Chapter 6: Economics

6.1 Introduction

This chapter examines the economic characteristics in the economic impact analysis area and evaluates how these characteristics would be affected by the project alternatives. The economic analysis considers the economic conditions adjacent to State Route (S.R.) 210 and in Sandy at the 9400 South and Highland Drive park-and-ride lot.

What is the economic impact analysis area?

The economic impact analysis area includes the businesses adjacent to S.R. 210 from the gravel pit just north of Fort Union Boulevard to the town of Alta, including the Alta Bypass Road, and the area around the 9400 South and Highland Drive park-and-ride lot in Sandy.

Economic Impact Analysis Area. The economic impact analysis area includes the businesses adjacent to S.R. 210 from the gravel pit just north of Fort Union Boulevard to the town of Alta, including the Alta Bypass Road, that could be affected by changes in vehicle access, road closures, property impacts, and traffic congestion (see Figure 1.1-1, Transportation Needs Assessment Study Area, in Chapter 1, Purpose and Need). In addition, the economic impact analysis area includes the area around the 9400 South and Highland Drive park-and-ride lot in Sandy. Generally, businesses are located on Wasatch Boulevard adjacent to and near the intersection with Fort Union Boulevard, near the park-and-ride lot at 9400 South and Highland Drive, and in Little Cottonwood Canyon as recreation businesses associated with the Alta and Snowbird ski resorts. The economic conditions in the city of Cottonwood Heights are also provided as context for regional economic activity.

6.2 Regulatory Setting

Currently, no regulations specify how to evaluate economic impacts in an Environmental Impact Statement (EIS). The Federal Highway Administration's Technical Advisory T 6640.8A, *Guidance for Preparing and Processing Environmental and Section 4(f) Documents* (FHWA 1987), recommends that an economic analysis, if applicable, should discuss the following impacts:

- Economic impacts to the regional and/or local economy such as development, taxes and public expenditures, employment opportunities, accessibility, and retail sales
- Impacts to the economic vitality of existing highway-related businesses (for example, gas stations and motels) and the overall local economy
- Impacts of the proposed alternatives on established business districts, and any opportunities to minimize or reduce such impacts by the public and/or private sectors

For the economic evaluation of each action alternative, UDOT considered how the alternative's construction and operation would change both local and regional economic activity. The economic indicators that were evaluated were a change in business and tax revenue from construction-related congestion and delay, a change in business and tax revenue from the operation of the alternative, and how tolling could change

economic conditions. For the avalanche mitigation alternatives, UDOT considered how a reduced number of roadway closures as a result of implementing snow sheds could change economic activity for the businesses in Little Cottonwood Canyon.

6.3 Affected Environment

6.3.1 Regional Economic Conditions

The full length of S.R. 210 is 12.5 miles. It is the primary link for Cottonwood Heights and communities in the north part of the Salt Lake Valley to access Little Cottonwood Canyon. S.R. 210 provides a direct connection to Little Cottonwood Canyon from Interstate 215 (I-215). S.R. 210 is also an important commuter road for residents of the southeast valley to access I-215 and employment centers throughout the northern Wasatch Front.

As Wasatch Boulevard, S.R. 210 is part of a major north-south corridor at the base of the Wasatch Mountains providing primary access to both Big and Little Cottonwood Canyons. Travelers into Little Cottonwood Canyon on S.R. 210 are primarily recreation users. Residential property owners and resort employees in Little Cottonwood Canyon also use S.R. 210 for commuting, and businesses in the canyon use the road for trips for goods and services.

Many people choose to live in the Salt Lake City metropolitan area because of the easily accessible and abundant outdoor, year-round recreation opportunities (Utah State University 2015). Little Cottonwood Canyon also draws tourists from outside the region because of its easy access from the Salt Lake City International Airport, which is less than 30 miles away.

Little Cottonwood Canyon is an important source of drinking water and supports the broader economic environment in Salt Lake City and other cities in Salt Lake County. The purpose of the watershed area is to protect and promote health and promote conditions that contribute to preserving and protecting drinking water quality. Drinking water from Little Cottonwood Canyon is used by the tourism industry along with other businesses and residential properties in Salt Lake County.

S.R. 210 is the only road access into Little Cottonwood Canyon. It is a State Scenic Byway that is recognized for its views of dramatic mountain peaks and steep canyon walls. Federal Wilderness Areas are located on both sides of the steep canyon. The canyon also has a small number of residents. Recreation activities in Little Cottonwood Canyon include, but are not limited to, sightseeing, rock climbing, cycling, camping, picnicking, hiking, skiing, ice climbing, and snowshoeing. The canyon is home to two resorts: Alta and Snowbird.

The substantial recreation opportunities in Little Cottonwood Canyon and its proximity to a large metropolitan area generate about 1.2 million vehicle trips into the canyon per year, which carry about 2.1 million visitors. Visitation into the canyon is equally distributed between winter and summer uses, with winter use more focused on peak ski weekends and holidays, and summer use occurring throughout the season (Mountain Accord 2015).

Given that the populations of Salt Lake and Utah Counties are expected to grow by 36% and 108%, respectively, through 2050, the number of travelers into Little Cottonwood Canyon will also increase. Because of the vast number of recreation opportunities in the central Wasatch Range, in addition to other recreation assets throughout the state, the Outdoor Industry Association estimates that the Utah travel, tourism, and recreation industry generated about $12.3 billion in annual consumer spending, 110,000 jobs, $3.9 billion in wages and salaries, and $737 million in state and local tax revenue in 2017 (OIA 2017).

In addition, the leisure and hospitality sector of Utah's economy grew by 4.1% in 2019, making it the sector of the state's economy with the second-highest growth. According to the 2020 *Economic Report to the Governor*, travel-related sales tax revenues in 2019 were trending from 5% to 9% above 2018 revenues (Utah Economic Council 2020).

What is Senate Bill 277?

The 2018 Senate Bill 277 included funding for transportation improvement projects that "have a significant economic development impact associated with recreation and tourism within the state."

Reliable and convenient access to Utah's recreation areas supports the tourism industry and the leisure and hospitality sector of the state's economy. The 2018 Senate Bill 277 is indicative of the State of Utah's interest in supporting growth in this sector by reducing congestion on roads and improving access to and the user experience in recreation and tourist areas. The issue of traffic congestion in Big and Little Cottonwood Canyons has implications beyond inconvenience to travelers. Though quantitative data are not available, ski industry experts report that these reliability issues have substantial effects on skier days and potential revenue. In the context of a 120-day ski season, closures for avalanche control and congestion delays can have a substantial effect on the ski areas, particularly if closures occur on weekends or holidays (Mountain Accord 2014).

6.3.2 Local Economic Conditions

6.3.2.1 S.R. 210 – Wasatch Boulevard

6.3.2.1.1 Cottonwood Heights

The economic impact analysis area along Wasatch Boulevard is within the Cottonwood Heights city boundary. Cottonwood Heights is mostly built out, so the population and employment in this city are fairly constant. The total population in Cottonwood Heights in 2017 was about 34,200 (U.S. Census Bureau 2017). The majority of Cottonwood Heights residents are not employed in the city. Of the 25,300 jobs available in Cottonwood Heights, about 4,200 were filled by those who live in Cottonwood Heights (Cottonwood Heights City, no date). The industry types that employ the greatest number of people in Cottonwood Heights are the finance and insurance sector (14%), retail (13%), and food services (13%) (Cottonwood Heights City, no date). Because the majority of Cottonwood Heights residents work outside the city, Wasatch Boulevard is an important economic link for residents to access employment in other parts of Salt Lake County. The average commute time for residents is 23 minutes, which indicates that many residents commute to work outside the city (U.S. Census Bureau 2017).

Cottonwood Heights, "The City Between the Canyons," is situated as the gateway to the Cottonwood Canyons, offering recreation opportunities as well as potential retail sales for recreationists on their way to or from the mountains. The city's proximity to recreation opportunities as well as a major business center at I-215 and 6200 South has resulted in new hotels, recreation retail services, and restaurants moving into the city.

Property tax is the largest source of revenue for Cottonwood Heights City ($7.4 million), representing 33.8% of total government revenue. Sales tax is the second-largest source of revenue for the City ($6.1 million), representing 30% of total government revenue. Retail sales in Cottonwood Heights are assessed a tax at the rate of 7.1% (Cottonwood Heights City 2018).

6.3.2.1.2 Businesses Adjacent to Wasatch Boulevard

The main private businesses in the economic impact analysis area are destination businesses and convenience businesses. This EIS makes this distinction because customers use these types of businesses differently and because most available studies regarding the economic effects of changes in access distinguish between these business types.

- **Destination businesses** are businesses that customers plan to visit in advance of their trip. Examples include trucking companies, vehicle repair shops, specialty stores, doctor's or dentist's offices (and most offices), major retailers, insurance agencies, and sit-down restaurants.
- **Convenience businesses** are those that customers visit more on impulse or when passing by. Examples include convenience stores, gas stations, and fast-food restaurants. Convenience businesses are also referred to as "drive-by" businesses.

Within the economic impact analysis area, the only five businesses adjacent to Wasatch Boulevard are at the Fort Union Boulevard intersection: one convenience business (7-Eleven) and four destination businesses (Porcupine Pub & Grille, Alpha Coffee, Saola Restaurant and Lounge, and Lift House, a recreation-based business) (Figure 6.3-1). Although these businesses are popular with local residents, they rely heavily on the recreational users of Big and Little Cottonwood Canyons.

A newer development (Canyon Centre) is along Wasatch Boulevard immediately south of Fort Union Boulevard on the west side of Wasatch Boulevard (Figure 6.3-1). When fully completed, the Canyon Centre development will include a three-story parking structure with public parking, a 65,000-square-foot office building, a 125-unit hotel, a 17-lot single-family development, a multifamily housing development, multiple restaurants, an internal park, multiple plazas, and room for retail space. The businesses in this development are considered destination businesses.

6.3.2.2 S.R. 210 – North Little Cottonwood Road to Alta

6.3.2.2.1 Little Cottonwood Canyon Recreational Economics

Little Cottonwood Canyon is an important recreation area for local and state residents and out-of-state tourists during all seasons of the year. The substantial recreation opportunities in Little Cottonwood Canyon and its proximity to a large metropolitan area result in about 2.1 million people visiting the canyon per year. Winter activities are focused primarily at the Alta and Snowbird ski resorts, although backcountry skiing is increasing in popularity. Skiing in the canyons provides the primary economic support for hotels and restaurants, not only in Little Cottonwood Canyon but in the Salt Lake Valley. The ski industry is an important part of the Utah economy, contributing $1.322 billion during the 2016–2017 ski season. Out-of-state per-skier expenditures were $309 per person per day, with Utah residents spending $107 per person per day (Ski Utah 2018).

From 1999 to 2018, S.R. 210 was closed an average of 56 hours per winter season for avalanche control. These closures cause considerable congestion at the entrance to Little Cottonwood Canyon. This congestion can deter skiers from visiting the Snowbird or Alta resorts and could cause some skiers to use alternate ski areas on the day of the closure. The closures have a negative impact on recreational users and the businesses in Little Cottonwood Canyon by reducing recreation access and business revenue.

Figure 6.3-1. Businesses on Wasatch Boulevard in the Economic Impact Analysis Area

Summer visitation in Little Cottonwood Canyon is about equal to winter visitation. During the summer, people hike, climb (also a winter activity), bike, and sightsee. Both ski resorts host a variety of summer activities including mountain biking, sightseeing, lift and tram rides, and weekend events such as Snowbird's Oktoberfest and Alta's Wildflower Festival. All of the summer and winter recreation activities support a host of businesses in the Salt Lake Valley including hotels, recreation equipment, information services, and food.

Figure 6.3-2 shows the businesses in Little Cottonwood Canyon that support recreational users. These businesses are considered destination businesses. One nonrecreational business is Perpetual Storage, which provides secured storage of critical data and digital records within the granite walls of the canyon. Both the Alta and Snowbird ski resorts have numerous businesses within their facilities. In addition, outfitter and guide businesses operate on National Forest System lands in Little Cottonwood Canyon under authorization from the U.S. Department of Agriculture Forest Service.

6.3.2.2.2 Town of Alta

The town of Alta is a small community near the terminus of S.R. 210 at the top of Little Cottonwood Canyon. The town has a total population of about 350. About 20% of residents work from home and 30% walk to work supporting the local recreation or government services industries (U.S. Census Bureau 2017). Within the town limits, five hotels and a restaurant support recreational users, primarily those who visit the town during the winter. The two primary roads through the town of Alta are S.R. 210 and the Alta Bypass Road. The average commute time for residents is 12 minutes (U.S. Census Bureau 2017).

Most revenue for the Town of Alta is generated by property tax ($337,000, or 19% of revenue) and general sales tax ($1.2 million, or 64% of revenue). Most of the general sales tax comes from the ski resort industry (Town of Alta 2017).

6.3.2.3 Mobility Hubs

6.3.2.3.1 Gravel Pit

The gravel pit is an existing aggregate mine of about 200 acres. The site provides asphalt, sand, and fill for construction projects along the Wasatch Front. The site is estimated to continue with mining operations for 5 to 20 years. Cottonwood Heights City has begun planning efforts to redevelop the site as a commercial and residential development when the mine is no longer in operation. The plans include office space, residential, hotels, restaurants, and retail. Located adjacent to the site is the Wasatch Ski and Snowboard Rental business.

What is a mobility hub?

A mobility hub is a location where users can transfer from their personal vehicle to a bus.

What is the gravel pit?

The gravel pit is an existing aggregate (gravel) mine located on the east side of Wasatch Boulevard between 6200 South and Fort Union Boulevard.

6.3.2.3.2 9400 South and Highland Drive

The southeast corner of the intersection of 9400 South and Highland Drive is an existing Utah Transit Authority (UTA) bus park-and-ride lot. As shown in Figure 6.3-3, there are numerous retail businesses in the vicinity of the park-and-ride lot including "big-box" retail outlets, a pharmacy, and restaurants.

Figure 6.3-2. Businesses in Little Cottonwood Canyon in the Economic Impact Analysis Area

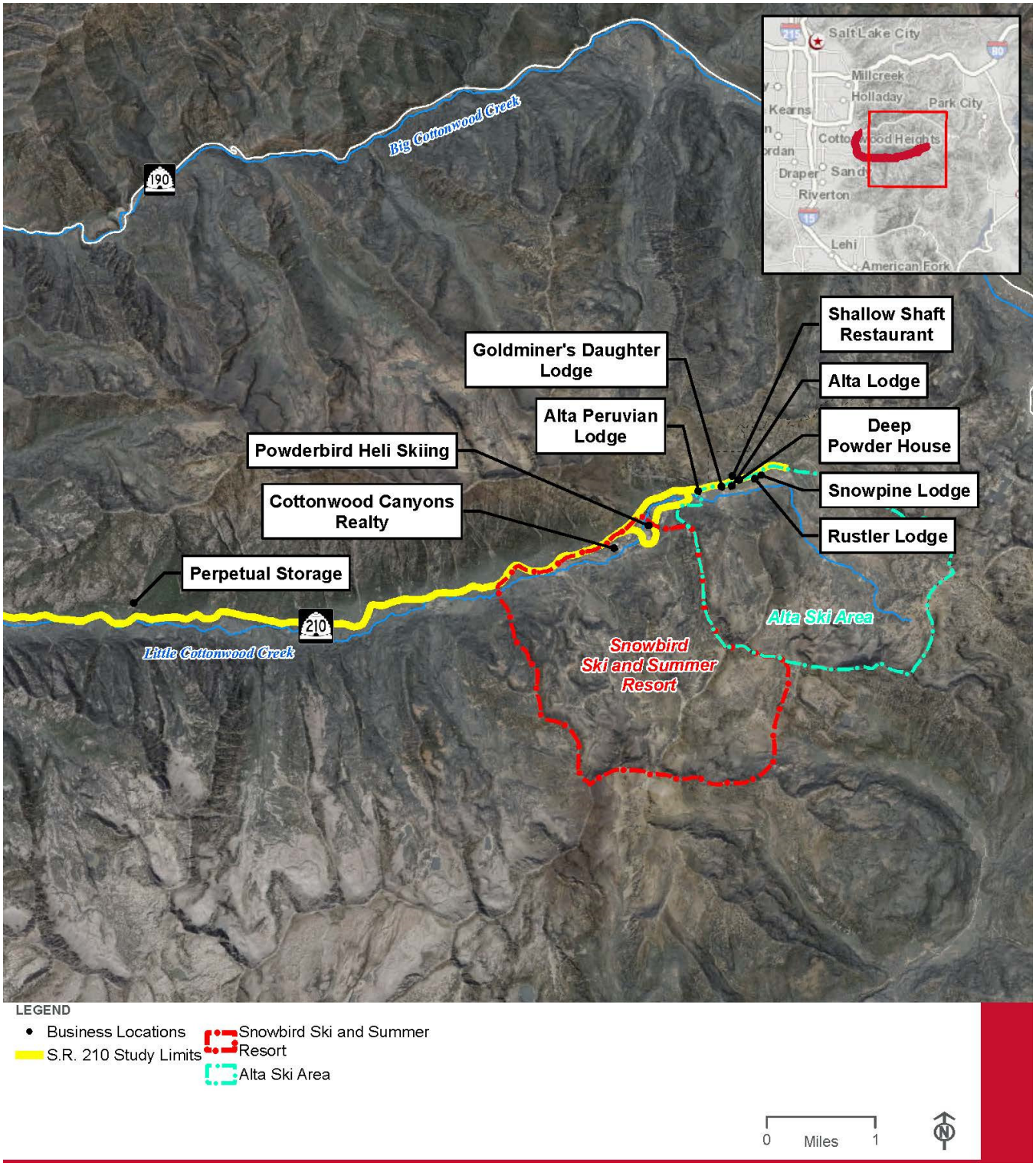
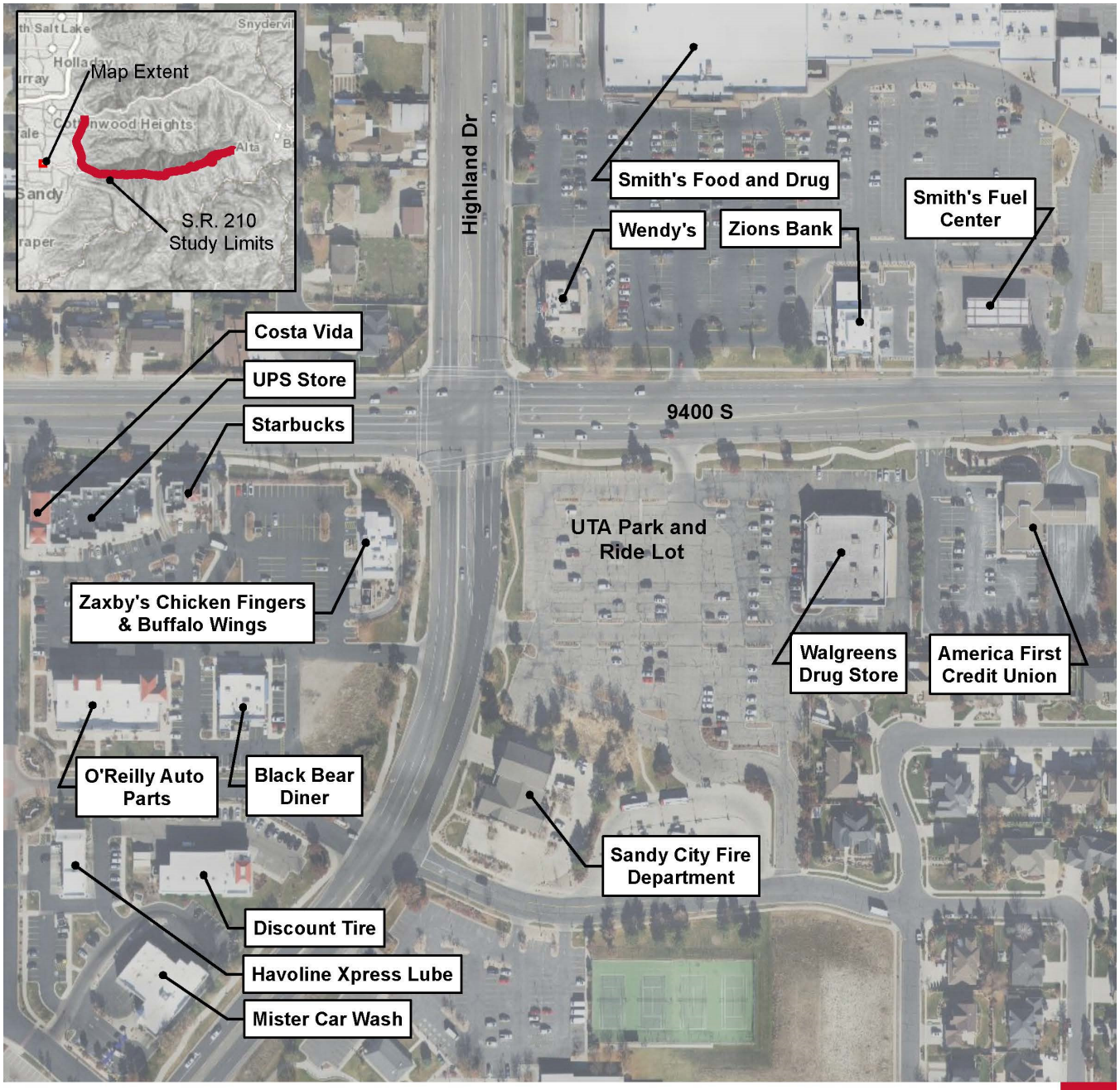


Figure 6.3-3. Businesses Adjacent to the UTA 9400 South and Highland Drive Park-and-ride Lot in the Economic Impact Analysis Area



6.4 Economic Consequences and Mitigation Measures

6.4.1 No-Action Alternative

This section describes the economic impacts of the No-Action Alternative in the Wasatch Boulevard segment of S.R. 210, in the segment of S.R. 210 from North Little Cottonwood Road to the town of Alta, at the gravel pit, and at the park-and-ride lot at 9400 South and Highland Drive.

6.4.1.1 S.R. 210 – Wasatch Boulevard

With the No-Action Alternative, the proposed improvements to S.R. 210 would not be implemented, and the traffic congestion on Wasatch Boulevard, avalanche closures, and trailhead parking conflicts would become worse. Travel demand modeling projects that Wasatch Boulevard would operate at a level of service (LOS) of LOS E and F in 2050.

The increased congestion on Wasatch Boulevard would most likely affect convenience businesses at the intersection of Fort Union Boulevard and Wasatch Boulevard where customers visit more on impulse or when passing by. During the peak travel periods of the morning and evening commutes, some travelers might avoid this area and take other routes with less congestion.

Because of the difficulty of entering or exiting a business, this congestion could result in fewer people stopping and accessing the businesses. These travelers would likely visit similar businesses along their alternate route. Destination businesses such as the Lift House, Porcupine Bar & Grille, and the Canyon Centre development are less likely to be affected by congestion because travelers plan to visit these businesses.

Overall, the increase in congestion in 2050 would not be a substantial adverse impact to the businesses along Wasatch Boulevard in the economic impact analysis area.

What is a travel demand model?

A travel demand model is a computer model that predicts the number of transportation trips (travel demand) in an area at a given time.

What is level of service?

Level of service is a measure of the operating conditions on a road or at an intersection. Level of service is represented by a letter “grade” ranging from A (free-flowing traffic and little delay) to F (extremely congested, stop-and-go traffic and excessive delay).

6.4.1.2 S.R. 210 – North Little Cottonwood Road to Alta

With the No-Action Alternative, the snow sheds and trailhead parking areas would not be built. The main impact with the No-Action Alternative would be an increase in avalanche closures as traffic increases in the canyon. The avalanche risk increases with more vehicles because of the greater potential for an avalanche to strike a vehicle, which results in more avalanche-mitigation efforts. By 2050, the hours of avalanche closures would increase from the current average of 56 hours to up to 108 hours over the typical 120-day ski season. For the EIS process, the Utah Department of Transportation (UDOT) conducted an economic evaluation of projected avalanche closures in 2050. UDOT estimated that, with the No-Action Alternative, given between 56 and 108 hours of closures, spending at the Alta and Snowbird ski resorts would be reduced by between about $31 million and $62 million per season in 2050 (UDOT 2019).

UDOT does not expect the increase in parking conflicts at trailheads to have a substantial adverse economic impact on the businesses in Little Cottonwood Canyon since most businesses are near the ski resorts, which have parking to support summer use.

With the No-Action Alternative, the action alternatives would not be implemented; therefore, there would be no changes from the action alternatives to the Little Cottonwood Canyon watershed as a primary drinking water source and no changes to the regional economic conditions supported by the drinking water. See Chapter 12, Water Resources, for more information regarding the expected impacts to the Little Cottonwood Canyon watershed including Little Cottonwood Creek as a drinking water source.

6.4.1.3 Mobility Hubs

6.4.1.3.1 Gravel Pit

With the No-Action Alternative, Cottonwood Heights City plans to allow development of the gravel pit. The current plans include a mix of commercial and residential uses. The development would provide a substantial economic benefit to Cottonwood Heights as well as to the regional economy in the form of local and regional taxes. In addition, the development is likely to include hotels to increase the capacity for canyon visitors. Because the mobility hub at this location would not be constructed with the No-Action Alternative, there would not be any economic benefit to the surrounding businesses in Cottonwood Heights resulting from the construction and operation of the mobility hub. The amount of tax revenue (property tax and/or sales tax) with the No-Action Alternative would depend on the type of development approved and what, if any, tax incentives are offered to the developers. Because these details regarding these developments are not known and not approved, the No-Action Alternative could potentially cause an increase or a decrease in tax revenue (property tax and/or sales tax) compared to the gravel pit mobility hub developments proposed with the action alternatives.

6.4.1.3.2 9400 South and Highland Drive

With the No-Action Alternative, the UTA park-and-ride lot would continue to be used a bus park-and-ride lot. There would be no change to the local or regional economy.

6.4.2 Enhanced Bus Service Alternative

This section describes the economic impacts of the Enhanced Bus Service Alternative, which includes improvements to the Wasatch Boulevard segment of S.R. 210, two mobility hubs, avalanche mitigation alternatives, trailhead parking alternatives, and the No Winter Parking Alternative.

The 2018 Senate Bill 277 is indicative of the State of Utah's interest in supporting growth in the leisure and hospitality sector of the state's economy by reducing congestion on roads and improving access to and the user experience in recreation and tourist areas. The Enhanced Bus Service Alternative includes improvements to Wasatch Boulevard, enhancements to bus service, and construction of snow sheds to reduce avalanche closures on S.R. 210. These elements would provide a better recreation experience and support numerous businesses in the Salt Lake Valley (hotels, restaurants, and recreation equipment sales and rentals) as well as the businesses in Little Cottonwood Canyon. The reduced congestion and reduced number of avalanche closure hours and days would be important for Utah's support of the leisure and

hospitality sector of the state's economy. More details regarding the economic impacts of this alternative are provided in the following sections.

6.4.2.1 S.R. 210 – Wasatch Boulevard

This section describes the impacts to ecosystem resources from the Imbalanced-lane Alternative and the Five-lane Alternative, which would both widen the Wasatch Boulevard segment of S.R. 210.

6.4.2.1.1 Imbalanced-lane Alternative

Effects of Construction

During construction, the economic impacts of the Imbalanced-lane Alternative would be attributable to (1) the increase in economic activity associated with project-related expenditures and (2) any decrease in commerce and employment associated with the temporary decrease in commerce and employment resulting from disruption of access. No businesses would be relocated as a result of the Imbalanced-lane Alternative.

The congestion associated with constructing the Imbalanced-lane Alternative could increase travel delays and reduce worker productivity. This impact would affect both commuters and businesses that rely on Wasatch Boulevard. Most of the impacts would be felt by the 7-Eleven and the Canyon Centre development. Congestion-related impacts from construction might be experienced primarily by convenience businesses such as the 7-Eleven. Temporary impacts could occur because of short-term traffic congestion during construction.

In contrast, a customer who wants to go to a specific business (a destination business such as those in the Canyon Centre development) in a construction area would be less likely to avoid the area and select another business because of temporary construction-related congestion. Patrons of these destination businesses would be more likely to travel during off-peak periods to avoid construction delays.

Several studies conducted in Texas show that the actual impacts experienced by businesses can vary as much as the nature of the businesses. Some generalities can be drawn from these studies, including that travel-related businesses such as restaurants and gas stations might have slightly reduced revenues and that sales rebounded after the construction project was completed. Additionally, the studies found that opinions of the economic impacts were more pessimistic than the actual, measured impacts (Buffington and Wildenthal 1997a, 1997b).

The construction around the intersection of Fort Union Boulevard and Wasatch Boulevard would be short-term over a 3-to-4-month period, and business revenues would return to normal after construction.

Business Impacts

Based on the level of design currently developed for the Imbalanced-lane Alternative, there would be minor strip takes of the 7-Eleven and Canyon Centre development properties that border Wasatch Boulevard. The strip takes would not affect the viability of any businesses and therefore would not reduce local government property tax or sales tax revenue.

What is a strip take?

A strip take is the acquisition of a strip of land on the edge of a parcel.

Effects of Operation

With the Imbalanced-lane Alternative, congestion levels would improve compared to the No-Action Alternative. The few business along Wasatch Boulevard at the intersection of Fort Union Boulevard could have increased business as a result of the decreased roadway congestion, which could result in slightly more tax revenue for Cottonwood Heights City. Travelers might be more willing to stop at these businesses if there is less congestion.

Overall, the Imbalanced-lane Alternative would likely provide minor economic benefits to the businesses as a result of reduced congestion.

Impacts to Property Values

Many studies have attempted to quantify the impact of transportation facilities on surrounding properties. Since property values in any area depend on many different variables (including location, adjacent land uses, community services, land use controls, topography, drainage, natural amenities, regional growth or decline, interest rates, and local supply and demand), it is difficult to isolate and identify the effect of one transportation facility on property values. In general, an improved transportation network increases all property values in an area. However, as suggested by previous studies, residential properties adjacent to higher-volume roads such as arterials or freeways could have lower property values or have a lower rate of appreciation than similar properties located farther from higher-volume roads, if all other variables are similar.

Because S.R. 210 is an existing arterial road, if property values decline based on proximity to the road, this effect is already present for residential properties adjacent to S.R. 210 given the existing high traffic volumes on the road. It is possible that any existing adverse effects on property values might increase with the S.R. 210 Wasatch Boulevard alternatives due to an increase in noise and a wider roadway facility that could decrease the distance between S.R. 210 and the front-row residential properties.

6.4.2.1.2 Five-lane Alternative

The economic impacts from the Five-lane Alternative would be the same as those from the Imbalanced-lane Alternative.

6.4.2.2 S.R. 210 – North Little Cottonwood Road to Alta

6.4.2.2.1 Effects of Construction

With the Enhanced Bus Service Alternative, there would be no improvements to S.R. 210 from North Little Cottonwood Road to Alta; therefore, there would be no economic impacts to businesses and residences in Little Cottonwood Canyon from construction activities. See Section 6.4.2.4, Avalanche Mitigation Alternatives, for potential economic impacts related to construction of the snow sheds and Section 6.4.2.5, Trailhead Parking Alternatives, for impacts related to trailhead parking.

6.4.2.2.2 Business Impacts

There would be no business acquisitions from the Enhanced Bus Service Alternative from North Little Cottonwood Road to Alta.

6.4.2.2.3 Effects of Operation

General Economic Impacts

The Enhanced Bus Service Alternative would provide improved bus service to the ski resorts and would reduce the number of vehicles on S.R. 210 in Little Cottonwood Canyon. The enhanced bus service would provide an economic benefit to the ski resorts by allowing more users to access the resorts than what can be provided by the current parking lot capacities and existing bus service. As shown in Table 6.4-1, the skier capacity with the Enhanced Bus Service Alternative would increase by about 2,283 skiers compared to the existing maximum skier capacity provided by the current infrastructure and buses. Since resort employees use the transportation system and are not skiing, they were subtracted from the skier capacity. For the analysis, only bus trips from 7 AM to 1 PM were included under the assumption that few skiers would access the resorts after 1 PM.

Table 6.4-1. Change is Skier Capacity with the Enhanced Bus Service Alternative

Mode	Skier Capacity with Existing Infrastructure	Skier Capacity with Enhanced Bus Service
Resort parking	7,595[a]	7,595[a]
Roadside parking	1,953[b]	1,454[c]
Buses	1,512[d]	4,536[e]
Reduction for ski resort employees[f]	1,062	1,304
Total skiers	**9,998**	**12,281**

[a] Assumes resort parking of 3,500 parking spaces at average vehicle occupancy of 2.17.
[b] Assumes roadside parking of 900 parking spaces at average vehicle occupancy of 2.17.
[c] Assumes elimination of winter roadside parking of 230 spaces as part of alternative.
[d] Assumes maximum capacity of current UTA bus service of 36 trips from 7 AM to 1 PM with occupancy of 42 people per bus.
[e] Assumes maximum capacity of Enhanced Bus Service Alternative with 108 trips from 7 AM to 1 PM with occupancy of 42 people per bus.
[f] Assumes 9.6% reduction in the number of resort employees who use the transportation system. The employees who use the transportation system are subtracted from the total skiers.

The average in-state and out-of-state per-skier expenditures were estimated to be $293 per person per day (University of Utah, Kem C. Gardner Policy Institute 2018). The estimate assumed that the resorts would operate at maximum capacity only on weekends and holidays (2 weeks for Christmas through January 1, Martin Luther King Jr. Day, Presidents' Day, and 1 week for Easter), or about 49 days total.

As shown in Table 6.4-2, the net economic benefit to Utah of the Enhanced Bus Service Alternative over an entire ski season is predicted to be about $34.1 million (or 11.1%) compared to the No-Action Alternative. The table also includes any loss of revenue from those skiers who are projected to no longer visit the ski resorts in Little Cottonwood Canyon because of a toll (for more information, see the section titled *Tolling Impacts* below).

Table 6.4-2. Change in Visitor Spending with the Enhanced Bus Service Alternative

Alternative	Spending per Day in 2050	Annual Spending in 2050
No-Action Alternative	$6.3 million	$306.7 million
Enhanced Bus Service Alternative	$7.0 million	$340.8 million
Change with Enhanced Bus Service Alternative	+$0.7 million (11.1% increase)	+$34.1 million (11.1% increase)

Source: HDR 2020
Table assumes that about 550 vehicles per day, or about 1,200 skiers, would not visit the ski resorts in Little Cottonwood Canyon because of a toll.

To incentivize use of the enhanced bus service, a toll or a ban on single-occupant vehicles would need to be implemented.

The Enhanced Bus Service Alternative, including its supporting elements (trailhead parking and avalanche mitigation), would have *de minimis* impacts to Little Cottonwood Creek and the overall watershed as a primary drinking water source, so this alternative would not change the regional economic conditions supported by the drinking water. See Chapter 12, Water Resources, for more information regarding the expected impacts to the Little Cottonwood Canyon watershed including Little Cottonwood Creek as a drinking water source.

Tolling Impacts

To determine the impacts from tolling and to better understand how the road users value travel time, Lighthouse Research and Development, Inc. (Lighthouse) surveyed local users. Specifically, this survey collected information regarding visitors' travel choices and recreation activities during both winter and nonwinter periods of visitation to the resorts. The telephone survey began on June 26, 2019, and concluded on August 5, 2019, after receiving 1,057 valid responses. The survey focused on collecting information from the general population in the four counties surrounding Big and Little Cottonwood Canyons: Davis, Salt Lake, Summit, and Utah. The results of the survey were used to help UDOT determine the impact from various toll options.

For tolling to be effective in reducing congestion on S.R. 210 and to eliminate about 30% of vehicle traffic (and move the passengers to the bus service), the toll would need to be between $20 and $30. Based on the survey results at that toll rate, about 550 vehicles or about 1,200 skiers (assuming an average vehicle occupancy of 2.17) per day are projected to no longer visit the ski resorts in Little Cottonwood Canyon, instead going to other ski resorts near the Wasatch Front (the analysis assumes that Big Cottonwood Canyon would also be tolled). The skiers would still go skiing, so the regional or state economy would not likely lose business or tax revenue. However, the ski resorts in Little Cottonwood Canyon would lose some revenue. With the added skier capacity of about 2,283 skiers per day provided by the Enhanced Bus Service Alternative versus the potential loss of 1,200 skiers per day from a toll, there would still be an overall net economic benefit during busy ski days. If the toll is in place even on off-peak days with a similar toll rate to $20 to $30, this alternative could cause the resorts to lose revenue because fewer skiers would visit the resorts.

Impacts of a Ban on Single-occupant Vehicles

Another option besides tolling would be to eliminate single-occupant vehicles from Little Cottonwood Canyon during peak travel periods. Single-occupant vehicles are about 30% of vehicle traffic in the canyon. Single occupants might be more willing to take transit and not go to another resort since the inconvenience factor would be less than traveling with a family.

6.4.2.3 Mobility Hubs Alternative

The Enhanced Bus Service Alternative includes two mobility hubs: a mobility hub at the gravel pit and a mobility hub at the park-and-ride lot at 9400 South and Highland Drive.

6.4.2.3.1 Gravel Pit

Effects of Construction

Constructing a mobility hub at the gravel pit location would not cause any economic impacts. Wasatch Ski and Snowboard Rental is located adjacent to the gravel pit, and construction activities would be similar to the current aggregate mining operations. Access would be maintained to Wasatch Ski and Snowboard Rental during construction, so only temporary, limited impacts would occur.

Business Impacts

An existing aggregate mine at the gravel pit is planned for a future commercial and residential development. If the mobility hub is constructed prior to the commercial and residential development and while the aggregate mine is in operation, this construction might impact the operation and could be an economic impact. The aggregate mine is one of the major suppliers of gravel and asphalt in the Salt Lake Valley. The current owner of the mine expects to continue operations for another 5 to 20 years. Since portions of the mine are no longer in use, it might be possible to avoid impacting the mine operations with the mobility hub.

Effects of Operations

Cottonwood Heights City's plans at the gravel pit include a mix of commercial and residential uses. The development would provide a substantial economic benefit to Cottonwood Heights as well as to the regional economy in the form of local and regional taxes. In addition, the development is likely to include hotels to increase the capacity for out-of-state tourists to ski in the winter.

The mobility hub at the gravel pit would provide about 1,500 parking spaces, which could be shared with the development. The mobility hub users would provide an economic benefit to the proposed commercial development at the gravel pit and to Cottonwood Heights City since the users might stop at restaurants and shops either before or after skiing. The amount of tax revenue (property tax and/or sales tax) with the gravel pit mobility hub would depend on the type of development approved and what, if any, tax incentives are offered to the developers. Because these details regarding these developments are not known and not approved, the gravel pit mobility hub could potentially cause an increase or a decrease in tax revenue (property tax and/or sales tax) compared to the developments at the gravel pit with the No-Action Alternative.

6.4.2.3.2 9400 South and Highland Drive

Effects of Construction

Most of the construction activity associated with the 9400 South and Highland Drive mobility hub would be confined to the existing 4-acre park-and-ride lot. This construction would not alter traffic flow into nearby businesses except for the Walgreens at the northeast corner of the park-and-ride lot. The construction activity could deter some patrons from visiting the Walgreens. Walgreens is considered a destination business, so patrons are less likely to avoid the area and select another business because of construction. UDOT would work with the business during construction to minimize impacts and provide adequate access to the business.

Business Impacts

The 9400 South and Highland Drive mobility hub would not require any business acquisitions.

Effects of Operation

The mobility hub at 9400 South and Highland Drive would provide about 1,000 parking spaces. The mobility hub's users would provide an additional economic benefit to the businesses in Sandy near the mobility hub since the users might stop at restaurants and shops before or after skiing.

6.4.2.4 Avalanche Mitigation Alternatives

The Enhanced Bus Service Alternative includes two alternatives for avalanche mitigation: the Snow Sheds with Berms Alternative and the Show Sheds with Realigned Road Alternative.

6.4.2.4.1 Snow Sheds with Berms Alternative

Effects of Construction

Construction of the snow sheds would occur during the summer and would take about two summer construction seasons. During construction, S.R. 210 in Little Cottonwood Canyon could have periodic delays at the snow shed construction sites, which could reduce visitation for summer activities at the Snowbird and Alta ski resorts. Summer is the off season for the resorts, but there are still many popular activities including hiking, mountain biking, tram and ski lift rides, festivals, and concerts. Although construction delays would be temporary, the closures could reduce the resorts' revenues during the summer since they could deter people from visiting the resorts.

Business Impacts

The Snow Sheds with Berms Alternative would not require any business acquisitions.

Effects of Operation

With the implementation of the snow sheds, the number of road closures due to avalanches and avalanche mitigation would be reduced by between 6 and 15 days per year in 2050. This reduction in the number of road closures would provide an economic benefit to the Alta and Snowbird ski resorts by allowing more

visitors to access the resorts. The reduction would result in more lift passes, ski lessons, equipment rentals and purchases, food purchases, and other resort-related spending. In 2050, the economic benefit compared to the No-Action Alternative is estimated to be between $19 million and $45 million per ski season depending on the number of road closures (UDOT 2019). Overall, the snow sheds would provide an economic benefit to the ski resorts.

6.4.2.4.2 Snow Sheds with Realigned Road Alternative

The economic impacts from the Snow Sheds with Realigned Road Alternative would be the same as those from the Snow Sheds with Berms Alternative.

6.4.2.5 Trailhead Parking Alternatives

The Enhanced Bus Service Alternative includes three alternatives to address trailhead parking:

- Trailhead Improvements and No S.R. 210 Roadside Parking within ¼ Mile of Trailheads Alternative
- Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative
- No Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative

6.4.2.5.1 Trailhead Improvements and No S.R. 210 Roadside Parking within ¼ Mile of Trailheads Alternative

Trailhead improvements would be constructed during the summer and within one summer season. Most of the construction would occur within existing parking areas, and this limitation would minimize delays for traffic using S.R. 210. However, traffic could be temporarily rerouted near the trailhead access points, and this rerouting could cause some delays for those wishing to visit the ski resorts for summer activities. The delays to traffic would be minor and are not expected to substantially reduce summer revenue at the ski resorts.

6.4.2.5.2 Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative

The overall economic impacts from this alternative would be the same as from the Trailhead Improvements and No Roadside Parking within ¼ Mile of Trailheads Alternative.

As described in Section 4.4.2.5.2, Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative, in Chapter 4, Community and Property Impacts, there would be recreational impacts to climbers who use roadside parking and pullouts on the lower portion of Little Cottonwood Canyon to access climbing areas. About 15 roadside pullouts would be eliminated. Improved trailhead parking at the Grit Mill, Gate Buttress, Bridge, Lisa Falls, and White Pine Trailheads could be used to access some areas. These reductions in parking and access to climbing areas are not anticipated to reduce sales of climbing equipment or the total number of climbing-related trips, since climbers could use alternative access through the existing trail network to reach the affected climbing areas in Little Cottonwood Canyon. In addition, hundreds of climbing routes in Little Cottonwood Canyon and other surrounding areas

would still be open and accessible for climbing, and access to these routes would be unaffected by the changes to roadside parking with this alternative.

6.4.2.5.3 No Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative

The overall economic impacts from this alternative would be the same as from the Trailhead Improvements and No Roadside Parking within ¼ Mile of Trailheads Alternative.

The economic impacts to climbers from this alternative would be the same as from the Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative.

6.4.2.6 No Winter Parking Alternative

By eliminating winter roadside parking in the canyon, about 230 parking spaces on S.R. 210 would be removed adjacent to the ski resorts. UDOT does not expect the loss of this parking to have an economic impact on the ski resorts because the Enhanced Bus Service Alternative would provide substantial parking in the Salt Lake Valley and an efficient mode of transportation to replace the loss of 230 parking spaces.

6.4.3 Enhanced Bus Service in Peak-period Shoulder Lane Alternative

This section describes the economic impacts of the Enhanced Bus Service in Peak-period Shoulder Lane Alternative, which includes improvements to the Wasatch Boulevard segment of S.R. 210, improvements to the segment of S.R. 210 from North Little Cottonwood Road to the town of Alta, two mobility hubs, avalanche mitigation alternatives, trailhead parking alternatives, and the No Winter Parking Alternative.

6.4.3.1 S.R. 210 – Wasatch Boulevard

The economic impacts from the Imbalanced-lane Alternative and the Five-lane Alternative with the Enhanced Bus Service in Peak-period Shoulder Lane Alternative would be the same as with the Enhanced Bus Service Alternative.

6.4.3.2 S.R. 210 – North Little Cottonwood Road to Alta

6.4.3.2.1 Effects of Construction

Construction of the peak-period shoulder lanes would occur during the summer and would take about two summer construction seasons. During construction, S.R. 210 in Little Cottonwood Canyon could be reduced to one travel lane adjacent to construction areas, which could reduce visitation for summer activities at the Snowbird and Alta ski resorts. Summer is the off season for the resorts, but there are still many popular activities including hiking, mountain biking, tram and ski lift rides, festivals, and concerts. Although construction closures would be temporary, the closures would reduce the resorts' revenues during the summer since they could deter people from visiting the resorts.

6.4.3.2.2 Business Impacts

The Enhanced Bus Service in Enhanced Bus Service in Peak-period Shoulder Lane Alternative would not require any business acquisitions.

6.4.3.2.3 Effects of Operation

The economic impacts from the Enhanced Bus Service in Peak-period Shoulder Lane Alternative would be the same as from the Enhanced Bus Service Alternative

6.4.3.3 Mobility Hubs Alternative

The economic impacts from the mobility hubs with the Enhanced Bus Service in Peak-period Shoulder Lane Alternative would be the same as with the Enhanced Bus Service Alternative

6.4.3.4 Avalanche Mitigation Alternatives

The economic impacts from the avalanche mitigation alternatives with the Enhanced Bus Service Alternative in Peak-period Shoulder Lane Alternative would be the same as with the Enhanced Bus Service Alternative.

6.4.3.5 Trailhead Parking Alternatives

The economic impacts from the trailhead parking alternatives with the Enhanced Bus Service Alternative in Peak-period Shoulder Lane Alternative would be the same as with the Enhanced Bus Service Alternative.

6.4.3.6 No Winter Parking Alternative

The economic impacts from the No Winter Parking Alternative with the Enhanced Bus Service Alternative in Peak-period Shoulder Lane Alternative would be the same as with the Enhanced Bus Service Alternative.

6.4.4 Gondola Alternative A (Starting at Canyon Entrance)

This section describes the economic impacts of Gondola Alternative A, which includes a gondola alignment from the entrance to Little Cottonwood Canyon to the Snowbird and Alta ski resorts, improvements to the Wasatch Boulevard segment of S.R. 210, two mobility hubs, avalanche mitigation alternatives, trailhead parking alternatives, and the No Winter Parking Alternative.

6.4.4.1 S.R. 210 – Wasatch Boulevard

The economic impacts from the Imbalanced-lane Alternative and the Five-lane Alternative with Gondola Alternative A would be the same as with the Enhanced Bus Service Alternative.

What are gondola base and terminal stations?

As used in this chapter, the term *terminal station* refers to the first and last stations on a passenger's gondola trip. Passengers board and disembark the gondola cabins at the terminal stations.

The *base station* is the terminal station at the bottom of the canyon, and a *destination station* is a terminal station at the top of the canyon.

A *tower* supports the gondola cable.

6.4.4.2 S.R. 210 – North Little Cottonwood Road to Alta

6.4.4.2.1 Effects of Construction

Construction of the gondola system would occur during the summer and would take about two summer construction seasons. During construction, limited locations of S.R. 210 in Little Cottonwood Canyon (mainly near towers) could be temporarily restricted to one travel lane, which could reduce visitation for summer activities at the Snowbird and Alta ski resorts. There are many popular activities at the resorts during the summer including hiking, mountain biking, tram and ski lift rides, festivals, and concerts. Although Gondola Alternative A would have limited impacts to S.R. 210, mainly temporary traffic delays, these delays could reduce the resorts' revenues by a small amount during the summer.

6.4.4.2.2 Business Impacts

Gondola Alternative A would not require any business acquisitions.

6.4.4.2.3 Effects of Operation

The economic impacts from winter operation of Gondola Alternative A would be the same as those from the Enhanced Bus Service Alternative. Gondola Alternative A would also operate during the summer. UDOT conducted an assessment of induced summer use to estimate the number of additional trips that would occur on the gondola system beyond those trips that users were already planning to make by vehicle. The assessment estimated that there would be 198 additional summer visitors in the canyon per weekend day in 2050 with Gondola Alternative A or B (for more information, see Chapter 20, Indirect Effects). No baseline data are available regarding the amount of money that summer visitors typically spend at Snowbird, Alta, and the surrounding businesses. UDOT anticipates that the estimated 198 additional visitors per weekend day would increase revenues at Snowbird, Alta, and the surrounding businesses, assuming that the additional visitors spend money on summer activities, lodging, food, or shopping during their trip.

Gondola Alternative A, including its supporting elements (trailhead parking and avalanche mitigation), would have *de minimis* impacts to Little Cottonwood Creek and the overall watershed as a primary drinking water source, so this alternative would not change the regional economic conditions supported by the drinking water. See Chapter 12, Water Resources, for more information regarding the expected impacts to the Little Cottonwood Canyon watershed including Little Cottonwood Creek as a drinking water source.

6.4.4.3 Mobility Hubs Alternative

The economic impacts from the mobility hubs with Gondola Alternative A would be the same as with the Enhanced Bus Service Alternative.

6.4.4.4 Avalanche Mitigation Alternatives

The economic impacts from the avalanche mitigation alternatives with Gondola Alternative A would be the same as with the Enhanced Bus Service Alternative.

6.4.4.5 Trailhead Parking Alternatives

The economic impacts from the trailhead parking alternatives with Gondola Alternative A would be the same as with the Enhanced Bus Service Alternative.

6.4.4.6 No Winter Parking Alternative

The economic impacts from the No Winter Parking Alternative with Gondola Alternative A would be the same as with the Enhanced Bus Service Alternative.

6.4.5 Gondola Alternative B (Starting at La Caille)

This section describes the economic impacts of Gondola Alternative B, which includes a gondola alignment from La Caille to the Snowbird and Alta ski resorts, improvements to the Wasatch Boulevard segment of S.R. 210, two mobility hubs, avalanche mitigation alternatives, trailhead parking alternatives, and the No Winter Parking Alternative.

6.4.5.1 S.R. 210 – Wasatch Boulevard

The economic impacts from the Imbalanced-lane Alternative and the Five-lane Alternative with Gondola Alternative B would be the same as with the Enhanced Bus Service Alternative.

6.4.5.2 S.R. 210 – North Little Cottonwood Road to Alta

6.4.5.2.1 Effects of Construction

The overall economic impacts from construction from Gondola Alternative B would be the same as from Gondola Alternative A.

6.4.5.2.2 Business Impacts

Gondola Alternative B would not require any business acquisitions.

6.4.5.2.3 Effects of Operation

The beneficial and adverse economic impacts from Gondola Alternative B would be the same as from Gondola Alternative A except at the gondola base station at La Caille. A proposed development that is expected to be built with or without Gondola Alternative B adjacent to the base station could include residential uses mixed with a hotel, restaurants, and a few retail shops. The development would provide an economic benefit to Cottonwood Heights as well as to the regional economy in the form of local and regional taxes. The users of the base station could provide an additional economic benefit to the proposed La Caille development since the gondola users might use the hotel or the restaurants and shops either before or after skiing.

The amount of tax revenue (property tax and/or sales tax) with the Gondola Alternative B developments would depend on the type of development approved and what, if any, tax incentives are offered to the developers. Because these details regarding these developments are not known and not approved, Gondola Alternative B could potentially cause an increase or a decrease in tax revenue (property tax and/or sales tax) compared to the No-Action Alternative developments in the La Caille area.

Gondola Alternative B, including its supporting elements (trailhead parking and avalanche mitigation), would have *de minimis* impacts to Little Cottonwood Creek and the overall watershed as a primary drinking water source, so this alternative would not change the regional economic conditions supported by the drinking water. See Chapter 12, Water Resources, for more information regarding the expected impacts to the Little Cottonwood Canyon watershed including Little Cottonwood Creek as a drinking water source.

6.4.5.3 Mobility Hubs Alternative

With Gondola Alternative B, there would be a 1,500-space parking structure at the gondola base station at La Caille, and the mobility hubs at the gravel pit and at 9400 South and Highland Drive would have reduced parking lots and would require about 600 and 400 parking spaces, respectively. This is less than that proposed with the enhanced bus service alternatives and Gondola Alternative A of 1,500 parking spaces at the gravel pit and 1,000 at 9400 South and Highland Drive. The fewer number of parking spaces would result in less economic benefit to the proposed and existing businesses around the mobility hubs since fewer users would potentially visit the surrounding businesses either before or after skiing.

The analysis of the 1,500-space parking structure at the Gondola Alternative B base station is included in Section 6.4.5.2, S.R. 210 – North Little Cottonwood Road to Alta.

6.4.5.4 Avalanche Mitigation Alternatives

The economic impacts from the avalanche mitigation alternatives with Gondola Alternative B would be the same as with the Enhanced Bus Service Alternative.

6.4.5.5 Trailhead Parking Alternatives

The economic impacts from the trailhead parking alternatives with Gondola Alternative B would be the same as with the Enhanced Bus Service Alternative.

6.4.5.6 No Winter Parking Alternative

The economic impacts from the No Winter Parking Alternative with Gondola Alternative B would be the same as with the Enhanced Bus Service Alternative.

6.4.6 Cog Rail Alternative (Starting at La Caille)

This section describes the economic impacts from the Cog Rail Alternative, which includes a cog rail alignment from La Caille to the Snowbird and Alta ski resorts, improvements to the Wasatch Boulevard segment of S.R. 210, improvements to the segment of S.R. 210 on North Little Cottonwood Road, two mobility hubs, avalanche mitigation alternatives, trailhead parking alternatives, and the No Winter Parking Alternative.

What are cog rail base and terminal stations?

As used in this chapter, the term *terminal station* refers to the first and last stations on a passenger's cog rail trip. Passengers board and disembark the cog rail vehicles at the terminal stations.

The *base station* is the terminal station at the bottom of the canyon, and a *destination station* is a terminal station at the top of the canyon.

6.4.6.1 S.R. 210 – Wasatch Boulevard

The impacts from the Imbalanced-lane Alternative and the Five-lane Alternative with the Cog Rail Alternative would be the same as with the Enhanced Bus Service Alternative.

6.4.6.2 S.R. 210 – North Little Cottonwood Road to Alta

6.4.6.2.1 Effects of Construction

Construction of the cog rail system would occur during the summer and would occur over about two summer construction seasons. During construction, limited locations of S.R. 210 in Little Cottonwood Canyon could be temporarily restricted to one travel lane (mainly for construction vehicle access), which could reduce visitation for summer activities at the Snowbird and Alta ski resorts. There are many popular activities at the resorts during the summer including hiking, mountain biking, tram and ski lift rides, festivals, and concerts. Although the Cog Rail Alternative would have limited impacts to S.R. 210, mainly temporary traffic delays, these delays could reduce the resorts' revenues by a small amount during the summer.

6.4.6.2.2 Business Impacts

The Cog Rail Alternative would not require any business acquisitions.

6.4.6.2.3 Effects of Operation

The economic impacts from operation of the Cog Rail Alternative would be the same as those from operation of Gondola Alternative B.

6.4.6.3 Mobility Hubs Alternative

The impacts from the mobility hubs with the Cog Rail Alternative would be the same as with Gondola Alternative B.

6.4.6.4 Avalanche Mitigation Alternatives

The Cog Rail Alternative includes the same mid-canyon snow sheds as the Enhanced Bus Service Alternative and also includes two additional upper-canyon snow sheds. However, the general economic impacts from the avalanche mitigation alternatives with the Cog Rail Alternative would be the same as with the Enhanced Bus Service Alternative.

6.4.6.5 Trailhead Parking Alternatives

The cog rail alignment would remove segments of the Gate Buttress, Grit Mill, and Lisa Falls Trailheads. To reduce the impacts to the trailheads, UDOT used a single-track design adjacent to the trailheads; however, even with the single-track section, segments of the trailheads would be removed. Therefore, as part of the Cog Rail Alternative, the three trailheads would need to be reconfigured to maintain their use.

With the improvements, parking at the Gate Buttress Trailhead would be modified from 31 spaces in a dirt parking area to 21 paved spaces, the number of spaces at the Grit Mill Trailhead (21 paved spaces) would not change, and parking at the Lisa Falls Trailhead would be modified from about 58 spaces including adjacent roadside parking within ¼ mile of the trailhead to 41 paved spaces. At all three trailheads, parking would not be allowed within ¼ mile of the trailhead, and appropriate site drainage and restroom facilities would be added.

Three trailhead parking alternatives are being considered:

- Trailhead Improvements and No S.R. 210 Roadside Parking within ¼ Mile of Trailheads Alternative
- Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative
- No Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative

If the Cog Rail Alternative is selected, one of the three trailhead parking alternatives would be identified as the Preferred Alternative.

6.4.6.5.1 Trailhead Improvements and No S.R. 210 Roadside Parking within ¼ Mile of Trailheads Alternative

With the Cog Rail Alternative, the Gate Buttress, Grit Mill, and Lisa Falls Trailheads would be reconstructed as part of the cog rail design. Therefore, the only improved trailheads with this trailhead parking alternative would be the Bridge and White Pine Trailheads. The design of these trailheads would be the same as with the Enhanced Bus Service Alternative.

Trailhead improvements would be constructed during the summer and within one summer season. Most of the construction would occur within existing parking areas, and this limitation would minimize delays for traffic using S.R. 210. However, traffic could be temporarily rerouted near the trailhead access points, and this rerouting could cause some delays for those wishing to visit the ski resorts for summer activities. The delays to traffic would be minor and are not expected to substantially reduce summer revenue at the ski resorts.

6.4.6.5.2 Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative

With this alternative, the trailhead parking improvements would be the same as with the Trailhead Improvements and No S.R. 210 Roadside Parking within ¼ Mile of Trailheads Alternative described in Section 6.4.6.5.1. However, with this alternative, all roadside parking in Little Cottonwood Canyon would be eliminated from the entrance to the canyon to Snowbird Entry 1. To eliminate parking, No Parking signs would be placed along S.R. 210. In all, the total number of parking spaces from the intersection of S.R. 209/S.R. 210 to Snowbird Entry 1, including at the reconstructed trailheads as part of the cog rail design, would be reduced from the existing 528 spaces to 221 spaces (a reduction of 307 spaces).

The overall economic impacts from this alternative would be the same as from the Trailhead Improvements and No Roadside Parking within ¼ Mile of Trailheads Alternative with the Cog Rail Alternative.

The economic impacts from the reduction in parking spaces would be the same as from the Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative with the Enhanced Bus Service Alternative.

6.4.6.5.3 No Trailhead Improvements and No Roadside Parking from S.R. 209/S.R. 210 Intersection to Snowbird Entry 1 Alternative

With this alternative, there would be no improvements to trailhead parking at the Bridge and White Pine Trailheads. The Gate Buttress, Grit Mill, and Lisa Falls Trailheads would still be reconstructed as part of the cog rail design. To eliminate parking, No Parking signs would be placed along S.R. 210. In all, the total number of parking spaces from the intersection of S.R. 209/S.R. 210 to Snowbird Entry 1, including at the reconstructed trailheads as part of the cog rail design, would be reduced from the existing 528 spaces to 114 spaces (a reduction of 414 spaces).

The economic impacts from this alternative with the Cog Rail Alternative would be the same as with the Enhanced Bus Service Alternative.

6.4.6.6 No Winter Parking Alternative

The economic impacts from the No Winter Parking Alternative with the Cog Rail Alternative would be the same as with the Enhanced Bus Service Alternative.

6.4.7 Mitigation Measures

6.4.7.1 All Alternatives

For businesses that experience short-term access and visibility problems during construction, a traffic access management plan will be developed and implemented by the construction contractor that maintains the public's access to the business during normal business hours. However, with construction in Little Cottonwood Canyon, it might not be possible to keep the road open all of the time during the summer construction period. UDOT will work with the U.S. Department of Agriculture Forest Service and businesses in Little Cottonwood Canyon to inform them of potential closures and try to avoid closures during peak periods.

For impacts related to strip takes from business properties, the business will receive compensation in accordance with UDOT's right-of-way acquisition practices. Property acquisitions will be completed according to the provisions of the federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended, and the Utah Relocation Assistance Act, Utah Code, Section 57-12.

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