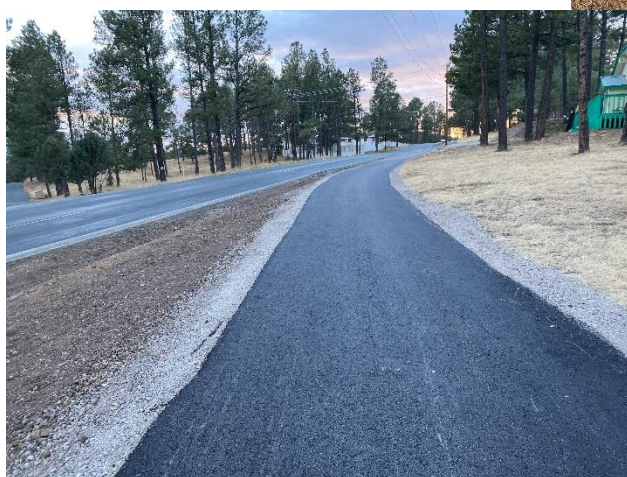
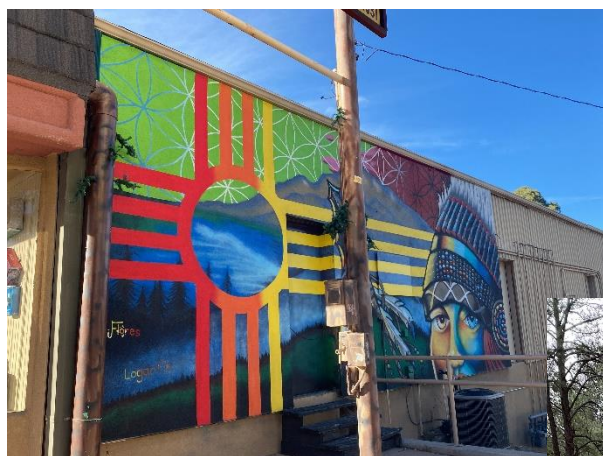


CASE STUDIES OF BICYCLING & WALKING IN SMALL COMMUNITIES: *RUIDOSO, NEW MEXICO*



February 2022

Prepared by the Western Transportation Institute at Montana State University's Small Urban, Rural, and Tribal Center on Mobility (SURTCOM) for the New Mexico Department of Transportation.

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COVER IMAGES

Front Cover Top: A mural in downtown Ruidoso, New Mexico

Front Cover Middle: Cedar Creek Fitness Trail

Front Cover Bottom: The multi-use spur off of the existing multi-use trail called The Links

The back cover presents a photo collage of people walking and bicycling in Ruidoso, New Mexico, as observed by the case study researchers while on-site.

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EXECUTIVE SUMMARY

The purpose of this case study was to identify bicycle and pedestrian infrastructure and programs in Ruidoso, New Mexico that would be of interest to other peer communities. Ruidoso, New Mexico is a mountain town in an otherwise desert environment, and as such, many within the state, surrounding states, and even abroad visit the community to find respite from the heat. Consequently, the core of the community, Midtown, is set-up to provide a commerce center for visitors. The narrow winding mountain roads also provide challenges for implementing walking and bicycling facilities, particularly when adhering to requirements of the Americans with Disabilities Act. The community offers many outdoor recreating opportunities (Cedar Creek Trails, Grindstone Lake Trails, Ruidoso River Trail, and Moon Mountain), which in some cases, can be accessed by walking or bicycling to them. A recently completed spur off “The Links” multi-use trail provides off-road connectivity for community members to the local grocery store, Eastern New Mexico University’s satellite campus, the Village Hall, and the community library. Future bicycle and pedestrian projects planned for the community include providing safer facilities for middle and high school students to get from their homes to school. Ruidoso is also interested in providing greater connectivity by enabling residents and visitors access to the outdoor recreation opportunities through walking or bicycling to them.

INTRODUCTION

Walking and bicycling have become increasingly popular modes of transportation and the existence of dedicated infrastructure to support active modes offers benefits to a community and its residents. While examples of active transportation infrastructure found in larger communities are well documented, this infrastructure can look different in rural communities and documented examples are lacking. This research effort aims to address this gap. Case studies from fifteen communities with fewer than 10,000 residents were developed. The case studies feature existing rural bicycle and pedestrian infrastructure located across five states, to include: Arcadia, LaBelle, and Taylor Creek in Florida; Calvert City, Corbin, and Morehead in Kentucky; Pelican Rapids, Pipestone, and Walker in Minnesota; Ruidoso, Silver City, and Truth or Consequences in New Mexico; and Fair Haven, Morristown, and the Town of Hartford in Vermont. Communities were selected using a prioritization process developed through a cooperative effort between the state departments of transportation and the researchers. More details about the research project, Case Studies of Communities of Less Than 10,000 People with Bicycle & Pedestrian Infrastructure, as well as additional case studies can be found at:

https://westerntransportationinstitute.org/research_projects/case-studies-of-communities-of-less-than-10000-people-with-bicycle-pedestrian-infrastructure/

Case studies provide a detailed description of each community including a discussion of recent planning efforts related to bicycle and pedestrian infrastructure, supporting programs, and partnerships. Site visits, approximately one day per community, were conducted from June through December of 2021. During these visits, researchers collected spatial data and photographs to document existing infrastructure. Within this day visit, researchers also captured photos of people walking and bicycling in the communities, which can be found on the back cover of each case study. They also reached out to local advocates and community leadership. Lessons learned and best practices were documented from reviewing the planning documents and speaking with advocates and community leadership. The case studies aim to provide peer communities with the knowledge and encouragement to support additional implementation of active transportation infrastructure in rural communities across the US.

This case study focuses on Ruidoso, New Mexico.

BACKGROUND OF THE COMMUNITY

Ruidoso, New Mexico has approximately 7,791 residents (2019), and has experienced a 3.0% population decrease since 2010. However, during peak tourism months, the population can swell to 30,000 people, resulting in queues a half-mile long west of the intersection of Sudderth Drive and Mechem Drive in the Midtown area (where NM-48 bends from west to north). During the summer, tournaments (i.e., baseball, basketball) are held almost every weekend, which may in part contribute to the congestion. The 2019

comprehensive plan identifies the temporary population expansion as a challenge, as more public services are needed than available. The plan compares the change during the peak summer season to “a nice home built for 8,000, but often must host a party for 30,000 people.”

Ruidoso is in Lincoln County, in south-central New Mexico. The community's boundaries encompass 16.1 square miles.

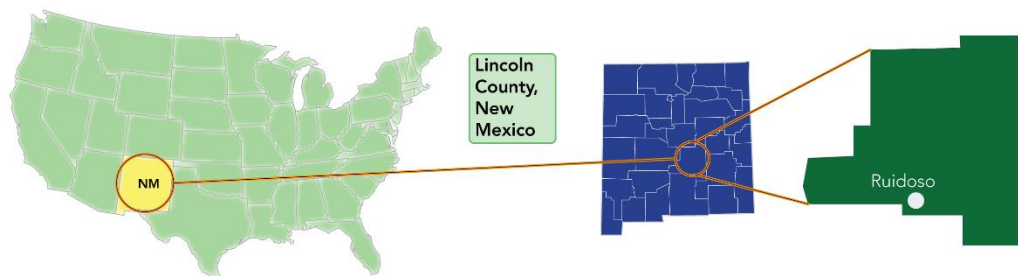


Figure 1: Location of Ruidoso, New Mexico of Lincoln County in south-central New Mexico.

The following paragraphs provide demographic and socioeconomic data about the community, so that peer communities can better understand similarities and differences between their community and this case study community.

The average age of Ruidoso residents is 50.9 years old (2019). Approximately 65.6% (2019) of homes in Ruidoso are vacant which includes seasonal housing, vacant housing for rent/sale, and vacant housing held off the market. Many of the homes categorized as vacant are known to be second homes or made available as short-term rentals. Due to its history of being a ski town as well as a well-known respite from the heat for visitors from Texas, Mexico, and other parts of New Mexico, while the vacancy rate is large, it is not unexpected. (Coloradans, Arizonans, and Californians are also identified as visitors, although less-so.) In fact, the 2019 comprehensive plan for the community identifies the numerous vacant vacation homes as a challenge for the community. It is said that Ruidoso's attraction as a center for retirement homes, second homes, and resort-style cabins began in the 1970's.

Approximately 47.8% (2018) of Ruidoso residents are employed within the community; a statistic which may provide a level of understanding regarding residents' commute distance and potential interest in walking or biking to work. According to the 2019 American Community Survey, 4.2% of people in Ruidoso walk and 0.0% bicycle to work for their daily commute. Ruidoso has a 6.6% (2019) unemployment rate. Ruidoso's median household income is \$50,114 (2019), with 4.4% of households earning less than \$10,000 and 1.9% earning more than \$200,000. Approximately 8.1% (2019) of Ruidoso's population lives in poverty, as defined by the Office of Management and Budget's Statistical Policy Directive 14.

COUNTY TYPOLOGY

According to the rural classification methodology used in *Emerging Technology and Opportunities for Improved Mobility and Safety for Rural Areas*, Ruidoso is located within a county that was designated as an Older Age County Type. An Older Age County Type is defined by having one-third of the population over 60 years of age.

COMMUNITY HISTORY

Ruidoso resides on the eastern slope of the Sacramento Mountains at the base of Sierra Blanca Peak. For that reason, it is well known for the natural beauty of the region as well as the recreational opportunities that stem from its location. In fact, forty-one percent of the Village's residents are within a ten-minute walk of a park. When compared with peer community's, Ruidoso reportedly manages more parkland. The Rio Ruidoso, meaning "noisy river," for which the community was named, runs parallel to Sudderth Drive, in Midtown. Midtown is the main tourist commercial area. While incorporated as a village in 1946, human habitation in the area spans more than 1,000 years.

The shape of Ruidoso is very much defined by what surrounds it, primarily the mountains and forest, which are largely managed by the United States Forest Service. It results in a community that is stretched along the relatively narrow path of the lower lying areas between the mountain slopes. Many places of interest are concentrated near US70 (see the bottom right of Figure 2); however, there are also some places of interest, like a grocery store, the library, the current location for village offices, and the post office, where extending from US70, NM-48 runs west and eventually bends north (see center of Figure 2). Ruidoso is home to the Lincoln County Medical Center. It is owned by Lincoln County but managed and leased by Presbyterian Healthcare Services. Ruidoso is also home to Eastern New Mexico University (ENMU) – Ruidoso, located near the grocery store (Albertson's).

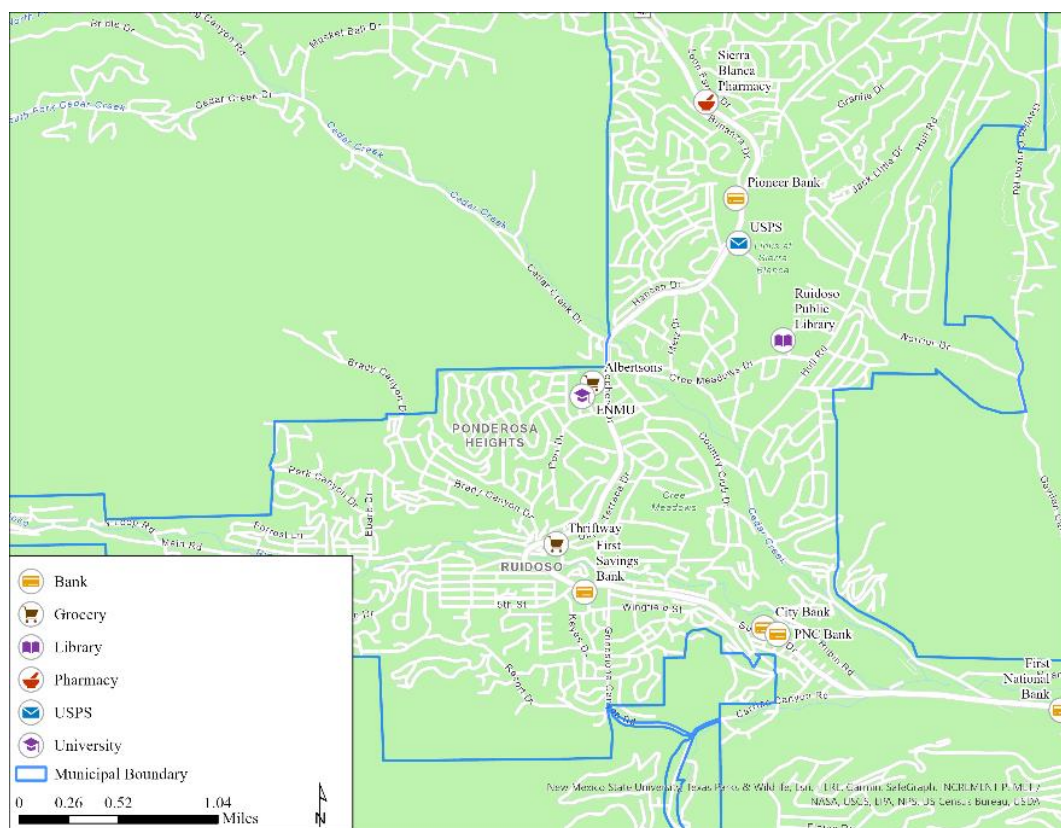


Figure 2: City map of the downtown core of Ruidoso, New Mexico showing boundaries and services.

TIMELINE

A timeline of events is provided in Table 1 to describe major milestones for bicycle and pedestrian infrastructure development and supporting programs in Ruidoso, New Mexico.

Table 1: Timeline of major milestone events for bicycle and pedestrian infrastructure.

Year	Event
1946	The Village of Ruidoso was incorporated as a village
2010	The United States Forest Service's Smokey Bear Ranger District of the Lincoln National Forest made the decision to implement sixteen miles of mountain bicycling trails in the Grindstone area
2017	Fairies were added along the Two Rivers Trail
2017	The downhill flow trail was opened in June in Cedar Creek
2019	Ruidoso completed a new comprehensive plan
2020	The Lincoln National Forest made the decision to install a trailhead at Sawmill canyon to provide additional access to the Grindstone Mesa hiking and biking trails
2021	A 0.6-mile spur from The Links trail was added; it connects to Mechem Drive (NM-48) and consequently a grocery store and the Eastern New Mexico University – Ruidoso campus

EVOLUTION OF *PLANNING* FOR BICYCLE AND PEDESTRIAN INFRASTRUCTURE

In 2019, Ruidoso updated their comprehensive plan. The plan indicates that there were three primary drivers: 1) parks and recreational opportunities, 2) transportation, and 3) economic development. In fact, when the community was asked for feedback via surveys for the plan, the topic of “transportation & roads” was the third most popular topic, with feedback including “making roads more bikeable.” One of six guiding principles for the plan included “Maintain and Enhance Our Small-Town Feel,” with “Make it easy to walk and bike around town,” listed as a component of this principle. A second principle was “Create More Opportunities for Recreation,” with “Develop and link trails,” listed as a component.

The Advisory Committee for the update to the comprehensive plan included a Youth Advisory Council representative. To develop the plan, the consultants held several meetings, including one focused on transportation. In the transportation-focused meeting, two topics discussed included neighborhood traffic calming and improvements for different modes, including bicycling and walking. In the Natural Resources chapter, the plan highlights that, “Access to Ruidoso’s trails as a draw for locals and visitors.” The core business district within the community along Sudderth Drive is locally called “Midtown.” The plan found through its corresponding surveying effort that, “Survey respondents strongly agree that access to outdoors and recreation is an important Village asset.” The plan notes as a challenge that in the 20th century, a major shift occurred, where auto-orientated centers and corridors replaced pedestrian-orientated main streets. Furthermore, with online shopping becoming more popular, discount stores and those that provide an “experience,” like a high-end boutique, can remain competitive as brick-and-mortar stores. It also suggests that being able to park once and explore is appealing to those looking for experiences; this is how Midtown is designed. However, the plan also identifies this as a challenge in that while tourist-orientated retail may be attractive to tourists, it does not serve locals well.

The draft plan also identified the Rural Pathway Project (RPP) of the State of New Mexico Tourism Department as a potential source of technical assistance to Ruidoso for diversifying its economic base. Biking and hiking are examples of an identified tourist base. An interesting topic presented in the comprehensive development plan was the “homecomer” population, which are individuals who spent time away, typically in large urban areas, and are now returning to their “rural roots.” Within the economic development chapter, the following goal relates to walking and biking:

- Goal 1: Ruidoso has a diverse industry base that sustains the Village for the long term
 - Policy 1.3: Convene businesses in targeted industry clusters and define needs
 - Action 1.3.A: Embrace the outdoor recreation industry clusters and define needs.
 - Define and close the gaps in the bike trail system.

The plan noted that the Village of Ruidoso plans to move their local government offices from near the library to the Horton Complex near US70. The plan suggests coordinating with United States Forest Service and the Bureau of Land Management to develop a trails master plan.

Ztrans Public Transportation runs the “Red Route,” which links Ruidoso, Ruidoso Downs, Capitan, and Carrizozo. The service reportedly operates twice a day, Monday, Wednesday, and Friday. The plan suggests that a limitation regarding expanding service is the limited pedestrian network.



Figure 3: A sign on a streetlight noting the Red Route for Ztrans Public Transportation.

There is a significant desire by locals for more walking and bicycling options. Most sidewalks are along NM48 (Sudderth Drive and Mechem Drive) and crossing NM48 can be a problem. The plan noted that, *“The frequency of crossing locations may need to be examined more closely to allow for crossing options at regular intervals, including between signalized intersections.”* It suggests that *“Connections between trails would allow recreational bicyclists to access different trail networks without getting in a car.”* The following goals, policies, and actions are of interest and identified in the Transportation chapter:

- Goal 1: It is easy to walk and bike in the Village and to access Midtown without a vehicle.
 - Policy 1.1: Improve conditions for bicyclists throughout Ruidoso
 - Action 1.1.A: Conduct a Bikeways Route Study – this would identify bikeways through the community that could serve as connections
 - Action 1.1.B: Conduct a Bikeshare Feasibility Study – potential locations identified include the Grindstone Lake recreation area, central lodging areas, Midtown, and public parking sites.
 - Policy 1.2: Improve conditions for pedestrians across the Village
 - Action 1.2.A: Incorporate pedestrian pathways and sidewalks into the Village of Ruidoso’s roadway design standards
 - Action 1.2.B: Evaluate additional pedestrian crossings along Sudderth Drive through Midtown
- Goal 2: Ruidoso’s recreational trails network is unparalleled across the state.
 - Policy 2.1: Expand the trail network. Pursue connections among existing facilities.
 - Action 2.1.A: Create and adopt a Trails Master Plan.
 - Action 2.1.B: Develop a Wayfinding Plan.
- Goal 3: Village and area residents have transit options.
 - Policy 3.2: Support pedestrian improvements that enhance access to bus stop locations.

Like other communities, Ruidoso’s plan identifies that aging infrastructure is causing pipe failures. They are trying to address these by reducing high-pressure occurrences. The plan

concludes by identifying potential funding sources for all of the plan's recommendations (i.e. Community Facilities Direct Loan & Grant Program; Rural Community Development Initiative Grants).

In 2021, the Village of Ruidoso indicated that they had commissioned an engineering firm to study the reduction of Sudderth Drive (NM-48) from four lanes to three lanes to provide more space for pedestrians in response to the state's COVID-19 emergency public health orders. The change was intended to be non-permanent. The proposal was intended to provide space for outdoor dining as well as outdoor retail kiosks. The community members were invited to provide input via a survey.

EXISTING BICYCLE & PEDESTRIAN INFRASTRUCTURE

Table 2 summarizes bicycle and pedestrian infrastructure identified across all case study communities, noting which ones were observed while on-site in Ruidoso, New Mexico.

Table 2: Bicycle and pedestrian infrastructure found across all case study communities, noting those found in Ruidoso.

Bicycle and/or Pedestrian Infrastructure in Case Study Communities	Presence in Ruidoso
Bicycle Lane	
Bike Rack	X
Shared Lane Markings	
Sidepath	X
Defined Bike Route (by signage)	
Multi-Use Pathway	X
Trail (soft surface)	X
Rectangular Rapid Flashing Beacon (RRFB) Crossing	
Mid-Block Crossing	X
Crosswalk	X
Sidewalks	X
Bridges that enable walking or biking	X
Underpasses that enable walking or biking	
Parklet	
Benches	X
Repair Station/Air Pump	X
Speed Bump/Speed Table	X
Speed Feedback Sign – Permanent	X
Speed Feedback Sign – Portable	
Signage	
<i>Bike/Ped Crossing Sign with light emitting diode (LED) lights</i>	X
<i>Bicycle May Use Full Lane</i>	
<i>Share the Road</i>	
<i>State Law, Yield/Stop for Pedestrian in Crosswalk</i>	
<i>Steep Grade</i>	
<i>Drive Slow in Residential Areas/Please Slow Down</i>	

Bicycle and/or Pedestrian Infrastructure in Case Study Communities	Presence in Ruidoso
Traffic Calming Area	
Weight Limitations	
Interpretative/ Wayfinding Information	X
Walking Routes	
Entertainment District	

North of the core of the community, Alto Lake, created as an off-channel storage reservoir, currently serves as storage of water for Ruidoso's Alto Crest Water Treatment Plant. Encircling the lake is a one-mile soft-surface trail.

Easily accessible by many residences near Midtown, Wingfield Park Trail offers two, quarter-mile walking loops made of crushed gravel (Figure 4). Wingfield Park hosts many events within the community, including serving as the start of the Grindstone Trail Run. A conceptual plan presented in the 2019 comprehensive plan identified opportunities for improvements to the park, including adding more extensive walking paths.



Figure 4: Wingfield Park Trail.

Ruidoso also has a Bike Skills Park located near the elementary school (Figure 5). It was created by a local resident with permission from the community.



Figure 5: Bike skills park.

Unique to all of the communities considered for case studies, Ruidoso made use of several sidepath facilities. However, rather than rumblestrips providing the separation, as identified in the *Small Town and Rural Multimodal Networks* guide, the community makes use of plastic bollards. One example can be found on Sierra Blanca Road to define access from the convention center in the core of the community to The Links trail, which completely encircles the golf course (#1 in Figure 11).

Limited bicycle racks were found throughout the community; however, this one observed at the grocery store was apparently a very recent installation (#2 in Figure 11). The story goes that an individual that frequently bicycles within the community was at the grocery store and expressed his dissatisfaction with the lack of a bicycle rack. Leadership within the grocery store heard about the complaint and installed the bicycle rack.

There is one bicycle rental and repair shop within the community (#3 in Figure 11). It had begun several years ago, where another local business offered a free space to enable such a business to begin. The community saw a need and was remiss that a previous bicycle shop in the community had folded. Reportedly, the bicycle shop started with a bicycle and a helmet for rent and offered repairs. It has now expanded to its current location and has numerous offerings including repairs, rentals, bicycles for purchase, and many accessories.

As one enters Midtown from the west on the primary arterial roadway, Sudderth Drive (NM-48), motorists encounter a flashing beacon warning of pedestrian crossings and identifying the posted speed as 25 mph (#4 in Figure 11). One of the recent additions to walking and bicycling infrastructure in the community is a 0.6-mile multi-use spur from The Links that connects to the intersection where one can access the grocery store and the Eastern New Mexico University's local campus (#5 in Figure 11). The Links multi-use path (Figure 6) encircles the golf course within the center of the community and is set for repaving in the near future.



Figure 6: The Links multi-use path.

The Links multi-use path also connects many of the surrounding residences to both the library and the current location of the village hall. Annually, The Links hosts the Turkey Trot in November. Exercise equipment can be found along The Links (Figure 7).



Figure 7: Exercise equipment along the Links.

The Ruidoso River Trail (#6 in Figure 11), a reportedly beloved trail of locals, is an approximately two-mile round-trip trail that transitions back and forth between a fully separated multi-use trail and a sidepath (Figure 8). However, in this area, the traffic is low-volume and the speed limit is marked at fifteen miles per hour. The trail is part of the Two

Rivers Park area and has a play area for children aged two to five, restrooms, picnic tables, and grills.

Separated Multi-Use Trail



Sidepath



Figure 8: The Ruidoso River Trail, multi-use trail, and sidepath examples.

The Ruidoso River Trail is also called the Two Rivers Fairy Trail. From April through September, tiny houses that have pictures of fairies hidden behind doors that can be opened by children are hung up along the trail.

Several murals (see top left of the front cover) exist throughout the community, including one on Sudderth Drive (NM-48) (#7 in Figure 11) where stairs connect a parking lot above to Ruidoso's Midtown (Ruidoso's core business district). A mural (Figure 9) is hidden away on Rio Street where another sidepath is present.



Figure 9: Mural hidden along Rio Street.

A sidepath (#8 in Figure 11) on White Mountain Drive joins the separated multi-use pathway of The Links and provides a connection to the elementary school as well as the White Mountain Recreation Complex in the core of the community.

The Grindstone Lake Trail system is close to the community and offers more than eighteen miles of International Mountain Bike Association (IMBA) designed mountain bike trails. Found at a trailhead is a bicycle repair station (#9 in Figure 11).

The 1.3-mile Cedar Creek Fitness Trail (#10 in Figure 11) allows walking and jogging only; no bicycles or dogs are permitted. In the same area, about thirteen miles of trails are located within Cedar Creek. They are open to “moderately challenging” mountain bicycling, including Lower Jerryatrics and Upper Jerryatrics trails. The Cedar Creek area is accessible by walking from Mechem Drive (NM-48), on a two-lane roadway with no shoulder; there is a sign warning motorists of the potential presence of bicyclists and walkers (Figure 10). One individual was observed using the Cedar Creek Fitness Trail who did not have a parked vehicle in the trailhead parking lot. The community’s 2019 comprehensive plan identifies the gap between Mechem Drive and the Cedar Creek trailhead as a desired trail connection (Figure 10).



Figure 10: Sign warning of bicycle/pedestrian presence between Mechem Drive and the Cedar Creek Trails.

BICYCLE & PEDESTRIAN MAP

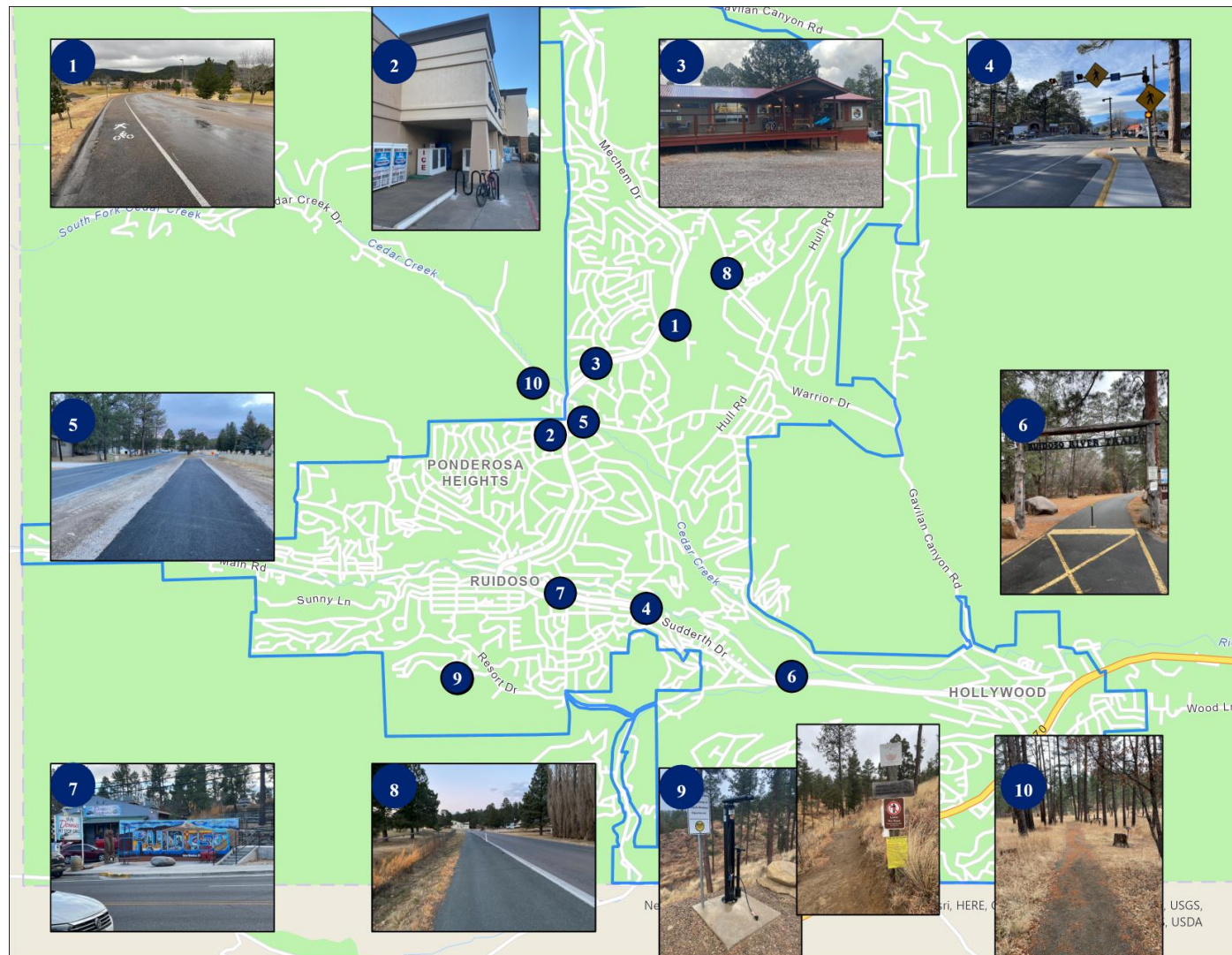


Figure 11: Ruidoso Bicycle & Pedestrian Infrastructure Map.

SUPPORTING PROGRAMS FOR BICYCLE AND PEDESTRIAN INFRASTRUCTURE

Ruidoso has implemented several programs that support walking and bicycling within the community that were observed while on-site or documented in reports (Table 3).

Table 3: Bicycle and pedestrian supporting programs in case study communities, noting those found in Ruidoso.

Bicycle and/or Pedestrian Supporting Programs in Case Study Communities	Presence in Ruidoso
Demonstration/Pilot Projects	
Art Walks/Historical Walk/Children's Walk/Health Walk	X
Sculpture(s)/Statue(s)	
Mural(s)	X
Little Free Library	X

Additional programs that support and encourage walking and bicycling include the Two Rivers Fairy Trail, the presence of a bicycle shop, a non-profit organization that assists with trail building, classes teaching one how to bicycle, the previous bicycle-focused group, and a short-term program rewarding residents for “checking-in” at trailheads.

One of the unique offerings to get parents and their children out and walking along the Two Rivers Trail were fairy houses created to allow children to search for ten fairies while they walk.

Very few communities that were included as case studies had bicycle shops. In fact, in speaking with the current owner of the bicycle shop in Ruidoso, New Mexico, prior to his shop, another in the community folded. His current bicycle shop evolved over time, beginning with a small amount of space in a rental outlet for motorized vehicles with only one bike and one helmet for rental, eventually developing into a sophisticated, and extensively stocked store. One can purchase a trailer to add to a bicycle to tow groceries. E-bicycles have also become very popular at the store, particularly because of the hilly topography of the community.

Within the community, the non-profit organization EcoServants, provides a year-long AmeriCorps program for youth. Through the program, participants can learn and practice environmental stewardship, including the rebuilding of trails to address the destruction caused by the 2012 Little Bear Fire.

While historically the Parks & Recreation department within the Village of Ruidoso has offered bicycle classes, at present time, they are not offered. As an example, a dirt camp was offered as a summer program for children, which leveraged the aforementioned Bike Skills Park. Community members have identified that such classes are offered within the educational system of the community.

The Parks & Recreation department rents out bicycles. Helmets are provided with mountain bicycle rentals at forty dollars per day. This program has been offered for more than ten years.

Historically there was a group called Bicycle Ruidoso. Unfortunately, over time, this group had lost its 501c3 status and has since dissolved. Its webpage can be found on signs, but the domain no longer appears to be owned by the entity.

To familiarize residents with the myriad of trailheads in the region, the community promoted Ruidoso Adventure Tours mobile app sweepstakes. If you checked in using the app at specific trailheads, your name would be entered for a drawing. The community coordinated with local businesses to give away some large items, including a bicycle (valued at \$5,000) from the local bike shop.

PARTNERSHIPS TO PLAN & IMPLEMENT BICYCLE & PEDESTRIAN INFRASTRUCTURE

The 2019 comprehensive plan notes that walking and bicycling trails near the community have been developed through partnerships between the United States Forest Service and local organizations.

The Village of Ruidoso has identified that the New Mexico Department of Transportation (NMDOT) has funded trail infrastructure projects, noting that NMDOT has been a vital partner in funding, planning, and constructing these projects.

FUNDING FOR BICYCLE & PEDESTRIAN INFRASTRUCTURE

Exercise equipment along The Links loop was funded with a \$7,000 grant from the Lincoln County Community Health Council and Presbyterian Healthcare Services.

The Cedar Creek “downhill flow trail” cost a reported \$75,000; it was funded by the Ski Apache’s National Forest Fund. The community had originally hoped to fund this project via the Bell helmet trail contest but narrowly lost.

The community is also looking into potentially leveraging Safe Routes to School grants to connect the schools to outdoor recreation opportunities. Ruidoso Public Schools was awarded funding through the Transportation Alternatives Program (TAP) to design (about \$112,000) and construct (about \$695,000) a multiuse trail along Warrior Drive which would provide walking and bicycling access to the middle and high school.

FY20 New Mexico Department of Transportation, Federal Highway Administration, Design Funding through the Transportation Alternatives Program (TAP) and Recreational Trails Program (RTP) was awarded to Ruidoso for three projects: the 0.6-mile spur trail from The Links along Cree Meadow Road to Mechem Drive (NM-48); design of multi-use natural

surface trails and corresponding signage for Moon Mountain; and repaving The Links. The community had applied for funding from these programs in the past but did not receive. Therefore, while not always successful, Ruidoso did not get dissuaded.

LESSONS LEARNED

Ruidoso has had success in developing different multimodal pieces of their community: the Grindstone Lake Trails, Cedar Creek Trails, The Links, Ruidoso River Trail, and Alto. Yet, they acknowledge that connecting these pieces to enable residents and visitors to travel to these locations without first getting into a private vehicle remains a challenge. One of the challenges with creating these connections is the mountainous topography of the community, which may make bicycling and walking up and down hills challenging for some people. Limited space is also present as Ruidoso was built, including its roadways, without envisioning the current levels of motor vehicle traffic congestion as well as interests in traveling with other modes. The competition for space is a common challenge identified by small communities interested in walking and bicycling facilities. The Village of Ruidoso notes that the mountainous topography does present challenges when ensuring that infrastructure is compliant with the Americans with Disabilities Act, particularly because of the steep grades.

Small communities that were included as part of these case studies often struggled to retain a bicycle shop if one existed in the first place. The example provided herein, where the bicycle shop started out with a minimum number of items to rent and then evolved into the present bicycle shop, can be replicated in other communities. If the community has a vacant store front, it is possible that the community (if it owns the property) could lease, potentially for nothing or at a significantly reduced cost, the space to someone working to develop a bicycle shop.

THE FUTURE OF BICYCLE & PEDESTRIAN INFRASTRUCTURE IN THE COMMUNITY

The Village of Ruidoso has acquired the rights from the state and had created a plan to further develop hiking and mountain biking trails within the Moon Mountain area. For a twenty-year lease from the State Land Office, the community paid \$250,000. The high school is right next to this area, and the cross-country team is said to use the area to train.

Goals for the future, as identified in the 2019 comprehensive plan, are to better connect existing trails so as to create more opportunities for walking and bicycling within the community and connections to nearby amenities (i.e. Grindstone Lake Trails). This interest was repeated within several different topic areas of the plan. However, the community has acknowledged challenges in doing so because of the narrow roads that were created when traffic volumes were a lot smaller as well as a reflection of the mountainous topography.

As a part of their 2019 comprehensive plan, the Village of Ruidoso has also identified a Trails Master Plan as a need. In addition, they have identified an interest in investigating the development of a bikeshare program within the community.

The community was recently awarded funding to develop a wayfinding plan for the community. The intent of the wayfinding plan is to address needs at the vehicular, bicycle and pedestrian scales, not only including local destinations but also regional destinations.

A new resident who is tied to bicycle backpacking is building an interest in the community for this type of travel.

Finally, a Safe Routes to School project is expected to provide multimodal connections between the middle school, high school, and core of the community.

KEY POINTS

Ruidoso has been successful at developing relatively disparate pieces of walking and bicycling infrastructure. At present, they are working on how to build and connect these successes. Therefore, continuing to build on pieces that were developed over time is important. In addition, as demonstrated by the recent funding award from the New Mexico Department of Transportation, there is a need to maintain the infrastructure, as is being done with The Links. Finally, as this case study highlighted, Ruidoso was not always successful with their requested funding. Even so, they kept applying for the ideas they wanted funded and were ultimately successful.

SUCCESSFUL STRATEGIES TO APPLY IN OTHER SMALL COMMUNITIES

The following are strategies that were identified in Ruidoso, New Mexico that could be applied to other small communities:

1. Provide significantly reduced or free space to an entrepreneur interested in starting a bicycle shop in the community. They do not need much to start with: a bicycle, a helmet, some repair tools, tubes, and a passion for bicycling.
2. Do not try to complete the entire bicycle and pedestrian network at once. Start with easy to accomplish projects and continue to build on these successes as momentum is achieved.
3. Ask for bicycle racks. One can leverage the benefit of small communities by simply asking for provisions, like a bicycle rack, if they will be used.

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