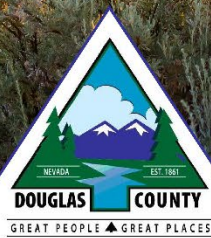


# DOUGLAS COUNTY COMPREHENSIVE TRAILS PLAN 2023



Adopted 1/18/2024



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“Someone’s sitting  
in the shade today  
because someone  
planted a tree a long  
time ago.”

-Warren Buffet





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# Acknowledgments

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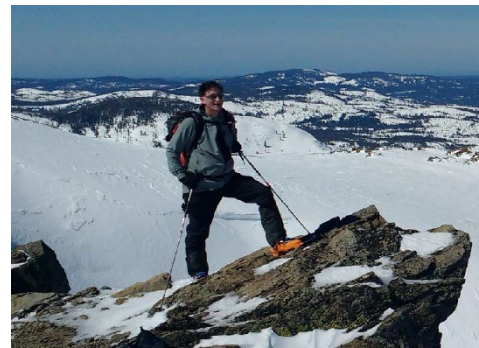
**The Douglas County Community and Other Stakeholders**

A special thank you to the dedicated residents and visitors of Douglas County as well as other stakeholders who contributed their time, energy, and ideas to this plan.



## In Memoriam: Carlo Luri (1962-2022)

### “Pursue the Dash”



Carlo Luri, a beloved member of our community, is remembered for his passion for the outdoors and his dedication to preserving our environment. Carlo's sudden passing has left a void, but his legacy of advocacy and adventure will continue to inspire us.

Carlo cherished the outdoors, whether skiing, exploring frozen lakes, or biking. His love for nature was matched only by his commitment to protecting it. He was a driving force behind the Carson Valley Trails Association, where he served as a board member and president, leaving a lasting impact on our trails.

Carlo was also deeply involved in cycling advocacy, especially youth mountain biking, and was instrumental in building strong teams of coaches. He embraced adventure, from multi-day bikepacking trips to expeditions with the Friends of Black Rock Desert.

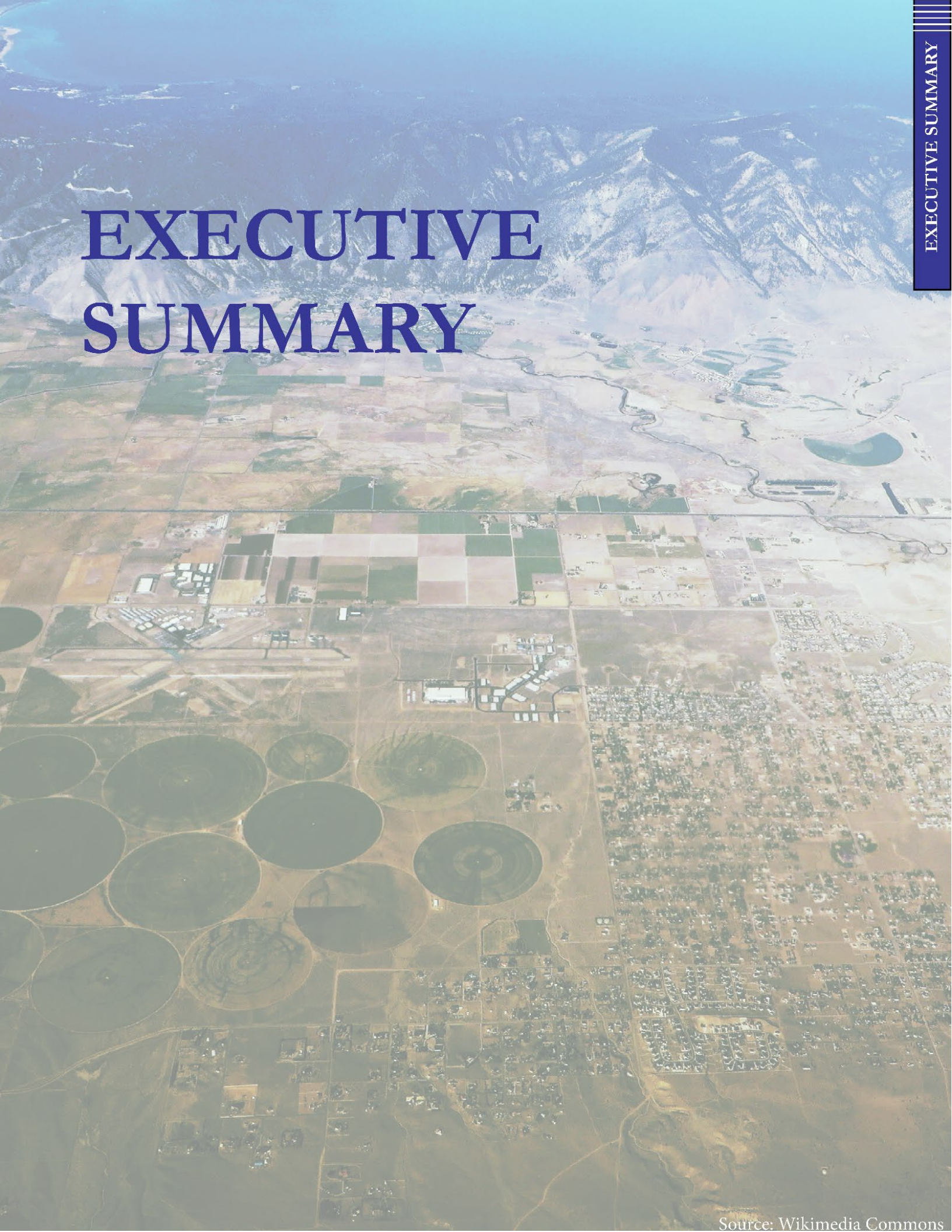
In his professional life, Carlo was a key figure at Bently Enterprises, contributing to sustainable projects. His networking skills and involvement in various organizations promoted our region's trails, tourism, and economy.

Carlo's sudden illness and passing were a shock, but he departed peacefully, surrounded by his family. His legacy lives on in the beauty of the outdoors he cherished and in the community he enriched. We will miss him deeply.

Carlo, your memory will forever be a guiding light on our trails, a reminder of the beauty and generosity that defined your life. You will be deeply missed but never forgotten.



# EXECUTIVE SUMMARY





## Plan Vision

The Douglas County Comprehensive Trails Plan (the Trails Plan) offers a vision for a trail system that connects Douglas County residents and visitors to each other and their natural environment. The Trails Plan is more than “lines on a map” – it demonstrates collaboration and how a county-wide system of well-connected pathways and trails can promote quality of life, economic development, and resilience by prioritizing infrastructure that can adapt to various environmental, social, and economic challenges.

The Trails Plan is a blueprint, informed by public priorities, which will guide the County and its partners as they design, fund, and maintain a high-quality system of pathways and trails over time.

## Trail History

The trail system in Douglas County is deeply rooted in history, connecting the region to significant events that shaped the American West. One of the oldest historic trails that is intertwined with Douglas County's heritage is the Carson Trail, which was a vital segment of the California National Historic Trail that brought pioneers seeking gold and farmland to the golden state during the mid-1800s. Over time, these trails have transitioned from migration corridors to crucial transportation routes, initially facilitating mail delivery during the Pony Express, to being intricately connected to the region's economic and cultural development through the Virginia and Truckee Railroad. Today, these trails have evolved into a diverse and modern network that honors its storied past while catering to the recreational and transportation needs of residents and tourists alike, making Douglas County a hub for both heritage and contemporary trail experiences.

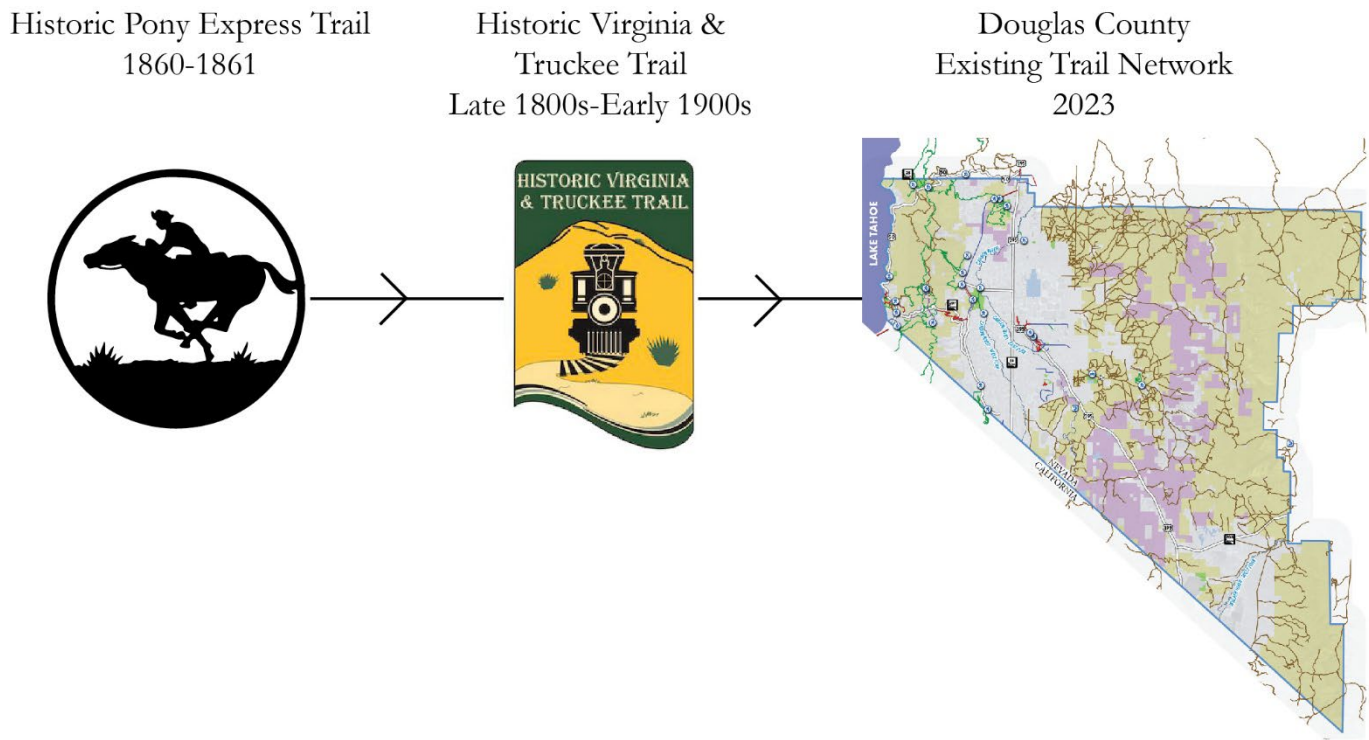


Figure 1: Douglas County Trail History

## Summary of the Plan

Trails Plan is the guiding document for recreational trails and multi-use pathways within Douglas County. To continue its legacy of providing outstanding recreational facilities to the community, the County undertook its most thorough update of the Trails Plan to date. The Trails Plan lays out the process for locating and prioritizing opportunities for pathways and trails. In subsequent phases of work, the County and its collaborators will refine details such as trail alignment, accessibility, suitable design, and eventual construction within these identified corridors.

Existing	Proposed
There are <b>989</b> miles of existing pathway and trails within Douglas County.	There are <b>280</b> miles of proposed pathway and trail opportunities within Douglas County.

### Public Outreach Key Takeaways

<p><b>Connect Communities</b></p> <p>Extensive outreach from the public and stakeholders' group found that the Trails Plan should focus on providing connections between communities and new developments through the construction of shared-use paths.</p>	<p><b>Build on the Strength of Existing Partnerships and Programs</b></p> <p>The feedback from the public regarding the current safety and maintenance of the trails has been overwhelmingly positive. To further enhance this program, Douglas County should persist in fostering partnerships and pursuing funding opportunities.</p>	<p><b>Improve Amenities</b></p> <p>As the population of Douglas County grows and more people visit, there is a greater demand for responsible and safe use of the trails. To promote this, it's essential to offer sufficient amenities at the trails and trailheads, including parking, restrooms, and access to water.</p>
---	---	--

#### Top 3 activities people use trails for in Douglas County



Hiking



Walking



Mountain Biking

#### Top 3 barriers, challenges, conflicts, or safety issues when using trails



Gaps in the trail network



Parking



Lack of trailheads and amenities such as bathrooms

#### Top 3 trail improvements respondents would like to see



Improve trail connectivity



New recreational trails



New pedestrian and/or bicycle transportation paths/lanes/etc.

#### Top 3 services or amenities respondents are looking for when using trails



Public restrooms/water



Pet waste stations



Nothing



# Goals

*GOAL 1: Develop a sustainable, safe, equitable, and well-connected trail system that provides recreational and transportation opportunities for all trail users. Priority should be given to trails that close gaps in the trail network and provide the highest public benefit in overall connectivity to neighborhoods, public services, and recreation opportunities.*

*GOAL 2: Implement, manage, operate, and maintain trails to encourage proper usage and user safety.*

*GOAL 3: Provide adequate trailheads, parking, and amenities including, but not limited to, restrooms, trash, bicycle repair stations, seating, informational kiosks, etc. that are ADA accessible whenever feasible.*

*GOAL 4: Collaborate with the public, neighboring partners and jurisdictions, and landowners to realize shared interests in implementing trails.*

*GOAL 5: Collaborate with federal agencies to encourage the updating and prioritizing of authorized motorized trail systems.*

*GOAL 6: Explore and identify the use of available federal and state funding as well as other revenue sources to acquire easements and/or rights-of-way in order to implement and maintain trails.*

*GOAL 7: Promote awareness of the trail system and the opportunities for interpretation/education of the natural, cultural, and historic environment of Douglas County to encourage outdoor recreation as a business opportunity.*

*GOAL 8: The Douglas County Trails Master Plan should be reviewed as part of the development and public works project review process to ensure trails are incorporated with future projects where applicable. The Douglas County Trails Master Plan should be reviewed and updated concurrently with other Douglas County Plan updates to ensure consistency in the planning process.*



## Trails Map

Douglas County intends to establish a network of interconnected trails that span diverse landscapes, encompassing waterways, railways, and roadways, providing a range of experiences for both residents and visitors. They are collaborating with partners to enhance and expand this trail system, with a particular emphasis on pathways that foster connections between communities, enhancing accessibility for all. These trails serve dual roles, serving as both recreational assets and transportation routes, ultimately reinforcing the bonds in the community.

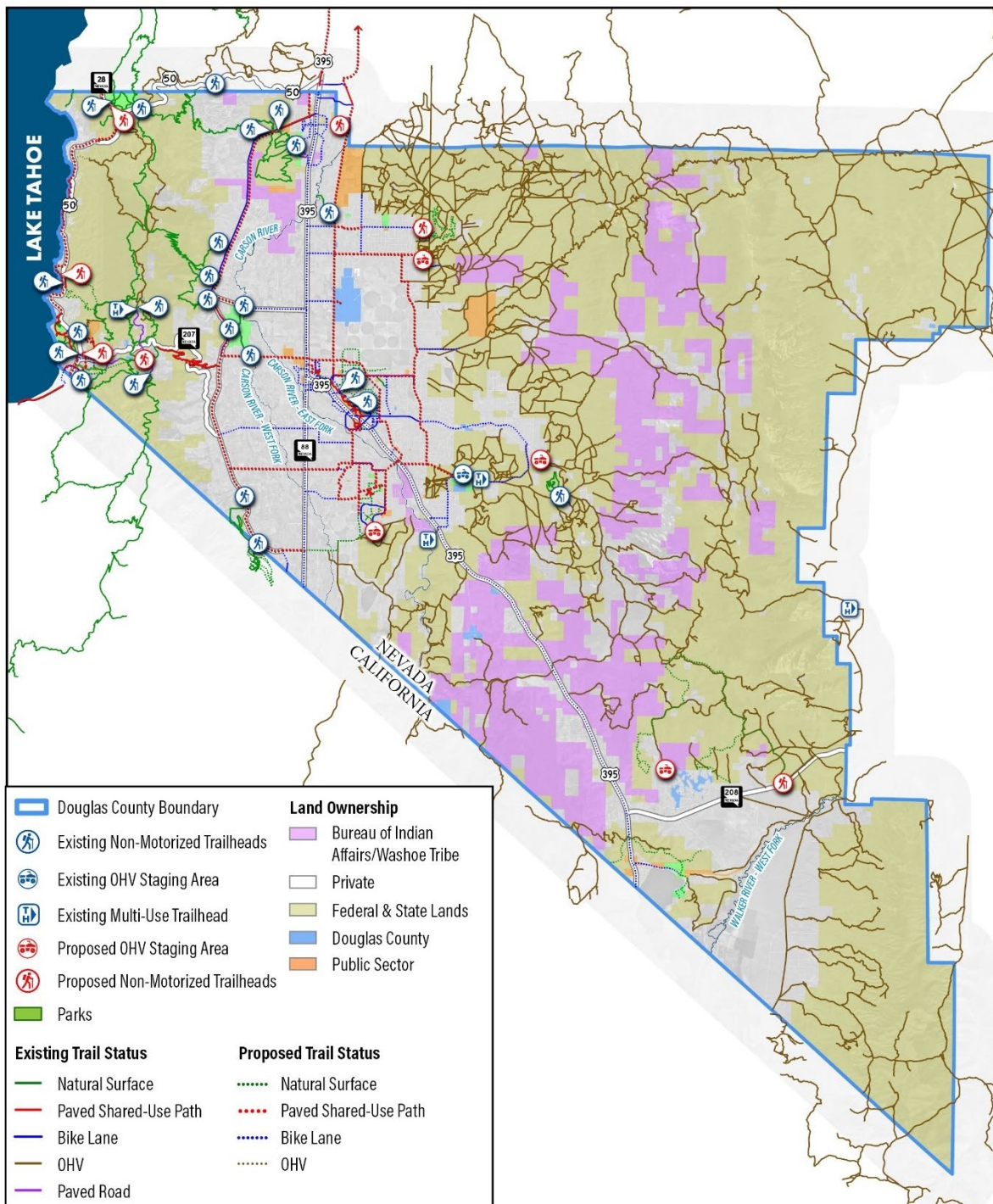
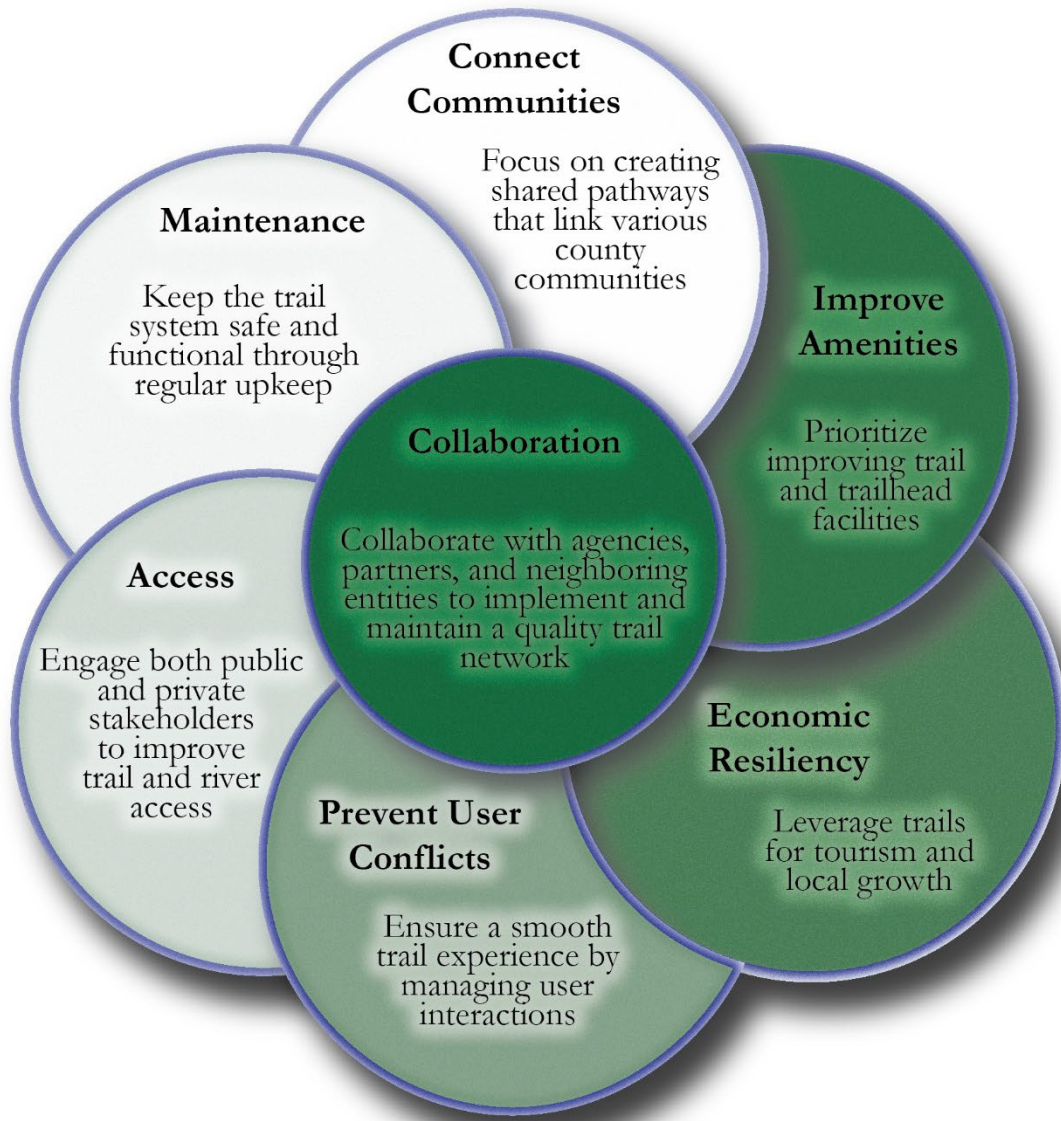


Figure 2: Existing and Proposed Trail Map



## Key Outcomes/Strategies

The 2023 Trails Plan outlines several key outcomes and strategies to enhance the trail system in Douglas County. These strategies encompass various aspects of trail development and management, aiming to create a more connected, accessible, and enjoyable network of trails that benefit both residents and the broader community.



## Trail Prioritization

Based on input from surveys and workshops, Douglas County has a clear priority: creating shared-use paths to connect communities. These paths can improve mobility and safety, reduce traffic, boost tourism, and enhance community interaction.

Through community engagement efforts, a few trails rose to the top identified in **Figure 3**. To deliver these trails more efficiently, the County welcomes collaboration with other agencies and stakeholders. The timing of construction depends on factors like funding and expected use, allowing the County to adapt to changing needs.

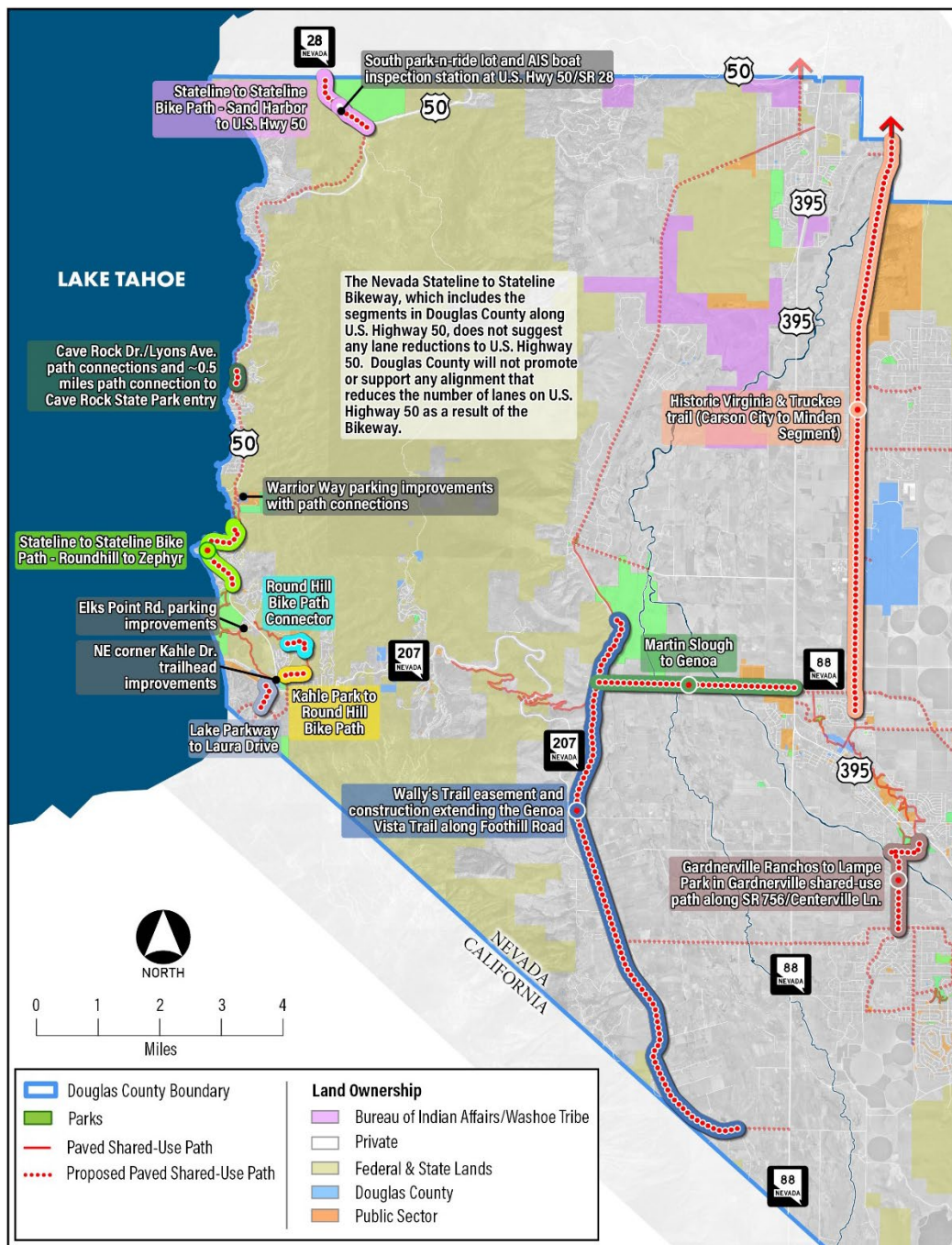


Figure 3: Douglas County Priority Trails





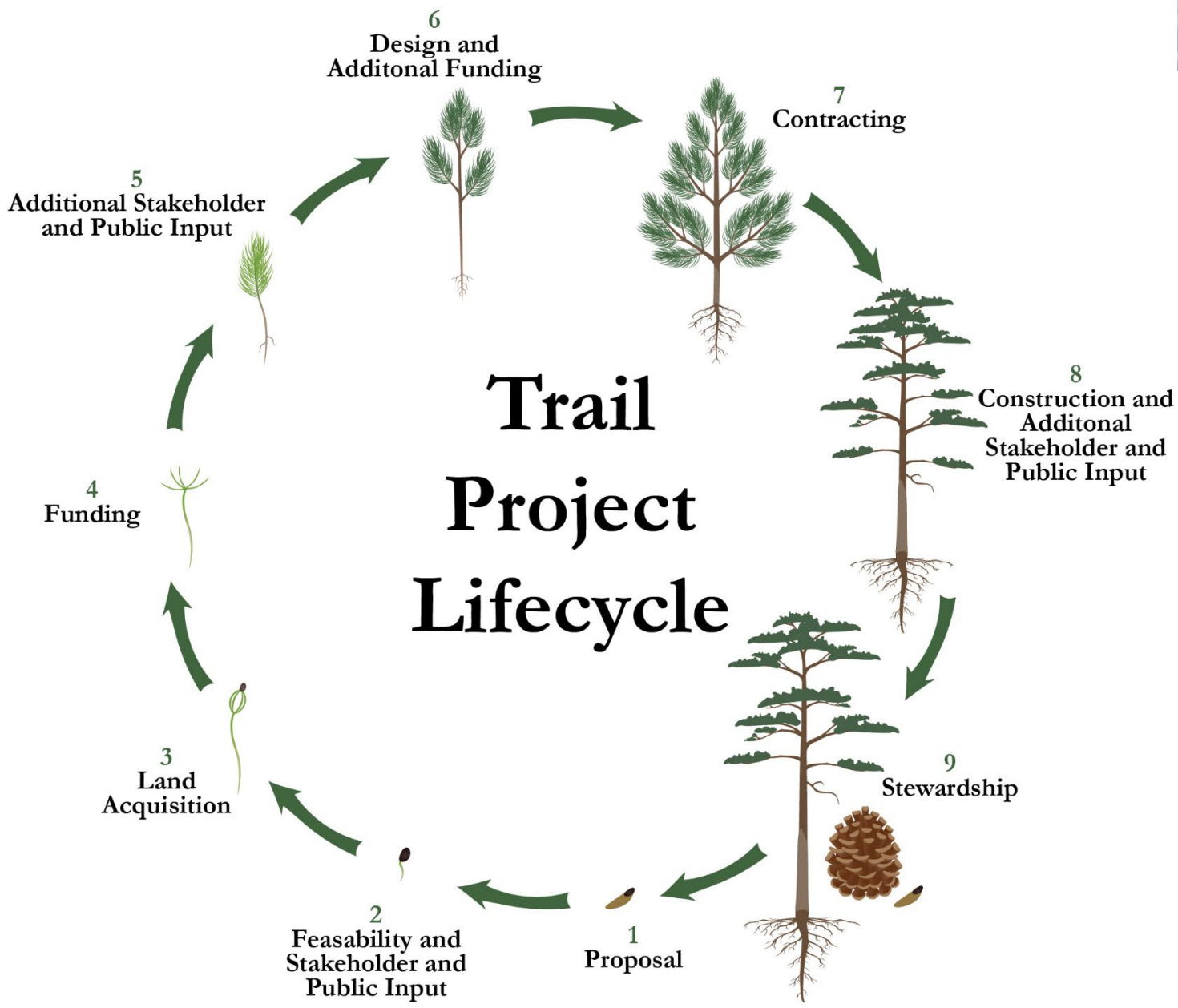
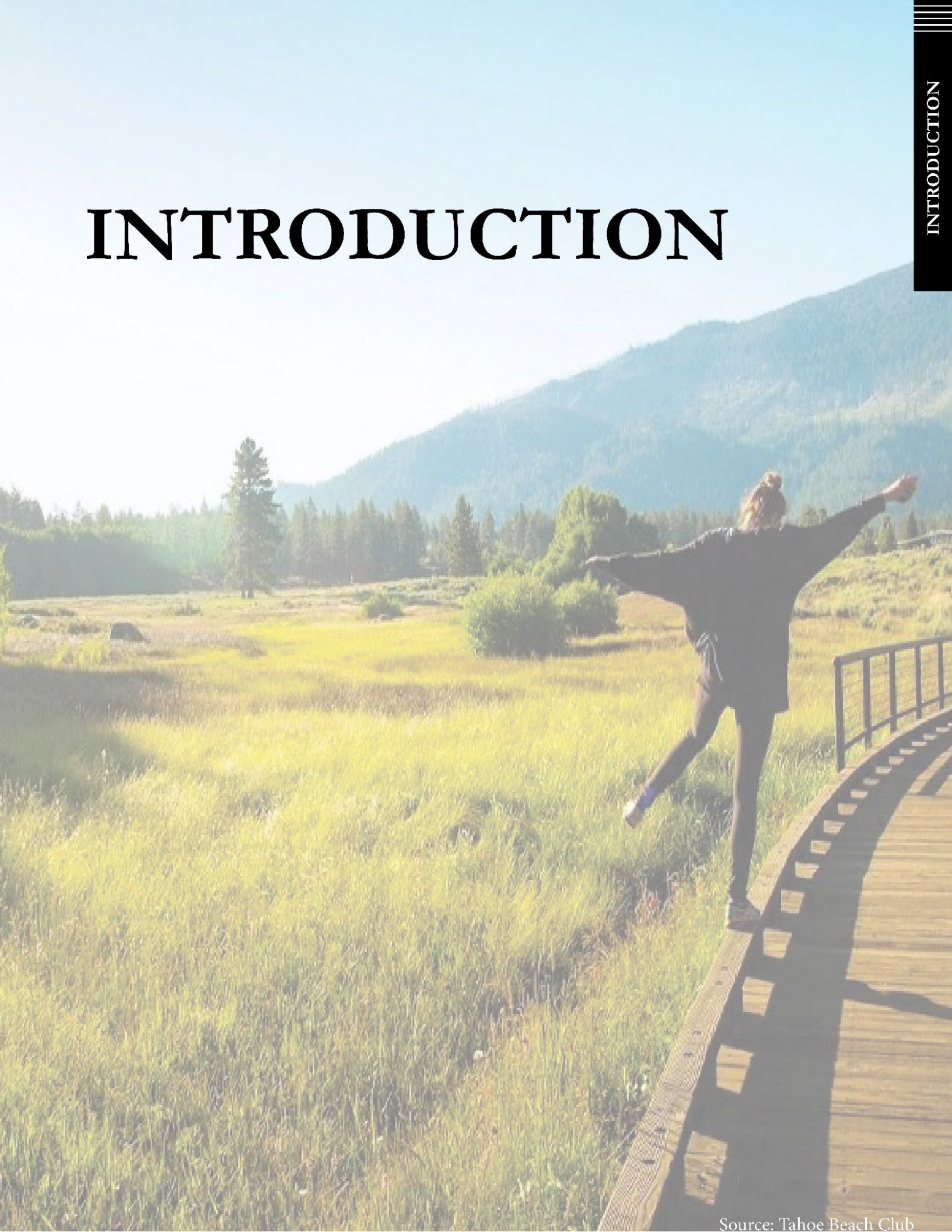


Figure 5: Trail Project Lifecycle





# INTRODUCTION





## History

Douglas County is home to several trails with historical significance that reflect its rich past. Among these, the Pony Express Trail, which threads its way through this very region, stands out as a prominent example. This trail served as a vital communication and transportation lifeline in the Old West era. The legacy of the Pony Express Trail, combined with that of other historical routes, emphasizes the lasting role that trails and pathways have played in shaping the County's evolution and growth.

Over time, trail planning has evolved from mere pathways to robust, integrated systems that promote connectivity, recreation, and community engagement. The County's progression from its 1996 Master Plan to its 2003 Trails Plan signified a growing recognition of the role that trails play in enhancing the County's livability, alternative modes of transportation, and tourism potential. While the 1996 Master Plan provided a general framework for public access to public lands, the 2003 Trails Plan offered detailed design and placement of trails, trailheads, and amenities. The 2003 Trails Plan aimed to establish a cohesive network of multi-use paths, encompassing both hard and soft surfaces, spanning across Douglas County. Its objectives included establishing specific access points, trailheads, and trails to ensure connectivity across the Carson Valley and between various community areas.

Trail planning has also been influenced by the State of Nevada's Bicycle Plan of 2014, which recognized the importance of cycling infrastructure and connectivity. This plan has played a role in shaping the County's approach to trail development, aligning it with broader state-level initiatives for sustainable transportation and recreation.

Furthermore, the County's approach to trail development has also been influenced by the Douglas County Master Plan of 2020. This updated Master Plan places a strong emphasis on the importance of updating the 2003 Trails Plan, enhancing livability, alternative modes of transportation, and tourism potential within the county, which aligns perfectly with trail development goals.

This evolution from simple paths to intricate networks reflects the dedication of Douglas County staff, volunteers, community members, and federal and state agencies who have actively participated in shaping a trail system that facilitates connection, recreation, and appreciation of the Carson Valley.

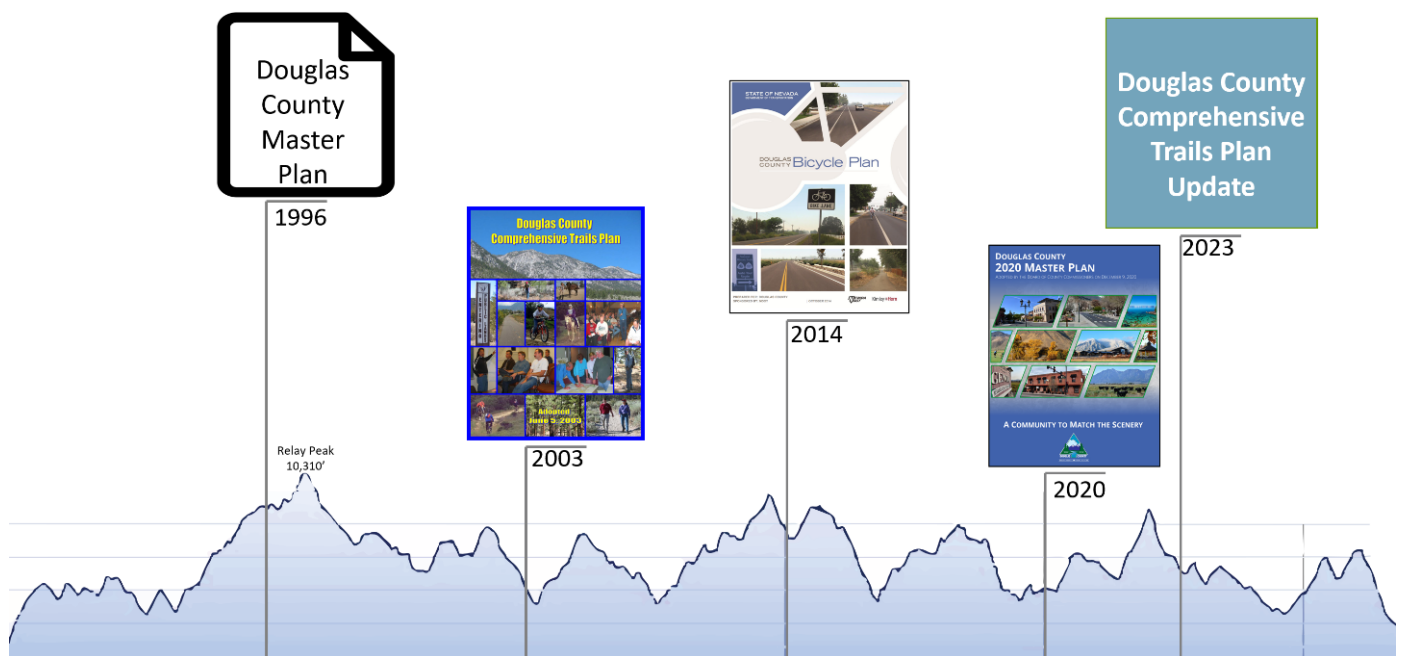


Figure 6: Douglas County History of Planning Efforts

## What's New Since 2003

Since the inception of the 2003 Plan, the landscape of the trail system and needs within Douglas County have changed. These changes have been driven by a combination of factors, including shifts in demographics, land use, and recreational preferences.

In light of these changes, it is imperative to undertake a comprehensive review and update of the 2003 Trails Plan. This process will ensure that the plan remains relevant, addresses current challenges and opportunities, and aligns with the community's evolving vision. By adapting to the changing landscape and needs of Douglas County, the updated Trails Plan can continue to foster outdoor recreation, community well-being, and sustainable growth in the years to come.





## Goals and Objectives



**GOAL 1:** Develop a sustainable, safe, equitable, and well-connected trail system that provides recreational and transportation opportunities for all trail users. Priority should be given to trails that close gaps in the trail network and provide the highest public benefit in overall connectivity to neighborhoods, public services, and recreation opportunities.

**Objective 1:** Identify and close trail network gaps.

**Objective 2:** Diversify the trail network and focus on community connectivity.

**Objective 3:** Focus on priorities and support partners in advancing other trail opportunities.



**GOAL 2:** Implement, manage, operate, and maintain trails to encourage proper usage and user safety.

**Objective 1:** Collaborate with private landowners to secure easements for future trails.

**Objective 2:** Provide resources dedicated to advancing priority trails, and continued maintenance of the existing network.

**Objective 3:** Design pathways and trails to meet the needs of multiple trail users.

**Objective 4:** Improve marketing materials to inform and educate users of trail type, connectivity, and how to properly use the trail system.



**GOAL 3:** Provide adequate trailheads, parking, and amenities including, but not limited to, restrooms, trash, bicycle repair stations, seating, informational kiosks, etc. that are ADA accessible whenever feasible.

**Objective 1:** Analyze the need to expand staging and parking areas to ensure they are appropriate for all permitted users of the trail.

**Objective 2:** Design amenities that are appropriate for each trail user and accommodate new technologies.



**GOAL 4:** Collaborate with the public, neighboring partners and jurisdictions, and landowners to realize shared interests in implementing trails.

**Objective 1:** Engage with the community, neighboring jurisdictions, and landowners for input and collaboration to ensure cohesive trail alignment and connectivity.

**Objective 2:** Establish long-term agreements for trail maintenance and management with partners.



**GOAL 5:** Collaborate with federal agencies to encourage the updating and prioritizing of authorized motorized trail systems.

**Objective 1:** Coordinate with federal agencies on an annual basis to ensure collaboration between trail plans.



**GOAL 6: Explore and identify the use of available federal and state funding as well as other revenue sources to acquire easements and/or rights-of-way in order to implement and maintain trails.**

**Objective 1:** Identify federal, state, and alternative funding sources for trail projects. Apply for grants on an annual basis for priority projects, and support partner agency grant applications.

**Objective 2:** Establish partnerships and explore public-private initiatives for funding.

**Objective 3:** Encourage partner agencies to incorporate trails and trail planning into their normal organizational infrastructure, including the development of annual operation and maintenance budgets to adequately care for trails.



**GOAL 7: Promote awareness of the trail system and the opportunities for interpretation/education of the natural, cultural, and historic environment of Douglas County to encourage outdoor recreation as a business opportunity.**

**Objective 1:** Develop an integrated marketing campaign to raise trail system awareness.

**Objective 2:** Create engaging interpretation and educational programs to highlight natural, cultural, and historical aspects.

**Objective 3:** Partner with local businesses to promote trail use and related services, and support ecotourism initiatives that enhance the local economy.

**Objective 4:** Ongoing community engagement:

- » Maintain continuous communication with the community to gather input and feedback.
- » Encourage local communities, government, and organizations to contribute trail data, including both current trail information and planned trails, to readily accessible trail databases.
- » Adapt strategies based on community needs and interests for sustained engagement.



**GOAL 8: The Douglas County Trails Master Plan should be reviewed as part of the development and public works project review process to ensure trails are incorporated with future projects where applicable. The Douglas County Trails Master Plan should be reviewed and updated concurrently with other Douglas County Plan updates to ensure consistency in the planning process.**

**Objective 1:** Embed the Douglas County Comprehensive Trails Plan within development and public works reviews to ensure trails are incorporated into projects where feasible, enhancing connectivity.

**Objective 2:** Review and update the Trails Master Plan alongside other County plan updates.



## Developing the Trails Plan

The project schedule was divided into three distinct phases to accomplish a thorough review and inclusive method for trail planning. This approach encompassed data analysis, engagement with stakeholders, and solicitation of public input to develop a trail network that matches the County's requirements and objectives. This collaborative endeavor guaranteed that the trail plan was not only well-informed but also a true reflection of the varied interests and aspirations of the County's residents. Here is a timeline of the project schedule:

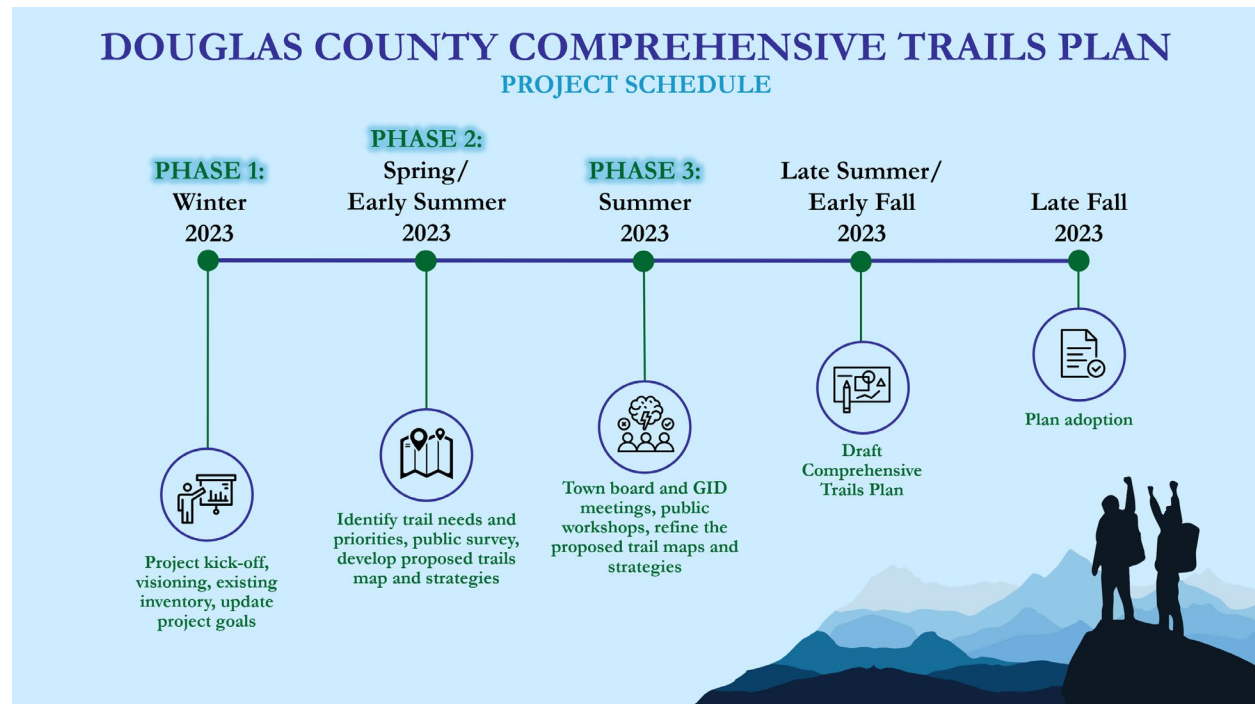


Figure 7: Project Schedule

### PHASE 1: Review Information

During Phase 1 of the trail planning process, the project team focused on reviewing existing information and aligning it with the County's goals. This phase involved several critical steps:

- **Review of Local, Regional, and Statewide Plans:** The team began by thoroughly examining local, regional, and statewide plans related to trails and outdoor recreation. This comprehensive review allowed them to understand the broader context and identify any overlap or synergies with the County's objectives.
- **Cross-Referencing with Existing Trails Database:** To ensure accuracy and avoid duplication, the team cross-referenced the information from these plans with the County's existing trails database. This step involved geospatial analysis to precisely identify gaps in the current trail network where potential additions were needed.
- **Data Cleanup and Integration:** Redundant or outdated data was eliminated, and necessary updates were integrated into the existing dataset. This process aimed to improve the accuracy and cohesiveness of the trail information.
- **Prioritizing Connectivity and Land Respect:** The team placed a strong emphasis on connectivity, recognizing the importance of creating a trail network that links various communities and natural areas. Additionally, they considered the balance between trails on private and public lands, respecting property rights while expanding recreational opportunities.

- **Plan Objective Adjustment:** As part of this phase, the team adjusted the plan's objectives to align with current and future needs and goals. This ensured that the trail planning efforts remained relevant and forward-looking.

## PHASE 2: Gather Feedback and Analyze Community Needs

Phase 2 of the process centered on community engagement and feedback collection, strengthening the foundation for the trail plan:

- **Validation with Stakeholders:** To validate the compiled data and gather insights, the project team engaged with stakeholders and County staff through group sessions and individual meetings. This inclusive approach allowed for diverse perspectives and ensured that the data was accurate and comprehensive.
- **Advisory Board Review:** The trail plan underwent a thorough review by the Douglas County Parks and Recreation advisory board. This step added an additional layer of scrutiny to enhance the accuracy and reliability of the initial trail maps.
- **Prioritizing Accuracy and Usability:** Throughout Phase 2, the team prioritized the accuracy, reliability, and usability of the trail maps. These considerations were vital to create a resource that would be valuable to both residents and visitors.
- **Collaborative Approach:** Collaboration was at the heart of this phase, fostering a sense of shared responsibility among stakeholders. This collaborative spirit not only enhanced the credibility of the data but also created a sense of ownership and commitment to the trail planning process.



Figure 8: Trails Plan Partners



### PHASE 3: Determine Priorities and Implementation Strategy

Phase 3 was dedicated to refining priorities and developing a strategy for trail implementation. This phase involved extensive public involvement and engagement efforts:

- **Refinement Based on Priorities:** Multiple rounds of refinement were conducted, guided by stakeholder and agency priorities. This iterative process ensured that the trail plan was responsive to the needs and preferences of the community.
- **Extensive Public Involvement Campaign:** A significant milestone in this phase was the launch of the most extensive public involvement campaign in County history for trails. This campaign aimed to engage a wide range of community members in the planning process.
- **Public Surveys:** To gather insights and establish a baseline of community sentiment and trail priorities, the project team initiated public surveys. These surveys allowed residents and outdoor enthusiasts to share their opinions, preferences, and insights.
- **Public Workshops:** In July 2023, four public workshops were held. These face-to-face gatherings provided an opportunity for in-depth discussions, idea sharing, and suggestions. By involving the community in shaping the future trails plan, transparency and inclusivity were emphasized.

### A Living Document

The 2023 Trails Plan reflects the aspirations, preferences, and suggestions of the Douglas County community and stakeholders. It outlines a comprehensive and strategic path to enhance the trail system. The County acknowledges the dynamic nature of the community's requirements and anticipates that these needs will evolve. Consequently, the plan is regarded as a dynamic document that will be regularly revised alongside other County Master Plans. During periodic reviews, the County will refresh the park and trail inventory and adjust the planned trail network by assessing factors such as land use, population densities, and the prevailing community needs.

## Overview of Relevant Plans

The following graphic includes the major statewide/multi-regional, regional, and community plans that the Douglas County Comprehensive Trails Plan coordinates with. It should be noted that this list is not exhaustive. A review of available plans related to the Trails Plan is included in **Appendix A**:

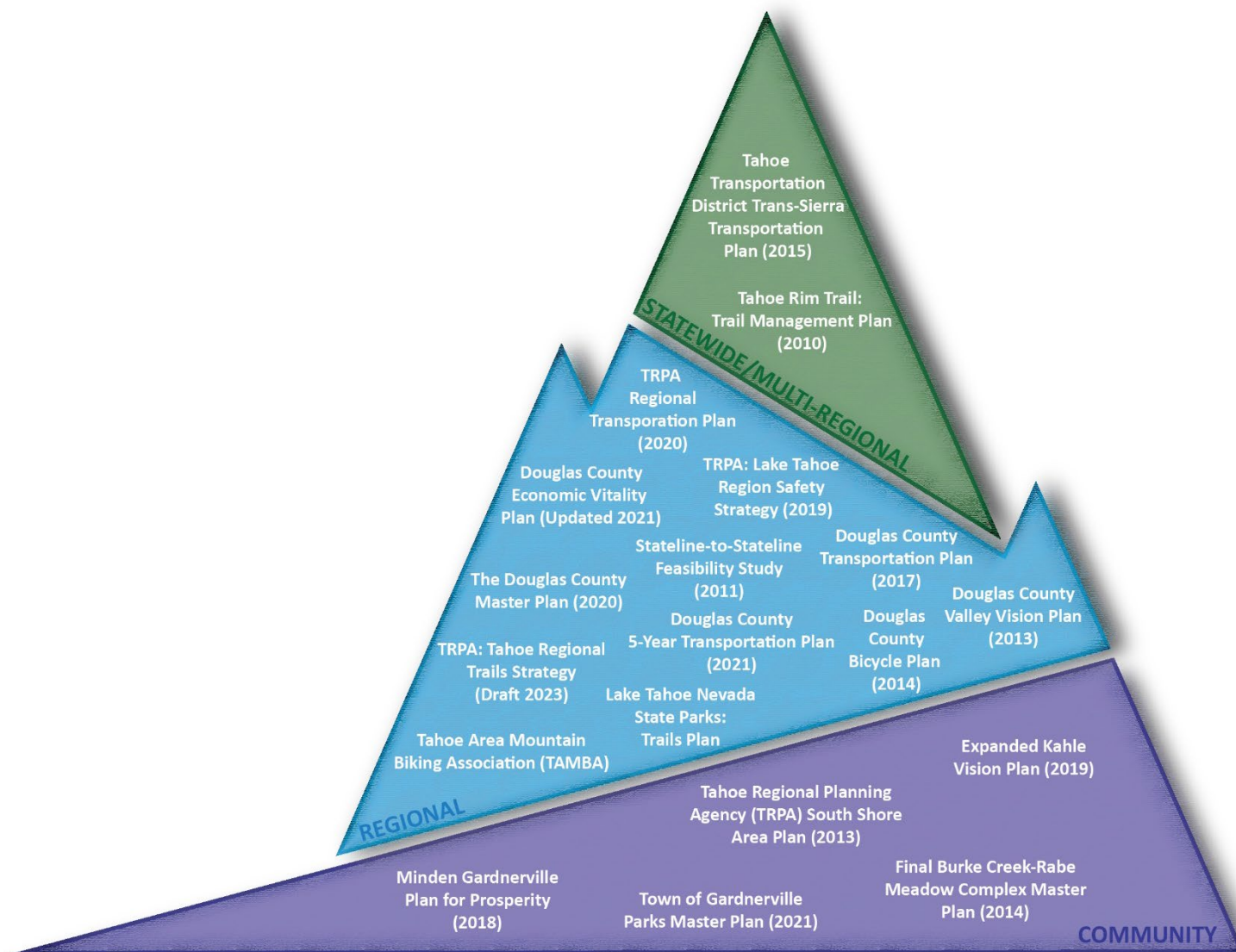


Figure 9: Overview of Relevant Plans



## Current Conditions

The following current conditions influenced the content of this plan.

### POPULATION GROWTH

Historically, Douglas County’s population has increased by a rate of about 1.6% year-to-year. Most recently, from 2018 to 2022, the population has increased by approximately 6.8% or about 1.4% year-to-year.

**Table 1: Douglas County Population (1970 to 2022)**

1970	1980	1990	2000	2010	2018	2019	2020	2021	2022
7,008	19,487	28,070	41,674	47,197	49,070	49,537	49,082	49,661	52,674

*Source: Nevada State Department of Taxation*

Douglas County's possible annual growth scenarios (**Table 2**) include a very slow growth of 0.1%, a slow growth of 1%, a historic growth of 1.3%, and a maximum growth of 2%. Considering the County's growth strategies, future growth is likely to fall between very slow (0.1%) and slow (1%) rates in the next 20 years. This would lead to a population of about 50,000 to 60,000 by 2038.

**Table 2: Douglas County Population Growth Scenarios**

Scenario	2020	2030	2038*
State Demographer (0.1%)	49,695	50,673	50,131
Census Data: Low Growth (1.0%)	49,912	55,134	59,702
Historic Growth (1.3%)	50,060	56,963	63,163
Douglas County Title 20: Maximum Growth (2.0%)	50,406	61,445	71,993

*Source: Douglas County Master Plan (2020)*

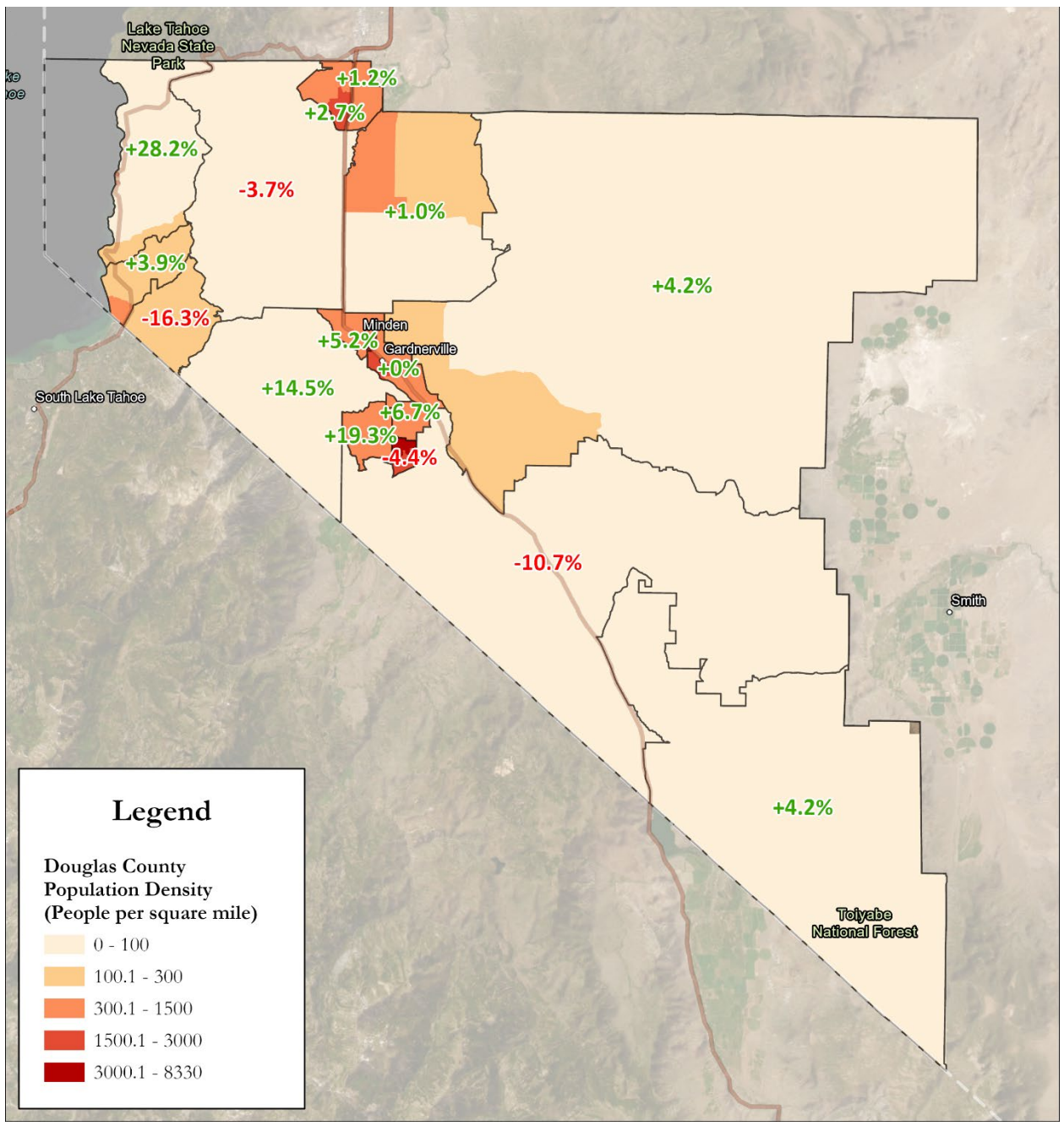
Douglas County has three towns, which include Gardnerville, Minden, and Genoa. Population size has decreased in Gardnerville (-5.46%) and Genoa (-1.82%), but it has increased in Minden (+1.59%) from 2018-2022.

**Table 3: Douglas County Town Population (2018 to 2022)**

	2018	2019	2020	2021	2022	Percent Change 2018-2022
<b>Gardnerville</b>	5,874	6,036	5,933	6,188	5,553	-5.46%
<b>Genoa</b>	219	220	218	213	215	-1.82%
<b>Minden</b>	3,270	3,293	3,294	3,460	3,323	+1.59%

*Source: Nevada State Department of Taxation*

Douglas County census tracts with the greatest population growth between 2017 and 2021 were tracts associated with the Gardnerville Ranchos and Foothills community areas and Tahoe’s East Shore (**Figure 10**). Most of Douglas County’s population is concentrated in the urban centers of south Carson City, Minden, Gardnerville, Gardnerville Ranchos, and Stateline. As urbanization and development continue to shape these areas, preserving access to natural spaces and recreational opportunities becomes paramount. Trails, being essential conduits to nature and outdoor experiences, play a pivotal role in alleviating the effects of urban living. By providing accessible and well-maintained trails, the County can effectively mitigate the pressures of urbanization and offer residents a respite from the financial strains associated with high living costs. The availability of these trails not only promotes physical well-being but also fosters mental rejuvenation, contributing to the overall quality of life for Douglas County's population.



**Figure 10:** Douglas County Population Density (Replica Spring 2021 data) and Percent Growth/Decline from 2017-2021 by Census Tract (ACS 5-year estimates)

**DOUGLAS COUNTY AGE DISTRIBUTION AND DISABILITY RATES**

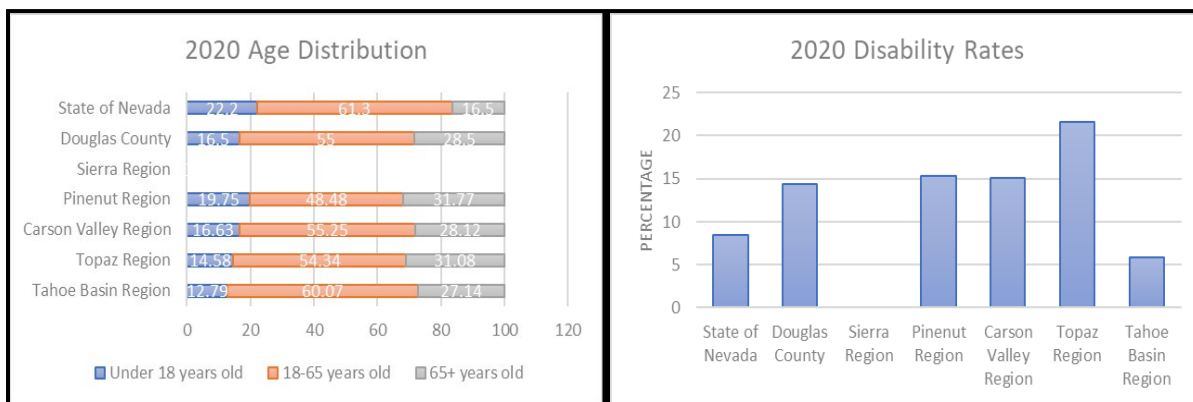
With a median age of 52.9, Douglas County is much older than the State’s overall age of 38.2. Among six age groups — 0 to 4, 5 to 19, 20 to 34, 35 to 49, 50 to 64, and 65 and older — the 65+ group was the fastest growing between 2010 and 2021 with its population increasing by 63%. This suggests a growing segment of the population seeking activities that promote physical activity and well-being in their golden years. Trails, with their varying levels of difficulty and accessibility, provide an avenue for seniors to stay active, connect with nature, and maintain their health. For older individuals, regular walking or light hiking can contribute to better cardiovascular health and increased mobility.





Conversely, the decline of 15.9% in the 5 to 19 age group over the same period indicates potential challenges in engaging the younger generation in outdoor activities. This is where the more urbanized population centers like Minden and Gardnerville play a pivotal role. These areas, unlike other parts of Douglas County, house a higher concentration of young families with children and teenagers. Trails in and around these urban centers can serve as invaluable resources for these families, offering a space for children and teens to explore, learn, enjoy quality time with their peers, and combat sedentary lifestyles and screen time by encouraging outdoor play and exploration. This, in turn, can contribute to improved mental and emotional well-being, fostering a sense of balance in an increasingly fast-paced world.

In Douglas County, a notable 14.4 percent of residents are individuals with disabilities, a percentage surpassing the state average of 8.5 percent. The diverse range of disabilities encompasses hearing, vision, cognitive, ambulatory, self-care, and independent living challenges. Creating a trail network that caters to the needs of individuals with disabilities is not only a matter of accessibility but also of equity and social integration. Incorporating features like smooth surfaces, gradual inclines, handrails, and clear signage can make trails more navigable for individuals with various disabilities. Additionally, sensory-rich elements, such as interpretive displays with tactile components, can provide a meaningful experience for those with cognitive or visual impairments. By doing so, individuals with disabilities can enjoy outdoor activities and be part of the community experience.

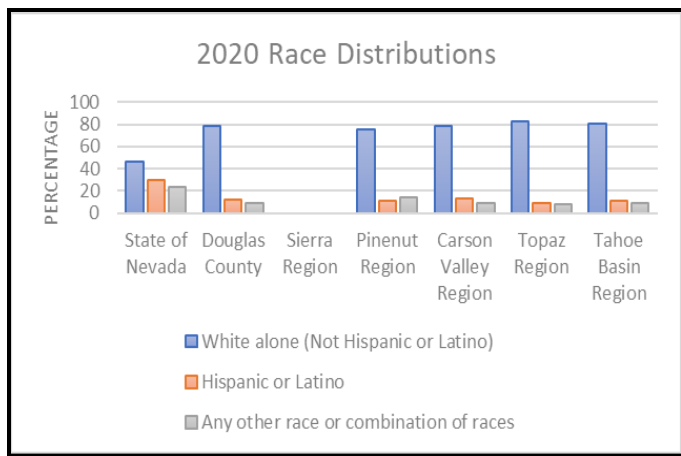


Graph 1: Douglas County Age Distribution (2020 Census Data)

Graph 2: Douglas County Disability Rates (2020 Census Data)

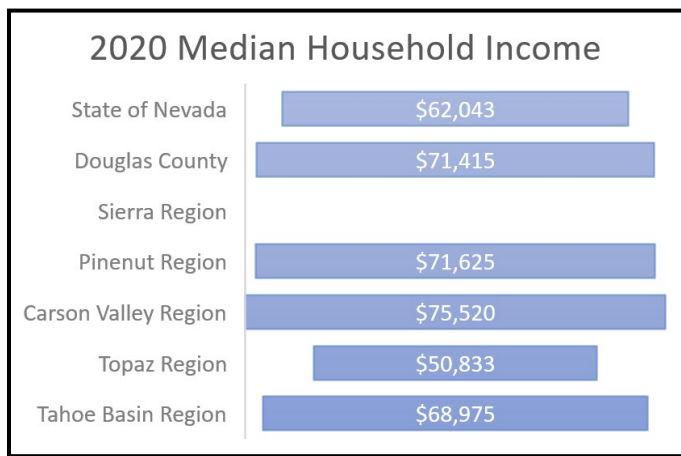
### DOUGLAS COUNTY RACE DISTRIBUTION AND MEDIAN INCOME

The dominant racial group in Douglas County is White alone (Not Hispanic or Latino). Analyzing racial trends over a two-decade span, projections indicate a forecasted 4.11% decrease in the White alone (Not Hispanic or Latino) population. In contrast, the Hispanic or Latino population is expected to experience a substantial surge, with an estimated increase of 46.7%. As the County's racial composition evolves, trails can offer a common ground for residents from various backgrounds to come together, fostering unity and shared experiences. By facilitating interactions and connections in natural settings, trails contribute to social cohesion, breaking down barriers, and promoting a sense of belonging among the County's diverse population.



**Graph 3:** Douglas County Race Distribution (2020 Census Data)

Douglas County residents boast a higher level of affluence per household compared to statewide averages. This economic standing presents a unique opportunity for the County's trail system. As residents enjoy higher disposable incomes, there exists a potential to invest in trail infrastructure that caters to a wide range of recreational preferences. With this financial advantage, the County can develop and maintain trails that provide diverse experiences and additional amenities that enhance the overall trail experience.



**Graph 4:** Douglas County Median Household Income (2020 Census Data)

**LAND OWNERSHIP**

Douglas County is comprised mostly of lands owned by the Bureau of Land Management (36.00%), Private Lands (30.33%), U.S. Forest Service (17.63%), and the Bureau of Indian Affairs (12.48%). This diverse ownership landscape presents both opportunities and challenges for the development and management of the County's trail system. Collaborating effectively with these various landowners is essential to ensure the seamless connectivity of trails across different jurisdictions. It also underscores the importance of adhering to regulations and guidelines specific to each land ownership entity.



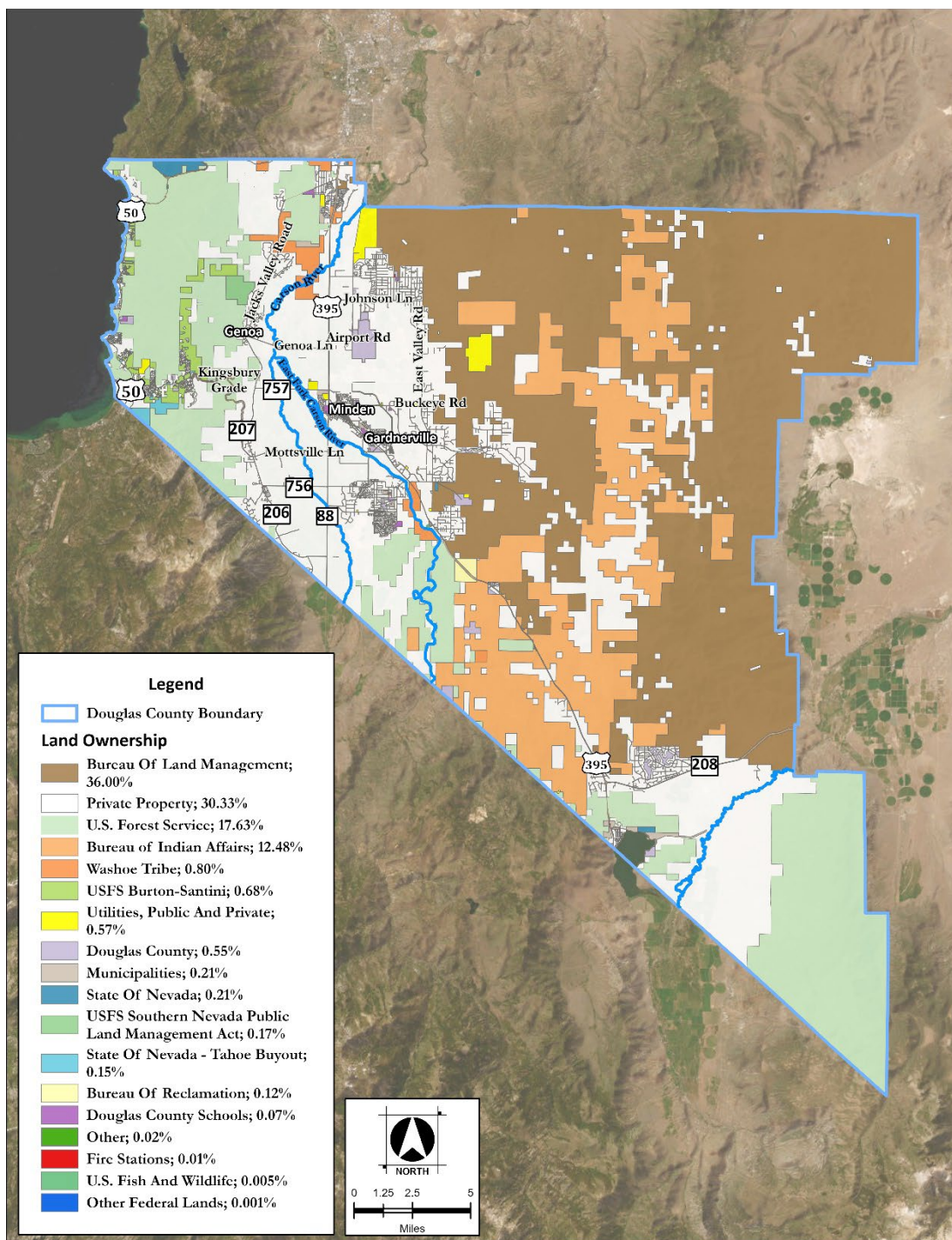


Figure 11: Douglas County Land Ownership

## LAND USE

The Trails Plan places a strong emphasis on the critical relationship between land use and the development of a cohesive and accessible trail network. Land use decisions have a profound impact on the character and functionality of a community, and the County intends to harmonize trail planning with broader development objectives outlined in the County's Master Plan in the following ways:

- **Connecting Communities and Public Resources:** By aiming to strategically connect neighborhoods to vital public spaces, including schools, parks, open spaces, commercial centers, and

essential services, a trail network can be created that promotes outdoor recreation and enhances the overall quality of life for residents and visitors alike.

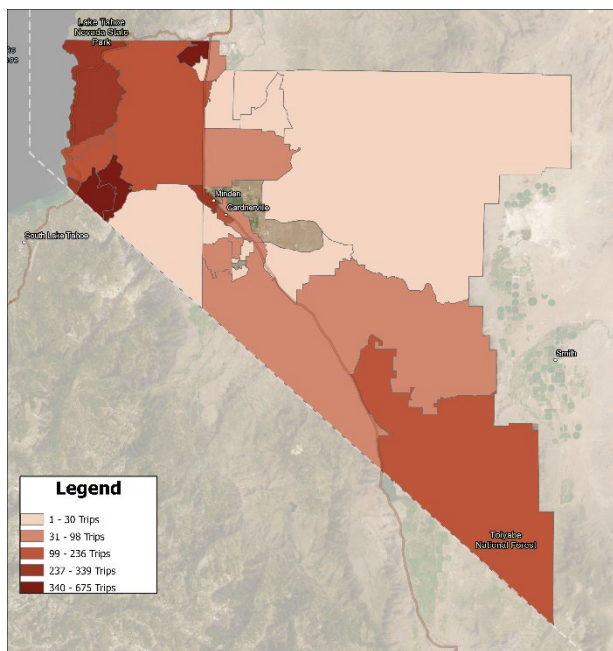
- **Supporting Future Development:** As Douglas County experiences new development projects, the Trails Plan is committed to identifying opportunities to extend trail connectivity. Preserving trail right-of-way and easements is of paramount importance to ensure the ongoing growth and integration of the trail network. These preserved corridors are essential for future expansion and adaptation to meet the evolving needs of the community.
- **Integrated Planning:** To maintain the relevance and effectiveness of the Trails Plan, it must be regularly reviewed alongside updates to the County's Master Plan. This integrated approach ensures that trails evolve in conjunction with the broader vision for the County's development. Furthermore, major land use decisions should be made in consideration of the Trails Plan, as they directly influence the ability to establish and sustain a robust and interconnected trail system. This integrated approach ensures that the trails remain responsive to the ever-changing needs of residents and visitors.

## VISITATION

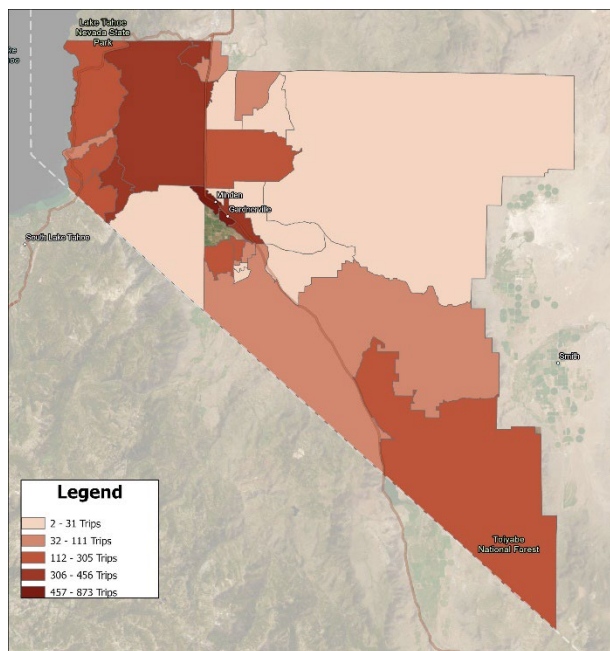
Douglas County's natural beauty attracts year-round visitors, drawing about 56,100 external trips that concluded within the county on a typical Spring Saturday in 2021. Many of these visitors originated from Carson City, El Dorado County, Washoe County, Lyon County, and Mono County. Notably, 4,220 of these trips were for recreational purposes. The Tahoe and Sierra Regions, along with urbanized parts of southern Carson City and Minden, stood out as popular destinations. In contrast, residents embarked on 5,740 recreational trips within Douglas County on the same Saturday. Their preferences leaned towards areas such as Carson Valley, Minden, Gardnerville, and the Sierra Region.

It's important to note that around 42.4% of those engaging in recreational activities in Douglas County were non-residents. Therefore, trail planning should consider the needs and preferences of both residents and visitors.

The data used for these visitation counts was gathered from Replica, a prominent big data analysis company that leverages cell phone and credit card data to uncover trends in user demographics and movement patterns.



**Figure 12:** Douglas County Visitor Recreation Trip Destinations (Replica Spring 2021 data)



**Figure 13:** Douglas County Resident Recreation Trip Destinations (Replica Spring 2021 data)



## The Existing Trail Network

Douglas County boasts an existing trail network that serves as the foundation for the County's outdoor recreational opportunities. The current trail network not only caters to diverse outdoor interests but also connects communities, promotes physical activity, and contributes to the County's overall quality of life. While substantial, the current trail network does have some gaps in connectivity between communities and regions. Additionally, there is a need for regular maintenance and potential improvements to existing trails to ensure they remain safe and enjoyable for all users. These considerations underscore the County's commitment to continually enhancing and expanding its trail system to better serve the needs and aspirations of its residents and visitors.

Currently, Douglas County boasts an extensive trail inventory spanning approximately 1,000 miles. This collection encompasses a diverse range of trail types, including natural surface, biking, paved, and off-highway vehicle (OHV) trails. For a comprehensive breakdown of Douglas County's trail offerings, see the detailed information provided in **Appendix B**. Additionally, to gain a visual understanding of the trail arrangement as of 2023, consult **Figure 14**, which illustrates the entirety of the County's trail network.

The existing trail network comprises several key typologies:

### Natural Surface Trail — 110.39 miles

Non-motorized, ground-surface trails used for recreational purposes



Source: CVTA



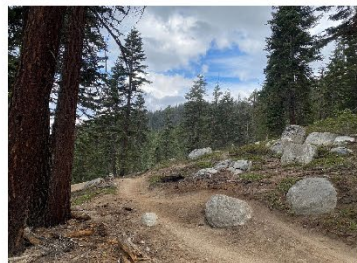
Genoa Canyon Trail. Source: CVTA



Clear Creek Trail. Source: CVTA

### Off-Highway Vehicle (OHV) 825.11 miles —

Motorized, ground-surface trails used for recreational purposes



Source: NV OHV



Source: NV OHV



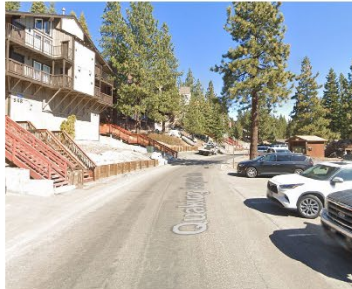
Source: NV OHV

# Paved Road — 5.49 miles

A hard-surfaced road with no pavement markings or pedestrian facilities



Source: The Regular Guard



Quaking Aspen Lane, Stateline, NV. Source: Google



Easy Street, Stateline, NV. Source: Google

# Bike Lane — 25.98 miles

A non-road bicycle facility designated by striping, signing, and pavement markings



Source: Federal Highway Association



Foothill Rd. Bike Lanes. Source: Google



Source: Federal Highway Association

# Shared-Use Path — 22.43 miles

Pedestrian facilities physically separated from traffic but intended for shared-use by a variety of groups including pedestrians, bicyclists, and joggers



Source: Federal Highway Association



Martin Slough Shared Use Path. Source: Douglas County



Rabe Meadows Shared Use Path. Source: Tahoe Fund



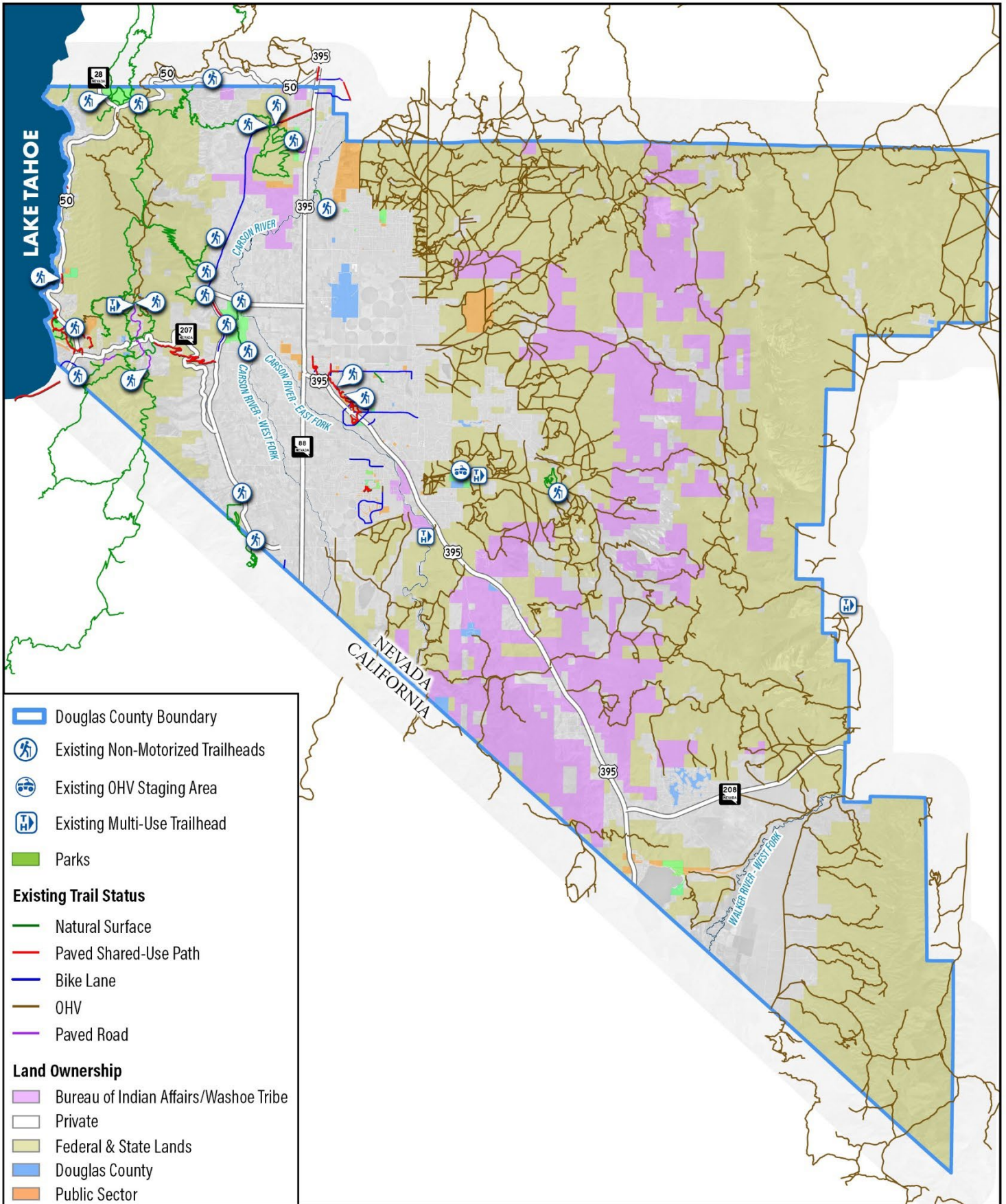
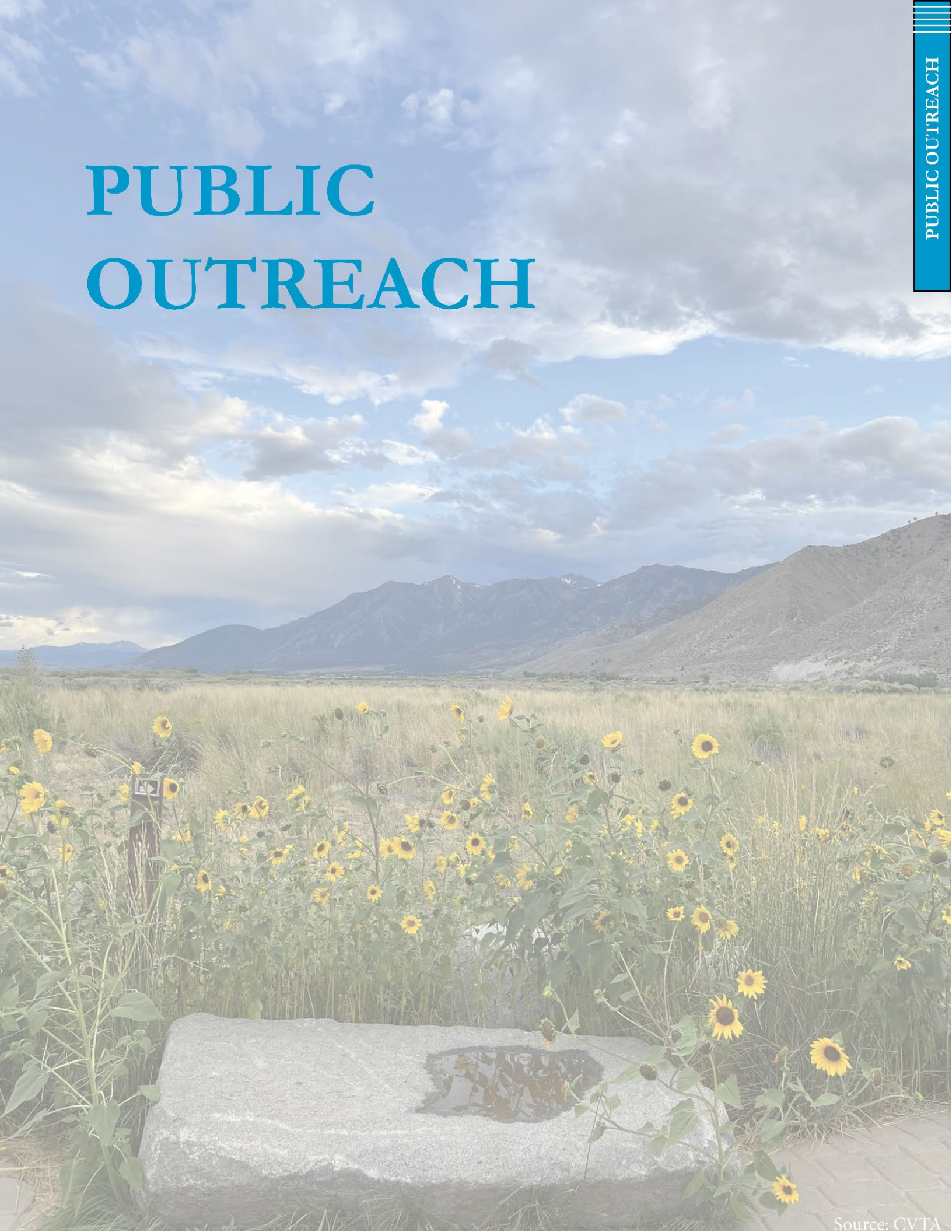


Figure 14: Douglas County Existing Trails



# PUBLIC OUTREACH



## Engagement Methods

To ensure meaningful engagement across a diverse spectrum of the Douglas County community, a range of methods were employed during the Trails Plan development. The resulting plan is a direct reflection of the needs and values expressed throughout this collaborative process, encompassing the vision, project prioritization, recommendations, and implementation strategies. This Trails Plan serves as a catalyst, allowing residents of Douglas County to sustain discussions regarding the significance of their trail system. By consistently seeking public input and fostering close collaboration with the various user groups of pathways and trails within Douglas County, a strong sense of connection and ownership can be nurtured among residents contributing to the enduring success of the trail system.

The goals of the public engagement process for this plan were:

- Create meaningful dialogue with stakeholders and identify long-term system advocates.
- Provide diverse opportunities for public interaction and engagement.
- Feature clear, compelling, and educational materials about the Trails Plan, how it was developed, and its future benefits.
- Solicit feedback on the needs and priorities of trails and amenities.

The engagement methods used during the creation of the plan provided diverse opportunities for stakeholders and residents to engage and reduce barriers. Methods included two technical advisory committee meetings and multiple additional focus group meetings, an online survey, eight General Improvement District (GID) and Town Board presentations, three Parks and Recreation Advisory Board meetings, and four public workshops with activities and informational boards that sought feedback in person.

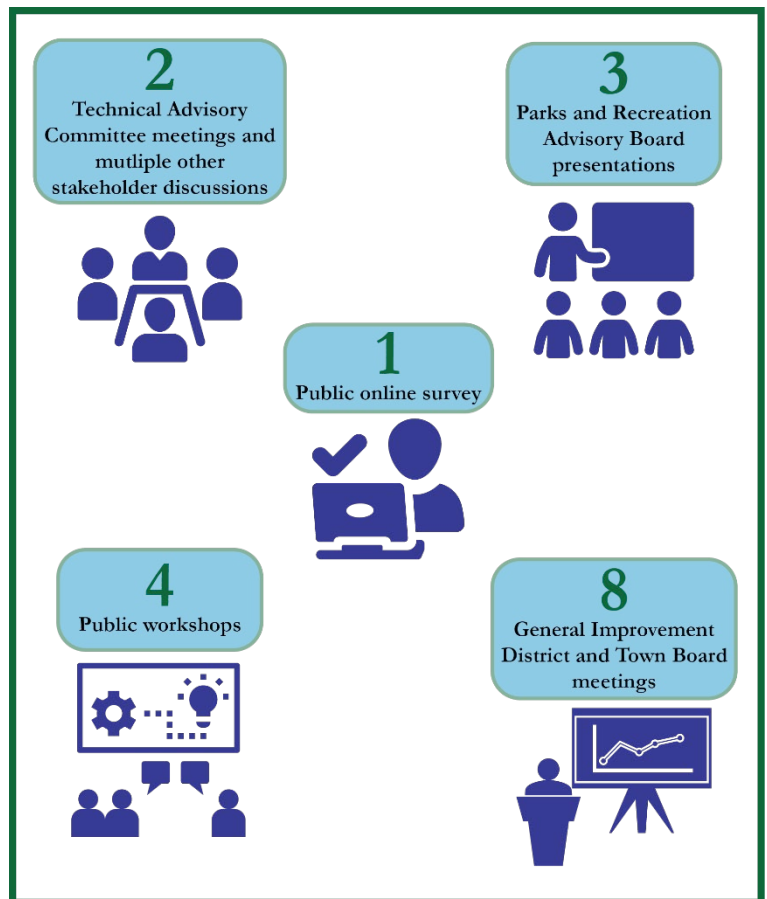


Figure 15: Public Outreach Summary

Information sought during these methods of engagement included:

- Gather user insights for targeted trail improvements.
- Identify system growth opportunities and challenges.
- Shape the community's trail vision and preferences.
- Address usage needs, barriers, and benefits.
- Set investment priorities for trail development.



## What We Heard: Community Feedback and Needs

### TECHNICAL ADVISORY COMMITTEE AND STAKEHOLDER INPUT

Stakeholders, encompassing various interest groups and representatives from public land management agencies, actively took part in two comprehensive meetings and multiple follow-up discussions. These conversations revolved around the evaluation of the current trail inventory maps as well as the proposed additions. Other focal points of these discussions included determining priorities within the trail network and providing valuable recommendations for its enhancement and expansion.

### GENERAL IMPROVEMENT DISTRICT (GID) AND TOWN BOARD MEETINGS

Key feedback from the public during the GID and town board meetings revealed several common threads, which helped drive the focus of the plan:

- Concern over the lack of sidewalks and connectivity within and to certain communities.
- Prioritize multi-use path connectivity between communities:
  - > Minden/Gardnerville to the Gardnerville Ranchos and Genoa
  - > V&T Path
  - > NV Stateline to Stateline Bikeway – Zephyr connection
  - > Kahle Park connectivity, fix the connection behind the old middle school
  - > Pony Express Trail
- Need for parking and trailhead improvements.
- Desire for Carson River access.
- Questions about maintenance responsibilities of trails and trailheads.
- Importance of respecting land access and installing appropriate signage.
- Ensuring ADA accessibility on trails.
- Accommodating different user groups such as e-bike riders.
- User conflicts/addressing safety concerns/enforcement.
- Require new trail connections within new developments.
- Winter use planning.
- Need for trail maps and better communication/signage on trails.
- Involve the public in the planning process of new trails.
- Collaborate with neighboring counties.
- Questions about funding.



ONLINE SURVEY

From the start of May to mid-June 2023, Douglas County conducted an online public survey. While the majority of the **446 respondents** hailed from Douglas County itself, the survey also managed to gather input from individuals residing in other counties such as Carson City, Washoe, Lyon, Alpine, Storey, Placer, and El Dorado. The survey was mainly disseminated through press releases, social media, flyer postings at trailheads, email blasts, and word of mouth. For visual reference, please consult **Map 6**.

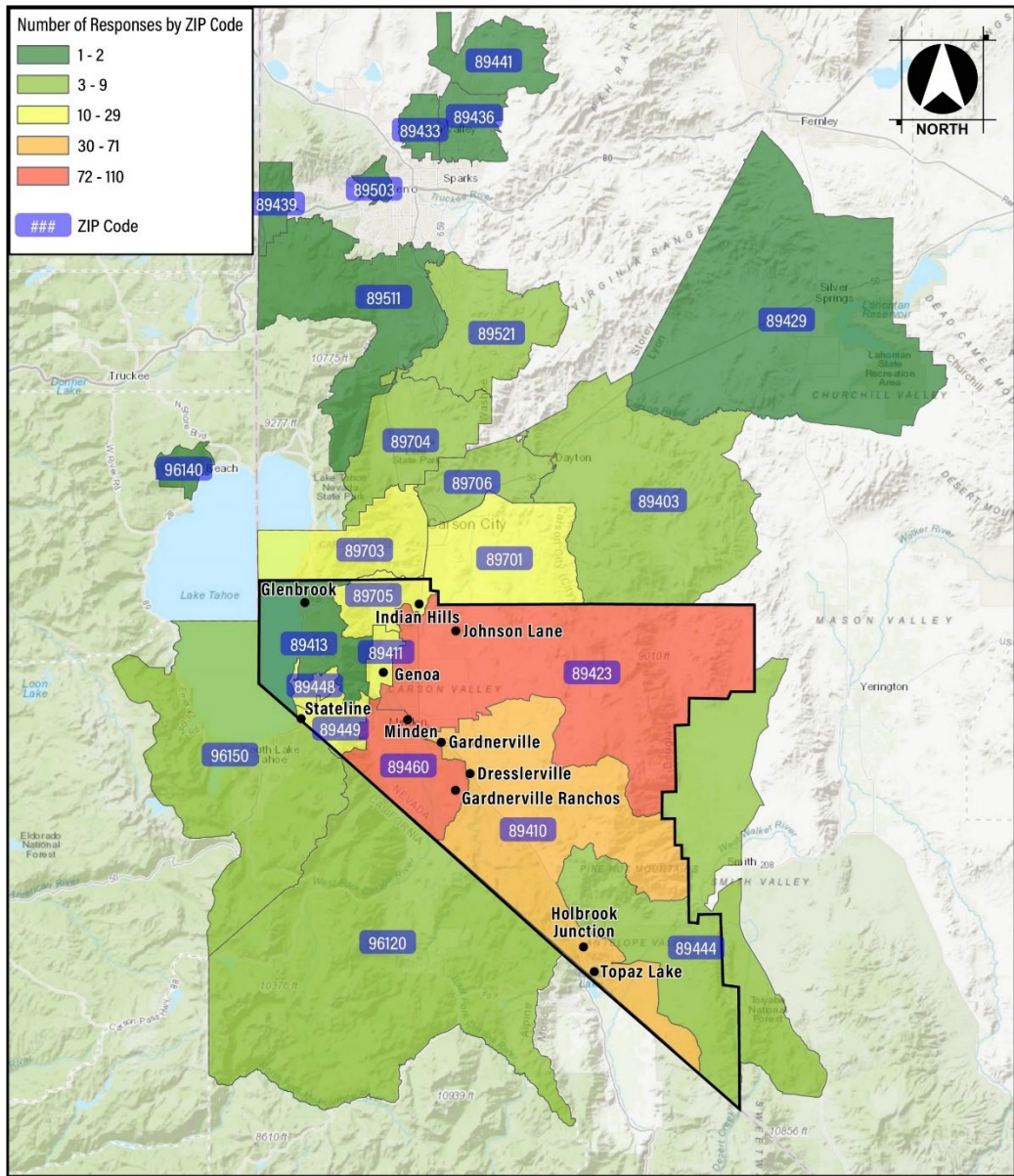
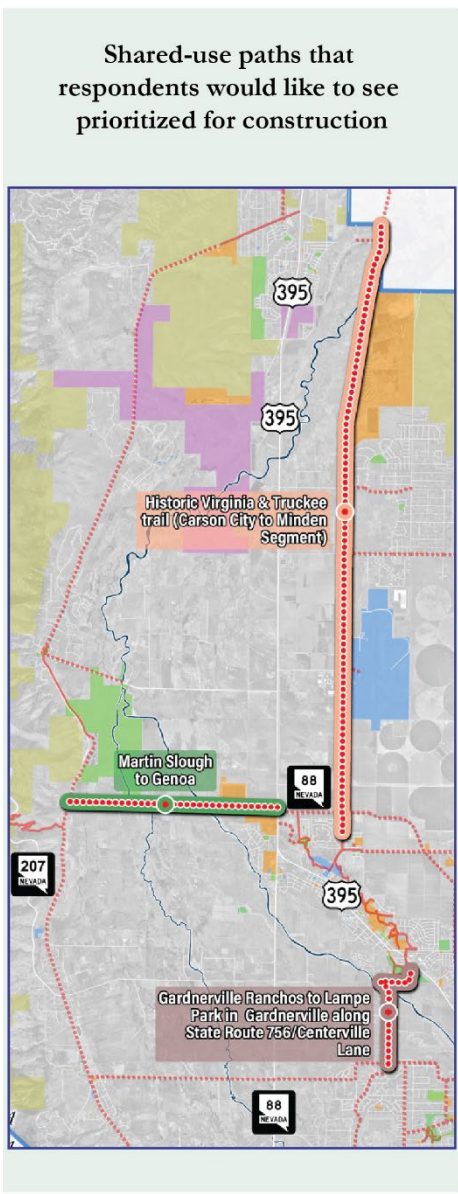


Figure 16: Survey Response by Zip code

### Survey Results:

Key results from the online survey are as follows (please consult **Appendix C** for a full summary of survey results).

## Top Responses



### Trail improvements

- Improve trail connectivity
- New recreational trails
- New pedestrian and/or bicycle transportation paths/lanes/etc.

### Sources where respondents get information about trails

- Websites/Online Maps:
  - Carson Valley Trails Association
  - AllTrails
  - Trailforks
  - Other
- Word of mouth
- Paper brochures, maps, guidebooks, etc.

### Types of trails respondents would like to see prioritized for construction

- Single track hiking and mountain bike trails
- Bike lanes
- Paved, shared-use paths

### Barriers, challenges, conflicts, or safety issues when using trails

- Gaps in the trail network
- Parking
- Lack of trailheads and amenities such as bathrooms

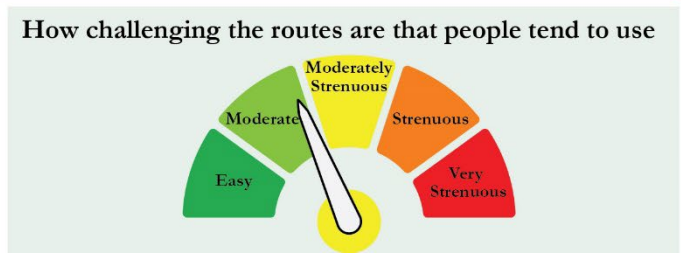
### Services or amenities respondents are looking for when using trails

- Public restrooms/water
- Pet waste stations
- Nothing

### Activities people use trails for

- Hiking
- Walking
- Mountain Biking

- 92% of respondents rated the overall safety of trails as either **excellent** or **good**
- 89% of respondents rated the overall maintenance of trails as either **excellent** or **good**





**PUBLIC WORKSHOPS**

A series of four public workshops were organized throughout the county in July 2023. These workshops were held across two days, offering both daytime and evening sessions. The workshop locations included Stateline, Topaz Ranch Estates, Indian Hills, and Gardnerville.

The event featured a concise overview of the plan, trail typologies, and both proposed and existing trail maps. Interactive boards were also set up, aiming to gather input on priority shared-use paths and trail/trailhead amenities. This open-house style arrangement allowed attendees to familiarize themselves with the Trails Plan materials, engage with County staff and stakeholders, and share their feedback.

The key takeaways from the workshops were as follows:



**Image 1:** Public Workshop at the Douglas County Community and Senior Center

**Prioritize funding and constructing the following amenities:**

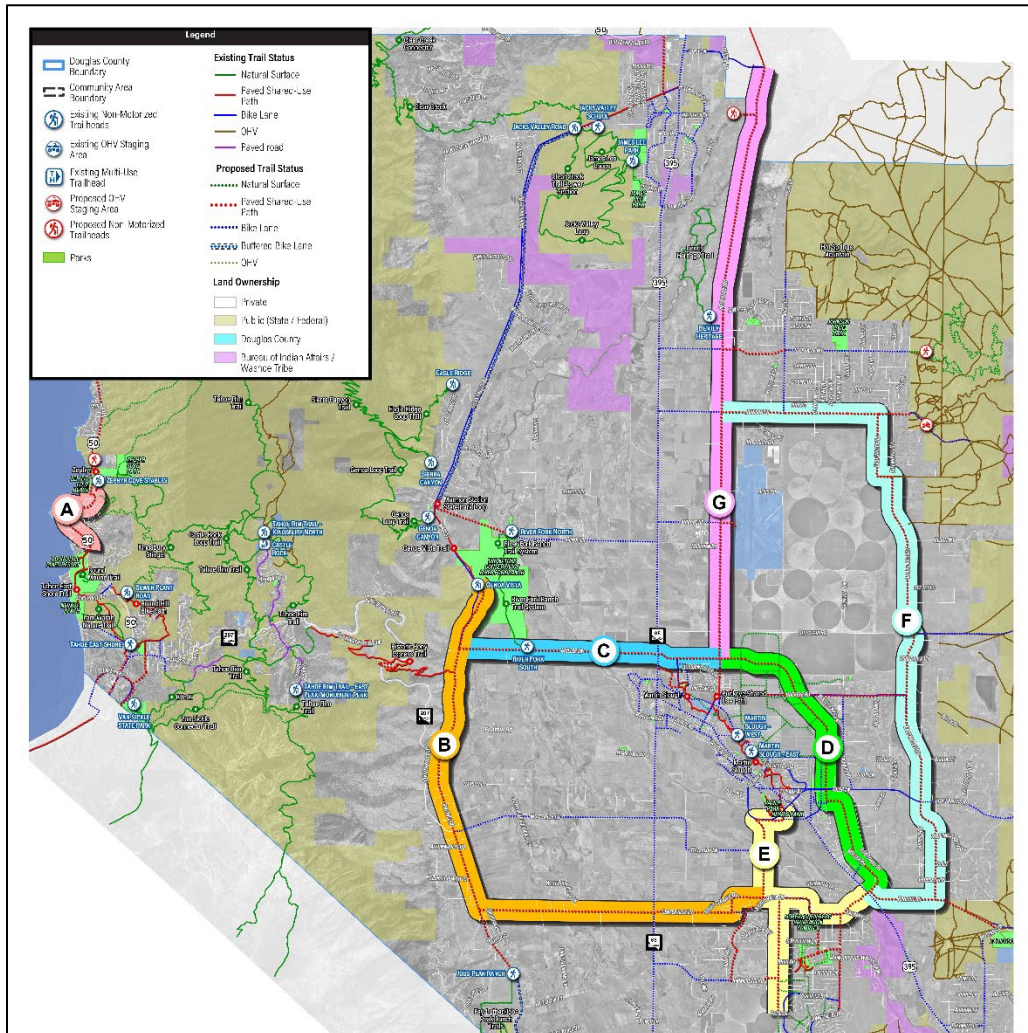
- Signage and maps
- Drinking water
- New restrooms
- Improved access and parking
- Pet waste stations





**Prioritize shared-use path connectivity between the following communities:**

- Minden/Gardnerville to the Gardnerville Ranchos
- Historic Virginia and Truckee Path connecting Minden and Carson City
- Path along Foothill Rd
- NV Stateline to Stateline Bikeway from Zephyr to Round Hill



**Which proposed path would you like to see prioritized for construction to connect communities?**

Place a sticker into the box next to your preferred option.

<b>A</b>	Paved path connecting Round Hill Pines and Zephyr	9
<b>B</b>	Paved path along Foothill Rd.	10
<b>C</b>	Paved Path connecting Genoa and Minden	5
<b>D</b>	Paved Path along Muller Parkway realignment	2
<b>E</b>	Paved path connecting Gardnerville Ranchos and Gardnerville	27
<b>F</b>	Paved Path along East Valley Rd.	6
<b>G</b>	Paved path connecting Minden and Carson City via the Historic V&T Trail	16


**Douglas County Comprehensive Trails Plan Update 2023**






# TRAIL RECOMMENDATIONS AND IMPLEMENTATION





## Comprehensive Trail Network

The plan envisions the creation of an interconnected system of pathways and trails throughout the county, seamlessly weaving together routes along sloughs, rivers, railroads, stream corridors, and roadways. Furthermore, it proposes the addition of spurs and loops that traverse a rich variety of natural and cultural landscapes. This comprehensive approach aims to fulfill the County’s aspiration for a unified network of trails that encompass both natural and urban settings, offering unique and varied experiences to residents and visitors alike.

Douglas County, in collaboration with its partners, is dedicated to seeking new opportunities for development and improving its already comprehensive trail network. This expansion builds on the foundation of existing trails, many of which have been established by federal agencies and enthusiastic volunteer groups like the Carson Valley Trails Association (CVTA) and Tahoe Area Mountain Biking Association (TAMBA).

While maintaining its support for OHV and natural surface trails, the County is now placing a distinct focus on the expansion of shared-use paths that foster connectivity among various communities. By prioritizing the creation of these paths, Douglas County aims to create a seamless network that not only accommodates different types of trail users but also enhances the overall accessibility and integration of the county's neighborhoods. Through this approach, the County envisions trails not only as recreational assets but also as transportation pathways that strengthen community bonds and provide avenues for diverse interactions.

In alignment with this vision, Douglas County is proud to present an array of maps that showcase the dynamic trail network that threads through the region. These maps not only chart out the physical routes but also serve as visual representations of the unity and diversity that these trails inspire. As you explore the maps, you'll witness how trails traverse through different landscapes, crossing boundaries and bringing people together. Each line etched on these maps reflects the journey toward a more cohesive and integrated community.

### Seeking New Opportunities

Various avenues exist for exploring new trail opportunities in Douglas County. They include, but are not limited to, the following methods:

- **Provide Letters of Support upon partners’ request:** Help trail partners by giving official support letters, encouraging collaboration for trail projects.
- **Evaluate Douglas County Capital Improvement Projects:** Examine ongoing and proposed county projects to find opportunities for integrating trails, maximizing resources, and improving community infrastructure.
- **Conduct Development Reviews:** Review development plans to ensure trails or trail connections are included, follow rules, prioritize safety, and meet community needs. Address challenges as they arise.
- **Review projects in collaboration with partners:** Work closely with government agencies, businesses, landowners, and nonprofits to review trail proposals. Build partnerships and secure funding for construction and maintenance.
- **Annual Trails Plan review:** Conduct an annual review of the Trails Plan in coordination with the County Parks and Recreation Advisory Board, assessing the progress, addressing challenges, making recommendations, and making necessary adjustments to match community needs.
- **Community workshops, surveys, and trail events:** Organize workshops, surveys, and events to raise awareness about trails. Gather input from residents to determine new trail locations and features, ensuring community satisfaction.
- **Environmental and cultural assessments:** Assess areas for trails, considering ecological impact. Identify historically or culturally significant sites for trail development, promoting heritage conservation.

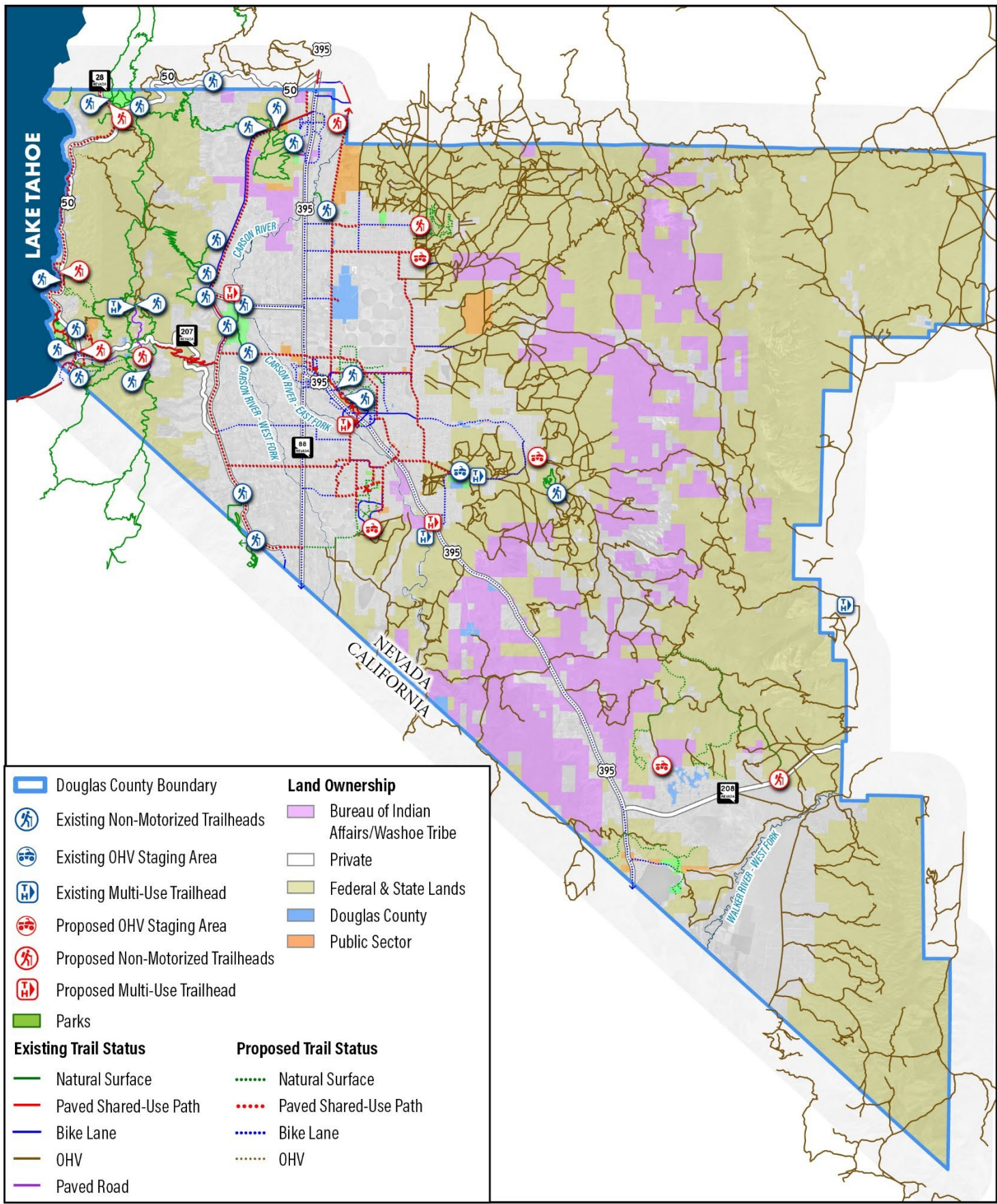


Figure 17: Douglas County Existing and Proposed Trails



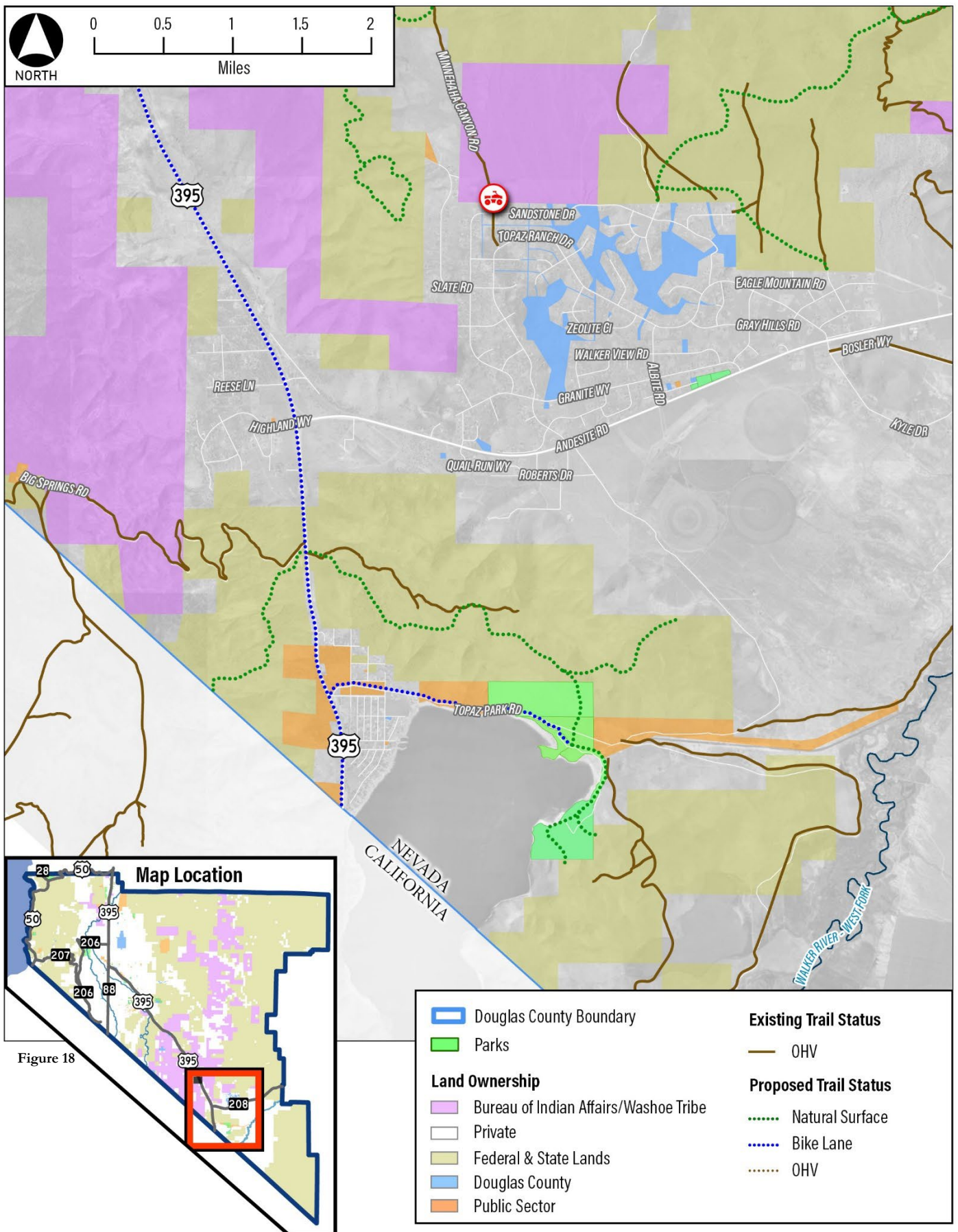


Figure 18





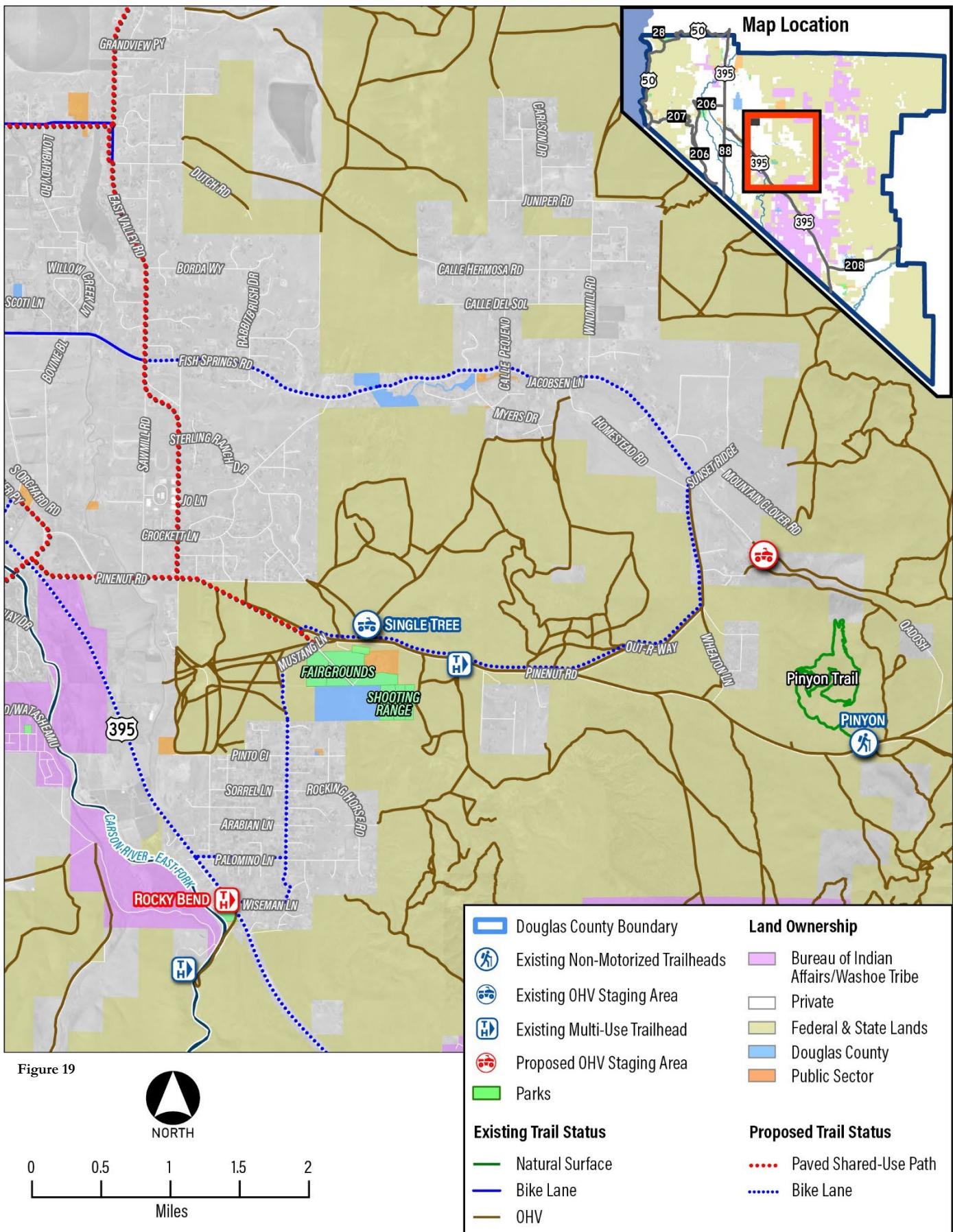


Figure 19





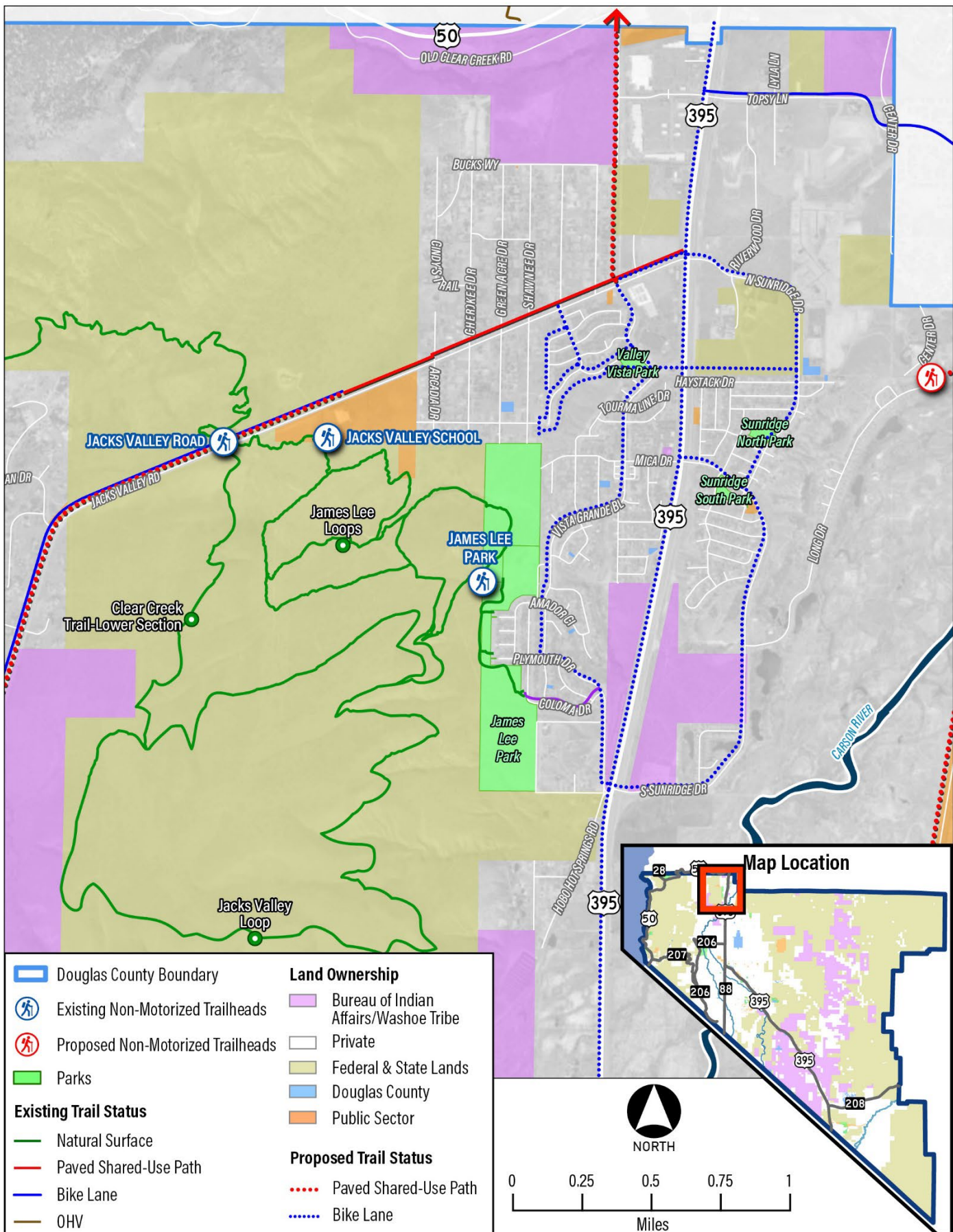


Figure 20





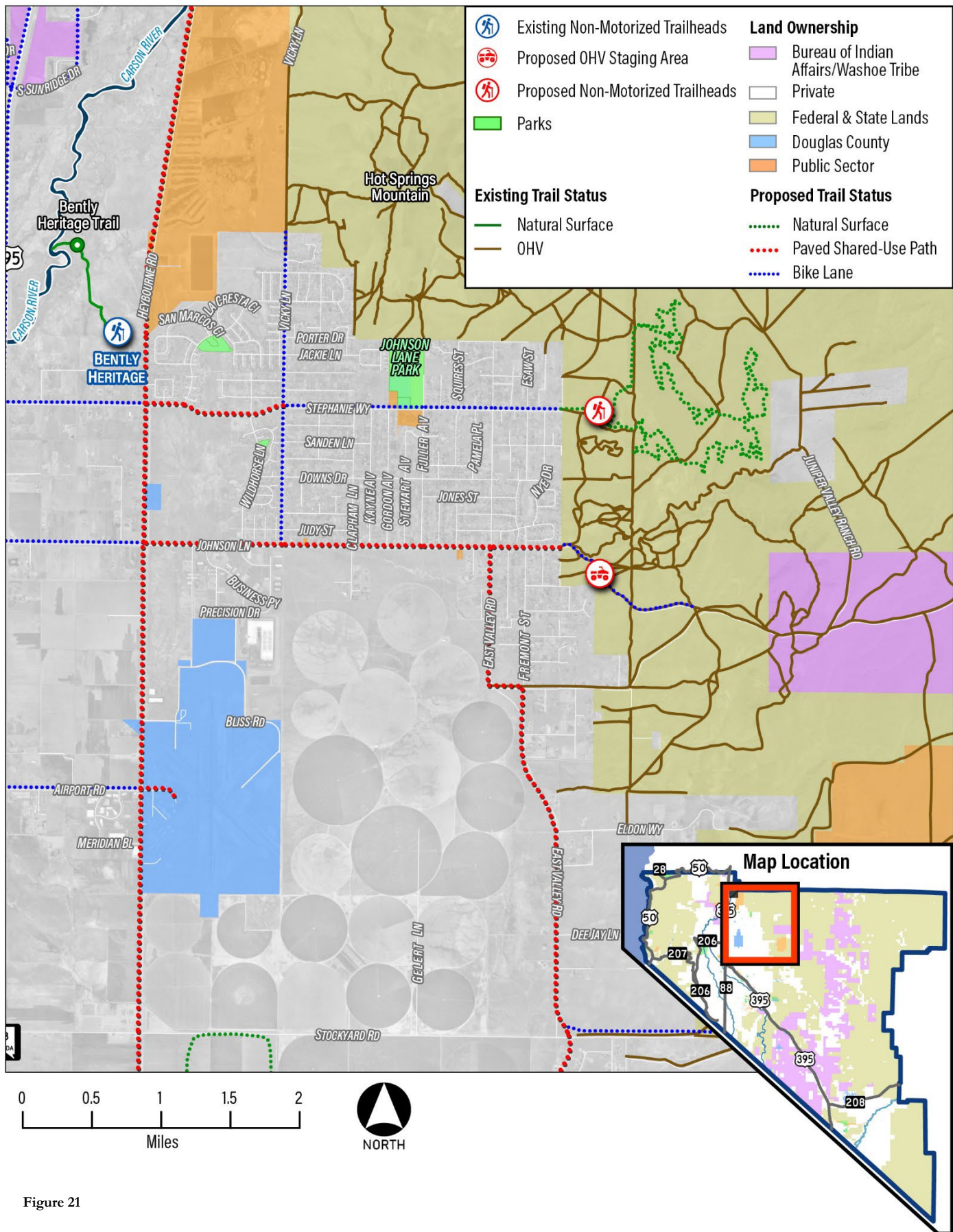


Figure 21



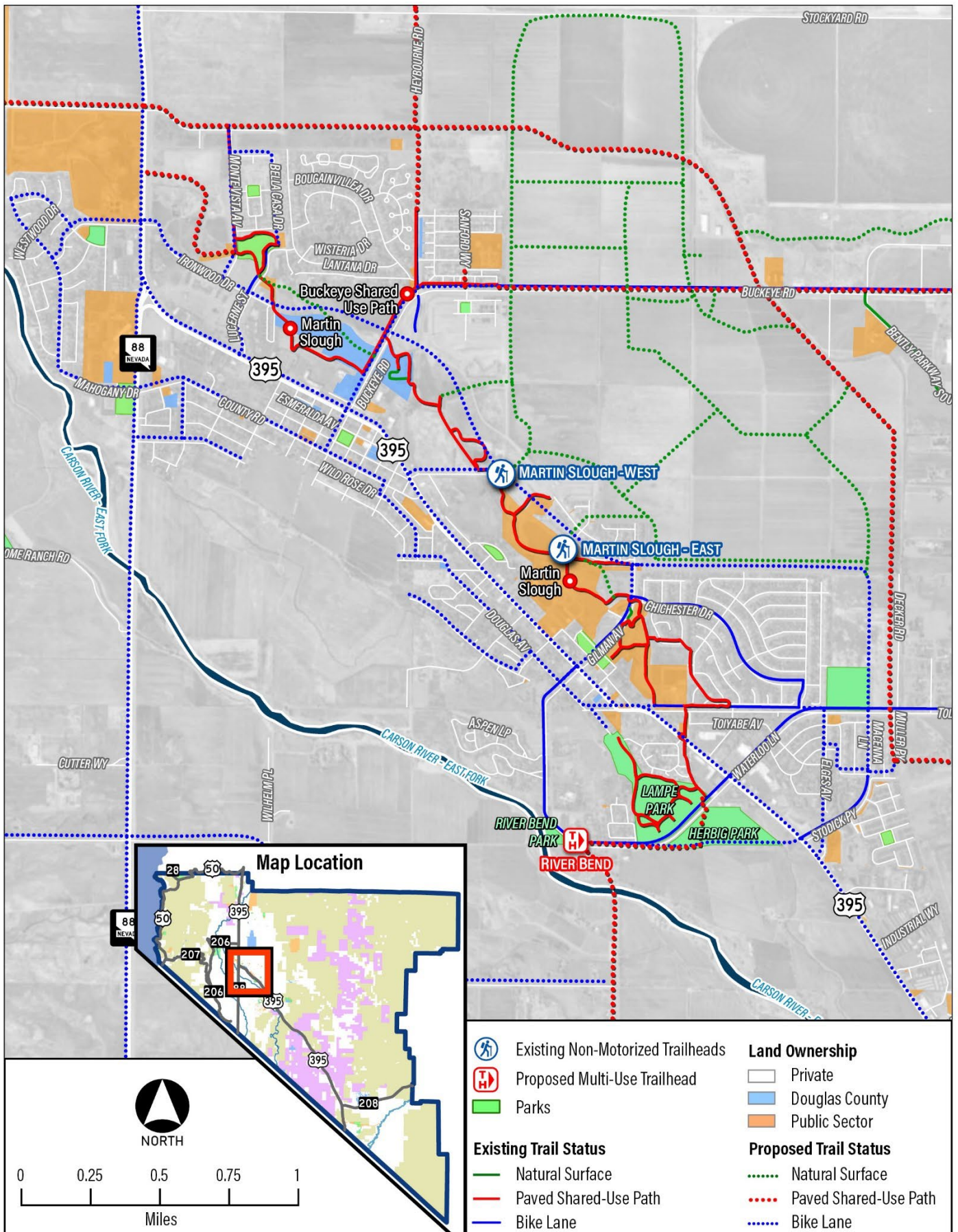


Figure 22



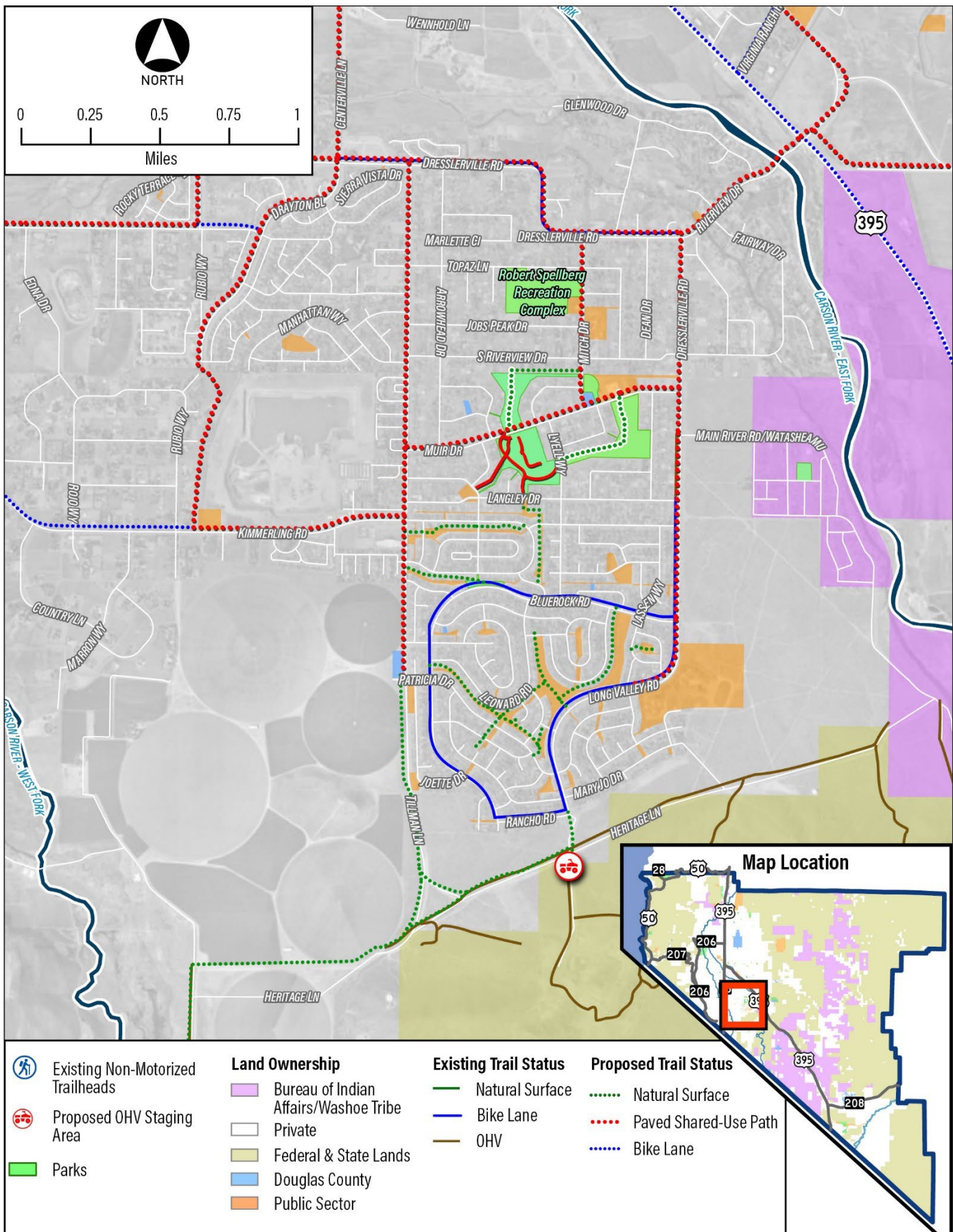


Figure 23











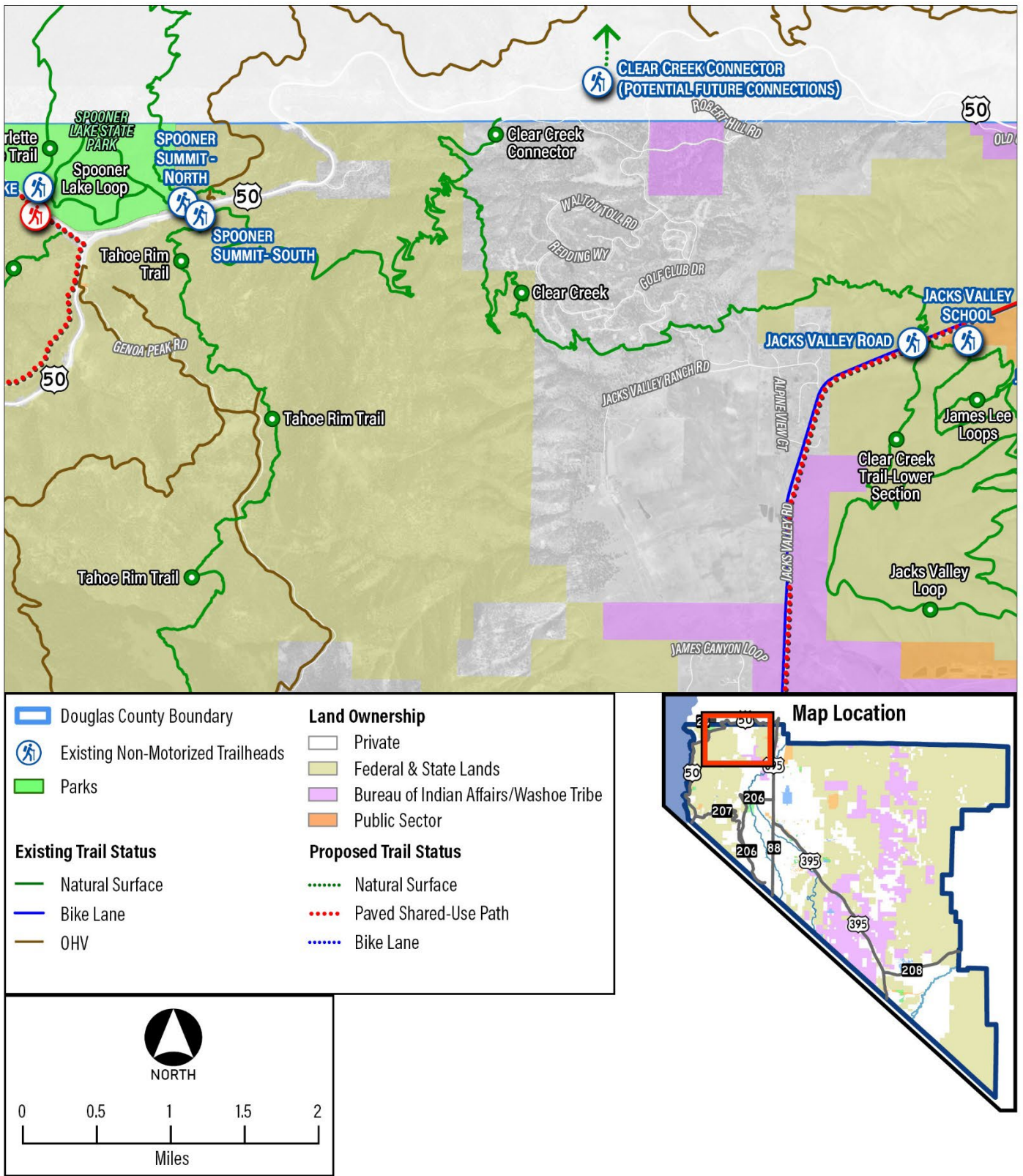
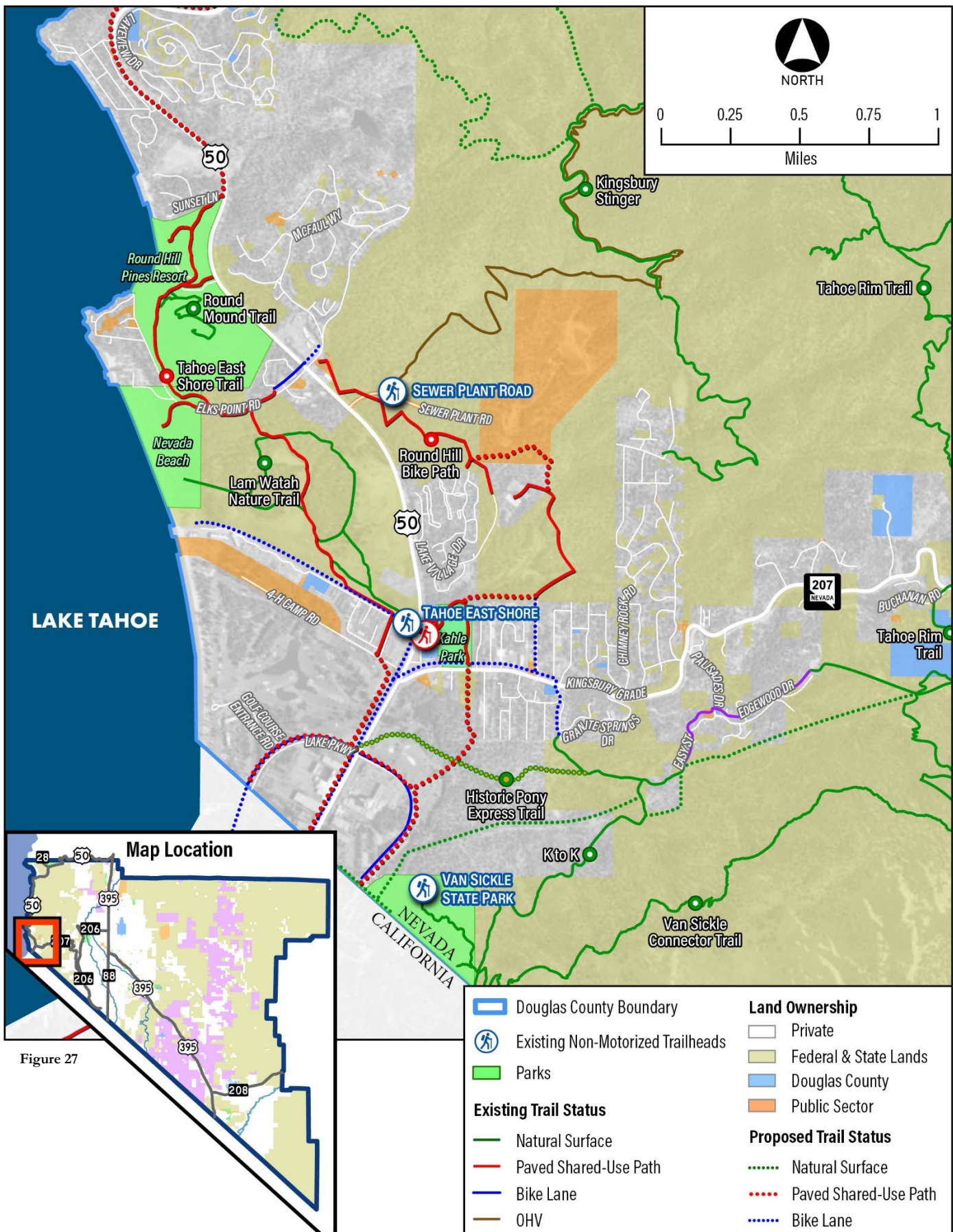


Figure 26







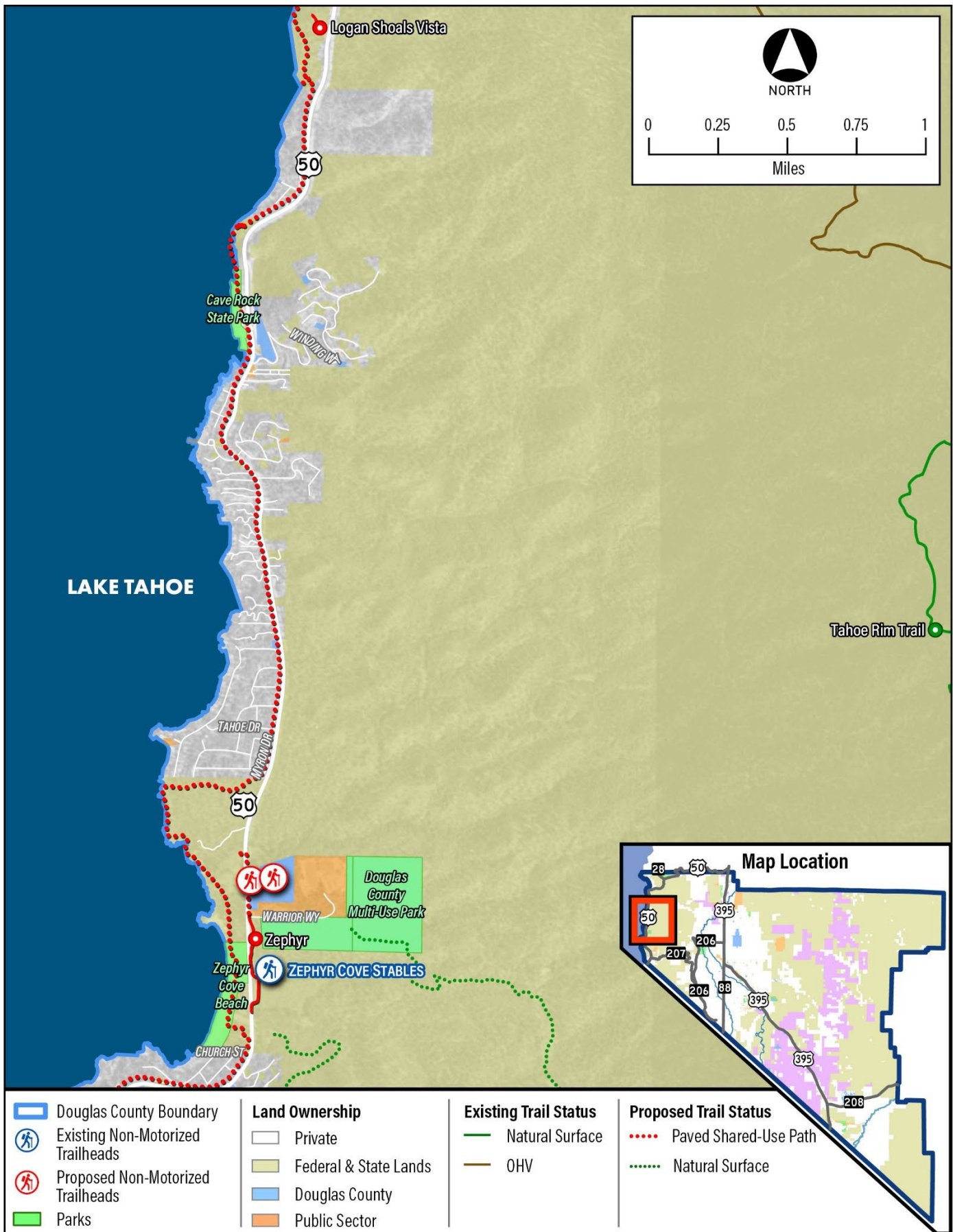


Figure 28

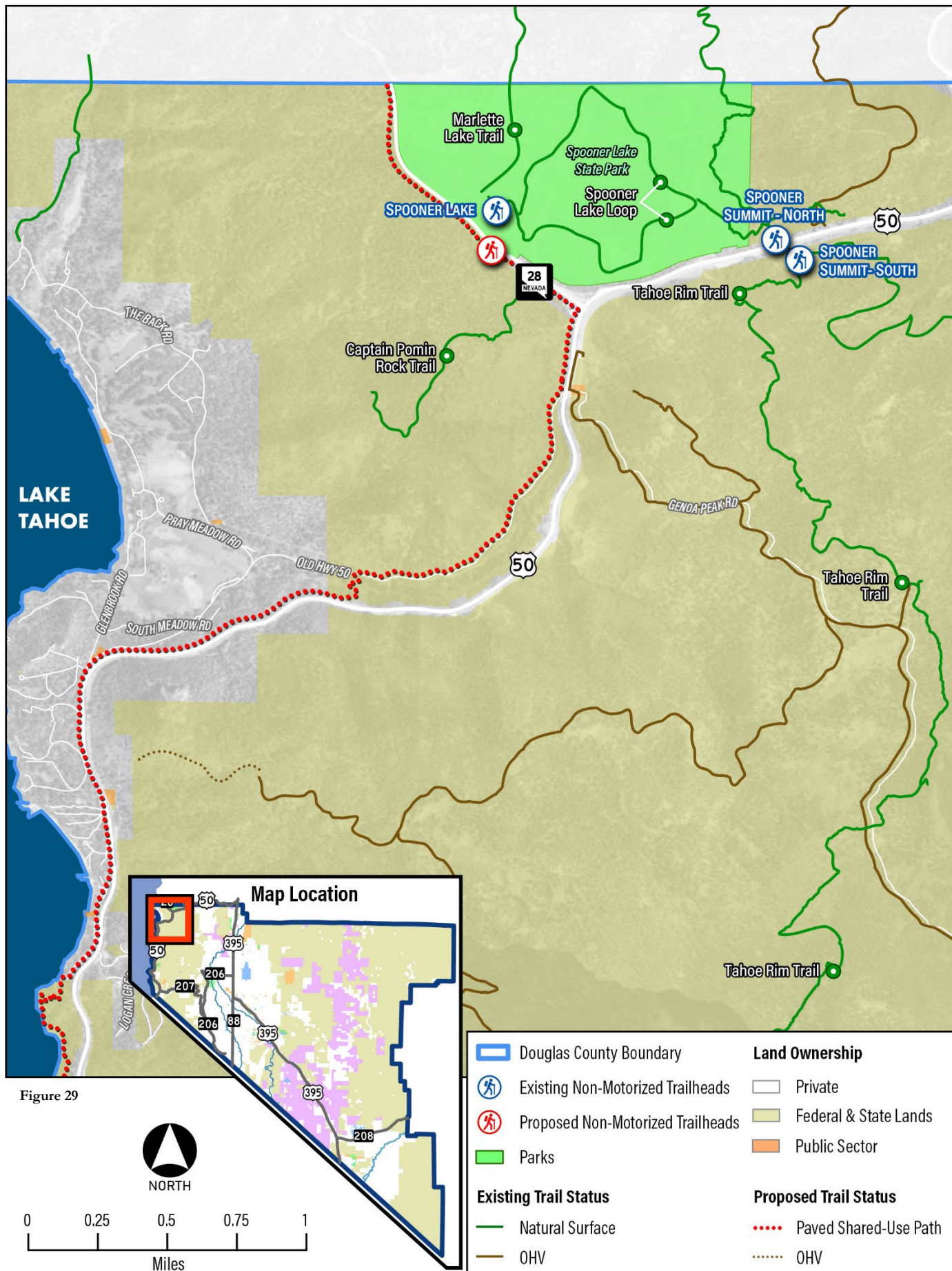


Figure 29



## Trail/Trailhead Access & Amenities

Trailheads are the public access points for the pathway and trail system. Primary trailheads provide parking and a kiosk or signage with trail information. They can also offer restrooms, picnic shelters, water, and other amenities. Secondary trailheads provide trail access with limited signage and may or may not provide parking or other amenities.

Primary trailheads should be located as needed in urban and suburban areas, as well as heavily trafficked rural areas. The county should take advantage of opportunities to co-locate trailheads with public parks, schools, and community centers and do shared parking and restroom facilities wherever feasible. Secondary trailheads should be pursued wherever practicable, such as where trail alignments cross public lands or rights-of-way, to maximize the accessibility of the pathway and public trail system.

The following amenities should be provided at primary trailheads:

- » Parking lots
- » Restrooms
- » Seating
- » Interpretive and directional signage
- » Litter receptacles
- » Bike racks, repair, and charging stations
- » Pet waste containers
- » Lighting
- » Kiosks

## Trail Focus Areas/Trail Prioritization and Phasing

### SHARED-USE PATH NETWORK PRIORITIZATION

Drawing upon the extensive input gathered through both surveys and dynamic workshops, the County has gained a comprehensive understanding of the sentiments and desires of its community members. This community-driven feedback has unveiled a clear and compelling priority for forthcoming construction endeavors: the development of shared-use paths that serve as pivotal connectors between communities. These envisioned pathways hold the potential to unite neighborhoods and points of interest, safely separate pedestrians and cyclists from vehicular traffic, reduce vehicle miles traveled, boost tourism and the economy, and facilitate a seamless flow of movement and interaction.

This strategic focus on enhancing connectivity underscores the County's commitment to fostering an environment that promotes both physical activity and meaningful engagement among its residents. By emphasizing the establishment of shared-use paths, the County aims to create an inclusive network that caters to a wide spectrum of interests and needs. This approach reflects a responsive and forward-thinking stance, aligning construction plans with the aspirations of the people it serves.

While Douglas County has identified these trails as priority routes for future construction, the County encourages other agencies to facilitate the realization of these pathways. Collaborative efforts can bring together diverse resources, expertise, and perspectives, ultimately leading to more effective and efficient project implementation.

The timing of pathway construction can vary based on several factors. Funding availability is a significant consideration, as it plays a pivotal role in determining the feasibility and pace of project execution. Additionally, the level of demand and usage anticipated for these pathways can influence the priority and sequencing of their

construction. This adaptive approach to development allows the County to align its efforts with the evolving needs and preferences of its residents while ensuring that projects are undertaken strategically and sustainably.

**Table 4: Priority Projects Implementation**

**NV Stateline-to-Stateline Shared-Use Path**

The Nevada Stateline to Stateline Bikeway Project Feasibility Study was completed in 2011 on behalf of the Tahoe Regional Planning Agency (TRPA), which includes the segments in Douglas County along U.S. Highway 50 from Spooner/SR 28 Junction to Stateline. The Feasibility Study looked at a number of conceptual shared-use Bikeway alignments and provided a number of design parameters. For example, the study focused on encouraging the use of publicly owned land to minimize impacts to private property and separate the Bikeway from the highway to the greatest extent feasible. It is important to recognize this study was about the potential shared-use path alignments and does not suggest any lane reductions to U.S. Highway 50. The alignment has not changed and is the same alignment that is contained in this plan. The design and environmental analysis will be required for future segments of the Bikeway. Douglas County will not promote or support any alignment that reduces the number of lanes on U.S. Highway 50 as a result of the Bikeway.

Section Priority	Unique Features	Project Partners	Cost and Potential Sources of Funding	Status of Completion	Project Comments
<b>A</b> Lake Parkway to Laura Drive. Located on west side of U.S. Hwy 50. ~0.5 miles.	Bridge Structure over Edgewood creek, Relocation of Private fence in some sections with potential easement; landscaping.	Edgewood Corporation, NDOT, DC, TTD, TRPA	Estimated <b>\$4 million</b>  FHWA, NDOT, Conserve Nevada, Recreational Trails Program, Tahoe Fund, private/local matching funds	<b>Completed:</b> Preliminary Eng. and Environmental  <b>To Be Completed:</b> Final Design & Construction	This project is slated to be constructed in conjunction with the intersection improvements at Lake Parkway. Environmental was done for shared-use path but may need to be updated based on final alignment and whether it is within the APE. This connection is vital to connecting visitors and residents to the resort core. In 2022, the existing Rabe Meadows section of the trail had 176,000 bike and pedestrian trips while the Round Hill Pines segment had 154,531 trips.
<b>B</b> NE corner Kahle Dr. trailhead improvements. ~30 parking spaces.	Need to add Fiber connection from 50 to lot.	DC, NDOT	Estimated <b>\$800,000</b>  NDOT, FHWA, Recreational Trails Program, private/local matching funds	<b>To Be Completed:</b> Preliminary Design Environmental (CE); Final Design, and Construction	This project is to improve the existing parking and organize to ~30 spaces with path connection to Kahle intersection and to Kahle Community Center. Current overflow parking is on Kahle Drive, which will be eliminated with street improvements. Consider coordinating with the (Kahle Vision Plan) Kahle Drive street and intersection improvements.
<b>C</b> Elks Point Rd. parking improvements. ~120 parking spaces.	Need to add fiber connection to new lot and to Nevada Beach, restroom.	DC, USFS, NDOT	Estimated <b>\$3.5-5 million</b>  USFS, NDOT, Douglas County, EIP: Stormwater, Conserve Nevada, private/local matching funds	<b>To Be Completed:</b> Preliminary Eng., Environmental, Final Design, and Construction	Elks Point Road is a NDOT road. The project would formalize parking in off-roadway parking lot similar to SR 28 North Trailhead parking (~50 spaces) on USFS property and to look at a roundabout or intersection improvement at Nevada Beach entrance to reduce congestion at the entry and queuing of vehicles on Elks Point Rd to U.S. 50.



Section Priority	Unique Features	Project Partners	Cost and Potential Sources of Funding	Status of Completion	Project Comments
<b>D</b> Round Hill Pines to Zephyr Cove shared-use path. ~3 miles.	Adjacent private lands, maintain path within U.S. Hwy 50 right-of-way	FHWA, USFS, NDOT, NHP, TTD, TRPA	Estimated \$12-24+ million depending on final alignment  USFS, NDOT, FHWA, Douglas County, EIP: Stormwater, Conserve Nevada, private/local matching funds	<b>To Be Completed:</b> Prelim Design Environmental, Final Design, and Construction	Environmental Analysis will determine the alignment, the final end within Dreyfus and preliminary design and construction estimates. Note that USFS took out a portion of the existing path at Round Hill Pines when entry road was built and should provide funding to replace that section with this project. Zephyr Cove vendor has a commitment of \$1 million to construct path within that segment, which could be match to other sources.
<b>E</b> Warrior Way parking improvements with path connections. ~150-200 parking spaces.	Need to add Fiber Connections; Restroom; Could include Ped/Bike Tunnel	USFS, NDOT, TTD, TRPA	Estimated \$4-7 million  USFS, Douglas County, NDOT, FHWA, EIP, Conserve Nevada, private/local matching funds	<b>To Be Completed:</b> Preliminary Eng., Environmental, Final Design, and Construction	Coordinate with Douglas County parking study and with USFS. USFS vendor required \$1 million for new path improvements and would be a good match to other sources.
<b>F</b> Cave Rock Dr./Lyons Ave. path connections and ~0.5 miles path connection to Cave Rock State Park entry	May include improvement to Cave Rock entry for acceleration/deceleration	NDOT, NDSP, TTD, TRPA	Estimated \$1- 3.5 million  NDOT, NDSP, FHWA, EIP, private/local matching funds	<b>To Be Completed:</b> Preliminary Eng., Environmental, Final Design, and Construction	Coordinate with NDOT Pedestrian Improvements/3R project to look at potential pedestrian connection to Cave Rock, NV State Park Entry booth.
<b>G</b> South park-n-ride lot and AIS boat inspection station at U.S. Hwy 50/SR 28. ~250 parking spaces and ~0.5 miles of shared-use path to Spooner Lake State Park entry.	Includes restroom, AIS station, new highway entry, relocation of snow play hill, restoration of existing hill area;	USFS, NDOT, TTD, TRPA, USFWS, NDSP	Estimated \$7 million  USFWS, NDOT, Fed-HIP, private/local matching funds	<b>Completed;</b> Preliminary Eng., and Environmental  <b>To Be Completed:</b> Final Design and Construction	Project is fully funded and is in design with construction slated for 2025. There may need to be some additional environmental based on NDOT's entry analysis. Future connection of NV Stateline-to-Stateline shared-use path will go from gated Old 40 north around the existing NDOT/AIS parking area to connect to south park-n-ride lot.

<b>H</b>	Runs along SR 28 with steep slopes and rocky terrain. Will require pedestrian bridges and walls. Utility co-location.	FHWA, USFS, Washoe Tribe, NDOT, NHP, NVSP, NDSL, TTD, TRPA, Washoe County, Carson City	~\$48-64+ million depending on final alignment  USFS, NDOT, FHWA, Douglas County, EIP: Stormwater, Conserve Nevada, Tahoe Fund, private/local matching funds.	<b>Completed:</b> Preliminary Eng. and Environmental  <b>To Be Completed:</b> Final Design & Construction	TTD, TRPA, USFS, and NDOT are currently working on the South parking lot's final design. TTD and USFS have been actively seeking grant funds for this project.
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**Historic Virginia and Truckee Trail**

Section Priority	Unique Features	Project Partners	Cost and Potential Sources of Funding	Status of Completion	Project Comments
<b>I</b>	The path follows the original rail bed. Connecting to Carson City will require crossing the Carson River. History of the agriculture within the county. Danberg owned most of the property. Interpretive signage of train, agriculture/ranching, and Washoe peoples.	Historic Virginia & Truckee Trail, Douglas County, Carson Valley Visitors Authority, Carson Valley Economic Development	~\$18-36+ million depending on final alignment  Conserve Nevada, Recreation Trails Program, Federal and State grants, FHWA – Federal Lands Access Program grants, SNPLMA grants, private grants, local matching funds	<b>To Be Completed:</b> Preliminary Eng., Environmental, Final Design, and Construction	Need to do land and environmental surveys and acquire easements. Have agreement from NV energy to use powerline easement but need 120 different land owner approvals that the utility easement is on.

**Jacks Valley Road and Foothill Road**

Section Priority	Unique Features	Project Partners	Cost and Potential Sources of Funding	Status of Completion	Project Comments
<b>J</b>	Potential creek crossings, adjacent private property	USFS, NDOT, CVTA, Wally's, Town of Genoa	~\$20-40+ million depending on final alignment  FHWA, USFS, NDOT, Conserve Nevada, Recreation Trails Program	<b>To Be Completed:</b> Wally's easement, Preliminary Eng., Environmental, Final Design, and Construction	Need to look at preliminary engineering and feasibility study as a first step. Continue work with Wally's to secure easement.



### Douglas County Community Connections

Section Priority	Unique Features	Project Partners	Cost and Potential Sources of Funding	Status of Completion	Project Comments
<p style="text-align: center;"><b>K</b></p> <p>Martin Slough to Genoa shared-use path. <b>~3 miles</b></p>	<p>Crossing of Hwy 395</p>	<p>NDOT, CVTA, Towns of Minden and Genoa</p>	<p><b>~\$6-12 million</b> depending on final alignment</p> <p>USFS, NDOT, Conserve Nevada, Recreation Trails Program, private/local matching funds</p>	<p><b>To Be Completed:</b> Preliminary Eng., Environmental, Final Design, and Construction</p>	<p>Need to look at preliminary engineering and feasibility study as a first step.</p>
<p style="text-align: center;"><b>L</b></p> <p>Gardnerville Ranchos to Lampe Park in Gardnerville shared-use path along SR 756/Centerville Ln. <b>~2 miles.</b></p>	<p>Adjacent private property</p>	<p>NDOT, Town of Gardnerville, Ranchos GID</p>	<p><b>~\$4-8 million</b> depending on final alignment</p> <p>NDOT, Conserve Nevada, Recreation Trails Program, private/local matching funds</p>	<p><b>To Be Completed:</b> Preliminary Eng., Environmental, Final Design, and Construction</p>	<p>Need to look at preliminary engineering and feasibility study as a first step. Secure easements, as necessary.</p>
<p style="text-align: center;"><b>M</b></p> <p>Round Hill Bike Path Connector. <b>~0.5 miles.</b></p>	<p>Crosses Kingsbury GID property</p>	<p>Kingsbury GID, TRPA, USFS, TTD</p>	<p><b>~\$2-4 million</b> depending on final alignment</p> <p>Conserve Nevada, Recreation Trails Program, private/local matching funds</p>	<p><b>To Be Completed:</b> Preliminary Eng., Environmental, Final Design, and Construction</p>	<p>Need to look at preliminary engineering and feasibility study as a first step. Secure easements, as necessary.</p>
<p style="text-align: center;"><b>N</b></p> <p>Kahle Park to Round Hill Bike Path. <b>~0.25 miles.</b></p>	<p>Adjacent private property</p>	<p>Kingsbury GID, TRPA, USFS, TTD</p>	<p><b>~\$1-2 million</b> depending on final alignment</p> <p>Conserve Nevada, Recreation Trails Program, private/local matching funds</p>	<p><b>To Be Completed:</b> Preliminary Eng., Environmental, Final Design, and Construction</p>	<p>Need to look at preliminary engineering and feasibility study as a first step. May require private easement.</p>



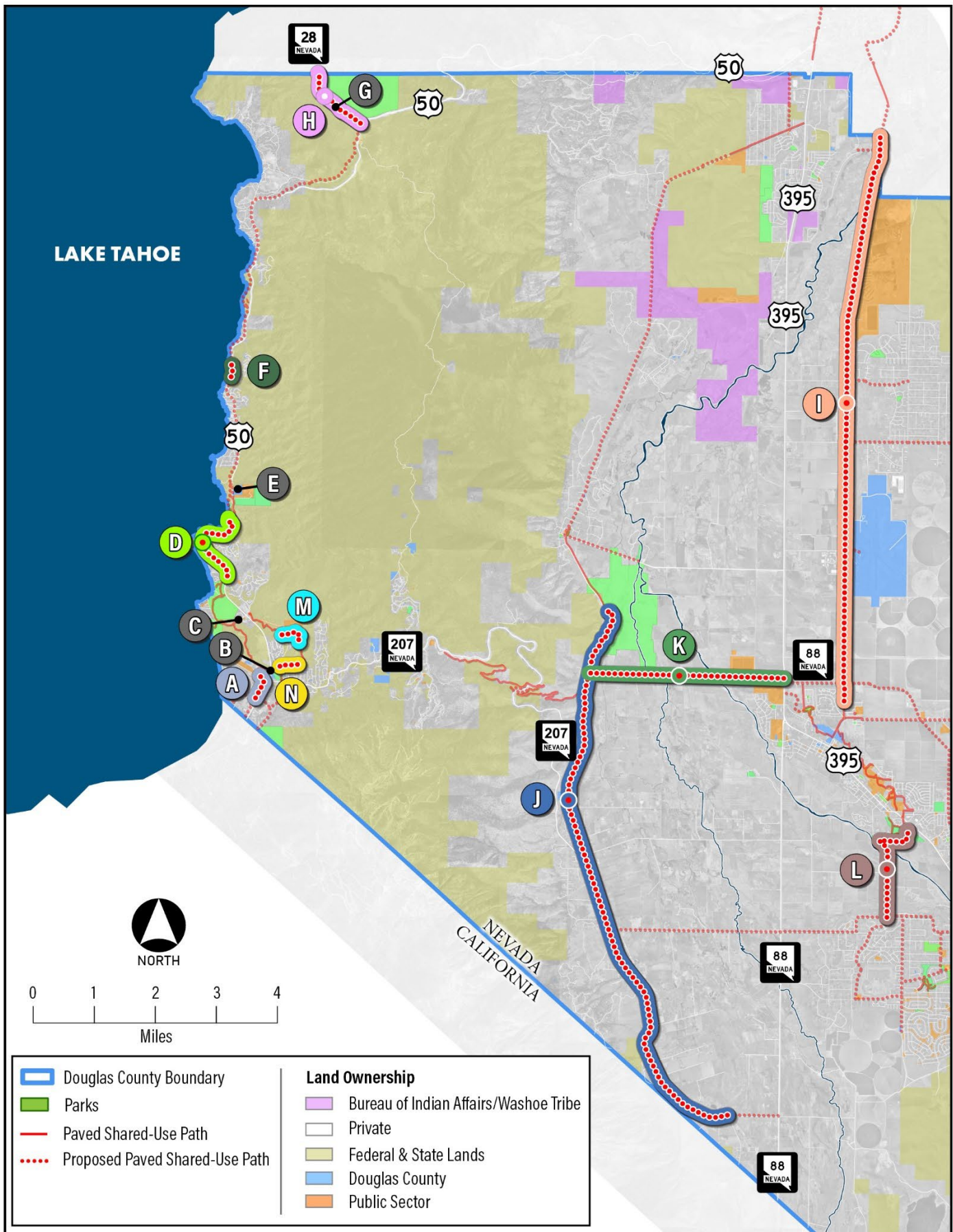


Figure 30



## SUPPORTING OUR PARTNERS

Trail construction responsibilities in Douglas County are typically distributed among a range of entities, each tailored to the specific circumstances of location and trail type. Often, it is a cooperative effort involving multiple stakeholders. Government agencies, such as county or municipal parks and recreation departments, frequently assume the role of planning, funding, and executing trail projects on public lands. Additionally, public land management agencies like the Bureau of Land Management (BLM) or the United States Forest Service (USFS) will approve trails within the public lands they manage. Nonprofit organizations, such as the Carson Valley Trail Association, are integral and partner with government agencies and typically fund, design, build, and maintain these trail systems. Private developers might have the responsibility of including trails as part of their development projects, especially in residential or commercial contexts. Volunteer groups, trail clubs, and community organizations play a vital role in constructing and maintaining trails, often in collaboration with government entities or nonprofits. The intricacies of trail construction vary based on factors such as jurisdiction, available resources, environmental considerations, and community engagement, which underscores the importance of consulting local government agencies, parks and recreation departments, and relevant nonprofit organizations for accurate information about trail construction in specific areas within Douglas County.

It is important to highlight that the United States Forest Service (USFS) – Carson District, has relied on the CVTA, TAMBA, and other volunteer groups for the construction and maintenance of future system trails. The CVTA holds the primary Volunteer Service Agreement with the USFS, which enables them to voluntarily provide uncompensated trail services in support of the USFS's efforts. Douglas County will continue to support these relationships.

In addition to supporting our partners, Douglas County would like to be involved in any closures, decommissioning of, or proposed trails within the county.



Image 2: Technical Advisory Committee meeting (April 2023)

## Water Trails and Access Points

Water trails within Douglas County consist of designated routes along lakes or rivers, specifically designed to cater to individuals utilizing small watercraft such as kayaks, canoes, single sailboats, or rowboats. These trails, sometimes referred to as "blueways," are the aquatic equivalent of hiking trails. Water trails are characterized by thoughtfully established access and launch points, often situated near noteworthy historical, environmental, or cultural landmarks. These points of interest are complemented by nearby amenities, such as restaurants, hotels, and campgrounds, enhancing the overall experience for those exploring these waterborne pathways.

Douglas County acknowledges the significance of water trails and is dedicated to improving river access for the community's benefit. The County understands the delicate equilibrium necessary when dealing with private lands in pursuit of this goal. The County's approach is grounded in understanding and addressing the concerns and rights of private landowners while working to create responsible and sustainable access points that benefit both residents and the natural environment.

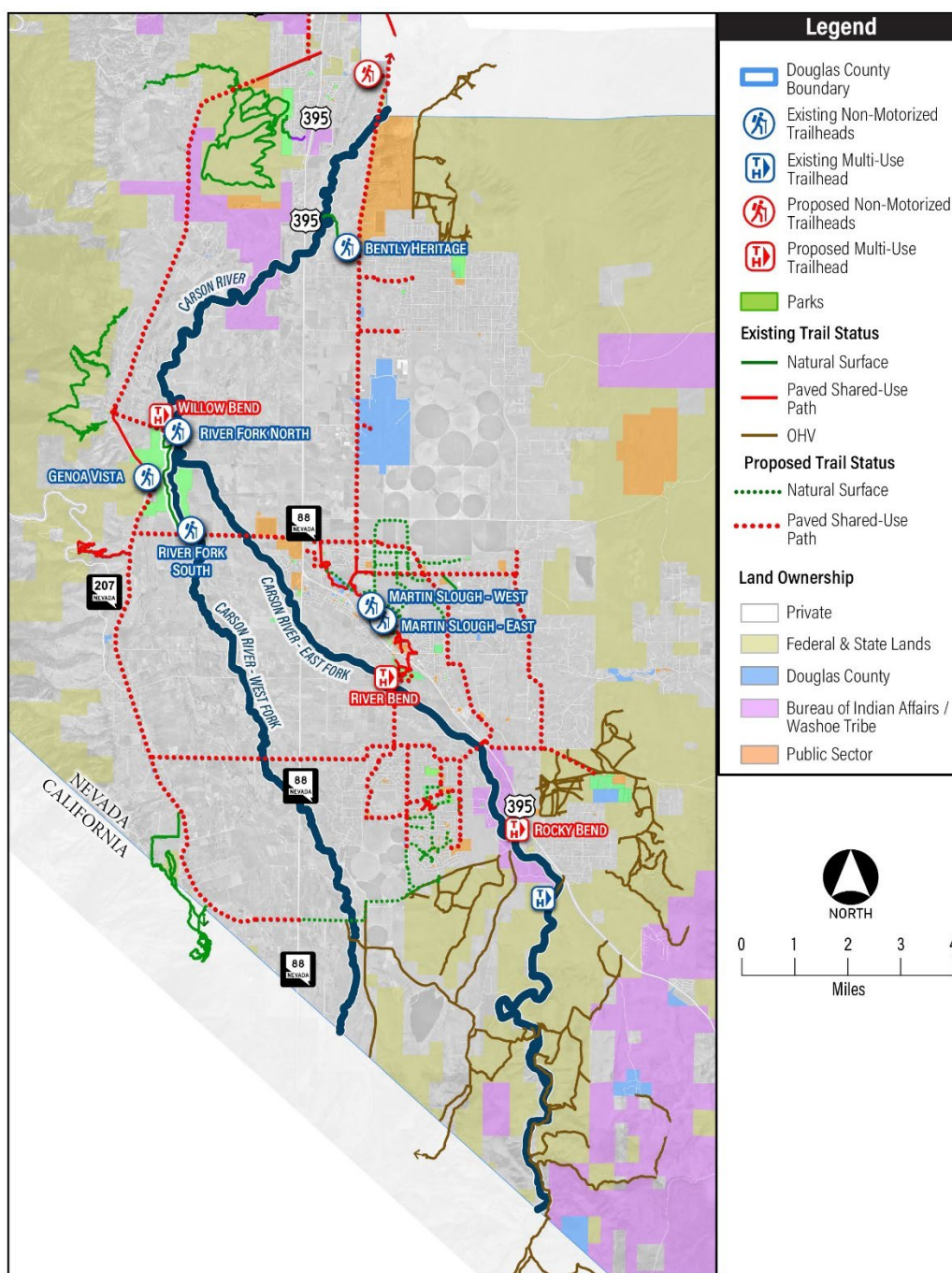


Figure 31: Carson Valley Water Trails



**CAVE ROCK**

The Cave Rock area of Lake Tahoe’s East Shore offers good paddling for all ability levels and the chance to paddle close to a rugged shoreline. Pine trees perched in a field of jumbled boulders and small inlets ringed with willows create an iconic picture of paddling on Lake Tahoe. This shoreline offers fantastic views, but not many public beaches to land on, so plan a day trip when launching from this area. The Cave Rock Boat Launch parking area fills early during the peak season; plan an early morning launch for paddling this part of the East Shore.

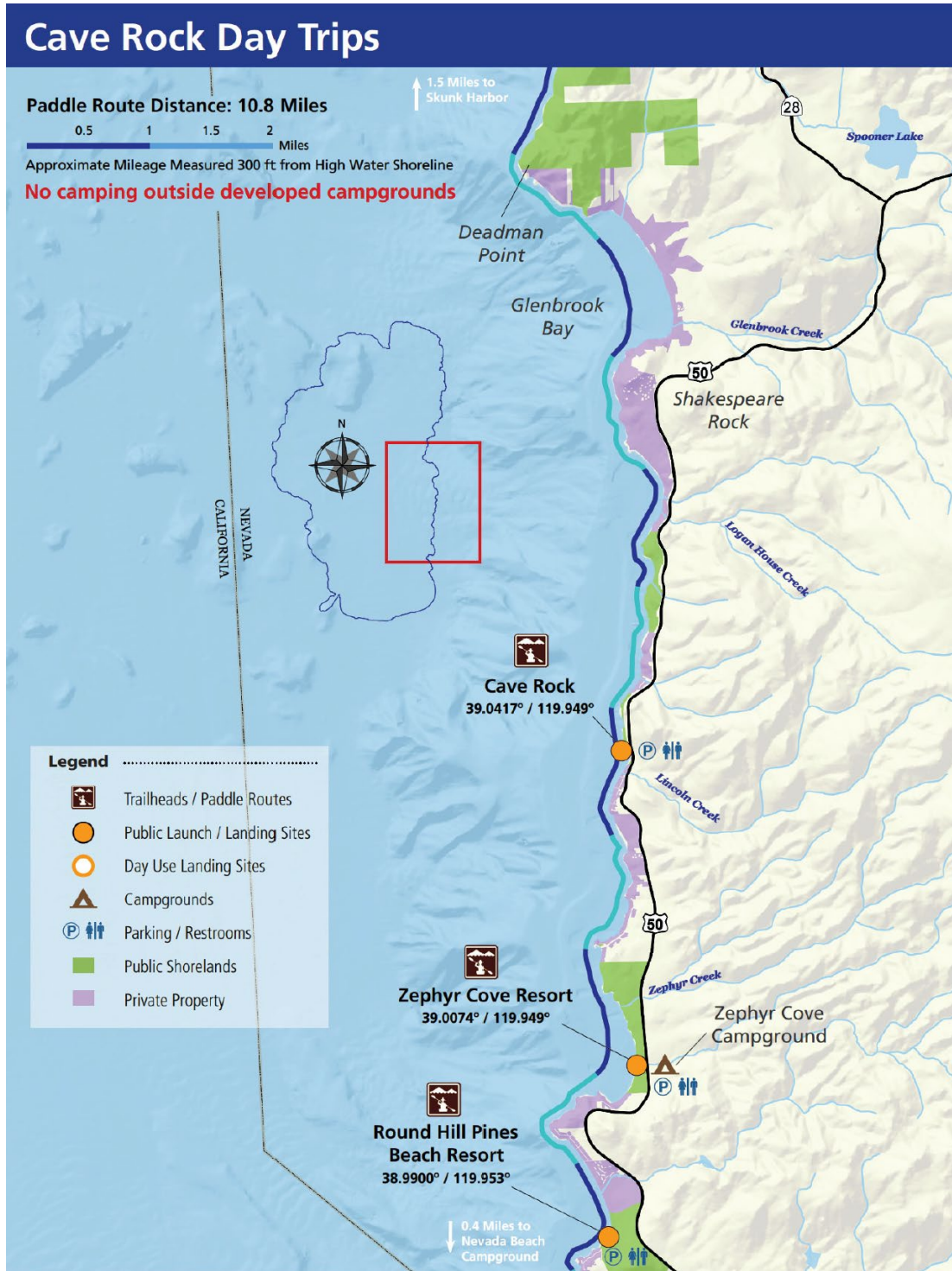


Figure 32: Cave Rock Day Trips Map.  
 Source: <https://laketahoewatertrail.org>

## SOUTH LAKE TAHOE

South Lake Tahoe offers good paddling for all ability levels along endless miles of sandy beaches. Stay at the historic resorts at Zephyr Cove or Camp Richardson, visit the Tallac Historic site, hike, or bike a nearby trail, enjoy bird watching in wetland sanctuaries, picnic on the beach, or stop at a lakeside bistro; all accessed easily from the water. Always wear your life jacket and SUP leash, carry a flashlight and whistle, and check conditions before you head out.

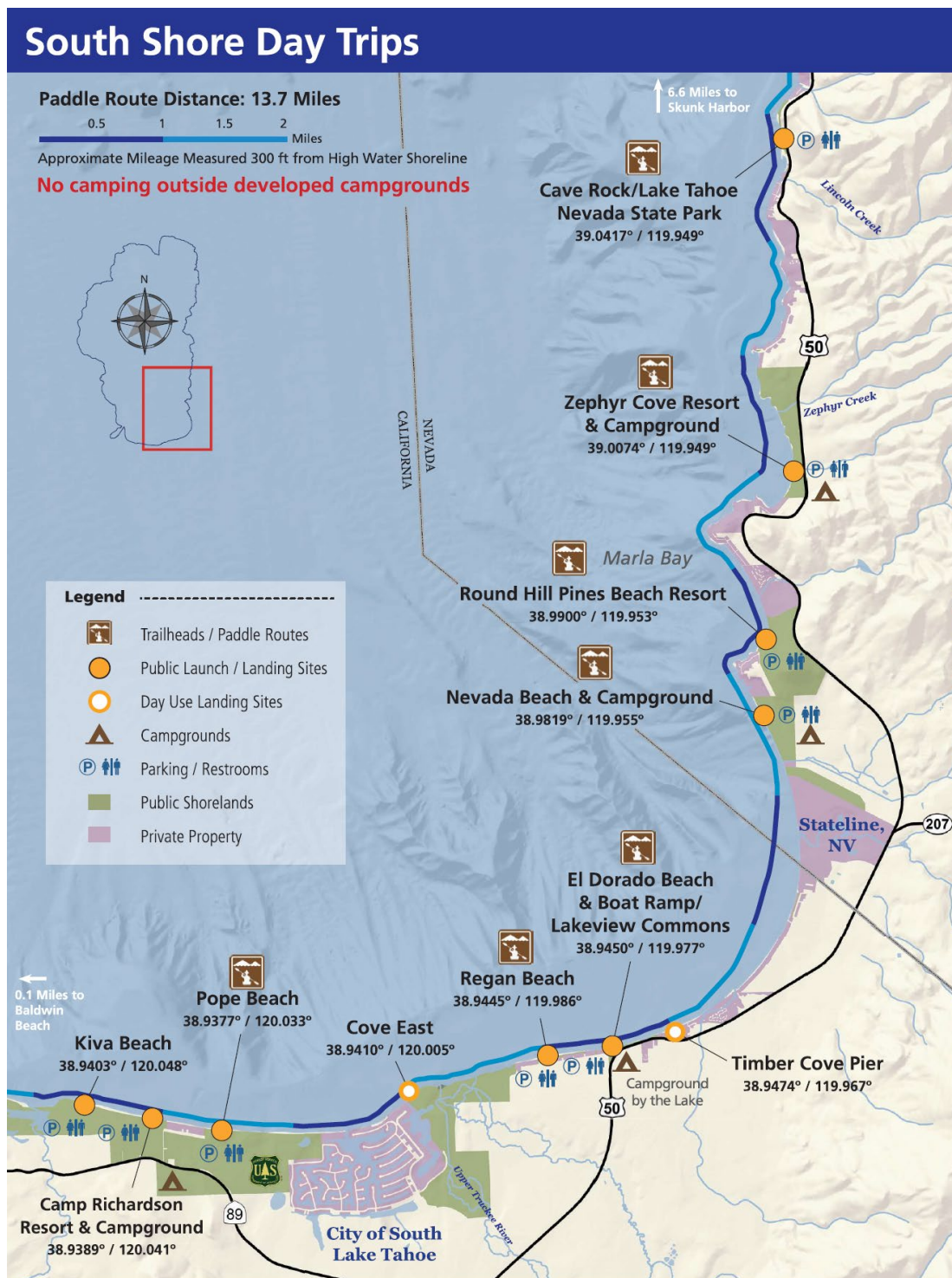


Figure 33: South Shore Day Trips Map.  
Source: <https://laketahoewatertrail.org>



## Action Plan

The action plan serves as a roadmap for trail projects, guiding stakeholders through the entire lifecycle of a trail's development and maintenance. It outlines the critical components that need to be considered, from the initial planning stages to the ongoing management and upkeep of the trail system.

While there are a lot of user-built trails out there that didn't go through much of a planning process, trails built without planning and expertise may face the following problems:

- » Unnecessary and harmful erosion and degradation of the trail itself and surrounding landscape.
- » Hazards either in the original construction or due to degradation.
- » Degradation to sensitive plant species or fish and wildlife habitat.
- » Trails that don't connect to a larger network, or trails that duplicate similar routes or experiences that might be more thoughtfully placed and aligned.
- » Trails that land managers don't have the resources to maintain.
- » Physical features that create inaccessible barriers that exclude a variety of users (such as use of uncompacted substrates, side slopes, steps, tree roots, rocks, narrow passage between trees, etc.)

The County should prioritize the following action items to maintain the momentum of the pathway and trail planning process, work efficiently toward the buildout of the Trails Plan, and position itself to take advantage of funding, acquisition, and partnership opportunities when they arise:

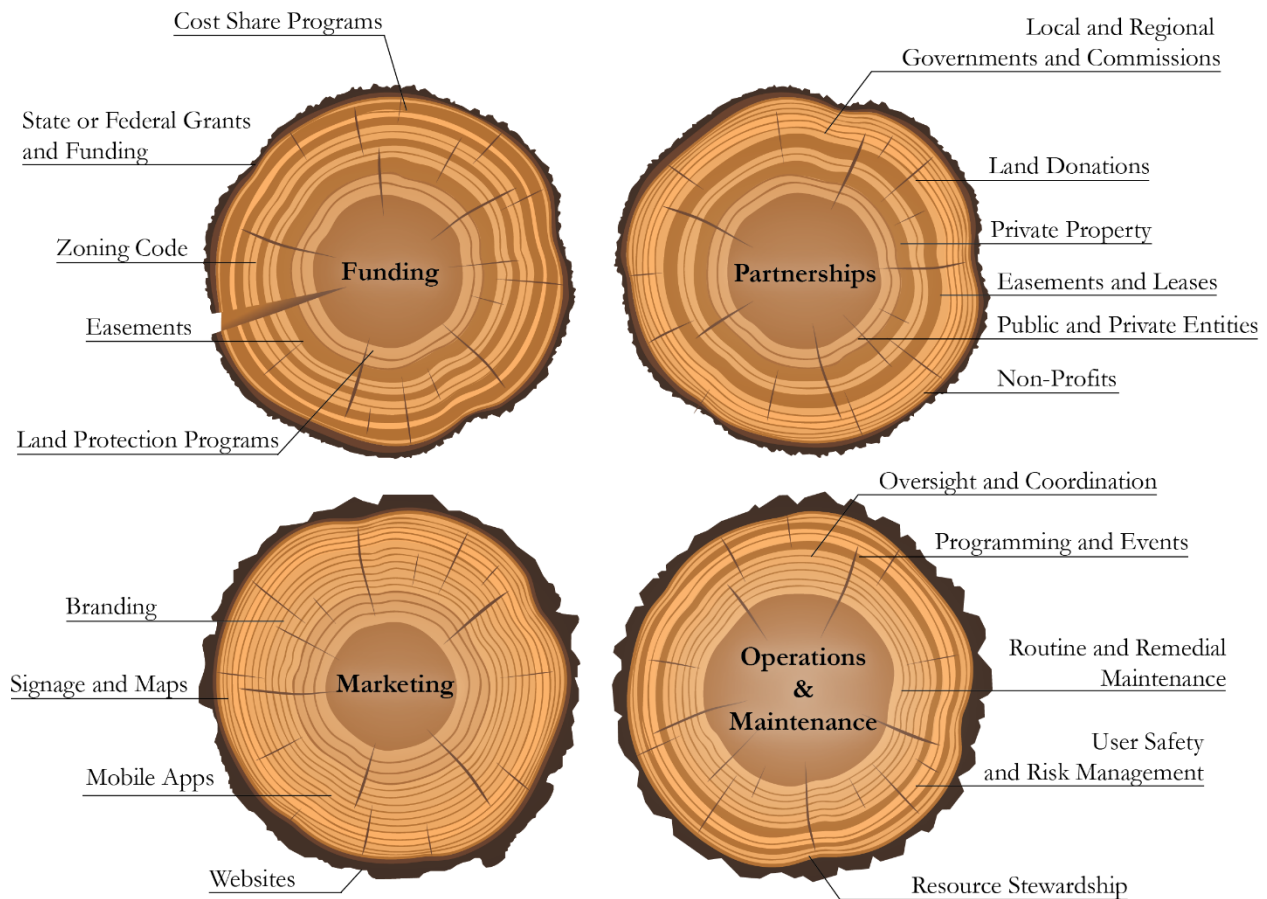


Figure 34: Action Items

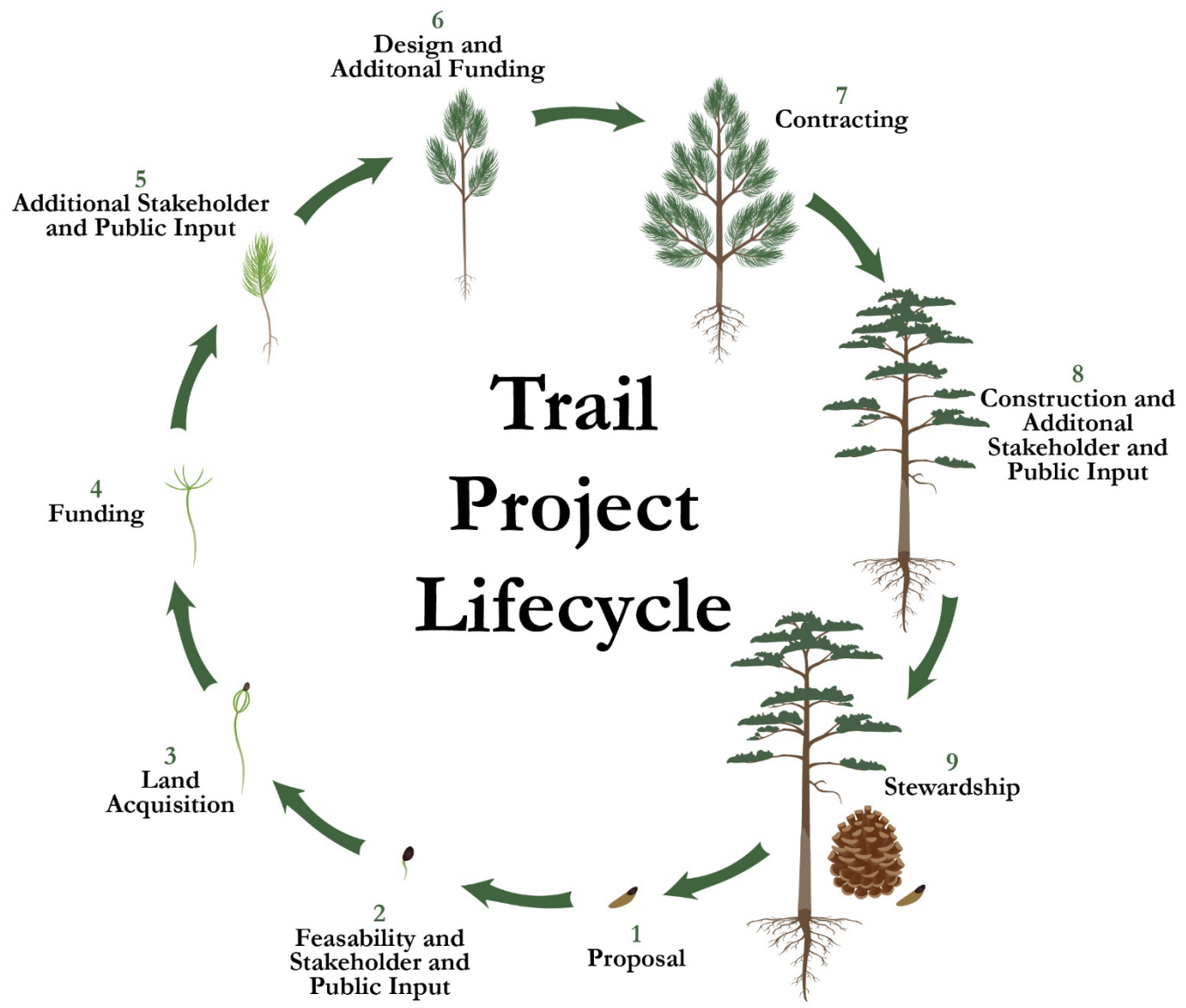


Figure 35: Trail Project Lifecycle

**1. FUNDING**

- Coordinate across County departments to develop a funding strategy that draws from a diversity of municipal, state, federal, and private funding streams to meet the capital and operational needs of the pathway and trail system buildout.
- Prioritize short-term funding for items that will position the County to leverage other funds—such as additional staffing to support grant and volunteer coordination; planning, design, and approval processes to ensure high-priority projects are shovel-ready; and matching funds that will be required for short-term grant pursuits.



## Methods and Mechanisms

To help preserve natural resources and systems in tandem with development and increasing populations, several methods and funding sources are available to aid in this effort and are listed below:

**Table 5: Funding Methods and Mechanisms**

Method	Mechanism
<b>Planned Development Overlay District (Douglas County)</b>	Allows increased residential density in a large-scale development that sets aside at least 25% of the site as open space (developed park or restoration) including trail opportunities.
<b>Urban Service Areas (Douglas County)</b>	Promotes higher density residential and intense retail and office to be located in urban service areas and identifies infill sites and receiving areas (adjacent to areas with urban density & existing public utilities & require TDRs). Opportunity for improved urban trail access.
<b>Transfer Development Rights (TDR) program (Douglas County)</b>	TDR is a voluntary program that enables property owners to retain ownership and use of property consistent with a conservation easement (continue to use land for agriculture & open space). Opportunity for easements and trail connectivity in conservation areas.
<b>State Parks Land And Water Conservation Grant</b>	A federal program providing matching grants to states and through the states to local governments for the acquisition and development of public outdoor recreation areas and facilities. The land and water conservation fund assistance is provided on a 50/50 matching basis to individual projects.
<b>State Parks Rec Trails Program (RTP)</b>	The program provides funding for all kinds of recreational trail uses, such as pedestrian uses (hiking, running, wheelchair use), bicycling, in-line skating, equestrian use, cross-country skiing, snowmobiling, off-road motorcycling, all-terrain vehicle riding, four-wheel driving, or using other off-road motorized vehicles.
<b>US Department of Transportation funding programs</b>	Administered through Federal Highways Administration (FHWA) and NDOT in the form of Transportation Alternative Program (TAP), highway safety improvement program (HSIP), congestion mitigation and air quality operating assistance (CMAQ), surface transportation program (STP), and other competitive transportation funding programs. All of these include trail improvements.
<b>Conservation Bond Program, Question 1 (Nevada Division Of State Lands)</b>	A voter-approved initiative that authorized the state of Nevada to issue general obligation bonds and the proceeds were to provide grants for state agencies, local governments, or qualifying private nonprofit organizations "...to preserve water quality; protect open space, lakes, rivers, wetlands, and wildlife habitat; and restore and improve parks, recreational areas, and historic and cultural resources."
<b>Tribal Transportation Program</b>	Funding through FHWA specific to trail projects on Tribal lands.
<b>Additional methods</b>	<ul style="list-style-type: none"> <li>» Co-location of facilities</li> <li>» Opt-out/opt-in programs</li> <li>» Donations or endowments</li> <li>» Coordination with other organizations</li> <li>» Easements</li> <li>» Development Code trail corridor development &amp; connectivity provisions or in lieu payment</li> </ul>

## 2. PARTNERSHIPS

In pursuit of an expansive and well-connected trail network, Douglas County is committed to fostering collaborations and partnerships to ensure seamless regional connectivity and sustainable trail development. Here are the key strategies and initiatives outlined for achieving this goal:

- Maintain efforts to foster collaborations with neighboring local and regional governments and commissions. This approach ensures seamless regional connectivity and maximizes the potential for cost-sharing in both the implementation and maintenance of the system.

- Continue to build partnerships with local and regional pathway and trail non-profits and foundations to take advantage of opportunities for collaboration through planning, grants, facility construction, maintenance, education, and advocacy.
- Continue to pursue land donations, easements, and the construction of public pathways and trail facilities through future development, with the Trails Plan as a guiding document for the County and developers.
- Build relationships with both public and private entities that are well-positioned to help the County reach out to private landowners and negotiate public trail access—including, but not limited to, the Douglas County Parks and Recreation Advisory Board, trails associations and clubs, the Chamber of Commerce, business associations, non-profit organizations, local land trusts, homeowners associations, utilities, community leaders, legal and real estate professionals, and educational institutions.
- Develop a flexible toolkit for acquiring public trail access on private land—including fee simple acquisitions, purchase options, easements, and leases. Develop marketing materials to help the County communicate to private landowners the implications and benefits of various approaches to providing public trail access.

### **Private Property and Easements**

Within the framework of the Trails Plan, Douglas County is dedicated to expanding trail networks for public enjoyment, but it's important to understand how public access is granted on private lands. This involves collaboration with landowners, the utilization of easements, and ensuring public liability is properly managed. Here are the key points regarding trail development and access on private property:

#### Public Access on Private Property:

- Access rights on private property are not automatic.
- Public access is granted when the property owner dedicates the trails and the County, or another public entity officially accepts this dedication.
- Alternatively, landowners can provide easements for future access.

#### Strategic Trail Placement:

- Many proposed trails on private lands align with future arterial or collector road connections as per the County's Transportation Plan.
- These trails are often integrated within approved subdivisions or designated components of the adopted Trails Plan.

#### Collaboration with Private Landowners:

- The County actively collaborates with private landowners.
- Incentive programs are employed to encourage land or easement contributions that provide access to and protect rural and natural areas.
- Collaboration extends to cooperating with various public landowners at local, regional, state, and federal levels to enhance trail accessibility on public lands.

#### Engaging with Private, Tax-Exempt Landowners:

- The County seeks to engage with private, tax-exempt landowners, including Homeowners Associations (HOAs), utilities, authorities, and conservation-focused nonprofit organizations.
- The goal is to explore avenues for public trail access and establish partnerships for effective trail management on private land.

#### Publicly Dedicated Property:

- All trails open to the public must be located on publicly dedicated property.



- Public street rights-of-way and easements are commonly used for land conservation and public access.
- When gaps in public property or right of way exist, easements for public access may be required.

Managing Liability:

- During the acquisition of trail easements, liability concerns may arise.
- Responsibility for general liability is typically assumed by entities like Douglas County, BLM, or the USFS, mirroring the approach taken for streets and other public spaces.

Trail Easements:

- Certain situations may necessitate trail easements and installations.  
For phased projects, the relocation and dedication of a trail in a future phase may require temporary trail easements to access the existing trail.

**3. MARKETING**

This section of the action plan focuses on marketing strategies to promote and maintain the County's pathways and trails. The aim is to create a consistent and recognizable brand through branding guidelines, which help makes navigation and recognition easier.

- Develop branding guidelines to create consistent and recognizable materials or signage, wayfinding, and printed and online pathway and trail maps.
- Maintain a website that remains current and comprehensive, featuring a county-wide map showcasing pathways, trails, water trails, and land ownership. Provide pertinent details regarding access points, trail information, and upcoming events. Regularly update information related to water levels and access conditions. In addition, incorporate details about ongoing and upcoming pathway and trail initiatives, along with the criteria guiding prioritization, funding origins, and collaborative partnerships.
- Work with Nevada Trail Finder, an online interactive mapping site that is administered by the Great Basin Institute and the Nevada Division of State Parks, to provide updated pathway and trail information through a mobile mapping application.

**4. OPERATIONS AND MAINTENANCE (O&M)**

Maintaining trails effectively is essential to the safe use, enjoyment, and long-term success of any trail. To achieve this, a comprehensive maintenance program must be in place. A quality O&M program addresses specific required tasks and begins with sound design, durable components, and a comprehensive management plan. The responsible officials and entities should embrace the plan at the beginning.

Programs and protocols that will endure should be instituted, including training of field and supervisory people. Additionally, community groups, residents, business owners, developers, and other stakeholders should be engaged in the long-term stewardship effort.

**Guiding Principles**

The following guiding principles will help ensure the preservation of a first-class system:

- Good maintenance begins with sound planning and design
- Foremost, protect life, property, and the environment
- Promote and maintain a quality outdoor recreation experience
- Develop a management plan that is reviewed and updated annually with tasks, operational policies, standards, and routine and remedial maintenance goals
- Maintain quality control and conduct regular inspection

- Include field crews, police, and fire/rescue personnel in both the design review and ongoing management process
- Maintain an effective, responsive public feedback system and promote public participation
- Be a good neighbor to adjacent properties

An effective O & M plan should include the following areas:

- Maintenance: routine and remedial
- User safety and risk management
- Programming and events
- Resource stewardship and enhancement
- Marketing and promotion
- Oversight and coordination

The following are some of the typical O&M activities for various types of trail and trailhead amenities:

- Inspection and citizen response
- Trail surface maintenance
- Repaving and pavement overlays
- Sweeping/street sweeping (for on-street facilities)
- Street surface upkeep and repair (on-street facilities)
- Parking lot repair at trailheads
- Maintain connecting on-street and sidewalk routes
- Vegetation and pest management (e.g. Trimming overhanging branches)
- Irrigation systems
- Litter and trash removal
- Graffiti and vandalism control
- Dust reduction
- Address detours/disruptions (with workable alternative routes)
- Remedy "social trails" (such as shortcuts)
- Repair trail structures and fixture/erosion control
- Signage (especially safety signage), striping, and lighting
- Rest areas, shelters, and water stations (including equestrian)
- Bike repair stations
- Toilet facility service
- Patrol, security, enforcement, safety hazard reduction
- Special event policies and permitting
- Education and enforcement
- Accident and incident data tracking
- Snow removal
  - Douglas County has a snow removal plan that assesses the necessity and availability for snow removal. Prioritization of snow removal depends on the safety and critical accessibility of roads in public areas as well as funding and personnel availability across different Douglas County departments.

### User Safety And Risk Management

User safety is critical to trail design, operations, and management. Trail planners and managers should establish a comprehensive safety initiative that encompasses systematic risk assessment, inter-agency review of proposed enhancements, and mechanisms for reporting accidents and incidents. Collaborating with various stakeholders is key, including not only department managers, planners, designers, and engineers but also law enforcement, fire and rescue personnel, and field maintenance staff during both the design and review phases.



The essential steps within this framework encompass:

- Incorporating sound design and engineering principles during the planning and design stages. Conforming to established standards like the American Association of State Highway and Transportation Officials (AASHTO)'s Guide for the Development of Bicycle Facilities ensures trail designs align with appropriate benchmarks. Similarly, safety and regulatory signage should adhere to guidelines specified in the Federal Highway Administration's Manual of Uniform Traffic Control Devices. For comprehensive references regarding accessibility standards, primitive trail design, mountain biking facilities, bridges, and more, the American Trails and U.S. Forest Service websites serve as valuable resources.
- Consulting experts in bicycle facility engineering to address complex scenarios such as street crossings, trails adjacent to roads, and mid-block crossings. It might be advisable to enlist an engineer's expertise to review the entire plan set, as bicycles are considered vehicles and should be treated accordingly.
- Encouraging diverse perspectives. Engaging individuals of all genders, varying age groups, and representatives from law enforcement and fire/rescue units for plan reviews is essential. Different viewpoints will contribute to a more comprehensive understanding of safety and security concerns, which can vary based on perspective.
- Implementing an emergency response protocol in collaboration with law enforcement, EMS agencies, and fire and rescue departments. This protocol should involve mapping trail access points, designing trails and access roads to accommodate emergency vehicles, and establishing location identifiers such as mile markers.
- Conducting routine safety inspections to identify hazards, faulty structures, missing safety signs, and related concerns.
- Promoting user courtesy and trail etiquette while enforcing safe user behavior and bicycle speed limits.
- Implementing a user feedback plan, complete with a responsive procedure to address issues promptly and effectively.

### **Administering An O&M Program**

A series of effective measures can streamline the organization and efficient management of an Operations & Maintenance (O&M) program:

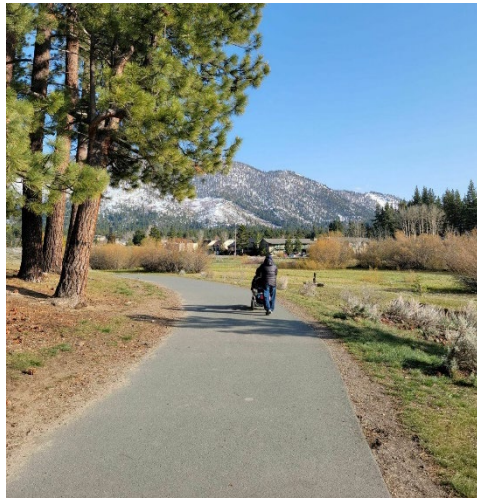
- Create and distribute an O&M manual detailing specific tasks, their frequency, quality benchmarks, and estimated costs or staffing needs. Translate this into an annual budget structured for anticipated build-out over five-year periods.
- Allocate dedicated and sufficient funding based on the comprehensive O&M program manual and yearly budget.
- Ensure the program's financial sustainability by identifying consistent and viable funding sources.
- Arrange regular meetings for key participants within the O&M program. These gatherings serve to evaluate past performance, establish priorities, and determine funding requirements for the upcoming season.
- Recognize that multiple agencies or jurisdictions may partake in management. Given the nature of trail systems, involvement from neighboring communities or infrastructure partners, like stormwater management agencies or highway departments, might be required. In such cases, an interagency maintenance agreement could be established through a memorandum of understanding (MOU) or a similar agreement. This agreement should delineate responsibilities, equipment sharing, performance standards, and potential cost-sharing arrangements.
- The County is evaluating potential paid parking in the Tahoe Basin to help fund trail maintenance.

## Economic Development

Trails in Douglas County, NV, present a compelling avenue for driving economic growth and enriching the local community. The region's diverse terrain, captivating natural landscapes, and abundant recreational opportunities collectively offer a distinctive platform for drawing in visitors, bolstering tourism, and fostering overall regional prosperity. By meticulously crafting pathways and trails that stand as attractions in their own right, the County can curate experiences that illuminate its rural, natural, cultural, and historical riches. Collaborative efforts with local businesses and organizations will be instrumental in not only promoting the trail system but also enhancing its efficacy in linking users to points of interest.



**Image 4:** View from Genoa Loop Trail that starts and ends in Genoa's business district. Source: AllTrails

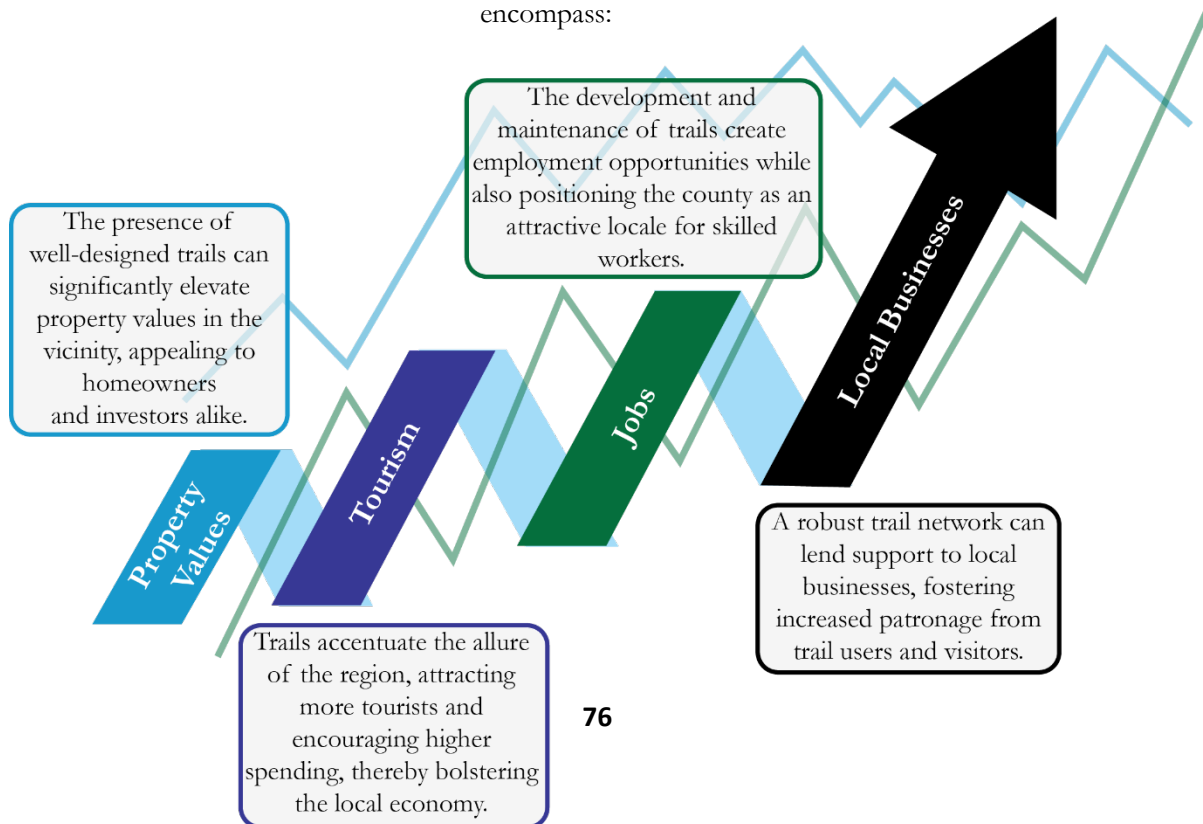


**Image 3:** Shared-Use Path connecting visitors to beaches and businesses in the Round Hill Pines Resort and Nevada Beach area. Source: AllTrails

To help provide diverse recreational opportunities and bolster the economy, Douglas County is open to exploring improvements such as re-routes and integrating new features and designs into trails. Particularly of interest are potential enhancements to the Sierra Canyon, Genoa Loop, and Clear Creek trails to create a more engaging experience for mountain bikers.

In essence, the development and maintenance of a comprehensive trail system in Douglas County has the potential to stimulate economic growth, attract visitors, support local businesses, and enhance the overall quality of life for residents. By strategically integrating trails into the County's economic development plans, Douglas County can reap the benefits of a thriving and diverse economy while preserving and promoting its natural assets.

The economic advantages that can be derived from these trails encompass:









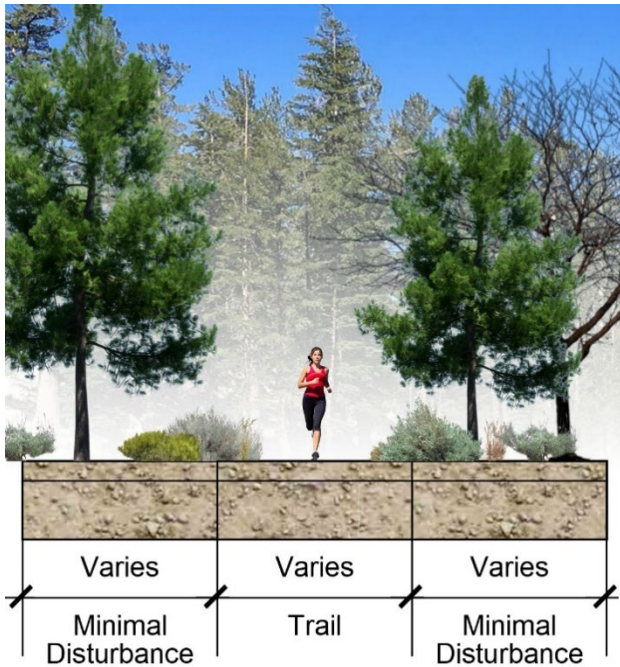
# DESIGN GUIDELINES





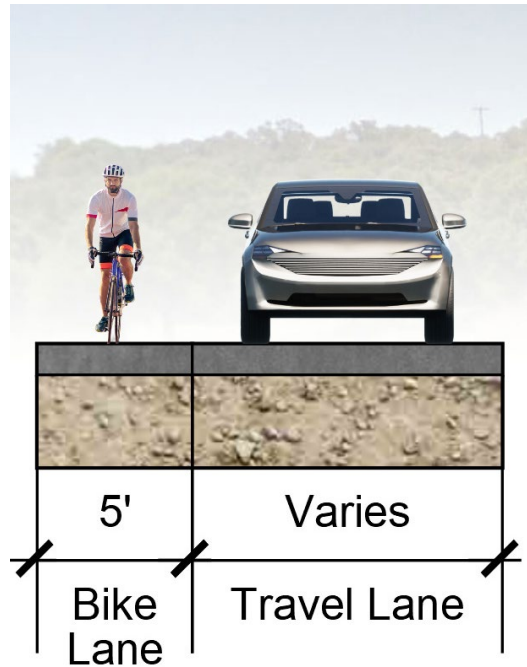
# Trail Types

## NATURAL SURFACE TRAIL



<b>Users</b>	Bicycle users, pedestrians, equestrians
<b>Context</b>	Town, suburban, rural
<b>Typical Tread Widths</b>	Varies upon location
<b>Materials</b>	Natural soil surface, wood mulch, sand, gravel, decomposed granite
<b>Source</b>	USFS Standard Trail Plans and Specifications ( <a href="https://www.fs.usda.gov/sites/default/files/trail-specifications.pdf">https://www.fs.usda.gov/sites/default/files/trail-specifications.pdf</a> ). May vary outside Forest Service.

## BIKE LANE



<b>Users</b>	Bicycle Users
<b>Context</b>	Town, suburban, rural, high-traffic areas
<b>Typical Tread Width</b>	5' but a width of 4' may be used on roadways with no curb and gutter and no on-street parking
<b>Materials</b>	Asphalt, cement
<b>Source</b>	NDOT Bicycle Plan



**Image 5:** Spooner Lake Trail. Source: AllTrails.com



**Image 6:** Foothill Lane Bike Lane. Source: sierrarecmagazine.com/



SHARED-USE PATHS ADJACENT TO AND OFF ROADWAYS

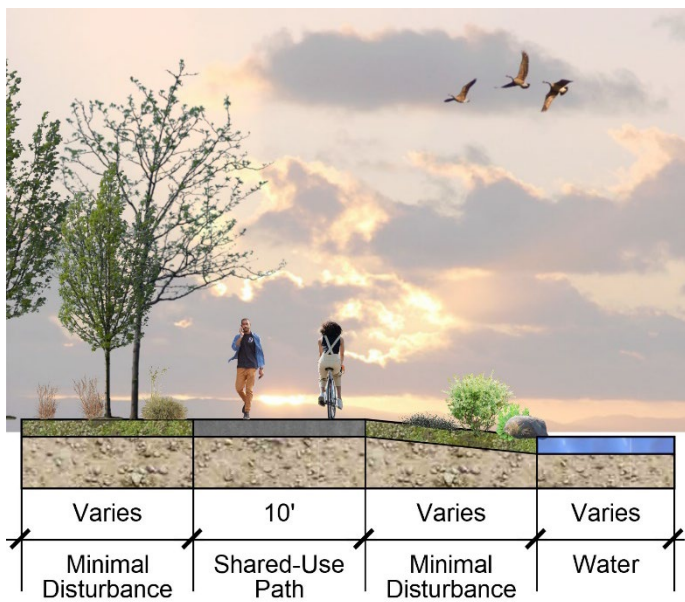
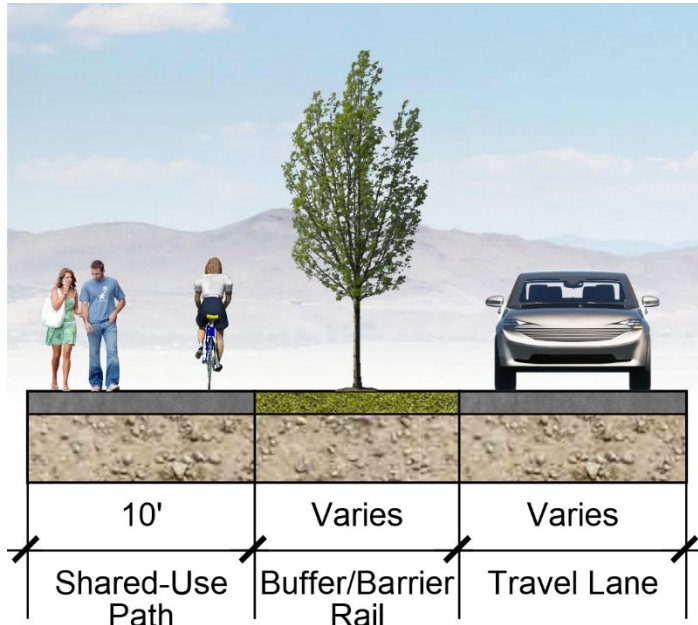


Image 7: Genoa Vista Trail



Image 8: Tahoe East Shore Trail. Source: trailink.com



Image 9: Martin Slough Trail. Source: AllTrails

Table 8: Design Guidelines Table	
<b>Users</b>	Bicycle users, pedestrians
<b>Context</b>	Town, suburban, rural, high-traffic areas
<b>Typical Tread Widths</b>	10-14' but a path of eight feet may be used for a short distance due to physical constraint
<b>Materials</b>	Compacted aggregate, resin-stabilized aggregate, asphalt, cement
<b>Source</b>	FHWA Shared-Use Path Standards Report ( <a href="https://www.fhwa.dot.gov/publications/research/safety/pedbike/05137/05137.pdf">https://www.fhwa.dot.gov/publications/research/safety/pedbike/05137/05137.pdf</a> )



## Other Design Considerations

### SUSTAINABLE TRAILS: ENVIRONMENTAL, ECONOMIC, AND SOCIAL SUSTAINABLE TRAILS

Douglas County boasts abundant natural and cultural resources that define its character and attracts residents, visitors, and businesses. The Trails Plan serves as an exceptional avenue to safeguard and amplify these resources as the county experiences growth and increased visitors. By intertwining recreational and transportation uses along pathways and trails across the county, there is a duty to improve, preserve, and restore these corridors to maintain their integrity. Consequently, this plan presents multiple recommendations to either safeguard or enhance these pivotal resources:

#### Environmental:

- Conserve, preserve, and restore natural systems and their integrity to provide ecosystem services for the community and future generations.
- Embed resiliency in the design of the pathways and trails to withstand and rebound from future environmental changes and disturbances.

#### Economic:

- Utilize durable and regionally available materials.
- Form mutually beneficial partnerships to execute the plan, including public-private partnerships.

#### Social:

- Create an equitable plan that addresses all communities and their specific needs.
- Conserve Douglas County's unique cultural landscape and historic resources.
- Prioritize the health, safety, and well-being of all communities by providing comfortable, safe, and accessible pathways and trails for people of all ages and abilities.

### NATIONAL WILDLIFE CRISIS STRATEGY

In January 2022, the U.S. Forest Service launched a robust, 10-year strategy to address the wildfire crisis in the places where it poses the most immediate threats to communities. The strategy, called "Confronting the Wildfire Crisis: A Strategy for Protecting Communities and Improving Resilience in America's Forests," combines a historic investment of congressional funding with years of scientific research and planning into a national effort that will dramatically increase the scale and pace of forest health treatments, such as prescribed burns and forest thinning, over the next decade. Through the strategy, the agency will work with states, Tribes, and other partners to address wildfire risks to critical infrastructure, protect communities, and make forests more resilient.

Douglas County is committed to supporting the objectives set forth in the National Wildlife Crisis Strategy for any new infrastructure projects implemented on Forest Service lands.

## Cultural Assets

As trails are added within or near culturally, naturally, and historically significant points of interest, there emerge exciting opportunities for interpretation and education. These trails can serve as living classrooms, providing a platform for immersive learning experiences. Interpretive signs, guided tours, and interactive exhibits can be strategically placed along the trails, offering insights into the cultural, natural, and historical significance of the area. Visitors can learn about the indigenous flora and fauna, understand the historical events that unfolded in the vicinity, and appreciate the cultural heritage of the region. An inexhaustive review of the cultural assets within Douglas County can be found below. Douglas County staff are urged to contact the Washoe County Tribe and Nevada State Historic Preservation Office to confirm information and involve these partners in the planning and design process.

### LINCOLN HIGHWAY

The Lincoln Highway, the first transcontinental highway in the United States specifically designed for cars, includes the Sierra Nevada Southern Route. This route stretches westward from U.S. Route 50, passing through Carson City, then south around Lake Tahoe and west over Johnson Pass (near Echo Summit) and continues over the Sierra Nevada mountains to Sacramento. During 1914-1915 and in 1928, the Kings Canyon Road, which is now part of the Douglas County Off-Highway Vehicle (OHV) system, was a segment of the national Lincoln Highway. A historical marker indicating this route's significance can be found at the Logan Shoals vista along the east shore of Lake Tahoe.



**Image 10:** Looking northward on a section of the old Lake Tahoe Wagon Road (opened in 1863), later Lincoln Highway (1913-1928), and finally US 50 (1926 to 1931) - since abandoned. Scanned from a Kodachrome negative. Source: Flickr.com

### CALIFORNIA NATIONAL HISTORIC TRAIL – CARSON TRAIL SEGMENT

The Carson Trail, which is part of the California National Historic Trail, was a major route in the mid-1800s for people heading to California in search of gold and farmland. From 1841 to 1869, over 200,000 travelers journeyed along this trail, bringing significant changes to the lives of Native Americans. The trail stretches 2,000 miles from Missouri through several states, ending in central California.

A marker to commemorate the trail is located near Minden and is inscribed with the following, “We soon entered the lower end of Carson Valley. The steep mountains on our right, are thickly covered with pines... on the east side of the valley, the mountains present no green thing; all is naked and dreary.” - Franklin Langworthy, Oct. 9, 1850.



**Image 11:** Carson Trail – Entering Carson Valley Marker. Source: HMdb.org



### HISTORIC PONY EXPRESS TRAIL

Incorporating the Historic Pony Express Trail into the Douglas County Trails Plan offers a unique opportunity to blend outdoor recreation with cultural heritage. The Pony Express, an iconic 19th-century mail delivery route, holds historical significance that can be preserved and celebrated through trail development. The trail is a living link to the past, representing the daring spirit of communication pioneers who traversed challenging terrain to connect the East and West coasts. By integrating segments of the original trail into our modern trail network, Douglas County can pay homage to this storied history, offering a tangible connection to the region's heritage. The County and National Park Service are engaged in a collaborative effort with historical organizations, local experts, and heritage groups. This collaboration aims to ensure precise trail alignment and engaging interpretation. As part of this initiative, there is a proposal to realign the trail for a safer crossing of Highway 207 (Kingsbury Grade). The envisioned trail enhancements encompass formalized access points and signage, surface improvements for a shared-use path, ADA accessibility for the upper trail section, and the incorporation of interpretive signage.

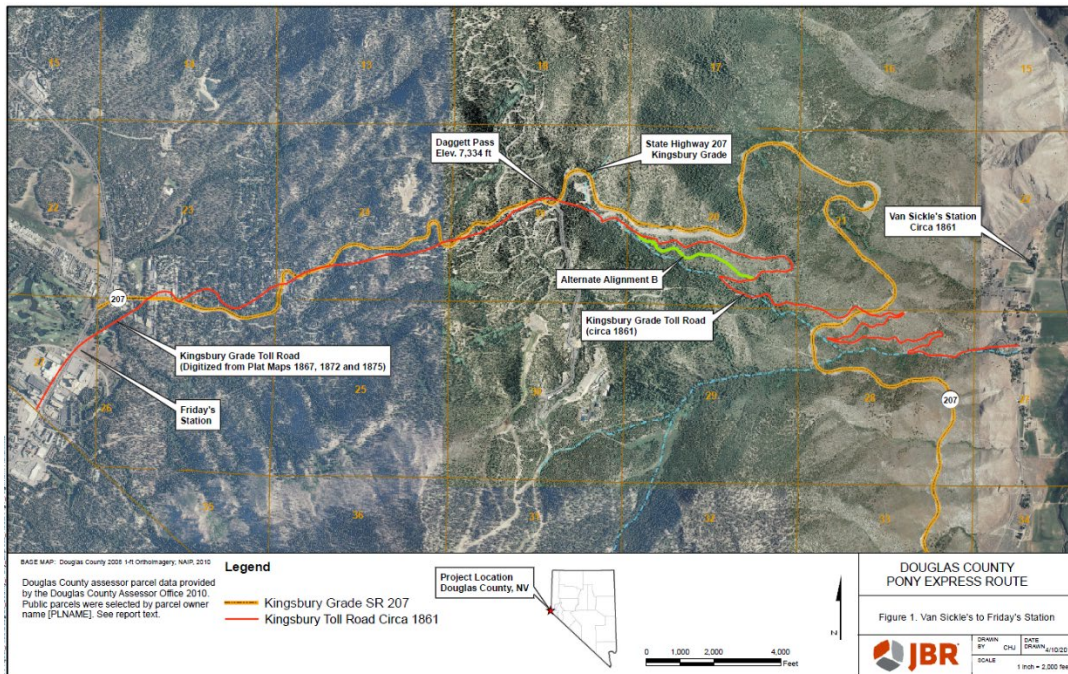


Figure 36: Historic Pony Express Alignment circa 1861-1875

*“Van Sickle, who helped finance the road, eventually acquired it and sold it to Douglas County in 1889 for \$1000.”*

**-Kingsbury Grade Road Marker**

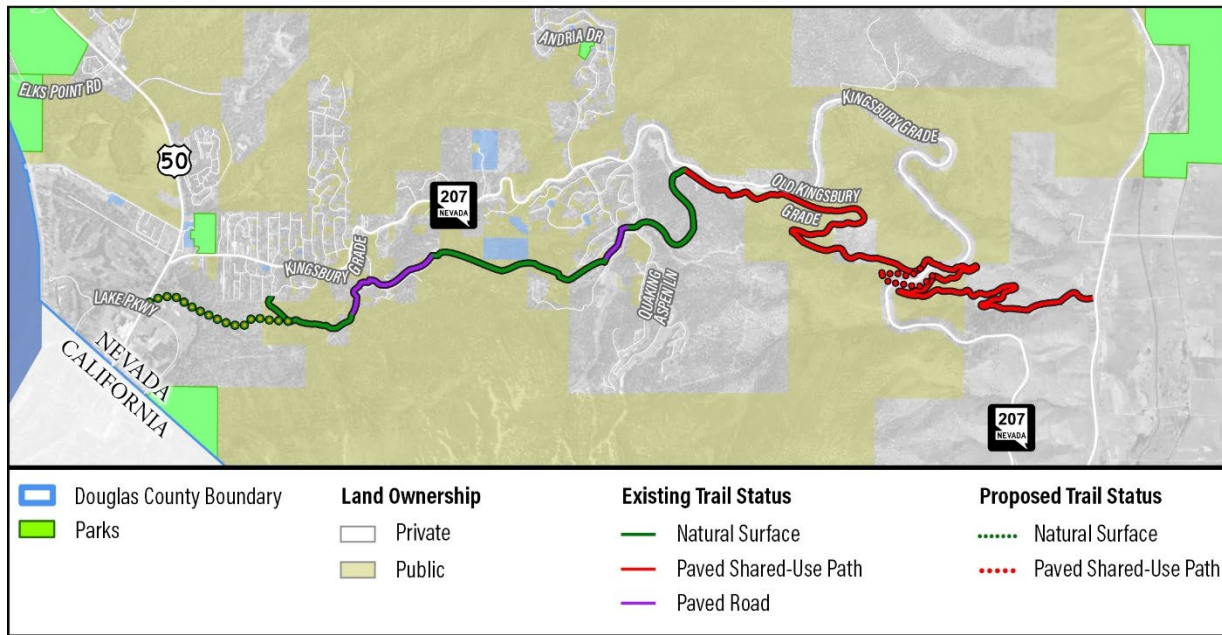


Figure 37: Historic Pony Express Alignment (2023 Trails Plan)

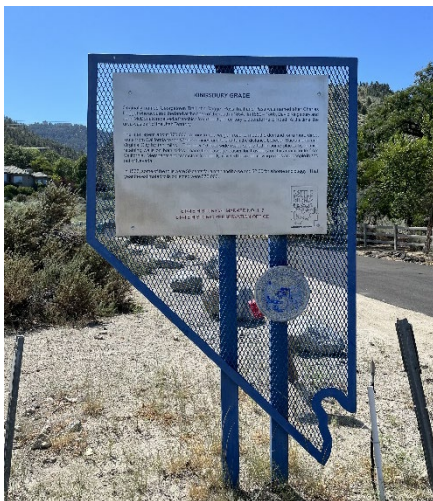


Image 12: Kingsbury Grade historical marker

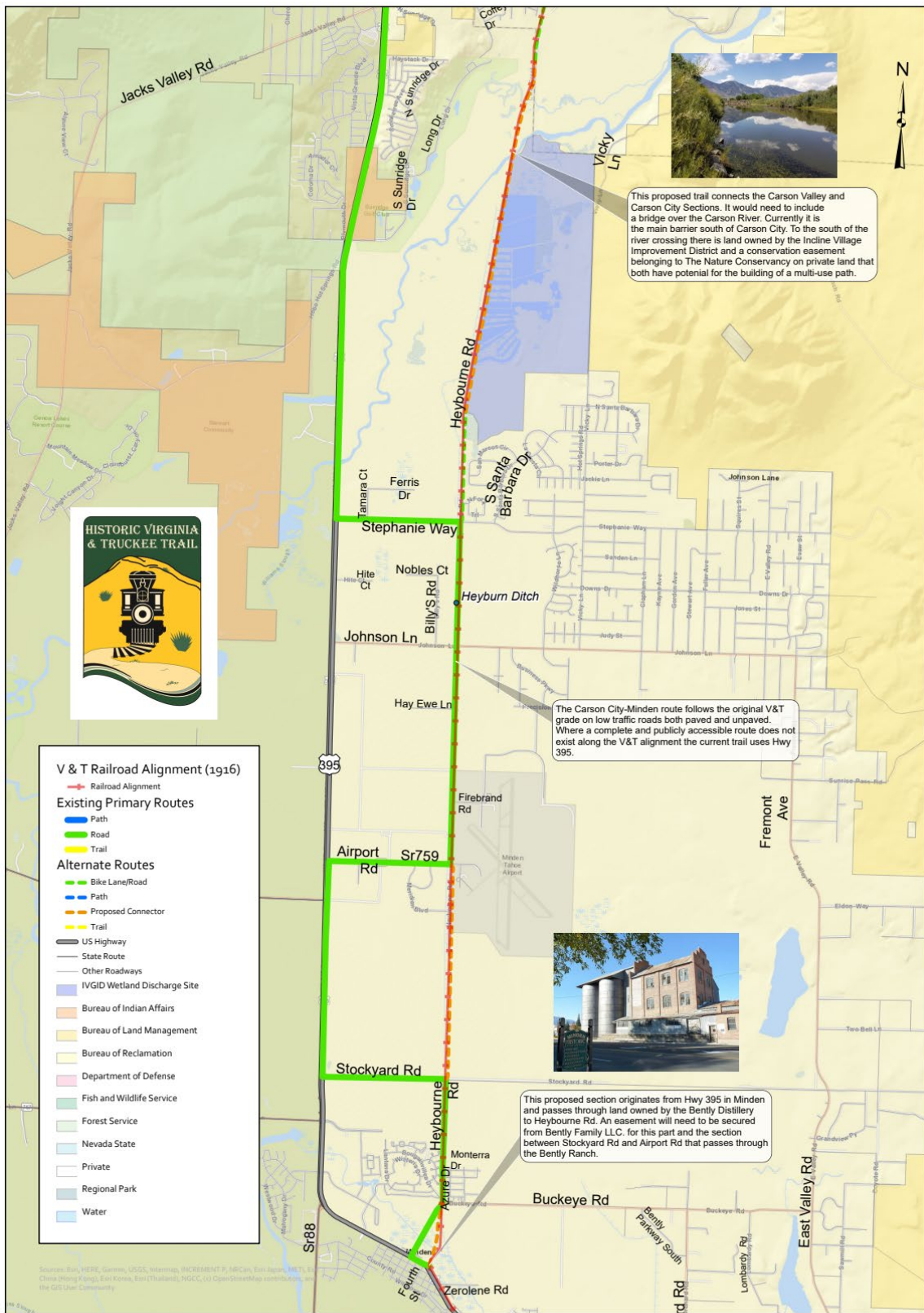


Image 13: Proposed site on Kingsbury Grade for Pony Express Trail crossing

### HISTORIC VIRGINIA AND TRUCKEE TRAIL

The Historic Virginia and Truckee Trail, spanning 50-60 miles, originates from the historic Virginia and Truckee Railroad, established in 1868 by the Bank of California to transport ore from Comstock silver mines to Carson River mills. The railroad extended to Carson City for lumber transport and further connections. Its disuse began in 1950, returning the route to private, city, county, and Bureau of Land Management ownership. Around 2015, efforts advocating its transformation into a rail trail gained momentum. Assembly Bill 84's passage in 2019 allocated substantial funding, propelling projects like the Historic Virginia and Truckee Trail. The trail will link counties, cities, and museums, connecting with significant regional and national trails like the Pony Express Trail, American Discovery Trail, Tahoe Pyramid Trail, Tahoe Rim Trail, and Pacific Crest Trail. In Douglas County, the trail might align with an active railroad, enabling both rail and trail use, reflecting the vision of a commuter line connecting Minden and Carson City. The Trails Plan proposes connecting the trail via Heyborne Road, but since this route crosses private land, careful considerations are essential to ensure the feasibility of this connection.





Matthew Little Great Basin Institute, 2020  
 Photo Credits from top to bottom: Matthew Little, Anne Knowles for the Nevada Appeal

CARSON VALLEY SECTION



Figure 37: Historic Virginia & Truckee Railroad Trail Alignment and Opportunities. Source: Muscle Powered



## WASHOE TRIBE AND OTHER NATIVE AMERICAN HERITAGE

Douglas County acknowledges the profound cultural significance of the land and the enduring presence of Native American heritage, notably the Washoe Tribe. Incorporating this heritage into the trail system demonstrates our commitment to preserving history and fostering respect for the original inhabitants that have shaped this region.

In collaboration with the Washoe Tribe and other Native American communities, the Trails Plan aims to integrate their perspectives, insights, and narratives into the trail experience. Ongoing consultations with tribal representatives can provide valuable guidance on appropriate trail design, interpretive elements, and educational programs that honor their heritage. This approach aligns with our commitment to fostering cultural awareness, preserving history, and creating an inclusive and respectful trail system that honors the diverse legacy of our region.

## Avoiding Trail User Conflicts

The trail system in Douglas County will cater to a diverse range of users, including hikers, bicyclists, walkers, off-highway vehicle enthusiasts, equestrians, and water trail users. This user base encompasses individuals with varying abilities, expectations, and requirements. Hence, trail design should proactively consider potential user needs. The aim is to create trails that prioritize safety, conserve natural resources, and deliver exceptional experiences for all users. Wherever trail corridor and environmental conditions allow, the primary trails of the County's system should provide separated treads for different user types with well-designed crossings and varied buffer widths that promote positive interactions between different users. The National Recreational Trails Advisory Committee and Federal Highway Administration provide the additional guiding principles for the planning and design of trails that prevent user conflict:

- Provide adequate trail mileage to reduce congestion and allow all users to feel their needs are being met.
- Minimize the number of contacts between users, particularly in congested areas and at trailheads.
- Improve sightlines on system trails.
- Engage local users in the project-specific planning and design process, to allow all voices to be heard and to ensure trail design accommodates community-specific needs.
- Promote trail etiquette and promote responsible trail behavior through educational materials featured on trail websites and on-site signage.
- Bring users together through efforts such as volunteer trail maintenance or advisory councils.

## Accessibility

To serve the broadest possible cross-section of the Douglas County community, the primary urban trails of the pathway and trail system should always seek to follow universal design principles.

Universal design for trails means that tread conditions and connections accommodate users of all ability levels through manageable slopes, firm and stable surfaces, and adequate horizontal and vertical clearances. Universal design also entails providing signage that is legible for all people and pathway and trail amenities – such as parking, picnic tables, and drinking fountains – that can be used by all visitors.

Accessible trails will not be feasible in all contexts. The County will determine on a project-by-project basis whether environmental conditions allow for accessible design. The U.S. Access Board defines the following limiting factors to help identify conditions in which accessible trails might not be feasible:

- Trail grades or cross slopes exceed 40% for 20' or more.
- The trail surface is not firm and stable for 45' or more.
- The tread width is less than 12" for 20' or more.



- Obstacles of 30” or higher are present across the full width of the trail.

If any of those limiting factors are present, the County and its trail design team should evaluate whether accessibility is practical and how to balance the system’s universal design and natural resource protection goals.

The County and its partners should be aware of whether funding sources for individual projects require certain accessibility standards – for example, the U.S. Access Board’s Accessibility Guidelines for Outdoor Developed Areas or the USFS Outdoor Recreation Accessibility Guidelines.

## Wayfinding and Signage

### BRANDING

Douglas County should develop branding and signage guidelines that reflect the unique character of the system. Given the importance of connectivity to and within other trail systems, the County should coordinate these guidelines with partners including the Nevada Department of Transportation, the Towns of Minden, Gardnerville, and Genoa, the Tahoe Regional Planning Agency, and the Carson Valley Trails Association.

County-specific branding should incorporate complimentary colors, fonts, material, iconography, and legibility. Consistent and recognizable wayfinding elements will help orient trail users and facilitate connections across different regional trail systems. It will also strengthen public awareness and support for countywide pathways and trails.

### SIGNAGE

Legible and consistent signage helps to orient, prepare, and educate pathway and trail users. Below are the types of signs that will be used throughout the system.

- **Regulatory signs:** These signs share information about requirements for speed, stop and yield locations, usage rules, and other safety-related messages. Certain regulatory signs are required by state and federal funding agencies, and those standards rely on the Manual on Uniform Traffic Control Devices by the Federal Highway Administration. Regulatory signs should be posted at trailheads and wherever required by local or state law.
- **Warning signs:** These signs alert trail users to be aware of their surroundings and should be placed wherever needed to call attention from trail users.
- **Informational signs:** These signs share information that helps trail users learn about the trail and plan their trip. Information might include trail difficulty, length, trailhead locations, emergency contact information, and the locations of nearby attractions and boat ramps. Kiosks, panel signs, and mile markers are all examples of informational signs. Informational signs should be placed at trailheads to mark trail destinations.
- **Educational or interpretive signs:** These signs teach trail users about the natural, historical, or cultural features of the trail and help forge connections between trail users and their environment. Interpretive signs should be placed at trailheads and along the trail as needed to call out special features and learning opportunities.
- **Bridge, “Banner” or “Billboard” signs:** Large, visually appealing signs that are cohesive with the County’s branding and the branding of the trails system can be used to indicate publicly accessible destinations or trail experiences along corridors and at major corridor access points.

## New Technology

### APPS AND DIGITAL GUIDES

Trail users can benefit from a digital guide that follows their journey throughout the corridors, identifies key destinations, interprets the historic, cultural, and natural landscapes, and provides current information and alerts related to maintenance, accessibility, and use. The proposed trails in the Plan are rich in Native American, national, railroad, agricultural, settlement, and natural history. Opportunities for learning about history and nature can be integrated into interpretive wayfinding and signage along trails via mobile or web-based apps, QR code readers, or digital navigation/mapping applications. An app can also provide information about outfitters or cultural destinations along the corridor, as well as educational opportunities for all ages.

### ELECTRIC BIKES

E-bikes, or electric bicycles, are becoming very popular for outdoor activities. They help people of different fitness levels explore trails. Including e-bikes in the Trails Plan offers new opportunities and challenges that need careful consideration.

Presently, Nevada Revised Statutes 484B.017 designated electric bicycles as devices upon which a person may ride, having two or three wheels, or every such device generally recognized as a bicycle that has fully operable pedals, a seat or saddle for the rider, an electric motor which produces not more than 750 watts and meets the requirements of one of the following three classes:

- Class 1: An electric bicycle equipped with a motor that provides assistance only when the rider is pedaling and ceases to provide assistance when the bicycle reaches the speed of 20 miles per hour.
- Class 2: An electric bicycle equipped with a motor that may be used exclusively to propel the bicycle and is not capable of providing assistance when the bicycle reaches the speed of 20 miles per hour.
- Class 3: An electric bicycle equipped with a motor that provides assistance only when the rider is pedaling and ceases to provide assistance when the bicycle reaches the speed of 28 miles per hour.



Image 14: E-bike charging station. Source: all4cycling.com

To ensure e-bikes, regular bikes, and walkers can share trails safely, clear signs, teaching trail etiquette, and speed limits can minimize conflicts. Creating rules for e-bike use, especially in shared areas, promotes peaceful coexistence. Installing charging stations at trailheads can ease e-bike users' worries about running out of power and encourage longer rides. Partnerships with local businesses can expand the charging network, enhancing user convenience.

Future regulations pertaining to e-bike usage on trails may emerge, and the Trails Plan should remain adaptable to comply with evolving legal frameworks. Collaborative engagement with local agencies and user groups can help shape regulations that balance the needs of different trail users while promoting sustainable outdoor experiences. By addressing infrastructure, user education, and regulations, the Trails Plan can ensure e-bikes contribute positively to the trail experience while maintaining safety and inclusivity.

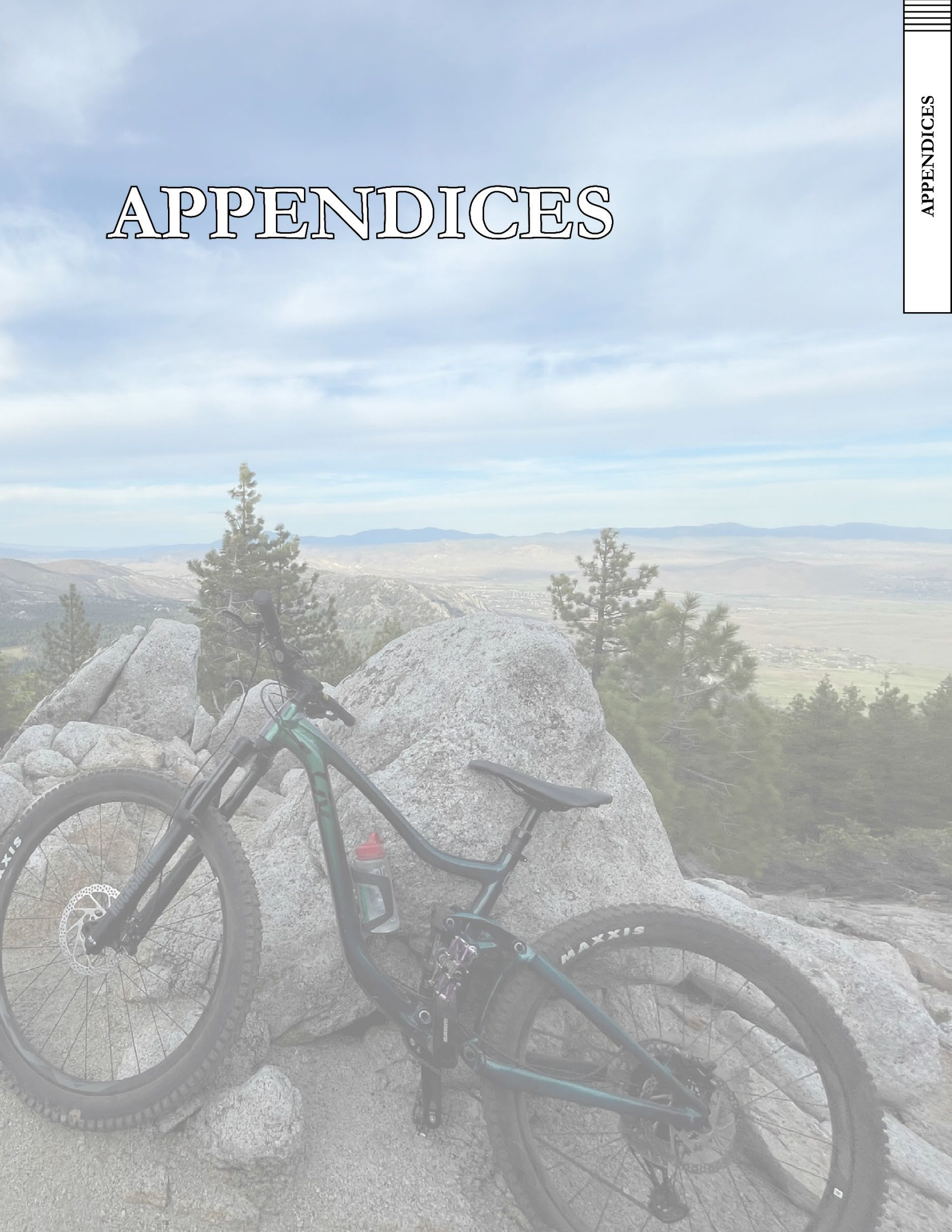
### ONLINE RESERVATION SYSTEMS

Some trails and parks are adopting online reservation systems for managing trailhead parking and ensuring controlled access during peak times.





# APPENDICES





## A. Relevant Plans

# B. Existing Trail Inventory





## C. Public Survey Results