

Mount Rose Scenic Byway Corridor Management Plan

Highway to the Sky





CONTENTS

	LUN
EXECUTIVE SUMMARY	
CHAPTER 1: PURPOSE & VISION	
PURPOSE & VISION	1
PLAN PURPOSE	2
CORRIDOR SETTING	3
VISION & GOALS	6
STAKEHOLDER & PUBLIC OUTREACH	7
CHAPTER 2: MOUNT ROSE SCENIC BYWAY'S INTRINSI	C VALUES
INTRINSIC VALUES	19
TERRAIN	20
OWNERSHIP	22
LAND USE & COMMUNITY RESOURCES	24
VISUAL QUALITY	26
CULTURAL RESOURCES	30
RECREATIONAL RESOURCES	34
HYDROLOGY	40
VEGETATION COMMUNITIES & WILDLIFE	42
FUEL MANAGEMENT & FIRES	44
CHAPTER 3: THE HIGHWAY AS A TRANSPORTATION FA	CILITY
TRANSPORTATION FACILITIES	47
EXISTING ROADWAY CONFIGURATION	48
EXISTING TRAFFIC VOLUMES & TRENDS	49
EXISTING TRANSIT SERVICES	50
EXISTING BICYCLE & PEDESTRIAN FACILITIES	50
EXISTING TRAFFIC SAFETY	50
EXISTING PARKING AREAS	55
PLANNED ROADWAY IMPROVEMENTS	55
CHAPTER 4: ENHANCING THE BYWAY FOR VISITING, LI	VING & DRIVING
CORRIDOR MANAGEMENT STRATEGIES & ACTION ITEN	IS 57
PRESERVE THE SCENIC QUALITY & NATURAL RESOURCE	ES 59
BALANCE RECREATION ACCESS WITH TRANSPORTATIO & SAFETY NEEDS	N 68
CONNECT PEOPLE WITH THE CORRIDOR	86
PROMOTE TOURISM	94

CHAPTER 5: CORRIDOR STEWARDSHIP

CORRIDOR STEWARDSHIP99MANAGING PARTNERS100CURRENT RESOURCE MANAGEMENT DOCUMENTS102



This Plan was funded by an On Our Way grant from the Tahoe Regional Planning Agency and a Federal Scenic Byway Grant from the Nevada Department of Transportation.

CHAPTER ONE PURPOSE & VISION





The Corridor Management Plan identifies goals, objectives and potential enhancements to improve the Mount Rose Scenic Byway.

PLAN PURPOSE

The Mount Rose Scenic Byway is officially named the "Highway to the Sky" and offers travelers an exciting ascent over the Sierra Nevada from the sage-covered slopes of the eastern Sierra west to Lake Tahoe. Not only does the highway connect travelers to a variety of recreation destinations and cultural and natural resources along the Byway, it also serves as a minor arterial connecting both tourists and commuters from Reno to Lake Tahoe.

Balancing the needs of recreation travelers and commuters along the winding two-lane road is challenging. Safety and traffic needs must be met while ensuring the Byway's scenic quality is not diminished and Mt. Rose's important watersheds are protected.

The Mount Rose Scenic Byway Corridor Management Plan (CMP) focuses on identifying partnerships to manage and preserve the surrounding natural environment and developing solutions for a safe, multi-modal highway in order to provide opportunities for people to experience the scenic beauty and recreational opportunities. The CMP identifies goals, objectives and potential enhancements to improve the Byway.

The planning process included public outreach and stakeholder coordination through traditional in-person meetings and on-line surveys. Input from both the public and land managers led to the development of the proposed Byway improvements.

The intent of the CMP is to provide Washoe County, other land managers, governing agencies/organization and the surrounding communities a tool for managing and preserving the Byway's special and unique qualities.

The plan is designed to help agencies address shared issues and provide a resource for seeking grant funding for the Byway's projects.

CORRIDOR MANAGEMENT PLAN PURPOSE

A Corridor Management Plan is a community-based document that outlines the goals and strategies for protecting and enhancing a scenic byway's intrinsic qualities. The CMP achieves the following:

- Identifies the Corridor's most valuable intrinsic qualities.
- Establishes goals to manage and preserve valued qualities.
- Address issues related to safety, access, visitor experience, and aesthetics.
- Identifies opportunities for wayfinding and signage.
- Creates marketing and promotion strategies.
- Identifies implementation and management strategies to achieve the goals and vision.

CORRIDOR SETTING

The Mount Rose Scenic Byway includes 23 miles of SR 431 connecting Lake Tahoe to Reno through the Lake Tahoe National Forest and over the summit of Mount Rose into Reno. A designated Nevada State Scenic Byway, it begins at the SR 431/SR 28 roundabout in Incline Village and climbs to almost 9,000 feet at the Mount Rose Summit before descending to the Reno area. The Byway ends at Wedge Parkway just west of the Reno city limits.



The Mount Rose Scenic Byway includes 23 miles of SR 431 connecting Lake Tahoe to Reno. Safety, recreation access, visual quality and resource protection issues confront the Corridor. The Corridor includes more than the highway and the immediate rightof-way. Although issues and opportunities affecting the Corridor may be most easily seen along the roadway, management strategies are identified on a more contextual level to include the road itself, facilities within the immediate right-of-way and natural and developed areas within the viewshed seen from the highway.

This contextual planning approach does not supersede individual jurisdictions' plans, but rather allows for a coordinated approach and understanding of projects and efforts. Plan partners can collaborate more effectively to identify shared challenges and joint projects and recognize opportunities for shared benefits within the Corridor.

CORRIDOR SIGNIFICANCE

The Mount Rose Highway reaches an elevation of 8,911 feet, the highest pass in the Sierra that is maintained year-round. Home to numerous developed and informal recreation areas, the Corridor is also rich in history and culture. Named the "Highway to the Sky" when construction began in the early 1950's, the Byway passes primarily through National Forest lands filled with exceptional beauty. Mountain peaks and valley floors, forests and meadows, a vast array of plants and animals, unusual geology and the dazzling splendor of Lake Tahoe offer the traveler something new behind every switchback.

CHALLENGES FACING THE CORRIDOR

The challenges facing the Corridor include safety, recreation access, visual quality and resource protection.

Safety

- Icy and snowy conditions exist during the winter; the depth of snow and blowing snow can make it challenging for drivers and the Nevada Department of Transportation's (NDOT's) snow removal crews.
- The roadway is winding with sharp turns that can be cause for accidents both in inclement and dry weather.
- Roadside/shoulder parking or parking over the fog line for recreation access in winter and summer can be hazardous.
- Few marked pedestrian crossings exist.
- No bike lanes exist on the 19-mile segment of two-lane roadway and the roadway is a popular biking destination.
- Slow-vehicle pull-offs are not signed and may be too short.
- No emergency turn-outs are provided in a steep section with concrete barrier rails.
- No deceleration lanes exist at Callahan Ranch Road and Edmonton Drive.
- No left turn lanes exist at Country Club Drive and the Mt. Rose Ski Tahoe Area.
- The current chain up area located in front of the NDOT maintenance station creates conflicts with snow plows.
- Flash flooding of streams impacts both the highway infrastructure and safety of the highway.
- The two-lane segment of the Corridor has limited right of way and the adjacent topography is steep which can limit improvements.



- Development of small, adjoining parcels can create potential safety issues along the Corridor: it is difficult to achieve adequate distance between each parcel's access point to allow for turning movements and it is difficult to provide the appropriate length of acceleration and deceleration lanes.
- During emergencies the traffic on the two-lane segment of the Corridor can block emergency vehicle access or delay motorists for hours on the highway.
- The northbound Lake Tahoe viewpoint is located on a hairpin turn.

Visual Quality

- The northeastern portion of the Corridor is located close to the City of Reno. Growth pressure from Reno has been felt with new residential and commercial developments that can affect the area's visual quality.
- Cell phone towers and large wind turbines can create visual detractions from the mountain views.
- Landscape treatments from neighboring developments can grow to block mountain views.
- Light pollution from street lights, parking lot lights, local signage and development can interrupt the night skies enjoyed by both residents and visitors.
- Mass grading, rock cuts and the stabilization of rock cuts from development and road construction can impact views.
- Water tanks from neighboring developments can impact views.
- Large commercial digital signage can be distracting.

Resource Protection

- The highway is surrounded by Sierra pine forests and transitions to Great Basin sagebrush. Fire risk exists for both vegetation communities in the arid landscape.
- The Corridor is surrounded by significant watersheds that drain into the Lake Tahoe Basin or into the Truckee Meadows. Protecting water resources for their ecological, recreational, wildlife and human values is important.
- Noxious weeds can easily spread and increase the risk of wildfire and damage native wildlife habitat.
- Drought can increase the risk of wildfire, impact wildlife and recreation facilities.

The Corridor Vision is to provide all Byway users a safe and scenic experience that highlights, manages and preserves the Corridor's natural, cultural and recreational qualities and resources.





- Drought has increased the need for low water use and native plant materials.
- Bark Beetle continues to impact the pine forest.
- Aquatic invasive species impact water bodies.
- Sensitive meadow and stream environments need to be monitored to protect them from future over use.
- Cultural resources in the northern, developed section of the Corridor have at times been compromised by development.
- Fishing is popular in local streams, lakes and ponds. These limited resources need to be enhanced and protected.
- The highway traverses through deer and bear habitat requiring appropriate wildlife crossings.
- Small wildlife such as squirrels and chipmunks can be trapped in the roadway where barrier rails do not provide passages.

Recreation Access and Experience

- The Corridor is heavily used for access to hiking, biking, skiing, snowboarding, sledding, snowmobiling, cross country skiing and other activities. Inadequate off-highway parking exists, forcing users to park along the highway.
- Trails connect across the highway with parking on the opposite side. There are no crosswalks or signage indicating pedestrian traffic.
- Mt. Rose Ski Tahoe and Sky Tavern ski areas have plans for summer and or winter expansion with no left turn lanes or acceleration/ deceleration lanes accessing either location.
- Motorists often seek a safe location to pull over and take pictures.
- Motorists and recreation visitors have limited access to information on use of the Corridor for an enhanced experience.
- There is no information on how the surrounding Scenic Byways can be enjoyed by visitors in a single or multiple day trip.
- Local businesses are not aware of the Scenic Byway or its value to their businesses.

VISION AND GOALS

CORRIDOR VISION

Provide all Byway users a safe and scenic experience that highlights, manages and preserves the Corridor's natural, cultural and recreational qualities and resources.

GOALS AND OBJECTIVES

The following goals and objectives were established to address the challenges facing the Corridor. Specific project recommendations are described in Chapter 4 to help realize the goals.

Preserve the Scenic Quality and Natural Resources

- Define the sense-of-place.
- Enhance the Corridor's environmental assets.
- Balance the demand for recreation with the need for natural resource protection.
- Protect cultural resources and views from growth and development.
- Ensure water quality and watershed protection are maintained through best management practices.

- Minimize erosion and disruption to the environment.
- Provide for fuels treatment and noxious weed removal to reduce risk of catastrophic wildfire.

Balance Recreation Access with Transportation and Safety Needs

- Formalize and screen off-highway parking where possible for safe access to trails and viewpoints.
- Provide for safe pedestrian and bike access to reduce motorist conflicts.
- Identify multi-seasonal recreation opportunities.
- Include opportunities for accessibility.
- Provide vistas and photo-opportunities.
- Identify emergency pull-off locations.
- Explore opportunities for additional emergency access through the use of Old SR 431 (Old Mount Rose Highway).

Connect People with the Corridor

- Highlight the many points of discovery such as Galena Regional Park, Tahoe Meadows, trailheads, recreation access and scenic viewpoints.
- Increase signage and wayfinding to destinations.
- Provide interpretive opportunities for natural, cultural and historic resources.
- Identify transit and park-n-ride opportunities.

Promote Tourism

- Market the Corridor to attract visitors en route to Lake Tahoe and as part of a cohesive roadway experience (SR 431 to SR 28 to Washoe Valley) enticing visitors to stay longer and explore the region.
- Promote the rich historical and cultural resources.

Identify Implementation and Management Strategies

• Collaborate with other entities to leverage funding and resources.

STAKEHOLDER AND PUBLIC OUTREACH

An outreach effort was conducted as part of the planning effort to engage Plan Partners, stakeholders and the community. Outreach events included traditional public open houses as well as online surveys and website updates to increase the number of people engaged in the planning process.

PLAN PARTNERS

A number of agencies manage, administer and/or operate lands within the Corridor. The majority of the highway travels through public lands managed by the U.S. Forest Service (USFS). The highway itself is operated by the Nevada Department of Transportation (NDOT). The CMP creates a platform for a coordinated approach between agencies and stakeholders to develop viable solutions and future collaborations so they may operate more effectively and efficiently within the Corridor.

Plan Partners are those agencies who have a stake in the Corridor. They were invited to participate as part of the Technical Advisory Committee and include the following:

- Washoe County
- Nevada Department of Transportation
- Nevada Division of Wildlife

Plan Partners, those agencies who have a stake in the Corridor, were invited to participate as part of the Technical Advisory Committee.



Stakeholder & Public Outreach



- U.S. Forest Service Humboldt Toiyabe, Carson Ranger District
- U.S. Forest Service Lake Tahoe Basin Management Unit
- Tahoe Regional Planning Agency/Tahoe Metropolitan Planning Organization
- Tahoe Transportation District
- Incline Village General Improvement District
- City of Reno
- State of Nevada Department of Tourism and Cultural Affairs
- University of Nevada, Reno Redfield Campus

STAKEHOLDER MEETINGS

Two stakeholder open house meetings were held at the South Valleys Library. Invitations were sent to the Plan Partners, other local business people and interested property owners. The meetings encouraged additional collaboration and input from those who may partner in the developing Corridor outcomes.

Representatives from the following organizations, businesses, groups and community representatives were invited:

- Desert Research Institute
- Great Basin Institute
- Incline Village Crystal Bay Convention and Visitors Bureau
- Friends of Incline Trails
- NV Energy
- NV Land Trust
- Reno-Sparks Convention and Visitors Authority
- Sierra Front Recreation Coalition
- Sierra Fire Protection/Truckee Meadows Fire
- Sky Tavern Ski Program
- State Historic Preservation Office
- Scenic Nevada
- Tahoe Rim Trail
- University Nevada Reno Redfield Campus
- Washoe County School District Galena High School
- Washoe Tribe
- ORMAT Geothermal Plant
- Reindeer Lodge
- Mount Rose Ski Tahoe
- Raleys
- Procrastinating Peddlers
- Reno Wheelman
- Reno Tahoe Open Golf Tournament
- Snowmobilers
- Callahan Family Members

- Saint James Village
- Callahan Ranch 5 acre tracts owners
- Montreux Homeowners Association
- Galena Forest Estates
- Lower northeast subdivisions owners
- 5-acre tract south
- South Truckee Meadows/Washoe Valley Community Advisory Board

PUBLIC MEETINGS AND ON-LINE SURVEYS

Two public meetings were held at the South Valley's Library. The meetings were conducted using an as open house format to allow for broad community input. Follow-up surveys were provided on-line after each public meeting as another option for community members to provide comments.

FIRST PUBLIC MEETING AND PUBLIC SURVEY

The goal of the first meeting was to gather community feedback on their wishes and worries for the Corridor, to understand what types of activities they enjoyed along the Corridor and to receive overall opinions. Attendees were able to complete comment cards and provide direct input.

Meeting One Results

- 12 people attended the meeting
- The top goals identified by attendees included first, Preserving the Scenic Quality and Natural Resources and second, Balancing Recreation Access with Transportation and Safety Needs
- Concerns included:
 - Expansion of commercial areas and development in the Corridor
 - Roadway safety for bicyclists and pedestrians
 - Unattractive parking areas without landscape buffering
 - Trash

Survey One Results

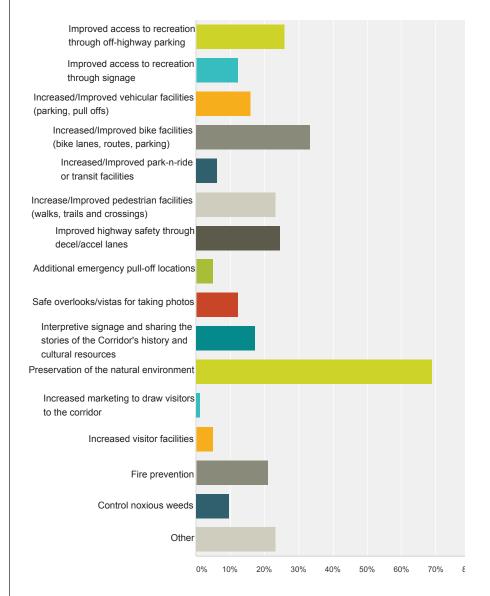
- 81 respondents overall
- Questions
 - What are your wishes for the Byway?
 - What are your worries for the Byway?
 - What are your activities along the Byway?
 - Prioritize the draft goals.
 - Any other comments.



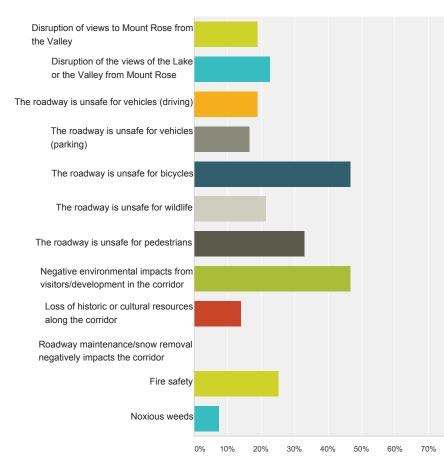
Stakeholder & Public Outreach

What are your wishes for the Byway?

- 69% Preservation of the natural environment
- 33% Improved bike lanes, bike routes
- 25% Improved highway safety (decel/accel lanes)
- 23% Improved pedestrian walks, trails, crossings
- 23% Other (wildlife corridors as a high write-in response)
- 21% Fire Prevention



What are your wishes for the Byway?



What are your worries for the Byway?

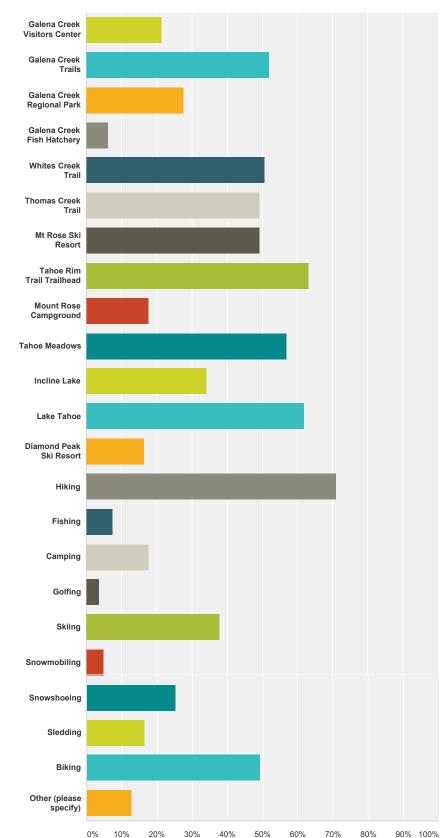
What are your worries for the Byway?

- 47% Negative environmental impacts from visitors
- 47% Road is unsafe for cyclists
- 33% Road is unsafe for wildlife
- 25% Fire safety
- 23% Disruption of views of the Lake or the Valley from Mount Rose
- 22% Road is unsafe for pedestrians

Stakeholder & Public Outreach

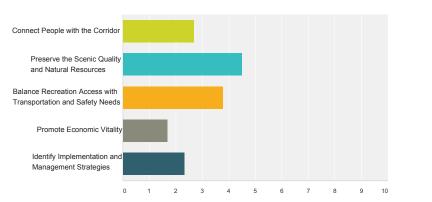
What are your favorite places and activities along the Byway?

- 71% Hiking
- 63% Tahoe Rim Trail
- 62% Lake Tahoe
- 57% -- Tahoe Meadows
- 51% Whites Creek Trail
- 49% Thomas Creek Trail
- 49% Mount Rose Ski Resort
- 49% Biking



What are your favorite places and activities along the Byway?

Prioritize the goals in the order you would believe would be most important for the Byway.



	1	2	3	4	5	Total	Score
Connect People with the Corridor	1.23%	22.22%	30.86%	35.80%	9.88%		
	1	18	25	29	8	81	2.69
Preserve the Scenic Quality and Natural Resources	67.90%	20.99%	7.41%	1.23%	2.47%		
	55	17	6	1	2	81	4.51
Balance Recreation Access with Transportation and Safety Needs	24.69%	39.51%	25.93%	8.64%	1.23%		
	20	32	21	7	1	81	3.78
Promote Economic Vitality	1.23%	3.70%	7.41%	38.27%	49.38%		
	1	3	6	31	40	81	1.69
Identify Implementation and Management Strategies	4.94%	13.58%	28.40%	16.05%	37.04%		
	4	11	23	13	30	81	2.33

Prioritize the Goals in the Order You Would Believe Would be Most Important for the Byway.

- #1 Preserve Scenic Quality and Natural Resources as #1
- #2 Balance Recreation Access with Transportation and Safety Needs
- #3 Connect People with the Corridor
- #4 Identify Implementation and Management Strategies
- #5 Promote Economic Vitality

Write-in Responses: Other Thoughts/ Concerns

- 28 respondents
- Top trending comments
 - Wildlife crossings
 - Safety
 - Commercialization/
 development
 - Medical marijuana facility



SECOND PUBLIC MEETING AND PUBLIC SURVEY

A short presentation was provided at the second meeting to summarize the Corridor's goals and recommendations. Attendees participated in a question and answer session, were able to complete comment cards and provided direct input to the planning team.

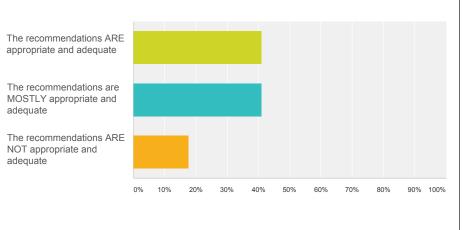
Meeting Two Results

- 40 people attended the meeting
- A large majority of the attendees came to the meeting to voice concerns regarding a proposed medical marijuana facility at the Old Galena Lodge
- Concerns included:
 - Development of a medical marijuana facility anywhere along SR 431
 - Safety issues that could be increased because of the road's sharp curves
 - Traffic impacts
 - Aesthetics of the development
 - Addition of any billboards or converting billboards and signs to digital signs
 - New development along the highway

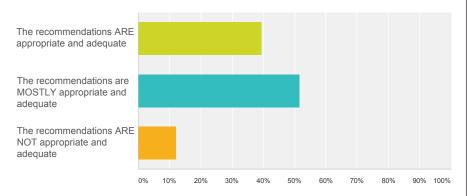
Survey Two Results

- 34 respondents overall
- Questions
 - Considering the proposed recommendations for "Preserve the Scenic Quality and Natural Resources" of the Mount Rose Scenic Byway shown on the graphic below, how do you feel regarding the recommendations?
 - Considering the proposed recommendations for "Balance Recreation Access with Transportation and Safety Needs" of the Mount Rose Scenic Byway shown on the graphic below, how do you feel regarding the recommendations?
 - Considering the proposed recommendations for "Connect People with the Corridor" of the Mount Rose Scenic Byway as shown on the graphic below, how do you feel regarding the recommendations?
 - Considering the proposed recommendations for "Promote Economic Vitality" of the Mount Rose Scenic Byway shown on the graphic below, how do you feel regarding the recommendations?
 - Do you have any other thoughts or recommendations you would like to share?

How do you feel regarding the recommendations for "Preserve the Scenic Quality and Natural Resources"?



How do you feel regarding the recommendations for "Balance Recreation Access with Transportation and Safety Needs"?



How do you feel regarding the recommendations for "Preserve the Scenic Quality and Natural Resources"?

- 41% The recommendations ARE appropriate and adequate
- 41% The recommendations MOSTLY appropriate and adequate
- 18% The recommendations ARE NOT appropriate and adequate
- Comments included concern for development, the inappropriateness of medical marijuana dispensaries along the Corridor, the need to encourage wind turbines for clean energy, impacts of billboards, and the need for additional safety improvements.

How do you feel regarding the recommendations for "Balance Recreation Access with Transportation and Safety Needs"?

- 39% The recommendations ARE appropriate and adequate
- 52% The recommendations MOSTLY appropriate and adequate
- 12% The recommendations ARE NOT appropriate and adequate
- Comments included concern for development of medical marijuana dispensaries along the Corridor, support for Corridor improvements and additional thoughts on potential safety enhancements.

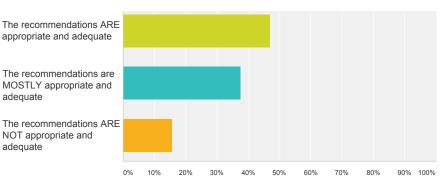
How do you feel regarding the recommendations for "Connect People with the Corridor"?

- 47% The recommendations ARE appropriate and adequate
- 38% The recommendations MOSTLY appropriate and adequate
- 16% The recommendations ARE NOT appropriate and adequate
- Comments included concerns about increased traffic through promotion of the Byway, too much additional signage and the development of medical marijuana dispensaries along the Corridor. Support for recommendations was also mentioned.

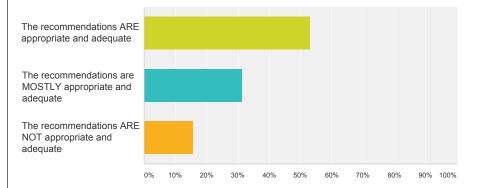
How do you feel regarding the recommendations for "Promote Economic Vitality"?

- 53% The recommendations ARE appropriate and adequate
- 31% The recommendations MOSTLY appropriate and adequate
- 16% The recommendations ARE NOT appropriate and adequate
- Comments included concerns about increased traffic through promotion of the Byway and the development of medical marijuana dispensaries along the Corridor. Support for recommendations was also provided.

How do you feel regarding the recommendations for "Connect People with the Corridor"?



How do you feel regarding the recommendations for "Promote Economic Vitality"?



Additional comments, thoughts:

- Medical marijuana facilities and other similar businesses should not be allowed: safety concerns and scenic issues.
- Corridor is great.
- Additional improvements to accommodate wildlife corridors are needed.
- Too much signage would not be desirable.
- Alternative energy sources are desirable and should not be restricted.
- Safety improvements should occur improved passing lanes.

2 CHAPTER TWO MOUNT ROSE SCENIC BYWAY'S INTRINSIC VALUES





Over 19 miles of SR 431 is a two-lane roadway curving its way through steep terrain as it climbs from Lake Tahoe to the summit and descends into the Reno area. The Mount Rose Scenic Byway Corridor possesses many intrinsic qualities that make it unique. The Byway passes through several ecosystems ranging from high desert to subalpine and includes historical and cultural, scenic, natural and recreational resources. Analysis of the current conditions helps inform the recommendations made in Chapter 4.

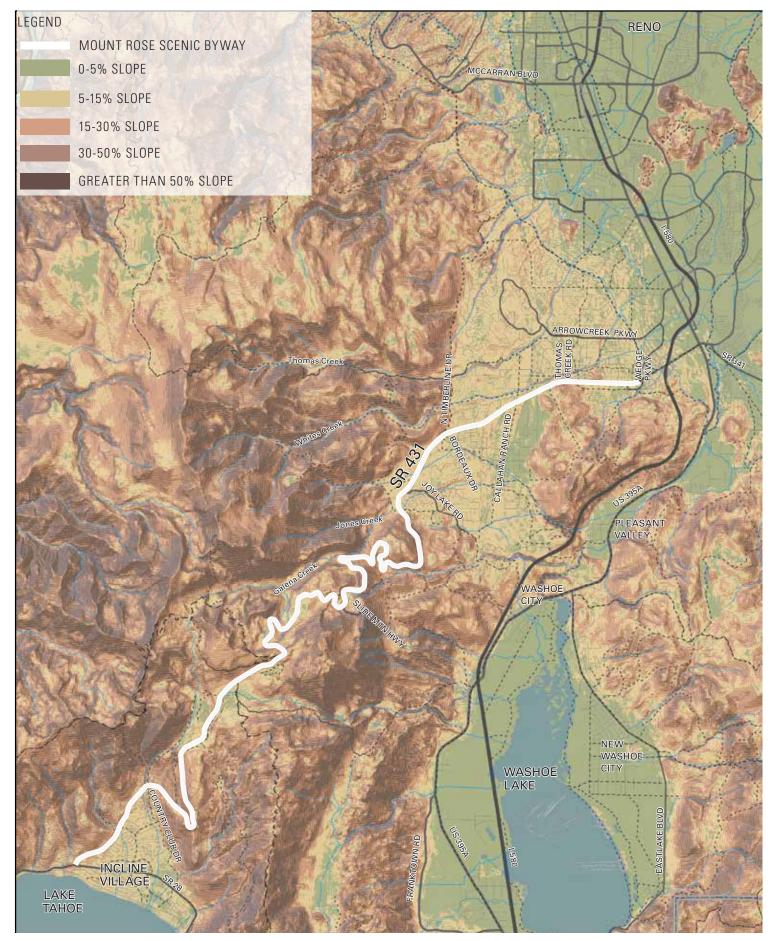
TERRAIN

At 10,776 feet elevation, Mount Rose is one of the highest peaks in the Carson Range. Traveling east from Incline Village, SR 431 climbs nearly 2,500 feet before it reaches the Sierra's highest year-round summit (elevation of 8,911 feet) and then descends into the Reno area at 4,500 feet.

Mount Rose, on the north side of SR 431, is named after the "Rose" of the mountain. The silhouette of Rose's face can be seen gazing skyward. Slide Mountain lies to the south of SR 431 and is the home of Mt. Rose - Ski Tahoe. Slide Mountain garnered its name for large rock slides on its southeastern slope. In 1983, a large rock slide occurred that destroyed homes in Washoe valley, causing one fatality. The remains of this slide can still be seen today.

The Steamboat Hills are part of a northeast trending line of four rhyolite domes that erupted between one and three million years ago. Steamboat Hills are one of the many unique indicators of geologic processes that continue to shape the range of the Great Basin and Lake Tahoe. Millions of years of geology have supported geothermal energy and abundant hot springs.

Terrain

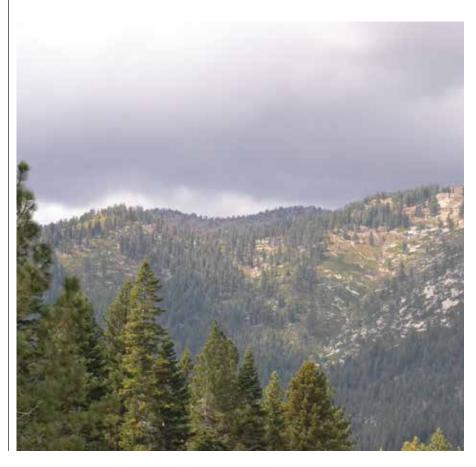


The majority of the Corridor is managed by the USFS. Privately owned lands are primarily located in the developed areas of Incline Village and the Galena/Callahan Ranch/Rolling Hills area near Reno.

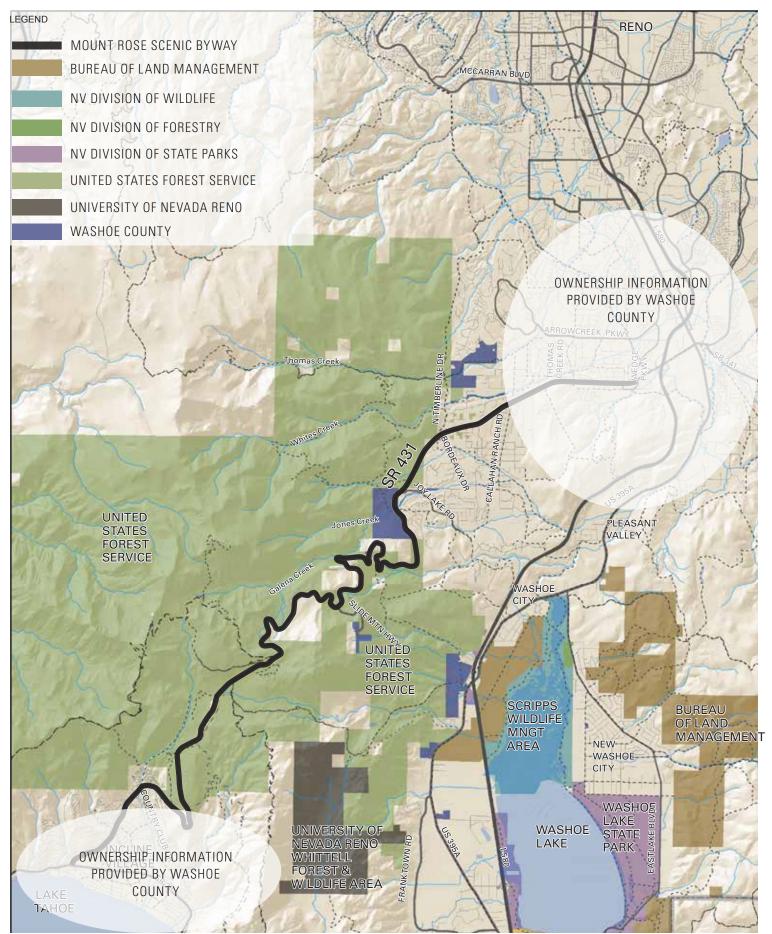
OWNERSHIP

The Corridor includes land owned and managed by the Humboldt-Toiyabe National Forest (HTNF) and the Lake Tahoe Basin Management Unit (LTBMU), Washoe County and the City of Reno as well as privately owned parcels. A large portion of the lands adjacent to the Byway are owned by USFS/LTBMU/HTNF. Privately owned lands are primarily located in the developed areas of Incline Village to the west and the Galena/Callahan Ranch/Rolling Hills area to the east.

The larger recreation facilities managed by public entities includes Washoe County's Galena Creek Regional Park, the City of Reno's Sky Tavern ski area, the U.S. Forest Service (USFS) Summit Campground and Incline Village General Improvement District's (IVGID) Diamond Peak ski area. The Mt. Rose - Ski Tahoe ski area is privately-owned and operated.



Ownership



Incline Village to the southwest and the commercial and residential developments in the northeast make up the majority of developed areas along the Corridor.



SOUTHWEST MASTER PLAN MAP RURAL RURAL RESIDENTIAL SUBURBAN RESIDENTIAL URBAN RESIDENTIAL COMMERCIAL

INDUSTRIAL

OPEN SPACE

LAND USE AND COMMUNITY RESOURCES

The Mount Rose Scenic Byway connects Incline Village and Crystal Bay to the developed area near Galena High School in the northeastern portion of the Byway. The 2015 overall population of the Corridor is approximately 17,600. This includes residents of Incline Village and other residential areas within 2 miles of the Byway.

According to ESRI in 2015 the population of Incline Village was approximately 9,900. The town offers a number of commercial and institutional developments, including Sierra Nevada College, UC Davis Tahoe Environmental Research Center, Lake Tahoe School, Incline High School, Incline Middle and Elementary schools and Incline Village Community Hospital. The resort bed base in Incline Village and Crystal Bay include anchors such as the Hyatt, Biltmore and Cal Neva.

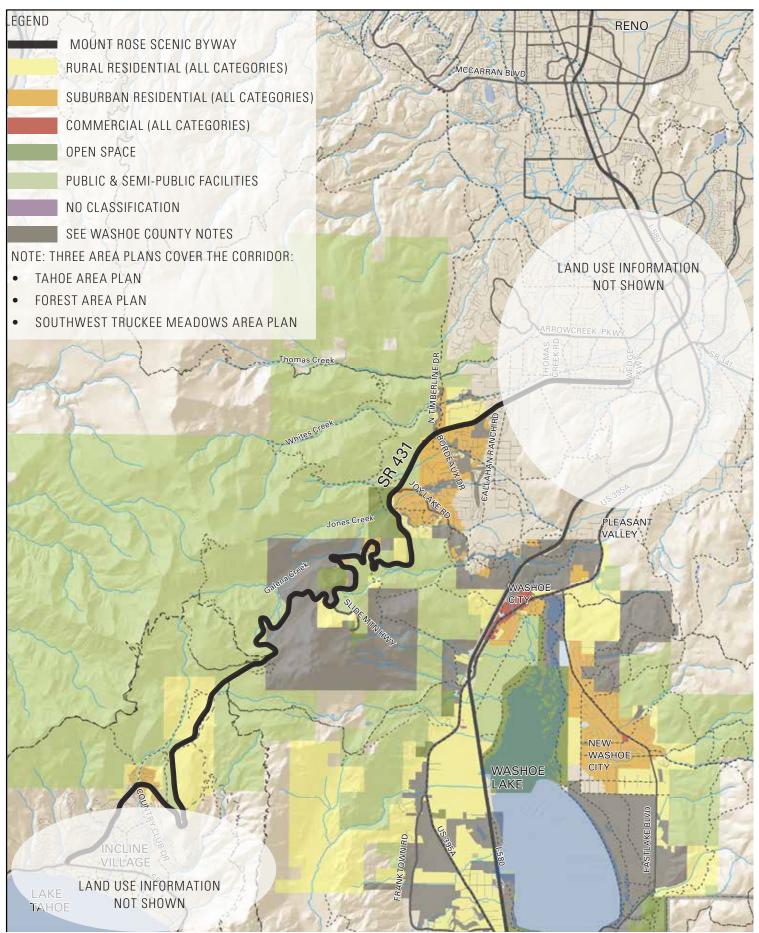
The Mt. Rose - Ski Tahoe resort is located east of the summit on the southern side of SR 431. Mt. Rose - Ski Tahoe owns the land where the base facilities are located on both sides of the mountain and operates much of the ski terrain under a lease agreement with the USFS. A small area of commercial land use is designated northeast of the Reindeer Lodge and the old Christmas Tree sites. Continuing to the northeast, the next commercial designation is just west of Timberline Drive.

The northeast section of the Corridor includes a number of residential, commercial and institutional developments. Residential areas include Galena Forest Estates, St. James Village, Montreux, Estates at Mount Rose, Callahan Ranch, Saddlehorn, Monte Rosa, Rolling Hills, Galena Estates and others. Commercial uses include gas stations and shopping centers with grocery stores and restaurants. Commercial land uses are designated near Wedge Parkway, at Edmonton Drive and at Thomas Creek Road. Galena High School, the Redfield Campus (a collaborative effort between the University of Nevada, Reno, Truckee Meadows Community College, the Redfield Foundation and local businesses) and Saint Mary's medical facility are all located in the northeastern section of the Corridor near Wedge Parkway.

Three area plans cover the Byway: the Tahoe Area Plan, the Forest Area Plan and the Southwest Truckee Meadows Area Plan. The vision statement in the 2010 Southwest Truckee Meadows Area Plan describes managing growth to prevent the spread of commercial development west of the Thomas Creek Road/SR 431 intersection.



Land Use & Community Resources





Defining visual elements along the Mount Rose Scenic Byway include Lake Tahoe and the surrounding mountains, the Sierra Nevada mountains and forests and Steamboat Hills.

VISUAL QUALITY

A natural quality is defined as a feature in the visual environment that is in a relatively undisturbed state. A scenic quality is the heightened visual experience derived from the view of natural and man-made elements along the Corridor.

Defining visual elements along the Mount Rose Scenic Byway include Lake Tahoe and the surrounding mountains, the Sierra Nevada mountains and forests and Steamboat Hills. Views of Lake Tahoe are prominent near Incline Village whereas mountain, forest and meadow views dominate the route from Country Club Drive near Incline Village to Timberline Drive in the Truckee Meadows.

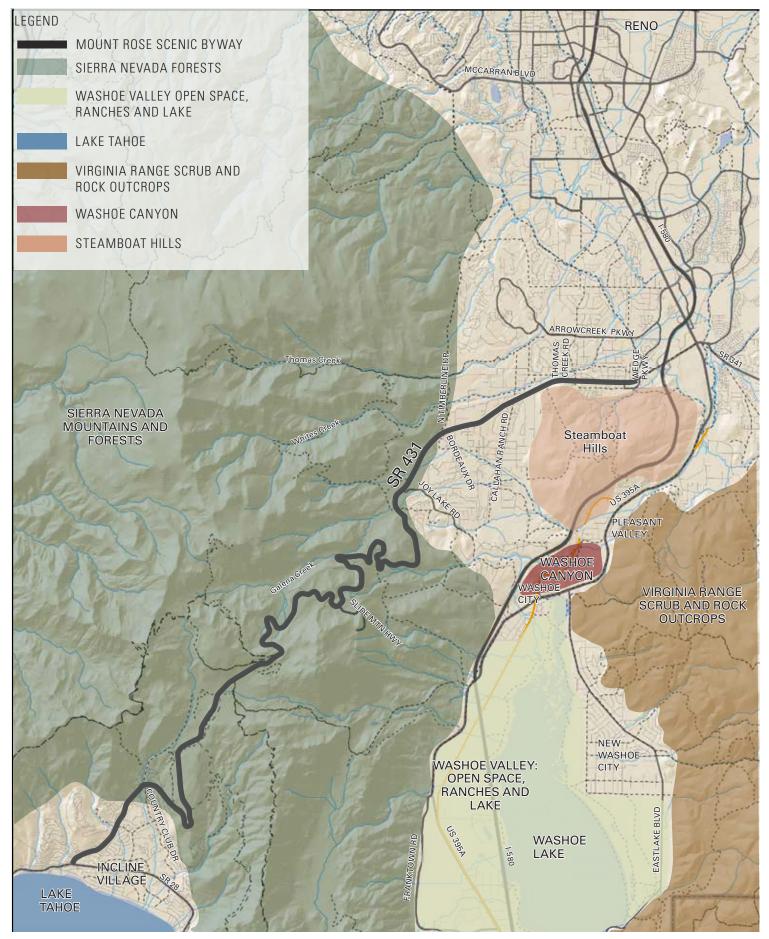
At the summit of Mt. Rose there are stunning views in all directions across the expansive Tahoe Meadows into Lake Tahoe and the Truckee Meadows' valley floor. The summit's subalpine environment allows visitors to experience the harshness of nature and see the effects of wind and snow on the Krumholtz pine trees and see unique plant life such as the Tahoe Yellow Cress.

Near the Mt. Rose - Ski Tahoe resort, vista opportunities exist. Views of Reno and Washoe Valley can be seen from different vantage points. On clear days you can see to the Stillwater Range near Fallon, Nevada.

Looking west from the Galena/Montreux area sweeping mountain views of the eastern slope of the Sierras/Carson Range create a stunning backdrop and photo opportunity. From this area as you look south along the Carson Range, views continue past both Washoe Valley and Carson City. Looking north and east one can view Peavine Mountain north of Reno. As the highway descends into Reno, views to the east highlight the Virginia Range and provide visitors a glimpse of Geiger Grade as it climbs up to historic Virginia City (elevation 7.000 feet). As visitors reach the end of the scenic corridor, the Steamboat Hills to the south offer beautiful rolling hills that are rich in geothermal activity and host unique plant life like the Steamboat Buckwheat. This area is rural in character with some residential development and Galena High School.



Visual Quality





POINTS OF INTEREST

(Many of the Corridor's other scenic points of interest are described in other sections of the CMP as they also provide cultural, recreational, hydrologic or vegetative interest. The list below identifies significant mountain views and viewpoint pull-offs).

Lake Tahoe Viewpoint

This existing lookout point offers one of the best panoramic views of Lake Tahoe. It is located about four miles east of Incline village along the northbound side of the highway at an elevation of 7,562 feet. A kiosk gives the names and locations of the surrounding mountain peaks. A southbound viewpoint is also located approximately 1.5 miles north of the northbound viewpoint.

Mount Rose

Mount Rose is located on the northwestern side of SR 431 and is the highest mountain in Washoe County. Visually prominent, the mountain resembles the silhouette of a woman's ("Rose's") face gazing skyward. It is unclear whether the name came from early 1800's settler Jacob H. Rose, who built a lumber mill near Franktown, or Rose Hickman, a friend of Washoe City newspaper editor H.S. Ham.

Slide Mountain

Slide Mountain stands south of Mount Rose. Mt. Rose - Ski Tahe ski resort is located on Slide Mountain. The mountain garnered its name from large rock slides on its southeastern slope. In 1983, a large rock slide occurred that destroyed homes in Washoe Valley and caused one fatality. The remains of this slide can still be seen today.

Washoe Valley and Truckee Meadows Viewpoints

Informal pull-off areas along SR 431 and Slide Mountain Highway offer expansive views of Washoe Valley and the Truckee Meadows/Reno area.



SIGNAGE

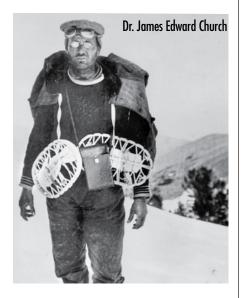
The majority of Byway signage includes standard traffic control signs, a NDOT Intelligent Transportation System (digital) sign, historic site markers, and monument entry signs at parks and recreation areas. A standard NDOT scenic byway sign is located just west of Wedge Parkway. Roadway signs also identify each creek and river crossing.

One billboard is located along the Corridor at Edmonton Drive. Any new signs must adhere to the CMP recommendations as well as Washoe County's sign regulations which both limit the placement of new billboards. Washoe County's updated sign code also intends to address and limit digital signage.



The highway was not formally paved until the popularization of skiing in the 1950's and the emergence of ski resorts such as the Reno Ski Bowl (now the Slide Mountain side of Mt. Rose - Ski Tahoe).





CULTURAL RESOURCES

The region was originally occupied by the Washoe and Paiute tribes. They lived a nomadic life – hunting, fishing and gathering – and often traveled through the Byway region during seasonal migrations between Washoe Valley and the Truckee Meadows up to Lake Tahoe.

By the 1850's settlers from the east began reaching the area. At first very few emigrants settled permanently in the region, as many were passing through on their way to California. In June 1859 the Comstock Lode was discovered near current day Virginia City. The lode was the first major silver ore discovery in the United States and it put the region on the map. As miners flocked to the area the Mount Rose area was one of many to supply timber to the mining sites.

In 1882 Sierra Wood and Lumber Company established the town of Incline Village, then just known as Incline. The town was named after the steep tramline that hauled lumber 1,600 feet up in elevation and deposited it into a flume that took it to the Virginia & Truckee (V&T) Railroad located in Lakeview/Washoe Valley where it would then be transported to the Virginia City-Comstock area for use in the mines.

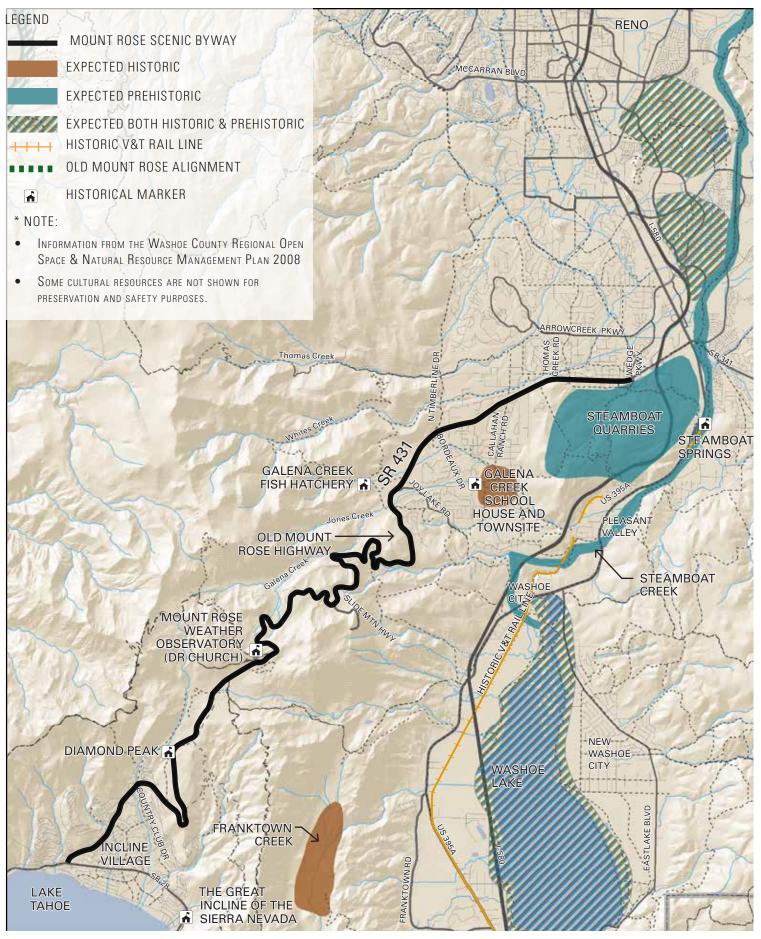
On New Year's Day in 1895 Dr. James Edward Church of the University of Nevada became the first Euro-American to make a winter ascent of Mount Rose. Dr. Church went on to earn an international reputation for his theory and technique in determining the water content of snow. His technique and methodology were used to predict water resources for coming summer months. The "Mt. Rose Stick" is used worldwide to measure the water content in the snow pack. Dr. Church made several assents of Mt. Rose each winter in an effort to prove his theory. A cabin was built at 9,200 feet as a safe haven should he get caught in a storm. Remnants of the cabin still exist. Dr. Church would take the V&T train from Reno to Pleasant Valley and walk up Galena Canyon staying at Phillip and Annie Callahan's Ranch before making his ascent up the mountain.

INCLINE VILLAGE HISTORY

George Whittell purchased the land that later became Incline Village in 1935. Whittell frequently sold parcels of the 40,000 acre purchase to private owners for commercial and residential development. In response to the growing trend of large-scale commercial and residential development in the basin starting in the mid-1950's, George Whittell sold nine thousand acres for \$5 million to an investment company in 1959. This group of investors from Oklahoma, Kansas, and Hawaii sold the land to the Crystal Bay Development Company the next year for a 500 percent profit. The land was developed as the new town of Incline Village, located near the Incline tramline that had operated in the area during the Bonanza-mining days of the Comstock Lode.

In 1960, the developers subdivided the parcel into 1,700 lots. By 1968, over three thousand homes had been built in Incline Village. The Incline Village sale, more than any other transaction made by Whittell, directly contributed to the development boom that occurred at the lake after 1955.

Cultural Resources



Old Mount Rose Highway parallels much of the existing SR 431.



TOWN OF GALENA HISTORY (GALENA: SPANISH FOR LEAD)

Galena was originally founded as a gold mining property. Because of the high lead sulfate mix it wasn't very economical to mine here so the area was turned into a lumber center. The town was linked to the V&T Railroad in Pleasant Valley via a short wagon trail down the canyon. The town was abandoned after 1867, following two disastrous fires. A roadside historic marker is located on the east side of Callahan Road at Galena Creek bridge and describes the historic townsite.

Washoe County's Phillip and Annie Callahan Park is located across from the historic marker honoring Phillip and Annie Callahan who settled in the area to ranch the meadow lands. The Callahan's formerly owned a brickyard in Virginia City before moving to Galena to ranch. They raised nine children on the ranch and set aside one acre for the schoolhouse. Many Callahan grandchildren attended the one room Galena schoolhouse and family members still reside in the area today. The Galena Schoolhouse is owned by Washoe County with plans to preserve it as an interpretive center.

POINTS OF INTEREST Old Mount Rose Highway

In 1906, the first county road was built along Galena Creek. This route of old SR 431 is similar to the current highway alignment and still exists today. The harsh winters demolished the road and the city abandoned maintenance. The highway was not formally paved until the popularization of skiing in the 1950's and ski resorts such as the Reno Ski Bowl (now part of Mt. Rose - Ski Tahoe on the Slide Mountain side) emerged.

Northern/Incline Flume

In the late 1870's the Sierra Nevada Wood & Lumber Company expanded operations to Incline. The profitable operation milled 75,000 board feet of lumber a day at the base of Incline Mountain. A flume transported water to move the lumber from the Incline area along the granite crest ridgeline and into the Lakeview Station in Washoe Valley. The lumber would then be transferred to the V&T railroad on to Carson City and up to the Comstock.



Mount Rose/Dr. Church Weather Observatory

In 1905, Dr. James Edward Church established one of America's first highaltitude meteorological observatories on the summit of Mount Rose. His studies revolutionized snow surveys which are still used throughout the world today to predict sessional water flow from snow pack.

Galena Creek Fish Hatchery

Washoe County operated the Galena Fish Hatchery from 1931 to 1949 as an attempt to mitigate the effects of the Comstock Lode on the region's ecosystem. The hatchery represents the beginning of a trend for the conservation of habitat and recreational lands.

Galena Creek Historic School House

The Galena Creek School House was listed on the National Register of Historic Places in 2011. Joanne de Longchamps, Nevada's famous poet, lived in the schoolhouse and published *The Schoolhouse Poems*.

Steamboat Hot Springs

These natural hot springs got their name because early emigrants thought they looked like a steamboat from afar because of their puffing steam. The springs reached their popularity during the Comstock era. Many thought that the hot springs had curative properties which led Dr. Joseph Ellis to build bathhouses and a hospital at the spring in 1861-1862. With the failure of the Comstock mines in the 1880's, attendance at the springs waned.

Steamboat Hot Springs is one of the more extensively studied geothermal areas in all of Nevada and historically, one of the most written about in the world. The reason is the extremely rare mineral content and the way the bench moves water from one vent to another. The sinter flows just southwest of the main terrace (believed to be the largest in the world) to the rhyolite domes and the underlying massive magma chamber. At one time the geyser on the main terrace would shoot 85 feet into the air and was considered the largest geyser in the U.S.

The combination of these geological oddities gave scientists years of data to study and research. Much of the research is still being studied at the site by geothermal companies who have drilled holes and begun to extract the steam to generate electricity. Some geologists believe there is enough energy below Steamboat and a line extending north all the way to Lawton's to power the entire Truckee Meadows. Four geothermal plants derive energy from the springs. Mineral spas offer a variety of therapeutic services and pools feed with spring waters.

Steamboat Quarries

Native Americans historically used the obsidian rock in the area for their arrowheads, drills and spear points. The rhyolite lava and pumice in the area is mostly composed of quartz and alkali, but it also harbors many other minerals including silver, gold, arsenic, copper, boron and more. These vents and cracks on the top ledge of the Steamboat area are also filled with sulfur and cinnabar. For a time, the area was mined for both of these substances. Sulfur was used in the production of gunpowder and cinnabar was melted down for mercury and used by miners. A dynamite factory was in the area during the late 1970's. Today the area is mined for gemstones.

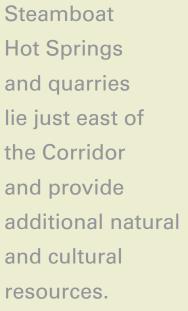




Photo by Larry Garside Nevada Bureau of Mines



Recreational

resources

provide

opportunities

for hiking,

biking, mountain

biking, fishing,

horseback riding,

camping, skiing and more.



RECREATIONAL RESOURCES

The Mount Rose highway became a significant transportation corridor after skiing increased in popularity during the 1950's. Today the area is still a recreational hot spot offering skiing and snowshoeing in the winter and hiking, camping and golfing in the summer.

POINTS OF INTEREST & ACTIVITIES Parks and Recreation Areas

Tahoe Meadows

Tahoe Meadows is a high elevation meadow with an interpretive loop boardwalk accessible trail. During the winter the meadows are great for snowshoeing, sledding and cross-country skiing. Snowmobilers utilize the north side of the meadow for winter play access.

Mount Rose Wilderness

Mount Rose Wilderness was added to the National Wilderness Preservation System by the U.S. Congress in 1989. The 30,000 acres encompass the rugged high-elevation portion of the Carson Range and Mount Rose. Recreation opportunities include hiking, backpacking, camping, nature viewing and fishing.

Mount Rose Summit Welcome Plaza

At an elevation of 9,000 feet the Mount Rose welcome plaza sit at the highest summit maintained year round. The plaza is a trailhead for the Tahoe Rim trail and the Mount Rose Summit Trail.

Slide Mountain Trailhead

A one-mile loop trail from the Washoe County trailhead leads to stunning views of Mount Rose, Slide Mountain, Washoe Valley and Reno.

Galena Creek Recreation Area and Visitor Center

The facilities include the Washoe County Galena Creek Regional Park, historical Galena Creek Fish Hatchery and the Galena Creek Visitor Center. The site is a cooperative project between Washoe County and the USFS. It is operated by the Great Basin Institute. Nestled in a forested area on the eastern slope of the Sierra, the park is popular year-round and offers hiking (with interpretive trails), fishing, horseback riding, picnicking and snowshoeing.

The park is the gateway to a network of trails connecting to White's and Thomas Creek Canyons, Dry Pond and Church's Pond. Galena Creek flows through the center of the park. Trailheads provide access to Jones-White Creek loop trails and portals to the Mount Rose Wilderness Area. Camp We Ch Me overnight group camping lodge and Marilyn's Pond are also located in the park facilities.

Phillip and Annie Callahan Park

This 25-acre park offers picnic areas, horseshoe pits, and playgrounds. It is also the site of the historic Galena School House and provides access to the Galena Creek Trail.

Skiing and Mountain Activities

Diamond Peak Ski Resort

With 655 acres of skiable terrain, the resort provides access for skiing and snowboarding. Operated by IVGID, the facilities are available to anyone who purchases a pass. Diamond Peak recently updated its Master Plan to revisit the potential for future development of the facility as a community recreational resource and to provide additional summer operations.

Mt. Rose - Ski Tahoe

A privately-operated ski resort, Mt. Rose - Ski Tahoe includes 1,200 acres of terrain. Over 60 trails and three terrain parks are provided for skiing and snowboarding.

Sky Tavern Ski Area

The Sky Tavern Ski area is a nonprofit ski area that focuses on teaching children how to ski and/or snowboard. It recently expanded into mountain biking as well. The City of Reno purchased the 143-acre property in 1968 for the exclusive use of teaching children winter sports. The nonprofit group consists of dedicated parents who manage the program and maintain the facilities year round.

Golfing

Five golf courses are located near or accessed via the Corridor. These include:

- Incline Village Golf Courses
 - Mountain Course
 - Par-72 Championship Course
- Montreux Golf and Country Club every August hosts the PGA Barracuda Championship
- Arrowcreek Country Club
- Wolf Run Golf Club



Recreational Resources







JONES CREEK TRAILHEAD

Camping

Mount Rose Campground

Mount Rose Campground is the only campground along the Mount Rose Highway and is open during summer (approximately July 1st) thru early fall. Located in the Humboldt-Toiyabe National Forest, available activities include fishing in Ophir Creek, swimming, boating and sightseeing. Hiking is also available on several area trails including Tahoe Meadows trails, Tahoe Rim Trail, Mount Rose Wilderness Trail and the Mount Rose Summit Trail. The campground contains single and double-family sites, as well as one triple-family site. Picnic tables and fire rings are provided, as are restrooms and potable water.

Trail Systems

Tahoe Rim Trail

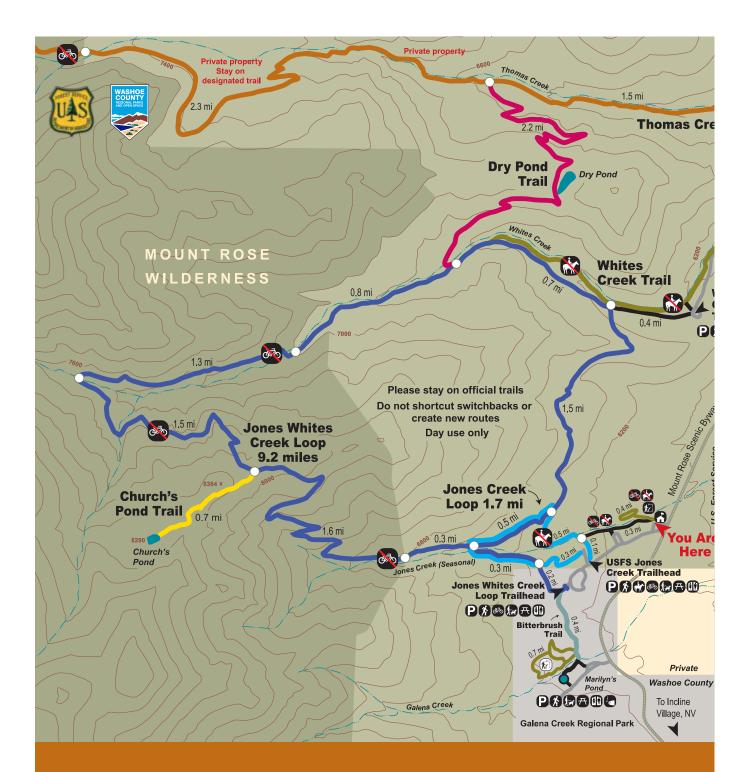
The Tahoe Rim Trail is known as the "ring around the jewel." The trail was completed in 2001 and travels 165 miles along high ridges encircling Lake Tahoe. It passes through two states, four national forests and Lake Tahoe Nevada State Park. The trail provides challenging terrain and rewarding scenic vistas of Lake Tahoe. It can be accessed from a trailhead near the Mount Rose Summit Welcome Plaza or at the west end of the Tahoe Meadows.

Other Trail Systems

In addition to the Tahoe Rim Trail, a number of trail systems can be quickly accessed from the Corridor, including the following:

- Galena Creek Trail System (including Jones Creek Trail)
- Jones-White Creek Loop Trail
- Whites & Thomas Creek Canyons
- Ballardini Ranch Trailhead
- Brown's Creek Trail
- Incline Flume/North Flume Trail
- Incline Lake/Meadows trails
- Tahoe Meadows trails
- Mount Rose Wilderness Trail
- Mount Rose Summit Trail
- Ophir Creek Trail
- Rim to Reno Trail

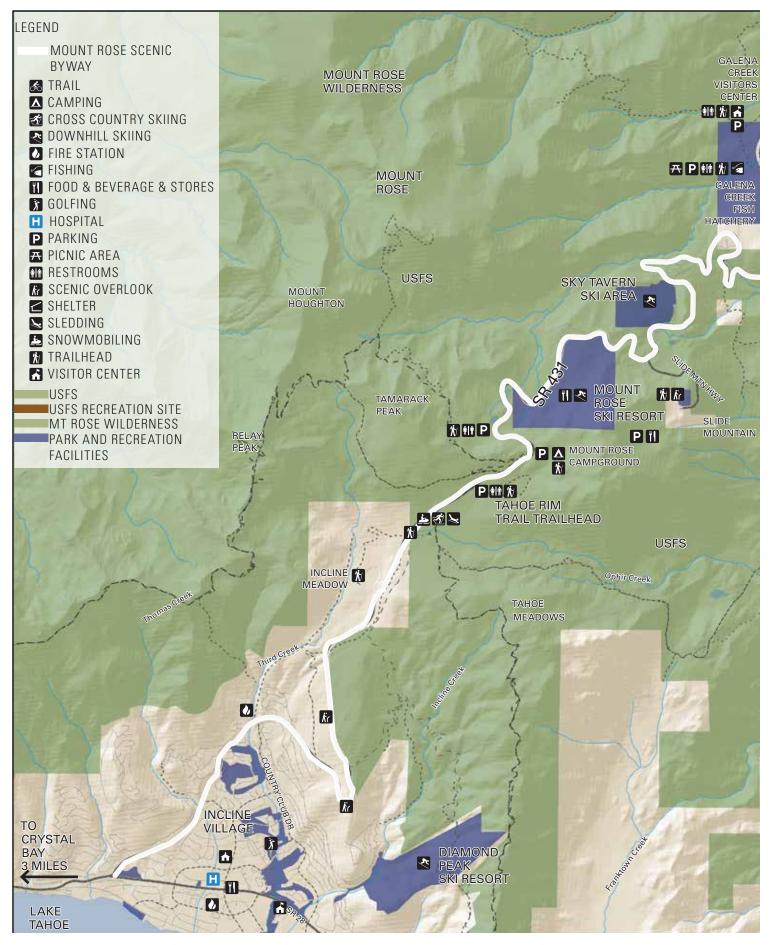




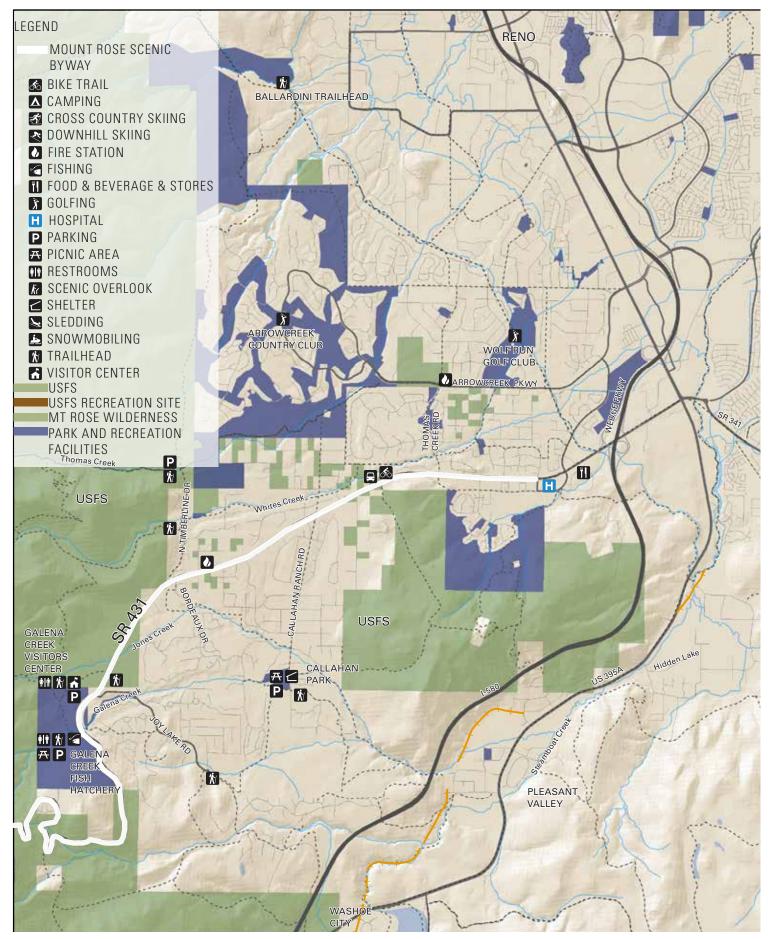
Jones/Whites/Thomas Creeks Trail System

FREE COPIES of this map can be downloaded from the Humboldt-Toiyabe National Forest website or by calling the US Forest Service Carson Ranger District at (775) 882-2766. Map created September 2010.

Recreation & Trails (Southwest)



Recreation & Trails (Northeast)





On the east side of the Corridor a number of creeks define the various canyons and are signed where they cross the highway. Trails have been developed between the creek systems.

HYDROLOGY

In addition to the iconic water body of Lake Tahoe, numerous seeps and springs and creeks are sprinkled throughout the Mount Rose landscape.

Within the Tahoe Basin and Incline Village area First Creek, Second Creek, Third Creek, Incline Creek and Mill Creek flow into Lake Tahoe. On the east side of the Corridor a number of creeks define the various canyons. These creeks include:

- Thomas Creek
- Whites Creek
- Jones Creek
- Galena Creek
- Browns Creek
- Winters Creek

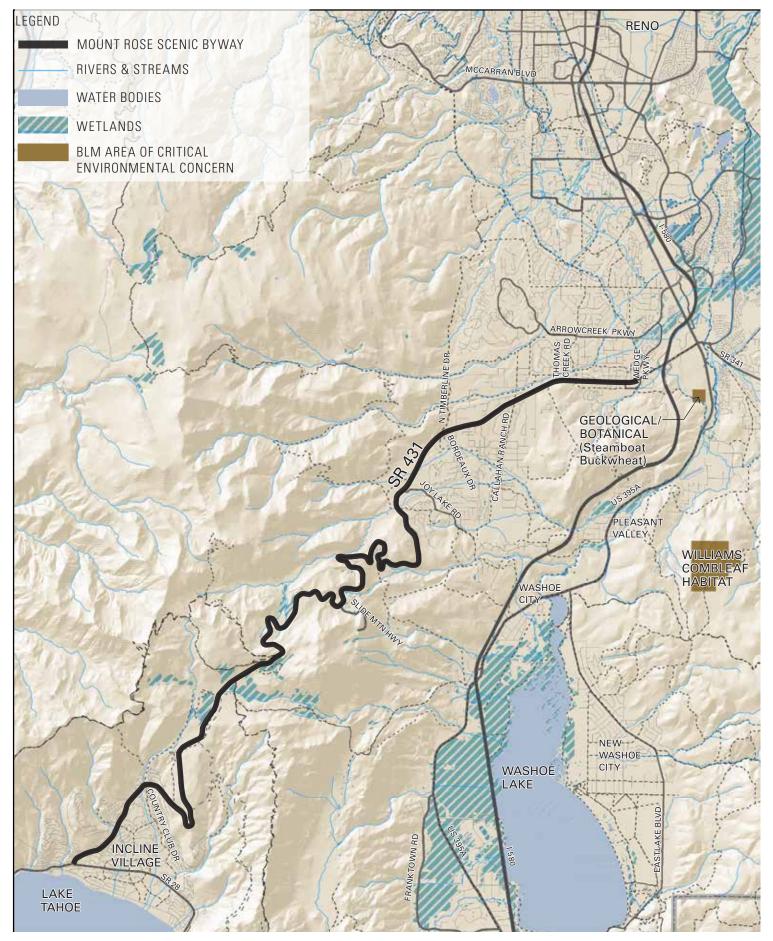
The area's water resources include both surface water and groundwater. The majority of the residential development in the northeastern portion of the Corridor is currently supplied by groundwater wells. A surface water treatment plant is planned for the near future. Water resources are primarily supplied by winter snow.

Snow surveying in the United States began on Mount Rose. Dr. Church used the mountain as an ``outdoor laboratory'' in his study of snow in all of its phases.

In the early 1900's, as an offshoot of his original work, Dr. Church devised a method of measuring depth and water content of snow. The first practical application of this method ended the so-called ``Tahoe Water War.'' Through the use of Dr. Church's data, a good correlation was found between water content of the snow on Mount Rose and the spring rise of Lake Tahoe. Thus, releases could be regulated to prevent both flooding and waste of water– putting an end to battles between local land owners and downstream users.



Hydrology



The Byway region is part of a unique ecotone between the Sierra Nevada and the Great Basin.

VEGETATION COMMUNITIES AND WILDLIFE

The Byway region is part of a unique ecotone between the Sierra Nevada and the Great Basin. Located in a transition zone between the Sierra Nevada province and the Basin and Range province, the Corridor includes four life zones and is home to plants and animals that only occur within its lands.

The Mount Rose Highway begins in the ponderosa pine forests of Incline Village and travels up the mountain through various ecosystems and past alpine meadows. Once the highway crests the summit it drops down the eastern side of the Sierra into the sagebrush and semidesert ecosystem of Reno and Washoe Valley.

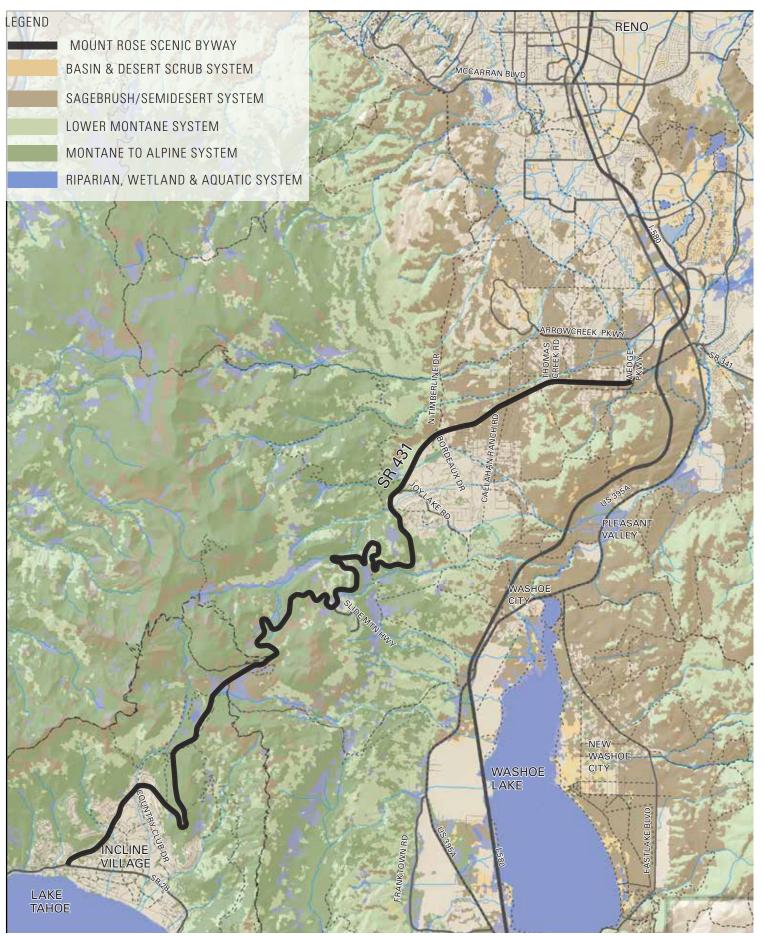
A few of the wildlife and vegetation species of interest in the Corridor region include Tahoe draba, Steamboat Buckwheat, Washoe Pine and Yellow Legged Frog.

POINT OF INTEREST Mount Rose Wilderness

Mount Rose Wilderness is located between the Carson Range and the Great Basin. It is 30,000 acres of protected land with numerous hiking trails, including a portion of the Tahoe Rim Trail, and scenic views. It provides relatively easy access for the average recreation user. It is one of the few wilderness areas that provides that respite of wilderness close to a large population base.



Vegetation Communities





The fire hazard rating for the Corridor includes areas categorized as extreme, high and moderate.

FUEL MANAGEMENT AND FIRES

The Corridor's forests and sagebrush plant communities make it prone to fire. Typically small fires play an important role in maintaining the region's forest health and biodiversity. Recent fires have increased in size and intensity, damaging the natural resources and surrounding development. Washoe County's 2008 *Open Space and Natural Resource Plan* shows that almost all of Washoe County has burned over the past century. The Mount Rose Byway has seen a handful of fires over the past decade.

The management of forest health, invasive species and fire risk is critical to safeguarding the watersheds of both the Tahoe Basin and the Truckee Meadows. In September 2015, a Summit on Nevada's Collaborative Approach to the National Strategy of resilient landscapes, fire adaptive communities and a safe and effective wildland fire response was held in Reno. As these strategies are rolled out they should be implemented wherever possible along the Corridor.

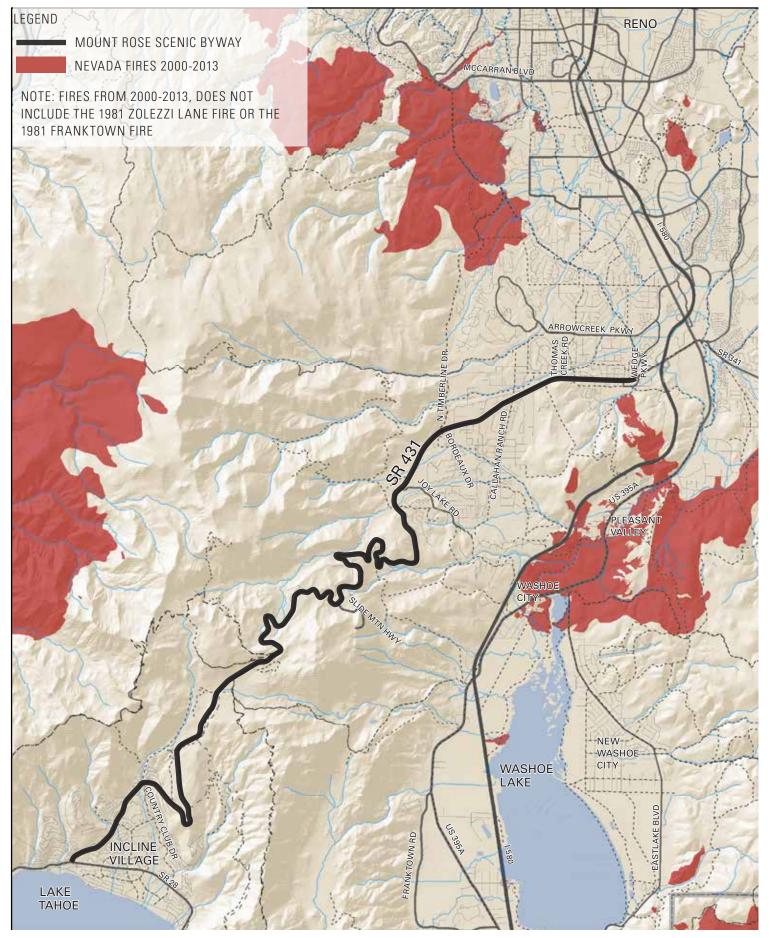
The 2005 *Washoe County Fire Plan* lays out risk and hazard recommendations for each community within Washoe County. The fire plan separates the Corridor into three areas. Lands within the Tahoe Basin are referred to as North Lake Tahoe. Lands between the summit and Galena Creek Regional Park are classified as the Mount Rose Corridor Community. Lands east of Galena Creek Regional Park are referred to as Galena. Respectively, the fire hazard rating for each area is categorized as extreme, high and moderate.

The fire plan recommends defensible space and fuel reduction treatments, including the removal of brush understory along SR 431. Other recommendations include the construction of shaded fuel breaks and the reduction of ladder fuels. A 500-foot wide fuel break along SR 431 is recommended for Washoe County Parks.

The Corridor includes a significant amount of land owned and maintained by the USFS. The Forest Service works to minimize fire risks by clearing dense vegetation through the process of fuel reduction and controlled burns. The USFS has done a number of major fuel reduction projects in the Brown's Creek, White's Creek and Thomas Creek areas and near Galena Creek Park. NDF, in coordination with Washoe County, is working on reducing the fuels within Galena Creek Regional Park.

The forests between Incline Village and the edge of the Mount Rose Corridor community is managed by the North Lake Tahoe Fire Department. Since the year 2000 they have completed 1,300 acres of fuel reduction within their jurisdiction, including areas surrounding Incline Village and the Mount Rose Highway.

The local communities have actively supported defensible space fuel reduction programs around private homes. They have participated in community-wide fire drills. The area has a high potential for fires either starting within a community and travelling to the adjacent forest and watersheds or vice versa. Therefore, it is critical that the communities collaborate and participate in the fire adaptive communities program.



3 CHAPTER THREE THE HIGHWAY AS A TRANSPORTATION FACILITY





From the SR 28 roundabout in Incline Village, SR 431 is a two-lane roadway for about 19 miles until it transitions to a fourlane roadway with a center two-way left-turn lane in the northeast section near Reno.

EXISTING ROADWAY CONFIGURATION

Note: Information in this chapter begins with highway marker 0.0 in Incline Village and ends at Wedge Parkway. The highway generally runs from a southern point in Incline Village to a northeasterly point in Reno.

State Route (SR) 431 begins as a two-lane roadway at its intersection with SR 28 in Incline Village and continues to the northeast for about 19 miles in that capacity with turn lanes provided at the Joy Lake Road, Galena Creek Visitor Center and Jackilda Lane areas. There are many slow vehicle turnouts provided along this stretch of roadway in both the uphill and downhill directions, but there are no slow moving vehicle lanes. A central two-way left-turn lane is provided from east of mile marker 19 near Bordeaux Drive for four miles to Wedge Parkway. Also within that section, one additional travel lane is provided in each direction (for a five-lane cross section with four travel lanes and a center turn lane). The average grade from SR 28 to Mount Rose Summit is 6 percent with a maximum grade estimated to be 13 percent. From Mount Rose Summit to Wedge Parkway, the average grade is 5 percent and the maximum grade is almost 13 percent.

There are three main intersections along the SR 431 Corridor, as follows:

- Roundabout at the southern terminus of the Corridor at SR 28
- Traffic signal at the intersection with Thomas Creek Road
- Traffic signal at the northern terminus of the Corridor at Wedge Parkway

The posted speed limits along the Corridor vary from a maximum of 55 miles per hour to a minimum of 45 miles per hour. A '25 mph when flashing' advisory sign and beacon is located in the Tahoe Meadows area just west of the summit to slow traffic during the winter when vehicles park along the roadway to access winter recreation opportunities.

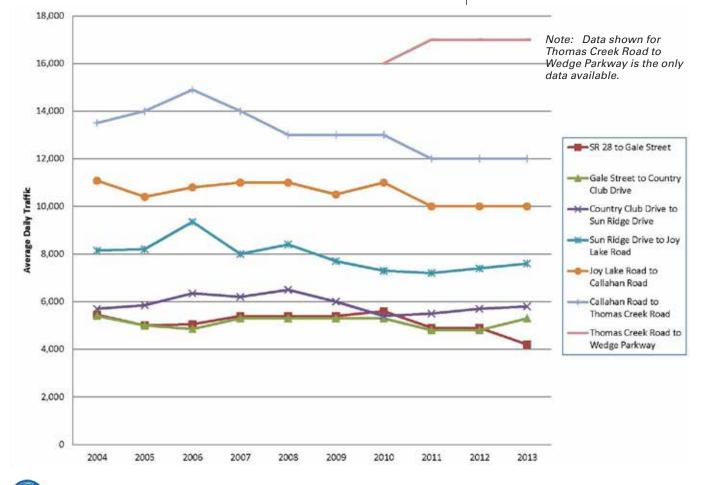
EXISTING TRAFFIC VOLUMES AND TRENDS

Existing and historical traffic volumes were obtained from the NDOT website. Existing traffic volumes were acquired for the most recent year available, which is 2013. In general the traffic volumes are low (under 6,000 vehicles per day) in the southern part of the Corridor and they increase to the north, with the highest volume (up to 17,000 vehicles per day) in the northern part of the Corridor. Annual average daily traffic (AADT) volumes throughout the Corridor are provided in Figure 1.

Historical AADT volumes are available annually and were obtained for the most recent 10 years (2004 through 2013). A review of this data indicates that traffic along the Corridor has generally declined as shown in Figure 1. Considering all count locations as a whole, annual AADT volumes fell by approximately 10 percent in the past 10 years, reflecting a one percent annual decline. The largest decline was in the southern part of the Corridor with a 3 percent annual decline, followed by the northernmost part of the Corridor with a 1.3 percent decline, while in the middle segments of the Corridor the volumes remained relatively unchanged.

In general the traffic volumes are lowest (under 6,000 vehicles per day) around Incline Village or southern part of the Corridor and highest in the Callahan Road to Wedge Parkway or northern part of the Corridor (up to 17,000 vehicles per day).

Figure 1: Mount Rose Scenic Byway Historic Traffic Volumes



The Byway is the highest mountain pass in the Sierra, making it attractive to road bikers wanting to make the Summit. The two-lane portion of the Byway is a designated bike route, but the shoulders are narrow. Safety for bicyclists was one of the top concerns of the community.



EXISTING TRANSIT SERVICES

There are few public and private transportation services available in the SR 431 Corridor, as discussed below.

North Lake Tahoe Express – A year-round service is provided to/from the Reno Tahoe International Airport and serves several different locations throughout North Lake Tahoe. The Blue Route travels on SR 431 between Incline Village and the airport. Three round-trips are provided in the summer and winter peak seasons while two round-trips are provided in the spring and fall shoulder seasons. The price per ride starts at \$49 per person and 24-hour advanced reservations are required.

Regional Transportation Commission (RTC) – Does not operate in the Mount Rose Corridor, but the Intercity Route passes by the end of the Corridor on US 395. One pilot project to provide service over the summit resulted in the knowledge that RTC's current fleet of buses is not equipped to handle the long, steep hills in the Corridor.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

Bicycle facilities in the Mount Rose Corridor are limited to the following:

- The Tahoe Metropolitan Planning Organization (TMPO) is updating its bicycle and pedestrian master plan to include a bike lane in the existing wide shoulder from the junction of SR 28/SR 431 to the highway summit
- The majority of the Corridor is a designated bike route where bikes share the road with the motorists
- The north part of the Corridor from Bordeaux Drive to Wedge Parkway a bike lane is provided in both directions
- There are no existing pedestrian facilities

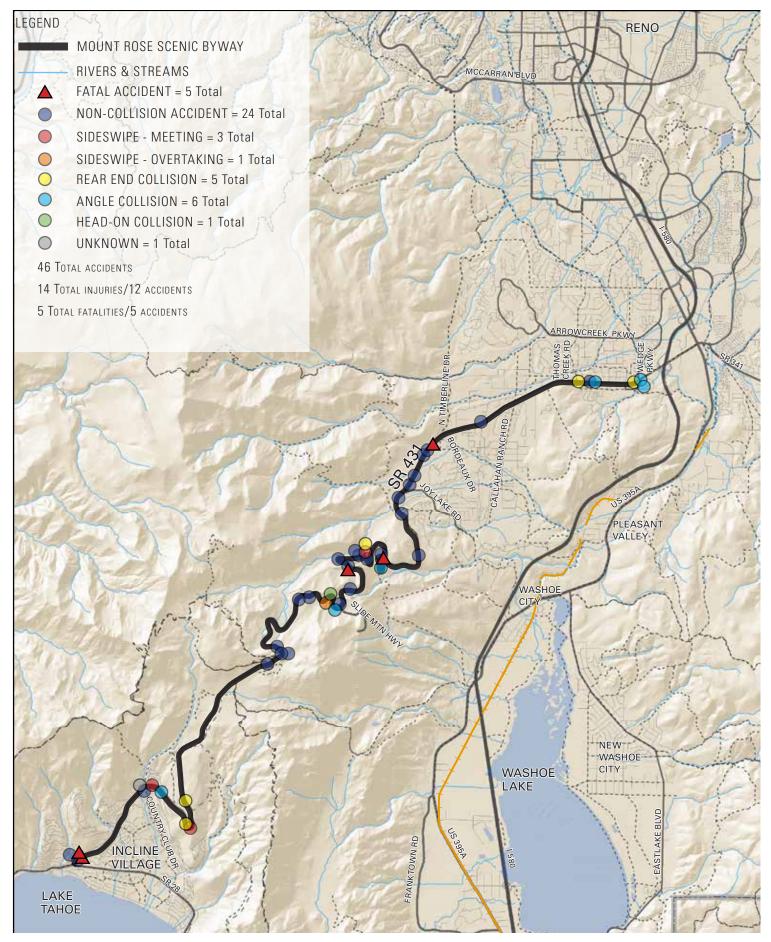
EXISTING TRAFFIC SAFETY

CRASH DATA

Information on traffic crashes is kept by NDOT. Data on all traffic crashes for the most recent five years (July 2009 to July 2014) was collected for the study Corridor. Supplemental information on fatal crashes was also obtained from NDOT for the years 2000-2015.

Tables 1 and 2 present the crash data organized and summarized by different criteria. Table 1 presents the data summarized by crash type and crash severity. As shown, a total of 46 crashes were reported. Ten out of the 46 total crashes on Mt. Rose occurred during snow, ice or blowing snow weather conditions, although only two crashes were reported to occur under icy or snowy road conditions (dry roads were reported for the remaining 44 crashes). Only one crash was reported to involve wildlife.

The majority of crashes in the Corridor were non-collision (or single vehicle) crashes, which includes overturned vehicles and vehicles that hit an object. In total, approximately 57 percent of crashes in the Corridor were of this type. Sideswipes, rear-ends and angle were the next most common type of crashes. None of the crashes reported involved bicyclists or pedestrians. The severity of crashes can be broken down into three categories: property damage only, injury and fatal. The lower portion of Table 1 presents a



A total of 46 crashes were reported from July 2009 - July 2014. The majority of crashes in the Corridor are non-collision (or single vehicle) crashes, which includes overturned vehicles and vehicles that hit an object. In total, approximately 57 percent of crashes in the Corridor were of this type. Sideswipes, rear-ends and angle were the next most common type of crashes

summary of crashes in the Corridor by severity. Overall, 63 percent of reported crashes resulted in property damage only and 26 percent resulted in injuries. Five, or 11 percent, of the crashes resulted in a fatality.

Table 2 shows the fatality crash data between January 2000 and August 2015 obtained from NDOT. Fourteen fatal crashes occurred in the Corridor with a total of 15 fatalities. Five fatalities occurred during the time period of July 2009 through 2014. Non-collision crashes were the most common, comprising 57 percent of all fatal crashes. Reviewing the location of the 14 crashes, two crashes occurred about a quarter mile east of the Highway 28/SR 431 intersection near the existing runaway truck ramp. Both crashes involved tractor trailers trucks and both are considered non-collision crashes as no other vehicles were involved. NDOT has plans to modify the runaway truck ramp to address this safety concern. The intersection of SR 431 and SR 28 has also been reconfigured as a roundabout since the 2004 collision which occurred at that location. No other fatalities have occurred at the roundabout intersection since it was constructed.

Table 3 presents the crash rates by highway segment. The first group of columns represents the observed crash rate for each segment of the Corridor. Next, the applicable statewide average was determined based on roadway type (Mt. Rose Highway is a minor arterial). Finally, the observed rate and the statewide rate are compared, as shown in the last group of columns. Any value in these columns over 100 percent would indicate that the observed rate is greater than the statewide average. The segment from the SR 28 intersection to Gale Street exceeds the statewide average and includes the location of the runaway truck ramp which NDOT has plans to improve.

CRASH TYPE	NUMBER	PERCENT	
Angle	7	15%	
Head-on	2	4%	
Non-Collision	26	57%	
Rear End	5	11%	
Sideswipe	5	11%	
Unknown	1	2%	
TOTAL	46	100%	
CRASH SEVERITY	NUMBER	PERCENT	
Property Damage	29	63%	
Injury	12	26%	
Fatality	5	11%	
Total	46	100%	

International Severity Type and Severity

Note: Based on NDOT crash data and additional fatality data from July 2009 through July 2014.

Note: There were no reported crashed involving bicyclists or pedestrians.

CRASH YEAR	CRASH DATE	MILE POST	WEATHER	FATALITIES	INJURED	CRASH TYPE	TOTAL VEHICLES
2000	26-Oct-2000	17.50	RAIN	1	1	UNKNOWN	2
2001	29-Mar-2001	12.30	CLEAR	1		NON-COLLISION	1
2001	08-May-2001	9.00	CLEAR	1		NON-COLLISION	1
2001	14-Oct-2001	6.04	CLOUDY	1		NON-COLLISION	1
2001	15-Dec-2001	21.60	CLOUDY	2	1	HEAD-ON	2
2001	28-Dec-2001	3.30	SNOW	1		NON-COLLISION	1
2004	20-Mar-2004	0.00	CLEAR	1	1	NON-COLLISION	1
2005	11-Mar-2005	19.00	CLEAR	1	1	NON-COLLISION	2
2010	18-Jun-2010	0.00	CLEAR	1		NON-COLLISION	1
2011	02-Sep-2001	15.35	CLEAR	1		SIDESWIPE, MEETING	2
2012	23-Apr-2012	0.00	CLOUDY	1		NON-COLLISION	1
2012	03-Sep-2012	13.00	CLEAR	1		HEAD-ON	2
2012	21-Dec-2012	19.00	SNOW	1	2	ANGLE	2
2015	01-Jan-2015	4.00	CLEAR	1	4	HEAD-ON	2

Imma: Mount Rose: Fatal Crashes from January 1, 2000 Thru August 1, 2015

Impliment Rose: Analysis of Crash Rate by Highway Segment (2009-2014)

						OBSERVED CRASH RATES			
MILE POST	FROM	то	TOTAL CRASHES	SEGMENT LENGTH (MILES)	MVM	TOTAL CRASHES PER MVM	FATAL + INJURY CRASHES PER MVM	FATALITY VICTIMS PER 100 MVM	
0.0	SR 28	to Gale Street	1	0.6	5.3	0.57	0.38	0.00	
0.6	Gale Street	to County Club Dr.	2	1.6	15.5	0.13	0.00	0.00	
2.2	Country Club Drive	to Sun Ridge Drive	22	11.9	128.2	0.18	0.04	0.00	
14.1	Sun Ridge Drive	to Joy Lake Road	5	3.3	46.1	0.13	0.11	0.00	
17.4	Joy Lake Road	to Callahan Road	5	3.1	58.0	0.10	0.10	0.00	
20.5	Callahan Road	to Thomas Creek Rd,	0	1.4	23.0	0.00	0.00	0.00	
21.9	Thomas Creek Rd.	to Wedge Parkway	6	1.3	39.2	0.15	0.05	0.00	
	Total Corridor		41	23.2	324.3				

			STATEWIDE AVERAGE			PERCENT OF STATEWIDE AVERAGE			
MILE POST	FROM	то	TOTAL CRASHES PER MVM	INJURY CRASHES PER MVM	FATALITY VICTIMS PER 100 MVM	TOTAL CRASHES PER MVM	FATAL + INJURY CRASHES PER MVM	FATALITY VICTIMS PER 100 MVM	
0.0	SR 28	to Gale Street	0.96	0.3	1.35	59%	126%	0%	
0.6	Gale Street	to County Club Dr.	0.96	0.3	1.35	13%	0%	0%	
2.2	Country Club Drive	to Sun Ridge Drive	0.96	0.3	1.35	19%	13%	0%	
14.1	Sun Ridge Drive	to Joy Lake Road	0.96	0.3	1.35	14%	36%	0%	
17.4	Joy Lake Road	to Callahan Road	0.96	0.3	1.35	11%	34%	0%	
20.5	Callahan Road	to Thomas Creek Rd.	0.96	0.3	1.35	0%	0%	0%	
21.9	Thomas Creek Rd.	to Wedge Parkway	0.96	0.3	1.35	16%	17%	0%	

Note: MVM = Million Vehicle Miles

Note: Based on NDOT crash data and additional fatality data from July 2009 through July 2014.



Five fatalities were reported during the 5-year time period analyzed. The observed crash rates are below the statewide average for all but the section between the SR 28/ SR 431 intersection and Gale Street. NDOT has plans to improve the runaway truck ramp where both fatalities occurred.

ROADWAY SAFETY ASSESSMENTS

NDOT regularly performs roadway safety assessments (RSA) on roadways throughout the state. Three such RSA's were completed on various sections of the Mt. Rose Corridor. The most recent was in August 2013 from mile post (MP) 18.694 to MP 23.050 (this is approximately from Galena Creek Visitor Center to I-580). A high level of 'run off the road' crashes were found in this area and the report recommended rumble strips and variable speed limit signs. Also to improve intersection sight distance, the report recommended trimming vegetation at Bordeaux Drive and Callahan Ranch Road. Pedestrian crossing improvements were recommended at the intersection of Thomas Creek Road.

An RSA was performed on Mt. Rose Highway in June 2011 from MP 6 to MP 8 (Tahoe Meadows area). There were several recommendations for improved signage, including a 25 mph alternative speed limit for the recreation area around Tahoe Meadows. Upgraded painted edgelines were suggested to better delineate the shoulder parking area. Additionally, several items were recommended to be considered including the following: improve bus shuttle service, install monitoring cameras, extend the shoulder widening, install snow fencing, provide separate parking for snowmobilers, and possibly build off-highway parking lot. Some of the improvements were subsequently installed.

Another RSA was performed in June 2010 from MP 8.174 to MP 18.694 (approximately from the Summit to Galena Creek Visitor Center) and from MP 23.050 to MP 24.413 (this section is past Wedge Parkway and therefore is not included in the CMP). Safety recommendations from this RSA include: review signal timing, add a centerline rumble strip, widen shoulders for bike lanes and add edgeline rumble strips, and add left and right turn lanes into Mt. Rose - Ski Tahoe ski resort main lot. At present a centerline rumble strip has been installed.

SAFETY CONSIDERATIONS ASSOCIATED WITH LAND USE AND PARCEL SIZE

The Corridor contains areas of small adjoining individual parcels zoned Tourist Commercial (at the Old Tanenbaum along SR 431), Neighborhood Commercial or Residential. Development of small parcels can create potential safety issues along the Corridor. It is difficult to achieve adequate distance between each parcel's access point to allow for turning movements and it is difficult to provide the appropriate length of acceleration and deceleration lanes.

Previously, the cumulative impacts of land use designations and development have not been addressed along the Corridor. Development or Tentative Map approvals are considered separately which hinders the ability to provide safety improvements such as frontage roads or shared access points, appropriate acceleration and deceleration lanes, turn pockets and other highway safety improvements.

Additionally, segments of the Corridor, particularly the two lane segments, lack adequate right of way to widen the road or provide necessary safety improvements.

SUMMARY

Overall, the majority (63 percent) of reported crashes resulted in property damage only. There were five fatalities during the 5-year time period analyzed. None of the crashes reported involved bicyclists or pedestrians. The observed crash rates are below the statewide average rates for all but one area. No existing transportation safety deficiencies are identified, with the exception of the driver sight distance concerns at Bordeaux Drive and Callahan Ranch Road.

EXISTING PARKING AREAS

Roadside parking occurs at the following formal and informal locations:

- Paved pullout at approximately mile post 4 on the lake side (east side) of the road at the Scenic Overlook
- Paved pullout at approximately mile post 4.2 on the west side of the road
- Widened paved shoulder in the Tahoe Meadows recreation area from approximately mile post 7 to 8 (about 1 mile in length) with a small curb separated trailhead parking area at the northern end of the recreation area: this parking area can become very busy during winter weekends.
- Paved off highway parking area at Mount Rose Summit with about 28 striped spaces plus additional parking along the widened shoulder
- There are seven additional widened paved shoulder areas (between mile post 4 and 11) that are used for parking to access recreational areas

PLANNED ROADWAY IMPROVEMENTS

- Mt. Rose repaving and improvements project This project will repave the highway and install guardrail, drainage and safety improvements from Mt. Rose Junction (near Summit Mall) to Mt. Rose Summit. Rumble strips will be installed to enhance driving safety in residential areas at the base of the highway. The approximately \$10 million project will also include nearly 18,000 linear feet of new guardrail, as well as rock removal and mesh cover to reduce erosion-caused rock fall on one roadside slope. Construction began June 2, 2014 and is currently scheduled to end in Fall 2015.
- Mt. Rose truck ramp improvement project The Nevada Department of Transportation plans to improve the run-away truck ramp just north of the intersection with Highway 28 in Incline Village. The project would convert the current gravel surface to concrete and add seven drag nets to 'catch' a run-away truck. The ramp improvements are scheduled to occur in 2016.

Roadside parking occurs in both formal and informal locations. The widened shoulder in the Tahoe Meadows recreation area section can become very busy during winter weekends. Vehicles also park in other shoulder locations and adjacent unpaved areas to access recreation opportunities.

CHAPTER FOUR ENHANCING THE BYWAY FOR VISITING, LIVING & DRIVING STRATEGIES & ACTION ITEMS





The Corridor Plan recommendations presented in Chapter 4 identify strategies and action items to achieve the goals and objectives identified in Chapter 1. The challenges facing the Corridor include safety, visual quality, resource protection and recreation access. The Corridor Plan recommendations presented in Chapter 4 identify strategies and action items to achieve the goals and objectives identified in Chapter 1:

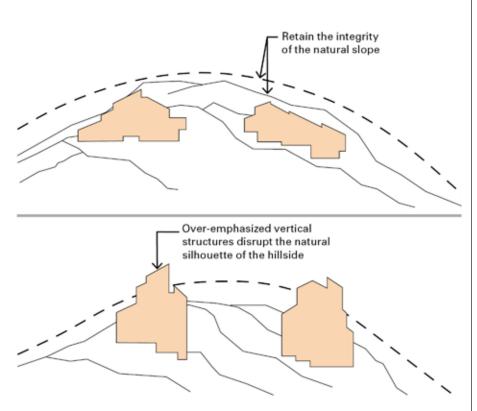
- Preserve the Scenic Quality and Natural Resources
- Balance Recreation Access with Transportation and Safety Needs
- Connect People with the Corridor
- Promote Tourism
- Identify Implementation and Management Strategies

PRESERVE THE SCENIC QUALITY AND NATURAL RESOURCES

STRATEGIES & ACTION ITEMS

Preserve Views and Scenic Vistas/Protect Viewsheds

- Manage development and grading to preserve mountain views and avoid mass grading and large rock cuts visible from the highway.
- Maintain current and proposed outdoor advertising standards to manage billboards and on-site signs so they do not detract from scenic views or night skies.
- Manage cell towers and wind turbines that may be visible from the Corridor to ensure they do not detract from the area's visual quality.
- Focus development along the easternmost portion of the Corridor.
- Develop design guidelines to ensure development maintains the area's visual quality.



Development on hillsides and mountains should retain the integrity of the natural slope and not extend above the hillside.

<u>GUIDELINES: GRADING &</u> <u>ROCK CUTS</u>

- Grading should minimize the visual impact of all residential and nonresidential hillside development, including road cuts and driveways.
- Grade to create naturallooking slopes where feasible. Have diversity in gradient and profile rather than uniform slopes.
- Create landforms that respond to the uniqueness of the site, the surrounding landscape and the roadway travel experience.
- Utilize naturalized retaining and terracing where needed.
- Create smooth landform transitions that blend with the natural terrain.
- Development should be designed to follow the natural contours when possible.



GUIDELINES: GRADING & ROCK CUTS (CONTINUED)

- Conduct careful rock geology, site, and cost analysis, and design rock cuts to avoid the need for rock fall protection fencing.
- Design rock cuts to be natural in form, texture, and color in relationship to the surrounding landforms.
- Blend rock cuts to match natural rock forms and use naturalized bedding planes to avoid creating an unnatural rock face.
- Ensure all designed landforms are natural in appearance and blend with the topography and geology of the surrounding landscape.
- Match new rock and soil excavations with existing rock and soil using rock staining, soilcoloring treatments, and/ or accelerated weathering techniques.
- Utilize naturalized grading and terracing where possible instead of rock fall protection fencing.



Naturalized rock cuts are preferred over the use of rock fall protection fencing.



Terraced and planted rock cuts such as those used on US 50 in Lake Tahoe are preferred over the use of rock fall protection fencing.



Site planning for multiple buildings should incorporate public spaces for seating and gathering.



Authentic building materials such as wood treated with fire resistant coating or wood tone material and stone should be used.



Stone and color selection should blend with the surrounding landscape.

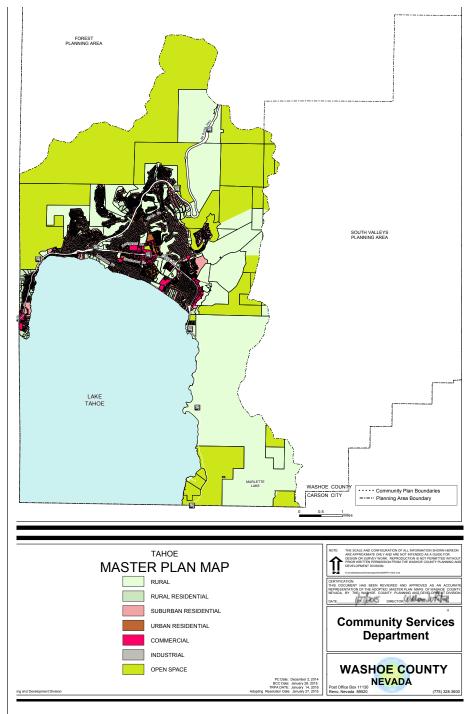
<u>GUIDELINES:</u> <u>ARCHITECTURAL</u> <u>CHARACTER</u>

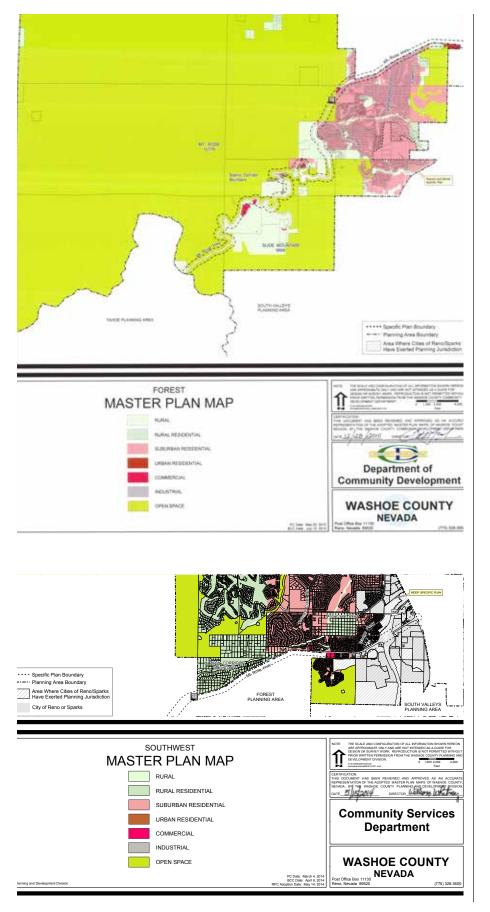
- Development along the Byway should be built in a way as to retain the visual quality of the highway.
- Authentic building materials such as wood pillars or beams and stone should be used.
- Colors should be limited to earth tones so that the color blends in with natural surroundings.
 Brighter accent colors may be used but should be limited so that the overall building blends with the environment.
- Roofs should be fire resistant material and earth tone in color. Do not use shiny metal roofs.
- Buildings should be designed to complement rather than dominate their surroundings.
- Highly reflective materials are undesirable because of their tendency to create uncomfortable glare conditions.
- The use of standardized "corporate" architectural designs associated with chain or franchise buildings is strongly discouraged and alternative designs should be explored.



Preserve the Scenic Quality & Natural Resources

 Three Area Plans cover the Mount Rose Scenic Byway. Open space is the primary land use identified along the Corridor. The Southwest Truckee Meadows Area Plan's vision also describes preventing the spread of commercial development west of the Thomas Creek Parkway and SR 431 intersection.





- Utilize NDOT's Landscape and Aesthetics Corridor Guidelines to enrich highway facility aesthetics.
- Guidelines are provided for a number of facilities, including:
 - Community gateways
 - Viewpoints and pulloffs
 - Signage
 - Pedestrian crossings
 - Bicycle facilities
 - Barriers and guard rails
 - Lighting
 - Fencing
 - Grading and retaining walls
 - Rock cuts and excavation
 - Drainage
 - Erosion control
 - Water harvesting
 - Irrigation
 - Softscape types and treatments
 - Wildlife crossings and protection

Enhance Aesthetics of Roadside Facilities

- Utilize NDOT's *Landscape and Aesthetics Corridor Guidelines* to continue the enhancement of highway facility aesthetics, including truck runaway ramps, rock cuts and barrier rails.
- Encourage the use of native landscaping and low-water use plant materials and the removal/replacement of high-water use ornamental landscape along the Corridor to minimize impacts to area wells.
- Select and arrange adjacent plant materials to avoid blocking views of the Carson Range from the eastern section of SR 431.
- Reference "bee-friendly" or beneficial insect pollinator habitat planting lists such as the *Native Plants Pesticide Free* list from the U.S. Fish and Wildlife Service to develop pollinator friendly corridors.





NDOT"s Landscape and Aesthetics Corridor Plan sets forth aesthetic guidelines for a variety of roadside facilities. The plan includes a list of native and adapted native plants which could be used along the Corridor to minimize water use.



Highway facilities should fit seamlessly within the landscape. Roadways should be sensitively sited and designed within areas of scenic importance.



Colors and simple patterning of walls and barrier rails should be the standard in areas of national significance.

- NDOT's Landscape and Aesthetics Corridor Guidelines identify additional recommendations for the scenic byways in Lake Tahoe, including SR 431, as follows:
 - Highlight the experience of the surrounding Sierra Nevada mountains, Lake Tahoe, drainages, meadows, forests, plants, animals, and people.
 - Establish a model for future highways in environmentally sensitive areas and project a system of the highest quality.
 - Provide access to highly utilized recreation destinations.
 - Elevate the scenic byways within and around Lake Tahoe to a level equal to the status of the landscape through which it passes.



Manage and Maintain Natural Resources

- Manage and maintain forest health to reduce fire risk as a critical component of safeguarding the watersheds of Tahoe and the Truckee Meadows.
- Maintain and enhance fire breaks where needed.
- Evaluate trails for use as fire breaks and as emergency fire access.
- Promote and support the removal of noxious weeds.
- Promote and support Nevada's collaborative approach to resilient landscapes, fire adapted communities and a safe and effective wildland fire response.



Photo from Resource Concepts Inc. Washoe County Fire Plan

Adequate defensible space mitigates a moderate fuel hazard condition created by low accumulations of dead and down woody material near the Mt. Rose - Ski Tahoe ski resort.



Photo from Resource Concepts Inc. Washoe County Fire Plan

Dead and down woody fuels create a high fuel hazard in the Jeffrey pine and white fir stands near the Sky Tavern ski area. The *Washoe County Fire Plan* assessment estimated fuel loads as ranging between ten and twenty tons per acre.

- Targeted fuels reduction efforts can reduce the amount, height and distribution of fuel in a specific area in order to decrease the spread and size of wildfires.
- Fuels reduction efforts along the highway are considered beneficial to the Corridor's overall visual quality.

Enhance Wildlife Habitat and Connectivity

- Identify, maintain and enhance wildlife crossings.
- Provide passages or breaks in barrier rails and fencing to avoid trapping small wildlife within the roadway.



Barrier rails with scuppers installed at every fifth barrier facilitate small animal passage through the barrier according to a study by Caltrans.



Facilitate movement through wildlife passages by utilizing natural surfacing. The crossing may be coordinated with creek crossings when appropriate. The natural streambank should be maintained through the structure.

GUIDELINES: WILDLIFE CROSSINGS

- Engage appropriate agencies in the planning and design of wildlife crossings.
- Use ecologicallyappropriate wildlife crossing structures that meet the needs of specific wildlife species in order to improve movement and safety along the Corridor.
- Design wildlife crossing structures to blend with the surrounding landscape.
- Manage the amount and type of human activity near crossing structures.
- Utilize fencing as appropriate to direct wildlife to crossing locations.



The CMP aims to improve safety while maintaining appropriate recreation access and enhancing active transportation facilities.

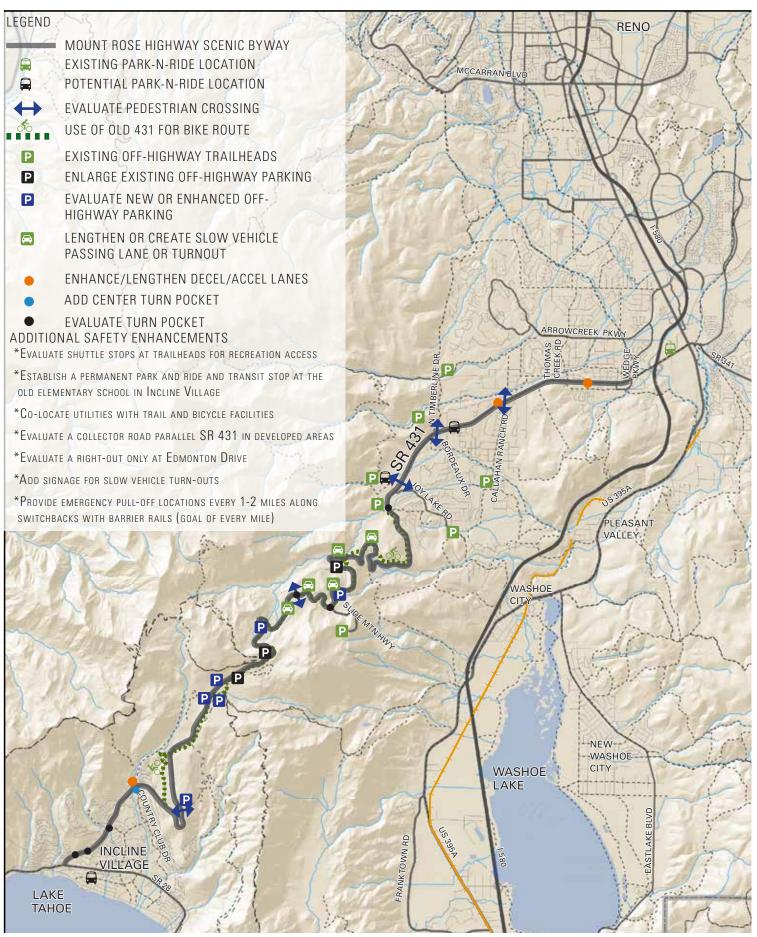
BALANCE RECREATION ACCESS WITH TRANSPORTATION AND SAFETY NEEDS

STRATEGIES & ACTION ITEMS

Enhance Recreation Access

- Formalize or enhance off-highway parking locations.
 - Evaluate options for off-highway parking at the North/Incline Flume Trail.
 - Provide trailhead parking for hiking, x-country skiing and picnicking at Incline Meadow.
 - Provide for off-highway larger parking lots at the west end of Tahoe Meadows for snowmobilers and cross-country skiers to work towards eliminating the need for recreation access parking along the highway.
 - If required to meet parking needs, enhance trailhead parking by creating a median dividing the parking from the highway along the Tahoe Meadows corridor on both sides of the highway.
 - Evaluate options to expand parking for the Tahoe Rim Trail.
 - Evaluate the opportunity for additional parking at the Summit Visitor Center.
 - Evaluate the opportunity to shift the parking near Tamarack Lake from the south side to the north side in order to position recreationists on the correct side of the highway.
 - Evaluate the opportunity to formalize off-highway parking across from Bums Gulch chairlift.

Balance Recreation Access with Transportation & Safety Needs



- Evaluate options for off-highway parking near Sky Tavern with a trail connection to mountain recreation opportunities to eliminate the roadside parking occurring on the curve below NDOT maintenance station 2.
 - Evaluate the opportunity to provide a trail connection from Sky Tavern to the forest service trails to the east.
- Evaluate shuttle stops to key trailheads to create a recreation access system.
- Evaluate opportunities designated for snow play areas with associated parking.
- Improve trails at Mount Rose Campground.
- Create a defined trail system that connects the Mount Rose Corridor to Washoe Valley.

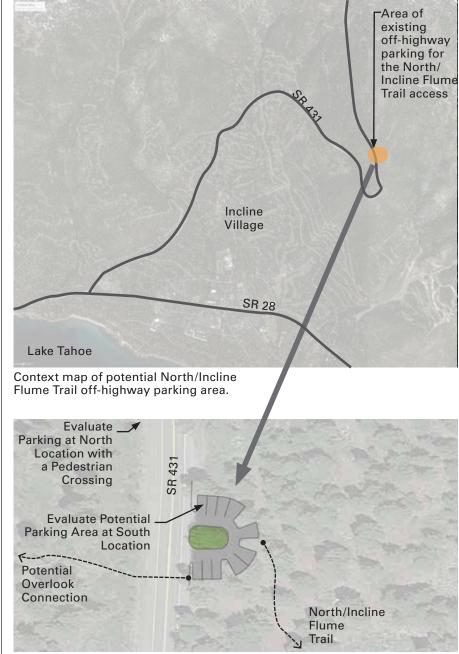
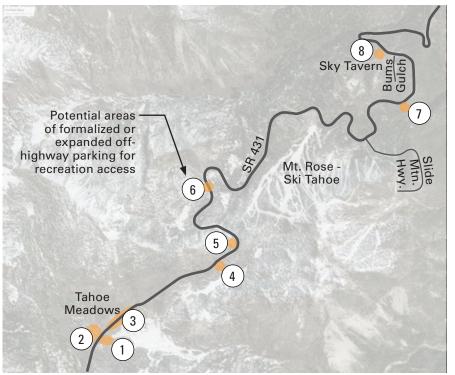
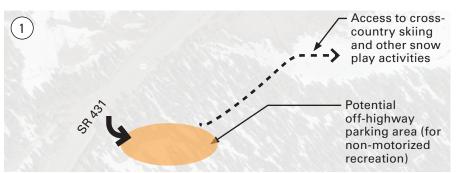


Diagram of potential North/Incline Flume Trail off-highway parking area.

- North/Incline Flume Trail potential for formalized off-highway parking.
 - Parking to be evaluated for either north and south location.
 - Consider south location in order to reduce the need for pedestrians to cross the highway or incorporate a pedestrian crossing with the north location.
 - Information kiosk to be incorporated as part of the parking area.
 - Work with the Forest Service to meet any property acquistiion requirments.
- Evaluate shuttle stop opportunity.



Context map of potential off-highway parking areas and parking expansion areas (not including the North/Incline Flume Trail off-highway parking location). Diagrams and enlargements of parking locations are located on the following pages and can be referenced by the number located on the map.



Location of potential SR 431 parking area on east side of highway for access to cross country and other low impact snow play activities.

 Off-highway parking opportunities to enhance recreation access and safety occur throughout the Corridor. A concentration of offhighway parking occurs from Tahoe Meadows to Sky Tavern.

 Recreation access to the southeast side of SR 431 at Tahoe Meadows provides off-highway parking for access to snow play and hiking.

- Off-highway parking opportunities exist for trailers and vehicular parking at the west end of Tahoe Meadows which could provide access to the children's recreation area, snowmobiling and horseback riding.
- The NDOT Road Safety Audit indicated parking demand often exceeds the supply during the winter months. The concentration of pedestrians and vehicles parked along the Tahoe Meadows area combined with through traffic movements, contributes to safety issues from congestion and pedestrian conflicts.

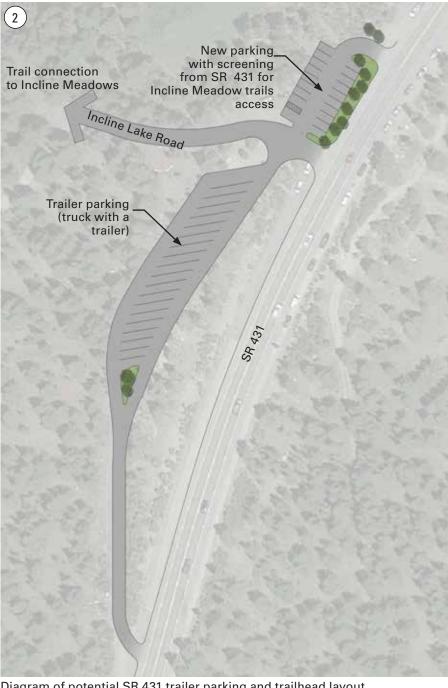
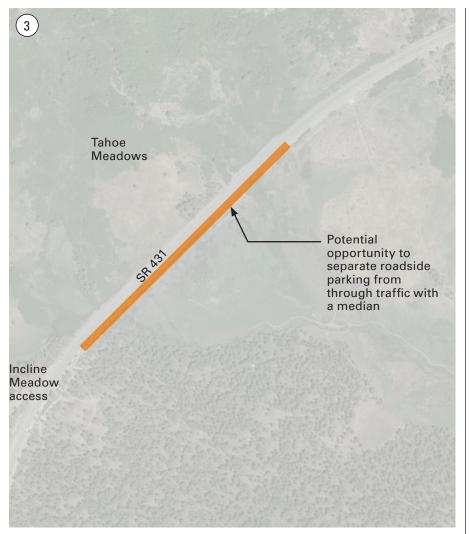


Diagram of potential SR 431 trailer parking and trailhead layout.

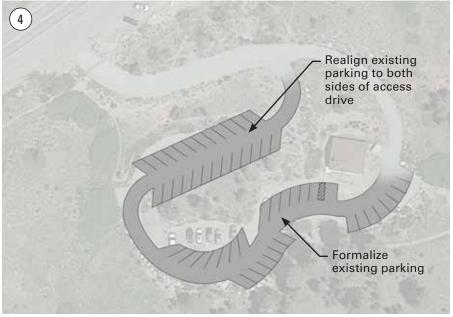


Enhanced parking along SR 431 at Tahoe Meadows could include a median to separate off-highway parking from through traffic.

- Evaluate parking needs and the ability to accommodate vehicles in off-highway parking areas to the extent feasible.
- If needed to meet parking needs, enhance trailhead parking by creating a median dividing the parking from the highway along the Tahoe Meadows corridor on both sides of the highway.

Balance Recreation Access with Transportation & Safety Needs

• Tahoe Rim Trail trailhead potential parking expansion.



Proposed new parking realignment and expansion at Tahoe Rim Trail trailhead.

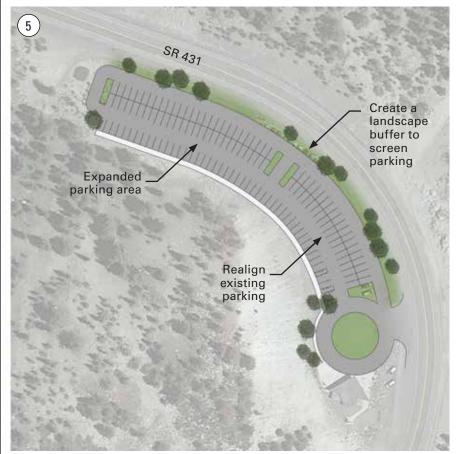
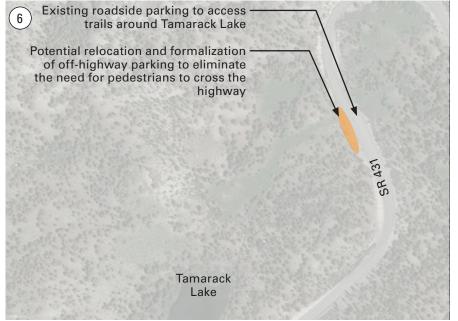
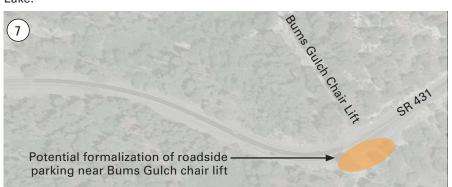


Diagram of potential Summit Visitor Center parking realignment and expansion.

• Summit Visitor Center potential parking expansion and transit or shuttle unloading area near plaza/ restroom area.



Potential relocation and formalization of roadside parking near Tamarack Lake.



Potential formalization of roadside parking near Bums Gulch chair lift.

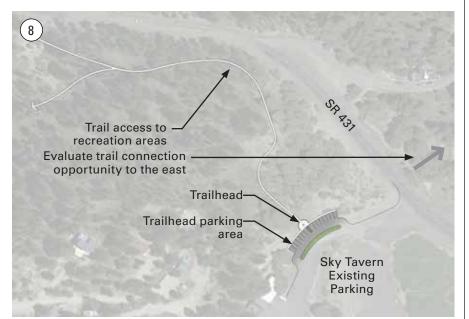


Diagram of potential off-highway parking and trail connection at Sky Tavern.

• Off-highway parking opportunities at Tamarack Lake and Bums Gulch chairlift.

- Potential off-highway parking and trail connection at Sky Tavern using the existing paved area to provide hiking access to nearby recreation areas.
- Evaluate the opportunity to provide a trail connection to the forest service trails to the east.

 Evaluate other opportunities to formalize or develop off-highway parking to work towards eliminating the need for roadside parking for recreation access.
 Potential location for parking across from Bums Gulch is shown.

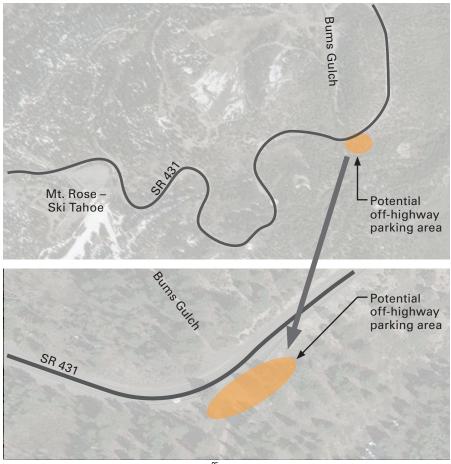
 Create a trail route through Washoe/Allen's Canyon that connects the Mount Rose Scenic Byway to the Washoe Valley Scenic Byway.

LEGEND

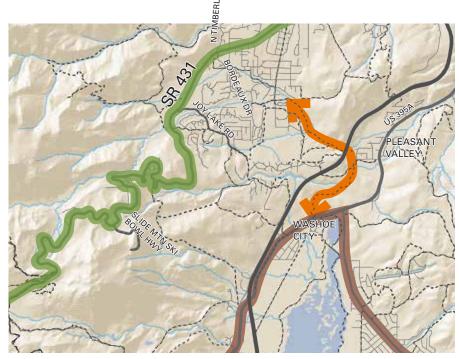


MOUNT ROSE SCENIC BYWAY WASHOE VALLEY SCENIC BYWAY

TRAIL CONNECTIVITY BETWEEN MOUNT ROSE SCENIC BYWAY AND WASHOE VALLEY SCENIC BYWAY



Potential location for formalizing of highway parking between Mt. Rose -Ski Tahoe and Bums Gulch.



Washoe County has a flexible easement through Washoe/Allen's Canyon to develop a trail that connects the Mount Rose Byway to the Washoe Valley Byway.

Provide Mobility and Transportation Facilities

Enhance Bicycle & Pedestrian Facilities for Safety and Access

- Explore the opportunity to utilize old highway 431 for biking/hiking and emergency access.
- Create a designated bike lane along SR 431 from Incline Village to the summit using the existing wide shoulder. Provide signage and any necessary pavement markings.
- Explore areas to widen SR 431, where possible, to allow for a safer bike riding and motorist experience from the summit to the existing bike lane at Timberline Drive.
- Work with Mt. Rose Ski Tahoe on their proposed bridge crossing so materials blend with the forest environment.



Old highway 431 is located within close proximity of the Mount Rose Scenic Byway. It provides an opportunity for a separated bike path which could also be used for emergency access when needed.



Adequate shoulder width for a bike lane exists along the highway from Incline Village to the summit.

• Improve old highway 431 for bike access.



Existing condition along old highway 431.

• Sign and stripe a bike lane from Incline Village to the summit.



• The recommended pedestrian crossing facility will vary based on additional study. A pedestrian hybrid beacon is distinct from pre-timed traffic signals and flash warning beacons because it is only activated by pedestrians when needed. They have been shown to significantly reduce

pedestrian crashes and can fill the gap between unprotected crosswalks and full traffic signals to serve pedestrians.

- Underground utilities where possible and co-locate trails and bicycle facilities.
- Evaluate enhanced pedestrian crossings (signage, striping, pedestrian hybrid beacon, or separated crossing) at the following locations:
 - Timberline Drive to connect to Whites Creek and Thomas Creek trails
 - Callahan Road
 - Galena Creek Regional Park (underpass at Galena Creek to connect Callahan Park to Galena Creek Regional Park through Joy Lake open space)
 - Mt. Rose Ski Tahoe (potential skier bridge that may be used by hikers/pedestrians in summer)
 - North/Incline Flume Trail



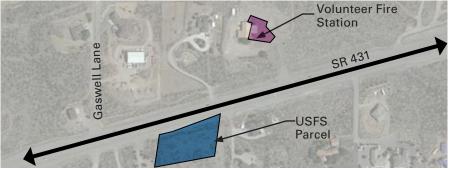
Pedestrian crossing facilities may range from flashing signage and striping (shown in the first image above) to pedestrian hybrid beacons (shown in the image above). A hybrid beacon would be considered for the five-lane highway section.

Enhance Transit Facilities

- Evaluate park and ride locations that better serve the Truckee Meadows residents traveling to Tahoe and for those who live along Mount Rose Highway; consider the following locations:
 - Galena Creek Visitor Center
 - Between Thomas Creek and Montreaux (volunteer fire station or USFS parcel)
 - Lower commercial area/Redfield Campus area
- Maintain the existing park and ride at the Summit shopping center.
- Create shuttle stops for Mt. Rose Ski Tahoe shuttles at the park and rides.
- Enhance school bus stop waiting areas to improve safety.
- Evaluate shuttle stops at key trailheads along SR 431 such as the North Flume Trail and Tahoe Rim Trail.
- Reinstate transit service from Reno to Incline Village and connect with the East Shore Express.
- Work with Washoe County School District to establish a permanent park and ride and transit stop at the old elementary school in Incline Village.



Potential park and ride location at Redfield Campus.



Potential park and ride location at the volunteer fire station or USFS parcel.

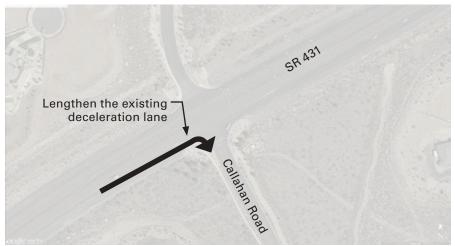


Potential park and ride location at the Galena Creek Visitors Center.

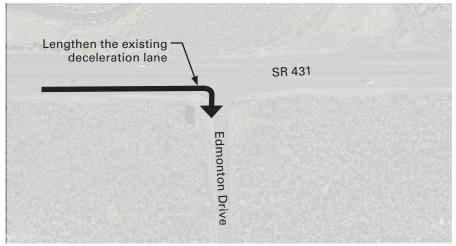
 The current park and ride located at the Summit shopping center does not serve many potential users along SR 431 as it requires them to backtrack down the highway when they would prefer meeting further to the west.
 Potential locations could be evaluated to coincide with existing parking areas and public property sites.

Evaluate Opportunities for Safety Enhancement Projects

- Enhance/lengthen the deceleration lanes at Callahan Road and Edmonton Drive.
- Add a center turn pocket and acceleration lane at Country Club Drive.
- Evaluate center turn pockets at the following locations:
 - Kelley Drive
 - McCourry Boulevard
 - College Drive
 - Mt. Rose Ski Tahoe Area
 - Slide Mountain Road
 - Douglas Fir Road

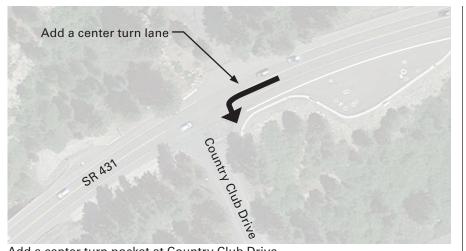


Enhance or lengthen the eastbound deceleration lane at Callahan Road.

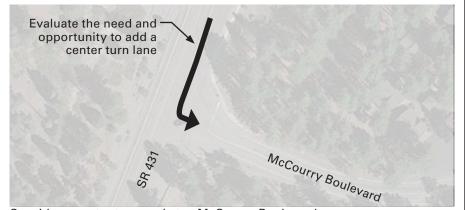


Enhance or lengthen the eastbound deceleration lane at Edmonton Drive.

 Eastbound traffic descending the summit can gain speed and increase the potential for rear-end collisions in the northeastern section of the Corridor, especially in winter snow conditions. Lengthening deceleration lanes at highly used intersections may reduce that potential.



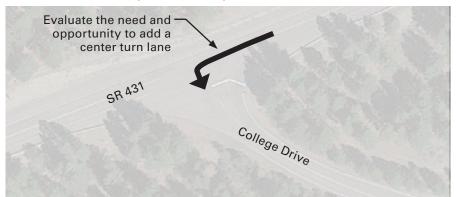
Add a center turn pocket at Country Club Drive.



Consider a center turn pocket at McCourry Boulevard.



Consider a center turn pocket at Kelley Drive.



Consider a center turn pocket at College Drive.

 Center turn lanes may be beneficial at locations such as Country Club Drive, McCourry Boulevard, Kelley Drive, College Drive, Slide Mountain Road, Mt. Rose - Ski Tahoe and Douglas Fir Road. Turn lanes should be evaluated at these and other intersections.



- Evaluate passing or slow traffic lanes with signage indicating passing lane "x miles" ahead at the following locations:
 - Reindeer Lodge
 - Below maintenance station #2
 - Top of Bum's Gulch near old chairlift tower
 - Above and below Mt. Rose Ski Tahoe Area
- Evaluate a right-out only from Edmonton Drive if Thomas Creek Road is extended south.
- Provide emergency pull-off locations along switchbacks with barrier rails (every one to two miles with a goal of every one mile).
- Add signage for slow vehicle turnouts.
- Manage and reduce the addition of multiple driveway access points along the highway where possible require a collector road in the northeastern section of the Corridor that new and existing subdivisions share.
- Near Timberline Road mile marker 19 add a "No Passing Next 1/2 Mile" sign.
- Relocate the chain up sign from the first NDOT maintenance station to the Galena Visitor Center area and enforce chain-up and chain down areas.
- Evaluate safety and transportation issues, including lighting and traffic volumes, when considering proposed development along the Byway.



Traffic often queues behind slow-moving vehicles ascending the summit. Slow vehicle turnouts can be enhanced to improve traffic flow and create slow vehicle passing lanes where possible.

- Slow vehicle turnouts can be lengthened where possible and signed to allow slow vehicles to easily pull off and on the road while other vehicles pass.
- Slow vehicle turnouts can be lengthened in some locations to add a slow vehicle passing lane.

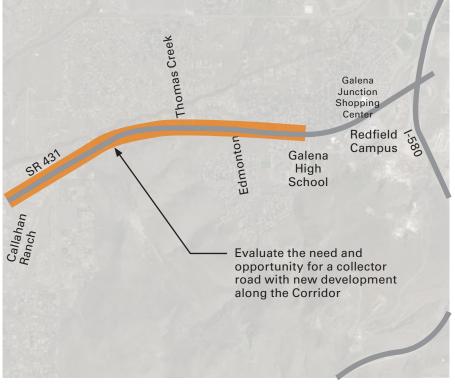


Existing pull-off location is not signed.



Emergency pull-off locations should be identified every one to two miles through the switchbacks east of Slide Mountain Road.

 Provide emergency pull-off locations along switchbacks with barrier rails (every one to two miles with a goal of every one mile).



Within the developed areas in the northeastern section of the Corridor, a collector road may serve to reduce driveway access onto the highway and increase safety.

 A collector road can help reduce the number of intersections and driveways fronting the highway.



• Cumulative impacts of land use and development need to be considered along the Corridor in order to maintain or improve safe access.

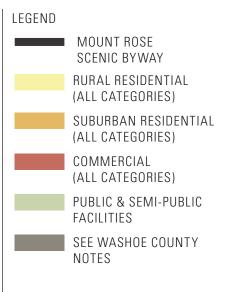
Consider the cumulative impact of land use and development along the Corridor in order to maintain or improve safe access along the highway.

- Limiting the average daily trips or peak traffic movements may be necessary to maintain or improve the highway safety in areas of multiple adjoining small parcels.
- NDOT and Washoe County are encouraged to work together to evaluate and consider cumulative safety impacts as part of land use designations.
- NDOT and Washoe County are encouraged to work together to evaluate and consider the cumulative safety impacts as part of the review of development proposals, including but not limited to:
 - Requiring appropriate length of acceleration and deceleration lanes for highway access;
 - Encouraging frontage roads or connectivity of multiple small parcels with interior street; and
 - Limiting the number highway access points and encouraging shared access points.
- NDOT is encouraged to review and reduce the speed limit to 45 mph on the two lane segment of the highway from Joy Lake Road to the four lane segment at Timberline Road.
- NDOT is encouraged to review "No Passing" signage between Galena Visitor Center to Bourdeaux Drive and consider

Balance Recreation Access with Transportation & Safety Needs



A number of small adjoining individual parcels along the highway can create potential safety issues due to inadequate distance to allow for turning movements. Cumulative impacts and coordination with NDOT and Washoe County is encouraged to evaluate and consider the safety impacts of development proposals.





Vista points, interpretive information, Byway signage and visitor centers all play a role in connecting travelers to the Corridors intrinsic resources.

CONNECT PEOPLE WITH THE CORRIDOR

ENHANCE OVERLOOKS AND VISTA POINTS

- Develop additional viewpoints add signage and interpretive information.
 - Slide Mountain Road views of Washoe Valley
 - West of Bums Gulch Road views of Reno/Truckee Meadows
- Create an off-highway vista point of Lake Tahoe near the existing pulloff east of Incline Village.
- Provide signage for photo-opportunity pull-offs at Thompson Lane and Mountain Ranch Road.

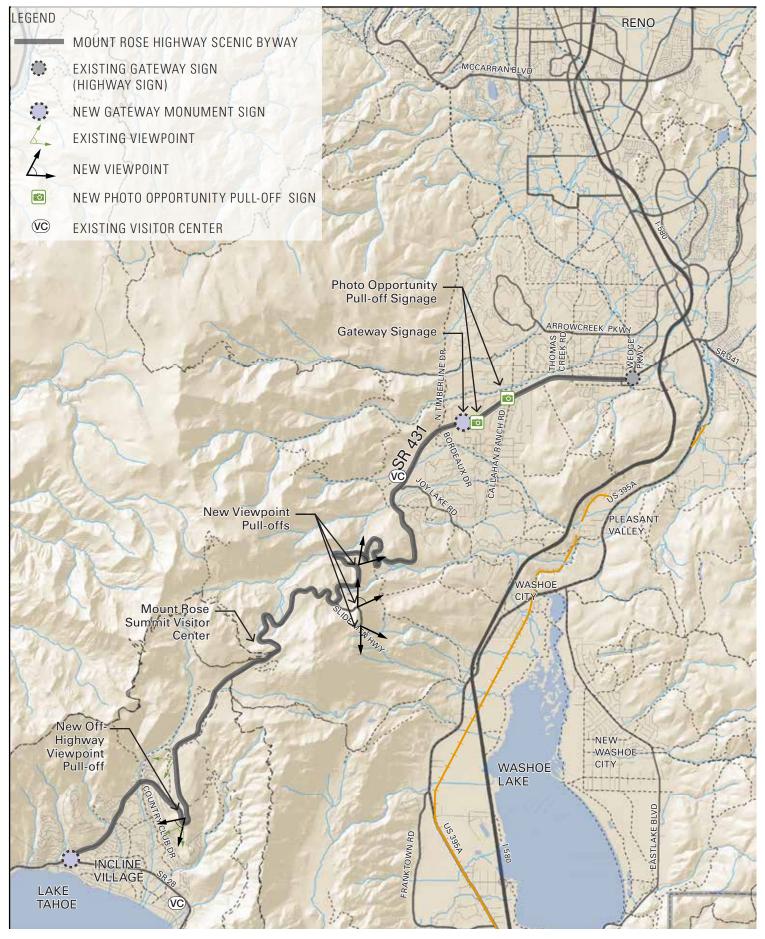
PROVIDE BYWAY SIGNAGE TO ENHANCE WAYFINDING AND STRENGTHEN THE BYWAY'S SENSE OF PLACE

- Provide monument signage to announce the Corridor (near Thompson Lane and near Incline Village).
- Evaluate locations and provide a digital sign for transit and recreation area parking. This sign would be used approximately 60 days per year to alert motorists and reduce u-turn movement and trolling for parking. An example of the message is as follows:
 - Winter: Mount Rose parking full, use Slide Mountain parking
 - Summer: Sand Harbor parking full, use East Shore Express
- Enhance signage for scenic vista points and recreation resources.
- Evaluate the need to have large street signs in order to keep signage visually unobtrusive.

HIGHLIGHT THE CORRIDOR'S VISITOR CENTERS

• Utilize and promote Galena Creek Visitor Center as a gateway to the Byway.

Connect People with the Corridor



Connect People with the Corridor

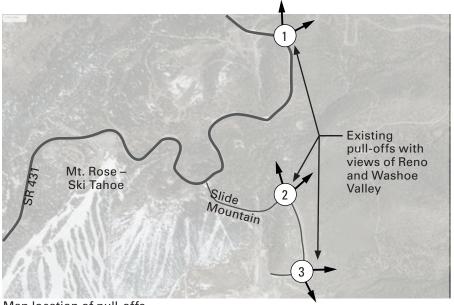
• Existing pull-offs that offer nice views of Lake Tahoe, Reno and Washoe Valley could be enhanced through signage and the incorporation of interpretive information.







A number of pull-off locations, such as those above, provide vistas of Lake Tahoe, Reno and Washoe Valley.



Map location of pull-offs.



Positive messaging should notify motorists of upcoming viewpoints, parking, and emergency turnouts located along the highway.

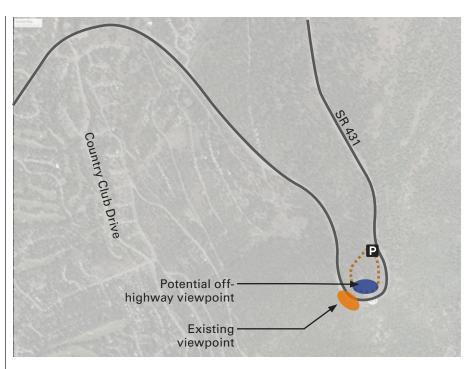


Potential signage at viewpoints.

- Signage should identify viewpoints, parking and slow vehicle turnouts but not be overused and detract from the Corridor's scenic quality.
- Signage can help visitors navigate quickly to viewpoints and photo opportunities and reduce the tendency for motorists to travel slowly and search for pull-off locations.



- The existing Lake Tahoe viewpoint just east of Incline Village could be improved through the creation of an off-highway location.
- Work with the USFS to meet the Santini/Burton Act requirements for the parking access.



The existing viewpoint offers easy access to eastbound travelers, but it is a challenging location for westbound travelers. A new viewpoint that is located off the roadway could provide an enhanced opportunity.



An off-highway overlook could provide views of Lake Tahoe and separation from the highway traffic.



Existing bus pull-off at Thompson Lane.



The mountain view from Mountain Ranch Road bus pull-off.



The existing bus pull-offs at Thompson Lane and Mountain Ranch Road can be used for quick photo-opportunity sites.

 In the northeastern portion of the Corridor, travelers are known to use bus pull-offs for photoopportunities of Mount Rose and the Carson Range.



 Scenic byway monument signage, in conjunction with the existing scenic byway sign, can help welcome travelers to the Corridor.



An off-highway overlook could provide views of Lake Tahoe and separation from the highway traffic.



A standard NDOT scenic byway sign is located just west of Wedge Parkway.



During the winter the sign could notify travelers when the Mt. Rose parking area was full.



During the summer the sign could notify travelers when Sand Harbor parking area was full and promote the use of the East Shore Express.

• Provide digital signage to notify travelers about transit use and recreation access.



The sign would be off when not needed.



The Galena Creek Visitor Center is well-located in the northeastern portion of the Corridor to serve as a gateway to the Byway for travelers coming from the Reno area.

 Position the existing Galena Creek Visitor Center as the gateway visitor center. Provide interpretive and travel materials regarding the Byway.



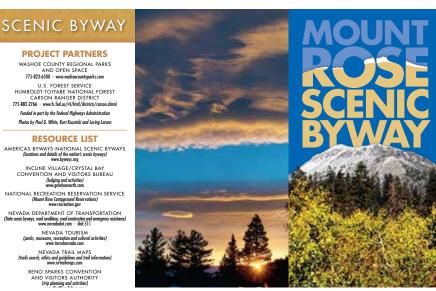
• Utilize technology to manage and provide tourism information.

PROMOTE TOURISM

- Utilize technology to manage and provide tourism information.
- Provide links and referrals to corridor commercial areas (similar to the National Geographic Tourism program).
 - Highlight and connect people to recreation opportunities.
 - Develop an auto tour guide of historic and recreation resources.
 - Highlight Galena's history and the natural resources of Mt. Rose and the Tahoe Basin.
 - Provide visitors with information on how to be stewards of the region's resources.
- Market the corridor as a method to lengthen the visitor's stay.
 - Reach out to Reno Tahoe Convention and Visitors Authority, Incline Village Crystal Bay Convention and Visitors Authority and Nevada Commission on Tourism to promote the Corridor.
 - Make the Byway tour part of the Reno-Tahoe experience.
 - Work with Reno-Sparks Convention and Visitors Authority, Carson City Visitors Bureau, Incline Village Crystal Bay Visitors Bureau and the Nevada Commission on Tourism to communicate the Byway's relationship to the larger region and its system of scenic byways and historic sites and provide local and visitor links.
 - Develop a byway logo/brand.

 Mount Rose Scenic Byway's brochure can be enhanced to provide auto tour information that identifies appropriate pull-offs and recreation opportunities.

 Develop digital guides that can be accessed by computer or mobile phones (byway websites and mobile applications (apps)).



Guides can communicate destinations and resource information.



Digital visitor information can be communicated by mobile apps.



Communicate the Byway's relationship to the larger region and system of byways and historic sites (e.g., SR 28, US 50, Mt. Rose Highway, Washoe Valley, Virginia City, Carson City and Steamboat) – work with Reno-Sparks Convention and Visitors Authority, Carson City Visitors Bureau, Incline Village Crystal Bay Visitors Bureau and Nevada Commission on Tourism.



The Mount Rose Scenic Byway is located near two state scenic byways, a national scenic byway and numerous areas with cultural, historical, recreational and natural interest. A loop system could be identified to connect the byways and other regional areas of interest.

GEOTOURISM AND COMMUNITY VITALITY

The Corridor Management Plan's intent for enhancing tourism is based on the geotourism principles presented by National Geographic as part of their support of local cultures and resources. As the Reno area continues to grow, it is recognized that increases in tourism traffic should be monitored in coordination with increased commuter traffic in order to minimize environmental and transportation concerns associated with increased traffic volumes. Some of the key geotourism principles relevant to Mount Rose are described below.

PRINCIPLES OF GEOTOURISM

- Integrity of a Place: Enhance the geographical character of the destination by developing and improving it in ways distinctive to the locale. Encourage market differentiation and cultural pride in ways that are reflective of natural and cultural heritage.
- Community Involvement: Local businesses and civic groups join to provide a distinctive, authentic visitor experience.
- Community Benefit: Encourage micro- to medium-size enterprises and tourism business strategies that emphasize economic and social benefits to involved communities, especially poverty alleviation, with clear communication of the destination stewardship policies required to maintain those benefits.
- Conservation of Resources: Encourage businesses to minimize water pollution, solid waste, energy consumption, water usage, landscaping chemicals and overly bright nighttime lighting. Advertise these measures in a way that attracts the large, environmentally sympathetic tourist market.
- Protection and Enhancement of Destination Appeal: Encourage the destination to sustain natural habitats, heritage sites, aesthetic appeal and local culture. Prevent degradation by keeping the volume of tourists within maximum acceptable limits. Seek business models that can operate profitably within those limits.
- Interactive Interpretation: It informs both visitors and hosts. Residents discover their own heritage by learning that things they take for granted may be interesting to outsiders.
- Market Selectivity: Encourage growth in tourism market segments most likely to appreciate, respect and disseminate information about the distinctive assets of the locale.
- Evaluation: Establish an evaluation process to be conducted on a regular basis by an independent panel representing all stakeholders' interests and publicize evaluation results.

5 CHAPTER FIVE CORRIDOR STEWARDSHIP





Management agencies must meet their individual goals and needs for area natural resources. Coordination of management strategies may offer previously unseen benefits as well as avoiding unintended effects.

MANAGING PARTNERS

Managing resources along the Mount Rose Highway requires agencies and organizations to continue working together to implement projects, resolve issues that may arise, and coordinate funding sources.

The primary agencies who own lands, manage facilities or operate transit along or in close proximity to the Corridor include:

- Washoe County
- Nevada Department of Transportation
- U.S. Forest Service Humboldt Toiyabe, Carson Ranger District
- U.S. Forest Service Lake Tahoe Basin Management Unit
- Incline Village General Improvement District
- City of Reno
- Tahoe Transportation District
- Regional Transportation Commission Washoe

These entities recognize it will not only take a collaborative effort to accomplish many of the projects, but that future infrastructure and maintenance and operation costs also need to be included.

FUNDING AND PROJECT IMPLEMENTATION

Implementation of projects is based on available funding. Funding through the public sector is typically uncertain. Private sector investments and public support is encouraged to help the projects become reality. Mutually beneficial projects can also be incorporated as part of other planned projects such as maintenance overlays or trail maintenance.

MANAGING PARTNERS ROLES & RESPONSIBILITIES

The CMP describes five main goals with corresponding objectives and strategies for managing and enhancing the Corridor. As the CMP moves forward, each managing partner will have different roles and responsibilities. Table 3 identifies which of the managing partners would be involved to help achieve each goal.

TRPA's primary role is permitting and monitoring the management/ maintenance activities and, therefore, they are not listed in the table. In particular, they are the regulatory agency overseeing best management practices by all other agencies. Tahoe Metropolitan Planning Organization (TMPO), the transportation arm of TRPA, oversees the development of the Tahoe region's Regional Transportation Plan and the bicycle and pedestrian master plan.

COMMUNITY ORGANIZATIONS

Community groups may also be involved in the implementation and monitoring of the CMP. Community engagement with the Byway is an important element of a Corridor's success. As new projects come forward, local groups can help engage stakeholders and other community groups so that the Byway's resources and challenges are considered. No one entity can achieve success on its own. Leveraging the human capacity of community organizations can build a strong foundation for Byway success. Agencies must continue to work together to create attractive grant funding applications, leverage resources, and create projects that have Corridorwide benefit.

GOALS & STRATEGIES	WASHOE COUNTY	NDOT	USFS	IVGID	CITY OF RENO	TTD	RTC	COMMUNITY ORGANIZATIONS
Preserve the Scenic Quality and Natural Resources								
Preserve Views and Scenic Vistas/Protect Viewsheds	Х	х	х		Х			
Enhance Aesthetics of Roadside Facilities	Х	Х	Х					Х
Manage and Maintain Natural Resources	Х	Х	Х	Х	Х			Х
Enhance Wildlife Habitat and Connectivity	Х	Х	Х					
Balance Recreation Access and Transportation and Safety Needs								
Enhance Recreation Access	Х	Х	Х	Х	Х			Х
Provide Mobility and Transportation Facilities	Х	х	х			X	х	Х
Evaluate Opportunities for Safety Enhancement Projects	Х	Х	х	Х		X		Х
Connect People with the Corridor	<u>.</u>							
Enhance Overlooks and Vista Points	Х	Х	Х					Х
Provide Byway Signage to Enhance Wayfinding	Х	Х						
Highlight the Corridor's Visitor Centers	Х		Х	1				Х
Promote Tourism				0				
Promote Tourism	Х	Х	Х	Х	Х			Х
Identify Implementation and Management Strategies								
Collaborate with other entities to leverage funding and resources	Х	X	x	х	Х	Х	Х	Х

CURRENT RESOURCE MANAGEMENT DOCUMENTS

Following is an initial list of resource management documents and a summary of particular elements that relate to, are consistent with, or may have influence on the Corridor. The list is not inclusive. It is meant to represent the type of documents management agencies should reference when planning Corridor projects.

WASHOE COUNTY GENERAL PLAN VOL. 1

The Master Plan is used to determine the most desirable location of each type of development. The plan includes policies and maps that define development suitability and conservation of natural resources(e.g. protect critical environmental areas, define water resources, enhance visual and scenic corridors, etc.). It also includes growth forecasts as well as policies and maps reflecting desires related to land uses and transportation. Finally, the Master Plan has standards and maps to guide provision of public services and facilities. The public services and facilities are implemented through the Capital Improvements Program. The plan addresses the following areas:

- Conservation and Open Space
- Housing
- Land Use and Transportation
- Open Space and Natural Resource Management
- Population
- Public Services and Facilities

WASHOE COUNTY GENERAL PLAN – TAHOE AREA PLAN

The *Tahoe Area Plan* acts as a guide for the Board of County Commissioners, the Washoe County Planning Commission, TRPA and the community on matters of growth and development within the Tahoe planning area.

Specific issues described in the Conservation section include the following:

- Potential for severe wildfires
- Development on steep slopes
- Development in riparian areas

The discussion of scenic areas includes the following:

- The Tahoe Meadows area lies in the northern portion of the planning area and is dissected by SR 431. The meadow and the ridges overlooking Lake Tahoe are an undeveloped scenic area that is easily accessible to the public. It should be preserved in its natural state because of its great scenic and recreational value.
- SR 431, as it winds its way down into the Tahoe Basin, offers spectacular views of the lake and the surrounding mountains. Views from this highway should be protected and enhanced whenever possible. Future development in this area should be designed with the intent of preserving the views. The overall scenic quality of the Tahoe planning area should be recognized and preserved to the greatest extent possible. The attainment and maintenance of Tahoe Regional Planning Agency (TRPA) scenic quality thresholds is encouraged.

Some of the items discussed in the Public Services and Facilities section include:

- Funding, maintaining and expanding the bike path system
- Enhancing parks and recreation opportunities

Transportation improvements described for the Mount Rose Highway includes the following:

- The planned use of numerous and frequent shuttle buses is an important factor for the future.
- Improvements to the Mount Rose Highway should include additional turnouts, roadside parking and turning lanes in the Incline Village area.

WASHOE COUNTY GENERAL PLAN - FOREST AREA PLAN

The *Forest Area Plan* responds to a citizen-based desire to identify, implement and preserve the community character that has evolved throughout the Forest Planning Area over time. Through cooperation with the Washoe County Board of County Commissioners and the Washoe County Planning Commission, the communities of the Forest Planning Area will maintain and apply objective standards and criteria that serve to manage growth and development in a manner that:

- Respects the heritage of the area by encouraging architectural and site design standards that are responsive to this heritage;
- Prevents the spread of commercial development outside existing nodes west of the intersection of Thomas Creek Parkway and SR 431;
- Respects private property rights;
- Provides a range of housing opportunities;
- Maintains the scenic quality of the SR 431 Corridor;
- Provides ample open space and recreational opportunities;
- Promotes the educational and scientific opportunities inherent in the area's natural history and rural character;
- Addresses the conservation of natural, scenic and cultural resources;
- Ensures that infrastructure is coincident with development and appropriate in scale and character to the community character articulated below; and,
- Coordinates resource availability with the construction of infrastructure through the implementation of facilities and resources plans.

The primary vision of this plan is to maintain, preserve, and facilitate the planning area's desired character. Management guidelines and policies for private, commercial, residential and public lands will be implemented in a fashion that respects the rights of wildlife, residents, land owners and business owners; herein identified as the major stakeholders in this essential planning document.

Though most existing development can be characterized as suburban with a rural complexion, there remain vast amounts of undeveloped or developed areas that are more truly rural in nature. The suburban, rural, and resort areas come together to create a planning area characterized by spectacular mountain vistas, abundant wildlife and a prevalent feeling of openness.

The vision is to continue the direction of the original Forest Area Plan by preserving, protecting and enhancing the scenic Mount Rose area for those who live here, those who recreate here and those who visit here. By preserving the area for all to enjoy, the regional assets of the gateway to Lake Tahoe and the Sierra Nevada Mountains will be protected. The plan seeks to preserve the region's high quality of life, a primary reason that people choose to live and work in the Truckee Meadows, and invest in its cities and county.

Goals that are specifically relevant to the scenic byway include the following:

• Goal 3: Manage the location, intensity and mix of uses for Commercial Regulatory Zones in a manner that implements the goals and policies of the Washoe County Land Use and Transportation Element and ensures the scenic quality, traffic safety, and gateway character of the planning area is preserved and improved.

Relevant Policies

- F.3.1 The Forest Area Plan update provides for limited new commercial opportunities adjacent to SR 431. Future creation of new commercial areas adjacent to SR 431 by rezoning to a Commercial Regulatory Zone or by granting of special use permits is not consistent with the desired character of the community.
- F.3.3 In order to recognize the important gateway function of the Forest Planning Area, the Mount Rose Scenic Highway Commercial Overlay District (MRSHCOD) is established. All property within or adjacent to the Mount Rose Scenic Corridor and designated with a Commercial Land Use regulatory zone must be within this overlay district. All development activities within this overlay district are subject to the following additional policies.



- F.3.4 The intent of the MRSHCOD is to ensure that commercial development in and adjacent to the Mount Rose Scenic Highway will:
 - Contribute to the community character, promote neighborhood and create a sense of place founded in the quality of life that comes with environmental and community responsibility.
 - Be compatible with and enhance the scenic quality of the Mt. Rose Highway corridor.
 - Enhance the safety of SR 431.
 - Ensure that architectural styles enhance and contribute to the gateway function of the site and function to present a unified, integrated appearance.
- Goal 5: The regional and local transportation system in the Forest planning area will be a safe, efficient, multi-modal system providing access to commercial services, public lands and recreational opportunities and efficient connections to the greater region.
- Goal 6: Resources key to the preservation and implementation of the character described in the Character Statements will be protected and where possible, enhanced.
- Goal 7: Maintain open vistas and minimize the visual impact of hillside development in a manner that implements the community character described above.
- Goal 8: Maintain and enhance the scenic value of the SR 431 Corridor.

Relevant Policies

- F.8.1 The SR 431 Corridor through the planning area is designated a Scenic Corridor as depicted on the Forest Character Management Plan map.
- The intent of the Scenic Corridor is to:
 - a. Promote the preservation and enhancement of the scenic nature of the Corridor.
 - b. Limit and manage the establishment of uses incompatible with the scenic nature of the Corridor.
 - c. Ensure that development within the corridor does not diminish the distant vistas available along the Corridor.
 - d. Ensure that development within the corridor enhances the near vistas available along the Corridor and does not create a tunnel effect.
 - e. Promote the Corridor as a community and regional asset.
- F.8.2 Washoe County will adopt further standards to enhance and maintain the value of the Corridor as a scenic area. At a minimum, these standards will address landscaping, building height and setback, lighting and signage. The standards will limit the establishment of new commercial land uses, including those established by special use permit, on SR 431 between the intersections of Thomas Creek Parkway and Timberline Drive. Further standards will address the use of interpretive displays for travelers along the roadway. Signage may be lighted, but not in such a way that it impacts the dark sky goals of the County.
- Bright internal lighting, neon lighting, or signs that move are discouraged.
- F.8.3 Enhance the visitor and resident experience, Washoe County will encourage recreational facilities such as trails, trailheads and scenic view points.
- F.8.4 Washoe County will encourage visitor information promoting the Mount Rose Scenic Corridor as the gateway to Lake Tahoe and information on Lake Tahoe's tourist amenities.
- Goal 9: Public and private development will respect the value of cultural and historic resources in the community.
- Goal 10: The Forest Planning Area will contain an extensive system of trails that integrates other recreational facilities; the Regional Trail System, including the urban core of Reno and Sparks, public lands, schools and transit facilities; and contributes to the preservation and implementation of the community character.
- Goal 14: Public and private development will respect the value of wildlife and wildlife habitat to the community.

WASHOE COUNTY GENERAL PLAN - SOUTHWEST TRUCKEE MEADOWS AREA PLAN

The *Southwest Truckee Meadows Area Plan* responds to a citizen-based desire to identify, implement and preserve the community character that has evolved throughout the Southwest Truckee Meadows over time. It presents goals and strategies to achieve the following vision:

Through cooperation with the Washoe County Board of County Commissioners and the Washoe County Planning Commission, the South Valleys community will maintain and apply objective standards and criteria that serve to manage growth and development in South Valleys in a manner that:

- Respects the heritage of the area by encouraging architectural and site design standards that are responsive to this heritage;
- Prevents the spread of commercial development west of the Thomas Creek Parkway and SR 431 intersection;
- Respects private property rights;
- Provides a range of housing opportunities;
- Maintains the scenic quality of the SR 431 Corridor;
- Provides ample open space and recreational opportunities;
- Promotes the educational and scientific opportunities inherent in the area's natural history and rural character;
- Addresses the conservation of natural, scenic and cultural resources;
- Ensures that infrastructure is coincident with development and appropriate in scale and character to the community character articulated below; and,
- Coordinates resource availability with the construction of infrastructure through the implementation of facilities and resources plans.

Specific goals and policies describing the Corridor include the following:

- Goal 3: The regional and local transportation system in the Southwest Truckee Meadows planning area will be a safe, efficient, multi-modal system providing access to commercial services, public lands and recreational opportunities, as well as efficient connections to the greater region.
- Goal 5: Maintain open vistas and minimize the visual impact of hillside development in a manner that implements the community character described above.
- Goal 6: Maintain and enhance the scenic value of the SR 431 Corridor.

Relevant Policies

- SW.6.1 The SR 431 Corridor through the planning area is designated a Scenic Corridor.
- SW.6.2 Development Standards along the Corridor will be consistent with the implementation of the corridor study as described in policy SW.3.7.
- SW.6.3 Washoe County will adopt further standards to enhance and maintain the value of the Corridor as a scenic area. At a minimum, these standards will prohibit the establishment of new commercial land uses west of the intersection of SR 431 and Thomas Creek Parkway.
- Goal 7: Public and private development will respect the value of cultural and historic resources in the community.
- Goal 8: The Southwest Truckee Meadows planning area will contain an extensive system of trails that integrates other recreational facilities, the Regional Trail System, public lands, schools and transit facilities. This trail system will contribute to the preservation and implementation of the community character.
- Goal 9: Cooperate with state and federal agencies in the management of public lands in the planning area.
- Goal 11: The built environment will minimize the destructive potential of any identified natural hazard, including but not limited to wildland fire, earthquakes and land slides.
- Goal 12: Public and private development will respect the value of wildlife and wildlife habitat to the community.



WASHOE COUNTY REGIONAL OPEN SPACE AND NATURAL RESOURCE MANAGEMENT PLAN

The Washoe County Regional Open Space and Natural Resource Plan provides the framework, goals and policies for the management of natural resources and open spaces in southern Washoe County. The plan strives to protect the region's natural resources and open space through a series of goals and policies that address the following concerns:

- Biodiversity
- Cultural Resources
- Natural Hazards
- Recreational Resources
- Visual and Scenic Character
- Water Resources

Biodiversity

- Goal 1: Protect and re-establish migration corridors.
- Goal 2: Acquire and restore critical vegetation communities.
- Goal 3: Achieve species restoration goals through cooperative efforts.

Cultural Resources and Sensitive Landscapes

- Goal 1: Ensure that culturally and environmentally sensitive lands are adequately buffered from development.
- Goal 2: Protect and manage cultural resources within the region's urban, rural and urban interface areas.
- Goal 3: Teach citizens about the history, legacy and uniqueness of the region's cultural and sensitive resources.
- Goal 4: Native American tribes will have access to areas used for cultural purposes.
- Goal 5: Secure public funding for acquisition and protection of culturally sensitive lands.
- Goal 4: Control invasive non-native species in the region.
- Goal 5: Protect important habitats from impacts or loss due to development.

Natural Hazards

- Goal 1: Emphasize fire suppression through the use of defensible space and native habitat restoration.
- Goal 2: Achieve an awareness of the private responsibility for fuels management.
- Goal 3: Develop, fund and carry out a region-wide fuels management program.
- Goal 4: Integrate regional open space and natural resource management with flood management where appropriate.
- Goal 5: Maintain excellent air quality in the region.
- Goal 6: Wildlife conflicts will be minimized within transportation corridor and in the urban interface.

Recreational Resources

- Goal 1: Sustain effective and ongoing interagency and interjurisdictional working relationships to address the planning, development, operations and maintenance of regional recreational resources and foster an integrated approach to resource management.
- Goal 2: Leverage existing infrastructure opportunities for regional trail corridors and connections.
- Goal 3: Preserve valuable properties and make strategic acquisitions.
- Goal 4: Create a major regional trail corridor system.
- Goal 5: Provide appropriate opportunities and facilities for motorized recreation.
- Goal 6: Minimize resource pressures posed by development near open space areas.
- Goal 7: Promote the use and support of the region's park and recreation facilities and services.

Visual and Scenic Character

- Goal 1: Protect the region's visual and scenic resources.
- Goal 2: Preserve and protect the visual integrity of our region's hillsides, ridges and hilltops.
- Goal 3: Preserve the remaining integrity of our region's dark night sky.

- Goal 4: Protect the region's visual resources from impacts of illegal activities (such as dumping, abandoned vehicles and illegal trail creation).
- Goal 5: Educate the public on the values of the region's scenic resources.

Water Resources

- Goal 1: Preserve and acquire water rights to support healthy fish and wildlife populations.
- Goal 2: Provide sufficient water resources to support natural functions of open space.
- Goal 3: Integrate open space acquisition with water resource management where feasible.

Sustainability and Ecosystem Services

- Goal 1: Institutionalize the concept of ecosystem services within the region.
- Goal 2: Manage open space and natural resources for "no net loss."
- Goal 3: Ensure future open space and natural resource land acquisitions meet as many goals and policies as possible from this Plan.

NDOT US 395, WEST US 50, SR 28, SR 207 AND SR 431 CORRIDOR LANDSCAPE AND CORRIDOR PLAN

The *NDOT Landscape and Corridor Plan* establishes the vision for the landscape and aesthetics of the U.S. 395, West US 50, SR 28, SR 207 and SR 431 Corridor. The vision synthesizes historic, current, and future conditions into a comprehensive guide to improve the visual appearance of the highway corridors through communities, rural landscapes and scenic environments. It describes landscape treatment types applicable for the area and establishes a set of guidelines for highway facilities.

2035 REGIONAL TRANSPORTATION PLAN - REGIONAL TRANSPORTATION COMMISSION WASHOE

The 2035 Regional Transportation Plan (RTP) identifies the long-term transportation investments that will be made in the urbanized area of Reno, Sparks and Washoe County, Nevada. The plan includes transportation projects, programs and services for walking, biking, driving and riding transit. In addition, the plan provides for maintaining existing infrastructure in good condition and improving the operation of existing services.

The goals of the RTP, which are discussed further in each chapter of the plan, include the following:

- Improve safety
- Integrate land use and economic development
- Promote healthy communities and sustainability
- Manage existing systems efficiently
- Integrate all types of transportation
- Focus on regional connectivity
- Promote equity and environmental justice
- Improve freight and goods movement
- Invest strategically

Programmatic Investments

In support of these guiding principles and goals, the RTP includes four programmatic investments that will be ongoing throughout the life of the plan. These investments, as described below, received consistently strong support at all community outreach events.

 Accessibility improvements under the Americans with Disabilities Act (ADA) — Ongoing implementation of the ADA Transition Plan is a priority for the RTC. With the segment of the population over 75 years old being the fastest growing demographic in the region, the importance of accessible pedestrian facilities will continue to grow. Annual funding will be programmed for spot improvements throughout the region to upgrade sidewalks, crosswalks and curb ramps. The project needs were identified through an extensive data collection effort and prioritized based on proximity to transit routes, medical services and senior facilities.



- Pedestrian and bicycle facility improvements —Ongoing implementation of the Reno-Sparks Bicycle Pedestrian Master Plan will be funded throughout the RTP planning horizon. These spot improvements will enhance the safety and regional connectivity of the pedestrian and bicycle network.
- Traffic Signals and Intelligent Transportation Systems (ITS) Operations Technology and traffic operations strategies promote faster travel times on the existing roadway network. Investments in ITS have proven to be a cost-effective alternative to adding road capacity. The plan identifies annual funding to upgrade traffic signals and associated communications technologies.
- Pavement Preservation Maintaining roads and bridges in good condition and extending the useful life of
 pavement on regional roads is a proven way to minimize long-term costs. The RTP identifies annual funding to
 apply the appropriate pavement preservation treatment to regional roads and bridge decks, which can include
 surface seals, crack seals, patching, resurfacing or reconstruction. RTC partners with the NDOT Highway
 Bridge Program to provide funding to replace or rehabilitate substandard bridges.

TAHOE METROPOLITAN PLANNING ORGANIZATION (TMPO) REGIONAL TRANSPORTATION PLAN (RTP): MOBILITY 2035

The *Regional Transportation Plan* (RTP) is the transportation element of the Lake Tahoe Regional Plan and provides a blueprint for a regional transportation system and guides transportation improvements. It includes objectives for reducing reliance on the private automobile and investing in multi-modal facilities and emphasizes coordinating projects and funding to transform Corridors into complete streets.

It identifies the following Corridor projects:

- Bike lane from Incline Village to the Mount Rose Highway summit
- Separated bike path from North/Incline Flume Trail to the Mount Rose Highway summit
- Inter-regional transit service from Reno to North Lake Tahoe communities
- Parking management strategies

TRPA REGIONAL PLAN

Provides an update to the *1987 Regional Plan* with a focus on restoration of sensitive lands and environmental improvement projects to repair past damage and promote community through goals and policies, codes and ordinances, land use and area plans.

Key Related Elements:

- Emphasizes implementation of Environmental Improvement Program to achieve erosion control on roadways and restore forests and wetlands.
- Prioritizes increasing alternative transportation options.
- Integrates with the RTP to support sidewalk and bike trail projects.
- Creates coverage exemptions for bike trails.

Key Related Goals & Policies

- Provide public access to scenic views.
- Coordinate a multi-agency effort to prioritize and fund water quality improvement projects through the Environmental Improvement Program.
- Promote transportation enhancements that increase the viability of transit systems.
- Construct, upgrade, and maintain pedestrian and bicycle facilities.
- Implement new technology to increase the efficiency and effectiveness of the transportation network and promote usage of alternative transportation.
- Strengthen transportation options into and out of the Lake Tahoe region.
- Encourage the development of parking management strategies. Encourage programs that provide incentives to fund improvements benefiting transit users, pedestrians and bicyclists. Encourage strategies tailored to the needs of each specific location and promote pedestrian and transit use.
- Incorporate transit stops and bicycle and pedestrian facilities in roadway improvement projects.
- Use transportation system management measures to improve the existing transportation system.
- Preserve existing viewpoint turnouts along scenic highways to maintain traffic flow and safety.

- Integrate transportation improvement programs into the environmental improvement program.
- Engage in collaborative and cooperative planning efforts leveraging resources and executing transportation improvements.
- Scenic viewpoints from roadways should be identified and pull-off facilities provided on public property, wherever desirable.
- Signs should be placed along the roadways, as appropriate, to identify photo sites and scenic turnouts.
- Time limits for parking at roadside turnouts should be established.
- Bike trails should be expanded to provide an alternative for travel in conjunction with transportation systems.
- Parking along scenic corridors shall be restricted to protect roadway views and roadside vegetation.

TMPO LAKE TAHOE BICYCLE AND PEDESTRIAN PLAN WITH DECEMBER 2014 TECHNICAL AMENDMENT

It presents a guide for planning, constructing and maintaining a regional bicycle and pedestrian network and support facilities and programs. The document includes prioritized project lists for the bicycle and pedestrian network and lays out policies for local governing bodies and transportation agencies. It identifies potential funding sources and specifies preferred designs to encourage consistency and safety. An update of the 2010 plan is underway as of September 2015.

Key Goals:

- Complete a bicycle and pedestrian network that provides convenient access to Region destinations and destinations outside the Region.
- Provide environmental, economic, and social benefits to the Region through increased bicycling and walking.
- Identifies the following as proposed Corridor facilities:
 - Bike lane/widened shoulder from SR 431/SR 28 intersection to Mount Rose Highway summit
 - Shared-use path improvements along a portion of SR 431

TRPA ENVIRONMENTAL THRESHOLDS

The threshold evaluation is completed every five years to measure carrying capacity targets to be achieved set forth by the Lake Tahoe Regional Plan. The nine thresholds studied are: water quality, air quality, scenic resources, soil conservation, fish habitat, vegetation, wildlife habitat, noise, and recreation.

Monitoring and surveys completed as part of the Threshold Report may be used to support monitoring efforts of the Corridor to achieve the goals.

TRPA ENVIRONMENTAL IMPROVEMENT PROGRAM

The program identifies projects designed to achieve and maintain environmental thresholds. Corridor projects included in the list as of September 2015:

- Scenic corridor viewpoint turnouts
- Interpretive and educational programs/signage
- Hazardous fuels reduction and healthy forest restoration
- Basinwide transit operations
- Inter-regional transit service operational enhancements and capital enhancements
- Washoe County Master Plan bike/ped improvements

TRPA REGIONAL RECREATION PLAN

The plan balances the demands for utilization and preservation of the region's resources and provides a sustainable vision for personnel and budget for resource planning, management and maintenance. It provides existing recreational facility analysis, considerations, proposed opportunity and constraints, and recommendations in defined planning areas including Mt. Rose Wilderness and Incline Village.



USFS DRAFT FOREST PLAN AND EIS 2012

The plan revises the *1988 Land and Resource Management Plan* (Forest Plan) of 154,000 Acres of National Forest Service land over 15 years.

Relevant Program Strategies, Objectives and Guidelines:

- Reduce roadside parking in areas of high density use and provide for managed parking. Prioritize transit or alternatives to the private automobile where parking capacity is reduced.
- Install barriers and/or signs to prevent roadside parking wherever necessary to protect the public and natural resources.
- Consider developed site design capacity and management capabilities when evaluating access.
- Engage potential public/private partners to identify need and locations for joint visitor information facilities and services at major Lake Tahoe Basin entry points for the life of the plan.
- Provide visitor information facilities and services at major entry points and areas of concentrated use using public/private partnership. Assist in orienting visitors to an area's special features, recreation opportunities, regulations and services. Develop messages to forge emotional and intellectual connections between the interests of visitors and the meanings inherent in the resource.
- Nominate for listing to the National Register of Historic Places the Comstock Historic Logging District, Angora Lookout, Cave Rock, Hawley Grade, Camp Richardson Resort, Meiss Cabin and Barn, and Skunk Harbor on the National Register of Historic Places during the Plan period.
- Maintain and enhance public access opportunities to USFS lands.
- Create outstanding recreation opportunities through innovative sustainable facility design.
- Modify developed recreation facilities where appropriate to meet changing user demands.
- Improve recreation activity on public lands by retrofitting existing recreation sites, converting existing sites to compatible uses, or expanding recreation sites or permit boundaries.
- Improve circulation and reduce congestion through capital investments.
- Complete LTBMU National Visitor Use Monitoring every five years and review for trends and visitor satisfaction.
- Wilderness lands should have very high scenic integrity. They provide outstanding opportunities for solitude or a primitive an unconfined type of recreation.

USFS MULTI-JURISDICTIONAL FUEL REDUCTION AND WILDFIRE PREVENTION STRATEGY, 2007

The plan includes strategic decisions that must be made by land management, fire and regulatory agencies to reduce the probability of a catastrophic fire event. Suggested treatments for 208,800 acres of forested land in the Lake Tahoe Basin including fuel reduction treatments, defensible interfaces, cost and schedules, potential, and risks.

The document is listed to reinforce importance of collaboration and coordination. Treatments within the Corridor should be coordinated to understand impacts to and potential opportunities for recreation access and facilities.

WASHOE COUNTY WILDFIRE RISK/HAZARD ASSESSMENT PROJECT 2005 (WASHOE COUNTY FIRE PLAN)

The report was prepared specifically for the communities within Washoe County that were identified in the 2001 Federal Register list of communities at risk within the vicinity of federal lands that are most vulnerable to the threat of wildfire. It lists the general risk/hazard assessment results for each community and describes recommendations to be made at the community level, by Washoe County, NDOT, USFS and other management entities.