange of federal-aid rural funds for ITD state funds. At the request of the Idaho Transportation Board, LHTAC has agreed to administer this program and account for the expenditures of the funds based on criteria established by the Idaho Transportation Board and LHTAC. The program has four categories of grants:

- **Construction Projects** include any type of local road or bridge project to improve the condition, safety, or service life of that local road or bridge, from maintenance up to and including reconstruction. This type of project grant is limited to a maximum of \$100,000. Projects must include road and roadway work. Projects exclusively for pedestrian or drainage improvements are not eligible. A one-year hiatus will be applied to those Local Highway Jurisdictions who received LRHIP Construction project awards the previous year.
- **Federal-aid Match Construction Projects** include any type of local road or bridge project that has federal-aid (or other federal funds) to improve the condition, safety, or service life of that road or bridge. To apply for this project, Ketchum must already be awarded the federal-aid project. It should be included in the Idaho Transportation Investment Program (or similar program) and must be scheduled for construction within the next two years (from the grant fiscal year). This type of project has a maximum grant amount of \$100,000. Annually, a total of \$200,000 is reserved for this type of project and award is based on need.
- **Transportation Plans** funds are to be used to hire a licensed consulting engineer or transportation planner to complete a new Transportation Plan or update an original Transportation Plan that is over 10 years old. An original Transportation Plan is limited to a \$50,000 award and an update is limited to a maximum of a \$30,000 award. Plans must include an asset management plan (iWorQ or approved alternative), if one is not in place.
- **Sign Projects** include sign replacement and upgrade projects to bring warning and regulatory signs, signposts, and pavement markings up to Manual on Uniform Traffic Control Devices (MUTCD) standards. This type of project grant is limited to a maximum of \$30,000.

Emergency Funds are available through a separate application for emergencies that occur. The amount reserved annually to fund these projects is \$400,000 and individual grants are limited to \$100,000.



### 8.2.1.3 LOCAL HIGHWAY SAFETY IMPROVEMENT PROGRAM (LHSIP)

The Highway Safety Improvement Program (HSIP) is a federally funded program aimed at eliminating Fatal and Serious Injury (Type A) crashes on the roadway system. Local highway jurisdictions (LHJ) can receive approximately \$8.9M of the state HSIP funds through the LHSIP, administered through LHTAC. Eligibility for the LHSIP is based on LHJs having at least one Serious Injury (Type A) or Fatal crash over the last five years. Qualifying LHJs are identified by LHTAC and notified each fall to begin the application process. This federally funded program requires a local match, not to exceed 7.34 percent. Projects are ranked according to individual cost-benefit ratios. Projects are funded first based on their cost-benefit ratio within their ITD District, and then by their overall cost-benefit ratio throughout the state. Final project selection is by the Idaho Transportation Board.

### 8.2.1.4 FEDERAL LANDS ACCESS PROGRAM (FLAP)

The Federal Lands Access Program (FLAP) was established in 23 U.S.C. 204 to improve transportation facilities that provide access to, are adjacent to, or are located within Federal lands. The Access Program supplements state and local resources for public roads, transit systems, and other transportation facilities, with an emphasis on high-use recreation sites and economic generators. The program is administered by the FHWA Western Federal Lands Highway division. It is directed towards public highways, roads, bridges, trails, and transit systems that are under state, county, town, township, tribal, municipal, or local government jurisdiction or maintenance, and provide access to federal lands.

See their website for the most current eligible project types and program status:

<https://flh.fhwa.dot.gov/programs/flap/>

## 8.2.2 ITD

ITD offers several assistance programs to qualifying agencies. The following is a brief summary of those programs and their qualification criteria. Details and applications can be found at the following website: <https://itd.idaho.gov/alt-programs/>

### 8.2.2.1 TRANSPORTATION ALTERNATIVES PROGRAM (TAP)

The purpose of the TAP, formerly known as Community Choices for Idaho, is to provide for a variety of alternative transportation projects to address the needs of non-motorized users and to advance ITD's strategic goals of Mobility, Safety and Economic Opportunity while maximizing the use of federal funds. The program will provide an annual mechanism to solicit locally identified projects and leverage potential federal funding opportunities for sponsored projects.

The TAP provides funding for programs and projects defined as transportation alternatives, including on- and off-road pedestrian and bicycle facilities, infrastructure projects for improving non-driver access to public transportation and enhanced mobility, and safe routes to school educational projects.





### 8.2.2.2 ADA CURB RAMP PROGRAM

The Idaho Americans with Disabilities Act (ADA) Curb Ramp Program is a state-administered program that provides funding for projects to address curb ramps on the state highway system. The goal of the program is to provide accessible facilities for pedestrians with disabilities while allowing local jurisdiction flexibility in meeting the required standards. ITD is allocating \$500,000 of state funds annually for this program. Applicants can qualify for up to \$60,000 in state funding to construct new or alter existing curb ramps on the state highway system to meet the requirements of the ADA. Funds can only be used for construction purposes. This program provides local communities more control over the design of pedestrian facilities in their communities, the time of construction, and makes better economical use of state funds while addressing accessibility on the state highway system.

### 8.2.3 Idaho Department of Parks and Recreation

#### 8.2.3.1 THE RECREATIONAL TRAILS PROGRAM (RTP)

The Recreational Trails Program of 1998 establishes a program for allocating funds to the States for recreational trails and trail-related projects. Projects must be from trail plans included, or referenced, in a Statewide Comprehensive Outdoor Recreation Plan required by the Land and Water Conservation Fund Act (Section 1302 (a)(b)). The typical grant funding level for the program is approximately \$1.5 million annually.

Permissible uses of the funds are: maintenance and restoration of existing recreational trails; development and rehabilitation of trailside and trailhead facilities and trail linkages for recreational trails; purchase and lease of recreational trail construction and maintenance equipment; and construction of new recreational trails (with restrictions for new trails on Federal lands). The Idaho Department of Parks and Recreation (IDPR) is responsible for the administration of the Recreational Trails Program in the State of Idaho.

At least 30 percent of funds received annually by the State must be reserved for uses relating to motorized recreation, at least 30 percent must be reserved for non-motorized recreation, and the remaining 40 percent must give preference to projects that provide for innovative recreational trails corridor sharing by motorized and non-motorized use. More information is available at this website: <https://parksandrecreation.idaho.gov/recreational-trails-program-rtp>

#### 8.2.3.2 THE RECREATIONAL ROAD & BRIDGE FUND

The 1993 session of the Idaho legislature passed HB 185 which authorized the IDPR to administer 0.44 percent of State gas tax revenues to “be used solely to develop, construct, maintain and repair roads, bridges and parking areas within and leading to parks and recreation areas of the state.” The typical grant funding level for the program is approximately \$300,000 annually. Currently all road and bridge applications are reviewed by IDPR staff and recommendations are presented to the Idaho Park and Recreation Board for final approval.

More information is available at this website: <https://parksandrecreation.idaho.gov/recreational-road-bridge-fund>

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Capital Improvements  
Plan

| Final Capital Improvement Plan |   |  |  |                           |  |            |                |
|--------------------------------|---|--|--|---------------------------|--|------------|----------------|
| Project ID                     | Project Name                            | Description  | ROW & Roadway Width  | Justification             | Notes  | Timeframe  | Estimated Cost |
| Bicycle/Multi-use              |   |  |  |                           |  |            |                |
| A1                             | Bike Wayfinding Plan                    | Conduct a study to support the proposed sharrow installation and connection with other bike facilities to determine wayfinding sign placement and coordination with current City wayfinding system | N/A  | Bicycle Mobility & Safety | Coordinate with recent wayfinding signing through downtown   | Short-term | \$10,000       |
| A2                             | 2nd Avenue Sharrow/Protected Bike Lanes | Install sharrow bike markings and signing along 2nd Avenue from Serenade Lane to 1st Street and protected bike lanes from 1st Street to 6th Street   | ROW - 44' from Serenade Lane to Trail Creek<br>60' from Trail Creek to Cottonwood Street<br>80' from Cottonwood Street to 6th Street<br>Roadway - 24' from Serenade Lane to curb & gutter 26'<br>from begin curb & gutter to curve 36'<br>from curve to Cottonwood Street<br>60' from Cottonwood Street to River Street<br>45' from River Street to 1st Street<br>60' from 1st Street to 2nd Street<br>65' from 2nd Street to 6th Street<br>On-street parking from Cottonwood Street to 6th Street | Bicycle Mobility & Safety | Connect to pathway at Serenade Lane, pathway at 6th Street, sharrow at 4th Street, and proposed sharrow at 1st Street and 6th Street   | Short-term | \$86,000       |
| A3                             | Gem Street & Leadville Avenue Sharrow   | Install sharrow bike markings and signing along Gem Street from SH-75 to Leadville and on Leadville Avenue from Gem Street to 6th Street   | ROW - 30' on Gem Street and Leadville Avenue from Gem Street to driveway<br>45' from driveway to Lava Street<br>60' from Lava Street to 6th Street<br>Roadway - 20' on Gem Street<br>Leadville Avenue - 25' from Gem Street to Onyx Street<br>30' from Onyx Street to River Street<br>45' from River Street to 6th Street<br>On-street parking on both sides of street from River Street to 6th Street   | Bicycle Mobility & Safety | Connects to sharrow at 4th Street and proposed sharrow at 1st Street and 6th Street  | Short-term | \$15,000       |
| A4                             | Not Used                                |  |  |                           |  |            |                |
| A5                             | 1st Street Sharrow                      | Install sharrow bike markings and signing along 1st Street from 2nd Avenue to Alpine Lane  | ROW - 60' from 2nd Avenue to Alpine Lane<br>45' from 2nd Avenue to East Avenue<br>East Avenue to Alpine Lane<br>On-street parking on both sides of street from 2nd Avenue to Alpine Lane   | Bicycle Mobility & Safety | Connects to sharrow at 1st Avenue and proposed sharrow at 2nd Avenue, Leadville Avenue, and Alpine Lane  | Short-term | \$13,000       |
| A6                             | 6th Street Sharrow                      | Install sharrow bike markings and signing along 6th Street from 2nd Avenue to Washington Avenue and Main Street to Alpine Lane   | ROW - 60' from 2nd Avenue to Alpine Lane<br>45' from 2nd Avenue to 1st Avenue<br>35' from 1st Avenue to Washington Avenue<br>32' from Main Street to Alpine Lane<br>On-street parking on both sides of street from 2nd Avenue to 1st Avenue<br>On-street parking on north side of street from 1st Avenue to Washington Avenue<br>No on-street parking between Main Street and Leadville Avenue<br>On-street parking on both sides of street from Leadville Avenue to Alpine Lane                   | Bicycle Mobility & Safety | Connects to pathway at 2nd Avenue, sharrow at 1st Avenue and Washington Avenue, the southbound bike lane on Warm Springs Road, and proposed sharrow at 2nd Avenue, Leadville Avenue, and Alpine Lane | Short-term | \$13,000       |

| Final Capital Improvement Plan |                                 |   |   |                           |  |            |                  |
|--------------------------------|---------------------------------|---|---|---------------------------|--|------------|------------------|
| Project ID                     | Project Name                    | Description   | ROW & Roadway Width                                 | Justification             | Notes  | Timeframe  | Estimated Cost   |
| A7                             | SH-75 Pathway                   | Install a separated paved pathway parallel to SH-75 from 9th Street (Knob Hill) to Saddle Road. Provide a 12' wide pathway. Include a cost/benefit analysis to verify feasibility of pathway.   | ROW - 100' from 6th Street to Saddle Road           | Bicycle Mobility & Safety | Coordinate with ITD<br>Connect to proposed sharrow on 9th Street and existing pathway at Saddle Road | Short-term | \$296,000        |
| <b>TOTAL</b>                   |                                 |   |   |                           |  |            | <b>\$433,000</b> |
| Pedestrian                     |                                 |   |   |                           |  |            |                  |
| B1                             | Main Street and 1st Street      | 1. Add bulb outs on Main Street approaches & rebuild pedestrian ramps<br>2. Provide high visibility crosswalks and update pedestrian crossing signals to automatically provide a WALK signal rather than requiring pedestrian to push the button when crossing side streets parallel to SH-75                             | ROW - 80' on Main Street and 60' on 1st Street      | Pedestrian Safety         | Coordinate with ITD  | Short-term | \$120,000        |
| B2                             | Main Street and Sun Valley Road | 1. Add bulb outs on Main Street approaches & rebuild pedestrian ramps<br>2. Provide high visibility crosswalks and update pedestrian crossing signals to automatically provide a WALK signal rather than requiring pedestrian to push the button when crossing side streets parallel to SH-75                             | ROW - 80' on Main Street and 60' on Sun Valley Road | Pedestrian Safety         | Coordinate with ITD  | Short-term | \$130,000        |
| B3                             | Main Street and 4th Street      | Provide high visibility crosswalks and update pedestrian crossing to a pedestrian hybrid beacon (high intensity activated crosswalk [HAWK]) with curbside push buttons for cyclists.<br>The existing RRFB equipment may be repurposed to replace the existing beacons at the Wood River Trail/Warm Springs Road crossing. | ROW - 80' on Main Street and 60' on 4th Street      | Pedestrian & Bike Safety  | Coordinate with ITD  | Short-term | \$200,000        |
| B4                             | Main Street and 5th Street      | 1. Add bulb outs on Main Street approaches & rebuild pedestrian ramps<br>2. Provide high visibility crosswalks and update pedestrian crossing signals to automatically provide a WALK signal rather than requiring pedestrian to push the button when crossing side streets parallel to SH-75                             | ROW - 80' on Main Street and 60' on 5th Street      | Pedestrian Safety         | Coordinate with ITD  | Short-term | \$120,000        |
| B5                             | Main Street and 6th Street      | 1. Upgrade median to be wider and include detectable warnings on each side for ADA compliance.<br>2. Provide high visibility crosswalks and upgrade pedestrian ramps with the crossings on Main Street and 6th Street to provide accessible route to new Warm Springs Road sidewalks.                                     | ROW - 80' on Main Street and 60' on 6th Street      | Pedestrian Safety         | Coordinate with ITD<br>Potential negative impacts to snow plow operations                            | Short-term | \$60,000         |



| Final Capital Improvement Plan      |  |   |  |                        |   |                    |                    |
|-------------------------------------|--|---|--|------------------------|---|--------------------|--------------------|
| Project ID                          | Project Name                           | Description   | ROW & Roadway Width                                    | Justification          | Notes   | Timeframe          | Estimated Cost     |
| C1                                  | 1st Avenue and 1st Street              | Add bulb outs on 1st Avenue approaches & rebuild pedestrian ramps   | ROW - 100' on 1st Avenue and 60' on 1st Street         | Pedestrian Safety      |   | Short-term         | \$130,000          |
| C2                                  | 1st Avenue and Sun Valley Road         | Add bulb outs on 1st Avenue approaches (existing in NW corner) & rebuild pedestrian ramps   | ROW - 100' on 1st Avenue and 60' on Sun Valley Road    | Pedestrian Safety      |   | Short-term         | \$110,000          |
| C3                                  | 1st Avenue and 4th Street              | Add bulb outs on 1st Avenue approaches & rebuild pedestrian ramps   | ROW - 100' on 1st Avenue and 60' on 4th Street         | Pedestrian Safety      |   | Short-term         | \$140,000          |
| C4                                  | 1st Avenue and 5th Street              | Add bulb outs on 1st Avenue approaches & rebuild pedestrian ramps   | ROW - 100' on 1st Avenue and 60' on 5th Street         | Pedestrian Safety      |   | Short-term         | \$140,000          |
| D1                                  | East Avenue and 2nd Street             | Add bulb outs on East Avenue approaches & rebuild pedestrian ramps  | ROW - 100' on East Avenue and 60' on 2nd Street        | Pedestrian Safety      |   | Short-term         | \$120,000          |
| D2                                  | East Avenue and Sun Valley Road        | Add bulb outs on East Avenue approaches & rebuild pedestrian ramps  | ROW - 100' on East Avenue and 60' on Sun Valley Road   | Pedestrian Safety      | Coordinate with ITD   | Short-term         | \$130,000          |
| D3                                  | East Avenue and 5th Street             | Add bulb outs on East Avenue approaches & rebuild pedestrian ramps  | ROW - 100' on East Avenue and 60' on 5th Street        | Pedestrian Safety      |   | Short-term         | \$130,000          |
| E1                                  | Warm Springs Road and Saddle Road      | Tighten vehicle turning radii with curbing to reduce pedestrian crossing distance and reduce speed of turning vehicles<br>Update pedestrian ramps | ROW - 100' on Saddle Road and 80' on Warm Springs Road | Pedestrian Safety      |   | Short-term         | \$170,000          |
| S1                                  | Downtown Core Sidewalk infill          | Connect existing sidewalks in downtown core   | N/A  | Pedestrian Safety      | This is a lump sum that allows the City to be flexible in implementing improvements | Short-term         | \$2,000,000        |
| S2                                  | Warm Springs Road Sidewalk             | Extend sidewalk on west side of road from bus stop to bike path across from YMCA<br>Includes stormwater upgrades with new curb and gutter         | ROW - 80' on Warm Springs Road                         | Pedestrian Safety      |   | Short-term         | \$210,000          |
| S3                                  | 4th Street Sidewalk                    | Widen existing sidewalk to current standards between Washington Avenue and 2nd Avenue.  | ROW - 60' on 4th Street                                | Pedestrian Safety      |   | Short-term         | \$370,000          |
| S4                                  | Main Street Signal Pedestrian Upgrades | Install pedestrian improvements including new signal hardware to allow pedestrian scramble at each signalized intersection                        | N/A  | Pedestrian Safety      | Coordinate with ITD   | Short-term         | \$500,000          |
| <b>TOTAL</b>                        |  |   |  |                        |   |                    | <b>\$4,780,000</b> |
| <b>Roaway/Intersection Projects</b> |  |   |  |                        |   |                    |                    |
| F1                                  | 4th Street Evaluation                  | Close the segment from Main Street to East Avenue to motor vehicles   | N/A  | Pedestrian Enhancement |   | Future Development | \$100,000          |

| Final Capital Improvement Plan         |  |   |   |                               |  |                    |                    |
|--|--|---|---|-------------------------------|--|--------------------|--------------------|
| Project ID                             | Project Name   | Description   | ROW & Roadway Width   | Justification                 | Notes  | Timeframe          | Estimated Cost     |
| F2                                     | Warm Springs Road and 10th Street and Lewis Street Intersection Improvements Concept Study | Conduct an alternatives analysis of various intersection improvements at Warm Springs Road and 10th Street and Lewis Street, including a roundabout at 10th, dog bone roundabout or double roundabout at 10th and Lewis, or mini-roundabouts at each intersection | N/A   | Traffic Congestion Mitigation |  | Future Development | \$75,000           |
| F3                                     | Warm Springs Road and 10th Street and Lewis Street Intersection Construction               | Design and construct the preferred intersection improvements identified in the Concept Study  | ROW - 80' on Warm Springs Road, 60' on 10th Street, and 80' on Lewis Street | Traffic Congestion Mitigation |  | Future Development | \$2,000,000        |
| F4                                     | Main Street Lane Reconfiguration Study   | Conduct a lane reconfiguration study to investigate changing the 4-lane Main Street into a 3-lane section with one travel lane in each direction and a center median to allow dedicated left turn lanes at public street intersections                            | ROW - 80' on Main Street  | Traffic Congestion Mitigation | Coordinate with ITD Bulb outs and other improvements included in projects B1 through B5 will work with the lane reconfiguration alternatives | Future Development | \$100,000          |
| F5                                     | Implement Paid Parking   |   | N/A   | Parking Management            |  | Future Development | TBD                |
| <b>TOTAL</b>                           |  |   |   |                               |  |                    | <b>\$2,275,000</b> |
| Road Rehabilitation and Reconstruction |  |   |   |                               |  |                    |                    |
| M3                                     | Mill and Overlay East Avenue   | Mill and Overlay East Avenue  | N/A   | Safety                        |  | 2025               | \$600,000          |
| M4                                     | Mill and Overlay Walnut Avenue   | Mill and Overlay Walnut Avenue  | N/A   | Safety                        |  | 2025               | \$80,000           |
| <b>TOTAL</b>                           |  |   |   |                               |  |                    | <b>\$680,000</b>   |
| Maintenance                            |  |   |   |                               |  |                    |                    |
| M1                                     | Sidewalk Curb and Gutter Repairs   | City wide repairs annually  | N/A   | Pedestrian Safety             |  | Annual Work        | \$1,000,000        |
| M2                                     | 4th Street Pavers  | Replace pavers for smooth surface   | N/A   | Pedestrian Safety             |  | 2020-2025          | \$2,000,000        |
| PM1                                    | Pavement Marking Maintenance   | All City owned streets (parking, crosswalks, etc.)<br>Crosswalks and "shark teeth" on Main Street (SH-75) and Sun Valley Road west of Main Street (SH-75 Spur)  | N/A   | Safety                        |  | Annual Work        | \$50,000           |
| CH1                                    | Asphalt Maintenance  | Chip seal City owned streets  | N/A   | Safety                        | Follow planned multi-year chip-seal cycle  | 2020-2023          | \$250,000          |
| <b>TOTAL</b>                           |  |   |   |                               |  |                    | <b>\$3,300,000</b> |



# B

## Multi-year Chip Seal Schedule

| Asphalt Maintenance Schedule    |       |               |       |                               |        |                                    |       |
|---------------------------------|-------|---------------|-------|-------------------------------|--------|------------------------------------|-------|
| <u>2020</u>                     |       | <u>2021</u>   |       | <u>2022</u>                   |        | <u>2023</u>                        |       |
|                                 |       | N Bigwood     | 10.5  | East Ave                      | 25     | Washington                         | 20    |
| Warm Springs RD Bridge to W end | 53    | Lewis         | 15    | Leadville                     | 8      | First Ave                          | 32    |
| Northwood Sub                   | 24.3  | Northwood     | 10    | River                         | 2      | Second Ave                         | 25    |
| Stirrup                         | 6     | S. Bigwood    | 9     | First St                      | 5.4    | Third Ave                          | 13    |
| Spur                            | 8     | Stoneridge    | 7.6   | Second St                     | 6.4    | River St                           | 2     |
| Valleywood                      | 2     | Telemark      | 3     | Fourth St                     | 11     | First St                           | 6.6   |
| Latigo                          | 3.5   | Adams Gulch   | 6     | Edelweiss                     | 7.7    | Second St                          | 6.6   |
| Clubhouse                       | 15.3  | River Rock    | 5     | Fifth St                      | 8.7    |                                    | 105.2 |
| Sawtooth Lane                   | 3     | Spruce        | 7     | Leadville                     | 13     |                                    |       |
|                                 | 115.1 | Sixth St      | 5.5   | Onyx                          | 3.3    |                                    |       |
|                                 |       | Alpine Lane   | 3     | Gem                           | 2      |                                    |       |
|                                 |       | Walnut-9th    | 22    | Jade                          | 1      |                                    |       |
|                                 |       |               | 103.6 | Emerald                       | 2      |                                    |       |
|                                 |       |               |       | Topaz                         | 3      |                                    |       |
|                                 |       |               |       | Garnet                        | 3      |                                    |       |
|                                 |       |               |       |                               | 101.50 |                                    |       |
|                                 |       |               |       |                               |        |                                    |       |
| <u>2024</u>                     |       | <u>2025</u>   |       | <u>2026</u>                   |        | <u>2027</u>                        |       |
|                                 |       | Bird Dr       | 10    |                               |        | Warm Springs RD bridge to west end | 53    |
| Sun Valley RD                   | 7     | Fourth Ave    | 9     | Warm Springs RD-6th to bridge | 24     | Lewis                              | 15    |
| Fourth St                       | 10    | Rocking Horse | 4.2   | Saddle                        | 24     | Northwood                          | 10    |
| Fifth St                        | 7     | Parkway       | 4.2   | College                       | 2      | Howard                             | 4     |
| Sixth St                        | 12    | Pinewood      | 2     | Exhibition                    | 9.8    | Ritchie                            | 4     |
| Seventh St                      | 9.4   | Sunnyside     | 2.2   | River Run                     | 9      | Jane                               | 5     |
| Eighth St                       | 9.6   | Broadway      | 12    | Irene                         | 8      | Gates                              | 0.5   |
| Ninth St & Leadville            | 7     | Holiday       | 1.5   | Bald Mountain                 | 16     | Picabo                             | 9     |
| 10th All                        | 8     | Corrock       | 5.5   | Cedar                         | 2.3    | Skiway                             | 6     |
| Buss Elle                       | 3.8   |               | 50.6  | Fir                           | 2.4    | Sage                               | 12.4  |
| Badger                          | 1     |               |       | Pine                          | 2.4    |                                    | 118.9 |
| Sabala                          | 3.8   |               |       | Shady Lane                    | 1.8    |                                    |       |
| Bordeaux                        | 3.8   |               |       | Georgia                       | 7      |                                    |       |
| Rember                          | 2     |               |       | Aspen                         | 8      |                                    |       |
| Williams                        | 6.8   |               |       |                               | 116.7  |                                    |       |
| Wood River Dr                   | 26    |               |       |                               |        |                                    |       |
|                                 | 117.2 |               |       |                               |        |                                    |       |
| <u>2028</u>                     |       |               |       |                               |        |                                    |       |
| Simpson                         | 4.7   |               |       |                               |        |                                    |       |
| Turf                            | 2     |               |       |                               |        |                                    |       |
| Huffman                         | 6.4   |               |       |                               |        |                                    |       |
| Hillside                        | 11    |               |       |                               |        |                                    |       |
| Belmont                         | 5.7   |               |       |                               |        |                                    |       |
| Short Swing                     | 3.7   |               |       |                               |        |                                    |       |
| Wanderers                       | 3     |               |       |                               |        |                                    |       |
| Flower                          | 1     |               |       |                               |        |                                    |       |
| Penny                           | 5.3   |               |       |                               |        |                                    |       |
| Dollar                          | 5.3   |               |       |                               |        |                                    |       |
| Ramona                          | 2.2   |               |       |                               |        |                                    |       |
| Canyon Run                      | 17    |               |       |                               |        |                                    |       |
|                                 | 103.8 |               |       |                               |        |                                    |       |



**Pathway Asphalt Maintenance Schedule**

| <u>2020</u>  | <u>2021</u> | <u>2022</u> | <u>2023</u> | <u>2024</u>         |
|--|-------------|-------------|-------------|---------------------|
| Warm Springs Rd Bike Path                            |             |             |             | Saddle Rd Bike Path |
|  |             |             |             |                     |
|  |             |             |             |                     |
| <u>2025</u>  | <u>2026</u> | <u>2027</u> | <u>2028</u> | <u>2029</u>         |
| Warm Springs Rd Bike Path<br>Blaine County Bike Path |             |             |             |                     |
|  |             |             |             |                     |
|  |             |             |             |                     |
| <u>2030</u>  |             |             |             |                     |
| Blaine County Bike Path                              |             |             |             |                     |



# C

## Future ADA Parking Layout

# Future Parking Layout

