



# Washoe County Tahoe Transportation Plan



## Contents

1 – Introduction/Executive Summary .....	1
2 – Background .....	2
2.1 Planning Framework .....	2
2.2 Population and Employment .....	7
2.3 Land Use and Development .....	8
2.4 Traffic Operations and Safety .....	10
3 – Existing Conditions (Facilities and Services).....	15
3.1 Bicycle and Pedestrian Facilities .....	15
3.2 Snow Removal.....	17
3.3 Parking .....	19
3.4 Transit Service.....	20
3.5 Trip Reduction Programs .....	28
4 – Community Engagement.....	30
4.1 Project Website.....	30
4.2 Virtual Public Meeting.....	30
4.3 In-Person Public Meeting.....	33
4.4 Agency/Stakeholder Meetings.....	34
5 – Recommendations .....	36
5.1 Bicycle and Pedestrian Facility Improvements .....	36
5.2 Winter Maintenance .....	38
5.3 Parking Management.....	40
5.4 Transit Improvements.....	42
5.5 Trip Reduction Programs .....	44
5.6 State Route 28 Intersections.....	45
5.7 Village Boulevard Intersections at Northwood and Southwood Boulevards .....	47
5.8 Data and Technology .....	49
6 – Funding and Implementation.....	50
6.1 Funding.....	50
6.2 Implementation .....	53



## List of Exhibits

Exhibit 2-1: Population Density by Block Group .....	8
Exhibit 2-2: Regulatory Zones .....	9
Exhibit 2-3: Town Centers .....	10
Exhibit 2-4: Incline Village Annual Average Daily Traffic .....	11
Exhibit 2-5: SR 28 at Mt. Rose Highway Traffic Volume Trends by Year, 2011-2021 .....	12
Exhibit 2-6: Impact of Speed on Pedestrian Crash Outcomes .....	13
Exhibit 2-7: Crash Density (2015-2019) .....	13
Exhibit 2-8: Crash Types .....	14
Exhibit 3-1: Multi-Use Paths .....	16
Exhibit 3-2: Transit Service Overview .....	21
Exhibit 3-3: TART Systemwide Annual Ridership and Level of Service .....	22
Exhibit 3-4: TART Fixed Route Service to Incline Village and Crystal Bay .....	22
Exhibit 3-5: Average TART Mainline Daily Ridership, by Month .....	23
Exhibit 3-6: Estimated Riders per Revenue Hour, by Month – TART Mainline Route .....	23
Exhibit 3-7: TART Connect Vehicle .....	24
Exhibit 3-8: TART Connect Incline Village Performance Report .....	25
Exhibit 3-9: Heat Map of TART Connect Summer 2021 Pickup Location .....	25
Exhibit 3-10: TTD Systemwide Annual Ridership and Level of Service .....	26
Exhibit 3-11: Tahoe Transportation District Schedules.....	26
Exhibit 3-12: Performance of the East Shore Express, 2022.....	27
Exhibit 4-1: Summary of Comments in Online Map Survey.....	32
Exhibit 4-2: Interactive comment map response locations .....	33
Exhibit 5-1: Bicycle and Pedestrian Facility Gaps and Recommended Connections .....	36
Exhibit 5-2: Staffing and Operating Characteristics of Peer Communities .....	39
Exhibit 6-1: Recommendations Summary.....	54





## 1 – Introduction/Executive Summary

Washoe County initiated the Washoe County Tahoe Transportation Plan to identify actionable solutions that address the unique mobility challenges faced by Washoe County residents, businesses, and visitors in the Lake Tahoe Region.

This plan builds on previous work completed in other local and regional planning studies. Plan goals and objectives were developed based on these studies, along with input from project advisory committees and members of the public. Goals of the plan are to:

- Improve safety
- Expand connectivity
- Optimize mobility and parking
- Strengthen community vitality

This plan document begins with an overview of existing conditions in and around Incline Village and Crystal Bay, including population, employment, land use, and traffic operations. It then describes the types and condition of existing facilities in the study area, including pedestrian and bicycle facilities, parking, and transit.

Next, the document describes the planning process used to develop plan recommendations. The planning process for this effort was highly collaborative, including close coordination with agency staff at Washoe County, Placer County, Tahoe Regional Planning Agency (TRPA), Tahoe Transportation District (TTD), Regional Transportation Commission of Washoe County (RTC), Nevada Department of Transportation (NDOT), Tahoe North Truckee Transportation Management Association (TNT/TMA), along with other local partners. The Washoe County Incline Village/Crystal Bay Citizen Advisory Board (CAB) was the public advisory committee for this study. Two public meetings were held – one virtual and one in-person – to collect feedback from stakeholders and community members at key points in the planning process.

A combination of data collection, agency coordination, and community engagement was used to formulate plan recommendations related to local/regional trip reduction programs, multimodal accommodations, transit service, parking, intersection safety, snow removal, State Route 28 (SR 28), and technology. The document concludes with an overview of funding sources available for various types of improvements, along with recommendations for implementation timeframes and responsibilities.

### Multiuse Path Along Country Club Drive





## 2 – Background

### 2.1 Planning Framework

Multiple plans and studies have been conducted to identify transportation needs and recommended investments in the Tahoe Basin. Summaries of key planning documents that provide a foundation for this study are provided below.

#### Threshold Standards and Regional Plan - Amended 2021

The purpose of the [Regional Plan](#) is to guide decision-making as it affects the region's resources. The plan with all of its elements, as implemented through Agency ordinances and rules and regulations, will achieve and maintain the adopted environmental threshold carrying capacities (thresholds) while providing opportunities for orderly growth and development. The plan addresses land use, transportation, conservation, recreation, and public facilities. This document integrates the requirements of the TRPA Bi-State Compact, signed into law in 1980 and updated in 2022, which emphasizes development of a transportation plan addressing all modes of travel in order to:

- Reduce dependency on the automobile
- Reduce air pollution which is caused by motor vehicles
- Provide public transportation and public programs and projects related to transportation.



The focus of the plan is to develop a multimodal transportation system that prioritizes bicycling, walking, and transit, and serves residents and visitors while contributing to the environmental and socioeconomic health of the Region. Goals identified in the transportation element are provided below.

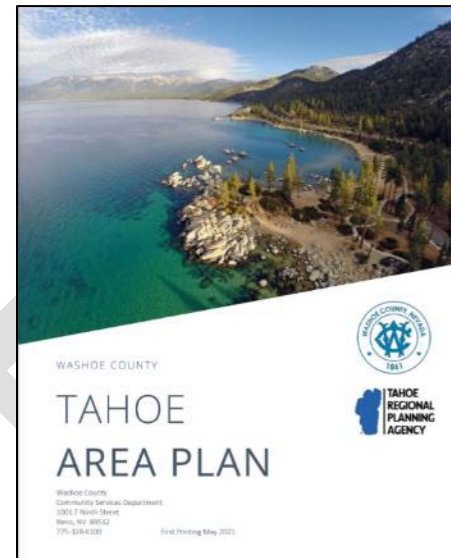
- **Environment:** Protect and enhance the environment, promote energy conservation, and reduce greenhouse gas emissions.
- **Connectivity:** Enhance and sustain the connectivity and accessibility of the Tahoe transportation system, across and between modes, communities, and neighboring regions, for people and goods.
- **Safety:** Increase safety and security for all users of Tahoe's transportation system.
- **Operations and Congestion Management:** Provide an efficient transportation network through coordinated operations, system management, technology, monitoring, and targeted investments.
- **Economic Vitality and Quality of Life:** Support the economic vitality of the Tahoe Region to enable a diverse workforce, sustainable environment, and quality experience for both residents and visitors.
- **System Preservation:** Provide for the preservation of the existing transportation system through maintenance activities that support climate resiliency, water quality, and safety.



## Washoe County Tahoe Area Plan, May 2021

The [Tahoe Area Plan](#) guides growth and development in the study area. The emphasis is to promote development and growth in areas that will help achieve environmental sustainability. The plan emphasizes a community framework that supports a comprehensive transportation network that includes transit, pedestrian, and non-motorized modes. The Tahoe Area Plan focuses on providing and promoting diverse transportation options that reduce air pollution, traffic, parking issues, and noise to manage the impacts of tourism and development in the Region.

To facilitate this, the plan envisions expansion of existing transit services and introduction of new service options. The area plan also supports establishment of mobility hubs to connect major activity centers and the multi-use path network with a more robust transit system. Service proposals under this plan include more frequent transit service, additional community-based transit service, expanded East Shore service to new mobility hubs, a visitor and employee serving shuttle service, seasonal and special event shuttles, dial-a-ride service, and transit between Reno and North Lake Tahoe.



### Goals identified in the Tahoe Area Plan:

- Reduce private automobile use by promoting wise land use patterns and providing adequate services and infrastructure to facilitate alternative transportation, including limiting roadway expansion, investment in alternative transportation, multimodal connections between Town Centers, implement travel demand management strategies to reduce vehicle miles travelled (VMT).
- Increase the safety of biking and walking by providing bicycle paths, pedestrian paths, and multi-use trails. Connect tourist, commercial, residential, and recreational land uses with bicycle and pedestrian paths. Reduce conflicts between automobiles, pedestrians, and bicyclists through access management, and improved curb cuts.
- Improve transit service and use through increased transit frequency and hours of operation, new transit services, improved transit shelters, use of bus pullouts, and increased participation in the Truckee / North Tahoe Transportation Management Association (TNT/TMA).





## Regional Transportation Plan

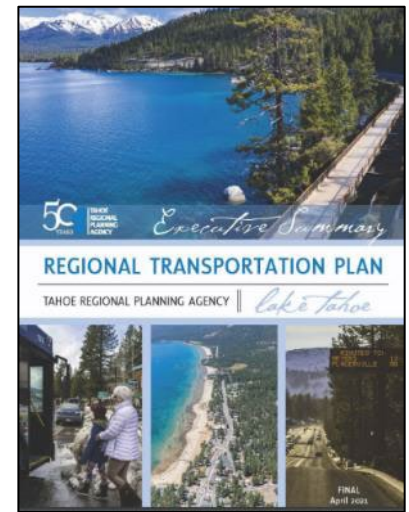
The [Regional Transportation Plan](#) (RTP) supports implementation of the Regional Plan. It provides strategies to improve water quality, air quality, scenic resources, noise levels, and recreation resources across the Tahoe Region. It addresses ways that the Tahoe transportation system can meet the daily needs of transit-dependent riders and employees, make it easier for recreational travelers to use transit, and assure visitors they can get around without their cars. It focuses on four primary areas, as described below.

- **Transit:** Expanding transit services and ridership will improve mobility and reduce congestion and greenhouse gas (GHG) emissions. Increasing the frequency of bus service will enhance its convenience to customers and boost ridership.
- **Technology:** Connecting people with information about the many ways to travel around the Region, providing better data and analysis, and ensuring charging facilities are available for electric vehicles are all crucial to maximizing the efficiency of the transportation system. This includes intelligent transportation system (ITS) investments, real-time parking information, and traffic management.
- **Trails:** A connected network of trails and multiuse paths will increase trips by foot and bike.
- **Operations and Maintenance:** Investments in transportation operations and maintenance will help make sure the network operates efficiently, minimizes life-cycle costs, and reduces impacts from emissions and stormwater runoff of Lake Tahoe.

The RTP identifies the Stateline to Stateline Bikeway segment from Crystal Bay to Incline Village for the year 2035. This project is consistent with goals to improve mobility and reduce dependence on cars. Other relevant project in the RTP include a bicycle facility along SR 28 from Preston Field to Northwood Boulevard, SR 28 Central Corridor Improvements from Sand Harbor State Park to Spooner Lake State Park, parking technology improvements, changeable message signs, variable speed limit signs, and transit improvements for TART and TTD.

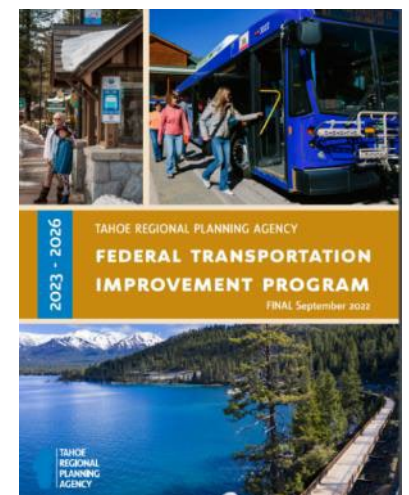
## 2023-2026 Federal Transportation Improvement Program, September 2022

The Regional Transportation Plan is implemented through the four-year [Federal Transportation Improvement Program](#) (FTIP). This document is developed by TRPA and used to program state and federal funding for transportation improvements. It also identifies transportation performance measures and targets, consistent with federal requirements. Projects listed in the FTIP are incorporated into the State Transportation Improvement



## Regional Transportation Plan Vision

Tahoe's transportation system is interconnected, inter-regional, and sustainable, connecting people and places in ways that reduce reliance on the private automobile.



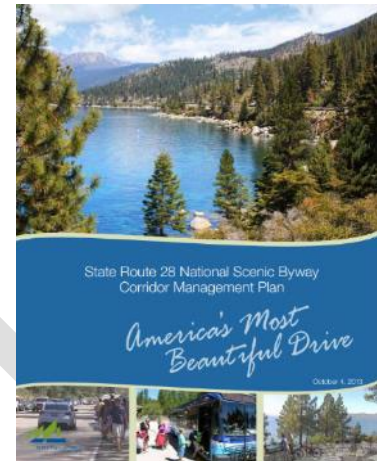


Program (STIP) by reference. Improvements recommended through this study would need to be incorporated into the FTIP/STIP prior to implementation with federal funds.

#### SR 28 National Scenic Byway Corridor Management Plan, October 2013

This [Corridor Management Plan](#) brought agencies and members of the community together to address the safety and mobility concerns for SR 28 between Crystal Bay and US 50. The recommendations for construction of the first segment of the East Shore Trail and associated parking improvements that were developed through this plan have been implemented, with design currently underway for the second segment of the East Shore Trail between Sand Harbor State Park and Spooner Lake State Park. Other recommendations in the plan included the following:

- Pedestrian crossing enhancements in Incline Village
- Evaluate locations and develop a park-n-ride facility
- Stateline to Stateline Bikeway Phase 4 from Crystal Bay to Lakeshore Boulevard (west)
- Installation of a Crystal Bay corridor gateway sign, which has been completed



#### SR 28 Corridor Parking Management Plan, 2019

The [SR 28 Corridor Parking Management Plan](#) establishes the vision and goals for parking in this important corridor, as well as implementation strategies. The plan describes how parking strategies can be implemented in combination with transit service enhancements and multimodal transportation investments, as well as public outreach and enforcement. Technology, such as a mobility app that provides real time parking information, would be another key tool. The plan identifies a variety of strategies for consideration, including demand-based pricing, time-limited parking, a parking reservation system, permit system, and restricted parking zones.

#### SR 28 Corridor Parking Management Plan Vision

Parking in the Tahoe Basin is safe, predictable, easy to find, and connected to reliable alternative modes of transportation through a well managed, integrated parking system. It provides a positive experience for residents and visitors of all abilities accessing recreation areas, business districts, and other locations, while maintaining emergency access. Parking management enhances access and encourages the use of other travel modes through investments in transit, walking and biking, and technology to provide better information for people making travel decisions.

#### Linking Tahoe: Lake Tahoe Transit Master Plan (2017)

TTD facilitates, implements, and delivers transportation services in the Tahoe Region, operating transit service in South Lake Tahoe and between Incline Village and Sand Harbor State Park. The intent of TTD's [Transit Master Plan](#) (TMP) is to link the Tahoe Basin together as a whole and change the way that land use improvements are complemented by transit. The plan aims to develop a transit network that is





reflective of the visitor impacts on the region, that serves residents and workers, and that is based on demand and reflects the changes in seasonal visitors and residents during summer, winter and off-peak seasons. By developing the transit system, the region can provide transportation options that connect the Basin by non-auto modes. The five key drivers of the plan are to serve the existing high use corridors, service local residents as well as visitors (both summer and winter), create regional and inter-regional connections based on data, support economic growth and change, and create connections with all modes - ferry, water shuttle, biking, walking and the car.

#### Placer County Short Range Transit Plan

The Placer County [Short-Range Transit Plan](#) (SRTP) was developed for the Placer County Transit program, serving western Placer County, California. The SRTP is intended to provide a detailed business plan to guide the transit organization in setting service strategies, improvement priorities, and implementation sequencing. The plan includes a review of demographics and transit needs, a series of surveys and ridership counts conducted for all Placer County Transit services, a review of the effectiveness and efficiency of existing services, a review of similar systems, analysis of a wide range of options, and the results of public input processes. The resulting SRTP provides operational, capital, marketing, management, and institutional plans, including an implementation plan.

#### Tahoe Transportation District Short Range Transit Plan (2017)

The [Tahoe Transportation District \(TTD\) SRTP](#) was developed to guide the development of TTD's goals, objectives, and policies for the next five years of transit service within the Lake Tahoe Region. The SRTP was developed within the context of the long-range transit plan, *Linking Tahoe: Lake Tahoe Transit Master Plan (TMP)*, which is aimed at implementing a new vision for transit as "the vehicle for change in the Tahoe Region." The SRTP is the first installment on the twenty-year path of the TMP. TTD is currently updating the SRTP.

Visitors can account for 75 percent of vehicle trips made internal to the Tahoe Region<sup>1</sup>. This visitation can translate into a considerable number of vehicles congesting the transportation network. Tahoe Region transportation infrastructure can experience high levels of travel delay during peak travel periods. By providing interconnected transit and multimodal options, the region can decrease the number of vehicles on the road (both residents and visitors) and allow users to safely and reliably reach their destinations via transit, walking, biking, or other non-auto modes.

The TMP details goals to achieve a transit and multi-modal vision, including a twenty-percent transit mode split target within twenty years; establishment of a regional traffic control center; addressing parking and the development of mobility hubs; and introduction of "free fare" transit service where appropriate. To realize the vision put forth in the TMP, the SRTP's goals and objectives include details provisions concerning safety, workforce development, fleet expansion and replacement, facility capacity and modernization, and future service and route proposals. Of these goals, the first four are identified as key fundamentals in need of considerable improvement.

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<sup>1</sup> The TRPA Transportation Demand Model 2020 identifies a 38% share of visitor trips on average.



## Lake Tahoe Transit Master Plan

The [Lake Tahoe Transit Master Plan](#) (TMP) provides a vision that transit is the vehicle for change in the Tahoe Region. This is supported by a series of intents:

- Transit must have a significant presence in the community
- Transit must connect residential areas with commercial centers
- Transit must connect people to recreational opportunities in summer and winter based on the volumes of demand
- Transit must be a priority investment in the region and must have impact on decisions for linking the Tahoe Basin with the key locations in California and Nevada, such as Sacramento, San Francisco, Stockton, Reno, and Carson City.
- Transit must be organized to achieve success by being simple and understandable with the customer experiencing a single integrated system. This plan identifies the importance of mobility hubs as supporting infrastructure that provides for a high quality customer experience. These people-oriented places provide a focal point for the transit network at key locations.

## Tahoe-Truckee Electric Vehicle Readiness Plan

TRPA and the Truckee Donner Public Utility District completed the [Tahoe-Truckee Plug-In Electric Vehicle Readiness Plan](#) in 2017. The purpose of the plan is to accelerate transportation electrification in the Tahoe-Truckee region. Electric vehicles will have a major role in broader efforts to reduce GHG emissions and improve water quality and clarity. The document included policies to make it easier and less expensive to install electric vehicle charging infrastructure in the region.

## 2.2 Population and Employment

As of 2020, Incline Village was home to 9,462 residents, up from 8,777 in 2010. The area has a population density of 440 people per square mile, which is similar to Tahoe City (460 per square mile) and lower than Truckee (523 per square mile). A map of population density by Census block group is provided in Exhibit 2-1. An estimated 8,200 jobs are also located in the study area. Major employers include:

- Incline Village Community Hospital
- Hyatt Regency Lake Tahoe Resort
- Crystal Bay Casino
- Diamond Peak Ski Resort
- University of Nevada, Reno at Lake Tahoe
- Raley's

The Tahoe area sees about 15 million visitors each year. The variety of visitors to Incline Village and Crystal Bay includes those staying at local hotels and vacation rentals, day trips from Reno and other surrounding areas, and visitors from other areas of the Lake Tahoe Region.





## 2.3 Land Use and Development

Incline Village and Crystal Bay, along with other areas of Northern Nevada, are experiencing increasing growth pressures. The Tahoe Master Plan in the Tahoe Area Plan identified the policy framework to guide future development. The plan establishes regulatory zones (Exhibit 2-2) and a Town Center overlay zone (Exhibit 2-3). The regulatory zoning districts establish land use standards for specific areas of Incline Village and Crystal Bay. These standards regulate building height, residential density, permissible uses, structural design, landscaping, signage, parking, and noise. Town centers are designated as suitable places for infill and compact redevelopment.

**Exhibit 2-1: Population Density by Block Group**

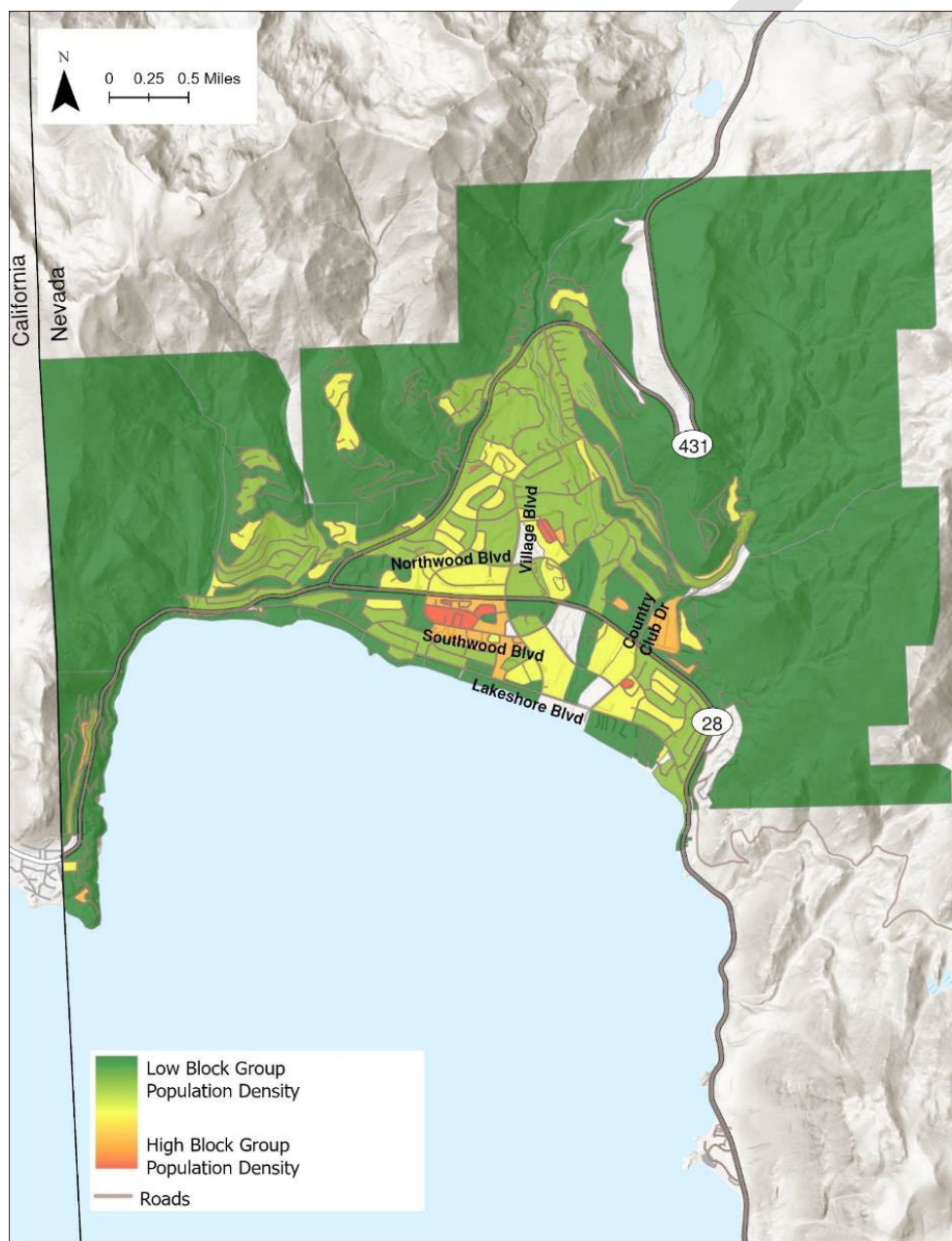
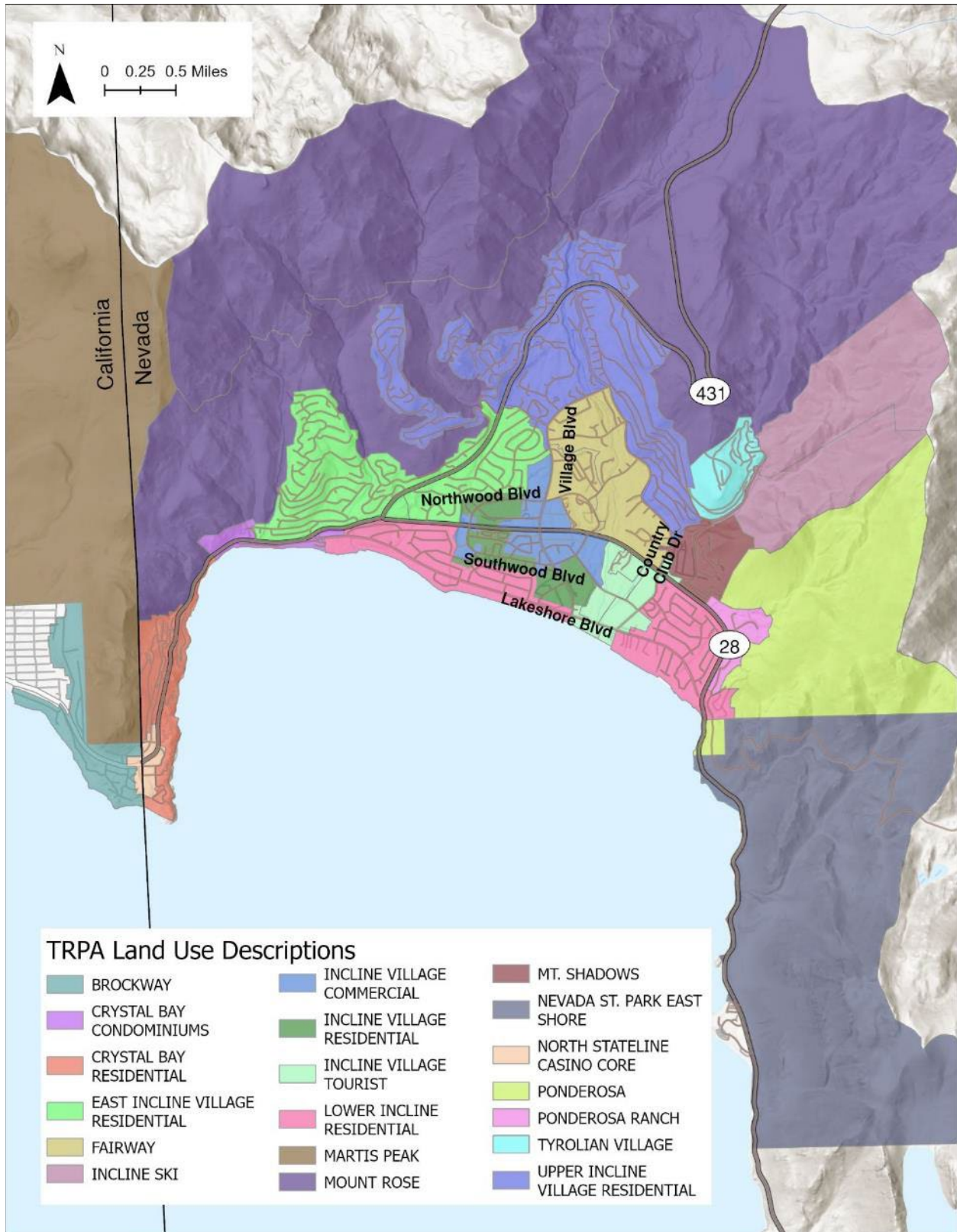






Exhibit 2-2: Regulatory Zones



**Exhibit 2-3: Town Centers**

Two examples of developments in the study area include the pending approval of the Resort at Tahoe (formerly known as Boulder Bay) and recently approved Nine 47 Tahoe, which are described below.

- The Resort at Tahoe is a planned commercial project located along State Route 28 at the current Tahoe Biltmore Lodge and Casino and Beesely's Cottages sites. The project will include a new casino, a 76-room hotel, and 79 condominiums, along with retail space, a beach club, and a wedding and event venue. Preliminary site and utilities work began in May of 2022 with an anticipated opening in 2025. Although The Resort at Tahoe is being promoted as pedestrian and bicycle friendly, stakeholders have expressed the desire to see a multiuse path traversing the development, as well as a dedicated turnaround area for TART buses.
- Nine 47 Tahoe is a luxury condominium project located on the north shore of Lake Tahoe in Incline Village. The development, which includes 40 condominiums, a 37,000 square foot recreation center, and two golf courses, is expected to break ground in 2023. The anticipated opening date is early 2024. The two-acre site is located at the corner of Tahoe and Southwood Boulevard.

## 2.4 Traffic Operations and Safety

### Traffic Operations and Demand

A variety of trip types and purposes are made in Incline Village and Crystal Bay. Area travel demand includes of a combination of permanent residents, seasonal residents, vacationers, day trippers, and a diverse workforce of local and regional employees. Each user group has unique transportation patterns and needs.



Area roadways see a range of traffic volumes with notable seasonal variation. Exhibit 2-4 shows annual average daily traffic (AADT) measured on an average weekday. As expected, traffic volumes are highest on SR 28, the community's major thoroughfare. The segment of SR 28 west of Incline Village sees upwards of 12,000 vehicle trips per day, with volumes just under 10,000 AADT on the segment running through town. For reference, the typical capacity for a two-lane rural highway is 13,900 vehicles per day. Volumes on other area roadways vary between 3,000 and 4,000 trips per day. For reference, the typical capacity of a rural collector road is 10,600 vehicles per day. Daily volumes during peak holiday periods can be considerably higher than the annual average.

**Exhibit 2-4: Incline Village Annual Average Daily Traffic**

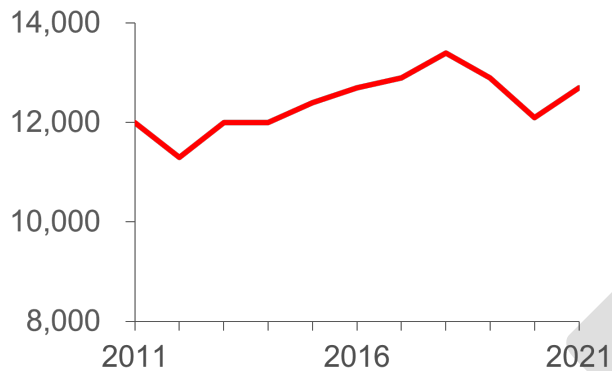






As shown in Exhibit 2-5, traffic volumes on SR 28 have varied over time. While AADT grew steadily between 2012 and 2018, there was a decrease during 2019 and 2020. Levels of traffic began to rebound as the impacts of COVID-19 closures diminished.

**Exhibit 2-5: SR 28 at Mt. Rose Highway Traffic Volume Trends by Year, 2011-2021**



### Safety

Between 2015 and 2019 there were a total of 554 crashes in the Incline Village and Crystal Bay areas. Of these, two were fatal, eight resulted in severe injuries, and 136 resulted in non-severe injuries. The remaining crashes were classified as property damage only. Exhibit 2-6 shows the density crashes experienced in Incline Village and Crystal Bay during this time period. Higher concentrations crashes occurred on the segment of SR 28 between Incline Village and Crystal Bay, including half of the crashes that resulted in severe injuries.

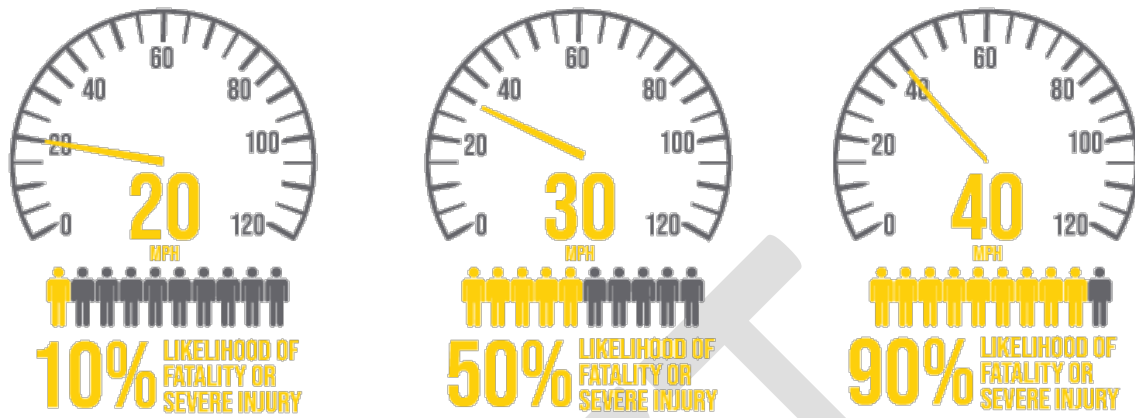
Major intersections in Incline Village on SR 28 also have higher concentrations of crashes. The two intersections in Incline Village with the highest numbers of crashes were SR 28 at Village Boulevard (34 crashes) Mt. Rose Highway (25 crashes). It is noteworthy that at the Village Boulevard traffic signal, 44 percent of crashes resulted in injuries. This is higher than at the Mt. Rose Highway roundabout, where 16 percent of crashes resulted in injuries. A roundabout contributes to safety in two ways. First, it reduces operating speeds at the intersection and the adjacent corridor. Second, it reduces crash severity by reducing the kinetic energy and softening the impact angle. The FHWA lists it as a proven safety countermeasure with a 78% reduction in fatal and serious injury crashes over a signalized intersection.

Of the 554 crashes that have occurred in the study area, 7 percent were recorded as happening during wet, snowy, or icy road conditions. A summary of crash types is provided in Exhibit 2-7. The most frequent crash types included non-collisions (31.9 percent), angle crashes (25.3 percent), rear-end crashes (23.1 percent).

Collisions with wildlife are also a safety concern for the study area. Two bears were reported killed in traffic crashes during the fall of 2022. Other wildlife such as bobcats are at risk as well. Speed is a determining factor in the severity of crashes for vehicles, pedestrians, and wildlife, as indicated in Exhibit 2-6. The speed limit on SR 28 at Lakeshore Drive is 45 miles per hour (mph) and transitions to 35 mph near Country Club Drive.

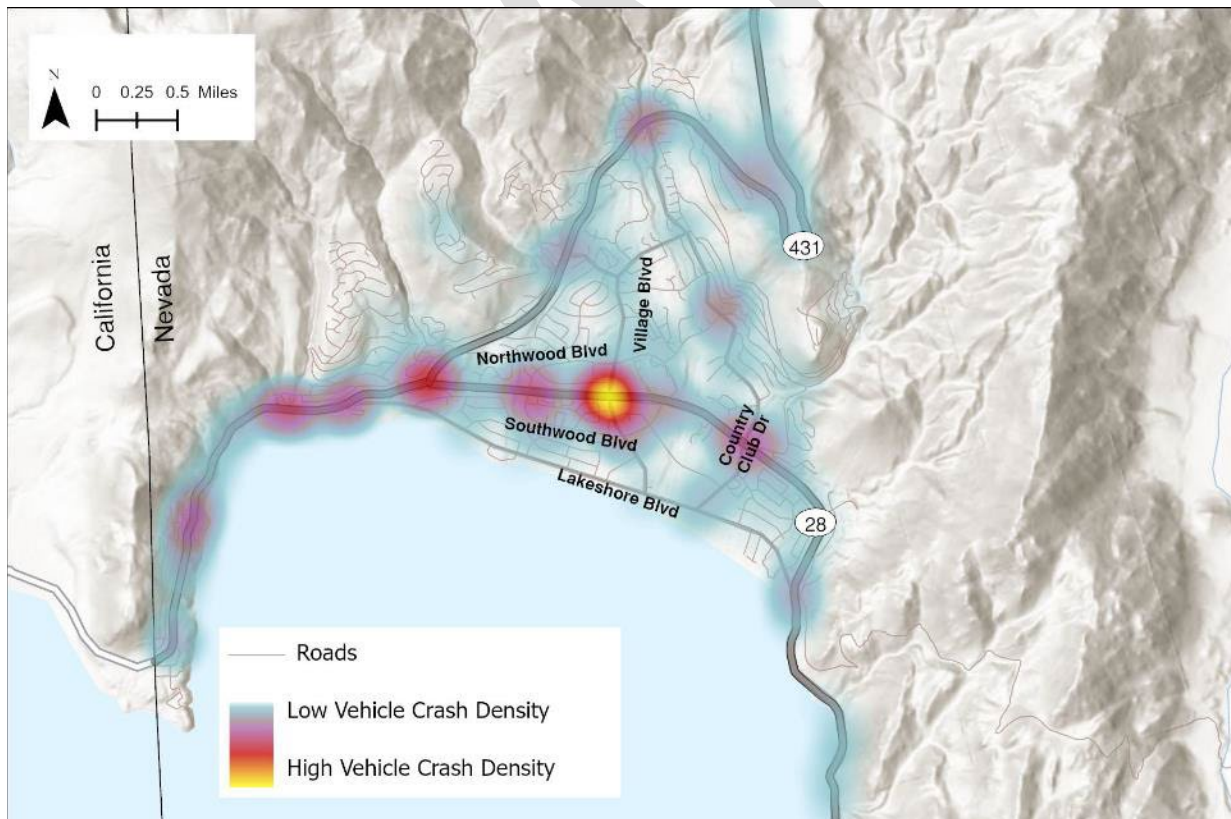


**Exhibit 2-6: Impact of Speed on Pedestrian Crash Outcomes**



Source: Vision Zero Truckee Meadows

**Exhibit 2-7: Crash Density (2015-2019)**





### Exhibit 2-8: Crash Types

Crash Type	Head-On	Angle	Backing	Rear-End	Sideswipe	Non-Collision	Unknown
Number	17	140	16	128	63	177	13
Percentage	3.1%	25.3%	2.9%	23.1%	11.4%	31.9%	2.3%

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## 3 – Existing Conditions (Facilities and Services)

### 3.1 Bicycle and Pedestrian Facilities

Incline Village has just over 14 miles of paved surface, multi-use trails. The pathways are used by residents and visitors for recreation, exercise, and active transportation. The characteristics and connectivity of the path network varies throughout the community. Some areas are relatively well connected, with a consistent and continuous path network, while other areas are more fragmented, as shown in Exhibit 3-1 below. Key gaps in the multi-use path system are outlined below:

- SR 28 from the 76 Gas Station to the Preston Field and playground area
- Northwood Boulevard eastward from Village Boulevard to SR 28
- SR 28 from Deer Court to Country Club Drive
- SR 28 from Country Club Drive to the East Shore Trail parking area and trailhead
- The east side of Village Boulevard from SR 28 to Lakeshore Drive

#### Multiuse Path Along SR 28



While sidewalks are present in some Incline Village and Crystal Bay locations, pedestrians are more often accommodated via pedestrian paths or multiuse paths. Members of the community have identified concerns about the limited width of existing multiuse paths and the high volume of both pedestrians, cyclists, and electronic bicycles (e-bikes) using them. The paths also have numerous driveway crossings, including almost 40 on SR 28 within the Northwood/Southwood Boulevard loop. In many areas the paths are unmarked and it may be difficult for motorists to see that a trail is crossing the driveway.

**Exhibit 3-1: Multi-Use Paths**

In response to conflicts being reported between e-bikes and pedestrians, Washoe County has been advancing policies to improve safety. The County ordinance was updated to require that persons operating a bicycle or e-bike must restrict speed and the manner of operation to a reasonable and prudent manner relative to terrain, conditions, equipment, personal capabilities, personal safety, and the safety of all other park users. The County is also in the process of implementing 'SLOW ZONES' and other trail etiquette signage in more congested areas to remind users that the trail is multi-use and family friendly. Finally, the County is working to establish partnerships with local agencies, organizations, and residents to develop additional educational materials regarding safe and appropriate trail usage. Because e-bikes expand the number of people who may be able to bicycle for commuting or other transportation purposes and extend the distances that people may be able to cycle, they offer the potential to meaningfully reduce the number of automobile trips.

Trail use management basin wide needs to continue to have a unified approach across jurisdictions for consistency. This consistency will ensure that rules, policies, and laws are not confusing to the public and the enforcement agencies.





### Unmarked Driveway Crossings Along SR 28 Multiuse Path



Trail counters have been installed on the East Shore Trail to collect data and better understand trail usage. Trail usage continues to grow, with a peak of 1,850 one-way trips during July of 2022.

### 3.2 Snow Removal

Snow removal is a critical issue for Incline Village and Crystal Bay, which receive significant winter snowfall. The multiuse paths provide important connections between residential areas and community facilities for residents and visitors. Incline Village sits at an elevation of 6,350 feet, with developed areas in the foothills nearing 8,000 feet. For high-altitude communities such as this, wintertime snow removal is always an important issue. People often walk in the street when snow covers the multiuse trails, which has been identified by area residents and Washoe County representatives as a safety concern. Snow removal is a key component of the Washoe County Public Works Department's wintertime operations. Staffing, equipment, routing, and prioritization are all different components of these operations that must be managed to effectively clear the snow after storm events and maintain mobility through the winter. NDOT is responsible for snow removal on the SR 28 roadway and Washoe County clears the SR 28 multiuse path. Washoe County also plows multiuse paths on County roads. The Incline Village General Improvement District (IVGID) manages snow removal at parks and other IVGID-maintained facilities. During early 2023 winter storms, the RTC provided snow removal services at Incline Village bus stops. A resource gap for snow removal at bus stops has been identified by the regional partners.



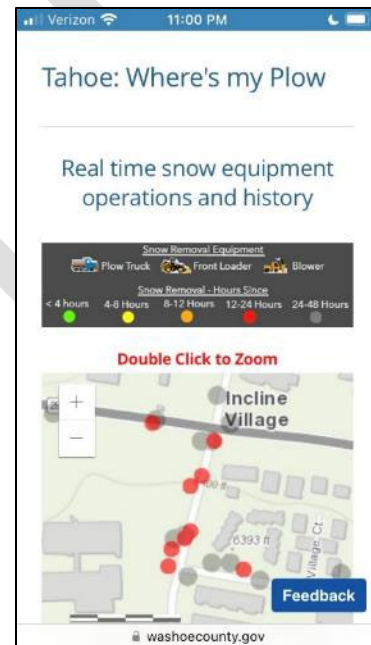


## Washoe County Snow Removal on Multiuse Paths



One of the key goals of the Washoe County Tahoe Area Plan is to design and operate the transportation system in a manner that provides “safe, efficient, and environmentally responsible access to residential areas, commercial services, public lands and recreational opportunities, and efficient connections within the Tahoe Region.” The plan notes that snow plowing schedules should prioritize routes within Town Centers and high-traffic multi-use trails that connect Town Centers with residential and recreational areas.

Washoe County has a total available operator staff of 47 employees. Of the 47 employees, 11 are dedicated to snow removal in Incline Village/Crystal Bay. With on-road vehicles carrying the majority of person trips, clearing of snow on roadways is the first priority. Washoe County plows streets first and then begins to clear 11 miles of pathway. It should be noted that the three-mile East Shore Trail is closed during the winter to prevent hazardous conditions and is therefore not plowed.



Once the roads are clear, pathways along school routes are plowed first. Pathways connecting to commercial areas typically receive secondary priority. With a typical storm, roads on every street will be cleared the day of the event, with the plows going back on the second day to push the snow back. This means that the pathways usually get cleared during day two or three. With a big storm event it can take from five days to over a week for the pathways to be cleared. Real-time snow plow information is available on the “Where’s my Plow” feature on the Washoe County website.

Other factors also impact the capacity of crews to respond to storm events. Because of water quality concerns for Lake Tahoe, crews must sweep and maintain roads between events. Additionally, crews often help residents and visitors retrieve vehicles stuck in the snow and provide snow safety education to area school students.



### 3.3 Parking

Parking has been and will continue to be an important issue for the communities of Incline Village and Crystal Bay. Parking-related concerns have been documented in numerous local and regional plans and studies over the years, and outreach during this plan has confirmed many of these issues.

#### Incline Village Parking Examples



#### Study-Identified Parking Concerns

Parking issues identified as part of this study's planning process can be divided into four main categories: environmental concerns, safety issues, trail and transit access, and land use/destination access.

"Parking is of significant community interest throughout the plan area. Parking availability affects access to all land use types. During summer weekends, public parking areas are at capacity, leading to potentially dangerous roadside parking. To continue supporting the needs of the local residents, the community's many special events, and the underlying tourism-based economy, the County must work to develop a compressive approach to parking in the planning area. The approach should balance the immediate need to provide adequate parking with the desire to encourage alternative transportation modes that do not carry the same parking demand." –Tahoe Area Plan

**Environmental Concerns:** Current parking patterns are potentially damaging to the area's water quality and drainage. When spaces are difficult to find, vehicles have been seen parking on top of dedicated drainage areas, which impedes drainage and increases sedimentation. This also damages the infrastructure investments in water quality that have been previously made.

**Safety Issues:** Roadside parking in inappropriate areas presents a safety hazard for all roadway users, particularly pedestrians, and bicyclists.

**Trail and Transit Access:** Improperly parked vehicles also block multiuse trails, sidewalks, and transit stops. Boat and recreational vehicle (RV) parking is particularly problematic, as these larger and longer vehicles are more likely to block entrances.



**Land Use:** Overflowing parking can impact residents, spilling over onto residential streets or into dedicated apartment/condominium lots.

Several location-specific parking concerns have also been identified as part of this study, including:

- Improper parking is especially problematic along the section of Lakeshore Boulevard between Village Boulevard and Country Club Drive.
- Motorists blocking fire hydrants also pose a safety hazard in a number of areas, such as near Northwood Boulevard and McCourry Boulevard.
- Overflow on-street parking is problematic along Oriole Way, adjacent to apartment complexes. Vehicles have been observed blocking walkways and access points.

### 3.4 Transit Service

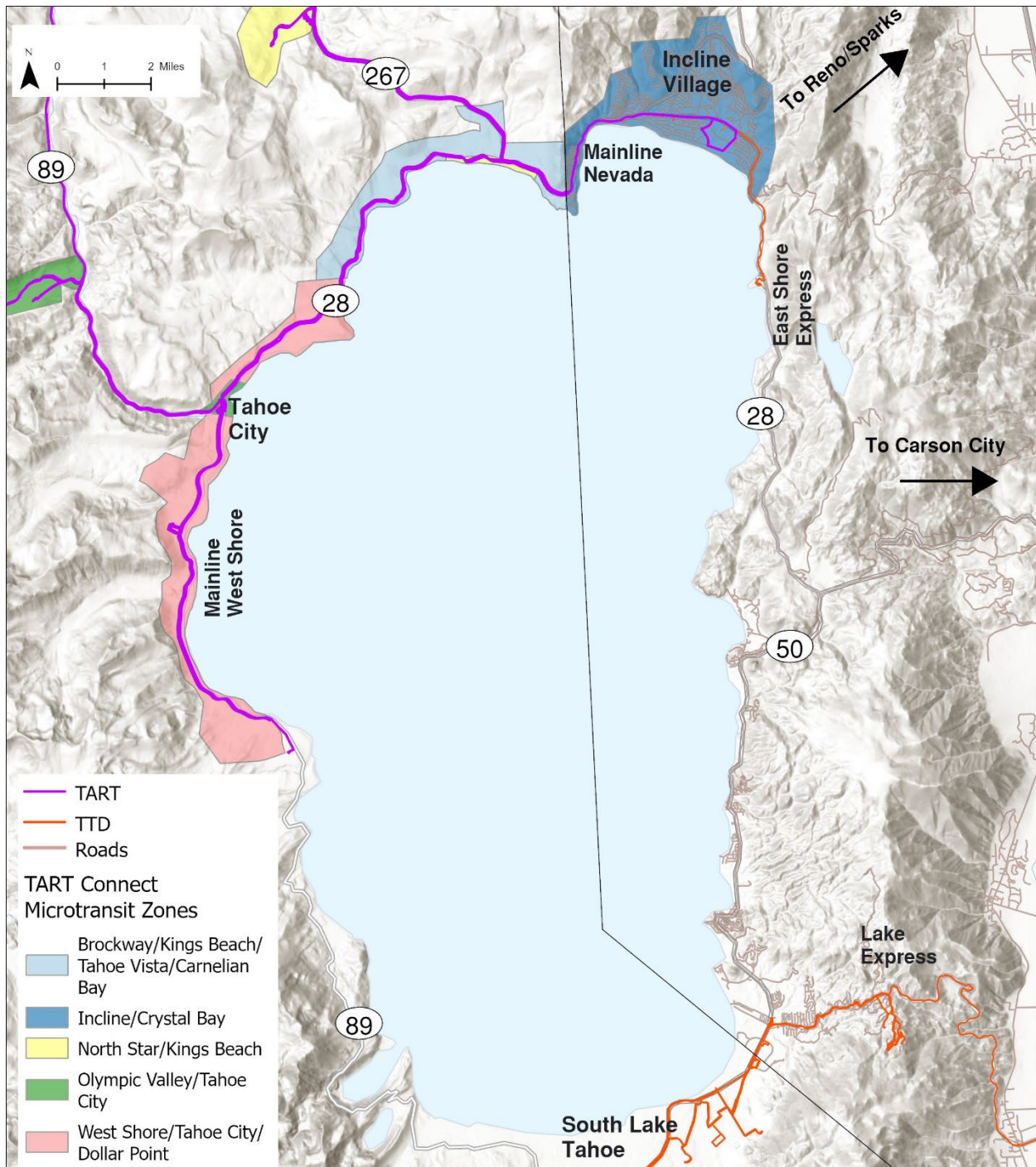
Transit service in the Tahoe Region is primarily provided by the Tahoe Truckee Area Regional Transit (TART) on the north side and Tahoe Transit District (TTD) serving South Lake Tahoe. Both agencies provide connections to Incline Village. Service between the north and south shores has been dependent on funding and weather. TART Connect is an on-demand microtransit service in Incline Village and other parts of the TART service area.

Other services in the region include Lake Link, an on-demand service in South Lake Tahoe operated by the South Shore Transportation Management Association. The Tahoe Airporter is a private shuttle providing connections between Stateline and the Reno-Tahoe International Airport. Another private shuttle services include the North Lake Tahoe Express with connections between Incline Village and the Reno/Tahoe International Airport, and the Diamond Peak Ski Shuttle that offers seasonal service. A vanpool program is provided by the RTC for commuting trips to, from, or within Washoe County.





### Exhibit 3-2: Transit Service Overview



#### Tahoe Truckee Area Regional Transit

Placer County operates TART. There are eight fixed routes and six TART Connect zones. TART Connect is an on-demand service that allows people to call in to schedule a ride. TART Connect Incline Village (Zone

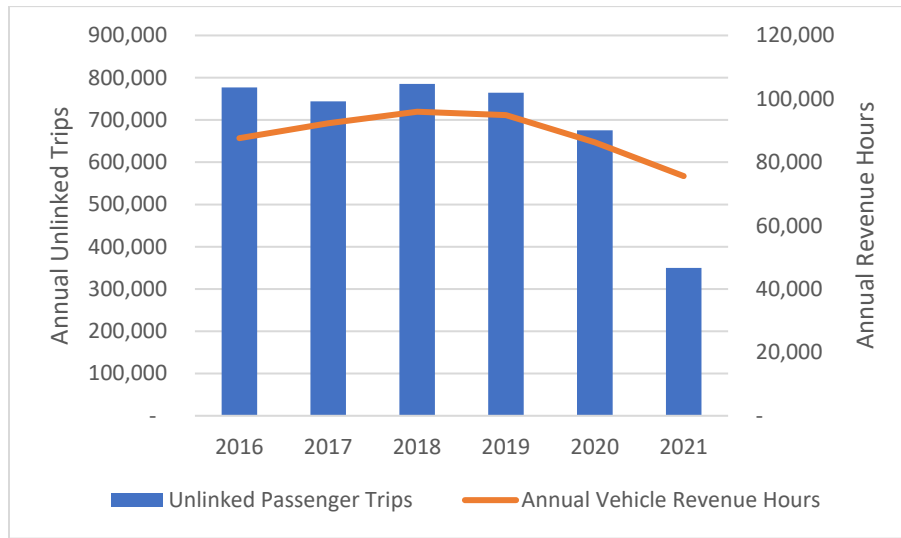




3) began in 2021. Fixed routes and TART Connect are free for all passengers. Winter hours and schedules begin in December, but hours are reduced beginning in September with the fall schedule.

Overall, ridership has declined since COVID, consistent with nation-wide trends. Placer County reduced service by 12% in 2021, but ridership fell by 48% from the previous year, according to the National Transit Database reporting.

### Exhibit 3-3: TART Systemwide Annual Ridership and Level of Service



Source: National Transit Database Annual Agency Profiles

#### Fixed Route

The Mainline route (Route ML) travels between Incline Village and Tahoma on the western shore of Lake Tahoe. The schedule is broken into three segments: the West Shore, North Shore, and Incline Village. It operates every hour, though some trips travel only as far east as Crystal Bay. Incline Village does not have transit service between 9:00 a.m. and 11:00 a.m., and the last trip of the day departs Incline Village at 4:30 p.m. Route Hwy 267 route travels between Crystal Bay and Truckee with hourly service.

### Exhibit 3-4: TART Fixed Route Service to Incline Village and Crystal Bay

Service Type	Route	Summer Operating Hours	Fall Operating Hours
Day Service	Mainline (service to Incline Village and Crystal Bay)	6:10 a.m. – 7:00 p.m.	6:00 a.m. – 5:56 p.m.
	Hwy 267 (service to Crystal Bay)	7:00 am – 12:25 am	7:00 am - 5:52 pm
	Hwy 89 (service to Crystal Bay)	6:30 am – 6:28 pm	6:00 am - 6:52 pm
Night Service	Crystal Bay – Northstar		6:00 p.m. – 9:25 p.m.
	Crystal Bay to Olympic Valley	6:35 p.m. – 11:35 p.m.	6:35 p.m. – 10:35 p.m.

Riders in Nevada make up between 19 and 27% of the total ridership of Mainline route. In the past year, ridership was highest between December 2021 and March 2022.

**Exhibit 3-5: Average TART Mainline Daily Ridership, by Month**

Month and Year	Daily Ridership	Nevada-Only Ridership (Subset)
November 2021	311	71
December 2021	465	110
January 2022	506	133
February 2022	559	153
March 2022	465	123
April 2022	282	58
May 2022	298	65
June 2022	457	102
July 2022	374	74
August 2022	341	65
September 2022	375	79
October 2022	292	63

Source: Placer County, 11-2-22

Estimates for ridership per service hour on the ML route are calculated based on nine service hours per day for the Nevada portion of the route. These calculations assume one bus is used to provide the service. Passengers per service hour, also called route productivity, ranges from a low of 6.4 riders per revenue hour in April 2022, to a high of 17 in February of 2022.

**Exhibit 3-6: Estimated Riders per Revenue Hour, by Month – TART Mainline Route**

Month and Year	Riders per Revenue Hour in Nevada Only
November 2021	7.9
December 2021	12.3
January 2022	14.8
February 2022	17.0
March 2022	13.7
April 2022	6.4
May 2022	7.2
June 2022	11.3
July 2022	8.3
August 2022	7.2
September 2022	8.7
October 2022	7.0

Source: Placer County, 11-2-22





### Paratransit

Complementary paratransit taxi service is available to eligible riders anywhere within  $\frac{3}{4}$  of a mile of the fixed route bus service provided by TART, consistent with the Americans with Disabilities Act (ADA) requirements. A person must call 24 hours before a ride is needed to request a trip. Trips can be requested up to 14 days in advance. Service is offered between 6:00 a.m. and 6:00 p.m.

### TART Connect

TART Connect offers free curb-to-curb, on-demand service for any trip within the defined service areas in Truckee and North Lake Tahoe. Riders can use the TART Connect app or call the phone number to reserve a trip. TART Connect vehicles are equipped with bike racks and are ADA accessible. Riders can make connections to fixed-route transit or TART Connect's Zone 2 in Crystal Bay. A summary of the TART Connect zones is provided below:

- Zone 1 – Olympic Valley, Tahoe City, Sunnyside, Homewood, Tahoma, and Carnelian Bay
- Zone 2 – Northstar, Kings Beach, Brockway, Crystal Bay, Tahoe Vista, and Carnelian Bay
- Zone 3 – Incline Village and Crystal Bay

Zone 3 service operates from 8 a.m. until 12 a.m. daily during the summer. During fall and winter it operates from 6 p.m. until 10 p.m. Sunday through Thursday and 6 p.m. until 12 a.m. on Friday and Saturday.

### Exhibit 3-7: TART Connect Vehicle



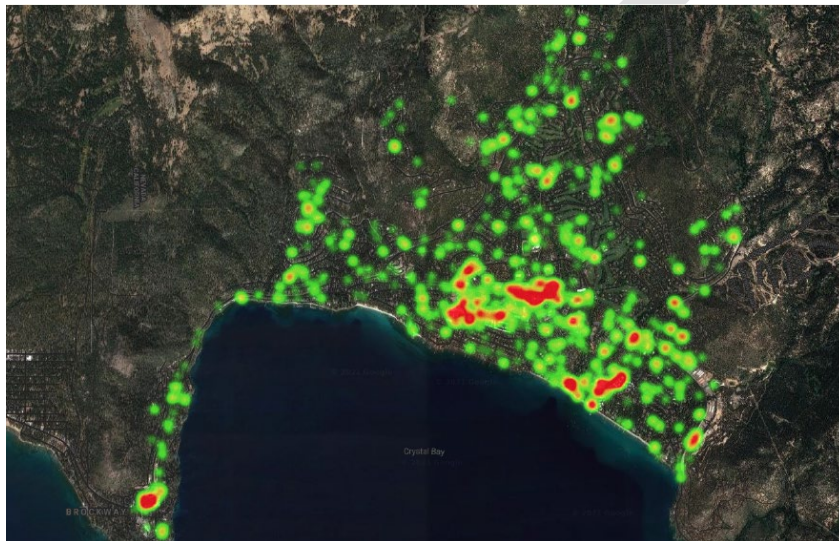
*Source: Tahoe North Truckee Transportation Management Association*

TART Connect Incline Village (Zone 3) has the highest ridership between the three year-round services (Zones 1 – 3). Ridership performance trends are shown in Exhibit 3-9. Ridership is highest during the summer and winter seasons, with ridership per revenue hour growing as the service matures, even in the off-peak seasons.

**Exhibit 3-8: TART Connect Incline Village Performance Report**

Season	Dates	Daily Average Ridership	Ridership per Revenue Hour
Summer 2021	June 24 - September 6	323	8.3
Fall 2021	September 7 - December 9	89	7.2
Winter 2021	December 10 - April 10	372	8.6
Spring 2022	April 11 - June 30	99	9.1
Summer 2022	June 30 - September 5	489	9.8
Fall 2022	September 6 - October 15	101	9.9

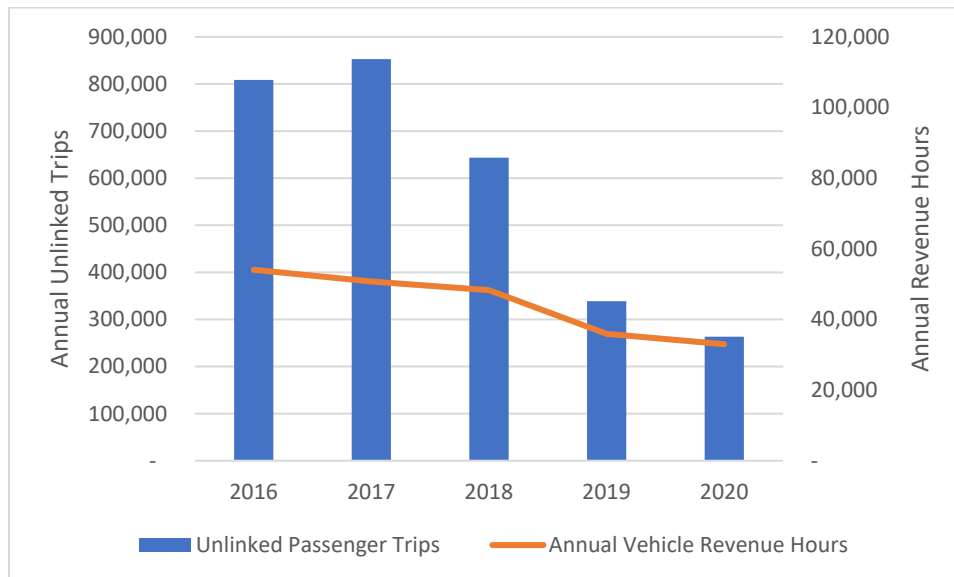
As shown in the figure below, TART Connect is utilized at residential and commercial locations throughout Incline Village. It is an important resource for providing convenient access to shopping, restaurants, and recreation access points

**Exhibit 3-9: Heat Map of TART Connect Summer 2021 Pickup Location****Tahoe Transportation District**

TTD operates primarily on the south shore of Lake Tahoe. TTD operates the East Shore Express summer service, which connects Incline Village and Sand Harbor State Park. Service along the east shore between South Lake Tahoe and Incline Village occurs once in the morning and evening when the East Shore Express is operating. TTD is current developing an update to the short-range transit plan.

Systemwide, ridership has declined over recent years, consistent with national trends. TTD reduced service by 6% in 2021, and ridership fell by 6% from the previous year, according to the National Transit Database reporting. This includes fixed-route and demand response service. Ridership in 2017 peaked at over 850,000 unlinked passenger trips. Service has been reduced 39% since then and ridership has dropped 71%.



**Exhibit 3-10: TTD Systemwide Annual Ridership and Level of Service**

Source: National Transit Database Annual Agency Profiles

**Fixed Route**

TTD's fixed route schedule is shown in Exhibit 3-11. Routes 50 and 55 serve South Lake Tahoe, whereas routes 19X, 22, and 28 connect the region.

**Exhibit 3-11. Tahoe Transportation District Schedules**

Route	Type of Service	Days of Operation	Operating Hours
19X	Regional Connection	Daily	6:15 am – 6:53 pm
22	Regional Connection	Daily	7:00 am – 8:17 pm
28/East Shore Express	Regional Connection	Daily, Summer only	10:00 am – 6:30 pm
50	Community Connection	Daily	6:30 am – 8:38 pm
55	Community Connection	Daily	6:00 am – 6:50 pm

Route 28, known as the East Shore Express, runs between late June and Labor Day weekend, but was discontinued for two years during COVID-19. In 2022, it returned with modifications. The route ended a half hour earlier in the evening than previous years. In 2019 when three buses operated on the route, there were 36,815 passengers in the summer season. In 2022, with one bus operating the service and no advertising of the service returning, there were 29,161 total passengers.

**Exhibit 3-12: Performance of the East Shore Express, 2022**

Month	Days of Service	Daily Average Ridership, Weekdays	Daily Average Ridership, Weekends	Average Boardings per Revenue Hour, Weekdays	Average Boardings per Revenue Hour, Weekends
June	6	144	104	17	12
July	31	441	528	52	62
August	31	279	719	33	85
September	4	313	560	37	66

Note: Expanded hours for holidays such as Independence Day are not included

#### Paratransit Service

ADA-accessible dial-a-ride services are offered within one mile of fixed routes in South Lake Tahoe. Services are shared-ride, origin to destination transportation service, provided to individuals with disabilities. Reservations for dial-a-ride services are taken by phone daily.

#### Fares

In 2020, TTD began offering zero-fare service on all transit routes to make travel safer in response to COVID-19 by eliminating fare exchanges between transit operators and riders.

#### Regional Transportation Commission of Washoe County

RTC implemented a microtransit pilot program between Reno and Incline Village during the summer of 2021. The purpose of the pilot program was to offer public transit connectivity between the Truckee Meadows and Incline Village, reduce traffic along SR 28, and help maintain the Lake Tahoe Region environment. The service was offered between 7 a.m. and 9 p.m. Monday through Friday for \$5 per person per trip. An additional \$2 was added for trips that included admission to Sand Harbor State Park. The ADA accessible vehicle included bike racks. Reservations were required to be made one to three days in advance. The service extended from the Summit Mall park-and-ride lot in Reno along Mt. Rose Highway to Incline Village and Sand Harbor State Park. The service was advertised on local television channels and social media.

A total of 342 passengers used the service between May and August. The highest number of passengers on a single day was 26. Two-thirds of all trips had one or two passengers. The majority of trips, 61%, were to Sand Harbor State Park. Other primary destinations included Raley's (13%) and the Hyatt Regency (11%). Several factors contributed to the low ridership, including COVID-19 restrictions, construction on Mt. Rose Highway, evacuations and smoke resulting from the Caldor Fire, and a shortage of transit vehicle drivers. Due to the low ridership and ongoing labor shortage, RTC did not renew the pilot for 2023.



### 3.5 Trip Reduction Programs

There are several Trip Reduction Programs already underway in the Incline Village and Crystal Bay communities: the RTC operates the RTC Smart Trips Program and Vanpool Program, the Tahoe Regional Planning Agency operates Commute Tahoe, and the TNT/TMA oversees several programs and services to manage transportation demand across the area.



**RTC Vanpool Vehicle**

**RTC Smart Trips:** RTC Smart Trips is a free service provided by the RTC to help local businesses encourage employees to use alternative modes of transportation, including public transit, bicycling, walking, carpooling, and vanpooling. RTC provides information and resources on their website for individuals and businesses who are interested in using the program. The site outlines the benefits of alternative transportation usage for the community, as well as for individuals and business owners. Key program offerings include:

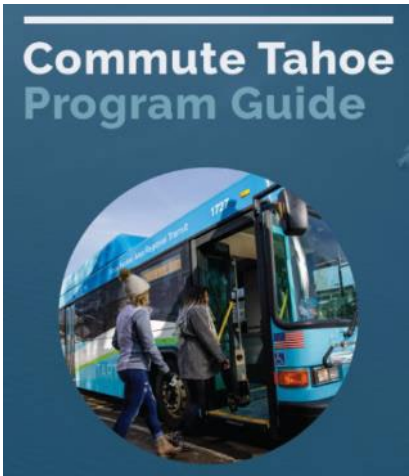
- **RTC Vanpool** – Vanpools allow 5-14 people to commute together at substantially reduced costs compared to driving alone. Vanpooling also helps reduce vehicle miles of travel and associated environmental impacts. The van is driven by one of the members and passengers are picked up at pre-arranged locations. Expenses for the vehicle and fuel are shared by the riders and subsidized by RTC. Employers have the opportunity to further subsidize the vanpool cost. RTC has partnered with Commute with Enterprise, an organization that supplies the vehicles and provides maintenance and insurance. Vanpools are well suited to long commuting distances, such as between Incline Village and the Reno/Sparks metro area. At the beginning of this year there were no vanpools being used in Incline Village, and as of December 2022 there are four travelling to the Hyatt Regency Lake Tahoe.
- **Commuter/Tax Benefits** – Federal tax code allows employees to deduct up to \$300 per month from their paycheck before taxes to pay for transit and vanpool expenses.
- **RTC Rideshare** – A web-based service that assists with carpool matching.
- **Guaranteed Ride Home (GRH)** – Employees are guaranteed a ride home from work by taxi if they carpool or vanpool to work and are registered for the GRH Program. This benefit mitigates the fear of being stranded at work if an extenuating circumstance arises during the day.





**TRPA Commute Tahoe:** Commute Tahoe is a regional program designed to help employers encourage their employees to bike, walk, carpool, or take transit to and from work. The overarching goal of the program is to reduce vehicle trips and traffic congestion throughout the region. The program website includes resources for both employers and employees, discussing program benefits, tools, and tips for measuring program success post-implementation. TRPA works closely with the north and south shore TMAs to utilize the tools developed from the Commute Tahoe Program.

**Tahoe North Truckee TMA:** The TNT/TMA markets and supports a number of local and regional transit services, including the TART, TART Connect, the North Lake Tahoe Express Airport Shuttle, the South Lake Tahoe (TTD), and private car and charter services. These services provide a variety of alternatives to area residents for using transit to access work and other daily destinations.





## 4 – Community Engagement

Washoe County is committed to developing and implementing robust community engagement processes. The outreach process for the Tahoe Transportation Plan was designed to provide opportunities for community members and other stakeholders to share thoughts, concerns, and comments in a variety of ways, throughout the planning process. Engagement opportunities included a project website, a virtual public meeting, an online survey, an interactive comment map, an in-person public meeting, and numerous agency/stakeholder meetings.

### 4.1 Project Website

A project website was developed to house information and provide updates throughout the duration of the planning process. The website included an overview of the study purpose, a timeline and major milestones, contact information for the study team (to provide comments and feedback), and links to additional resources. The website was updated periodically with new information about engagement opportunities and draft study materials.

#### Project Website



### 4.2 Virtual Public Meeting

A virtual public meeting was held between June 6 and July 22, 2022. Meeting materials included a presentation from Washoe County Commissioner Alexis Hill, along with an online survey and interactive comment map (summarized in the following sections). The meeting was advertised primarily through Washoe County's social media outlets, including Facebook and Twitter, along with a press release to regional media. Partner agencies also publicized the meeting through social media and other channels. A flyer was also posted at several community boards throughout Incline Village.

#### Online Survey

An online survey was available between June 6 and July 22, 2022, as part of the virtual public meeting. The agency received 243 responses to the survey, primarily from year-round residents of the Incline Village/Crystal Bay areas. A significant number of responses were also received from individuals who visit the area for recreational day trips (such as lake access, hiking, bicycling, dining).

The survey was designed to better understand the travel patterns, needs, and preferences of both residents and visitors. Questions were asked about State Route 28 usage and concerns, snow removal along multi-use trails, current and future transit use, and experiences with parking in the area. Responses are summarized below:

**State Route 28 (SR 28):** Survey respondents were asked how often they travel along the SR 28 corridor. Responses were split, with visitors (and some residents) using the corridor monthly or less (27 percent) and residents using the corridor daily (22 percent), 2-3 times per week (16 percent), or weekly (11 percent).



When asked about their top concerns about the SR 28 corridor, a number of issues arose, including traffic congestion/reliability, crashes/speeding/safety issues, not enough safe places to walk and bicycle, and a lack of parking/safe parking opportunities. Traffic congestion was the top concern for 36% of survey participants, followed by crashes/speeding/safety issues (24%) and not enough safe places to walk and bicycle (16.5%).

**Snow Removal:** When asked about prioritizing snow removal on multi-use trails, respondents cited access to schools, commercial centers, and parks and recreation facilities as their top three priorities, respectively. As expected, prioritization varied among residents and visitors.

**Transit Use:** Nearly 67 percent of survey respondents had never used transit in Incline Village or Crystal Bay. Those who had used transit had mainly used the TART Connect (within Incline Village) or the TART Mainline (to the North Shore of Lake Tahoe).

When asked which type of transit service they would be most likely to use in the future, respondents mainly chose service to/from Reno or Carson City (54 percent) or service within Incline Village and Crystal Bay (39 percent). Other popular responses were service to travel from Incline Village/Crystal Bay to the Lake Tahoe South Shore (32 percent) and North Shore/Truckee (35 percent). Respondents were able to choose more than one answer.

**Parking:** The majority of survey respondents indicated that they park in Incline Village or Crystal Bay for a relatively short time period – either between 1-3 hours (33 percent) or less than 1 hour (30 percent), which is well-aligned with the typical visitor trip purposes of recreation and dining. Respondents noted that parking is most challenging at parks and recreation areas and on residential streets.

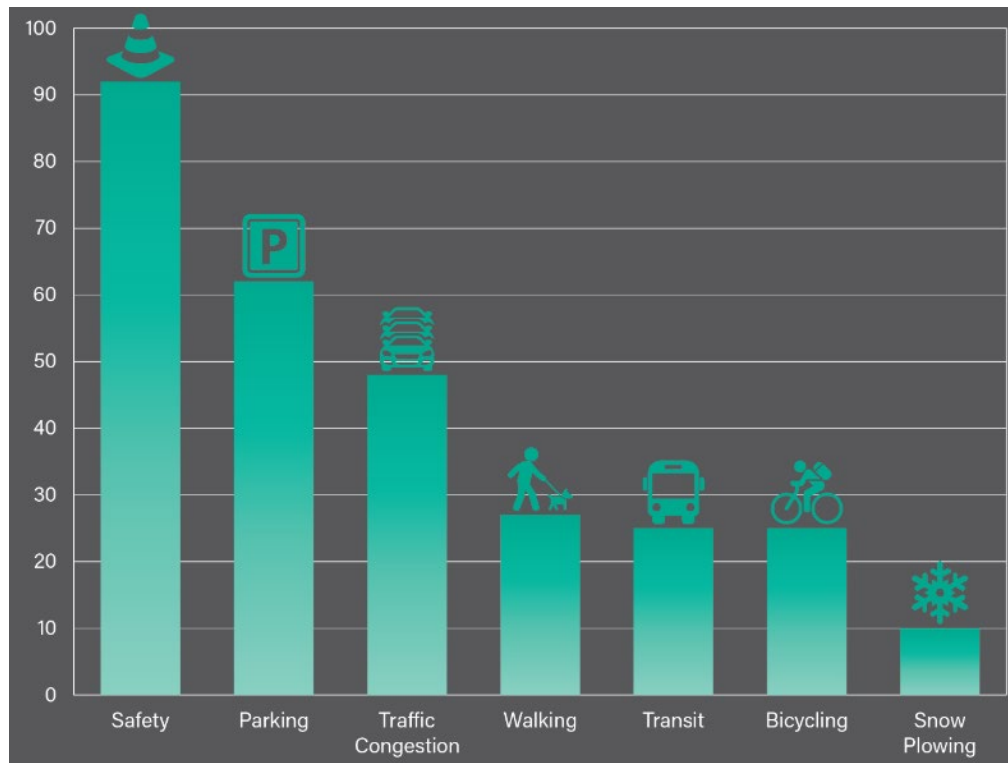
#### **Interactive Comment Map**

An interactive comment map was available between June 6 and July 22, 2022 (also as part of the virtual public meeting), and the agency received a total of 289 comments. The platform allowed users to drop a location-specific comment on the map related to seven different topic areas. The number of comments received under each topic area is summarized in Exhibit 4-2.





#### Exhibit 4-1: Summary of Comments in Online Map Survey



As with the online survey, the majority of comments on the interactive map were left by residents of Incline Village or Crystal Bay (196 of the total 289, or 68 percent).

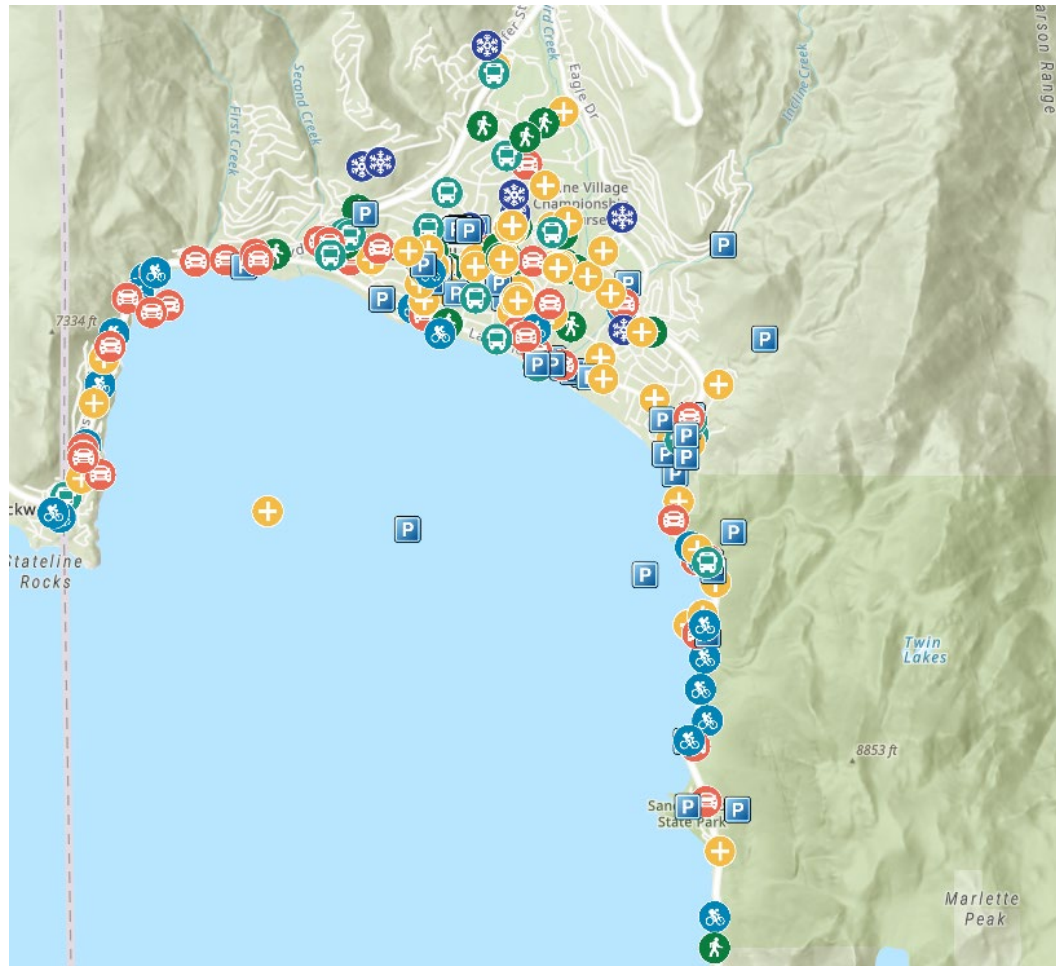
Major themes among the comments included concerns about:

- Speeding
- The need for various intersection safety improvements
- Unsafe vehicle passing, particularly along SR 28
- On street parking (such as lack of availability, boat/RV parking in residential areas)
- Disconnected sidewalks
- Narrow bike paths and unsafe conditions for on-road cycling
- Mobility hubs (presence/location)

There were clusters of comments left in several areas, as shown in Exhibit 4-3. Along with field work, data analysis, and online survey results, these clusters of comments helped the study team identify hot spots for further investigation.



## Exhibit 4-2: Interactive comment map response locations



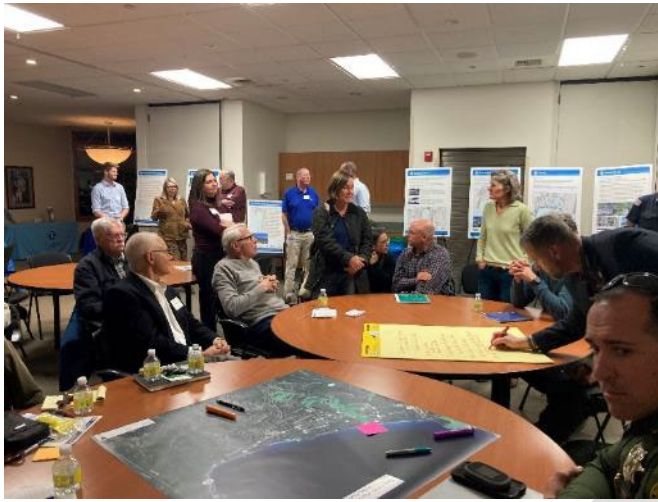
### 4.3 In-Person Public Meeting

An in-person, open house-style public meeting was held on November 16, 2022, at the Parasol Tahoe Community Foundation in Incline Village. This meeting provided an opportunity for members of the community to learn about proposed alternatives and provide input. The meeting was held from 4 p.m. to 7 p.m. and included a formal presentation at 5:30 p.m., followed by a series of small group discussions. The non-structured portion of the meeting preceding the presentation allowed visitors time to view boards and other study materials, interact with project team members, ask questions, and leave comments about proposed solutions. In addition to boards and handouts about the study itself, materials were also available highlighting partner agency initiatives.

The meeting also included an outdoor demonstration area, including vanpool, TART, and TART Connect vehicles for attendees to view and board. This demonstration was intended to help raise awareness about the transit services available in and around Incline Village and Crystal Bay.



## Public Meeting, November 16, 2022



The meeting was attended by about 40 people. General support was expressed for the intersection improvements identified in the presentation. Additional concerns about conflicts between pedestrians, bicyclists, and e-bikes were discussed. Corridors of emphasis for enhanced multimodal improvements included Village Boulevard and Lakeshore Drive. The concept of a bicycle boulevard for Lakeshore Drive was suggested during the meeting and carried forward into this report. General concerns about high visitor volumes were also identified.

### 4.4 Agency/Stakeholder Meetings

Throughout the course of the study, many meetings were held with advisory boards and committees, partner agencies, and other stakeholders.

***Incline Village/Crystal Bay Citizens Advisory Board (CAB):*** The CAB served as the community advisory committee for this study. The study team presented at the CAB meetings in April, June, August, October, and December of 2022. The CAB is a group of community members who meet regularly to discuss topics of interest within Washoe County neighborhoods. The study team engaged with this group throughout the project so that the perspective of residents was being heard and incorporated.

***Project Technical Advisory Committee:*** The study team also presented at Technical Advisory Committee (TAC) meetings in March, May, July, and August of 2022. This committee included staff from Washoe County and partner agencies, including: NDOT, Placer County, TTD, TRPA, RTC, TNT/TMA, and Travel North Tahoe Nevada. This committee provided guidance to the project team, provided technical input, and helped facilitate coordination among the partner agencies.

The study team presented similar material to the two groups on a consecutive cycle. Thus, the summary of presentation topics below groups the meetings together in this fashion.

- At the March/April meetings, the team provided an overview of major project objectives and emphasized opportunities for community engagement throughout the study.
- At the May/June meeting, the study team advertised the upcoming virtual public meeting, and provided information about planned improvements along SR 28. The team also provided an overview of the TART Connect service.





- At the July/August meeting, the study team provided an overview of feedback received from the online survey and interactive comment map, focusing on major themes.
- At the August TAC/October CAB meeting, the study team presented proposed alternatives for group feedback and discussion. Concepts focused on improving safety along SR 28 (including intersections), multiuse path connectivity, and mitigating parking concerns. The team also advertised the November in-person public meeting.
- At the December meeting, the study team presented the public meeting materials and listened to discussion from the committee. The need for additional data for future study was identified, as well as concerns about pedestrian safety at intersections and e-bikes.

**Other Agency Meetings:** The study team also met with a number of other agencies and groups throughout the development of this plan. The meetings can generally be grouped into five major categories: data coordination, NDOT coordination, transit agency coordination, peer agency interviews, and resident/business advocacy groups.

**Data Coordination:** Several meetings were held with staff from the TTD and TRPA to discuss data needs and availability for the study. The group also discussed the potential role of transportation technology, including fiber, real time parking management, and e-bikes, and future grant opportunities.

**NDOT Coordination:** Coordination with NDOT was particularly important for this project given the critical role SR 28 plays in these communities. A number of meetings were held with various NDOT staff, focused mainly on needs and proposed improvements along SR 28. These meetings helped ensure consistency and continuity between study recommendations and planned improvements.

**Transit Agencies:** There are multiple transit services operating within the study area, as well as multiple operators. One of the main objectives of this plan was helping to raise awareness about transit service alternatives and improve coordination between the services, communities, and other modes of transportation. A series of meetings was held with various operators to better understand existing service provision and identify opportunities for improvement. Topics discussed included opportunities to expand existing vanpool services and the Commute Tahoe Program, investments in services from between RTC service area and the Tahoe Basin, lessons learned from RTC's FlexRIDE pilot, and general employee-centered initiatives in Incline Village.

**Peer Agency Interviews:** The study team conducted a series of interviews with peer agencies to help determine best practices and lessons learned for snow plowing in other resort/mountain communities, particularly on multiuse paths. Interviews were held with representatives from Vail, Colorado; Park City, Utah; and Steamboat Springs, Colorado. Meetings were also held with Washoe County staff to better understand current snow plowing procedures and needs in the study area.

**Resident/Business Advocacy Groups:** The project team met with the Incline Village – Crystal Bay Community Forum on September 16. This meeting was shortened due to technical difficulties, but information was shared about the upcoming public meeting. The study team participated in a meeting facilitated by local employers with a focus on workforce housing and transportation needs. On November 28, 2022, the project team attended a meeting of the Incline Village Crystal Bay Association (IVCBA), which seeks to strengthen the sense of community and support vibrant businesses in Incline Village through a Main Street initiative.



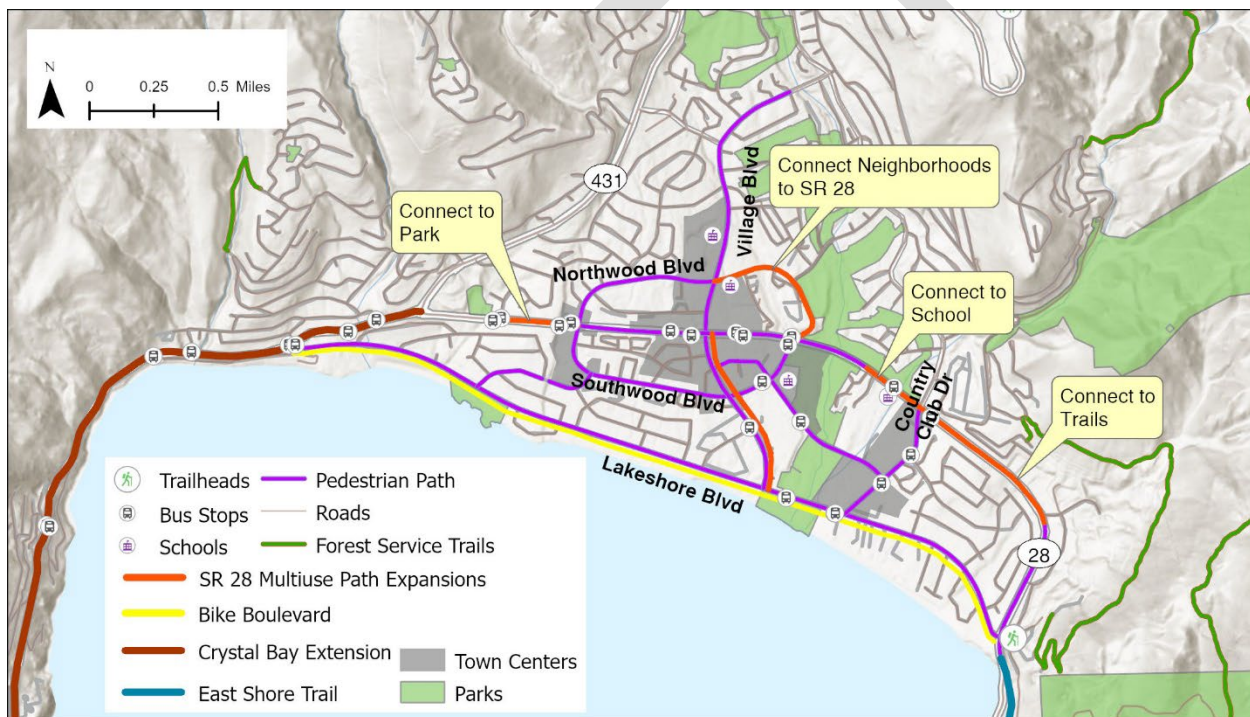
## 5 – Recommendations

### 5.1 Bicycle and Pedestrian Facility Improvements

Bicycle and pedestrian facility recommendations are summarized below, including sidewalk, bike lane, and multiuse path improvements. These improvements are discussed together, as these facility types work together to form a non-motorized network for system users.

- **Pathway Connectivity:** Several gaps have been identified in the multiuse path network. Recommended connections and extensions are shown in Exhibit 5-1, focusing on key community destinations such as parks, schools, and other recreational facilities. Most of these improvements can be implemented as stand-alone projects and phased according to priority and funding availability. Recommended multiuse path extensions are located on SR 28, Northwood Boulevard, and Village Boulevard.

**Exhibit 5-1: Bicycle and Pedestrian Facility Gaps and Recommended Connections**



- **Driveway Crossings:** Wide driveway crossings pose a safety hazard for pedestrians and bicyclists using the area's multiuse paths in several locations. Crosswalk treatments could be used to raise motorist awareness to the path crossing locations. Longer term needs include redesigning and/or consolidating access points to reduce potential conflicts.





## Driveway Crossing Treatment Options



- **SR 28 Multiuse Path:** Extending the multiuse path along SR 28 further to the west and south towards Crystal Bay has been identified as a regional priority in the RTP. Due to the complexity and environmental constraints in this corridor, further alignment analysis and environmental studies are needed. These improvements would improve multimodal access between residential and commercial locations. An additional benefit of this connection is better distribution of parking demand due to an additional access point.

## SR 28 Between Incline Village and Crystal Bay



- **Lakeshore Boulevard Bicycle Boulevard:** A bicycle boulevard treatment is recommended for Lakeshore Drive. This would include painting “bike boulevard” markings on the roadway and installation of signage to indicate that bicycles are able to utilize the full lane. This would slow





traffic and provide e-bikes with an alternative to using the narrower multiuse paths in this corridor and contribute to traffic calming.

### Riverside Drive Bicycle Boulevard, Reno, NV



### 5.2 Winter Maintenance

The study team conducted a review of existing conditions in Washoe County and best practices related to trail maintenance in high altitude resort communities to help inform study recommendations. As described in Chapter 3, current snow removal practices on multiuse paths focus first on connections between residential areas and schools (elementary schools, followed by other schools). Pathways to other commercial areas are the second priority. The East Shore Trail is closed during snow events for safety reasons and snow is not removed.



The virtual public meeting for this study included an opportunity for community input on snow removal concerns. When asked about prioritizing snow removal on multi-use trails, respondents cited access to schools, commercial centers, and parks and recreation facilities as their top three priorities, respectively. It is noteworthy that the prioritization recommended by survey participants is consistent with the existing Washoe County practice.

Three peer communities were interviewed about snow removal practices: Park City, Utah; Vail, Colorado; and Steamboat Spring, Colorado. Questions and discussion emphasized snow plowing, which is of particular concern for these types of communities. The staffing and operating characteristics of the public works and/or parks and recreation departments of these communities are summarized in Exhibit 5-2, as compared to Washoe County.

**Exhibit 5-2: Staffing and Operating Characteristics of Peer Communities**

	<b>Washoe County, NV</b>	<b>Park City, UT</b>	<b>Vail, CO</b>	<b>Steamboat Springs, CO</b>
Responsible Jurisdiction	Public Works	Public Works	Public Works	Public Works, Parks and Recreation
Miles of Trail	11	20*	6	12
Workers	7	6	16	20
Equipment	Maclean MV4 80" blower	Bombardier ATV snowplow Small snowcat w/ blade Rubber track skid steer	Small loader Bobcat Trackless snowplows	Bobcat Toolcat Skid steer John Deere backhoe
Overall Priority	Roads	Roads	Emergency service roads and bus routes	N/A: separate crews for streets and trails
Trails Priority	Schools and residential areas	Schools and commercial centers	Residential Areas	Primary river trail, then adjoining trails

\*Includes sidewalk

A common finding from the peer community interviews is that they all have well established and successful snow removal operations. When asked if there were any areas they would like to make changes, none had anything to change. Similarly, none of the communities indicated a lack of staffing or capacity, which is likely a key contributor to their success. Other things that were identified as working well for these communities include:

- Using the best available equipment
- Managing resident expectations
- Clearing main areas as early as possible
- Not responding to requests to help stuck vehicles
- Closing some trails in winter months

Best practices and recommendations are as follows:

**Staff Capacity:** Staffing is a challenge due to housing affordability in the Lake Tahoe region and the difficulty of commuting to Incline Village from Reno/Sparks during storm events. Additional staff would help the county ensure more effective and timely wintertime operations. Currently, roadway crews clear roads and then begin working on multiuse paths, with school areas as the highest priority. Having additional staff would allow for concurrent work on roads and paths, as well as in Incline Village and Crystal Bay. The current Washoe County staff are highly experienced and knowledgeable about the locations of existing paths and other infrastructure, which is critical to avoid damaging resources that cannot be seen under multiple feet of snow. It was noted that labor availability impacts NDOT and private sector contractors in the snow removal industry, as well as Washoe County.







**Equipment:** Washoe County has one piece of equipment appropriate for plowing pathways and trails, which is also used for some road clearing activities. At a minimum, adding one or more additional pieces of plowing equipment would help with redundancy and coverage during breakdowns. Paired with additional workers, additional equipment would also allow the County to better prioritize the clearing of multiuse paths.

**Tandem Crews:** Steamboat Springs is unique, having separate crews for roadway and trails. This allows them to do both at once and removes the need to place priority on one or the other. Additional staff and equipment could allow the County to adopt such a model.

**Policies and Partnerships:** The County may consider implementing a requirement for certain types of landowners to clear pathways traversing their property, such as in commercial areas. County Code requires that residents and business owners shovel sidewalks that front their properties and this could be used as a precedent for such a policy. As noted in Chapter 3, relatively few sidewalks exist in Incline Village, which is primarily served by multiuse paths.

### 5.3 Parking Management

As discussed in Section 3.2, the Incline Village and Crystal Bay areas are currently experiencing a number of parking-related challenges. Recommendations are focused on mitigating these challenges by better managing existing parking resources rather than continuing to add parking.

#### No Parking Signage

There are a number of areas across these communities where parking is problematic that are not adequately signed to prohibit parking. No parking signage is an important first step in helping both residents and visitors better understand where parking is and is not appropriate. In particular, no parking signage should be installed along Country Club Drive between Lakeshore Boulevard and Country Club Villas to prevent motorists from blocking the bus stop and multiuse path.

No parking signage could also be combined with signs explaining the problems created by illegal parking in a given area. For example, the environmental ramifications of parking in a drainage area or the logistical problems created by blocking a transit stop. This messaging could also encourage use of the TART Connect service. As described in Chapter 3, TART Connect is a free, on-demand transit service that will provide rides within Incline Village and Crystal Bay. This service has great potential to reduce parking demand from within Incline Village at popular destinations.

#### Warnings and/or Tickets

Parking enforcement is an ongoing challenge due to the staff hours needed to adequately patrol areas of concern across Incline Village and Crystal Bay. Increased enforcement efforts should be targeted in







the areas with the most impactful parking violations, such as those that regularly create safety hazards or block access to critical services.

As with no parking signage, warnings or tickets could be combined with an educational campaign. For example, a parking violator might receive a flyer on their windshield noting that they are parked illegally and explaining the problems it creates (such as environmental impacts, adverse impacts on Lake Tahoe Water quality, and access to emergency services). The campaign could also help raise awareness of the free TART Connect service the provides access to many popular destinations across the community without the need to find parking.

### [TART Connect Marketing](#)

In addition to potential educational signage and flyers associated with parking enforcement, a general increase in marketing for the TART Connect service could help mitigate some of the community's parking challenges. The service could specifically be marketed as a more convenient alternative to driving around looking for parking. Some changes in the service may be necessary to accommodate visitors wishing to bring recreational gear to the lake.

### [Exploring Parking Opportunities and Real-Time Parking Data](#)

There are several areas located outside the community that may function well as more formalized park-and-ride locations, including Spooner Summit, Mt. Rose Highway, Reno, Carson City, and Truckee. Park-and-ride lots provide the opportunity for out-of-town visitors to park once, outside or on the edge of the Tahoe Basin, and then make use of the communities' transit services and carpooling.

Mobility hubs provide an opportunity to improve access to and throughout Incline Village while reducing impacts on the community and environment. They achieve this by making transit a convenient and accessible transportation option for residents and visitors, reducing reliance on automobiles. Mobility hubs also bring an opportunity to strengthen the sense of community by developing a welcoming public space that contributes to thriving residential and commercial districts. They improve safe multimodal access to employment opportunities, shopping, and recreation resources.

There is also the potential to enter into shared parking arrangements at underused commercial parking lots. For example, there may be opportunities for shared parking when businesses have different peak hours or seasons. These arrangements help make the most efficient use of existing parking with minimal investment or disruption.

In the future, additional analyses may be necessary to explore additional sites for boat and recreational vehicle parking. As with shared parking arrangements, there may be opportunities to better utilize existing parking lots (such as convert ski parking into boat parking during the summer) without new major capital investments or policy changes.

Shared parking opportunities outside of the Lake Tahoe Basin would be most successful if motorists driving into the region are aware when parking lots at popular destination reach capacity. This will require systems to monitor real-time parking utilization and communicate this to incoming visitors. Potential tools include smart-phone based applications, variable message boards, social media, and other alert systems.



## 5.4 Transit Improvements

Service levels and ridership in the Tahoe area have declined over the past few years, but the region is working towards solutions that can incentivize transit ridership. The two main transit providers operate with limited funding as well as within a highly complex administrative and regulatory framework.

**Tie the region together with feeder service to mobility hubs and park-&-ride lots.** Increasing travel options for people to get to Incline Village can reduce the number of people driving personal vehicles. There is an opportunity to build on the marketing that TART and TNT/TMA have done to advertise parking and riding in locations where routes exist (Routes Hwy 267 and Hwy 89). The planned Incline Village mobility hub is an important component of the regional transit strategy, which links the Tahoe Basin with interconnected mobility hubs and a combination of fixed-route and on-demand transit services. In addition to this regional context, the Incline Village mobility hub will provide a connection point that allows local residents and visitors to access commercial, employment, and recreation destinations without relying on an automobile. Tying the region together can include promoting or modifying existing services, as well as working with regional partners to create new services that get people out of their cars sooner and meet at locations that can serve the needs of people traveling to the area for work and play. Using parking lots at Mt. Rose for people traveling from Reno or Spooner Summit for those coming from Carson City are examples of areas that could be explored as connection points.

Due to the unique constraints that limited utilization of the 2021 RTC FlexRIDE pilot program between Reno and Incline Village and caused early closure of the service (including closures related to COVID-19 and wildfires and labor shortages), it is recommended that funding be considered to continue this pilot in a future year. The survey results from this study, as well as high Washoe County visitor volumes to Incline Village and Sand Harbor State Park, indicate the potential for improved performance in a renewed pilot program.

### **Secure long-term funding for regional service.**

- **TTD Route 28 East Shore Express.** Transit connections between north and South Lake Tahoe along the eastern shore of Lake Tahoe have been dependent on funding. Securing long-term funding would help support regional mobility and congestion goals.
- **TART Route ML service between Truckee and Incline Village.** Cellphone data that analyzes where and when people travel might help confirm or modify when Route ML travels into Incline Village. Though there are transfers people can make at Crystal Bay, the last trip out of Incline Village is early and may not be attractive to workers or visitors who may be willing to leave their cars in Truckee.
- **Limited scheduled service from park-&-ride lots.** People are more likely to use Park & Ride locations if there is a base level of transit service that reflects people's desire come and go as freely as possible. Though an all-day transit service may not be feasible, there would need to be more than just one round trip per day. This service will require partnership with transit service providers in surrounding regions.

**Prioritize access to reliable internet.** Riders must be able to schedule on-demand trips and track the real-time location of a bus which will increase ridership and decrease barriers to riding.



**Continue the TART Connect Service.** TART Connect Incline Village has been a success. As ridership demand grows, it will be important to scale the program to keep riders happy with the service. This could mean additional vehicles and operators during peak hours. Additional vehicles may mean the zones can be expanded, but on-demand planning principles should apply before any new regions are considered for future growth. That includes zone size, as well as considering vehicle and operator constraints and ridership demand. Additional long-term funding partnerships will be needed to allow continuation of this important service in the coming years.

**Bus stop improvements.** Stops that are ADA accessible, provide clearly marked crosswalks to reach the bus stop, designed for easy snow removal, and have readily available information about the service, in locations where people feel safe to wait, can help increase ridership for local riders and reduce barriers for visitors riding an unfamiliar system. Visitors to unfamiliar destinations can be more prone to ride transit if it is easy to understand, and easier to ride. Red paint along curbs at bus stops to reduce the prevalence of parking can also help reduce trip times by speeding up the boarding and debarking process. Priority areas, based on ridership as indicated by Placer County service providers, include the following:

- SR 28 at the 76 Gas Station – crosswalk improvement, ADA accessible boarding area and shelter
- SR 28 at Lakeshore Drive (east), new bus stop with area for bus to pull out of traffic for customer boarding and alighting and sidewalk connectivity to existing crosswalk, combined with parking management at the unpaved shoulder of Lakeshore Drive
- SR 28 at Toepa (located at the eastbound driveway entrance southwest of the 76 Gas Station bus stop), provide paved level boarding area
- SR 28 near the Village Drive, provide paved level boarding area
- Country Club Drive and Incline Way, provide paved level boarding area
- Lakeshore Drive at the Hyatt, provide a paved level boarding area

#### Proposed Bus Stop Improvement at 76 Gas Station







### Proposed Bus Stop with Turnout at Lakeshore Drive (East)



## 5.5 Trip Reduction Programs

Expanding the use of existing trip reduction programs and services will help the Incline Village and Crystal Bay areas move towards a more sustainable transportation delivery model. A variety of programs and services are already available but are underutilized in many cases. Existing trip reduction programs include: the RTC Smart Trips Program, the RTC Vanpool Program, the TRPA Commute Tahoe program, and several TNT/TMA programs and services to manage transportation demand across the area. Strategies to make these alternatives more attractive and/or increase awareness of their availability are outlined below.

**RTC Vanpool:** As described in Chapter 3, the RTC Vanpool program is a powerful tool in reducing vehicle miles of travel and reducing long-distance community costs. Vanpools can be an important program to address workforce challenges related to housing costs in the Lake Tahoe Region by reducing commuting costs from Reno/Sparks or Carson City. Similarly, the Vanpool program can reduce commuting costs for Incline Village and Crystal Bay residents that work in surrounding regions as well. While the program had over 300 vanpools at the beginning of 2021, none travelled to or from Incline Village. Through efforts to raise awareness and partner with local businesses, now three vanpools are in use with the potential to grow significantly.

**Marketing:** Additional marketing of existing services is a key strategy for increasing the usage and impact of these programs. Services can be marketed through a variety of mediums depending on the



target audience. For example, vanpools and other commuter-oriented programs can be marketed directly through employers, such as using employee intranets, newsletters, and break rooms. Services with a broader audience may need to make use of paid media, social media, and other advertising venues. TNT/TMA is currently a primary champion for TART transit marketing.

**Services Changes/Integration:** TTD and TART regularly update their short range transit plans to adapt to changing travel demand needs. The TTD transit plan update is currently underway. Continued efforts should be made to reach out to employers about supporting trip reduction programs including vanpool.

## 5.6 State Route 28 Intersections

The Nevada Department of Transportation is in the midst of a substantial pavement preservation project along SR 28. Construction of this project is anticipated to last into 2023 and presents opportunities for joint implementation of other study recommendations.

### Traffic Signal Timing and Coordination

RTC is currently working with Washoe County and NDOT on a signal timing and coordination project along SR 28. The outdated traffic signals in Incline Village will be replaced in the coming year as part of the SR 28 pavement improvement project. Field reviews and information provided by TART indicate that making left turns onto SR 28 from Village Boulevard and Country Club Drive is challenging and creates a safety concern for buses and other vehicles. Recommendations for traffic signal timing and coordination include:

- Provide for safe pedestrian crossing opportunities
- Provide a protected left turn signal with flashing yellow arrow at Village Boulevard and Country Club Drive
- Optimize signal coordination to improve traffic flow
- Include bicycle detection at signals

**SR 28 and Pinion Drive/Lakeshore Drive (west):** An Intersection Control Evaluation (ICE) was conducted for the intersection of SR 28 and Pinion Drive/Lakeshore Boulevard by NDOT during the study period for this plan. This is a critical intersection for the Tahoe Basin, as eastbound SR 28 splits off onto Lakeshore Drive, which provides access to most of the beaches in Incline Village. A 2020 signal warrant study suggested the need for a traffic signal at this intersection, prompting the ICE. Safety concerns resulting from high travel speeds, increasing traffic volumes, and horizontal curvature of the roadway also played a role in the need for the ICE. Three alternatives were identified for further evaluation, including a signalized intersection, a roundabout, and a T-intersection. The bus stop at this location is not ADA compliant and a level boarding area should be provided in conjunction with the intersection improvement. The NDOT analysis is ongoing.

**SR 28 and Southwood Boulevard/Northwood Boulevard (east):** This intersection forms a gateway into the central portion of Incline Village. Land uses in the vicinity include a middle school, skateboard park, and planned condominium development. The skewed angle of roads entering this intersection create an intersection with wide pavement crossing distances for pedestrians and challenging sight lines for motorists. The existing bus stop is not ADA accessible. The outdated overhead pedestrian flashing lights are scheduled for replacement and pedestrian ramps at the intersection will be upgraded to meet ADA



standards with the NDOT pavement improvement project in 2023. An intersection evaluation was conducted by NDOT to evaluate longer-term improvements. Concepts considered included a new traffic signal, pedestrian crossing improvements, roundabout, bus turnout, and ADA compliant bus stop on the east side of the intersection. The preliminary recommendation of the study is for construction of a roundabout at this intersection. Additional scoping and engineering analysis will occur before a final design is selected. Relocating the bus stop to the east side will reduce the likely number of Southwood Boulevard crossings by pedestrians travelling to the school or skate park.

**Existing SR 28 Intersection and Bus Stop at Southwood Boulevard/Northwood Boulevard (East)**







### 5.7 Village Boulevard Intersections at Northwood and Southwood Boulevards

The Village Boulevard intersections at Northwood and Southwood Boulevards were identified as high areas of concern during the public survey. Due to the angle at which the streets intersect, both intersections have wide pavement crossing distances for pedestrians. The intersections have stop signs for Northwood and Southwood Boulevards and Village Boulevard traffic flows freely. Concerns identified include high travel speeds and difficulty making left turn movements.

A range of alternatives is recommended for further consideration by Washoe County. Additional traffic operational and design analysis is recommended to determine the most appropriate intersection treatment, as summarized in the table on the following page.

#### **Intersection of Village Boulevard and Northwood Boulevard**





Description of Alternative and Summary Analysis	Illustration of Alternative Concept
<p><b>4-Way Stop</b> <b>Benefit:</b> The 4-way stop will make it easier to turn onto or cross Village Boulevard from Northwood Blvd. <b>Consideration:</b> The addition of stop signs may not slow travel speeds and may result in increased rear-end crashes. <b>Implementation Cost:</b> Moderate</p>	
<p><b>Pavement Striping to Make Crosswalk More Visible</b> <b>Benefit:</b> Narrow travel lanes to reduce speeds and increase visual prominence of the pedestrian crossing to raise motorist awareness <b>Consideration:</b> The pavement area for pedestrian crossings will not change <b>Implementation Cost:</b> Low</p>	
<p><b>Roundabout</b> <b>Benefit:</b> Roundabouts have been shown to reduce travel speeds and crash severity <b>Consideration:</b> May require education for drivers <b>Implementation Cost:</b> Higher</p>	





## 5.8 Data and Technology

Expansion of Wi-Fi and broadband connectivity throughout Incline Village and Crystal Bay would help these communities provide real time traffic and parking information, disseminate information about micromobility solutions, and aid visitors with wayfinding.

Real-time information is a particularly useful strategy for communities seeking to optimize both traffic and parking operations without adding travel lanes or other paved surfaces. There are a number of smart phone applications available to help visitors find and pay for parking.

Variable message boards are another useful tool for managing parking and assisting visitors with wayfinding, especially during holidays and events. These message boards are a relatively low-cost, versatile, and proven solution.

TTD was awarded a SMART grant in 2023 for intelligent sensor integration. The grant will be used to optimize regional travel using sensors at each of the seven entry points into the Lake Tahoe Basin. Grants and other potential funding sources are discussed in more detail in Chapter 6 – Funding and Implementation.





## 6 – Funding and Implementation

### 6.1 Funding

There are a number of funding sources available for the various types of improvements recommended in this plan. Since many people throughout the region, the nation, and the world enjoy the amenities of the Tahoe Region, the Tahoe Regional Plan calls for a financial approach that spreads the costs of protecting environmental quality among property owners, businesses, overnight and day visitors, transportation systems users, and local, state, and federal governments.

The five major available funding categories are federal funding (formula and discretionary grant programs), state funding, regional/local funding, and private funding sources/partnerships. The most relevant and promising sources to fund proposed improvements are described below.

#### Federal Funding (Formula and Discretionary Grant Programs)

The Bipartisan Infrastructure Law (BIL), signed in November of 2021, allocated \$550 billion to transportation, broadband, and utility investments across the United States. This funding will be distributed over the five-year period between 2022 and 2027 via a competitive grant application process. Several of the most relevant funding sources are described in the following sections.

**Surface Transportation Block Grant Program (STBG):** STBG is a flexible federal formula program that provides for allocations to both TRPA, as the MPO, and NDOT. TRPA incorporates these funds into a regional call for projects dedicated to the MPO planning area. NDOT manages STBG funds that area available for allocation on a state-wide basis. Use of STBG funds must be managed in accordance with the RTP and FTIP.

**Transportation Alternatives Set-Aside:** The Transportation Alternatives Set-Aside (also known as TA Set-Aside) from the STBG Program provides federal funds for community-based projects that expand travel choices and enhance the transportation experience. These projects are intended to integrate modes and improve the cultural, historic, and environmental aspects of our transportation infrastructure. Local governments, regional transportation authorities, transit agencies, MPOs, and school districts, among others, are eligible to apply for TA Set-Aside funding. Federal guidelines specify that projects must be selected based on a competitive process.

Eligible project types include planning, design, and construction of a variety of facilities, programs, and other efforts. More specific examples of eligible projects include:

- Bicycle, pedestrian, and other nonmotorized transportation facilities
- Traffic calming, lighting, and other safety-related infrastructure
- ADA improvements
- Turnouts, overlooks, and viewing areas
- Recreational trails
- Safe Routes to School (SRTS), including infrastructure, non-infrastructure, and coordinator positions
- Vulnerable road user safety assessment
- Vegetation management



- Environmental mitigation related to stormwater, water pollution prevention, wildlife crossings, and habitat connectivity
- Micromobility projects, including bike and scooter share (construction and non-construction projects that facilitate safe access for pedestrians and bicyclists)
- Removal of outdoor advertising

Under the BIL, TA Set-Aside funding will gradually increase over the next four years, from \$1.38 billion in 2022 to \$1.50 billion in 2026. In Fiscal Year 2022, NDOT received a \$10.5 million TA Set-Aside apportionment from the federal government. From this, \$1.3 million was allocated to the state's Recreational Trails Program, which is administered by the Nevada State Parks Department. A total of \$9.2 million was then available to be distributed among the state's MPOs and rural areas. Of this amount, \$5.4 million (or 59 percent) was suballocated based on population, and the remaining \$3.8 million (or 41 percent) was available to areas of all population sizes.

**Federal Land Access Program (FLAP) Program:** FLAP is a funding program administered by the FHWA Central Federal Lands Highway Division and provides resources for transportation needs. Eligible projects must provide access to or be adjacent to federal lands. These funds are awarded on a competitive basis within Nevada. The next call for projects is tentatively scheduled for early 2023.

**Rebuilding American Infrastructure with Sustainability and Equity (RAISE):** The RAISE grant program is designed to help urban and rural communities advance projects that modernize roads, bridges, transit, rail, ports, and intermodal transportation and make our transportation systems safer, more accessible, more affordable, and more sustainable. Competitive projects will emphasize safety, environmental sustainability, quality of life, economic competitiveness and opportunity, partnership and collaboration, innovation, state of good repair, and mobility and community connectivity.

The program has been allocated \$9.7 billion over a five-year period for individual projects of up to \$25 million. Projects may be for capital investments or planning activities.

**Multimodal Project Discretionary Grant (MPDG):** The MPDG grant program combines three grants (INFRA, Rural, and Mega) into a single funding opportunity. Applicants may apply for one, two, or all three opportunities with a single application. Eligible project categories include highway and bridge, intercity passenger rail, railway-highway grade and separation, wildlife crossing, public transportation, marine highway, and freight and multimodal projects.

Grant focus areas are safety, economic strength, global competitiveness, equity, climate and sustainability, and environmental justice. The grant opportunity also emphasizes reducing automobile dependency, particularly in underserved communities.

Project award sizes vary considerably between the three programs, ranging from a \$5 million minimum for INFRA up to a \$500 million maximum for MEGA. The program has been allocated \$8 billion over a five-year period.



The INFRA grant opportunity is likely the most relevant for projects recommended in the Incline Village and Crystal Bay communities. Eligible activities include planning, design, and construction, specifically:

- Development-phase activities and costs, including planning, feasibility studies, revenue forecasting, alternatives analysis, environmental review, preliminary engineering and design work, and other pre-construction activities
- Construction, reconstruction, rehabilitation, acquisition of real property, environmental mitigation, construction contingencies, and equipment purchases

**Strengthening Mobility and Revolutionizing Transportation (SMART):** The SMART program was established to provide grants to eligible public sector agencies to conduct demonstration projects focused on advanced smart community technologies and systems in order to improve transportation efficiency and safety. Stage 1 of the grant awards focus on planning and prototyping projects, while stage 2 will focus on implementation. States, regional and local planning organizations, public transit agencies/authorities, and Metropolitan Planning Organizations (MPOs) are some of the more common eligible applicants.

SMART grants may be used to carry out projects that demonstrate coordinated automation, connected vehicles, intelligent sensors, systems integration, smart technology traffic signals, smart grids, commercial delivery/logistics, and/or innovative aviation. The program has been allocated \$100 million in competitive grant funding over the five-year BIL period.

**Safe Streets and Roads for All (SS4A):** The SS4A program funds regional, local, and Tribal initiatives through grants to prevent roadway deaths and serious injuries. Eligible applicants include MPOs, counties, cities, towns, transit agencies, and Tribal governments. The program has been allocated \$5 billion over the next five years.

Grant awards are divided into two categories: Action Plan Grants and Implementation Grants. An Action Plan Grant is used to develop an Action Plan – a holistic, well-defined strategy to prevent roadway fatalities and serious injuries in a locality (i.e., a safety plan). Implementation Grants are used to fund and implement specific projects previously identified in the Action Plan. To receive an implementation grant, the local entity applying must have an adopted Safety Plan that adheres to the program.

This program emphasizes promoting safety; employing low-cost, high-impact strategies to improve safety over a wide geographic area; incorporating evidence-based projects and strategies; and ensuring equitable investment in the safety needs of underserved communities. It also encourages the adoption of Complete Streets polities; use of the Safe Systems Approach; and targeting of zero roadway fatalities. The Tahoe MPO will be working on updating the Regional Safety Strategy to ensure local applicants, if not covered by their jurisdiction, are covered and eligible for these funds.

### State Funding

NDOT receives fuel tax revenues that are available for use statewide. These funds are prioritized using the One Nevada process and programmed over a four-year time period in the STIP.

In addition, the Nevada Legislature had the discretion to allocate general fund revenues to projects in the Lake Tahoe Region.





### Regional/Local Funding

The RTC receives fuel tax and sales that that is available for use on regional facilities throughout Washoe County. RTC defines regional roads as those with at least 5,000 vehicles per day or a transit route. Voters approved indexing the fuel tax to inflation in 2008, which now provides a reliable source of revenue for improvements on regional roads. A sales tax was also approved by Washoe County voters to fund both transit and roadway improvements. RTC should continue to partner with Washoe County and other regional partners to fund critical infrastructure and transit service improvements.

Innovative partnerships have made the launch of TART Connect in Incline Village possible. It was initially funded through \$200,000 from the Incline Village Crystal Bay Visitors Bureau. RTC of Washoe County provided additional funding to continue the second year of operations. The service is operated by TART and marketed by the TNT/TMA.

### Private Funding/Partnerships

Public/private partnerships (PPPs), including collaborations with area non-profits, community organizations, the development community, or potential private donors should be considered where feasible. The Tahoe Fund is an example of a local non-profit that uses private funds for projects in the Lake Tahoe Region.

## 6.2 Implementation

Exhibit 6-1 summarizes key recommendations from the Plan, noting lead agency responsibility and the most promising funding source(s) to ensure timely implementation. It is envisioned that Washoe County will designate a staff member to be the champion for advancing the recommendations in this study. Due to the complex regulatory framework in the Lake Tahoe Region, implementation of most initiatives will require the support and participation of multiple agencies and organizations. The table below identifies the recommended lead agencies and areas for support from partner agencies.

Three time horizons are presented in the recommendations: near-term (1 to 5 years), mid-term (5 to 10 years), and long-term (10 or more years). Near-term projects are generally those that involve changes to pavement markings, signage, traffic signal timing, and programmatic initiatives. Mid-term projects would include construction within the existing public right-of-way that does not generate significant environmental impacts. Long term projects are more complex and include projects that may require right-of-way acquisition, environmental documentation, and larger funding packages. Programming of funds must follow the applicable project prioritization processes for the funding agency, such as the RTP/FTIP process for TRPA and the One Nevada/STIP process for NDOT.

**Exhibit 6-1: Recommendations Summary**

Recommended Improvement	Lead Agency	Partners	Timeframe	Notes
<b>SR 28 Intersection Improvements</b>				
Traffic Signal Timing Improvements (underway)	RTC	Washoe Co., NDOT	Near-term	RTC has conducted signal timing analysis
Crosswalk Restriping (completed)	NDOT		Completed	
Traffic Signal Replacement/Upgrades	NDOT		Near-term	Signal replacements are planned for 2023
SR 28 at Pinion/Lakeshore (ICE underway, includes bus stop)	NDOT	Washoe County, TTD, RTC	Mid-term	Transit agency support is needed for bus stop improvements
SR 28 at Southwood/Northwood East (ICE underway, includes bus stop and turnout)	NDOT	Washoe County, TTD, RTC	Mid-term	Transit agency support is needed for bus stop improvements
<b>Bus Stop Improvements</b>				
SR 28, 76 Gas Station, reconstruction shelter	RTC, Washoe County	TART, TRPA, NDOT	Mid-term	The improvements would be constructed in NDOT ROW; service to be operated by TART
SR 28, Lakeshore Dr. (east), new station and parking management	NDOT, TTD	RTC	Near-term	The improvements would be constructed in NDOT ROW; service to be operated by TTD. Construction could be funded and implemented by NDOT, TTD, or RTC.
SR 28, Toepa, ADA bus pad	RTC, Washoe County	TART	Near-term	The improvements would be constructed in NDOT ROW; service to be operated by TART
County Club and Incline Way, ADA bus pad	RTC, WC	TTD	Near-term	Service to be operated by TART
Lakeshore Dr. at Hyatt, ADA bus pad	RTC, WC	TTD	Near-term	Service to be operated by TART
Incline Village Mobility Hub	TTD	Washoe County, TRPA	Mid-term	TTD is currently conducting a site evaluation study
<b>Multiuse Path Connectivity</b>				
SR 28, Crystal Bay to Incline Village	TTD	WC, NDOT, RTC, TRPA	Long-term	Next step is to seek funding to refine the



Recommended Improvement	Lead Agency	Partners	Timeframe	Notes
				alignment & conduct environmental studies
SR 28, 76 bus stop to Preston Field	WC	NDOT, TTD, RTC, TRPA	Mid-term	
SR 28, Rd. D to Northwood Blvd.	WC	WC, NDOT, RTC, TRPA	Mid-term	
SR 28, Glen Rd. to Country Club Dr.	WC	NDOT, TTD, RTC, TRPA	Mid-term	
SR 28, Country Club. Dr. to existing path past Sweetwater Rd.	WC	WC, NDOT, RTC, TRPA	Mid-term	
SR 28, driveway crossings	WC	NDOT, TTD, RTC, TRPA	Near-term	
Northwood Blvd, Village Blvd. to SR 28 (east)	WC	RTC, TRPA, TTD	Mid-term	
Bike Boulevard on Lakeshore Drive	WC	TRPA, TTD, TART	Near-term	
Village Boulevard (east side)	WC	TRPA, TTD	Mid-term	
Review separation of transportation modes at a system-wide level, including pedestrians, bicycles, e-bikes, and cars	WC	TRPA	Near-term	The Tahoe <a href="#">Active Transportation Plan</a> will be updated over the next 12 months and include helpful information for this improvement
<b>Winter Maintenance</b>				
Assessment of resources for snow removal and possible contracting	WC	TTD, NDOT, IVGID	Near-term	This is primarily a Washoe County budgetary analysis and will include coordination with other snow removal partners
<b>Local Intersections and Roadways</b>				
Village Blvd. at Southwood Blvd. safety and operational improvements	WC	TTD, TRPA, RTC	Mid-term	A design option will be selected pending a detailed traffic operational analysis
Village Blvd. at Northwood Blvd. safety and operational improvements	WC	TTD, TRPA, RTC	Mid-term	A design option will be selected pending a detailed traffic operational analysis





Recommended Improvement	Lead Agency	Partners	Timeframe	Notes
Parking restrictions/signage on Village Blvd. and Country Club Dr.	WC, IVGID	TTD	Near-term	Coordinate with regional TTD parking initiatives
Parking restrictions/signage on Northwood Blvd. at McCourrey Blvd	WC	TTD	Near-term	Coordinate with regional TTD parking initiatives
<b>Transit Service and Parking</b>				
Microtransit marketing	All, TNT/TMA lead		Near-term	
Vanpool marketing	All, RTC lead		Near-term	
Park & Ride location analysis outside of Tahoe Basin	TRPA	TRPA to facilitate partnership between local agencies to add to CIPs	Long-term	Consider a mobility hub master plan for the Tahoe Basin in Nevada with connections to Carson City and Reno/Sparks
Incline Mobility Hub Project Concepts and Site Assessment	TTD, WC	TRPA, TART, TMA	Near-term	
Transit strategies to connect urban areas to Tahoe Basin	TRPA/RTC/TMA		Long-term	Regional revenue discussion needed to identify funding resources
<b>Main Street Program</b>				
Develop community vision for main street corridors and improvements	WC, IVCVA, NDOT		Near-term	GOED manages the Nevada Main Street Program
<b>Technology and Data Needs</b>				
Real-time transit, traffic, parking data, and wayfinding information	TTD, RTC, NDOT		Mid-term	Local and regional components; SMART grant awarded to TTD
Community-wide Wi-Fi/broadband connectivity	TTD, NDOT Tahoe Basin Broadband Committee	WC, Caltrans,	Near-term	
Communicate real-time traffic and parking data to motorists	TTD	TRPA, NDOT	Mid-term	

Timeframes: Near-term – 1-5 years; Mid-term – 5-10 years; Long-term – 10+ years