

FY 2024 RAISE Application: Project Description

Project Name: Nevada State Route 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project (Central Corridor Phase IIIB)

STIP ID: XS20220009

Regional Introduction

The Lake Tahoe Basin is home to the largest alpine lake in North America and has been a popular vacation destination since the late 19th century. Before that, the Washoe Tribe were regular occupants of the Tahoe shoreline. Lake Tahoe is one of the deepest and clearest lakes in the world with its surface at an elevation of 6,225 feet above sea level. The Lake Tahoe Region offers impressive scenery within the Lake Tahoe Basin and throughout the surrounding Sierra Nevada Mountains. The region is one of the most heavily visited national forest areas, exceeding 20 million visitors annually, surpassing the visitation of any national park. Lake Tahoe is designated as an Outstanding National Resource Water under the federal Clean Water Act and is the second deepest lake in the United States.

Figure 1-Project Location



The Nevada State Route 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project (Central Corridor Phase IIIB) (Project) is an integral part of a comprehensive corridor improvement plan, [State Route 28 \(SR 28\) National Scenic Byway Corridor Management Plan \(CMP\)](#). The CMP focuses on 11 miles of rural shoreline, the longest undeveloped stretch at Lake Tahoe, which parallels Nevada State Route 28 (SR 28) from Incline Village, NV to Spooner Summit, NV where SR 28 connects with US Highway 50. The SR 28 Corridor handles over two million vehicles annually and over one million recreational users. The corridor hosts a significant number of recreation sites along the shore, as well as access to mountain biking and hiking, including access to the internationally popular Tahoe Rim Trail. Annual snowfall ranges between 100 to 200 inches at lake level, offering additional recreational opportunities, as well as transportation challenges.

This collaborative project takes an integrated approach to improving safety, by relocating over 1,000, often illegally, shoulder parked cars to off-highway parking, expanding transit, and

minimizing pedestrian conflicts on the highway. It will also support commerce and economic growth by encouraging responsible tourism and recreational opportunities in an area that has been largely inaccessible to many populations. Environmental and water quality improvements, as well as infrastructure preservation, within the SR 28 Corridor will be appreciated for generations.

The RAISE grant request for this Project covers a trail segment totaling approximately 1.75 miles (pending final trail alignment) and associated improvements between Nevada's Sand Harbor State Park and Thunderbird Cove, as depicted in Figure 2. This section of trail is a microcosm of the entire 11- mile corridor in terms of problems and the solution. The completion of this section of trail and associated improvements are vital to the overall CMP and once completed, the advantages will be recognized throughout the corridor.

Problem

There have been minimal recreation planning efforts in the corridor and there are few paved, off-highway, parking spaces associated with the recreation areas. This leads to hazardous shoulder parking, which can exceed 1,000 cars on summer days on this narrow, winding mountainside highway.

The lack of bike and pedestrian facilities creates serious safety issues, with over 3,000 bikes and pedestrians, on a summer day, trying to access the public lands by using the travel lanes as sidewalks. Motorists have a difficult time seeing pedestrians when they walk out between vehicles parked bumper to bumper on the shoulder of the highway. Traffic gets congested as people search for parking spaces and slow to accommodate bikes and pedestrians. According to the Nevada Department of Transportation (NDOT), the overall crash rate is 180% higher than the statewide average. Currently due to a lack of infrastructure, there is limited public transit serving the corridor. In this remote area, cellular connectivity is inconsistent and bandwidth is limited which inhibit communication strategies to mitigate congestion and encourage mode shift.

There are also environmental concerns with shoulder parking, including heightened erosion and fine sediment runoff going into the Lake, which is damaging to its ecology and clarity.

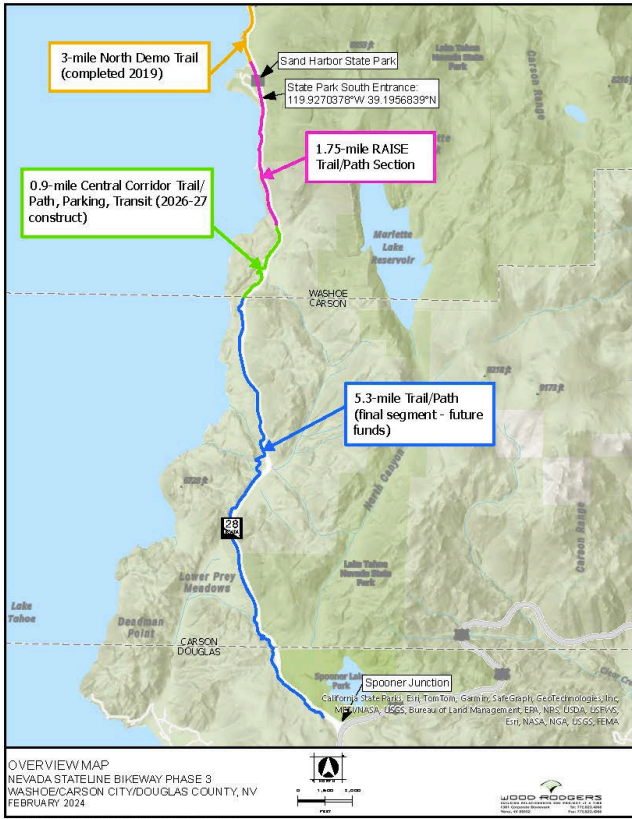
Solution

The RAISE funding will be used for final design and construction of this section of the Tahoe East Shore Trail, totaling approximately 1.75 miles of a multi-use path, which will meet Class 1 standards to maximize trail use. The path will have strategically placed benches, vista points, safety and wayfinding signage, and user access points.

The project includes improvements at three intersections, along with four pullouts. A tunnel will be constructed where the trail crosses the Sand Harbor Park entrance to avoid trail users and vehicle at-grade conflicts. Finally, as part of the project, a fiber optic line will be installed in the previously built underground conduit to improve communication and future parking management infrastructure.

The first constructed segment of the Tahoe East Shore Trail, known as the North Demonstration Project (from Incline Village, NV to Sand Harbor Park), includes a three mile off-highway shared use path, with a tunnel under SR 28 for safe bike/pedestrian crossing; 90 off-highway parking spaces in Incline Village, NV, with parking management kiosks; transit stop improvements; highway safety and scenic improvements, such as new vistas; 4.5 miles of broadband conduit, and five miles of water quality improvements. It was completed in June 2019 and has been a major

Figure 2-Proposed Bikeway Alignment



success, with over 225,000 bike and pedestrian users annually. It demonstrated that this multi-model approach can provide a safe alternative to driving, helping to increase sustainable access for all users to enjoy this popular Scenic Byway Corridor.

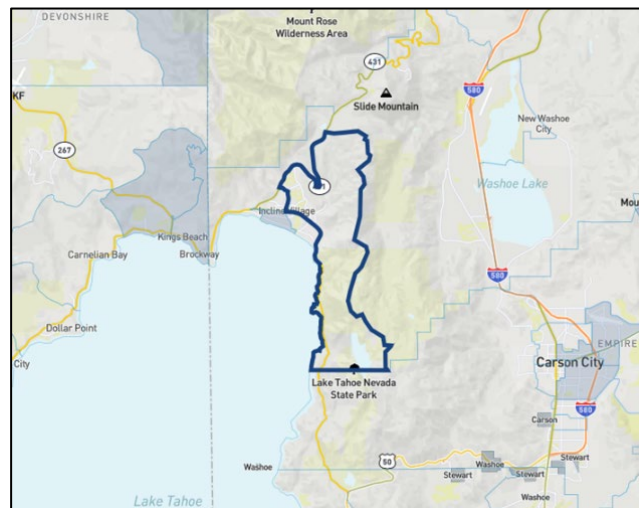
As shown in Figure 2, the Project parallels SR 28 along the east shore of Lake Tahoe in a RAISE grant-defined rural area. It will connect to the south end of the existing three-mile North Demonstration Project section of the Tahoe East Shore Trail. The Project will extend approximately 1.75 miles and connect to a 0.9-mile trail between Thunderbird Cove and Secret Harbor (Central Corridor Phase IIIA). This will total 5.65-miles of continuous trail that links to 240 vehicle parking spaces and transit infrastructure. Construction for Central Corridor Phase IIIA is planned to commence in 2026-27.

The Project is located in Washoe County census tract 33.10 (Figure 3). The population of the census tract is only 1,584,

as the area is mostly undeveloped forest and shoreline consisting of steep topography. It is near several Historically Disadvantaged Communities, including the neighboring census tract in Incline Village, NV, as well as those in Kings Beach, CA and Carson City, NV. These communities would enjoy an improved quality of life with increased access to recreation in their backyard.

The remaining 5.3 miles of the Tahoe East Shore Trail will continue south of Secret Harbor and will terminate at Spooner Summit, crossing into the Nevada counties of Carson City and Douglas (both with census tracts defined as Historically Disadvantaged Community). This final section of the trail will rely on future funding, some of which is programmed and includes construction of 40 parking spaces and transit stops at Skunk Harbor. The south terminus of the trail is at Spooner Summit, NV, where the Spooner Mobility Hub will be constructed.

Figure 3-Washoe County-Census



The Spooner Mobility Hub project is fully funded with 250 parking spaces to be built near the intersection of SR 28 and US Highway 50 (Hwy 50) with access to Nevada State Park, Spooner Lake. TTD partnered with NDOT on the design of the mobility hub and associated infrastructure, including electric vehicle charging. The mobility hub is located at a primary gateway to Lake Tahoe and will provide a permanent location for an Aquatic Invasive Species Inspection Station, essential to maintaining Tahoe's aquatic ecosystem and famous water clarity. The new transit facilities allow the East Shore Express (ESE) transit service to expand throughout the corridor and serve all new parking areas and recreational trail access. The ESE service has demonstrated its success by carrying nearly 30,000 visitors from Incline Village to Sand Harbor Park and the Tahoe East Shore Trail over a three-month period in 2022. Further, the mobility hub will join NDOT's improvements to Hwy 50, which includes transit stops along the Hwy 50 corridor.



The Project, as part of the CMP, has 30% design estimates completed, Environmental Analysis documentation and approvals, and is included in a larger Nevada Stateline-to-Stateline Bikeway Project Feasibility Report, with previously expended costs of \$1,597,283.

In consideration of the length and complexity of this narrow mountain corridor, a phasing plan was developed to create staging opportunities for more efficient construction. NDOT has installed fiber optics infrastructure as part of previous SR 28 improvements. Fiber optic improvements in this rural community will bring connections closer to the regional backhaul. There may also be an opportunity to coordinate with NV Energy to underground electrical lines under the trail, thus supporting climate resiliency. The undergrounding of the electrical lines would decrease infrastructure construction costs and improve long-term operations of the SR 28 Corridor by reducing highway closures due to repairs and maintenance of the power lines, as well as reducing the risk of wildfires.

The Lake Tahoe Basin is comprised of 79% federally owned land, and the Lake is controlled by the US Bureau of Reclamation. A very small portion of the Sand Harbor to Thunderbird Cove project (approximately 2.2%) is located on US Forest Service (USFS) land. This portion of the trail will be paid for with alternative funds, yet to be secured. The USFS Lake Tahoe Basin Management Unit is a primary partner in the CMP and supports this project through a special use permit for construction and post construction maintenance and operations.



Significant public engagement has been completed throughout the CMP process, including the [Stateline-to-Stateline Bikeway Feasibility Study](#), the North Demonstration Project, the environmental review of the Central Corridor Project, and the project is widely supported. In fact, a statewide voter approved bond measure was passed to support the Tahoe East Shore Trail. The popular North Demonstration Project, dubbed the “Impossible Trail,” and project partners have been recognized with multiple awards, including the American Institute of Steel Construction/National Steel Bridge Alliance “Special Purpose” Award, the Associated General Contractors Construction Risk Partners “Build America” award, and the 2019 American Trails award.

Conclusion

TTD applied for a TIGER 9 grant in 2017, a BUILD grant in 2018, as well as RAISE funding in 2023. Following the RAISE submission in 2023, TTD staff met with US DOT staff to discuss strategies to strengthen future applications, which have been included in this grant request.

The CMP takes a holistic approach in addressing FHWA’s strategic goals and priorities of Executive Order 14052 to improve safety, economic strength and global competitiveness, equity, climate, and sustainability by addressing dangerous conditions for motorists, pedestrians, and bicyclists by adding a shared-use trail and relocating unsafe highway parking.

The multi-use trail represents the project cornerstone, and the Project includes parking improvements, multiple trail access points for all users, entry to other recreational amenities, a public transit mobility hub and multiple public transit stops to provide a ‘complete streets’ project for this highly visited area of Lake Tahoe. The RAISE-funded trail section will provide a vital connection between the existing trail (North Demonstration Project) and the Thunderbird Cove to Secret Harbor trail on the south end to be constructed in 2026-27.

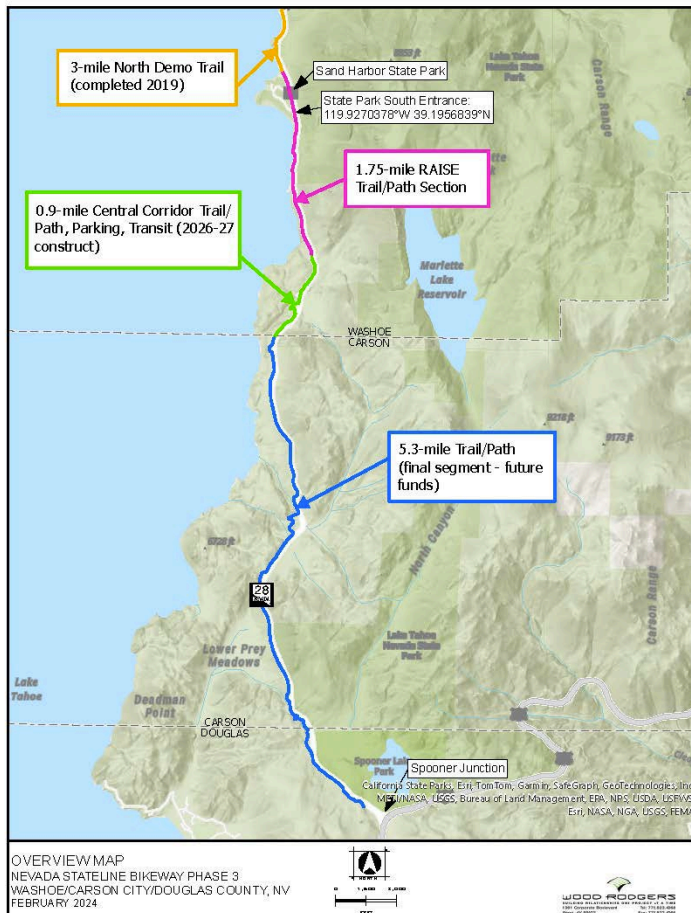
FY 2024 RAISE Application: Merit Criteria

Project Name: Nevada State Route 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project (Central Corridor, Phase IIIB)

STIP ID: XS20220009

The [State Route 28 \(SR 28\) National Scenic Byway Corridor Management Plan \(CMP\)](#) was developed to address safety, congestion, and environmental concerns. This comprehensive plan is being implemented in a series of smaller projects to make incremental progress towards the overall objectives. The Central Corridor, Phase III-B portion (Project) of the Nevada SR 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project, from Sand Harbor State Park to Thunderbird Cove will extend the connection from the first completed section of the Tahoe East Shore Trail (North Demonstration Project) to the remaining central corridor projects to the south. Illustrated in the project map below.

Figure 1-Project Map



CRITERION #1 SAFETY

The dueling needs for recreation access and through traffic have created major safety issues and an increasing fatality rate within the SR 28 Corridor. A video of the current SR 28 conditions and safety challenges can be found at: www.tahoetransportation.org/sr28. The overall injury crash rate of 0.54 per million vehicle miles is 180% higher than the statewide average of 0.30 according to the Nevada Department of Transportation (NDOT).

SR 28 has limited paved off-highway parking. As a result, the shoulder parking on this narrow highway is the leading cause of crashes. Vehicles park along the edge of steep slopes and in areas with limited sight distance. The lack of bike and pedestrian facilities also creates serious safety issues, with over 3,000 bikes and pedestrians, on a summer day, trying to access the public lands by using the travel lanes as sidewalks. Motorists have a difficult time seeing pedestrians when they step

out between vehicles parked bumper to bumper on the shoulder. The Project portion of SR 28 is named a High Impact Network (HIN) in Tahoe Regional Planning Agency's (TRPA) Vision Zero Strategy and is included in TRPA's project list. As the Metropolitan Planning Organization, TRPA is charged with improving roadway safety. A HIN is characterized as having the highest concentration of injuries according to Statewide Integrated Traffic Records System (SWITRS) and NDOT data.

Below is crash data in the corridor for the time period between 2019 and 2023:

- ◆ **239 total incidents** (vehicular, pedestrian, and bike); 53 of these incidents occurred between Sand Harbor to Thunderbird Cove
- ◆ One fatality; this is down from eight fatalities between 2006-2013
- ◆ 84 injury incidents, (vehicular, pedestrian, and bike)
- ◆ 151 property damage only incidents

Crash data is from 2019-2023 and it reveals the number of crashes and seriousness of the incidents has declined. It is not a coincidence that the first section of the Tahoe East Shore Trail (North Demonstration Project) was completed in 2019.

To improve safety in the SR 28 corridor, TTD and CMP partners are currently in the design phase to relocate dangerous shoulder parking to safe off-highway parking locations by providing 530 parking spaces, creating a shared-use path, building a new mobility hub (Hub) lot at the south end of the corridor near Spooner State Park, and creating transit stops and pedestrian crossings along the highway. Offering transit and bicycle options can decrease the number of crashes by simply reducing the number of single occupancy trips. The US DOT [Improving Safety for Pedestrians and Bicyclists Accessing Transit](#) document describes different bicyclist design user profiles and tolerances. Bicyclists of all user profiles and tolerance levels use this corridor which adds to the complexity and safety concerns. There are various events throughout the year that bring professional cyclists to the Basin. These confident riders are contrasted with novice riders who might be distracted while vacationing in a new area.

SR 28 Congestion / Safety Photos



The Sand Harbor State Park to Spooner Lake State Park segment, which includes the Project, has the least amount of paved off-highway parking (52 spaces), and as a result, has the most shoulder

parking and the greatest safety concerns. This RAISE grant request is to fund the construction and final design of the trail (approximately 1.75 miles) between Sand Harbor and Thunderbird Cove, with entrance improvements at Sand Harbor State Park. These improvements will enhance safety by connecting to off-highway parking, and reducing abrupt stops and illegal U-turns by motorists searching for parking. A Class I trail provides a safe alternative to people walking along the narrow highway to access the recreation areas.

The overall CMP project includes four primary strategies to improve safety:

1) Relocate dangerous shoulder parking to safe off-highway parking locations

Add over 500 off-highway parking spaces by expanding two existing USFS lots, building a new parking lot at Skunk Harbor, and creating the Hub at the south end of the corridor. The Hub will be fully ADA accessible with perimeter walkways, crosswalks, ramps, and clear signage. Elements discussed in the [Improving Safety for Pedestrians and Bicyclists Accessing Transit](#) guide will be incorporated during design to ensure all users feel welcome and safe.

2) Construct a ten-foot wide off-highway shared-use path

Safely connect the parking nodes with the recreation destinations, relocating bicyclists and pedestrians from the travel lanes completely separated from motor vehicles via the Class I shared-use path. The trail alignments are currently designed to remain consistently on the west side of SR 28 to avoid roadway conflicts; however, value engineering alternatives are being considered. It will be designed with Universal Principles to accommodate all users, including those with slower walking speeds (i.e. older adults, those with mobility devices or strollers).

Utilizing the [US DOT Benefit-Cost Analysis Guidance for Discretionary Grant Programs](#), the following quantified safety benefits are for the remaining project phases in the corridor:



Project Safety Benefits (2024 \$)				
Item	Fatality	Injury	PDO	Totals
Vehicular Crashes (2015-2020)	1	82	153	236
Countermeasure	Remove roadside parking			
Crash Modification Factor (ID 153)	0.8	0.8	0.8	
Bicycle/Pedestrian Crashes	0	4	0	4
Countermeasure	Construct share use path			
Crash Modification Factor (ID N/A)	0.01	0.01	0.01	
Crash Reduction	0.2	20.4	30.6	51
Annual Crash Reduction	0.03	3.39	5.10	9
Crash Severity Monetized Value	\$ 14,022,900	\$ 313,000	\$ 9,100	
Annual Safety Benefit	\$ 467,430	\$ 1,062,113	\$ 46,410	\$ 1,575,953
20 Year Total Benefit				\$ 31,519,067

The combination of the shared-use path and off-highway parking will reduce the number of crashes, especially in the Injury/Fatality categories. Further, these improvements are expected to reduce the number of near-misses and minor accidents not reported to law enforcement.

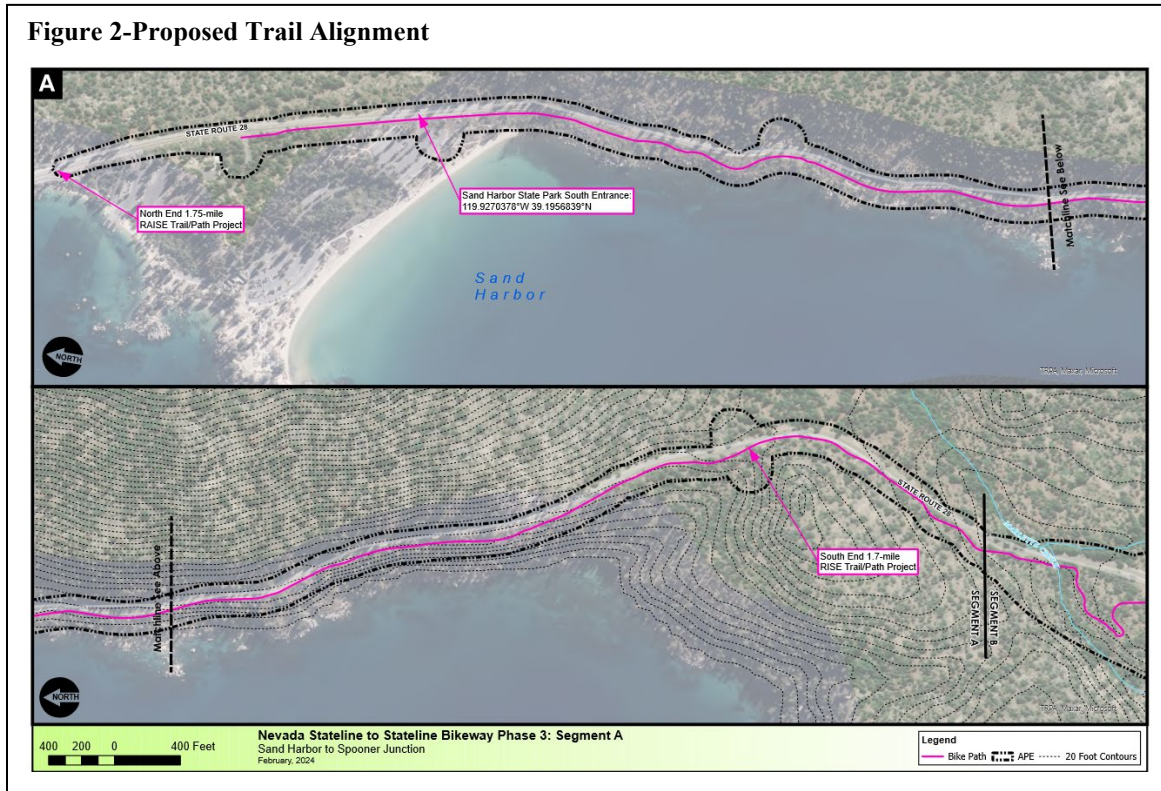
3) Increase transit service and stops

Provide transit service and stops in the proposed parking areas and at the Hub by expanding the East Shore Express (ESE) transit service (currently serving Incline Village to Sand Harbor). Service through the full 11-mile corridor will further reduce reliance on personal vehicles. Buses are equipped with an on-board camera system for safety, as well as space for beach gear of the passengers and bike racks. The Hub will have approximately 250 parking spaces with a lighted shelter to enhance the visibility of passengers. Real-time transit information will be shared on a monitor to keep passengers informed of bus arrival times. Transit and the shared-use path provide affordable and safe access for all, regardless of age or ability.

4) Replacement of aging infrastructure and increase climate resilience

NV Energy is working with the CMP partners on the potential to underground the overhead power lines (some over 100 years old). The opportunity to replace and relocate utilities under the shared-use path will drastically improve the function of the highway by reducing construction related delays and closures. It will also enhance the reliability of the utilities and reduce wildfire risks along this primary evacuation route.

Figure 2-Proposed Trail Alignment



CRITERION #2 ENVIRONMENTAL SUSTAINABILITY

Environmental sustainability is a priority in the Lake Tahoe Basin. Improving water quality, air quality, scenic resources, and recreation resources are just a few of the concerns to maintaining environmental sustainability. All Tahoe project planning incorporates environmental goals set by the TRPA to meet environmental thresholds as found in their [Regional Plan Goals](#) and [2020 Regional Transportation Plan](#), which includes their Sustainable Communities Strategy. Associated projects are also included in the 2021 Tahoe Climate Adaptation Action Portfolio [Climate Change Adaptation | California Tahoe Conservancy](#). As noted above, there may be opportunities to underground utilities beneath the bikeway. The NV Energy power line undergrounding project elements were identified as priority projects under their [Natural Disaster Protection Plan - NV Energy](#).

Water quality is a major environmental consideration in the Basin. More than seventy percent of pollutants impacting Lake Tahoe’s clarity come from the transportation system and built environment, such as erosion along the shoulders of SR 28 due to unorganized roadside parking and social trails. The Project will help to improve water quality by eliminating shoulder parking, adding water quality Best Management Practices, and eliminating pedestrian use of unauthorized, or social, trails that accelerate erosion. Lake Tahoe also supplies drinking water and it is considered some of the best in the world. There is a Drink Tahoe Tap® initiative that encourages residents and visitors to opt for tap water over bottled water. Preserving water quality is a generational investment. To further this initiative, a permanent Aquatic Invasive Species Inspection station will



be constructed near the Hub at Spooner Summit and corridor improvements will include stormwater capture and infiltration.

This is also a priority project identified in the Bi-State Consultation on Transportation [Final Report](#), led by Nevada and California Resources Agencies. The plan includes improving mobility through trail and transit improvements, which will reduce greenhouse gases and Vehicle Miles Traveled (VMT). TTD currently operates three battery electric buses and is expected to have four hybrid buses later this year, which is the foundation for its Zero-Emission Conversion Plan currently being developed to offer additional strategies to reduce greenhouse gas emissions. Charging infrastructure for electric buses, as well as electric vehicles, will be installed at the Hub.

To further increase environmental sustainability, recycled asphalt will be used for all paved sections of the trail and fly ash will be used for concrete components of the project. Any timber removed will be salvaged for onsite hardscape, landscape, or mulch. Trail and Hub amenities will be made of recycled materials and other natural materials will be utilized whenever possible.

Under the Tahoe Regional Planning Compact, which was ratified by the US Congress, specific environmental thresholds were established to protect Lake Tahoe. The proposed corridor improvements are part of the larger Lake Tahoe Environmental Improvement Program and are anticipated to provide the following benefits:

TRPA Threshold	Environmental Benefit
Air Quality	<ul style="list-style-type: none"> ✓ Reduced congestion from vehicles searching for parking ✓ Reduced VMT as use shifts to transit and bicycling
Water Quality	<ul style="list-style-type: none"> ✓ Reduced erosion from shoulder parking ✓ Reduced stormwater runoff from unauthorized trails ✓ Improved aquatic species habitat ✓ Prevention of invasive species (permanent Aquatic Invasive Species control station at Spooner Mobility Hub)
Scenic Resources	<ul style="list-style-type: none"> ✓ Improved visual quality from both roadway and Lake Tahoe with relocated shoulder parking to off-highway parking areas ✓ Improved visual quality with enhanced roadway aesthetics and possible undergrounding of power lines
Vegetation Preservation	<ul style="list-style-type: none"> ✓ Reduced impacts on vegetation by relocating shoulder parking and creating formalized trails ✓ Reduced wildfire risk with undergrounding of power lines
Recreation	<ul style="list-style-type: none"> ✓ Improved access to recreation sites ✓ Recreation experience is improved with new safe recreation opportunities, including the Class I shared-use path

CRITERION #3 QUALITY OF LIFE

On average, 20 million people travel to Lake Tahoe every year, with many of those visitors heading to Tahoe’s east shore (project location), the longest stretch of undeveloped shoreline, seeking the high-quality recreation Lake Tahoe and the mountains have to offer. This creates urban demand on a rural system and SR 28 is a primary access area for visitors, as well as the residents in nearby

communities. Many commuters rely on SR 28 when traveling to and from the state capital of Carson City. Limited parking, lack of bike and pedestrian facilities, and limited public transit and transit access lead to long wait times on the highway, heightened safety concerns, and less time to enjoy nature. Sparse access to the shoreline results in congestion in certain beach areas, which impacts the ecosystem and creates stress in a normally tranquil setting.

Construction of the Class I shared-use path improves access to the shoreline and federal lands, allowing people to disperse, while reducing highway congestion by moving the parking, as well as bike and pedestrian traffic, off the highway. These improvements will enhance and extend active and passive recreation, which has been shown to improve quality of life. Sand Harbor State Park has 530 parking spaces and had over 1.2 million visitors in 2023. Using TRPA's Bike and Pedestrian Corridor Use Model ([Existing, Proposed](#)) for projected non-motorist use, the path extension is expected to add approximately 106,000 active transportation users to the 225,000 annual users on the completed portion of the path. Currently, most of the recreation sites are gated off in the winter, but these improvements should allow for access throughout most of the year, barring extreme snow events.

The ESE transit service currently operates during the peak summer months. In 2023, the total ridership (one-way passenger trips) was 22,395. As a comparison, the 2022 ridership was 29,163 and 2019 was 36,815. Service was cancelled during COVID and reduced post-pandemic due to an operator shortage. The average passenger per hour on this service ranges between 25 to 50. Once the service extends to the Hub, it will intercept visitors and commuters, but ridership is not anticipated to remain as high throughout the year as in peak season. It is reasonable to compare it to an existing commuter route, which has approximately 1,000 passengers per month. Ridership is estimated to increase by approximately 45% (22,395 over 65 days plus 10,000 over 300 days), but this is subject to final design, seasonality, and operational guidelines.

In addition to recreation, the improved free-to-user transit connections increase access to employment, healthcare, schools, and shopping. Many specialty healthcare providers (e.g., dialysis clinics) are not available in the Lake Tahoe Basin, requiring local residents to travel to Carson City for healthcare. Ultimately, transit connections improve the social determinants of health outlined in the [Improving Safety for Pedestrians and Bicyclists Accessing Transit](#) document.

Limited intelligent transportation systems (ITS) technology and infrastructure make it difficult to communicate with the traveling public. The proposed CMP project improvements will enhance communication with motorists to help them make informed decisions. The trail, improved parking, and transit access (primary project elements), provide an alternative way to recreate at Lake Tahoe's east shore that reduces vehicle dependence and increases public health and affordability for travelers and residents alike. To ensure the improvements are usable by all people, the seven principles of Universal Design will be used to help guide the project design.

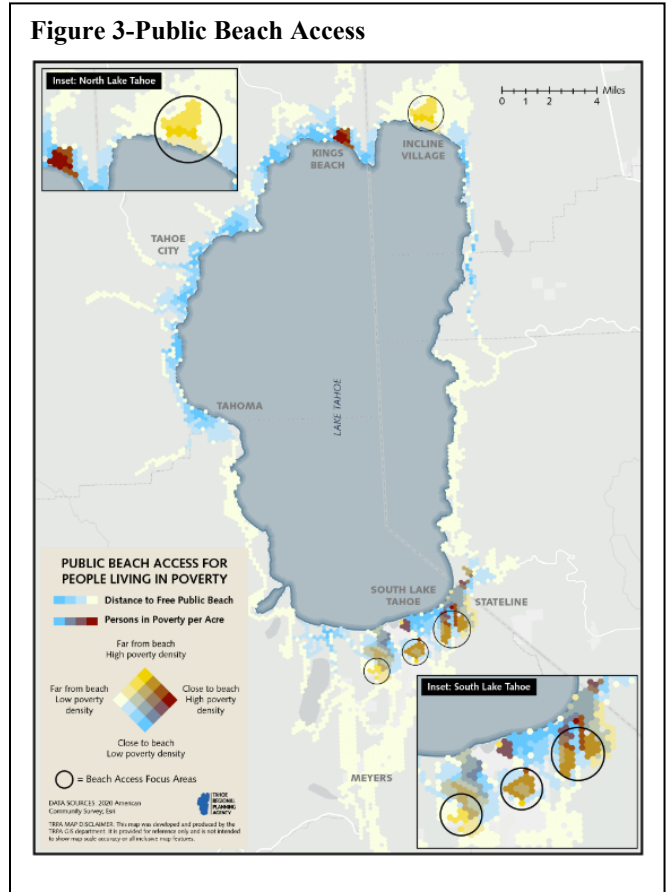
The [TRPA Transportation Equity Study](#) highlights obstacles that prevent people from accessing recreation. Public beach access for people living in poverty in Incline Village, NV is an area of concern as shown in the Public Beach Access for People Living in Poverty map below. The highlighted region below includes the area classified as a Historically Disadvantaged Community. All beaches in Incline Village, NV, are for private use by property owners. The beaches located in

the SR 28 Corridor are the closest public beaches for Incline Village residents (i.e., renters) without access to the private beaches.

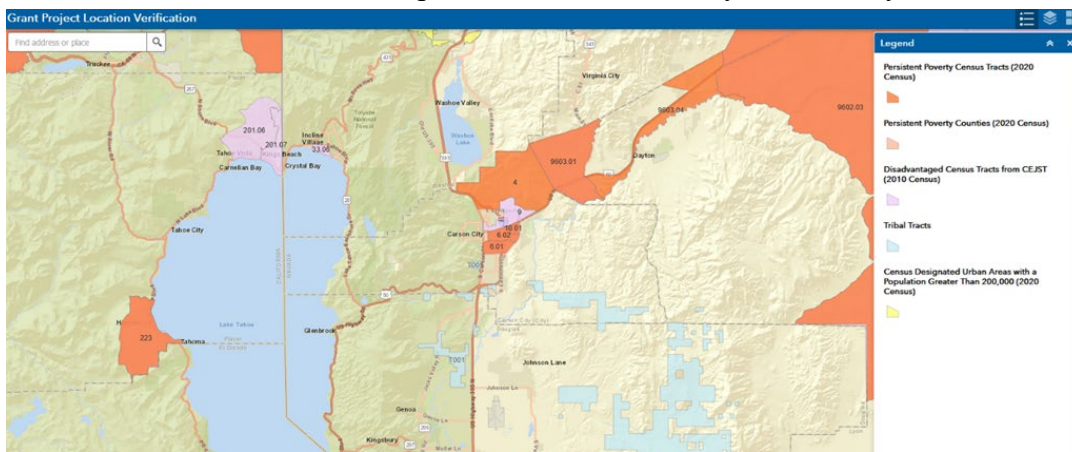
CRITERION #4 MOBILITY AND COMMUNITY CONNECTIVITY

Along SR 28 where the project is proposed, limited parking, lack of bike and pedestrian facilities, and limited transit lead to long wait times on the highway, with motorists searching for parking and having less time to recreate. Limited ITS, cellular, and broadband make it difficult to communicate with the traveling public. Historically, Lake Tahoe has been inaccessible to many due to socioeconomic factors and mobility challenges. This Project, as well as the CMP, level the playing field for all to enjoy this national treasure. The proposed project improvements will incorporate Universal Design principles to enhance access and provide safe alternative mode choices, as well as drastically improve the experience and quality of life through enhanced wayfinding, operational efficiencies, safe off-highway parking, access to the ESE transit service, and multi-use trail for visitors and residents, regardless of age or ability.

Figure 3-Public Beach Access



As the Project is on mostly undeveloped state land, it is not in a Historically Disadvantaged Community, but it is adjacent to the disadvantaged census tract in Incline Village, NV and those in nearby Kings Beach, CA and Carson City, NV as shown in the map below. In this bi-state, rural area, these communities are interdependent and connectivity is necessary.



[US DOT Grant Project Location Verification: Historically Disadvantaged Communities](#)

Regionally, the EPA Environmental Justice screening tool shows the following nearby communities have 80 to 95 percentile range of low-income: Kings Beach, CA (north shore of Lake Tahoe); Douglas County, Washoe County, and Carson City. Multiple census tracts within Washoe County have 95 to 100 percentile range of low income. Census tracts in Incline Village, NV range between 60 to 80 percentile range of low-income (Attachment A). The screening tool also shows a significant portion of the region’s communities’ people of color, located in Incline Village and ranging between 70 to 80% and in Carson City between 80 to 90% (Attachment B). Areas with limited English-speaking reach the 95-100 percentile in the neighboring community of Kings Beach (Attachment C). Despite the geographical distance, these communities are intertwined economically, with the rural highways being the primary linkage. The Project will enhance mobility and improve connections for pedestrians, cyclists, and vehicles to their recreation destination, thereby reducing transportation burdens for challenged groups.

Once all the corridor improvements are complete, there will be fare-free public transit available between Truckee, CA and South Lake Tahoe, CA along the east shore of Lake Tahoe; connecting Interstates 80 and 50. This regional connection has been included in the [TRPA’s Unmet Transit Needs Report](#) for at least 10 years and is also highlighted in their [Transportation Equity Study](#). Connectivity between these communities offers more employment options, educational alternatives, and increased access to health care.

The Washoe Tribe of Nevada and California is a member of the Corridor’s Project Development Team and will continue to be consulted throughout the project. They provided input into Tahoe East Shore Trail and parking facilities and will be involved throughout the final design. The Washoe (Wašiw) identify with Lake Tahoe as “the center of the Wašiw world is Da.aw (Lake Tahoe) both geographically and spiritually.” While the project is not located within tribal land, tribal consultation led to a feature for Tribal access to their lakeshore land via a trail from the proposed Skunk Harbor parking lot. Currently, there is no safe off-highway parking for the Tribe to access their land.

The CMP has been identified in the TRPA regional planning documents for over 15 years. The project was included in [TRPA’s Active Transportation Plan](#) and transit linkages identified in [TRPA Transportation Equity Study](#), both of which included outreach specific to disadvantaged communities near the project area. Numerous outreach events and public involvement were included as part of the [Nevada Stateline-to-Stateline Bikeway Project Feasibility Study](#) and as part of the Environmental Analysis and project development. All these planning documents involved public participation, public hearings, and various open public forums. The Project does not displace disadvantaged communities, but instead creates new infrastructure in a remote area with safe pedestrian, bicycle, and transit access and numerous recreation opportunities.

An interactive website and extensive public outreach process is consistent with the approaches outlined in the US DOT [Promising Practices for Meaningful Public Involvement in Transportation Decision-Making](#) document and includes notifying the public how they can be involved. These practices will continue throughout the project implementation. Several publicly noticed hearings were completed and a community review committee provided input during the initial design. To obtain a cross-section of the community, press releases, bi-lingual notices of the website at community meetings were numerous, including outreach to community-based organizations to ensure underserved communities were involved. A database was developed with all interested



parties and regular eblasts, Facebook posts, and Twitter feeds have kept the community informed with the North Demonstration Project. In addition to meetings and social media, there have been interviews with local and regional news sources, press releases, and articles in the newspapers. A multilingual and culturally appropriate approach will be taken for the Project.

CRITERION #5 ECONOMIC COMPETITIVENESS AND OPPORTUNITY

The connection between corridor improvements and economic vitality, especially in areas such as Lake Tahoe, are demonstrated as agencies find opportunities to create synergies between projects to maximize funding sources, accelerate delivery, and leverage resources for ongoing operations and maintenance (O&M). The Project, along with all the projects in the Lake Tahoe Basin, look at access holistically for all modes of transportation, as well as the infrastructure the local communities rely on for quality of life, goods movement, and commerce. As Tahoe continues to grow as a recreation destination and tourism-based industry, it is important to develop solutions that balance the core values of the communities, environment, and economies. With the SR 28 Corridor serving as one of the largest recreation areas in the Basin, it directly influences visitor demand across the region. The neighboring communities and millions of visitors rely on this corridor. The improvements and operational strategies outlined in the CMP are key to the economic competitiveness and sustainability of the local communities who serve the visitors. TTD’s intent is to maximize Disadvantaged Business Enterprise (DBE) goals and objectives on all elements of the CMP. DBE goals will be developed once the final design begins.

All elements of the corridor improvements offer job growth opportunities for the businesses in the surrounding communities, such as restaurants, lodging properties, bike shops/rentals, and concessionaires at beaches and the Hub. In addition to private business benefits, public agencies who maintain the path will hire new employees for O&M activities. The expansion of transit provides opportunities for TTD to expand its transit team, which are bargaining members of Teamsters Local 533. Below are the TTD classifications with current wages and the estimated increase in positions.

Positions	2024 Wage/Hr	Estimated Additional Positions
Bus Operator	\$25.00	3
Transit Dispatcher	\$23.40	1
Maintenance Technician	\$27.60 to \$32.40	1
Facilities Maintenance Worker	\$21.60 to \$23.40	1
Parts Technician	\$27.40	1

In addition to offering a living wage, these positions are year-round, and full-time with benefits, ultimately alleviating fluctuations and inconsistency of seasonal occupations. Further, additional support positions and/or contracts will be necessary for snow removal and parking management.

CRITERION #6 STATE OF GOOD REPAIR

The USFS acquired properties along the corridor were originally private properties and thus have had limited planning or improvements completed until the collaborative efforts of the 13 partner agencies of the CMP. Connecting safe off-highway parking areas with the shared-use path and transit will allow for extensions of the SR 28 No Parking Zones to prevent vehicles from parking

in environmentally constrained areas and preserve the structural integrity of the highway, while improving water quality, and decommissioning social trails to address existing erosion issues.

Co-location of power and fiber conduit underground and removal of the old power lines will reduce wildfire risks from aging overhead lines and will also reduce the cost of future maintenance. The trail design allows for typical wildland fire vehicle access. The Basin is particularly cognizant of wildfire after the mandatory evacuations due to the Caldor Fire in 2021. Broadband and ITS will provide needed traffic, wayfinding, and parking management technology. Co-location improves overall long-term corridor infrastructure O&M, will help reduce traffic congestion and delays, and improve electrical and communications continuity and reliability, as well as assist in evacuations in the event of a catastrophic event.

The parking lots will include improved ingress/egress, as well as parking management and proper signage informing the public of safe parking and vista options. The shared-use path will relocate bikes and pedestrians off the highway and transit connections will provide safe access. This will allow the road functionality and level of service to improve, offer more efficient maintenance of the highway, and reduce VMTs. Improved wayfinding, real-time information, and parking signage will assist visitors in traveling safely and reduce congestion.

Corridor improvements will align with NDOT's US 50 East Shore Corridor Management Plan, which improves safety and transit connectivity at the southern terminus.

Existing SR 28 Corridor Condition: Two-lane highway with over four million vehicles traveling through annually, at speeds exceeding the posted 45 mph while functioning as a parking lot for millions of vehicles annually. Pedestrians and bicyclists use the travel lanes as sidewalks.

- **Unsafe shoulder parking leads to erosion of highway shoulders and fill slopes, creating maintenance issues**

Very little shoulder parking exists along SR 28 due to steep embankments on the lake side. Motorists park along the dirt shoulder where possible and then walk down the embankments to the beach below. This creates erosion issues, impacts sensitive habitat, and causes long-term maintenance issues on the highway.

Proposed Project Improvement: The off-highway parking areas will allow for the removal and restriction of shoulder parking and preserve the structural integrity of the highway. Added water quality improvements and decommissioning of social trails will address existing erosion issues and help protect the ecosystem.

- **Aging power lines create wildfire risks**

The overhead power lines, dating back to the early 1900's, create a serious fire risk along this primary evacuation route for the Lake Tahoe Basin. NV Energy has deemed this area as critical for replacement and is working with the project partners on the potential to underground those power lines.

Proposed Project Improvement: There is an opportunity to locate utilities under the shared-use path and remove the old lines. This will eliminate the need to have years of ongoing lane closures resulting congestion and delays, if the utilities are placed under the highway. It also has potential to reduce the cost of reconstructing the highway.

- **The highway was not designed for bike, pedestrian, parking, or transit use**

The highway is narrow and meant for through traffic, with unsafe parking on the narrow shoulders causing a public safety concern that is difficult to enforce. With the high usage of the corridor due to over 12,000 acres of public recreation opportunities, including access to the Tahoe Rim Trail with over 400,000 annual users, the highway does not function properly when bike and pedestrians use the travel lanes. Not only is this unsafe, but also creates blockages for through traffic, including emergency vehicles and highway maintenance workers. Emergency pullouts and areas for vehicles to safely pull over to view the lake are few and far between, creating congestion and exacerbating safety issues.

Proposed Project Improvement: According to the American Public Transportation Association, transit agencies can help manage parking demand, build customer goodwill, expand transit reach, increase ridership, and create safer and more convenient connections to fixed route service when integrating bicycle facilities. These attributes are objectives of the CMP and they underscore the importance of a connected Tahoe East Shore Trail. The proposed parking areas will relocate shoulder parking and improve ingress/egress, with proper signage informing the public of safe parking options. The shared-use path will move bikes and pedestrians off the highway and improve non-motorized access to the region. With vehicles, bikes, and pedestrians off the highway, the functionality will improve and allow for more efficient use and maintenance of the highway. Improved wayfinding and parking signage will assist visitors to travel safely. The additions of emergency pullouts and scenic vistas will allow visitors an opportunity to move from the highway travel lanes safely, reducing congestion. Ultimately, the no parking zones will be expanded to improve the overall safety and traffic flow along SR 28. Creating safe, off-highway parking management creates an opportunity for a value capture approach to effectively manage and enforce parking in the corridor, using revenues to reinvest into O&M of the parking lots, multi-use path, and transit.

This corridor project is key to the successful long-term O&M of the SR 28 corridor. Operations and maintenance responsibility agreements are being drafted between partner agencies to provide a coordinated approach. Revenues generated by the parking management system will be used to fund O&M to ensure the corridor remains in a state of good repair for decades to come.

CRITERION #7 PARTNERSHIP AND COLLABORATION

The CMP is a true collaboration to address corridor wide issues, leverage non-federal resources, and save a significant amount of money by partnering with multiple agencies to address various infrastructure issues simultaneously. Figure 6 below illustrates the 13 various partners involved in the CMP. Please refer to the Letters of Support document of this grant application that details recent support.

In addition to the stakeholders, the public has been engaged throughout the SR 28 Corridor planning process. Staff and consultants will continue to use the concepts and guidance from the [Promising Practices for Meaningful Public Involvement in Transportation Decision-Making](#) document to reach a diverse cross-section of the community. There are various advocacy groups (e.g., Family Resource Center, Tahoe Family Solutions, Tahoe Area Coordinated Council for the Disabled, and Access Tahoe) that TTD routinely collaborates with to ensure all populations have an opportunity to provide public participation. The economic benefits of the CMP (i.e., workforce

development) as well as the quality-of-life improvements will be highlighted during future public meetings, where an interpreter will be available and local community groups will be encouraged to participate. Whenever practical, TTD will partner with DBE firms. Throughout the CMP, principles from Thriving Communities Network will be incorporated to further environmental justice and civil rights.

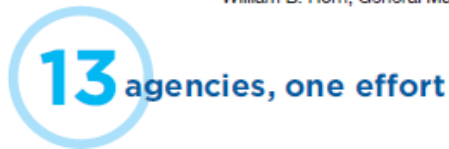
Figure 6-CMP Partners

Commitment

To jointly address shared issues, the TTD and its 12 partners have created a remarkable implementation mechanism: the SR 28 Corridor Management Plan. We thank the public for thoughtful comments and for supporting our commitment to protect the lake, improve safety, enhance recreation with transportation choices and benefit local/regional economies.

We, the undersigned, look forward to continued collaboration with the community as well as with each other:

  Carl Hasty, District Manager	  Joanne Marchetta, Executive Director
  Sue Klekar, Division Administrator	 Tim Carlson, Presidential Appointee
  Rudy Malfabon, P.E., Director	  Nancy J. Gibson, Forest Supervisor Lake Tahoe Basin Management Unit
  Sergeant Randy Jackson Incline Village/Lake Tahoe	  Dave Morrow, Administrator
  John McKenna, Chair	  James R. Lawrence, Administrator and State Land Registrar
  John Berkich, Interim County Manager	  Steve Mokrohisky, County Manager
  Darrel Cruz, Washoe Cultural Resource Department-Director, Tribal Historic Preservation Officer	  William B. Horn, General Manager



CRITERION #8 INNOVATION

Technology

Technology is an important element of the transportation network and provides significant economic advantages to rural communities. Information and communication developments will have significant effects on reducing emissions and congestion. Information Technology Systems and travel demand management are important for high demand recreation areas. These technologies share notifications with visitors well in advance so they can make decisions about alternative modes or changes to their destinations prior to becoming part of the congestion problem.

Value Pricing Pilot Program and Parking Management System– The electronic parking management system has been implemented at parking areas at the north end of the Tahoe East Shore Trail and is planned for the entire corridor. Demand pricing is used to manage capacity, allowing for better utilization of the available parking by encouraging turnover, as well as promote alternative transportation and create revenue generation for O&M and transit. It will also help to control recreational capacity by shifting users from crowded areas to other areas of the corridor with more capacity.

Strengthening Mobility and Revolutionizing Transportation (SMART) Grant – TTD was awarded the SMART grant and phase one will be used to ground truth the number of vehicles traveling into the Tahoe Basin. Turn movements, as well as bike and pedestrian movements, will be collected. The data collected will be used to plan and implement demand strategy improvements to reduce VMTs and subsequently greenhouse gases. Also, there may be future opportunities to determine real-time parking demand through this type of technology.

Installation of Fiber Optic Conduit and ITS – Will connect rural communities, urban communities, and transportation. This infrastructure installation is underway and will continue through the RAISE grant project and the corridor.

Project Delivery

TTD brings an innovative approach to corridor implementation through extensive partnerships and collaboration, as well as leveraging resources, including funding sources. The CMP showcases how to deal with complex multi-jurisdictional transportation issues with limited resources. This was evident in moving through the environmental process in partnership with the USFS. In addition to leveraging resources and building partnerships, TTD has also utilized innovative delivery methods, such as Construction Management-at-Risk (CMAR), to help minimize risks that arise and improve budget and schedule efficiencies, thereby reducing implementation costs and time. The North Demonstration Project was awarded multiple construction and trail awards. For this Phase of the project, as well as the remaining phases, TTD will focus on efficiencies to minimize financial and schedule variances. For the Project's section of trail, TTD will explore alternative design and standard approaches to see what yields the best project delivery. An alternative design approach is preferred, if feasible.

Through the continuation of the shared-use path and off-highway parking with a regional parking management approach, the project will improve access for local communities by reducing highway congestion and improving safety, while creating efficient means of operations. The CMP will also reduce highway maintenance costs by potentially moving the aging infrastructure under the path.



The potential of co-locating the NV Energy lines and broadband conduit under the new shared-use path allows the team to leverage resources for final design and construction, reduce overall costs, construction impacts to the highway, and ultimately, long term maintenance costs. Providing fiber communications to an area that is underserved and undergrounding these utilities as part of the project improves reliability of communications and the electric grid during critical times or in an emergency.

Financial

Many of the project delivery and financial innovations are analogous. Partners benefit through leveraging funding sources to make a complex, large scale, rural project possible. Partnerships to underground old electrical lines allow for opportunity to minimize construction costs and construction related impacts to the communities. These improvements are key to reliable energy needed for competitiveness and sustainability of the tourism economy in these recreation areas. Partner agencies have been successful at leveraging private, local, state, and federal funding for corridor wide improvements in the North Demonstration Project, reducing implementation cost and time. The Sand Harbor to Thunderbird Cove project will be no different. The RAISE request will significantly improve safety in the corridor, while helping provide an economic benefit to the surrounding communities.



FY 2024 RAISE Application: Project Readiness

Project Name: Nevada State Route 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project (Central Corridor Phase IIIB)

STIP ID: XS20220009

Project Schedule

The Central Corridor Phase IIIB (Sand Harbor to Thunderbird Cove) Project (Project) schedule below details the major milestones to demonstrate that RAISE grant funds will be obligated sufficiently in advance of the September 30, 2028 administrative deadline and that the Project can be constructed with all grant funds expended by September 30, 2033.

<u>Project Activity</u>	<u>Milestone Completion Deadline</u>
Environmental Permitting.....	Completed November 2020
30% Design.....	Completed December 2018
100% (Final) Design.....	October 2026
Approval of Plans, Specifications & Estimates (PS&E)	February 2027
Procurement (Advertise Project for Bidding).....	March 2027
Begin Construction	May 2027
State and Local Approvals.....	Completed
Public Involvement / Outreach	Ongoing through final design
Project Partnership and O&M Agreements	March 2030
Complete Construction	October 2030

Please note, no right-of-way acquisition is anticipated as the Project is located on Nevada State lands (Department of Transportation right-of-way). A very small portion of the Project (approximately 2.2%) is located on US Forest Service (USFS) land. This portion of the trail will be paid for with alternative funds, yet to be secured.

The completed Project milestone of the EA and FONSI have been completed for the entire SR 28. The remaining milestones are for this Project phase, the approximately 1.75-mile section.

Project Milestones	Start	Finish
*NEPA/TRPA joint EA and FONSI	August 2017	Nov 2020
**Design, pre-construction permits, utility coordination	October 2024	October 2026
***Construction, vegetation monitoring, and closeout	May 2027	October 2030

* Existing effort complete

** Certain tasks will be in design concurrently with a phased construction schedule

*** Due to mountainous winter weather conditions, Tahoe's construction season is limited from May to October. Certain activities can start as early as April and extend into November, weather permitting.

Project Schedule	2024	2025	2026	2027	2028	2029	2030
60% and 90% Design							
Final Design							
Construction Bid							
Construction of 1.75 miles shared-use trail, vistas, benches, signage, road intersection and pullout safety improvements							
Post construction O&M agreements							
Vegetation monitoring, project closeout							

Environmental Risk Assessment

NEPA(USFS)/TRPA Joint Environmental Assessment

To assure a multi-jurisdictional approach to environmental permitting, the USFS was the lead agency for the Environmental Assessment (EA) in coordination with local jurisdictions, the Tahoe Regional Planning Agency (TRPA), NDOT, FHWA, TTD and other project partners. The EA covered the eight-mile segment of the program of projects to be implemented in a phased approach, dependent upon partner priorities and available funding. The USFS announced the opening of public comment period for the EA via a press release and e-mail notifications. TTD posted the notification on its website as well. The EA was completed winter of 2019, with a Finding of No Significant Impact (FONSI), with the Decision Notice completed November 2020. The FONSI can be found here: [Forest Service \(usda.gov\)](https://www.usda.gov/forest-service).

TRPA Permit

The TRPA has oversight of the Basin’s land use regulations and environmental protection. TRPA will issue a conditional permit upon completion of 60% design and approve final plans once all conditions have been met.

Federal Transportation Requirements

The FHWA Nevada Division is a partner in the project and has been involved in all planning and initial environmental stages of the project, as well as the construction of the North Demonstration Project. They are supportive of the full corridor improvements as outlined in the SR 28 CMP. The project is included in the [2023-2026 TRPA Federal Transportation Improvement Program \(FTIP\)](#).

Significant public engagement has been completed throughout the Corridor planning, including the Stateline-to-Stateline Bikeway Feasibility Study, the North Demonstration Project, the environmental review of the CMP, and the projects included are widely supported. Public engagement will continue through the final planning efforts and will be incorporated in the plan as feasible. Additionally, public perspectives included in the TRPA’s Transportation Equity Study will be considered and incorporated into the plan.

State and Local Approvals

NDOT is a reviewing agency, as well as USFS, the Nevada Division of State Parks (NDSP), and local jurisdictions. Partner agencies continue to support the project implementation and goals.

Former Nevada Governors Sisolak and Sandoval were strong supporters of the project. This Project is included in NDOT's TIP number XS20170020.

TRPA provides local approval as stated above and the project is listed as a Regionally Significant Project in the TRPA Regional Transportation Plan and as part of the Tahoe Bi-State Consultation on Transportation led by the California and Nevada Departments of Natural Resources.

TRPA – Metropolitan Planning Organization (MPO)

TRPA represents the MPO for the Project and the Project is listed in their various planning and financial documents for delivery prior to 2030. The RAISE grant project portion of SR 28 is named a High Impact Network (HIN) in TRPA's Vision Zero Strategy. A HIN is characterized by having the highest concentration of injuries according to SWITRS and NDOT data.

Assessment of Risks and Mitigation Strategies

In 2011, a feasibility study was completed for the shared use path portion of the project, and in 2012, the SR 28 CMP was adopted by the partner agencies. The SR 28 Corridor Parking Management Plan (PMP) was adopted in 2019. These important project supporting documents can be found at: <https://www.tahoetransportation.org/projects/sr28-national-scenic-byway/>

Estimated costs for this Project have been validated based on 30% design estimates, costs from the North Demonstration Project, and previous costs for completed shared use paths in South Lake Tahoe.

TTD and its project partners have extensive experience delivering major corridor projects in the Lake Tahoe region. Although TTD and the project partners believe the risks are minimal, they are noted with mitigation measures already in place as described below.

- **Environmental Mitigation** – TRPA, TTD, and USFS have partnered to successfully complete several environmental projects in the basin, including the South Demonstration and North Demonstration projects and are continuing with the remaining projects in the CMP. TTD and its partners continually meet with the reviewing agencies to ensure the environmental mitigation meets the needs of all participating agencies and the public.
- **Project Delivery** – The North Demonstration Project (first segment of three-mile paved trail completed in 2019) provided many lessons that will reduce unknown risks and design and construction costs on the remaining trail throughout the corridor. For this RAISE grant portion of the trail, project development has been based on the results of preliminary engineering, including a feasibility study, opportunities and constraints analysis, EA, Record of Decision, 30% preliminary design, a financial plan, and revenue estimates from the parking program. General cut and fill quantities are understood, and project phasing has been developed with this in mind. A [structures memo](#) with review and input from NDOT has also been completed. It provides significant information to support the final design cost estimates for the Project. TTD and project partners will continue to evaluate value engineering alternatives without jeopardizing safety or compliance.
- **Construction in steep terrain with environmental constraints** – TTD will ensure the design team and contractor work together to minimize risks during construction. The Project has several challenges due to steep and sensitive terrain. Most notably, constructing the wall and tunnel structures in constrained areas, while keeping highway lanes open and

the public informed. These challenges were encountered in the North Demonstration project (photos shown at end of document) and provided TTD with a sound understanding of lessons learned for delivering this Project efficiently and within budget. The design team also includes the permitting agencies, allowing their concerns to be addressed prior to the start of construction and planned for accordingly.

Technical Capacity Assessment

As the grant applicant and lead agency for the Project, TTD attests to the following experience and qualifications in proving superior technical capacity in the development and delivery of active transportation projects emphasized in the RAISE grant criteria.

Federal Funding:

- Federal Lands Access Program
- Federal Highway Administration
 - Value Pricing Pilot Program
 - Subrecipient of Surface Transportation Block Grant Program
- Department of Transportation- Strengthening Mobility and Revolutionizing Transportation Phase 1
- Federal Transit Administration: 5307 UZA, 5307 CARES, 5307 ARP, 5310, 5339 UZA
 - Subrecipient of 5308, 5309, 5310, 5311, Congestion Mitigation and Air Quality, American Recovery and Reinvestment Act
- US Forest Service
- Federal Emergency Management Agency
 - California Governor’s Office of Emergency Services

Federal Regulations:

- Disadvantaged Business Enterprise
- Title VI Civil Rights
- Federal Transit Administration Urbanized Area Formula Grant recipient since 2016
 - National Transit Database
 - Transit Award Management System
 - Public Transit Agency Safety Plan
 - Transit Asset Management
 - Triennial Reviews in 2019 and 2023
- Procurement Requirements
- Americans with Disabilities Act Requirements
- Build America, Buy America Act
- Prevailing Wage Requirements

Project Planning:

- State Route 89/Fanny Bridge Community Revitalization (partnership with Central Federal Lands)
 - Meeks Bay Bike Trail, completed 2019
- US 50/South Shore Community Revitalization
- Cross-Lake Passenger Ferry
- State Route 28 National Scenic Byway

- America’s Most Beautiful Bikeway:
 - Nevada Stateline to Stateline Bikeway- South Demonstration (phases 1A, 1B, and 1C)
 - Nevada Stateline to Stateline Bikeway-North Demonstration

Project Delivery:

- State Route 89/Fanny Bridge Community Revitalization, estimated completion fall 2025 (partnership with Central Federal Lands)
 - Meeks Bay Bike Trail, completed 2019
- America’s Most Beautiful Bikeway:
 - Nevada Stateline to Stateline Bikeway- South Demonstration (phases 1A, 1B, and 1C), completed October 2013
 - Nevada Stateline to Stateline Bikeway-North Demonstration, completed June 2019
- Value Pricing Pilot Program, completed 2021

Financial Completeness Assessment

The Project Budget document describes the funding committed to the project from non-RAISE funding sources and demonstrates TTD’s, and its project partner’s, commitments to securing the necessary funding to deliver this Project. Specifically, a Nevada bond measure that supports environmental sustainability will be pursued to address the funding gap.



FY 2024 RAISE Application: Project BCA Narrative

Project Name: Nevada State Route 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project (Central Corridor Phase IIIB)

STIP ID: XS20220009

Per RAISE 2024 grant recommendations, a [Benefit Cost Analysis](#) (BCA) was updated by Wells Barnett Associates for the SR 28 Corridor projects, with attention to the Central Corridor, Phase IIIB portion (Project), referred to as Segment A in the BCA. Wells Barnett Associates found, overall, the project will provide substantial economic benefits to the surrounding area, including workforce development, safety benefits, reduced vehicle operating costs, improved mobility, improved health, recreation benefits, user expenditure benefits, capital cost-savings benefits, among others. The magnitude of the economic benefits provided by the project exceed the long-term costs of the project.

The commonly-cited [Transportation Research Board Report 552: Guidelines for Analysis of Investments in Bicycle Facilities \(2006\)](#) was used to calculate health benefits, which quantifies the health benefits from cycling at around \$80 per trip (inflated to 2024 dollars).

For all anticipated benefits, all phases of the Corridor Management Plan need to be completed; however, the Project section of trail is a key segment and will result in proportional benefits. When comparing the overall benefits to the overall costs for these projects, the combined total benefit-to-cost ratio is 1.34 using a 3.1% discount rate, as shown in the table below.

Table 4 Summary of BCA Results	
Land Use Type	Value
Net Present Value at 3.1%	
Total Project Benefits	\$157,651,411
Total Project Costs	\$118,088,186
Benefit-Cost Ratio	1.34



Together Creating a Legacy

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Chief Executive Officer

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–

February 22, 2024

The Honorable Pete Buttigieg
United States Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Dear Secretary Buttigieg:

I am writing to express the Tahoe Fund's strong support for the Tahoe Transportation District's (TTD) application for grant funding under the Rebuilding American Infrastructure with Sustainability and Equity program. TTD submits this application on behalf of 13 partner agencies and numerous private partners, including the Tahoe Fund, who are working together to make critical safety, environmental, recreational, and multi-modal transit improvements to State Route 28 (SR 28).

Helping TTD complete SR 28 improvements is the Tahoe Fund's top transportation-related priority. As Tahoe has risen in popularity among visitors, the corridor has had to sustain an unrelenting—and growing—crush of vehicles. This has increased fine sediment runoff into Lake Tahoe's famously clear waters, and has put visitors at risk. With an extremely limited number of off-highway parking options and nowhere else to go, we are now seeing long lines of cars double- and triple-parked along SR 28's narrow shoulder, and passengers darting across the busy road to access our beaches.

SR 28 is at an inflection point; we have to get this project across the finish line. The Tahoe Fund is dedicated to helping, by continuing to serve as a consistent source of private funding to match public dollars. So far, we have committed \$2 million to the project, with funds raised from over 1,300 generous donors—a reflection of the importance of this work not just to agencies, but to residents, businesses and visitors alike.

The results of our collaborative, public-private efforts thus far have been fantastic. Together, we have created more off-highway parking, less congestion, safer roads, and the first stretch of the dazzling East Shore Trail, which provides stunning vistas of Lake Tahoe along three miles of multi-modal, ADA-accessible pathway. Federal funding for the next phases of the project is essential. It will match local, state and private dollars to have an immediate—and game-changing—impact.

I very much appreciate your attention to this matter and urge you to give TTD's application your full support. Please do not hesitate to call or email should you have any questions. I can be reached at (775) 338-1668 or aberry@tahoefund.org.

Sincerely,

Amy Berry
Tahoe Fund CEO

JENIFER DAVIDSON
County Manager

SCOTT MORGAN
Assistant County Manager



1594 Esmeralda Avenue
Minden, Nevada 89423

www.douglascountynv.gov
775-782-9821

OFFICE OF THE COUNTY MANAGER

February 16, 2024

The Honorable Pete Buttigieg
United States Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Re: Douglas County's Support for Tahoe Transportation District's Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grant Application for the State Route 28 Safety Improvements, Shared-Use Path and Environmental Sustainability Project

Dear Secretary Buttigieg,

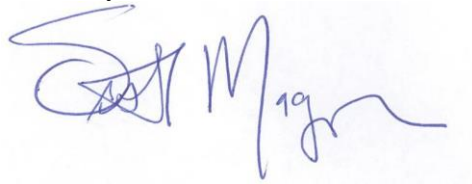
Douglas County is pleased to support the Tahoe Transportation District's (TTD) submittal for the RAISE grant program on behalf of the 13 partnering agencies who support this project. The shared-use path alignment along State Route (SR) 28 crosses through Douglas County as it links to US Highway 50. The shared-use path is a critical piece of connectivity to recreation destinations and transit for residents and visitors. There are over 2.6 million vehicles traveling this rural corridor, along with over one million people recreating at this portion of Lake Tahoe. To tackle the traffic congestion and safety along SR 28's narrow, winding, two-lane highway, with its steep topography, we must provide reasonable, off-highway parking locations and connect people with a shared-use path and transit, which this project will all provide.

This project also provides the opportunity for project partners to underground a 90-year-old Nevada Energy power line and install fiber/IT conduit critical for public safety, electronic wayfinding, and parking management. The partnering agencies are working closely with the private sector to provide construction efficiencies, cost savings, and reduce the disruption of traffic flow on SR 28.

Through our partnership with TTD and the U.S. Forest Service, the South Demonstration Project was built as part of the overall Nevada Stateline-to-Stateline Bikeway Project which Douglas County now maintains. It has been a tremendous success with 10,000 to 12,000 people per month using the path to link recreation destinations.

This multi-modal connectivity will significantly reduce the potential for pedestrian and vehicle conflicts at popular recreation destinations along SR 28. Nevada's rural highway SR 28 National Scenic Byway, needs our attention to provide a safe driving experience, a separated shared-use path, appropriate off-highway parking and transit access. These improvements will reduce accidents, alleviate congestion, and provide safe access for the users. Removing shoulder parking and unauthorized trails will stabilize the hillside and improve erosion control to protect the environment and water clarity of this national treasure, Lake Tahoe.

Sincerely,

A handwritten signature in blue ink, appearing to read "Scott Morgan" with a date "19" and a flourish at the end.

Scott Morgan
Douglas County, Assistant County Manager

CC: Carl Hasty, Tahoe Transportation District

Joe Lombardo
Governor

JAMES A. SETTELMAYER
Director
Department of Conservation and
Natural Resources

Bob Mergell
Administrator
Nevada State Parks

STATE OF NEVADA



901 S. Stewart Street,
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89701-5248

Phone: (775) 684-2770
Fax: (775) 684-2777
stparks@parks.nv.gov
<http://parks.nv.gov>

DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES
DIVISION OF STATE PARKS

February 9, 2024

The Honorable Pete Buttigieg
United States Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Support for Tahoe Transportation District's Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant application for the State Route 28 Safety Improvements, Shared-Use Path and Environmental Sustainability Project

Dear Secretary Buttigieg,

The Nevada Division of State Parks (NDSP) appreciates and supports the Tahoe Transportation District's (TTD) RAISE grant application for the next phase of the Nevada State Route (SR) 28 Safety Improvements, Shared-Use Path, and Environmental Sustainability project.

As part of the SR 28 Corridor Management Plan, NDSP is an operating partner on the first three-mile segment of the Tahoe East Shore Trail and can attest to the community and regional value. For the last 10 years, NDSP and TTD have coordinated to provide a transit option for Sand Harbor State Park visitors. The East Shore Express transit service provides nearly 30,000 trips during the peak summer season and reduces congestion from vehicles trying to enter the park.

This grant request includes the development of approximately 1.75 miles of a shared-use path, including a portion through the Sand Harbor State Park entrance, that would connect to the immensely popular Tahoe East Shore Trail. This will provide safe off-highway trail access to State Park and USFS lands along the SR 28 Scenic Byway and shoreline of Lake Tahoe. Improvements include vista points both on the highway and on the path, increased access to transit, and authorized/emergency pullouts. The project also provides the opportunity to underground 90-year-old powerlines and install fiber/IT conduit for public safety, wayfinding, improved viewsheds, and parking management. Collectively, these improvements will provide a safer visitor experience, improve water quality, preserve the ecosystem, enhance quality of life, and reduce vehicle miles traveled to continue to protect the national treasure, Lake Tahoe.

Sincerely,

A handwritten signature in blue ink that reads "Janice Keillor".

Janice Keillor
Deputy Administrator



JOE LOMBARDO

STATE OF NEVADA
DEPARTMENT OF TRANSPORTATION

1263 S. Stewart Street
Carson City, Nevada 89712

TRACY LARKIN THOMASON, P.E.

February 23, 2024

The Honorable Pete Buttigieg
United States Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant application for the Tahoe Transportation District State Route 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project

Dear Secretary Buttigieg:

The Nevada Department of Transportation (NDOT) supports the Rebuilding American Infrastructure with Sustainability and Equity grant application for the SR 28 Corridor improvements, submitted by the Tahoe Transportation District. The project includes construction of multimodal improvements for SR 28, which parallels the east shore of Lake Tahoe in Nevada, providing both transportation and economic development benefits.

The SR 28 National Scenic Byway Corridor Management Plan addresses challenging conditions for all roadway users by adding parking, a shared-use trail, and encouraging co-location of aging utilities, addressing emergency fire preparedness. The first three-mile segment of the trail, constructed and opened in 2019, hosts over 225,000 bike and pedestrian users annually. It has demonstrated this approach can provide a safe alternative to driving while creating new recreation business opportunities, with access for all users to enjoy this popular Scenic Byway corridor.

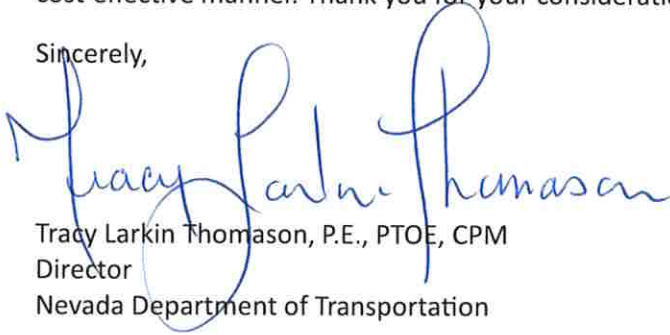
The RAISE grant request includes construction of 1.75 miles of the shared-use trail between Sand Harbor State Park and the Thunderbird Cove, completing an important link along this highly used recreation corridor. Designated off-highway parking areas and improved transit service will provide access to several beaches, the state park, and hiking and biking trails. These new facilities will be served by the expanded East Shore Express transit service which has demonstrated its success by carrying nearly 30,000 visitors to Sand Harbor and the Tahoe East Shore Trail over a three-month period. SR 28 corridor improvements support NDOT's One Nevada goals of improving safety, preserving infrastructure, optimizing mobility, transforming economies, fostering sustainability, and connecting communities. Most notably, the project will improve safety and connectivity for pedestrians, cyclists, and vehicles, thereby reducing transportation burdens, while supporting the region's economic driver in an environmentally friendly manner.

NDOT highly supports projects that improve mobility and safety for multiple users of the roadway. This project does exactly that, while offering high-quality recreational access to several federal and state park

RE: Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant application for the Tahoe Transportation District State Route 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project
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areas, along with environmental protection improvements along this National Scenic Byway. Since SR 28 is an NDOT asset, we have a vested interest in this project's success. NDOT is currently partnering with TTD on the design and construction of the Spooner Mobility Hub which will contribute to the outcomes of the RAISE grant project. NDOT has the highest confidence that TTD can deliver this project in a timely and cost-effective manner. Thank you for your consideration of this important project.

Sincerely,

A handwritten signature in blue ink that reads "Tracy Larkin Thomason". The signature is fluid and cursive, with a large initial "T" and "L".

Tracy Larkin Thomason, P.E., PTOE, CPM
Director
Nevada Department of Transportation



WASHOE COUNTY

OFFICE OF THE COUNTY MANAGER

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February 16, 2024

The Honorable Pete Buttigieg
United States Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Washoe County's Support for Tahoe Transportation District's 2022 Multimodal Project Discretionary Grant Application for the State Route 28 Corridor Safety Improvements, Shared-Use Path and Environmental Sustainability Project

Dear Secretary Buttigieg,

Washoe County is pleased to support the Tahoe Transportation District's (TTD) submittal for the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant application on behalf of the 13 partnering agencies who support this project. The North Demonstration project which built the first three-mile section of the shared-use path along State Route (SR) 28 is in Washoe County, Nevada. Washoe County has partnered with Nevada State Parks and TTD to maintain the path and parking facilities. The County is also partnering with TTD to design another bike trail in the Nevada Stateline to Stateline Bikeway Project. This trail will begin at the northern California/Nevada border and continue east to connect with the existing trail in Incline Village, Nevada. These partnerships have been tremendously successful in managing some of the recreation visitation of Lake Tahoe.

The path between Sand Harbor and Thunderbird Cove is a critical piece of connectivity, offering equitable recreation access to residents and visitors, enhancing transit connections, and providing economic benefits. There are over 2.6 million vehicles traveling this rural corridor, along with over one million people recreating at this portion of Lake Tahoe. To tackle the traffic congestion and safety concerns along SR 28's narrow, winding, two-lane highway, with steep topography, we must provide reasonable, off-highway parking options that connect people with a shared-use path and transit. In addition, this project provides opportunities for partner agencies to install underground utilities and fiber optic cable into a previously installed conduit. Partnering agencies are working closely with the private sector to provide construction efficiencies and cost savings while strategizing ways to reduce the disruption to motorists on SR 28.

Nevada's rural highway SR 28 National Scenic Byway needs our attention to provide a safe driving experience, a separated shared-use path, appropriate off-highway parking, and transit access. This funding will provide a trail that connects an important gap between Sand Harbor and Thunderbird Cove. The overall project will clear congestion, reduce vehicle miles traveled, and provide safe access to public lands. The trail will provide stabilization and erosion control which will protect the water clarity of this national treasure, Lake Tahoe.

Sincerely,

David M. Solaro, Arch., P.E.
Assistant County Manager

cc: Carl Hasty, Tahoe Transportation District



Mail

PO Box 5310
Stateline, NV 89449-5310

Location

128 Market Street
Stateline, NV 89449

Contact

Phone: 775-588-4547
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www.trpa.gov

February 23, 2024

The Honorable Pete Buttigieg
United States Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

RE: Support for Tahoe Transportation District's Rebuilding American Infrastructure with Sustainability and Equity grant application for the State Route 28 Safety Improvements, Shared-Use Path and Environmental Improvement Project

Dear Secretary Buttigieg,

The Tahoe Regional Planning Agency (TRPA) is pleased to support the Tahoe Transportation District's (TTD) submittal for the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) application for the next phase of the State Route (SR) 28 Shared-Use Path Project. The project includes construction of multimodal improvements for SR 28, which parallels the east shore of Lake Tahoe in Nevada, providing transportation, environmental, and economic benefits.

With over 2.6 million vehicles traveling this corridor and over one million people recreating along this section of Lake Tahoe, pedestrian/vehicle conflict is extremely high due to motorists parking along the shoulders of this narrow winding highway. High demand and congestion amplify safety risks as motorists make abrupt stops while searching for parking, park within the travel lanes, and attempt illegal U-turns. During the busy summer season, there are nearly 1,000 people walking in the travel lanes and crawling over the guardrails to access recreation destinations. This segment of roadway was identified in TRPA's Vision Zero Strategy as a High Impact Network, and it is included in the project list.

This grant request focuses on the development of approximately 1.75 miles of a shared-use path to close a gap between Sand Harbor and Thunderbird Cove that will connect to trails, parking, and transit improvements. These multi-modal improvements will provide enhanced public access for all to Federal and state lands along SR 28 and the shoreline of Lake Tahoe. Enhancements include vista points both on the highway and on the path, authorized/emergency pullouts, and transit stops. The project provides the opportunity to underground 90-year-old powerlines and install fiber/IT for parking management and real-time traveler information encouraging mode shifts to transit. Collectively, these improvements offer a safer visitor experience and work to improve water quality from erosive shoulder parking, while reducing vehicle miles traveled. These objectives align with TRPA's vision for a lake environment that is sustainable, healthy, and safe for the community and future generations.

The SR 28 corridor is a National Scenic Byway, and this project will enhance safe access for everyone to public lands along the corridor. The completion of the North Demonstration Project

from Incline Village to Sand Harbor State Park provides clear evidence of feasibility of this project and the demand for such improvements. The North Demonstration Project has won awards and become the most popular shared-use path in the entire Lake Tahoe Basin, with over 200,000 visitors annually. This shift to alternative modes to experience Lake Tahoe is a central goal of TRPA to “reduce the dependency on the private automobile” and protect Lake Tahoe for future generations.

We appreciate your consideration of this grant application submitted by TTD.

Sincerely,

A handwritten signature in blue ink that reads "Nick Haven". The signature is fluid and cursive, with the first name "Nick" being more prominent than the last name "Haven".

Nick Haven
MPO Director
Tahoe Regional Planning Agency

Cc: Carl Hasty, Tahoe Transportation District

File Code: 7700
Date: February 9, 2024

The Honorable Pete Buttigieg
Secretary of Transportation
United States Department of Transportation
1200 New Jersey Avenue SE
Washington, DC 20590

Dear Mr. Buttigieg:

We write to express our support for the Tahoe Transportation District's (TTD) request for funding through the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant application for the next phase of the State Route (SR) 28 Corridor Safety Improvements, Shared-Use Path, and Environmental Sustainability Project, specifically the area between Sand Harbor and Thunderbird Cove.

SR 28, a National Scenic Byway, is a narrow two-lane highway with steep topography that parallels the longest stretch of undeveloped shoreline in the Lake Tahoe Basin. The natural beauty and recreation destinations along this corridor make it one of the most visited National Forests in the country, and state parks in Nevada. Annually, there are over 2.6 million vehicles traveling this rural corridor, along with over one million people recreating. The traffic during peak season can be delayed for hours due to motorists searching for parking which impedes emergency response vehicles. The lack of parking and connecting path systems forces over 2,000 people, on an average peak summer day, to walk in the travel lanes, compounding congestion and safety concerns.

Working together, the 13 Federal, State, and local project partners set a goal for a multi-phased project to clear congestion; provide safe multi-modal access and road safety improvements; replace and underground utility infrastructure; install conduit for fiber/IT; and control erosion along the highway shoulder, thus protecting Lake Tahoe's water quality. The first phase was the recently constructed Tahoe East Shore Trail from Incline Village to Sand Harbor. It has been successful in not only providing a safe experience for motorists, bicyclists, and pedestrians, but has had a positive impact on local businesses who have expanded to meet the demand of over 200,000 visitors annually. Furthermore, the project has demonstrated the successful continued collaboration among the partner agencies to deliver a multi-benefit project.

The RAISE grant request includes construction of 1.75 miles of shared-use trail. Recreation areas will be served by an expanded East Shore Express transit service which transports nearly 30,000 visitors over a three-month summer period. NV Energy has an opportunity to work with the partnering agencies to create a more fire resilient corridor by undergrounding and replacing aging powerlines along this primary evacuation route. This joint effort improves construction efficiencies and costs, limits road closures and delays for future utility repairs, while supporting wildfire mitigation efforts.



We thank you for your consideration and support for investments in the region. If you have any questions, please feel free to reach out to our office.

Sincerely,

**ERICK
WALKER**

Digitally signed by ERICK
WALKER
Date: 2024.02.09
15:51:21 -08'00'

ERICK J. WALKER
Forest Supervisor

cc: Carl Hasty