

# MAKING SAFE & HEALTHY COMMUNITY CONNECTIONS IN ROUND VALLEY



Walk/Bike Path and Community  
Revitalization Strategy

**A Report to The Round Valley Indian Tribes  
& The Round Valley Indian Health Center**

February 1, 2010



Alta Planning + Design  
Berkeley, California



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Berkeley, California



Local Government Commission  
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**Local  
Government  
Commission**



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*Funding for this project provided by a Caltrans Environmental Justice: Context Sensitive Planning Grant.*

## Table of Contents

Introduction	1
The Charrette Process	
Project Area & The Community	
Background	5
Primary Challenges	
Guiding Principles for Revitalization	
Design Proposals	7
The Big Picture	
Trails	
School Center Projects	
Downtown Projects	
Tribal Areas	
Implementation Strategies	36
Trail Implementation Strategies	
Other Implementation Strategies	
Appendix	49
Charrette Participants	
Focus Group Meeting Notes	

## Introduction

This report summarizes the results of a charrette held in Round Valley, California. A charrette is a series of interactive public events that spans several days or more and culminates in a vision or design. The Round Valley charrette was conducted August 21-26, 2008 to produce a conceptual plan for safely linking key community locations via pedestrian and bicycle connections, and for creating a town center plan for the unincorporated community of Covelo, located in the center of Round Valley.

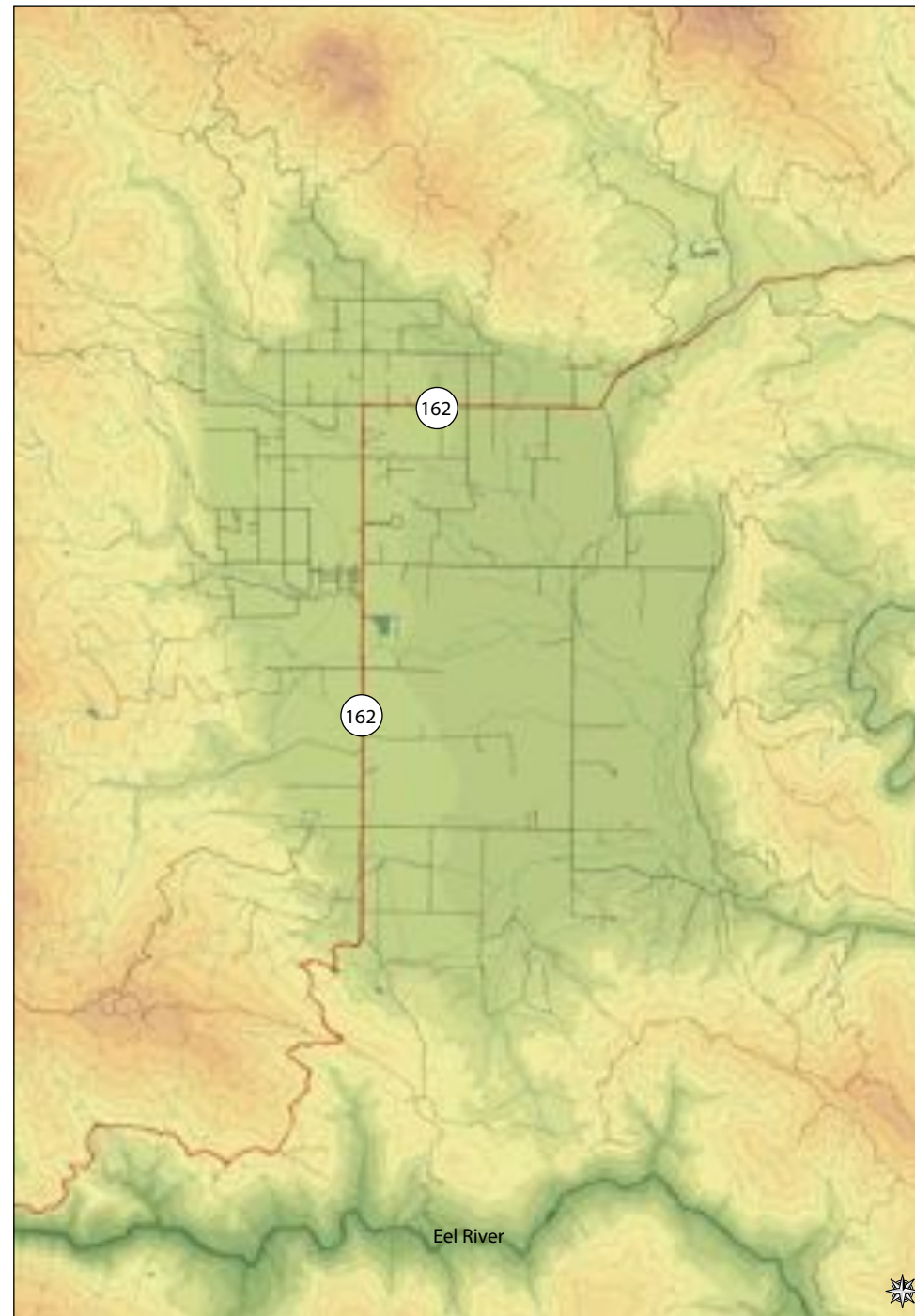
The study area includes the Round Valley Indian Tribes Reservation, the second largest Indian Reservation in California with approximately 2,800 tribal members currently living in the area. The Tribes include descendants of a number of nations, including the Yuki, Concow, Maidu, Little Lake, Pomo, Nomlaki, Cahto, Wailaki, Pit River and Lassik people. The Valley also includes unincorporated land under the jurisdiction of Mendocino County and State Highway 162 under the jurisdiction of Caltrans. Altogether, Round Valley has a population of approximately 4,000 on 44 square miles.

The project, "Round Valley Tribes Walk/Bike Paths and Library/Town Center Planning Project," strives to engage and bring together the Indian and non-Indian stakeholders of Round Valley in a visioning process that highlights community voices around safe and healthy transportation and land-use. The project is funded by an Environmental Justice: Context Sensitive Planning grant from the California Department of Transportation. Lead partners include the Round Valley Indian Health Center, Friends of the Round Valley Library, the Local Government Commission, Opticos Design, Inc, and Alta Planning + Design.

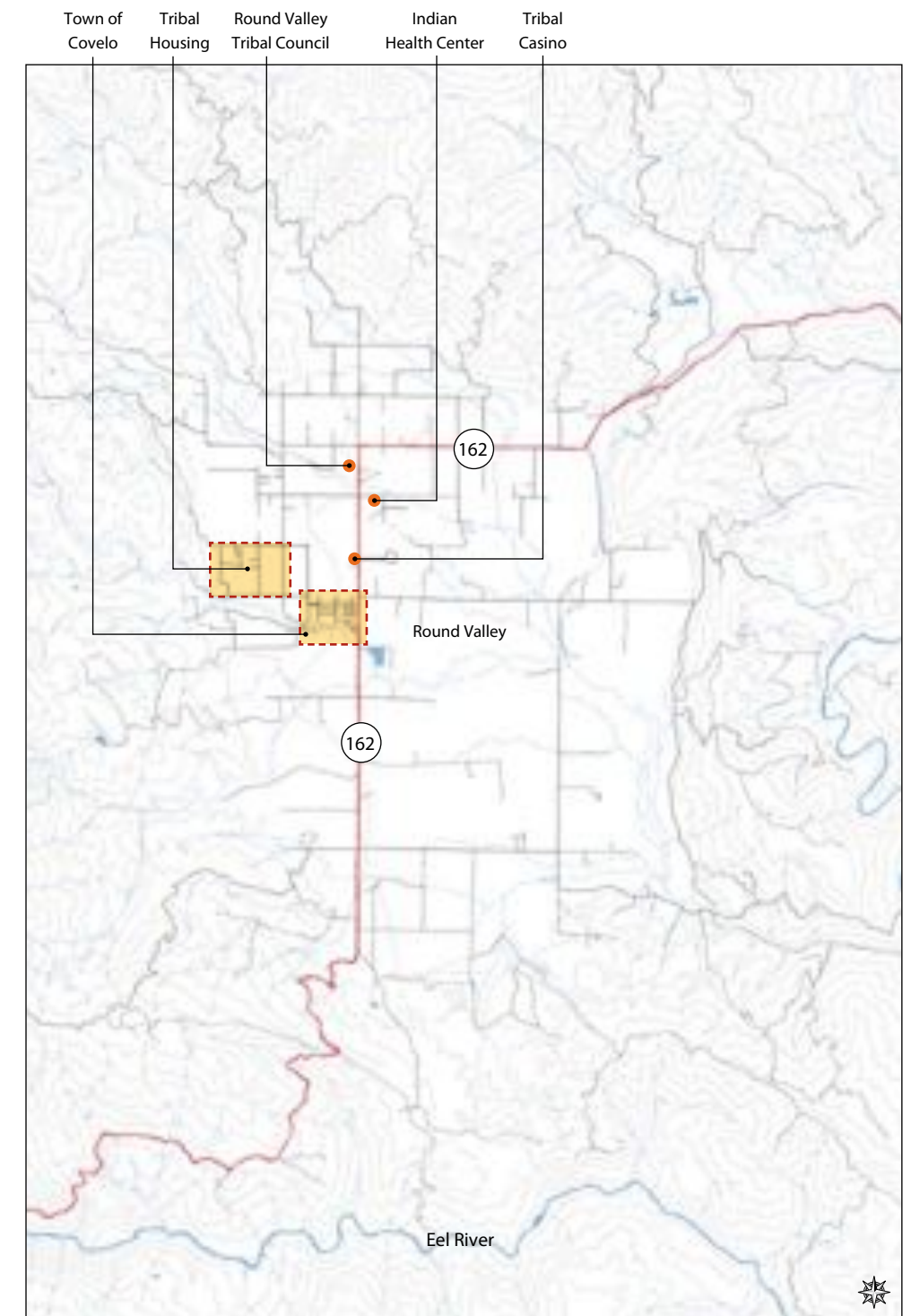
### The Role of Public Health

This project is relatively unique in that public health leaders at the Round Valley Indian Health Center took a primary role to ensure that this planning process was initiated, engaged the community successfully, and addressed key health and safety concerns. Considering the significant health issues facing the community and the growing evidence of a link between the built environment and health, this project is an important part of a movement to incorporate health in the planning process. The community realizes that not only will safe paths for bicycles and pedestrians improve transportation options, but they can also serve as a way to encourage area residents to engage in regular physical activity and improve health and longevity outcomes.

Support is building across the United States for a public health role in the planning process. The professional associations for planners (APA) and physicians (AMA) have both endorsed and encouraged communities to ensure that public health is at the planning table. Public health issues, such as obesity and other chronic diseases that relate to inactivity and poor diet, provide a different perspective on the design of a community. Public health can also bring unique community engagement and education skills to the discussion, and the value they are able to add to a public process should encourage all involved to consider what other agencies and departments may also have to offer in regards to collaboration on community plans and visions.



*Above: View of the Round Valley topography that defines the edges of the Valley.*



*Above: View of the Street network of Round Valley.*

### The Charrette Process

In coordination with Round Valley Indian Health Center staff and other community partners, the Local Government Commission organized a public design charrette process to produce conceptual plans for the community. The process included a multi-day series of meetings, presentations, and workshops that engaged key stakeholders including residents, property owners, and community organizations. The activities were designed to elicit their concerns and suggestions, provide information about possible solutions, and foster collaborative development of a community vision. The community-led outreach effort utilized leaders from the Valley and featured bi-lingual materials.

The formal charrette process began with an opening event at which over 150 community members attended. It featured a cultural celebration with healthy food and tribal dance and music. The event served as an orientation to the charrette process and participants were asked to share, discuss and vote on key values and community priorities.

The top community values identified were:

- Community/Friends/Family
- Peace/Love/Harmony
- Nature
- Clean/Pollution Free
- Sustainable/Organic
- Safety/Security

The top community priorities identified (and the number of votes they received) were:

- 1) Trails, Paths, Trail loop (22)
- 2) Paved Shoulders (15)
- 3) Plazas/Parks (13)
- 4) Public Art/Indigenous Art (9)
- 4) Water Features/Fountains (9)
- 5) Skate Park (7)
- 5) Restrooms (7)
- 5) Fruit Trees (7)
- 6) Traffic Issues/Speeding (6)
- 6) Recycling/Trash Bins (6)
- 6) Downtown Lighting (6)



**Top Left:** Community members dance and play music at the opening meeting. **Top Right:** Community members vote with dots on community priorities. **Below:** Meeting with emergency service providers to review issues in Round Valley.

**Top:** Community members post community values on wall. **Middle:** Tribal festivities before the opening presentation. **Below Left:** Local musicians play for the crowd before the opening meeting. **Below Right:** Elementary students present drawings on how they traveled to school.

During the first two days of the charrette, focus group meetings were held involving health and emergency service providers, local community leaders, and property owners, school children, and transportation and planning staff. Additional meetings were held throughout the charrette week to gain insight from local stakeholders who were not able to attend the public workshops.

The next community-wide event was a Saturday workshop with over 40 participants that featured a “walk audit” of the community, training on trail and community design, and provided participants with an opportunity to put their vision on maps during interactive design table discussions. The design team then spent three days of work developing the plans while continuing to seek input from stakeholders. The formal process ended with a community presentation of the conceptual plans where feedback was sought and recorded from a diverse group of 40 participants. The closing also served as a celebration of the community’s hard work during the process with drumming, food, and good discussion.



**Above:** Round Valley Indian Health Center. Special thanks for hosting the design team during the week.



**Above:** Community residents participate in the walking audit along Howard Street. **Middle and Below:** Residents discussed key problem areas, as well as their individual visions, during walking audit.



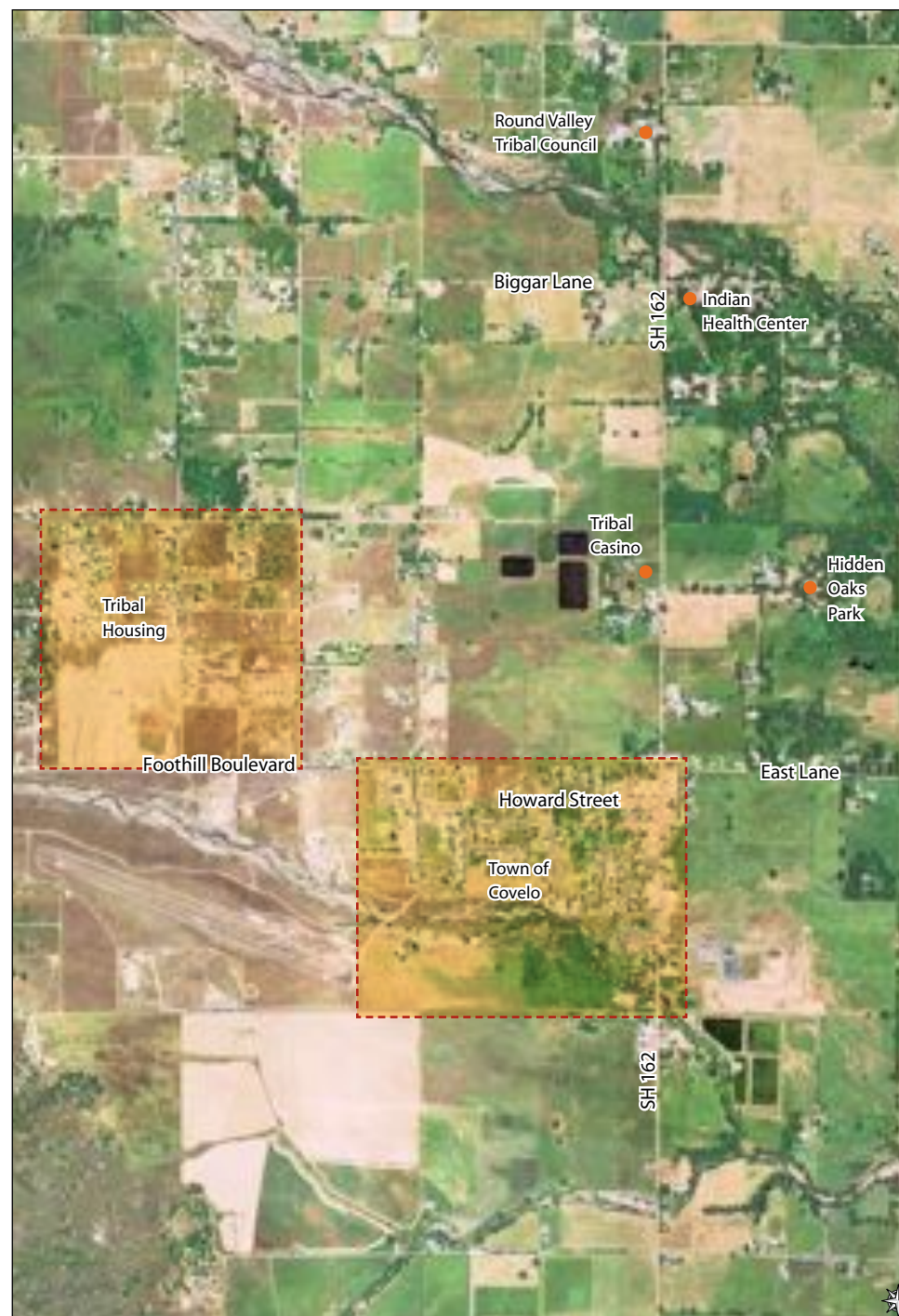
**Above:** Community members work with table maps to formulate their vision for Round Valley. **Below Left:** Community member presents the design recommendations from his table. **Below Right:** Resident details his design vision on a table map.

**Project Area and The Community**

This report is not able to do justice to the rich history of Round Valley, but it is important to note that its people have faced and overcome many challenges. When the Round Valley Indian Reservation was formed in 1856 (then called the Nome Cult Farm), the Yuki people of the Valley were made to share their home with forcibly relocated tribes with distinct cultures, some of whom were considered enemies, as well as deal with settlers and soldiers who had no respect for or were often hostile towards Native Americans. There was much conflict and bloodshed, but the Tribes survived and emerged as a unified community made up of a rich mix of cultures with a common reservation experience and history. Over time, the relationship between the Tribes and the non-Indian community in Round Valley has vastly improved, and today the community as a whole is diverse with a strong interest in self-sufficiency and collaboration.

The Round Valley Indian Tribes are led by a Tribal Council, which is supported by Tribal committees and authorities that deal with specific issues such as health, law enforcement, and housing. A combination of reservation and county land, along with state roadways, means that there are a variety of jurisdictions involved in Valley-wide planning. Each jurisdiction has its own processes for planning and implementation, and collaborative efforts between state, regional, local and tribal governments are key for long-term success.

Round Valley is a remote location 28 miles east of Highway 101, along Highway 162, which traverses rugged country along the Eel River to reach the community. Highway 162 serves as the only paved link to the world beyond the Valley. The main roads that lead through the surrounding Mendocino National Forest or north into Trinity County are unpaved.



*Above:* Aerial map indicating the location of community assets.



*Top Left and Right:* Community members watching the festivities before the kick off meeting. *Middle Left:* Round Valley tribes at the kick off meeting. *Middle Right:* Blackberry festival grounds located adjacent to the historic flour mill. *Bottom:* Herd of cow in the rich agricultural pastures of Round Valley.



## Primary Challenges

### Unsafe Environment for Pedestrians and Bicyclists

The roads connecting the reservation and Covelo have relatively low volumes of motor vehicle traffic. Yet, it is dangerous to walk and bicycle between key community destinations because there are limited existing sidewalks, paths and shoulders to support safe pedestrian, wheelchair or bicycle travel. A major community concern is Highway 162, a high speed rural road with no shoulders that serves as the primary link between the Round Valley tribal offices and health clinic and Covelo. Also, there is a high level of concern about children and teens walking to the schools from Tribal Housing along roads with no pedestrian facilities or lighting. In Covelo, where the majority of local merchants are located, Highway 162 is wide enough to provide some shoulder space for pedestrians and bicycles. Some areas of Covelo have sidewalks, but there is a lack of connectivity between existing segments, and many are in disrepair.

The majority of the pedestrians consist of young people - children walking to school, young mothers with babies, teens in transit, as well as people carrying groceries from town, and occasionally people in wheelchairs. There is no public transportation available. There are a growing number of people using bicycles for transportation, due in part to a growing group of advocates educating and supporting cyclists of all ages. A significant number of residents are low income and lack personal transportation.

### Inadequate/Decaying Infrastructure

The town of Covelo has several buildings that are in a dilapidated condition, including the former Hotel Covelo along Highway 162. Many of these structures suffer from deferred maintenance, and may require significant investment for renovation.

### Limited Economic Opportunities

Round Valley has a high rate of unemployment (56% overall, but higher for the Indian community) and very few employment opportunities for local residents due in large part to the area having experienced the decline of the timber industry in the last decade. The Round Valley Unified School District (RVUSD), Round Valley Tribe and Round Valley Indian Health Clinic (RVIHC) are the primary employers in the area besides local merchants. The Round Valley ranching/farming community represents a small population in the area, but agricultural production is significant in terms of organic product produced in a sustainable manner.

Due in part to the isolation of the community and lack of economic diversity, more than 50% of area residents are living below the poverty level, compared to 14% for all of Mendocino County and 12% statewide. Mortality rates in Round Valley are unusually high. The U.S. average life expectancy for women is 79.9 years, but the average age of death for Round Valley native women is 68 years. For men the national average is 74.5 years, compared to 57 years for native men in Round Valley. Specific health problems in the community have been identified by data collected for clients of the Round Valley Indian Health Center. Health problems among local residents include diabetes, obesity, high blood pressure, and heart disease. It is well known that many of these health conditions can be prevented or treated with an increase in physical activity and access to healthy foods.



*Clockwise from Top Left: Design table map created by community members showing issues and ideas for the future of Round Valley; Bicyclist riding on State Highway 162 with no shoulder or trail to ride on; Community members walking and pushing a wheelchair on Foothill Boulevard due to the lack of sidewalks; Pedestrian and vehicle conflicts in front of the Round Valley Elementary School; General disrepair of buildings and infrastructure in Covelo.*

The many efforts to get job-producing businesses established in Round Valley have generally failed, mainly because of the distance to outside markets and the rising cost of gasoline and diesel. This same problem, however, becomes an advantage when it improves access to and competitiveness of locally produced goods, avoiding the added cost of transportation. This has sparked interest in a centrally located public place where a farmers market and other activities could occur, potentially tying to existing and future resources in Covelo, such as the Round Valley public library and the historic landmark Old Flour Mill with its surrounding festival grounds. The need to safely link such a gathering spot with other key community assets is of central importance to any planning effort in Round Valley.

### Guiding Principles

During the charrette the design team identified the following urban design principles to guide future design decisions in the community.

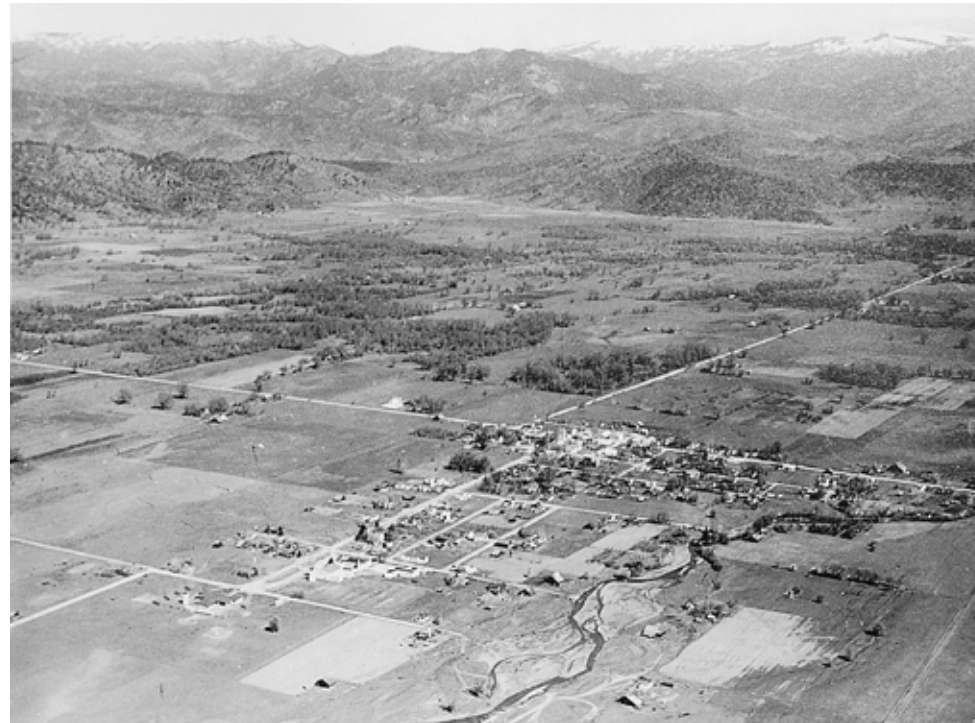
- 1. Maximize safe connections between key Community assets - including downtown Covelo, the School District, and the Tribal Casino for pedestrians and bicyclists, utilizing safely-designed streets, proper location of sidewalks, and implementation of a valley-wide trail system.**

Future improvements and new development should increase connectivity between the community's various assets. New community assets should be placed in locations proximate to existing assets in order to take advantage of the walkable nature of downtown Covelo.

- 2. Build upon the historic grid of the Town of Covelo to ensure good connectivity in the center of Round Valley.**

The Historic grid of Covelo has served the community well. The block and lot layout has allowed for a diverse range of lot sizes, buildings and uses. The Covelo grid has many houses on lots large enough to allow for lush gardens or workshops.

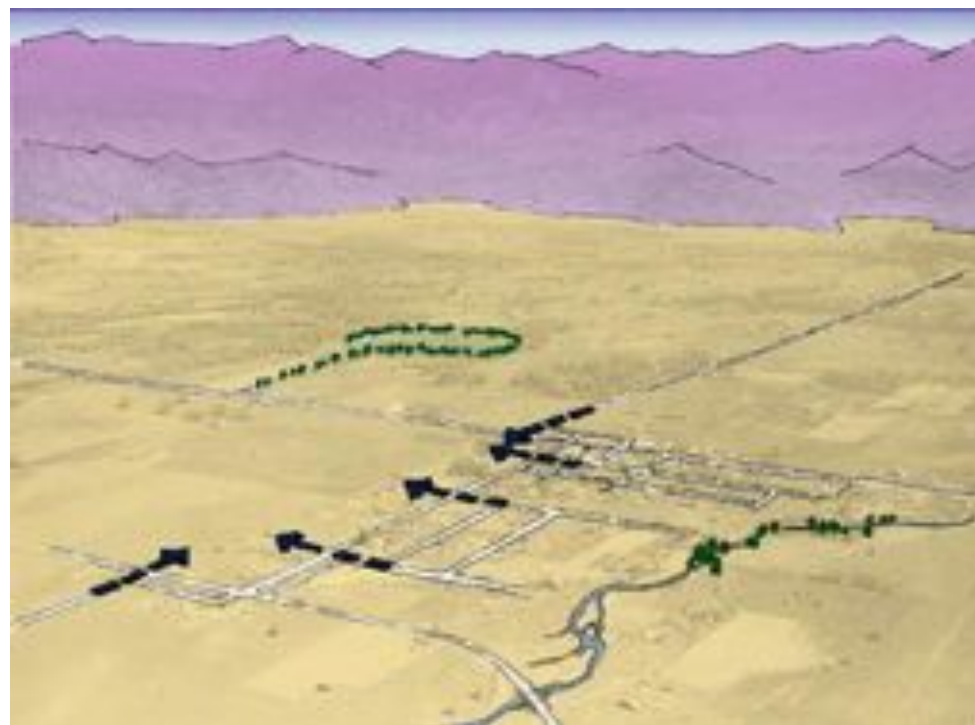
The interconnected grid of street provides many opportunities for pedestrian, bicycle and automotive connectivity. Future growth around the town should endeavour to extend the existing road network.



Historic aerial view of Covelo



Community assets with 5 minute walk radius shown: A. Schools B. Downtown Covelo C. Casino D. Tribal Health Clinic (not shown on map)



Future extensions of existing grid to create connections with future tribal housing and other community assets.



Trail network and open space

# The Big Picture

During the charrette, the design team explored a variety of ways that Round Valley could improve connectivity between key community assets, stimulate economic activity, and encourage healthy lifestyles. These improvements are organized in the following section by their location within the Valley in order to more easily define individual initiatives and aid in the prioritization of different projects that different groups may spearhead.

### School Center

A recent Safe Routes to School grant for the area surrounding the Round Valley High and Elementary schools has made it possible to implement improvements for pedestrians traveling to and from school.

### Downtown Covelo

Ongoing improvement projects such as the Library Commons provide a basis for additional recommendations to revitalizing the downtown, including the renovation of dilapidated historic structures and the encouragement of new economic activity through effective zoning and land use policy.

### Tribal Areas

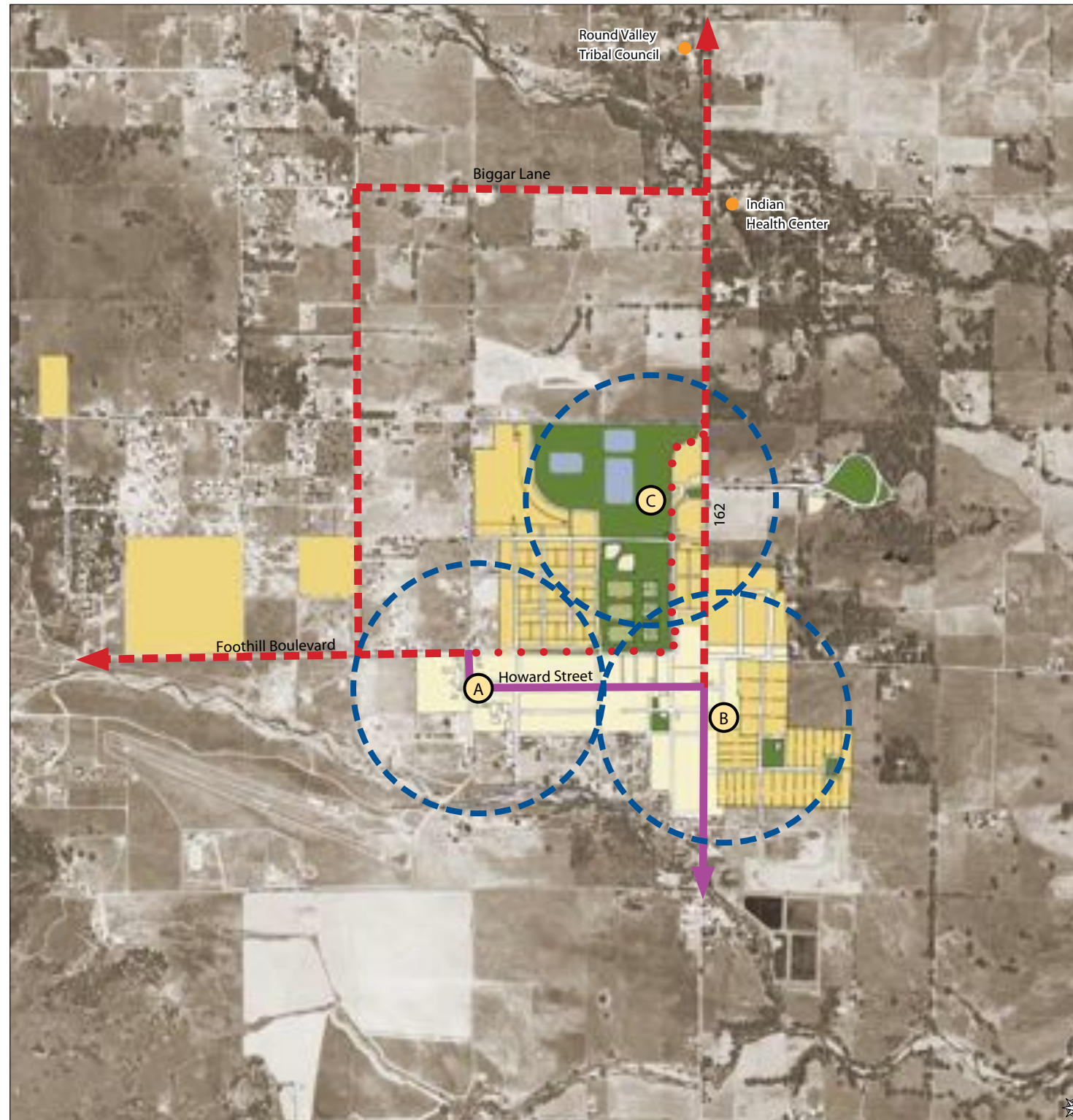
During the charrette the design team learned of the Round Valley Tribes' plans to expand development around the casino, including a hotel/motel, expanded recreational uses, and additional tribal housing. The design team formed some general recommendations to explore ways in which this potential development could maximize connectivity and pedestrian safety, as well as contribute to economic health and activity in the Valley.

### Other Key Locations

The Round Valley Tribal Administration Center and the Round Valley Indian Health Center are both located to the north of Covelo along Highway 162. Safe connections for pedestrians and bicyclists to these locations were identified as a high priority.

### Trails

With high pedestrian activity, a complete trail system within the Valley floor is seen as a way to connect all of these locations safely for pedestrians and bicyclists, and provide a basis for safe recreation and promotion of physical exercise/public health. As a high community priority, this section begins with a discussion of the trail.



### Nodes and Potential Projects

- Proposed Trails (off-street)
- Potential Future Trail Connections
- Proposed Street Improvements
- Other Key Locations
- (A)** School Center
  1. Intersection Improvements: Foothill Boulevard/Airport Road intersection and Howard Street /Airport Road intersection.
  2. Foothill Boulevard Improvements
  3. Foothill Boulevard Extension
- (B)** Downtown
  1. Farmer's Market
  2. Howard Street Improvements
  3. Greely Street Improvements
  4. Main Street Improvements
  5. State Route 162 Improvements
  6. State Route 162 Infill
  7. Small Farms Housing and Industrial Park
- (C)** Tourism/Recreation Center
  1. Casino Expansion
  2. Hidden Oaks Campgrounds
  3. Park & Recreation
  4. Tribal Housing

Map of project areas including existing downtown block and street network and proposed areas of improvement.

# Trails

## Trails & Future Connections

### Summary

During the August 2008 design charrette many of the residents of Round Valley identified trails as their highest priority community improvement. Many said that they do not feel safe walking and biking on most of the roads in Round Valley. In particular, Highway 162 was mentioned in regard to safety concerns.

This part of the charrette report presents a preliminary conceptual trail plan for Round Valley based on the comments of the participants and the studies and experience of the design team. It includes the goals, benefits, design options and preferences, and the basic challenges and opportunities. The Trail Plan provides a vision for what the desired trail system might look like and basic steps to help the local community take on its planning and building, with the support of county, regional and state agencies.

### Why Round Valley Needs Trails

The highest priority need for trails that was expressed is for safe pedestrian access for local residents, especially children and seniors, from their homes to vital destinations such as schools, stores, community facilities, and the health center. This includes people who do not drive, who do not have access to a vehicle and those who prefer to walk or bicycle.

The second priority need for trails is walking, bicycling and equestrian access for health and recreation. Walking and riding is a popular local activity, and enjoyable and practical due to the scenery and relatively close proximity to local destinations. Currently the only route in most cases is in the road that is shared with potentially high-speed traffic. This includes short connections in and near town, and connections and loops to outlying areas. These secondary connections may be of primary importance to people who live further out of town and depend on walking or biking to get to vital services.

The third priority need for trails is to support tourism and economic development. Though many people expressed concern that too much tourism might result in significant change to Round Valley, nearly everyone would like to see limited additional tourism to support local business and the economy. Trails can support local tourism by offering walking, bicycling and equestrian routes that connect to desirable scenic and recreational destinations in Round Valley and beyond. These local trails can supplement recreational opportunities in the Mendocino National Forest, local events such as the Blackberry Festival and rodeos, and venues such as the Casino, and the Tribe's planned Hidden Oaks RV campground.



Local residents riding on Hwy 162 north of town.



Keith's Market is one of the vital destinations in Round Valley.



Trails can be used to attract tourism and be a source of community pride.



Trails were identified as a priority by many residents during the charrette.



Local senior resident of Round Valley on Henderson Road.



Members of charrette design team and local residents touring Round Valley.



The Buffalo are a local destination and a source of community pride.

## Benefits of Trails

Implementing the Round Valley trails will create a bicycle, pedestrian, and equestrian, transportation and recreation trail system that meets the needs of the residents of the Valley. A multi-use trail facility will result in expanded mobility options for Round Valley residents and visitors, especially those who seek to integrate a healthy lifestyle into their daily activities. Given the scenic beauty of the area, the trail will also offer important recreational opportunities. The following benefits of trails are well documented on a national and international level.

### Transportation

Trails are critical transportation corridors for people who can't drive, including children, seniors, and low-income residents. Trails are a crucial element to a seamless multi-modal transportation system for people who chose not to drive to save money, benefit the environment, maintain their health, or just because it's more fun. Cities and small towns across the country are incorporating trails and similar facilities into their circulation and transit plans. The ability to travel to popular destinations and to or through scenic or natural areas on foot or other non-motorized means is a large factor in a community's "livability."

### Quality of Life

The extent of bicycling and walking in a community has been described as a barometer of how well that community is advancing its citizens' quality of life. Areas that are busy with bicyclists and walkers are considered to be environments that work at a human scale, and foster a heightened sense of neighborhood and community. These benefits are impossible to quantify, but when asked to identify civic places that they are most proud of, residents will most often name places where walking and bicycling are common, such as a popular greenway, river front project, neighborhood market, Main Street, or downtown. Walking and bicycling are also good choices for families. A bicycle enables a young person to explore her neighborhood, visit places without being driven by his parents, and experience the freedom of personal decision-making. More trips by bicycle and on foot mean fewer trips by car. In turn, this means less traffic congestion in the community. There are also more opportunities to speak to neighbors and more "eyes on the street" to discourage crime and violence. It is no accident that communities with low crime rates and high levels of walking and bicycling are generally attractive and friendly places to live.

### Health

Trails help people of all ages incorporate exercise into their daily routines by connecting them with places they want or need to go. The United States is currently experiencing a health epidemic that is caused, in part, by a lack of physical activity. Widespread concern over national health issues and rates of obesity make opportunities for recreation increasingly important for individuals, communities, and governmental organizations. The Surgeon General's 1992 report, "Physical Activity and Health," determined that physical activity can help reduce cardiovascular disease, lower the risk of colon cancer, lower the risk of diabetes, lower the risk of osteoporosis, reduce the risk of obesity, and relieve symptoms of depression and anxiety. The report further contains a Center for Disease Control 1991 study which determined that the most common form of exercise for all people over the age of 18 is walking at 44.1 percent. Part of the solution to this epidemic is providing outdoor recreation opportunities such as trails in parks and open space areas where people can walk, bicycle, and be more physically active. Studies show that frequency of trail use is directly proportional to the distance that one lives from trail access points, and regular trail users see health benefits. It logically follows that communities with greater access to trail systems and recreational opportunities will have healthier populations.

### Environment

Access to trail systems and natural environments directly benefits environmental quality, and provides opportunities for environmental education and the establishment of a conservation ethic. An understanding of one's natural environment leads to the future preservation of lands that are ecologically important, and support tourism that relies on the presence of high quality scenic open spaces and natural areas. People choosing to ride or walk rather than drive are typically replacing short automobile trips, which contribute disproportionately high amounts of pollutant emissions. Since bicycling and walking replace automobile trips, contribute no pollution, require no external energy source, and use land efficiently, they effectively move people from one place to another while providing a net decrease in adverse environmental impacts. They further create no noise, no adverse odor, and no congestion.

### Economic

An integrated and complete trail system can provide economic benefits to the Valley. This includes improvements in real estate values for homes near the trail and 'pedestrian-friendly' areas, work generated to construct and maintain the trail, and economic activity related to trail recreation and events such as tours, races, walks, rides, and other events.

### Historic Preservation/Community Identity

Many community leaders have been surprised at how trails have become sources of community identity and pride. These effects are magnified when communities use trails and greenways to highlight and provide access to historic and cultural resources. Many trail systems and greenways themselves preserve historically significant transportation corridors.



*Trails provide a means of regular exercise.*



*Many residents requested equestrian trails during the charrette.*

## Types of Trails

Trails can fall into several categories, including some with specific standards:

### Informal Trails

The most basic trails are just packed dirt created by people walking regularly along the same route. Often termed “volunteer” or “goat” trails, these may be perfectly functional, except that they may become wet and muddy during rains, and may be too rough for strollers, people who have difficulty walking, or bikes with skinny tires. They also tend to be encroached upon by vegetation, or conversely, if many people use them, multiple paths may merge into a broad area that is denuded of vegetation and compacted, resulting in dust and erosion.

### Improved Trails

Dirt trails can be improved for positive drainage and to address cross-slopes, and maintained or limited to that the trail area stays clear but does not get too wide or off course. Most Forest Service or regional park trails fall into this category. Many of these trails double as, or originated as, ranch or logging service roads.

### Paved Trails

The highest level of trail improvement are paved bike and pedestrian facilities, which often have adjacent unpaved path for horses, runners, etc., that feature striping, signage and other formal information and controls to make them full transportation systems.



*Informal trail.*



*Paved Trail.*



*Improved trail.*

**Trail Standards**

Many trail building/managing agencies have their own guidelines and standards for trails, including various county park departments, regional park and open space districts, the California Department of Parks and Recreation, the U. S. Forest Service, and the National Park Service.

**Access for People with Disabilities**

By federal law all these public facilities are required to comply with the 1998 Americans with Disabilities Act (ADA) to ensure that, to the extent practical, public trails can be used by people with wheelchairs and other limitations. Local, state, and federal agency standards are typically consistent with standards published by the Federal Access Board, which interprets the ADA. These are illustrated well in the Federal Highway Administration publication "Designing Sidewalks and Trails for Access," which covers a wide range of trail types and related outdoor recreation facilities.

**Caltrans Standards**

The California Department of Transportation (Caltrans) has adopted standards for bike-ways, paths, sidewalks and paths that may be part of a trail system. Most local agencies, such as Mendocino County, follow the Caltrans standards for their own projects, and in cases where the project is in the state highway right-of-way, or funded through Caltrans, it must be built per the standards or a formal exception must be obtained from Caltrans.

**Bicycle Facilities**

Chapter 1000 of the Caltrans Highway Design Manual contains detailed standards for Bikeways, which are considered multi-use facilities to be shared with pedestrians, although Caltrans considers separate facilities for pedestrians to be desirable. This chapter defines three types of bikeways:

**Class I Bikeway (Bike Path)**

A Class I Bikeway provides a completely separated path for bicycles and pedestrians with minimal crossings by roads or driveways. Class I Bike Paths must be paved and a minimum of 8 feet wide. There are many other details contained in the Highway Design Manual, including the radius of curves. The Manual recommends a maximum gradient of 5% for new Class I paths. Class I paths and other formally designated/funded public multi-use trail facilities must be designed to accommodate people with disabilities (particularly wheelchairs, but also visual and other disabilities). There are detailed state standards for disabled-access design that are consistent with federal standards.

**Class II Bikeway (Bike Lane)**

A Class II Bikeway provides a striped paved lane for bike travel on a street or highway – typically at least 4 feet wide, with a lane on each side parallel with the motor vehicle traffic direction. Wide paved shoulders, such as those in the central portion of Highway 162 in Covelo, function effectively as bike lanes. There are many standards for marking, alignment through intersections, and other factors detailed in the Highway Design Manual. Some bicyclists feel that the formal signing and striping of bike lanes gives bicyclists a false sense of security. It is really having the paved space separated from the vehicle lanes that provides the benefit.

**Class III Bikeway (Bike Route)**

A Class III Bikeway (Bike Route) is a signed route on which bicyclists and pedestrians share the roadway with motor vehicle traffic. Class III Bike Routes are designated by route signs placed at all changes of direction and periodically along the route. This is typically only formalized on low-speed local streets or low-volume rural routes.

**Sidewalks**

Caltrans standards for pedestrian sidewalks and paths are much less detailed than the standards for bikeways. They must be a minimum of 5 feet wide, excluding curbs. The grade or slope should be as flat as possible. Any part of a route with a slope greater than 1:20 (5%) shall have level areas at least 5 feet in length at intervals of at least every 400 feet.

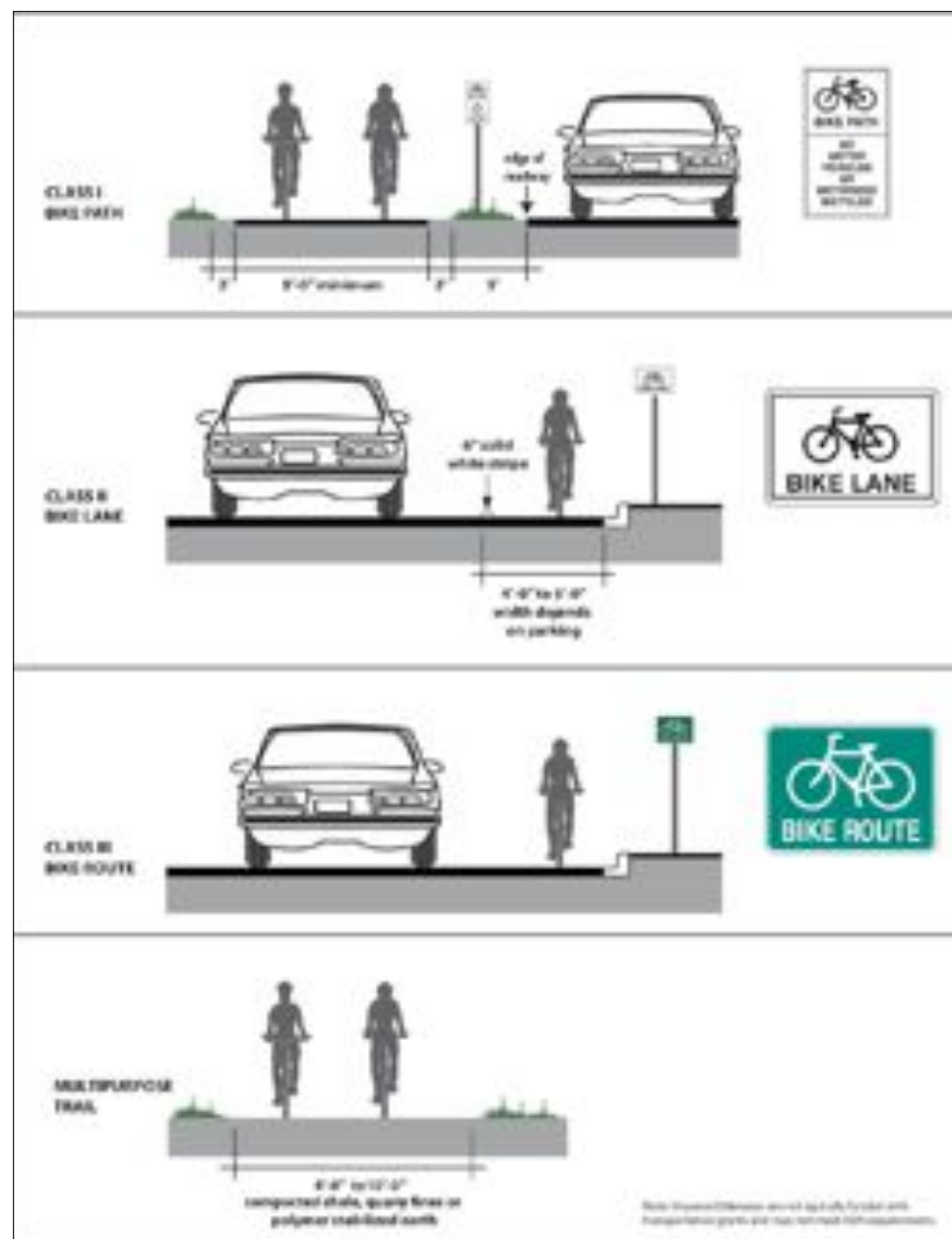


Figure 2-1 Cross sections showing Caltrans minimum design standards.

**Caltrans Trail Policy**

Caltrans only recently began recognizing unpaved improved trails as a facility they permit in their right-of-way. These are categorized by Caltrans as pedestrian facilities, though they are recognized to include multiple use by mountain bikes and potentially, horses. Unpaved trails in state right-of-way or funded through the state are required to be built per the ADA guidelines outlined under Unpaved Trails. In an urban setting or where they connect to public facilities, or if the funding source is from or through Caltrans, Caltrans may not accept an unpaved trail, and may require one of the above paved facilities.

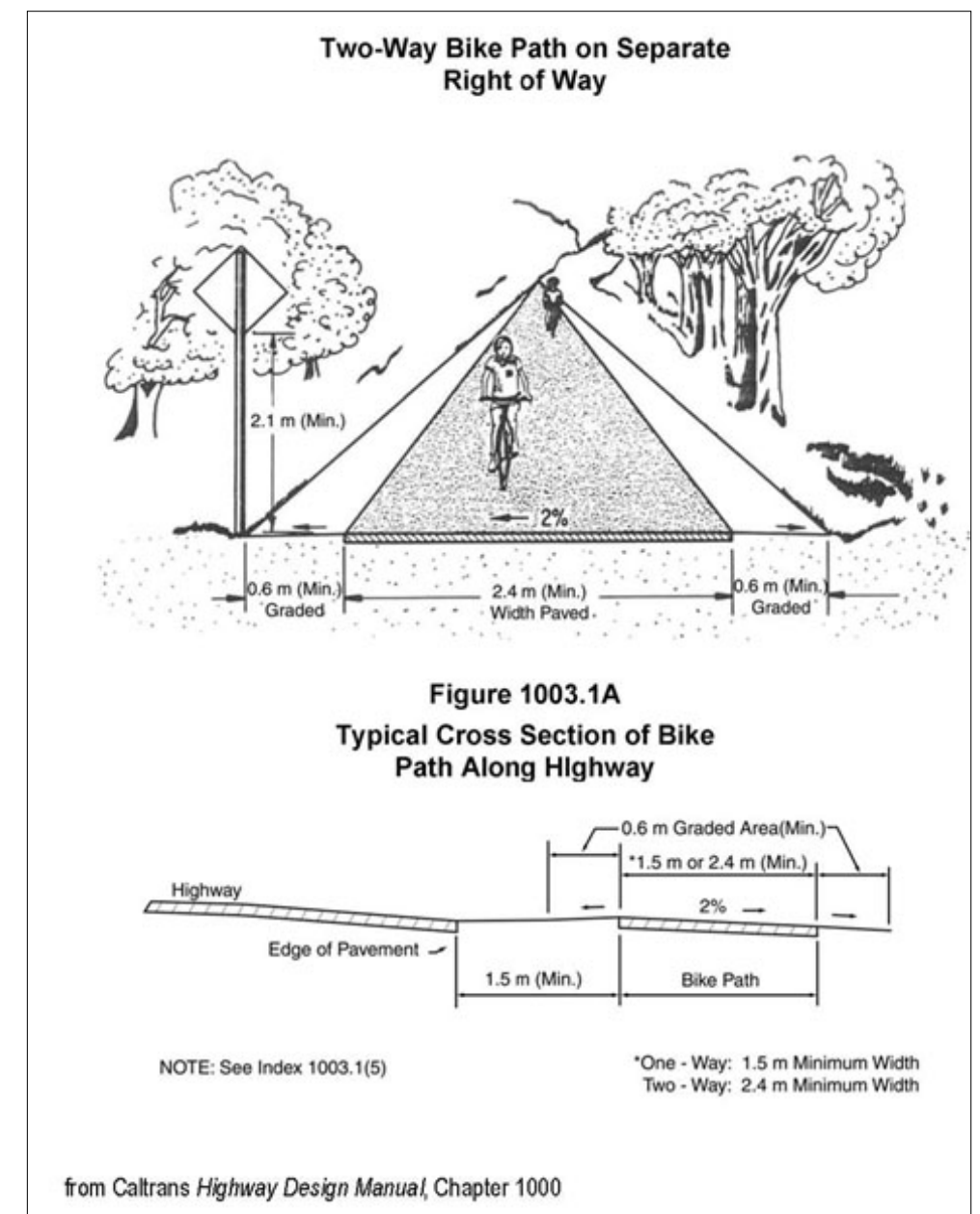


Figure 2-2 Caltrans Standard Design for Class I Trail.

Local Conditions for Trails

The typical location for public bike and pedestrian trails is along public roads, provided there is space in the public right-of-way. However, on most roads in Round Valley there is little or no space to add these improvements. Virtually all the roads in the Valley outside of central Covelo have a similar configuration, with two lanes, little or no paved shoulder, and a relatively narrow right-of-way between property fences (approximately 35 feet on side roads and up to 56 feet on Highway 162). The road typically drains to ditches on both sides (see Figure 2-3), making improvements more difficult and expensive.

In many cases mature oaks and other trees have grown up along the fence lines. In other locations there are residences, commercial or public building fronting the road, with driveways, gates, mailboxes, landscaping and other improvements that would interfere with trail improvements in the right-of-way. Along some roads blackberry, grape vines, or other dense shrubs have consumed the road shoulder and even encroach into the roadway. The current configuration of these roads makes it difficult to either widen the road for bike lanes or to construct a separate path (especially to meet the Caltrans standard of 8 foot width and 5 foot separation from the roadway).

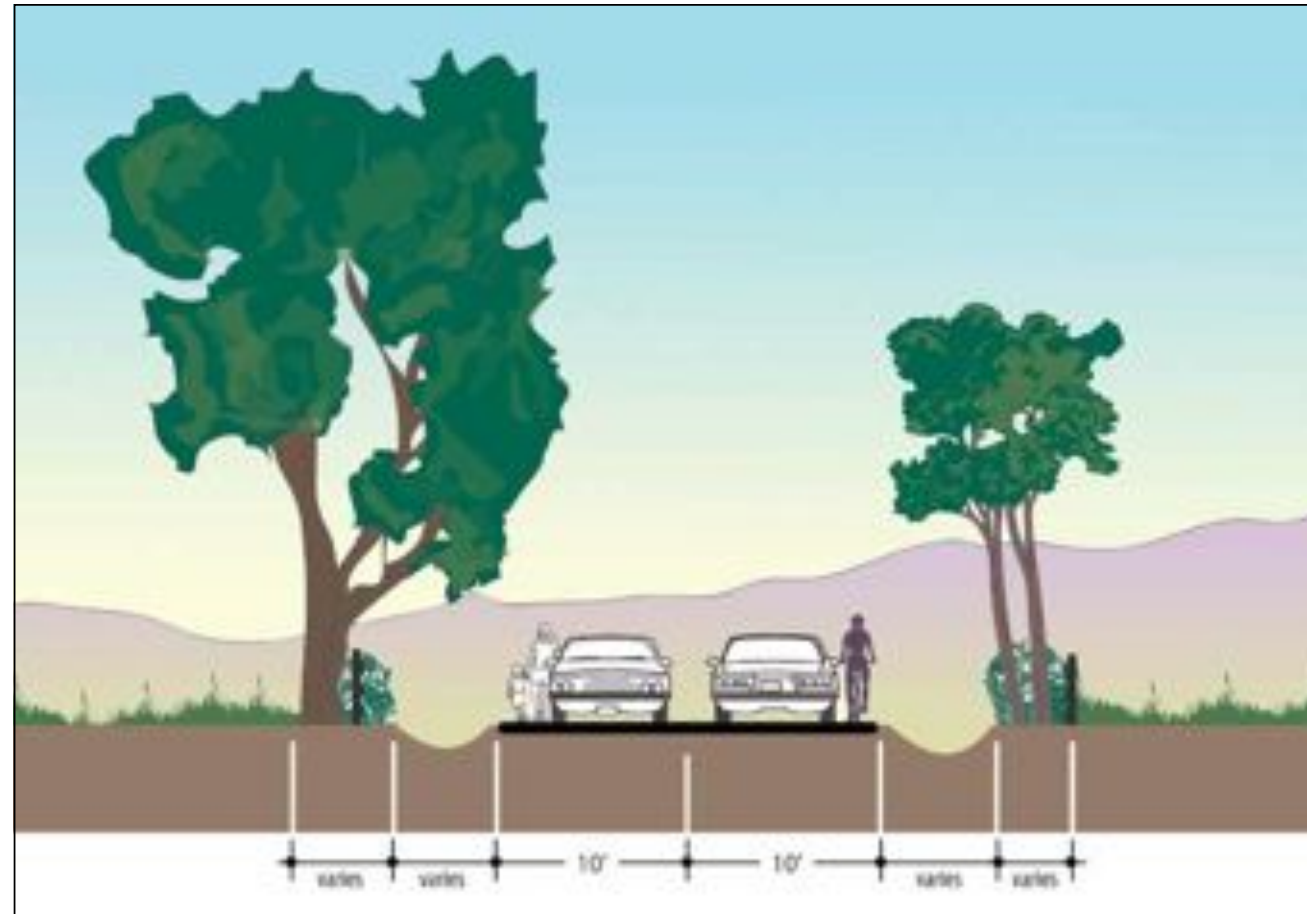


Figure 2-3 Cross section of typical road in Round Valley.



Hwy 162 south of town.



Typical road in Round Valley with narrow shoulder, drainage ditch and mature trees along the fence line.



Where Round Valley Needs Trails

Central Covelo

The streets in central Covelo generally work well for bicyclists and pedestrians. The central portion of Covelo along Highway 162 features wide paved shoulders (approximately 8 feet or more) that offer adequate room for bicyclist and pedestrian access. The bridge at Towne Creek has a consistent wide shoulder width. There are issues with vehicle speed, turning movements and parking along 162 that can interfere with safe walking and bicycling. Solutions for these conditions are discussed in the Urban Design portion of the report.

The grid of local residential streets in central Covelo has low enough traffic speeds and volumes that they are considered safe for pedestrian and bicycles to use the roadsides along with motor vehicles. There is some need for bicycle, pedestrian and traffic control improvements to Howard Street, Foothill Boulevard in the vicinity of the schools and potentially along Main Street. These concepts are detailed in the Urban Design portion of the report.



Aerial photo of Central Covelo showing grid of low traffic volume and low speed roads.



Existing asphalt path along south side of Howard St. from High School to Central Covelo is separated from roadway by landscaping.



Hwy 162 in Central Covelo with wide shoulder.



Residential street in Central Covelo with low traffic volumes and speeds.



Hwy 162 Bridge over Towne Creek has wide shoulders for pedestrians and cyclists.



Hwy 162 in Central Covelo has a wide sidewalk.

### High Priority Trails

Connections between three primary destinations that were frequently mentioned by local residents as high priority for trail improvements include:

**Segment 1:** From central Covelo north along 162 to the point it turns east at Mina Road.  
*Proposed Facility: 10' Class I Path (baserock)*

**Segment 2:** From the elementary, middle, and high schools west along Foothill Boulevard to the Tribal Housing Area between Foothill and Henderson, and east along Howard to central Covelo (covered in the Urban Design portion of the report).  
*Proposed Facility: 8' Class I Path (asphalt)*

**Segment 3:** From Tribal Housing to the Indian Health Center, along Crawford Road and Biggar Lane.  
*Proposed Facility: 10' Class I Path (baserock)*

### Hwy 162 North of Covelo

The destinations from central Covelo north along 162 are the Tribal Commerce Center (location of casino, gift shop and a planned convenience store); the entrance to the Tribe's Hidden Oaks Park (and planned RV campground); the Indian Health Center; the Tribal Council, and finally the Forest Service ranger station. A significant constraint on this segment is the bridge on 162 at Mill Creek, which has minimal shoulder space for bicyclists and pedestrians. The most economical solution may be to construct a parallel trail bridge on the west side of the existing bridge.



Example of a bridge that could be used to run parallel to the existing Hwy 162 bridge over Mill Creek.

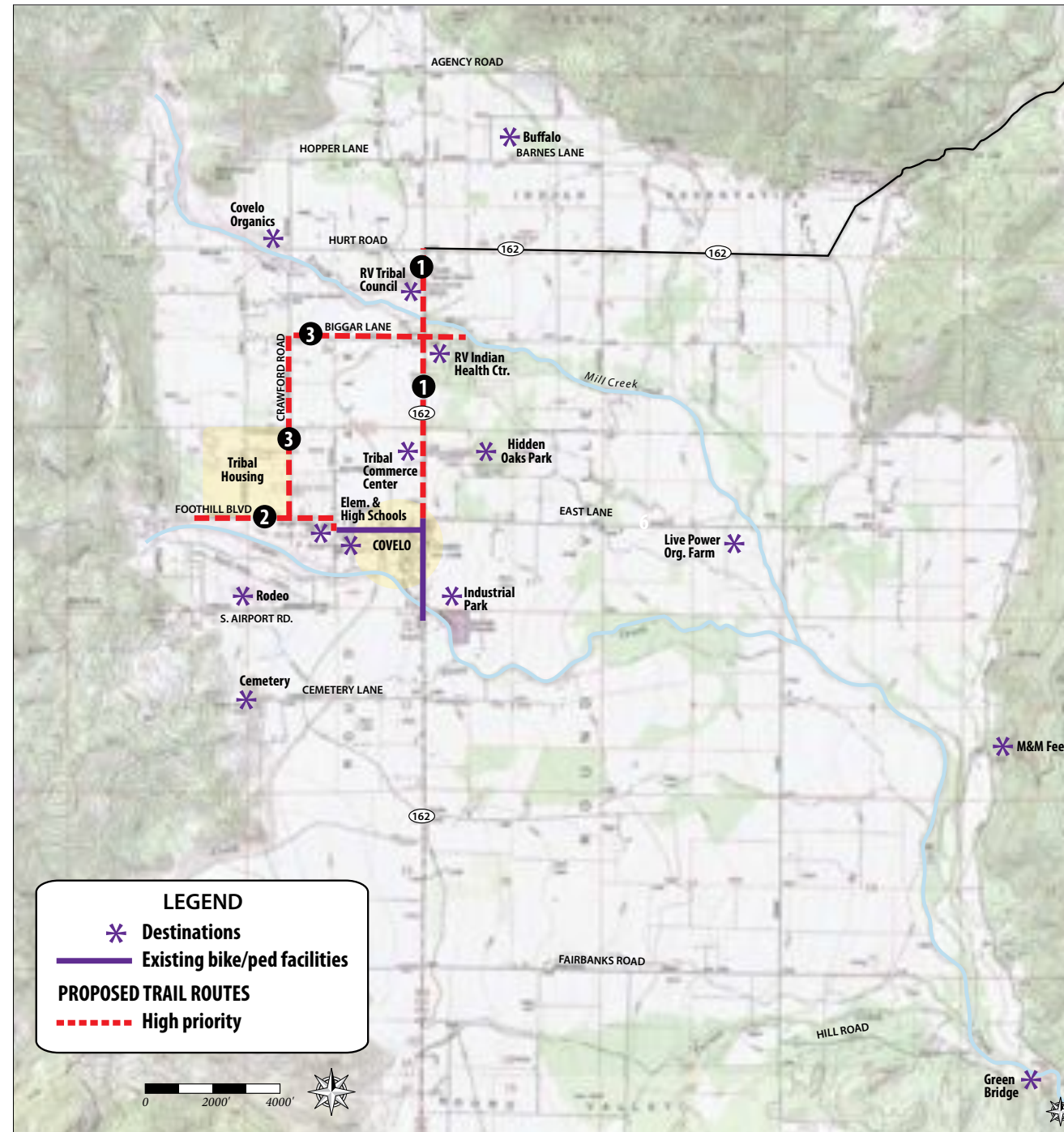


Figure 3-1. High priority trails map.



Hwy 162 as it passes the Round Valley Indian Health Center.



Hwy 162 bridge crossing Mill Creek has narrow shoulders.

Medium Priority

The next level of priority routes identified for trail improvements are:

**Segment 4:** Along 162 north of the Tribal Council and along Mina Road, to serve a number of residences dispersed around the north end of the valley.  
*Proposed Facility: 10' Class I Path (baserock)*

**Segment 5:** Improvements along 162 south of town to an area along Fairbanks Road to a cluster of residences along the road's north side.  
*Proposed Facility: 10' Class I Path (baserock)*



Fairbanks Road (looking east).

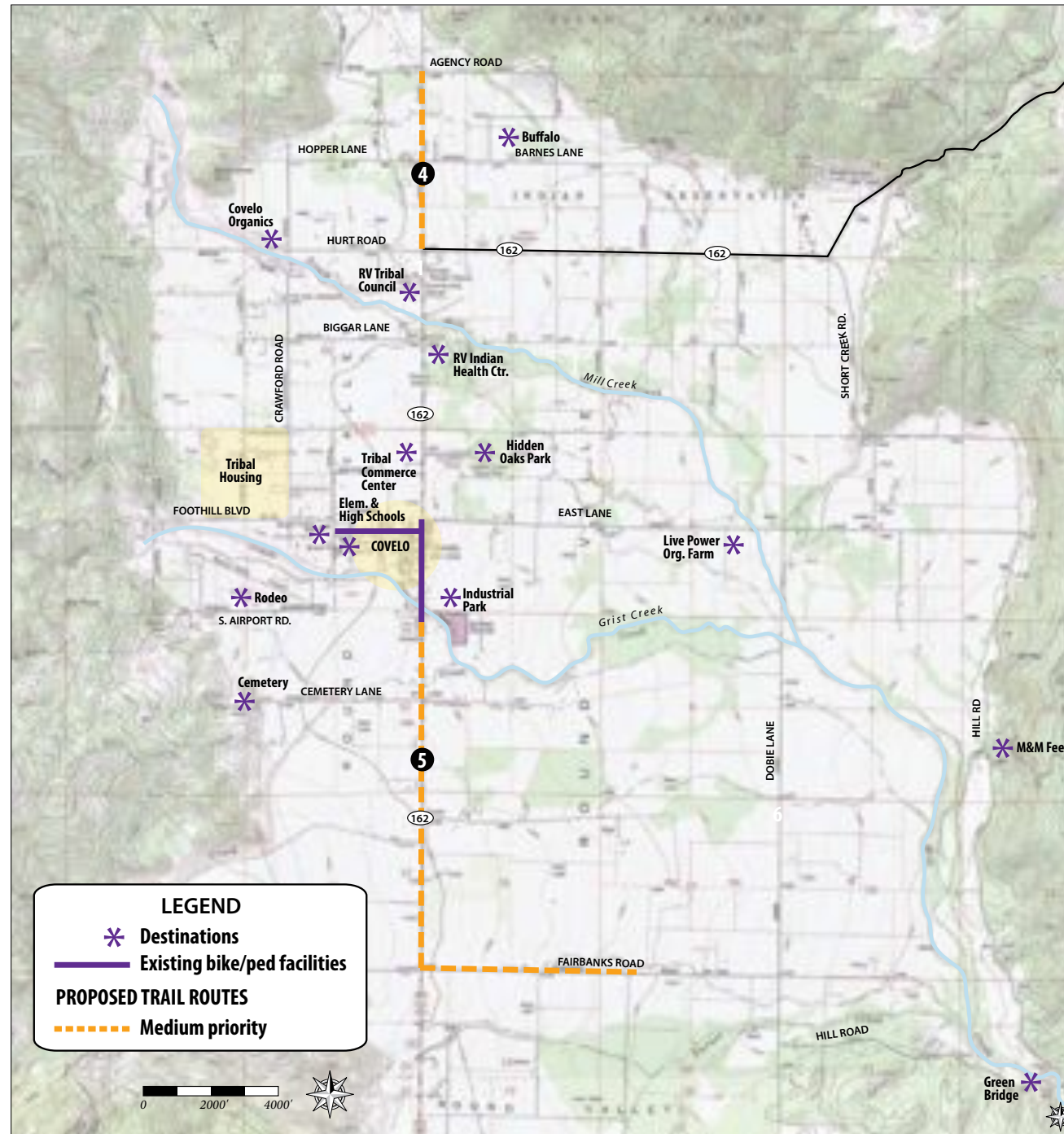


Figure 3-2. Medium priority trails map.



Mina Road (looking north).



Hwy 162 south of Covelo (looking south).

Low/Long-Term Priority

The lowest priority or longest-term set of trail improvements identified is a series of loop routes through the Valley that could function as recreational routes for residents and visitors and bike, pedestrian or equestrian connections for outlying residents.

**Segment 6:** A loop from central Covelo, south along 162 and Fairbanks (this segment overlaps #5), east to Dobie Lane, then south to Hill Road, around the east side of the Valley to East Road, then west back to Town. This is a highly scenic loop that would be enjoyable for road bicyclists who could simply use the road, with the addition of signage and markers to clarify the route. Equestrians and intrepid walkers could also be accommodated if there was a dirt trail parallel to the road. It would also serve residents along the route. Some portions of this informal trail would be feasible in the road right-of-way, but due to embankments, ditches and trees, most portions would require access on adjoining properties. Notable features along the route that could serve as rest stops include the “Green Bridge” over Mill Creek, at about the ½ way point, and the M&M Feed store and nursery a short distance to the north.  
*Proposed facilities: Class III Bike Route*

**Segment 7:** A loop around the north end of Round Valley, extending on the east along Short Creek Road north to Highway 162, then west to Barnes Lane and north and west along Crawford Road, and east along Hurt Road back to Highway 162 to complete the loop. An optional additional connection would be to create a low water ford of Mill Creek at Crawford Road to allow bicycles, pedestrians and equestrians to cross south to reach Biggar Lane. The route improvements for this loop are generally envisioned to be limited to signing of the route and trimming of vegetation encroaching into the road right-of-way (typically blackberries). Along busy Highway 162 a separate trail is needed, which would probably require acquisition of a trail easement, ideally on the north side.  
*Proposed facilities: Class III Bike Route*

**Segment 8:** A recreational loop trail around Airport Road starting at the intersection of Howard and Henderson. This low traffic volume loop is already being used for access to ballfields and the rodeo grounds and for recreational bicycling rides and would require only signage improvements, except for a tight blind corner where Airport turns west near Grist Creek (see photo below). The embankment on the west side of this turn should be graded back and some additional pavement placed to improve the sight distance and width. An option associated with Segment 8 would be to arrange a connection south across private property south to Cemetery Lane, which would connect west to the scenic cemetery and east to Highway 162 and Segment 6, connecting back to central Covelo.  
*Proposed facilities: Class III Bike Route*

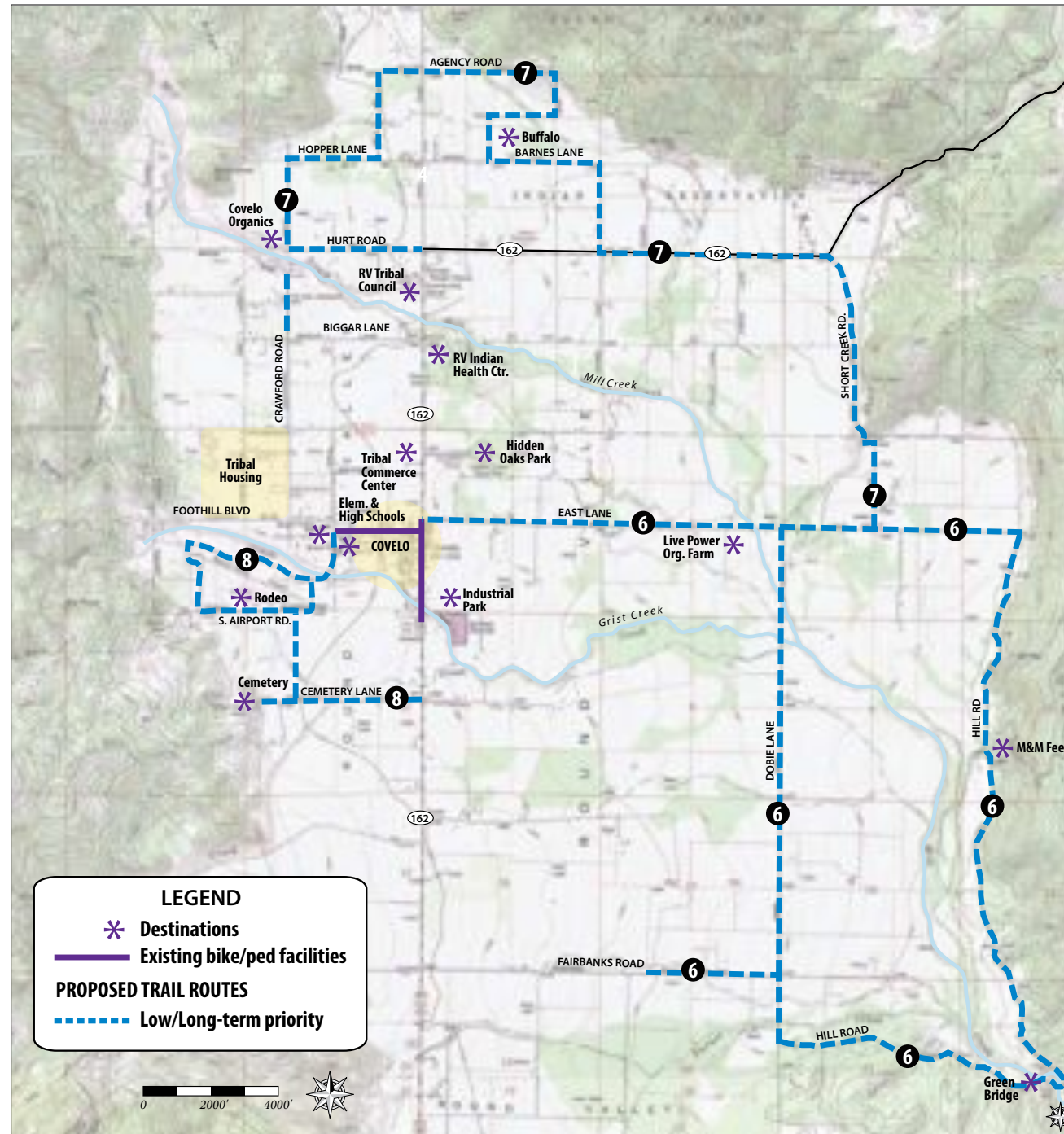


Figure 3-3. Low/Long-Term priority trails map.



The Buffalo, a destination point on segment 7.



Low traffic volume road adjacent to Airport.



Green Bridge over Mill Creek.

Summary of Potential Trail Improvements

	Proposed Trail #	Route/Connections	Length (ft)	Length miles	Trail Type (see notes below)	Cost	Notes/Features
High Priority Trails	1	Downtown to Tribal Center	7,945	1.50	2 (50%), 3 (50%)	\$1,543,050	includes 170' trail bridge at Mill Creek
	2	Foothill Blvd., Henderson and Howard Street to Downtown	3,034	0.57	1 or 4	\$536,146	includes traffic calming measures at HS
	3	Tribal Housing/Foothill Blvd. at Crawford Rd. to Indian Health Center/Hwy. 162	11,855	2.25	1 (65%), or 4 (35%)	\$893,690	1-2 driveway crossings on Biggar
Medium Priority Trails	4	Hwy. 162 along Mina Rd to Agency Rd	5,273	1.00	1 or 4	\$338,603	
	5	Industrial Park at Wattenberg Rd. along Hwy. 162; along Fairbanks Rd. to Dobie Ln.	16,312	3.09	1 or 4	\$1,531,420	5-6 driveway crossings on Fairbanks Lane
Low/Long-Term Priority Trails	6	Elem. & High School along East Ln. looping around Hill Rd & Dobie Ln.	61,762	11.70	5 or 6	\$1,012,787	
	7	Hurt Rd./Hwy. 162 N. to Hopper Ln., N. and E. to Agency Rd., S. via Barnes Ln.	42,858	8.12	5 or 6	\$51,753	
	8a	Elem. & High School looping around along S. Airport Rd.	12,035	2.28	5 or 6	\$11,400	
	8b	Hwy. 162 along Cemetery Ln. and N. to S. Airport Rd.	4,828	0.91	5 or 6	\$187,646	

Trail Types/Design Assumptions:

1. Base rock surface trail 10' wide on private land with permission, relatively level surface with good drainage, involving no roadside ditches.
2. 8' wide paved Class I path
3. Wide shoulders/bike lanes (Class II) in road right-of-way.
4. Wide shoulders/bike lanes in road right-of-way; requires culverting of the drainage ditch, similar to Fig. 4-1, or relocating onto private property with permission.
5. Signed route (Class III) including wayfinding and interpretive signage.
6. Informal unpaved trail 6' wide with permission on private property (primary cost is fencing)

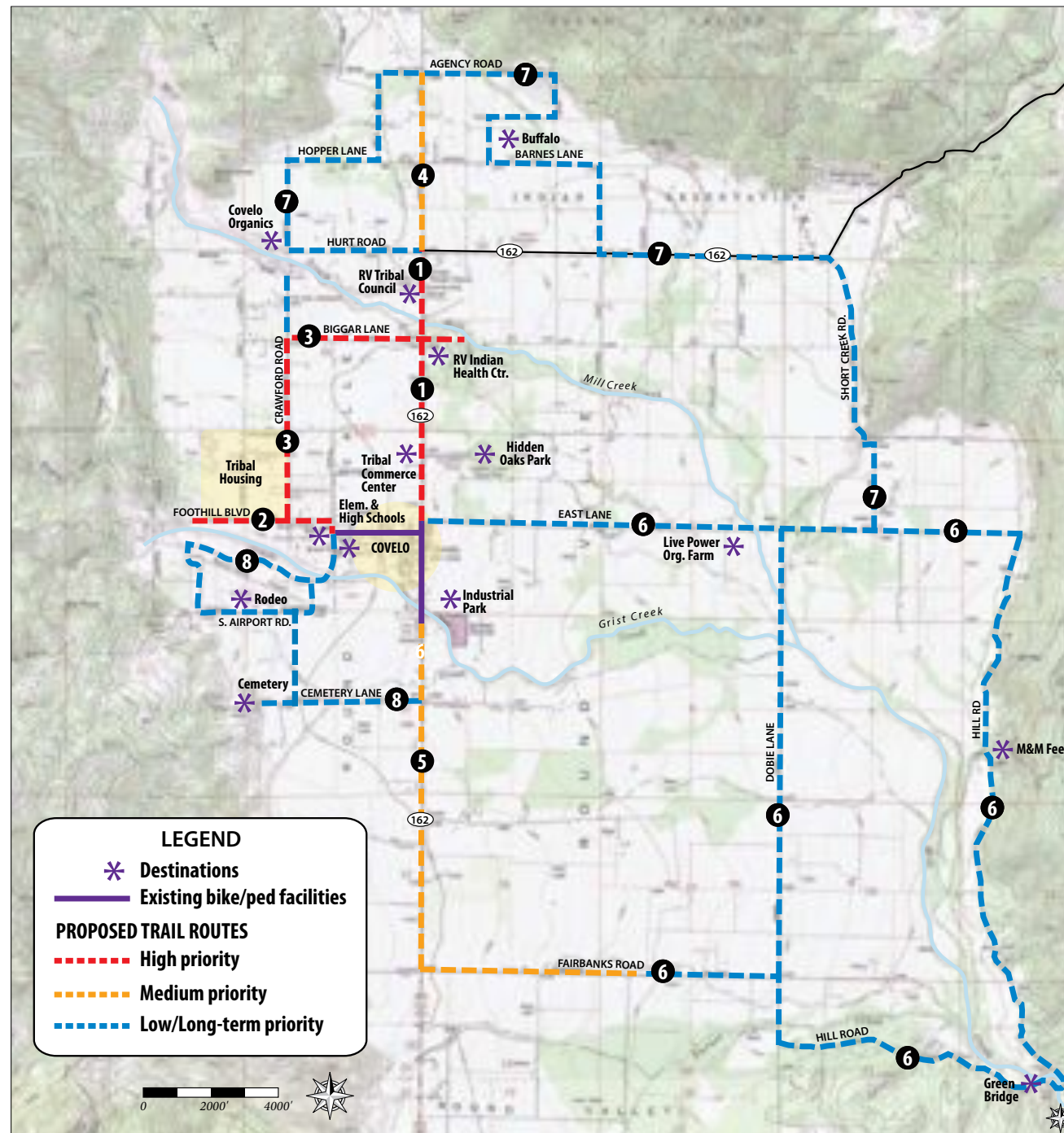


Figure 3-4. Map of all proposed bikeways.

Trail Destinations

A number of destinations have been identified by the community. Some are vital destinations such as food stores, the health clinic and work places that people need to access on a day-to-day basis. Others are destinations that are used for community gathering, entertainment, or recreation.

Vital Destinations:

- Tribal Housing
- Round Valley Schools
- Round Valley Indian Health Center
- Industrial Park
- M&M Feed
- Live Power Organic Farm
- Covelo Organics

Community Gathering, Entertainment and Recreation Destinations:

- Tribal Commerce Center
- Round Valley Tribal Council
- Hidden Oaks Park
- The Buffalo
- Rodeo Grounds
- Cemetery
- Green Bridge

Trail Design

Based on typical conditions for trails in the public road right-of-way (See Figure 2-3), there are some challenges and opportunities for how to provide a trails in various locations.

**Options for Trail Design**

Here are three alternatives for the specific location and configuration of the trail, depending on physical conditions and alignment opportunities.

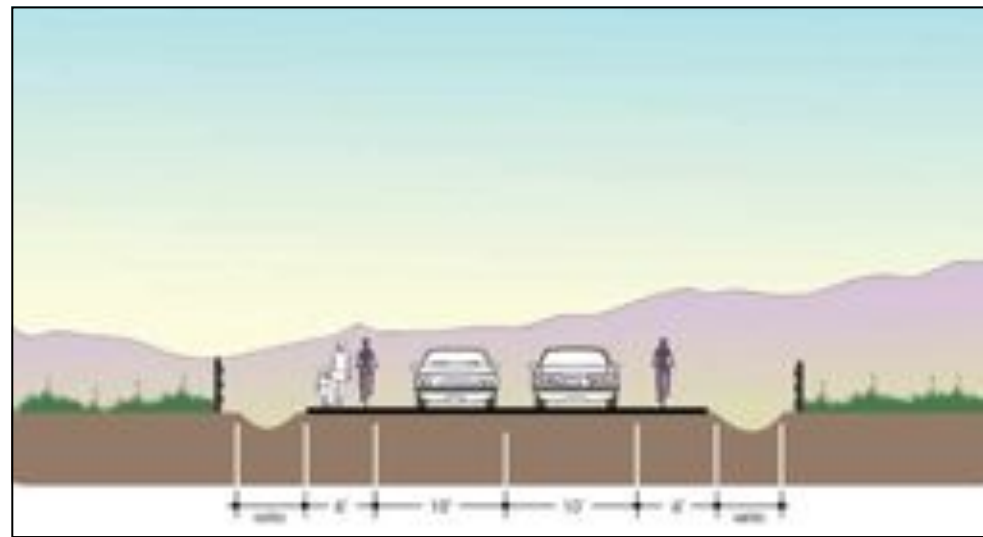


Figure 4-1. Option 1: Widen existing roadway 6' on both sides and relocate drainage ditches.

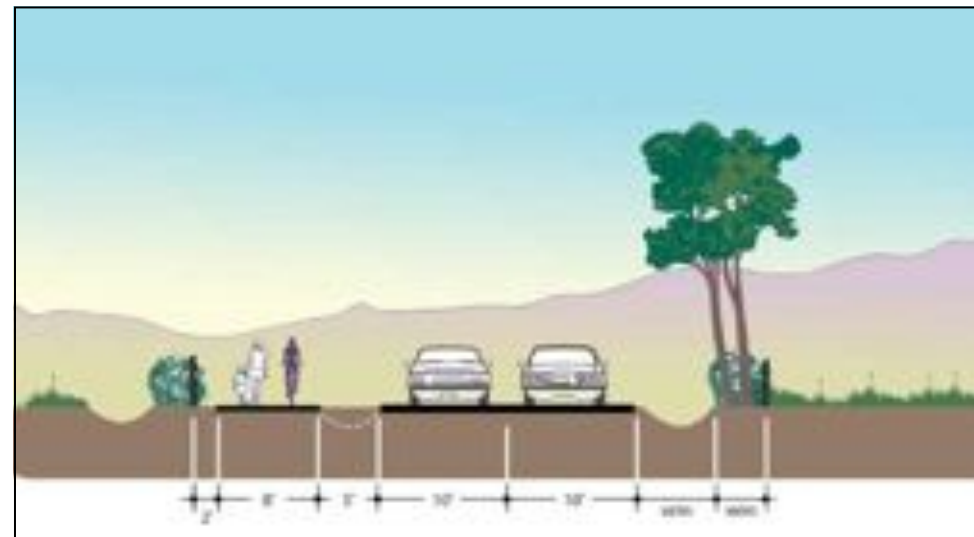


Figure 4-2. Option 2: Relocate drainage ditch to create Class I trail on one side of roadway.

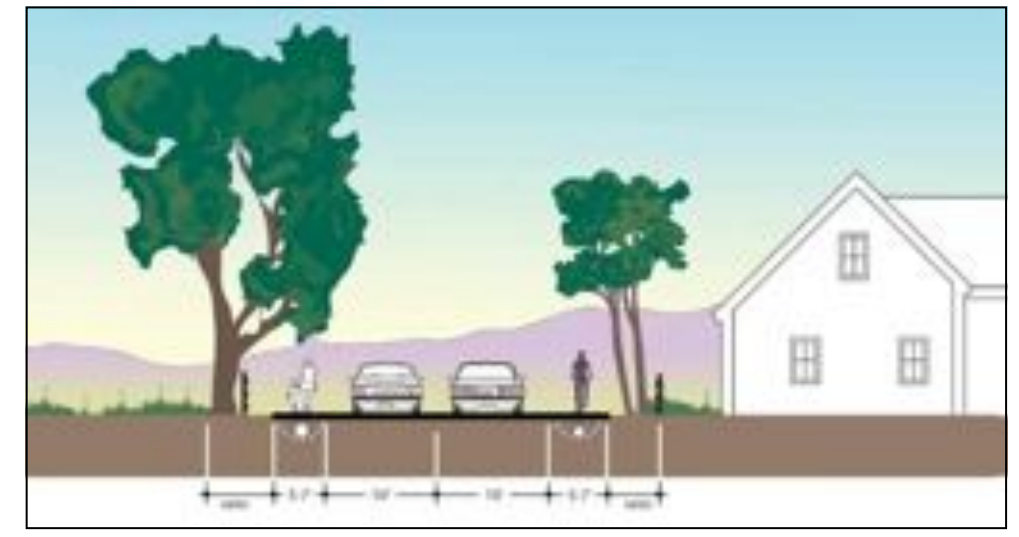


Figure 4-3. Option 3: Widen existing roadway by 5-7' and replace drainage ditch with culvert.

**Option 1**

One alternative would be to widen the roadway by relocating the ditches to beyond the fence/property line (requiring an easement or right-of-way purchase), however this would require the removal of the trees along the fence line, and wouldn't be feasible where there is adjacent development.

**Option 2**

There are some portions of roadways that have relatively wide shoulders and shallow ditches. In these cases it would be feasible to build a trail in the right-of-way if this condition extends far enough to justify the effort, or if the property owner is not willing to grant an easement, or if the alternative route is blocked by development.

**Option 3**

In cases where there is no alternative, it may be feasible to build a trail over the drainage ditch by placing a culvert in the ditch. The challenge for this solution is that the culvert would have to carry enough water to prevent flooding (and there are locations where the existing ditches are currently inadequate to prevent flooding), and it would require maintenance to prevent clogging. Provisions would be needed at regular intervals to allow runoff to enter the culvert and to allow cleanout. Essentially this would be a conversion of the ditch system to a closed storm drain system.

In locations where the drainage ditch is deep and narrow, a solution may be to bridge over the ditch with a plate or slab. A disadvantage of this solution is that it would interfere with maintenance of the drainage ditch. Like the above solution this would be expensive and is probably only appropriate to consider when there is no alternative route.

**Option 4: Preferred Alternative for Highway 162**

During charrette discussions of how to provide a trail along the high priority segments of Highway 162, it was determined that the preferred alternative, based on community input, is to construct a separate Class I path and bridle trail beyond the fence on private property, including a second fence line (see Figure 4-4). This would require the granting of a formal easement from the property owner, at least in cases where public funds were sought to construct the trail. This alternative has the advantage of much better safety and scenery than wide shoulders or a trail that is adjacent to the road. There are tax advantages and broad legal immunities for a property owner who allows a public trail, in addition to the benefit to the community and through their own access to the trail.

However, some property owners may be more comfortable having a ditch on their land than a trail, and thus in some cases this may be the preferred option. In any case, the option for culverting the ditches, as shown in Fig. 4-3, is likely to be so expensive as to be feasible only for short stretches.



Example of Class I Bike Path along busy road in Davis, California.

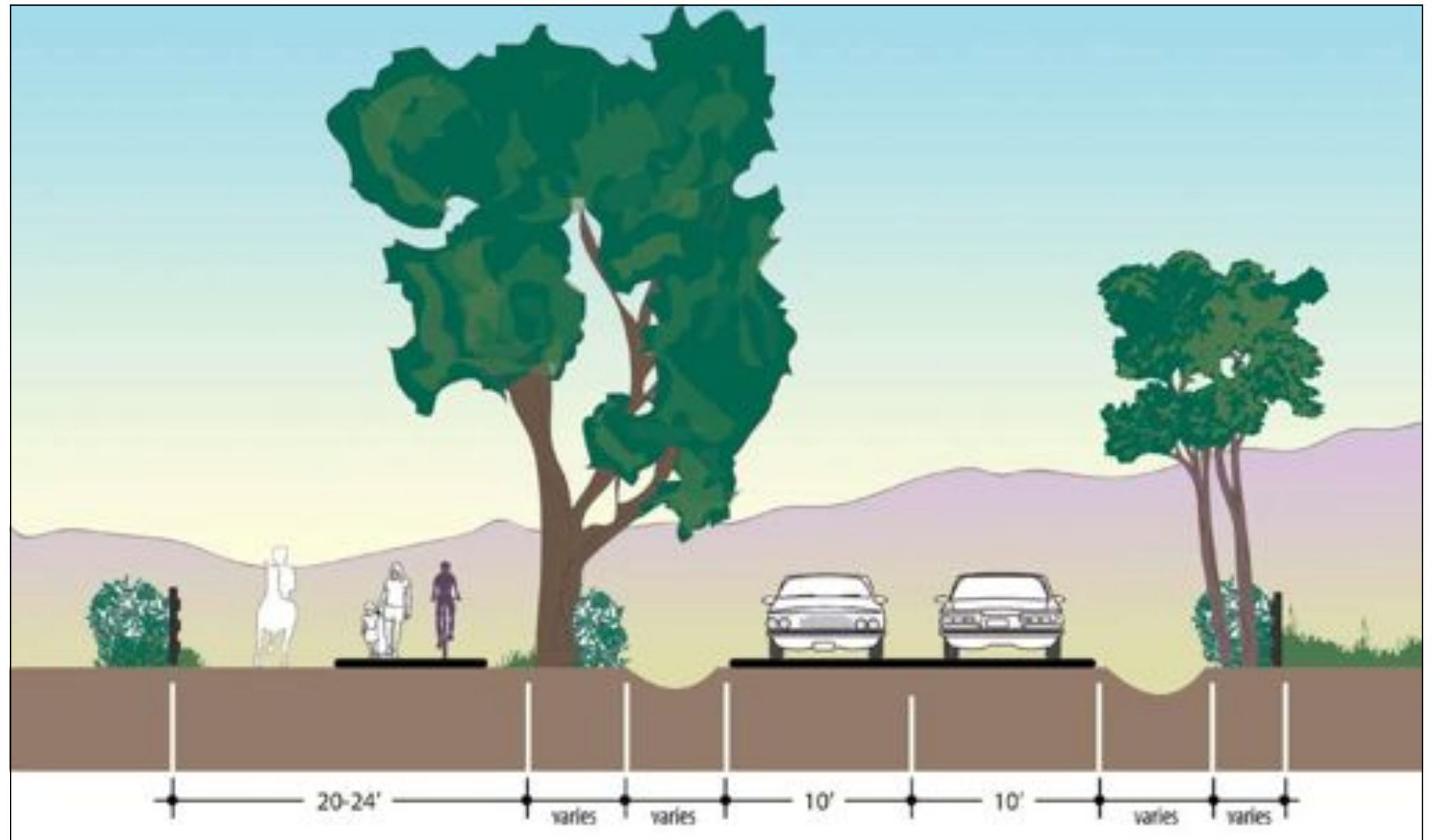


Figure 4-4. Option 4 (Preferred Alternative): Provide a 8' separated Class I path together with bridle trail.

**Proposed Trail Design**

Many residents of Round Valley expressed the desire for trails that are less formal, consistent with the rural atmosphere, and easier to construct and maintain with local labor and materials. The trail needs to accommodate bikes, strollers, wheelchairs and electric scooters for the disabled, and provide an all-weather surface.

**Trail Surface**

The minimum suitable surface for an unpaved trail that would serve these users is “base rock” or a compacted bed of graded crushed rock with coarse to fine particles. If properly located and applied, this material can provide a firm, stable all-weather surface while allowing rainwater to penetrate. Besides its more natural appearance, a base rock trail can be built and maintained with local materials and labor, and it doesn’t include any petroleum products. The Round Valley Tribe is considering establishing a graded rock and aggregate operation that could supply base rock for the trail and other projects. A base rock trail can be maintained using a pickup or wheelbarrow full of base rock and a hand-operated compactor, rather than requiring expensive, complicated paving equipment. It would be relatively efficient to add an asphalt or concrete overlay on the base rock trail if that was determined to be desirable.

A disadvantage of this type of trail is that it will not be as firm, weatherproof or long-lasting as pavement, and will not be as suitable for road bicycles with skinny tires, or for skateboards, roller blades, or wheelchairs. The surface will deteriorate due to weather, wear, gophers, settlement, or other factors, although it also easier to repair than pavement, as noted above.

A base rock trail would not be suitable for horses, both from the standpoint of the horse and rider (rocks getting into the horse’s hoofs), and because horses would tend to tear up and dirty the trail surface. A parallel dirt path for horses should be provided where equestrian access is desired. As an interim improvement, or in low-use or outlying areas, an informal dirt surfaced path may be all that is necessary to accommodate horses, walkers and mountain bikes.

**Trail Width**

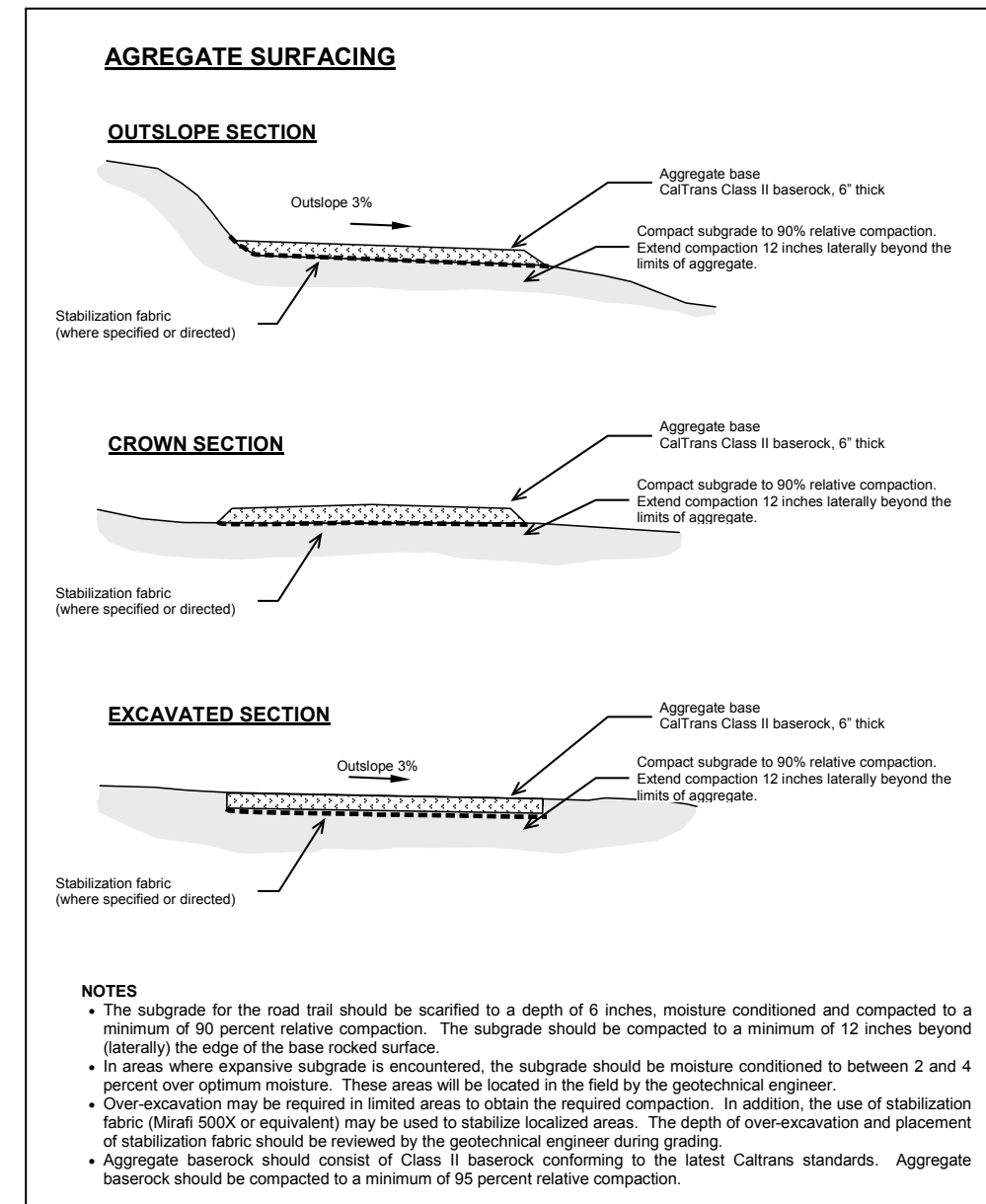
The width of the trail depends on the expected level and type of use (especially mixing pedestrians and bicycles, and/or seniors and young people, and on visibility around corners and ahead. A reasonable minimum width in low traffic areas would be 5 feet. Any heavily used area with mixed use should be a minimum of 8 feet, while 12 feet would be desirable.



Community trail construction project.



Base rock trail under construction.



Base rock trail construction details.



**Signage and Wayfinding**

Signage and related information and instructions is critical to making the trail system function well and avoiding some conflicts and management issues. This section outlines the types of signage required and major considerations in design and placement.

**Traffic Control**

Multi-use path signing and markings should follow the guidelines developed by Caltrans and the federal Manual on Uniform Traffic Control Devices. This includes advisory, warning, directional, and informational signs for bicyclists, pedestrians, and motorists. For any formal/public project the final signing plan should be reviewed and approved by a licensed traffic engineer or civil engineer.

Uniform signs, markings, and traffic control devices should be used for the trail per Chapter 2 of the Caltrans Manual of Uniform Traffic Control Devices, California Supplement 2003.

For a project in the Caltrans right-of-way or using funding through Caltrans, signing and markings that deviate from the Caltrans design standards must be approved.

In general, all signs should be located two to four feet from the edge of the paved surface, have a minimum vertical clearance of 8.5 feet when located above the path surface and be a minimum of four feet above the path surface when located on the side of the path. All signs should be oriented so as not to confuse motorists. The designs (though not the size) of signs and markings should be the same as used for motor vehicles.

**Trail Signage**

In addition to required traffic control signs, other signs and markings, including logo signs and directional signs, will be needed on the Round Valley trails. These should be designed with a thoughtful consistent theme, clear graphics, and durable construction, considering the examples and standards of many other established trail systems. This is an opportunity to take advantage of local artistic talents and identity, as long as basic sign functions are kept in mind. The three basic types of trail signage are discussed briefly below.

**Trail Logo**

A distinctive logo for the Round Valley trails should be developed and adopted, and used consistently on signs and markers to identify the trails throughout the Valley.

**Wayfinding/Directional Signs**

Directional signs on the Round Valley trails should indicate trail turns and connections, directions to nearby destinations or support facilities (such as restrooms, downtown Covelo, Casino, the buffalo herd, etc.), and mileages of trail segments and to destinations. Directional signs also need to be placed on approaches to the trail at each major connection point. At key locations on the system, especially in central Covelo, a kiosk or map-board sign should be provided, with a map of the trail system including “You Are Here”, information on local destinations and activities, any pertinent rules or conditions, and business-related information, such as where to rent a bike.

**Interpretive Signage**

Interpretive signage can be developed to enhance the experience of the trail and to allow users to gain a greater understanding of Round Valley’s unique geography, community and history.



*Signage example done by local resident and graphic designer Michael Mills.*

# School Center Projects

These projects focus on increasing the pedestrian and bicycle safety in and around the Round Valley Elementary and High Schools. Children and teens walk to the schools from Tribal Housing along roads with no pedestrian facilities or lighting. Some areas of Covelo have sidewalks, but there is a lack of connectivity between existing segments, and many are in disrepair.

**Issues:**

- A. Foothill Boulevard has a dirt path adjacent to the street, used by children traveling between school and tribal housing, that is not ADA accessible and becomes muddy when it rains.
- B. The intersection of Foothill Boulevard and Henderson Lane/Airport Road has a large turning radius that allows vehicles to travel through the intersection at high speeds.
- C. The intersection of Airport Road and Howard Street is a large expanse of undefined asphalt and gravel.
- D. Howard Street has a narrow, paved walkway on the south side of the street but does not provide proper facilities for bicyclists.



A. Foothill Boulevard has a dirt path adjacent to the street used by children traveling between school and tribal housing.



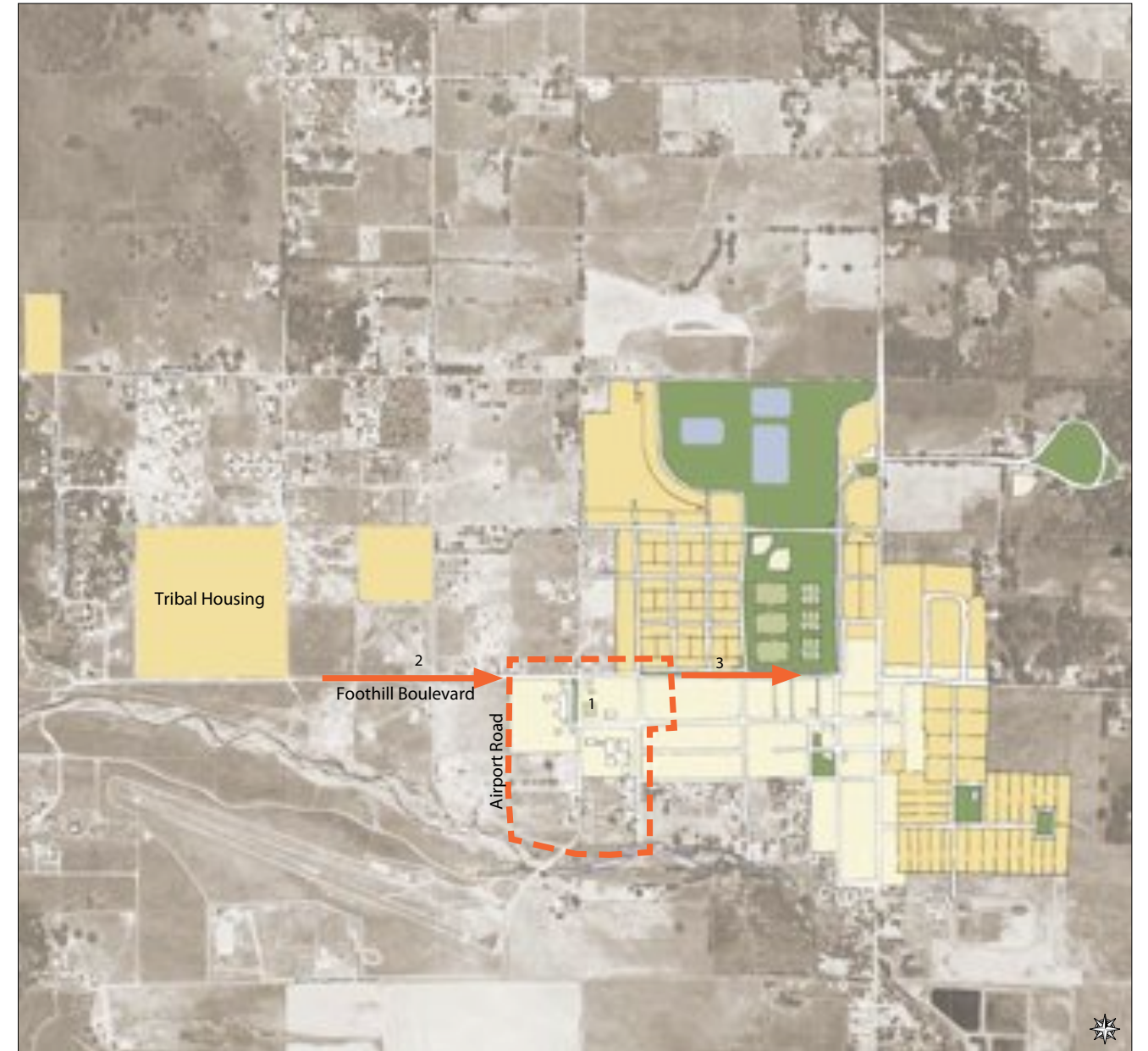
B. The intersection of Foothill Boulevard and Henderson Lane/Airport Road has a very large turning radius.



C. The intersection of Airport Road and Howard Street is a large expanse of undefined asphalt and gravel.



D. Howard street has a side walk on the south side of the street but does not provide proper facilities for bicyclists.



**Nodes and Potential Projects**

**School Center**

- 1. Intersection Improvements: Foothill Boulevard/ Airport Road intersection and Howard Street /Airport Road intersection.
- 2. Foothill Boulevard Improvements
- 3. Foothill Boulevard Extension

# School Center Intersection Alternatives

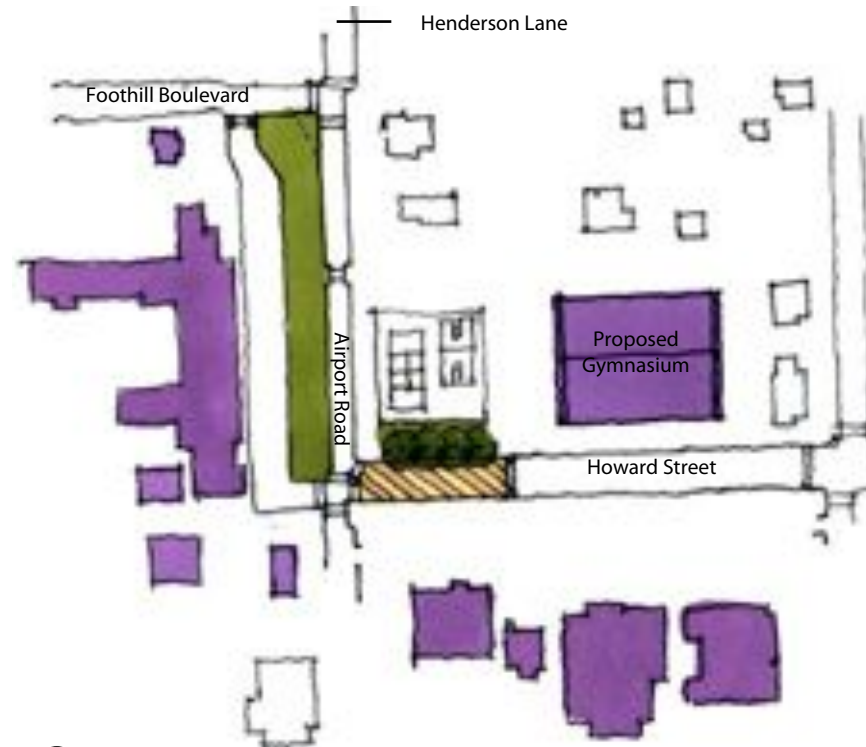
During the charrette, the Design Team looked at several different alternatives for the "dogleg" intersection of Foothill Boulevard, Henderson Lane, Airport Road and Howard Street. Each option would work well to slow down traffic and create a safer environment for pedestrians; however, there are varying degrees of complexity and cost associated with each.

Options 1 and 2 can be completed within the existing right-of-ways and Round Valley Unified School District property. Both options will require detailed design and engineering, funding, and permission from the County and School District to implement.

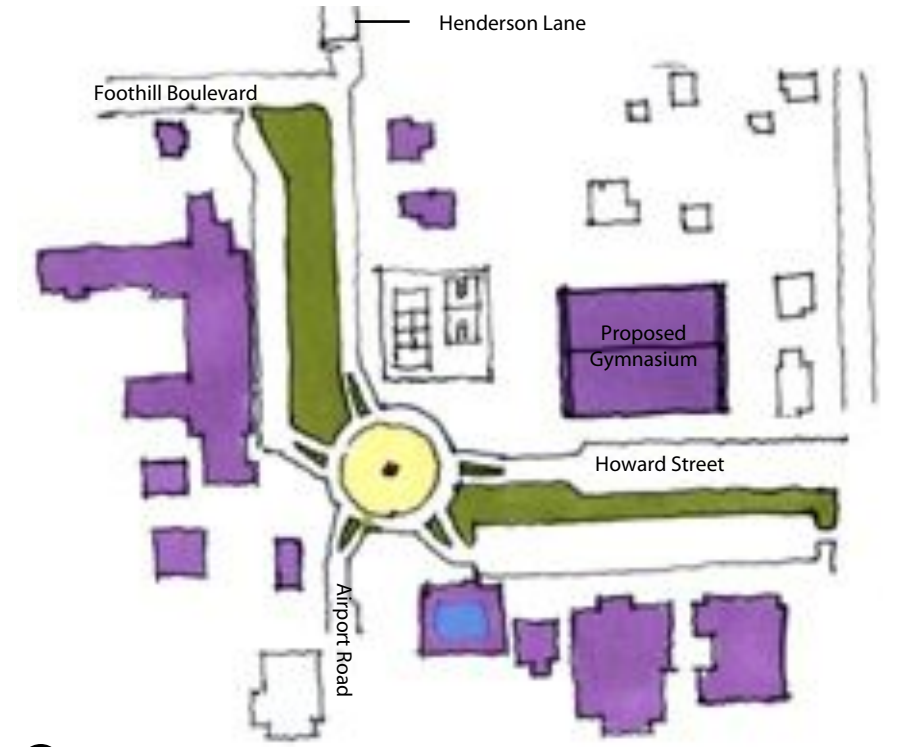
Options 3-5 consider the long-term extension of Foothill east of Henderson to 162. This extension can work to relieve traffic and pressure on Howard Street as it passes through downtown, and allow for a more pedestrian-oriented environment on Howard. Extending Foothill will require securing of right-of-ways from various owners, detailed design and engineering, and funding.

Option 1 is the most straight forward and cost effective in calming traffic and provides an increase in safety for pedestrians and bicyclist in the short term. Implementing Option 1 does not preclude the option of implementing one of the other options when more funding becomes available, including the long-term extension of Foothill Boulevard.

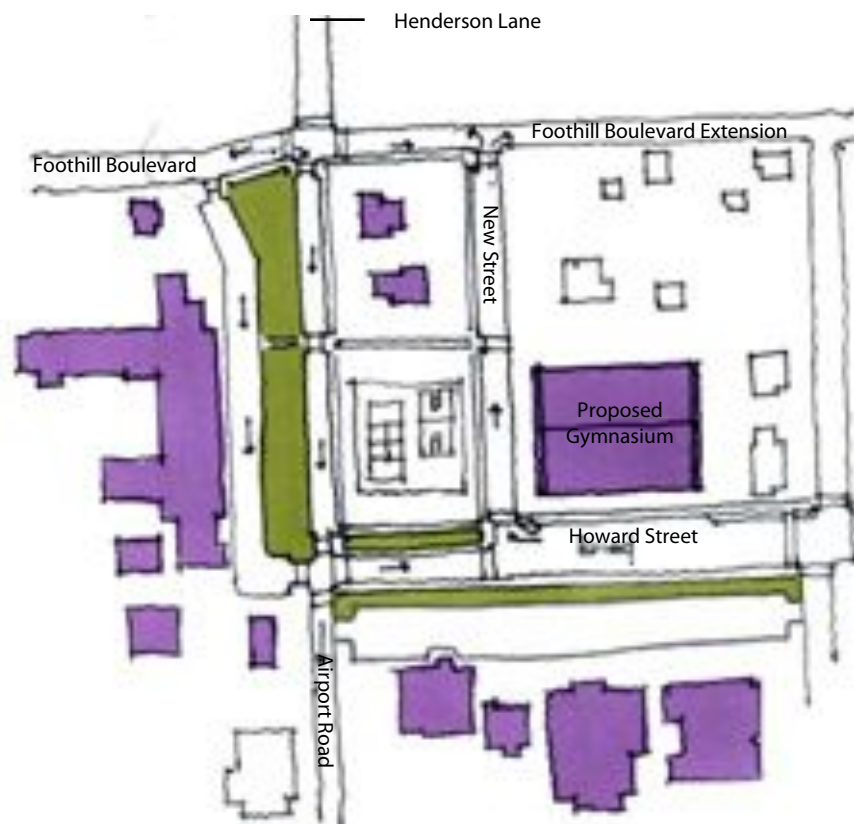
The Indian Tribes are considering developing a new gymnasium near the school center. The options shown include the integration of the gymnasium program into the school campus in the vacant lands on the north side of Howard.



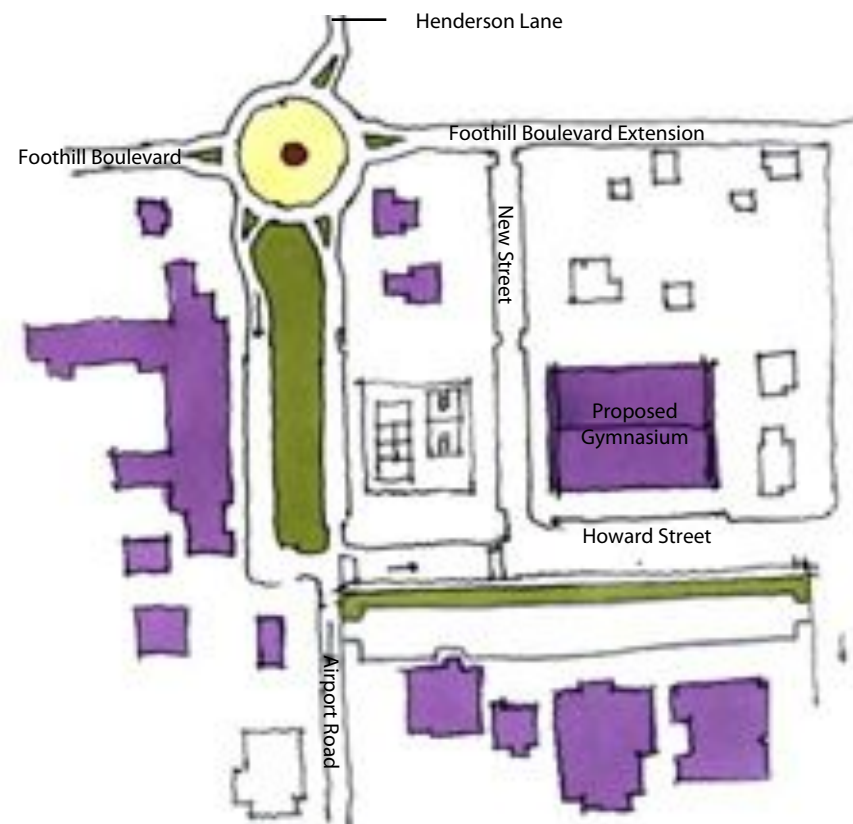
1 T intersection at Foothill and Henderson Lane. Narrowing of intersection at Airport and Howard with trees and Artwork on Howard Street. New cross-walks at intersections.



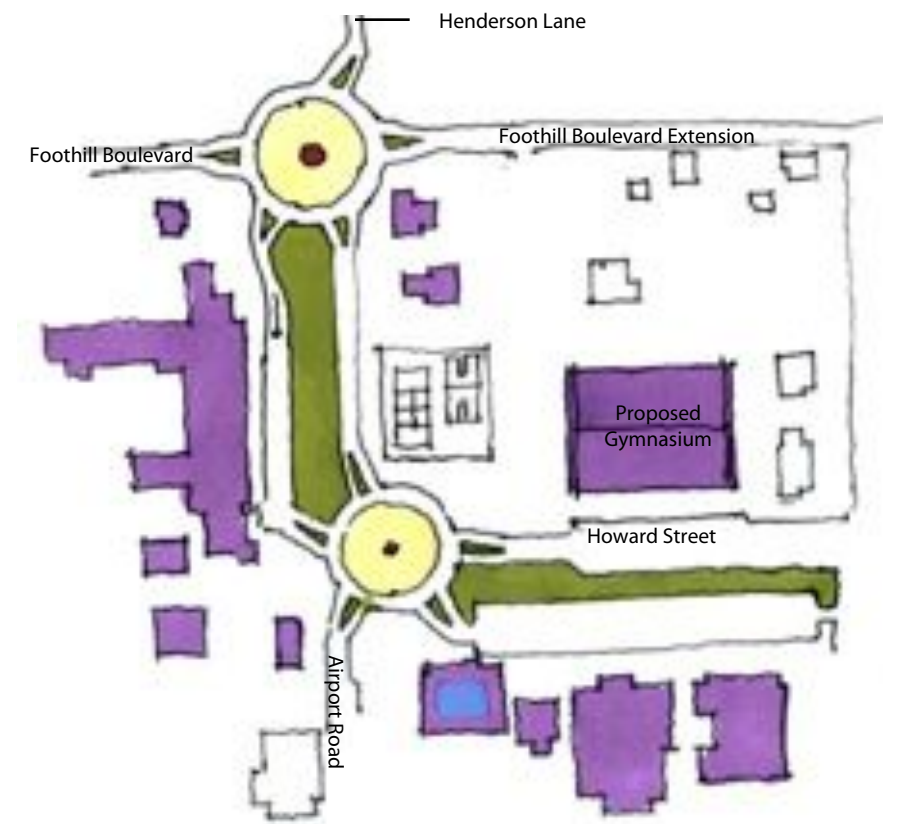
2 T intersection at Foothill and Henderson Lane. Roundabout at the intersection of Airport and Howard.



3 Foothill Boulevard extended and a simple 4 way intersection at Henderson Lane. New one way loop around the ball courts and after school programs.



4 Foothill Boulevard extended with a round about at the intersection of Henderson Lane. New two way road runs next to the ball courts and after school programs.



5 Foothill Boulevard extended and two roundabouts on Airport Road, one at Foothill Boulevard and one at Howard Street.

# School Center Intersection: Preferred Alternative

## School Intersection Improvements

The preferred alternative is a practical short-term option to solving the traffic calming needs and pedestrian and bicyclists needs of the community around the schools.

### Foothill Boulevard

The intersection improvements call for sidewalks on both sides of Foothill Boulevard, Airport Road and Howard Street. The intersection of Foothill Boulevard and Henderson Lane/Airport Boulevard should be converted to a "T" intersection with a stop sign on Foothill Boulevard.

### Airport Road

Crosswalks should be added where Airport Road intersects Foothill Boulevard and Howard Street. A mid-block crossing should be added along Airport Road to facilitate crossings between the Round Valley Elementary School and the after school program and ball courts.

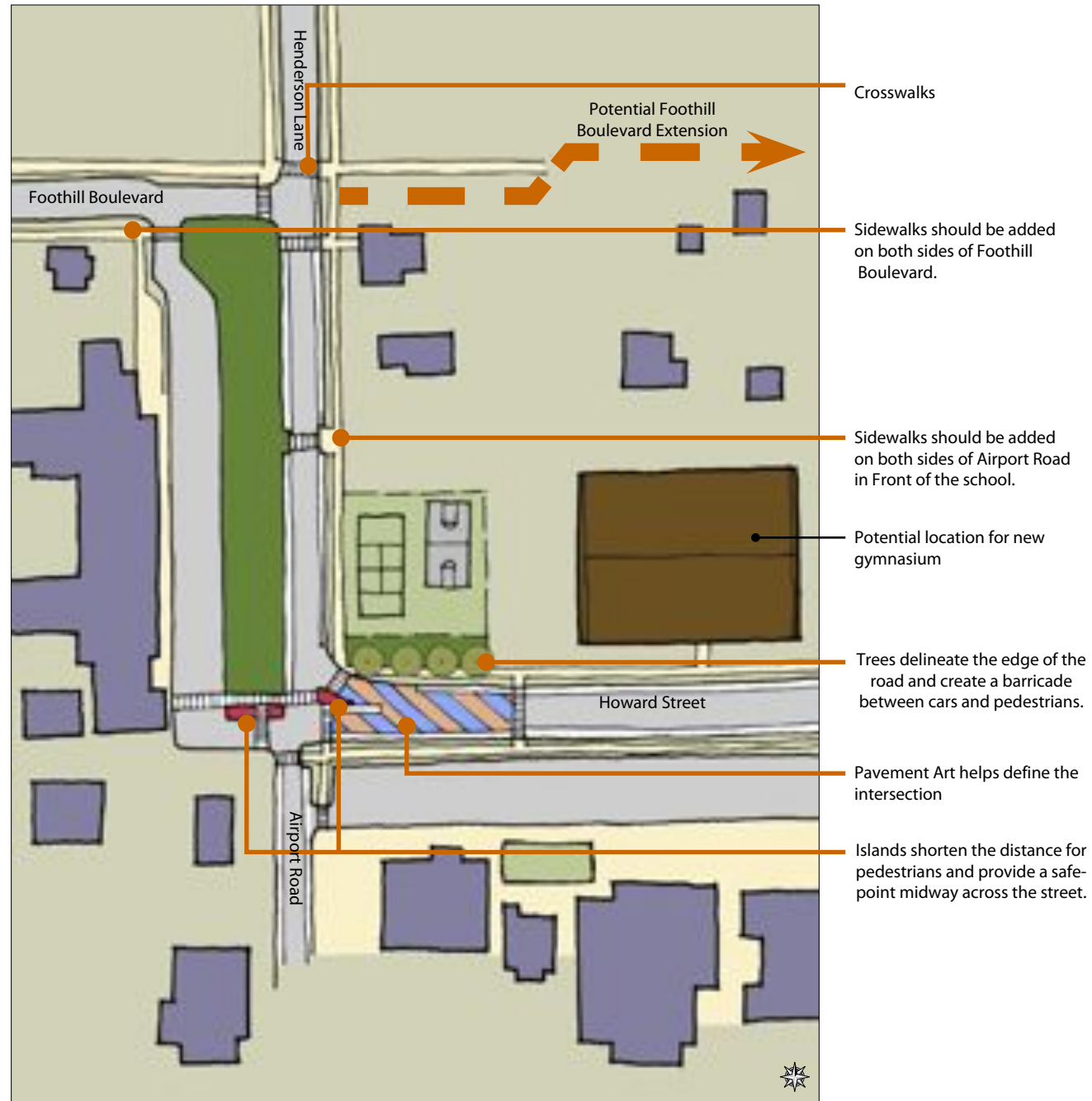
### Howard Street

At the intersection of Howard Street and Airport Road the paved surface area should be reduced. Pedestrian islands should be added to define a right hand turn lane and shorten the crossing times across Howard Street. The addition of crosswalks and pedestrian islands at the exit from the Round Valley Elementary School parking lot will better define where pedestrians should cross.

To the east of the intersection, there is an opportunity to implement a pavement art project. Along Howard Street a new sidewalk should be added to the north side of the street and the existing southern sidewalk should be rebuilt. Other improvements to Howard street could include the addition of bicycle lanes.

### Other Initiatives

During the charrette the design team learned that the Indian Tribes were considering the development of a new gymnasium to provide athletic facilities for local youth. Although other sites may be under consideration, the gym is shown here on vacant lands north of Howard. Siting this gymnasium near the Round Valley educational campus in this way would be beneficial for many reasons, including sharing of parking, clustering of services, and ease of access. These measures can be expanded upon once Foothill Boulevard is extended eastward.



Community members in the Portland, OR neighborhood paint an intersection.



An example where an intersection was painted, note the crosswalk stripes were intended to increase visibility.



Other amenities added to intersection could included a coffee station and bench.

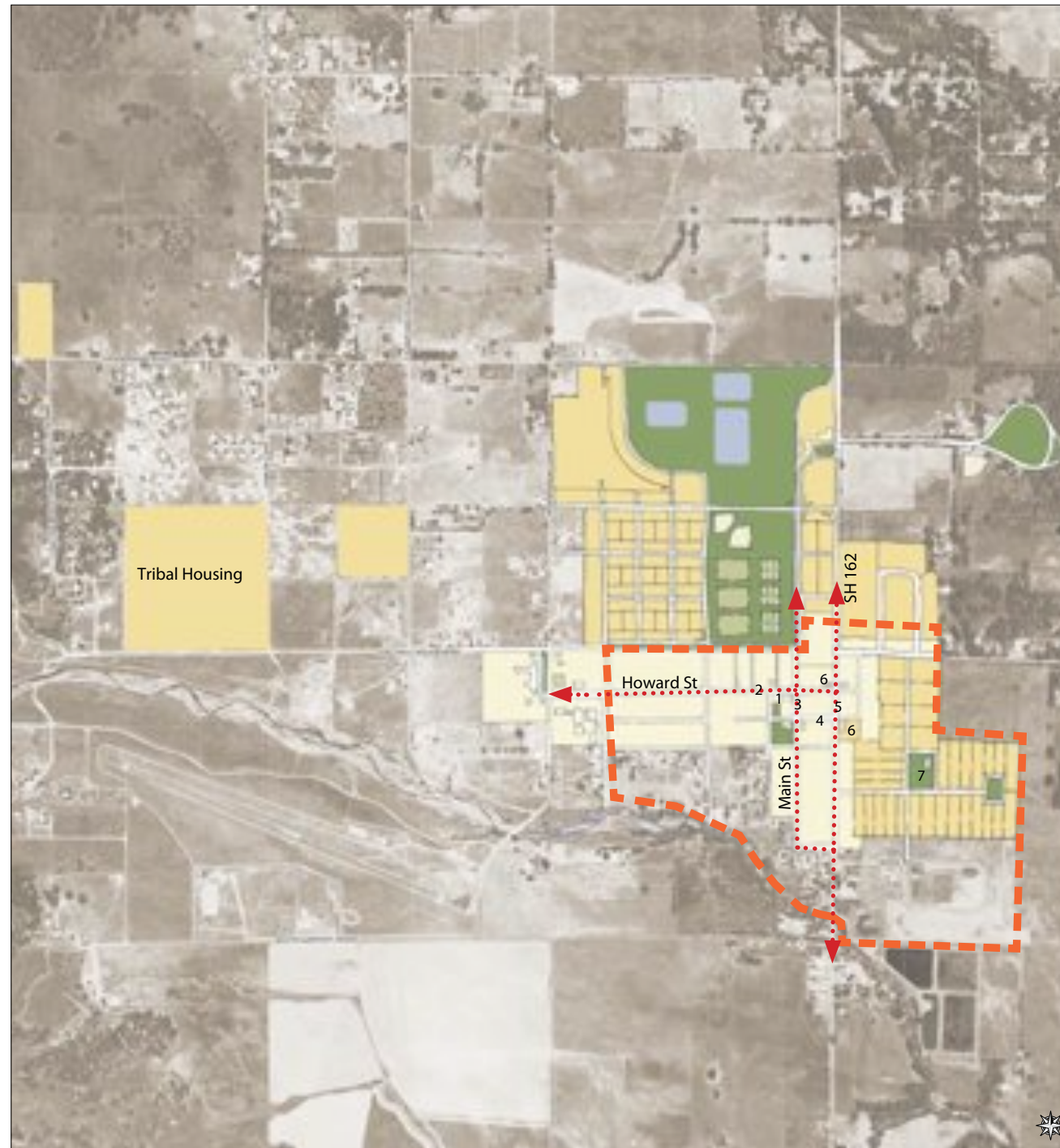
# Downtown Projects

The Downtown projects focus on stitching together the community assets found in downtown Covelo. These projects include providing additional on-street parking and pedestrian and bicycle amenities to the streets found within the Downtown. The initiatives also locate places where new infill development might occur.

Despite limited economic activity, downtown Covelo does support a variety of entrepreneurs and small businesses. Improvements to public space can assist in creating a healthy environment for small businesses that may eventually be able to establish a more permanent presence through continued investment. While many of the design concepts on the following pages may seem unlikely in the short term, they should be considered for their potential long-term viability.

**Issues:**

- A. High speed traffic on Howard Street.
- B. High speed traffic along State Highway 162.
- C. Disrepair or lack of sidewalks.
- D. Underutilized and vacant land.



**Nodes and Potential Projects**

**Downtown**

1. Farmer's Market and Library Commons
2. Howard Street Improvements
3. Main Street Improvements
4. Greely Street Improvements
5. State Route 162 Improvements
6. State Route 162 Infill
7. Small Farms Housing & Economic Opportunities

● ● ● Downtown Bicycle Circulation



**Farmer's Market and Library Commons**

The large open space at the intersection of Howard Street and Perry Street is already used as an informal community gathering space, animated by the existing coffee stand on the south side of Howard and the BBQ tent in front of the VFW. Activities such as the weekly Farmer's Market and recent community bicycle rides have brought additional energy and vitality to the area.

The future Library Commons facility will provide a strong source of daily activity in the area that should be used to encourage public space improvements and positive community gathering. A certified kitchen and café will be oriented to the open space, creating a good opportunity for a more formal space between the Library Commons and the existing coffee stand. The Farmer's Market could use such a space. Benches and a fountain could also be added to the grove to formalize the park.

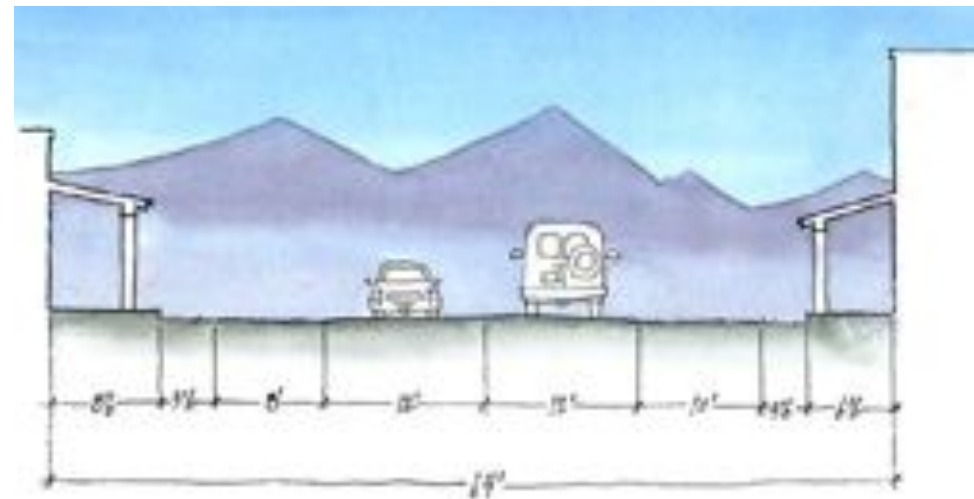


***Clockwise from Top Left:** The Friday afternoon Farmer's Market encourages community commerce and related activities, including bicycle repair and handicrafts; Coffee stand is an asset to the downtown and brings activity to the farmer's market and Library Commons; Regular movie nights at the Library Commons bring the community together; The planned improvements for the Library Commons (plan by Jay Leahy) include a certified kitchen, community meeting room, café, and terrace, all oriented to the Farmer's Market and Library Commons.*

# Howard Street Improvements



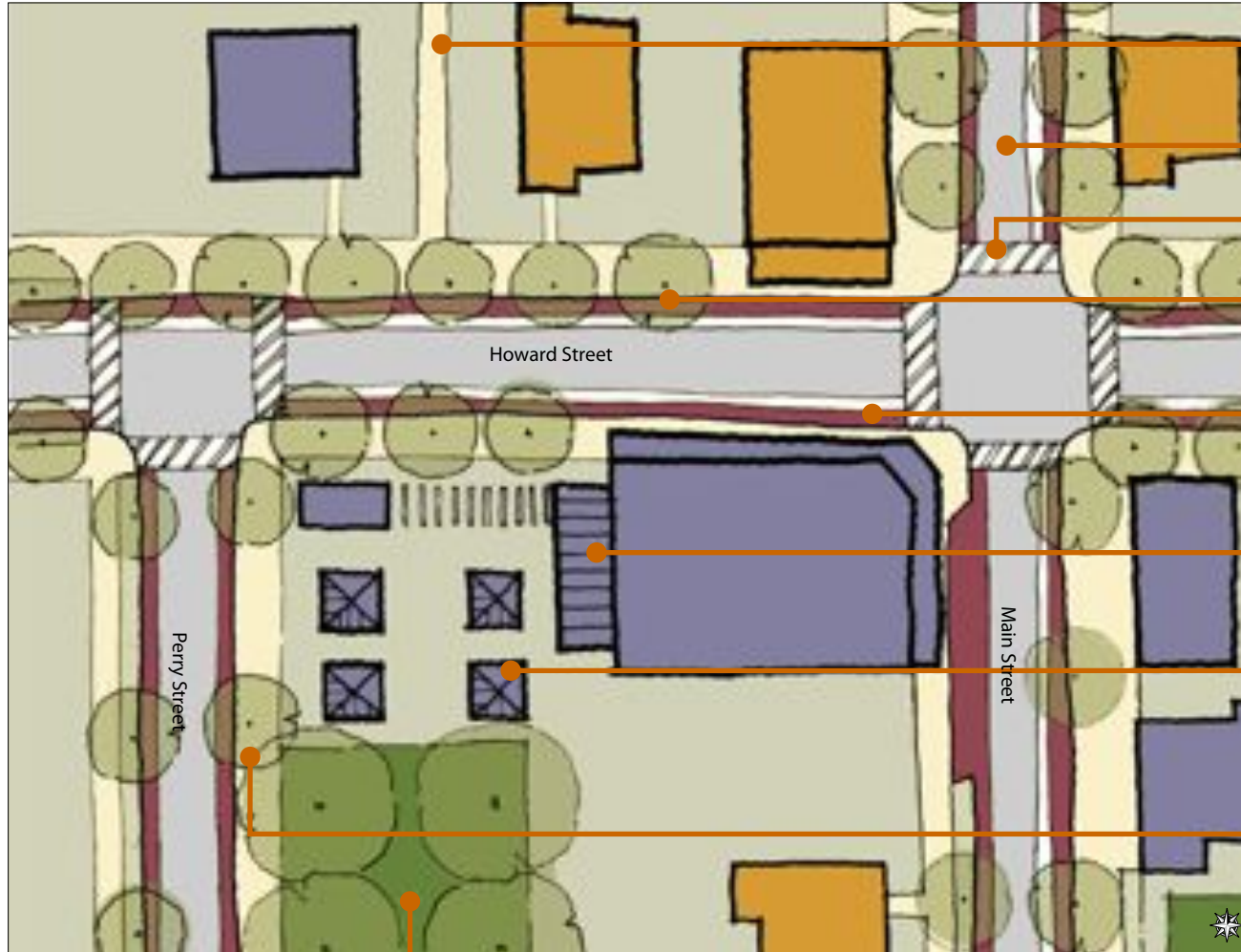
Existing view of Howard Street at the intersection with Main Street



Existing right-of-way shows two 12' travel lanes, narrow shoulders of gravel/dirt and the galleries of existing buildings which extend over the sidewalk.



Improved 64' ROW illustrates two 10' travel lanes, 5' bike lanes, 7' parallel parking lanes, and 10' improved sidewalks.



- Trail connection to Foothill Boulevard Extension
- Class III Bicycle Lanes along Main
- Highly visible crosswalks at all intersections
- Trees line the edge of Howard Street
- Clearly marked bike lanes and parallel parking lanes should be added on both sides of Howard St.
- New porch or gallery expansion for Library Commons adjacent to Kitchen
- Semi-permanent tents or pavilions could be set up in the improved plaza for farmer's market vendors.
- Improved sidewalks, trees and parallel parking lanes
- Improvements to park could include new landscaping and pavement, benches and water fountains



Examples of highly visible painted crosswalks and special paving used for shoulders. These treatments slow vehicles down and make streets more pedestrian friendly.

# Main Street Improvements



Existing view of Main Street at the intersection with Greeley Street



Illustrative image depicting potential new development at intersection of Main and Greeley Streets. Coordinating a plaza with such a new building can help ensure the long-term viability of good public spaces within the downtown.



Existing right-of-way shows two 15' travel lanes, narrow shoulders of gravel/dirt and no sidewalks.



Improved 60' ROW illustrates an asymmetrical cross section with two travel lanes, 7' parallel parking lanes on both sides, and 6' walkway on the east side and a 15' planting area. The roadway can be striped with Class III "sharrow" bicycle lane markings to provide an alternative north-south route through downtown that parallels Highway 162.

Making Safe & Healthy Community Connections in Round Valley  
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Example of child friendly water feature.



Example of pavement art.



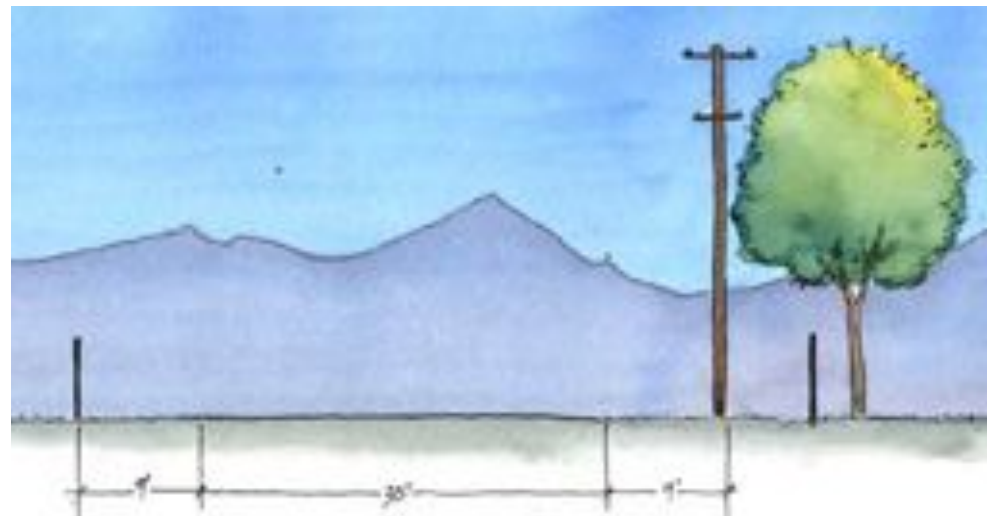
Example of pavement art.



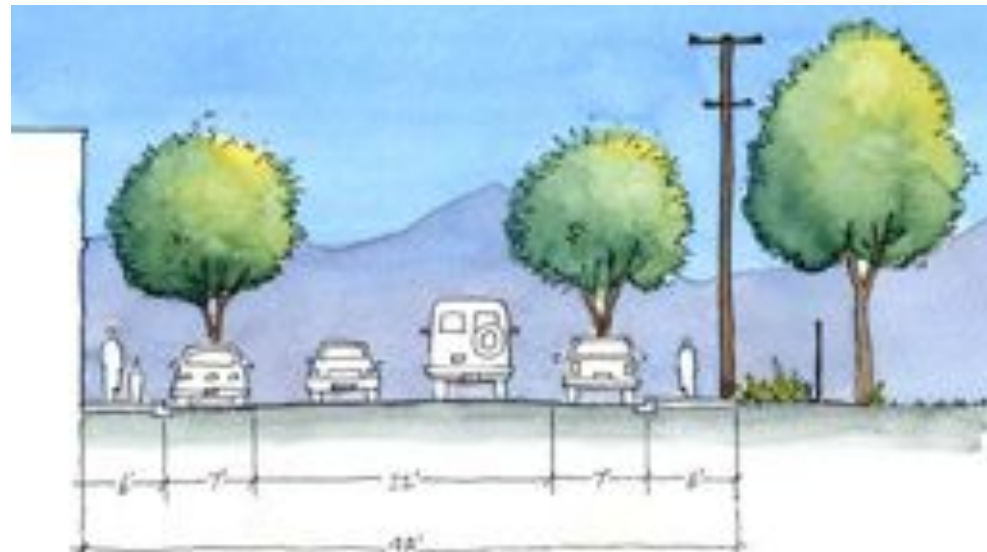
# Greely Street Improvements



Existing view of Main Street at the intersection with Greely Street



Existing right-of-way shows two 15' travel lanes, narrow shoulders of gravel/dirt and no sidewalks.



Improved 48' ROW illustrates two 11' travel lanes, 7' parallel parking lanes on both sides, and 6' sidewalk.



Illustrative plan of the intersection of Main Street and Greely Street.



Public art found in Round Valley



Example of public fountain.



Example of outdoor eating area.

# State Route 162 in Downtown Covelo Improvements & Infill



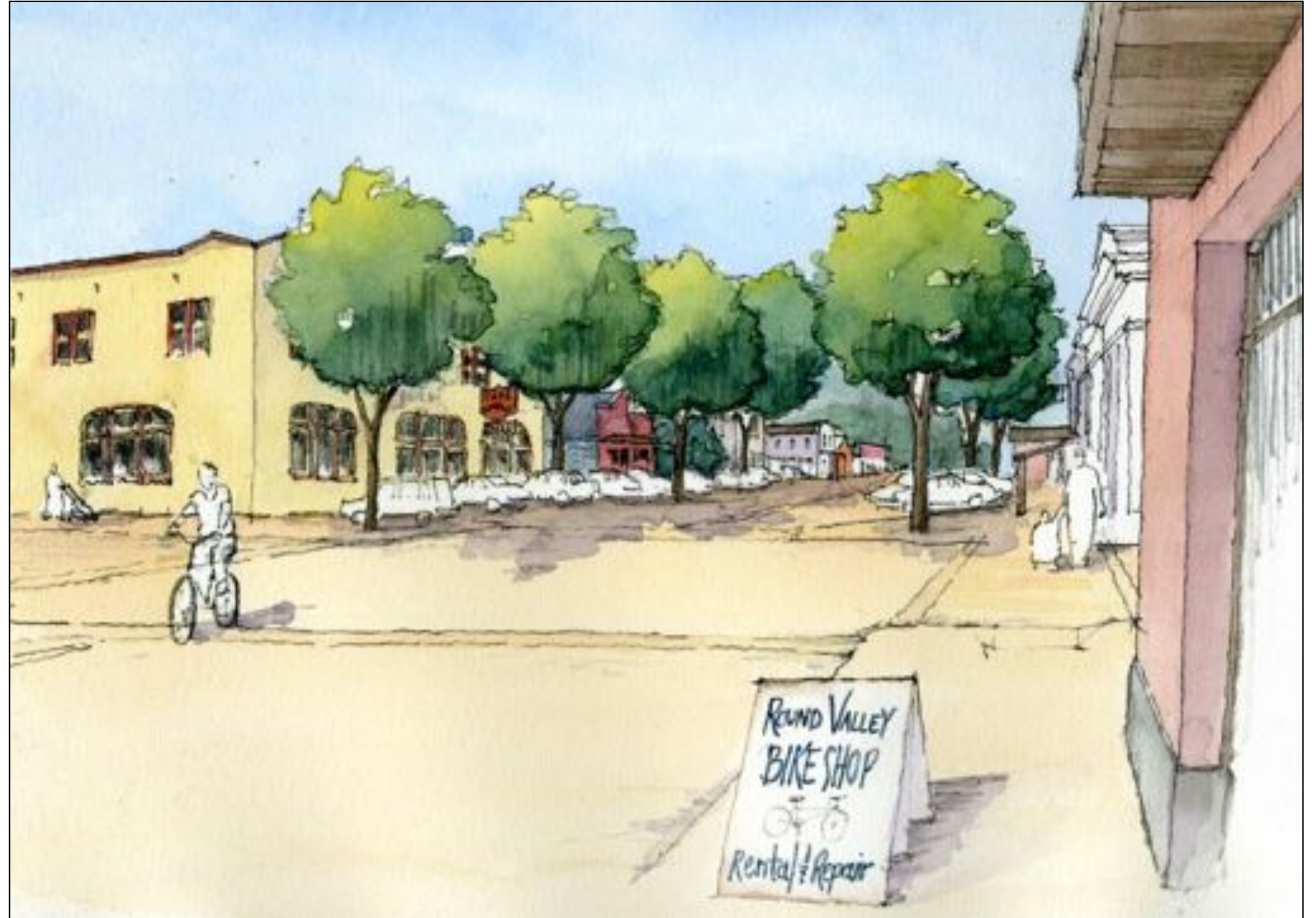
View of existing State Highway 162 (at Greely) looking north



Existing right-of-way shows two 11' travel lanes, wide shoulders with informal, on-street parking. Sidewalks are in various states of disrepair.



Proposed right-of-way shows two 11' travel lanes, angled on street parking with tree wells every 30'. The existing 56' cross section is suitable for such a configuration which can help calm traffic in the downtown and better service existing businesses; potential vehicle/bicycle conflicts can be mitigated if Class III facilities are implemented along Main.\*



View of proposed improvements to State Route 162 at Greely Street. Angled parking and planting of trees within the right-of-way can assist with slowing traffic speeds through the downtown area, creating a safer environment for pedestrians, and contributing to the viability of downtown businesses.

\*An alternative configuration could maintain two 12' travel lanes, two 8' parallel parking lanes, and stripe two 5' Class II bicycle lanes. Curb extensions with tree wells at the intersections could provide better crossings for pedestrians and provide opportunities for outdoor seating. In this case, the roadway could be narrowed from 56' to 50', and sidewalks could be increased from 8' to 11'.



Small Farms Housing & Industrial Park

The eastern side of State Highway 162 is comprised of a few modest houses and some commercial properties. Recent commercial development, such as the Round Valley Industrial Park (along Riffe Road just east of 162), has been limited in scale and slow to develop.

During the charrette the design team learned that a relatively large parcel east of 162 and north of the Round Valley Industrial Park has good soils and is potentially available for new development opportunities. Round Valley has established a strong organic farming presence that has resulted in limited "agrotourism" opportunities. Such endeavors could further benefit from a presence within downtown Covelo in close proximity to travelers and passing visitors. This parcel could be used for small-scale farming to occur in a live-work environment, directly across from the downtown. These small lot farm houses could vary from 1 to 2 acres in size allowing for both residences and room for small scale farming.

The new development could also connect to the industrial park to the south, where it could provide agricultural processing facilities for the small lot farms and the larger farms found in Round Valley.



Illustrative plan of proposed small lot farming in Covelo.



Small lot farming.



Industrial Park



Similar "live-work" opportunities traditionally existed in many historic towns.

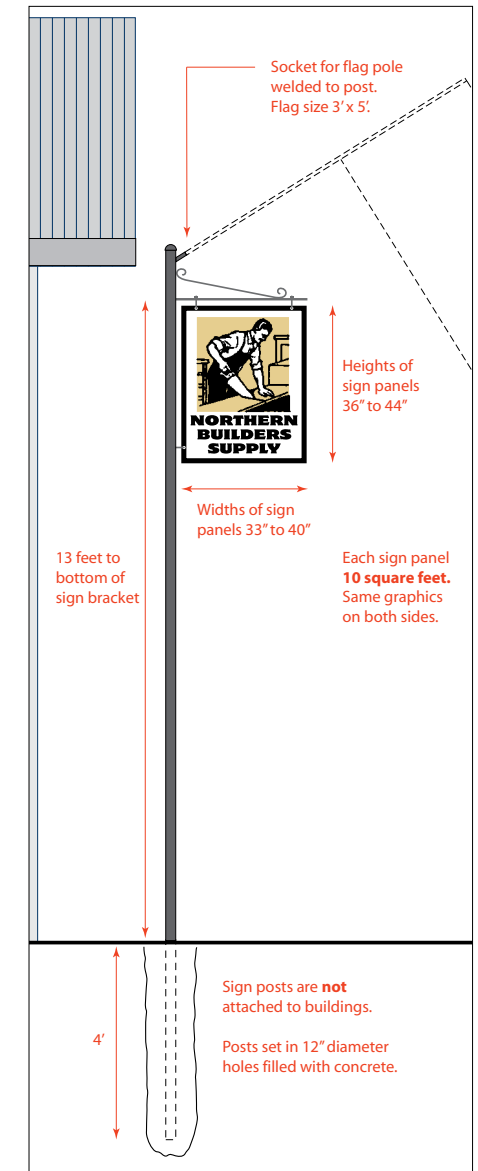
# Infill Development



Infill development potential along State Highway 162

Infill development potential along State Highway 162

Infill development potential along Main Street



Post and signage examples done by local resident and graphic designer Michael Mills. These signs could also be placed on buildings as blade signs or grouped at corners.

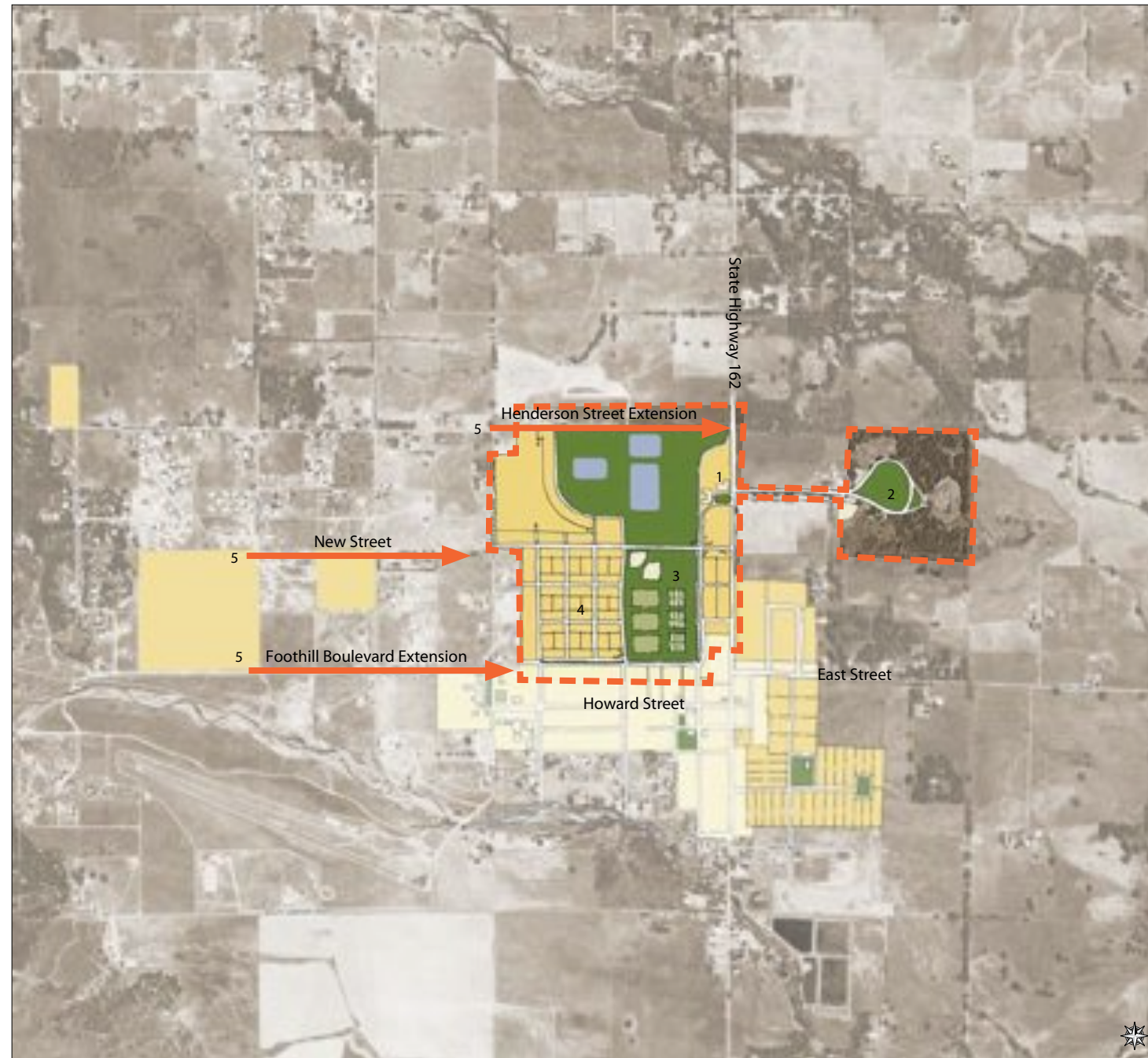
*Above:* Several parcels within the downtown could benefit from small-scale infill development, which could become more viable with relaxed zoning standards and the use of modular or pre-fabricated construction. Such structures could provide a setting for local businesses, as well as residents who may benefit from living in downtown Covelo.

# Tribal Areas

As the Round Valley Tribes build new housing, there is an opportunity to address some of the issues facing both the Tribes and the greater community of Round Valley.

New development can be oriented to create new physical connections to State Highway 162 and the downtown street grid, providing opportunities to distribute downtown traffic to other areas. Howard Street, for example, could see a significant drop in traffic volumes if Foothill Boulevard is extended eastward through to Highway 162. Additional opportunities exist within the tribal lands, including Henderson Street.

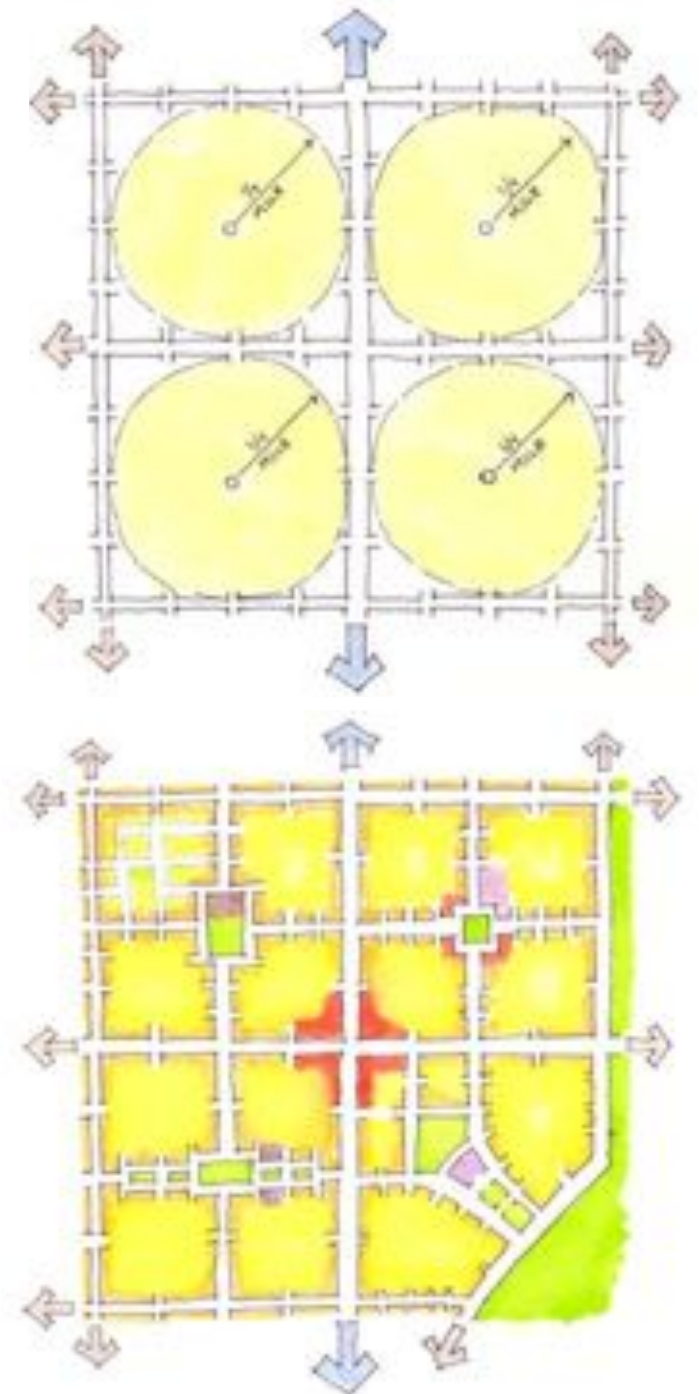
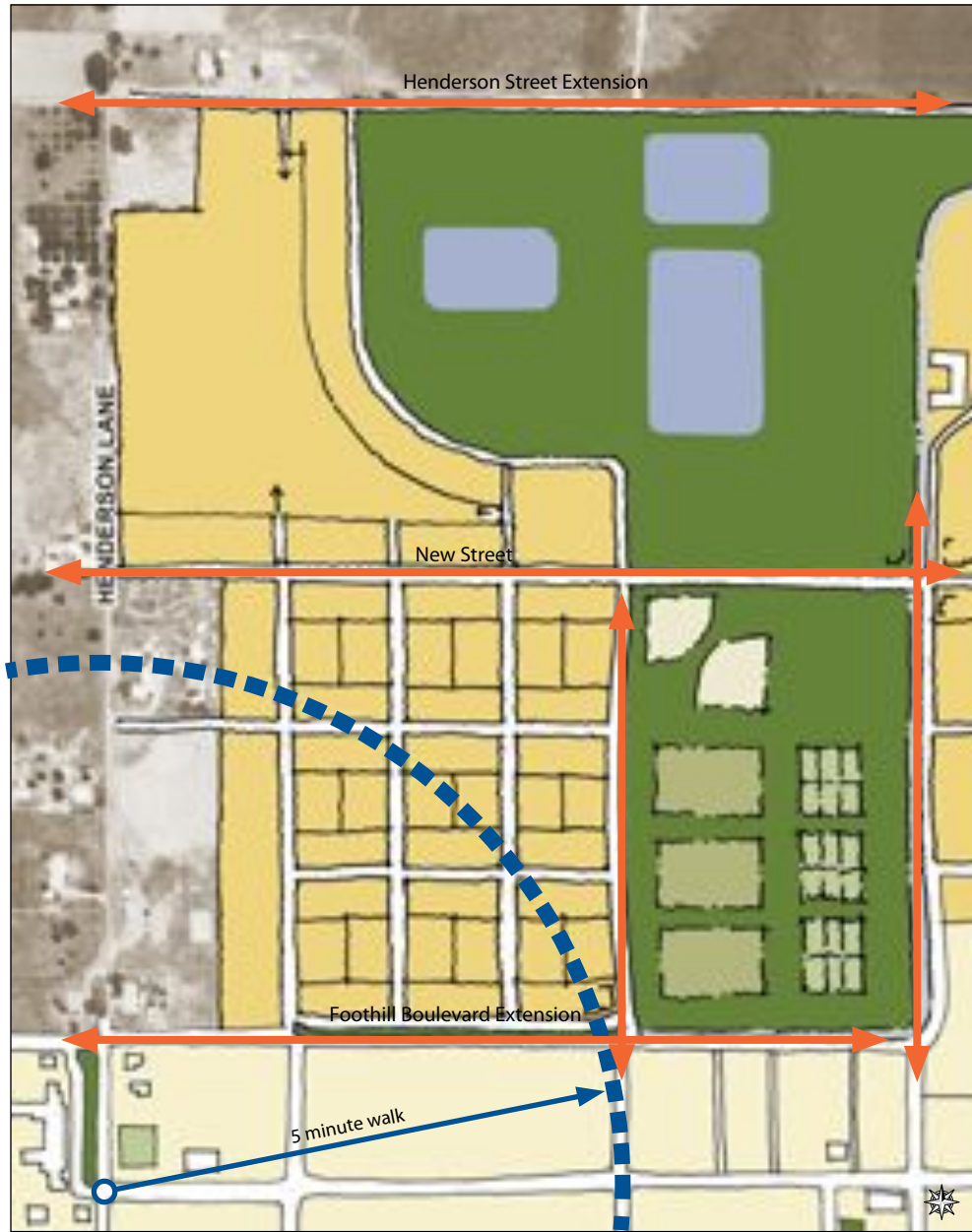
Future improvement of Tribal Lands provides both opportunities and potential constraints. On the positive side, the Tribes possess the ability to determine their own land uses and can even use California regulatory tools, such as Specific Plans, to develop customized and site-specific design and zoning solutions. On the other hand, the makeup of tribal lands, as the design team began to learn during the charrette, is at times subject to ownership patterns, such as Heirship Lands, that may make large-scale planning initiatives somewhat difficult. Community stakeholders should continue to maintain an open dialogue about future planning endeavors in order to optimize community connectivity, pedestrian safety, and potential economic development.



## Nodes and Potential Projects

- A** Tourism/Recreation Center
  1. Casino Expansion
  2. Hidden Oaks Campgrounds
  3. Park & Recreation
  4. Tribal Housing
- B** Trails & Future Connections
  5. New Connections to State Highway 162

# Connecting Tribal Housing



Development of tribal housing in close proximity to the Round Valley schools and job opportunities (Casino, industrial park and Downtown shops).

**Above:** Blocks can be organized into neighborhoods approximately 1200' (1/4) in diameter that are bound together (top) by a highly connected, pedestrian-scaled network of well-designed small arterials, local streets, and alleys. Plans should take into account placing neighborhood amenities (such as parks, day care centers, etc.) within 1/4 mile of each residence, and commercial amenities (such as neighborhood shopping centers) at the intersection of four neighborhoods (bottom).

# Tribal Casino, Recreation Park and Hidden Oaks Campground



Hidden Oaks Casino



Rodeo grounds at the Hidden Oaks Campgrounds



Potential New Tribal Housing      Recreational Facilities      Casino and Potential Hotel      Opportunities for Housing or Commercial Uses      Crosswalk between Casino and Hidden Oaks      Hidden Oaks Campground Improvements

## Tribal Casino, Recreation Park & Hidden Oaks Campground

The conversion of the Hidden Oaks Campgrounds to a year round accessible campground and the conversion of the Tribal casino into a more permanent facility provides an opportunity to create a destination on State Highway 162. The introduction of trails throughout the valley could attract tourists who stay at the campgrounds and hike and bicycle around the Valley. In addition a small new hotel could add accommodations for tourists not inclined to camping but who might wish to bike around the valley and go to the Casino.

Over the longer term, new recreation facilities could provide more opportunities to attract tourist and provide facilities for the Round Valley community. The recreational facilities could host bicycle tours around Round Valley similar to those found in communities of Napa and Sonoma. Football, soccer and baseball tournaments could also be held on the recreational facilities.

## Implementation Strategies

### Implementation

In order to move forward with effective implementation, it is recommended that the community pursue multiple aspects of the plan at once, looking for short-term opportunities and setting the stage for longer-term improvements. The community has been effective at identifying informal, quick and easy improvements and should continue to use the creativity and resourcefulness of its residents to do so. It is worth noting that the degree to which arrangements can be formalized will help ensure long-term success. Continuing the existing collaboration between community groups and looking for additional ways to increase partnership and communication is encouraged and will be a key to success, as most of the community's vision involves multiple jurisdictions and property owners.

In order to best coordinate next steps, it would be helpful to identify community leaders that can pursue necessary fact finding and research, spearhead implementation activities, and act as liaisons between potentially collaborating groups and individuals. The formation of a community committee that meets regularly will help focus the dialogue and activity.

Note that the recommendations on this page were based on what was happening in the community at the time of the charrette in 2008. Since that time, there has been progress, including the County using Safe Routes to School grant funds to make infrastructure improvements, movement on the Tribe's Comprehensive Plan, and California Endowment funding acquired to support additional grant writing.

#### Recommended Next Steps for Trail-Related Projects:

- Research specific land use constraints and opportunities on tribal lands with regards to land ownership, heirship land issues, etc. Opportunities to further this effort may exist through the Tribes' current work on a Comprehensive Plan with consultant Paul Mills of The Center for Applied Research.
- Secure information regarding existing conditions and locations of right-of-ways and easements along proposed trail routes, particularly along High Priority routes.
- Open chains of communication with adjacent property owners to investigate potential methods for trail right-of-way acquisition, particularly along High Priority routes.
- Determine ability of National Guard (expected to be in community in 2011 or 2012) to support High Priority trail construction, including clarifying what needs to be done in advance to maximize the use of their time.
- Seek/apply for funding for various trail, bike, and pedestrian projects. Since the charrette, the Round Valley Indian Health Center has obtained a grant from The California Endowment to write five grants for this trail construction by the end of 2010.

#### Recommended Next Steps for School Center-Related Projects:

- Identify "Phase 1" improvement project most suitable for Mendocino County's Safe Routes to School grant funds, considering opportunity for additional future improvements. *Completed summer 2009*
- Identify responsible/willing agency for further project implementation around school center. Round Valley School District can consider partnering with Mendocino County or Round Valley Indian Tribes on a state or federal Safe Routes to School grant proposal, which could be used to conduct a comprehensive Safe Routes to School plan.

#### Recommended Next Steps for Downtown-Related Projects:

- Communicate with County regarding appropriate land uses for downtown area through the ongoing General Plan Update.
- Open chain of communication with County regarding potential application of customized zoning to town of Covelo. Custom zoning could be modelled after Mendocino Town zoning and or a Form Based Code.
- Pursue the on-street parking and bike/pedestrian amenities mentioned on p. 25.
- Pursue planning and funding of streetscape improvements.
- Coordinate plans for a downtown center with the group in charge of the Library Commons project.

#### Recommended Next Steps for Tribal Area-Related Projects:

- Research appropriate plan-creation and implementation strategies for tribal lands as part of ongoing Comprehensive Plan with The Center for Applied Research.
- Communicate with County regarding appropriate land uses for tribal lands through ongoing General Plan Update.



## Trail Implementation Strategies

### Implementation

This section provides information and steps for implementing trails in Round Valley. Round Valley trails will likely be constructed over time based on the availability of funding, with each completed segment functioning either as a stand-alone project or as an extension of an existing trail. There are two forms of trail project implementation covered: 1) a community-based trail project that is built without use of public land (other than Tribal land) or public funds and 2) a project that involves use of Caltrans and/or Mendocino County public road right-of-way and/or public funding that carries requirements for a more formal process of planning, design, permitting and construction. It is highly likely that both community-based efforts to plan and implement trails, and formal public projects, will be required to implement the envisioned trail system.

### Community-Based Informal Trail Project Steps

Public input during the design charrette indicated that permission could be obtained from the Round Valley Tribes to construct the trail on Tribal lands, and from other local property owners who support the trail. Community members are eager to see progress and envision being able to complete portions of the trail with donated materials or labor. A community-based trail project will involve the following minimum steps:

1. Trail sponsors would need to get organized to help plan the trail, solicit donations, and potentially be holders of a trail easement, at least until the County or other agency was willing and able to take over the easement. It might be advantageous to incorporate as a non-profit organization (501 C-3), or bring the project under the wing of an existing non-profit or the Tribe.
2. Plan the alignment of the trail on a map and (with property owner permission) flag the trail in the field so the property owners and the public can see what is proposed.
3. Professional land surveying may be necessary in some locations, or even along the entire route, to resolve property boundaries and topography for design and to prepare easement documents.
4. Get permission from the property owners – at least a written agreement – and ideally a formal easement. The easement would need to be granted to an agency or organization that would own the rights for the trail on behalf of the community (see Right-of-Way Acquisition/Permission section below for details).
5. Design the trail segment adapting the general design details in this report to specific site conditions. Pay particular attention to drainage conditions. It would be ideal to lay out the trail after heavy rains to see what areas are wet or flooded, and identify locations where the trail may need culverts, ditches, raised surface, or other treatments. Prepare materials lists, construction steps and schedules.
6. Secure donated funds, materials, and labor to build the trail. Ideally, there should be no strings attached to the donation except that it be used for the trail.
7. After making sure that community, property owner, and agency concerns (e.g. regulations and policies that apply to private projects) are addressed, mobilize and go build it!

### Public Agency Trail Project Steps

If the project is sponsored by Mendocino County or Caltrans, or uses public lands or funds secured through these or other agencies, a more formal implementation process will be required. This may include specific procedures for planning, environmental documentation, design, permitting, bidding, construction management and project administration. The following steps are typically required for a formal public agency project. Generally a public project will require a minimum of two years; one for planning, permitting and environmental process and one for final design and construction. Most projects take three to five years of active effort. Caltrans has its own specific process and format for each of these steps that may be required if Caltrans is responsible.

#### 1. Funding for Design, Permitting, and Construction

Grant funding will need to be obtained for surveying, property or easement acquisition, if required, environmental documents, preparation of construction and permit documents, and for construction. A basic map, description, photos, and cost estimate for the proposed project, as described under community-based project, must be prepared, at minimum, to support a grant application. The materials in this report may provide a good start, with some refinement and additions to address specific proposed projects. Potential grant sources for trail construction are outlined in this document.

#### 2. Base Information

For a formal project, detailed base maps with right-of-way/property lines, topography (contour lines and/or spot elevations) and features such as roads, trees, buildings and fences must be prepared by a land surveyor or civil engineer covering the trail route and adjacent areas. The pertinent codes, policies, adjacent plans, utilities and other background information must be researched and analyzed for its relevance to the project.

#### 3. Preliminary Design

More detailed plans would be developed, typically by a team of landscape architect/trail planner and civil engineer. The plans would have relatively accurate locations, dimensions, materials and features to allow a correspondingly detailed preliminary cost estimate, but they would not have all the information required for bidding and constructing the project. The preliminary plans would be the basis for environmental documents and public and agency review of the project.

#### 4. Environmental Documentation

State law and nearly all grant programs require environmental studies of the project, and findings by a responsible public agency to comply with the California Environmental Quality Act (CEQA). If federal funds or interests are involved, the document may also need to address the National Environmental Policy Act (NEPA), which has a slightly different process and product. As a sovereign nation, the Tribe may be exempt from these requirements on their land and projects, but grant funding could carry the requirements in any case.

The environmental document must review and address a broad range of potential issues. Often the most complex issues to address are special status (rare, threatened or endangered) plant and animal species that are protected under the law. For example, the discovery of issues with special status plants and cultural/archaeological resources in the road shoulder area caused the Caltrans-sponsored High Risk Rural Roads grant project for Round Valley project to be cancelled.

#### 5. Permitting and Agreements

Project sponsors may need to obtain several types permits and agreements. As a sovereign nation, the Tribe may be exempt from these on their own lands, unless the requirement is imposed by a funding source.

#### 6. Any necessary planning stage permits from Mendocino County, such as demolition and tree removal permits;

- U.S. Army Corps of Engineers permit, for work that involves water or wetland fill, including consultation with the U.S. Fish and Wildlife Service;
- Potentially a Streambed Alteration Permit from the California Department of Fish and Game for work in or near the creeks;
- Storm Water Pollution Prevention Plan (SWPPP) and Water Quality Certification by the Regional Water Quality Control Board to comply with Section 401 of the Clean Water Act.
- Encroachment permit from Caltrans for any facility that is constructed in the state right-of-way (unless it is constructed by Caltrans).
- Clearing, grading and/or building permits (e.g. for bridges) from Mendocino County.

#### 7. Right-of-Way Acquisition/Permission

If acquisition or permission for use of property for the trail is required, this will need to be accomplished some time between preliminary design (when the feasible/desired alignment is defined) and finalization of construction documents, or at least prior to bidding and construction. Right-of-way acquisition/permission steps and approaches are outlined in detail below.

#### 8. Construction Documents

The preliminary plan drawings and descriptions will need to be translated into detailed construction plans, specifications and cost estimate that can be used to obtain permits and for bidding by contractors. This may require technical studies, such as to mitigate environmental impacts, address toxic contamination, provide soil borings and geotechnical studies for design or foundations for bridges, drainage studies and final design.

#### 9. Bidding

Contract bid documents for the project must be prepared, and the project must be advertised for public bid. The bids must be analyzed, and the sponsoring agency must award a construction contract to the lowest responsible bidder.

#### 10. Construction

In addition to the work of the contractor, construction of a public project entails designating agency and/or consultant staff to oversee the contractor and administer the project, including any grant-imposed procedures or paperwork.

## Right-of-Way Acquisition/Permission

One of the greatest challenges to implementing some of the Round Valley trails maybe the need to acquire permission to build the trail (right-of-way) from both public and private entities. Many of the segments of the trail will require the acquisition of an easement or a strip of land from private property owners. Special efforts should be made to gather input from property owners and the agricultural community, and to understand their needs and concerns. One of the basic goals of the Round Valley Trail project should be to protect and, where possible, to enhance the private properties along the trail alignments. National studies have consistently shown that trails, if properly designed and managed, help increase local property values and do not increase crime or liability rates.

Easements or right-of-way may be donated, purchased, leased, or otherwise acquired as part of this process. The lead organization or agency for each segment of the trail could also make special arrangements in terms of safety and liability protection, minimizing impacts to agricultural operations including spraying, screening the trail from adjacent properties, installing fencing and other barriers as needed, and posting and enforcing 'No Trespassing' signs and ordinances. The lead agency should contact each property owner individually to discuss options prior to any plans being made public. Any property owner along the proposed alignments may also initiate this contact with the appropriate lead agency. All discussions should be kept confidential throughout this process until an agreement, if any, is reached.

### Public Property Owners

The California Department of Transportation (Caltrans) and the Mendocino County Public Works Department are public agencies who have interests in or who control property on which the Round Valley trails may be constructed. They would have to grant permission, or become the sponsor or owner, for the trail to be constructed in their right-of-way, and Caltrans has specific procedures and requirements for this. Both Mendocino County (through the funded grant for a Safe Routes to School project on Howard Street) and Caltrans have been active participants in planning and helping to implement trails in Round Valley.

### Types of Right-of-Way Instruments

The Round Valley trails will require the development of agreements and possibly the acquisition of easements or right-of-way. There are a variety of instruments that can be used in this process.

#### 1. Memorandum of Understanding (MOU)

An agreement between agencies outlining which agency is responsible for the planning, design, construction and management of a bikeway. An MOU typically does not delineate any specific right-of-way boundaries and is less detailed than other instruments. Liability may be shared among all signing partners including the owner of the underlying property.

#### 2. License Agreement

Allows the use of a public or private right-of-way within specific parameters, but no rights to the land itself. The landowner may retain some liability.

#### 3. Easement Agreement

Similar to a license agreement, but typically specifies right-of-way that the trail owner controls within specific parameters set by the property owner. The right-of-way may be purchased or donated, and the landowner will retain some liability.

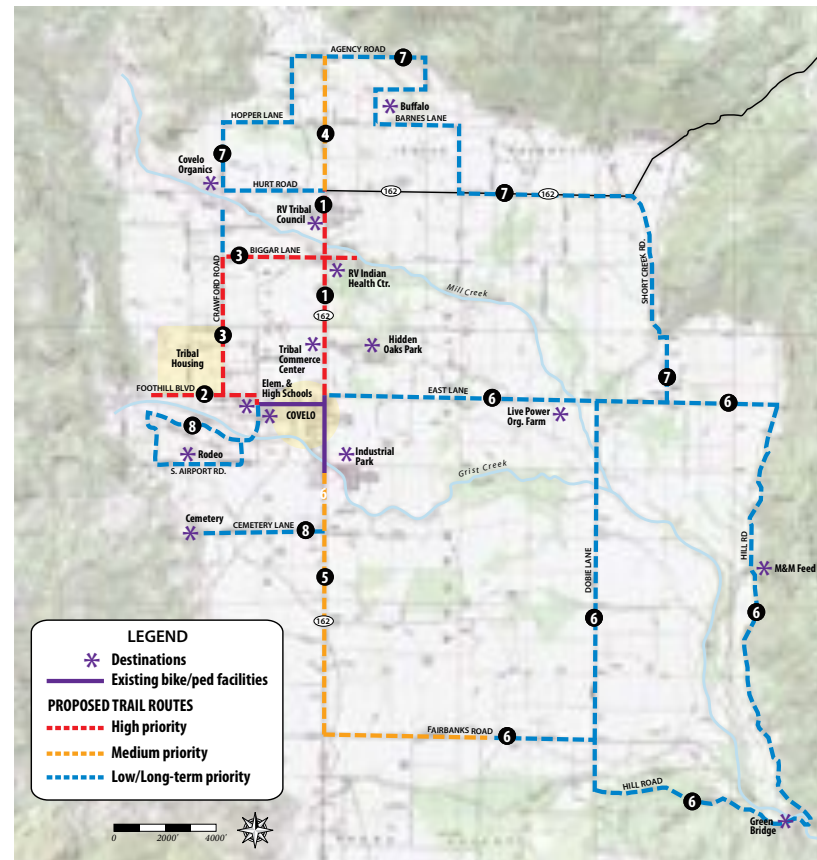
#### 4. Encroachment Permit

Used by public agencies such as Caltrans, this instrument allows local agencies to construct improvements within Caltrans right-of-way as long as they are designed and operated within established requirements. Both agencies would be protected under the Design Immunity statutes, but some shared liability would remain.

#### 5. Purchased/Title

Right-of-way for the trail may be purchased and the title transferred to the trail development entity. The major issues are (1) obtaining approval for a lot line adjustment and (2) the cost of the right-of-way. The former landowner would have no legal responsibility for anything that happens on the trail after the sale is complete.

The type of instrument selected will depend on a variety of factors, including the desire to maintain control over the underlying property, the need to be protected from liability, and other issues. Some funding programs require that the right-of-way be under control prior to an agency receiving a grant, and that the bikeway have a minimum serviceable life of 20 years.



Proposed Trail #	Length (ft)	miles	cost
1	7,945	1.50	\$1,543,050
2	5,660	1.07	\$536,146
3	9,700	1.84	\$893,690
4	5,300	1.00	\$338,603
5	16,750	3.17	\$1,531,420
6	61,760	11.70	\$1,012,787
7	42,860	8.12	\$51,753
8a	12,200	2.31	\$11,400
8b	7,100	1.34	\$187,646
<b>Total Project Cost:</b>			<b>\$6,106,495</b>

**Cost Estimates**

A reliable cost estimate is difficult to prepare for a concept-level plan such as the Round Valley trail system because there are many unknowns. The following concept-level cost estimates have been prepared to provide approximate costs for planning purposes, and a template to use for preparing more specific, accurate cost estimates. The costs are based on recent actual bid prices for similar trail projects.

The estimates are based on a series of assumptions about what is included in each of the envisioned trail segments. The actual project costs could vary significantly based on desires, field conditions and design or permitting requirements. These estimates are for a formal public project and do not include land or easement acquisition costs. If some or all of the project is completed as a volunteer/donated community-based project, some of these costs could be significantly reduced or avoided.

Based on the many assumptions inherent in the plan and the estimates, the total implementation cost of the Round Valley trail system is estimated to be approximately \$6.1 million, as summarized here and detailed in the following pages.

**Trail Segment 1 – Downtown to Tribal Center - 7,945 LF** - (quantity for all items except as noted). Assume trail is located on Tribal or private land with relatively level surface, good drainage and no roadside ditches involved

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	Clearing and grubbing - weed and brush clearing as required for trails and construction staging areas and temporary construction access. (assume avg. 16' width)	LF	\$4.00	7,945	\$31,780
2	Grading for 10' wide trail - ripping and compaction to 95%, assume 14' total width.	LF	\$10.50	7,945	\$83,423
3	10' wide trail surfacing - base rock - 6" Cl. II A.B. compacted, in place, w/ geotextile fabric on trail, installed 50% of trail length	LF	\$9.00	7,945	\$71,505
4	Culverts - includes trenching/backfill (6 CY/LF), 4-6" rock armor apron and double wall ABS plastic culvert, assume 18" x 12' culverts avg. 500' O.C.	EA	\$1,910.00	16	\$30,560
5	"V" ditch - approx. 12" deep, assume same length as trail	LF	\$8.00	7,945	\$63,560
6	Fencing - 5' high, 2-strand galvanized barbed wire on T posts with welded galvanized wire mesh with bracing	LF	\$15.00	7,945	\$119,175
7	Vehicular Gates - 12' steel tube with wire mesh - assume 1/ 1000 LF trail	EA	\$1,970.00	8	\$15,760
8	Trail Gates - pedestrian/bike (6' steel tube with wire mesh - assume 1/1000 LF trail )	EA	\$1,500.00	8	\$12,000
9	Signage - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	7,945	\$3,973
10	Hydroseeding - for revegetation and erosion control on trail perimeter and other disturbed areas (assume 10' average width)	LF	\$0.11	7,945	\$874
11	Erosion Control - Straw rolls, straw bales in ditches, silt fence, and other Storm Water Pollution Prevention Program (SWPPP) provisions per permit conditions. (allowance)	LF	\$2.60	7,945	\$20,657
<b>Subtotal A:</b>			<b>\$5,429.71</b>		<b>\$453,266</b>

<b>B. Trail Bridge Construction - at Mill Creek. Assume 170' length, including obtaining building permit</b>					
1	Grading for bridge approaches	CY	\$49.50	700	\$34,650
2	Concrete piers and excavation - 30" diameter by 21'-0" equals 0.2 CY per LF	LF	\$180.00	270	\$48,600
4	Concrete pier abutment and excavation, 8.5 SF by 46 LF	CY	\$1,218.00	20	\$24,360
5	Subdrain installation (allowance)	LF	\$205.00	100	\$20,500
6	170' (8' wide) pre-fab steel bridge, with 3-coat severe duty paint system, in place	LS			\$377,040
<b>Subtotal B:</b>			<b>\$1,652.50</b>		<b>\$505,150</b>
<b>Total A + B:</b>			<b>\$7,082.21</b>		<b>\$958,416</b>

<b>C. Other Construction Contract Costs (% of other construction cost - A + B)</b>					
1	Mobilization	5	%		\$47,921
2	Traffic Control for construction, per Caltrans requirements	2	%		\$19,168
3	Construction Survey and Staking - location and elevation staking to comply with design	3	%		\$28,752
4	Special Conditions - allowance for conditions of permits and environmental mitigations	5	%		\$47,921
<b>Subtotal C:</b>					<b>\$143,762</b>
<b>Total A + B + C:</b>					<b>\$1,102,178</b>

<b>D. Project Process Costs - % of other project costs (A + B + C)</b>					
1	Surveying and preliminary design	10	%		\$110,218
2	Permitting and environmental documents	10	%		\$110,218
3	Final design and bid documents	10	%		\$110,218
4	Bid and construction period services, project administration	10	%		\$110,218
<b>Subtotal D:</b>					<b>\$440,871</b>

<b>Total Project Cost:</b>					<b>\$1,543,050</b>
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**Trail Segment 2 – Foothill Blvd., Henderson and Howard Street to Downtown - 5,660 LF** - (quantity for all items except as noted). Assume trail is located on south side of Foothill on Tribal or School District land and road row from Crawford to Henderson Road - school fence is relocated to allow room for 8' paved path. Paved shoulder is added on the north side of Howard to accommodate bikes.

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	<b>Clearing and grubbing</b> - weed and brush clearing as required for trails and construction staging areas and temporary construction access. (assume avg. 16' width)	LF	\$4.00	3,020	\$12,080
2	<b>Grading for 8' wide trail</b> - ripping and compaction to 95%, assume 10' total width.	LF	\$10.50	3,020	\$31,710
3	<b>8' wide trail surfacing - base rock</b> – 3" asphalt on 6" base rock	LF	\$11.00	3,020	\$33,220
4	<b>Grading for 4' shoulder widening</b> - ripping and compaction to 95%, assume 6' total width.	LF	\$6.30	2,640	\$16,632
5	<b>4' wide shoulder surfacing</b> - 3" asphalt on 6" base rock	LF	\$5.50	5,660	\$31,130
6	<b>Culverts</b> - includes trenching/backfill (.6 CY/LF), 4-6" rock armor apron and double wall ABS plastic culvert, assume 18" x 12' culverts avg. 500' O.C.	EA	\$1,910.00	11	\$21,010
7	<b>"V" ditch</b> -approx. 12" deep, assume same length as trail	LF	\$8.00	5,660	\$45,280
8	<b>Fencing</b> - 6' high, heavy duty chain link with bracing	LF	\$15.00	5,660	\$84,900
9	<b>Vehicular Gates</b> - 12' steel tube with wire mesh	LS	\$1,970.00	2	\$3,940
10	<b>Trail Gates</b> - pedestrian/bike (6' steel tube with wire mesh)	LS	\$1,500.00	2	\$3,000
11	<b>Signage</b> - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	5,660	\$2,830
12	<b>Hydroseeding</b> - for revegetation and erosion control on trail perimeter and other disturbed areas (assume 10' average width)	LF	\$0.11	5,660	\$623
13	<b>Erosion Control</b> - Straw rolls, straw bales in ditches, silt fence, and other Storm Water Pollution Prevention Program (SWPPP) provisions per permit conditions. (allowance)	LF	\$2.60	5,660	\$14,716
<b>Subtotal A:</b>			<b>\$5,429.01</b>		<b>\$301,071</b>

<b>B. Traffic Calming and Intersection Improvements</b> - at High School/Howard Street					
1	Allowance	LS			\$200,000
<b>Subtotal B:</b>					<b>\$200,000</b>
<b>Total A + B:</b>					<b>\$501,071</b>

<b>C. Other Construction Contract Costs</b> (% of other construction cost - A + B)					
1	<b>Mobilization</b>	5	%		\$25,054
2	<b>Traffic Control</b> for construction, per Caltrans requirements	2	%		\$10,021
3	<b>Construction Survey and Staking</b> - location and elevation staking to comply with design	3	%		\$15,032
4	<b>Special Conditions</b> - allowance for conditions of permits and environmental mitigations	5	%		\$25,054
<b>Subtotal C:</b>					<b>\$25,054</b>
<b>Total A + B + C:</b>					<b>\$526,124</b>

<b>D. Project Process Costs</b> - % of other project costs (A + B + C)					
1	<b>Surveying and preliminary design</b>	10	%		\$2,505
2	<b>Permitting and environmental documents</b>	10	%		\$2,505
3	<b>Final design and bid documents</b>	10	%		\$2,505
4	<b>Bid and construction period services, project administration</b>	10	%		\$2,505
<b>Subtotal D:</b>					<b>\$10,021</b>
<b>Total Project Cost:</b>					<b>\$536,146</b>

**Trail Segment 3 – from Tribal Housing/Foothill Blvd. at Crawford Rd. to Indian Health Center/Hwy. 162 - 9,700 LF** - (quantity for all items except as noted). Assume trail is located on Tribal or private land with relatively level surface, good drainage and no roadside ditches involved

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	<b>Clearing and grubbing</b> - weed and brush clearing as required for trails and construction staging areas and temporary construction access. (assume avg. 16' width)	LF	\$4.00	9,700	\$38,800
2	<b>Grading for 10' wide trail</b> - ripping and compaction to 95%, assume 14' total width.	LF	\$10.50	9,700	\$101,850
3	<b>10' wide trail surfacing - base rock</b> – 6" Cl. II A.B. compacted, in place, w/ geotextile fabric on trail, installed 50% of trail length	LF	\$9.00	9,700	\$87,300
4	<b>Culverts</b> - includes trenching/backfill (.6 CY/LF), 4-6" rock armor apron and double wall ABS plastic culvert, assume 18" x 12' culverts avg. 500' O.C.	EA	\$1,910.00	20	\$38,200
5	<b>"V" ditch</b> -approx. 12" deep, assume same length as trail	LF	\$8.00	9,700	\$77,600
6	<b>Fencing</b> - 5' high, 2-strand galvanized barbed wire on T posts with welded galvanized wire mesh with bracing	LF	\$15.00	9,700	\$145,500
7	<b>Vehicular Gates</b> - 12' steel tube with wire mesh (assume 1/ 1000 LF trail)	EA	\$1,970.00	10	\$19,700
8	<b>Trail Gates</b> - pedestrian/bike (6' steel tube with wire mesh – assume 1/1000 LF trail )	EA	\$1,500.00	10	\$15,000
9	<b>Signage</b> - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	9,700	\$4,850
10	<b>Hydroseeding</b> - for revegetation and erosion control on trail perimeter and other disturbed areas (assume 10' average width)	LF	\$0.11	9,700	\$1,067
11	<b>Erosion Control</b> - Straw rolls, straw bales in ditches, silt fence, and other Storm Water Pollution Prevention Program (SWPPP) provisions per permit conditions. (allowance)	LF	\$2.60	9,700	\$25,220
<b>Subtotal A:</b>			<b>\$5,429.71</b>		<b>\$555,087</b>

<b>B. Other Construction Contract Costs</b> (% of other construction cost - A)					
1	<b>Mobilization</b>	5	%		\$27,754
2	<b>Traffic Control</b> for construction, per Caltrans requirements	2	%		\$11,102
3	<b>Construction Survey and Staking</b> - location and elevation staking to comply with design	3	%		\$16,653
4	<b>Special Conditions</b> - allowance for conditions of permits and environmental mitigations	5	%		\$27,754
<b>Subtotal B:</b>					<b>\$83,263</b>
<b>Total A + B:</b>					<b>\$638,350</b>

<b>C. Project Process Costs</b> - % of other project costs (A + B)					
1	<b>Surveying and preliminary design</b>	10	%		\$63,835
2	<b>Permitting and environmental documents</b>	10	%		\$63,835
3	<b>Final design and bid documents</b>	10	%		\$63,835
4	<b>Bid and construction period services, project administration</b>	10	%		\$63,835
<b>Subtotal C:</b>					<b>\$255,340</b>
<b>Total Project Cost:</b>					<b>\$893,690</b>

**Trail Segment 4 – from Hwy. 162 along Mina Rd to Agency Rd - 5,300 LF** - (quantity for all items except as noted). Assume trail is located on Tribal or private land with relatively level surface, good drainage and no roadside ditches involved

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	<b>Clearing and grubbing</b> - weed and brush clearing as required for trails and construction staging areas and temporary construction access. (assume avg. 16' width)	LF	\$4.00	9,700	\$38,800
2	<b>Grading for 10' wide trail</b> - ripping and compaction to 95%, assume 14' total width.	LF	\$10.50	9,700	\$101,850
3	<b>10' wide trail surfacing - base rock</b> – 6" Cl. II A.B. compacted, in place, w/ geotextile fabric on trail, installed 50% of trail length	LF	\$9.00	9,700	\$87,300
4	<b>Culverts</b> - includes trenching/backfill (.6 CY/LF), 4-6" rock armor apron and double wall ABS plastic culvert, assume 18" x 12' culverts avg. 500' O.C.	EA	\$1,910.00	20	\$38,200
5	<b>"V" ditch</b> -approx. 12" deep, assume same length as trail	LF	\$8.00	9,700	\$77,600
6	<b>Fencing</b> - 5' high, 2-strand galvanized barbed wire on T posts with welded galvanized wire mesh with bracing	LF	\$15.00	9,700	\$145,500
7	<b>Vehicular Gates</b> - 12' steel tube with wire mesh (assume 1/ 1000 LF trail)	EA	\$1,970.00	10	\$19,700
8	<b>Trail Gates</b> - pedestrian/bike (6' steel tube with wire mesh – assume 1/1000 LF trail )	EA	\$1,500.00	10	\$15,000
9	<b>Signage</b> - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	9,700	\$4,850
10	<b>Hydroseeding</b> - for revegetation and erosion control on trail perimeter and other disturbed areas (assume 10' average width)	LF	\$0.11	9,700	\$1,067
11	<b>Erosion Control</b> - Straw rolls, straw bales in ditches, silt fence, and other Storm Water Pollution Prevention Program (SWPPP) provisions per permit conditions. (allowance)	LF	\$2.60	9,700	\$25,220
<b>Subtotal A:</b>			<b>\$5,429.71</b>		<b>\$555,087</b>

<b>B. Other Construction Contract Costs (% of other construction cost - A)</b>					
1	<b>Mobilization</b>	5	%		\$27,754
2	<b>Traffic Control</b> for construction, per Caltrans requirements	2	%		\$11,102
3	<b>Construction Survey and Staking</b> - location and elevation staking to comply with design	3	%		\$16,653
4	<b>Special Conditions</b> - allowance for conditions of permits and environmental mitigations	5	%		\$27,754
<b>Subtotal B:</b>					<b>\$83,263</b>
<b>Total A + B:</b>					<b>\$638,350</b>

<b>C. Project Process Costs - % of other project costs (A + B)</b>					
1	<b>Surveying and preliminary design</b>	10	%		\$63,835
2	<b>Permitting and environmental documents</b>	10	%		\$63,835
3	<b>Final design and bid documents</b>	10	%		\$63,835
4	<b>Bid and construction period services, project administration</b>	10	%		\$63,835
<b>Subtotal C:</b>					<b>\$255,340</b>

**Total Project Cost: \$338,603**

**Trail Segment 5 – from Industrial Park at Wattenberg Rd. along Hwy. 162 turning at Fairbanks Rd. and running along until midway to Dobie Ln. - 16,750 LF** - (quantity for all items except as noted). Assume trail is located on Tribal or private land with relatively level surface, good drainage and no roadside ditches involved

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	<b>Clearing and grubbing</b> - weed and brush clearing as required for trails and construction staging areas and temporary construction access. (assume avg. 16' width)	LF	\$4.00	16,750	\$67,000
2	<b>Grading for 10' wide trail</b> - ripping and compaction to 95%, assume 14' total width.	LF	\$10.50	16,750	\$175,875
3	<b>10' wide trail surfacing - base rock</b> – 6" Cl. II A.B. compacted, in place, w/ geotextile fabric on trail, installed 50% of trail length	LF	\$9.00	16,750	\$150,750
4	<b>Culverts</b> - includes trenching/backfill (.6 CY/LF), 4-6" rock armor apron and double wall ABS plastic culvert, assume 18" x 12' culverts avg. 500' O.C.	EA	\$1,910.00	33	\$63,030
5	<b>"V" ditch</b> -approx. 12" deep, assume same length as trail	LF	\$8.00	16,750	\$134,000
6	<b>Fencing</b> - 5' high, 2-strand galvanized barbed wire on T posts with welded galvanized wire mesh with bracing	LF	\$15.00	16,750	\$251,250
7	<b>Vehicular Gates</b> - 12' steel tube with wire mesh (assume 1/ 1000 LF trail)	EA	\$1,970.00	16	\$31,520
8	<b>Trail Gates</b> - pedestrian/bike (6' steel tube with wire mesh) (assume 1/1000 LF trail )	EA	\$1,500.00	16	\$24,000
9	<b>Signage</b> - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	16,750	\$8,375
10	<b>Hydro seeding</b> - for revegetation and erosion control on trail perimeter and other disturbed areas (assume 10' average width)	LF	\$0.11	16,750	\$1,843
11	<b>Erosion Control</b> - Straw rolls, straw bales in ditches, silt fence, and other Storm Water Pollution Prevention Program (SWPPP) provisions per permit conditions. (allowance)	LF	\$2.60	16,750	\$43,550
<b>Subtotal A:</b>			<b>\$5,429.71</b>		<b>\$951,193</b>

<b>B. Other Construction Contract Costs (% of other construction cost - A)</b>					
1	<b>Mobilization</b>	5	%		\$47,560
2	<b>Traffic Control</b> for construction, per Caltrans requirements	2	%		\$19,024
3	<b>Construction Survey and Staking</b> - location and elevation staking to comply with design	3	%		\$28,536
4	<b>Special Conditions</b> - allowance for conditions of permits and environmental mitigations	5	%		\$47,560
<b>Subtotal B:</b>					<b>\$142,679</b>
<b>Total A + B:</b>					<b>\$1,093,871</b>

<b>C. Project Process Costs - % of other project costs (A + B)</b>					
1	<b>Surveying and preliminary design</b>	10	%		\$109,387
2	<b>Permitting and environmental documents</b>	10	%		\$109,387
3	<b>Final design and bid documents</b>	10	%		\$109,387
4	<b>Bid and construction period services, project administration</b>	10	%		\$109,387
<b>Subtotal C:</b>					<b>\$437,549</b>

**Total Project Cost: \$1,531,420**

**Trail Segment 6 – from Elem & High School along East Ln. looping around Hill Rd & Dobie Ln. - 61,760 LF** - (quantity for all items except as noted). May require only signage. Estimate assumes 1/2 route is located upon private land with permission, requires fencing and gates.

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	<b>Clearing and grubbing</b> - weed and brush clearing as required for trail (assume avg. 4' width)	LF	\$1.00	30,880	\$30,880
2	<b>Fencing</b> - 5' high, 2-strand galvanized barbed wire on T posts with welded galvanized wire mesh with bracing	LF	\$15.00	30,880	\$463,200
3	<b>Vehicular Gates</b> - 12' steel tube with wire mesh (assume 1/ 1000 LF trail)	EA	\$1,970.00	30	\$59,100
4	<b>Trail Gates</b> - pedestrian/bike (6' steel tube with wire mesh - assume 1/1000 LF trail )	EA	\$1,500.00	30	\$45,000
5	<b>Signage</b> - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	61,760	\$30,880
<b>Subtotal A:</b>			<b>\$3,486.50</b>		<b>\$629,060</b>

<b>B. Other Construction Contract Costs</b> (% of other construction cost - A)					
1	<b>Mobilization</b>	5	%		\$31,453
2	<b>Traffic Control</b> for construction, per Caltrans requirements	2	%		\$12,581
3	<b>Construction Survey and Staking</b> - location and elevation staking to comply with design	3	%		\$18,872
4	<b>Special Conditions</b> - allowance for conditions of permits and environmental mitigations	5	%		\$31,453
<b>Subtotal B:</b>					<b>\$94,359</b>
<b>Total A + B:</b>					<b>\$723,419</b>

<b>C. Project Process Costs</b> - % of other project costs (A + B)					
1	<b>Surveying and preliminary design</b>	10	%		\$72,342
2	<b>Permitting and environmental documents</b>	10	%		\$72,342
3	<b>Final design and bid documents</b>	10	%		\$72,342
4	<b>Bid and construction period services, project administration</b>	10	%		\$72,342
<b>Subtotal C:</b>					<b>\$289,368</b>

<b>Total Project Cost:</b>					<b>\$1,012,787</b>
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**Trail Segment 7 – from Hurt Rd./Hwy. 162 up to Hopper Ln. over to Agency Rd down to Barnes Ln, reconnecting with Hwy 162. following Short Creek Rd. to terminate at East Ln. - 42,860 LF** - (quantity for all items except as noted). Assume trail is located on road shoulders or shares roadway.

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	<b>Clearing and grubbing</b> - weed and brush clearing as required to clear road shoulders (assume 25% of length)	LF	\$1.00	10,715	\$10,715
2	<b>Signage</b> - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	42,860	\$21,430
<b>Subtotal A:</b>			<b>\$1.50</b>		<b>\$32,145</b>

<b>B. Other Construction Contract Costs</b> (% of other construction cost - A)					
1	<b>Mobilization</b>	5	%		\$1,607
2	<b>Traffic Control</b> for construction, per Caltrans requirements	2	%		\$643
3	<b>Construction Survey and Staking</b> - location and elevation staking to comply with design	3	%		\$964
4	<b>Special Conditions</b> - allowance for conditions of permits and environmental mitigations	5	%		\$1,607
<b>Subtotal B:</b>					<b>\$4,822</b>
<b>Total A + B:</b>					<b>\$36,967</b>

<b>C. Project Process Costs</b> - % of other project costs (A + B)					
1	<b>Surveying and preliminary design</b>	10	%		\$3,697
2	<b>Permitting and environmental documents</b>	10	%		\$3,697
3	<b>Final design and bid documents</b>	10	%		\$3,697
4	<b>Bid and construction period services, project administration</b>	10	%		\$3,697
<b>Subtotal C:</b>					<b>\$14,787</b>

<b>Total Project Cost:</b>					<b>\$51,753</b>
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**Trail Segment 8a – from Elem. & High School looping around along S. Airport Rd. and back to the school - 12,200 LF** - (quantity for all items except as noted). Assume trail is located on Tribal or private land with relatively level surface, good drainage and no roadside ditches involved

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	<b>Grading for 4' shoulder widening</b> - ripping and compaction to 95%, assume 6' total width.	LF	\$10.50	50	\$525
2	<b>4' wide shoulder surfacing</b> - 3" asphalt on 6" base rock	LF	\$9.00	50	\$450
3	<b>Signage</b> - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	12,200	\$6,100
4	<b>Hydro seeding</b> - for revegetation and erosion control on trail perimeter and other disturbed areas (assume 10' average width)	LF	\$0.11	50	\$6
<b>Subtotal A:</b>					<b>\$7,081</b>

<b>B. Other Construction Contract Costs</b> (% of other construction cost - A)					
1	<b>Mobilization</b>	5	%		\$354
2	<b>Traffic Control</b> for construction, per Caltrans requirements	2	%		\$142
3	<b>Construction Survey and Staking</b> - location and elevation staking to comply with design	3	%		\$212
4	<b>Special Conditions</b> - allowance for conditions of permits and environmental mitigations	5	%		\$354
<b>Subtotal B:</b>					<b>\$1,062</b>
<b>Total A + B:</b>					<b>\$8,143</b>

<b>C. Project Process Costs</b> - % of other project costs (A + B)					
1	<b>Surveying and preliminary design</b>	10	%		\$814
2	<b>Permitting and environmental documents</b>	10	%		\$814
3	<b>Final design and bid documents</b>	10	%		\$814
4	<b>Bid and construction period services, project administration</b>	10	%		\$814
<b>Subtotal C:</b>					<b>\$3,257</b>
<b>Total Project Cost:</b>					<b>\$11,400</b>

**Trail Segment 8b – from Hwy. 162 along Cemetery Ln & new trail up to S. Airport Rd. - 7,100LF (2,000 LF new trail)**- (quantity for all items except as noted). Assume trail is located on private land with relatively level surface, good drainage and no roadside ditches involved

		Unit	Unit Price	Quantity	Total Cost
<b>A. Basic Construction Items</b>					
1	<b>Clearing and grubbing</b> - weed and brush clearing as required for trails and construction staging areas and temporary construction access. (assume avg. 16' width)	LF	\$4.00	2,000	\$8,000
2	<b>Grading for 10' wide trail</b> - ripping and compaction to 95%, assume 14' total width.	LF	\$10.50	2,000	\$21,000
3	<b>10' wide trail surfacing - base rock</b>	LF	\$9.00	2,000	\$18,000
4	<b>Culverts</b> - includes trenching/backfill (.6 CY/LF), 4-6" rock armor apron and double wall ABS plastic culvert, assume 18" x 12' culverts avg. 500' O.C.	EA	\$1,910.00	4	\$7,640
5	<b>"V" ditch</b> -approx. 12" deep, assume same length as trail	LF	\$8.00	2,000	\$16,000
6	<b>Fencing</b> - 5' high, 2-strand galvanized barbed wire on T posts with welded galvanized wire mesh with bracing	LF	\$15.00	2,000	\$30,000
7	<b>Vehicular Gates</b> - 12' steel tube with wire mesh (assume 1/ 1000 LF trail)	EA	\$1,970.00	2	\$3,940
8	<b>Trail Gates</b> - pedestrian/bike (6' steel tube with wire mesh – assume 1/1000 LF trail )	EA	\$1,500.00	2	\$3,000
9	<b>Signage</b> - trail regulatory, directional and boundary signs (enamel on aluminum) mounted on wood posts and fence	LF	\$0.50	7,100	\$3,550
10	<b>Hydro seeding</b> - for revegetation and erosion control on trail perimeter and other disturbed areas (assume 10' average width)	LF	\$0.11	2,000	\$220
11	<b>Erosion Control</b> - Straw rolls, straw bales in ditches, silt fence, and other Storm Water Pollution Prevention Program (SWPPP) provisions per permit conditions. (allowance)	LF	\$2.60	2,000	\$5,200
<b>Subtotal A:</b>					<b>\$116,550</b>

<b>B. Other Construction Contract Costs</b> (% of other construction cost - A)					
1	<b>Mobilization</b>	5	%		\$5,828
2	<b>Traffic Control</b> for construction, per Caltrans requirements	2	%		\$2,331
3	<b>Construction Survey and Staking</b> - location and elevation staking to comply with design	3	%		\$3,497
4	<b>Special Conditions</b> - allowance for conditions of permits and environmental mitigations	5	%		\$5,828
<b>Subtotal B:</b>					<b>\$17,483</b>
<b>Total A + B:</b>					<b>\$134,033</b>

<b>C. Project Process Costs</b> - % of other project costs (A + B)					
1	<b>Surveying and preliminary design</b>	10	%		\$13,403
2	<b>Permitting and environmental documents</b>	10	%		\$13,403
3	<b>Final design and bid documents</b>	10	%		\$13,403
4	<b>Bid and construction period services, project administration</b>	10	%		\$13,403
<b>Subtotal C:</b>					<b>\$53,613</b>
<b>Total Project Cost:</b>					<b>\$187,646</b>

## Funding Sources

Funding that can be used for planning, designing and constructing the Round Valley trails could potentially come from all levels of government. This section covers federal, state, regional and local sources of bicycle and pedestrian funding, as well as some non-traditional funding sources that may be used for bicycle and pedestrian projects.

### Federal Funding Sources

The primary federal source of surface transportation funding—including bicycle and pedestrian facilities—is the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. This Federal bill is the third iteration of the transportation vision established by Congress in 1991 with the Intermodal Surface Transportation Efficiency Act and renewed in 1998 and extended in 2003 through the Transportation Equity Act for the 21st Century and the Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003. Also known as the Federal Transportation Bill, the \$286.5 billion bill was passed in 2005 and authorizes federal surface transportation programs for the five-year period between 2005 and 2009. At the time of writing, Congress is still determining the transportation and infrastructure priorities for the next six year cycle and funding amounts for many related programs is unknown.

Federal funding is administered through the State (Caltrans and the State Resources Agency) and regional planning agencies. Most, but not all, of these funding programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. Many federal programs require a local match of 10-20%. Federal funding is intended for capital improvements and safety and education programs, and projects must relate to the surface transportation system. Specific funding programs under the prior federal transportation bill for bicycle and pedestrian facilities are described here.

#### High Risk Rural Roads Program

SAFETEA-LU (the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users) introduced a new safety program called the High Risk Rural Roads (HR3) Program. The purpose of this program is to reduce the frequency and severity of collisions on rural roads by correcting or improving hazardous roadway locations or features. The roadway location targeted for improvement must have a collision rate for fatalities and incapacitating injuries that exceeds the statewide average for those functional classes of roadways. Only those roads that are functionally classified as rural major collector, rural minor collector, or rural local road are eligible to compete for HR3 funds. Current HR3 funds are allocated, and new funds will be available if the program is re-authorized.

APPLICATION DEADLINE: Ongoing  
 TYPE OF PROJECTS FUNDED: Design, Property Acquisition, Construction  
 TYPE OF TRAILS ELIGIBLE: Shoulder Widening  
 LINK TO PROGRAM: <http://www.dot.ca.gov/hq/LocalPrograms/HR3/>

#### Transportation, Community and System Preservation Program

The Transportation, Community and System Preservation Program provides federal funding for transit oriented development, traffic calming and other projects that improve the efficiency of the transportation system, reduce the impact on the environment, and provide efficient access to jobs, services and trade centers. The program is intended to provide communities with the resources to explore the integration of their transportation system with community preservation and environmental activities. The Program funds require a 20 % match.

APPLICATION DEADLINE: To be determined  
 TYPE OF PROJECTS FUNDED: Planning, Construction  
 TYPE OF TRAILS ELIGIBLE: Paved  
 LINK TO PROGRAM: [http://www.fhwa.dot.gov/tcsp/pi\\_tcsp.htm](http://www.fhwa.dot.gov/tcsp/pi_tcsp.htm)

#### Recreational Trails Program

The Recreational Trails Program of the federal transportation bill provides funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized as well as motorized uses. In California, the funds are administered by the California Department of Parks and Recreation. Recreational Trails Program funds may be used for:

- Maintenance and restoration of existing trails
- Purchase and lease of trail construction and maintenance equipment
- Construction of new trails; including unpaved trails
- Acquisition of easements or property for trails
- State administrative costs related to this program (limited to 7 percent of a State's funds)
- Operation of educational programs to promote safety and environmental protection related to trails (limited to 5 percent of a State's funds)

APPLICATION DEADLINE: To be determined  
 TYPE OF PROJECTS FUNDED: Planning, Property Acquisition; Construction; Safety and Educational Programs; Maintenance and Restoration of Existing Trails  
 TYPE OF TRAILS ELIGIBLE: Paved, Unpaved  
 LINK TO PROGRAM: <http://www.fhwa.dot.gov/environment/retrails/>

#### Land and Water Conservation Fund

The Land and Water Conservation Fund is a federally funded program that provides grants for planning and acquiring outdoor recreation areas and facilities, including trails. The Fund is administered by the National Parks Service and the California Department of Parks and Recreation and will be active until 2015.

Cities, counties and districts authorized to acquire, develop, operate and maintain park and recreation facilities are eligible to apply. Applicants must fund the entire project, and will be reimbursed for 50% of costs. Property acquired or developed under the program must be retained in perpetuity for public recreational use. The grant process for local agencies is competitive, and 40% of grants are reserved for Northern California.

APPLICATION DEADLINE: To be determined for 2010  
 TYPE OF PROJECTS FUNDED: Planning  
 TYPE OF TRAILS ELIGIBLE: Paved, Unpaved  
 LINK TO PROGRAM: <http://www.parks.ca.gov/ncrc/programs/rtea>

#### Rivers, Trails and Conservation Assistance Program

The Rivers, Trails and Conservation Assistance Program (RTCA) is a National Parks Service program which provides technical assistance via direct staff involvement, to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation monies available.

- The project has specific, partner-defined goals and tangible conservation or outdoor recreation results expected in the near future.
- The project protects or improves important natural resources or enhances outdoor recreation opportunities.
- Roles and contributions of project partners are substantive and well-defined.
- There is evidence of broad community support for the project.
- The anticipated role for RTCA is clearly stated and is appropriate.
- In evaluating applications, preference will be given to projects that:
  - Provide physical connections among resources;
  - Include both natural resource conservation and outdoor recreation;
  - Partner with an NPS area;
  - Partner with a health organization;
  - Connect communities to NPS areas;
  - Engage youth

APPLICATION DEADLINE: August 1  
 TYPE OF PROJECTS FUNDED: Planning  
 TYPE OF TRAILS ELIGIBLE: Paved, Unpaved  
 LINK TO PROGRAM: <http://www.nps.gov/rtca/>

#### Indian Reservation Roads Program

The Indian Reservation Roads Program addresses transportation needs of tribes by providing funds for planning, designing, construction, and maintenance activities. The program is jointly administered by the Federal Highway Administration's Federal Lands Highway Office and the Bureau of Indian Affairs (BIA) in accordance with an interagency agreement. The Indian Reservation Roads are public roads which provide access to and within Indian reservations, Indian trust land, restricted Indian land, and Alaska native villages. Approximately 25,000 miles are under the jurisdiction of BIA and tribes and another 24,000 are under State and local ownership. IRR funds can be used for any type Title 23 transportation project providing access to or within Federal or Indian lands and may be used for the State/local matching share for apportioned Federal-aid Highway Funds.

APPLICATION DEADLINE: To be determined for 2010  
 TYPE OF PROJECTS FUNDED: Road Planning, Design, Construction, and Maintenance  
 LINK TO PROGRAM: <http://flh.fhwa.dot.gov/programs/irr/>



## Statewide Funding Sources

The State of California uses both federal sources and its own budget to fund the following bicycle and pedestrian projects and programs.

### Bicycle Transportation Account

The Bicycle Transportation Account provides state funding for local projects that improve the safety and convenience of bicycling for transportation. Because of its focus on transportation, Bicycle Transportation Account projects must provide a transportation link. Funds are available for both planning and construction. Bicycle Transportation Account funding is administered by Caltrans and cities and counties must have an adopted Bicycle Transportation Plan in order to be eligible. In Mendocino County, the Regional Bikeway Plan is prepared by MCOG on behalf of the County and cities within, which may then adopt the Plan to become eligible for funding. The maximum amount available through the Bicycle Transportation Account is \$1.2 million dollars, cities and counties are eligible to apply.

APPLICATION DEADLINE: December 1

TYPE OF PROJECTS FUNDED: Planning, Construction, Maintenance

TYPE OF TRAILS ELIGIBLE: Paved

LINK TO PROGRAM: <http://www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm>

### Wildlife Conservation Board Public Access Program

Funding for the acquisition of lands or improvements that preserve wildlife habitat or provide recreational access for hunting, fishing or other wildlife-oriented activities. There is up to \$250,000 dollars available per project with applications accepted quarterly. Projects eligible for funding include interpretive trails, river access, and trailhead parking areas. The State of California must have a proprietary interest in the project. Local agencies are generally responsible for the planning and engineering phases of each project.

APPLICATION DEADLINE: Quarterly

TYPE OF PROJECTS FUNDED: Construction

TYPE OF TRAILS ELIGIBLE: Paved; River Access and Trailheads; Unpaved

LINK TO PROGRAM: [http://www.wcb.ca.gov/Pages/wcb\\_brief\\_overview.asp](http://www.wcb.ca.gov/Pages/wcb_brief_overview.asp)

### California Conservation Corps

The California Conservation Corps is a public service program, which occasionally provides assistance on construction projects. The Corps may be written into grant applications as a project partner. In order to utilize Corps labor, project sites must be public land or be publicly accessible. Corps labor cannot be used to perform regular maintenance; however, they will perform annual maintenance, such as the opening of trails in the spring.

APPLICATION DEADLINE: Ongoing

TYPE OF PROJECTS FUNDED: Construction

TYPE OF TRAILS ELIGIBLE: Paved; River Access and Trailheads; Unpaved

LINK TO PROGRAM: <http://www.ccc.ca.gov>

### Safe Routes to School

There are two separate and distinct Safe Routes to School programs. One is the State-legislated Program referred to as SR2S (infrastructure focused) and the other is the Federal Program referred to as SRTS (programmatic and infrastructure focused). Both programs are intended to achieve the same basic goal of increasing the number of children walking and bicycling to school by making it safer for them to do so, but there are differences in eligibility requirements. At the time of writing, future funding available and application dates for both programs are pending.

APPLICATION DEADLINE: No current call for proposals at state or federal level

TYPE OF PROJECTS FUNDED: Planning; Construction

TYPE OF TRAILS ELIGIBLE: Paved

LINK TO PROGRAM: <http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm>

### Environmental Justice: Context Sensitive Planning Grants

Environmental Justice (EJ) planning grants are intended to promote the involvement of low-income and minority communities, and Native American Tribal Governments, in the planning for transportation projects to prevent or mitigate disproportionate, negative impacts while improving their mobility, access, safety, and opportunities for affordable housing and economic development. Proposed projects should have a clear focus on transportation and community development issues that address the interests of low-income, minority, Native American, and other under-represented communities.

APPLICATION DEADLINE: April 1, 2010

TYPE OF PROJECTS FUNDED: Planning

TYPE OF TRAILS ELIGIBLE: Not Applicable

LINK TO PROGRAM: <http://www.dot.ca.gov/hq/tpp/grants.html>

### Office of Traffic Safety Grants

The Office of Traffic Safety (OTS) effectively and efficiently administers traffic safety grant funds to reduce traffic deaths, injuries and economic losses. OTS distributes funds statewide in the form of traffic safety grants that are awarded to political subdivisions of the state based upon certain criteria. OTS develops a yearly HSP that identifies the primary highway safety problems in the State and provides potential solutions. Identified in conjunction with the National Highway Traffic Safety Administration, OTS has several priority areas for grant funding, including Police Traffic Services, Emergency Medical Services, Roadway Safety, and Pedestrian and Bicycle Safety. Political subdivisions of the state are eligible to apply for and receive OTS grant funding. In addition to state governmental agencies, state colleges, and state universities, subdivisions of the state include local city and county government agencies, school districts, fire departments, and public emergency services providers. Non-profit, community-based organizations (CBOs) are eligible to apply for funding through a political subdivision of the state. For example, a county department may submit a proposal that includes funding for CBO participation. The CBO funding would be included under contractual services in the proposal budget.

APPLICATION DEADLINE: January 31, annually

TYPE OF PROJECTS FUNDED: Safety Programs

TYPE OF TRAILS ELIGIBLE: Not Applicable

LINK TO PROGRAM: [http://www.ots.ca.gov/Grants/Apply/GME\\_2011.asp](http://www.ots.ca.gov/Grants/Apply/GME_2011.asp)

### Community Based Transportation Planning Grants

The Community-Based Transportation Planning (CBTP) grant program funds coordinated transportation and land-use planning projects that encourage community involvement and partnership. Projects must support livable/sustainable community concepts with a transportation or mobility objective and promote community identity and quality of life. Project proposals should involve conceptual-level plans or study activities that encourage community-based stakeholder collaboration and consensus building through active public engagement. Each proposal should display a transportation/land use benefit that will likely induce additional benefits. Competitive project proposals should describe how the project will be implemented.

APPLICATION DEADLINE: April 1, 2010

TYPE OF PROJECTS FUNDED: Planning

TYPE OF TRAILS ELIGIBLE: Not Applicable

LINK TO PROGRAM: <http://www.dot.ca.gov/hq/tpp/grants.html>

### Proposition 84 Sustainable Communities Planning Grants

California voters passed the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84) on November 7, 2006. It added Division 43 to the Public Resources Code, Chapter 9. Sustainable Communities and Climate Change Reduction, Section 75065(a), authorizing the Legislature to appropriate \$90 million for planning grants and planning incentives that reduce energy consumption, conserve water, improve air and water quality, and provide other community benefits. At the time of writing, guidelines are still being finalized, but there is expected to be a key funding opportunity in 2010 related to the issues discussed in this report – the Sustainable Communities Planning Grant and Incentives Program.

The primary purpose of this grant program is to implement the vision of the Governor and Legislature to foster and support development of sustainable communities. Local governments will need to adopt land use plans and integrated strategies that can transform communities and create long-term prosperity. Such communities shall promote equity, strengthen the economy, protect the environment and promote healthy, safe communities.

Funds will be used to encourage sustainable regional and local actions that reduce greenhouse gas (GHG) emissions, promote water conservation, reduce automobile use and fuel consumption, encourage infill and compact development, protect natural resources and agricultural lands, promote public health, and revitalize urban and community centers. Proposals must help achieve state planning priorities and environmental goals, as well as promote cooperative and scale-appropriate methods and strategies that reflect the interdependence of environmental, economic and community health.

APPLICATION DEADLINE: Anticipated due date is April, 2010

TYPES OF PROJECTS FUNDED: Planning

TYPES OF TRAILS ELIGIBLE: Not Applicable

LINK TO PROGRAM: <http://www.sgc.ca.gov/>

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**Regional Funding Sources**

Regional bicycle and pedestrian grant programs come from a variety of sources, including federal funding, the State budget and vehicle registration fees.

**Regional Surface Transportation Program**

The Regional Surface Transportation Program (RSTP) provides funding for bicycle and pedestrian projects among many other transportation projects. This program includes funding for bridges, including any such construction or reconstruction necessary to accommodate other transportation modes. Mendocino Council of Governments distributes them to the County and cities within annually on a formula basis.

APPLICATION DEADLINE: None - Allocated

TYPE OF PROJECTS FUNDED: Construction; Safety and Education Programs; Planning

TYPE OF TRAILS ELIGIBLE: Paved

LINK TO PROGRAM: [http://www.dot.ca.gov/hq/transprog/federal/rstp/Official\\_RSTP\\_Web\\_Page.htm](http://www.dot.ca.gov/hq/transprog/federal/rstp/Official_RSTP_Web_Page.htm)

**Transportation Enhancement Program**

The Transportation Enhancement Program provides funds for the construction of projects beyond the scope of typical transportation projects that enhance the transportation system. Transportation Enhancement projects may include landscaping, bicycle facilities and streetscape improvements. Transportation Enhancement projects within Mendocino County are allocated by Mendocino Council of Governments.

APPLICATION DEADLINE: Not Applicable

TYPE OF PROJECTS FUNDED: Construction

TYPE OF TRAILS ELIGIBLE: Not Applicable

LINK TO PROGRAM: <http://www.dot.ca.gov/hq/TransEnhAct/TransEnact.htm>

**State Transportation Improvement Program**

The STIP is a multi-year capital improvement program of transportation projects on and off the State Highway System, funded with revenues from the Transportation Investment Fund and other funding sources. STIP programming generally occurs every two years. MCOG awards STIP funds on a competitive basis for highways, streets, roads, bike & pedestrians, and transit projects.

APPLICATION DEADLINE: Varies

TYPES OF PROJECTS FUNDED: Construction

TYPES OF TRAILS ELIGIBLE: Not Applicable

LINK TO PROGRAM: <http://www.dot.ca.gov/hq/LocalPrograms/STIP.htm>

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**Local Funding Sources**
**Transportation Development Act**

Transportation Development Act Article 3 funds are awarded to local jurisdictions for transit, bicycle and pedestrian projects in California. Funds for pedestrian projects originate from the Local Transportation Fund, which is derived from a ¼ cent sales tax revenue generated in the County. Local Transportation Funds are returned to each county based on sales tax revenues. Article 3 of the Transportation Development Act sets aside 2% of the Local Transportation Funds for bicycle and pedestrian projects. Eligible pedestrian and bicycle projects include: construction and engineering for capital projects; maintenance of bikeways; bicycle safety education programs (up to 5% of funds); and development of comprehensive bicycle or pedestrian facilities plans. These funds may be used to meet local match requirements for federal funding sources. MCOG allocates 2% of the funds for bike and pedestrian projects on a competitive basis and the estimated annual amount is \$55,000-\$60,000.

APPLICATION DEADLINE: Annual Cycle

TYPE OF PROJECTS FUNDED: Planning; Construction; Maintenance; Safety and Education

TYPE OF TRAILS ELIGIBLE: Paved

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**Nontraditional Funding Sources**
**Community Development Block Grants**

The Community Development Block Grant program provides money for streetscape revitalization, which may be largely comprised of pedestrian improvements. Federal Community Development Block Grant grantees may “use [these] funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities, paying for planning and administrative expenses, such as costs related to developing a consolidated plan and managing Community Development Block Grant funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs.”

APPLICATION DEADLINE: Not Applicable

TYPE OF PROJECTS FUNDED: Planning; Construction; Property Acquisition; Safety and Education

TYPE OF TRAILS ELIGIBLE: Not Applicable

LINK TO PROGRAM: <http://www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm>

**American Greenways Program**

Administered by The Conservation Fund, the American Greenways Program provides funding for the planning and design of greenways. Applications for funds can be made by local, regional or statewide non-profit organizations and public agencies. The maximum award is \$2,500, but most range from \$500 to \$1,500, and may be used to fund unpaved trail development.

APPLICATION DEADLINE: Varies

TYPE OF PROJECTS FUNDED: Planning; Construction

TYPE OF TRAILS ELIGIBLE: Paved, Unpaved

LINK TO PROGRAM: <http://www.conservationfund.org/?article=2471>

**California Center for Physical Activity Grant Program**

The California Center for Physical Activity runs several programs related to walking and offers small grants to public health departments. Grants are in the amount of \$4,999 dollars or less and are offered intermittently.

APPLICATION DEADLINE: Varies

TYPE OF PROJECTS FUNDED: Education and Encouragement

TYPE OF TRAILS ELIGIBLE: Not Applicable

LINK TO PROGRAM: [http://www.caphysicalactivity.org/our\\_projects.html](http://www.caphysicalactivity.org/our_projects.html)

## Other Implementation Strategies

As the County General Plan process moves forward, the Round Valley community should work with Mendocino County staff to ensure that the future land use vision can support many of the principles and design concepts discussed in this document.

In recent years, many general plans have chosen to create a framework of neighborhoods, districts, and corridors that help to organize land uses and establish appropriate development intensities. Land uses are subsequently organized along the concept of the “transect” that can respond appropriately to strong community character, and can provide a basis for zoning tools and standards that are specific to the community.

Covelo, like other historic rural communities within Mendocino County, has an existing physical form that does not adhere well to the County’s existing zoning and coding standards, which have typically addressed only rural and suburban development. The downtown core provides more urban conditions with an interconnected network of streets and blocks, moderate setbacks, and a mix of uses. This networks extends into the rest of the community which is primarily Neighborhood General in character. Much of the existing community of Covelo would simply not be possible if built to current County standards. Moreover, the community’s remoteness has created an opportunity for innovative economic strategies, such as CSA organic farming. Such artisanal opportunities could be expanded if live-work and other home-occupation activities could be encouraged.

Site-specific coding and zoning tools can provide a strategy for Covelo’s unique character to be maintained. Although conventional design guidelines can also contribute, regulatory solutions will ultimately be needed. Mendocino County has established a good precedent in their site-specific ordinance for the Town of Mendocino. Similar strategies could be used in Covelo as well.

### Form-Based Codes

The County should consider Form-based Codes as an effective tool for Covelo to promote both appropriate and effective infill within the existing community, continued economic viability, as well as walkable, and highly-connected areas at its periphery. The non-profit Form-Based Codes Institute offers the following definition for Form-Based Codes:

Form-based codes address the relationship between building façades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in form-based codes, presented in both diagrams and words, are keyed to a regulating plan that designates the appropriate form and scale (and therefore, character) of development rather than only distinctions in land-use types. This is in contrast to conventional zoning’s focus on the segregation of land-use types, permissible property uses, and the control of development intensity through simple numerical parameters (e.g., FAR, dwellings per acre, height limits, setbacks, parking ratios).

Form-based codes are often based on the concept of the transect, which suggests that places can be organized in varying degrees of intensity, from least urban at the rural edge, to most urban at the center. In the case of Covelo, the transect is very apparent and visible in a very short distance moving from the edge of town to downtown. The transect could be used as a tool for determining what new development should be like in order to ensure that it is both appropriate for its location and compatible with the existing community.

Form Based Codes are typically organized into a series of common sections, including a Regulating Plan (which indicates where different standards may apply), Public Space Standards (that regulate streets and other public space types) Building Form Standards (that regulate the configuration, features, and buildings as they address the public realm), Administration (that defines the application and review process), and Definitions. FBCs may also commonly include Architectural Standards, Landscaping Standards, Signage Standards, and Environmental Resource Standards.

RURAL



URBAN



T1 — Preserve



T2 — Rural Zone



T-3 — Neighborhood General Zones



T-4 — General Urban Zone



Mountains



Grazing Lands



Single-Family Home



Locally-Serving Commercial



Riparian Habitat



Cultivated Lands



Single-Family Home



Institutional Uses

**Above:** Transect diagram for Round Valley. From left to right, the transect starts at its least urban in the “T-1” zone, where natural preserves and open spaces dominate the landscape. “T-2” or “Rural Zone” follows, composed of agricultural lands. “T-3” or “Neighborhood General” would comprise most of the Covelo core community: single family and multi-family homes and related structures. “T-4” or “General Urban” could be applied to some of the buildings found around 162 and Howard Street.

Form-Based Codes could be implemented in a variety of ways, including the following:

1. The County could consider a Development Code Update of their existing zoning standards as they would be applied to Covelo. Such a code update could include form-based traditional neighborhood standards organized along a transect or other regulating tool, and create a basis for appropriate land uses.

2. The County could consider using a coding template such as the Smart Code. Such an "off-the-shelf" template could be calibrated to follow Covelo's unique physical form and could be adopted as either a mandatory or optional code. An optional format would allow developers to choose between a fast-tracked process (if they adhere to the code), or a conventional process (if they follow existing county standards).

3. Form-based standards could be required, even in a mandatory format, for any new developments requiring a Specific Plan, such as potential future development on Tribal Lands.

For additional information on form-based codes, please consult the following resources:

- The Form-Based Codes Institute's web site at [www.formbasedcodes.org](http://www.formbasedcodes.org)
- The Smart Code web site at [www.smartcodecentral.org](http://www.smartcodecentral.org)
- The book "Form Based Codes: A Guide for Planners, Urban Designers, Municipalities, and Developers" by Daniel Parolek, Karen Parolek, and Paul Crawford, available from Wiley Press

**Chapter 4: Form-Based Code**  
**Neighborhood General (NG) Standards**

**Key**  
 - - - Property Line      - - - Setback Line  
 - - - Build-to Line (BTL)      ■ Building Area

Building Placement		
Build-to Line (Distance from Property Line)		
Front	20' *	A
Side Street	10'	B
Rear, Ancillary Building	5'	C
*May be reduced to meet furthest back adjacent BTL if adjacent BTL is less than 20' from property line.		
Setback (Distance from Property Line)		
Side	4' one side, 8' other	D
Rear, Main Building	40'*	E
* Setback shall be measured from 120' from front property line if no alley adjoins the property.		
Building Form		
Primary Street Façade built to BTL	50% min.	F
Side Street Façade built to BTL	30% min.	G
Lot Width	50' max.	H
Lot Depth	150' max.	I
Distance between buildings	10' min.	J
Depth of ancillary building	28' max.	K
Footprint of ancillary building	700 sf max.	

Use	
Ground Floor	Residential, or Services <b>L</b>
Upper Floor(s)	Residential, or Services <b>M</b>
*See Table 4.4 for specific uses.	
Height	
Building Max.	2.5 stories and 30' max. <b>N</b>
Ancillary Building Max.	1.5 stories and 15' max.
Finish Ground Floor Level	18" min. above sidewalk* <b>O</b>
First Floor Ceiling Height	10' min. clear <b>P</b>
Upper Floor Ceiling Height	8' min. clear <b>Q</b>
*6" on downslope lots.	
Notes	
Mansard roof forms are not allowed.	
The windows along any portion of a building that project beyond the rear façade of adjacent homes must be privacy windows if the façade is 10' or less from the side property line.	
Any decks on the rear of homes greater than 2' above grade must have a privacy screen toward neighboring lots.	

**4-18**      Downtown Mixed Use Master Plan  
 Opticos Design, Inc.

Above: Sample pages from a Form-Based Code prepared for the City of Benicia, California by Opticos Design. Building Form Standards typically address building placement, land use, height, parking, encroachments, and frontage.

**Chapter 4: Form-Based Code**  
**Neighborhood General (NG) Standards**

**Key**  
 - - - Property Line      - - - Setback Line  
 ■ Parking Area      ■ Encroachment Area

Parking		
Location (Distance from Property Line)		
Front Setback	20'	R
Side Setback	0'	S
Side Street Setback	5'	T
Rear Setback	5'	U
Parking Drive Width 11' max. <b>V</b>		
No more than a single space of parking is allowed in front of the front façade plane.		
50% of the on-street parking spaces adjacent to lot can count toward parking requirements.		
Encroachments		
Location		
Front	10' max.	W
Side Street	8' max.	X
Notes		
Porches, Balconies, and Bay Windows may encroach into the setback on the street sides, as shown in the shaded areas.		
Allowed Frontage Types (see page 4-26)		
Stoop		
Depth	4' min., 6' max.	
Forecourt		
Depth	20' min., not to exceed width	
Width	20' min., 50% of lot width max.	
Porch		
Depth	8' min.	
Height	2 stories max.	
Common Lawn		
Porch Depth	8' min.	

**4-19**      Downtown Mixed Use Master Plan  
 Opticos Design, Inc.

## Charrette Participants

### Focus Groups

Local/Regional/State Government  
Thursday, August 21, 2008  
4:00-5:00 PM

Rex Jackman – Caltrans Planning  
Ron Caviglia – Mendocino County DOT  
Clark Davis – Catrans Traffic Safety  
Loretta Ellard – MCOG  
Phil Dow – MCOG  
Patrick Ford – Mendocino County Planning Team

Health/Emergency Responders  
Friday, August 22, 2008  
3:00 – 4:00 pm

Tammy Buckley – Covelo Volunteer Fire & Ambulance  
Lindon A. Duke – Round Valley Indian Police Department  
Bernie Pollard – Round Valley Indian Health Clinic  
Steve Viramontes – Round Valley Indian Health Clinic  
Greg Baarts – California Highway Patrol

Business and Tribal Leaders  
Friday, August 22, 2008  
4:00 – 5:00 pm

Ronald W. Lincoln, Sr. - Tribal Economic Development  
David Weitzman - Resident  
Ernie Menifield - Wylaki Tribe  
Warren Johnson - Friends of the Library

### Public Events

Opening Workshop  
Thursday, August 21, 2008

Azhill, Mercy  
Bertm, Latricia  
Bettcat, Kelley  
Bettega, Aryssa  
Bienvenu, Bailey  
Bienvenu, Honey  
Blais, Lucy (Luciente)  
Borden, Carol  
Britton, Gerald  
Britton, Justin  
Britton, Kaiden  
Britton, Khadijah  
Britton, Kristen  
Britton, Taleah  
Budd, Rose Covelo  
Burgess, Harlow  
Burgess, Maxwell  
Burgess, Renee  
Carrio, Corina Covelo  
Carter, Julia  
Carter, Kristin  
Carter, Meaghan  
Cathey, Devon  
Dalson, George  
Darin  
Daughton, Madeline  
Dow, Phil MCOG  
Duke, Ross  
Duncan, Sandra  
Dunn, Linda Tribal Police  
Durazo, Angela  
Durazo, Jessica  
Ellard, Loretta MCOG  
Elliot, Corrianna  
Emily  
Escalera, Maiya  
Escareno, Leila  
Fallis, Ursula  
Fazien, Alixa  
Field, Viviana A.S.E.S.  
Francia, Rose  
Garcia, Daniel  
Gauder, Jadie  
Gauder, Joe Round Valley Processor  
Gauder, Moss  
Gurrola, Cruz  
Gurrola, Johnny  
Hanover, Jason  
Hanover, June  
Hanover, Shoni  
Helme, Rebecca  
Hernandez, Linda Covelo  
Hilbach-Barger, Bruce  
Hish, G.

Hoaglen, Cindy RVIHC  
Hoaglen, Donna Tribal Member  
Hoaglen, Inez  
Hoaglen, Iris MCOE  
Hoaglen, Lakota  
Hoaglen, Myron  
Hoaglen, Shanice  
Hoaglen, Tevin  
Hoaglen, Yolanda  
Hurt, DeeDee R.V.H.C.  
Hurt, Rolland  
Hutt, Deb  
Hutt, William  
Jack, Aiyanna  
Jack, Regina  
Jaher, Eli  
Jaher, Jeane  
Joaquin, Jenna Lee  
Johnson, Warren RV Library  
Kellerstrass, Robin  
Kinney, Chris “Kestrel” RVUSD  
Kirby, David  
Lambert, Chris  
Lincoln, Ernie  
Lincoln, Lina  
Lincoln, Nikie  
Lindsey, Miz  
Littlelake, Fire Covelo  
Makayla, Makayla  
Mangel, Donna  
Mangel, Henry  
Marjo & Morten  
Marruto, Lacey  
Marruto, LeeLee  
Marruto, Tina  
McCarty, Sammy  
McCloud, Lilawah  
McCloud, Makalya  
Medel, Azusa (5yrs. Old)  
Medel, Julian  
Medel, Maria Dental Clinic  
Meinfield, Susanne  
Meyer, Dean RVIHC  
Miki, John Opticos Design  
Mitchell, Erikah  
Ochoa, Jim RVITEDE  
Oliver, Andy  
Oliver, Faith Tribal Member  
Ozuna, Michael  
Ozuna, Nikolas  
Palley, Rio Student Teacher  
Palley, Tom  
Parker, Dollie  
Parker, Jonathan  
Patino, Aileen  
Patino, Alonso  
Patino, Charlene

Pete, Angelica  
Pete, Joan Yuki Trail  
Peters, Cameron  
Peters, Warren  
Pina, Felish  
Rabano, Carlos Tribal Police  
Ray, Rachal and Dane  
RedHawk, Otaka  
RedHawk, Rachel  
Rose, Audrey  
Rose, Zackariah Strong Wind  
Rudid, Susan  
Russ, Julia  
Scroggins, Jessica  
Shayleena  
Short, Adrian  
Smith, Steve  
Sorain, Jim  
Stamation, David Visitor  
T.J.  
Tillotson, Tracie  
Want, Armstead  
Want, Jaylee  
Want, Marquita  
Want, Miranda  
Want, Rolinda  
Want, Tesia  
Want, Yardy  
Want, Zoey  
Weber, Frostie RVIHC  
Whipple, Cherul  
Whipple, Deborah Covelo  
Whipple, Kenneth Covelo  
Whipple, Michael  
Whitehurst, Dora  
Williams, Jared  
Wilson, Jesse  
Wilson, Mckenzie  
Wilson, Regina  
Wilson, Shawn

## Charrette Participants

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### Community Design Workshop Saturday, August 23, 2008

Borden, Carol  
 Bowes, Kathy Garden Project  
 Bowes, Robert Garden Project  
 Card, JoAnn RVIHC  
 Cool, Stanley  
 Cox, Lynn  
 Cunnan, Robert  
 Daughton, Madeline School Board  
 Decater, Gloria Live Power Community Farm  
 Doo, Hunny  
 Downing, Dane CCSD  
 Francia, Carol  
 Francia, Rose  
 Fugman, Paula  
 Helme, Rebecca Covelo  
 Hilbach-Barger, Bruce  
 Hurt, Danielle RVIHC  
 Jane, Jessy  
 Johnson, Warren  
 Lanham, John  
 Lee, Benwade  
 Lindsey, Mia  
 Mangel, Donna  
 Mangel, Henry\  
 McCloud, Lilawah  
 McCloud, Makalyn  
 Meyer, Dean  
 Mills, Michael  
 Nelson, John RVIHA Carpenter  
 Pollard, Bernie  
 Powell, J. David  
 Rae, Crystal Citizen  
 Reboca, Sheena  
 RedHawk, Otaka  
 RedHawk, Rachel  
 Rudich, Susan  
 Smith, Octavien  
 Smith, Quade  
 Telas, Meena  
 Want, Stanley NRD  
 Whipple, Eddie  
 Williams, Jared  
 Weber, Frostie RV ASES

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### Closing Workshop Tuesday, August 26, 2008

Britton, Anna  
 Cool, Stanley  
 Cox, Gloria RVIHC  
 Cox, Lynn  
 Cummings, Mary Jane RVIHC  
 Cunnan, John Covelo  
 Cunnan, Robert  
 Daughton, Madeline School Board  
 Dow, Phil MCOG  
 Downing, Dane  
 Francia, Moon  
 Francia, Rose  
 Fugman, Paula  
 Gauder, Joe  
 George, Marylin  
 Helme, Rebecca  
 Hilbach-Barger, Bruce  
 Jahr, Jean  
 Johnson, Warren  
 Knight, Norma  
 Lanham, John  
 Lee, Benwade  
 Mangel, Donna Covelo  
 Mangel, Henry Covelo  
 McLau, Edna  
 Meyer, Dean  
 Mills, Michael  
 Mills, Sharon SELDA-RV Resident  
 Merrifield, Ernie  
 Nummelin, Olly  
 Pollard, Bernie  
 Powell, J. David  
 Rae, Crystal Citizen  
 Robertson, Jesse Caltrans  
 Rudich, Susa  
 Viramontes, Steve  
 Want, Stanley  
 Weber, Frostie RVIHC  
 Williams, Jared

## Focus Group Meeting Notes

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### Local/Regional/State Government

Thursday, August 21, 2008

4:00-5:00 PM

I first visited in 1975 and looks the same now as before, actually a little bit worse. Hey day way before and could use something. Isolation is a problem. Don't envision being a tourist Mecca or anything else like that, envision slow growing and sustainable. Keeping what we have and can't afford to lose more.

Hunting and fishing opportunities and a lot of people who like to do that - if they want to bring in outsiders.

Heard they've talked about road over the mountains. Don't think that will ever happen - Forest Hwy 7 paved to Willows and over. There was a congressman pushing for this. Caltrans did an origins and destination study and found that it wouldn't at all be cost effective. Roughly only 225 cars diverted to use it. So cost benefit wouldn't pan out.

Needs of pedestrians – need to be able to walk. Sidewalks won't take away anything. Sidewalks about 162 wanted. Safe Routes to School – kids should be able to walk and bike to school and around town.

Potential to attract bike races or something. Almost no roadways with enough width at the moment for that.

Feeling that I have, met with them couple of years ago as part of regular outreach, I think they were surprised and enthusiastic about possibilities and ability to make improvements. Their interest and enthusiasm shows and if they stick with it will achieve something. I was recently in Willow Creek and they did something – self-starters. Took the initiative and went through a planning process and community involvement. Higher traffic volume and no sidewalks, something that looked similar. 5-lane section. Reduced to 3 lanes and putting in bike lanes and street trees and sidewalks. This is a “place” now. The community's persistence and Caltrans' willingness to be flexible made it happen. Funded the TE grants to construct much.

Need for beautification. Don't want to insult town. But needs trees or plantings, greenery.

County has some money to build sidewalks near the high school. Bids were too high at first. Use contractor doing other work to make cost savings. Storm drainage project about a year or two out. Well-worn path out there now. State Safe Routes to School money. Which one would you like to see first and they thought piece along Foothill.

High risk rural road project – boundaries uncertain. Substantial problems with the project. Right-of-way cost. Endangered species act- might be wetlands and would be a lot of work to deal with. Pot of money could be in jeopardy as it might not be approved. Environmental clear and then can spend money. New federal program. Put together in a hurry. Few routes qualified for that program in our district.

Narrow width of roadways – the key is good grid pattern but needs to widen out when you have the potential to do so. If you talk about a class 1 bikeway, people may not want to give up land or loss of farming. Particular when kids are using, outside of visible areas so have security issues. Best possibility is doing incremental widening and try to create class 2 when possible.

On 162 the local cultural of walking 2-3 abreast, listen and move off and wave when they hear someone coming. The cars slow politely. Just what's developed out of necessity.

MCOG bikeway plan – identified bikeways proposed for class 3. By being in our plan eligible for BTA funds.

Constraints - lots of funding sources like BTA, TE but the applicant for a community is often county DOT and sometimes their priorities get pulled. Confusion Hill for example. Round Valley is not always the priority.

Do bits and pieces as opportunities arise. Caltrans can apply for some funding on behalf of community. Lake County plan 3 years ago along North Shore. Caltrans said we know of some state TE money and they knew about it in a plan and applied for the money themselves.

County's plate is very full.

Very important to get a plan done and know where pieces go when funding becomes available. And having a plan improves competitiveness.

Long-range planning has released General Plan Update in draft. Still some materials need to be developed. Meetings in front of planning commission and in the community when both documents are released. Process was last out in this area in 2005 when previous people from county were preparing it. This version of the plan did involve several land use changes in this area. 1 in the core area – requesting commercial and 1 outlying smaller lot sizes and one other residential density increase requested. All circulated and no comments and no other changes. Process comment period ends early November. Final version adopted by Board of Supervisors next year. What we'd like to see in our communities is the ability for local needs to be met. The amount of residential and commercial development be balanced and appropriate for what the community is looking for. Ukiah Valley Area only place in this GPU where there are any significant changes. Trying to keep growth in the core areas of larger communities.

Keep enough resources here in order to keep people from having to go to Willits for everything.

Have things for the youth to do. Important for rural areas.

County maintains a road yard here.

All of the non-tribal parcels, request goes through county office. County-tribe relations, staff person works on this, including consultations when general plan changes.

Standards that are applied county wide- don't always fit everywhere. Ukiah vs. here. Nice if there were some planning guidelines for struggling, small areas.

Everyone works well together. Standards that we have to apply. Most of our standards we can grant exceptions to. Over the last 5 yrs Caltrans from top down a more flexible attitude to really looking at the context of where we are. There will be limited participation from Caltrans in this process. Thought it would be good to talk to local maintenance facility people. Head of them might want to participate.

10 tribes in this county, more than any other county (fed recognition). MCOG has a MOU with Round Valley that discusses things about how we share information that makes it an obligation to send info to Round Valley, but do send to all regardless. 3-4 years in place.

Flat and hard to get to. When Sonoma County was pushing out bicyclists, Lake County said bring cyclists up here, we want their business.

Lots of people walking and biking anyway.

Walk/run brings in outside people. Thought about bike race possible here. Mountain trails. Common bicycles can be a strategy.

Arcata tried shared bikes, ugly lime green and out for public use. It's not around any more. Worked for a few years.

Influx of young people and key person who is interested in starting something.

Its flat. That's part of the draw.

Speeds are so high here.

First priority look at where travel patterns are and start there.

Road that goes around near M&M feed. More long term trail possibilities.

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### Health/Emergency Responders

Friday, August 22, 2008

3:00 – 4:00 pm

More foot traffic along 162 than in past. Several fatalities along that stretch in past few years. Public safety is my focus. Also concerned about connecting communities. High speeds – biggest problem. Trouble intersections at 162 & Biggar, Crawford & Howard. I've been on high speed pursuit on every road in the valley. 162 biggest problem. Howard also a problem. Several years ago got speed bumps near tribal housing, and made a big difference.

162 Wagon Wheel area to Mina/Mendocino Pass split. No stop signs. 25 mph signed, but lots of speeding. New speed feedback signs just installed.

Last yr, 5 collisions at Health Center (one of them 3-car). Coming out slow of parking lot and 60 mph going fast. Conflict. Vegetation blocking views when not kept trimmed.

Mina & 162 vegetation/visual issues. Also at Crawford & Biggar and Crawford & Foothill and Taber and Crawford.

Taber & Henderson – blind corner.

Some roundabouts in the region.

Roundabout might be nice at Howard and 162.

Housing off of Biggar and houses over there that also need to be tied in addition to Tribal housing, downtown, casino, health center.

Kids use Howard, Foothill. Crawford shoots all the way down to the creek.

There is one bridge on north end, and would cut the valley in two in something happened to it. At Crawford - crossing would be important to have. People will drive thru it in dry years. Restoration work, has made it more difficult to cross. More tribal housing out that way in Agency Road area. Talked about bridge a few years ago with Tribe and County.

If using path along private property, would have to move some cattle fences.

Flooding spot – at driveway north of the casino and goes out into the road. Fixing the culvert would fix the problem Near-by pear orchard south of town also floods. Once 162 turns to right, low spot at Barnes.

Would be nice to get drivers in the mind set that all the way to Mina we go slowly.

How do emergency vehicles get through roundabouts?

Fire dept right next to hotel. Most of our calls go to Indian Housing, Taber, Pitt River. Vegetation fires near housing and medical for elderly at housing. Cal Fire responds and is here during the summer. In winter, by ourselves, roll fire truck and ambulance to most calls so we can go to fire from there and to help support/lift people. Biggest truck is 30 ft and no ladder truck.

Tribe mining rock at some point and will have a number of large trucks to support that.

Horse trails on mostly private land. 40 yrs ago could go anywhere. Now pot farming – people are very protective of land and you don't want to travel without permission. Especially in the summer.

Want facilities to be pleasing to the eye, but also be safe.

Swimming hole at Buckeye down by ranger station. Pool at the HS, not always open and funding not always there and not always lifeguards. Creeks – no existing walking paths. Private property along the creek. But can travel right down the center.

162 is my main concern. Straight so people can see bikes and pedestrians. At a meeting a couple days ago discussing radar signs and thinking about using bot-dots.

Its 25 just in the downtown. Would like to see 25 extended to casino. One accident there this year.

Hidden Oaks is the 40 acre parcel, campground, rodeo arena, 2 base ball fields. Another rodeo at the airport. Hidden Oaks is tribal land. Kids currently get driven there.

162 and Howard next to Masonic building. Tried to do a park there in late 70s. Lawn benches and vandalism were an issue.

Farmers market part of library commons parcel.

Always cooler near the health clinic. Could be a location for a park.

Park potential in tribal housing area. Playground equipment out there.

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#### Business and Tribal Leaders

Friday, August 22, 2008  
4:00 – 5:00 pm

Haven't heard of anybody who knew about the County's General Plan Update. 5 yrs ago last time they did this. Brought in staff person from Bay Area to help facilitate, top priority was recreation. We expressed that we wanted to become the gateway to the Yolly Bolly Wilderness and organic farming.

In first General Plan in 75 or 76 we set aside land for farming and industry. Supervisors ignored it and tried to open up a huge paving batch plan operation in middle of residential

Making Safe & Healthy Community Connections in Round Valley  
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area. We are at constant threat and battle from the county. At some point, I have concerns about how we protect what we have. I don't want to incorporate. Mendocino is unincorporated but has strong protections. Here historic structure bulldozed by county over night and now vacant lot fenced off. We have never had a plan for the downtown and what we want to keep.

A friend, a community leader expressed great disappointment to me about what is not happening and feels that towns like this are dying on the vine. Parking issues have prevented some development. Laundry store got destroyed which is a key need.

Some people come in from out of valley to go to casino, but those that do tie it into other activities. Don't like the road at night. Tourism explored in the past, but not everybody leaves once they come, so how do we do something sustainable without bringing in too much growth?

Still worried about potential for two dams along the Eel.

Property values have soared recently, which makes it harder to protect things and added risk. Values up 10-20 times over last 10 years. Brings in people who have money to spend but no real interest in the land.

I remember the town when it resembled Virginia City. Old west look. Used to have 4 saloons. 10 saloons between Dos Rios and Covelo. 3 grocery stores 10 years ago.

20-30 years ago hotel was operating. Art Deco design, but ran into seismic problems. Take much work to upgrade it. Septic system failed and small businesses couldn't afford to fix it.

They just rebuilt the sewer system and sewage location. Now those who get the service have to pay substantial fees. Tribe also has sewer system that can handle the entire valley.

A painting scheme was devised by a local artist. Best model is the RV Flower Mill. On the National Registry since 1980. People who redid it restored it beautifully. Other facades have been covered over and probably ruined. Windows at another place kept getting broken, so they bricked over the town.

A person who lives outside of the valley owns most of the downtown, some people know him, and sometimes he come in to check on his properties.

Fabric is being eaten away.

Medical center counts 3000 being served in the valley. Lack of medical care kept older people from moving here before the medical center.

Fire service was not good until recently. Many historical buildings burnt down.

Medical marijuana law brought in lots of pot farmers who don't invest in towns. New people came in after that passed. Donating money generates suspicion so part of reason why don't reinvest.

First energy crisis brought young people in – back to the land.

Fuel station and electric charging and biodiesel an idea. On the table at Tribal planning right now. Also year round campsite at Hidden Oaks. There are campsites there now but are very rough. 48-acre area and big potential. Forest Service type of set up could be hundreds of sites. Got funding to do a feasibility study for 100-200 camp sites. Consultant doing it for the tribe and is still working on it.

More people wanted healthy clean food. Organic and local interest. Two organic farms that support folks as far as Berkeley. But dropped out of other markets with increased transportation cost. Live Power farm using horses and 150 year old machinery. Lack of chemical use in the valley historically makes it easy to organically farm. Organic beef, pork interest. That information needs to come in.

Bur right now land is too expensive. Land east of town owned by old-timer who wants to do something nice for town. Could do something very nice with modest housing.

People raising animals have to take their animals to Ft Bragg to be slaughtered. So lots of our healthy meat is available there and not here.

Concern about the ped/bike trails between town and housing. Think ROW wide enough to go from road and move the ditches to the fences and widen the pavement.

I think it would be better to have children off the road. Our elderly people have to walk to medical center. Would trails ok for motorized wheelchairs? Would be nice to have something new that everybody values.

Lots of kayakers and rafters from Ranger St to Dos Rios because its a world class stretch. Cyclists come up here too. Cross-country skiers come for the 6,000-7,000 foot mountains. 45 minutes to an hour to get there from Covelo. In-line skating popular. Combination of these things could make it recreation destination.

Over at the housing 90 some homes now and soon to be 32 and so that path would be ideal for them.

Rivers are overfished. On north fork of the Eel, Tribe has plans for fishery – restocking first. Long-term plan.

Immediate goal is to develop campground at rodeo and need the trails to connect to that. There was plan for hotel at casino. Got funding for convenience store and that's in the process of being developed. Gift shop would be up graded. Theme – match with town to keep structure yet. Tribe just bought property north of town and reserved strip along road for commercial, residential and park behind.

New residential planned for northeast of town – look at county planning

Have met with schools to talk about collaboration.

I've lived here and seen new development come in that didn't work in the community. We have successfully made a stand against some new development and worked to preserve our water.

Tribe offered to join hands with County and go to DC and ask for more support but it county didn't take us up on it.

Karen Breedlove – new director of housing should talk to her as they have long-range planning.

First priority is linking school and tribal housing.



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Saturday Workshop Design Table Maps  
August 23, 2008

**Group 1**

Zoning for gardens south of town – intensive 1 acre plots and house along them. Area west of town can probably provide for whole valley. Plaza downtown south of blackberry festival grounds. Mixed use zoning – loosen it up to help people make a living. Pigmented asphalt shoulders. Safety improvements at school intersections. West side of 162 is the better spot for path as it thaws out quicker than east side in winter. If not roundabouts, use artistic and highly visible crosswalks and murals. Footbridge over the creek in two locations – new location at north end of Crawford and one across Mill Creek at 162. Use aesthetically pleasing small diameter wood bridge. Route from housing down Henderson to get to 162. Biggar is kind of tight, very narrow. Continue Henderson as a walking path. Entrance to back of elementary school. Improve intersection – save concrete and use paint or texture surfaces, attention grabbing features. Foothill south side path from Tabor to Airport is important. Great bike loop East to Hill to Fairbanks to 162 to town.

**Group 2**

We concentrated on movement around the valley, Fairbanks, Hill, East Lane. Biking on East Lane and Hill ok. Bad part is 162. Wide ditch on both sides. Suggest culvert with a top surface attached, like a metal panel that lays across it, not requiring expensive work. Doesn't have to be a complete widening of entire road. Don't need the whole thing done, but focus of spots here and there where you could pull out and let trucks go by. Suggest \_ -1 mile project and do a pilot project to test different strategies. Maybe limit easement purchasing to acquire land just to get around tree. North end people have no where to go except to highway – those along Barnes Lane and Agency Trail. Suggest space for activity/park/path link out there and keep them off of 162.

**Group 3**

Downtown to North of town to where 162 turns towards river – most important part. Roundabout there and at casino at clinic, and at Howard Street. Each would allow people to get across the street. Wanted to keep trail off the road. We'd like to see the trail go all the way around the valley, including East Lane and Fairbanks. Maybe old jail could be turned into a bathroom next to the Blackberry Festival grounds. Water sculpture downtown. Plaza near charter school/mill/commons area. This weekend was rodeo and lots of people have horses, and horse trails could make it more accessible to people outlying areas - brought trail down Fairbanks and connect to rodeo grounds. Cut off point connects with rodeo grounds, airport road, across one bridge. Bike/walk and horse trails.

Other comments from map: Lighting and landscaping at tribal housing. A park along Grist Creek. Keep trees along the trail along 162. Shoulders where "complete" paths aren't necessary – on Mina past 337 to make it possible for people to visit farms and Indian community at north end of valley.

**Group 4**

Get trailer park easement – already using it, ducking under fence. Link to pre-school to support all children. At Lovelle crosswalk across Howard. Sidewalk on north side. Sidewalks on

both sides of Howard. Sidewalks in town and also sidewalks on East Lane, and run behind trees.

**Group 5**

Drinking water along paths. Need to deal with HS lunch crowd. Making a loop is a priority, not just a triangle. Connect housing with school. Traffic control island at Foothill and Crawford. Walking/bike path to that intersection and cutting through fields to south and diverting from foothill – they have already created a path there, and we just need to give them a gate. Fence along narrow path along foothill, could be moved to other side of trees and get enough space for path improvements. No crossing guards now. Road at Henderson would cut thru – thought I saw a road back there. Didn't chose Howard Street as a bike path, went along tribal lanes and then meander and cut off traffic from town. Calming devices as enter town, on Howard, at casino, at clinic, church, tribal center, and reduce speeds from 55 mph. West side bike path along 162 and continuing out to agency road and 50-100 homes out there. Natural water features instead of fountains, which makes sense for this context and are probably cheaper. Bike paths materials - want something from the Valley using crushed concrete. Local materials and labor means its more likely to be repaired.

Other comments on map: Water for animals. Botanical/medical walking trails with exercise stations at RVIHC, RVIHA, RVIT Admin, & Building Horizons. Park at 162 & Greely Street. Ball fields north of town on tribal land. Park across street to north of RVIHC.

**Group 6**

Presentation: Started with the trail along Howard St, and include a trailer park site connection. Near the legion hall a north/south path location there. Liked islands and medians at school. Get some additional right-of-way along Biggar Lane.

Other comments from map: Poor visibility at bridge going to Airport. Public park at Old Burger Station. Horse access is a must. And signage encouraging sharing trail with all users. Skate park. Ropes course and resting places. Widen Hill Road. Bridge at end of Crawford.

**Group 7**

Trail on east lane. Park north of business park on east side of 162.

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Feedback from Closing Presentation  
August 26, 2008

- Angled parking, especially back-in parking, allowed by Caltrans?
- Maintenance of trail – who can do this? Adopt a Trail Program? School?
- Is angled parking currently allowed on 162?
- Bike lane needed more than additional parking
- Concern about bike lane next to parallel parking because of opening doors.
- How does Caltrans respond to changing speed zones? Change of design?
- How can we get funding to add striping around the schools?
- New trail on Howard?
- Can base rock trail be converted easily to asphalt trail?
- Will there be another meeting after the final recommendations/report is finished?
- Can we take the plan to Caltrans and request them to do it?
- Can we paint the road ourselves?
- What is Caltrans' process for redefining the speed zones on 162?
- Where are we in the 5-yr cycle to monitor speed zone?
- Can we do it sooner than the 5-yr date?
- Can the casino put in a "slow down" sign?
- New pedestrian bridge – same level as current bridge & lighting. People in wheelchairs will be using it.
- Funding sources for projects included in report?
- Lighting for trail? Possible to be solar powered?