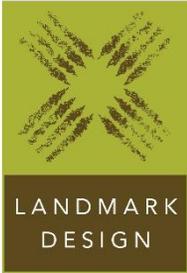


Town of Alta Commercial Core Plan

Existing Conditions and Analysis

A Working Document



Landmark Design Team

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PURPOSE

This report summarizes key investigations and analyses undertaken as part of developing a Commercial Core Plan for the Town of Alta. It focuses on a summary of public input, documentation and analysis of existing conditions, and key conclusions that will help guide plan development. The assessments are divided into five main topic areas, as follows:

1. **Public Input**
2. **Land Use Opportunities, Place-making, Community Design & Built Form**
3. **Transportation**
4. **Economics**
5. **Utilities (water, sewer, natural gas and electrical)**

This report is intended to summarize preliminary data and information assembled by the Landmark Design Team. The information is not intended to be definitive or terminal in nature, but to help inform the development of alternative Commercial Core Concepts and the Plan to follow.

1 Public Input

SUMMARY AND ASSESSMENT OF PUBLIC SCOPING MEETING ACTIVITIES & INFORMAL SKIER INTERVIEWS

PUBLIC SCOPING WORKSHOP

A Public Scoping Meeting was held on January 25, 2016 to gather public input on issues and ideas for the Commercial Core. The meeting was comprised of three activities asking participants to indicate where they spend their time when in Alta, what they like best about Alta and what they think is "missing" (or what Alta needs). The following is a description of workshop activities and summary of results.

ACTIVITY 1: WHERE DO YOU GO?

Activity Description: Scoping Meeting participants were asked to place a colored dot on places they spend their time. The color of dots represented the frequency of visits (red = daily, green = 1x week, yellow = 1x month and blue = occasionally). The number of dots per location were tallied, and adjustments made for frequency of visit, to come up with an overall score.

Top Places Visited

1. Alta Ski Area
2. Alta Ski Area Ski School/Day Lodge
3. Alta Lodge
4. US Post Office
5. Albion Basin

ACTIVITY 2: A TYPICAL DAY AT ALTA

Activity Description: Scoping Meeting participants were asked to draw or describe their daily "path" including places they went on an average day (in both summer and winter months), what they saw and how they got around (by foot, skis, car, etc.). Note: Responses indicated on the figure likely do not include all places a person goes on a regular basis.

Summary

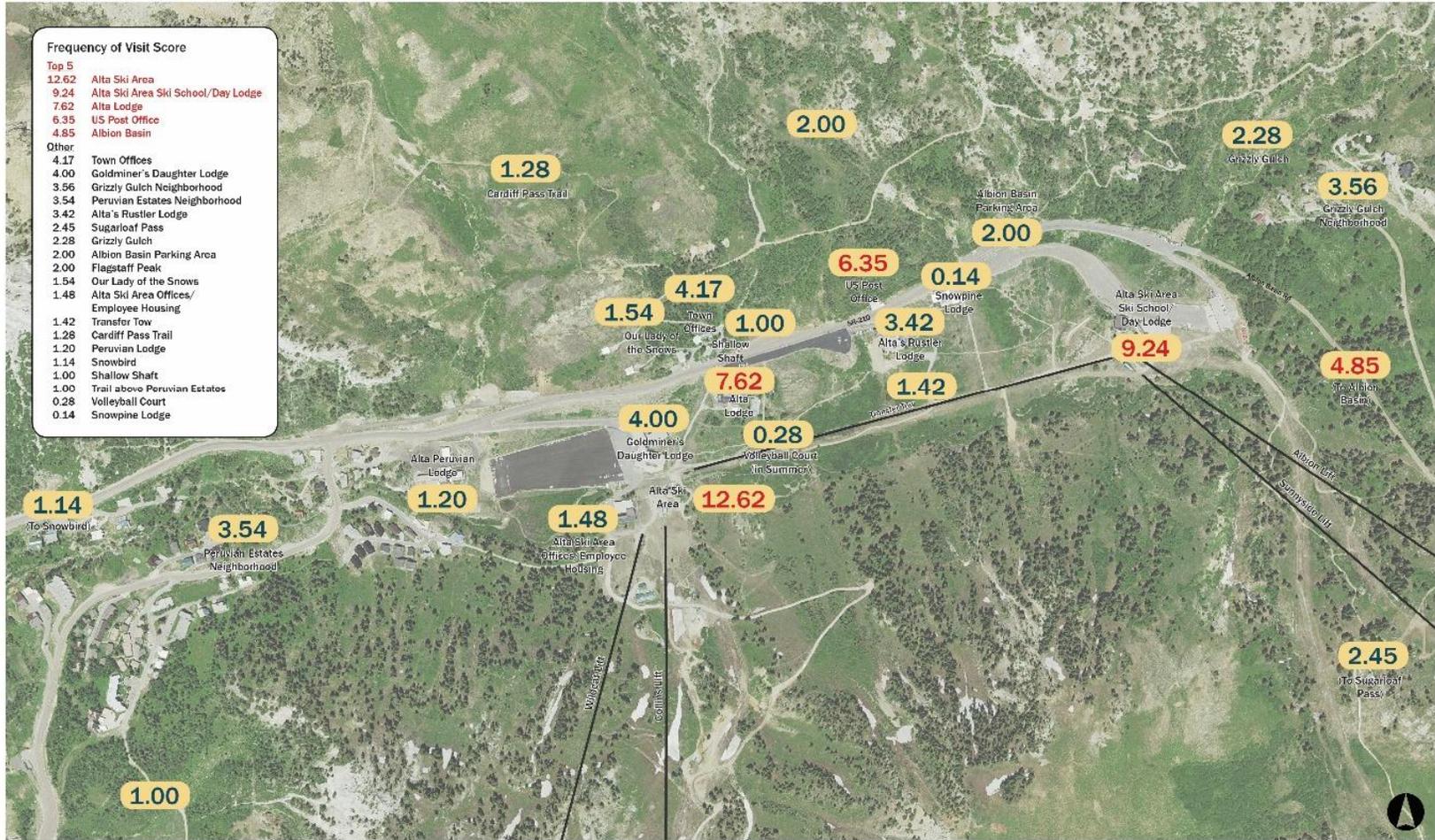
Of the twenty-six individuals who participated in the "A Typical Day at Alta" activity, thirteen indicated that they live in the Salt Lake Valley and come to Alta regularly (for work, skiing, hiking, etc.) Ten individuals indicated that they live in Alta; five from the Grizzly Gulch neighborhood, three from the Peruvian Estates neighborhood, and two at the Rustler Lodge (employees/seasonal residents). Two of the participants with residences in Alta use the home as a second home.

The majority of the daily routes and places visited are related to work activities and/or the two most popular outdoor activities for the area: skiing and hiking. Other activities, but with less popularity or frequency, included: road and mountain biking, rock climbing, camping, and cross-country skiing.

As expected, visits to the lodges and ski area buildings are substantially more frequent during the winter months, with those in the Wildcat Base area being more frequently visited. During the

WHERE DO YOU GO?

Activity Description: Scoping Meeting participants were asked to place a colored dot on places they spend their time. Colors of dots varied based on frequency of visit (red = daily, green = 1x week, yellow = 1x month and blue = occasionally). Number of dots per location were tallied, and adjustments made for frequency of visit, to come up with an overall score.



summer months the Albion Basin area is the center of activity. The post office and town offices have equal visitation numbers throughout the year.

ACTIVITY 3: WHAT DOES ALTA HAVE? / WHAT IS ALTA MISSING?

Activity Description: The two posters were attached to the walls at the Public Scoping Meeting displaying ideas and comments from regarding “What Does Alta Have?” and “What is Alta Missing?” Scoping Meeting participants were asked to place an ‘x’ by ideas they agree with.

Ideas and comments included under the two topics were developed based on input gathered from an Advisory Committee meeting (held on January 24, 2016) and previous Town of Alta visioning and public participation exercises held including “The Future of Alta” Visioning Meeting (April 2009), Myles Rademan’s Re-Thinking Alta Research/Presentation (February 2009), and the Planning Commission Vision Statement Public Hearing (2011).

What Does Alta Have? - Top Responses

1. Unique skiing experience
Hiking
Careful, intentional development
2. Wildlife habitat
Family-friendly skiing options
Open space
3. Skiing in a natural environment
Simple natural beauty in winter and summer

Watershed protection
Limited development

What is Alta Missing? - Top Responses

1. Good Public Transit
2. Improved Trailheads & Summer Facilities
3. Year-Round Small Businesses (e.g. bakery/coffee shop/deli/small convenience or grocery store)
4. Less Car Traffic
5. A Pedestrian-Friendly Place

ACTIVITY 4: WHAT MAKES ALTA ‘ALTA’?

Activity Description: Participants were asked to help us visualize what makes Alta unique by sending a photo that represents what makes Alta ‘Alta’ in their eyes.

Summary of Results

The Town of Alta is first and foremost a place for skiers. Hubs and centers for people during the winter are primarily located at the Alta Ski Area. During the summer months, Alta becomes a launching point for another primary outdoor recreational activity: hiking. There are only a few year-round community gathering places, including Alta Lodge, the Town of Alta Office and the Post Office. Alta Lodge is the only business that is consistently open during winter and summer months, and even it closes for 2-3 months of year during the shoulder season. Activities are primarily focused around the natural environment (downhill skiing, cross country skiing, hiking, biking, rock climbing, etc.)

Top previous responses Scoping Meeting participants agreed with

Overall ranking

WHAT IS ALTA MISSING? (WHAT DOES ALTA NEED?)

More Employee Housing *Options*

Consistent with 'natural, laid back, funky' atmosphere. No glitzy disco

Night time activities

Self-guided historic tour route and brochure

SUMMERTIME ACTIVITIES

A PEDESTRIAN-FRIENDLY PLACE **5**

YEAR-ROUND SMALL BUSINESSES **3**
(E.G. BAKERY/COFFEE SHOP/DELI/ SMALL CONVENIENCE OR GROCERY STORE)

GREEN/SUSTAINABLE BUILDING
Trail development

IMPROVED TRAILHEADS & SUMMER FACILITIES (E.G. RESTROOMS) **2**

MORE RESTAURANT OPTIONS

BETTER COMMUNICATION BETWEEN THE TOWN'S MAJOR PLAYERS **All**

Additional Comments:

- High percentage of deed restricted housing to benefit localism and community (see Telluride planning and zoning)

- Eliminate cars on summer road exempting residents and nursing home buses. Charge fee for ride to Albion Basin (\$1.00). [Added comment: Only with viable and affordable alternative.]

- Public transit only works if there is a day lodge available. Lockers would be helpful and somewhere that serves food while the road is clearing out (not a lodge).

- Public transport for employees, not just visitors
- Toll on private vehicles (\$10 or more)

With evening programs/ activities that all lodges promote: films, lectures, etc. Lady of the Snows does some of this now

That are not a lodge so lodge guests are not disturbed

+ space for kids, picnic and play space

GATHERING PLACES

AFFORDABLE HOUSING

DAY LODGE WITH LOCKERS **Big**

create restrooms, camp sites, etc. in areas away from Albion Basin

Not much!

- Transportation Center
- UDABC Liquor Store
- Expanded Post Office
- Tourist Info Center [central to visitor areas]

- HOV lane for buses and other high occupancy vehicles

- Community gateway place separate from the lodges

- What is missing? Not much!

- More residents

- Limit on amount of vehicles in the canyon

- Lots and lots of buses

- Fully utilized infrastructure. Many under-utilized buildings.

- Respect for private property
- Transportation options – think outside the box

SENSE OF COMMUNITY

BETTER LEADERSHIP

LESS CAR TRAFFIC **4**

A BETTER LIBRARY

CONNECTIONS TO OTHER CANYONS **No**

A nice "Welcome to Alta" sign

COMMUNITY CENTER TRAFFIC CALMING **5**

More mountain biking and hiking trails

CLASSROOM FACILITY FOR K-12 STUDENTS

KEEP THE FUNKY, LOW-SCALE, RESPECT-THE-ENVIRONMENT VIBE WHEN MAKING IMPROVEMENTS

PLANNING AND ZONING THAT ENCOURAGES BUSINESS REMODELS AND EXPANSION

IMPROVED GARBAGE & RECYCLING SERVICES

GOOD PUBLIC TRANSIT **1**

Bus

Make transit a "no brainer"

WHAT MAKES ALTA 'ALTA'?

Activity Description: Meeting participants, as well as the general public (via the project website), were asked to help us visualize what makes Alta unique by sending a photo that represents what makes Alta 'Alta' in their eyes. Brief descriptions or captions were also included by many.



According to the input of local residents, the key features and elements that make Alta unique are related to its unique outdoor environment and include both active recreation (resort skiing/ access to backcountry skiing and hiking) as well as more passive activities (observing wildlife, viewing the landscape, engaging with open space, and appreciating the watershed and unique Albion Basin locale). And, they also consciously focus less on the built environment (“careful, intentional development” and “limited development”). This idea is easily supported by the lack of structures and buildings in the photos that were sent in response to the question “What Makes Alta ‘Alta’?”

Informal interviews and discussions with business owners and operators, employees and others reflect a wider diversity of concerns and visions for the future. It was expressed that the town and ski area have been static for too long, and are now being choked by the expansion of Snowbird and at risk of losing its market brand and ability to provide a positive ski experience. There is also some concern that the town is not using its limited resources well, and should instead be a shining example of ski town sustainability.

Key issues/needs for the Town include:

- Transportation (too many cars and insufficient public transit)
- Pedestrian safety
- Improved trailheads and summer facilities
- Having year-round businesses to provide for the basic needs of the Town population.

INFORMAL SKIER INTERVIEWS

Skiers were interviewed on Friday, February 12, 2016 from approximately 2:30 PM to 4:00 PM in order get a sense of their needs and desires for a future Commercial Core. The interviews were conducted simultaneously at the following locations:

- Goldminer's Daughter Slope Side Cafe – outdoor terrace
- Albion Grill (cafeteria and outdoor terrace)/ Alta Java

A total of 34 individuals and groups of skiers were interviewed, 21 at the Goldminer's Daughter location and 13 at the Albion sites. The weather was warm and sunny, and the majority of people interviewed had recently completed their ski day, and were enjoying an "après -ski" rest.

The interviews asked for responses to the following seven questions:

- Where are you from?
- Where are you staying?
- Is this your first time to Alta/
- Where did you park and why?
- Why do/did you come to Alta to Ski?
- What is Alta Missing?
- Do you come here during the off-ski (summer) season? If so, why?

The following is a breakdown of responses by interview site.

Goldminer's Daughter:

Only three of the individuals and groups interviewed were from Utah, with the rest from locations across the US, primarily the East Coast and California. One group was from Brazil. The majority of out-of-town visitors were staying in Sandy or near the mouth of the canyon with friends or at motels, two groups were staying in Salt Lake City with friends, three groups were staying at Goldminer's Daughter, and three groups were staying in Park City.

Most of the respondents were either parked at the Goldminer's Daughter (lower) parking lot or had been shuttled to Goldminer's Daughter from the airport. Two groups of local residents (both retired) had used the bus.

The reasons respondents chose Alta were generally related to the good skiing and the reputation of the ski area, as well as the absence of snowboarders. Other reasons stated follow:

- the high-caliber of skiers
- the charm and "old-timey" ambience
- small resort/big mountain
- ease of access
- great vibe
- not fancy
- all about skiing and not the other stuff
- I'm a season pass holder
- someone else organized the trip
- we like to switch from resort to resort

- Mountain Collective member
- backcountry access
- friendly people

Respondents generally found little missing from the Alta experience, and most indicated they liked it as is. The few suggestions provided include the following:

- After-ski opportunities
- Late afternoon food/ bar food (sliders, tacos, etc.)
- Food trucks
- Music/bands at day lodge area
- A small store for basic provisions
- Too much traversing required
- No family entertainment options like Park City and Snowbird
- Nightlife
- A hot dog stand at the top, poutine stand at the base
- Need better bus service

Only three of the interviewed group members had been to Alta during the summer, all were local residents and came to hike.



Albion Grill/Alta Java:

Two of the individuals and groups interviewed were from Utah, with the rest from locations across the US. One family was from Hawaii. The majority of out of town visitors were staying at various locations within the Salt Lake Valley (Sandy, Cottonwood Heights, Midvale, West Valley City, Salt Lake City) with family or at hotels, one group was staying in Bountiful, two groups were staying in Park City, and one group had rented a house in the Alta area (at Superior Point).

Most of the respondents were parked at the Albion Basin (upper) parking lot. One of the local residents had used the bus.

The reasons respondents chose Alta were generally related to the variety of ski runs/terrain, because family or friends know and love Alta, and the absence of snowboarders. Other reasons stated include the following:

- a great ski school for kids with easy drop off/pick up
- friendliness
- it seems protected weather-wise
- it's down-to-earth
- the natural beauty of the area
- it's simple
- it's intimate (not vast)

Respondents generally found little missing from the Alta experience, and most indicated they liked it just as it is. The few suggestions provided include the following:

- Needs better parking
- Nicer buildings
- A lift to the hillside restaurants
- Restaurants
- Places to go after skiing
- Shopping (outdoor sports stores, local artisan shops, etc.)
- Ability to host a conference
- Clearly marked runs (more guides or markers)

Only the two local individuals had been to Alta during the summer and had come here to hike.

Conclusions/Summary

It should be stressed that this was an informal interview to get a sense of sense of skier needs and desires for a future Commercial Core, and not a definitive study.

There was general agreement from respondents at both locations that the reason they come to Alta is for the great skiing. Most respondents were overwhelming positive about the experience, and found only minor areas for improvement, primarily related to a desire for more after ski opportunities. The interview respondents at Goldminer's Daughter seemed to be generally older, less family-focused and more familiar with the ski area, while those at the Albion Grill location were dominated by families (some with children) and tended to be more novice skiers.

2 Land Use, Community Design & Built Form

LAND USE OPPORTUNITY ASSESSMENT

Identifying the best sites for future growth and development is an elemental function of this planning effort. In order to ensure that sensitive natural areas are protected and development is located at the most suitable locations, a systematic GIS overlay process was applied to the core area. Both physical and man-made conditions were mapped and analyzed, primarily utilizing data from the Town of Alta and AGRC, and with limited data from Mountain Accord sources.

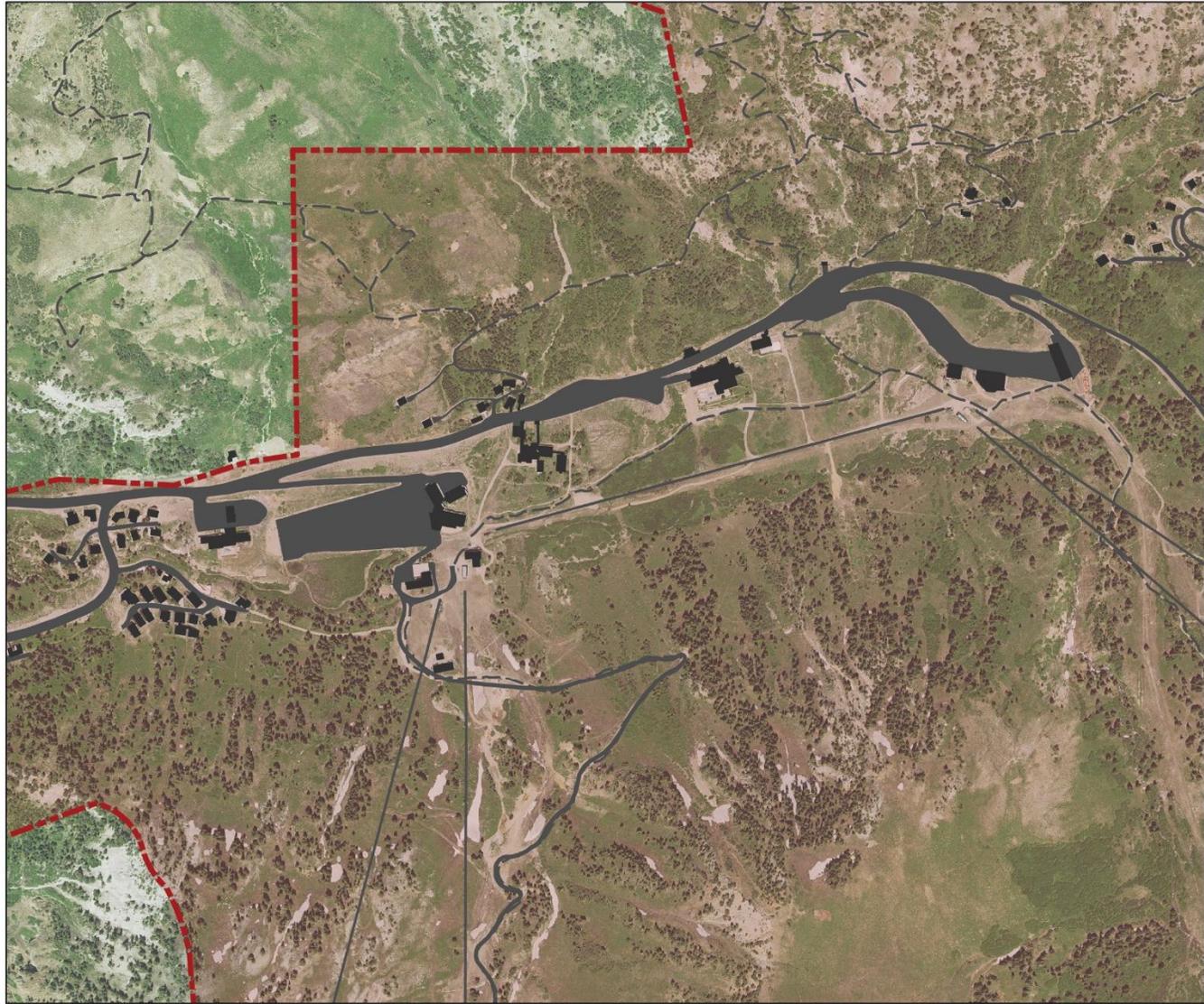
As illustrated in the accompanying maps, the overlay process eliminated the following areas from consideration:

- **Built Environment**
existing buildings, parking, roadways, etc.
- **Federal and Private Residential Lands**
- **Natural Constraints**
creeks, wetlands, areas that are predominantly forested, areas with slopes greater than 30-percent, areas with slopes between 30 and 70 percent, and rock outcrop areas
- **Potential Land**
Private land tracts that are either vacant, developed, or partially-developed. Development is currently limited to these sites.
- **Potential Land within the Land Trade Area**
Includes areas that are currently federally owned that would be suitable for development according to this model. Also includes the existing privately-owned parcels.

CONCLUSION

Without a land trade, areas with potential for accommodating growth and development are limited. The inclusion of federal land which might be part of a land swap as discussed in the Mountain Accord process increases opportunities significantly.

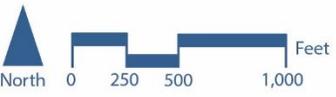
It should be noted that the purpose of this exercise is to provide a general sense of the sites and locations that are most suitable for development, and which sites and areas should be preserved and protected. Since the base mapping that was available was not fully rectified and correlated, a level of interpolation and the application of broad generalizations were assumed. It is therefore stressed that all potential sites will need to be carefully scrutinized and conditions verified on-site visits and through other means in order to provide a more definitive determination of planning-level opportunity and suitability.



Built Environment

Legend

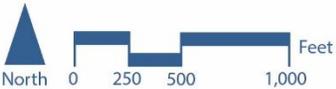
-  Town of Alta
-  Buildings/Structures
-  Parking Areas
-  SR-210/Bypass Road
-  Other Roads
-  Trails





Federal & Residential Lands

- Legend**
- Town Boundary
 - Federal Land
 - Existing Residential
 - Land Unavailable for Development





Natural Constraints

Legend

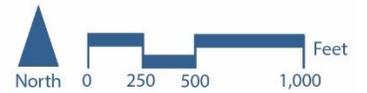
-  Town Boundary
-  Creeks
-  Wetlands
-  Predominantly Forested
-  Slopes Greater tha 30 Perc
(data from Mountain Accorc)
-  30 to 70 Percent Slopes
(based on Soil Types)

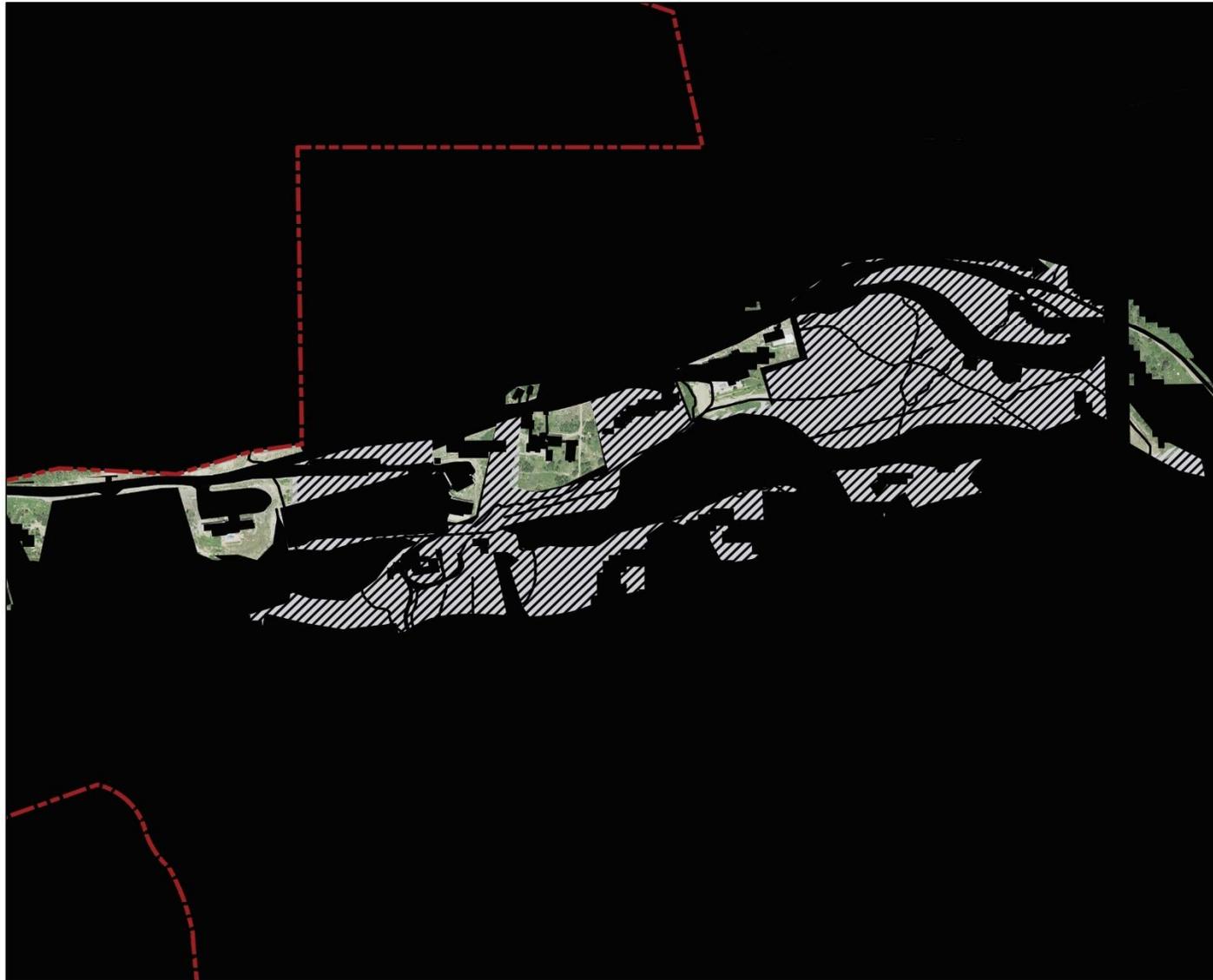


Potential Land

Legend

-  Town Boundary
-  Land Unavailable for Develop





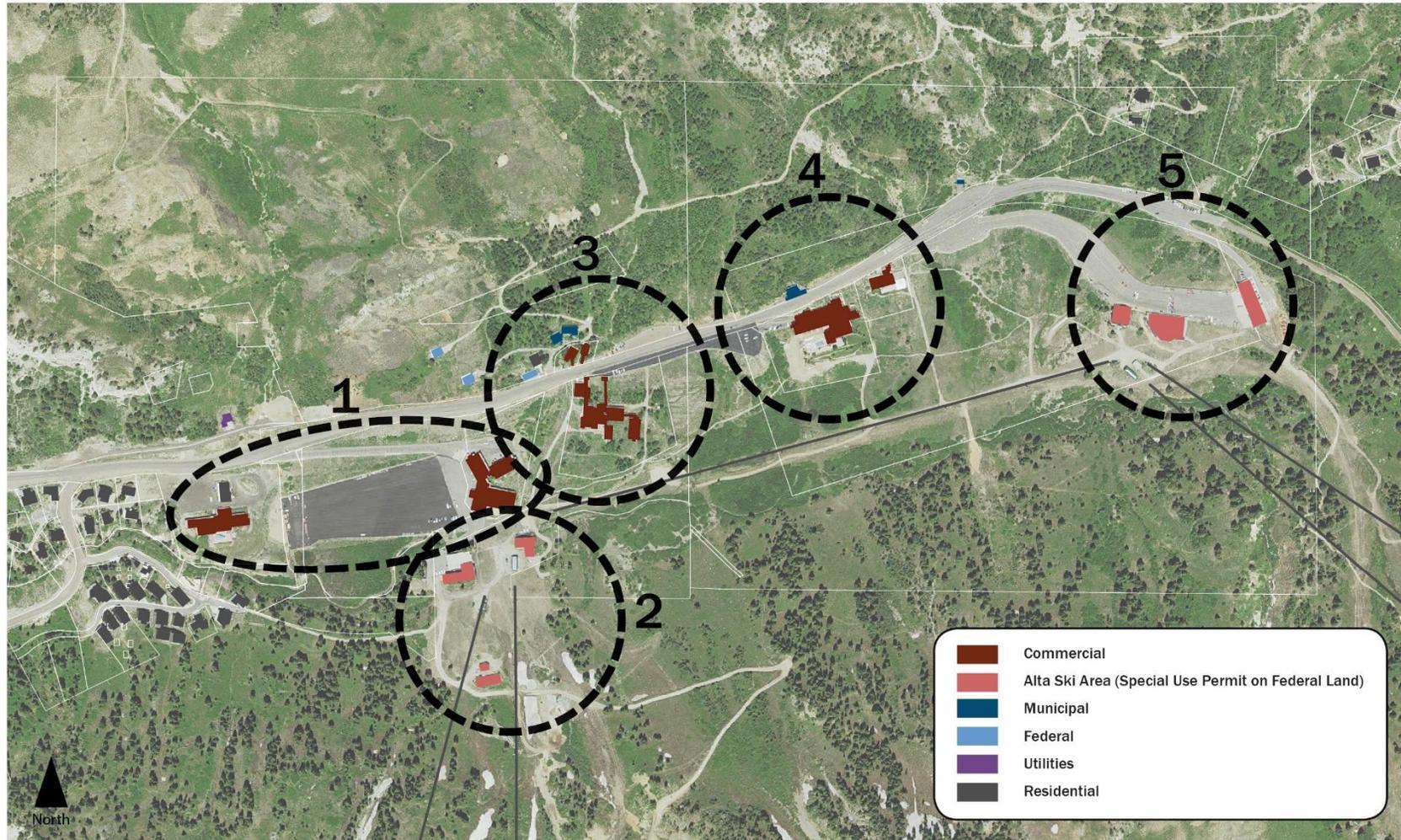
Potential Land with the Land Trade Area

Legend

-  Town Boundary
-  Potential Land Exchange Area
-  Land Unavailable for Development

COMMUNITY DESIGN & BUILT FORM

The following is a photographic summary compiled in to address existing buildings and the built-form in and around the Town of Alta. This analysis focuses on areas within the Commercial Core, although structures and buildings in the ski area are also included. The five areas illustrated in the map below demarcate the photo-boards on the following page.





Wildcat Base Parking Area



Goldminer's Daughter Lodge



Goldminer's Daughter Lodge



Alta Peruvian Lodge



Alta Peruvian Lodge



1 - Goldminer's Daughter and Alta Peruvian Lodges



Alta Skier Services



Alta Ski Shop & Demo Center/Wildcat Ticket Office



Alta Ski Shop & Demo Center/Wildcat Ticket Office



Alf's Restaurant



Alf's Restaurant



Watson's Shelter Restaurant



Alta Ski Area Housing



Ski Patrol Building at top of Collins Lift



Building near Old Watson's site

2 - Alta Ski Area - West Side (Wildcat Base)



Our Lady of the Snows



USFS Maintenance Building



Town of Alta Offices (Front) / Unified Police (Behind)



Shallow Shaft



Residential Building



Alta Lodge



3 - Our Lady of the Snows, Town Offices & Alta



Bus Shelter



Recycling Area



Alta's Rustler Lodge



Alta's Rustler Lodge



Fire Station/Community Center/Post Office/Library



Fire Station/Community Center/Post Office/Library



The Snowpine Lodge



The Snowpine Lodge



Alta's Rustler Lodge (Front) & The Snowpine Lodge (Behind)

4 - Alta's Rustler Lodge, Community Center & The Snowpine



Albion Base Parking Area



Albion Base Ticket Office/Ski School



Albion Base Ticket Office/Ski School



Albion Grill/Alta Sports/Alta Java



Albion Grill/Alta Sports/Alta Java



Sunnyside Lift



Maintenance Building

5 - Alta Ski Area - East Side (Albion Base)

3 Transportation

INTRODUCTION

This document provides an analysis of the transportation opportunities for the Alta Commercial Core study. The document is organized in the following sections:

- A **Transportation interest matrix** that analyzes the direction given by existing policy from the Town of Alta, Alta Ski Area, various agencies and community planning processes;
- An **analysis of existing conditions** for the different modes and seasons and the assets, challenges and opportunities for each;
- A **summary** of policy direction and opportunities to achieve the goals of these policies

TRANSPORTATION INTEREST MATRIX

Agency	SR-210	Parking	Active Transportation	Transit
Town of Alta	<p>General Plan (3.12):</p> <ul style="list-style-type: none"> • Support realignment of road to avoid avalanche paths; • public safety is number one concern with respect to any roadway changes; • due to limited parking do not support increasing capacity of SR-210; • should engage with Snowbird on road planning efforts; • SR-210 is a scenic byway; 	<p>General Plan (4.3):</p> <ul style="list-style-type: none"> • The town should review the balance among the various types of parking (e.g. backcountry skiers, employees, Grizzly Gulch residents, etc.) to guide any additional development that may be proposed. • Examine the possibility of establishing trailhead parking for those not using existing ski lift facilities 	<p>General Plan:</p> <ul style="list-style-type: none"> • Maintenance and improvement of hiking trails recommended. Development of new hiking trails should be studied, avoid environmentally -sensitive areas, and coordinate with appropriate partners (4.10) • Support mountain bike use on existing trails. Restrict mountain bike use in environmentally sensitive areas. 	<p>General Plan (3.12):</p> <ul style="list-style-type: none"> • Support improving public transit to relieve congestion and protect environment • The town recognizes the importance of the role of the Utah Transit Authority and will continue to cooperate in efforts aimed at enhancing their services in the canyon

Agency	SR-210	Parking	Active Transportation	Transit
	<ul style="list-style-type: none"> • opposition to toll booths/fee collection at mouth of canyon or anywhere in LCC <p>Regulatory – Town Code</p> <ul style="list-style-type: none"> • Title 7, Chapter 1 & 2, mostly public safety related <p>Assumed Interests: Safety, avalanche control, access to ski areas, “Red Snake issue”</p>	<ul style="list-style-type: none"> • Construction of a parking structure should be investigated <p>Regulatory – Town Code</p> <ul style="list-style-type: none"> • Chapter 12 dictates # of spaces required for each use • 10-6D-6 BFZ Parking Requirements • 6-1-3 Parking Regulations <p>Assumed Interests: Desire for better planned and more control over parking, but not necessarily an increase in parking?</p>	<p>Development of new trails should be coordinated with appropriate partners (4.11)</p> <ul style="list-style-type: none"> • No mention of road cycling, walking, or other forms of active transportation in General Plan or Town Code <p>Assumed Interests: Not much discussion, but assumed general support of increased pad/biking infrastructure</p>	<p>Assumed Interests: Increased year round transit, support of a transit “hub”/visitor center</p>
UDOT	<p>Planning:</p> <ul style="list-style-type: none"> • 2016-2021 STIP: Intersection improvement at SB Entry 1 (summer 2016?) • 2040 RTP: Avalanche shed at White Pine Chutes • Road is a designated state scenic byway • Open to walkable street design in TOA [<i>from meeting 1/2-0/16</i>] 	<p>Regulatory:</p> <ul style="list-style-type: none"> • Parking along SR-210 in Alta is regulated by Forest Plan, see below. <p>Assumed Interests: Unsure</p>	<p>Assumed Interests: Bicycle and pedestrian safety. Small improvements have been made in the canyon over the years, with none in the Town of Alta.</p>	<p>Corridor Management Plan (Scenic Byways)</p> <ul style="list-style-type: none"> • Develop visitor and transportation node at Albion Area <p>Assumed Interests: Generally supportive. Reduction in # of cars in</p>

Agency	SR-210	Parking	Active Transportation	Transit
	<p>Regulatory: Snow tire and chain restrictions; oversize/overweight load restrictions; Class 4 (Regional Rural) facility</p> <p>Assumed Interests: Safety, avalanche control, access to ski areas, “Red Snake issue”</p>			canyon reduces avalanche hazard index.
UTA	<p>Assumed Interests: Improvements to winter driving hazards would improve safety of drivers and riders?</p>	<p>Assumed Interests: More parking at the mouth of the canyon to increase transit ridership</p>	<p>Assumed Interests: Supportive of active transportation infrastructure around transit stops (Linda Gehrke at FTA has advocated for this through Mountain Accord)</p>	<p>Planning:</p> <ul style="list-style-type: none"> • RTP 2040: LCC Corridor identified for future unfunded transit improvements (BRT, mentioned but realistically it’s mode undetermined) • Like idea of shared ride program • Would add service to winter before summer, e.g. later ski service • Transit Center would be helpful for ops and visibility <p><i>[above 3 bullets from meeting 1/2-0/16]</i></p> <p>Assumed Interests: If funding is available, would be interested in expanding</p>

Agency	SR-210	Parking	Active Transportation	Transit
				current service. Still interested in pursuing fixed guideway in the future
Alta Ski Lifts (ASL)	<p>Assumed Interests: Any improvement to SR-210 are better than what we have now. Access to Ski Area is critical. May be interested in elimination of dead end road (alternate egress from/to canyon)</p>	<p>Regulatory (MDP update)</p> <ul style="list-style-type: none"> Reshape the Sunnyside and Snowpine parking lots into one at a better overall elevation Parking places lost over time to mass transit would be replaced, as well as 50 places moved from Wildcat to Sunnyside.” (Still need to do NEPA) <p>Assumed Interests: See above</p>	<ul style="list-style-type: none"> Want to work with Town and USFS to establish a “Town Center trailhead” near Tom Moore toilets for backcountry users and transit Have a well-constructed summer trails plan including improvements and construction of new trails <p>Assumed Interests: See above</p>	<ul style="list-style-type: none"> Any improvements to transit are better than what we have now (would like improvements to be all weather, avoid avalanche paths, and eliminate dead end canyon <p>Assumed Interests: Better transit and connection via tunnel to Big Cottonwood.</p>
U.S. Forest Service (USFS)	<p>Assumed Interests: Reduction in vehicles in the canyons.</p>	<p>Regulatory:</p> <ul style="list-style-type: none"> Revised Forest Plan: “parking capacities of canyon parking lots will not exceed 2000 levels unless modification is needed for watershed protection or to facilitate mass transit. <p>Assumed Interests:</p>	<p>Regulatory, Revised Forest Plan:</p> <p>Support for a wide spectrum of recreation facilities to be provided</p> <p>Assumed Interests: Support for active transportation.</p>	<p>Regulatory, Revised Forest Plan:</p> <p>“Mass transit will be commonly used during winter, reducing crowding and increasing safety for users of the canyons. The Forest Service will work actively with other parties to explore options for reducing private vehicular use within</p>

Agency	SR-210	Parking	Active Transportation	Transit
		<p>Resource degradation concerns due to over parking. Parking serves to establish an artificial canyon capacity, but is growing hard to control.</p>		<p>these Canyons.” (Desired Future Condition)</p> <p>Assumed Interests: Reduction in vehicles in the canyons, support of mass transit. Concerns over fixed guideway expressed during Mountain Accord (would induce additional visitation). Carrying capacity concerns.</p>
Alta Community	<p>Vision/Values 2015:</p> <ul style="list-style-type: none"> • One of the things that makes Alta different than other ski towns is there is one road • Less cars • Transportation (via SR-210) is an issue <p>Work with UTA and Forest Service to manage traffic summer and winter and develop flexible alternatives for public access. Disincentive the car but have these systems in place prior that step.</p>	<p>Summer Roundtable: Trailhead parking access/better information and support services for them</p> <p>Assumed Interests: Comprehensive parking solutions for residents and employees (limited winter overnight parking for employees and Grizzly Gulch/Albion Basin residents</p>	<p>Summer Roundtable:</p> <ul style="list-style-type: none"> • Enhance community walking trail (link to transit hub, create signage, landscaping along trail to make visitors “feel safe,” clearly sign places where visitors should “get out of the car”, bring residents and visitors to the right places to spend money) <p>Assumed Interests:</p>	<p>Alta Summer Vision Focus Group:</p> <ul style="list-style-type: none"> • Alta should work with appropriate partners to improve bus or shuttle service to and from the area. <p>Summer Roundtable:</p> <ul style="list-style-type: none"> • Support public transportation <p>Vision/Values 2015:</p> <ul style="list-style-type: none"> • Resounding support for flexible public transportation <p>Assumed Interests: Support for increased year round public transit. Mode remains undecided and controversial within the community.</p>

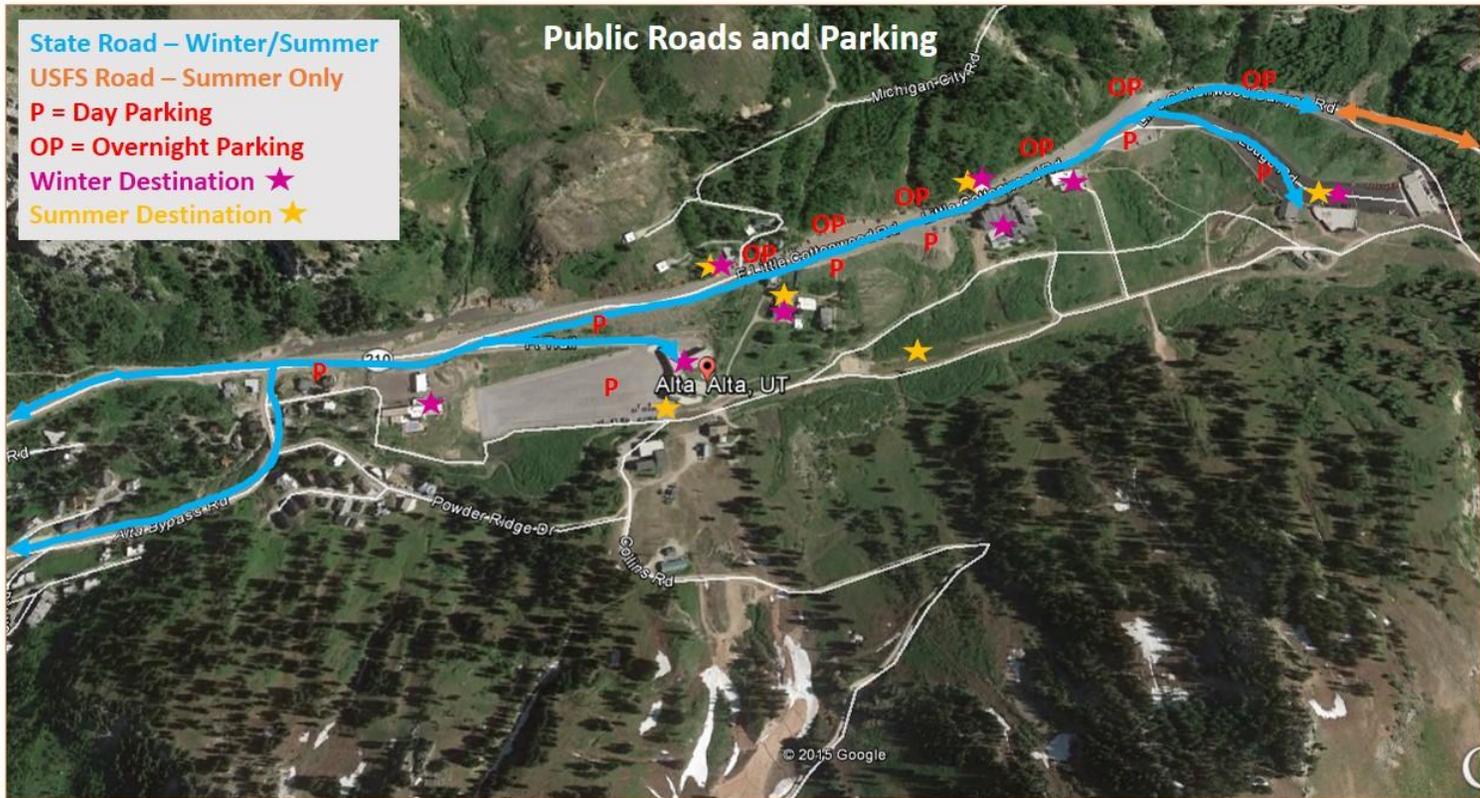
Agency	SR-210	Parking	Active Transportation	Transit
	<p>Assumed Interests: Reduction of vehicles in the canyons. Improved safety.</p>			
Mountain Accord	<p>From Current Phase 2 Approach:</p> <ul style="list-style-type: none"> Address roadside parking and safety management strategies Avalanche control improvements Evaluate options for LCC to BCC connection (to help resolve Grizzly Gulch issue) 	<p>From Current Phase 2 Approach:</p> <ul style="list-style-type: none"> Add park and ride locations at mouths of canyons/in the valley Paid parking or user fees to incentivize transit use 	<p>From Current Phase 2 Approach:</p> <ul style="list-style-type: none"> Road cycling improvements Coordinated trails/recreation plan for Wasatch area, to include Alta. Also includes road cycling plan Recreation/Environment capacity analysis for canyons 	<p>From Current Phase 2 Approach:</p> <ul style="list-style-type: none"> Increase bus service in winter New bus service in summer Marketing campaign to take transit and carpool Pursue short term transportation solutions Continue to study long term transportation solutions in LCC. Not ready for NEPA
Areas of Agreement, Discord and Outstanding Questions	<p>Themes of agreement:</p> <ul style="list-style-type: none"> Safety (esp. Avalanche control) No more capacity Reduction of vehicles in the canyon <p>Potential discord with other agencies:</p> <ul style="list-style-type: none"> Dead-end road Auto access Tolling/fees to canyon entry (UDOT has expressed opposition to this when discussing Mountain Accord) 	<p>Themes of agreement:</p> <ul style="list-style-type: none"> Keep existing number of spots, no more no less – 2,446. More precision on parking design, catering to different types of use More efficient parking, i.e. parking garage or Alta’s plan to merge the two lots There is a close connection between parking in the town and the mouth. 	<p>Themes of agreement</p> <ul style="list-style-type: none"> Desire for new trails, especially in Alta base area away from overused Cecret Lake base Avoid environmentally sensitive areas for hiking and biking trails Town Center trailhead idea seems to be supported by ASL and UTA – integrate transit and recreation use with car reduction. Although it’s not stated in planning docs, there seems to be support for 	<p>Themes of agreement</p> <ul style="list-style-type: none"> Broad agreement of promoting transit use for myriad reasons including environment, congestion, safety Desire for year round service Desire for transit hub in Town of Alta <p>Potential discord with other agencies:</p> <ul style="list-style-type: none"> ASL wants a connection to Big Cottonwood Canyon Would fixed guideway transit (and tunnel) induce demand?

Agency	SR-210	Parking	Active Transportation	Transit
	<p>Questions:</p> <ul style="list-style-type: none"> • Policy seems to address big picture of canyon, less the treatment of the segment going through the town and how it ends – policy vacuum? 		<p>increasing ped/bike safety on the highway.</p> <p>Questions:</p> <ul style="list-style-type: none"> • Policy vacuum on active transportation within town policy (somewhat addressed in Alta Community section)? • UDOT’s active transport focus seems to be on safety on SR-210 outside of Alta? • How could Town Center trailhead idea integrate with Commercial Core pedestrian / bike network? • How can good active transportation network support goal of transit use to/from Alta? 	<p>Questions</p> <ul style="list-style-type: none"> • What is transit’s relationship to carrying capacity of Alta? Currently carrying capacity seems to be tightly related to vehicles (road and parking) but if transit service improves could bring more people with existing parking. • What is “flexible” public transportation? • Desire for hub to be in Albion base area? •

EXISTING CONDITIONS, ASSETS, CHALLENGES, AND OPPORTUNITIES

WINTER SEASON

Vehicle	<u>EXISTING CONDITIONS:</u>
	<p data-bbox="359 370 548 399">Road Network:</p> <p data-bbox="359 436 1894 834">One major through road exists for vehicular traffic in the Alta Commercial Core. This is SR 210, which runs east west along the north end of the commercial core and dead-ends at the beginning of the Summer Road. The speed limit of SR-210 in the Town of Alta is 25 mph. SR-210 is a Class Four (Regional Rural) facility that starts at the bottom of Little Cottonwood Canyon near 9400 South and runs the length of the canyon to into the Town of Alta where it terminates on the east end of town. SR-210 is a two-lane roadway for most of the canyon, with short passing lanes in each direction. SR-210 is the only ingress/egress into and out of the Town of Alta and as such is the only connection between the Town of Alta and the regional transportation network. February is peak traffic month, and during that time, SR-210 experiences average daily traffic of 8,000 vehicles (Mountain Accord Existing Conditions and Future Trendlines Report, Transportation System, 2014). In addition, several secondary roads exist. The Bypass Road from Snowbird and Powder Ridge Drive are primarily for accessing residential areas and bypassing SR 210, while other such as the Lodge Road and the eastern end of Peruvian Acre Road function as driveways and parking lots.</p> <p data-bbox="359 943 464 972">Parking:</p> <p data-bbox="359 1010 1894 1284">Public parking is primarily in the Commercial Core and is composed of 2,446 spots (Little Cottonwood Canyon SR-210 Transportation Study, 2006). The amount of parking is fixed by the U.S. Forest Service, however it could be expanded to accommodate transit and for watershed protection (Revised Forest Plan, 2003). Parking occurs at two main Ski Area lots, Wildcat and Albion, and along SR-210. Parking areas are signed along SR-210. Overnight parking in Town is limited to designated areas on the north side of the SR-210. Residents of Grizzly Gulch and Albion Basin park cars overnight in these areas, as do live-up lodge employees. Live-up Ski Area employees park on the south side of the Wildcat Lot. During peak times, day parking may reach or exceed capacity.</p>



ASSETS

Free flow: Generally traffic free flows through town (only exception is during “red snake” PM commutes)

Parking capacity is generally acceptable for almost all days (about

CHALLENGES

Safety: Roadway conditions during inclement weather can make travel challenging

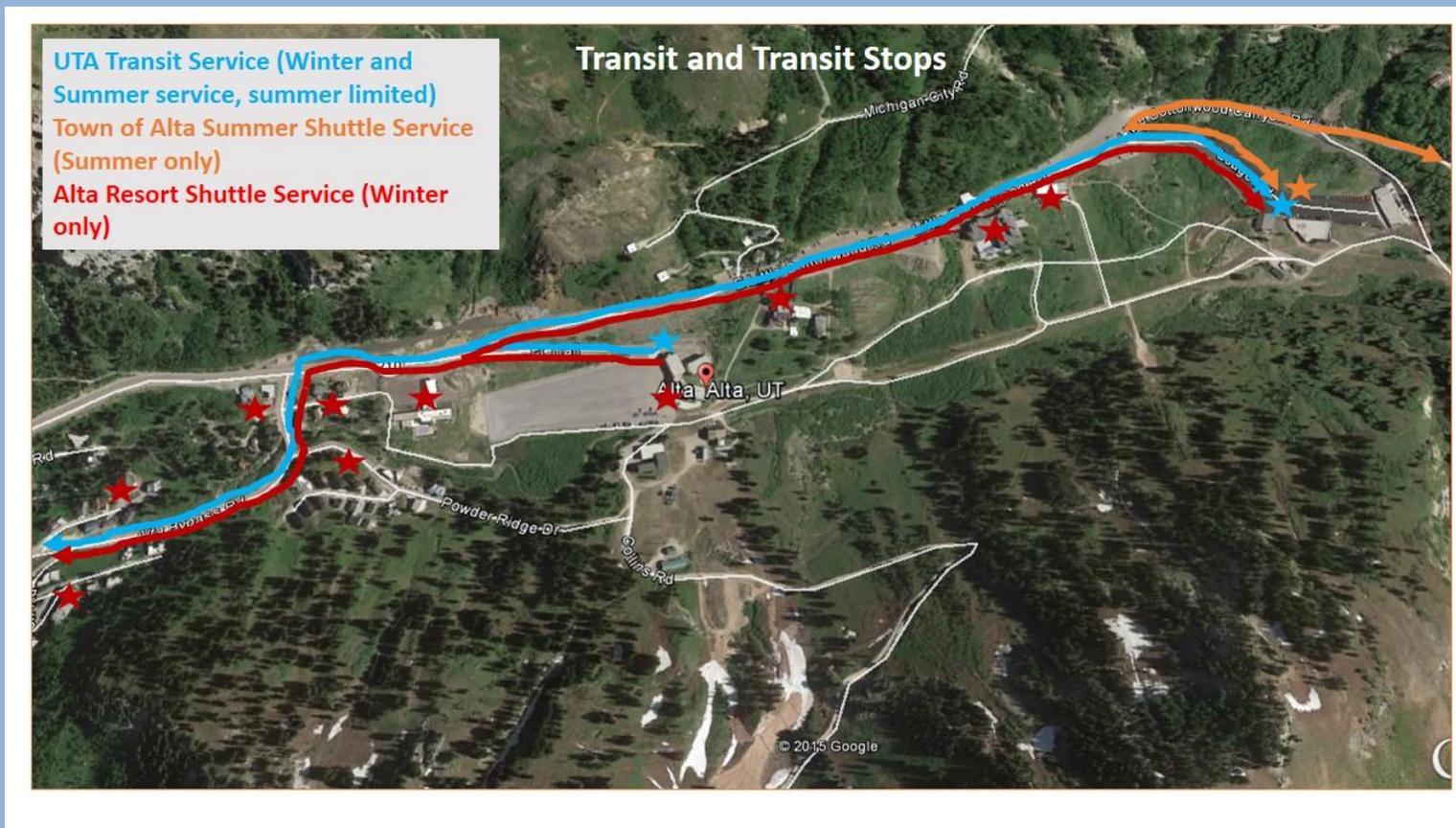
OPPORTUNITIES

Improve safety between moving vehicles and parked vehicles/pedestrians/skiers on the highway

Increased communication with drivers: e.g. provide real time travel info for red snake afternoons (could decrease # of cars in the

	<p>a dozen days per season parking capacity is maxed out)</p>	<p>Safety: Pedestrians/backcountry skiers/poorly parked cars can present safety conflicts</p> <p>Safety: highway closures due to avalanche conditions. High avalanche risk</p> <p>Road Capacity at peak times: red snake during PM commute</p> <p>Parking Capacity: overnight parking can be inconvenient and challenging. Parking at capacity a dozen or so times a year.</p>	<p>snake and decrease heavy risk on high risk days)</p> <p>Increased parking efficiencies</p>
<p>Transit</p>	<p><u>EXISTING CONDITIONS:</u></p> <p>UTA Service:</p> <p>UTA provides “ski-bus” service from the Salt Lake Valley to Alta Ski Area from mid-December through mid-April. Alta Ski Area employees and season pass holder ride the bus at no cost, all other pay a one-way fare of \$4.50 (2015-2016). In Alta, the Ski Bus makes formal stops at the Goldminer’s Daughter and the Albion Day Lodge, however can make additional informal stops as requested at the Alta Peruvian Lodge, Alta Lodge, and the Rustler Lodge.</p> <p>Alta Resort Shuttle:</p> <p>The Alta Resort Shuttle operates in the winter months only and is funded by town of Alta and HOA’s/winter rentals to provide local transit service between Alta residences to destinations around town (including Snowbird). The Alta Resort Shuttle makes</p>		

stops at local “neighborhoods,” Alta Ski Area bases, and Snowbird. The shuttle runs mid-December through the end of March and averages 120 riders per day (Town of Alta correspondence).



ASSETS:

Basic service: UTA provides service from valley to Alta

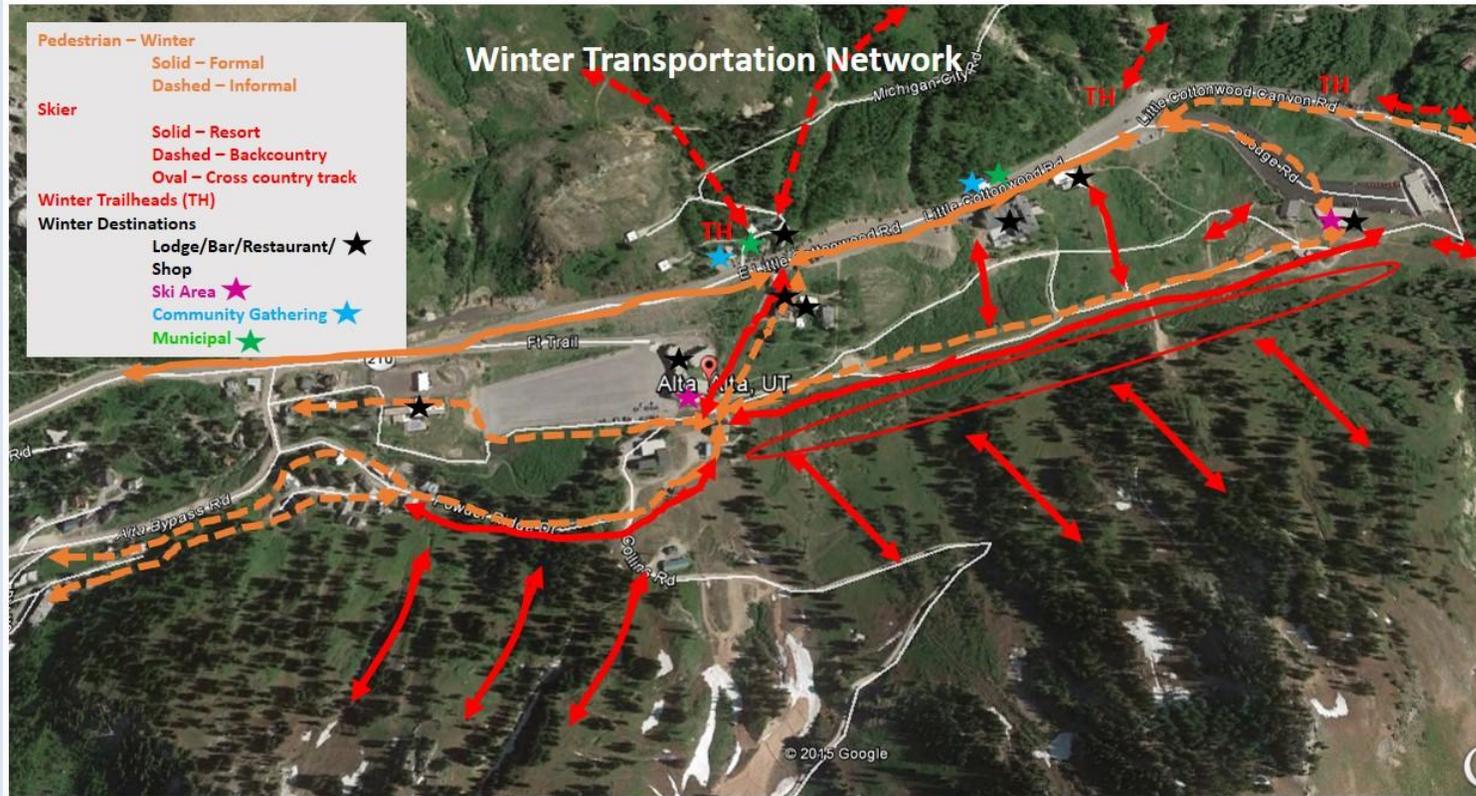
CHALLENGES:

Travel time: Car has travel time advantage most of the time from the valley to Alta, especially considering three stops at Snowbird)

OPPORTUNITIES:

Alta Resort Shuttle service could be better utilized and/or investigate other opportunities for people to move around town without a car

	<p>Subsidy: Alta Ski Area subsidizes UTA service for employees and pass holders</p> <p>Tow network: Cross tow with series of rope tows serves as public transportation between base areas for resort skiers</p> <p>Alta Resort Shuttle service provides services for residents</p>	<p>No incentive: Little or no incentive to take transit</p> <p>No transit hub on arrival (get dropped off in parking lot with no real sense of arrival or facilities)</p> <p>Gear: Difficult to travel with ski gear</p> <p>Local transit: No (or poor) public transit within Alta and between Alta and Snowbird</p>	<p>Enhanced UTA ski season service (increased frequency or express service to Alta and/or extended hours i.e. 7 p.m.)</p> <p>Coordination with appropriate agencies to create incentives for transit and disincentives for driving (from valley to Alta), including park and ride lots/centers at the canyon mouths, where most skiers board.</p> <p>Transit hub/center: Creation of a more formal transit hub that can evolve over time depending on direction of transit</p> <p>TDM: Work with Ski area and other entities to reduce demand for SOV trips.</p>
<p>Pedestrian</p>	<p>EXISTING CONDITIONS: Main pedestrian corridors are similar between summer and winter (SR-210 and Cross Tow) however pedestrian traffic is reduced during winter months due to inclement weather and unsafe walking conditions (slippery road, post-holing in snow, plows on road, etc.). No formal winter trail network, all off-highway walking occurs on groomed packed ski runs, most commonly: Powder Ridge Road, Cross Tow, Summer Road, Alta Lodge Hill.</p>		



ASSETS:

Two flat corridors: Two options for main corridors to walk around town
 1) Hwy 2) Cross tow. Both corridors are relatively flat, with gentle rise towards Albion Side.

CHALLENGES:

Poor connections: Walking between lodges and between base areas is challenging. Both on the highway and along cross tow.

OPPORTUNITIES:

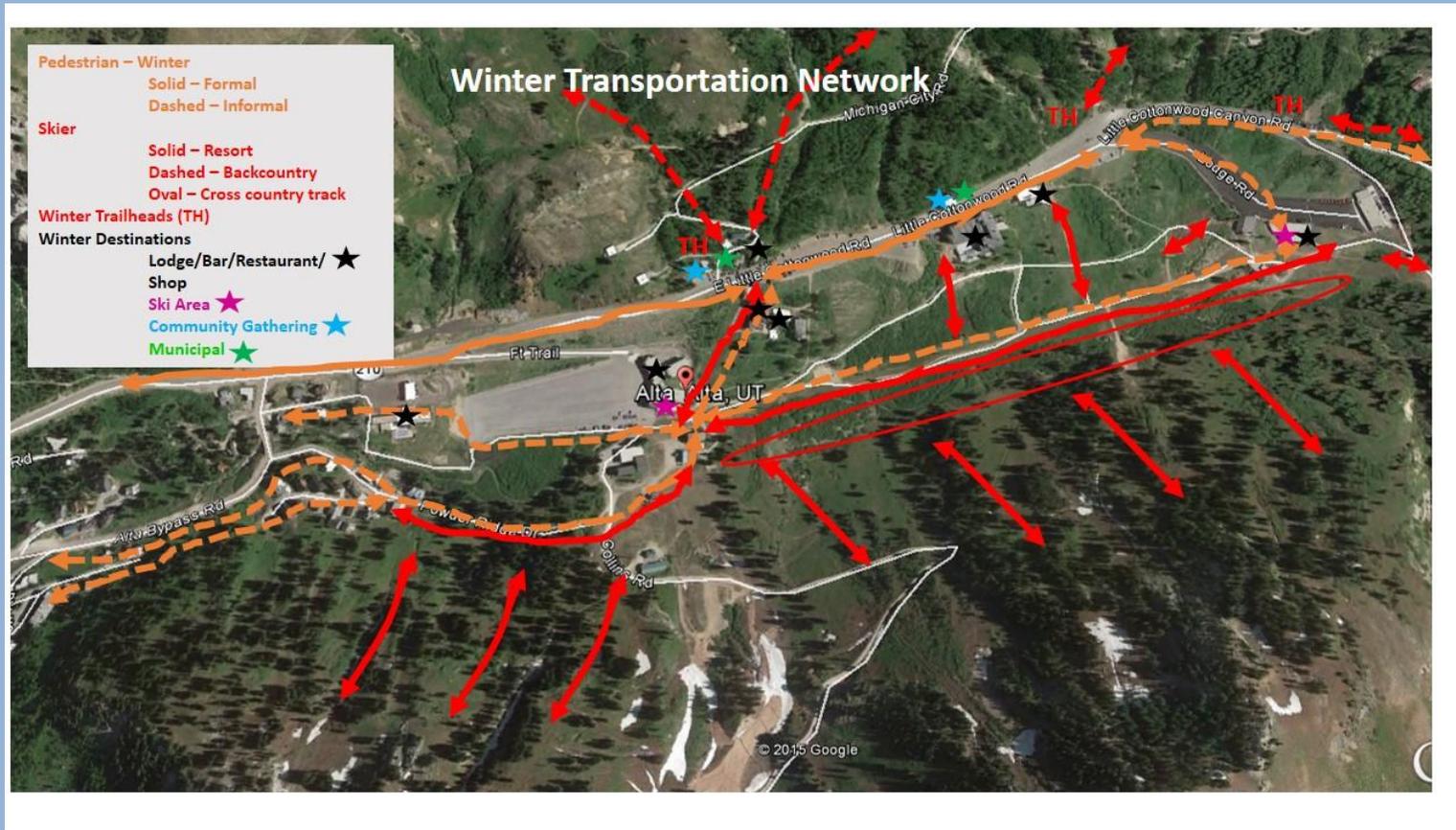
Better connections for walking between ski area destinations

Increased safety measures to protect pedestrians from moving traffic

		<p>Steep grade: Grade between cross tow corridor and road corridor make it difficult to get from one corridor to another. (E.g. Pedestrians cannot use rope tows to access lodges from cross tow, limited places where walking up hill is an option or palatable)</p> <p>Safety Concerns: unsafe to walk on Hwy 210 at times of inclement weather, busy traffic, and full parking</p>	<p>Negotiate the steep grades: Maintained routes up and down the hill</p> <p>Increase desirability for residents/visitors to walk around town</p> <p>Re-design Highway 210 through the Town of Alta as walkable street</p> <p>Create a pedestrian-oriented end to Highway 210/summer road gateway/trailhead</p>
<p>Skier</p>	<p><u>EXISTING CONDITIONS:</u></p> <p>Resort Skiers:</p> <p>Skiers are the most prevalent users of the cross tow area during winter months. The cross tow is a horizontal rope tow used to move from Wildcat Base to Albion Base and as a runout from skiing in the Eagle’s Nest / North Rustler Area. Skiers also travel perpendicular to the cross tow via lodge rope tows/lifts to access lodging facilities and beginner terrain on the north side of the cross tow. A cross country loop south of the cross tow exists but is not used for connectivity and is exclusively for cross country skiing use.</p>		

Backcountry Skiers:

Informal backcountry trailheads exist to access backcountry terrain, but lack facilities, dedicated parking, and informational signage.



ASSETS:

Cross tow network is a great asset for resort skier mobility

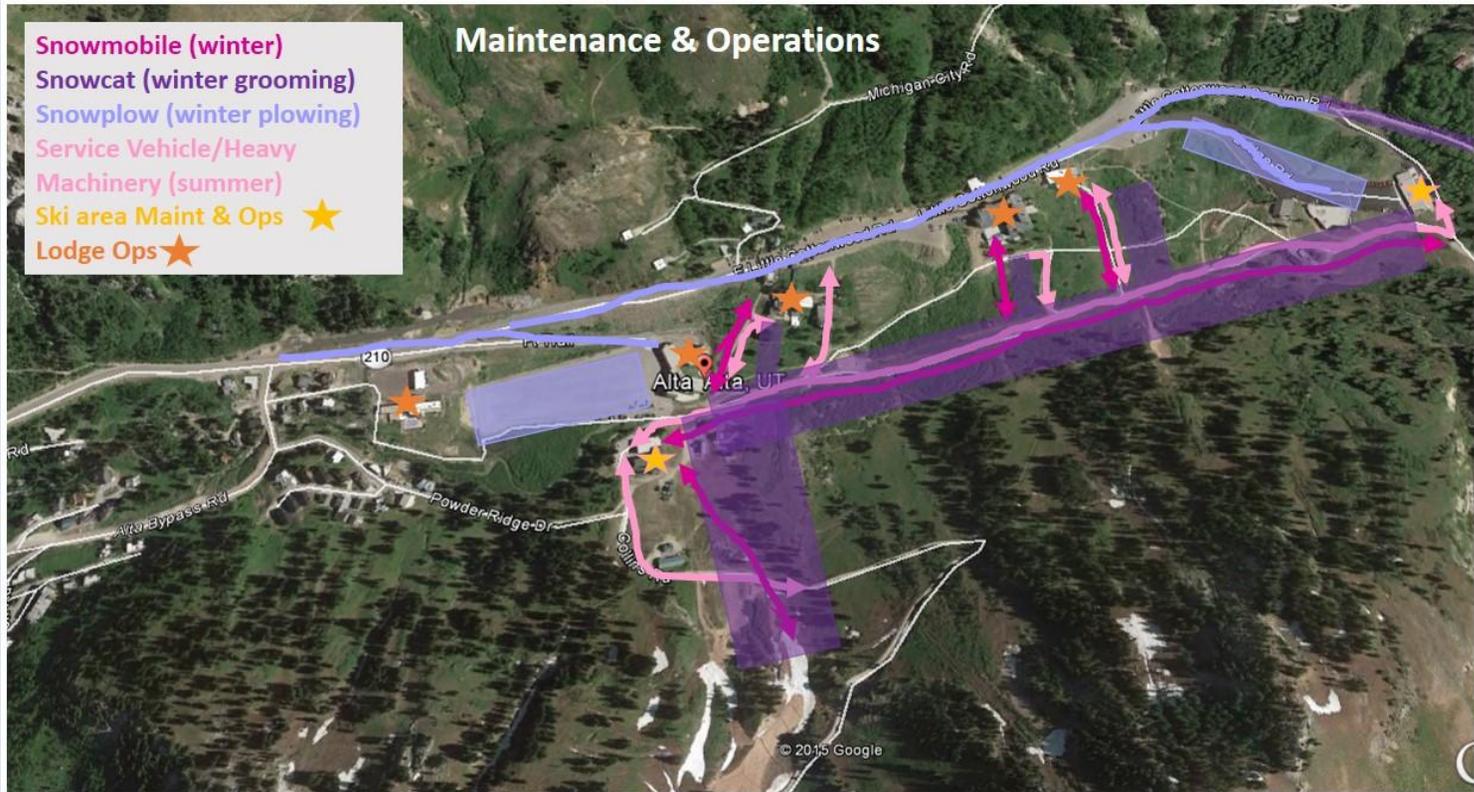
CHALLENGES:

Parking: Challenges for backcountry skiers with lack of formal parking. Skiers and gear all over the Highway. For resort

OPPORTUNITIES:

Trailhead(s): Consolidated parking with facilities for backcountry skiers

	<p>Backcountry access: Hwy 210 provides superior access to backcountry terrain for backcountry skiers; there is a concentrated staging area at the end of the road.</p>	<p>skiers, if lots are full, difficult to get from resort base areas to highway parking.</p> <p>Highway: no skier route parallel to cross tow along highway</p> <p>Lack of facilities: No facilities for backcountry skiers (restroom, etc.)</p>	<p>Opportunities to better move skiers around base area?</p> <p>Create more formal trail network to allow backcountry skiers to get into the commercial core</p> <p>Create parallel track to cross tow</p> <p>Improve mode of connection (aerial?) between two base areas</p>
<p>Maint.</p>	<p>EXISTING CONDITIONS: Ski area maintenance and operations includes snow cat grooming equipment and snowmobiles. Maintenance and operations are generally confined to the cross tow area and along the rope tows that access the lodges. Snow cat equipment operates starting at 5pm and cease operations before the ski resort opens at 9:15. Snowmobile traffic may exist at any time of the day, though most frequently from 7am – 5pm.</p>		



ASSETS:

-UDOT provides maintenance and appropriate level of service for clearing Hwy 210 in town

CHALLENGES:

For UDOT snowplows:

Parked cars and safety: Poorly parked cars and pedestrian/skiers close to highway present safety challenge and may decrease effectiveness of service

OPPORTUNITIES:

For UDOT snowplows:

Increase safety for snowplow operators
Decrease challenges/obstacles for effective plowing

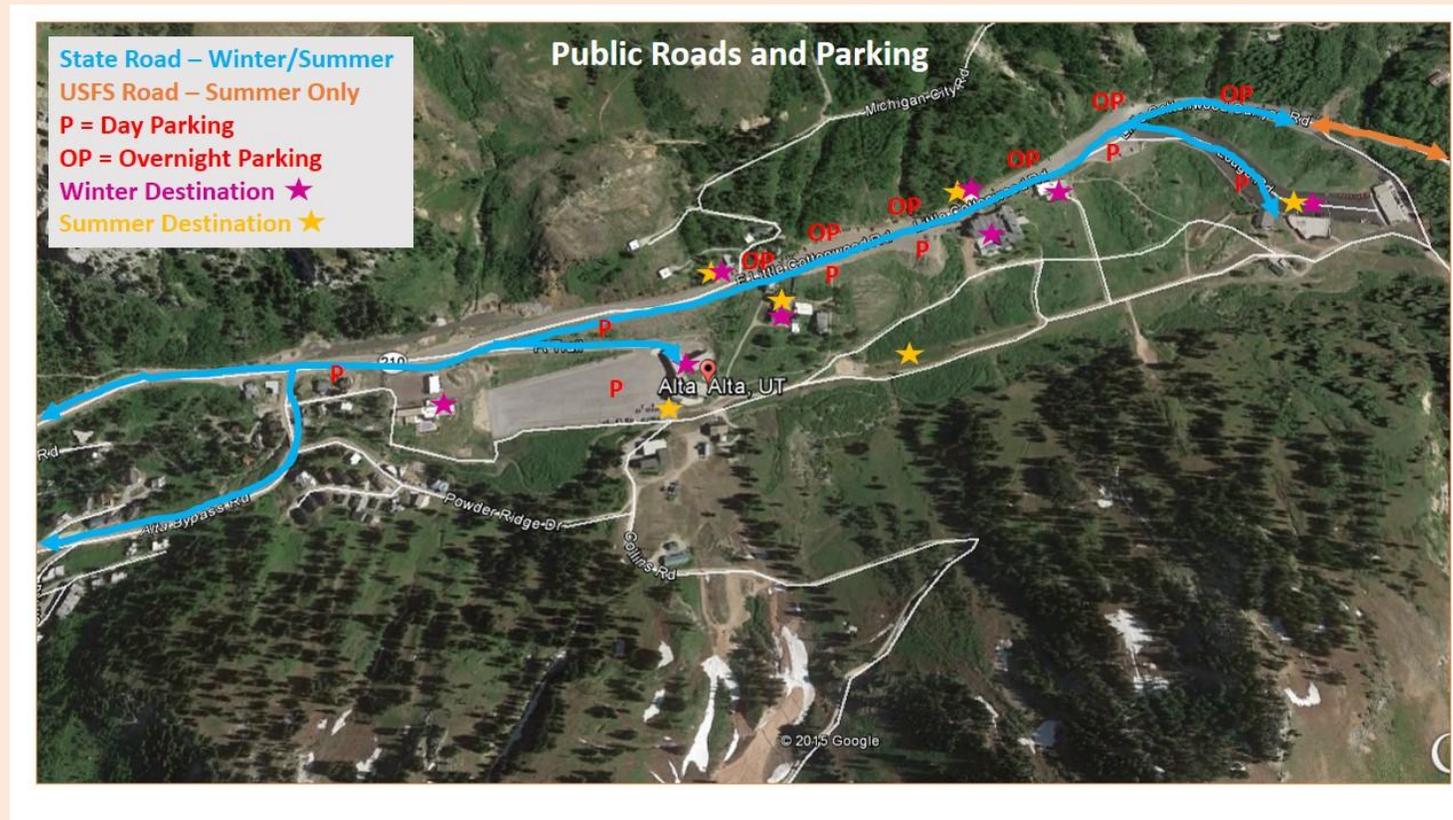
	-Alta Ski Area provides grooming of cross tow corridor and access to lodges from cross tow	<p><u>For ASA snow cats/snowmobiles:</u></p> <p>Generally, very little conflict between pedestrians/skiers and snow cats/snowmobiles but very high liability if there were an incident</p>	<p><u>For ASA snow cats/snowmobiles:</u></p> <p>Decrease conflicts between ASA snow cats/snowmobiles and skiers/pedestrians?</p>
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SUMMER SEASON

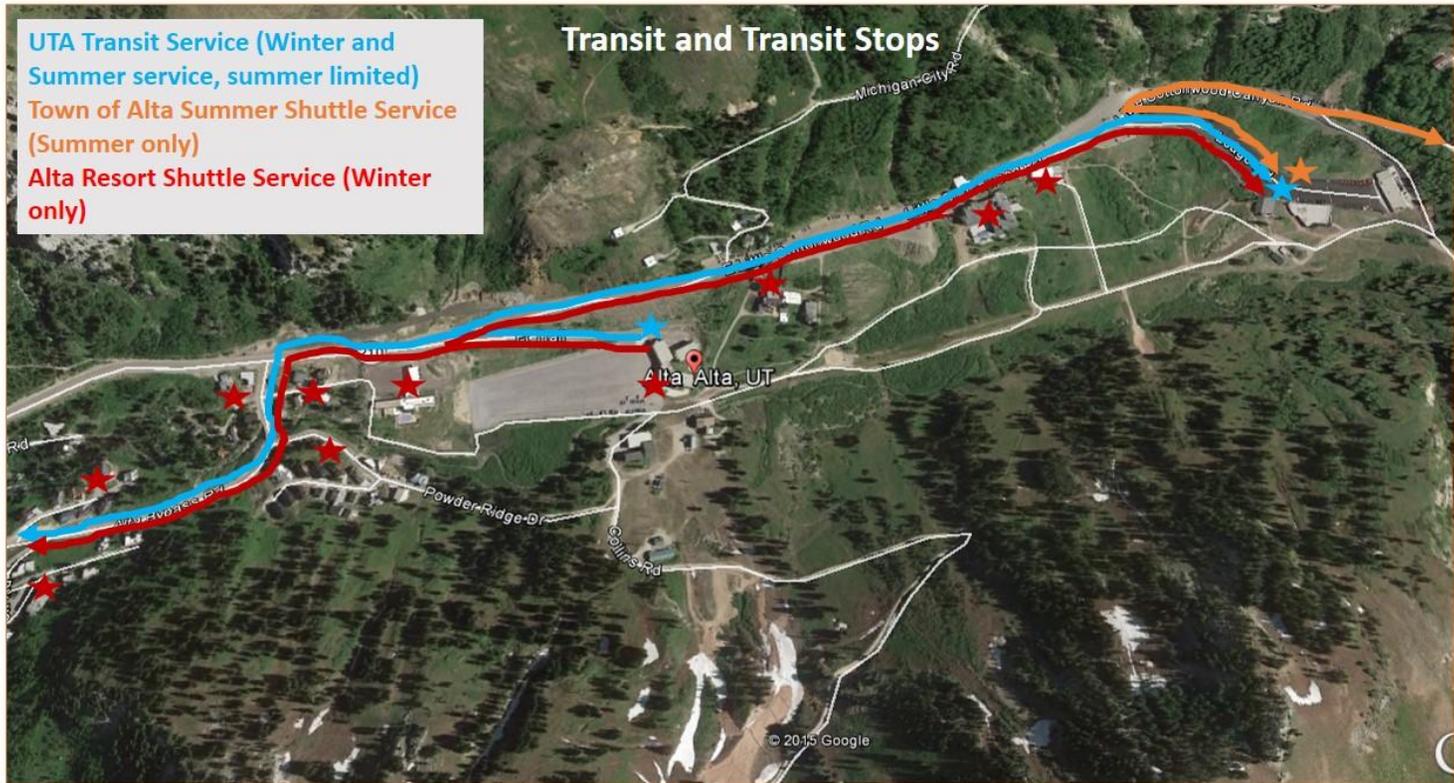
<p>Vehicle</p>	<p><u>EXISTING CONDITIONS:</u></p> <p>Road Network:</p> <p>Vehicles travel primarily on SR-210 or via Bypass Road to access commercial core (see winter discussion, above). Many vehicles travel through the commercial core to access the Summer Road. July is the highest peak summer month, during that time, SR-210 experiences average daily traffic of 5,100 vehicles (Mountain Accord Existing Conditions and Future Trendlines of the Transportation System Report, 2014). In addition to SR-210, the seasonal USFS Albion Basin Road (“Summer Road”) opens to the public when the snow has melted and before accumulating snows start again in the winter. The road is generally open July – September. Although the Albion Basin Road is not in the commercial core, it is heavily visited road and traffic passes through the commercial core to access the Albion Basin Road. In addition, several secondary roads exist, and while travel is restricted, the roads create a more connected network than in the winter. For example, Powder Ridge Drive and Peruvian Acre Road connect to one another.</p> <p>24-hour summer traffic volume was obtained from the Albion Basin Transportation Feasibility Study (2011)</p> <ul style="list-style-type: none"> • East of Bypass Rd/SR-210 intersection (24-hour traffic volume) <ul style="list-style-type: none"> ○ Weekday average: Eastbound 805; Westbound 797; 1602 total ○ Weekend average: Eastbound 1374; Westbound 1434; Total 2808 total • Entrance to Summer Road (24 hour traffic volume) <ul style="list-style-type: none"> ○ Weekday average: Eastbound 451; Westbound 445; Total 896 ○ Weekend average: Eastbound 658; Westbound 664; Total 1322

Parking:

Public parking is primarily in the Commercial Core and is composed of 2,446 spots (Little Cottonwood Canyon SR210 Transportation Study, 2006). The amount of parking is fixed by the U.S. Forest Service however it could be expanded to accommodate transit and for watershed protection (Revised Forest Plan, 2003). During the summer, parking mainly occurs in the Albion Base lot, as it serves as a staging area for the Town of Alta Summer Shuttle and Albion Grill. Minor amount of parking occurs in the Wildcat lot.



	<p><u>ASSETS:</u></p> <p>Traffic free flows through town on Hwy 210</p> <p>Parking in the Town operates below capacity</p>	<p><u>CHALLENGES:</u></p> <p>Speed control: Most visitors want to drive right through town and up summer road</p> <p>Summer Road: Parking, traffic on summer road is problematic</p>	<p><u>OPPORTUNITIES:</u></p> <p>Trailheads in town: Create facilities/trails/etc. to incent people to get out of their cars at the Albion Base instead of driving up the summer road</p> <p>Traffic calming on Highway 210 in town</p>
<p>Transit</p>	<p><u>EXISTING CONDITIONS:</u></p> <p>UTA Service:</p> <p>Summer bus service includes one route up in the morning and one route down in the evening, primarily serving Snowbird workers.</p> <p>Summer Shuttle:</p> <p>The Town of Alta funds (with some financial assistance from partners) and hires a contractor to operate a Summer Shuttle that originates in the Albion Base Parking lot and travels up the Summer road, making stops at Catherine’s Pass Trailhead and Cecret Lake Trailhead. Both trailheads are outside of the Commercial Core, but the Albion Base area serves as a major parking and staging area for the shuttle program. The shuttle operates on weekends and holidays. In the summer of 2015, the shuttle served an average of 940 riders/day, marking a drastic increase over the previous summers which had ridership ranging from 457-636 riders/day from 2010-2014 (correspondence with Town).</p>		



ASSETS:

Summer shuttle service runs between Albion Base and Secret Lake Trailhead

CHALLENGES:

No UTA service (one route a day, focused on Snowbird employees)

Car has travel time advantage from valley to Alta

OPPORTUNITIES:

Work toward summer canyon service: Develop summer UTA service from valley to Alta and incent transit trips to bring fewer cars to Alta and LCC

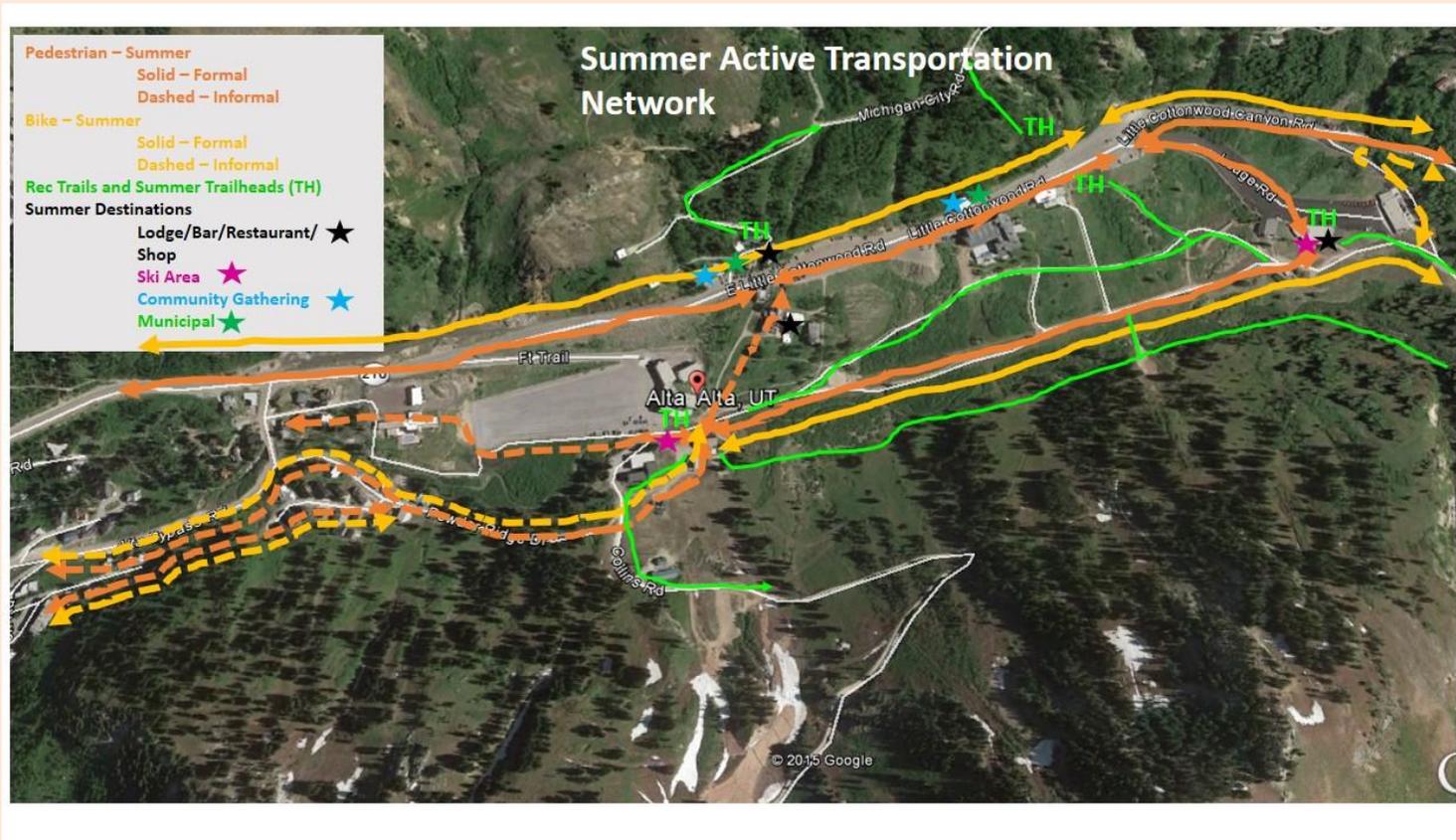
Financial resources to manage shuttle service is a burden to Town

Transit hub: Create of a more formal summer transit hub for visitors.

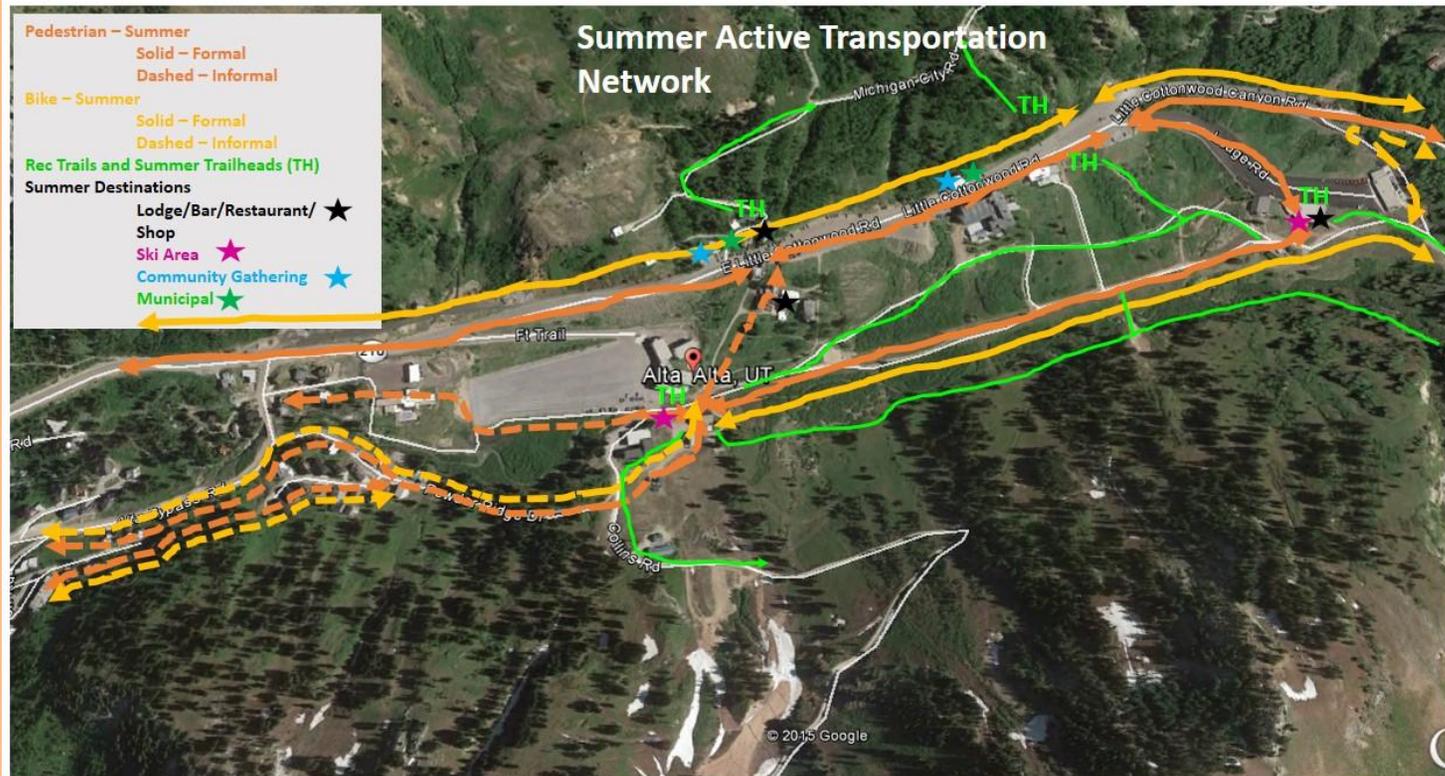
Bike

EXISTING CONDITIONS:

Road cyclists primarily ride up SR-210 through the commercial core and to the end of the pavement. Mountain bikers will primarily ride up cross tow or SR-210 to access Summer Road to Castle Loop trail depending on origin. Residents along the Bypass Road will use footpaths that connect neighborhoods and then to the "Powder Ridge Road."



	<p><u>ASSETS:</u></p> <p>Space on highway: No dedicated path for bikes on highway, but shoulder for riding is wide in most places</p> <p>Road cycling destination: Alta is the top of a canyon popular with road cyclists so is a destination.</p>	<p><u>CHALLENGES:</u></p> <p>Safety concerns for bikes on road during times of high traffic.</p> <p>Poor bicycle connectivity for anything except the highway</p> <p>No dedicated, separated paved bicycle connections (i.e. multi-use paths)</p>	<p><u>OPPORTUNITIES:</u></p> <p>Safety: Increase safety for road bikers on Highway 210</p> <p>Network: Create a basic network of bicycle facilities connecting existing and planned town destinations.</p> <p>Destination: Create more of a destination place for cyclists riding up canyon;</p> <p>Staging: A jumping off point for cyclists riding up trails or summer road.</p>
<p>Pedestrian/ Hiking</p>	<p><u>EXISTING CONDITIONS:</u></p> <p>Pedestrian traffic is more common during summer months due to better weather conditions and ease of walking conditions. Pedestrians walk on SR-210 as well as formal trail system. A fully developed trail network has been developed and maintained by Alta Ski Area and the USFS, with help from other partners (CCF, TOA, FOA, etc.).</p> <p>From Albion Basin Summer Road Study:</p> <p>Trail counts were done at:</p> <ul style="list-style-type: none"> • Secret Lake Trailhead (today daily use: 825-1385 hikers; 0-25 bikers) • Catherine’s Pass Trailhead (today daily use: 160-525 hikers; 0-5 bikers) • Albion Meadow Trail junction – just north of Alf’s (today daily use: 45-480 hikers; 5-55 bikers) 		



ASSETS:

Planned trails: Alta Ski Area trails masterplan addresses creation of trails in base area.

CHALLENGES:

Poor connections: Walking between lodges and between base areas is challenging, both on the highway and along the cross tow.

OPPORTUNITIES:

Better connections for walking

Increased Safety

Two options for main corridors to walk around town 1) Hwy 210 and 2) Cross tow. Both corridors are relatively flat, with gentle rise towards Albion Side.

Steep grade: Grade between cross tow corridor and road corridor make it difficult to get from one corridor to another.

Negotiate the steep grades: Maintained routes up and down the hill

Increase desirability for residents/visitors to walk around town

Safety Concerns: unsafe to walk on Hwy 210 at times of high traffic.

Re-design Highway 210 through the Town of Alta as walkable street

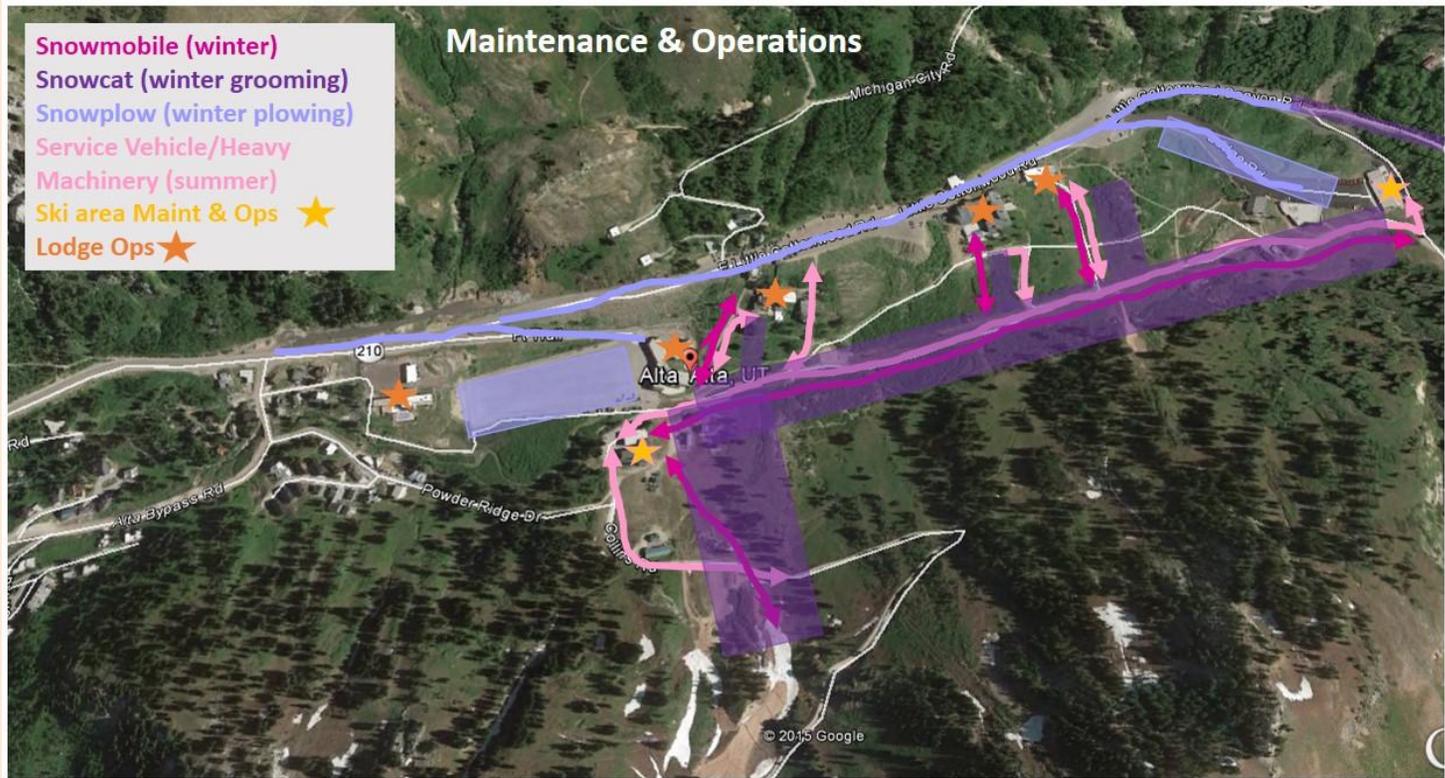
No formal trailheads for trails accessing north side of highway.

Create a pedestrian-oriented end to Highway 210/summer road gateway/trailhead

Maintenance

EXISTING CONDITIONS:

Ski area maintenance and operations include trucks and heavy equipment. These usually operate along the cross tow road, and access other locations via SR-210. Alta Lodge uses a dirt road south of the Lodge for vehicular access to the property, although that road is closed to public traffic.



ASSETS:

CHALLENGES:

OPPORTUNITIES:

Alta Ski Area vehicle maintenance shop and heavy equipment is at the same location as current “hub”

SUMMARY OF TRANSPORTATION POLICY DIRECTION ON KEY ISSUES

The following is a summary of how relevant policy from the Town of Alta, state, regional, and federal agencies, and significant planning processes address key transportation issues in the Town of Alta Commercial Core area and provide guidance for this study.

SR 210

- In general policy direction on SR 210 is canyon-wide.
- Safety, especially avalanche control, is a major issue.
- Actions that would add vehicles to SR 210 are problematic.
- The number of vehicles in the canyon should be reduced.
- There is openness to changing the design of the highway through the town.
- There could be some disagreement about instituting tolling/fees to canyon entry
- Policy is unclear on how the highway should end at the top of the canyon; some may want to explore alternate route out of the canyon.

PARKING

- Keep existing number of parking spots in the town of Alta / Alta Ski Area 2,446.
- Use more precision on parking design, catering to different types of uses.
- Make parking more efficient, i.e. parking garage or Alta's plan to merge the two lots.
- Recognize the close connection between parking in the town and the mouth.

ACTIVE TRANSPORTATION

- There is a desire for new trails, especially in Alta base area away from the overused Secret Lake base.
- Avoid environmentally sensitive areas for hiking and biking trails.
- A Town Center trailhead idea seems to be supported by key stakeholders.
- Integrate transit and recreation use with car reduction.
- There seems to be support for increasing pedestrian/bike safety on the highway.
- There is a lack of policy direction on active transportation within the town.

TRANSIT

- There is broad agreement of promoting transit use for myriad reasons including environment, congestion, safety
- Desire exists for year round service
- Desire for more flexible public transportation
- Desire exists for a transit hub/center in Town of Alta
- Stakeholders potentially disagree on a transit connection to Big Cottonwood Canyon / Park City. Whether it would induce demand
- Unclear what is transit's relationship to carrying capacity of Alta – is capacity tied to cars or people?

SUMMARY OF TRANSPORTATION OPPORTUNITIES

The following are actions that could achieve the policy guidance, leverage the assets, and overcome the challenges identified above.

VEHICLES

- Improve safety between moving vehicles and parked vehicles/pedestrians/skiers on the highway
- Increased communication with drivers: e.g. provide real time travel info for red snake afternoons (could decrease #

of cars in snake and decrease heavy risk on high risk days) and/or other down canyon travel restrictions due to accidents/delays

- Increase winter parking efficiencies
- Keep existing number of spots, no more no less - 2,446.
- More precision on parking design, catering to different types of use
- More efficient parking, i.e. parking garage or Alta's plan to merge the two lots
- Calm traffic on Highway 210 in town
- Consider parallel route to SR 210 in summer to connect visitors to Albion Basin – cross tow or road along slope
- Create additional connection from Wildcat lot to SR 210 at Alta Lodge
- Create park and ride experience for summer visitors in heart of town center / commercial core
- Consider alternative ways to get vehicles from the edge of town to parking spots
- Create facilities/trails/etc. to incent summer visitor drivers to get out of their cars at the Albion Base instead of driving up the summer road
- Promote park and ride facilities at the canyon mouths
- Study parking or vehicle fees in canyon

TRANSIT

- Enhanced UTA ski season service (increased frequency or express service to Alta and/or extended hours i.e. 7 p.m.)
- Work toward summer canyon service: Develop summer UTA service from valley to Alta and incent transit trips to bring fewer cars to Alta and LCC
- Alta Resort Shuttle service could be better utilized and/or investigate other opportunities for people to move around town without a car

- Consider bringing shuttle further down into Town if Commercial Core is located there.
- Rideshare program
- Transit hub/center: Creation of a more formal transit hub that can evolve over time depending on direction of transit that can serve winter and summer transit service, and in long term could serve train
- Consider realigning UTA routes directly from Bypass Road via Powder Ridge Dr. through Wildcat Parking Lot then up to 210 to Albion.
- Understand potential fixed guideway alignments and stops
- Coordination with appropriate agencies to create incentives for transit and disincentives for driving (from valley to Alta), including park and ride lots/centers at the canyon mouths, where most skiers board.
- TDM: Work with Ski area and other entities to reduce demand for SOV trips.

PEDESTRIAN / HIKING

- Formalize informal summer pedestrian connections
- Create winter pedestrian network - better connections for walking among ski area destinations
- Formalize clusters of pedestrian destinations (are relatively similar in summer and winter) and create connections among them
- Increased safety measures to protect pedestrians from moving traffic
- Negotiate the steep grades: Maintained routes up and down the hill
- Increase desirability for residents/visitors to walk around town
- Re-design Highway 210 through the Town of Alta as walkable street

- Create a pedestrian-oriented end to Highway 210/summer road gateway/trailhead
- Integrate transit and recreation use with car reduction

SKIERS

- Trailhead(s): Consolidated parking with facilities for backcountry skiers
- Focus on two nodes for backcountry skiers – town buildings area and end of highway
- Opportunities to better move skiers around base area?
- Create skier connection parallel (above) cross tow to connect lodges
- Create more formal trail network to allow backcountry skiers to get into the commercial core
- Create parallel track to cross tow
- Decrease conflicts between ASA snow cats/snowmobiles and skiers/pedestrians

- Improve mode of connection (aerial?) between two base areas

BICYCLE

- Increase safety for road cyclists on Highway 210
- Create a basic network of bicycle facilities connecting existing and planned town destinations.
- Create more of a destination place for cyclists riding up canyon
- Create a more formal staging area with greater level of amenities as a jumping off point for cyclists riding up trails or summer road.

MAINTENANCE

- Increase safety for UDOT snowplow operators
- Decrease challenges/obstacles for effective plowing

4 Economics

SCOPE OF WORK

The following report contains elements of a market analysis concerning the town of Alta, Utah. Per the revised scope of work outlined by the client, the report highlights the following:

- An existing conditions analysis
- Interviews with local business owners, property owners, brokers, and developers
- An overview of rents and construction costs
- A seasonal retail analysis highlighting current practices by existing retailers

Based on requests from the aforementioned sources, the report does not contain a lodging analysis, case studies of other resort towns, an analysis of seasonal demand requirements, fiscal impacts, funding options, potential summer programs and facilities, study of land constraints, or demographic target market analyses. While some of the aforementioned were discussed with market participants as part of this assignment, no data collection or conclusions are presented herein, per the client's guidelines.

SUMMARY OF FINDINGS

The report highlights several issues regarding potential development and market conditions. The following summarize a few of the key findings:

- Additional retail could be supported at present at near 1,000 to 1,500 square feet, if the location is either Albion

Basin or along the highway. Occupants would most likely be from expansion of existing users, and not new entrants to the market

- An additional 1,500 to 2,000 square feet of retail could be supportable if additional summer activity takes place. Retailers will need a full nine to ten-month season to consider expansion and new ventures. The current season results in a shorter period of activity that makes any type of new development less feasible. The most likely potential retailers include a coffee shop, small grocer, a ski rental/outdoor activity store, a bakery, and a café/bar. Massing near a transportation hub would most likely result in quicker absorption, higher values, and less turnover
- Retail construction costs are estimated at near \$150 to \$165 per square foot, dependent upon a variety of factors (and not including land value). To ensure financial feasibility (and that value will exceed construction and land costs), rents will need to be near \$15.00 per square foot per year, triple net, with a first year rate of return (CAP rate) of approximately 8.0 percent. Rent levels will be difficult to support at this amount without increased summertime activity. Investors will likely require higher rates of return (which consequently results in lower overall values) if locations are secondary and/or transportation remains the same
- For additional retail and commercial use, critical massing of people needs to occur in a centralized area. A spreading out or "dilution" of potential customers to multiple gathering areas will not lead to enough activity to sustain additional development

- A summertime (as well as winter) place maker, such as a lodge, conference center, reception hall, etc., is likely necessary to accommodate large groups and get the mass necessary to keep retail activity occurring during summer months
- Projections for additional retail development are largely contingent upon transportation issues (i.e., a tunnel, train, bus hubs, etc.)
- Structured parking is estimated at close to \$30,000 per space. Some resort towns have experienced costs well above this amount, while other, more urban locations are lower. Surface spaces are estimated to cost closer to \$4,000 to \$4,500 per space.

EXISTING CONDITIONS ANALYSIS

BACKGROUND

The subject of this analysis is the Town of Alta, located in Salt Lake County, Utah. Existing conditions are outlined based on available demographic data, as well as information received from residents, property owners, and business entities in the Town of Alta.

As noted by the following maps, the majority of the Town of Alta is characterized by open, mountainous space. Town boundaries have increased in size following various annexations in the past 40 years, while development has largely been contained to select areas.

The associated exhibit highlights land uses for the Town of Alta. Residential uses are primarily clustered around the western/northern portion of the town, with commercial uses lining the main vehicular arterial. A small section of governmental use buildings is situated in a central/northern area (also next to the road), while the rest of the town area is identified as recreation and open space.

The recreation and open space represented in the map is primarily utilized and maintained as the Alta Ski Area. During winter months, the mountainous terrain is heavily trafficked with downhill and backcountry skiers, while summer months are populated with hikers and nature enthusiasts. The primary land owner is the Wasatch-Cache National Forest, as shown on the accompanying map. Most private land is located around the road entrance to Alta, as well as near the peripheries of the town boundaries. Conservation easements have been placed on some private land parcels, resulting in land that will remain undeveloped. Other private land holdings have slopes that prohibit development. Consequently, available land for development is limited in Alta.

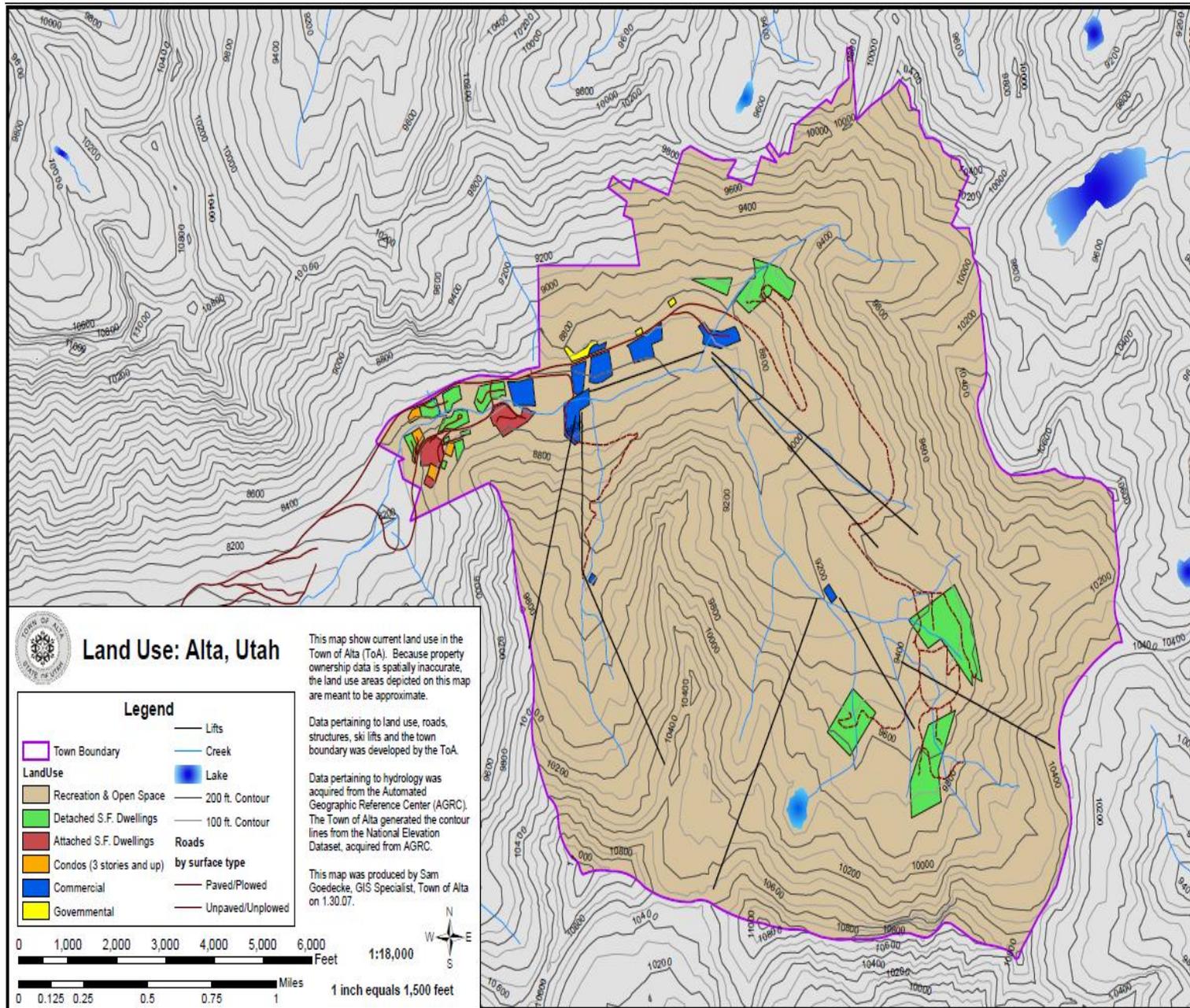
According to the Alta Zoning Map, developmental density is generally highest in close proximity to ski resort and road improvements, while most of the town has very low density zoning.

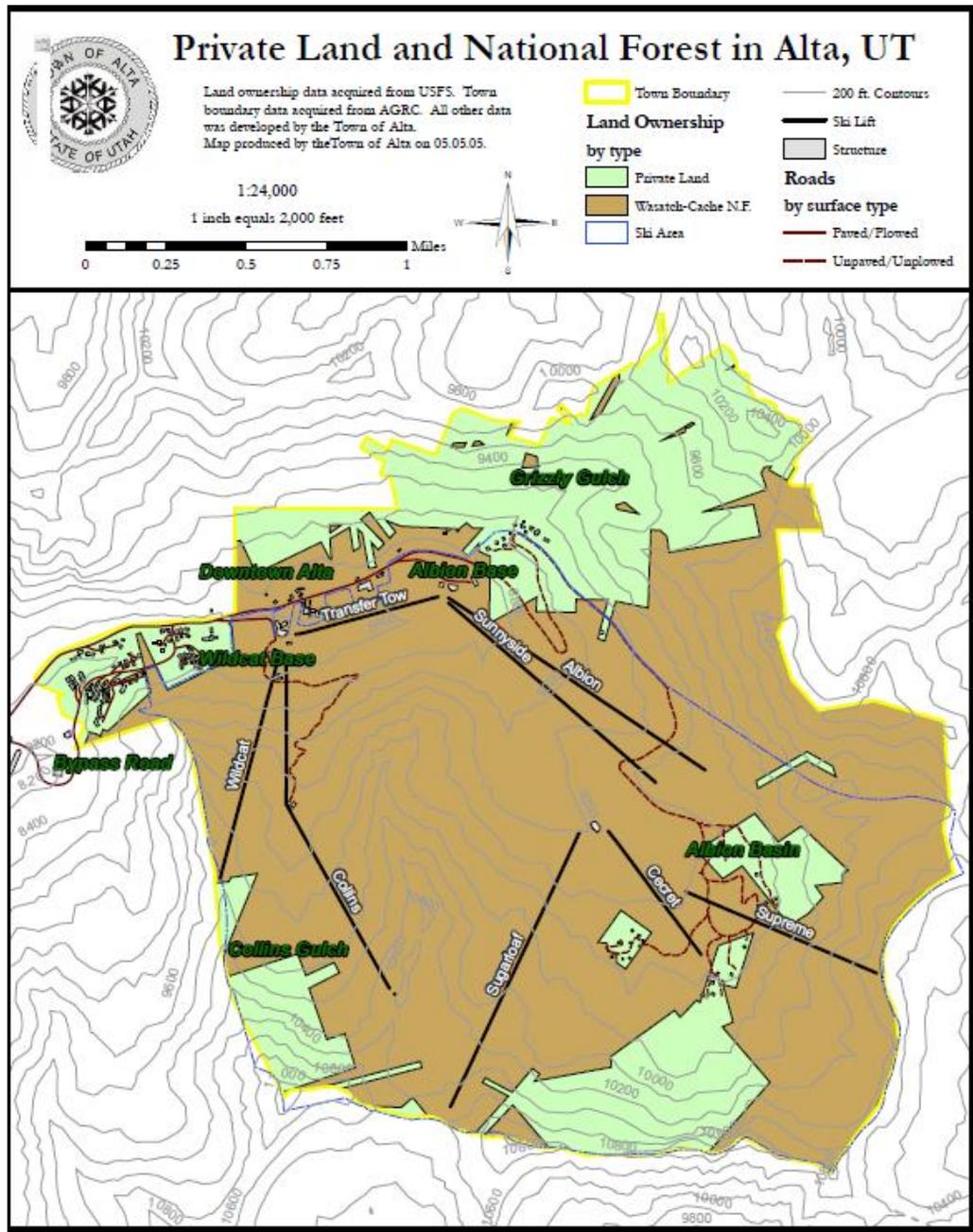
Finally, in relation to zoning, the following maps highlight in more detail the commercial core of Alta. The central, dotted red-line refers to an area delineated as the “core,” which is not a zoning designation but a generally defined area used for planning purposes.

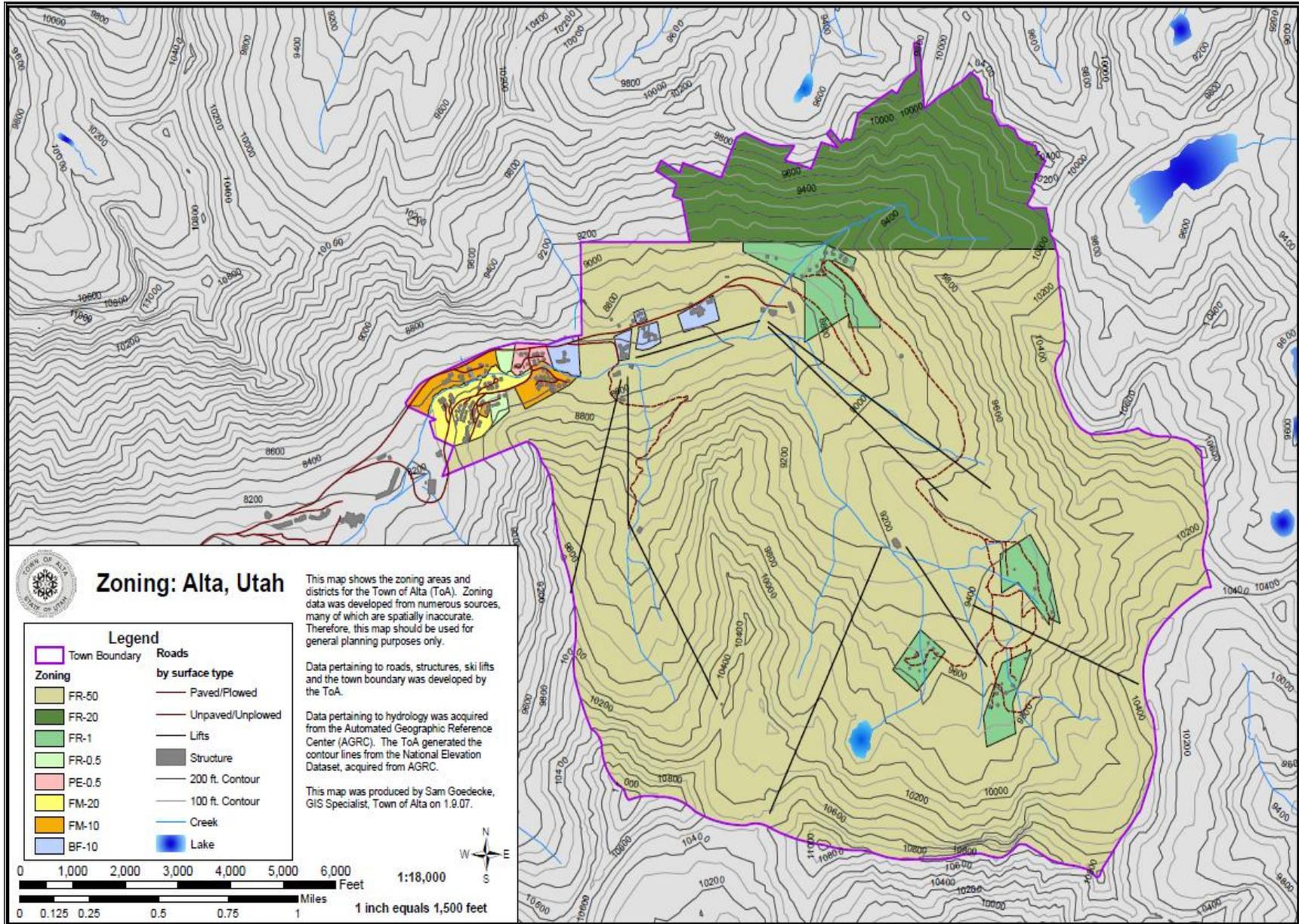
DEMOGRAPHICS

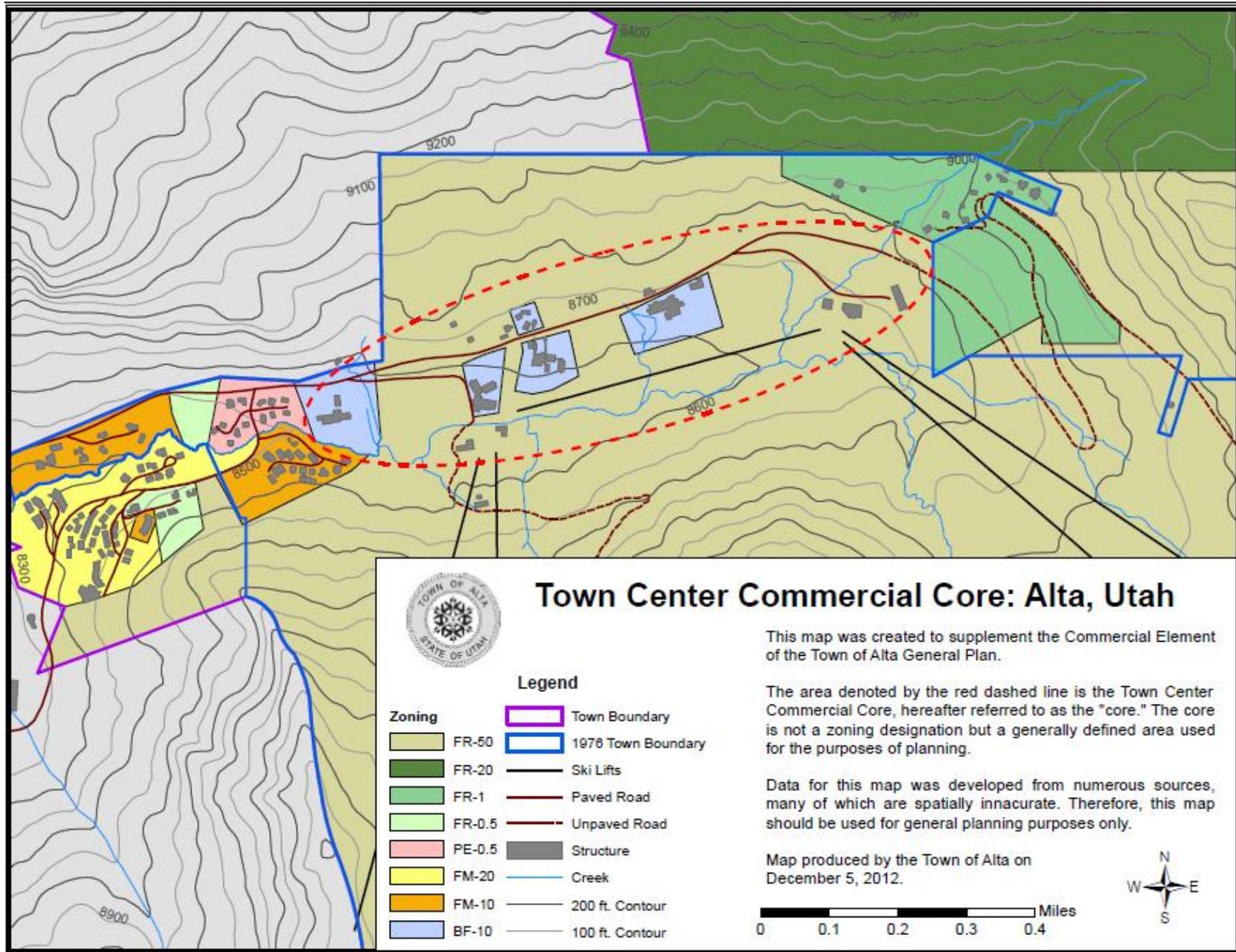
Basic demographic information for Alta shows that population is less than 400 persons, with growth from 2000 to 2010 at just above five percent. According to various business owners and town representatives, the nighttime population during winter months increases to near 1,000. This includes guests, residents, and employees of the various lodges and hotels.

The populace is atypically male in gender, with only 37 percent of residents being female. The median age of 36.7 is more reflective of national statistics, but well above the median age in Utah (30.2). Incomes for Alta have been reported at higher levels than those for









the State, and significant increases in median incomes were reflected from 2000 to 2010.

BASIC DEMOGRAPHIC INFORMATION - ALTA

Population - 2000	363
Population - 2010	383
Population – 2015 (Estimate)	394
Male vs. Female Population	64 to 37 percent
Median Age - Alta	36.7
Median Age - Utah	30.2
Median Income Alta – 2013	\$66,860
Median Income Alta - 2000	\$51,250
Median Income Utah - 2013	\$59,770
Housing Supply - 2015	330 Units
Percentage of Renter Occupied Housing	36%
Median Gross Apartment Rent - 2013	\$657 per month
Median House or Condo Value - 2015	\$631,500
Travel Time to Work – Less than 15 mins.	55% of population
Travel Time to Work – Work at Home	22% of population

The basic demographic information also shows that Alta has roughly 330 housing units, of which approximately 36 percent were noted to be leased (as of 2015). Gross apartment rents are below the median for Salt Lake County, while median home values are significantly higher.

EXISTING TOWN OF ALTA BUSINESSES

Current businesses in Alta are primarily involved in the lodging and tourism industry. A ski/outdoor equipment shop, coffee establishment, a stand-alone restaurant, and a few others comprise the majority of non-lodging or resort-specific businesses. Major employers within Alta include the ski resort, as well as the lodges noted below:

- Alta Chalets – represents a variety of homes, cabins, and condominiums
- Alta Lodge – provides guest rooms with ski-in/ski-out service since 1940. Open nearly year-round (except for a 1.5-month shoulder season in both spring and fall)
- Alta Peruvian Lodge – provides guest rooms since 1948. Open only during winter months
- Snowpine Lodge – Ski-in/Ski-out lodge with some off-season use
- Rustler Lodge – approximately 85 rooms of ski-in/ski-out service, open only during winter months
- Goldminer’s Daughter – Ski-in/Ski-out lodge directly at the base of Collins and Wildcat ski lifts. Over 90 rooms that are open only during winter months

All of the above lodges have their own dining facilities, with meals included in the costs of the room rates. They are the primary employers (with the ski resort), with most providing some sort of onsite lodging for employees.

INTERVIEWS – PROPERTY OWNERS, BUSINESS OWNERS, DEVELOPERS AND RESIDENTS

Interviews with various property owners, business owners, developers, and residents of Alta reveal additional information regarding existing conditions in Alta, as well as perceptions regarding what could be developed (if at all). These same sources also discussed the need for a summertime economy, as demographic trends change dramatically around the winter season. Respondents indicated that various commercial needs are lacking in Alta, with the following noted multiple times by different sources:

- A convenience store
- A small grocery store
- A bakery
- A more centrally located coffee shop

- An amphitheater or area for outdoor music and events
- A convention center or conference hall that can host large weddings, corporate events, festivals, and similar larger events
- An area for more locker storage
- Dedicated employee housing
- More independent restaurants

Most respondents were in favor of additional development at Alta, but recognized the need to better understand the potential of a summertime economy. Interviews included questions regarding current business operations (if a business owner), what needs were most critical in Alta, how a Town Center could best serve the area (and what uses and location would be appropriate), what kept businesses from expanding or operating more in the summer, and what services residents deemed most vital, as well as other comments.

Focus was also placed on how transportation alignment and improvements could alter business and overall lifestyle in Alta. Respondents were questioned regarding long-term planning issues such as Mountain Accord, as well as more short-term requirements to alleviate occasional traffic issues.

Property owners, developers, and business owners all opined regarding the potential for near-term commercial development. Considerations were also made for types of development, densities, absorption, and achievable rents and returns.

Presently, it appears that Alta would rely upon internal growth (i.e., expansion of existing businesses) for any new development. Other business owners and developers are reticent to pursue construction without a clear summertime economic plan. Two, existing businesses have indicated that they may pursue near-term expansion, if property was made available in key locations. Both are

retail sales-oriented stores, and are established enough in the area that they believe they could expand without any additional summertime economic stimulation. However, both prefer space close to the existing Albion Basin parking lot, which currently does not provide any retail vacancies (or any development).

Overall, there is enough demand at present to support near 1,000 to 1,500 square feet of additional commercial space in Alta. Absorption may take upwards of a year, and tenants will all likely come from expansion of existing uses. Notable, however, is that absorption of 1,000 square feet is anticipated to be net, and not merely relocating of existing spaces to better locations.

Further retail development could also be supported in the near term at upwards of 1,500 to 2,000 square feet, if additional tourist activity were to be created during summer months. Presently, the busy season consists of mid-December through mid-April. Few visitors are found in Alta in the second half of April, May, and June, as well as the second half of October and most of November. July and August see heavy traffic in the Albion Basin. Consequently, most retailers who do not already have a presence in Alta indicate that they would not be able to financially reconcile an operation that has significant seasonality differences. Interviewed businesses were anxious to see if activity could be increased in at least June and September, thereby creating a calendar year that has essentially nine to ten months of healthy operations.

An increase of 1,500 to 2,000 square feet, dependent upon summer activity, also requires a location most likely in the Albion Basin or on the main highway. Businesses and developers were hesitant to commit to development in the Wildcat area, unless significant lodging or resort improvements were made. Overall, most see the majority of a 1,500 to 2,000 square foot expansion being filled by a small grocer and eateries.

Also noted is the potential impact of transportation changes on retail demand. Numerous sources showed that if a train or tunnel (or both) is constructed, that retail development could be as significant as the Town would allow. This includes development of lodging facilities as well. A more direct connection to Park City through Big Cottonwood Canyon was seen by those interviewed as a possibility of adding notable commercial facilities. Absorption and total potential square footage is not available, however, without a more in-depth study of possible traffic counts due to transportation improvements.

Interviews also revealed some of the following regarding the potential of additional development in Alta:

- A convention center/conference hall is necessary. Several lodges have facilities, but are closed in the summer. The Alta (resort) offerings are too small (200 or less) and are part less desirable cafeterias/etc.
- Outdoor amphitheaters have been considered and are desired, but finding the right land, parking, and environmentally-stable area has been difficult
- Various festivals have considered Alta, but need a place for various performances
- There exists a need for space that can service corporate retreats. Companies that are looking for training or a place for outdoor workshops, have had interest in Alta, but facilities are lacking

RENTS AND CONSTRUCTION COSTS

Included in the scope of this assignment is an overview of potential construction costs and achievable rents for retail development. Also considered is the cost of possible structured parking, which has been proposed as an option under various development scenarios.

Construction costs are taken from currently active firms in Northern and Central Utah, with appropriate adjustments made for Alta's unique location. Additionally, costs are outlined by several cost estimating services, a few of which include multipliers for properties at high elevations, on sloped land, and with other geographical features that are not considered typical (i.e., potential for avalanches, extreme temperatures, soil conditions, etc.).

Construction of a single-story retail building is estimated at near \$150 to \$165 per gross square foot. The range is due to the variety of potential finishes, and the costs consider the uniqueness of getting materials to Alta. Land costs are noted to be separate, but the range does include a developer profit allowance.

In order to justify construction costs of \$150 to \$165 per square foot, rental rates would need to be near \$15.00 per square foot per year. This is obtainable for a less-seasonable economy, but may be only feasible in Alta for very small spaces (typically, smaller spaces lease at higher rates per square foot than larger areas, all else equal). Consequently, for larger retail offerings (in excess of 250 square feet), incentives may be necessary in order to attract development. Otherwise, development may have to come from owner/user types. If \$15.00 per square foot per year rents can be achieved, then capitalization rates could likely be supported at 8.0 percent. Considering the unique seasonality attributes, an 8.0 percent overall rate may be supportable for Alta retail (while lower rates are reflected in more typical environments throughout the Salt Lake Valley). If higher rates are required by investors (based on their perception of risk and value), then financial feasibility will be questionable until rental rates increase and/or construction costs decline.

Costs are also examined for potential parking garage spaces. Historically, structured spaces in suburban environments have ranged widely from \$15,000 to upwards of \$25,000 per space. A recent study for parking garages in Park City showed costs in that

area of upwards of \$45,000 per space. Park City has unique soils that require notable costs, and it is assumed that Alta does not experience this issue. Nonetheless, construction of parking facilities at Alta will likely be above the historical range, due to the time and expense associated with delivering materials and utilizing a short construction season. Estimates from various sources suggest that costs could average \$30,000 per space in Alta.

Alternatively, additional surface spaces are estimated closer to \$4,000 to \$4,500 per spot. This includes costs associated with driveways and all parking connectors.

SEASONAL RETAIL ANALYSIS – CURRENT PRACTICES

This report looks at existing summer conditions for retail properties, as revealed through interviews with property and business owners which are highlighted below.

In regards to the summertime economy, respondents indicated that the seasonality of Alta presents significant hurdles, and that the ski resort should take an active role in organizing and creating events during the summer to promote the area. Opinions differed as to what would be appropriate, with most indicating that activities should be focused around promoting and preserving the beauty of Alta. As the various quotes reflect, there is a relatively wide range in sentiment from a variety of sources regarding what the community needs for summertime growth. Nonetheless, there are several components that seem to be repeated from those interviewed. They are listed below:

- A vision needs to be created or the town will continue to lose business to other resorts and communities
- There needs to be better planning between the resort and lodges/retailers to create a unified plan for a summertime economy

- For retailers looking to expand or take space in Alta, the shoulder season needs to be shortened by adding festivals, retreats, concerts, weddings, etc.
- Restaurant uses could expand if lodging was more available during summer months. Lodges would not have to open their kitchens (which are reportedly costly) if there were restaurant options in Alta
- There needs to be a gathering area, or community center, that can attract people year round. The community center should have the ability to act as a corporate retreat option, as well as a wedding and event facility. It has the potential to generate income to the town, and provide a community benefit. If properly located, it could be accompanied by new retail space, thereby creating a more focused town center
- Albion Basin seems to be the preferred location for most people for a town center. It, however, misses more than half of the traffic. If a tunnel or train is not coming to Alta, then a reroute of Wildcat parking may be appropriate in order to tie the areas together for both winter and summer use
- A year-round lodge operated by Alta is considered key by several parties, including current lodge owners, as it would aid in attracting tourists for key summer months

Comments also highlighted that business is not as robust as in years past, and that significant consideration needs to be made in regards to year-round transportation issues in the Canyon. These and other observations are shown below (actual quotes from those interviewed):

- “We need Alta (the ski resort) to keep a lift open during summer months”
- “Keeping a lodge open during the summer is just not financially feasible. If we did open up, it would only be for

three months and to keep staff from turning over every year”

- “Alta (the resort) could shorten the shoulder season by keeping the lifts open for another month”
- “We need more trails from the Wildcat side to get people to park down there and use that part of the mountain”
- “Mountain biking in the summer is more of a Snowbird thing – the terrain doesn’t seem right in Alta”
- “There could be plenty of restaurant and wedding business, but we need some of the lodges to stay open in order to get the bigger crowds”
- “Festivals are a great idea, but we need to convince the lodges to open up their restaurants so that people will stay up the Canyon after the festivals”
- “A summer-time economy is relatively non-existent. Particularly during the shoulder seasons there is literally no activity. A roughly two-month wildflower period brings people back up the canyon, particularly on weekends, but that is it”
- “A conference center is key to bringing summer activity to Alta. There needs to be a beautiful place to meet”
- “The town lacks a sense of place, with a real need for a town center that is more than just a community center”
- “Adding access to other canyon communities (i.e., Brighton, Park City) would greatly improve Alta’s outlook and a summertime economy”
- “We need a better transportation system up the canyon for all seasons, and a shuttle/bus operation is just a five-year band-aid. The population is growing, and we need constructive, large-scale changes”
-

- “We need a dramatic restaurant or conference hall that can cater to weddings and corporate events. That will drive summertime lodging business”
- “The town needs to be more willing to allow for additional condominium and restaurant growth”
- “Alta needs a train. Otherwise, we fail to plan for the next 20 to 30 years of growth”
- “A community center is key. We need a bigger space than Our Lady of the Snows. Something more functional and versatile”
- “Concerned that the road closure during the summer is cutting off access for too many people. We need a plan to manage the summer growth without it getting too big”
- “We used to be busier at Thanksgiving and prior to Christmas. Now, the end of November and beginning of December is pretty weak”
- “During key weekends and holidays, we are booked well in advance and fully occupied at good rates. Weekdays are a bit softer sometimes, which has changed in the past few years”
- “Some might be in favor of more summer festivals, but they don’t do anything to help the lodges. People come up for the day and then go home”
- “We are considering opening up during the summer, particularly on the weekends, during July, August, and September”
- “It is key to capture some of the 4:00 rush out of the canyon. How do we get those people to stay and relax?”
- “Summer activities in Alta should be focused around nature and environmental retreats”

5 Utilities (Water, Sewer, Gas & Electrical)

WATER

INTRODUCTION

The Salt Lake County Service Area #3 is a government water district located near Snowbird Ski Resort, which is immediately west and down-canyon from the Town of Alta. The Town of Alta owns all of its water infrastructure, and contracts with Service Area #3 for operation and maintenance. The Town of Alta uses culinary water through a Surplus Water Agreement with Salt Lake City Public Utilities. This agreement allows the Town of Alta 265,000 gallons of water per day and dictates where this water can be served.

Water demands vary greatly throughout the year due to seasonal visitation trends. The Town of Alta water distribution system currently consists of a variety of pipe sizes from 2" to 14".

UNDERSTANDING OF NEEDS

This inventory document is provided as a working document, which is intended to assist the Landmark Design Team and the Town of Alta assess the implications of growth possibilities related to future development in Alta's commercial core, between the Peruvian Lodge and Albion Basin parking lot, and south from the highway to the toe of the ski slope. There may one day additional private land in this study area, and any development on that land will require further utility infrastructure planning, as well as compliance with the Town of Alta's remaining water allotment per the surplus water agreement with Salt Lake City Public Utilities. It is understood that such development could include restaurants and bars, a multi-

purpose community center, a bakery, a small store, lodging, housing, or a day lodge.

This report discusses planning-level ways to better utilize the sources supplying the existing water system as well as possible solutions that promote sustainable design for future growth and implementation of potential projects. It also indicates some upgrades which need to be made and includes recommendations for improving and upgrading existing infrastructure for established connections and to accommodate potential future residential and commercial growth, which will be determined as this plan emerges.

METHOD AND DATA SOURCES

The majority of the data collected for this study was obtained from available Town records. Descriptions of the data collected for the study is summarized in the following list:

- 2012 Annual Drinking Water Quality Report for Alta Town
- The U of U CvEEN 6440 Water Distribution System Design Class Spring 2011 Semester Report
- Population data from Town of Alta
- Water use data (obtained from Town of Alta billing records)
- Water system details – Exhibit (obtained from Salt Lake Service Area #3 GIS Mapping)
- Locations and pipe sizes, tanks, water valves, fire hydrants and lift stations.
- Storage Tank (365,000 gallons located on the mountain above the Bay City tunnel)

- Aerial map (obtained from the Utah Automated Geographic Reference Center (AGRC))
- Water source data (Bay City Tunnel)
- Land use data (obtained from the Town of Alta Zoning Map)
- Town of Alta Peak Day Demand Source Capacity Requirements Inventory
- State of Utah Drinking Water Rule R309-510: Facility Design and Operation: Minimum Sizing and Requirements

It should be noted that the data provided by the Town of Alta is generally inconsistent and lacks sufficient detail for providing definitive solutions. Nevertheless, it is sufficient for addressing general planning-level needs and ideas.

With the GIS map provided by Salt Lake County Service Area #3, we can better understand the layout of the system and the possible options to increase the water supply as needed for future growth.

SYSTEM INFORMATION

The Town of Alta’s water system is System Nr. 18049. The Town of Alta’s partner in water and sewer operation is Salt Lake County Service Area #3 (Service Area #3), which is located at Snowbird Ski Area.

The Town is provided water by the Bay City Tunnel, which is located on the east side of State Route 210, opposite Snowpine Lodge. Water is pumped from a 300-foot vertical shaft, which is located 1800 feet from the portal of the mine. The water is then pumped into a water tank which is located on the mountain slopes above the tunnel. This tank stores 365,000 gallons of water.

FUTURE PLANS

The Town of Alta’s options for development are limited at present, due to the lack of private land available for development.

Implementation of a Commercial Core rests in large part on the possibility of a land trade between Alta Ski Area and the US Forest Service. This Master Plan is being prepared to provide a vision of what the commercial core may be, and is yet-to-be- determined.

Some of the uses that have been discussed as part of this Commercial Core included the following uses:

- Restaurants and bars;
- A community center;
- A bakery, small store and coffee shop;
- Additional lodging;
- Housing for employees;
- Other housing/lodging options;
- A day lodge; and
- A transit Center

There may one day be additional private land in the commercial core project study area, and any development on that land will require further utility infrastructure planning, per Chris Cawley, Assistant Town Administrator.

DEVELOPMENT LIMITATIONS AND OPTIONS

The major issue that the Town of Alta faces is the balance of the 265,000 gallons per day allotment against what is currently being used. The unused allotment of around 35,000 gallons per day is all the culinary water that is currently available to support any future growth.

Some possible options that might be considered for extending and improving access and utilization follow:

- Utilize measures to conserve water consumption;
- Determine if there are any other possible sources of water.
- Investigate if a secondary source of water may be available for exterior uses;
- Water reuse;
- A system efficient study to determine if the existing system has issues with possible breakage out of the system (wasted water)

Detailed investigations of these options to increase the amount of available water to support further future growth are beyond the scope of this report. They could, however, be studied in greater detail to determine the feasibility, value and the cost of each option, including recommendations.

EXISTING SOURCES, FACILITIES & POSSIBLE FUTURE CONNECTION

This section examines the needs and requirements for sources and facilities on an individual basis, with the following caveat regarding **three main requirements** that must be considered when evaluating a water system:

- **Sources**, which typically considers water rights and capacity but in this case it is the 300-foot deep vertical shaft where the water is pumped and then lifted to a 365,000-gallon storage reservoir.
- **Storage**, which considers water tank capacity; and
- **Distribution System**, which considers pipe size and flow capacity.

SOURCES

The only current source of culinary water for the Town of Alta is the Bay City Tunnel. It is a 300-foot deep vertical shaft where the water

is pumped and then lifted to a 365,000-gallon storage reservoir. The appropriate water rights currently exist for this course.

STORAGE FACILITIES

Water from the Bay City Tunnel is treated at the source and fed into a 365,000-gallon storage tank known as the “Alta Storage Tank”; It also feeds the 10,000-gallon Grizzly Gulch Storage tank,

The minimum State storage requirement for fire flow is 1,500 gallons per minute (gpm) for 2 hours for a total of 180,000 gallons. The state requires peak day demand storage of 400 gallons per Equivalent Residential Connection (ERC) for indoor use and 4,964 gallons per irrigated acre for outdoor use in addition to the fire storage.

PUMP STATIONS

There are five pump stations within the system, two in the Bay City Tunnel. Water is pressurized by pumping into the two water tanks and is then gravity pressurized into the distribution system. The storage tank elevations provide enough pressure to transmit water throughout the existing system.

DISTRIBUTION SYSTEM

The distribution system for the Town of Alta consists of pipe sizes ranging from 2” to 14”. Flow seems to be acceptable under normal demand conditions throughout the system. If this system had redundancy by a more traditional looping system, the flow would improve.

EXISTING AND FUTURE CONNECTIONS IN THE TOWN OF ALTA SERVICE AREA

The area that is provided water by the Town of Alta's system consists mostly of rural residential housing units and a few commercial connections. The area served is within the boundaries established as part of the Town's surplus water agreement with Salt Lake City Public Utilities, and this boundary is expressly identified in the agreement as the Town's boundary as of 1976.

As described earlier, roughly 35,000 gallons per day of peak day culinary source capacity is available for future development within the town's surplus water agreement. This amount represents 13.8 percent of Alta's total allotment of 265,000 per its surplus water agreement, and it has been calculated based on uses currently connected to the Town of Alta water system, and State of Utah regulations regarding drinking water system peak day source demand (<http://www.rules.utah.gov/publicat/code/r309/r309-510.htm>).

CONCLUSION / ANALYSIS

From the current information gathered, it is possible for future growth to take place in the Commercial Core, although the details can only be assessed once specific development concepts have been formulated and the planning-level utility needs and requirements analyzed.

Some of the key elements which will be assessed at that stage include the following:

- Type of Development
- Location of Development
- Size and Intensity of Development

- Continuity and Focus of Development (Nodal versus Dispersed, for example)

SEWER

Alta's main sewer line was constructed in 1971 in cooperation with Salt Lake County #3-Snowbird. The town's incorporation in 1970 allowed Alta to apply for US Environmental Protection Agency funding not otherwise available to assist with development of sewer infrastructure in Little Cottonwood Canyon. The Town and Snowbird Ski Resort thereby partnered in funding this sewer project, and entered into a perpetual agreement for ownership and maintenance of the system. Per this agreement, the Town of Alta owns 40% of the total capacity of the main sewer line between the LCC sewer line's connection to sewer infrastructure owned by Cottonwood Improvement District (a wastewater collection agency located in Salt Lake Valley), up Little Cottonwood Canyon to the Superior Parking Lot. In this location, a spur extends southeast along the Alta Bypass Road toward residential areas including Blackjack Condominiums, Superior Point, Sugarplum Condominiums, and the Powder Ridge PUD. This spur is owned and operated by Service Area #3. The main line continues up-canyon from the Snowbird Superior Parking Lot toward Hellgate Condominiums the center of Alta; beyond this junction in the Superior Lot, the Town of Alta owns 100% of the main sewer line, which terminates in the Grizzly Gulch neighborhood.

Operation of Alta's sewer is described in the Town of Alta Sanitary Sewer Management Plan, which is available on the Town of Alta website or by contacting the Town of Alta office. The town retains a part-time employee who is a State of Utah-certified sewer operator to operate and maintain the sewer infrastructure owned by the

town. Some aspects of sewer maintenance and operation are conducted through the town's contract with Cottonwood Improvement District, which is responsible for treatment of wastewater generated in Alta. Connection to Alta's sewer main is regulated by Cottonwood Improvement District, which also levies connection fees for development of lateral connections. The main sewer line and the Alta Bypass Road Sewer Main consist of 8" ductile iron pipe, with limited sections of 8" HDPE pipe. The line is certified watershed-compliant, with mechanical joints and double-lid, cast-in-place manhole covers. The capacity of the LCC sewer system is 3.2 million gallons per day, and per the agreement described above, Alta owns a 40% allotment of this total capacity. Peak flow at the sewer metering station in the Snowbird Superior lot is generally around 220 gallons per minute, and the average flow is roughly 60 gallons per minute.

The likelihood that the capacity of the current sewer system will be exceeded under normal circumstances is low. Sewage generation rarely exceeds total water use by a significant amount, and given Alta's contractual culinary water use limit of 265,000 gallons per day, combined with Snowbird's contractual limit of 1,000,000 gallons per day (Snowbird uses surplus Salt Lake City Public Utilities water under an agreement similar to the Town of Alta's) the sewer line's capacity of 3.2 million gallons per day is adequate.

NATURAL GAS

Alta's natural gas supply was originally developed by a special service district. The service district was created in 1986, bonds were issued for development of the service line, and the line was installed in the same year. Bonds were paid off in 1997 and gas line was

deeded to a utility company. Today, the Little Cottonwood Canyon gas line is owned and operated by Questar.

Gas flows up Little Cottonwood Canyon in a high pressure, 8-inch line. The main line runs parallel to Highway 210 through Snowbird to a depressurizing station near Snowbird Entry 4, where the line changes to a 6" HDPE pipe which runs up the Alta Bypass Road.

ELECTRICAL

A brief evaluation of the Electrical Power lines feeding the town of Alta, and the adjacent resort was conducted. This power line is owned and maintained by Rocky Mountain Power.

The objectives of this evaluation are as follows:

- Determine the condition of the Electrical Power line service today, does it meet the existing needs of the city and the resort?
- Will the Electrical Power line be adequate to serve the future, at varying levels of development?
- Regarding development, are some areas better suited and in proximity to the existing power line than others?
- General cost points if upgrades are necessary.

The analysis was meant to be investigative but not exhaustive. Existing electrical equipment was reviewed only on drawings provided by the Town of Alta and Rocky Mountain Power, and was not reviewed or documented in person. Interviews have been held with Rocky Mountain Power to determine the size of wire, capacity and running load of the system, and General Condition, as well as documentation of operating practice.

The comments in this report use best practice and engineering judgment based on the available information, but are not meant as a warranty of the utility system, nor as a complete assessment of reliability. Rocky Mountain Power is solely responsible for maintenance of the line and to provide quality, reliable electrical service to the users of their utility.

Existing Condition of Electrical Power Service

Power to the town comes from Brighton Substation, with a power line over the top of Twin Lakes Pass, down near Grizzly Gulch, all on overhead power lines. There is a southern radial branch that runs up into the Albion basin to feed the homes and some of the resort lifts in that area. On the main line, once it reaches the Alta resort Shop, it drops underground and continues west, with spurs north and south feeding all of the structures of the town. The underground portion is a much smaller wire than the main line over the pass. Heading west, it reaches Snowbird, where it is tied to a normally open switch that provides backup power in the event the Twin Lakes Pass line is down. See attached figure 1 for a general routing of the power lines.

The distribution voltage of this line is 24,900 volt, which is double the voltage of what is normally done in the valley. The higher voltage allows the line to carry more power for further distances, without voltage drop. Some of the spurs are rated at 14,400 volt. The main line overhead conductor is 397 AAC, all aluminum, and was recently rebuilt approximately 10 years ago to a 46,000 volt standard. According to Rocky Mountain Power, this rebuild of the main line greatly increased the reliability of the line, by increasing the spacing between conductors, and providing longer insulators, the lines no longer exhibit the faults that occurred prior to 2005.



Figure 1 – Routing of Rocky Mountain Power Circuit - Brighton 21 Feed to Alta

Hence, the statement in the 2005 Alta General Plan, page 10, which indicates that the power is inadequate and not dependable is no longer entirely accurate. It appears that Rocky Mountain Power has invested heavily in the past decade to improve the power to the Town, and fewer incidents have occurred.

Capacity of Power Line

Loading of the transformer at Brighton is approximately 16% at peak conditions. Loading of the existing overhead line is approximately 25% loaded at peak conditions. There is plenty of capacity on the portion over Twin Lakes Pass.

On the underground line, it is sized as 4/0 aluminum, with a much smaller carrying capacity than the newly upgraded overhead power line at the pass. According to Rocky Mountain Power, the 4/0

aluminum is currently at approximately 50% of peak capacity, running approximately 100 amps of the available capacity of 200 amps. But because of the higher 24.9 kV voltage, the remaining capacity of the wire can provide substantial additional loading if the resort expands by one lift, or if additional commercial structures are built. To put this into perspective, a typical large house or small commercial facility would only increase the load on the high voltage side by 1 amp or so. This means that anywhere parallel to the main line is a good location for the city core elements and multiple structures can be built with adequate power on the line.

Redundancy

The redundant feed up Little Cottonwood Canyon is a buried line the entire distance. In the events when Rocky Mountain Power has had to use it, the redundant line can normally carry the entire load of Snowbird and Alta, however, in peak load conditions the portion of line going up Grizzly Gulch and over twin lakes pass experiences too much voltage sag in reverse, and the few structures on the Brighton side must be isolated or without power. It is common for backup plans to not be fully as capable as the primary line throughout the State. Since this is a backup source, and not the primary source of Alta, it is a tolerable solution in the short term. There are no immediate plans by Rocky Mountain Power to upgrade

facilities should also be considered in parallel with the power lines, and potentially water/sewer facilities could be parallel to electric and telecommunications, developing a new utility corridor as the Town Center develops.

The focus of the studies commercial core is in this same area as shown on Figure 2. This area is very near the highest capacity of the

any portion of the power lines, except where storm damage, failures or maintenance requires upgrade.

Because the main line is east/west and all power is tied to this single line, a failure on the underground portion will affect many customers. In large cities, Rocky Mountain Power usually has ability to route power around construction projects or accidental outages, but at Alta, all power flows along the main line so anything downstream of a fault or construction or maintenance issue will be subject to an extended outage. Improvements in redundancy could be made by running a parallel line, higher along the existing highway, to meet up with the existing line down near Goldminers Daughter. Splitting the load into two circuits would increase the capacity of the line and provide a fully redundant path if one were to be disabled. See Figure 2 to see an approximation of how this might be installed.

Development Options

For a single building or two, the entire redundant path shown in figure 2 is not necessary. However, if possible, construction projects should anticipate a future utility corridor, installing extra conduits and routing east and west if possible. If several facilities are developed at once, or if the roadway is rebuilt or realigned, then it would be prudent to develop the new utility corridor, potentially sharing the cost with multiple developments. Telecommunications power line, near the shop at Albion parking lot. Developing a couple of small commercial facilities anywhere between Little cottonwood creek and north of the upper highway is reasonable and cost effective from a power utility standpoint.

Costs

Cost of a utility corridor are generally born by the development or roadway project. In general, trenching and conduit duct bank are

fairly inexpensive and a good investment when the pavement is already being changed. It is possible to install conduit only, and then pull wire into the duct bank later on. Buried utilities should be a minimum of 3 feet down for best protection, any rock outcroppings may require shallower depths, but minimum is 2 feet under any roadway. For budgetary purposes, a multiple conduit duct bank installed for both power and telecommunications would be approximately \$40 per foot, with wire costing approximately \$200 per foot.

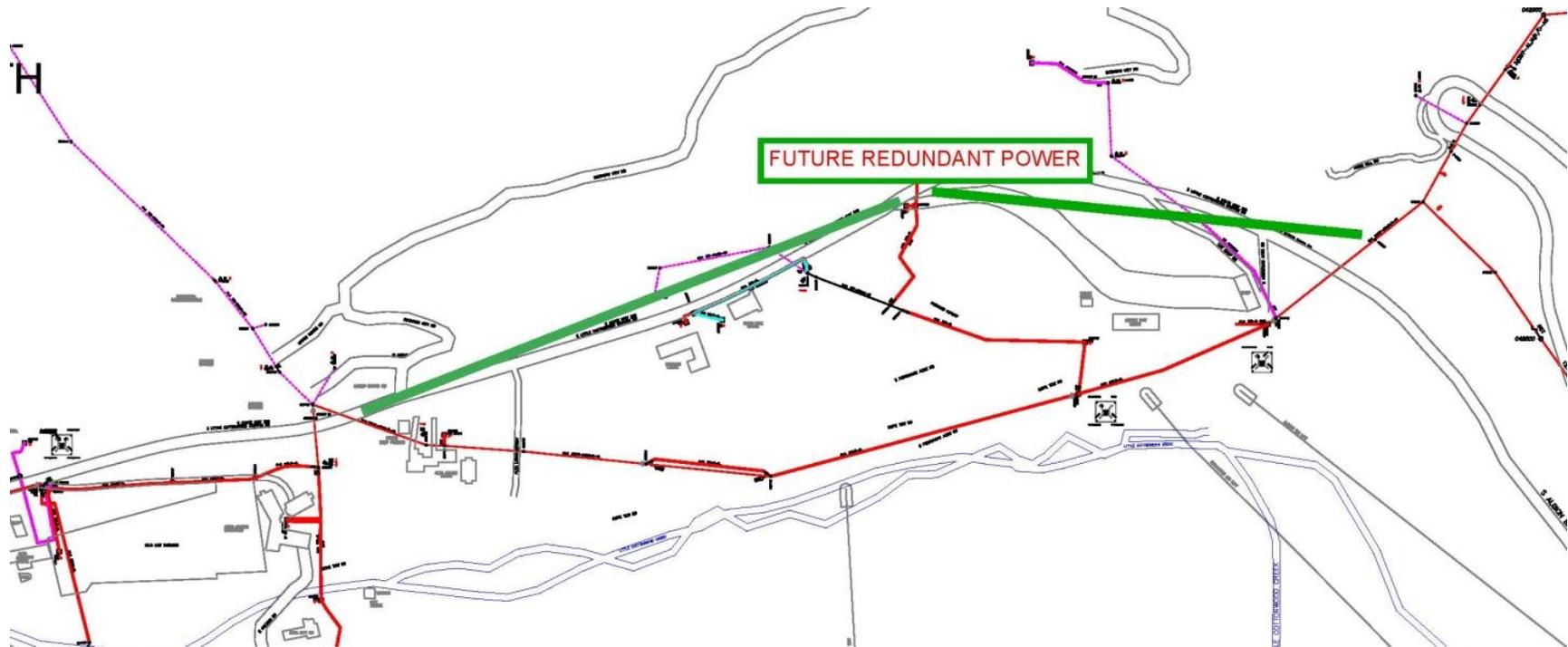


Figure 2 – Rocky Mountain Power Circuit – Future Redundant Power Circuit