NEVADA COUNTY BICYCLE MASTER PLAN

Amendment 1

DECEMBER 2016

FEHR & PEERS

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EXECUTIVE SUMMARY

VISION

Nevada County will sustain high levels of utilitarian and recreational bicycling by providing safe, well-designed bikeways and support facilities. A strong culture of bicycling will support bicycling-related education, encouragement, and enforcement for residents and visitors alike.

KEY FINDINGS/RECOMMENDATIONS

The following are key findings and recommendations of the Nevada County Bicycle Master Plan.

- Implementation of the Bicycle Master Plan will support jurisdictions' efforts to achieve the vision for bicycling in Nevada County.
- The Bicycle Master Plan will improve jurisdiction's access to funding, including funding awarded through the Active Transportation Program.
- Rural areas of Nevada County already experience high levels of recreational bicycling.
- The cities of Grass Valley and Nevada City and Town of Truckee all have dense developed areas where bicycling is a convenient mode of utilitarian transportation.
- There are 22 miles of existing Class I bike paths, 24 miles of existing Class II bike lanes and 28 miles of Class III bike routes in Nevada County.
- The majority of bicyclists surveyed bicycle for recreation and exercise; however, approximately 50 percent of bicyclists surveyed also bicycle for shopping and to work.
- Approximately 80 percent of bicyclists surveyed cite a lack of bicycle infrastructure as a primary factor that prevents them from bicycling more often.
- According to the 2007-2011 American Communities Survey, 0.6 percent of commuters in Nevada County bicycle as their primary mode of transportation to work.
- Bicycling would be improved in Grass Valley and Nevada City by implementing several Class II bike lane and Class III bike route projects, especially those near major destinations such as Sierra College and commercial destinations on Freeman Lane.
- High-priority bike lane projects would connect Grass Valley and Nevada City on Nevada City Highway, Ridge Road, and Old Tunnel Road.
- There are few continuous public rights-of-way in Grass Valley and Nevada City for Class I bike path projects; however, some short Class I bike paths could improve connectivity to key destinations such as schools (Seven Hills Middle School, Deer Creek Elementary School, and Nevada Union High School) and key commercial areas (off of McKnight Way and Freeman Lane).
- Improving conditions for bicycling in the Town of Truckee through a linked network of bike lanes and bike routes that connect with the network of shared use paths will serve the needs of both recreations bicyclists and commuters.
- Class III bike route projects will provide a connection from western Nevada County to eastern Nevada County.

- Multi-use shoulders would improve conditions for bicycling on rural roadways in unincorporated Nevada County and on state highways; high-priority shoulder projects are proposed for roadways with high bicycle volumes and/or high vehicle volumes.

COST

The total capital cost for the system of bicycle facilities proposed in this plan is approximately $174.5 million. In unincorporated Nevada County, the cost of Class III bike routes with multi-use shoulder represents the majority of expenditures given their relatively high cost and high proposed mileage; however, these projects would improve safety for all roadway users, including motorists and pedestrians. In Truckee, river and railroad crossings represent the majority of expenditures. **Table E-1** includes a breakdown of the capital cost by jurisdiction.

TABLE E-1: PROPOSED BIKEWAY COST SUMMARY

Jurisdiction	Capital Cost
Grass Valley	$7.9 million
Nevada City	$1.0 million
Truckee	$71.1 million
Nevada County	$94.5 million
Total	**$174.5 million**

Source: Fehr & Peers, 2016.

HIGH PRIORITY PROJECTS

The bicycle facilities proposed in this plan were prioritized according to their benefit and feasibility. The following are high-priority projects that have high benefit and high feasibility.

Grass Valley projects:

- A Class I bike path connecting Sierra College Drive to the Sierra College parking lot
- Class II bike lane gap closures on Sierra College Drive, Morgan Ranch Drive, Hughes Road, and East Main Street
- A Class III bike route on East Main Street and West Main Street

Nevada City projects:

- Signal detection for bicyclists at the State Route 49/East Broad Street intersection
- A Class I bike path connecting Reward Street to Seven Hills Middle School and Deer Creek Elementary School

Truckee projects:

- Tahoe Donner Trail (paved trail) from end of Trout Creek Trail Phase 1 to Northwoods Boulevard
- Truckee River Legacy Trail (paved trail) Phase 4, 5A and 5B from Palisades Drive to Donner Memorial State Park
- Mousehole project (paved trail) from Deerfield Drive/SR 89 South to West River Street
- Trout Creek Trail (paved trail) from end of Trout Creek Trail Phase 1 to Lausanne Way
- Joerger Ranch-Riverview Sports Park Connector (paved trail) from Joerger Drive to Martis Valley Trail Connector
- Class II bike lanes on West River Street from Riverside Drive to Placer County line
- Class II bike lanes on SR 89 from Henness Road to north Town limits
- Class II bike lanes on Donner Pass Road from South Shore Drive to west Town limits
- Class II bike lanes on SR 89 from Donner Pass Road to south Town limits
- Class II bike lanes on South River Street from Brockway Road along South River Street
- Class II bike lanes on Glenshire Drive (1,500 feet west and 1,000 feet east of Highland Avenue)
- Class II bike lanes on Glenshire Drive and Dorchester Drive (Glenshire Drive/Dorchester Drive loop)

Nevada County projects:

- Class II bike lane projects that would connect Nevada City and Grass Valley, including segments of Brunswick Road, Nevada City Highway, and Old Tunnel Road
- Class II bike lanes on Pleasant Valley Road between State Route 20 and Lake Wildwood Drive
- A Class I bike path along Combie Road connecting Bear River High School and the Higgans Village Shopping Center to State Route 49
- Several Class III bike routes with multi-use shoulder on roadways with high bicycle volumes and/or high vehicle volumes, such as Brunswick Road, State Route 49, and La Barr Meadows Road

INTERAGENCY COORDINATION

Achieving the vision for bicycling in Nevada County will require that the jurisdictions and its stakeholders work together to implement the Bicycle Master Plan. Coordination between the jurisdictions and its stakeholders is required throughout the project development process, including planning, funding, design, construction, and maintenance. Measurable performance measures can be used to track how well implementation of the Bicycle Master Plan is achieving the vision for bicycling in Nevada County.

RELATIONSHIP WITH THE TRUCKEE TRAILS AND BIKEWAYS MASTER PLAN

In response to input received by the Town of Truckee Town Council and surrounding communities, this plan has been expanded to better integrate the Town of Truckee and Eastern Nevada County. In particular, this

amended plan includes several proposed bicycle facilities that are located outside, but directly adjacent to the Town of Truckee boundaries.

The Town of Truckee adopted the Truckee Trails and Bikeways Master Plan in September 2015. Although the Truckee Trails and Bikeways Master Plan is the primary guidance document for paved and unpaved trails, bike lanes, bike routes, and walkways within the Town of Truckee, the Nevada County Bicycle Master Plan is meant to support Truckee's plan as well as address areas that are adjacent to but outside the Town boundaries in Nevada County. Therefore, this plan includes limited discussion of Truckee's demographics, existing facilities, and planned infrastructure. The majority of the information pertaining to the Town of Truckee is directly based upon the September 2015 Truckee Trails and Bikeways Master Plan. As such, any projects that were completed in 2015 or 2016 in Truckee may not be reflected in this Nevada County Bicycle Master Plan. Goals and policies for trails and bikeways in the Town of Truckee are contained in the Truckee Trails and Bikeways Master Plan.

1. INTRODUCTION

The Nevada County Bicycle Master Plan was prepared by Fehr & Peers under contract to the Nevada County Transportation Commission. This Bicycle Master Plan is a result of the diligent efforts of the Nevada County Transportation Commission, Nevada County, and the communities of Nevada County, including the City of Grass Valley, City of Nevada City and Town of Truckee, other public agencies, and citizens interested in improving the bicycling environment in Nevada County. The plan could not have been developed without the committed efforts of these organizations and residents.

1.1 SETTING AND STUDY AREA

The study area shown in **Figures 1-1a, b and c** includes all of Nevada County. The diverse topography and geography of Nevada County ranges from elevations about 500 feet above sea level in the western end of the County to almost 8,000 feet above sea level at the eastern edge. West to east, the rolling hills of developed areas such as Grass Valley and Nevada City give way to the more and more rugged, mountainous terrain that characterized areas such as Donner Pass which separates the east and west County areas. The County is host to popular year-round recreation destinations that provide opportunities for snow sports, golfing, hiking, camping, fishing, rafting, and road and mountain bicycling. The County is located near the Lake Tahoe area, which lies to the east and south.

The densest residential areas in Nevada County are the incorporated communities of Grass Valley (population 12,860), Nevada City (population 3,070) and Truckee (population 16,180)[1]. The major portion of the County's employment is centered in Grass Valley and Nevada City, with significant employment, including many recreation industry jobs, found near the Truckee area. However, of the total population of 98,764 only 32,108 (33 percent) live in the above incorporated communities, while 66,656 (67 percent) live in other unincorporated areas of the County, illustrating the essential rural nature of the County as a whole.[2] From 2009-2011 the County had about 42,830 employed residents with median annual earnings of about $28,086[3]. Journey to work data, discussed in **Chapter 4**, indicates that the majority of residents 16 and over have access to a motor vehicle.

[1] *Total Population,* US Census 2010, Summary File 1, accessed March 2013.

[2] Ibid.

[3] *Selected Economic Characteristics,* American Communities Survey 2009-2011 3-Year Estimates, Nevada County, accessed March 2013

Travel in the County is primarily by automobile due to the rural nature of the roadway network and limited opportunities for alternative modes of travel. The network is built around Interstate 80 and several state routes, including Highways 20, 49, 89, 174, and 267. Depending on the segment, these state routes are classified as limited access highways, major or minor arterials or low-volume rural highways. In developed areas they connect with a system of collector and local streets. Western Nevada County is served by the Gold Country Stage, which operates buses equipped with front bicycle racks. The Gold Country stage serves most population and employment centers in the western half of the County and connects to Auburn via an inter-County route. The Town of Truckee is served by Tahoe Area Regional Transit (TART), which has routes that run between the Town and destinations along Lake Tahoe, and Truckee Dial-a-Ride paratransit service for seniors and persons with disabilities. Amtrak has a Town of Truckee station that serves bus and passenger rail routes.

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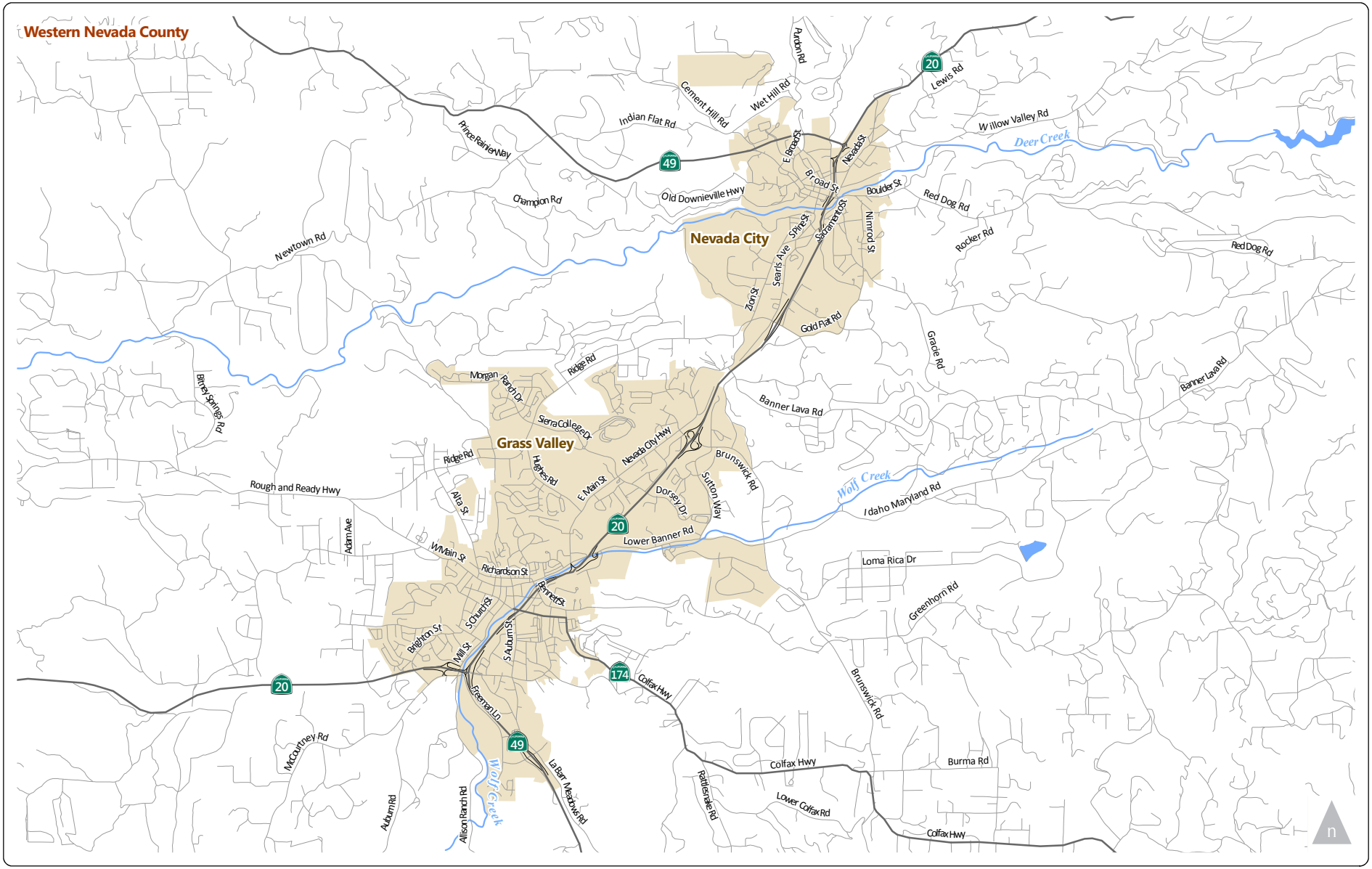

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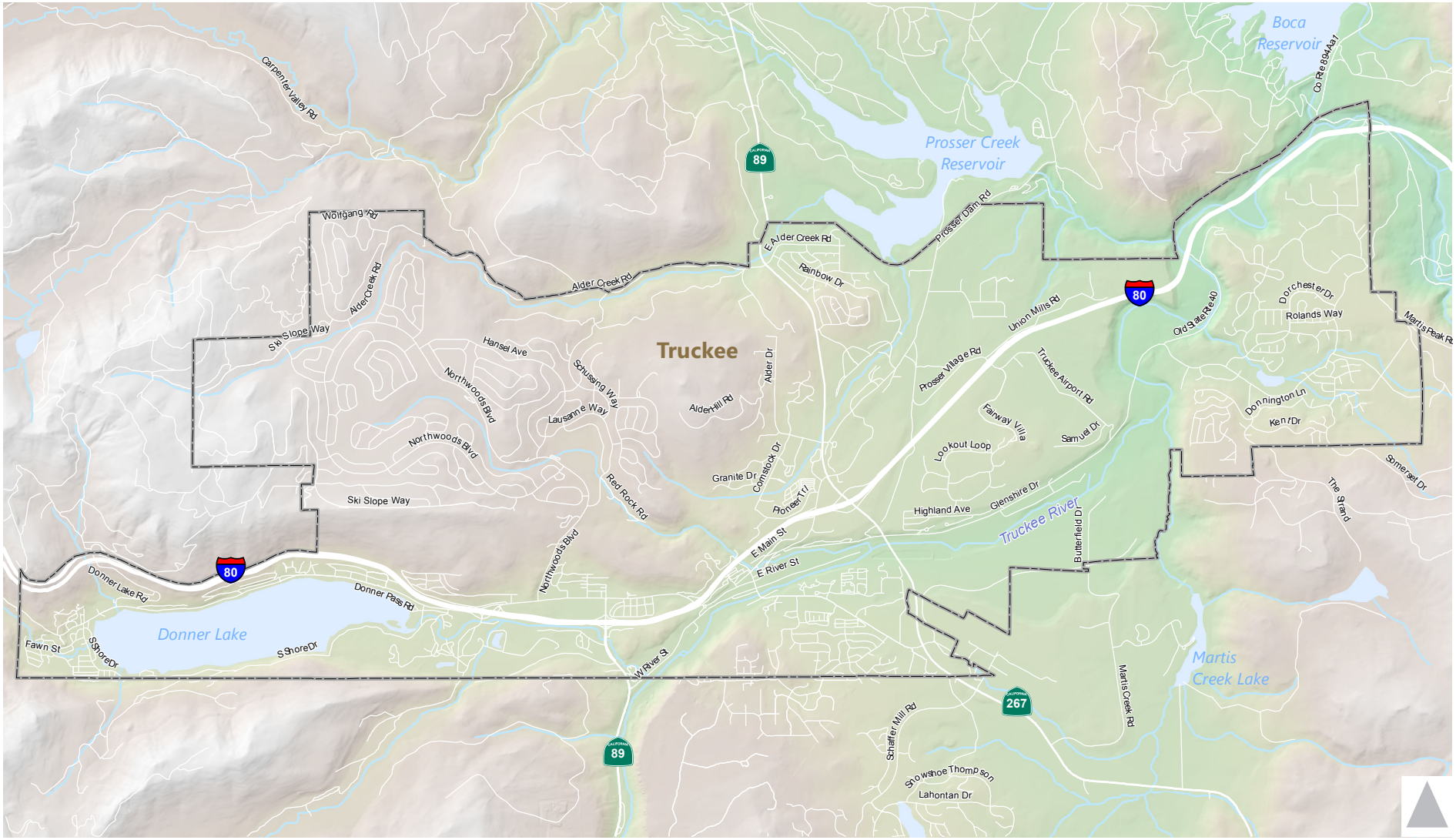
STUDY AREA

FIGURE 1-1B



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STUDY AREA

FIGURE 1-1C

1.2 WHY DOES NEVADA COUNTY NEED A BICYCLE MASTER PLAN?

The County of Nevada has been growing slower than the State growth rate over the last several years. Traffic congestion is not yet the problem it is in other communities around the state. However, managing traffic is a key strategy for the growing communities of Nevada County to ensure they maintain their rural nature and community character. The plan is one step in providing alternative modes and addressing future traffic congestion in the County.

In addition to reducing traffic congestion, encouraging cycling in the community will help increase the enjoyment and quality of life for the residents of Nevada County. Since bicycling is among the most popular forms of recreational activity in the United States, we can assume that thousands of County residents bicycle at least occasionally will benefit from this plan. Substantial health benefits also result from bicycling for transportation and recreation. This is especially true for children who bike to school, and the older segment of the population who benefit from low-impact forms of exercise.

Safety concerns are one of the primary reasons to improve bicycling conditions in Nevada County. Concerns about safety have historically been the single greatest reason people do not commute by bicycle, as captured in polls dating back to the early 1990's (Lou Harris, 1991). Addressing those concerns for bicyclists through physical and program improvements is another primary objective of this plan.

Bicycling also has several economic benefits. Bicycling is an affordable mode of transportation and by bicycling instead of driving, people have more money to save or spend on things other than car purchases, maintenance, and fuel. Additionally, bicycle infrastructure typically has a positive economic impact on local shops and businesses that benefit from increased accessibility and increased numbers of pass-by bicyclists. Bicycling infrastructure's contribution to transportation alternatives and recreational opportunities typically has a positive effect on property values.

1.2.1 Funding Requirements

Projects included in an adopted bicycle master plan have substantially greater chances of receiving funding from several sources, including the federal Transportation Alternatives Program and the California Active Transportation program (ATP). Cycles 1 and 2 of the ATP awarded approximately $260 million and $180 million, respectively. Cycle 3, upcoming in 2016, will award approximately $230 million. Most communities will need to seek additional funding to implement the elements of their bicycle plans, and can leverage their plans in the grant application process.

The Active Transportation Program was created by SB 99/Assembly Bill 101 to encourage increased use of active modes of transportation such as biking and walking. The program consolidated five previous state funded programs: Transportation Alternatives Program, Recreational Trails, Safe Routes to Schools, Environmental Enhancement and Mitigation Program and the Bicycle Transportation Account. It provides a comprehensive program that improves program planning and flexibility and is more efficient than multiple programs. Another benefit is that funds can be directed to multi-year projects to make greater long-term improvements to active transportation.

The ATP mixes state and federal funds and provides substantial funding, with a focus on implementing active transportation improvements to support the goals of local SB 375 sustainable community strategies. This program is funded from a combination of federal and state funds from appropriations in the annual state budget act. Forty percent of the funding goes toward metropolitan planning organizations in urban areas. Ten percent of the funds go to small urban and rural regions. The remaining funds go to the California Transportation Commission for statewide projects.

In order to maximize the effectiveness of program funds and to encourage the aggregation of small projects into a comprehensive bundle of projects, the minimum request for Active Transportation Program funds considered is $250,000. This minimum does not apply to non-infrastructure projects, Safe Routes to Schools projects, and recreational trail projects.

Project types allowed under the ATP include: new bikeways serving major transportation corridors, new bikeways to improve bicycle commuting options, bicycle parking at transit and employment centers, traffic control devices to improve pedestrian and bicycle safety, improving and maintaining safety on existing bikeways, recreational facilities, Safe Routes to School projects, Safe Routes To Transit projects, education programs, and other improvements to bicycle-transit connections and urban environments.

For a project to contribute toward the Safe Routes to School funding requirement, the project must directly increase safety and convenience for public school students to walk and/or bike to school. Safe Routes to Schools infrastructure projects must be located within two miles of a public school or within the vicinity of a public school bus stop. Other than traffic education and enforcement activities, non-infrastructure projects do not have a location restriction.

TABLE 1-1: ACTIVE TRANSPORTATION PROGRAM (ATP) CRITERIA

Criteria	Status
The estimated number of existing bicycle trips and pedestrian trips in the plan area, both in absolute numbers and as a percentage of all trips, and the estimated increase in the number of bicycle trips and pedestrian trips resulting from implementation of the plan.	Address in future planning efforts
The number and location of collisions, serious injuries, and fatalities suffered by bicyclists and pedestrians in the plan area, both in absolute numbers and as a percentage of all collisions and injuries, and a goal for collision, serious injury, and fatality reduction after implementation of the plan.	Addressed in Pedestrian Improvement Plan but requires further addressing in future planning efforts
A map and description of existing and proposed land use and settlement patterns which must include, but not be limited to, locations of residential neighborhoods, schools, shopping centers, public buildings, major employment centers, and other destinations.	Addressed in Bicycle Master Plan but requires further addressing in future planning efforts

TABLE 1-1: ACTIVE TRANSPORTATION PROGRAM (ATP) CRITERIA	
Criteria	**Status**
A map and description of existing and proposed bicycle transportation facilities.	Addressed in Bicycle Master Plan
A map and description of existing and proposed end of-trip bicycle parking facilities.	Addressed in Bicycle Master Plan
A description of existing and proposed policies related to bicycle parking in public locations, private parking garages and parking lots and in new commercial and residential developments.	Addressed in Bicycle Master Plan
A map and description of existing and proposed bicycle transport and parking facilities for connections with and use of other transportation modes. These must include, but not be limited to, parking facilities at transit stops, rail and transit terminals, ferry docks and landings, park and ride lots, and provisions for transporting bicyclists and bicycles on transit or rail vehicles or ferry vessels.	Address in future planning efforts
A map and description of existing and proposed pedestrian facilities at major transit hubs. These must include, but are not limited to, rail and transit terminals, and ferry docks and landings.	Address in future planning efforts
A description of proposed signage providing wayfinding along bicycle and pedestrian networks to designated destinations.	Addressed in Bicycle Master Plan
A description of the policies and procedures for maintaining existing and proposed bicycle and pedestrian facilities, including, but not limited to, the maintenance of smooth pavement, freedom from encroaching vegetation, maintenance of traffic control devices including striping and other pavement markings, and lighting.	Addressed in Bicycle Master Plan and Pedestrian Improvement Plan
A description of bicycle and pedestrian safety, education, and encouragement programs conducted in the area included within the plan, efforts by the law enforcement agency having primary traffic law enforcement responsibility in the area to enforce provisions of the law impacting bicycle and pedestrian safety, and the resulting effect on accidents involving bicyclists and pedestrians.	Addressed in Bicycle Master Plan and Pedestrian Improvement Plan
A description of the extent of community involvement in development of the plan, including disadvantaged and underserved communities.	Addressed in Bicycle Master Plan and Pedestrian Improvement Plan

TABLE 1-1: ACTIVE TRANSPORTATION PROGRAM (ATP) CRITERIA	
Criteria	**Status**
A description of how the active transportation plan has been coordinated with neighboring jurisdictions, including school districts within the plan area, and is consistent with other local or regional transportation, air quality, or energy conservation plans, including, but not limited to, general plans and a Sustainable Community Strategy in a Regional Transportation Plan.	Addressed in Bicycle Master Plan and Pedestrian Improvement Plan
A description of the projects and programs proposed in the plan and a listing of their priorities for implementation, including the methodology for project prioritization and a proposed timeline for implementation.	Addressed in Bicycle Master Plan and Pedestrian Improvement Plan
A description of past expenditures for bicycle and pedestrian facilities and programs, and future financial needs for projects and programs that improve safety and convenience for bicyclists and pedestrians in the plan area. Include anticipated revenue sources and potential grant funding for bicycle and pedestrian uses.	Addressed in Bicycle Master Plan and Pedestrian Improvement Plan
A description of steps necessary to implement the plan and the reporting process that will be used to keep the adopting agency and community informed of the progress being made in implementing the plan.	Addressed in Bicycle Master Plan and Pedestrian Improvement Plan and needs to continue to be addressed in future planning efforts
A resolution showing adoption of the plan by the city, county or district. If the active transportation plan was prepared by a county transportation commission, regional transportation planning agency, MPO, school district or transit district, the plan should indicate the support via resolution of the city(s) or county(s) in which the proposed facilities would be located.	To be addressed following the adoption of the Bicycle Master Plan
Source: California Transportation Commission, Adoption of 2014 Active Transportation Program Guidelines	

1.3 ROLE OF THE BICYCLE MASTER PLAN

The Nevada County Bicycle Master Plan is primarily a Countywide coordinating and resource document for the City of Grass Valley, City of Nevada City, Town of Truckee and the unincorporated County areas. The plan focuses on developing a complete Countywide network of bikeways as well as programs, and specific policies and enhancements. In addition, the plan provides specific recommendations for the incorporated

areas of Grass Valley and Nevada City and references the *Town of Truckee Trails and Bikeways Plan*, 2015. The plan helps to promote safe access to popular destinations Countywide and ensure the development and application of consistent design standards. Key goals of the plan are to provide consistency with other plans as well as to promote the critical aspect of policy integration and coordination with the County Department of Public Works and the County Planning Department, to ensure that projects proposed in this plan can be funded and implemented in a timely fashion.

The Town of Truckee adopted an updated local bicycle master plan in September 2015. The Town's plan provides detailed local infrastructure, policy and program recommendations. The Town of Truckee's eligibility for funding will be determined primarily based on the adoption and approval of their local bicycle plan. Nevertheless, the Town should consider officially adopting relevant sections of the *2016 Nevada County Bicycle Master Plan* as a countywide bicycle planning document.

To the extent feasible, this plan has incorporated existing local plans, priorities and policies as part of its recommendations. Plans reviewed include:

- Nevada City General Plan (1980-2000)
- Nevada County Bicycle Master Plan (2007)
- Western Nevada County Non-Motorized Trails Master Plan (2010)
- City of Grass Valley 2020 General Plan (1999)
- Non-motorized Transportation Plan for Nevada County (2000)
- Nevada County Pedestrian Improvement Plan (2011)
- City of Grass Valley Parks & Recreation Master Plan Update (2004)
- Nevada County Regional Transportation Plan (2005)
- Wolf Creek Parkway Master Plan (2006)
- Truckee General Plan (2006)
- Town of Truckee Trails and Bikeways Plan (2015)
- State Route 49 Corridor System Management Plan (2009)
- Transportation Concept Reports for State Routes 49, 20 and 174 (dates vary)
- General Plans and Bicycle Master Plans from neighboring jurisdictions (dates vary)

A more detailed review of past planning efforts is found in **Chapter 2**.

Adopting this document will improve access to state and federal funding for the County, Grass Valley, and Nevada City. Future planning efforts will ensure each of these jurisdictions conforms to the Active Transportation Program guidelines for Active Transportation Plans; Active Transportation Plan conformity is a future requirement of Active Transportation Program funding. The Town of Truckee will meet the requirements separately from Nevada County by adopting their own plan. All projects in this plan will require additional feasibility, design, environmental, and/or public input prior to being funded and constructed. All projects and plans would need to conform with local General Plans & EIRs as well. Regardless of whether the Town of Truckee adopts this plan as a countywide bicycle planning document, the *Town of Truckee Trails and Bikeways Master Plan (2015)* would continue to be the authoritative document regarding proposed facilities within the Town of Truckee.

1.4 BICYCLE PLAN PROCESS

This plan was developed during 2012/2013 under the purview of the Nevada County Transportation Commission (NCTC). NCTC is the Regional Transportation Planning Agency (RTPA) for the County of Nevada, the City of Grass Valley, City of Nevada City, and the Town of Truckee.

In Fall 2012, NCTC formulated a Project Advisory Committee to oversee and provide input into the planning process. The committee included staff from the County of Nevada, City of Grass Valley, City of Nevada City, Town of Truckee and NCTC, stakeholders from the bicycling community, and a team of consultants.

With the committee's input, NCTC held two public meetings to engage residents in the production of this plan. The meetings were held in Nevada City and Grass Valley and were a key component to the draft and final documents and list of priority projects.

1.5 OVERVIEW OF THE PLAN STRUCTURE

This report is divided into chapters, detailed below:

Chapter 1 – Introduction: Sets the context for the plan including purpose and structure.

Chapter 2 – Goals and Objectives: Summarizes the goals, policies and objectives guiding the implementation of the Bicycle Master Plan, incorporating previous planning efforts

Chapter 3 – Existing Conditions: Details the existing bikeway facilities in Nevada County.

Chapter 4 – Demand Analysis: Reviews the relationship between bicycle activity, commute patterns, demographics, land use and collisions.

Chapter 5 – Proposed System: Outlines the recommended bikeway improvements, including bicycle parking, and education, outreach and encouragement programs.

Chapter 6 – Implementation: Outlines an implementation strategy, including a priority list of projects containing feasibility analyses and cost estimates. Funding sources are included in this chapter.

Appendix A – Public Outreach Materials and Documentation

Appendix B – Survey Results and Responses

Appendix C – Prioritization Criteria

Appendix D – Project Prioritization by Jurisdiction

2. GOALS, OBJECTIVES, AND POLICIES, AND RELATIONSHIP TO OTHER PLANS

2.1 VISION

Nevada County will sustain high levels of utilitarian and recreational bicycling by providing safe, well-designed bikeways. A strong culture of bicycling will support bicycling-related education, encouragement, and enforcement for residents and visitors alike.

2.2 GOALS, OBJECTIVES AND POLICIES

Goals provide the context for specific objectives and policies discussed in the bicycle plan. The goals provide the long-term vision and serve as the foundation of the plan. Goals are broad statements of purpose, while policies provide a bridge to specific implementation guidelines, which are provided in the proposed projects and programs. The policies proposed here are not proscriptive and have no fees or specific penalties associated with noncompliance. Rather, they are intended as guidance for the development, funding and implementation of future bikeways in Nevada County. Goals and policies for trails and bikeways in the Town of Truckee are contained in the *Truckee Trails and Bikeways Master Plan*.

The following goals, objectives and policies are proposed for adoption as part of the Bicycle Master Plan.

Goal 1: **Improve safety for bicyclists in Nevada County.**

Objective: Construct and maintain bikeways identified in the Nevada County Bicycle Master Plan that will help improve safety.

Policies

1.1 Prepare and maintain a bicycle master plan that identifies safety needs and concerns.

1.2 Maintain existing and proposed facilities for safe use by bicyclists and motorists, and regularly clear these facilities of debris where feasible.

1.3 Require all bikeways to conform to design standards contained in the latest version of the Caltrans Highway Design Manual and CA MUTCD, and consider implementing innovative design recommendations to provide additional safety in conflict areas.

1.4 Use available accident data to monitor bicycle-related accident levels annually, and target a 10 percent reduction on a per capita basis over the next 20 years.

Goal 2: **Provide suitable conditions for bicycling in all appropriate future development projects.**

Objective: Maximize the number of daily trips made by bicycling in future development areas.

Policies

2.1 Facilitate on-site circulation for bicycle travel.

2.2 Require future development to construct bikeways included in the proposed system as a condition of approval.

2.3 Encourage future commercial development to provide bicycle access to surrounding residential areas.

2.4 Require future commercial development to place bike racks near entrances for employers and customers.

2.5 Meet the requirements of the Americans with Disabilities Act when constructing proposed bikeways, where applicable.

2.6 Encourage future development to consider schools as important destinations for bicyclists when designing circulation systems.

Goal 3: Develop a bikeway system that enhances conditions for bicycling for utility.

Objective: Increase bicycle trips to work and school.

Policies

3.1 Provide efficient connections to major destinations like schools and commercial centers.

3.2 Provide support facilities such as bicycle racks, personal lockers, and showers at appropriate locations such as "park and ride" facilities, employment centers, schools, and commercial centers.

3.3 Consider hosting or sponsoring events that promote bicycling for utility, such as Bike to Work Day.

Goal 4: Educate and inform residents and visitors about bicycling.

Objective: Improve motorists' and bicyclists' understanding of existing laws and proper roadway etiquette, and provide access to bicycle organizations and programs for current and potential bicyclists.

Policies

4.1 Work with local organizations to facilitate education programs at schools, employment centers and commercial centers.

4.2 Work with law enforcement to regularly educate motorists and bicyclists, and consider temporary roadway checkpoints to target outreach.

4.3 Encourage local law enforcement agencies and local school districts to cooperatively develop a comprehensive bicycle education program that is taught to all students in Nevada County, including through Driver's Education classes.

Goal 5: Avoid adverse impacts associated with the implementation of the proposed system.

Objective: Mitigate potentially significant impacts to less than significant levels, where feasible.

Policies

5.1 Conduct environmental review consistent with the California Environmental Quality Act for individual projects as they advance to the implementation stage of development.

5.2 Avoid areas of sensitive habitats for plants and wildlife when constructing facilities contained in the proposed system.

5.3 Solicit and consider community input in the design and location of bikeway facilities.

5.4 Consider the effects on other transportation facilities such as travel lane widths, turn lanes, on-street parking and on-site circulation when planning and designing on-street bikeways.

5.5 Consider landowner concerns when planning and acquiring off-street bikeway easements.

Goal 6: Ensure the timely funding of the bicycle improvements described in this plan.

Objective: Jurisdictions within the region should work to fund construction of the bicycle improvements in this plan and maximize the amount of local, state, and federal funding for bikeway facilities that can be received by agencies in Nevada County.

Policies

6.1 Maintain current information regarding regional, state, and federal funding programs for bikeway facilities along with specific funding requirements and deadlines.

6.2 Partner with other agencies to pursue funding for bicycle projects as stand-alone grant applications or as part of larger transportation improvement.

Objective: Jurisdictions within the region should develop and construct the improvements in this plan in a timely fashion

Policies

6.3 Environmental documentation, right-of-way acquisition and plans, specifications and detailed cost estimates should be developed as soon as adequate funding is available.

6.4 Projects should be constructed as soon as adequate funding is available to avoid escalation and cost overruns.

Goal 7: **Integrate the Bicycle Master Plan into future planning and design efforts.**

Objective: The County should require that the policies, programs and projects of the Bicycle Master Plan be integrated into all ongoing and future planning and design documents and guidelines.

Policies

7.1 Update local roadway design standards to include sufficient pavement sections to accommodate bikeway facilities.

7.2 Require inclusion of all bicycle improvements from this plan in upcoming capital projects, where appropriate.

7.3 Require inclusion of bicycle master plan policies, programs and improvements in all ongoing and future planning efforts, as applicable.

2.2 RELATIONSHIP TO OTHER PLANS AND POLICIES

This section summarizes past planning efforts and establishes a policy framework to guide transportation decisions and capital improvement programming for both unincorporated Nevada County and its incorporated cities and towns. This undertaking is intended to promote regional planning, offer opportunities to coordinate infrastructure improvements and to incorporate past planning efforts into the current plan. It is recommended that all jurisdictions of Nevada County, including Nevada County, Grass Valley, Nevada City and The Town of Truckee, adopt the recommended policies in this plan to ensure their effective and consistent implementation countywide.

2.2.1 Previous Plans in Nevada County

The Bicycle Master Plan is intended to coordinate and guide the provision of all bicycle-related plans, programs, and projects in the County. The studies or planning efforts listed below have been reviewed and consulted, studied for consistency, and where appropriate, folded into the Nevada County Bicycle Master Plan. Each plan summary addresses relevant goals, objectives and policies, and previous infrastructure and program proposals.

Nevada County General Plan (1995)

The purpose of this plan is to meet state planning requirements and to assist decision makers in coordinating land use and infrastructure decisions. The Circulation, Conservation/Open Space, Recreation and Community Design elements all contain policies relevant to the bicycle plan update's goals of developing bicycle facilities, multi-modal connections and connections between neighborhoods and communities.

Non-motorized Transportation Plan for Nevada County (2000)

The purpose of this plan was to supplement the 1996 Nevada County Bicycle Master Plan. The plan provides a framework of Commute, Safe Routes to Schools, Sidewalk and Rural Recreation Trails facility types. Included in the plan are specific commute corridors identified for further study and evaluation, including corridors through open space where additional right-of-way and easements would be required.

Nevada County Regional Transportation Plan (2005)

This plan was adopted to bring Nevada County into compliance with the California Transportation Commission 1999 Regional Transportation Plan guidelines. Its purpose is to guide development of the County's transportation system and to lay out policies and actions intended to address all modes and facilities, including roadways, public transit, goods movement, bicycle and pedestrian needs, aviation and transportation system management. The plan includes a number of goals pertaining to non-motorized transportation designed to promote safety on local roads and state highways and encourage alternative modes.

Nevada County Bicycle Master Plan Update (2007)

The previously adopted master plan provides information required to maintain eligibility for Bicycle Transportation Account funding, including current and future unsafe, existing and proposed facilities and programs and updated cost estimates. Elements of the 2007 plan are folded into the current plan update.

Western Nevada County Non-Motorized Trails Master Plan (2010)

The Nevada County Planning department developed this plan to create a comprehensive and, where possible, integrated regional recreational trails system. The plan provides a map of existing trails, goals and policies for the County, design guidelines for trail development, and programs to implement the regional trails system.

Nevada County Pedestrian Improvement Plan (2011)

This plan is intended to guide and influence pedestrian infrastructure, policies, programs, and development standards to improve conditions for walking in Nevada County. The plan includes an inventory of existing facilities and proposed future projects, including proposed Class I bike paths.

City of Grass Valley 2020 General Plan (1999)

The purpose of this plan is to meet state planning requirements and to assist decision makers in coordinating land use and infrastructure decisions to promote economic growth and development in Grass Valley and the surrounding unincorporated areas. The Circulation, Recreation and Community Design elements all contain policies relevant to the bicycle plan update.

City of Grass Valley Parks & Recreation Master Plan Update (2004)

To assist in maintaining Grass Valley's livability, the Parks and Recreation Commission and the City created the first Grass Valley Parks and Recreation Master Plan. The plan describes how the City will provide parks and recreation opportunities to residents on a 20-year timeline. The plan identifies bicycle-related goals, policies and proposals from the City of Grass Valley 2020 General Plan.

Wolf Creek Parkway Master Plan (2006)

The Wolf Creek Parkway Alignment Study and Conceptual Master Plan establishes potential routing for a multi-use non-motorized trail along the Wolf Creek Corridor, provides guidelines for design development, and outlines alternative strategies for implementation.

Nevada City General Plan (1986)

The Nevada City General Plan contains policies and goals relevant to the Nevada County Bicycle Master Plan. The General Plan was intended to preserve the City's historic, small-town character and to guide development and infrastructure improvements.

Martis Valley Community Plan (2003)

Martis Valley is a geographic area bisected by Martis Creek, which flows to the Truckee River, generally located south of the Town of Truckee, north of Brockway Summit on State Route 267, south and east of the Truckee River, and west of the Nevada state line. The Martis Valley Community Plan sets forth goals, policies, assumptions, guidelines, standards, and implementation measures to guide the physical, social, and economic development of the Martis Valley area.

The Martis Valley Community Plan includes a network of existing and proposed dirt trails and paved trails. Dirt trails that connect to the Town of Truckee are proposed on the south and east sides of Sierra Meadows, on the south side of Schaffer Mill Road, and on the south side of State Route 267 east of Schaffer Mill Road. Additionally, the Martis Valley Community Plan proposed an dirt trail and a shared use path between Truckee Tahoe Airport and Martis Creek Lake north of State Route 267 towards the Truckee River.

Truckee General Plan (2006)

The Truckee General Plan provides a vision for land use and transportation in the Town of Truckee. It describes existing conditions for bicycling and discusses the possible impacts on bicycling as a result of the implementation of the general plan. It references previous versions of the Town of Truckee Trails and Bikeways Plan as guiding documents to avoid negative impacts on bicycling conditions in the process of local development. The plan also encourages the development and implementation of the non-motorized system promoting the use of alternative transportation and creating recreational opportunities fort the Truckee community and beyond.

Truckee River Corridor Access Plan (2012)

The Truckee River Corridor Access Plan serves as the guiding vision for the Truckee River corridor between Lake Tahoe and Truckee. The plan's purpose is to help agencies and organizations direct land management activities; enhance, restore, and protect natural resources; and develop dirt trails, staging areas, and other potential low-intensity recreational facilities. The Truckee River Corridor Access Plan identifies a potential shared use path along the Truckee River between Tahoe City and Truckee. The path segment between Tahoe City and Squaw Valley is already complete.

Town of Truckee Trails and Bikeways Master Plan (2015)

This bikeways plan was a community-based planning effort promoting the development of a local multi-use trail and bikeway system designed to increase recreational, educational and alternative transportation opportunities for the benefit of local residents and visitors to the Truckee area. This plan includes a thorough summary of plans relevant to the Town of Truckee.

2.2.2 Relevant State Plans, Regulations and Legislation

State Route 49 Corridor System Management Plan (CSMP) (2009)

This document identifies existing multi-modal conditions along State Route 49 from Placer County to Grass Valley and proposes phased improvements for the corridor. The plan calls for staged widening projects south of the State Route 49/20 Freeway to south of Combie Road, and for a Class III bike along the same alignment.

State Route 49 Transportation Concept Report (2000)

This Transportation Concept Report (TCR) was developed for the segment of State Route 49 in Caltrans District 3, which includes Nevada County. The report discusses environmental concerns, traffic operations, multi-modal connections, and potential improvements along the corridor.

State Route 20 Transportation Concept Report (2013)

This TCR was developed for the segment of State Route 20 in Caltrans District 3, which includes Nevada County. The report discusses environmental concerns, traffic operations, multi-modal connections and potential improvements to the corridor.

State Route 174 Transportation Concept Report (2010)

This TCR was developed for the segment of State Route 174 in Caltrans District 3, which includes Nevada County. The report discusses environmental concerns, traffic operations, multi-modal connections and potential improvements to the corridor.

Dorsey Drive Interchange Improvement Initial Study (2006)

This study examined the potential environmental impacts of the proposed Dorsey Drive Interchange. The study notes that the interchange will include sufficient width to accommodate bicyclists and pedestrians

Caltrans Highway Design Manual

The Caltrans Highway Design Manual sets the basic design parameters of on-street and off-street bicycle facilities.

California Manual on Uniform Traffic Control Devices (CA MUTCD)

Part 9 of the 2012 CA MUTCD contains design standards and guidance for the use of traffic control devices, including pavement markings, traffic signals and signs, specifically related to bicycle operation on roadways and shared-use paths. The 2012 CA MUTCD includes design standards and guidance for bicycle detection at new and modified traffic signals, these standards are based on the outcome of Assembly Bill 1581 and Caltrans Traffic Operations Policy Directive 09-06.

Assembly Bill 32 and Senate Bill 375

Senate Bill (SB) 375 is the implementation legislation for Assembly Bill (AB) 32. AB 32 requires the reduction of greenhouse gases (GHG) by 28 percent by the year 2020 and by 50 percent by the year 2050. Reducing

automobile trips is one method of reducing GHG emissions. This may be achieved by promoting modes other than the automobile, such as walking, bicycling, or riding transit.

Assembly Bill 1358

Assembly Bill 1358 is the Complete Streets Act. It calls for the inclusion of all modes (pedestrian, bicycles, transit, and automobile) into the design of roadways.

Assembly Bill 101 and Senate Bill 99

Senate Bill (SB) 99 is legislation for the Active Transportation Program (ATP). It consolidates existing state and federal programs to create a single funding pot to increase active modes of transportation.

Caltrans Deputy Directive 64 (Revision 1) DD-64-R1

Deputy Directive 64-R1 (DD-64-R1) was issued to ensure that travelers of all ages and modes may move "safely and efficiently along and across a network of 'complete streets.'" The directive establishes responsibilities for Caltrans staff to safely accommodate bicyclists, pedestrians, and transit users.

2.2.3 Plans from Neighboring Jurisdictions

Sierra County Bicycle Master Plan (2012)

This plan updates the previous 1994 plan and addresses utilitarian and recreational bicycling needs in Sierra County. The plan does not include bicycle facilities at the border between Sierra County and Nevada County.

Yuba County Bicycle Master Plan

This plan addresses utilitarian and recreational bicycling needs in Yuba County. The plan proposes a Class III with multi-use shoulder facility on State Route 20 at Yuba County's eastern border with Nevada County.

Placer County General Plan

While Placer County does not have a bicycle master plan, its General Plan contains policies and goals related to bicycling and bicycle facilities.

Placer County Regional Bikeway Plan (2002)

The Placer County Regional Bikeway Plan provides for a regional system of bikeways for transportation and recreation purposes. The Regional Bikeway Plan proposed bike lanes on State Route 89 between Truckee and Squaw Valley and on State Route 267 between Truckee and Tahoe Vista. This plan is currently in the process of being updated consistent with the goals contained within the Placer County General Plan.

3. EXISTING CONDITIONS

Existing conditions in Nevada County include existing facilities for bicycling as well as safety, education and encouragement programs. In addition, this chapter places the existing facilities and programs in a land use context by summarizing major destinations. As described in the introduction to this plan, Nevada County is primarily rural with few existing facilities for bicycling but with a growing demand for safe recreational and transportation options. Agency staff and the public have identified the lack of facilities including pathways, wide road shoulders, safe routes and bicycle parking as a key concern.

3.1 MAJOR DESTINATIONS

Major destinations in Nevada County include schools, multi-family housing, commercial centers, popular recreational areas, and other land uses. A map of Nevada City and Grass Valley land uses can be found in **Figure 3-1**. Additionally, **Figure 3-2** shows key destinations and income demographics by census block group throughout the County.

3.1.1 Grass Valley

Located along State Route 49 near the southern intersection with State Route 20, the greater Grass Valley area is home to approximately 63 of western Nevada County's top 84 major employers. Major shopping and commercial destinations include the downtown area shops and restaurants on and around East Main Street as well as the Brunswick Basin shopping Center on Brunswick Road, the Pine Creek Shopping Center on Freeman Lane, the Grass Valley Center on McKnight Way, the Fowler Center on Nevada City Highway, the Glenbrook Center off State Route 49/20, the Gold County Center off Sutton Way and others. Public and private educational destinations include at least 11 K-12 schools, including Nevada Union High School. The City is also home to the Sierra College Nevada County Campus, the primary higher education institution in the western County. Destinations for recreation in the Grass Valley area include Empire Mine State Park, neighborhood parks such as Condon Park, the Nevada County Country Club, the Nevada County Fairgrounds and various hiking and mountain bike trails.

3.1.2 Nevada City

Located along State Route 49 near the northern intersection with State Route 20, the greater Nevada City area is home to approximately 14 of western Nevada County's top 84 major employers. Nevada City is the location of the Eric Road Government Center, off State Route 49, where most County government departments are located as well as the County jail and main library. Shopping and commercial destinations are located in and around the historic downtown area on Commercial and Broad Streets as well as at the Seven Hills Center on Zion Street and others. Educational destinations include at least three elementary/middle schools. Destinations for recreation in the Nevada City area include neighborhood parks such as Pioneer Park, hiking and mountain bike trails as well as the nearby Yuba River, a regional destination for mountain biking and whitewater rafting.

3.1.3 Truckee

Located on Interstate 80 at the intersection with State Route 89, at the eastern end of the county, the greater Truckee area encompasses the Donner Pass/Donner Lake area and many outdoor recreation opportunities for on-road and off-road bicycling. Truckee is a major destination for visitors from outside the county, with many seasonal and vacation homes in the area. Local educational destinations include approximately six elementary/middle schools as well as three high schools and high school extension programs, including Tahoe Truckee High School. The Sierra College Tahoe/Truckee extension is also located in Truckee. The greater Truckee area is home to golf courses, state and regional parks and numerous downhill and cross-country snow sports facilities. The recreational industry is a key source of employment for Truckee residents and constitutes many of the employment destinations in the town.

3.1.4 Other Unincorporated Community Areas

There are a number of less-populated unincorporated community areas in western Nevada County, such as Alta Sierra, Chicago Park, Lake of the Pines, Bitney Springs, Lake Wildwood, North San Juan, Penn Valley, Washington and Soda Springs. There are approximately 15 elementary, middle and high schools in these communities, including public and private institutions. Gated communities such as Lake Wildwood and Lake of the Pines are destinations for service industry workers and for residents and their visitors utilizing the lakes and golf courses offered for private use. In addition, both of these areas have public destinations, respectively the Wildwood center on Pleasant Valley Drive and the Higgans Village and Lake Center shopping areas both on Combie Road. Penn Valley is home to a small shopping and employment area centered at the intersection of Penn Valley Drive and Spencerville Road. Although employment destinations in other outlying communities are more limited than in the more populous areas, there is substantial seasonal recreational employment in some areas along the Yuba River Valley.

3.1.7 Parks, Open Space and Recreation

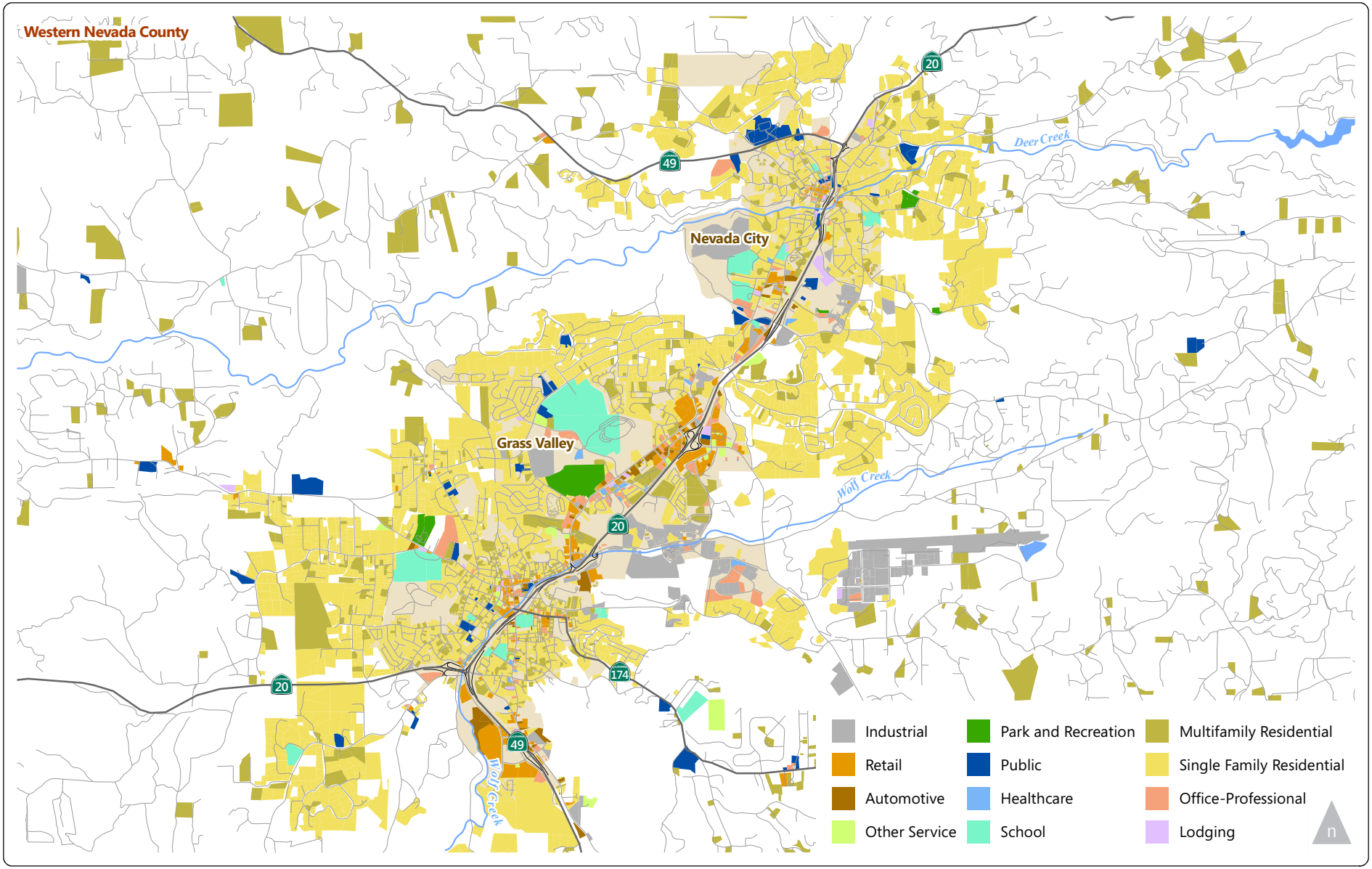
Recreational cycling and access to open space by and for bicycle use have been identified by County residents as high priorities. Many scenic road cycling routes throughout the County are destinations in and of themselves. Examples are Bitney Springs Road, Penn Valley Road and Rough and Ready Highway. In the eastern part of the County, Donner Pass Road west of Truckee is an example of a challenging preferred recreational cycling route. Specific trailhead access for mountain biking are found throughout the County, including Empire Mine State Park and in the state and federal lands in the Truckee area. In addition, local cyclists have identified numerous "caches" of informal, unofficial trails throughout the developed and developing areas of the County. The bikeway improvements included in **Chapter 5** identify routes that, in addition to their transportation function, allow visitors to safely and conveniently bicycle to destinations for mountain biking and hiking as well as enjoying safer recreational road cycling.

3.2 BARRIERS

Nevada County has some significant barriers for bicyclists to access the destinations mentioned above. Connectivity between the eastern and western parts of Nevada County is made challenging due to topography and a lack of bike facilities to serve bicyclists between these two regions. Barriers within the

western part of the county include the State Route 49/20 Freeway, Wolf Creek, Deer Creek, and the topography of the County. The freeway is especially challenging because it separates Grass Valley and Nevada City schools, shopping centers and multi-family housing to the east and west. There are 13 freeway crossings, each with varying roadway widths, shoulders, bike lanes. Deer Creek also poses a challenge for bicyclists riding from Zion Street to downtown Nevada City, with only one creek crossing to the west of the freeway on South Pine Street. Barriers in Truckee include Interstate 80, the Union Pacific Railroad and the Truckee River. Barriers are illustrated in **Figure 3-3**.

East-west barriers in the eastern side of the county include Interstate 80, Union Pacific Railroad's Trans Sierra Railroad, and mountainous topography.



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EXISTING LAND USE

FIGURE 3-1A

Existing Land Use Types

- Open Space
- Golf Course
- Industrial
- Mining
- Commercial/Office
- Public/Institutional
- Multi Family Residential (Includes Apartments, Duplexes, Mobile Homes, Condominiums
- Single Family Residential
- Gray's Crossing Specific Plan (Residential, Commerical, Golf Course, Open Space)
- Vacant/Undeveloped

Source: Town of Truckee 2025 General Plan EIR And 2015 Truckee Trails and Bikeways Master Plan

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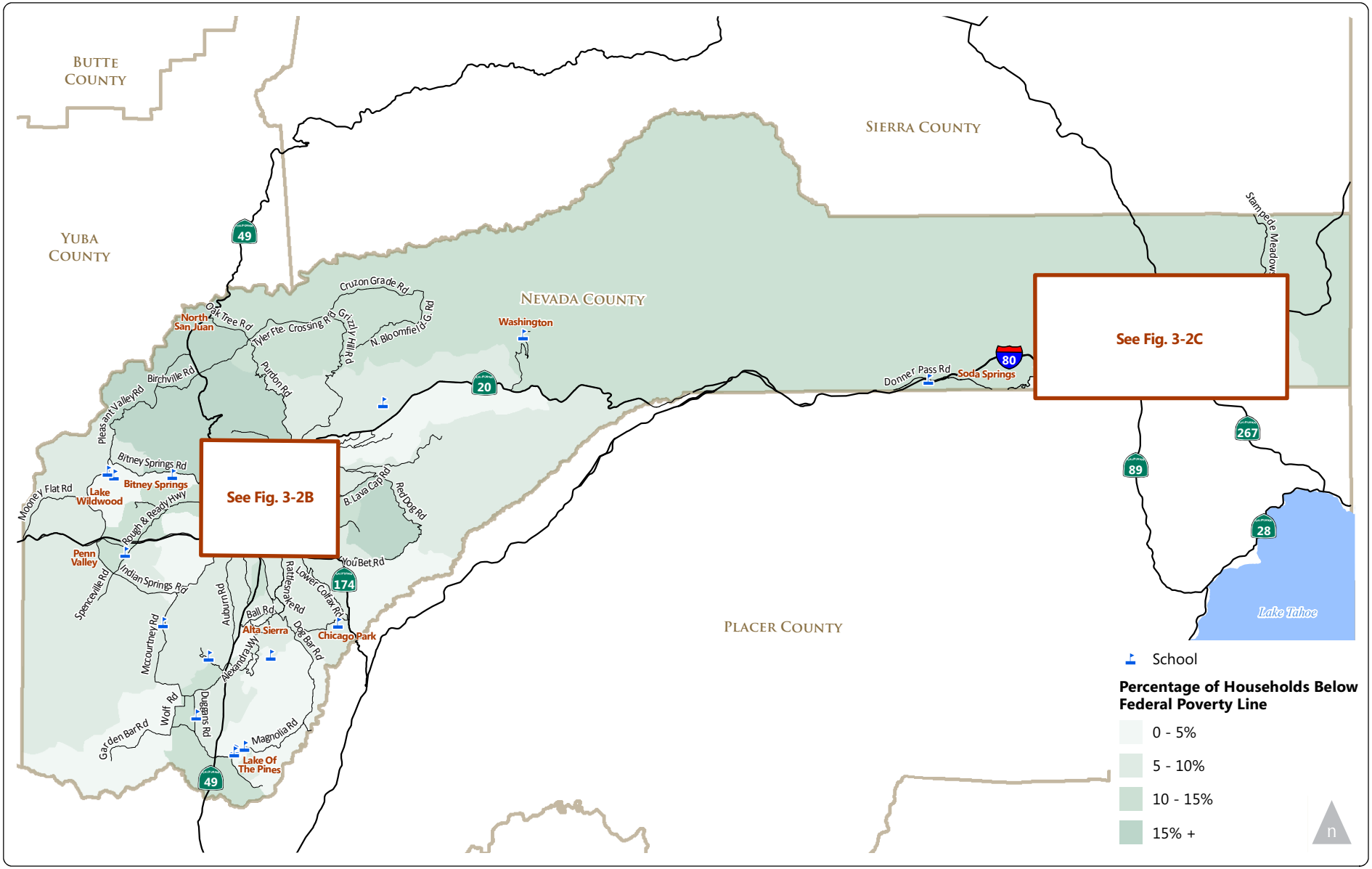
EXISTING LAND USE

FIGURE 3-1B



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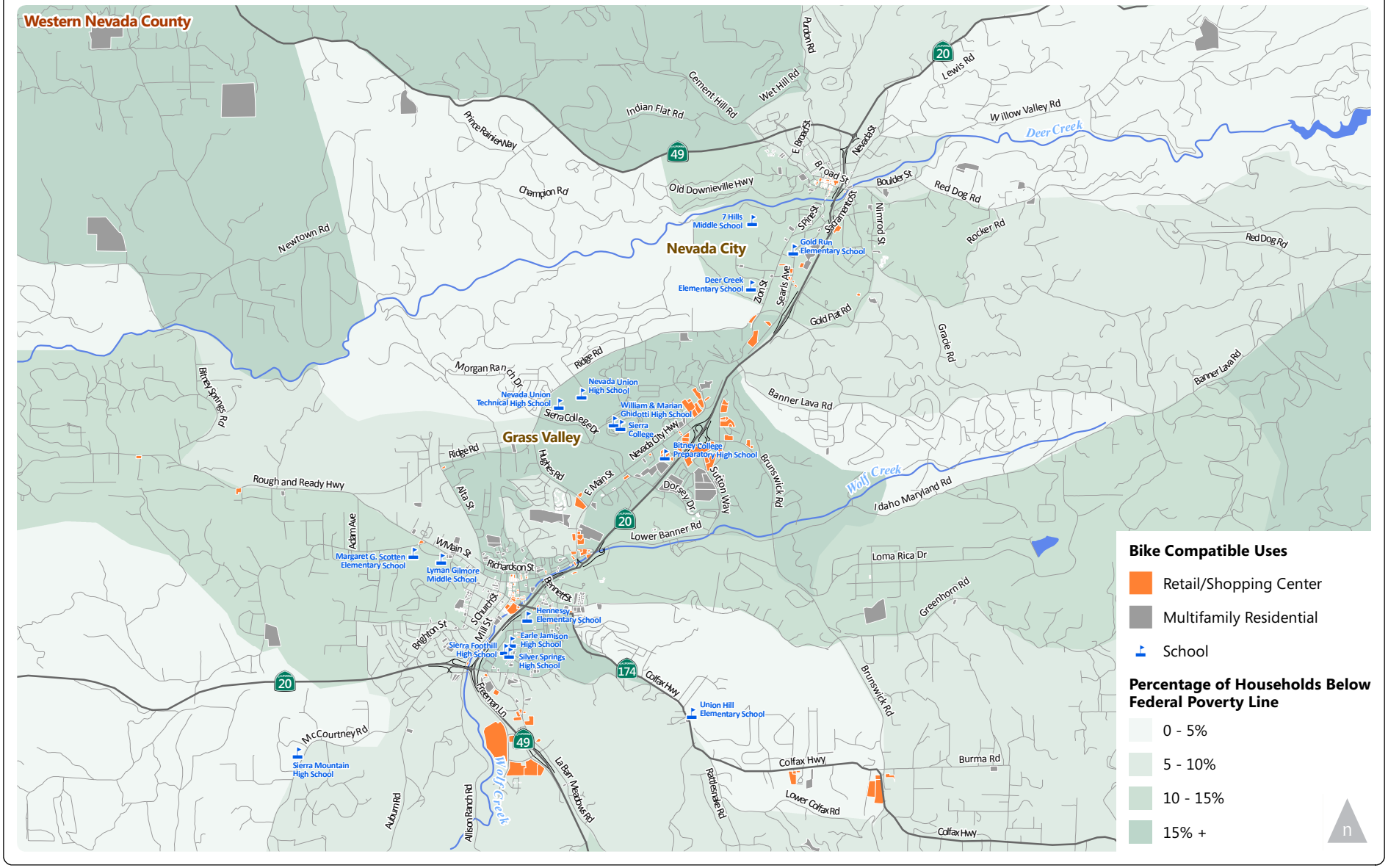
MAJOR BICYCLE TRIP GENERATORS AND DESTINATIONS

FIGURE 3-2A



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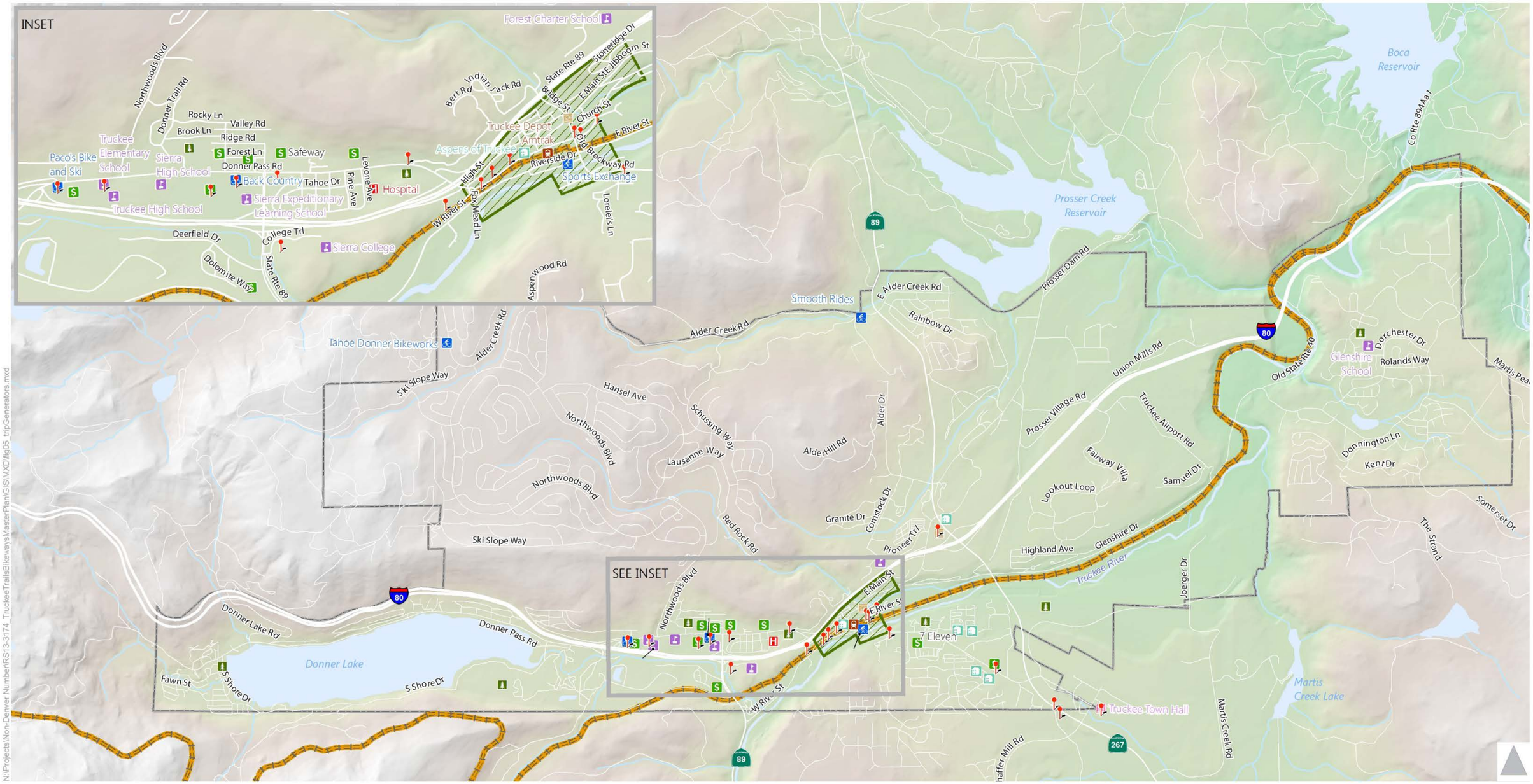
MAJOR BICYCLE TRIP GENERATORS AND DESTINATIONS

FIGURE 3-2B



Bike Shop
Government
Hospital
Multi-Family Housing
Recreation Center
School
Commercial Center/ Retail Store
Train Station
Park
Rail
Water
Existing Bike Parking
Downtown Truckee

Source: 2015 Truckee Trails ad Bikeways Master Plan

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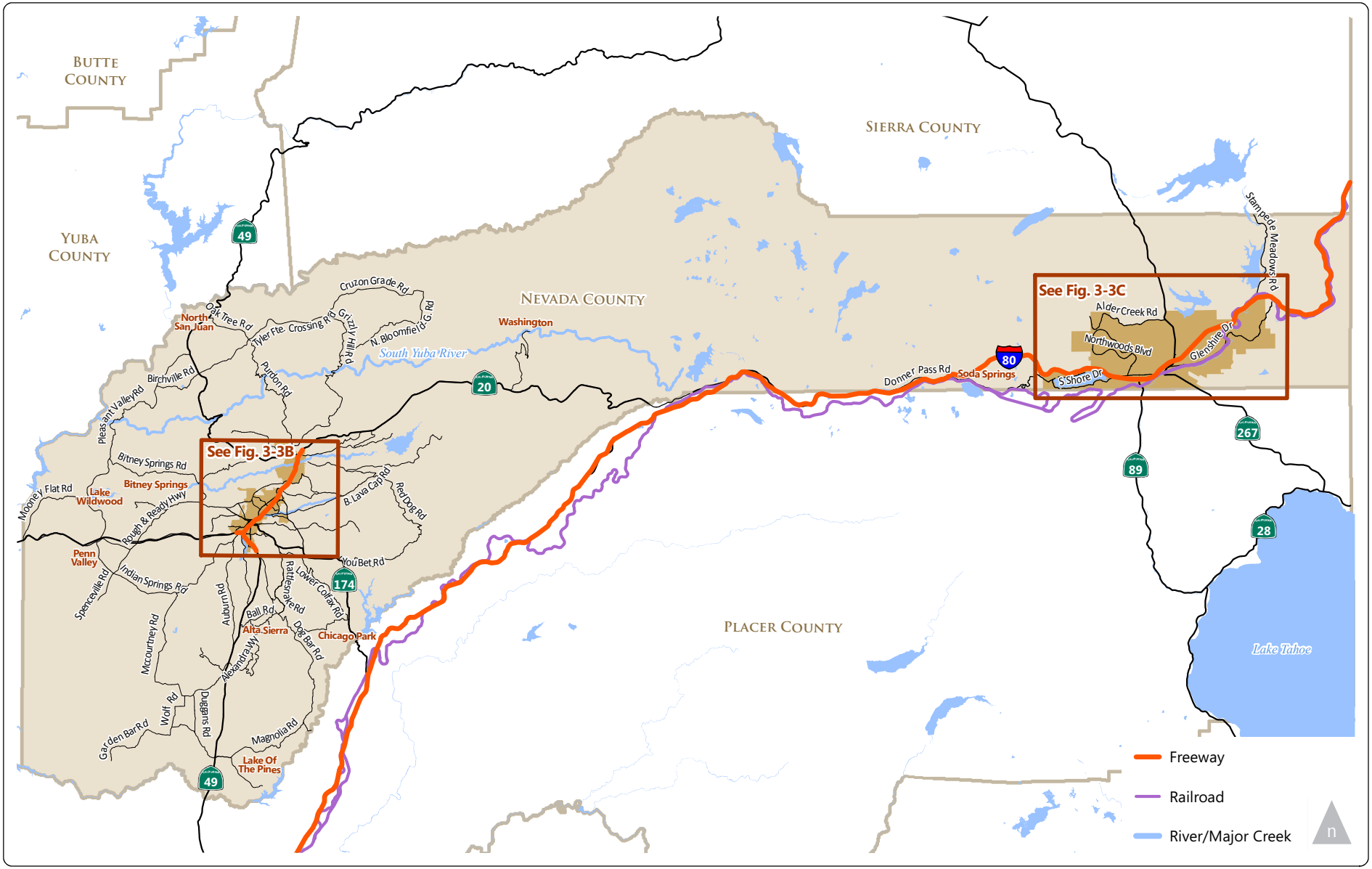
FEHR PEERS

MAJOR BICYCLE TRIP GENERATORS AND ATTRACTORS

FIGURE 3-2C



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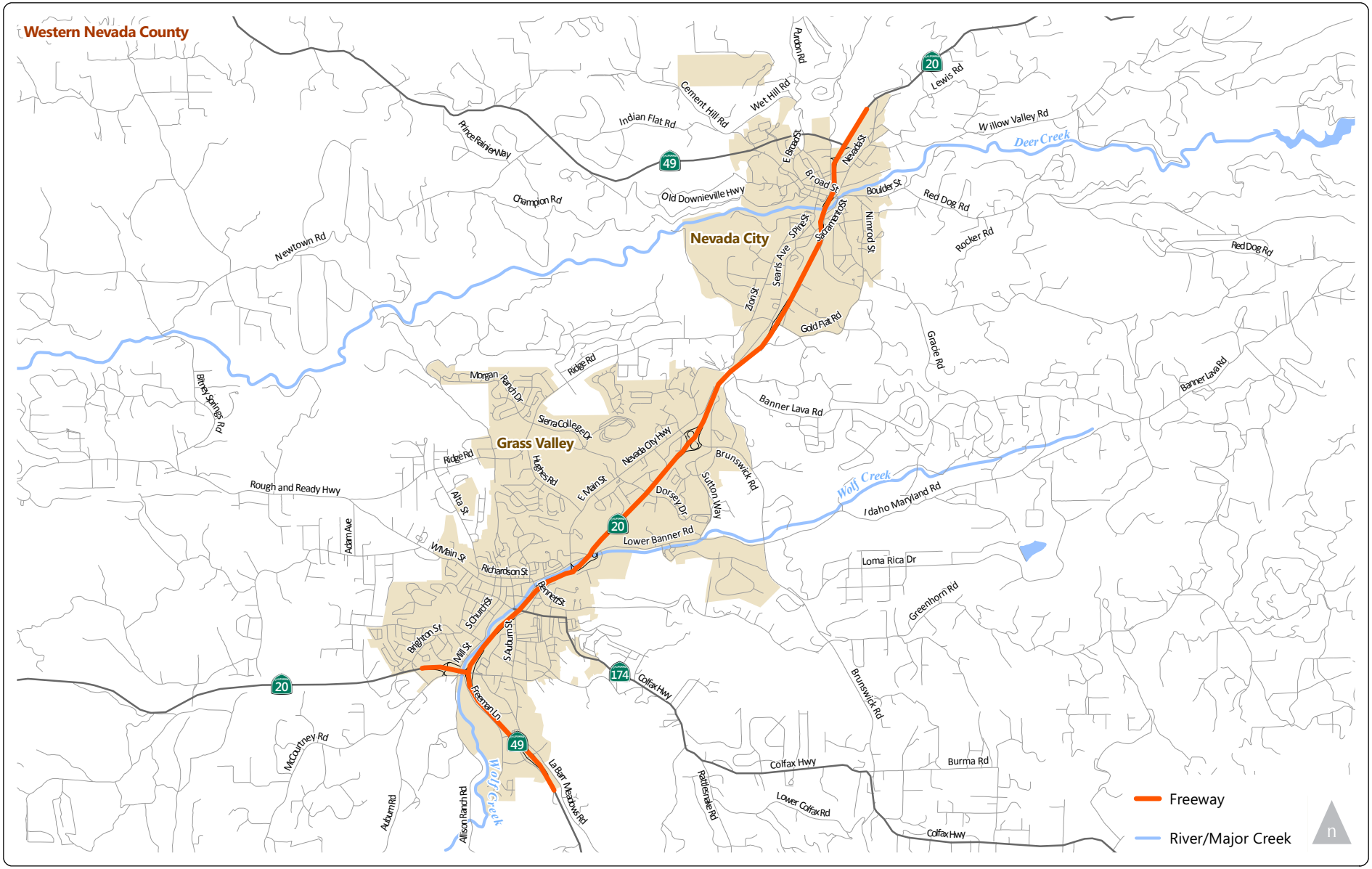
BARRIERS AND OPPORTUNITIES

FIGURE 3-3A



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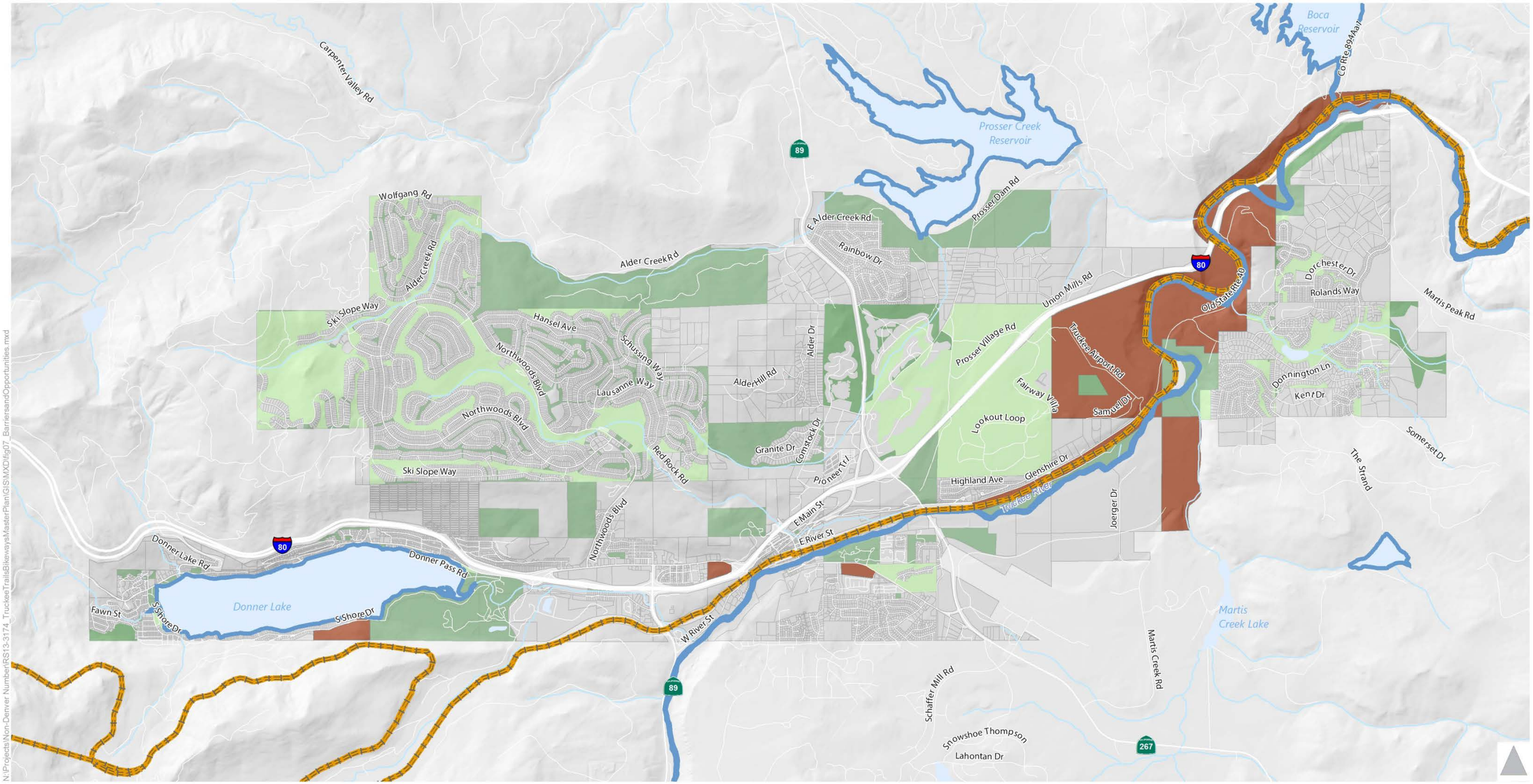
BARRIERS AND OPPORTUNITIES

FIGURE 3-3B



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Land Use Types

Recreation | Open Space | Resource Conservation | Rail | Water

Source: Town of Truckee 2025 General Plan EIR

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BARRIERS AND OPPORTUNITIES

FIGURE 3-3C

3.3 BICYCLE FACILITIES

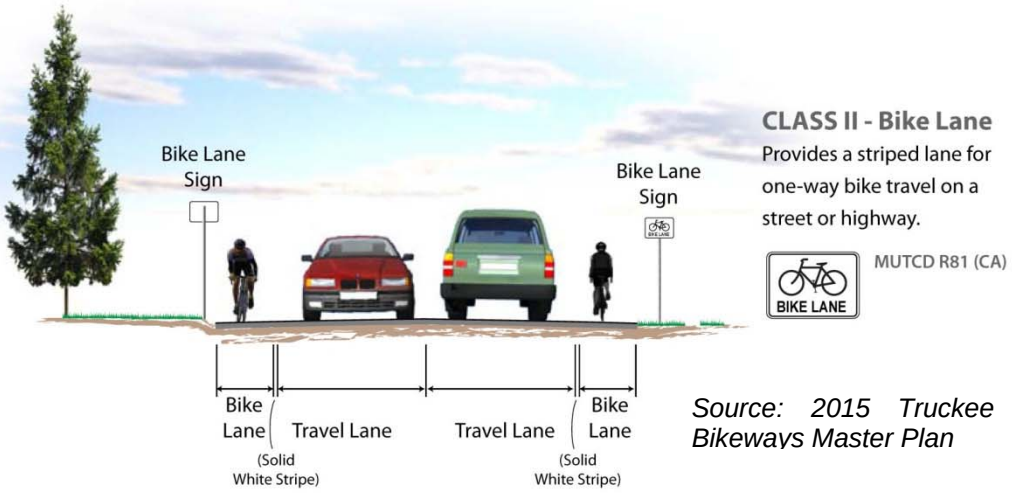
3.3.1 Bicycle Facility Types

The four types of bikeways described by Caltrans in Chapter 1000 of the Highway Design Manual are as follows.

Class I Bike Path or Trail – Provides for bicycle travel on a paved right-of-way completely separated from any street or highway, except for cases when the path must intersect a conflicting right-of-way. If pathway is to be used primarily for recreation and not with transportation funding, it may be constructed to reflect local conditions and needs.

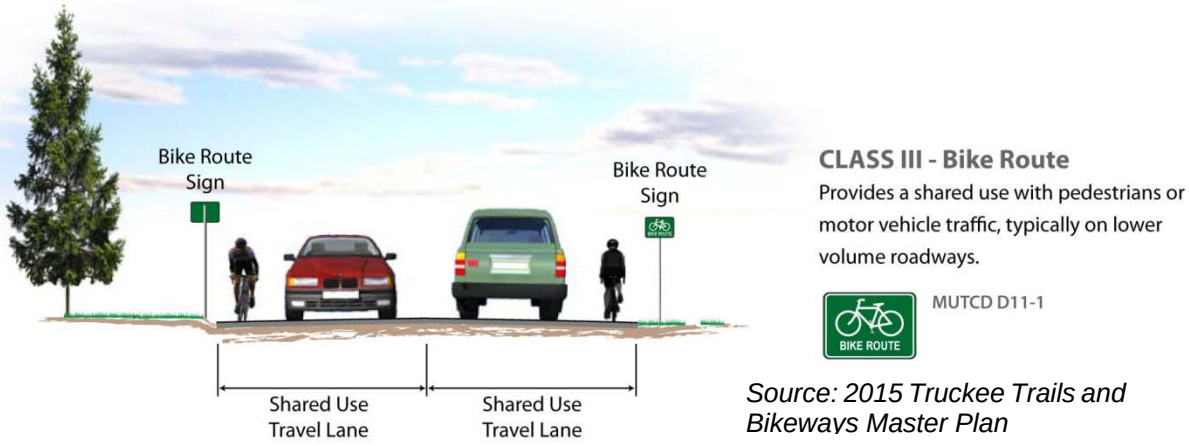
Source: 2015 Truckee Trails and Bikeways Master Plan

Class II Bike Lane – Provides a striped and stenciled lane for one way travel on a street or highway. Bike lane minimum widths are: four feet without gutter where parking is prohibited, five feet with gutter where parking is prohibited and five feet where parking is permitted.



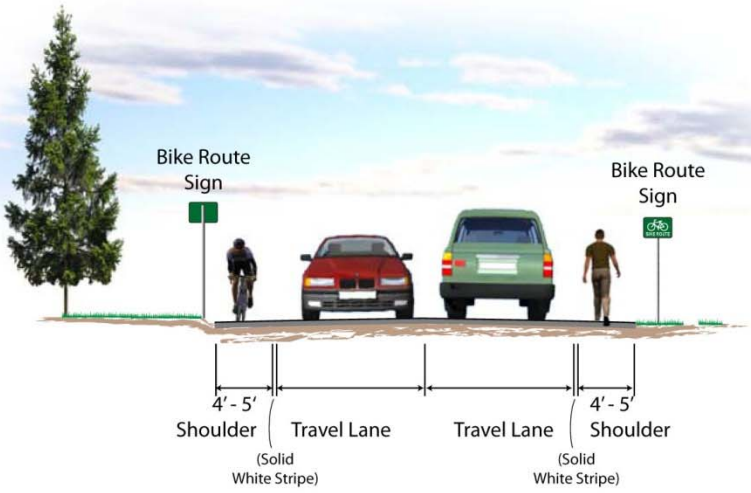
Source: 2015 Truckee Trails and Bikeways Master Plan

Class III Bike Route – Provides for shared use with pedestrian or motor vehicle traffic and is identified by items including signage and shared roadway bicycle markings, also known as "sharrows." These markings provide increased awareness of cyclists to motorists, and may guide cyclists to ride to the left of roadside hazards like parked vehicle "door zones."



Source: 2015 Truckee Trails and Bikeways Master Plan

Class III Bike Route with Multi-Use Shoulder – Provides a striped shoulder of variable width. This facility is used when jurisdictions wish to maximize road space for bicycles but do not have sufficient right-of-way to meet minimum requirements for Class II bike lanes. Class III Bike Routes with Multi-Use Shoulder are common in mountainous areas similar to rural Nevada County.



CLASS III - Bike Route

Provides a shared use with pedestrians or motor vehicle traffic, typically on lower volume roadways.

MUTCD D11-1

Source: 2015 Truckee Trails and Bikeways Master Plan

Class IV Cycle Tracks of Separated Bikeways – Provide a right-of-way designated exclusively for bicycle travel adjacent to a roadway and are protected from vehicular traffic. Types of separation include, but are not limited to, grade separation, flexible posts, inflexible physical barriers, or on-street parking.

3.3.2 Existing Bikeways in Nevada County

The existing western Nevada County bikeway system consists of approximately 9.4 miles of bikeways, including approximately 4.1 miles of Class I bike paths and 5.3 miles of Class II bike lanes (see **Table 3-1**). The existing eastern Nevada County bikeway system consists of approximately 78 miles of bikeways, including approximately 18 miles of paved trails (Class I bike paths) and 19 miles of Class II bike lanes (see **Table 3-2**).

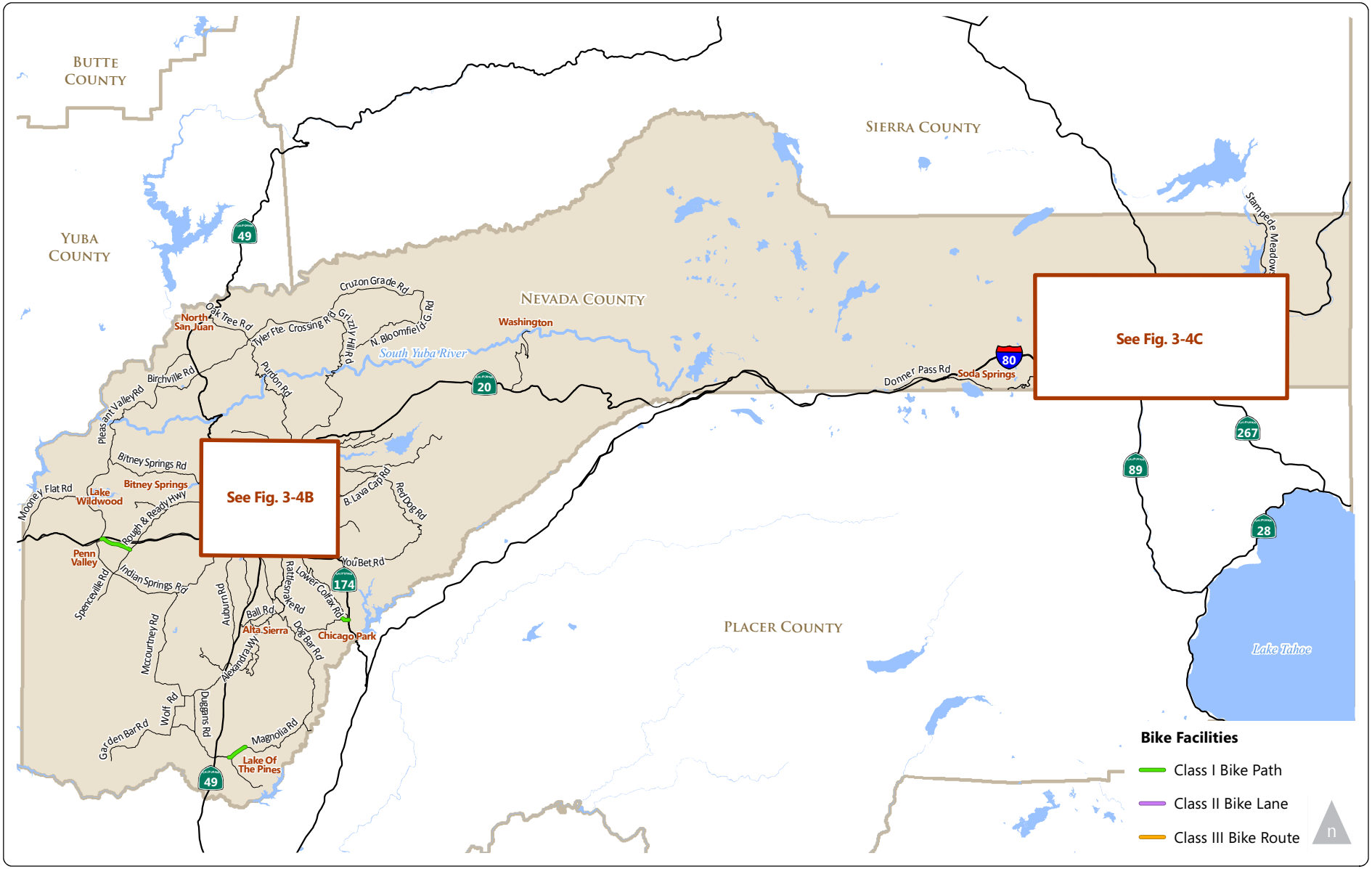
Class I bike paths must meet specific width, clearance, curve radii, gradient, and other requirements, while Class II bike lanes and Class III bike routes must meet specific striping, signing and/or other requirements. More details on Class I, II and III facility types are provided in the following section.

Many rural roads in Nevada County are narrow and winding and some have high seasonal traffic volumes, shoulders of varying width and some steep sections. Based on a basic inventory, approximately 16.9 miles of rural roads in Nevada County feature a multi-use shoulder. Although these multi-use shoulders do not feature Class III bike route signage, and are not considered Class III bike routes with multi-use shoulder, they improve conditions for bicycling.

See **Figure 3-4** for a map of the bikeway network in western Nevada County. **Table 3-1** and **Table 3-2** provide a summary of existing bikeways and **Table 3-3** details existing bikeway segments.

TABLE 3-1: WESTERN NEVADA COUNTY EXISTING BIKEWAYS SUMMARY	
Bikeway Type	**Miles**
Class I Bike Path	4.1
Class II Bike Lanes	5.3
Class III Bike Route with Multi-Use Shoulder	0
Class III Bike Route	0
Subtotal	9.4
Multi-Use Shoulder on Rural Roadways	16.9
Total	26.3
Source: Fehr & Peers, 2016	

TABLE 3-2: EASTERN NEVADA COUNTY EXISTING BIKEWAYS SUMMARY	
Bikeway Type	**Miles**
Paved Trail (Class I Bike Path)	18
Class II Bike Lanes	38 (one way), 19 (two way)
Class III Bike Route	28 (two way)
Dirt Trail	13
Total	78 (two way)
Source: Fehr & Peers, 2016	



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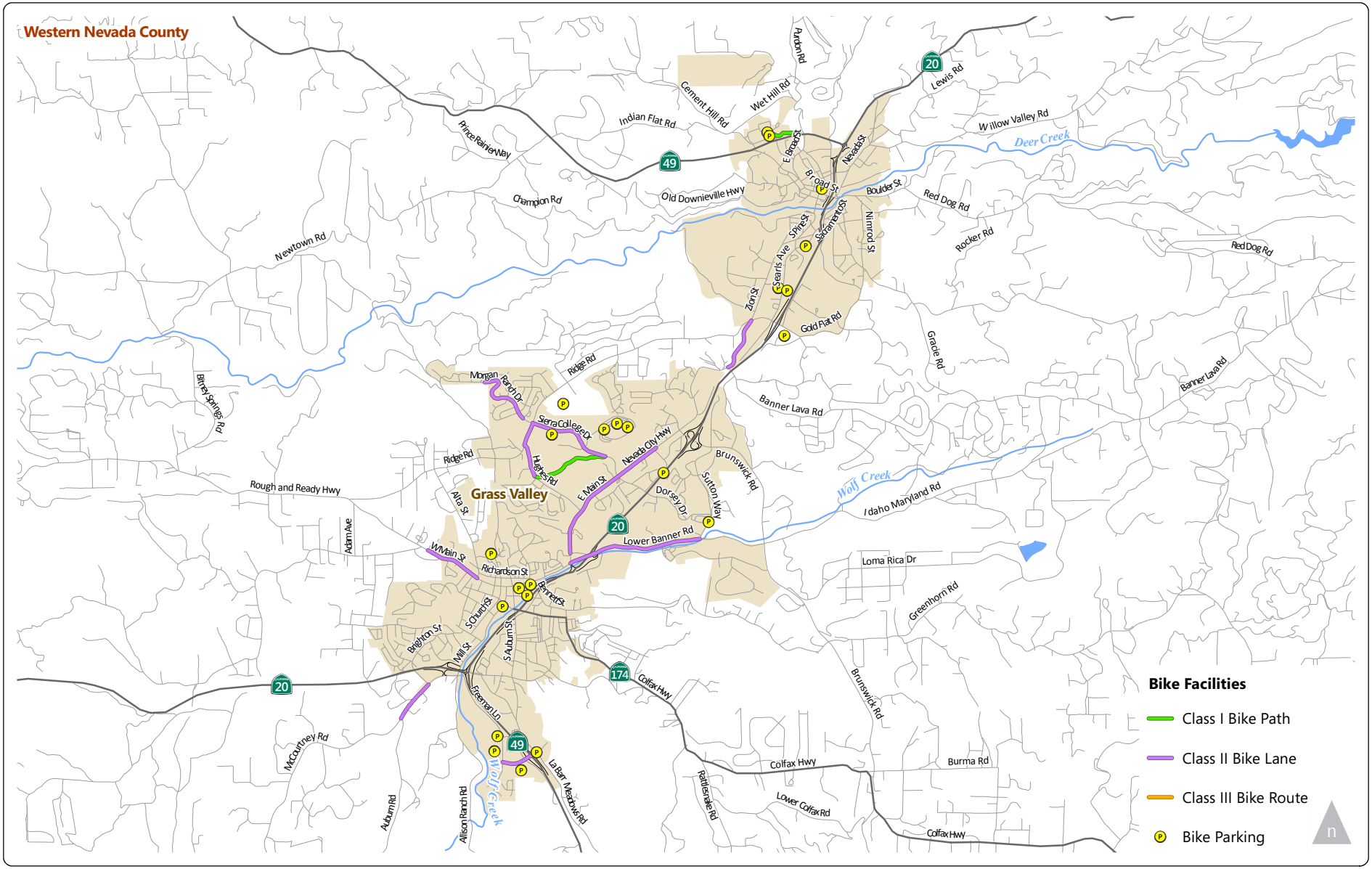
EXISTING BICYCLE FACILITIES

FIGURE 3-4A



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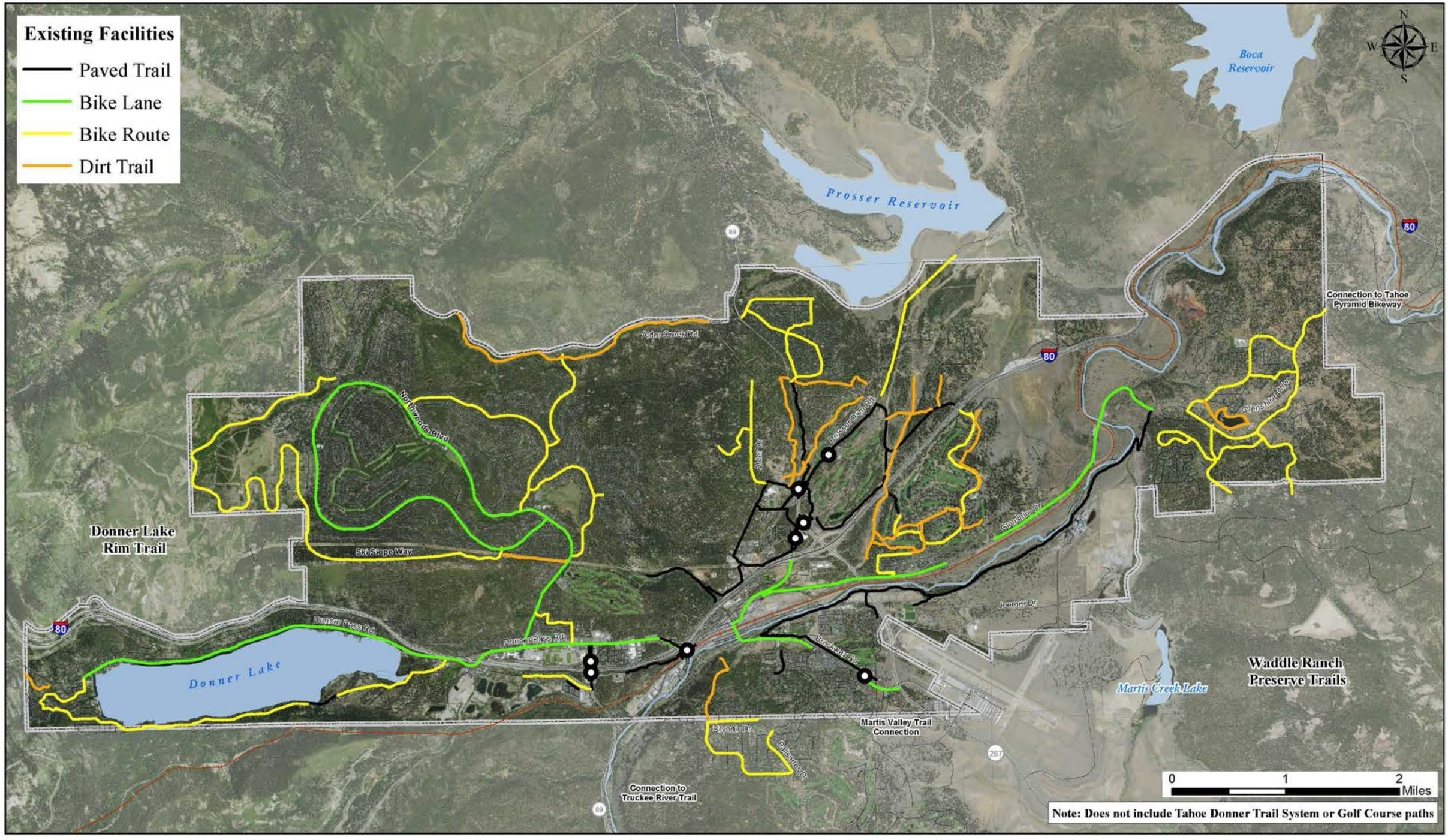
EXISTING BICYCLE FACILITIES

FIGURE 3-4B



FEHR PEERS

Source: 2015 Truckee Trails and Bikeways Master Plan

EXISTING BICYCLE FACILITIES

FIGURE 3-4C

TABLE 3-3: EXISTING NEVADA COUNTY BIKE PATHS AND BIKE LANES					
Segment Name	**From**	**To**	**Bikeway Class**	**Area**	**Miles**
Litton Pathway	Hughes Road	Sierra College Drive	I	Grass Valley	0.6
Magnolia School Pathway	Lakeshore North	Kingston Lane	I	Lake of the Pines	0.8
Mount Olive Pathway	Lower Colfax Road	Mountain Lion Road	I	Nevada County	0.8
Penn Valley Pathway	Spenceville Road	Pleasant Valley Road	I	Penn Valley	1.6
Rood Center Pathway	North Bloomfield Road	Helling Way	I	Nevada City	0.3
SR 89 Path	Deerfield Drive	Donner Pass Road	I	Truckee	0.8
Pioneer Trail	SR 267	Trout Creek	I	Truckee	2.7
Brockway Trail	Lincoln Highway	Martis Drive	I	Truckee	1.0
Truckee Legacy Trail	Glenshire Drive	Brockway Road	I	Truckee	5.4
Grays Crossing Trails	Multiple Locations		I	Truckee	3.9
Trout Creek Trail	Pioneer Trail	Western Terminus	I	Truckee	0.7
Palisades Drive Trail	Torrey Pine Road	Brockway Road	I	Truckee	0.3
College Trail-McIver Crossing connector	College Trail	Donner Pass Road west of I-80 east interchange	I	Truckee	0.8
Deerfield Drive Trail	Save Mart	Dolomite Way	I	Truckee	0.1
South Shore Drive connector	South Shore Drive	Donner Memorial State Park	I	Truckee	0.1
Other miscellaneous Class I bike paths			I	Truckee	2.2
Total Existing Class I Bike Path					22.1
E Main St./Nevada City Hwy.	Scandling Avenue	Manor Drive	II	Grass Valley	1.1
Idaho Maryland Road	E Main Street	Sutton Way	II	Grass Valley	0.8

Hughes Road	Ridge Road	Lidster Avenue	II	Grass Valley	0.3
Sierra College Drive	Ridge Road	Litton Pathway	II	Grass Valley	0.7
Morgan Ranch Drive	Success Mine Loop	Vistamont Drive	II	Grass Valley	0.6
McCourtney Road	Brighton Street	Auburn Road	II	Grass Valley	0.3
Rough & Ready Hwy. / W Main Street	Grass Valley city limits	Alta Street	II	Grass Valley	0.5
Ridge Road	Hughes Road	Sierra College Drive	II	Grass Valley	0.3
McKnight Way	Freeman Lane	La Barr Meadows Road	II	Grass Valley	0.3
Nevada City Highway	Banner Lava Cap Road	Ridge Road	II	Nevada City	0.4
Donner Pass Road	South Shore Drive	East River Street	II	Truckee	5.6
Donner Pass Road	Brockway Road	Stevens Lane	II	Truckee	0.8
Northwoods Boulevard	Donner Pass Road	Donner Pass Road	II	Truckee	7.4
Brockway Road	SR 267	Donner Pass Road	II	Truckee	1.6
Glenshire Drive	Donner Pass Road	Light Hill Place	II	Truckee	4.3
Total Existing Class II Bike Lane					25
Ski Slope Way	Alder Creek Road	Northwoods Boulevard	III	Truckee	6.5
Hansel Avenue	Northwoods Boulevard	Northwoods Boulevard	III	Truckee	2.0
Lausanne Way	Hansel Avenue	Northwoods Boulevard	III	Truckee	1.4
Old Highway Drive/Washoe Road/Fawn Street/Pine Street	South Shore Drive	South Shore Drive	III	Truckee	1.1
South Shore Drive	Pine Street	Donner Pass Road	III	Truckee	3.3
Schussing Way	Alder Creek Road	Hansel Avenue	III	Truckee	1.1
Alder Drive	Cornstock Drive	Actinolie Way	III	Truckee	1.0

Deerfield Drive	SR 89	Cold Stream Road	III	Truckee	0.4
Meadow Way/ Rocky Lane/ Bull Pine Trail	Lincoln Highway	Northwoods Blvd	III	Truckee	0.6
Beacon Road	Alder Drive	End of Street	III	Truckee	0.5
Rainbow Drive	SR 89	E Alder Creek Road	III	Truckee	1.3
E Alder Creek Road	SR 89	Poppy Lane	III	Truckee	0.7
Poppy Lane	E Alder Creek Road	Heather Road	III	Truckee	0.2
Pine Forest Road	Rainbow Drive	Rainbow Drive	III	Truckee	0.4
Heather Road	Poppy Lane	Rainbow Drive	III	Truckee	0.2
Prosser Dam Road	Ghirard Road	North Town limits	III	Truckee	1.6
Thelin Drive	Silverfir Drive	Palisades Drive	III	Truckee	1.1
Palisades Drive	Thelin Drive	Ponderosa Drive	III	Truckee	0.5
Silverfir Drive	Ponderosa Drive	Thelin Drive	III	Truckee	0.5
Fairway Drive/Lookout Loop/Caleb Drive	Caleb Circle	Highway 80	III	Truckee	2.3
Olympic Boulevard	Lookout Loop	Glenshire Drive	III	Truckee	0.8
Glenshire Drive	Berkshire Circle	Eastern city limit	III	Truckee	2.1
Donnington Lane	Somerset Drive	Somerset Drive	III	Truckee	1.5
Somerset Drive	Glenshire Drive	Glenshire Drive	III	Truckee	0.9
The Strand	Glenshrie Drive	Glenshire Drive	III	Truckee	0.7
Woodbridge Lane	Glenshire Drive	Dorchester Drive	III	Truckee	0.4
Donner Pass Road	Conifer Drive	Castle Creek Drive	III	Truckee	2.8
Dorchester Drive	Glenshire Drive	Glenshire Drive	III	Truckee	1.4
Total Existing Class III Bike Route					31

Source: Fehr & Peers, 2016

3.3.3 Past Expenditures on Bicycle Facilities

Based on the inventory of the existing bikeway network, an estimate of past expenditures is possible. **Table 3-4** provides a summary of the past Countywide expenditures on bicycle facilities, in 2013 dollars. **Chapter 6** provides an explanation of 2013 per mile costs for the various bikeway classifications.

TABLE 3-4: WESTERN NEVADA COUNTY PAST BIKEWAY EXPENDITURES

Bikeway Classification	Mileage	2013 Per Mile Cost	Expenditure
Class I Bike Path	4.1	$528,000	$2.2 million
Class II Bike Lanes	5.3	$739,200	$3.9 million
Class III Bike Route with Multi-Use Shoulder	0	$580,800	$0
Class III Bike Route	0	$1,580	$0
Subtotal	9.4	N/A	$6.1 million
Multi-Use Shoulder on Rural Roadways	16.9	$580,800	$9.8 million
Total	26.3	N/A	$15.9 million

Source: Fehr & Peers, 2016

As shown in **Table 3-4** the past countywide expenditures for the western part of the county on Class I bike paths and Class II bike lanes total approximately $6.1 million. Including the multi-use shoulders on roads, the total past countywide expenditures total $15.9 million. **Table 3-5** shows past expenditures in Truckee, which total over $17.1 million.

TABLE 3-5: EASTERN NEVADA COUNTY PAST BIKEWAY EXPENDITURES

Project	Limits	Status	Cost
Glenshire Drive bike lanes (Phase 1)	Highland Avenue to Berkshire Circle	Constructed	$2.9 million
Glenshire Drive bike lanes (Phase 2)	Donner Pass Road to Highland Avenue	Funded	$3.4 million
Trout Creek Trail	Downtown Truckee to Northwoods Boulevard	Funded	$4.1 million

TABLE 3-5: EASTERN NEVADA COUNTY PAST BIKEWAY EXPENDITURES			
Project	**Limits**	**Status**	**Cost**
Truckee River Legacy Trail (Phase 3A)	Riverview Sports Park to Tahoe-Truckee Sanitation Agency (TTSA) Water Reclamation Plant	Constructed	$1.0 million
Truckee River Legacy Trail (Phase 3B)	TTSA Water Reclamation Plant to Glenshire	Constructed	$4.3 million
Brockway Road Trail (Phase 2)	Martis Valley Road to Truckee River Regional Park	Constructed	$1.1 million
Stockrest Springs Trail	Donner Pass Road to US Forest Service Ranger Station	Constructed	$63,000
Sierra College shared use path	Donner Pass Road/McIver Crossing roundabout towards Sierra College	Constructed	$286,000
Total			$17,149,000
Source: Fehr & Peers, 2016			

3.3.4 Signing

Implementing a well-planned, attractive and effective system of network signing enhances bikeway facilities by promoting their presence to both potential and existing users. Signing may help increase the bicycle mode split by directing cyclists to on-street and off-street bikeways. In particular, multi-use paths that meet Caltrans standards require additional signs and stencils to help manage different user groups such as bicyclists, persons with disability, and pedestrians.

Currently a few standard bike route signs exist in Nevada County, mostly at local street connections and decision points. No continuous routes are identified by signage or pavement markings.

3.3.5 Maintenance

Maintenance of bikeway facilities is a critical and often overlooked element of bikeway planning. Bikeway maintenance is divided into two categories, routine maintenance and major maintenance. Major maintenance consists of projects with significant capital funding needs, such as pathway reconstruction, shoulder maintenance or repaving of a bicycle lane as part of roadway repaving. Routine maintenance consists of activities including bike lane sweeping, repainting lines, and replacing signage and stencils. In Nevada County, such routine activities are conducted on an ongoing basis concurrently with regular roadway maintenance. In eastern Nevada County, the Town of Truckee has particular maintenance challenges posed by heavier snowfall. Combined with snow plows and sand, winter conditions can obscure

and damage bicycle lane striping and stenciling. The Town of Truckee also does not clear snow from its off-street bicycle facilities except for certain Class I bike paths.

3.3.6 Bicycle Support Facilities

Support facilities help improve the convenience of cycling, and may increase bicycle mode split between certain origins and destinations. These facilities include bicycle parking, shower and changing space, secure storage for bicycle gear, Class I bike path amenities, and directional signage.

Bicycle Parking

Bicycle parking ranges from temporary racks to 24-hour personal access lockers, depending on the needs of cyclists using the facility. Appropriate parking facilities are typically identified according to the following factors:

- **Type of trip and duration of stay:** determines how long the bicycle will be left unattended.
- **Security of area:** determined by cyclist's perception.
- **Equipment to be stored:** this factor includes the value of the bicycle(s) to be left unattended, and any additional equipment that the cyclist might want to keep secure, including helmets, cycling attire and panniers.

Bicycle parking facilities are classified as follows:

Class I Bicycle Parking is typically provided at major employment sites, schools, and transportation terminals for long-term parking. Class I bicycle parking includes bike lockers, bike cages, bike rooms, and bike corrals.

Because access is limited to users, these facilities provide higher security, allowing bicyclists to feel comfortable leaving bicycles for long periods of time. Building owners/managers often regulate long-term parking and issue keys to bike cages or bike rooms. Alternatively, electronic bicycle lockers offer a keyless option allowing a user to pay for secure parking time.

Class II Bicycle Parking is typically provided by bike racks, and usually accommodates stays up to two hours. Racks are relatively low-cost devices that typically hold two to eight bicycles, support the bicycle at two points of contact, allow bicyclists to securely lock the frame and at least one wheel, are secured to the ground, and are located in high visibility areas with effective "passive surveillance".

Shower and Locker Facilities

People are more likely to commute to work on bicycles if they have convenient access to showers and lockers; these facilities assist in encouraging regular commuting via bicycle. Shower and locker facilities are typically implemented as a component of new commercial building construction, and managed by the building owner/manager; they are rarely publicly owned and operated.

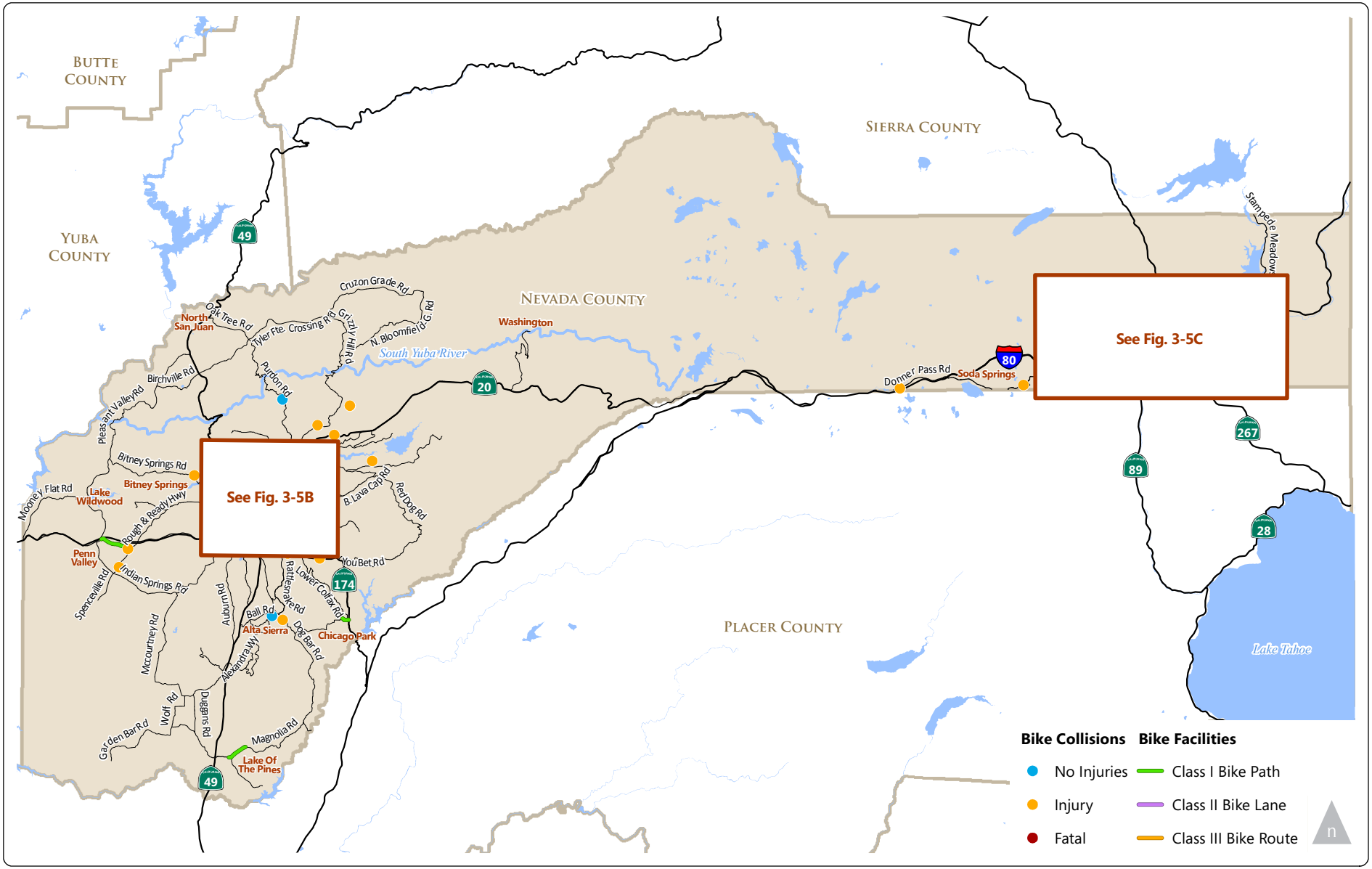
Nevada County Existing Bicycle Parking and End-of-Trip Facilities

Field reviews conducted in 2007 and 2012 revealed approximately 23 locations with existing bicycle parking throughout the western part of the county, also shown in **Figure 3-4**. These locations are primarily at government buildings and public facilities, Sierra College and Nevada Union High School campuses, and a number of shopping centers. Nevada City has one on-street bicycle parking facility and parklet in its downtown core and Grass Valley has bike lockers at its City Hall. Despite these facilities, in many cases, bicyclists visiting stores, restaurants, places of employment and community facilities must temporarily lock their bicycles to parking signs, benches and rails. Nevada County Zoning Regulations require that most parking lots with 20 or more vehicle spaces provide one bike rack per 20 spaces for new development (Section L-II 4.2.9.C.6 of Parking Standards). Bicycle racks must be designed to provide a minimum of four bicycle spaces.

No official shower or locker facilities for bicycle commuters are known to exist in Nevada County. It is possible that some employers provide these facilities or that bicycle commuters use facilities in health clubs or other establishments. The *Nevada County Bicycle Master Plan Update (1996)* stated a policy that encouraged employers to provide such facilities for commute cyclists.

3.4 BICYCLE SAFETY

The Bicycle Master Plan development process included an evaluation of bicycle safety. In particular, existing bicycle collision data was reviewed to identify bicycle collision locations and the nature and type of collisions that have occurred within the County. Collision data involving bicycles was collected from the California Highway Patrol Statewide Integrated Traffic Records System (SWITRS) for August 2006 to July 2011. **Figure 3-5** shows the location and severity of these collisions.



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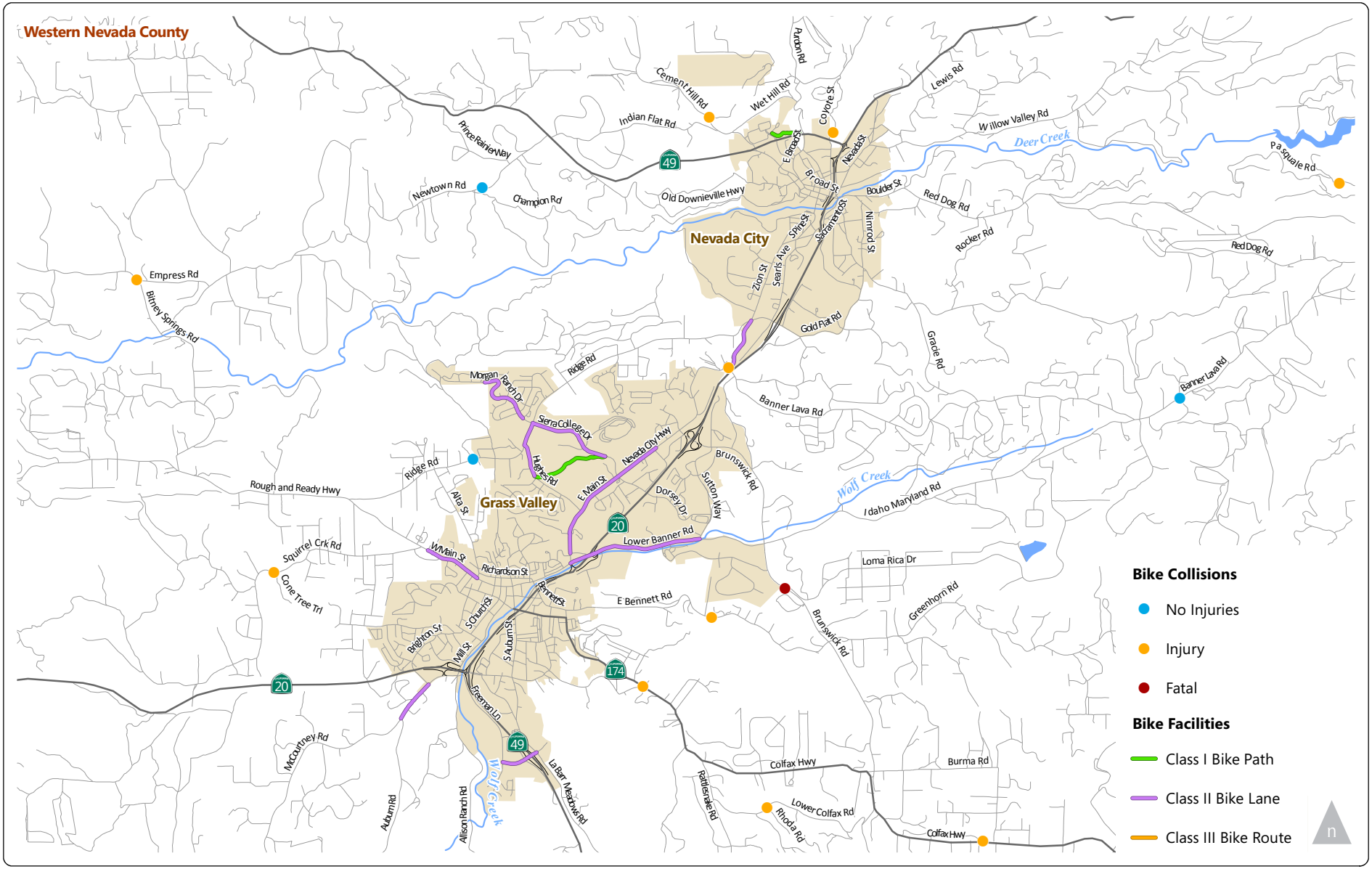
5-YEAR BICYCLE COLLISIONS WITH AUTOS

FIGURE 3-5A



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5-YEAR BICYCLE COLLISIONS WITH AUTOS

FIGURE 3-5B

Accident Severity

	No Injuries	Injuries	Fatalities
Bicycle	○	●	●
Pedestrian	◇	◆	◆

Source: Statewide Integrated Traffic Records System (SWITRS), 2008-2012. Retrieved January 29, 2014.

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5-YEAR BICYCLE COLLISIONS WITH AUTOS

FIGURE 3-5C

3.5 EDUCATION PROGRAMS, SUPPORT GROUPS AND EVENTS

Education is an important element in encouraging increased bicycling and safety. Improving bicycle facilities and support facilities in the County cannot fully improve conditions for bicycling without proper education of both youth and adult cyclists and motorists. Education of all roadway user groups can address specific collision types common for bicyclists. Safety and education programs may include Safe Routes to Schools in-class instruction, adult "Street Skills" classes that teach safe bicycle operation and maintenance, and "Share the Road" outreach that targets both motorists and cyclists. More details about proposed programs can be found in **Chapter 5**.

As reported by members of the Project Advisory Committee, programs include courses taught by law enforcement agencies, and events and programs hosted by support groups, discussed in section 3.5.1 below.

3.5.1 Support Groups

Nevada County is home to at least nine local bike shops and bike-related businesses, along with the following bicycle groups:

- The Bicyclists of Nevada County (BONC) is the local chapter of the International Mountain Biking Association. The group's primary mission is to improve opportunities for recreational trail bicycling by promoting responsible mountain bicycling, preservation and improvement of riding opportunities, cooperation with other interest groups and the education of cyclists and non-cyclists. They regularly hold group rides and trail building and improvement events.
- The Sierra Express Bicycle Club is a volunteer organization that promotes all forms of cycling. The club was established in the early 1970's and today promotes itself as a club for all road riders. The Sierra Express Bicycle Club promotes cycling at every level, with regularly scheduled rides and their annual century ride.
- Youth Bicyclists of Nevada County (YBONC) is a non-profit foundation that provides local schools with organizational, financial and trail construction assistance. The foundation works with school bike clubs and mountain bike leagues to promote youth cycling in the county.
- The Nevada Union Miners Mountain Bike Team is an organization composed of existing Nevada Union High School Students. The team competes against other schools as part of the Nor Cal High School Cycling League and hosts group rides and training events.
- The Truckee Trails Foundation is an advocacy, trail planning and trail maintenance non-profit. Their advocacy and planning work focuses on both on-street bikeways and off-street bikeways. Additionally, the Foundation has a full-time seasonal trail maintenance crew and organizes volunteer trail crew days each summer.
- The Truckee Bicycle Team is a Truckee-based, recreational road bicycling team.
- The Truckee High School Mountain Bike Club is a member of the Nevada Interscholastic Cycling League.
- California 89 has three separate clubs: a bike club, tri club (triathlon) and run club. The bike club's focus is on recreational road bicycling.

3.5.2 Events

Events promote awareness of bicycling for transportation and recreation. Most bicycling events in Nevada County are organized by the above advocacy groups and include group rides, volunteer days, commuting events, and the annual Nevada City Bicycle Classic, a popular bike race in downtown Nevada City that attracts amateur and professional cyclists from around the country.

3.5.3 Programs

The Bicycle Recycle Project at Seven Hills School in Nevada City trains students in bicycle building, repair, and maintenance. Participating students complete a basic curriculum then can rehabilitate disabled bicycles donated by the community. Once repaired, students donate the rehabilitated bicycles to variety of organizations and individuals with need, including community agencies, homeless shelters such as Loaves and Fishes in Sacramento, and private families. The Project teaches mechanical and technical skills, promotes social awareness, and builds leadership abilities. Since its inception, the Project has trained over 1,500 students and built over 2,000 bicycles.

3.6 MULTI-MODAL CONNECTIONS

Improving non-motorized access to transit is an important part of making bicycling a part of daily life in Nevada County. Linking bicycles with public transit overcomes barriers such as trip distance, personal safety and security concerns, and riding at night, in poor weather, or up hills. This link also enables bicycles to reach more distant areas for both recreation and transportation.

Bicycling to transit instead of driving benefits communities by reducing air pollution, demand for park-and-ride lots, energy consumption and traffic congestion with relatively low cost investments.

There are four main components of bicycle-transit integration:

- Allowing bicycles on transit;
- Offering bicycle parking at transit locations (including lockers and/or racks);
- Improving bikeways to transit within a three mile “catchment zone” radius;
- Encouraging usage of bicycle and transit programs.

About 0.5 percent of workers who live in Nevada County commute to work via public transit.[4] This percentage increases to about 1.9 percent and 0.9 percent in Grass Valley and Nevada City, respectively.[5] The Gold Country Stage provides the County's primary fixed route transit and is operated by the Nevada County Department of Public Works. Existing Gold Country Stage public transit service in western Nevada County provides fixed-route service to most County communities including Grass Valley, Nevada City, Alta Sierra, Chicago Park, Lake of the Pines, Bitney Springs, Lake Wildwood, San Juan Ridge and Penn Valley, and Auburn and Colfax in Placer County.

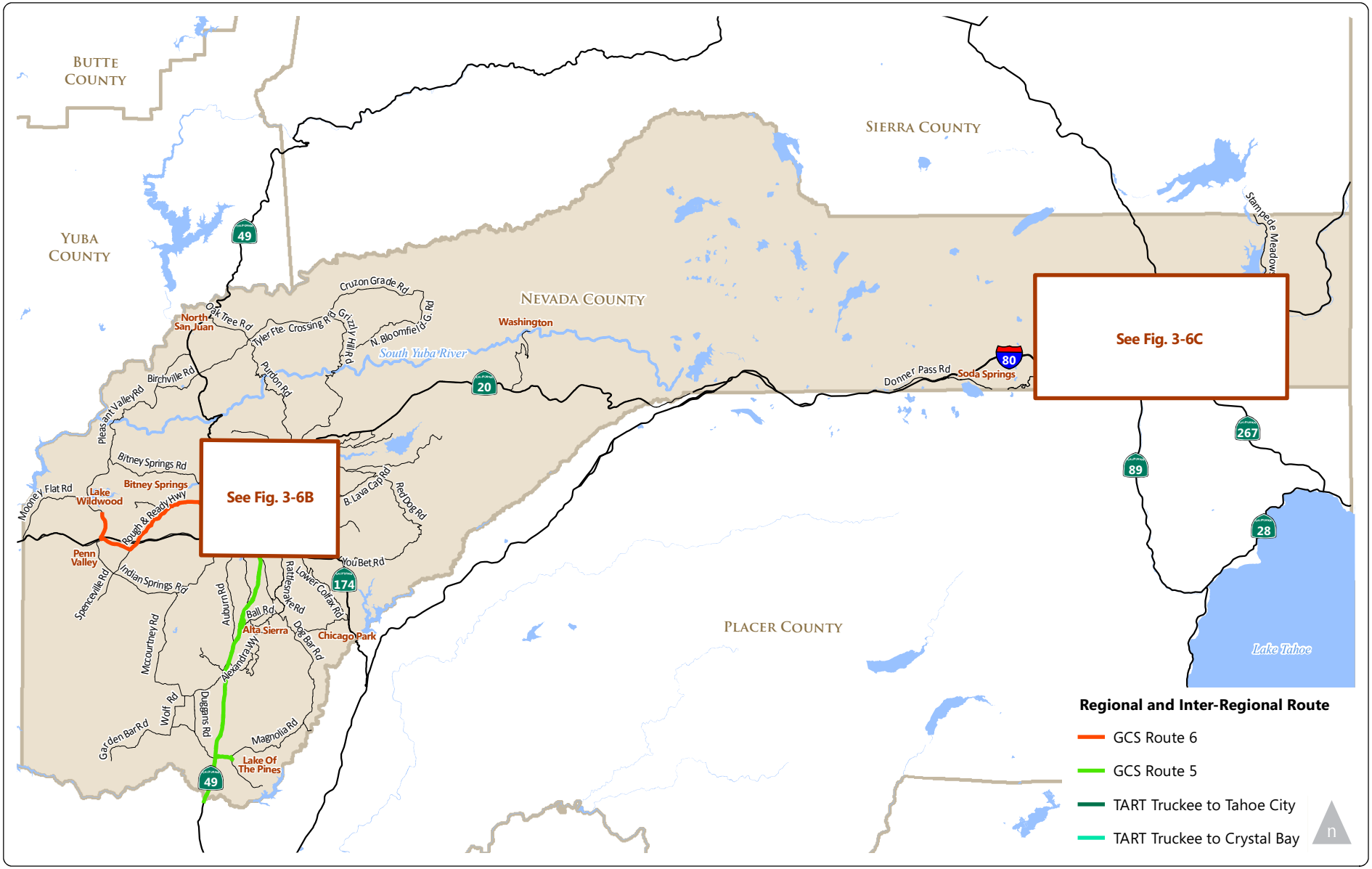
Currently, the entire fleet of Gold Country Stage vehicles is equipped with bike racks that can carry up to either two or three bicycles (depending on the bus). Racks are usable at any time at the same fare rate as a regular passenger. Overflow bicycles are not allowed inside transit vehicles. Typically, bicycle parking facilities do not exist at bus stops along the transit routes unless those facilities swerve nearby land use such as a commercial, employment, or educational center. Multi-modal transfer points may include park-and-ride lots or busy stops at locations such as the Sierra College campus or major shopping centers, as well as the Tinloy Transit Center in downtown Grass Valley. Nevada County has one Caltrans-operated park-and-ride lot in Penn Valley at the intersection of Penn Valley Drive and State Route 20. The location does not provide bike lockers.

Truckee Area Regional Transit and the Tahoe Trolley provide fixed route service between the Town of Truckee and nearby Lake Tahoe, ski resorts and recreation areas. Truckee Trolley provides limited fixed transit service on an east-west route through town and to points east and west, as well as a dial-a-ride on-demand pickup service. TART buses can carry up to two bicycles at a time on a front-mounted bicycle rack.

Figure 3-6 includes Gold Country Stage routes as well as bus stop multi-modal transfer locations. Potential improvements to Nevada County's multi-modal services are described in **Chapter 5**.

[4] *Means of Transportation to* Work, American Communities Survey 2007-2011 5-Year Estimates, Grass Valley and Nevada City CDP, California, accessed February 2013.

[5] *Means of Transportation to Work*, American Communities Survey 2007-2011 5-Year Estimates, Nevada County, California, accessed February 2013.



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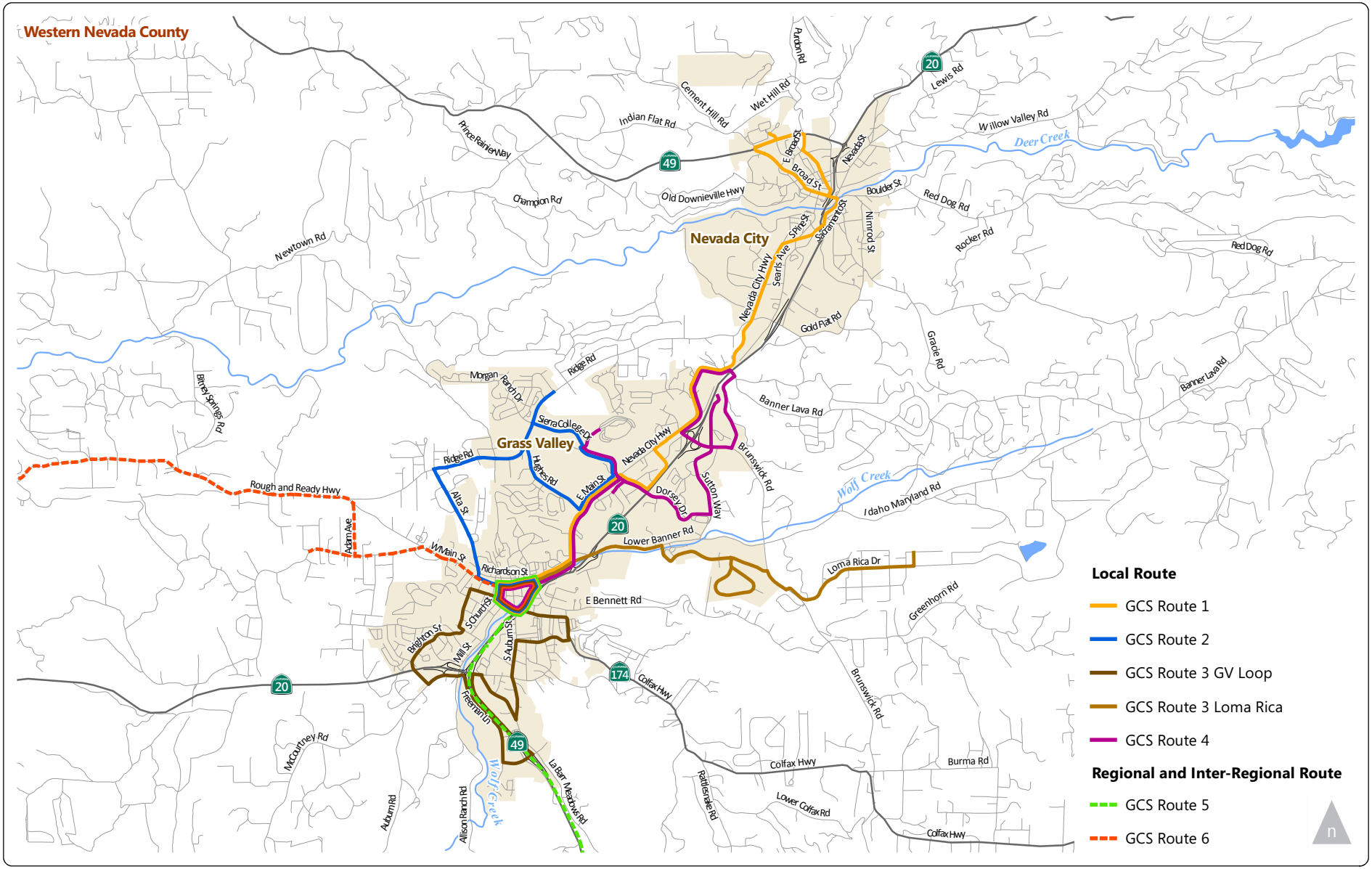
TRANSIT FACILITIES

FIGURE 3-6A



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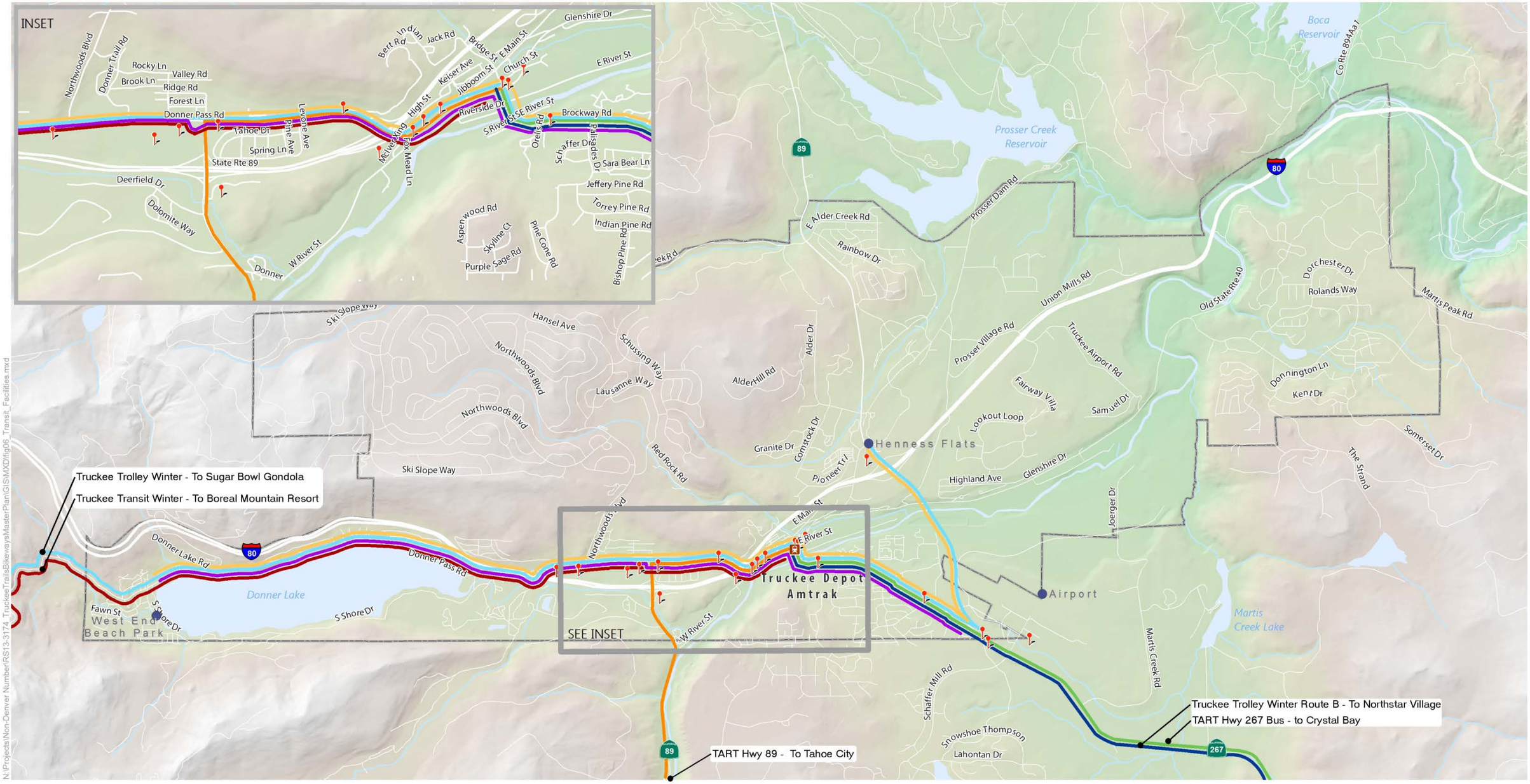
TRANSIT FACILITIES

FIGURE 3-6B



Existing Transit Routes

- Tahoe Area Regional Transit (TART): Hwy 267 bus (Winter)
- Tahoe Area Regional Transit (TART): Hwy 89 bus
- Truckee Transit: Non-winter (April 1 - mid December)
- Truckee Transit: Winter (Mid December - March 30)
- Truckee Trolley: Route A Sugar Bowl (Winter)
- Truckee Trolley: Route B Northstar (Winter)
- Truckee Trolley: Summer
- Existing Bike Parking

Source: 2015 Truckee Trails and Bikeways Master Plan

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TRANSIT FACILITIES

FIGURE 3-6C

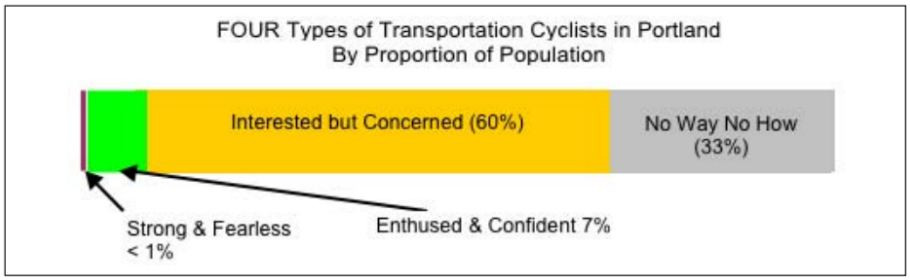
4. NEEDS ANALYSIS

This section summarizes the bicycling needs in Nevada County that have been discussed in **Chapter 3**: Existing Conditions and identified by staff, the public and during field inspections. Specific projects and programs are addressed in **Chapter 5**.

4.1 BICYCLIST NEEDS

To build a safer and more inviting network of bicycle facilities and programs, it is important to understand the specific needs of bicyclists with differing levels of riding experience and comfort in mixed traffic. This chapter identifies four types of bicyclists in Nevada County, and addresses their different needs and preferences. The rider types, according to a peer-reviewed methodology by the Portland Office of Transportation, are described below.

4.1.1 Four Rider Types



Source: Roger Geller

Strong and Fearless

These riders typically comprise less than one percent of the population. They ride in Nevada County regardless of roadway conditions, and can ride confidently in mixed traffic and hilly terrain. Many of the 0.5 percent of Nevada County's working population who commute by bicycle fall into this category.

Enthused and Confident

Enthused and Confident riders are still comfortable sharing the road with vehicle traffic, but they prefer the separation afforded by Class II bike lanes or Class III bike routes with multiuse shoulders. Compared to Strong and Fearless riders, Enthused and Confident bicyclists are more sensitive to road conditions, and less likely to ride if a roadway presents a perceived safety hazard. Research suggests that these riders are the easiest to attract to regular riding with new facilities. Nonetheless, they only comprise about seven percent of the population.

The above two categories – under 10 percent of Nevada County's population – are the most likely to use Class II bike lanes and Class III bike routes with multiuse shoulders on County collectors and arterials. The

County can retain and attract these respective groups by striping and maintaining existing and proposed shoulders and Class II bike lanes.

Interested but Concerned

These riders represent the majority of Nevada County's population (approximately 60 percent). They are curious about bicycling, and may occasionally ride on paths or calm "low stress" streets, but they typically do not ride on a regular basis due to safety concerns and the relative convenience of other modes. These riders are most attracted to Class I bike paths or low speed residential areas where they experience little conflict with motor vehicles. Due to safety concerns, Interested but Concerned riders will likely not use Class II bike lanes on long stretches of major arterials and collectors. They are also unlikely to ride on Class III bike routes with multiuse shoulders along rural County roads, especially over variable terrain.

Jurisdictions can attract Interested but Concerned riders by connecting pockets of low-stress residential roads with formal bikeways and paths, providing safe routes to local schools, and through educational programs.

No Way No How

Research suggests that about a third of the population is disinterested in cycling. They do not own a bicycle, and do not intend to ride for utility or recreation. Nonetheless, these individuals are important to the future of bicycling in Nevada County. Whether they drive, take transit, or walk, No Way No How residents share the transportation system with Nevada County's cyclists. Education programs can help inform this population about bicycling and rules of the road, and bicycle facilities can increase awareness of bicyclists to motorists and transit vehicles.

4.1.2 Commuter and Recreational Needs

Bicyclists in Nevada County may ride for utility, recreation, or both. These two trip purpose categories have different characteristics and may require different measures to promote riding and bicyclist safety.

Commuting Cyclists

These individuals ride for utility – to work, school, shopping, or other destinations. Bicycle commutes are typically shorter than those made by vehicle, with many commuters riding fewer than three miles per one-way trip. Measures to support these riders may include Class II bike lanes or widened shoulders on arterials that connect residential uses to employment and shopping areas, safe routes to school, and support facilities like bike parking, lockers and showers. Commuting cyclists may also use transit to complete their trip. Jurisdictions may consider transit station bike parking, bike lanes, paths or widened shoulders to transit stations, and bike-compatible buses to encourage multimodal commutes.

Recreational Cyclists

These cyclists vary from Interested but Concerned riders who may complete a short loop on residential roads and Class I bike paths to Strong and Fearless cyclists who ride long distances on rural County roads

and major arterials. Many of the improvements in this plan are designed to serve both transportation and recreation cyclists who share the same routes on local paths and roadways.

4.2 PUBLIC OUTREACH

A key component of this Bicycle Master Plan is public participation. To ensure the plan was tailored to local needs and concerns, the Project Advisory Committee hosted community workshops, developed a web site for the plan, and conducted an online survey. This section documents these outreach efforts and provides key takeaways.

4.2.1 Community Workshops

The Project Advisory Committee hosted two workshops in Grass Valley and Nevada City in February and March 2013. The workshops had an open-house format, giving residents and members of the committee the opportunity to interact and share ideas. At the workshops, approximately 50 attendees provided suggestions for the proposed bicycle network, support facilities, and educational programs.

Key takeaways from the workshops included:

- Need increased connectivity between Grass Valley and Nevada City.
- Widen shoulders and provide bike lanes when practicable. Examples include improvements to Highway 49, Newtown Road, and Rough and Ready Highway.
- Maintain existing facilities, keeping shoulders and Class II bike lanes clear of debris that force cyclists into mixed traffic.
- Provide education programs to motorists and cyclists for increased awareness and compliance with vehicle code.
- Develop safe routes to schools, including connections to Seven Hills Middle School and Deer Creek Elementary School.

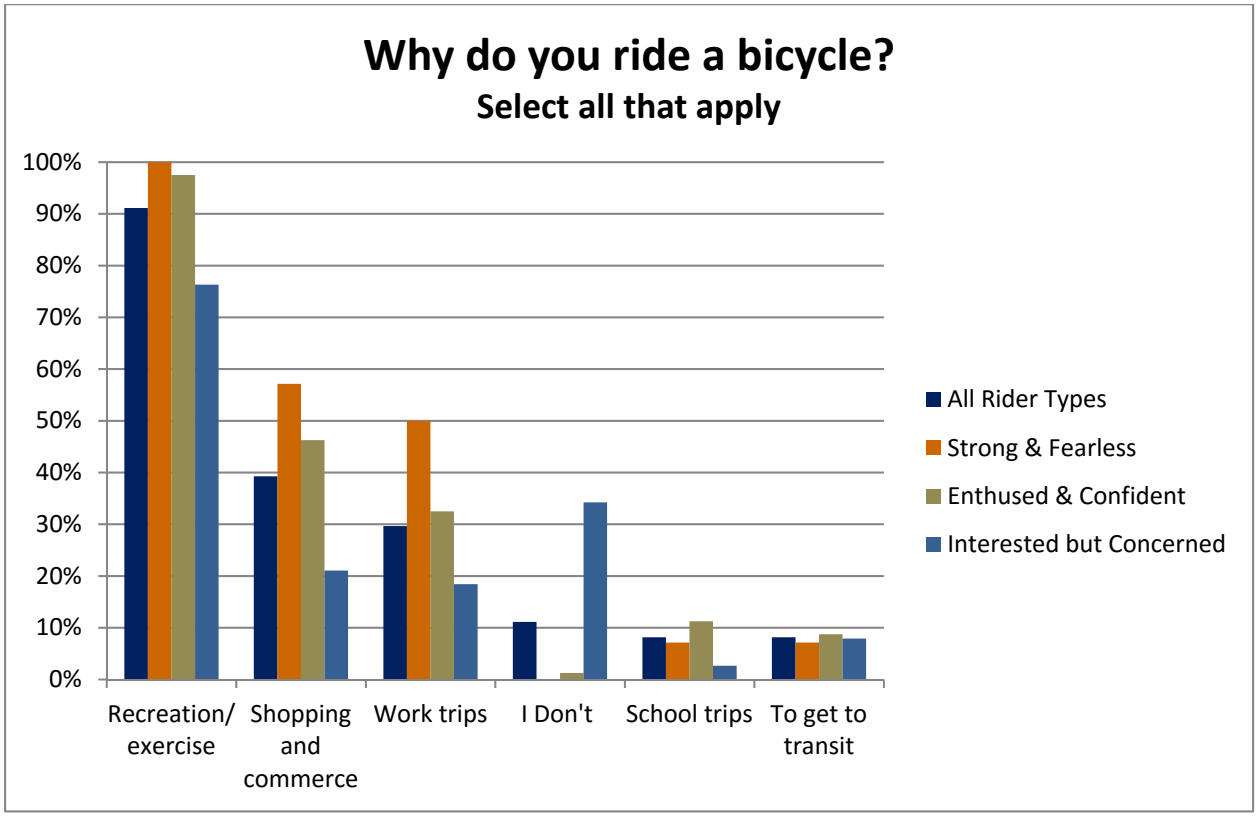
Photographs: Community workshops in Nevada City (above) and Grass Valley (below).

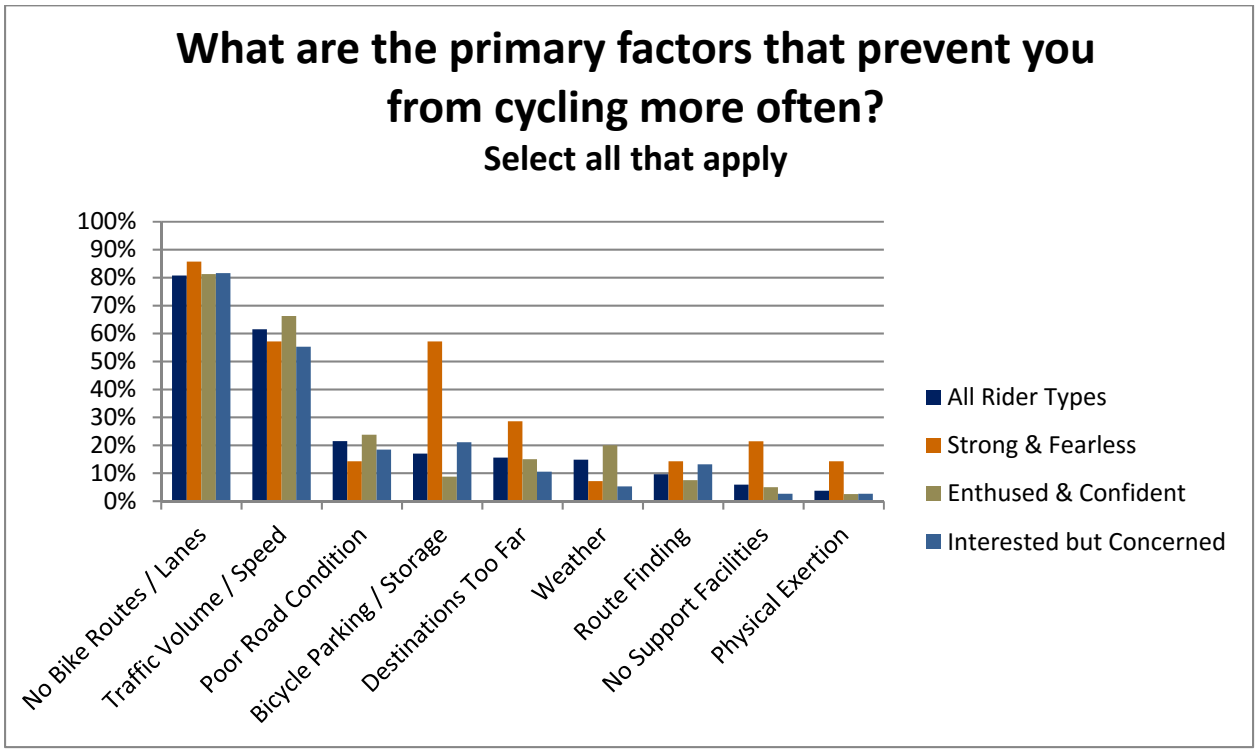
- More secure bike parking at destinations.

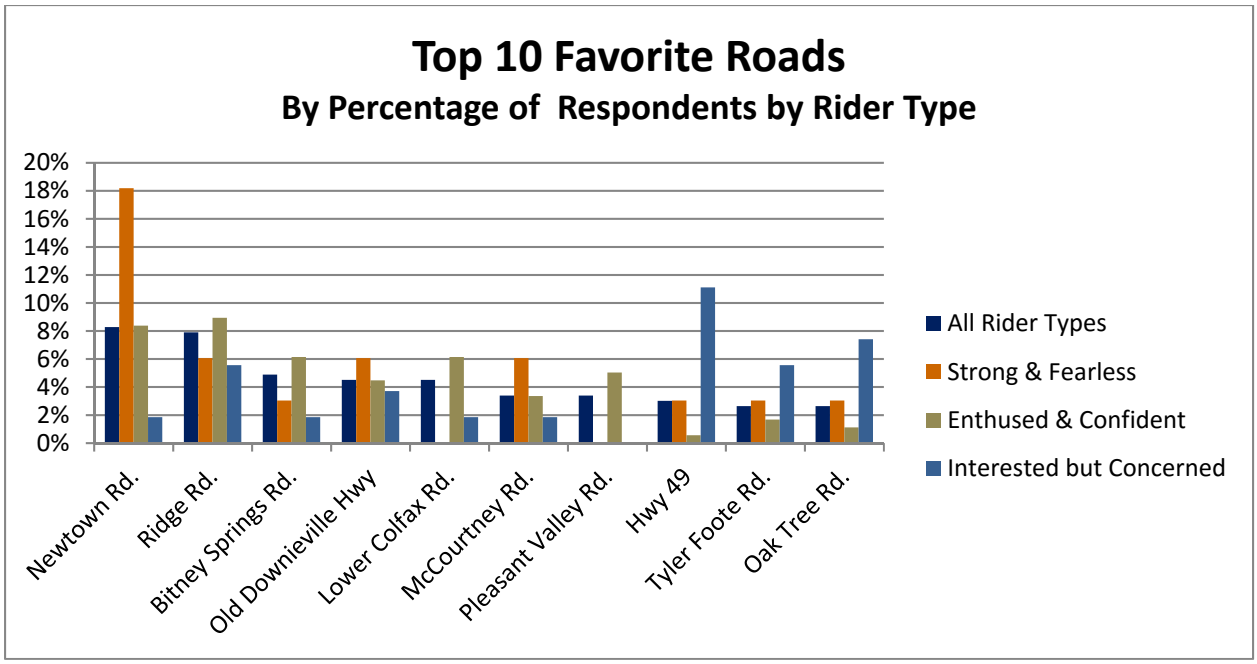
4.2.2 Survey

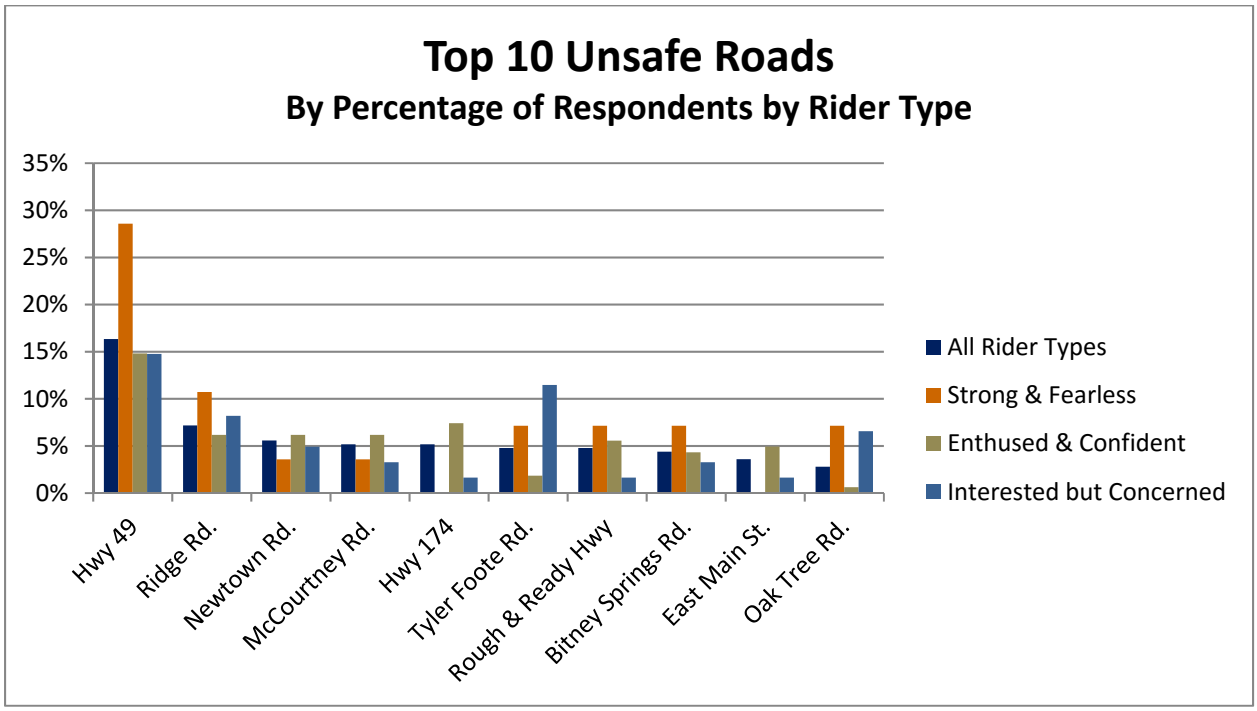
Along with outreach events, the Project Advisory Committee conducted an online survey to collect input from residents. The majority of the 160 respondents rode for recreation and exercise, and about 85 percent indicated another trip purpose like commuting to work or school, bicycling to shopping destinations, and riding to transit. While most respondents identified themselves as Enthused and Confident riders, the survey included feedback from other rider types including Interested but Concerned bicyclists, who made up about thirty percent of respondents. The Project Advisory Committee was able to separate responses by rider type to better understand feedback from different user groups.

The survey revealed similar concerns to those expressed in the community workshop, as well information contained in the following figures and **Appendix B**:



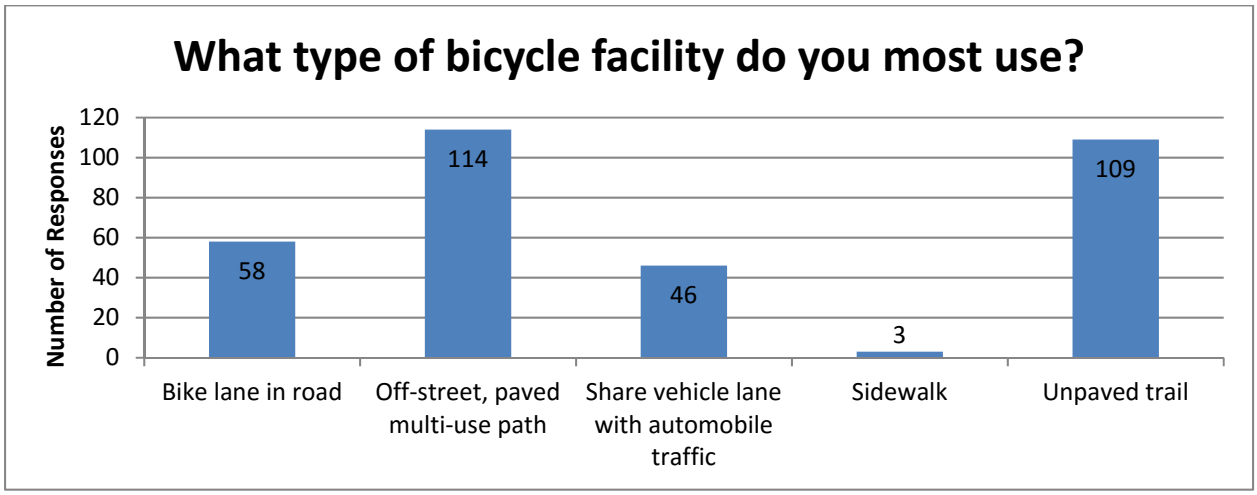

What are the primary factors that prevent you from cycling more often?
Select all that apply
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
No Bike Routes / Lanes
Traffic Volume / Speed
Poor Road Condition
Bicycle Parking / Storage
Destinations Too Far
Weather
Route Finding
No Support Facilities
Physical Exertion
All Rider Types
Strong & Fearless
Enthused & Confident
Interested but Concerned

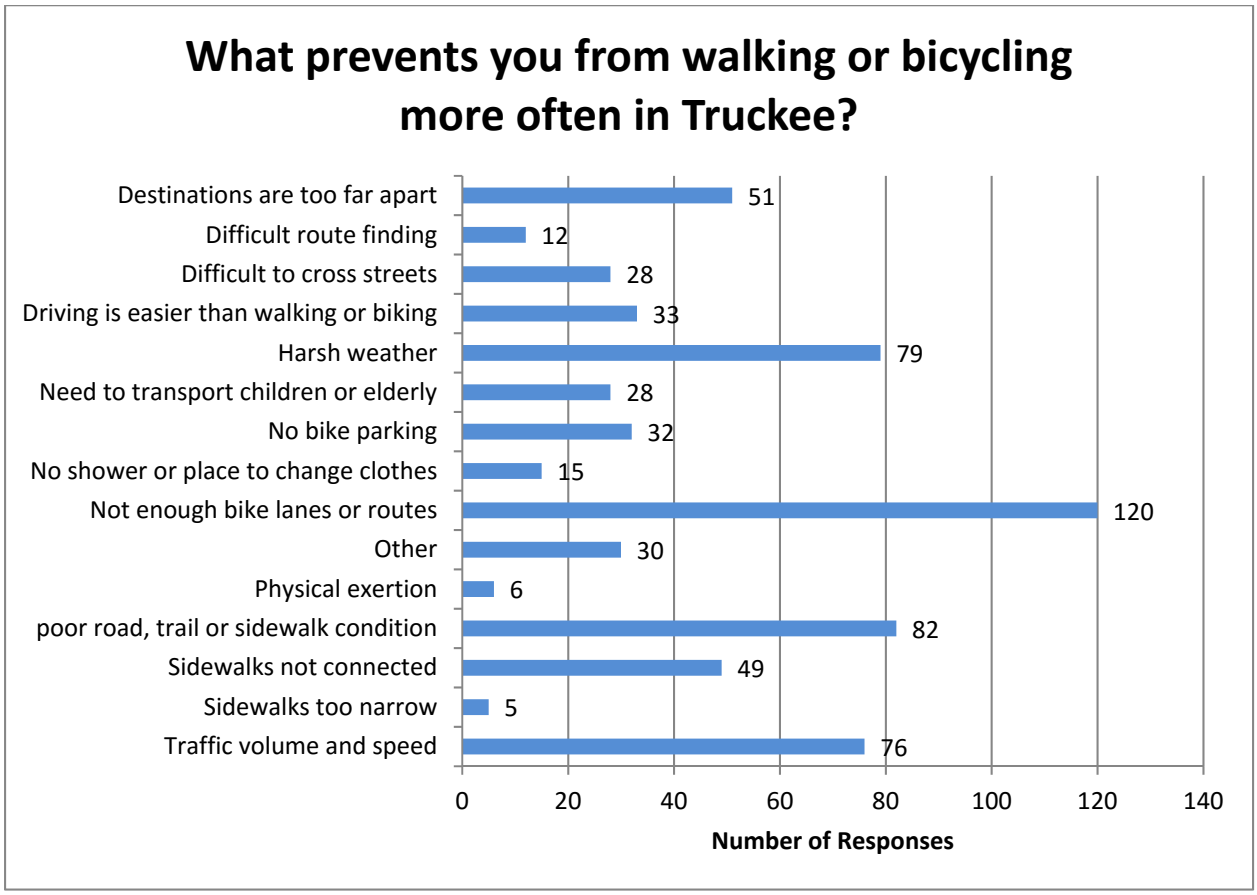

Top 10 Favorite Roads
By Percentage of Respondents by Rider Type
20%
18%
16%
14%
12%
10%
8%
6%
4%
2%
0%
Newtown Rd.
Ridge Rd.
Bitney Springs Rd.
Old Downieville Hwy
Lower Colfax Rd.
McCourtney Rd.
Pleasant Valley Rd.
Hwy 49
Tyler Foote Rd.
Oak Tree Rd.
All Rider Types
Strong & Fearless
Enthused & Confident
Interested but Concerned

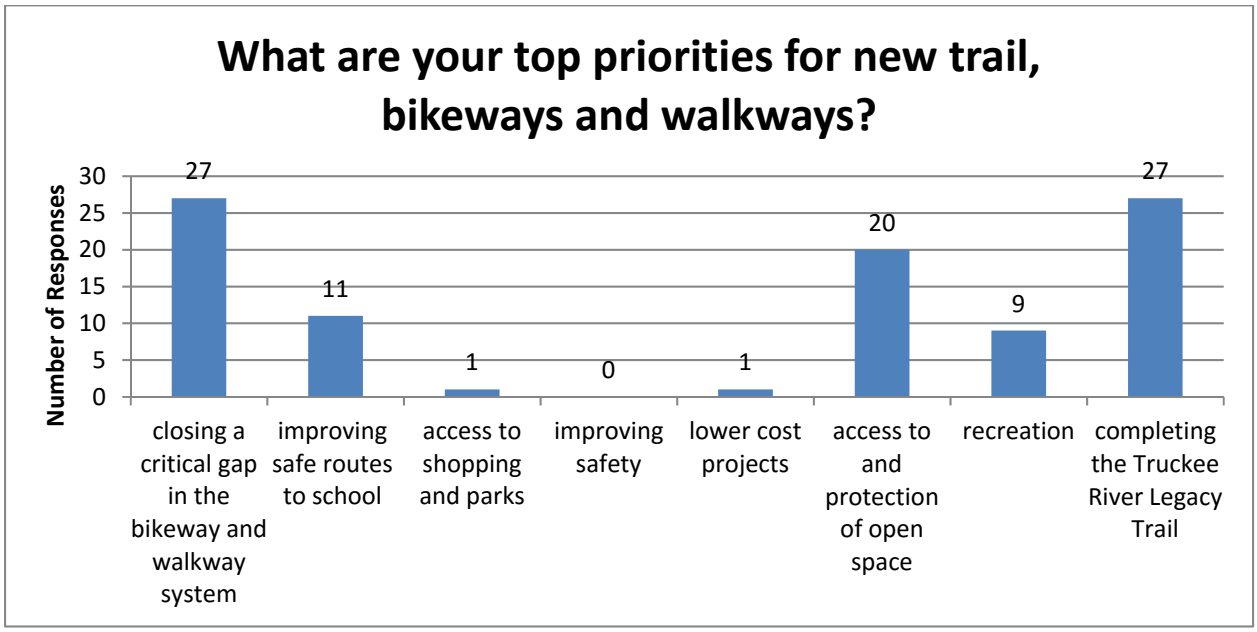


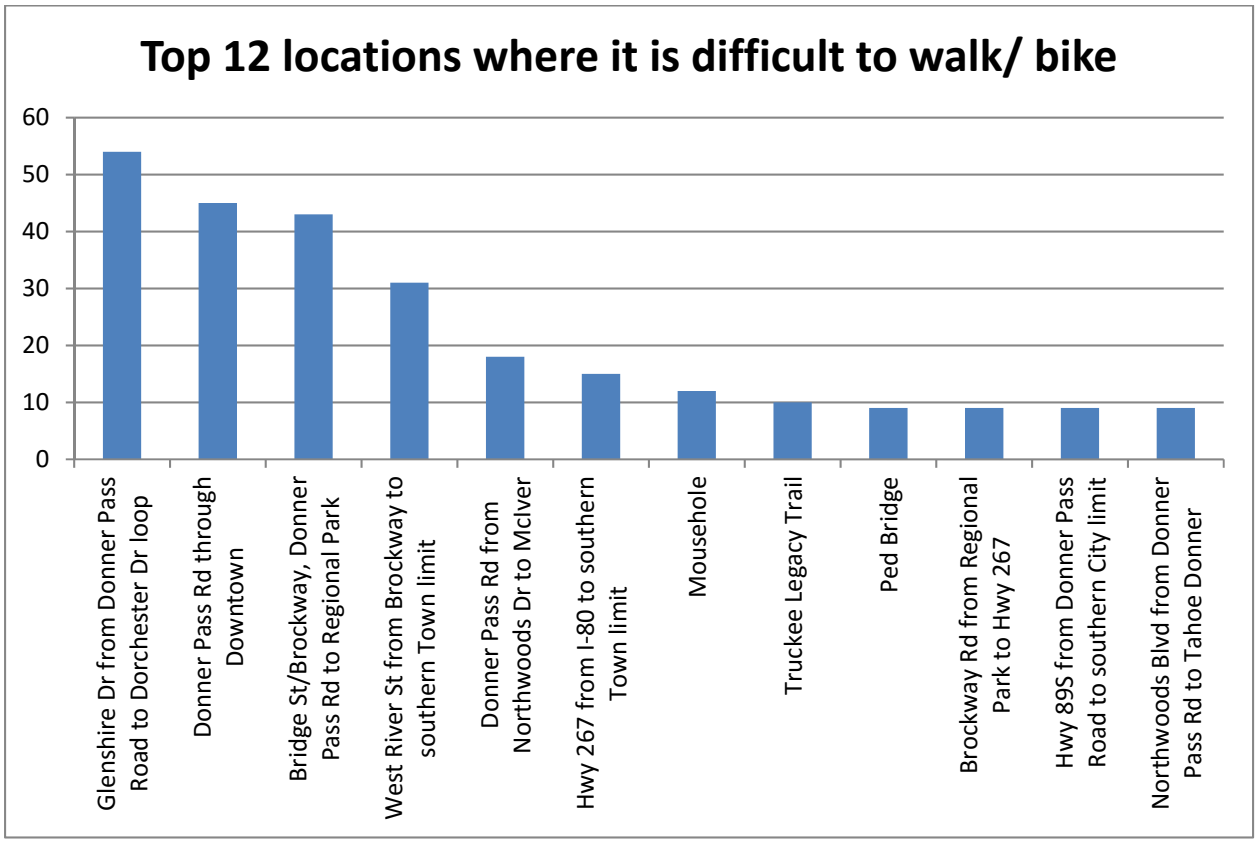
4.2.3 Truckee Public Outreach

The Town of Truckee conducted its own public outreach as a part of the Truckee Trails and Bikeways Master Plan. Two community workshops were held and two online surveys were administered as a part of this plan. The first public workshop was held in February 2014, to gather information about residents' travel habits, facility preferences and areas of need. The second public workshop was held in April and included a short presentation followed by attendees voting for their highest priority trail, bikeway and walkway projects. These two public meetings were supplemented by two online surveys to solicit similar feedback. With over 1/3 of responses, the majority of residents preferred off-street bicycle paths, paved and unpaved. 58 people stated a preference for in road bike lanes, while 46 people preferred a shared vehicle lane with automobile traffic. The condition or presence of bicycle facilities is the main actor that prevents residents from biking or walking more. Similarly, most respondents prioritized a closure in facility gaps, specifically at the Truckee River Legacy Trail.


What type of bicycle facility do you most use?
Number of Responses
120
100
80
60
40
20
0
58
114
46
3
109
Bike lane in road
Off-street, paved multi-use path
Share vehicle lane with automobile traffic
Sidewalk
Unpaved trail


What prevents you from walking or bicycling more often in Truckee?
Destinations are too far apart 51
Difficult route finding 12
Difficult to cross streets 28
Driving is easier than walking or biking 33
Harsh weather 79
Need to transport children or elderly 28
No bike parking 32
No shower or place to change clothes 15
Not enough bike lanes or routes 120
Other 30
Physical exertion 6
poor road, trail or sidewalk condition 82
Sidewalks not connected 49
Sidewalks too narrow 5
Traffic volume and speed 76
0 20 40 60 80 100 120 140
Number of Responses


What are your top priorities for new trail, bikeways and walkways?
Number of Responses
30
25
20
15
10
5
0
27
11
1
0
1
20
9
27
closing a critical gap in the bikeway and walkway system
improving safe routes to school
access to shopping and parks
improving safety
lower cost projects
access to and protection of open space
recreation
completing the Truckee River Legacy Trail


Top 12 locations where it is difficult to walk/ bike
60
50
40
30
20
10
0
Glenshire Dr from Donner Pass Road to Dorchester Dr loop
Donner Pass Rd through Downtown
Bridge St/Brockway, Donner Pass Rd to Regional Park
West River St from Brockway to southern Town limit
Donner Pass Rd from Northwoods Dr to McIver
Hwy 267 from I-80 to southern Town limit
Mousehole
Truckee Legacy Trail
Ped Bridge
Brockway Rd from Regional Park to Hwy 267
Hwy 89S from Donner Pass Road to southern City limit
Northwoods Blvd from Donner Pass Rd to Tahoe Donner

4.3 CURRENT USAGE AND FUTURE BENEFITS

4.3.1 Bicycle Usage Data

Journey to work data was obtained from the 2007-2011 American Communities Survey for Nevada County, California, and the United States. Journey to work data are shown in **Table 4-1**.

TABLE 4-1: JOURNEY TO WORK DATA

Mode	United States	California	Nevada County	
			Percent	Number of People
Bicycle	0.5%	1.0%	0.6%	239
Walked	2.8%	2.8%	3.2%	1,371
Drove Alone	76.1%	73.0%	74.7%	32,106
Carpool	10.2%	11.7%	9.9%	4,258
Public Transit	5.0%	5.1%	0.5%	216

Source: American Communities Survey, 2007-2011.

As shown, approximately 0.6 percent of the Nevada County journey-to-work trips are made by bicycle, or about 239 trips. This number is greater than the 0.3 percent mode split reported in the 2007 bicycle plan update. This modest increase may be partially explained by a number of factors including: newly constructed bicycle facilities, outreach efforts from bicycling organizations, changes in economic conditions, increased bicycling for environmental and health reasons, differences in data collection and inference between the American Communities Survey and US Census, and random sampling variation.

The data above likely underestimates the true amount of bicycling in the County. Neither Census nor American Communities Survey data include the number of people who bicycle for recreation, children who bicycle to school, or for non-work commute trips like bicycling to commercial areas. The data also reflects only a person's dominant commute mode and does not account for biking to transit. Finally, the percentage of non-commute bicycle trips is likely greater than the percentage of bicycle commute trips as commute trips tend to be longer and less bikeable than shopping or school-related trips.

4.3.2 Future Usage and Benefits

A key goal of the Bicycle Master Plan is to maximize the number of local bicycle commuters in order to help reduce traffic congestion and air pollution, and improve health outcomes. Little data currently exists to quantify the number of residents who would bicycle if conditions for cycling improved in the county. To

estimate this latent demand and determine potential usage, we must rely on an evaluation of comparable communities that have improved conditions for bicycling.

Bend, Oregon

Bend is a city of about 77,000 people in Central Oregon's Deschutes County. The city has some similarities to Nevada County, with rural, mountainous outlying areas that often experience adverse weather and an economy supported in part by recreation activities like nearby skiing and outdoor areas. Like Nevada County, Bend has a large recreational riding community and hosts a major annual bicycle race, the Cascade Classic that draws cyclists from around the region. Nonetheless, the two areas have differences that should be taken into account. First, about 73 percent of Deschutes County's employed residents also work within the county, compared to 48 percent for Nevada County.[6] This indicates that commutes in Deschutes County are shorter and therefore more bikeable. Second, the most populated areas in Bend and Deschutes County do not have the same topographical challenges as Nevada County, which has steeper grades between major destinations.

Despite these differences, conditions for Bicycling in Bend are a good benchmark for Nevada County. Thanks to improved bicycle facilities, community outreach, cycling tourism, and other factors, the city has 2.5% journey to work bicycle mode share.[7]

South Lake Tahoe, California

South Lake Tahoe is another mountainous city with a large number of cyclists who ride for utility and recreation. The city shares many similarities to communities in Nevada County, but like Deschutes County major employment and housing centers are on similar topographic profiles, mostly surrounding Lake Tahoe. The city and surrounding area also have major employers like Heavenly Ski Resort, casinos, destination restaurants, and hotels that employ large amounts of service industry workers. These workers may be more likely to commute by bike and could explain some of South Lake Tahoe's relatively high bicycle mode share.

[6] *Work Area Profile Report, Nevada County* and *Work Area Profile Report, Deschutes County*, Census on the Map 2010, accessed March 2013.

[7] *Means of Transportation to Work*, American Communities Survey 2007-2011 5-year estimates, accessed March 2013

South Lake Tahoe has a 4.5% journey to work bicycle mode share, which could serve as a high-end benchmark for Nevada County.[8]

Forecasting Bicycle Usage

The average journey to work mode share for the above communities is 3.5%. Due to the rural nature of Nevada County and its unique topographic challenges relative to other communities, it is reasonable to expect a slightly lower forecasted mode share. Nevada County's goal is to achieve a bicycle mode share of three percent by the year 2025. By interpolating growth from the year 2000, the estimated population of workers over 16 years of age is about 45,000. The potential impacts of achieving this goal are available in **Table 4-2**.

TABLE 4-2: BENEFITS OF IMPROVED BICYCLE MODE SPLIT (YEAR 2030)

2030 Bicycle Mode Split	Bicycle Commuters	Annual Vehicle Trips Saved	VMT Saved	Lbs CO_2 Saved
0.6% (Existing Mode Split)	252	80,637	645,092	593,434
2.8% (State Goal Mode Split)	1,268	405,775	3,246,201	2,986,251
3.0% (Nevada County Goal Mode Split)	1,359	434,759	3,478,072	3,199,555

Source: Fehr & Peers, 2016

[8] Ibid.

5. PROPOSED NETWORK AND IMPROVEMENTS

This chapter presents the proposed bicycle network and improvements for Nevada County. The recommended system and improvements consist of bicycle facilities: including the bikeway system, parking and support facilities, and bicycle programs related to safety, education and outreach. It is recommended that all the jurisdictions of Nevada County adopt the infrastructure and program plan recommended in this section to ensure effective and consistent implementation countywide.

5.1 INTRODUCTION

The recommended bicycle circulation strategy consists of a comprehensive network of utilitarian and recreational bikeways connecting residential areas of Nevada County with destinations like schools and commercial centers. The proposed network is shown in **Figure 5-1**; **Figure 5-2** shows the trails and bikeways network proposed in the *Town of Truckee Trails and Bikeways Master Plan*. **Tables 5-1** through **5-4** include a summary of the proposed bikeways by jurisdiction. The tables are sorted by facility type and include cost estimate and prioritization information. **Chapter 6** describes the methodology for cost estimates and prioritization; **Appendix D** includes the proposed bikeway lists sorted by benefit score and feasibility score. Cost estimate and prioritization information for projects in the Town of Truckee is included in the *Town of Truckee Trails and Bikeways Master Plan*.

The system and project prioritization were selected according to input from agency staff and members of the Project Advisory Committee, and members of the public through surveys and workshops.

5.1.1 Creating a Network

A bikeway network consists of facilities that provide superior conditions for bicyclists compared to other roadways in the county. It is important to state that by law bicyclists are allowed on all streets and roads, except where they are specifically prohibited, regardless of whether they are part of the bikeway system. The bikeway network is a tool that allows the County and its jurisdictions to focus and prioritize implementation efforts where they will provide the greatest community benefit.

The Project Advisory Team selected proposed facilities according to the following criteria:

- Existing bicycling patterns and levels of expected usage
- Traffic volumes and speeds
- Safety concerns, including prior collisions involving bicycles
- Available right-of-way
- Connectivity to key destinations
- Closures of critical gaps in the existing bicycle network

Additionally, members of the public and the Project Advisory Committee expressed particular interest in improving connectivity between Nevada City and Grass Valley. Intercity connectivity was therefore used as a key evaluation criterion for projects in and around these incorporated areas.

It is important to note that the bikeway system and project prioritization serve as guidelines to those responsible for implementation. The system and projects themselves may change over time according to shifts in bicycling patterns, implementation constraints, and new opportunities for bicycle facilities.

5.1.2 Environmental Protection

Bicycling is one of the most environmentally sound forms of travel, especially as an alternative to motor vehicle use. Nonetheless, some pathway proposals in this plan may have environmental impacts, including impacts to biological resources. All of the projects in this plan will require additional feasibility analysis, which must include required environmental analysis.

5.2 PROPOSED BIKEWAY NETWORK

Recommended segments are divided into Class I bike paths, Class II bike lanes, Class III bike routes with multi-use shoulder, and Class III bike routes. Additionally, the *Town of Truckee Trails and Bikeways Master Plan* includes several proposed recreational trails; proposed recreational trails in western Nevada County are described in the Western Nevada County Non-motorized Recreational Trails Master Plan. The fully built-out network in western Nevada County would consist of approximately 9.6 miles of Class I bike paths, 17.4 miles of Class II bike lanes, 61.2 miles of Class III bike routes with multi-use shoulder, and 174.1 miles of shared Class III bike routes. Prioritization and implementation strategies are found in **Chapter 6**.

5.2.1 Class I Bike Paths

Several segments of new Class I bike paths are proposed in this plan. The locations of these segments were determined according to existing rights of way, including the presence of existing but informal pathways, and the evaluation criteria described in section 5.1.1.

Additional opportunities for Class I bike paths beyond those proposed in this plan may exist. Jurisdictions within the region should begin exploring with Caltrans opportunities to relinquish non-essential areas in the controlled access corridor to the appropriate jurisdiction to allow for use of these areas for Class I bike paths or pedestrian paths.

Litton Pathway Extension

This proposed facility extends the existing paved Litton Pathway in Grass Valley from its current terminus at Sierra College Drive, through and around the campus in a loop with a spur connecting to existing bicycle lanes on Ridge Road. This alignment would pave an existing dirt pathway along public property and provide school access as well as recreational opportunities for cyclists and pedestrians.

Idaho Maryland Pathway

The 2011 Nevada County Pedestrian Improvement Plan proposed a multi-use path on the south side of Idaho Maryland Road from Main Street to Sutton Way. The path would provide a separated bikeway for cyclists to access key destinations including shopping centers on Sutton Way and the proposed Loma Rica Ranch Specific Plan Area. There are no existing dirt pathways on the proposed alignment.

Loma Rica Ranch Pathways

The Loma Rica Ranch Specific Plan identified a multi-use path extending from Sutton Way to the eastern extent of the plan area. The proposed path includes a northeast/southwest extension that would connect to proposed Class II bike lanes on Brunswick Road.

Brunswick Road Pathway

This pathway would pave an existing trail that runs along Brunswick Road from Idaho Maryland Road to Town Talk Road.

State Route 20 Overcrossing at Freeman Lane

The final proposed Class I bike path in Grass Valley is an overcrossing that would connect Freeman Lane to West Empire Street at the State Route 49 Northbound off ramp. The only existing State Route 49/20 crossing between downtown Grass Valley and McKnight Way is the multi-lane arterial adjacent to the proposed Class I bike path. However, the existing configuration requires cyclists to either ride on State Route 20 / West Empire Street with high speed traffic, or dismount and walk via a pedestrian path that accesses the overcrossing and a sidewalk on the north side of the structure. The proposed Class I bike path overcrossing would provide a low stress alternative for bicyclists and pedestrians and close a critical gap between the southeast and southwest neighborhoods of Grass Valley. The overcrossing is a long-term project; further feasibility assessment is necessary to determine if it could be constructed as a standalone structure or cantilevered off of the south side of the existing West Empire Street overcrossing.

Seven Hills to Deer Creek Pathway

This pathway in Nevada City would extend from Reward Street through Seven Hills Middle School, contour the back of the school, and then connect to Deer Creek Elementary School. The pathway would connect these two major destinations, and also provide a safe alternative for children who ride to school on Zion Street. The proposed alignment is located on school property.

State Route 20 – Eagle Lakes Road – Hampshire Rocks Road Connector

This bike path in eastern Nevada County would connect State Route 20 near the Interstate 80 interchange to Eagle Lakes Road and Eagle Lakes Road to Hampshire Rocks Road, making trans-Sierra travel possible by bicycle.

Truckee River Legacy Trail

This proposed shared use path will connect Donner Lake at the west to Glenshire at the east. The portions of the Truckee River Legacy Trail between Truckee River Regional Park and Glenshire already exist. West of Truckee River Regional Park, the Truckee River Legacy Trail will parallel Brockway Road, pass through the Hilltop Master Plan area, cross the Truckee River near the West River Street/State Route 89 intersection, go underneath the Union Pacific Railroad at the Mini Mousehole, and pass through the Coldstream Planned Community.

Tahoe-Pyramid Bikeway

The Tahoe-Pyramid Bikeway is a vision of following the Truckee River by foot or by bicycle from its source at Lake Tahoe to its terminus at Pyramid Lake. The Tahoe-Pyramid Bikeway will include portions of the Truckee River Legacy Trail between State Route 89 and Glenshire Drive. This includes a bike path along the Truckee River until Hinton Road, and then a bike route until Glenshire Drive.

Trout Creek Trail

This proposed shared use path will connect Downtown Truckee to Northwoods Boulevard in Tahoe-Donner on an alignment adjacent to Trout Creek.

Pioneer Trail Extension to Frates Lane

This proposed shared use path will connect the Pioneer Trail at its western terminus to Frates Lane, behind the Gateway at Donner Pass shopping center. This shared use path will make it possible for residents of Gray's Crossing to access commercial destinations on Donner Pass Road without riding on Donner Pass Road itself. Additionally, this shared use path will improve access to the Truckee Community Recreation Center for Truckee residents who live off of Donner Pass Road between Northwoods Boulevard and Levon Avenue.

Brockway Road/State Route 267 Trail Extension and Connection to Truckee River Legacy Trail

This proposed shared use path will extend the Brockway Road Trail from its terminus at Martis Valley Road along State Route 267 to the southern Town limits. The Town will coordinate with Placer County to connect this shared use path to Truckee Tahoe Airport Road. Additionally, this trail includes a connection between Brockway Road and the Truckee River Legacy Trail along the current Martis Drive alignment.

Old Greenwood-Glenshire Drive Bridge Connector

This proposed shared use path will connect the Overland Trail/Fairway Drive intersection to the informal parking areas on the south side of the Glenshire Drive bridge over the Truckee River. It will significantly improve route directness between the Glenshire Drive bridge and areas north of Interstate 80.

5.2.2 Class II Bike Lanes

Bicycle lanes are primarily recommended in the developed or developing areas of Nevada County. They would connect key destinations, separate bicycle traffic on busier roadways, and close critical gaps in the bicycle network to maximize the benefits of existing facilities. Bike lanes could not be recommended for many streets in downtown cores of Grass Valley and Nevada City due to roadway width limitations. Also, while many rural County roads provide access to destinations, these facilities typically do not meet minimum lane widths and have topographical challenges that could make implementing Class II bike lanes impractical. In addition, bicycle lanes have striping and stenciling requirements that may not be consistent with the character of rural roadways. Key proposed Class II bike lanes in Nevada County include:

- **Nevada City Highway** – close the critical gap on this roadway by connecting the Class II bike lanes in Nevada City to those in Grass Valley.
- **Ridge Road** – complete Class II bike lanes from Rough & Ready Highway to Nevada City.
- **Old Tunnel Road** – provide bike lanes that would help connect Grass Valley communities east of the State Route 20 Freeway to Nevada City via Banner Lava Cap Road.
- **Brunswick Road** – three proposed projects would connect Grass Valley communities west of the State Route 20 Freeway with shopping centers to the east and the Loma Rica area.
- **Critical Gap Closures near Sierra College** – projects would continue bike lanes on Sierra College Drive and Hughes Road to existing bike lanes on Nevada City Highway.
- **Freeman Lane** – bicycle lanes would connect to shopping centers along the road, and to newly striped bike lanes on East McKnight Way.
- **Glenshire Drive** – continuation of bike lanes on Glenshire Drive to complete the Glenshire Drive/ Dorchester Drive loop.
- **SR 89 and SR 267** – from the north Town limits to the south Town limits.
- **Brockway Road** – to provide a connection from Truckee River Regional Park to SR 267.
- **Martis Valley Road and Ponderosa Drive** – providing bicycle access for neighborhoods south of Brockway Road.
- **Alder Creek Road** – from Northwoods Boulevard to SR 89 to close gaps with other existing and proposed facilities.
- **West River Street** – from SR 89 to McIver Crossing.

Tables 5-1 through **5-4** and **Appendix D** describe the proposed Class II bike lanes. Cost estimates, implementation strategies, phasing and prioritization for these bicycle lanes are provided in **Chapter 6**.

5.2.3 Class III Bike Routes

These routes are proposed in busy downtown and developed areas that lack the available street width to reasonably accommodate bicycle lanes. They would be signed with Caltrans standard bicycle route signs and, where appropriate, include Shared Roadway Bicycle Marking stencils. The stencils alert motorists to the presence of cyclists on the roadway and guide cyclists to ride outside the door zone of parked vehicles. Key Class III bike routes in Nevada County include:

- **East and West Main Street** – provide a bike route through downtown Grass Valley that would extend existing Class II bike lanes that currently terminate at Alta Street.

- **Richardson Street** – designate a parallel bike route to the proposed Class III bike route on Main Street for bicycles to avoid heavier motor vehicle traffic.
- **Broad Street (including East and West spurs)** – provide a bike route through downtown Nevada City connecting to the Rood Center and State Route 49.
- **Old Downieville Highway** – designate this popular alternative to State Route 49 with low vehicle traffic as a bicycle route.
- **Sierra Drive** – a designated bike route to connect the residences off of Sierra Drive to Donner Pass Road.
- **Richards Boulevard** – a designated bike route to connect the residences off of Sierra Drive to Richards Boulevard.
- **Eagle Lakes Road, Hampshire Rocks Road, and Donner Pass Road** – along with implementation of short Class I bike path segments near the State Route 20 / Interstate 80 interchange, these bike routes would form a trans-Sierra route for bicyclists.
- **Donner Pass Road** – a bike route with sharrows on Donner Pass Road through Downtown Truckee to encourage motorists and bicyclists to share the road on through this busy corridor.

Tables 5-1 through **5-4** and **Appendix D** describe the proposed Class III bike routes. Cost estimates, implementation strategies, phasing prioritization and segment details for these facilities are found in **Chapter 6**.

5.2.4 Class III Bike Routes with Multi-Use Shoulder

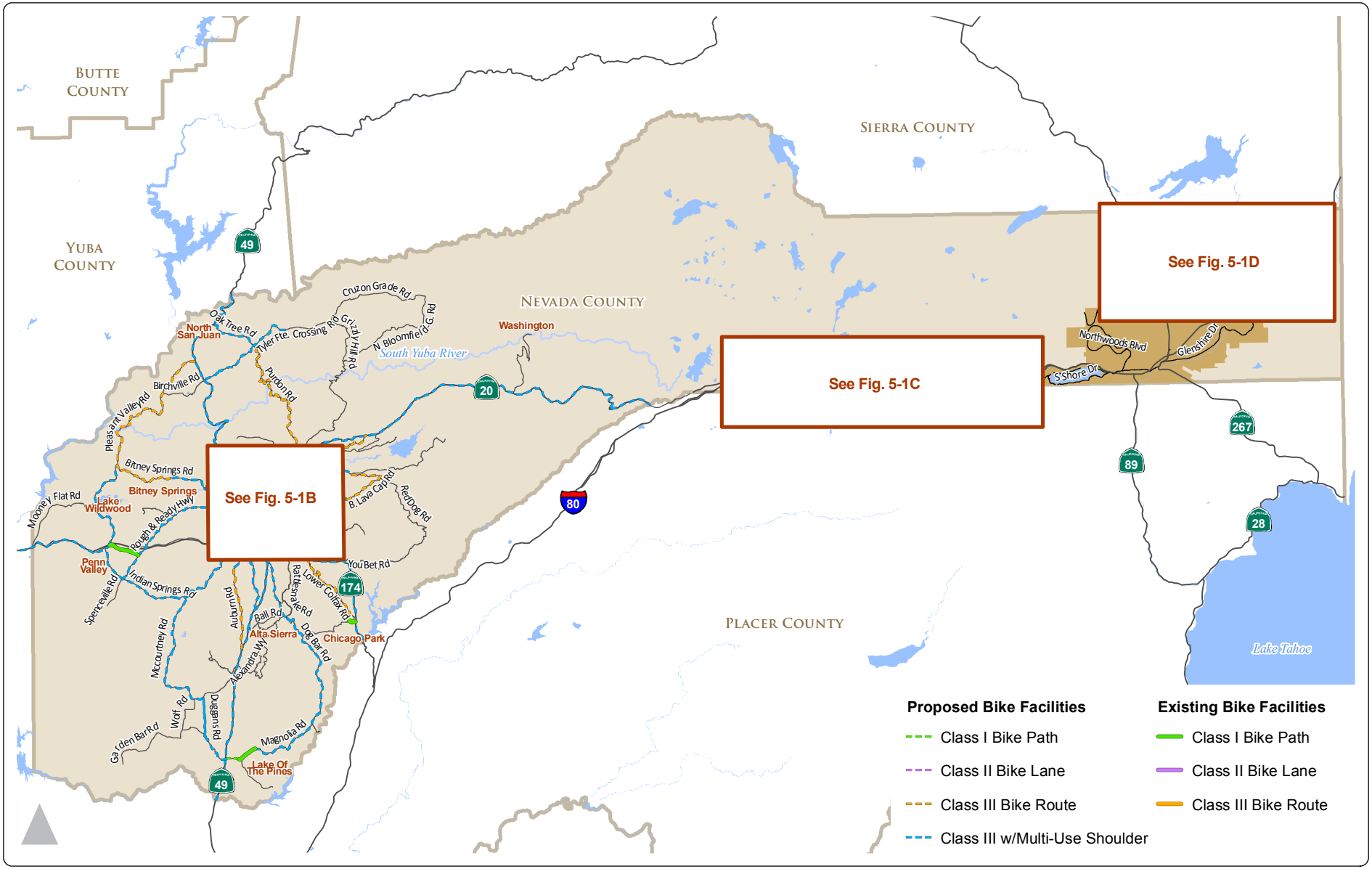
These facilities are proposed on County roadways and state routes where traffic volume, speed, bicycle usage and other factors support the need for enhanced shoulders for cyclists. While these routes may lack the shoulder width and striping requirements of Class II bike lanes, they are intended to provide a 4-5 foot shoulder where widening is practical. For areas with topographic and right-of-way challenges, priority may be given to the uphill shoulder, which would act as a climbing lane to separate slow-speed cyclists from high-speed motor vehicles.

During public outreach, many residents expressed concerns about discontinuous shoulders. Where practical, multi-use shoulders should not drop suddenly from the roadway, especially in conflict areas with a high speed differential between cyclists and motor vehicles. Class III bike route signage should be used to alert motorists to the presence of cyclists along these routes, and especially in areas with little to no shoulder. Key Class III bike routes with multi-use shoulder include:

- **Newtown Road** – widen shoulders where possible and provide signage on this popular recreational route between State Route 49 and Bitney Springs Road.
- **Bitney Springs Road** – provide a Class III bike route with multi-use shoulder from Rough & Ready Highway to Newtown Road.

- **California State Highways** – where bicycle travel is permitted, provide widened shoulders on all state routes. Projects include shoulder widening on State Route 49 between Newtown Road and Old Downieville Highway, and State Route 174 from Grass Valley to Rattlesnake Road and Lower Colfax Road bike routes.
- **Donner Pass Road** – from Interstate 80 at the Soda Springs interchange to Sugar Bowl roads.

Tables 5-1 through **5-4** and **Appendix D** describe the proposed Class III bike routes with multiuse shoulder. Cost estimates, implementation strategies, phasing prioritization and segment details for these facilities are found in **Chapter 6**.



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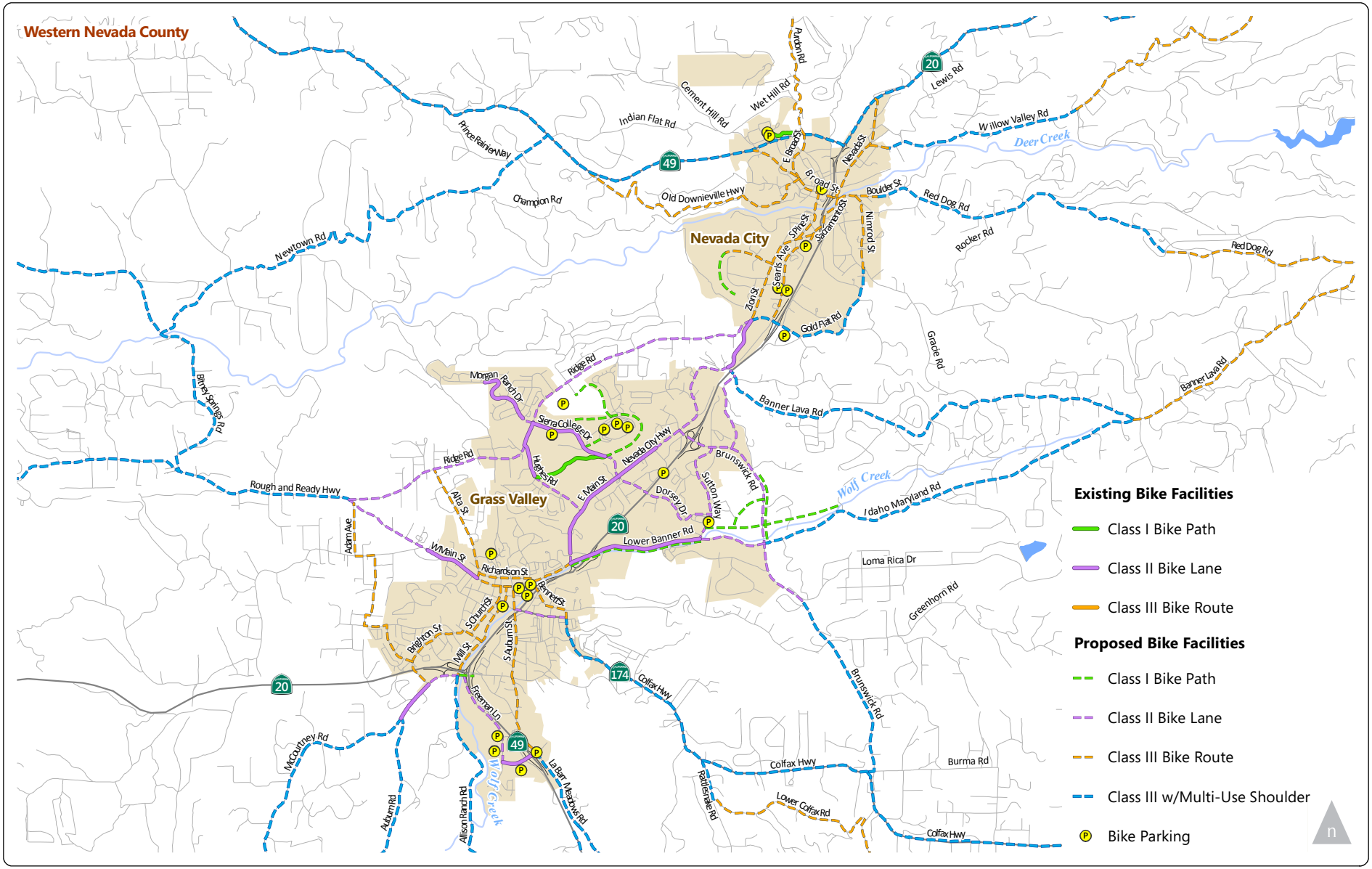
PROPOSED BICYCLE FACILITIES

FIGURE 5-1A



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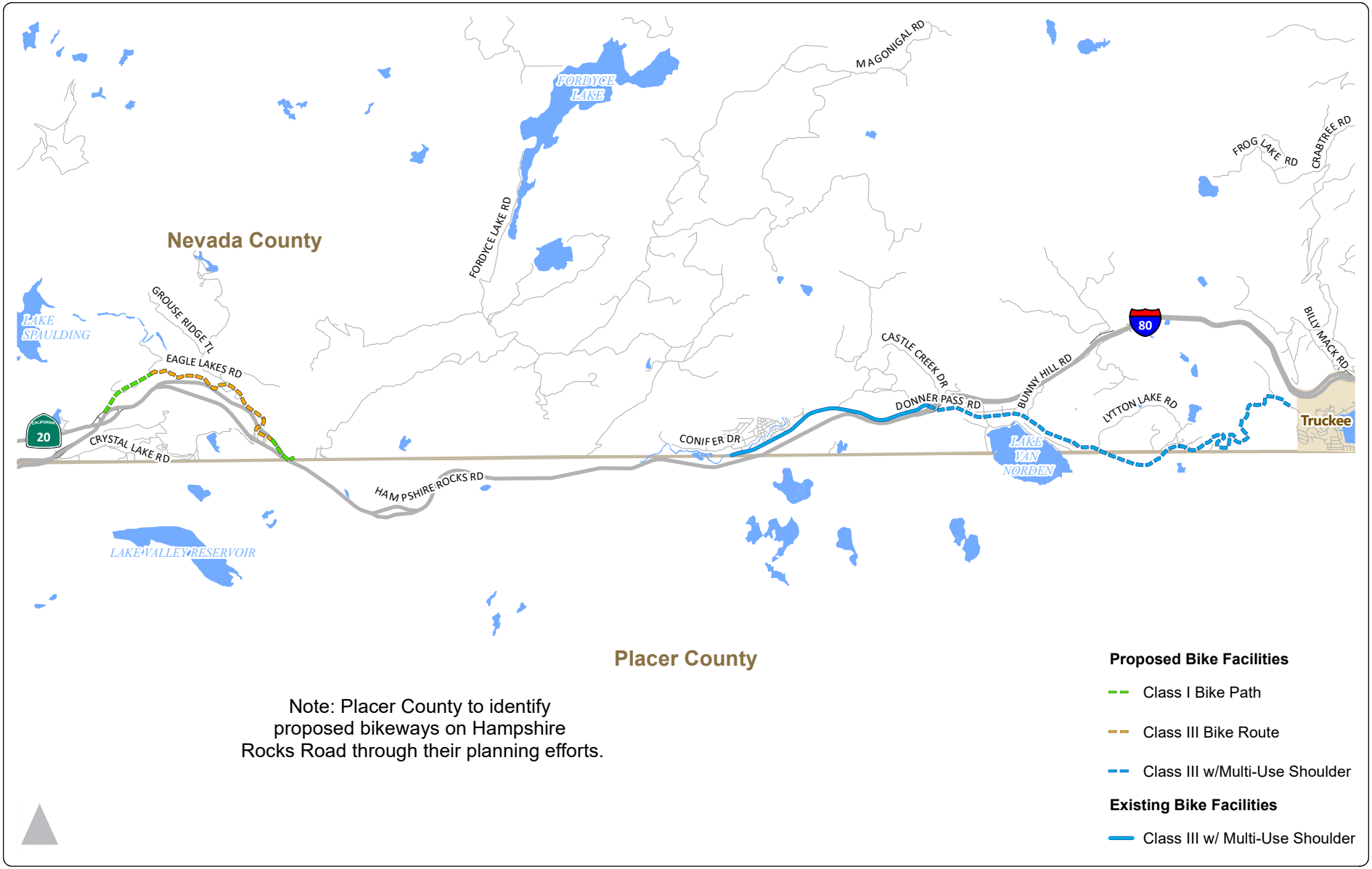
PROPOSED BICYCLE FACILITIES

FIGURE 5-1B



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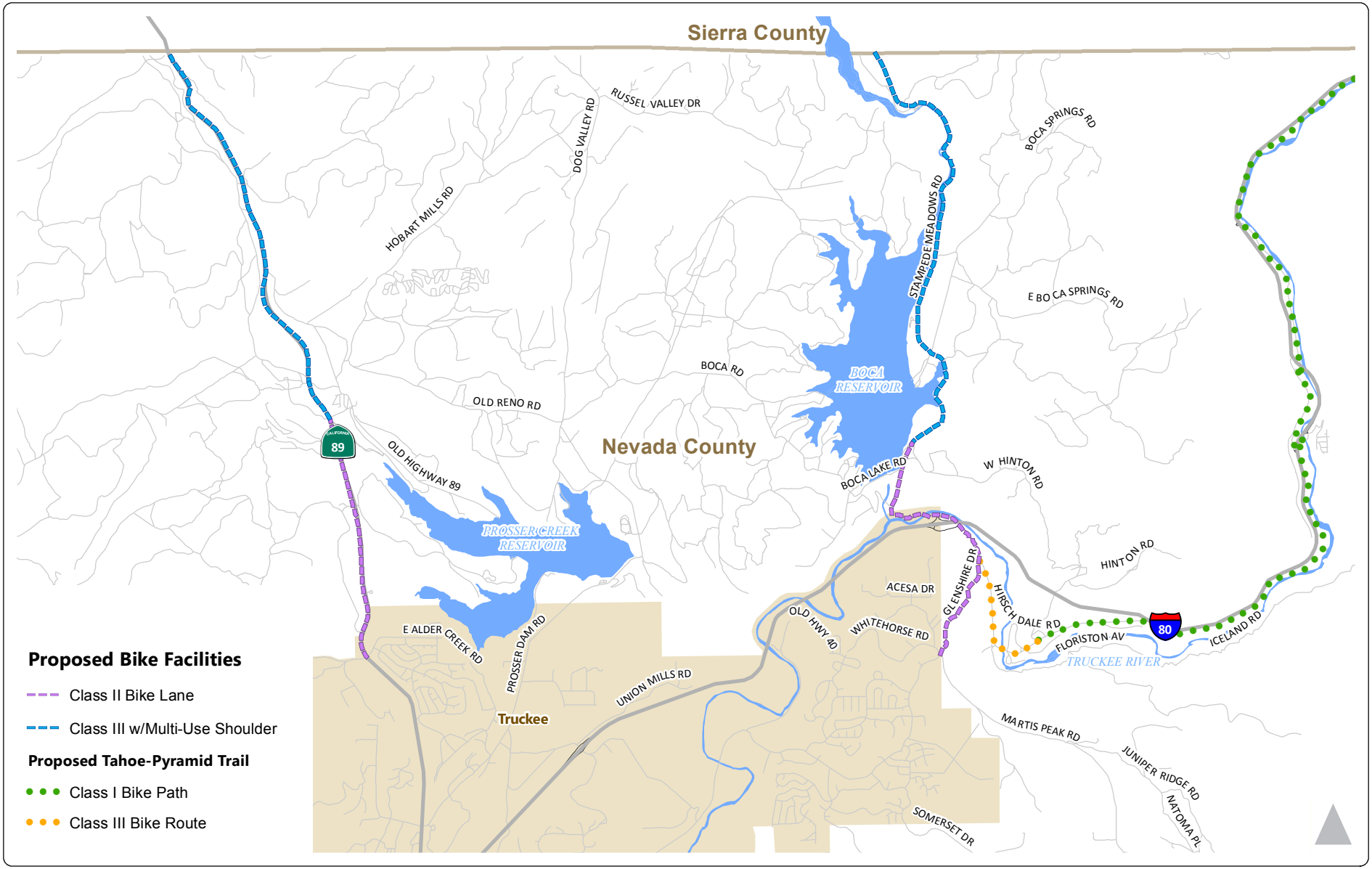
PROPOSED BICYCLE FACILITIES

FIGURE 5-1C



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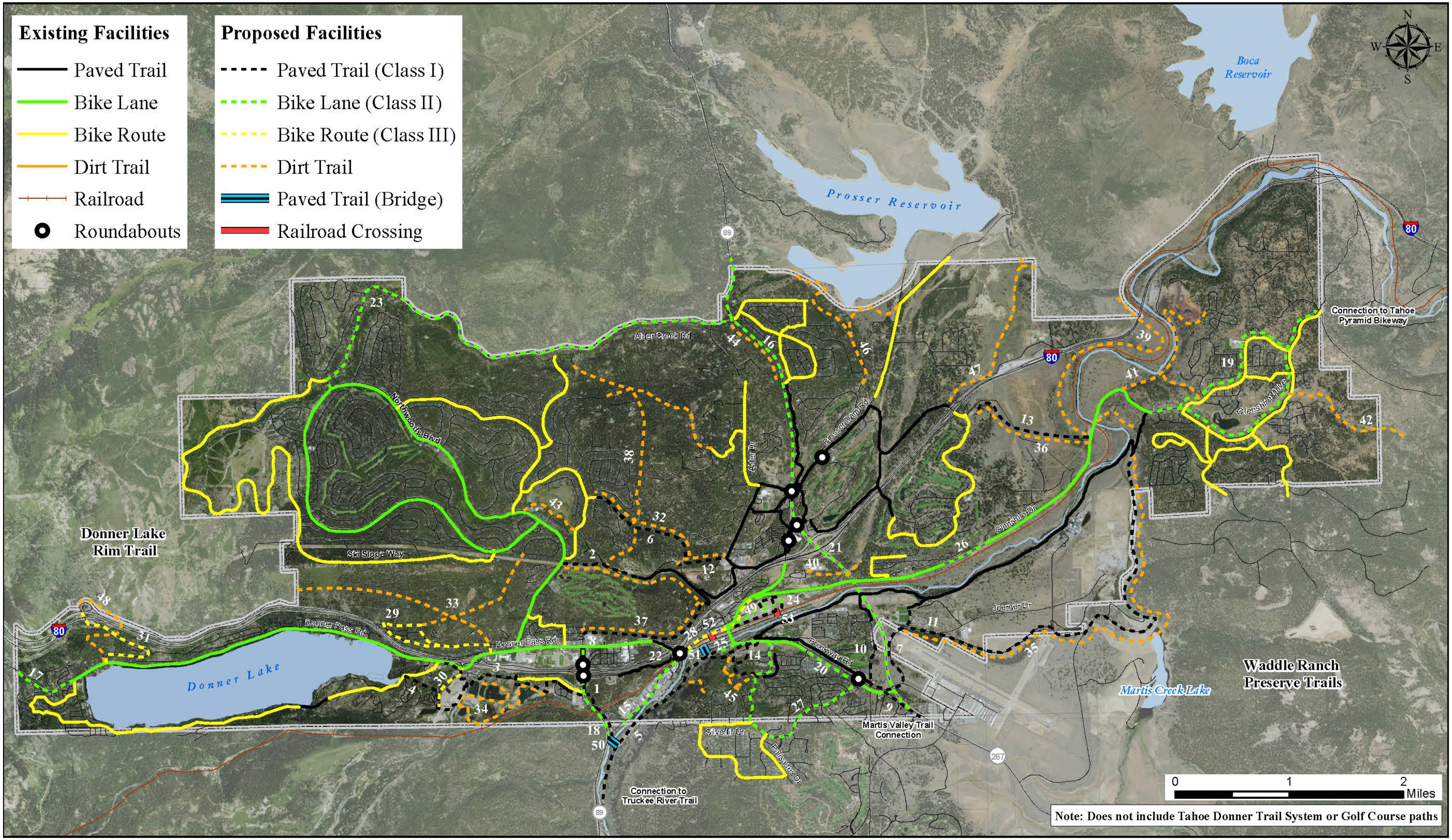
PROPOSED BICYCLE FACILITIES

FIGURE 5-1D


Existing Facilities
Paved Trail
Bike Lane
Bike Route
Dirt Trail
Railroad
Roundabouts
Proposed Facilities
Paved Trail (Class I)
Bike Lane (Class II)
Bike Route (Class III)
Dirt Trail
Paved Trail (Bridge)
Railroad Crossing
Boca Reservoir
Prosser Reservoir
Donner Lake
Martis Creek Lake
Donner Lake Rim Trail
Waddle Ranch Preserve Trails
Connection to Tahoe Pyramid Bikeway
Connection to Truckee River Trail
Martis Valley Trail Connection
Alder Creek Rd
Northwoods Blvd
Ski Slope Way
Donner Pass Rd
Prosser Dam Rd
Glenshire Dr
Glenshire Drive
Joerger Dr
Brockway Rd
Silverfir Dr
Palisades Dr
Alder Dr
Miles
Note: Does not include Tahoe Donner Trail System or Golf Course paths

FEHR PEERS

Source: 2015 Truckee Trails and Bikeways Master Plan

PROPOSED BICYCLE FACILITIES

FIGURE 5-1E

TABLE 5-1: SUMMARY OF PROPOSED BIKEWAYS – GRASS VALLEY					
Improvement	**Limits**	**Distance (mi)**	**Cost**	**Benefit Score**	**Feasibility Score**
Class I bike path to Sierra College	Sierra College Dr. to Sierra College southwest parking lot	0.14	$73,500	Med	High
Class I bike path overcrossing of SR 20	Freeman Ln. to SR 20 NB off ramp	0.02	$710,000	Med	Low
Class I bike path in Loma Rica Ranch development	Segment 4 to Brunswick Rd.	0.34	$179,300	Low	Med
Class I bike path in Loma Rica Ranch development	Sutton Way to Wolf Creek	1.05	$555,300	Low	Low
Class I bike path improvements to Litton Trail	Sierra College Dr. north of campus to Sierra College Dr. south of campus	1.03	$546,100	Med	Low
Class I bike path from Litton Trail to NUHS	Segment 1 to NUHS Dwy.	0.45	$235,500	Med	Med
Class I bike path along Idaho Maryland Rd.	SR 20 ramps to Sutton Way	1.01	$532,400	Low	Low
Class I bike path along Brunswick Rd.	Town Talk Rd. to Idaho Maryland Rd.	0.61	$320,500	Low	Med
Class II bike lanes on Sutton Way	Brunswick Rd. to Idaho Maryland Rd.	0.81	$322,200	Med	Med
Class II bike lanes on Sierra College Dr.	Litton trail to Nevada City Hwy.	0.23	$48,400	High	High
Class II bike lanes on Ridge Rd.	Rough & Ready Hwy. to Nevada City Hwy.	0.77	$163,200	High	Med
Class II bike lanes on Old Tunnel Rd.	Brunswick Rd. to Banner Lava Cap Rd.	0.52	$163,200	Med	Med
Class II bike lanes on Nevada City Hwy.	Joersche Dr. to Banner Lava Cap Rd.	1.05	$1,118,500	High	Low
Class II bike lanes on Morgan Ranch Dr. extended to Ridge Rd.	Vistamont Dr. to Ridge Rd.	0.07	$15,600	Med	High
Class II bike lanes on McCourtney Rd.	Brighton St. to Freeman Ln.	0.23	$49,600	Low	High
Class II bike lanes on Idaho Maryland Rd.	SR 20 ramps to Brunswick Rd.	1.52	$720,000	Med	Low
Class II bike lanes on Hughes Rd.	Litton trail to Nevada City Hwy.	0.45	$95,400	Med	High
Class II bike lanes on Freeman Ln.	McCourtney Rd. to E McKnight Way	0.88	$257,100	Med	Med
Class II bike lanes on Dorsey Dr.	Nevada City Hwy. to Sutton Way	0.85	$541,400	Med	Low
Class II bike lanes on Colfax Ave. under SR 20	Auburn St. to Ophir St.	0.40	$84,600	Med	High
Class II bike lanes on Brunswick Rd.	Idaho Maryland Rd. to Bet Rd.	0.59	$124,000	Med	Med
Class II bike lanes on Brunswick Rd.	Nevada City Hwy. to Idaho Maryland Rd.	1.77	$643,200	Med	Low
Class II bike lane completion on E Main St. north of Idaho Maryland Rd.	Scandling Ave. to Idaho Maryland Rd. roundabout	0.08	$16,100	Med	High
Class III with multi-use shoulder on La Barr Meadows Rd.	McKnight Way to Southern City Limits	0.34	$136,600	Low	Low
Class III with multi-use shoulder on Colfax Hwy. 174	Ophir St. to Mercury Dr.	0.47	$153,100	Low	Low
Class III with multi-use shoulder on Allison Ranch Rd.	McCourtney Rd. to Southern City Limits	0.66	$383,500	Low	Low
Class III bike route on S Church St.	W Main St. to Chapel St.	0.35	$600	Med	High

TABLE 5-1: SUMMARY OF PROPOSED BIKEWAYS – GRASS VALLEY					
Improvement	**Limits**	**Distance (mi)**	**Cost**	**Benefit Score**	**Feasibility Score**
Class III bike route on S Auburn St.	W Main St. to E McKnight Way	1.33	$2,100	Med	High
Class III bike route on Richardson St.	Alta St. to E Main St.	0.43	$700	Med	High
Class III bike route on Packard Dr.	Wlker Dr. to Brighton St.	0.57	$900	Low	High
Class III bike route on Mill St.	W Main St. to McCourtney Rd.	0.81	$1,300	Med	High
Class III bike route on Main St.	Alta St. to Idaho Maryland Rd.	0.75	$1,200	Med	High
Class III bike route on Chapel St. / Brighton St.	Mill St. to McCourtney Rd.	0.89	$1,400	Low	High
Class III bike route on Bennett St./Ophir St.	E Main St. to Colfax Ave.	0.42	$700	Med	High
Class III bike route on Alta St.	Ridge Rd. to W Main St.	0.29	$500	Low	High
Source: Fehr & Peers, 2016.					

TABLE 5-2: SUMMARY OF PROPOSED BIKEWAYS – NEVADA CITY					
Improvement	**Limits**	**Distance (mi)**	**Cost**	**Benefit Score**	**Feasibility Score**
Class I bike path behind Seven Hills and Deer Creek Schools	Reward St. to Deer Creek Elementary School	0.53	$280,000	High	Mid
Class III with multi-use shoulder on Gold Flat Rd.	Gracie Rd. to Ridge Rd.	1.27	$736,100	Mid	Low
Class III bike route on Zion St. / Sacramento St.	Ridge Rd. to S Pine St.	0.76	$1,200	High	High
Class III bike route on Willow Valley Rd.	Nevada St. to Nevada City city limits	0.15	$200	Low	High
Class III bike route on W Broad St.	SR 49 to Broad St.	0.49	$800	Mid	High
Class III bike route on Searls Ave.	Ridge Rd. to Sacramento St.	0.80	$1,300	Mid	High
Class III bike route on Sacramento St.	S Pine St. to Broad St.	0.47	$700	Low	High
Class III bike route on S Pine St.	Sacramento St. to Broad St.	0.42	$700	High	High
Class III bike route on Reward St.	Reward St. to Heilman Ct.	0.11	$200	High	High
Class III bike route on Old Downieville Hwy / Monroe St.	Nevada City city limits to Broad St.	0.58	$900	High	High
Class III bike route on Nimrod St.	Boulder St. to Gracie Rd.	0.58	$900	Low	High
Class III bike route on Nevada St.	Boulder St. to SR 49	0.86	$1,400	Low	High
Class III bike route on E Broad St.	SR 49 to Broad St.	0.38	$600	Mid	High
Class III bike route on Broad St. / Boulder St.	W Broad St. to Nevada City city limits	0.69	$1,100	High	High
Bicycle detection project at SR 49 / E Broad St.	SR 49 / E Broad St.	N/A	$10,000	High	High
Source: Fehr & Peers, 2016.					

TABLE 5-3: SUMMARY OF PROPOSED BIKEWAYS – TRUCKEE					
Improvement	**Limits**	**Type**	**Distance (mi)**	**Cost**	**Community Priority Score**
Paved Trails (Class I)					
Tahoe Donner Trail	End of Trout Creek Trail Phase I to Northwoods Blvd.	Paved Trail (Class I)	0.7	$2,000,000	High
Truckee River Legacy Trail Phase 5A	SR 89 to Coldstream	Paved Trail (Class I)	1.5	$2,250,000	High
Truckee River Legacy Trail Phase 5B	Coldstream to Donner Memorial State Park	Paved Trail (Class I)	0.8	$1,250,000	High
Truckee River Legacy Trail Phase 4	Palisades Dr. to SR 89 (including bridge near SR 89)	Paved Trail (Class I)	2.3	$4,500,000	High
Mousehole Project	Deerfield Dr./89 South to West River St.	Paved Trail (Class I)	0.5	$14,000,000	HIgh
Trout Creek Trail to Lausanne Way/Basel Place	End of Trout Creek Trail Phase I to Lausanne Way	Paved Trail (Class I)	1	$2,000,000	High
Joerger Ranch-Riverview Sports Park Connector	Joerger Dr. at north end of Joerger Ranch to Joerger Ranch/Martis Valley Trail Connector	Paved Trail (Class I)	0.9	$1,000,000	High
Pioneer Bike Path Extension	Indian Jack Rd. to Frates Ln.	Paved Trail (Class I)	1.3	$3,250,000	Medium
Joerger Ranch-Martis Valley Trail Connector	South end of Joerger Ranch to south Town limits	Paved Trail (Class I)	0.5	$750,000	Medium
Joerger Ranch-Brockway Rd. Connector	Western side of Joerger Ranch to Brockway Rd.	Paved Trail (Class I)	0.3	$750,000	Medium
Martis Creek Lake Trail	Truckee River Legacy Trail to Martis Creek Dam Road to Riverview Sports Park	Paved Trail (Class I)	3.4	$5,100,000	Medium
Trout Creek Trail-Pioneer Bike Path Connector	Comstock Dr. to Trout Creek Trail	Paved Trail (Class I)	0.4	$600,000	Medium
Truckee River Bridge	West River St. connecting the Truckee River Legacy Trail and West River Street in the vicinity of Riverside Dr.	Paved Trail (Class I)	0.1	$1,000,000	Medium
Old Greenwood-Glenshire Dr. Bridge Connector	Overland Trail/Fairway Dr. intersection to Glenshire Dr. Truckee River bridge	Paved Trail (Class I)	1.2	$1,800,000	Medium
W. River Railroad Crossing	Donner Pass Rd. to West River St. at Spring St.	Paved Trail (Class I)	0.1	$15,000,000	Low

TABLE 5-3: SUMMARY OF PROPOSED BIKEWAYS – TRUCKEE					
Improvement	**Limits**	**Type**	**Distance (mi)**	**Cost**	**Community Priority Score**
E. River Railroad Crossing	Railyards Master Plan Area to East River St. approximately 1,800 feet east of Bridge St.	Paved Trail (Class I)	0.1	$15,000,000	Low
Railyard Master Plan Shared Use Paths	As described in Railyard Master Plan	Paved Trail (Class I)	0.9	$1,650,000	Low
Hilltop Master Plan	Palisade Dr. at Ponderosa Dr. to Hilltop	Paved Trail (Class I)	0.7	$1,500,000	Low
Class II Bike Lanes					
West River Street	Riverside Drive to Placer County line	Class II Bike Lanes	1.0	$1,500,000	High
SR 89	Henness Rd. to north Town limits	Class II Bike Lanes	2.4	$3,600,000	High
Donner Pass Road	S. Shore Dr. to west Town limits	Class II Bike Lanes	0.6	$900,000	High
SR 89	Donner Pass Rd. to south Town limits	Class II Bike Lanes	0.9	$50,000	High
South River Street	Brockway Rd. along South River St.	Class II Bike Lanes	0.1	$150,000	High
Glenshire Dr.	1500' west & 1000' east of Highland Ave.	Class II Bike Lanes	0.5	$500,000	High
Glenshire Dr. & Dorchester Dr.	Glenshire Dr./Dorchester Dr. loop	Class II Bike Lanes	3.7	$5,550,000	High
Brockway Rd.	Truckee River Regional park to Joerger Ranch	Class II Bike Lanes	0.5	$750,000	Medium
Highway 267	Henness Rd. to south Town limits	Class II Bike Lanes	1.8	$50,000	Medium
McIver Crossing	Donner Pass Rd. to West River St.	Class II Bike Lanes	0.1	$15,000	Medium
Alder Creek Rd. & Fjord Rd.	Northwoods Blvd. to SR 89	Class II Bike Lanes	4.5	$6,750,000	Medium
Railyard Master Plan Bike Lanes	As described in Railyard Master Plan	Class II Bike Lanes	0.8	$35,000	Medium
Palisades Dr./Ponderosa Dr./Martis Valley Rd.	Brockway Rd./Palisades Dr. intersection to Brockway Rd./Martis Valley Rd. intersection	Class II Bike Lanes	2	$3,000,000	Low
Class III Bike Routes					

TABLE 5-3: SUMMARY OF PROPOSED BIKEWAYS – TRUCKEE					
Improvement	**Limits**	**Type**	**Distance (mi)**	**Cost**	**Community Priority Score**
Donner Pass Rd.	McIver Crossing to Jibboom St.	Class III Bike Routes	0.7	$3,000	Low
Armstrong Tract	Highway Rd. East to Sierra Dr. East, loop Martis St. Palisade St. & Thomas Dr.	Class III Bike Routes	1.7	$8,500	Low
Coldstream Road	I-80 to end of Cold Stream Rd.	Class III Bike Routes	0.4	$2,000	Low
Donner Lake Rd.	Donner Pass Rd to I-80 interchange	Class III Bike Routes	1.2	$4,500	Low
Dirt Trails					
Trout Creek Trail Network	All paved segments of Trout Creek Trail	Dirt Trail	2.9	$580,000	Medium
Tahoe-Donner South Trails	North of Interstate 80, south of Tahoe-Donner	Dirt Trail	3	$600,000	Medium
Coldstream Specific Plan Trail	Coldstream Specific Plan area	Dirt Trail	1.9	$380,000	Medium
Martis Creek Trail Network	All paved segments of Martis Creek Trails	Dirt Trail	4.3	$860,000	Medium
Old Greenwood Glenshire Connector	Old Greenwood to Glenshire Drive	Dirt Trail	1.2	$240,000	Medium
Bridge Street Gateway Connector	Bridge Street to Frates Ln.	Dirt Trail	1.2	$260,000	Medium
Alder Hill Trails	East of Tahoe-Donner, north of Trout Creek	Dirt Trail	3.5	$700,000	Low
Glenshire Dr.-Prosser Creek Trail	Glenshire Dr. Truckee River bridge to Prosser Creek	Dirt Trail	2.3	$460,000	Low
Old Greenwood -Donner Pass Rd. Connector	Old Greenwood to Donner Pass Road at the Town of Truckee Public Service Center	Dirt Trail	0.6	$120,000	Low
Glenshire Trails	East of Truckee River in Glenshire	Dirt Trail	2.3	$460,000	Low
Eastern Glenshire Trail	Glenshire Drive toward eastern Town boundary	Dirt Trail	1.2	$240,000	Low
Northwoods Blvd.-Lausanne Rd. Connector	Northwoods Blvd. to Lausanne Rd.	Dirt Trail	0.5	$120,000	Low
State Route 89 N	Rainbow Dr. to Alder Creek Rd.	Dirt Trail	0.6	$120,000	Low
Hilltop-Truckee River Legacy Trail Connections	Hilltop to Truckee River Legacy Trail	Dirt Trail	1	$200,000	Low
Prosser Creek Reservoir Trails	South of Prosser Creek Reservoir	Dirt Trail	1	$200,000	Low
Prosser Village Rd.-Prosser Creek Trail	Prosser Village Rd./Interstate 80 interchange to Prosser Creek	Dirt Trail	1	$200,000	Low

TABLE 5-3: SUMMARY OF PROPOSED BIKEWAYS – TRUCKEE					
Improvement	**Limits**	**Type**	**Distance (mi)**	**Cost**	**Community Priority Score**
West End Trail	Donner Pass Road near Donner Lake Road to Billie Mack Road	Dirt Trail	1.1	$220,000	Low
Source: Fehr & Peers, 2016.					

TABLE 5-4: SUMMARY OF PROPOSED BIKEWAYS – NEVADA COUNTY					
Improvement	**Limits**	**Distance (mi)**	**Cost**	**Benefit Score**	**Feasibility Score**
County Roadways					
Class I bike path along Combie Rd.	SR 49 to existing Class I	0.74	$390,400	High	Med
Class I bike path along I-80	SR 20/I-80 interchange to Eagle Lakes Rd. and Eagle Lakes Rd. to Hampshire Rocks Rd.	1.53	$5,008,000`	Mid	Low
Tahoe-Pyramid Trail (Class I bike path)	Hinton Rd./Hirschdale Rd./ intersection to Nevada/Sierra County Line	8.93	$4,713,000	Mid	Low
Class II bike lanes on Brunswick Rd.	Grass Valley city limits to Bet Rd.	0.20	$41,900	High	High
Class II bike lanes on Nevada City Hwy	Nevada City city limits to Grass Valley city limits	0.09	$30,000	High	High
Class II bike lanes on Old Tunnel Rd.	Banner Lava Cap Rd. to Grass Valley city limits	0.09	$70,000	Mid	High
Class II bike lanes on Pleasant Valley Rd.	Lake Wildwood Dr. to SR 20	1.37	$290,200	High	Med
Class II bike lanes on Pleasant Valley Rd.	Wildflower Dr. to Lake Wildwood Dr.	1.58	$1,058,000	Mid	Low
Class II bike lanes on Ridge Rd.	Pear Orchard Rd. to Nevada City city limits	0.54	$399,000	Mid	Med
Class II bike lanes on Glenshire Dr./Stampede Meadows Rd.	Truckee eastern Town limit to Hinton Rd.	2.64	$1,950,200	Mid	Med
Class II bike lanes on Ridge Rd.	Rough & Ready Hwy to city limits	1.06	$660,300	Mid	Low
Class II bike lanes on Ridge Rd.	Grass Valley city limits to Pear Orchard Rd.	0.91	$572,200	Mid	Low

TABLE 5-4: SUMMARY OF PROPOSED BIKEWAYS – NEVADA COUNTY					
Improvement	**Limits**	**Distance (mi)**	**Cost**	**Benefit Score**	**Feasibility Score**
Class II bike lanes on Rough & Ready Hwy	Ridge Rd. to Grass Valley city limits	0.77	$486,000	Mid	Med
Class III bike route on Adam Ave. / Walker Dr. / Butler Rd.	Rough & Ready Hwy to city limits	0.78	$1,300	Low	High
Class III bike route on Alta St.	Ridge Rd. to Grass Valley city limits	0.56	$900	Mid	High
Class III bike route on Eagle Lakes Rd	Eagle Lakes Rd. western terminus near SR 20 to I-80at Placer County border	2	$3,200	Mid	High
Class III with multi-use shoulder on Donner Pass Road	Sugar Bowl Rd. to Truckee western Town limit	2.79	$1,619,000	Mid	High
Class III bike route on Auburn Rd.	Archery Rd. to SR 49	4.65	$7,400	Low	High
Class III bike route on Banner Lava Cap Rd.	Idaho Maryland Rd. to Red Dog Rd.	2.50	$4,000	Low	High
Class III bike route on Bitney Springs Rd.	Pleasant Valley Rd. to Gold Fork Rd.	3.54	$5,700	Low	High
Class III bike route on Hirschdale Rd. (part of Tahoe-Pyramid Trail)	Hinton Rd. to Glenshire Drive	1.23	$2,000	Mid	Low
Class III bike route on Lower Colfax Rd.	Rattlesnake Rd. to SR 174	6.62	$10,600	Mid	Low
Class III bike route on Old Downieville Hwy	SR 49 to Nevada City city limits	1.52	$2,400	Low	High
Class III bike route on Pleasant Valley Rd.	SR 49 to Bitney Springs Rd.	8.96	$14,300	Mid	High
Class III bike route on Purdon Rd.	Tyler Foote Crossing to SR 49	28.58	$45,700	Low	Med
Class III bike route on Red Dog Rd.	Quaker Hill Cross to Banner Lava Cap Rd.	1.60	$2,600	Low	High
Class III bike route on Willow Valley Rd.	Scotts Valley Rd. to SR 20	0.29	$500	Low	High
Class III with multi-use shoulder on Allison Ranch Rd.	Grass Valley city limits to SR 49	3.02	$1,753,300	Low	Low
Class III with multi-use shoulder on Auburn Rd.	McCourtney Rd. to Archery Rd.	1.27	$737,200	Low	Low
Class III with multi-use shoulder on Banner Lava Cap Rd.	Nevada City Hwy to Gracie Rd.	2.32	$1,345,500	Mid	Low
Class III with multi-use shoulder on Banner Lava Cap Rd.	Gracie Rd. to Idaho Maryland Rd.	1.23	$715,400	Low	Low
Class III with multi-use shoulder on Bitney Springs Rd.	Gold Fork Rd. to Empress Mine Rd.	1.65	$957,300	Mid	Low

TABLE 5-4: SUMMARY OF PROPOSED BIKEWAYS – NEVADA COUNTY					
Improvement	**Limits**	**Distance (mi)**	**Cost**	**Benefit Score**	**Feasibility Score**
Class III with multi-use shoulder on Bitney Springs Rd.	Empress Mine Rd. to Rough & Ready Hwy	1.89	$1,066,000	Mid	Low
Class III with multi-use shoulder on Brunswick Rd.	Bet Rd. to Hwy 174	1.23	$414,600	High	Med
Class III with multi-use shoulder on Dog Bar Rd.	La Barr Meadows Rd. to Alta Sierra Dr.	1.78	$622,600	High	Low
Class III with multi-use shoulder on Dog Bar Rd.	Alta Sierra Dr. to Mt Olive Rd.	1.94	$1,127,900	High	Low
Class III with multi-use shoulder on Dog Bar Rd.	Mt Olive Rd. to Magnolia Rd.	5.43	$3,156,500	Low	Low
Class III with multi-use shoulder on Idaho Maryland Rd.	Brunswick Rd. to Banner Lava Cap Rd.	3.07	$1,653,200	Mid	Low
Class III with multi-use shoulder on Indian Springs Rd.	Pleasant Valley Rd. to Spenceville Rd.	2.22	$1,287,800	Low	Low
Class III with multi-use shoulder on La Barr Meadows Rd.	Grass Valley city limits to Dog Bar Rd.	1.62	$470,400	Mid	Med
Class III with multi-use shoulder on Lime Kiln Rd./Duggans Rd./Wolf Rd.	McCourtney Rd. to SR 49	5.97	$2,481,600	Mid	Low
Class III with multi-use shoulder on Magnolia Rd.	Dog Bar Rd. to Class I at Kingston Rd.	4.00	$2,321,400	Mid	Low
Class III with multi-use shoulder on McCourtney Rd.	Auburn Rd. to Indian Springs Rd.	4.70	$2,034,600	Mid	Low
Class III with multi-use shoulder on McCourtney Rd.	Indian Springs Rd. to Lime Kiln Rd.	5.09	$2,293,000	Mid	Low
Class III with multi-use shoulder on Newtown Rd.	SR 49 to Bitney Springs Rd.	3.93	$2,280,400	Mid	Low
Class III with multi-use shoulder on Oak Tree Rd.	SR 49 to Tyler Foote Crossing	2.67	$1,549,900	Mid	Low
Class III with multi-use shoulder on Penn Valley Dr.	SR 20 to Spenceville Rd.	0.59	$340,500	Mid	Med
Class III with multi-use shoulder on Pleasant Valley Rd.	Bitney Springs Rd. to Wildflower Dr.	2.55	$1,435,400	Mid	Low
Class III with multi-use shoulder on Rattlesnake Rd.	SR 174 to Lower Colfax Rd.	0.31	$177,400	Mid	Med
Class III with multi-use shoulder on Red Dog Rd.	Nevada City city limits to Quaker Hill Cross	2.45	$1,423,200	Mid	Low
Class III with multi-use shoulder on Rough & Ready Hwy	Bitney Springs Rd. to Ridge Rd.	1.34	$611,300	Mid	Low
Class III with multi-use shoulder on Rough & Ready Hwy	SR 20 to Bitney Springs Rd.	4.07	$2,225,400	Mid	Low
Class III with multi-use shoulder on Spenceville Rd.	Penn Valley Dr. to Indian Springs Rd.	1.51	$878,500	Mid	Low

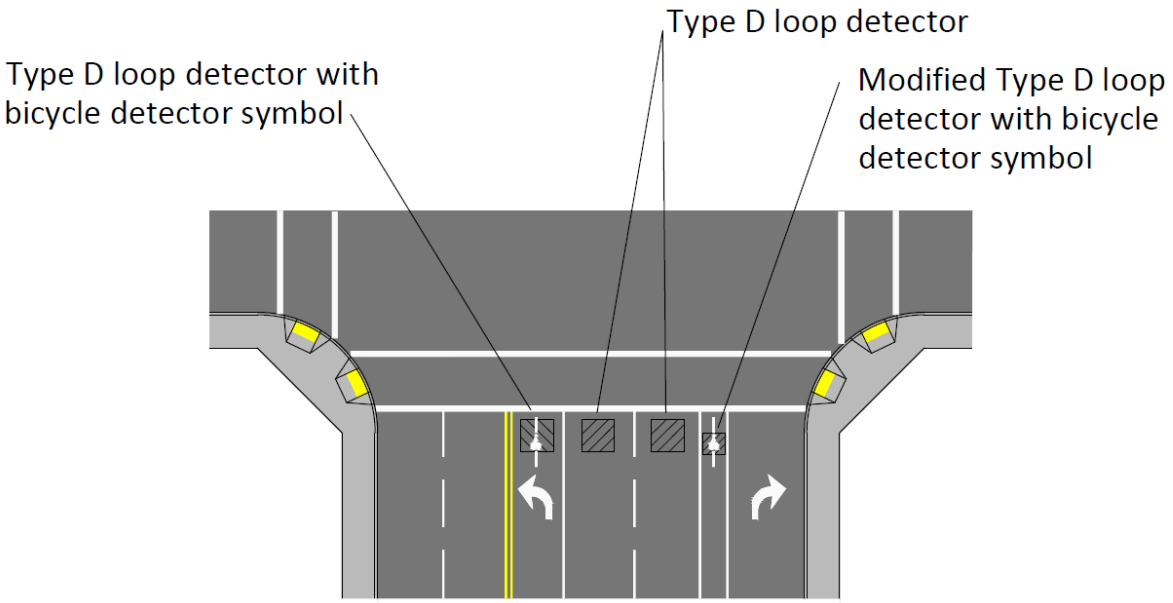
TABLE 5-4: SUMMARY OF PROPOSED BIKEWAYS – NEVADA COUNTY					
Improvement	**Limits**	**Distance (mi)**	**Cost**	**Benefit Score**	**Feasibility Score**
Class III with multi-use shoulder on Tyler Foote Crossing	SR 49 to Oak Tree Rd.	3.33	$1,931,400	Mid	Low
Class III with multi-use shoulder on Tyler Foote Crossing	Oak Tree Rd. to Cammena Rd.	1.89	$1,100,000	Low	Low
Class III with multi-use shoulder on Willow Valley Rd.	Nevada City city limits to Scotts Valley Rd.	1.50	$868,500	Low	Low
Class III with multi-use shoulder on Donner Pass Rd.	I-80/Donner Pass Rd. interchange at Soda Springs to Sugar Bowl Rd.	3.60	$2,091,100	Mid	Med
Class III with multi-use shoulder on Stampede Meadows Rd.	Hinton Rd. to Nevada/Sierra County line	4.34	$2,522,300	Low	Med
Caltrans Highways					
Class II bike lanes on SR 89	Truckee northern Town limit to Hobart Mills Rd.	1.99	$1,474,200	Mid	Med
Class III with multi-use shoulder on SR 174	Grass Valley City Limits to Rattlesnake Rd.	1.15	$602,100	High	Low
Class III with multi-use shoulder on SR 174	Brunswick Rd. to You Bet Rd.	2.18	$1,125,000	High	Low
Class III with multi-use shoulder on SR 174	Rattle Snake Rd. to Brunswick Rd.	1.38	$757,900	Mid	Low
Class III with multi-use shoulder on SR 174	You Bet Rd. to Lower Colfax Rd.	3.46	$2,011,600	Mid	Low
Class III with multi-use shoulder on SR 174	Lower Colfax Rd. to county limits	1.17	$681,100	Mid	Low
Class III with multi-use shoulder on SR 20	Nevada St. to Willow Valley Rd.	3.77	$2,188,600	Mid	Low
Class III with multi-use shoulder on SR 20	Willow Valley Rd. to Casci Rd.	4.69	$2,724,500	Mid	Low
Class III with multi-use shoulder on SR 20	Casci Rd. to Washington Rd.	4.22	$2,450,300	Mid	Low
Class III with multi-use shoulder on SR 20	Washington Rd. to Chalk Bluff Rd.	3.38	$1,960,800	Mid	Low
Class III with multi-use shoulder on SR 20	Chalk Bluff Rd. to county limits	5.99	$3,479,900	Mid	Low
Class III with multi-use shoulder on SR 49	Combie Rd. to county limits	2.37	$113,500	High	Med
Class III with multi-use shoulder on SR 49	Auburn Rd. to Combie Rd.	5.81	$393,100	High	Med
Class III with multi-use shoulder on SR 49	Newtown Rd. to Old Downieville Hwy	0.44	$253,200	Mid	Med
Class III with multi-use shoulder on SR 49	Crestview Dr. to Allison Ranch Rd.	2.54	$223,300	Mid	Med

TABLE 5-4: SUMMARY OF PROPOSED BIKEWAYS – NEVADA COUNTY					
Improvement	**Limits**	**Distance (mi)**	**Cost**	**Benefit Score**	**Feasibility Score**
Class III with multi-use shoulder on SR 49	Tyler Foote Crossing to Newtown Rd.	8.12	$4,575,000	High	Low
Class III with multi-use shoulder on SR 49	Oak Tree Rd. to Pleasant Valley Rd.	2.52	$1,462,100	Mid	Low
Class III with multi-use shoulder on SR 49	Pleasant Valley Rd. to Tyler Foote Crossing	1.09	$632,600	Mid	Low
Class III with multi-use shoulder on SR 49	Old Downieville Hwy to Nevada City city limits	1.13	$657,100	Mid	Low
Class III with multi-use shoulder on SR 49	Allison Ranch Rd. to Auburn Rd.	2.35	$1,229,800	Mid	Low
Class III with multi-use shoulder on SR 49	County limits to Oak Tree Rd.	2.30	$1,335,800	Mid	Low
Class III with multi-use shoulder on SR 89	Hobart Mills Rd to Nevada/Sierra County line	3.71	$2,152,700	Mid	Med
Source: Fehr & Peers, 2016.					

5.3 PROPOSED ADDITIONAL BICYCLE IMPROVEMENT PROJECTS

5.3.1 Bicycle Detection

The California MUTCD requires the provision of bicycle detection on all new and modified approaches to traffic-actuated signals. Research has shown that Type D loop detectors are most capable of detecting bicyclists. This plan recommends Type D detectors at the limit lines of actuated signals so that bicyclists can be detected from any lane. Bike lanes at signalized intersections should also include modified Type D loop detectors.



Other general recommendations for bicycle loop detection include the following:

- Regularly calibrate detectors so that they are sensitive to the metal in bicycle frames.
- Apply pavement stencils above bicycle loop detectors so that cyclists will know where to position their bicycles to actuate the signal.
- Consider alternative detection methods including video image detectors that can extend green time for slower approaching vehicles such as bicycles, and detect non-metallic bicycles like those made from carbon fiber.

5.3.2 Bicycle Parking

Bicycle parking is needed in commercial areas, schools, and other major destinations, and should be provided where there is space and demand. Due to roadway and sidewalk width limitations, many areas of downtown Grass Valley and downtown Nevada City may not have adequate space to install bicycle racks. In these areas, signs, parking meters, and other objects may provide enough parking capacity. Public works departments should be responsive to requests for bicycle racks even in areas where space is difficult to find.

5.3.3 Bike Route Signage

During the public outreach sessions, residents and staff expressed interest in improving wayfinding for bicyclists in the county. Wayfinding signage includes Class III bike route signs, and other signs that direct riders or identify a route of particular significance. For example, along with bike route signage on some County roads, cyclists also requested individualized signs for different recreational loops, and for routes to popular destinations like schools and shopping centers. As a general rule, all wayfinding systems should convey direction, destination, and distance.

Residents also expressed interest in Share the Road signs, which may be used in conjunction with wayfinding signs to alert motorists to the presence of cyclists. The latest research from the American Association of State Highway and Transportation Officials (AASHTO) indicates that these signs do not significantly improve conditions for cycling and should not serve as a replacement for appropriate geometric design.[9] Nonetheless, Share the Road signage may be used at the ends of bike lanes and multi-use shoulders, construction areas, or other areas where bicycles must transition to a mixed flow facility. Another similar sign that may be used is the "Bicycles May Use Full Lane" sign. This sign could be used on narrow or rural roadways where motorists and cyclists cannot operate side by side.

[9] *Guide for the Development of Bicycle Facilities, 4th ed.,* American Association of State Highway and Transportation Officials, 2012.

5.4 PROPOSED ENFORCEMENT, EDUCATION AND SUPPORT PROGRAMS

The Nevada County Bicycle Master Plan provides both physical recommendations, such as bike lanes, and program recommendations. Some of the program recommendations, including zoning requirements for bicycle parking, have already been covered by policies in **Chapter 2**. This section addresses future efforts to educate bicyclists and motorists, and efforts to increase the use of bicycles as a form of transportation and recreation.

5.4.1 Safe Routes to Schools

Safe Routes to Schools is a program designed to reduce local congestion around schools and improve safety by increasing the number of children walking and biking to school. A Safe Route program can integrate health, fitness, traffic relief, environmental awareness, and safety, among other elements. A typical program has four components:

Encouragement – Events, contests and promotional materials are incentives that encourage children and parents to try walking and biking.

Education – Classroom lessons teach children the skills necessary to navigate through busy streets and persuade them to be active participants in the program. Safe Routes Instructors have developed curriculum that includes on-the-bike instruction, walking instruction and lessons on health and the environment.

Engineering – A certified traffic engineer typically assists schools in developing a plan to provide a safer environment for children who walk and bike to school. This plan includes engineering improvements, enhanced enforcement, and driver outreach.

Enforcement – Working with local law enforcement, the program increases police presence around the school while developing public education efforts that increase drivers' awareness of the behaviors that endanger children.

Walking or biking to school gives children a sense of freedom and responsibility, allows them to enjoy fresh are and an opportunity to get to know their neighborhood, while arriving at school alert and ready to begin the day. Studies also show that children who are physically active perform better academically (California Department of Education, December 2002).

Communities elsewhere in California have experienced reduced traffic congestion and collisions in and around schools, and decreased speeds in residential neighborhoods. Children learn valuable traffic safety skills and responsibility and more people of all ages are able to walk and bike in the neighborhood due to improved access.

5.4.2 Adult Bicycle Education

Many less-experienced adult bicyclists are unsure how to negotiate intersections and ride with traffic on streets and roads. Adult education classes sponsored by government agencies, volunteer groups and local employers can help address this need. An annual or semi-annual class could help provide information on how to avoid collisions and citations. Instructors from elsewhere in the state or qualified local instructors or

volunteers could teach this class to cyclists, tailored to local needs and issues. Future expansion could include adding on-the-bike training.

5.4.3 Share the Road

Nevada County's jurisdictions should consider developing a Share the Road outreach program to help improve awareness of roadway etiquette for cyclists and motorists. The program could be a partnership between local cycling groups and Nevada County law enforcement. Nevada County or NCTC, in partnership with local agencies could seek annual funding to develop several elements of the program including:

- **Share the Road presentations** – to be given at public meetings, community events, employment centers and driver's education.
- **Checkpoints** – local law enforcement could establish checkpoints to distribute Share the Road information and educate cyclists and motorists. These checkpoints could be located on popular bike routes or in areas with high collision density.

6. IMPLEMENTATION

This chapter addresses the benefits and feasibility of proposed facilities, and provides recommendations for implementing priority projects.

6.1 COST ESTIMATES

Unit cost estimates were developed on a linear foot basis for material cost and adjusted to account for mobilization, minor items, design fees, construction management, and contingencies. Material costs were derived from the 2009 and 2011 editions of the *Caltrans Cost Data Book* and similar projects in Caltrans District 3 and the San Joaquin Valley Region. Right-of-way acquisitions are not included in the unit cost estimates. **Table 6-1** shows the cost estimates for bicycle facilities.

TABLE 6-1: UNIT COST ESTIMATES

Bikeway Classification	Improvement Type	Unit Cost (per linear foot)
Class I Bike Path	Bike Path	$100
	Overcrossing	$1,400
	Railroad Undercrossing	$2,000
Class II Bike Lanes	Striping Only	$40
	Widening	$140 (+$12,000 per signal)
	Widening Curb/Gutter	$600 (+$100,000 per signal)
Class III Bike Route	Signage Only	$0.30
	Multi-Use Shoulder	$110

Source: Fehr & Peers, 2016.

Table 6-2 shows the cost estimate totals for short-, mid-, and long-term projects by bikeway type.

TABLE 6-2: PROJECT COST ESTIMATES

Bikeway Classification	Grass Valley	Nevada City	Truckee	Nevada County	Total
Class I Bike Paths	$3.2 million	$280,000	$42.4 million	$10.1 million	$56 million
Class II Bike Lanes	$4.0 million	$0	$22.8 million	$9.4 million	$36.2 million
Class III Bike Routes with Multi-Use Shoulder	$673,000	$736,000	$0	$74.9 million	$76.3 million
Class III Bike Routes	$9,000	$10,000	$18,000	$62,400	$99,400
Trails (Truckee Only)	N/A	N/A	$5.9 million	N/A	$5.9 million
Total	$7.9 million	$1.0 million	$71.1 million	$94.5 million	$174.5 million

Source: Fehr & Peers, 2016.

As shown in **Table 6-2**, the total capital cost for the proposed system of bicycle facilities is approximately $174.5 million. Cost estimates for Class III bike routes with multi-use shoulder represent a large piece of expenditures, given their relatively high cost and high proposed mileage.

6.2 PROJECT PRIORITIZATION

6.2.1 Grass Valley

Proposed facilities in Grass Valley include approximately four miles of new Class I bike paths, 9.5 miles of Class II bike lanes and 7.3 miles of Class III bike routes and Class III bike routes with multi-use shoulders. To prioritize the implementation of these facilities, each was evaluated according to factors described in **Appendix C** and listed below:

- Access to key destinations
- Closure of a critical gap
- Facilitation of intercity travel to Nevada City
- Level of projected use
- Safety factors
- Project feasibility, including cost

Several high-priority projects in Grass Valley involve closing critical gaps in the existing bicycle network. These projects include Class II bike lanes on Sierra College Drive, Hughes Road, and a small segment of East Main Street north of Idaho Maryland Road. These projects have relatively high benefit because they leverage the existing network and high feasibility due to their length and lack of right-of-way constraints. A complete list of projects and prioritization can be found in **Appendix D.** The highest-priority and highest-feasibility projects, all of which could be implemented in the short-term, are described below:

Class II Bike Lanes on Sierra College Drive

This project would connect existing bike lanes on Sierra College Drive to bike lanes on Nevada City Highway. The bike lanes would close a critical gap in the existing network and facilitate relatively high levels of bicycle travel to key destinations like Sierra College, Nevada Union High School, and commercial uses on Nevada City Highway. The project would not require any street widening or additional infrastructure and is estimated to cost about $48,000.

Class I Bike Path to Sierra College

This project would convert an existing pathway from Sierra College Drive to the Sierra College southwest parking lot into a Class I bike path. The proposed bike path would have relatively high usage as it would provide a convenient cut-through for bicyclists and pedestrians accessing the campus. The project would require additional pathway widening and is estimated to cost about $74,000.

Class II Bike Lanes on Morgan Ranch Drive

This small project would connect the existing bike lanes on Morgan Ranch Drive with bike lanes on Ridge Road, closing a critical gap in the existing bicycle network. It would not require roadway widening and is estimated to cost about $16,000.

Class II Bike Lanes on Hughes Road

This project would connect existing bike lanes on Hughes Road with Nevada City Highway. The project would have similar benefits to the above Sierra College Class II bike lane project, and is estimated to cost about $95,400.

Class II Bike Lanes on East Main Street

This small project would connect existing bike lanes on East Main Street / Nevada City Highway to the Idaho Maryland Road roundabout, closing a critical gap in the existing bicycle network. The project would not require widening and is estimated to cost about $16,000.

Class III Bike Route on East and West Main Street

The proposed bike route would access key destinations in downtown Grass Valley. Signage for the route is estimated to cost about $1,000.

Notably absent from the high-priority projects are the proposed Class II bike lanes on Nevada City Highway and Old Tunnel Road that would connect Nevada City with Grass Valley. Members of the public expressed interest in these routes, but their relatively high cost would likely mean mid-term project delivery. These facilities have significant benefits that should be taken into account when prioritizing mid-term projects.

6.2.2 Nevada City

Most proposed facilities in Nevada City are Class III bike routes due to roadway width limitations. All Class III bike route projects are relatively low cost, high feasibility alternatives.

Another higher-priority project in Nevada City would install bicycle loop detectors at the signalized intersection of East Broad Street and State Route 49. Bicycle detection at this location would provide enhanced safety and access for bicyclists riding to the Eric Rood Center, or traveling to and from downtown Nevada City. The signal detection is estimated to cost about $10,000 and is considered to be a high-priority project that could be constructed in the short-term.

A complete list of projects can be found in **Appendix D**. Prioritization criteria for Nevada City were the same as those used for Grass Valley and are available in **Appendix C**.

6.2.3 Town of Truckee

The majority of the information pertaining to the Town of Truckee is directly based upon the September 2015 *Truckee Trails and Bikeways Master Plan*. As such, any projects that were completed in 2015 or 2016 in Truckee may not be reflected. Proposed facilities in Truckee include approximately 27 miles of dirt trails, 17 miles of new paved trails (Class I bike paths), 19 miles of Class II bike lanes and 4 miles of Class III bike routes. Projects were prioritized based on community benefit score and community support received during the public input process. The community benefit score includes connections to existing facilities,

access to key destinations, and facilitates walking and biking to school. Key high priority bike projects are as follows:

Truckee River Legacy Trail Phases 4, 5A and 5B

Amongst trail and bikeway projects, completion of the Truckee River Legacy Trail received the highest level of community support through workshops and online surveys. The completion of the trail would expand upon the Town's existing investment in the Truckee River Legacy Trail, provide a recreational connection to Donner Lake, and improve utilitarian bicycling from west Truckee to Downtown Truckee.

Tahoe Donner Trail and Trout Creek Trail projects

These projects would generally connect portions of eastern Truckee to Tahoe Donner. The Tahoe Donner Trail would extend the existing Trout Creek Trail to Northwoods Boulevard and the Trout Creek Trail would connect the existing Trout Creek Trail to Lausanne Way.

Mini Mousehole Project

This project is already funded through a federal TIGER grant. It will provide a paved trail (Class I bike path) tunnel underneath the Union Pacific Railroad along SR 89.

Bike Lane Projects

High priority bike lane projects according to the *Town of Truckee Trails & Bikeways Master Plan* include West River Street, SR 89, Donner Pass Road, South River Street, Glenshire Drive and Dorchester Drive.

6.2.4 Nevada County

Proposed facilities in unincorporated Nevada County include Class III bike routes with multi-use shoulders, and a small number of Class II bike lanes and Class I bike paths near developed areas. Projects in the County were evaluated based upon the following criteria, also available in **Appendix C**:

- Roadway traffic volume
- Roadway speed limit
- Vehicle and bicycle collisions
- Expected bicycle usage
- Cost

The highest feasibility, priority projects involve closing critical gaps between Nevada City and Grass Valley on Old Tunnel Road and Nevada City Highway, and extending proposed Class II bike lanes on Brunswick Road. While these projects are ideal for short-term delivery, they should be coordinated with adjacent projects in Grass Valley and Nevada City. Other high-priority projects include those listed below:

Class I Bike Path along Combie Road

This bike path would connect an existing bike path to Bear River High School to the Higgans Village Shopping Center and State Route 49. The project would access key destinations and provide a safer route for students to ride to school. The project is estimated to cost about $390,000 and could be constructed in the mid-term.

Class II Bike Lanes on Pleasant Valley Road

This project would stripe Class II bike lanes on Pleasant Valley Road from State Route 20 to Lake Wildwood Drive, connecting Lake Wildwood with Penn Valley and Class III bike routes in the area. The project is estimated to cost about $290,000 and could be constructed in the mid-term.

See **Appendix D** for a complete list of proposed bikeways and prioritization in Nevada County.

6.3 PROCEDURES FOR IMPLEMENTATION

6.3.1 Class I Bike Paths

Each of the proposed Class I bike paths will require a feasibility assessment for implementation. The feasibility assessment should identify or include:

- A preferred route
- Bike path or trail surface type (pavement versus aggregate)
- Proposed solutions to key roadway or waterway crossings
- Preliminary engineering and cost estimates
- Statements of stakeholder interest

Following a feasibility assessment, the responsible agency can fund project design and construction, add the cost to a schedule of development impact fees, or pursue grant funding.

While most Class I bike paths proposed in this plan are on city or County lands, the proposed alignment for the Seven Hills Middle School pathway is on Nevada City School District property. Nevada City should take necessary preparations to work with the school district before and during project implementation.

6.3.2 Class II Bike Lanes

Where Class II bike lanes are proposed, the responsible agency should require that roadways are modified to the desired standard for Class II bike lanes when various roadway projects are completed. Width for bike lanes can be acquired in two ways:

1. Add width to the existing roadway
2. Reduce the width of travel lanes on the existing roadway

Further feasibility assessment should determine the proposed implementation strategy for individual Class II bike lane projects.

6.3.3 Class III Bike Routes

For proposed Class III bike routes with a paved multi-use shoulder, the County can first sign these roadways as a Class III bike route with signage only and add "Share the Road" signage as appropriate. Similar to the strategy outlined for Class II bike lane projects, the County should require that roadways are modified to the desired standard for a Class III bike route with paved multi-use shoulder when various roadway projects are completed. For key segments or gap closures, the County can either fund project design and construction or pursue grant funding.

Where space for a multi-use shoulder is not possible on both sides of a roadway, preference should be given to adding shoulder width on the uphill side (also known as a "climbing lane" or "climbing shoulder") and on the inside of bends in the roadway. Shoulder width on the uphill side is beneficial to bicyclists because their speed is significantly lower when going uphill. Shoulder width on the inside of roadway bends is preferable because sight distance for vehicles is most limited through the inside of roadway bends.

The County can group the signage for all Class III bike routes into one project and apply for grant funding. This signage should include both the CAMUTCD D11-1 "Bike Route" signage, CAMUTCD W11-1 and W16-1 "Share the Road" signage, and guide signs for bicycle facilities.

6.4 FUNDING

6.4.1 Federal Funds

In 2015, the FAST Act extended previous legislation (MAP-21) as the primary source for federal transportation funding. While many of its impacts remain uncertain, the law provides for long-term important structural changes implemented with MAP-21.

Transportation Alternatives Program (TA) – This program combines the former Transportation Enhancements (TE), Federal Safe Routes to School, and Recreational Trails programs. Transportation Alternatives designates funds to regional planning agencies and states. Two percent of the amounts provided to states are allocated respectively to bike and pedestrian trails, and safe routes projects for children and persons with disabilities.

Congestion Mitigation and Air Quality (CMAQ) – This program was carried over from previous legislation and will remain largely intact. As an example of past funding amounts, CMAQ was funded at $2.26 billion in FY2013 and $2.28 billion in FY 2014.

6.4.2 Statewide Funds

The State of California uses both federal sources and its own budget to fund projects and programs. Sponsors apply directly to the state, or to regional agencies for funding, depending on the program.

Active Transportation Program (ATP) – The ATP is a consolidation of previous federal and state transportation programs including Transportation Alternatives Program, Bicycle Transportation Account and Safe Routes to School. The program focuses on promoting active transportation modes while increasing safety for non-motorized users, achieving greenhouse gas reductions, ensuring that disadvantaged communities benefit equally from these efforts.

Local Transportation Fund (LTF) - Limited amounts from the Local Transportation Fund (LTF), which is derived from a ¼ cent of the general sales tax collected statewide, can be used for bicycle facilities.

Highway Safety Improvement Program (HSIP) – This is a core federal-aid program that aims to reduce traffic fatalities and serious injuries on public roads. Caltrans administers the program in California and expects to receive $100 million for the 2012/13 Federal Fiscal Year. HSIP funds can be used for projects such as bike lane projects on local roadways, improvements to Class I multi-use paths, or for traffic calming measures. Applications that identify a history of incidents and demonstrate their project's improvement to safety are most competitive for funding.

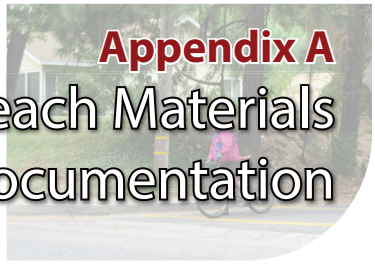
Land and Water Conservation Program – This program offers funds to states and through states to local governments for trails acquisition and development.

Environmental Justice: Context Sensitive Planning Grants – The Caltrans-administered program funds planning activities that assist low-income, minority, and Native American communities in becoming active participants in transportation planning and project development. The grant is funded by the State Highway Account.

6.4.3 Other Funding Sources

Private/local funding for bicycle projects comes primarily from development projects, either in the form of improvements constructed directly by developers or through development fee programs.

New policies at the federal level have resulted in a series of programs that promise to provide increased funding in the coming years for bicycle projects. The HUD-DOT-EPA Interagency Partnership for Sustainable Communities has generated a series of new grant programs to-date, including Urban Circulator grants, TIGER grants, and Sustainable Communities Planning grants. DOT Secretary Ray LaHood recently announced a new DOT policy initiative, indicating "well-connected walking and bicycling networks [are] an important component for livable communities."

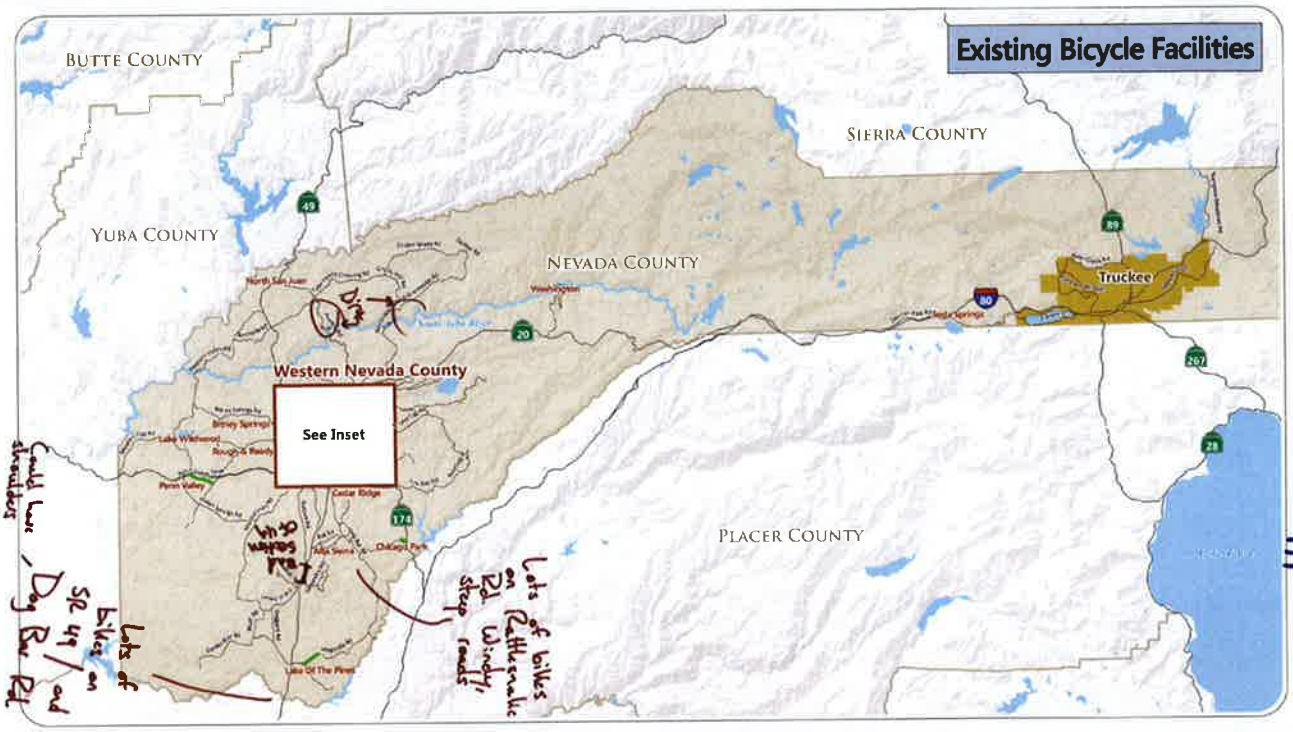


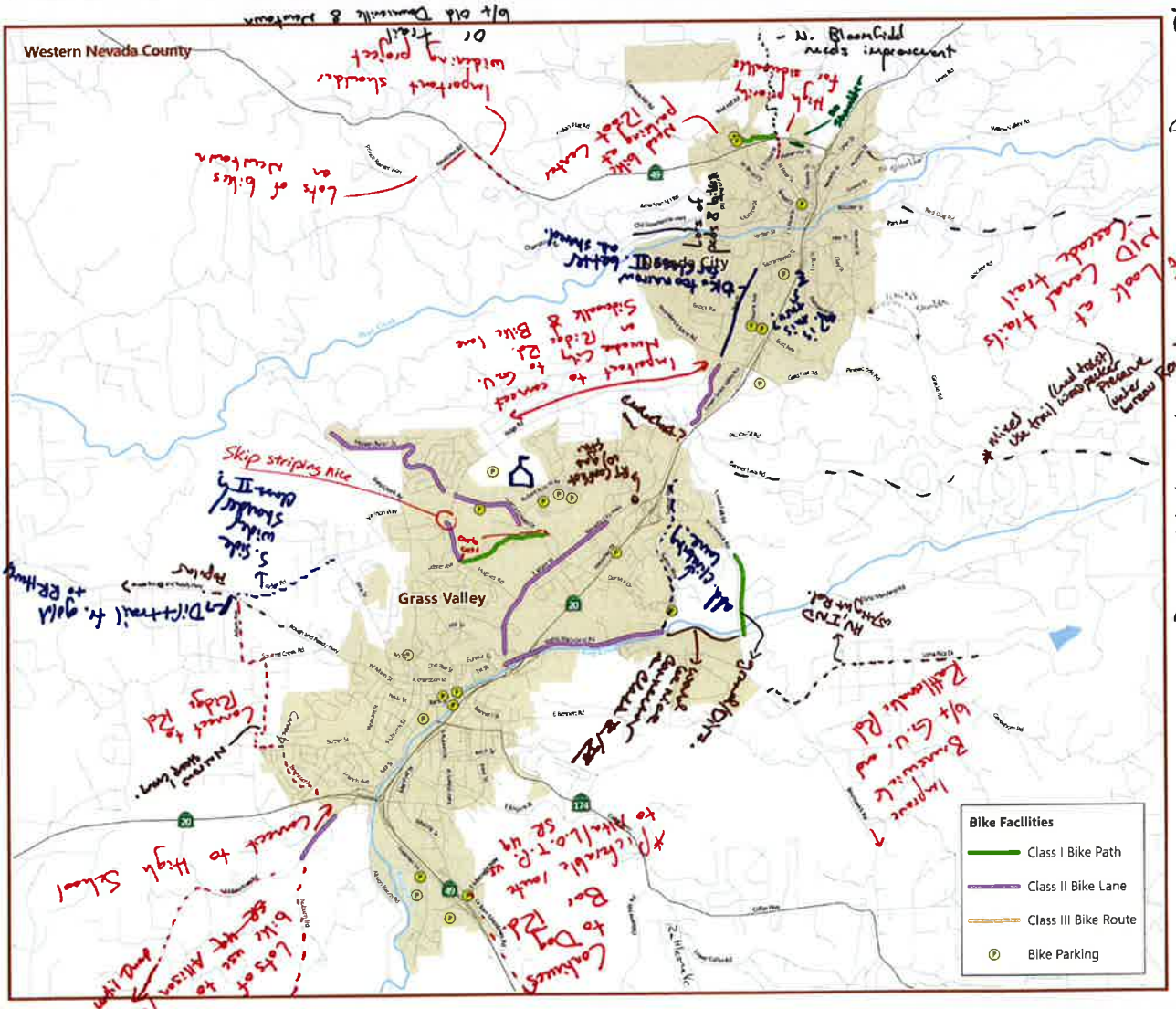
Appendix A
Public Outreach Materials and Documentation

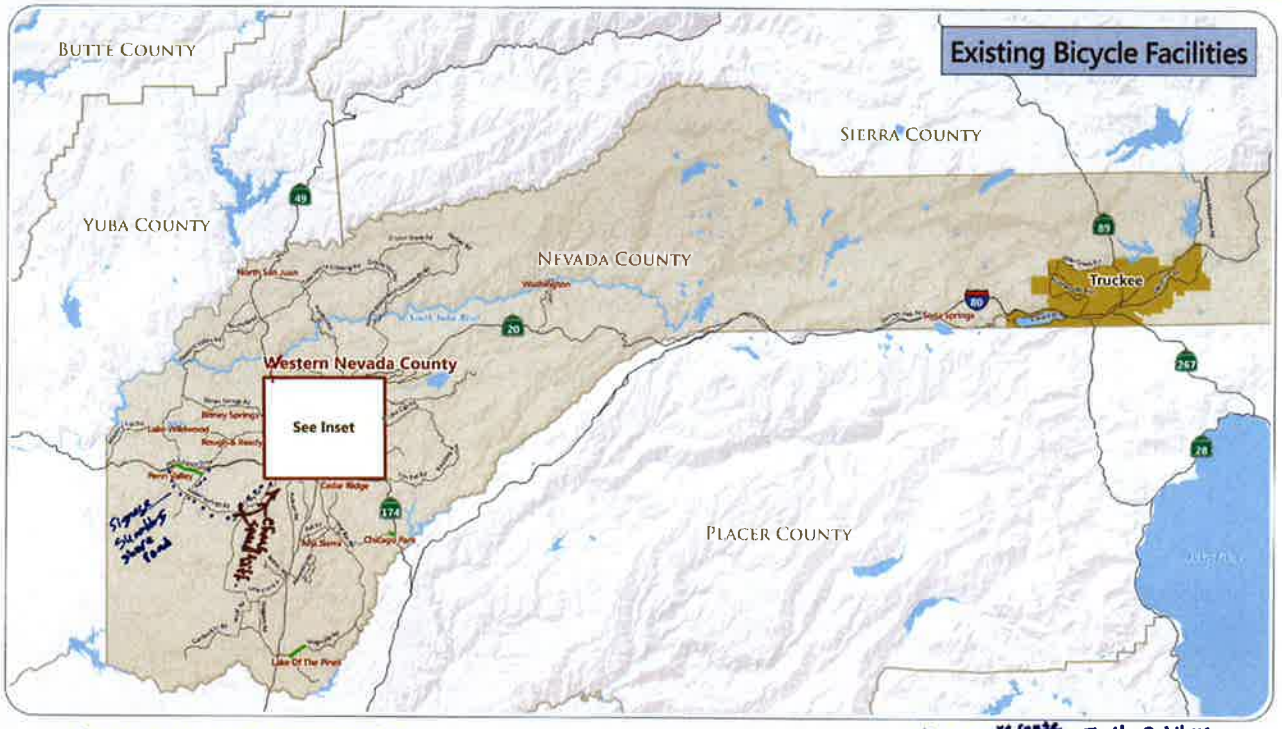
FEHR & PEERS

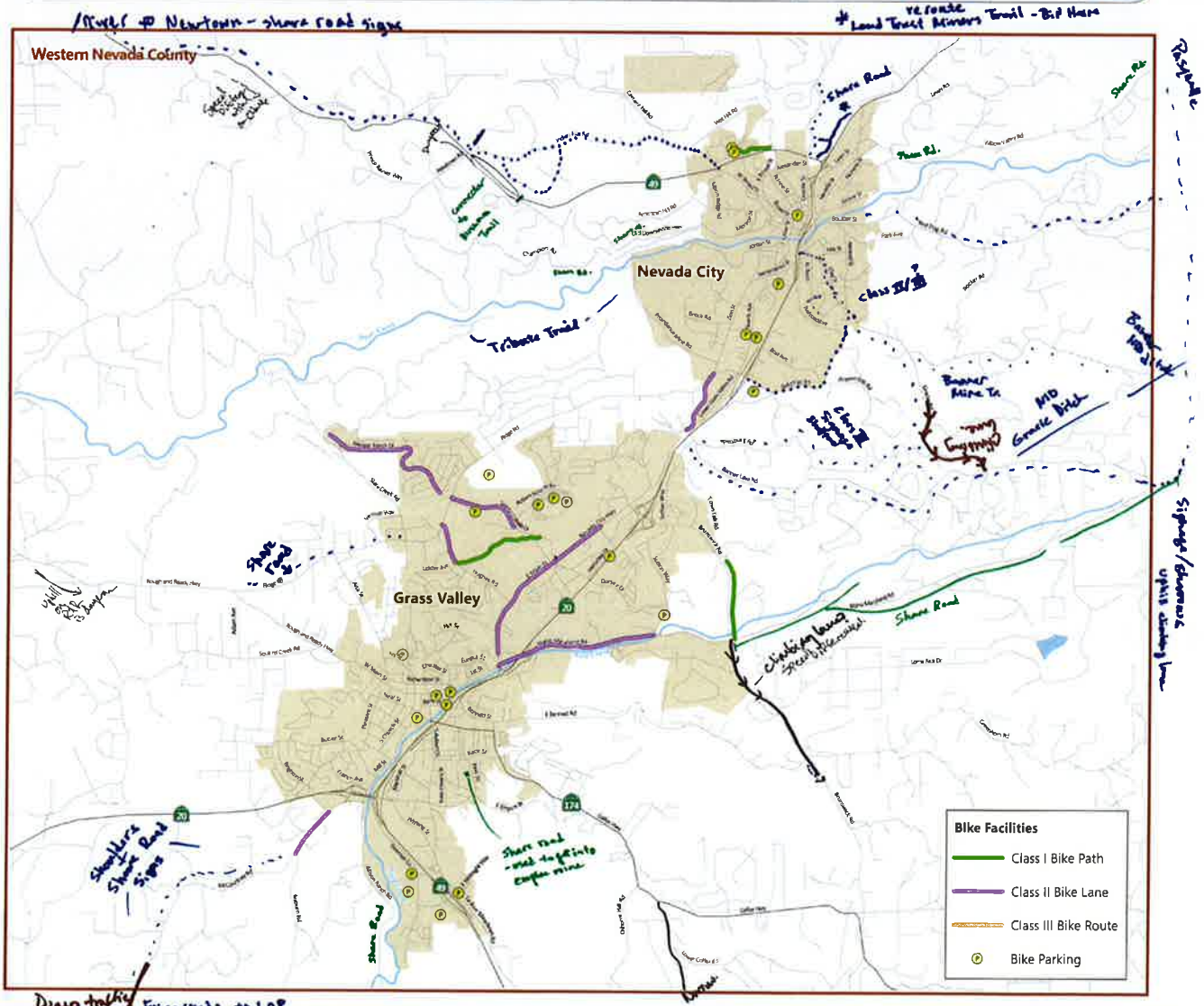
WORKSHOP EXHIBITS

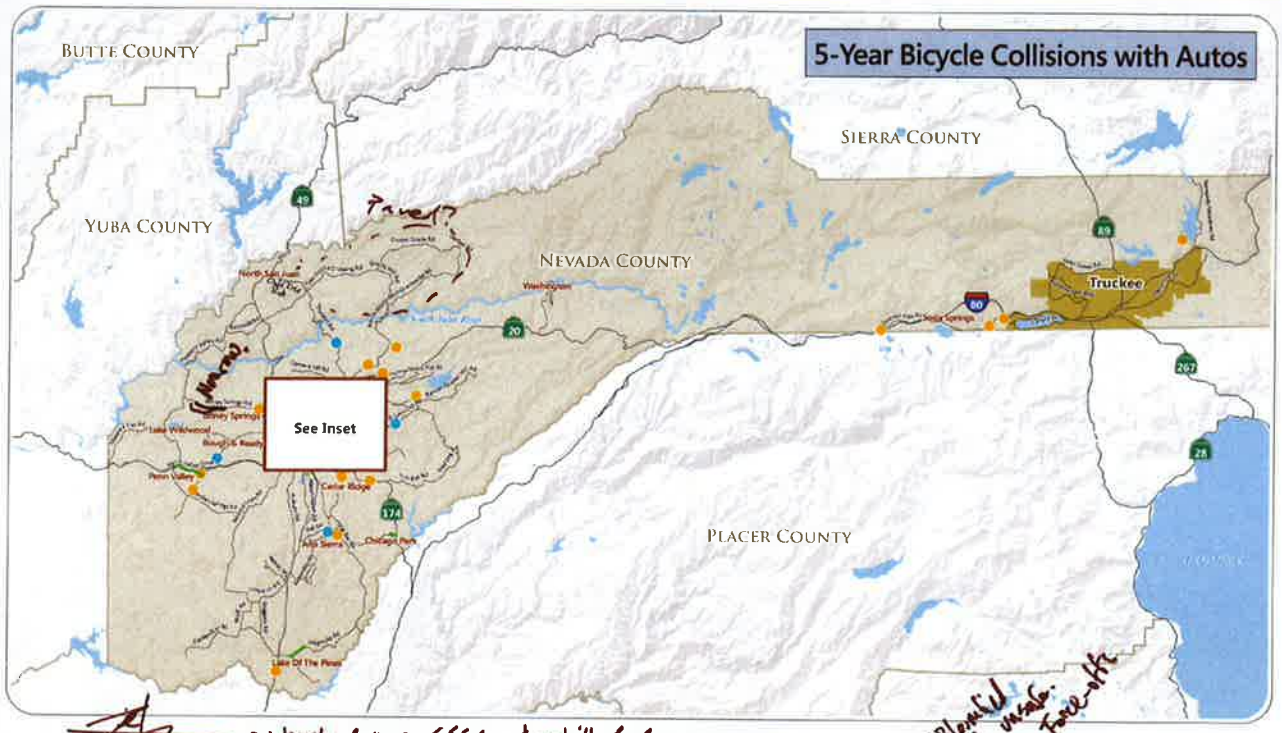
Workshop #1: Nevada City


Existing Bicycle Facilities
Butte County
Yuba County
Nevada County
Sierra County
Placer County
Truckee
Western Nevada County
See Inset

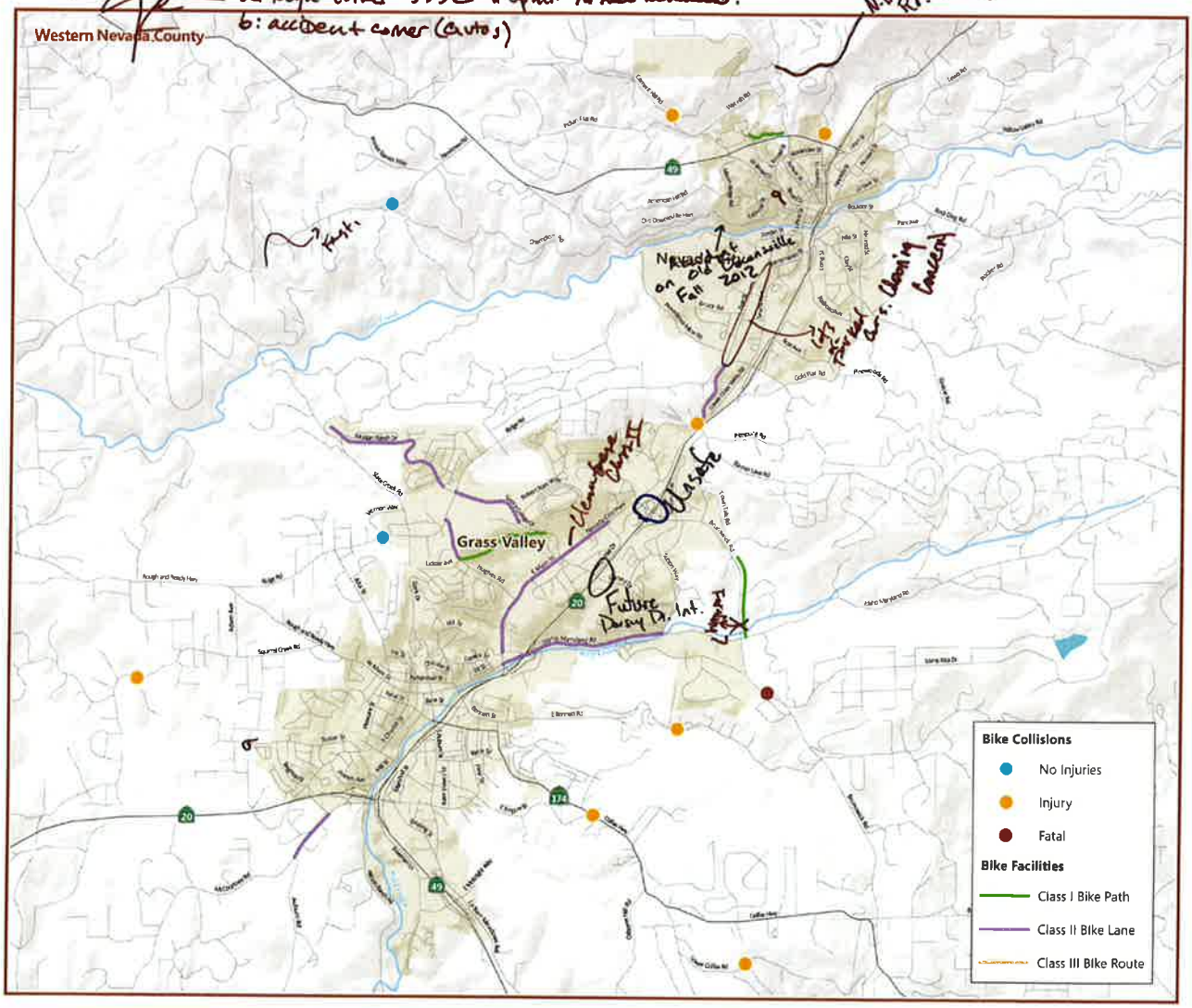

Western Nevada County
Grass Valley
Nevada City
Bike Facilities
Class I Bike Path
Class II Bike Lane
Class III Bike Route
Bike Parking

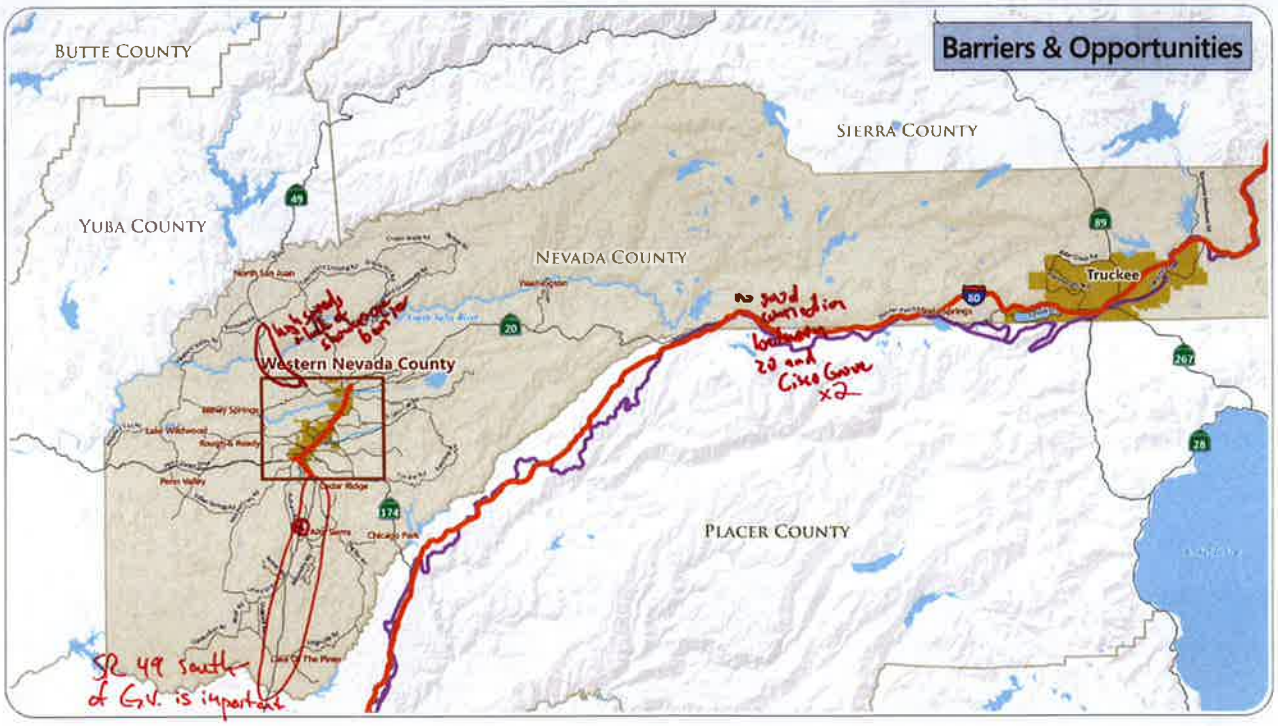

Existing Bicycle Facilities
Butte County
Yuba County
Sierra County
Nevada County
Placer County
Truckee
Western Nevada County
See Inset

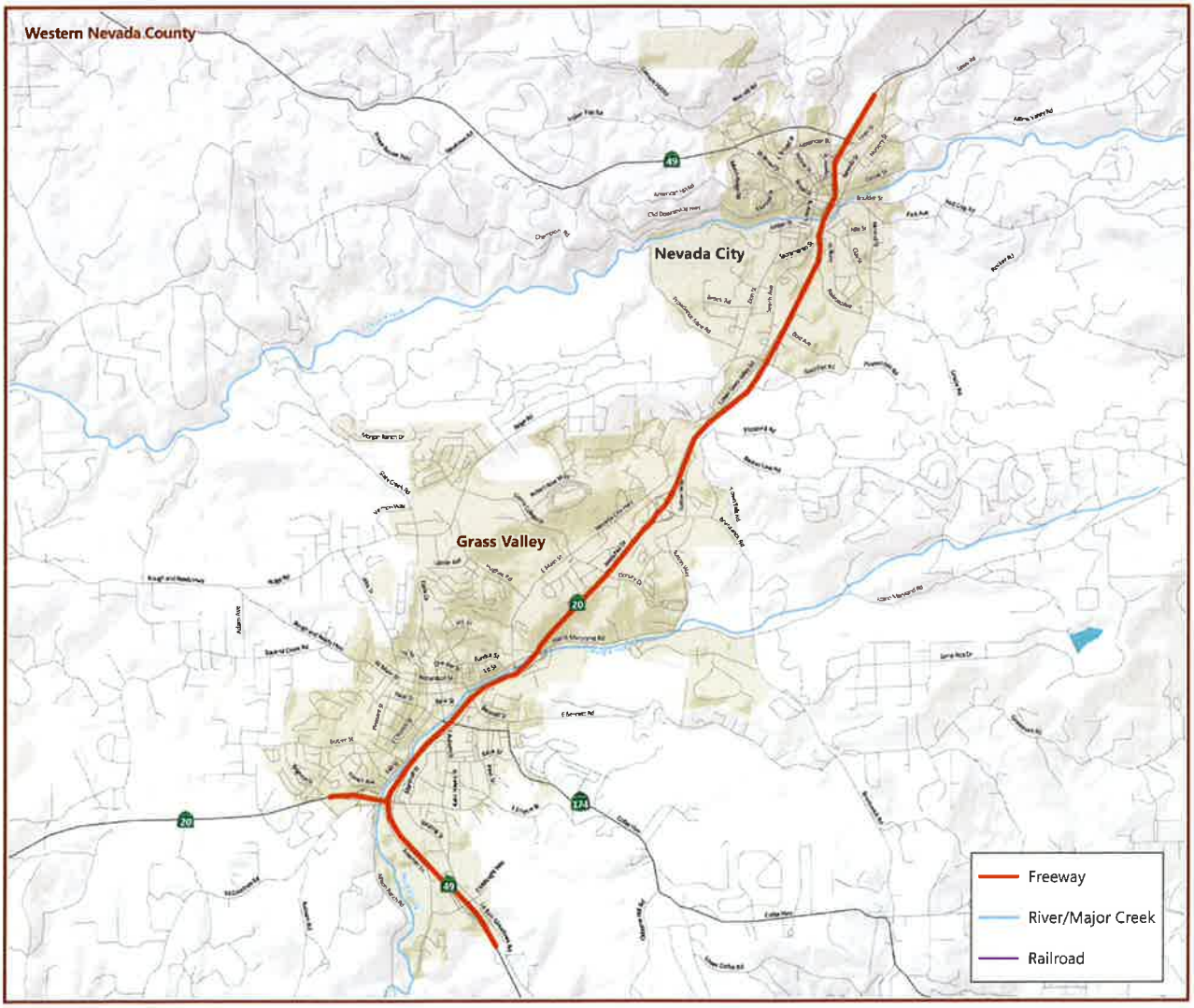

Western Nevada County
Nevada City
Grass Valley
Bike Facilities
Class I Bike Path
Class II Bike Lane
Class III Bike Route
Bike Parking

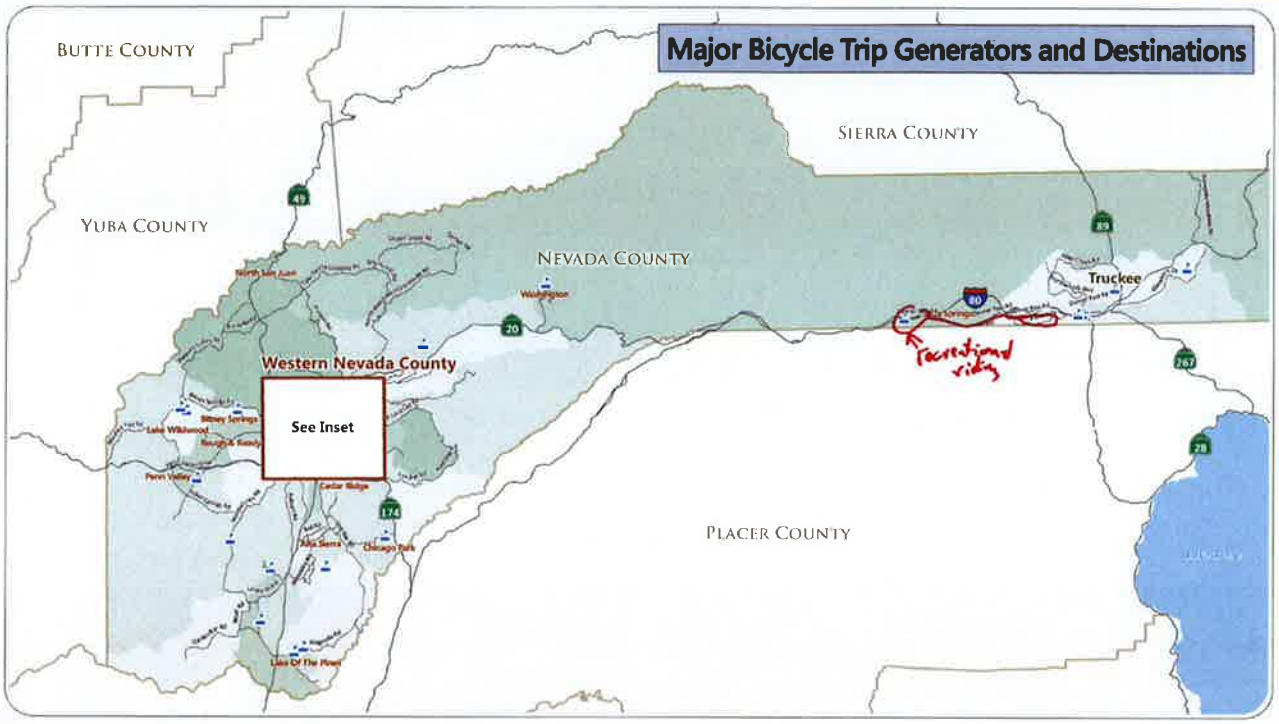


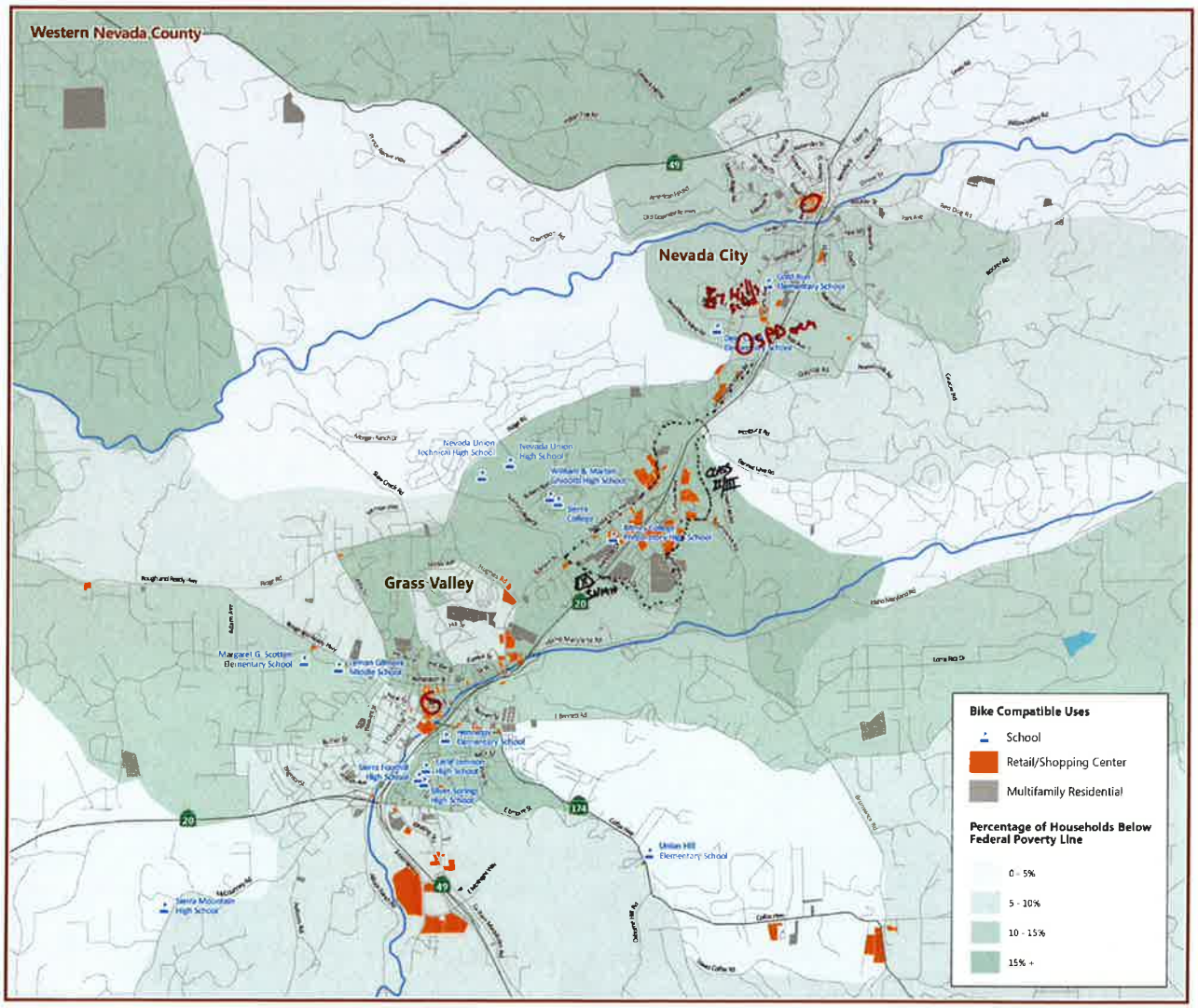
a: tough corner SSSC & uphill for bike movement.
b: accident corner (autos)




Barriers & Opportunities
Butte County
Yuba County
Nevada County
Sierra County
Placer County
Western Nevada County
Truckee
SR 49 south of G.V. is important


Western Nevada County
Nevada City
Grass Valley
Freeway
River/Major Creek
Railroad


Major Bicycle Trip Generators and Destinations
BUTTE COUNTY
SIERRA COUNTY
YUBA COUNTY
NEVADA COUNTY
PLACER COUNTY
Truckee
Western Nevada County
See Inset
recreational riding


Western Nevada County
Nevada City
Grass Valley
Bike Compatible Uses
School
Retail/Shopping Center
Multifamily Residential
Percentage of Households Below Federal Poverty Line
0 - 5%
5 - 10%
10 - 15%
15% +

Long Term Bicycle Parking

Long term bicycle parking protects both bicycles and their attached accessories. Bicycles can be left in long term parking for days at a time with reduced threat of theft and protection from the weather.

ke Lockers

te lockers are **fully enclosed** and **accessible only by the user.** ey are often located in parking lots, in parking garages, next to nsit centers, or adjacent to buildings. Users usually lease the ker for months at a time and are either provided with a key or pply a lock of their own.

kers @ Grass Valley City Hall have been installed for ~5 yrs. used only once.

es b/n E-lockers also O.K.

Place Stickers Here

• Indoor Storage

Indoor storage rooms can be incorporated into **employment or residential buildings.** These rooms include **short term bicycle racks** at a minimum and sometimes also include **other amenities** such as lockers for personal items.

Place Stickers Here

Other Enhancements For Bicycling

• Sharrows

Sharrows are pavement markings on **shared-use roadways** that inform bicyclists that they should be in the travel lane and away from parked cars. Sharrows also inform motorists to **expect bicyclists** to be in the travel lane.

• Buffered Bike Lanes

Buffered bike lanes feature a designated space to **separate bicyclists** from an adjacent motor vehicle lane. They may also be used to separate the bike lane from parking stalls.

• Directional Signage

Directional signs help **direct bicyclists** to nearby destinations and to other bikeways. They are also useful on bike paths for informing bicyclists of their location on the path.

FEHR & PEERS

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Intersection Treatments

Intersections are often challenging for bicyclists to negotiate. Below are several treatments designed to make intersections more bike-friendly. Place a sticker next to your intersection treatment of choice.

• Bicycle Loop Detectors/Push-Buttons

Bicycle loop detectors allow traffic lights to detect and give green lights to bicycles.

Place Stickers Here

• Through Bike Lanes

Through bike lanes allow cyclists to correctly position themselves on intersection approaches, reducing conflict with right turning vehicles.

Place Stickers Here

• Class I Bike Path Intersections

Where bike paths cross busy streets, a bike intersection will stop traffic so bicyclists and pedestrians can cross.

Place Stickers Here

• Colored Bike Lanes

Pavement coloring increases the visibility of bike lanes and alerts motorists and cyclists to potential conflict areas.

Place Stickers Here

• Bike Boxes

Bike boxes are clearly designated spaces for cyclists to wait for traffic lights to change. Bike boxes are best used in downtown environments.

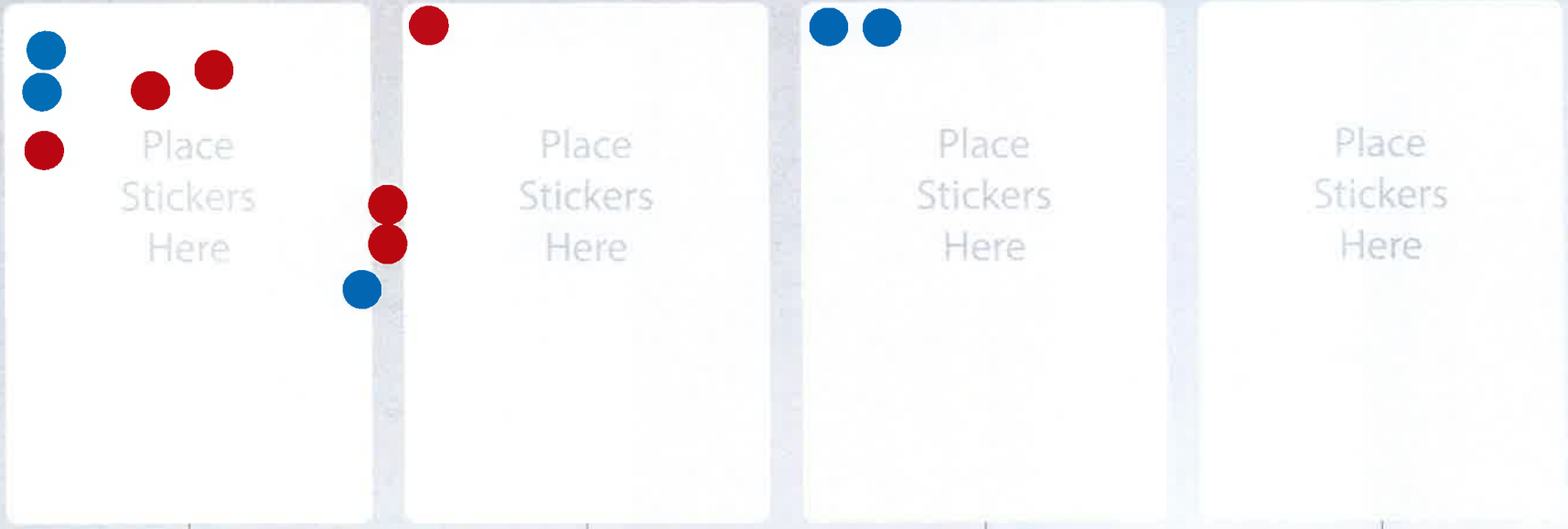
Place Stickers Here

Fehr & Peers

Nevada County Transportation Commission NCTC

Four Types of Cyclists: Which Type Are You?

Place a sticker in one of the boxes below.



Strong & Fearless

Will ride regardless of facilities

Trip distance is not such an issue

Enthusiastic & Confident

Comfortable in traffic with appropriate facilities

Prefer shorter trip distances

Interested but Concerned

Not attracted by bicycle lanes

Not comfortable in traffic

Will ride on low-volume/low-speed roadways

No Way No How

Not interested in using a bicycle for transportation

Fehr & Peers

Source: Adapted from materials provided by Portland Department of Transportation

Short Term Bicycle Parking

Short term bicycle parking includes stationary racks that require a user-provided lock. The racks below conform to the current industry standards which require a rack to lock both a bicycle's wheels and frame with a "U-Lock". Place your sticker next to your rack of preference.

• Inverted U

Place Stickers Here

• Bike Hitch Rack

Place Stickers Here

• Swerve Rack

Place Stickers Here

• Lightning Rack

Place Stickers Here

Fehr & Peers

NCTC

Bikeway Types

• Class I - Bike Path

Class I Bikeways, or bike paths, are used **exclusively by bicyclists and pedestrians**. They are completely **separate from roadways** with motorized traffic except for where they must traverse streets or driveways.

Place Stickers Here

• Class II - Bike Lane

Class II Bikeways, or bike lanes, are striped lanes for one-way bike travel **on a roadway**.

Place Stickers Here

• Class III - Bike Route (Signage Only)

Class III Bikeways, or bike routes, are roadways that **promote shared use** by both bicyclists and motorists.

Place Stickers Here

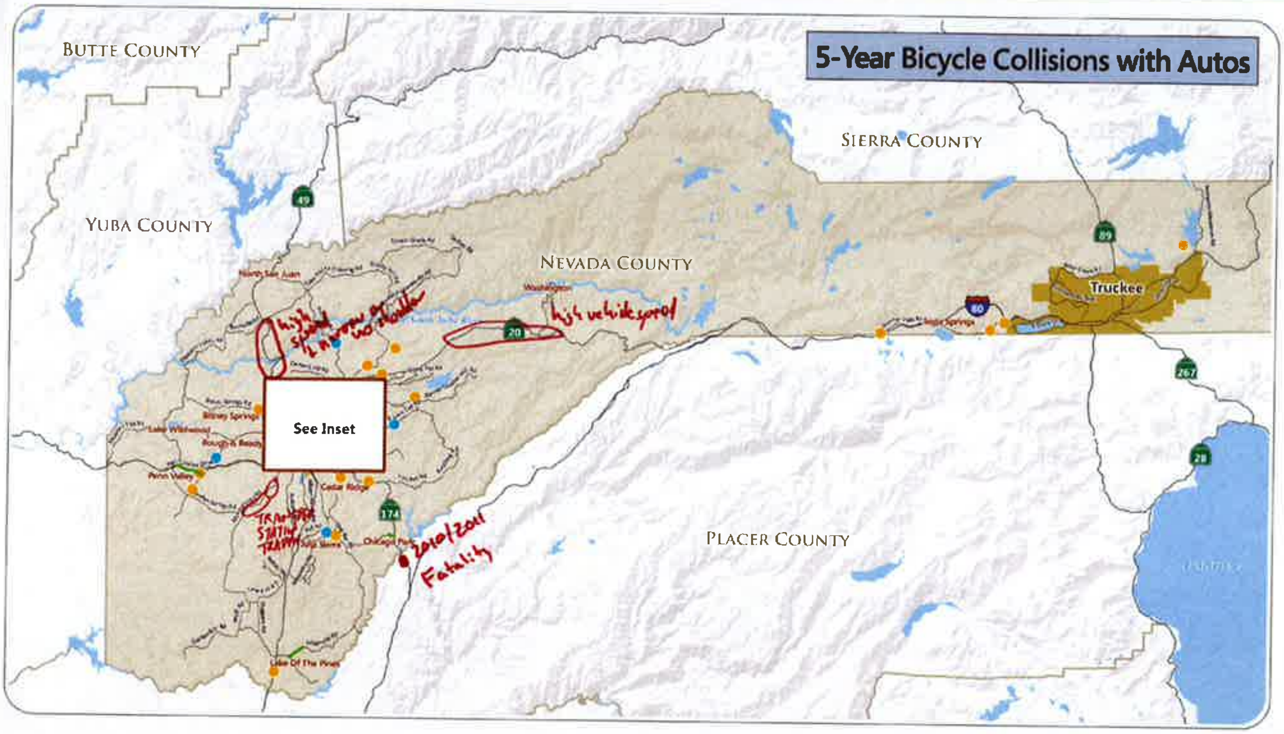
• Class III - Bike Route (With Multi-Use Shoulder)

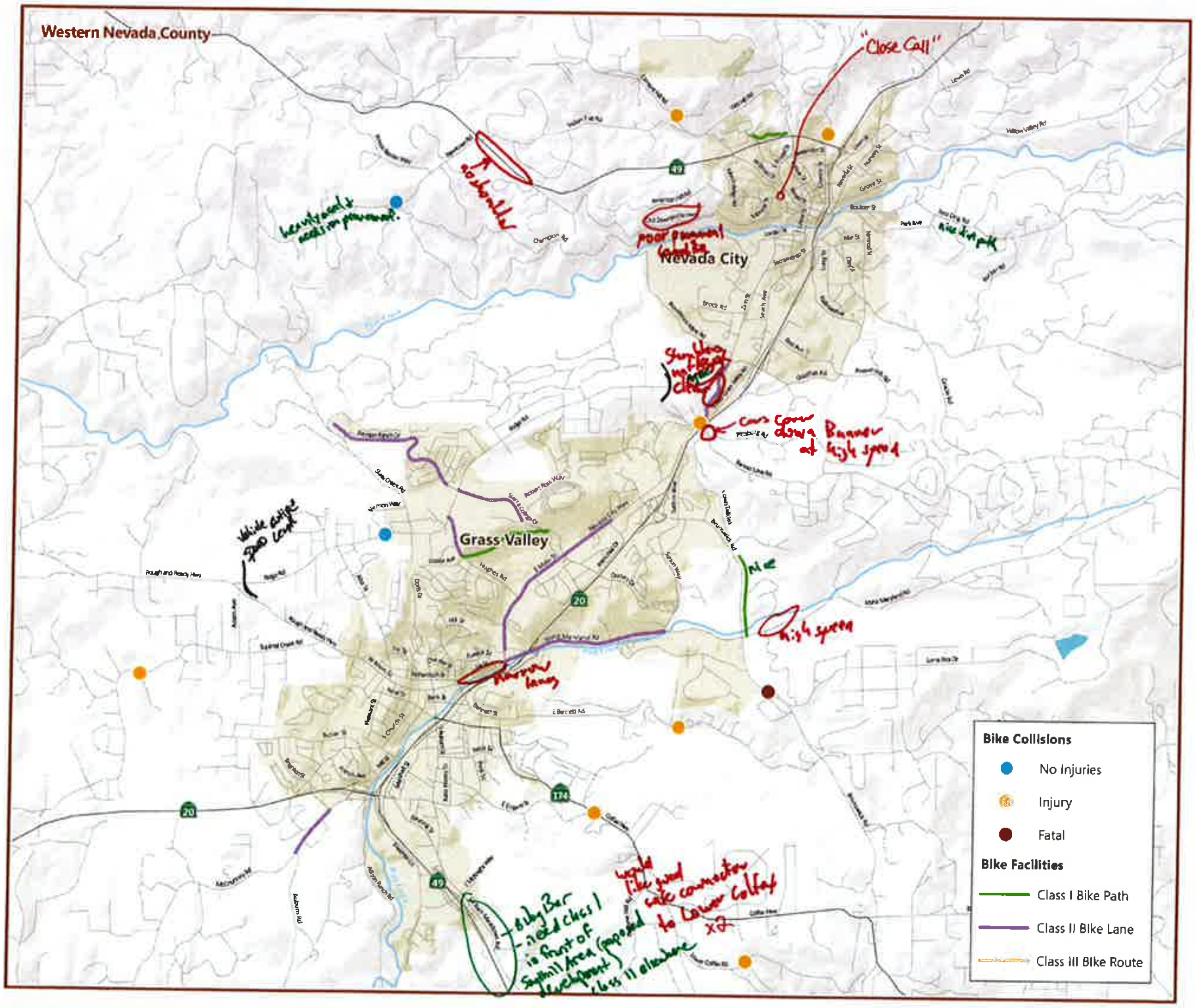
Class III Bikeways, or bike routes, with multi-use shoulders are an **enhanced** form of Class III facility. These routes include signage as well as **additional pavement width** for bicyclists and pedestrians to use on high volume and/or high speed roadways.

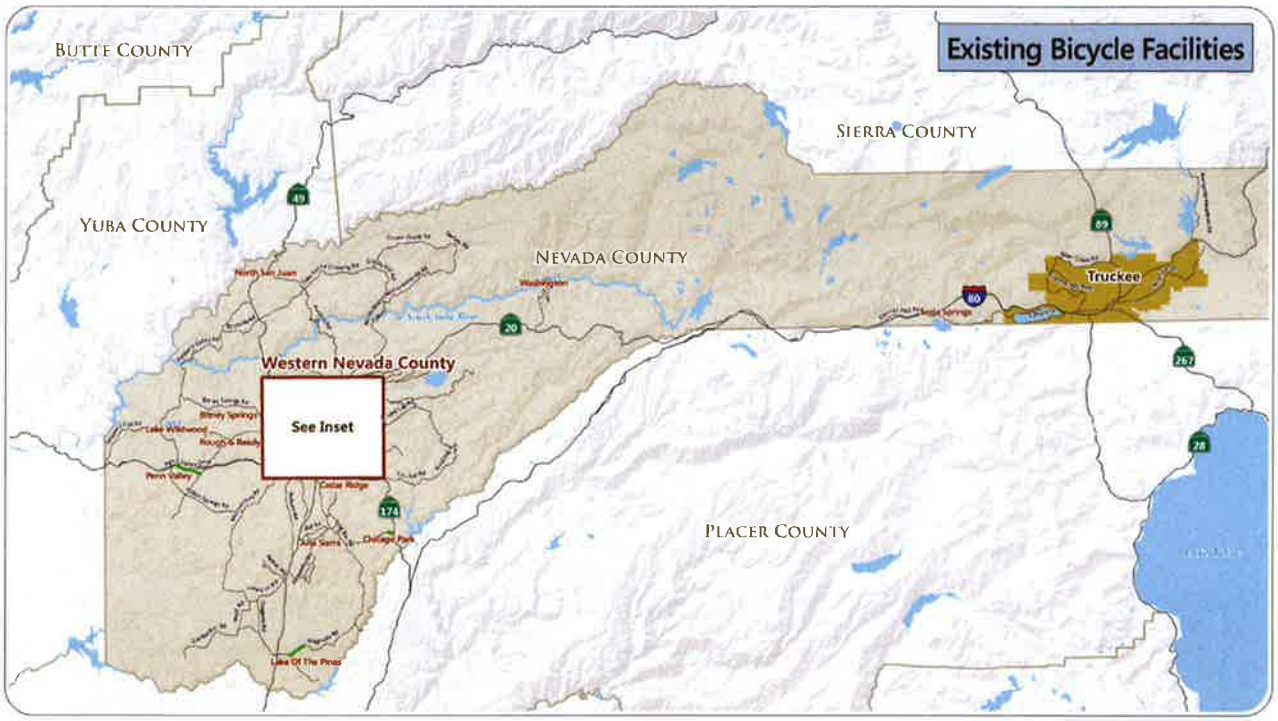
Place Stickers Here

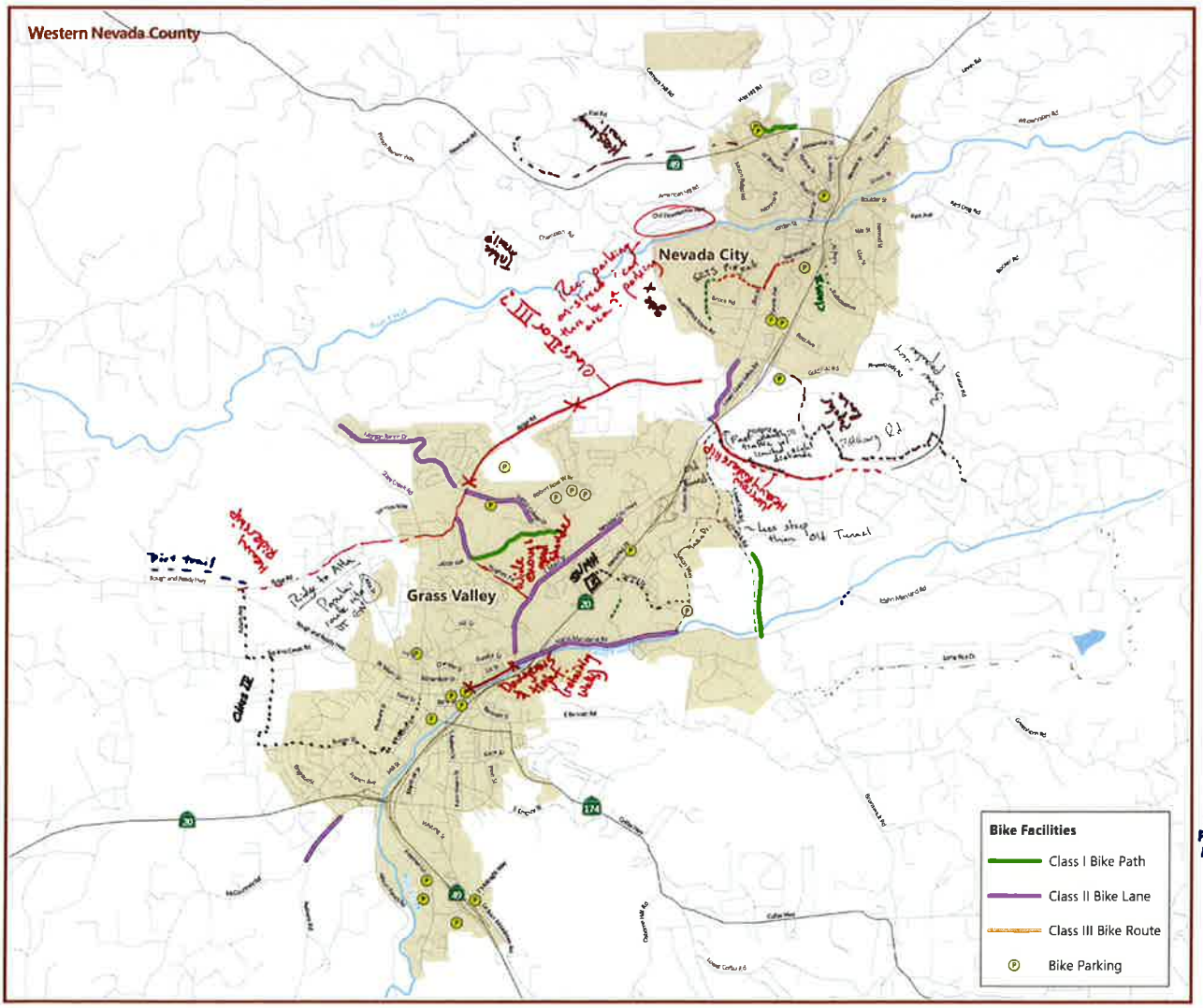
WORKSHOP EXHIBITS

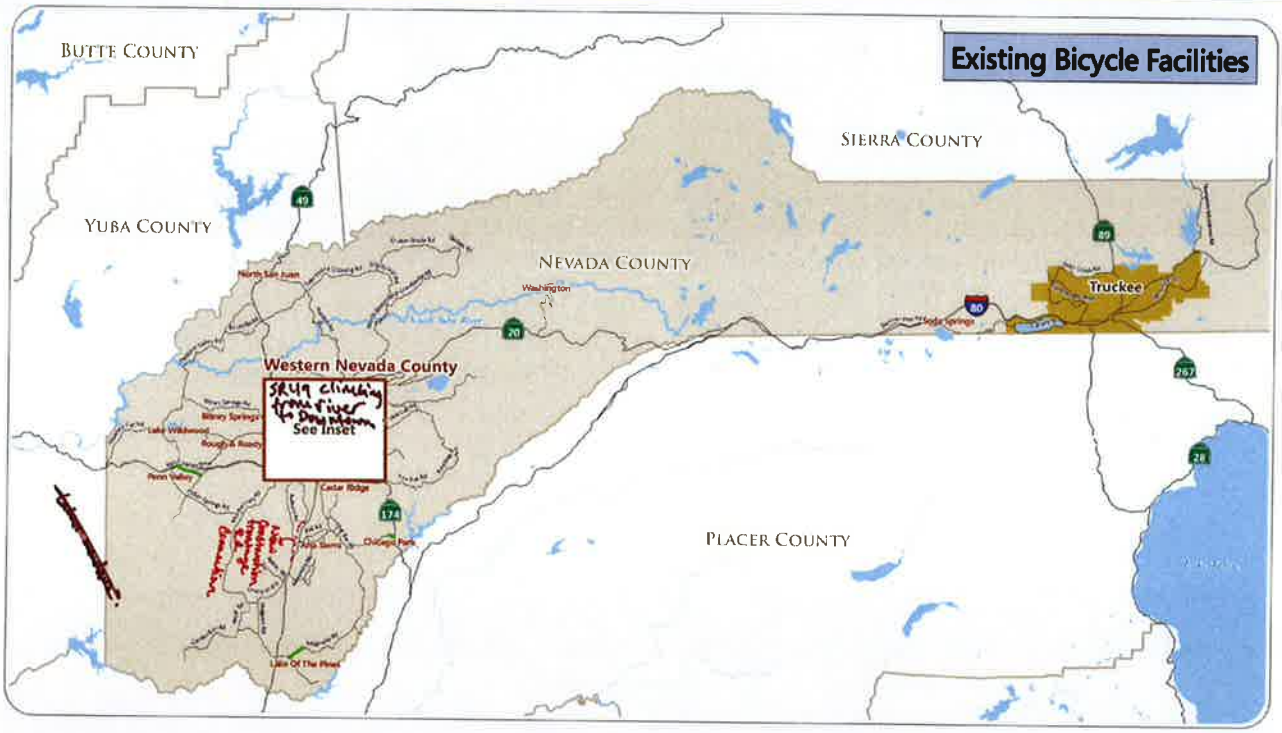
Workshop #2: Grass Valley

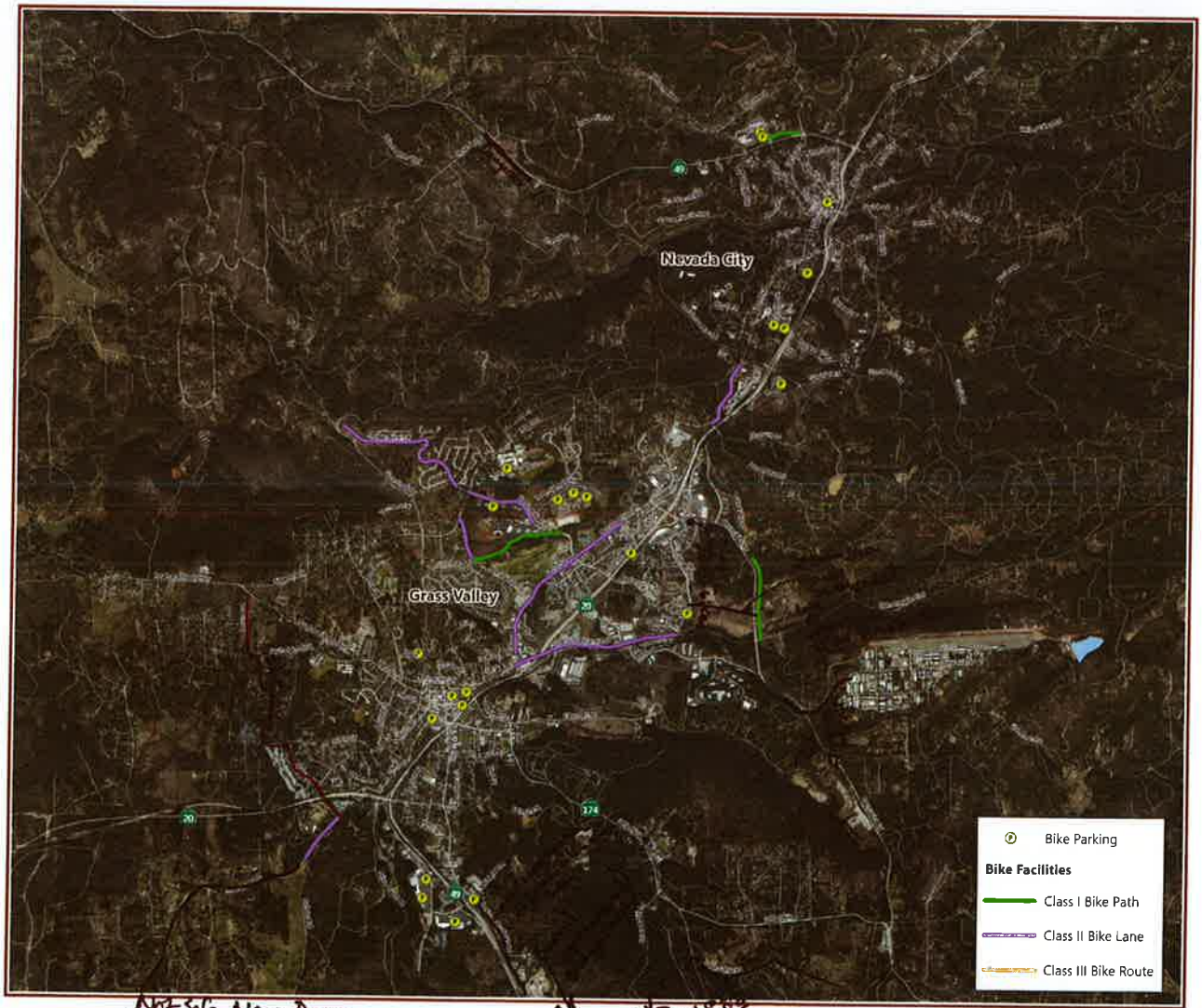

5-Year Bicycle Collisions with Autos
Butte County
Yuba County
Sierra County
Nevada County
Placer County
Truckee
See Inset
"high speed & narrow / no shoulder"
"high vehicle speed"
"2010/2011 Fatality"


Western Nevada County
Nevada City
Grass Valley
"Close Call"
"poor pavement condition"
"Cars come down Brunswick at high speed"
"high speed"
"Narrow lanes"
"Vehicle outside speed limit"
"would like good safe connector to Lower Colfax x2"
Bike Collisions
No Injuries
Injury
Fatal
Bike Facilities
Class I Bike Path
Class II Bike Lane
Class III Bike Route


Existing Bicycle Facilities
Butte County
Sierra County
Yuba County
Nevada County
Truckee
Western Nevada County
See Inset
Placer County
Lake Of The Pines


Western Nevada County
Nevada City
Grass Valley
Bike Facilities
Class I Bike Path
Class II Bike Lane
Class III Bike Route
Bike Parking


Existing Bicycle Facilities
Butte County
Yuba County
Nevada County
Sierra County
Placer County
Truckee
Western Nevada County
See Inset


Nevada City
Grass Valley
Bike Parking
Bike Facilities
Class I Bike Path
Class II Bike Lane
Class III Bike Route

Short Term Bicycle Parking

Short term bicycle parking includes stationary racks that require a user-provided lock. The racks below conform to the current industry standards which require a rack to lock both a bicycle's wheels and frame with a "U-Lock". Place your sticker next to your rack of preference.

- Inverted U

Place Stickers Here

- Bike Hitch Rack

Hitch w/pipe added for saddle "Hang" option.

Place Stickers Here

- Swerve Rack

Place Stickers Here

- Lightning Rack

Place Stickers Here

Fehr & Peers

NCTC

Intersection Treatments

Intersections are often challenging for bicyclists to negotiate. Below are several treatments designed to make intersections more bike-friendly. Place a sticker next to your intersection Treatment of Choice.

• Bicycle Loop Detectors/Push-Buttons

Bicycle loop detectors allow traffic lights to detect and give green lights to bicycles.

Place Stickers Here

• Through Bike Lanes

Through bike lanes allow cyclists to correctly position themselves on intersection approaches, reducing conflict with right turning vehicles.

Place Stickers Here

• Class I Bike Path Intersections

Where bike paths cross busy streets, a bike intersection will stop traffic so bicyclists and pedestrians can cross.

Place Stickers Here

• Colored Bike Lanes

Pavement coloring increases the visibility of bike lanes and alerts motorists and cyclists to potential conflict areas.

Place Stickers Here

• Bike Boxes

Bike boxes are clearly designated spaces for cyclists to wait for traffic lights to change. Bike boxes are best used in downtown environments.

Place Stickers Here

FEHR & PEERS

NEVADA • COUNTY • TRANSPORTATION NCTC COMMISSION

Four Types of Cyclists: Which Type Are You?

Place a sticker in one of the boxes below.

Strong & Fearless

Will ride regardless of facilities

Trip distance is not such an issue

Enthusiastic & Confident

Comfortable in traffic with appropriate facilities

Prefer shorter trip distances

Interested but Concerned

Not attracted by bicycle lanes

Not comfortable in traffic

Will ride on low-volume/low-speed roadways

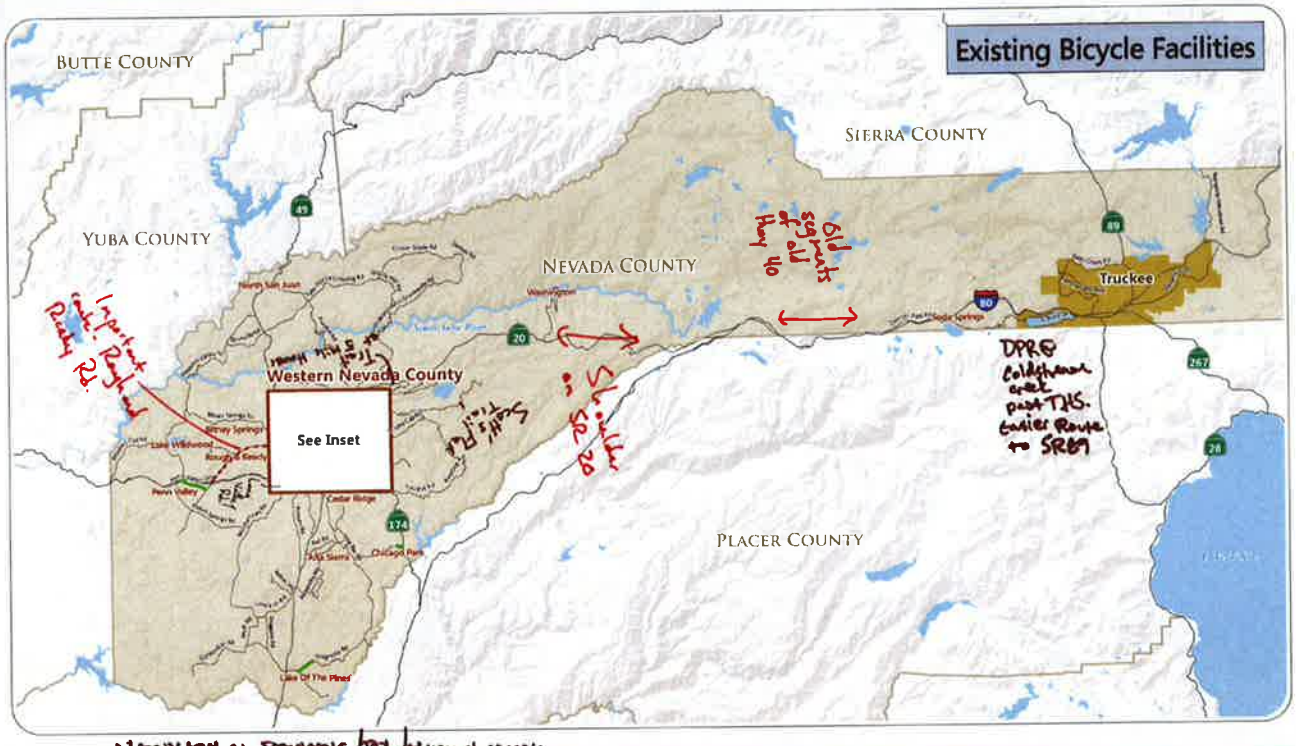
No Way No How

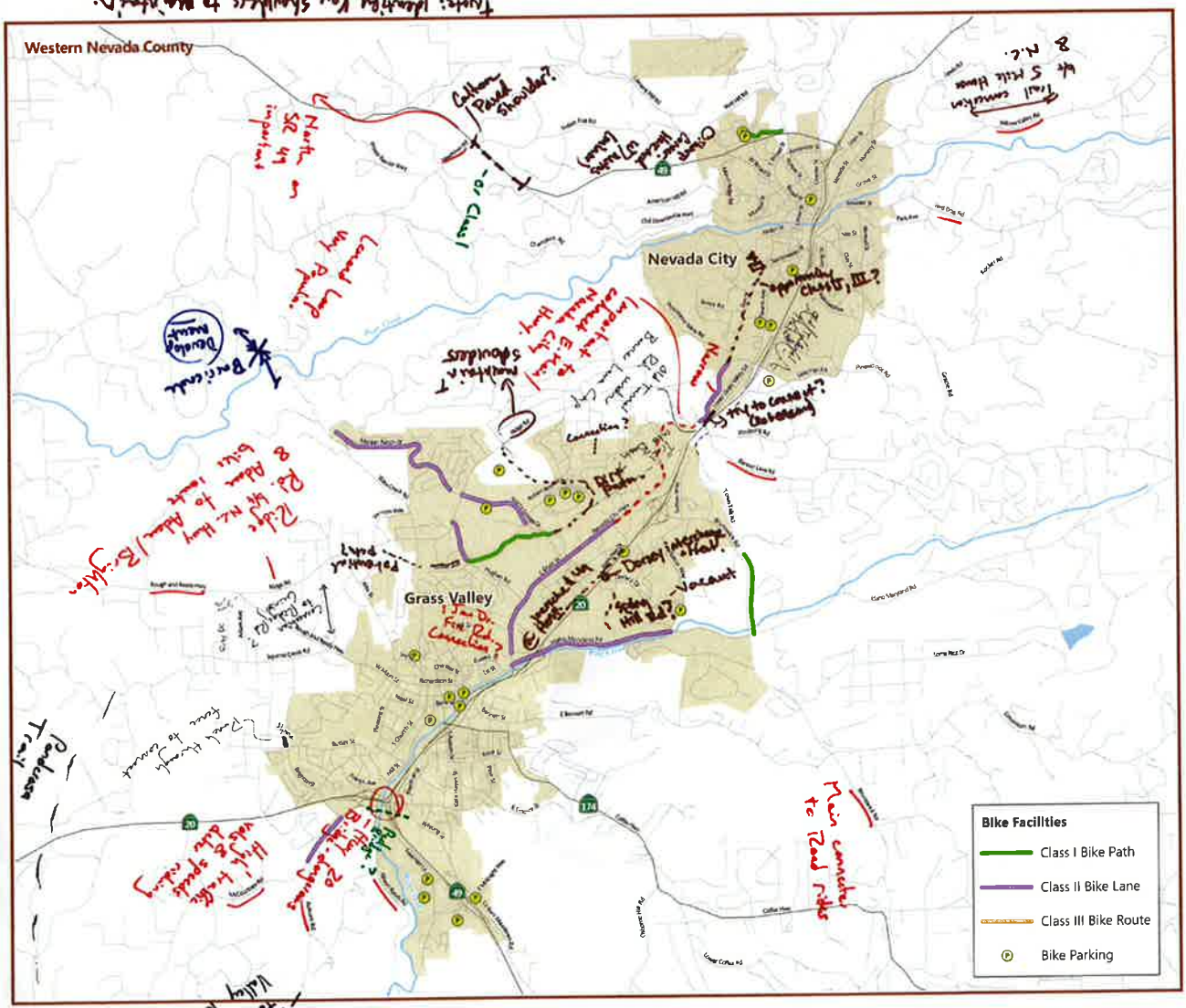
Not interested in using a bicycle for transportation

Source: Adapted from materials provided by Portland Department of Transportation

Fehr & Peers

NCTC


Existing Bicycle Facilities
Butte County
Yuba County
Nevada County
Sierra County
Placer County
Western Nevada County
See Inset
Truckee


Western Nevada County
Nevada City
Grass Valley
Bike Facilities
Class I Bike Path
Class II Bike Lane
Class III Bike Route
Bike Parking

WORKSHOP NOTES[1]

Workshop #1: Nevada City

1. Determine 4 or 5 (only a few) high priority safe routes and really improve them
2. Connectors b/t NC & GV other than Ridge Rd
3. Implementation Strategy that goes beyond grants. Focus on prioritization
4. Educational programs
    a. Police Dept: Potential to work with volunteer police officers, reducing workload for full-time PD
    b. Bike Buddies
    c. Teach cyclists about laws
    d. 3 ft rule
5. Share the Road signage (x3)
6. Regular (weekly/semiweekly) road closures in bicycle friendly area (Penn Valley, Old Hwy 40) to promote family riding.
7. Wayfinding signs in downtown areas and popular recreational rides (i.e. a Lemond Loop sign) to promote bike tourism
8. Look at county vehicle collision data – leverage safety projects to widen shoulders for cyclists
9. Look at Nevada County Trails Plan

Workshop #2: Grass Valley

1. Maintain shoulder, remove debris on Nevada Highway from GV to NC
2. Maintenance of facilities as priority for capital projects
3. S River Land Trust (x2)
    a. Tribute trail (possible opportunity)
    b. Hirshman Pond Trail (possible opportunity)
    c. Possibly contact county for trails centerline file
    d. Possibly contact NID for canals GIS layer
4. Share the road signage
    a. Especially in rural areas
5. Sharrows wanted on Class III facilities
6. Check goals and policies for missing elements, and existing elements that do not make much sense
7. On street bike parking
    a. Steps for implementation of bike parking in the Downtowns
8. Recreational loop and transportation connection.
9. Contact Steve C. for list of shoulder projects

[1] These notes were copied from sticky notes that were placed on exhibits by members of the public during the two workshops.

10. SRTS proj to 7 Hills Middle and Deer Cr Elem
11. Send Nev Co PIP to Duane
12. Get Ride Maps from Duane
13. Loma Rica Road – no shoulders
14. Bear Yuba Land Trust: Chris at chris@bylt.org
    a. Tribute Trail GIS
    b. Comment by Jet Lowe
15. Top Rec Loops
    a. Lemond Loop (N)
    b. Banner / Red Dog (E)
    c. Alison Ranch / SR 49 / Pengrea / Auburn Rd (S)
    d. Ridge / R&R to Penn Valley
        i. Pleasant Valley / Bittney
        ii. Indian Springs / McCourtney
16. Colored bike facilities
    a. Possibly use color on Class III shoulders in conflict areas
17. SR 49 improvements important for rec and commuter cycling
18. Bicycle Parking Downtown GV/NC
19. Willow Valley Rd. used by High School team (time trials).
    a. Share the road

Appendix B
Survey Results and Responses

FEHR & PEERS

Questions 9-14 Omitted from Technical Appendix

These questions contain long-form answers that are summarized in section 4.2.2. Please refer to this section for information on roadway preference and perceived safety issues.

Nevada County Bicycle Master Plan

SurveyMonkey

1. Why do you ride a bicycle? (select all that apply)

	Response Percent	Response Count
Recreation/exercise	**89.9%**	**143**
Work trips	28.9%	46
School trips	8.2%	13
Shopping and commerce	38.4%	61
To get to transit	8.8%	14
I don't	2.5%	4
I don't but want to	9.4%	15
Other (please specify below)	7.5%	12
	Other (please specify)	23
	answered question	**159**
	skipped question	**1**

2. What type of bicycle rider are you?

		Response Percent	Response Count
Strong & Fearless (Biking is part of my identity: I will ride on any road, any time, regardless of road conditions or traffic)		10.3%	16
Enthused & Confident (I enjoy riding and sharing the road with traffic, but prefer my own bike lane or path)		**59.6%**	**93**
Interested but Concerned (I am curious about bicycling, but have concerns about traffic, safety and other issues)		28.8%	45
No way, no how (I am not interested at all in bicycling)		1.3%	2
		answered question	**156**
		skipped question	**4**

3. On average how often do you ride a bicycle?

	Response Percent	Response Count
Daily	5.1%	8
3-5 times a week	**41.1%**	**65**
1-2 times a week	21.5%	34
1-3 times a month	11.4%	18
7-11 times a year	7.0%	11
1-6 times a year	9.5%	15
Never	4.4%	7
	answered question	**158**
	skipped question	**2**

4. What type of bikeway/facility do you most use?

	Response Percent	Response Count
Bike path	21.3%	32
Bike lane in road	17.3%	26
Share vehicle lane with automobile traffic	**60.7%**	**91**
Sidewalk	0.7%	1
	answered question	**150**
	skipped question	**10**

5. What type of bikeway/facility do you prefer to use?

	Response Percent	Response Count
Bike path	**69.3%**	**106**
Bike lane in road	28.8%	44
Share vehicle lane with automobile traffic	1.3%	2
Sidewalk	0.7%	1
	answered question	**153**
	skipped question	**7**

6. How do you commute to work? (select all modes that you regularly use)

	Response Percent	Response Count
Bike	26.8%	42
Transit	3.8%	6
Car	**56.1%**	**88**
Walk	8.3%	13
I do not commute to work	37.6%	59
	answered question	**157**
	skipped question	**3**

7. How far is your commute?

	Response Percent	Response Count
Under 1/4 mile	19.2%	23
1/4 - 1/2 mile	2.5%	3
1/2 - 1 mile	5.0%	6
1-3 miles	14.2%	17
3-5 miles	13.3%	16
5-10 miles	**20.8%**	**25**
10-20 miles	10.8%	13
20+ miles	14.2%	17
	answered question	**120**
	skipped question	**40**

8. 1)

	Response Percent	Response Count
Street Name	**100.0%**	**114**
Cross Street Name	78.9%	90
	answered question	**114**
	skipped question	**46**

15. What are the primary factors that prevent you from cycling more often in your community and/or Nevada County? (select all that apply)

	Response Percent	Response Count
Destinations too far	17.1%	24
No bike routes/lanes	**86.4%**	**121**
Traffic volume/traffic speed	65.7%	92
No place to park/store bicycle at destination	17.1%	24
Physical exertion	4.3%	6
Poor road condition	25.0%	35
Weather conditions	17.9%	25
No shower/facility to change clothes at destination	7.1%	10
Difficult route finding	10.0%	14
Other	9.3%	13
	answered question	**140**
	skipped question	**20**

16. If you have children, do they bike to school?

	Response Percent	Response Count
Yes	9.5%	13
No	32.1%	44
No children	**58.4%**	**80**
	answered question	**137**
	skipped question	**23**

17. Please provide your home zip code (optional):

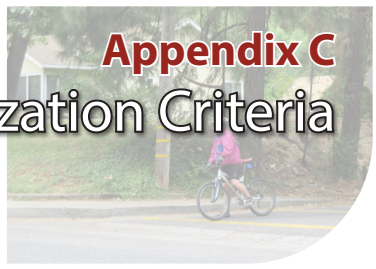
	Response Average	Response Total	Response Count
5-Digit Zip Code	**95,946.58**	**12,473,055**	130
		answered question	**130**
		skipped question	**30**

18. Please provide your age range (optional):

	Response Percent	Response Count
14 years of age or less	0.0%	0
15 to 24 years of age	1.5%	2
25 to 34 years of age	4.4%	6
35 to 44 years of age	22.8%	31
45 to 54 years of age	**35.3%**	**48**
55 to 64 years of age	24.3%	33
65 years of age or greater	11.8%	16
	answered question	**136**
	skipped question	**24**

19. Please provide your gender (optional):

		Response Percent	Response Count
Male		**56.9%**	**78**
Female		43.1%	59
		answered question	**137**
		skipped question	**23**



Appendix C
Prioritization Criteria

FEHR & PEERS

SCORING CRITERIA

1. Urban and Community Streets (Grass Valley, Nevada City, and Truckee)

Directly accesses key destinations (schools, commercial centers, regional destinations, and low-income housing)

- 0 – Does not access key destination
- 1 – Directly accesses (with frontage on) one key destination
- 2 – Directly accesses (with frontage on) two or more key destinations

Closure of a critical gap

- 0 – Does not close a critical gap
- 1 – Somewhat closes a critical gap
- 2 – Directly closes a critical gap

Facilitates Intercity Travel

- 0 – Does not provide a usable intercity connection
- 2 – Provides a usable intercity connection

Level of Utilitarian Use

- 0 – Little utilitarian use
- 1 – Medium utilitarian use
- 2 – High utilitarian use

Bicycle Collisions

- 0 – No bicycle collisions
- 1 – Bicycle collisions recorded
- 2 – Bicycle fatality or numerous collisions recorded

Feasibility

- 0 – Long-term; requires significant roadway reconstruction or neighborhood redevelopment
- 1 – Potential for short-term implementation; high costs likely
- 2 – Potential for short-term implementation; relatively low cost

Notes:

Each facility scored according to the above criteria, on a scale from 0 (low) to 2 (high)

SCORING CRITERIA

2. County Roads (Unincorporated Nevada County)

Average Daily Traffic (ADT)

- 0 – Below 2,000
- 1 – 2,000-7,000
- 2 – Above 7,000

Bicycle Collisions

- 0 – No bicycle collisions
- 1 – Bicycle collisions recorded
- 2 – Bicycle fatality or numerous collisions recorded

Vehicle Collision Density

- 0 – Below Average
- 1 – Above Average
- 2 – Very High Collision Density

Vehicle Speed (Speed Limit)

- 0 – At or below 30 mph
- 1 – 35 to 45 mph
- 2 – Above 45 mph

Level of Recreational/Utilitarian Use

- 0 – Little use
- 1 – Medium use
- 2 – High use

Feasibility

- 0 – Long-term; requires significant roadway reconstruction or neighborhood redevelopment
- 1 – Potential for short-term implementation; high costs likely
- 2 – Potential for short-term implementation; relatively low cost

Notes:

Each facility scored according to the above criteria, on a scale from 0 (low) to 2 (high)

Appendix D
Project Prioritization by Jurisdiction

FEHR & PEERS

1. GRASS VALLEY PROJECTS

Grass Valley Project List

Improvement	Improvement Type	Location	Limits	Distance (ft)	Unit Cost per Mile	Additional Cost (Signals)	Structures Cost	Facility Cost	*Benefit Score*	*Feasibility Score*
Class II bike lanes on Sierra College Dr.	Class II Bike Lanes	Sierra College	Litton trail to Nevada City Hwy.	1,210	$211,200	$0	$0	$48,400	High	High
Class I bike path to Sierra College	Class I Bike Path	Sierra College	Sierra College Dr. to Sierra College southwest parking lot	735	$528,000	$0	$0	$73,500	Med	High
Class II bike lanes on Morgan Ranch Dr. extended to Ridge Rd.	Class II Bike Lanes	NUHS	Vistamont Dr. to Ridge Rd.	390	$211,200	$0	$0	$15,600	Med	High
Class II bike lanes on Hughes Rd.	Class II Bike Lanes	Sierra College	Litton trail to Nevada City Hwy.	2,386	$211,200	$0	$0	$95,400	Med	High
Class II bike lane completion on E Main St. north of Idaho Maryland Rd.	Class II Bike Lanes	E Main St.	Scandling Ave. to Idaho Maryland Rd. roundabout	402	$211,200	$0	$0	$16,100	Med	High
Class III bike route on Main St.	Class III Bike Route	Downtown Grass Valley	Alta St. to Idaho Maryland Rd.	3,978	$1,600	$0	$0	$1,200	Med	High
Class II bike lanes on Colfax Ave. under SR 20	Class II Bike Lanes	South Grass Valley / Charter School	Auburn St. to Ophir St.	2,115	$211,200	$0	$0	$84,600	Med	High
Class III bike route on S Church St.	Class III Bike Route	Downtown Grass Valley	W Main St. to Chapel St.	1,836	$1,600	$0	$0	$600	Med	High
Class III bike route on S Auburn St.	Class III Bike Route	Downtown Grass Valley	W Main St. to E McKnight Way	7,000	$1,600	$0	$0	$2,100	Med	High
Class III bike route on Richardson St.	Class III Bike Route	Downtown Grass Valley	Alta St. to E Main St.	2,277	$1,600	$0	$0	$700	Med	High
Class III bike route on Mill St.	Class III Bike Route	Downtown Grass Valley	W Main St. to McCourtney Rd.	4,277	$1,600	$0	$0	$1,300	Med	High
Class III bike route on Bennett St./Ophir St.	Class III Bike Route	Downtown Grass Valley	E Main St. to Colfax Ave.	2,196	$1,600	$0	$0	$700	Med	High
Class III bike route on Packard Dr.	Class III Bike Route	Downtown Grass Valley	Wlker Dr. to Brighton St.	3,000	$1,600	$0	$0	$900	Low	High
Class III bike route on Chapel St. / Brighton St.	Class III Bike Route	Downtown Grass Valley	Mill St. to McCourtney Rd.	4,681	$1,600	$0	$0	$1,400	Low	High
Class III bike route on Alta St.	Class III Bike Route	Alta St.	Ridge Rd. to W Main St.	1,542	$1,600	$0	$0	$500	Low	High
Class II bike lanes on McCourtney Rd.	Class II Bike Lanes	Boston Ravine	Brighton St. to Freeman Ln.	1,240	$211,200	$0	$0	$49,600	Low	High
Class II bike lanes on Ridge Rd.	Class II Bike Lanes	Northwest Grass Valley	Rough & Ready Hwy. to Nevada City Hwy.	4,080	$211,200	$0	$0	$163,200	High	Med
Class II bike lanes on Old Tunnel Rd.	Class II Bike Lanes	Brunswidk Rd / Sutton Way	Brunswick Rd. to Banner Lava Cap Rd.	2,737	$314,800	$0	$0	$163,200	Med	Med
Class II bike lanes on Freeman Ln.	Class II Bike Lanes	Boston Ravine / McKnight	McCourtney Rd. to E McKnight Way	4,276	$300,100	$0	$0	$243,000	Med	Med
Class I bike path from Litton Trail to NUHS	Class I Bike Path	Sierra College	Segment 1 to NUHS Dwy.	2,355	$528,000	$0	$0	$235,500	Med	Med
Class II bike lanes on Sutton Way	Class II Bike Lanes	Sutton Way	Brunswick Rd. to Idaho Maryland Rd.	4,303	$395,300	$0	$0	$322,200	Med	Med
Class II bike lanes on Brunswick Rd.	Class II Bike Lanes	Loma Rica	Idaho Maryland Rd. to Bet Rd.	3,100	$211,200	$0	$0	$124,000	Med	Med
Class I bike path along Brunswick Rd.	Class I Bike Path	Brunswick Rd.	Town Talk Rd. to Idaho Maryland Rd.	3,205	$528,000	$0	$0	$320,500	Low	Med
Class I bike path in Loma Rica Ranch development	Class I Bike Path	Loma Rica	Segment 4 to Brunswick Rd.	1,793	$528,000	$0	$0	$179,300	Low	Med
Class II bike lanes on Nevada City Hwy.	Class II Bike Lanes	Glenbrook	Joersche Dr. to Banner Lava Cap Rd.	5,561	$872,100	$200,000	$0	$1,118,500	High	Low
Class I bike path overcrossing of SR 20	Class I Bike Path	Boston Ravine	Freeman Ln. to SR 20 NB off ramp	100	$528,000	$0	$700,000	$710,000	Med	Low
Class II bike lanes on Dorsey Dr.	Class II Bike Lanes	Dorsey Dr.	Nevada City Hwy. to Sutton Way	4,512	$633,600	$0	$0	$541,400	Med	Low
Class I bike path improvements to Litton Trail	Class I Bike Path	Sierra College	Sierra College Dr. north of campus to Sierra College Dr. south of campus	5,461	$528,000	$0	$0	$546,100	Med	Low
Class II bike lanes on Idaho Maryland Rd.	Class II Bike Lanes	Idaho Maryland Rd.	SR 20 ramps to Brunswick Rd.	8,000	$475,200	$0	$0	$720,000	Med	Low
Class II bike lanes on Brunswick Rd.	Class II Bike Lanes	Brunswick Rd.	Nevada City Hwy. to Idaho Maryland Rd.	4,411	$534,400	$0	$0	$446,400	Med	Low
Class I bike path along Idaho Maryland Rd.	Class I Bike Path	Wolf Creek	SR 20 ramps to Sutton Way	5,324	$528,000	$0	$0	$532,400	Low	Low
Class III with multi-use shoulder on Colfax Hwy. 174	Class III Bike Route	Colfax Hwy	Ophir St. to Mercury Dr.	2,480	$325,900	$0	$0	$153,100	Low	Low
Class I bike path in Loma Rica Ranch development	Class I Bike Path	Loma Rica	Sutton Way to Wolf Creek	5,553	$528,000	$0	$0	$555,300	Low	Low
Class III with multi-use shoulder on La Barr Meadows Rd.	Class III Bike Route	South Grass Valley	McKnight Way to Southern City Limits	1,790	$402,800	$0	$0	$136,600	Low	Low
Class III with multi-use shoulder on Allison Ranch Rd.	Class III Bike Route	South Grass Valley	McCourtney Rd. to Southern City Limits	3,486	$580,800	$0	$0	$383,500	Low	Low

2. NEVADA CITY PROJECTS

Nevada City Project List

Improvement	Improvement Type	Location	Limits	Distance (ft)	Unit Cost per Mile	Additional Cost (Signals)	Structures Cost	Facility Cost	*Benefit Score*	*Feasibility Score*
Bicycle detection project at SR 49 / E Broad St.	Signal Detection	Rood Center	SR 49 / E Broad St.					$10,000	High	High
Class III bike route on Reward St.	Class III Bike Route	Seven Hills Middle School	Reward St. to Heilman Ct.	578	$1,600	$0	$0	$200	High	High
Class III bike route on Zion St. / Sacramento St.	Class III Bike Route	Zion St	Ridge Rd. to S Pine St.	4,000	$1,600	$0	$0	$1,200	High	High
Class III bike route on S Pine St.	Class III Bike Route	Downtown Nevada City	Sacramento St. to Broad St.	2,200	$1,600	$0	$0	$700	High	High
Class III bike route on Old Downieville Hwy / Monroe St.	Class III Bike Route	West of Downtown	Nevada City city limits to Broad St.	3,088	$1,600	$0	$0	$900	High	High
Class III bike route on Broad St. / Boulder St.	Class III Bike Route	Downtown Nevada City	W Broad St. to Nevada City city limits	3,617	$1,600	$0	$0	$1,100	High	High
Class III bike route on W Broad St.	Class III Bike Route	Downtown Nevada City	SR 49 to Broad St.	2,570	$1,600	$0	$0	$800	Mid	High
Class III bike route on Searls Ave.	Class III Bike Route	Zion St	Ridge Rd. to Sacramento St.	4,210	$1,600	$0	$0	$1,300	Mid	High
Class III bike route on E Broad St.	Class III Bike Route	Downtown Nevada City	SR 49 to Broad St.	2,021	$1,600	$0	$0	$600	Mid	High
Class III bike route on Sacramento St.	Class III Bike Route	Downtown Nevada City	S Pine St. to Broad St.	2,462	$1,600	$0	$0	$700	Low	High
Class III bike route on Nevada St.	Class III Bike Route	East of Downtown	Boulder St. to SR 49	4,563	$1,600	$0	$0	$1,400	Low	High
Class III bike route on Willow Valley Rd.	Class III Bike Route	East of Downtown	Nevada St. to Nevada City city limits	770	$1,600	$0	$0	$200	Low	High
Class III bike route on Nimrod St.	Class III Bike Route	East of Downtown	Boulder St. to Gracie Rd.	3,054	$1,600	$0	$0	$900	Low	High
Class I bike path behind Seven Hills and Deer Creek Schools	Class I Bike Path	Seven Hills Middle School	Reward St. to Deer Creek Elementary School	2,800	$528,000	$0	$0	$280,000	High	Mid
Class III with multi use shoulder on Gold Flat Rd.	Class III Bike Route	East of Downtown	Gracie Rd. to Ridge Rd.	6,692	$580,800	$0	$0	$736,100	Mid	Low

3. NEVADA COUNTY PROJECTS

Nevada County Project List

Improvement	Improvement Type	Location	Limits	Distance (ft)	Unit Cost per Mile	Additional Cost (Signals)	Structures Cost	Facility Cost	*Benefit Score*	*Feasibility Score*
County Roadways										
Class II bike lanes on Brunswick Rd.	Class II Bike Lanes	Loma Rica	Grass Valley city limits to Bet Rd.	1,048	$211,200	$0	$0	$41,900	High	High
Class II bike lanes on Nevada City Hwy	Class II Bike Lanes	Nevada City to Grass Valley	Nevada City city limits to Grass Valley city limits	500	$316,800	$0	$0	$30,000	High	High
Class III w/ multi-use shoulder on Donner Pass Rd.	Class III w/ Shoulder	Donner Pass Rd	Sugar Bowl Rd. to Truckee western Town limit	14,720	$580,000	$0	$0	$1,619,000	Mid	High
Class II bike lanes on Old Tunnel Rd.	Class II Bike Lanes	Nevada City to Grass Valley	Banner Lava Cap Rd. to Grass Valley city limits	500	$739,200	$0	$0	$70,000	Mid	High
Class III bike route on Alta St.	Class III Bike Route	Alta	Ridge Rd. to Grass Valley city	2,980	$1,600	$0	$0	$900	Mid	High
Class III bike route on Pleasant Valley Rd.	Class III Bike Route	North San Juan	SR 49 to Bitney Springs Rd.	47,288	$1,600	$0	$0	$14,300	Mid	High
Class III bike route on Eagle Lakes Rd	Class III Bike Route	Eagle Lakes Rd	Eagle Lakes Rd. western terminus near SR 20 to PLacer County border	10,560	$1,600	$0	$0	$3,200	Mid	High
Class III bike route on Auburn Rd.	Class III Bike Route	Auburn Rd	Archery Rd. to SR 49	24,565	$1,600	$0	$0	$7,400	Low	High
Class III bike route on Banner Lava Cap Rd.	Class III Bike Route	Banner Lava Cap	Idaho Maryland Rd. to Red Dog	13,195	$1,600	$0	$0	$4,000	Low	High
Class III bike route on Bitney Springs Rd.	Class III Bike Route	Bittney Springs	Pleasant Valley Rd. to Gold Fork Rd.	18,711	$1,600	$0	$0	$5,700	Low	High
Class III bike route on Old Downieville Hwy	Class III Bike Route	Nevada City	SR 49 to Nevada City city limits	8,030	$1,600	$0	$0	$2,400	Low	High
Class III bike route on Red Dog Rd.	Class III Bike Route	Red Dog Rd	Quaker Hill Cross to Banner Lava	8,439	$1,600	$0	$0	$2,600	Low	High
Class III bike route on Adam Ave. / Walker Dr. / Butler Rd.	Class III Bike Route	West of Grass Valley	Rough & Ready Hwy to city limits	4,134	$1,600	$0	$0	$1,300	Low	High
Class III bike route on Willow Valley Rd.	Class III Bike Route	SR 20	Scotts Valley Rd. to SR 20	1,518	$1,600	$0	$0	$500	Low	High
Class III with multi use shoulder on Brunswick Rd.	Class III Bike Route	Brunswick Rd	Bet Rd. to Hwy 174	6,507	$336,400	$0	$0	$414,600	High	Med
Class I bike path along Combie Rd.	Class I Bike Path	Lake of the Pines	SR 49 to existing Class I	3,904	$528,000	$0	$0	$390,400	High	Med
Class II bike lanes on Pleasant Valley Rd.	Class II Bike Lanes	Lake Wildwood	Lake Wildwood Dr. to SR 20	7,256	$211,200	$0	$0	$290,200	High	Med
Class II bike lanes on Ridge Rd.	Class II Bike Lanes	Ridge Rd	Pear Orchard Rd. to Nevada City city limits	2,850	$739,200	$0	$0	$399,000	Mid	Med
Class III with multi use shoulder on La Barr Meadows Rd.	Class III Bike Route	La Barr Meadows	Grass Valley city limits to Dog Bar	8,530	$291,200	$0	$0	$470,400	Mid	Med
Class III with multi use shoulder on Donner Pass Rd.	Class III Bike Route	Donner Pass Rd	I-80/Donner Pass Rd. interchange	19,010	$580,800	$0	$0	$2,091,100	Mid	Med
Class II bike lanes on Rough & Ready Hwy	Class II Bike Lanes	West of Grass Valley	Ridge Rd. to Grass Valley city	4,050	$633,600	$0	$0	$486,000	Mid	Med
Class III with multi use shoulder on Penn Valley Dr.	Class III Bike Route	Penn Valley	SR 20 to Spenceville Rd.	3,095	$580,800	$0	$0	$340,500	Mid	Med
Class II bike lanes on Glenshire Dr./Stampede Meadows Rd.	Class II Bike Lanes	Glenshire Dr/Stampede	Truckee eastern Town limit to	13,930	$739,200	$0	$0	$1,950,200	Mid	Med
Class III with multi use shoulder on Rattlesnake Rd.	Class III Bike Route	Lower Colfax Rd	SR 174 to Lower Colfax Rd.	1,613	$580,800	$0	$0	$177,400	Mid	Med
Class III bike route on Purdon Rd.	Class III Bike Route	North of Nevada City	Tyler Foote Crossing to SR 49	150,878	$1,600	$0	$0	$45,700	Low	Med
Class III with multi use shoulder on Stampede Meadows Rd.	Class III Bike Route	Stampede Meadows Rd	Hinton Rd. to Nevada/Sierra	22,930	$580,800	$0	$0	$2,522,300	Low	Med
Class III with multi use shoulder on Dog Bar Rd.	Class III Bike Route	Dog Bar Rd	La Barr Meadows Rd. to Alta Sierra Dr.	9,416	$349,100	$0	$0	$622,600	High	Low
Class III with multi use shoulder on Dog Bar Rd.	Class III Bike Route	Dog Bar Rd	Alta Sierra Dr. to Mt Olive Rd.	10,254	$580,800	$0	$0	$1,127,900	High	Low
Class III with multi use shoulder on Magnolia Rd.	Class III Bike Route	Lake of the Pines	Dog Bar Rd. to Class I at Kingston Rd.	21,104	$580,800	$0	$0	$2,321,400	Mid	Low
Class III with multi use shoulder on McCourtney Rd.	Class III Bike Route	McCourtney Rd	Auburn Rd. to Indian Springs Rd.	24,816	$432,900	$0	$0	$2,034,600	Mid	Low
Class III with multi use shoulder on Newtown Rd.	Class III Bike Route	Newtown Rd	SR 49 to Bitney Springs Rd.	20,731	$580,800	$0	$0	$2,280,400	Mid	Low
Class III with multi use shoulder on Rough & Ready Hwy	Class III Bike Route	Rough & Ready	Bitney Springs Rd. to Ridge Rd.	7,054	$457,600	$0	$0	$611,300	Mid	Low
Class II bike lanes on Pleasant Valley Rd.	Class II Bike Lanes	Lake Wildwood	Wildflower Dr. to Lake Wildwood Dr.	8,330	$670,600	$0	$0	$1,058,000	Mid	Low

Nevada County Project List

Improvement	Improvement Type	Location	Limits	Distance (ft)	Unit Cost per Mile	Additional Cost (Signals)	Structures Cost	Facility Cost	*Benefit Score*	*Feasibility Score*
Class II bike lanes on Ridge Rd.	Class II Bike Lanes	Ridge Rd	Rough & Ready Hwy to city limits	5,574	$625,500	$0	$0	$660,300	Mid	Low
Class II bike lanes on Ridge Rd.	Class II Bike Lanes	Ridge Rd	Grass Valley city limits to Pear Orchard Rd.	4,802	$629,200	$0	$0	$572,200	Mid	Low
Class III with multi use shoulder on Bitney Springs Rd.	Class III Bike Route	Bittney Springs	Empress Mine Rd. to Rough & Ready Hwy	9,990	$563,400	$0	$0	$1,066,000	Mid	Low
Class III with multi use shoulder on Lime Kiln Rd./Duggans Rd./Wolf Rd.	Class III Bike Route	McCourtney Rd	McCourtney Rd. to SR 49	31,513	$415,800	$0	$0	$2,481,600	Mid	Low
Class III with multi use shoulder on McCourtney Rd.	Class III Bike Route	McCourtney Rd	Indian Springs Rd. to Lime Kiln Rd.	26,899	$450,100	$0	$0	$2,293,000	Mid	Low
Class III with multi use shoulder on Pleasant Valley Rd.	Class III Bike Route	Lake Wildwood	Bitney Springs Rd. to Wildflower Dr.	13,447	$563,600	$0	$0	$1,435,400	Mid	Low
Class III with multi use shoulder on Red Dog Rd.	Class III Bike Route	Red Dog Rd	Nevada City city limits to Quaker Hill Cross	12,938	$580,800	$0	$0	$1,423,200	Mid	Low
Class III with multi use shoulder on Spenceville Rd.	Class III Bike Route	Penn Valley	Penn Valley Dr. to Indian Springs Rd.	7,986	$580,800	$0	$0	$878,500	Mid	Low
Class III with multi use shoulder on Tyler Foote Crossing	Class III Bike Route	North San Juan	SR 49 to Oak Tree Rd.	17,558	$580,800	$0	$0	$1,931,400	Mid	Low
Class III bike route on Lower Colfax Rd.	Class III Bike Route	Lower Colfax Rd	Rattlesnake Rd. to SR 174	34,953	$1,600	$0	$0	$10,600	Mid	Low
Class III with multi use shoulder on Banner Lava Cap Rd.	Class III Bike Route	Banner Lava Cap	Nevada City Hwy to Gracie Rd.	12,232	$580,800	$0	$0	$1,345,500	Mid	Low
Class III with multi use shoulder on Bitney Springs Rd.	Class III Bike Route	Bittney Springs	Gold Fork Rd. to Empress Mine	8,703	$580,800	$0	$0	$957,300	Mid	Low
Class III with multi use shoulder on Idaho Maryland Rd.	Class III Bike Route	Loma Rica	Brunswick Rd. to Banner Lava Cap Rd.	16,225	$538,000	$0	$0	$1,653,200	Mid	Low
Class III with multi use shoulder on Oak Tree Rd.	Class III Bike Route	North San Juan	SR 49 to Tyler Foote Crossing	14,090	$580,800	$0	$0	$1,549,900	Mid	Low
Class III with multi use shoulder on Rough & Ready Hwy	Class III Bike Route	Rough & Ready	SR 20 to Bitney Springs Rd.	21,469	$547,300	$0	$0	$2,225,400	Mid	Low
Class I bike path along I-80	Class I Bike Path	I-80	SR 20/I-80 interchange to Eagle Lakes Rd and Eagle Lakes Rd to	8,080	$528,000	$0	$4,200,000	$5,008,000	Mid	Low
Tahoe-Pyramid Trail	Class I Bike Path	Truckee River	Hinton Rd./Hirschdale Rd.	47,130	$528,000	$0	$0	$4,713,000	Mid	Low
Tahoe-Pyramid Trail (proposed County alignment)	Class II Bike Lanes	Hinton Rd.	Hirschdale Rd. to Stampede Meadows Rd.	16,790	$739,200	$0	$0	$2,350,600	Mid	Low
Tahoe-Pyramid Trail (proposed Tahoe-Pyramid leadership alignment)	Class III Bike Route	Hirschdale Rd.	Hinton Rd. to Glenshire Dr.	6,490	$1,600	$0	$0	$2,000	Mid	Low
Class III with multi use shoulder on Allison Ranch Rd.	Class III Bike Route	Alison Ranch Rd	Grass Valley city limits to SR 49	15,939	$580,800	$0	$0	$1,753,300	Low	Low
Class III with multi use shoulder on Auburn Rd.	Class III Bike Route	Auburn Rd	McCourtney Rd. to Archery Rd.	6,702	$580,800	$0	$0	$737,200	Low	Low
Class III with multi use shoulder on Banner Lava Cap Rd.	Class III Bike Route	Banner Lava Cap	Gracie Rd. to Idaho Maryland Rd.	6,504	$580,800	$0	$0	$715,400	Low	Low
Class III with multi use shoulder on Indian Springs Rd.	Class III Bike Route	Penn Valley	Pleasant Valley Rd. to Spenceville Rd.	11,707	$580,800	$0	$0	$1,287,800	Low	Low
Class III with multi use shoulder on Tyler Foote Crossing	Class III Bike Route	North San Juan	Oak Tree Rd. to Cammena Rd.	10,000	$580,800	$0	$0	$1,100,000	Low	Low
Class III with multi use shoulder on Willow Valley Rd.	Class III Bike Route	Nevada City	Nevada City city limits to Scotts Valley Rd.	7,895	$580,800	$0	$0	$868,500	Low	Low
Class III with multi use shoulder on Dog Bar Rd.	Class III Bike Route	Dog Bar Rd	Mt Olive Rd. to Magnolia Rd.	28,695	$580,800	$0	$0	$3,156,500	Low	Low
Caltrans Highways										
Class III with multi use shoulder on SR 49	Class III Bike Route	Lake of the Pines	Combie Rd. to county limits	12,488	$48,000	$0	$0	$113,500	High	Med
Class III with multi use shoulder on SR 49	Class III Bike Route	SR 49 South of Nevada City	Auburn Rd. to Combie Rd.	30,701	$67,600	$0	$0	$393,100	High	Med

Nevada County Project List

Improvement	Improvement Type	Location	Limits	Distance (ft)	Unit Cost per Mile	Additional Cost (Signals)	Structures Cost	Facility Cost	*Benefit Score*	*Feasibility Score*
Class III with multi use shoulder on SR 49	Class III Bike Route	SR 49 North of Nevada City	Newtown Rd. to Old Downieville Hwy	2,302	$580,800	$0	$0	$253,200	Mid	Med
Class III with multi use shoulder on SR 49	Class III Bike Route	SR 49 South of Nevada City	Crestview Dr. to Allison Ranch Rd.	13,399	$88,000	$0	$0	$223,300	Mid	Med
Class II bike lanes on SR 89	Class II Bike Lanes	SR 89	Truckee northern Town limit to Hobart Mills Rd.	10,530	$739,200	$0	$0	$1,474,200	Mid	Med
Class III with multi use shoulder on SR 89	Class III Bike Route	SR 89	Hobart Mills to Nevada/Sierra	19,570	$580,800	$0	$0	$2,152,700	Mid	Med
Class III with multi use shoulder on SR 174	Class III Bike Route	SR 174	Grass Valley City Limits to Rattlesnake Rd.	6,072	$523,600	$0	$0	$602,100	High	Low
Class III with multi use shoulder on SR 174	Class III Bike Route	SR 174	Brunswick Rd. to You Bet Rd.	11,523	$515,500	$0	$0	$1,125,000	High	Low
Class III with multi use shoulder on SR 49	Class III Bike Route	SR 49 North of Nevada City	Tyler Foote Crossing to Newtown Rd.	42,875	$563,400	$0	$0	$4,575,000	High	Low
Class III with multi use shoulder on SR 174	Class III Bike Route	SR 174	Rattle Snake Rd. to Brunswick Rd.	7,289	$549,000	$0	$0	$757,900	Mid	Low
Class III with multi use shoulder on SR 174	Class III Bike Route	SR 174	You Bet Rd. to Lower Colfax Rd.	18,287	$580,800	$0	$0	$2,011,600	Mid	Low
Class III with multi use shoulder on SR 49	Class III Bike Route	North San Juan	Oak Tree Rd. to Pleasant Valley Rd.	13,292	$580,800	$0	$0	$1,462,100	Mid	Low
Class III with multi use shoulder on SR 49	Class III Bike Route	SR 49 North of Nevada City	Pleasant Valley Rd. to Tyler Foote Crossing	5,751	$580,800	$0	$0	$632,600	Mid	Low
Class III with multi use shoulder on SR 49	Class III Bike Route	SR 49 North of Nevada City	Old Downieville Hwy to Nevada City city limits	5,974	$580,800	$0	$0	$657,100	Mid	Low
Class III with multi use shoulder on SR 49	Class III Bike Route	SR 49 South of Nevada City	Allison Ranch Rd. to Auburn Rd.	12,418	$522,900	$0	$0	$1,229,800	Mid	Low
Class III with multi use shoulder on SR 20	Class III Bike Route	SR 20 Northeast of Nevada City	Nevada St. to Willow Valley Rd.	19,896	$580,800	$0	$0	$2,188,600	Mid	Low
Class III with multi use shoulder on SR 20	Class III Bike Route	SR 20 Northeast of Nevada City	Willow Valley Rd. to Casci Rd.	24,768	$580,800	$0	$0	$2,724,500	Mid	Low
Class III with multi use shoulder on SR 49	Class III Bike Route	North San Juan	County limits to Oak Tree Rd.	12,144	$580,800	$0	$0	$1,335,800	Mid	Low
Class III with multi use shoulder on SR 174	Class III Bike Route	SR 174	Lower Colfax Rd. to county limits	6,192	$580,800	$0	$0	$681,100	Mid	Low
Class III with multi use shoulder on SR 20	Class III Bike Route	Donner Pass	Casci Rd. to Washington Rd.	22,275	$580,800	$0	$0	$2,450,300	Mid	Low
Class III with multi use shoulder on SR 20	Class III Bike Route	Donner Pass	Washington Rd. to Chalk Bluff Rd.	17,825	$580,800	$0	$0	$1,960,800	Mid	Low
Class III with multi use shoulder on SR 20	Class III Bike Route	Donner Pass	Chalk Bluff Rd. to county limits	31,635	$580,800	$0	$0	$3,479,900	Mid	Low