

CHAPTER 2. EXISTING CONDITIONS

This chapter provides a description of existing conditions within the Town of Mammoth Lakes (TOML) relevant to trails and public access. Information is based on field visits, existing planning documents, infrastructure, programs and recreational activity patterns. The chapter presents a description of the following topics in their summer and winter contexts:

1. A description of the Town's setting and regional context
2. Jurisdictional issues
3. Major activity centers and recreation nodes
4. Paved multi-use paths
5. On-street bikeways
6. Pedestrian facilities
7. Interface between mountain bike trails and paved facilities
8. Soft-surface trail facilities
9. Bicycle parking
10. Public transportation and multi-modal opportunities
11. Accessibility issues

2.1. Setting and Context

Mammoth Lakes, California, is a unique destination-resort community located in the Eastern Sierra region of Central California. It covers only 4.5 square miles and is surrounded by the Inyo National Forest. Devils Postpile National Monument as well as the eastern entrance of Yosemite National Park are a short drive from the center of town. Mammoth Lakes sits at an altitude of 7,800 feet. The surrounding mountains rise to elevations approaching 12,000 feet. In summer, temperatures average 75-80 degrees for a high and seldom dip below 40. Winter temperatures average 30-40 degrees for a high and 10-20 degrees for a low with mostly sunny skies. According to the 2010 Census, the Town has a year-round population of 7,789, but with the seasonal influx of second home owners and visitors, the population can increase to around 35,000. The 2007 General Plan establishes a policy of a total peak population of 52,000 residents, visitors and employees. This peak is expected to be reached by 2025. As the community grows, residents, visitors, and businesses are concerned with maintaining a high quality of life². A central issue is ensuring access to the public lands that are among the area's most significant assets. The economic engine of the local economy is tourism and outdoor recreation. Residents and visitors alike are attracted to Mammoth for its outdoor recreational opportunities. In order to strike a balance between economic development and quality of life, the Town of Mammoth Lakes intends to develop a system of trails and public access that will integrate the community with its surrounding natural environment.

² "Quality of life" generally refers to the level of overall personal satisfaction (or dissatisfaction) with the physical, cultural or intellectual conditions under which one lives; and the ability to comfortably pursue enjoyable daily activities. The Needs Analysis chapter describes the recreational activities commonly pursued by Mammoth residents and visitors and discusses how their enjoyment of those activities can be enhanced.

2.2. Jurisdictional Issues

The agencies with the most direct jurisdiction over the facilities discussed in this plan are the Town of Mammoth Lakes, the U.S. Forest Service, and Caltrans.

2.2.1. Town of Mammoth Lakes (TOML)

The Town of Mammoth Lakes is the jurisdictional partner with the highest level of control over the development and implementation of this Trails Master Plan. The Town's jurisdictional influence is defined by three boundaries: (1) the Urban Growth Boundary (UGB); (2) the Town Boundary; and (3) the Planning Area.

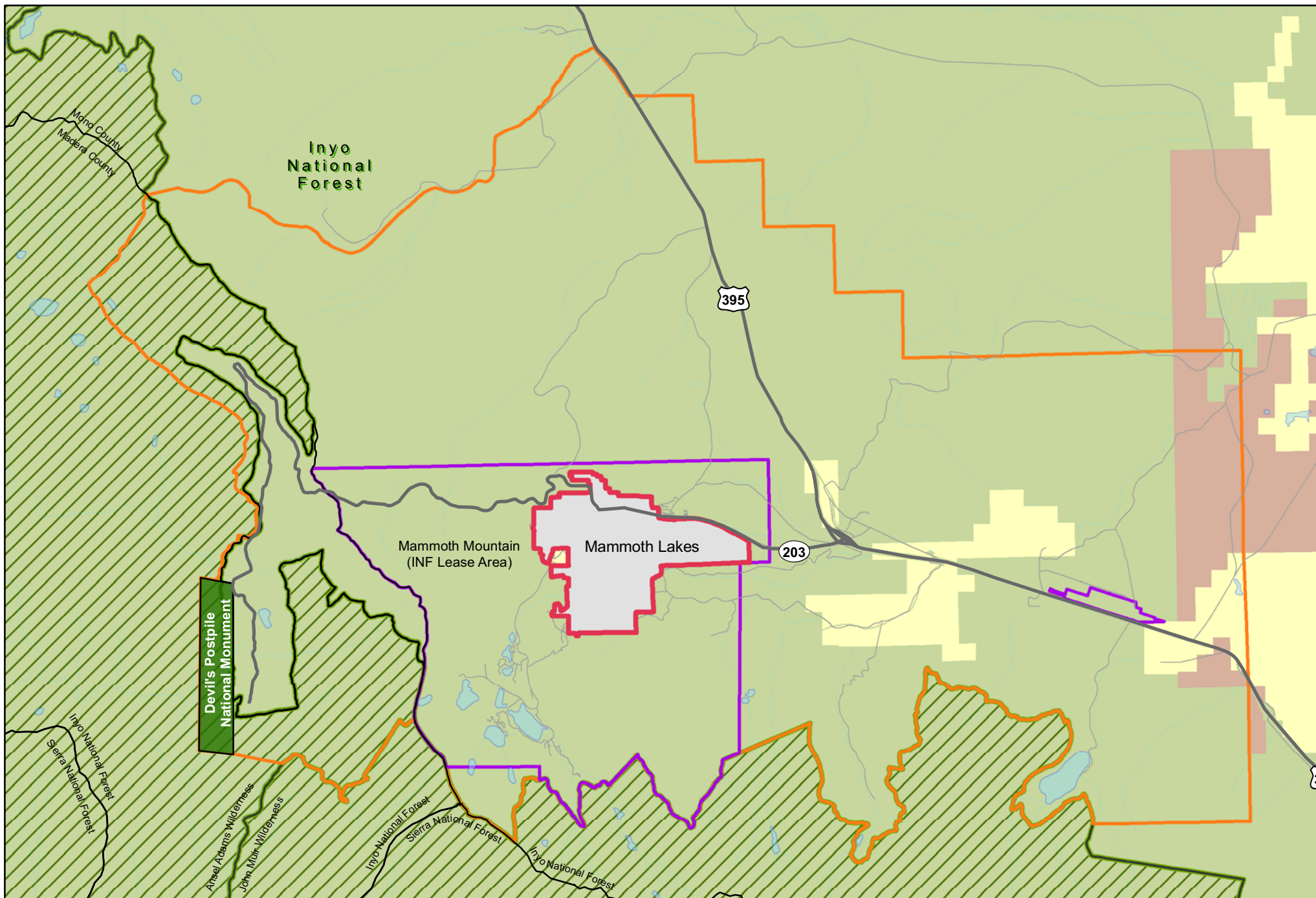
The Town controls all land use and zoning decisions within the UGB established by the 2007 General Plan. The function of the UGB is to limit urban development to within its boundary. The Town Boundary is the area subject to the Town's regulations and building codes. Most of the land outside the UGB, but within the Town Boundary, is undeveloped land under the jurisdiction of the USFS. By way of example, approximately half of the planned Snowcreek VIII development lies outside of the UGB, but within the Town Boundary. It was acquired through a land exchange with the Forest Service with the condition that the land could only be developed for recreational purposes, as dictated by the covenant. As a result, all residential and commercial development should take place on the area within the UGB and a golf course and recreational facilities may be developed on the portion within the Town Boundary, but outside of the UGB. The Planning Area per the General Plan defines the "sphere of influence" or the area which is likely to be impacted (even indirectly) by the Town's services and development decisions.

2.2.2. United States Forest Service (USFS)









The United States Forest Service administers most of the land outside the Town's urban growth boundary. These lands are generally open to the public, and many "informal" or "unofficial" trails exist on these lands. The development of any new formal trails or other recreational facilities must be approved by the Forest Service. The discussion of trails on USFS land is not intended to suggest that these trails have been approved by the Forest Service or to create any expectations for levels of service or maintenance. The Forest Service also administers some land within the UGB, primarily on the eastern end. The Mammoth Mountain Ski Area (MMSA) is the use permit holder for the MMSA and for the Tamarack Cross Country Ski Area. All proposals in or connecting to lands under this use permit must be carried out in coordination with MMSA. The Town of Mammoth Lakes currently maintains paved trails on USFS land under a Special Use Permit.

2.2.3. CA Department of Transportation (Caltrans)

Caltrans currently owns and maintains State Route 203 which consists of Main Street and the section of Minaret Road to the north of Main Street leading to the Mammoth Mountain Ski Area's Main Lodge. Caltrans is currently responsible for all roadway maintenance and snow removal on Highway 203. Caltrans does not maintain improvements that have been developed by the Town within the Highway 203 right-of-way such as bus stops and sidewalks. It would be possible for Caltrans to transfer ownership of Highway 203 to TOML if the Town were able to take on maintenance responsibilities.



MAP 2-1:
Mammoth Lakes Area
Jurisdictional Boundaries

- | | | |
|---|--|---|
|  Urban Growth Boundary |  Bureau of Land Management |  Forest (USFS) |
|  Town Boundary |  LA Department of Water and Power |  USFS Wilderness |
|  Planning Area | |  Highways (Caltrans) |



2.3. Major Activity Centers and Recreation Nodes

In order to present an organized analysis of the current levels of mobility and recreational access, key geographic locations have been selected and grouped into two broad categories: activity centers and recreation nodes.

Activity centers are locations or areas that attract significant levels of human activity or trips (civic buildings, schools, shopping centers, areas of high employment, etc). The “human activity” taking place at these locations is generally economic or civic in nature. While the activity at these locations may be subject to seasonal fluctuation, their significance does not change and—with the exception of schools—they are unlikely to go dormant at any time of the year.

In addition to traditional activity centers, the Town of Mammoth Lakes (TOML) and Mammoth Lakes Trails and Public Access (MLTPA) have identified a series of summer and winter recreation “nodes”. For the purposes of this Trails Master Plan the term “recreation node” is used as a general term to describe a geographic location of existing or potential significance for outdoor recreation. While the recreation nodes identified later in this section may or may not attract economic activity, their commonality lies in their existing (or potential) ability to facilitate recreational experiences. At many of these locations, residents and visitors already congregate (and disperse) in pursuit of recreational opportunities both within and beyond the Town’s urban growth boundary. In some cases a node may represent a point where a recreational experience starts (i.e. where you get off the bus or park your car). In other cases, the node may represent a point of transition in an ongoing recreational experience (i.e. from a paved MUP to narrow foot path). Unlike activity centers, seasonality and time of day heavily impact the type and level of activity at recreational nodes. Unlike activity centers, recreation nodes may be very active in one season and dormant in another. Even recreation nodes that function year-round will be strongly impacted by seasonal (summer-winter) changes in terms of activity levels and services provided. **Table 2-1** provides a generalized comparison of activity centers and recreation nodes.

Table 2-1. Characteristics of Activity Centers and Recreation Nodes

Activity Centers	Recreation Nodes
Less seasonal	More seasonal
Less directly impacted by recreational activity	More directly impacted by recreational activity
Generally located within UGB	Generally located on the edge or outside UGB
More consistent levels of activity (day / night)	Less consistent levels of activity (day / night)
Provide employment or other direct economic activity on-site	May or may not generate economic activity on-site*

* Recreation nodes that fall within the sub-category of “portals” typically do generate economic activity on-site either through user fees or the sale of food or lodging. While other recreation nodes do not generate economic activity on-site, it should be emphasized that recreation itself is the single most important component of the Mammoth Lakes economy, and regardless of the level of on-site economic activity, recreation nodes and the trail facilities they serve are an important element of the local economy.

In order to further define recreation nodes and plan for their future development, the following node types have been created: GIC points, access/egress points, trailheads, parks and portals.

GIC points are the basis for selecting recreation nodes and may include any official or unofficial locations where a recreational transition occurs. This transition can include parking a car or disembarking from another mode of transportation in order to engage a recreational activity. The transition may also be between jurisdictional boundaries or between types of experiences (i.e. urban and rural, paved to unpaved). All recreation nodes have at least one associated GIC point, but not all GIC points are recreation nodes.

Access/egress points are locations that have the same characteristics as a GIC point, but have been formalized so that access there is legal and/or regularly maintained by a public or private entity. The basic elements of an access/egress point should include signage and a clear passageway sufficient to accommodate the intended users. These locations may or may not include low-impact amenities such as a source of drinking water or limited parking. Whether or not access/egress points are included on trail maps should be determined by the entity responsible for the maintenance of that location.

Trailheads should provide—at a minimum—automobile and/or bicycle parking facilities, trash/recycling, restrooms and signage. Trailheads within the UGB should be served by public transportation during the seasons in which they are open.

Parks are self-contained recreation facilities that generally include the same amenities (parking, restrooms, trash/recycling) as a trailhead. Since all parks operated by the Town of Mammoth Lakes—except Whitmore Park—currently provide access to existing trails, parks essentially serve as trailheads with the additional amenities unique to each individual park. Whitmore park is currently used as a staging area for road bicycling.

Portals are the most developed form of recreation node and include all the amenities of trailheads plus lodging and restaurants. Because portals will tend to generate significant activity, all portals should be served by frequent public transportation in order to discourage traffic congestion, mitigate greenhouse gas emissions and reduce other forms of transportation-related pollution.

In some cases, locations that have been identified as portals could also be defined as activity centers for their high levels of employment and economic activity. The Main Lodge and the North Village are both examples, but since the North Village is less dependent on—and less directly linked to—outdoor recreational activities, the argument could more easily be made that it is both. For this reason, and the fact that it is clearly within the Town’s urban growth boundary, it will be evaluated as both an activity center and as a recreational portal.

(Note: These nodal types and definitions are subject to change and will be defined in more detail in the forthcoming Mammoth Lakes Trail System Standards Manual.)

2.3.1. Activity Centers (Summer and Winter)

Table 2-2 contains a list of major activity centers within the Town of Mammoth Lakes. One of these activity centers is also a recreation portal. While the majority of activity centers on this list have not been identified as recreation portals, connecting trails users to them is vital for “feet-first” mobility and enhancing the recreation experience. Providing access to activity centers from the larger trails network will create possibilities for in-town, short-distance recreation, and linked recreational/utilitarian trip-making. Current access to activity centers varies greatly from one activity center to another. There is also significant variation depending on your mode of transport. Because of their year-round importance and their location within the Town’s UGB, activity centers will be evaluated for their current accessibility via walking, bicycling, and transit.

Table 2-2. Major Activity Centers

GIC	Name	Description
191	North Village (MMSA Portal)	Shopping, tourism, employment
None	Main Street Retail Area	Shopping, dining, general services
None	Minaret Village Mall	Shopping, employment, civic
None	Gateway Center Mall	Shopping, employment
None	Industrial Park	Employment
124	Welcome Center	Tourism, employment, civic
None	Hospital and Medical Center	Employment, Health Care
None	Public Schools	Students (elem. middle, high), employment
None	Post Office / Hotels (Main St)	Tourism, employment, civic
None	New Library / Sierra High	Students (high), employment, civic
5	Cerro Coso Community College / Ski Museum	Students (college), employment
None	Snow Creek Athletic Club	Recreation, fitness

Existing access to these centers varies by location and season. Existing bicycle, pedestrian and transit access to these activity centers will be discussed in the following sections of this chapter. Specific projects to enhance “feet first” access to these locations can be found in Chapter 4.

2.3.2. Summer Recreation Nodes

The following tables describe the existing amenities and activities taking place at summer recreation nodes. These nodes are either used as staging areas or access points for summer recreational activities, or have existing potential for summer recreational use.

Table 2-3. Existing Amenities at Summer Recreation Nodes

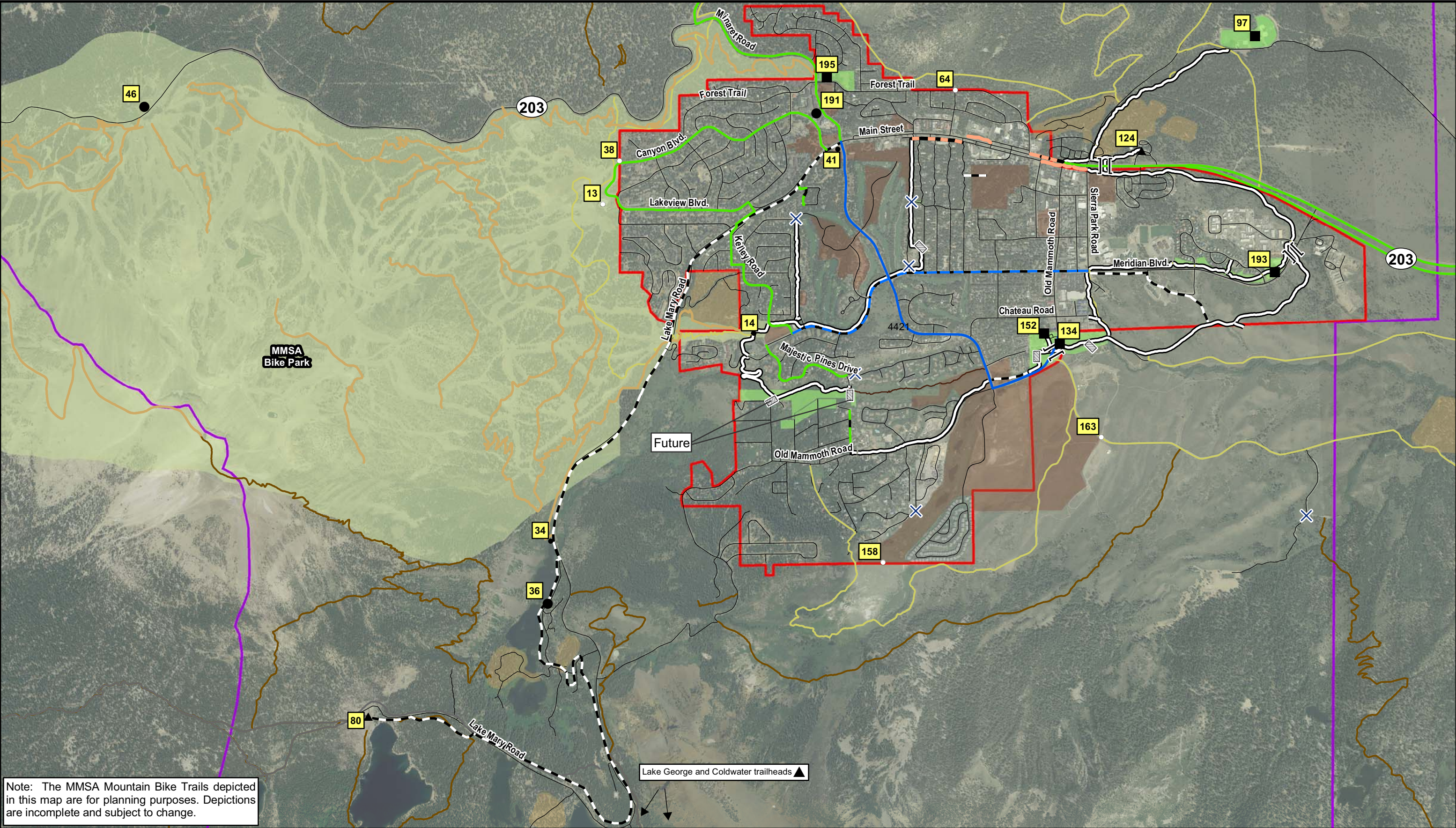
GIC	Name	Node Type	lodging	restaurant	parking	restroom	lift	bus	trail access	signage
46	Main Lodge (MMSA)	Portal	X	X	X	X	X	X	X	X
191	North Village (MMSA)	Portal	X	X	X	X	X	X	X	X
36	Tamarack Lodge (MMSA)	Portal	X	X	X	X		X	X	X
195	Community Center	Park			X	X			X	
134	Mammoth Creek Park East	Park			X	X		X	X	
152	Mammoth Creek Park West	Park			X	X		X	X	X
97	Shady Rest Park	Park			X	X			X	X
193	Trail's End Park	Park			X	X			X	X
88-90	Coldwater Campground*	Trailhead			X	X			X	X
80	Horseshoe Lake	Trailhead			X	X		X	X	X
86-87	Lake George*	Trailhead			X	X			X	X
124	Welcome Center	Trailhead			X	X			X	X
14	Eagle Lodge – temp (MMSA)	Access/Egress			X			X	X	
41	Lake Mary Bike Path NE Terminus	Access/Egress								
34	Twin Lakes Parking	Access/Egress			X				X	X
38	Austria Hof	GIC Point			X				X	
13	Canyon Lodge (MMSA)	GIC Point			X				X	
64	Sierra Blvd @ Forest Trail	GIC Point							X	
158	Path along Snowcreek V fenceline	GIC Point							X	
163	USFS gravel borrow pit	GIC Point			X				X	

* Not shown on map.

Table 2-4. Existing Characteristics of Summer Recreation Nodes

GIC#	Name	Node Type	Description
46	Main Lodge (MMSA)	Portal	Mountain biking, gondola rides to the top of Mammoth Mountain, Reds Meadow Transit to Minaret Vista & beyond
191	North Village (MMSA)	Portal	Mountain bike trails & MMSA fee bike park via Uptown/Downtown or MMSA bus, access to transit (w/in Town, to Main Lodge, to Lakes Basin), gondola rides, parking
36	Tamarack Lodge (MMSA)	Portal	Parking, restroom facilities, trail access, lodging
195	Community Center	Park	Parking, restrooms, access to mountain bike trails (uptown / downtown)
134	Mammoth Creek Park East	Park	Fishing, walking, access to Main Path, access to transit
152	Mammoth Creek Park West	Park	Fishing, walking, access to Main Path, access to transit
97	Shady Rest Park	Park	Parking, restroom, non-motorized and motorized trail access
193	Trail's End Park	Park	Access to skate park, Main Path and Meridian Path.
88-90	Coldwater Campground*	Trailhead	Parking, restroom, signage, camping, trail access, equestrian access
80	Horseshoe Lake	Trailhead	Parking, restroom, MTB and hiking trail access, bus service, signage
86-87	Lake George*	Trailhead	Parking, restroom, signage, boating, camping, trail access
124	Welcome Center	Trailhead	Parking (car and bicycle), restroom, signage, Main Path access, camping, information
14	Eagle Lodge – temp (MMSA)	Access/Egress	Potential for Mountain Bike Park access, access to Main Path system
41	Lake Mary Bike Path NE Terminus	Access/Egress	Lake Mary Bike Path as access to Lakes Basin and Main Path system, future development site (Mammoth Crossing)
34	Twin Lakes Parking	Access/Egress	Parking, summer trail access
38	Austria Hof	GIC Point	Access point for warming wall. Egress from MMSA Main Lodge via Shotgun Trail.
13	Canyon Lodge (MMSA)	GIC Point	Potential for Mountain Bike Park access and event site
64	Sierra Blvd @ Forest Trail	GIC Point	Trail access
158	Path along Snowcreek V fenceline	GIC Point	Trail access
163	USFS gravel borrow pit	GIC Point	OHV access/staging, mountain bike access, hiking access

* Not shown on map.



MAP 2-2: Existing Summer Recreation Nodes and Facilities (UGB & Beyond)

Summer Recreation Nodes <ul style="list-style-type: none">● Portals■ Parks▲ Trailheads● Access/Egress Points○ Key GIC Points	<ul style="list-style-type: none">9 GIC NumbersX Gates/Barriers/Closures] [Tunnels▨ Bridges	On-Street Facilities <ul style="list-style-type: none">Existing Bike Lanes (Class II)Near-Term Bike Lanes (Class II)Existing Bike Routes (Class III)Near-Term Bike Routes (Class III)	Paved Off-Road Facilities <ul style="list-style-type: none">Existing Paved Multi-Use Paths (Class I)Near-Term Multi-Use PathsExisting PromenadeNear-Term Promenade	Soft-Surface Trails <ul style="list-style-type: none">Existing MMSA Mountain Bike TrailsExisting USFS System Trails1991 TOML Future/Alternative TrailsPrivate Dirt Trails	<ul style="list-style-type: none">CampgroundsParks & Open SpacePlanned DevelopmentsUrban LimitTown Boundary
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2.3.3. Winter Recreation Nodes

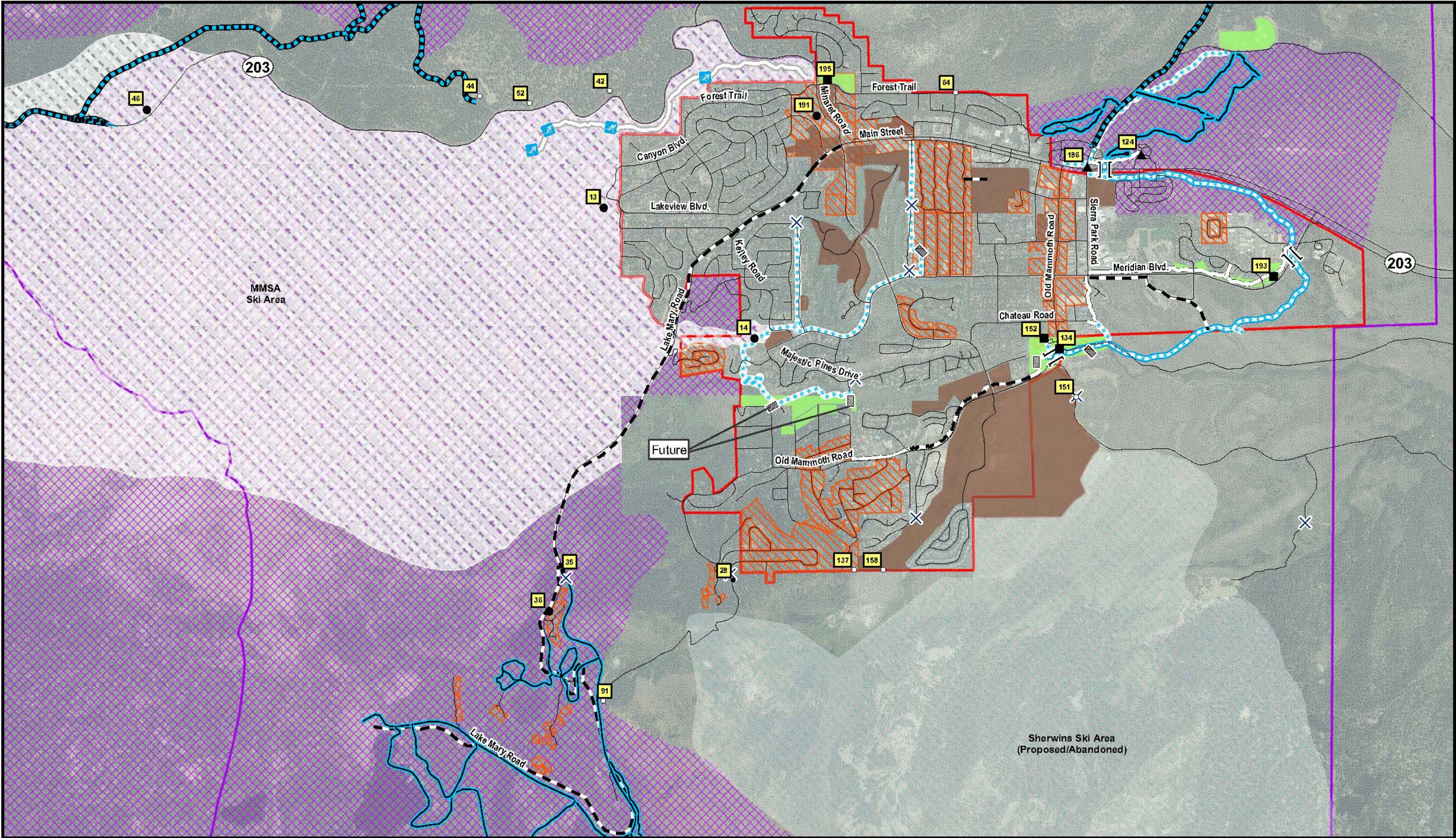
The following tables describe the existing amenities and activities taking place at winter recreation nodes. These nodes are either used as staging areas or access points for winter recreational activities, or have existing potential for winter recreational use.

Table 2-5. Existing Amenities at Winter Recreation Nodes

GIC	Name	Node Type	lodging	restaurant	parking	restroom	lift	bus	trail access	signage
13	Canyon Lodge (MMSA)	Portal	X	X	X	X	X	X	X	X
14	Eagle Lodge – temp (MMSA)	Portal	X	X	X	X	X	X	X	X
46	Main Lodge (MMSA)	Portal	X	X	X	X	X	X	X	X
191	North Village (MMSA)	Portal	X	X	X	X	X	X		X
36	Tamarack Lodge (MMSA)	Portal	X	X	X	X		X	X	X
195	Community Center Park	Park			X					
134	Mammoth Creek Park, East	Park			X				X	
152	Mammoth Creek Park, West	Park			X	X			X	
193	Trail's End Park	Park			X	X				
186	Shady Rest / Saw Mill Cutoff Road & Parking Lot	Trailhead			X				X	X
124	Welcome Center	Trailhead			X	X			X	X
35	Lake Mary Rd winter terminus	Access/Egres			X				X	X
28	Mill City	Access/Egres			X				X	
42	Earthquake Fault	GIC Point							X	
158	Path along Snowcreek V fence line	GIC Point								
44	Power Plant	GIC Point			X				X	
91	Sherwins Ridge Access at Lake Mary Road	GIC Point							X	
64	Sierra Blvd @ Forest Trail	GIC Point							X	
52	Sledz, snowplay	GIC Point			X	X	X	X		
137	Tamarack St @ UGB	GIC Point							X	
151	Winter terminus of Sherwin Creek Rd	GIC Point			X				X	

Table 2-6. Existing Characteristics of Winter Recreation Nodes

GIC	Name	Node Type	Description
13	Canyon Lodge (MMSA)	Portal	MMSA access MMSA egress; fee based; winter ski lifts
14	Eagle Lodge – temp (MMSA)	Portal	MMSA access MMSA egress; fee based; winter ski lifts
46	Main Lodge (MMSA)	Portal	Recreation portal; fee based; general access point; ski lifts; ski/snowboard; dog sledding; MMSA access; MMSA egress; public ungroomed nordic trails; public; fee-based snowmachine trail; snowmachine open area; snowshoe trail; snowshoe open area; vistas
191	North Village (MMSA)	Portal	Winter recreation portal; gondola; MMSA access/egress
36	Tamarack Lodge (MMSA)	Portal	Recreation portal; fee based; general access point; ice fishing; ice skating; MMSA egress; fee area groomed nordic trails; public groomed nordic trails; public un-groomed nordic trails; pet area and walking; public snowplay; snowshoe trail and open area; vistas; winter camping; groomed and winter hiking/walking
195	Community Center Park	Park	Parking, public meeting room.
134	Mammoth Creek Park East	Park	Winter road closure, public groomed nordic trails
152	Mammoth Creek Park West	Park	Recreation access, trailhead, restroom
193	Trail's End Park	Park	Facilities currently closed in winter.
186	Shady Rest /Saw Mill Cutoff Road & Parking Lot	Trailhead	Winter road closure and recreation trailhead; general access point; public groomed nordic trails; public un-groomed nordic trails; pet area and walking; snowmachine trail and open area; snowshoe trail and open area
124	Welcome Center	Trailhead	Visitor information and ungroomed access to nordic ski trails
35	Lake Mary Rd winter terminus	Access/Egress	Winter road closure; general access point; ski/snowboard access/egress; ice fishing; ice skating; MMSA egress; fee area groomed nordic trails; public groomed nordic trails; public un-groomed nordic trails; pet area and walking; public snowplay; snowshoe trail and open area vistas; winter camping; groomed winter hiking/walking
28	Mill City	Access/Egress	Winter road closure; general access point; kicker zone ski/snowboard; backcountry ski/snowboard access and egress; nordic ungroomed; public pet area; pet walking snowplay; public snowshoe trail; public area vistas winter hiking/walking
42	Earthquake Fault	GIC Point	Trail access
44	Power Plant	GIC Point	Staging area, general access point; OSV trail
91	Sherwins Ridge Access at Lake Mary Road	GIC Point	Access to backcountry skiing opportunities via Sherwins Ridge
64	Sierra Blvd @ Forest Trail	GIC Point	Trail access
52	Sledz	GIC Point	Fee area snowplay
158	Snowcreek V fence line	GIC Point	Backcountry ski/snowboard egress.
137	Tamarack St @ UGB	GIC Point	Private property; easement under negotiation.
151	Winter terminus of Sherwin Creek Rd.	GIC Point	Winter road closure; general access point; kicker zone ski/snowboard; backcountry ski/snowboard access and egress; dog sledding; public un-groomed nordic trails; pet area and walking; snowmachine trails and open area; public snowplay area; snowshoe trail and open area; vistas; winter camping



MAP 2-3: Existing Winter Recreation Nodes and Facilities (UGB & Beyond)

- Winter Recreation Nodes**
- Portals
 - Parks
 - ▲ Trailheads
 - Access/Egress Points
 - Key GIC Points

- GIC Numbers**
- 9
 - X Gates/Barriers/Closures
 -] [Tunnels
 - ▨ Bridges

- Paved Multi-Use Paths**
- Snow Removed from Existing Multi-Use Paths
 - Groomed Existing Multi-Use Paths
 - Snow Covered Existing Multi-Use Paths
 - Near-Term Multi-Use Paths

- Winter Use**
- Groomed : Multi-Use
 - Groomed : Non-Motorized
 - Ski Back Trail (Proposed)
 - Closed to Motorized

- Parks & Open Space
- Planned Developments
- Assessment Districts
- Urban Limit
- Town Boundary



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2.4. Paved Multi-Use Paths (Class I)

Often referred to as a “bike path”, a multi-use path provides for bicycle and pedestrian travel on a paved right-of-way completely separated from any street or highway. The California Highway Design Manual refers to these facilities as “Class I Bike Paths”. While the design of paved multi-use paths in the Town of Mammoth Lakes meets or exceeds the standards for a “Class I” facility, this terminology is purely technical and the term “paved multi-use path” or “paved MUP” will be used throughout this document except when discussing specific design standards.

Paved MUPs are generally desirable for recreational uses, particularly by families and children. Paved MUPs are preferred for corridors where there are few intersections or crossings, to reduce the potential for conflicts with motor vehicles. Paved MUPs can also serve a transportation function where a continuous facility is provided for a long distance or when it provides a connection to a major activity center.

Figure 2-1. Existing Bike Paths / Multi-Use Paths (Class I)



Main Path

Meridian Path

Shady Rest Path

Table 2-7. Existing Bicycle Facilities (Summer)

Facility Type	Mileage / Units
Bike Path (Class I) / Multi-Use Path	8.50 miles (Town Boundary)
	7.33 miles (UGB)
- Lake Mary Road (Near-Term*)	5.3 miles
- Cleared/Groomed Grade-separated crossings / Tunnels	3
- At-grade crossings (MUP to MUP)	16

*Near-term projects are those which are funded, designed, and/or under construction.

The Town's Main Path and other paved paths are built to the Caltrans standard of a Class I Bike Path and have been built in conformance with the 1991 Trail System Plan and the 2008 General Bikeway Plan. Some alignments have changed slightly, but the general concept of a Main Path loop with connections to other paths extending inward or toward the center of town (i.e. Meridian Trail) and outward or away from town (i.e. Shady Rest Park Trail) has been maintained. The "Main Path" as envisioned in the 1991 Trail System Plan is incomplete, but its existing segments still serve as the backbone of the current off-street bikeway network. The Meridian and Shady Rest Park Paths also serve important mobility and recreational needs. The Meridian Path serves schools, "The Trails" residential development, Trail's End Park, and the Industrial Park and is completely cleared of snow in the winter. The Shady Rest Park trail leads from Main Street near the Welcome Center and Forest Service offices, to the Shady Rest Campgrounds and the sports facilities at Shady Rest Park. The Lake Mary Road Path—at 5.3 miles—will be a significant addition when it is completed in 2009.

2.4.1. At-Grade MUP Crossings

The Town of Mammoth Lakes currently has 16 at-grade crossings along existing paved multi-use paths. There is significant variation in the treatments used at these crossings. **Figure 2-2** below shows some of the more typical treatments used at crossings. Some crossings use abundant treatment to enhance safety while others have very limited safety features. The Design Guidelines (Chapter 6) will provide guidance on the consistent application of a minimum combination of safety treatments as well as providing discussion of some additional safety treatments for at-grade crossings.

Figure 2-2. Existing At-Grade MUP Crossings



Trail-sized stop signs, full-sized stop sign for cross traffic, reflective bollards, tactile surface, identified crossing area



Trail-sized stop sign, school-zone crosswalk striping, warning signs for approaching motorists



Trail-sized stop sign and painted crosswalk

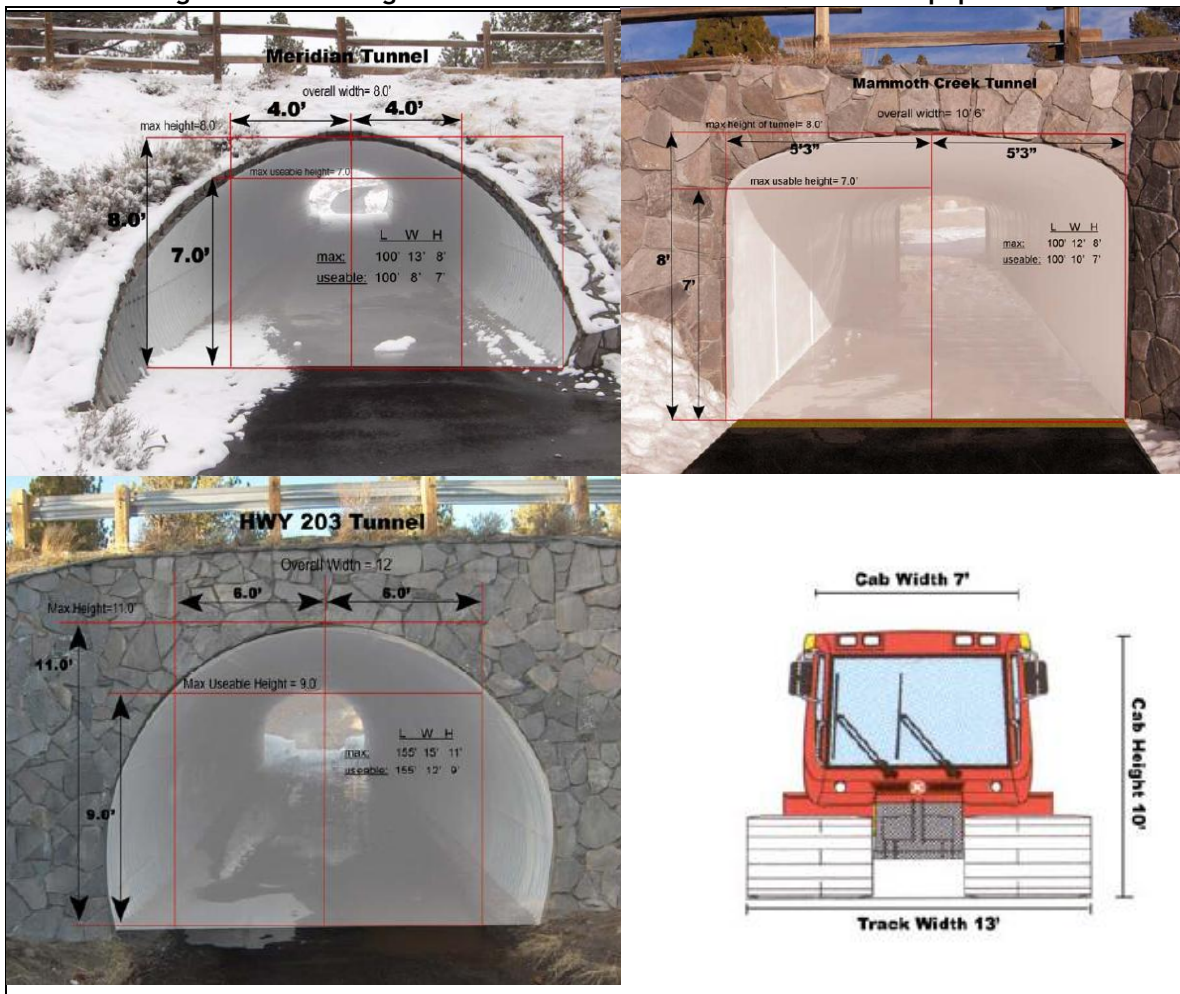


Trail-sized stop sign only

2.4.2. Grade-Separated MUP Crossings

The only grade-separated crossings currently in the Town of Mammoth Lakes consist of under crossings or tunnels. The Town's tunnels vary in width and height. Because some sections of path become cross country ski trails in the winter, Mammoth Nordic developed a memorandum which discussed winter maintenance issues associated with the inability of a standard snow cat to pass through the Town's tunnels. The images below were created by Mammoth Nordic to illustrate the need for wider tunnels in order to accommodate full-sized grooming equipment.

Figure 2-3. Existing Tunnel Widths and Winter Maintenance Equipment



Source: Mammoth Nordic

2.4.3. Winter Conditions on Paved Multi-Use Paths

Winter snow cover creates an entirely different system and set of recreational opportunities and challenges along the paved multi-use path system. The Town's paved multi-use path facilities are either cleared for winter mobility and recreation, groomed for cross-country skiing, or unmaintained (snow-covered) during the winter months.

While recreational bicycling declines to a level approaching zero in the winter, cycling for transportation has the potential to remain high with the appropriate infrastructure and maintenance. Current bike path maintenance levels are not favorable for winter bicycle commuting. However, the Safe Routes to School Program allows students to use MUP facilities to commute to schools from the Trail's End neighborhood and via Chateau Road. Other segments near the Welcome Center and along Old Mammoth Road are also cleared. A continuous section of paved MUP between Main Street and Eagle Lodge is currently unmaintained in the winter. **Table 2-8** provides an inventory of the Town's winter bicycle infrastructure.

Table 2-8. Existing Recreational Trail Facilities (Winter)

Facility Type	Mileage / Units
Cleared MUP	2.62 miles
Groomed MUP / Bike Path (TOML / Mammoth Nordic)*	2.47 miles
Snow-Covered Path (no maintenance)	3.41 miles
Groomed Grade-separated crossings / Tunnels	3 (when eastern portion of Main Path is groomed)
At-grade crossings (XC to XC)	2 (when eastern portion of Main Path is groomed)

*Grooming of the eastern section of the Main Path has been authorized and requires coordination between TOML, the Water District, and Mammoth Nordic. Due to other priorities and difficulties in mobilizing the necessary resources, this section of the Main Path often remains ungroomed for much of the winter season.

Because the Town's paved multi-use paths are a significant community resource and have required significant investment, they should be used to their fullest extent year-round. Because winter is the season when the Town's population is the highest, facilities that increase winter mobility and recreational opportunities should be used to their fullest potential. All pathways should be maintained in the winter (cleared or groomed) unless the cost of doing so outweighs the benefits. Subjective input will have to be considered in order to determine the best and highest use for each existing and future segment of paved multi-use path in Mammoth Lakes. For these reasons, it would be best if a plan for the winter maintenance of the Town's existing paved multi-use paths was created as part of an open and ongoing public process. Preferred maintenance levels on individual MUP segments are provided in Chapter 7.

2.5. On-Street Bikeways

Bicycle facilities play a much larger recreational role in the summer season. The weather is favorable, the MMSA Mountain Bike Park is open and the roadways, bike paths, and trails are generally clear of snow and debris. The existing in-town bikeway network consists of paved on- and off-street bikeways. The following discussion focuses on the Town's existing paved on-street bikeways.

Table 2-9. Existing On-Street Bicycle Facilities

Facility Type	Mileage / Units
Bike Lanes (Class II)	1.78 miles
- Bike Lane Signs*	7
Bike Routes (Class III)	3.61
- Bike Route Signs*	29

*Sign count is per MLTPA signage inventory.

2.5.1. Bike Lanes (Class II)

Referred to in the California Highway Design Manual (HDM) as “Class II” bikeways, bike lanes provide a striped and stenciled lane for one-way travel on both sides of a typical street or highway. When properly designed, bike lanes can help improve the visibility and positioning of bicyclists. In general, bike lanes are highly desirable for bicycle commute routes on major streets, and any urban area where bicycle circulation is desired by local residents in order to access a variety of destinations such as shopping areas, educational centers, and other land uses. The Town has bike lanes on Minaret Road between Main Street and Old Mammoth Road, and shorter segments on Old Mammoth Road between Mammoth Creek Park and Minaret Road.

Figure 2-4. Existing Bike Lanes (Class II)



All existing bike lanes in Mammoth are along roadways with soft shoulders. The bike lanes on Minaret Road are significantly wider than the four-foot minimum for bike lanes adjacent

to a soft roadway shoulder. On Old Mammoth Road, however, the lanes are narrower than the minimum standard in at least one location due to fluctuating pavement width.

2.5.2. Bike Routes (Class III)

Referred to in the HDM as “Class III” bikeways, bike routes provide for shared use with bicyclists and motor vehicle traffic and are typically identified only by signing. On streets with low traffic volumes and speeds (under 5,000 vehicles per day, 30 mph), bicycle lanes may not be needed. On low-traffic neighborhood streets, bike routes can serve as important connectors to schools and recreational areas such as parks. Bike routes may also be desirable on certain commute routes where installing bicycle lanes is not possible, provided that additional signage is installed to alert motorists to the presence of bicycles on the roadway.

Bike routes exist on Main Street/Hwy 203, Canyon Boulevard, Forest Trail, Lakeview Boulevard, Majestic Pines Drive, and Meridian Boulevard. The bicycling environment along these routes varies significantly.

Figure 2-5. Existing Bike Routes (Class III)



alerts motorists if they are drifting into the shoulder where bicyclists or stopped motorists may be present.

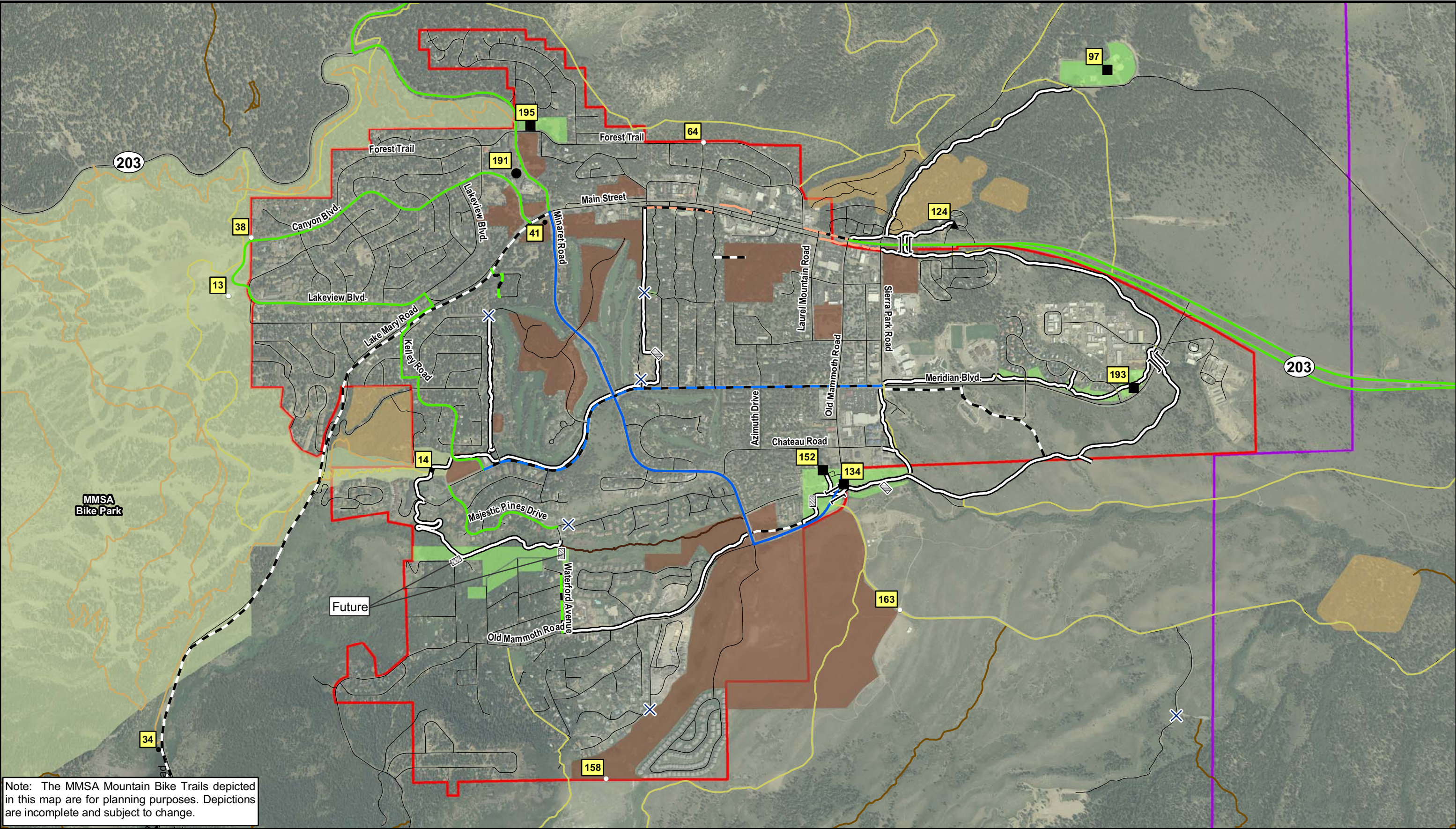
The bike route along Meridian Boulevard provides a narrower shoulder in a more urban setting. Because the space is designated as a shoulder and not a bike lane, motorists can use that space for stopping and parking. If no cars are parked in the shoulder, it operates much like a bike lane. A bike lane would be a superior treatment in this setting. A bike lane can be developed by either prohibiting parking in the existing shoulder or by restriping the roadway to provide both a parking lane and a separate bike lane. The second option may require removing a travel lane also known as a “road diet”.

Canyon Boulevard is designated as a collector street. Land uses along Canyon consist of high and low-density residential and commercial development. Canyon also provides a key connection between Canyon Lodge and the North Village, and is an important point of transition between mountain bike trails and the urbanized area. See the discussion on the interface of soft-surface and paved facilities in section 2.7.

Majestic Pines provides an example of a bike route on a local street. On local streets, shoulders are not necessary as long as traffic volumes are low and speeds are slow. In areas with steep grades, all excess width should be used to provide shoulders in the uphill direction since that is where the speed differential between cyclists and motorists will be greatest. In the downhill direction, cyclists can move at the speed of traffic.

Mammoth’s existing summer and winter bicycle networks are shown in **Maps 2-4** and **2-5**. The network consists of both on- and off-street facilities.

Currently, all on-street bike lanes and bike routes are cleared of snow along with the roadways, but hazards such as snow and ice accumulation in the bike lanes or shoulders can be hazardous.



Note: The MMSA Mountain Bike Trails depicted in this map are for planning purposes. Depictions are incomplete and subject to change.

MAP 2-4:
Existing Summer
Bikeways & Trails
(within UGB)

- Summer Recreation Nodes**
- Portals
 - Parks
 - ▲ Trailheads
 - Access/Egress Points
 - Key GIC Points

- GIC Numbers**
- 9
 - X Gates/Barriers/Closures
 - [] Tunnels
 - ▨ Bridges

- On-Street Facilities**
- Existing Bike Lanes (Class II)
 - Near-Term Bike Lanes (Class II)
 - Existing Bike Routes (Class III)
 - Near-Term Bike Routes (Class III)

- Paved Off-Road Facilities**
- Existing Paved Multi-Use Paths
 - Near-Term Multi-Use Paths
 - Existing Promenade
 - Near-Term Promenade

- Soft-Surface Trails**
- Existing MMSA Mountain Bike Trails
 - Existing USFS System Trails
 - 1991 TOML Future/Alternative Trails
 - Private Dirt Trails

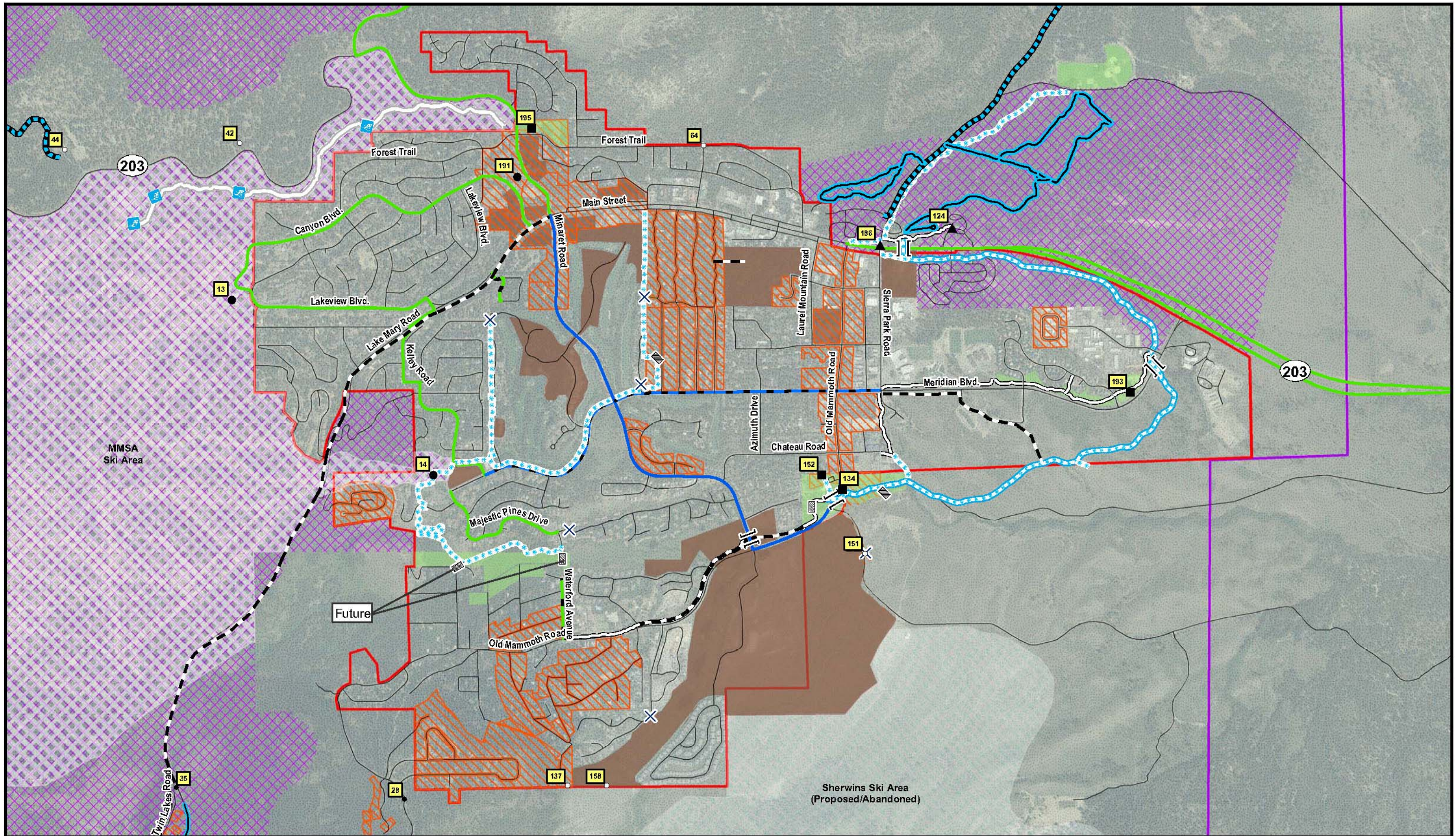
- Campgrounds
- Parks & Open Space
- Planned Developments
- Urban Limit
- Town Boundary



0 0.25 0.5 Miles



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**MAP 2-5:
Existing Winter
Bikeways & Trails
(within UGB)**

- Winter Recreation Nodes**
- Portals
 - Parks
 - ▲ Trailheads
 - Access/Egress Points
 - Key GIC Points

- GIC Numbers**
- 9
 - X Gates/Barriers/Closures
 - [] Tunnels
 - ▨ Bridges

- On-Street Facilities**
- Existing Bike Lanes (Class II)
 - Near-Term Bike Lanes (Class II)
 - Existing Bike Routes (Class III)
 - Near-Term Bike Routes (Class III)

- Paved Multi-Use Paths**
- Snow Removed from Existing Multi-Use Paths
 - Groomed Existing Multi-Use Paths
 - Snow Covered Existing Multi-Use Paths
 - Near-Term Multi-Use Paths

- Winter Use**
- Groomed : Multi-Use
 - Groomed : Non-Motorized
 - Ski Back Trail (Proposed)
 - Closed to Motorized

- Parks & Open Space
- Planned Developments
- Assessment Districts
- Urban Limit
- Town Boundary



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2.6. Pedestrian Facilities

The small scale of the Town of Mammoth Lakes, the existence of an urban growth boundary to prevent sprawling development, and the cultural value placed on outdoor recreation and physical activity all provide Mammoth with the ideal conditions for the type of “feet first” mobility found in many of North America’s smaller mountain resort towns. However, despite those physical and cultural characteristics, the Town’s built environment lends itself more to the auto-oriented mobility of suburban Southern California. The lack of pedestrian infrastructure, the prevalence and street-side location of surface parking lots, and the width of Mammoth’s main thoroughfare (Main Street) present challenges for pedestrians even under the most favorable weather and maintenance conditions. This section will provide an inventory and analysis of existing pedestrian facilities, and a discussion of some of the Town’s pedestrian-related urban design and safety issues. However, these issues of urban mobility will ultimately be covered in a Mobility Plan to be undertaken by the Mobility Commission and the Department of Public Works. The following narrative provides recommendations for pedestrian improvements that should be considered in these future mobility planning efforts.

2.6.1. Existing Pedestrian Facilities

Mammoth’s pedestrian infrastructure consists of sidewalks, crosswalks, multi-use paths and grade-separated crossings (tunnels). The following tables provide an inventory of existing pedestrian facilities in the Town of Mammoth Lakes. Multi-use paths will be included in the inventory of both pedestrian and bicycle facilities, because they are intended to serve both user groups. All facilities listed here are located within the UGB unless otherwise noted. **Table 2-10** provides an inventory of the Town’s existing summer pedestrian facilities. Mileage was determined through the Town’s GIS database.

Figure 2-6. Existing Pedestrian Facilities

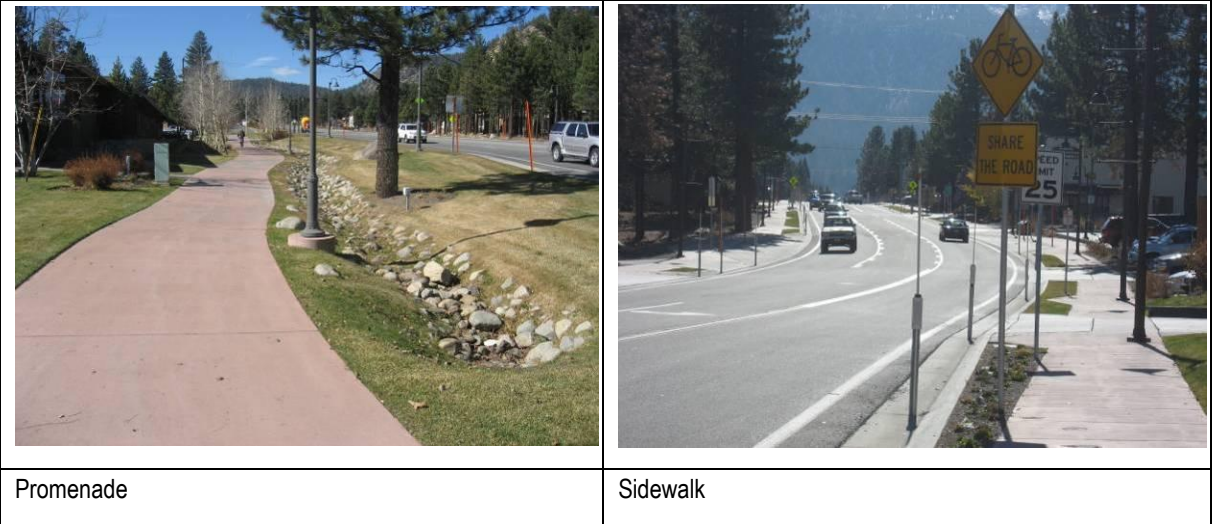


Table 2-10. Summary of Existing Pedestrian Facilities (Summer)

Facility Type	Mileage / Units
Promenades (10' sidewalks)	0.31 miles
Sidewalks (8' or less)	4.97 miles
- Signalized Crosswalks	17
Multi-Use Path / Bike Path (Class I)	8.50 miles (Town Boundary)
	7.33 miles (UGB)
- Grade-separated crossings / Tunnels	3 tunnels (1 is in Town Boundary, but outside UGB)
- At-grade crossings	16

Pedestrians in the Town face several challenges. Sidewalk infrastructure is very limited even during summer months when the Town's entire pedestrian infrastructure is generally exposed and available for public use. Multi-use paths make up the majority of pedestrian facilities in the summer months, where they are shared with other users such as cyclists and skaters. In several areas the multi-use path is where the sidewalk would traditionally be, directly adjacent to the street. In the winter, conditions change as some facilities become snow-covered and inaccessible, while others are maintained to serve a different purpose (i.e. MUP groomed for Nordic/XC skiing). Currently, 76.5 percent of the Town's sidewalks and 23 percent of the Town's multi-use paths are cleared in the winter. **Table 2-11** provides a summary of pedestrian facilities under typical winter conditions. Sidewalk infrastructure is categorized both by maintenance level and underlying heating infrastructure. For a layout of Mammoth's summer and winter pedestrian facilities, see **Map 2-6** and **Map 2-7** on the following pages.

Table 2-11. Summary of Existing Pedestrian Facilities (Winter)

Facility Type	Mileage / Units
<u>Sidewalks / Promenades (by Winter Condition)</u>	
Cleared Winter Sidewalks	3.80 miles
- Heated	0.22 miles
- TOML Snow Removal	3.58 miles
Snow-Covered Sidewalks / Promenades	1.48 miles
<u>Sidewalks (by Type of Infrastructure)</u>	
Sidewalks (Heated)	0.22 miles
Sidewalks (Plumbed for Future Heating)	1.50 miles
Sidewalks (No heating, unplumbed)	3.25 miles
Multi-Use Path (Cleared)	1.69 miles (Town Boundary)
	1.45 miles (UGB)
- Cleared or Groomed Grade-separated crossings / Tunnels	3
- At-grade crossings (cleared MUP to cleared MUP)	5
- At-grade crossings (partial / full closure)*	6

*Includes at-grade crossings where the trail is closed on at least one side of the crossing.

Another way to analyze the existing level of pedestrian infrastructure is by calculating the ratio of sidewalk miles to street miles. In communities with high levels of pedestrian infrastructure, the ratio of sidewalk to street mileage generally approaches 2:1 (a sidewalk on each side of every street). **Table 2-12** shows the sidewalk to roadway miles ratio for the Town of Mammoth Lakes and eight other cities with 500 miles of roadway or less.³

Table 2-12. Sidewalk to Roadway Ratio in Cities w/ less than 500 miles of Roadway

City/Town	State	Miles of Roadway	Miles of Sidewalk	Ratio
Town of Mammoth Lakes	California	58	5	0.09 : 1
Village of Riverside	Illinois	32	64	2.00 : 1
Orem	Utah	283	500	1.77 : 1
Rockville	Maryland	140	240	1.71 : 1
Billings	Montana	463	770	1.66 : 1
Glendale	California	365	600	1.64 : 1
Prairie Village	Kansas	113	153	1.35 : 1
Champaign	Illinois	220	240	1.09 : 1
St. Louis Park	Minnesota	142	104	0.73 : 1

Sources: TOML GIS Data, Nashville-Davidson County Strategic Plan for Sidewalks and Bikeways

In some cases it may be impractical, unnecessary, or even undesirable to install sidewalks on narrow residential streets with low traffic volumes, as doing so could require land acquisition, tree removal, or on-street parking removal. In these cases a more conservative estimate can be used that only considers “major roadways” (arterial and collector streets). This more conservative ratio may be more appropriate for the Town of Mammoth Lakes. The current ratios even using the conservative measure are very low. If we add the 1.53 miles of multi-use path that is directly adjacent to existing arterial or collector streets (0.96 in winter), the ratio improves slightly.

Table 2-13. Mammoth Lakes Sidewalk to Major Roadway Ratio

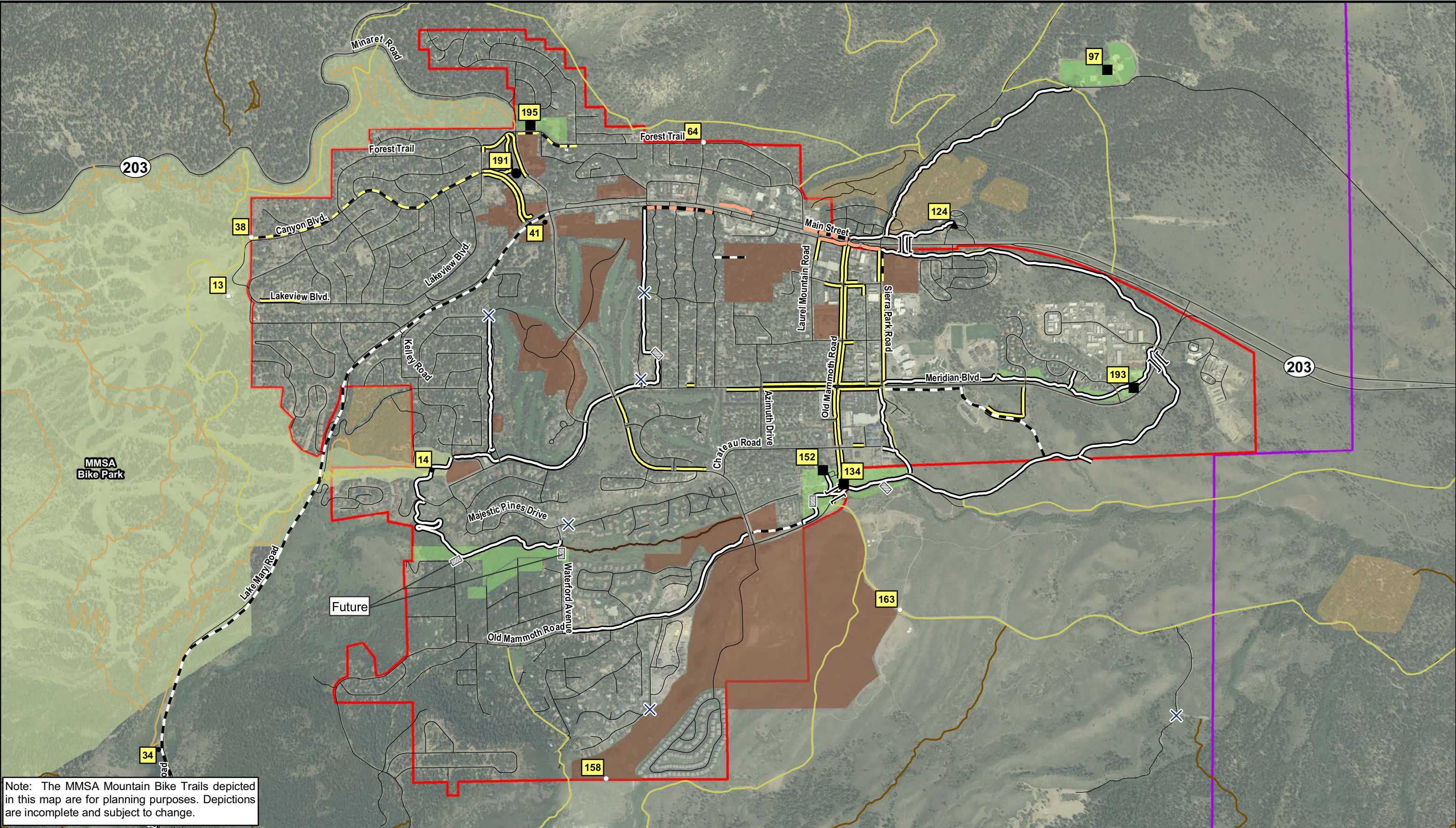
Season	Miles of Arterials	Miles of Collectors	Major Roadways (Total)	Miles of Sidewalk (w/ MUP)	Ratio
Summer (sidewalks only)	15.7	9.9	25.6	4.97	0.19 : 1
Summer (sidewalks & MUP)*	15.7	9.9	25.6	(6.51)	0.26 : 1
Winter (sidewalks only)	15.7	9.9	25.6	3.80	0.15 : 1
Winter (Sidewalks & MUP)*	15.7	9.9	25.6	(5.93)	0.23 : 1
High Target	15.7	9.9	25.6	51.16	2 : 1
Moderate Target	15.7	9.9	25.6	41.30	1.6 : 1

*Only multi-use paths directly adjacent to an arterial or collector were counted.

³ It should be noted that the cities listed were selected only based on their size and the availability of the data.

The “high target” ratio of 2:1 represents a sidewalk on each side of every arterial and collector street in town. The “moderate target” ratio represents a sidewalk on both sides of every arterial street and on one side of every collector street.





Table 2-14 identifies existing pedestrian facilities adjacent to major activity centers and includes crosswalks, sidewalks and multi-use paths. Chapter 4 will provide recommendations for improving pedestrian access to existing activity centers and provide guidelines for ensuring a high level of pedestrian access in new developments.




Note: The MMSA Mountain Bike Trails depicted in this map are for planning purposes. Depictions are incomplete and subject to change.

MAP 2-6: Existing Summer Pedestrian Facilities (within UGB)

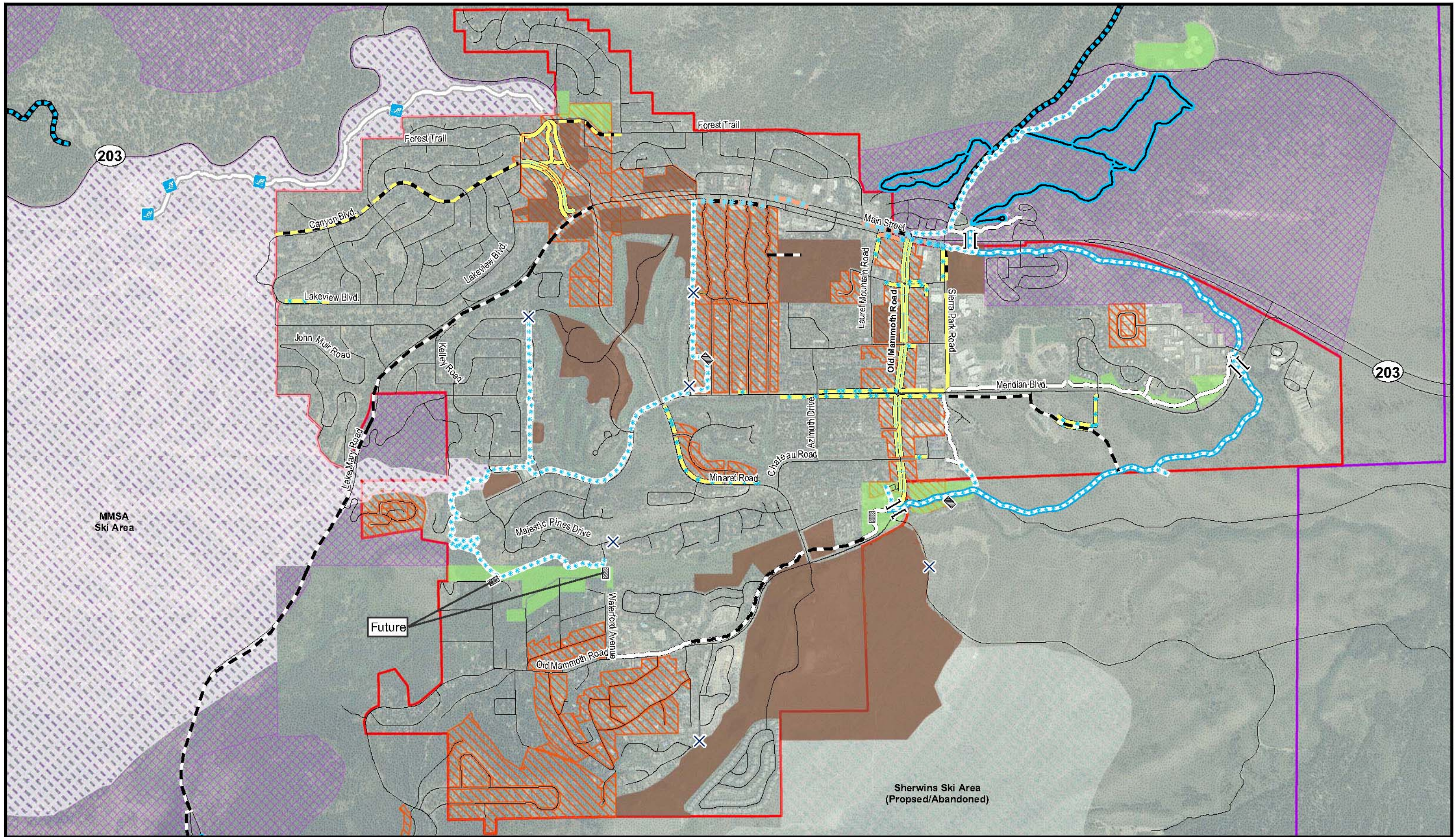
Summer Recreation Nodes		Pedestrian Facilities		Paved Multi-Use Paths		Soft-Surface Trails		Campgrounds	
●	Portals	9	GIC Numbers	—	Existing Sidewalks	—	Existing MMSA Mountain Bike Trails	+	Campgrounds
■	Parks	X	Gates/Barriers/Closures	—	Near-Term Sidewalks	—	Existing USFS System Trails	+	Parks & Open Space
▲	Trailheads]	Tunnels	—	Existing Promenade	—	1991 TOML Future/Alternative Trails	+	Planned Developments
●	Access/Egress Points	[Bridges	—	Near-Term Promenade	—	Private Dirt Trails	+	Urban Limit
○	Key GIC Points			—		—		+	Town Boundary



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MAP 2-7:
Existing Winter
Pedestrian Facilities
(within UGB)

Winter Recreation Nodes

- Portals
- Parks
- ▲ Trailheads
- Access/Egress Points
- Key GIC Points

GIC Numbers

- 9
- X Gates/Barriers/Closures
-]] Tunnels
- ▨ Bridges

Paved Multi-Use Paths

- Snow Removed
- Groomed (Mammoth Nordic)
- Snow Covered
- Near-Term Multi-Use Paths

Pedestrian Facilities

- Existing Sidewalks
- Near-Term Sidewalks
- Existing Promenade
- Near-Term Promenade

Sidewalk Maintenance

- Snow Removed
- Snow Covered
- Heated
- Plumbed for Heating

Winter Use

- Groomed for Multi-Use
- Groomed for Non-Motorized
- Ski Back Trail (Proposed)
- Closed to Motorized

Parks & Open Space

- Planned Developments
- Assessment Districts
- Urban Limit
- Town Boundary

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Table 2-14. Pedestrian Access to Major Activity Centers

Activity Center	Crossings	Sidewalks	Multi-Use Paths or Other Pedestrian Facilities
North Village	<u>Signalized</u> One (1) mid-block on Minaret Rd at The Village (year-round) Four (4) at Minaret and Main Street (year-round) <u>Unsignalized</u> One (1) mid-block on Canyon in The Village (year-round) Three (3) at Canyon and Lake Mary Road (year-round)	Minaret Rd W (year-round) Forest Trail S (year-round) Canyon Blvd E (year-round) Canyon Blvd W (year-round) Hillside Drive E partial (year-round)	Stairs to Westin Hotel
Minaret Village Mall	<u>Signalized</u> Four (4) at Old Mammoth & Meridian (year-round) <u>Unsignalized</u> Three (3) at Old Mammoth & Sierra Park (year-round)	Old Mammoth Rd E (year-round) Old Mammoth Rd W (year-round) Meridian Blvd N (year-round) Meridian Blvd S (summer only) Chateau Rd (none)	MUP runs behind shopping center on East side
Gateway Center Mall	<u>Signalized</u> Two (2) at Main & Old Mammoth (year-round) One (1) at Main and Laurel Mtn. (year-round)	Old Mammoth Rd E (year-round) Old Mammoth Rd W (year-round) Main St S (summer only) Laurel Mtn Rd E (partial, summer only) Tavern Rd S (partial, summer only)	Sidewalk along Main St frontage is 10' wide (summer only). MUP terminates at NE corner of Main St and Old Mammoth Rd (summer only)
Sierra Star Golf Course	<u>Signalized</u> Four (4) at Minaret and Meridian (summer only)	Minaret Road E (summer only)	MUP runs along N side of Meridian Blvd
Industrial Park	<u>Unsignalized</u> MUP Crossing on E end at Commerce Drive	None	MUP connection at E end of Commerce Drive
Welcome Center	<u>Grade-Separated</u> Tunnel at Main Path E of Sierra Park Rd (summer only)	None	MUP connects Visitor's Center to parking lot and Sawmill Cutoff Rd (year-round) Connection to Main Path via tunnel (summer only)
Hospital and Medical Center	None	Sierra Park Rd E (year-round)	None
Public Schools	<u>Unsignalized</u> Three (3) at Old Mammoth & Sierra Park (year-round)	Sierra Park Rd South of Meridian Blvd. (year-round)	MUP on S side of campuses connects to Trails End Park (year-round) and Mammoth Creek Park (summer only)
Post Office / Hotels (Main St)	<u>Signalized</u> One (1) crosses Main St at Mammoth Luxury Outlet Stores (year-round)	None	None
New Library / Sierra High	<u>Unsignalized</u> Three (3) at Old Mammoth & Sierra Park (year-round)	None	MUP on W side of Sierra Park Rd (year-round)
Community College / Ski Museum	None	College Pkwy N (partial, summer only) College Pkwy S (partial, summer only) Wagon Wheel Rd W (summer only)	MUP on N side of Meridian (year-round), no crossing available.

2.7. Interface Between Mountain Bike Trails and Paved Facilities

The transition between backcountry mountain bike (MTB) trails and the urbanized areas of Town can present serious safety hazards if not designed appropriately and thoughtfully. The most common areas of transition are at the North Village, Canyon Lodge and Eagle Lodge. These areas currently present some safety concerns and confusion that should be addressed through coordinated efforts between TOML, USFS and MMSA. See the Town of Mammoth Lakes Soft-Surface Trails Concept (Attachment A) for more discussion on soft-surface trails.

2.7.1. North Village

At the North Village, the transition between the Uptown/Downtown trail and Town streets can be hazardous because the trail ends near the intersection of Minaret Road and Forest Trail without providing any indication of how or where to safely transition onto surface streets or how to reach the bike shuttle pick-up location on Canyon Boulevard. The surface streets at this location do not have bike lanes and there is no dedicated area for mountain bikers to be dropped off or picked up in vehicles. The addition of such an area would also provide space for cyclists to regroup before continuing into Town.

2.7.2. Canyon Lodge

Mountain bikers who descend into the Canyon Lodge area do not currently have the opportunity to take a lift back up the mountain, so they are required to ride into Town via Canyon Boulevard in order to catch a bus, return to their vehicles or arrive at their in-Town accommodations. The steep grades along Canyon Boulevard encourage downhill cyclists to travel at high speeds which can be dangerous if they attempt to ride on the sidewalk or too close to the edge of the roadway. Because a bike route is a shared-roadway situation and only provides signage, there is currently no clear guidance as to the appropriate positioning of bicyclists in this situation. Riding in the center of the vehicle travel lane and obeying all traffic laws (including speed limits) is the safest way for cyclists to descend to North Village. A bike lane would be most appropriate in the uphill direction since uphill cyclists will be moving much slower than vehicular traffic. Additional signage, striping and pavement markings are required to improve cyclist behavior and overall safety at this location.

2.7.3. Eagle Lodge

The transition between the Juniper Trail and Eagle Lodge provides the only current opportunity for mountain bikers to transition directly from soft-surface MTB trails to a paved multi-use path. From Eagle Lodge mountain bikers can continue east and north toward the North Village and Main Street via the Main Path. Taking the Main Path east will connect them to the bike lanes on Minaret Road and up to the North Village, or they can continue up the path behind Tallus to the south side of Main Street at Callahan Way. Mountain bikers will also have the opportunity to continue on to the south and east via the Main Path and the Waterford connector to Mammoth Creek Park and the Old Mammoth District once the near-term projects are completed to close gaps at Waterford Avenue and along Old Mammoth Road. However, there is currently a lack of signage and wayfinding to let them know of these opportunities.

2.7.4. Twin Lakes

The MMSA Lakes Trail terminates at the Twin Lakes parking lot on the northwest side of Lake Mary Road. The parking lot is currently used as a staging area for hikers and other recreationists. The Lake Mary Path is designed to cross from the northwest to the southeast side of the road at this location and mountain bikers will need to be directed to reach the path safely while avoiding conflicts with motor vehicles and other trail users.

2.8. Soft-Surface Trails

Most opportunities for soft-surface trail development are on Forest Service lands outside the jurisdiction of the Town of Mammoth Lakes. However, access from Town to the trails and backcountry opportunities beyond the UGB are of primary significance to the Town's recreational and economic viability and thus are a major focus of this plan. The following section provides an analysis of existing summer and winter soft-surface trail facilities in and around the Town of Mammoth Lakes.

2.8.1. Summer Trails

The only existing soft-surface trail that falls completely within the urban growth boundary is the walking trail through Snowcreek Meadow. The trail extends from Waterford Avenue near Majestic Pines and follows Mammoth Creek on the North side to Minaret Road. In some sections close to the creek, the footpath will fill with water at times, causing users to walk off the trail and create adjacent paths. This is known as trail braiding (see glossary) and can be addressed through the use of a low wooden boardwalk. The trail is on private property and is currently maintained by the Snowcreek Meadow Committee. The Town of Mammoth Lakes currently has an easement in the area and could potentially construct a low-impact wooden boardwalk and take over responsibility for maintaining a trail segment within the easement.

Figure 2-7. Snowcreek Meadow Trail (private)

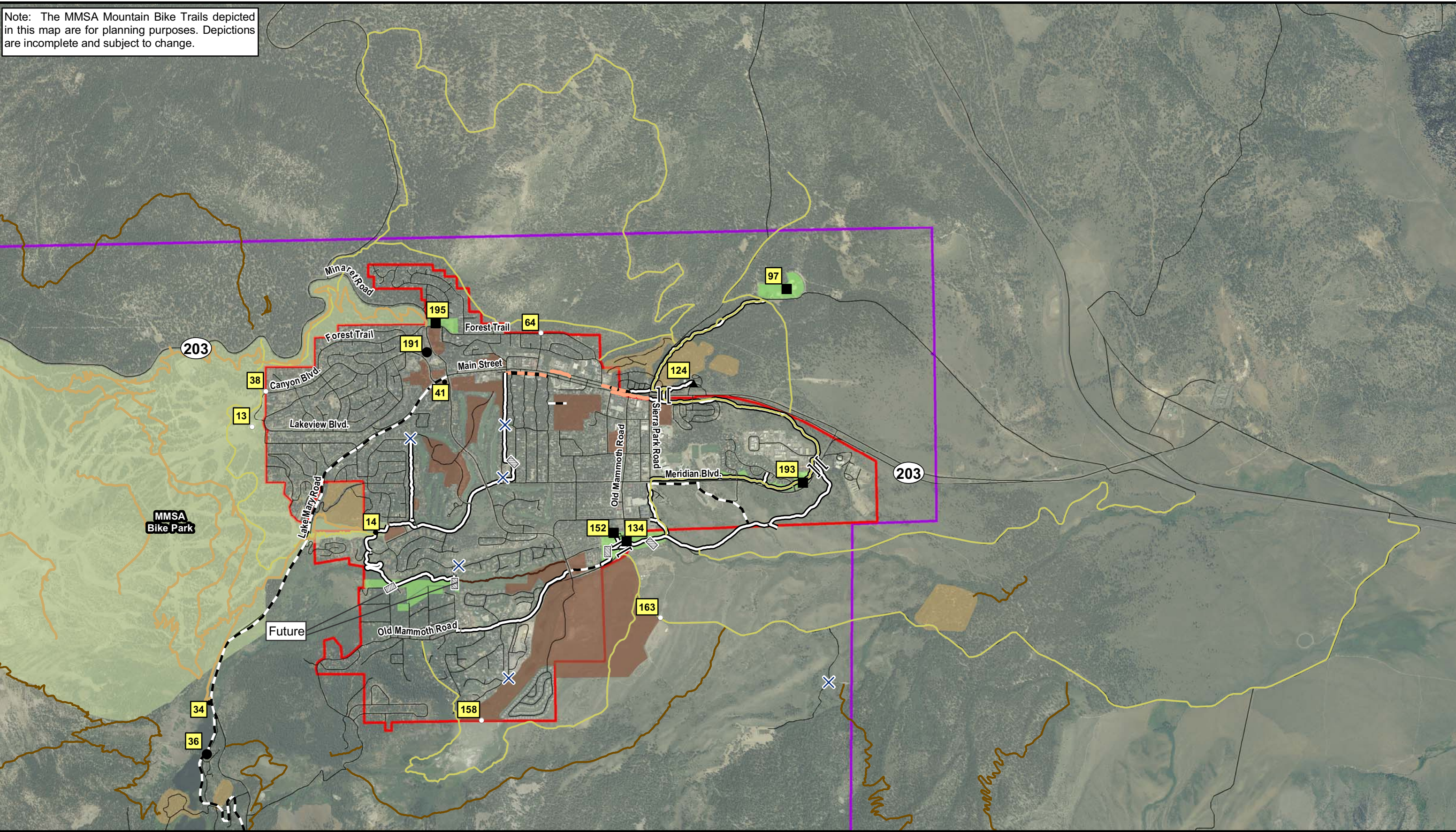


Signage at trail entrance makes it clear that only foot traffic is allowed.

Trail segment adjacent to Mammoth Creek

Map 2-8 shows existing summer trails in and around the Town of Mammoth Lakes. Existing trails include paved paths maintained by TOML, mountain bike trails managed by the MMSA Bike Park, USFS-sanctioned “system” of soft surface trails, and the private dirt trail through Snowcreek Meadow. The “Alternative/Future” alignments from the 1991 Trail System Plan are also shown for reference purposes, but do not currently exist. Existing winter trails can be found on **Map 2-9**.

Note: The MMSA Mountain Bike Trails depicted in this map are for planning purposes. Depictions are incomplete and subject to change.



MAP 2-8:
Existing Summer Trail
System (UGB & Beyond)

Summer Recreation Nodes

- Portals
- Parks
- ▲ Trailheads
- Access/Egress Points
- Key GIC Points

9 GIC Numbers

- ✕ Gates/Barriers/Closures
-]] Tunnels
- ▤ Bridges

Paved Off-Road Facilities

- Existing Paved Multi-Use Paths
- - - Near-Term Multi-Use Paths
- Existing Promenade
- - - Near-Term Promenade

Soft-Surface Trails

- Existing MMSA Mountain Bike Trails
- Existing USFS Sanctioned Trails
- 1991 TOML Future/Alternative Trails
- Private Dirt Trails

- Campgrounds
- Parks & Open Space
- Planned Developments
- Urban Limit
- Town Boundary





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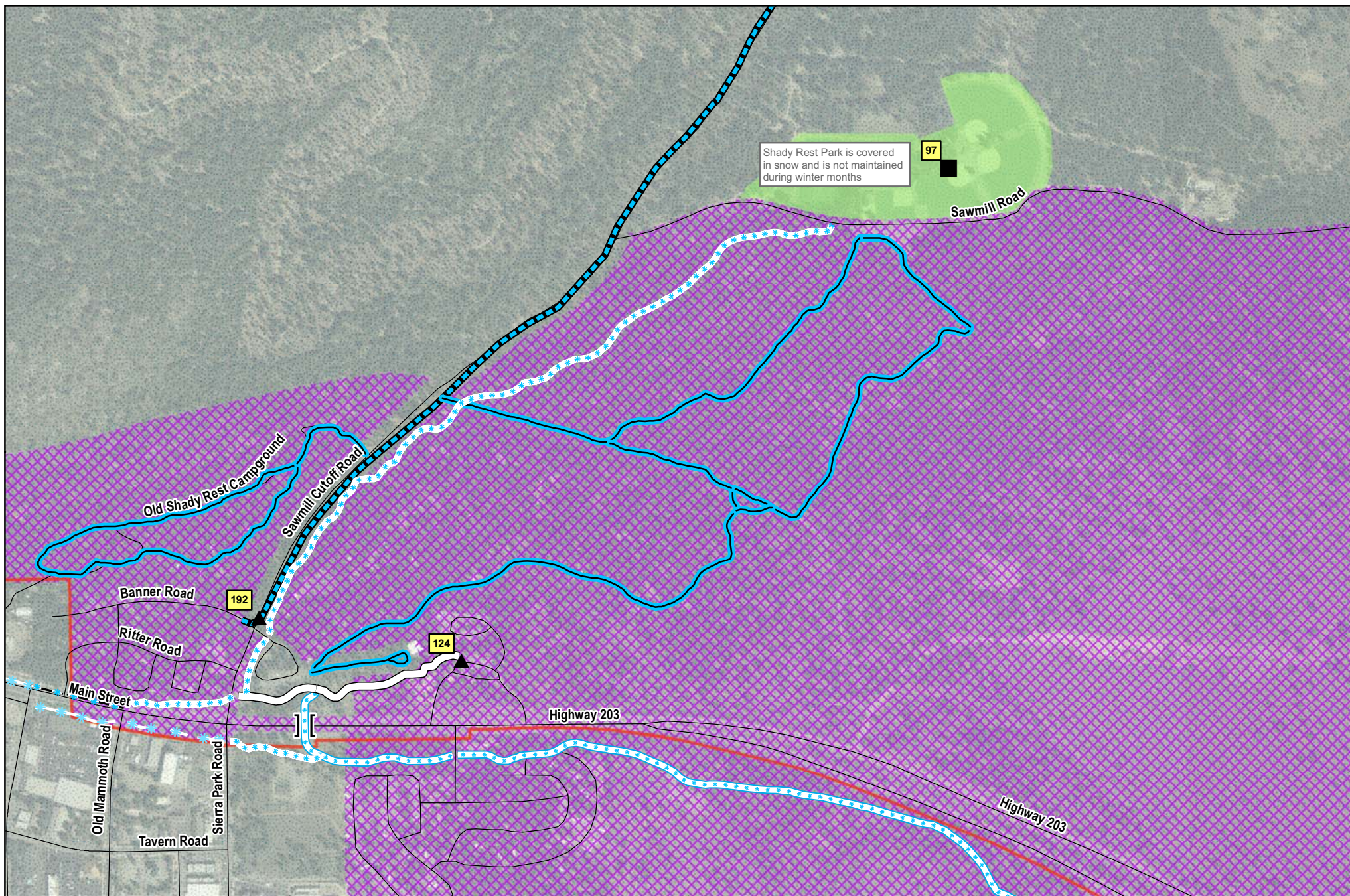
2.8.2. Winter Trails

Unpaved facilities currently used as public winter trails are generally located outside the urban growth boundary. Non-motorized trails are concentrated in the Lakes Basin and Shady Rest areas. Tamarack Resort in the Lakes Basin has the most extensive network of groomed cross-country trails near Town and charges a fee for use. Lake Mary Road is groomed and provides public access to the Lakes Basin without a fee. The Shady Rest area is open to the public and consists of motorized and non-motorized trails. Sawmill Cutoff Road is groomed and designated for motorized and non-motorized use and provides access to an extensive network of OSV trails. Groomed cross-country ski trails exist to the east and west of Sawmill Cutoff Road, primarily using the blue diamond system.

Table 2-15. Existing Groomed Soft-Surface Winter Trails

Facility Type	Mileage / Units
Multi-Use OSV Trails	85.96
Cross Country Ski Trails (Shady Rest)	2.57 miles
Cross Country Ski Trails (Tamarack) – fee based	14.50 miles

*Measurements based on regional GIS data.



MAP 2-9: Shady Rest Existing Winter Use

Winter Recreation Nodes

- Parks
- Trailheads
- GIC Symbols

]] Tunnels

— Streets

Parks & Open Space

Urban Limit

Existing Non-Motorized Area

Maintenance on Paved Multi-Use Paths

- Groomed (Mammoth Nordic)
- No Winter Maintenance (snow-covered)
- Snow Removed

Existing Winter Use

- Groomed : Multi-Use
- Groomed : Non-Motorized



0 0.125 0.25 Miles



2.9. *Bicycle Parking*

Bicycle parking is an important component in planning bicycle facilities and encouraging people to use their bicycles for everyday transportation. Bicycles are one of the most frequently stolen items in most communities, with components often being stolen even when the bicycle frame is securely locked to a rack. Because today's bicycles are often high-cost and valuable items, many people will not use a bicycle unless they are sure that there is secure parking available at their destinations.

In Mammoth Lakes, short-term bicycle parking facilities such as bike racks are the most common and appropriate type of bicycle parking facility. Higher security bicycle parking facilities such as bicycle lockers would only be warranted at major employment centers with a sufficient number of bicycle commuters to justify their purchase and maintenance. Existing bicycle parking in Mammoth Lakes is installed and maintained by property owners and there are no current design standards to ensure consistency and functionality of design. Unless given clear guidance on the type of racks, property-owners will tend to purchase inexpensive and ineffective bicycle racks.

Various bicycle rack types are currently deployed by businesses and public agencies in the Town of Mammoth Lakes. **Figure 2-8** below provides photos and a discussion of these existing bicycle rack types. The “wave” or “ribbon style” rack is preferred by the Town of Mammoth Lakes for most installations at public facilities. However, the Town has expressed interest in an artistic bicycle rack program which could provide racks that are aesthetically pleasing, consistent, and highly functional by design. This and other potential bicycle parking solutions will be discussed in greater detail in the Design Guidelines chapter.

Figure 2-8. Existing Bicycle Rack Types within the Town of Mammoth Lakes



This type of rack does not support the frame of the bicycle and can damage wheels. Also, it does not allow cyclists to lock the frame of the bicycle to the rack using a standard “u-lock”. It does not appear to be attached to the pavement, making it insecure.



This bike rack design does not provide sufficient support for the frame of the bicycle. Its placement against the wall of the building may not allow enough room to place the wheel over the top bar and lock the frame of the bicycle to the rack.



The “wave” or “ribbon” racks pictured accept all common lock types and support the frame at one point. The location of the racks adjacent to the entrance of the building is ideal.



The blue bicycle rack pictured above meets all of the criteria for a good bicycle rack. The only problem is that it may not be perceived as a bicycle rack without the addition of a pavement stencil, signage or an educational campaign identifying it as such.

Table 2-16. Bicycle Access to Major Activity Centers

Activity Center	Bicycle Facilities		
	Bicycle Parking*	On-Street*	Off-Street (Class I / MUP)
North Village	Bike / Ski Racks Combo	Bike Route on Canyon Blvd (Class III)	None
Minaret Village Mall	2 Bike Racks	Bike Route on Meridian Blvd (Class III)	MUP runs behind shopping center on East side
Gateway Center Mall	Bike rack at Footloose	None	MUP terminates at NE corner of Main St and Old Mammoth Rd (summer only) NEAR-TERM SEG. UNDER CONST. OMR TO FIRE STATION
Industrial Park	None	None	MUP connection on E end at Commerce Drive
Welcome Center	2 USFS, 1 T&R Office (back)	None	MUP connects Visitor's Center to parking lot and Sawmill Cutoff Rd (year-round)
Hospital and Medical Center	None	None	Connection to Main Path via tunnel (summer only) None
Public Schools	1at Elementary School, 7 at Middle School, None at High School	None	MUP on S side of campuses connects to Trails End Park (year-round) and Mammoth Creek Park (summer only)
Post Office / Hotels (Main St)	1 at Post Office		None
New Library / Sierra High	2 at New Library, 2 at Sierra High, 1 at Office of Education	Bike Route on Meridian Blvd (Class III)	MUP on E side of Sierra Park Rd (year-round)
Community College / Ski Museum	2 at West side of College None at museum	None	MUP on N side of Meridian (year-round), no crossing available.

*All bicycle parking and on-street facilities are year-round. Bicycle racks on private property may be unavailable for extended periods pending private snow removal. On-street bicycle facilities are cleared along with the roadway, but bike lanes may be impacted by ice and debris.

2.10. *Public Transportation and Multi-Modal Opportunities*

The Town of Mammoth Lakes is embarking on a new mobility planning effort to address issues of public transportation in the area. The Eastern Sierra Transit Authority (ESTA) operates both regional and local bus lines that serve the Town of Mammoth Lakes, including inter-city service along Highway 395 and the Town's intra-city shuttle/trolley service. Other key transit providers in the area are the Mammoth Mountain Ski Area (MMSA) which provides access between the Town and their ski area portals, and the Yosemite Area Regional Transportation System (YARTS) which provides summer shuttle service between the Town and Yosemite National Park.

Public transportation in Mammoth consists primarily of the bus systems operated by ESTA within the TOML and the Mammoth Mountain Ski Area. This coordinated bus system plays an important role in making “feet first” mobility practical. It also provides a means for moving residents and visitors efficiently to and from activity centers and recreation nodes. In the first section of this chapter the existing summer and winter recreation portals were analyzed for their accessibility via public transportation (see **Tables** Table 2-3 and **Table** 2-5). **Table 2-17** provides an analysis of current bus access to the Town's activity centers.

Table 2-17. Transit Access to Major Activity Centers¹

Activity Center	Summer ²	Winter ³
North Village	Yes	Yes
Minaret Village Mall	Yes	Yes
Gateway Center	Yes	Yes
Business Park	None	None
Welcome Center	None	None
Hospital and Medical Center	Yes	Yes
Public Schools	Yes	None
Post Office / Hotels (Main St)	Yes	Yes
New Library / Sierra High	Yes	Yes
Community College / Ski Museum	None	None

1. All bus lines that start and end within TOML are free.

2. Summer transit service typically runs from June – October.

3. Winter transit service typically runs from November – April/May.

Bicycle racks are currently provided on the TOML Trolley system. Bicycle carrying capacity on buses makes bicycling for recreation and transportation more practical for several reasons. For recreational riders it generally provides access from Town to the trailhead. This

trip is often one way and uphill. Bicycle racks on buses also provide bicycle commuters with an alternative way to get home in the event of bad weather, mechanical failure, or lack of desire to pedal uphill all the way home. For year-round bicycle commuters, bike racks on buses are even more important than in summer since weather conditions can change quickly and make cycling more dangerous.

2.11. *Accessibility Issues*

Peter Axelson of Beneficial Designs participated in the summer and winter public outreach processes described in Chapter 3. Under the current scope and budget of the project, he was unable to perform a detailed assessment of existing conditions. However, he did speak to general accessibility issues, many of which were related to the provision and maintenance of sidewalks, accessibility information related to grade and trail width on signage and/or maps, and the potential to make soft-trails through sensitive areas such as Snowcreek Meadow more accessible and environmentally sound through the creation of a boardwalk. Beneficial Designs recommends undergoing a Universal Trail Assessment Process (UTAP) to identify existing trail-related accessibility issues through the use of advanced data collection tools and processing software.

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