

# Surface Transportation Best Practices Study

Aspen/Pitkin County Airport  
April 2014



prepared for:



prepared by:



# **SURFACE TRANSPORTATION**

## **BEST PRACTICES STUDY**

*Prepared for:*



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## EXECUTIVE SUMMARY

### *Study Background*

The Aspen/Pitkin County Airport Master Plan Update approved in 2012 recognized the important role of the airport in the regional transportation system. Its strategic location on SH 82 only 3 miles from the heart of Aspen and about 8 miles from the Snowmass Village Mall provides a great opportunity for the airport to be served by the many modes of surface transportation (commonly referred to as “ground” or “landside” transportation) that the community has been diligent in developing over the years. Airport users continue to rely on private automobiles and rental cars to travel to/from the airport. The Airport Master Plan has identified a need to enhance the vehicle access and circulation system at the airport and to potentially consolidate parking in the vicinity of the terminal. To best plan for the future of the airport, this Surface Transportation Best Practices Study was conceived to determine what other similar airports are doing to address their users’ ground transportation needs while at the same time preserving the quality of the experience enjoyed by both residents and visitors in these unique communities.

### *Goals*

The purpose of this Best Practices Study is to identify policies, practices and programs that may be applicable at the Aspen/Pitkin County Airport to help achieve the following goals:

- Encourage the use of alternative modes of travel to/from the airport, thereby reducing the reliance on private automobiles and rental cars.
- Provide a seamless travel experience between the airport and the traveler’s ultimate destination within the community.

### *Study Approach*

The study takes two approaches to identifying best practices for encouraging the use of alternative ground transportation modes and providing a seamless travel experience.

The first approach was a literature review of reports, case studies, and guides from across the globe. The team attempted to focus on sources specific to small airports, but very little research of such airports relevant to this study exists. Thus, sources focusing on airports in general were used, and sources covering large airports were reviewed with the differences between small and large airports in mind.

The second approach was research of peer airports by reviewing their websites and by interviewing airport management using a questionnaire as a guide during telephone interviews. The interviews focused on finding what peer airports are doing in terms of alternative ground transportation modes and seamless travel experiences, or if they are aware of interesting and/or successful practices occurring elsewhere that could be applied at the Airport.

Results from both approaches were aggregated into a summary of possible strategies to consider for implementation at the Aspen/Pitkin County Airport.

## *Surface Transportation at the Aspen/Pitkin County Airport*

The approach to ground transportation at the Aspen/Pitkin County Airport has been to make all alternatives as efficient and convenient as possible, and to let the travelers make their choice.

### **Shuttles & Taxis**

Commercial vehicles such as hotel/resort shuttles, private/tour shuttles, and taxis/limos access the terminal via an access controlled drive on the south end of the terminal. This places commercial vehicles in location as convenient to the terminal as private auto drop-offs and is more convenient than private auto and rental car lots. Access is controlled in order to track usage by company and to levy charges for the visit. Most hotel/resort shuttle rides are prearranged, and Airport staff provides ground transportation companies with flight load factor reports each morning to assist in efficient visitation by commercial vehicles. Passengers can also call their destination and request a shuttle by visiting the Guest Services Information Booth or hotel/resort direct-dial telephones in the baggage claim area. Commercial vehicles can be met outside the baggage claim at the commercial vehicle pick-up point. Information on available private services is listed on the airport's website with contact information.

### **Transit**

The Roaring Fork Transportation Authority (RFTA) serves the airport via bus stops on State Highway (SH) 82 just south of Baltic Avenue, providing local and valley-wide bus and bus rapid transit (BRT) services. These stops also provide service to other significant uses on the opposite side of SH 82 of the airport. Passengers traveling between the stops and the terminal must presently pass through either the premium parking lot or the rental car ready lot and cross the airport access road. Those traveling downvalley must use the newly constructed SH 82 underpass. The walk to/from the stops is not protected from the elements, though the stops have been recently upgraded with shelters and real-time bus arrival information. Bus service is free for users between the airport and both Aspen and Snowmass Village, with a fare of between \$1 and \$10 for travel farther downvalley. Transit information is available within the terminal via direction signs and information brochures at the Guest Services Information Booth near the baggage claim. The Airport's website provides a link to RFTA's website, directions for arriving passengers, and notification that RFTA services to Aspen and Snowmass are free.

### **Rental Cars**

Five rental car companies are located in the terminal (Alamo, Avis, Budget, Hertz, and National), and two provide service from off-site (Enterprise and Go Rental). The rental car ready lot consists of 59 stalls and is located across the airport circulation drive from the baggage claim area of the terminal. The rental car storage lot is located next to the economy lot.

### **Private Auto**

Passengers arriving with their private vehicle can use one of two parking lots with 270 uncovered spaces with varying charges based on length of stay. The premium parking lot is located between the terminal and SH 82 and is meant for short-term parking, while economy parking is located south of the terminal and is meant for long-term parking. Passengers being dropped off via private auto use the airport circulation drive, which passes directly in front of both the ticketing and baggage claim areas of the terminal. There are over 20 back-in parking spots in front of the terminal along this drive for quick loading/unloading of passengers and their baggage.

## Bicycle and Pedestrian Access

The Owl Creek Trail and a trail spur provide the only access for bicyclists and pedestrians between the airport and both Aspen and Snowmass Village. Trail users may use the newly constructed SH 82 underpass for access to the terminal. Two bike racks are provided outside the terminal.

## *Findings from Literature Search*

The team conducted an extensive review of Transportation Research Board (TRB), air travel industry, and general web search resources to find best practices. Ideas and strategies were aggregated from these sources to develop findings divided into the two study goal categories.

## Encourage Use of Alternative Ground Transportation Modes

In general, there are two forms of best practices found from the sources reviewed. The first is a process for analyzing goals, current conditions, and possible strategies. The second is more specific to possible solutions that could be implemented to improve the use of alternative modes to/from airports.

### Process

Numerous reports suggested a process for analyzing and implementing a successful strategy to encourage the use of alternative ground transportation modes. The team combined the shared aspects of these varied suggested processes into a series of steps to be considered. These steps involve defining goals/problems, developing performance targets, collecting needed data, analyzing data and market conditions, developing and prioritizing solutions, marketing solutions, and monitoring the performance of strategies. This process is not intended to be used for analyzing every possible strategy considered, nor must the entire process always be followed. The decision of whether or not to employ all or even parts of this process is dependent on the scope and level of investment necessary for the potential strategy.

When other stakeholders are involved, engagement should be done as early as possible in the process. Furthermore, participation in regional planning efforts in addition to stakeholder engagement can help in the prioritization of airport needs at the regional level and build working relationships if they do not already exist.

### Strategies

Numerous strategies ranging in scope, level of investment, and responsible agency were suggested by the reviewed literature. In general, many transit agency related strategies involve the improvement of transit availability and efficiency through a combination of improvements such as increased frequency, expanded hours that are aligned with flight schedules, expanded service area, and equipping transit vehicles to handle luggage.

For airports, making access to alternative modes as convenient and comfortable as possible is key. Ideas such as locating transit services as close to the terminal as possible, providing detailed clear and frequent signage including in-terminal real-time transit displays, increased parking fees, and a consolidated ground transportation center are just a few of the potential strategies suggested.



## Seamless Travel Experience

Baggage handling service between a passenger's origin/destination and the airport is an important element of a seamless travel experience. Handling from the airport to destination is easier to implement since no security clearance is necessary; this type of service exists at numerous airports and is offered at Aspen/Pitkin County Airport by a third party. Handling baggage to the airport is more difficult given TSA security requirements. However, several locations across the county have implemented to-airport service, including Disney World in Orlando and several casino resorts in Las Vegas. It should be noted that some research has suggested that passengers are reluctant to part with their bags to/from the airport due to mistrust or a desire to simplify their travel planning.

Other documented strategies that help make a traveler's experience through the airport more efficient include at-home baggage tag printing and self-serve bag-drops. The combination of these two services would mean the only stop point for a departing passenger would be at the security checkpoint. The implementation of smartphone applications, such as baggage tracking and GPS guidance, have been found to further improve a traveler's experience.

## *Findings from Airport Research and Surveys*

Based on the research of the peer airports, many common trends and practices, as well as some unique ones, were uncovered.

## Encourage Use of Alternative Ground Transportation Modes

Use of private automobiles, rental cars and taxis is a prevalent choice at many of the airports because of availability, flexibility, comfort, convenience and the high-end nature of the clientele.

For the most part, the airports provide public parking in locations immediately adjacent to or very close to the terminal. Parking is typically free or reasonably priced. At some of the airports where public parking is currently free, consideration is being given to converting to paid parking.

Rental car companies are typically provided convenient locations near the baggage claim area in the terminal for their desks and very close to the terminal for lots used for staging vehicles. A number of the airports noted that their long range planning includes expanded parking for rental cars.

Taxis are a favorite choice of many tourists, and some of the airports have felt the need to focus on improving the quality of this service. Through the permitting process, airports have attempted to improve the quality of the drivers (uniforms, etc.) and the vehicles (passenger comfort, fuel efficiency, safety and environmental standards).

Pre-arranged commercial and lodging courtesy shuttles and limousines are an integral part of the ground transportation system at these airports. As such, every effort is made to accommodate them with easy access to the terminal. At many of the airports these shuttles are served curbside right outside the terminal; in others, they are served in separate lots that are typically situated just across the circulation drive from the terminal.

At most of the airports, the local bus systems do not provide dedicated service just for the airport, but instead serve the airport as part of their larger service plans. As a result, schedules tend to be driven more by commuter patterns (rather than airline schedules) and the vehicles are not specifically designed to accommodate passenger baggage. Therefore, the buses tend to be used more by employees at the airport than by passengers.



At those airports where transit is more successful, the managements of the airport and the bus system work closely with each other to tailor the bus schedules to match flight arrival and departure times as much as possible. This requires constant and continuous coordination.

Although bike racks and bike lockers are provided at a number of the airports, they seem to be used mostly by airport employees.

### Seamless Travel Experience

Terminal layout can be an effective way to ease the stress of arrival/departure at these airports where many of the travelers may not be frequent users of the airport. Avoiding conflicts between incoming and outgoing pedestrian flows and making pedestrian flow patterns intuitive and direct, with clear sight lines, are common practices.

The use of “ambassadors” or “greeters” was noted in a number of the airports, including the Aspen/Pitkin County Airport. These individuals are typically situated in the terminal, with their primary responsibility being to welcome travelers and to answer questions that they may have about airport facilities, ground transportation and community activities.

Baggage assistance is a service that is critical to the experience of the traveler, because the travelers at these airports often have a number of bags, oversized bags and recreational equipment. Contracted baggage assistance programs, airport-employed baggage helpers, allowing shuttle and taxi drivers to enter the terminal to assist with bags, and curbside check-in are all practices noted at the peer airports. United Airlines at the Aspen/Pitkin County Airport has experimented with a program to allow for self-serve baggage drop to reduce the need for check-in.

Management at all of the airports is very cognizant of the need to provide clear, concise and readily accessible information to the airport traveler regarding their ground transportation options. This needs to be available during their pre-trip planning as well as when they arrive at the airport. All of the airports noted the importance of an extensive signing plan within the terminal to direct passengers to the various ground transportation options.

### *Recommended Implementation Strategies*

Based on this research, the Aspen/Pitkin County Airport employs and is already proactively pursuing many practices that address the stated goals at a level equal to or greater than other airports of a similar size. Nevertheless, the research team has identified a number of strategies that could further enhance the goals of encouraging the use of alternative ground transportation modes and providing a seamless travel experience at the Airport. These strategies as outlined in the following tables are grouped according to the level of anticipated responsibility of the Airport.

### Encourage Use of Alternative Ground Transportation Modes

**Table E-1** lists recommended strategies that encourage the use of alternative ground transportation modes along with their potential benefits and responsible parties.

**Table E-1. Strategies to Encourage Use of Alternative Ground Transportation Modes**

Strategies	Benefits	Responsibility
Provide clear signage in the terminal and outside to direct passengers to the transit stops and the commercial ground transportation loop	Improves information availability	Airport
Display signs for alternative modes to be placed as good or better than the placement of parking and rental car signs	Improves visibility of alternative modes	Airport
Develop marketing materials (advertisement displays, brochures, promotional homepage displays) for alternative modes, including emphasis that transit services to Aspen and Snowmass Village are free	Improves visibility of alternative modes	Airport
Have greeters/passenger assistants promote transit/shuttles when asked about getting to Aspen and/or Snowmass Village	Improves visibility of alternative modes	Airport
Reroute the "Parking and Transportation" link on the airport website homepage to the ground transportation page rather than the parking page, order modes with alternative modes first and parking/rental cars last, and display all transit information on ground transportation page rather than forcing users to click another page	Improves ease of use and visibility of alternative modes	Airport
Develop a smartphone application that helps guide passengers from the terminal to the bus stops (or even their final destination via transit) and commercial vehicle loop using GPS	Improves ease of use and makes alternative modes more convenient	Airport
Continue to participate in regional planning efforts	Better project support and development	Airport
Provide free baggage trolleys that can be used between the transit stops and the terminal (dependent on facility upgrades)	Improves ease of use	Airport
Explore the feasibility of installing bike lockers (including TSA regulations)	Promotes bike use	Airport
Consider heated sidewalks between the terminal and the airport bus stops as a short-term improvement	Improves passenger safety and comfort	Airport, RFTA
Ensure that the walkway from terminal to bus stations on SH 82 is enclosed and temperature controlled for the longest distance possible, and is conveniently connected to the baggage claim in addition to the ticketing area	Improves comfort of use during poor weather and improve the convenience of transit	Airport, RFTA (upon terminal redevelopment)
Work with RFTA to install real-time bus information within the terminal, which could include estimated walk time to the bus stations, bus route and time display, and large map digital display with real-time bus locations and estimated arrival times	Improves ease of use	Airport, RFTA

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Strategies	Benefits	Responsibility
Display flight information at transit centers and hotels/resorts	Improves availability of information	Airport, RFTA, Hotels/Resorts
Ensure adequate lighting and security measures at transit stops and walkway, and on commercial vehicle loop	Improves the feeling of safety	Airport, RFTA, CDOT
Continue to protect the transit corridor identified in the Entrance-to-Aspen ROD	Preserves transit opportunities	Airport, RFTA, Aspen, CDOT
Consider integration of transit stops (including accommodations for possible fixed-guideway transit access) into the terminal in terminal redevelopment plans	Improves the convenience of transit	Airport, RFTA, Aspen, CDOT
Improve bike connection from the grade-separated transit tunnel to the terminal	Improves access to the terminal	Airport, Aspen
Support RFTA in the development of a system-wide trip planner, and incorporate a website plug-in of the trip planner onto the Airport's website with the origin pre-populated with the airport's address	Improves ease of use	RFTA, Airport
Support RFTA in the development of a system-wide map and display on the Airport's website and within the terminal	Improves ease of use	RFTA, Airport
Support RFTA in schedule modifications to better accommodate the schedules of employees at the airport	Improves ease of transit use	RFTA, Airport
Equip a few buses with luggage storage capabilities and use buses on schedules that coincide with known banks of flights	Improves ease of transit use and improves connectivity	RFTA
Consider allowance of overnight parking at park-n-ride facilities to accommodate air travelers	Improves access to transit	RFTA
Consider an extension to the airport stops of Aspen city bus routes traveling downvalley on SH 82	Reduces need for transfers and increases mobility	RFTA, Aspen

## Seamless Travel Experience

**Table E-2** lists recommended strategies that promote a seamless travel experience along with their potential benefits and responsible parties.

**Table E-2. Strategies to Create a Seamless Travel Experience**

Strategies	Benefits	Responsibility
Collect available data and conduct appropriate analyses to determine the demand for baggage check-in/delivery, airport dedicated service to hotels/resorts, and for alternative modes in general	Provides needs of passengers and ensures investment is based on demand	Airport
Include questions regarding to-airport baggage handling services in the next Airport Customer Survey (planned for 2015)	Provides needs of passengers and ensures investment is based on demand	Airport
Expand and improve baggage assistance services to help arriving passengers with their luggage	Provides premium service that reduces passenger stress of handling baggage	Airport, Aspen Portage
Encourage the creation of a forum that brings together the Airport, area hotels/resorts, and RFTA to discuss airline and baggage check-in capabilities on-site at hotels/resorts and the Rubey Park Transit Center (investigate partnering with BAGS or similar service to provide a more integrated airline and baggage check-in/delivery system)	Provides premium service that reduces passenger stress of handling baggage	Airport, RFTA, Hotels/Resorts, Airlines, Aspen Ski Company, Aspen
Work with airlines to integrate at-home baggage check-in, self-serve baggage drop, and real-time baggage tracking	Improves efficiency of check-in process	Airlines, Airport

## INTRODUCTION

### *Study Background*

The Aspen/Pitkin County Airport Master Plan Update approved in 2012 recognized the important role of the airport in the regional transportation system. Its strategic location on SH 82 only 3 miles from the heart of Aspen and about 8 miles from the Snowmass Village Mall provides a great opportunity for the airport to be served by the many modes of surface transportation (commonly referred to as “ground” or “landside” transportation) that the community has been diligent in developing over the years. Airport users continue to rely on private automobiles and rental cars to travel to/from the airport. The Airport Master Plan has identified a need to enhance the vehicle access and circulation system at the airport and to potentially consolidate parking in the vicinity of the terminal. To best plan for the future of the airport, this Surface Transportation Best Practices Study was conceived to determine what other similar airports are doing to address their users’ ground transportation needs while at the same time preserving the quality of the experience enjoyed by both residents and visitors in these unique communities.

### *Goals*

The purpose of this Best Practices Study is to identify policies, practices and programs that may be applicable at the Aspen/Pitkin County Airport to help achieve the following goals:

- Encourage the use of alternative modes of travel to/from the airport, thereby reducing the reliance on private automobiles and rental cars.
- Provide a seamless travel experience between the airport and the traveler’s ultimate destination within the community.

### *Study Approach*

The study takes two approaches to identifying best practices for encouraging the use of alternative ground transportation modes and providing a seamless travel experience. These approaches were combined with information from local plans to develop best practice recommendations for the Airport.

The first approach was a literature review of reports, case studies, and guides from across the globe. The team attempted to focus on sources specific to small airports, but very little research of such airports relevant to this study exists. Thus, sources focusing on airports in general were used, and sources covering large airports were reviewed with the differences between small and large airports in mind.

The second approach was research of peer airports by reviewing their websites and by interviewing airport management using a questionnaire as a guide during telephone interviews. The interviews focused on finding what peer airports are doing in terms of alternative ground transportation modes and seamless travel experiences, or if they are aware of interesting and/or successful practices occurring elsewhere that could be applied at the Airport.

Results from both approaches were aggregated into a summary of possible strategies to consider for implementation at the Aspen/Pitkin County Airport.

# SURFACE TRANSPORTATION AT THE ASPEN/PITKIN COUNTY AIRPORT

## *Current Surface Transportation Characteristics of the Airport*



Source: Aspen/Pitkin County Airport website

The approach to ground transportation at the Aspen/Pitkin County Airport has been to make all alternatives as efficient and convenient as possible, and to let the travelers make their choice.

## Shuttles & Taxis

Commercial vehicles such as hotel/resort shuttles, private/tour shuttles, and taxis/limos access the terminal via an access controlled drive on the south end of the terminal. This places commercial vehicles in location as convenient to the terminal as private auto drop-offs and is more convenient than private auto and rental car lots. Access is controlled in order to track usage by company and to levy charges for the visit, which cost companies around \$1 per visit.

Most hotel/resort shuttle rides are prearranged, although some places will send a shuttle to the airport when they know a flight is due in. Airport staff provides ground transportation companies with flight load factor reports each morning to assist in efficient visitation by commercial vehicles. Passengers can also call their destination and request a shuttle by visiting the Guest Services Information Booth or hotel/resort direct-dial telephones in the baggage claim area.

Taxis, limos, and private/tour shuttles can be met outside the baggage claim by the commercial vehicle pick-up point, along with the other commercial vehicle services. Information on available private services is listed on the airport's website with contact information.



### Transit

The Roaring Fork Transportation Authority (RFTA) serves the airport via bus stops on State Highway (SH) 82, providing local and valley-wide bus and bus rapid transit (BRT) services. These stops also provide service to Colorado Mountain College, Aspen Airport Business Center (AABC), and North 40 affordable housing on the opposite side of SH 82 of the airport. Thus, the stops are not dedicated for the airport and must accommodate other users. While it is unknown what percent of RFTA riders at the stops are passengers to/from the airport, according to information received from RFTA staff, the stops handle 230,000 alighting and departing RFTA riders annually. The addition of BRT is projected to increase overall passenger volumes at the stops by 65 percent or more.

Passengers traveling between the stops and the terminal must presently pass through either the premium parking lot or the rental car ready lot and cross the airport access road. Those traveling downvalley must use the newly constructed SH 82 underpass. Except for the underpass segment, the walk between the terminal and stops is unprotected from the elements, though the stops themselves do provide some limited protection.

The Airport/AABC stops are served by both local and valley RFTA service and the new VelociRFTA BRT service. Local service between Aspen and Snowmass Village runs daily for 20 hours every 15-30 minutes (depending on the time of day) and stops at the airport bus stops. Valley service connecting communities along SH 82 stops at the airport bus stops as well. It runs every half hour, with some hourly service in the late evening, and operates most of the day. None of the Aspen-only local routes currently reach the airport.

BRT service runs daily for a minimum of 14 hours per day, with a frequency of 10 minutes during the weekday morning and evening peak hours, and a frequency of 15 minutes during all other times including on Saturdays and Sundays. BRT buses can be tracked real-time via the internet, and are equipped with free Wi-Fi. There is one other BRT stop between the airport and downtown Aspen, and three stops within downtown.

With the introduction of BRT service, improvements were made to SH 82 to provide a dedicated transit lane. Furthermore, the Entrance-to-Aspen ROD provides for a transit corridor to be preserved along SH 82, which is being recognized in all airport planning.



*An example of an upgraded BRT stop*

All RFTA services follow the same price structure, which is free for users between the airport and both Aspen and Snowmass Village (only local routes serve Snowmass Village). Travel to/from farther downvalley costs



between \$1 to \$10 depending on the stop location, which is priced based on the distance between the airport and the zone/municipality the stop is located within.

All BRT stops, including the airport's, have recently been upgraded to include real-time bus arrival information, though no such information is available directly in the terminal. Buses can be tracked via RFTA's website, though no mobile site or application is available. Stops also provide shelter from the elements, provide information on RFTA services (routes, schedules, etc.), and include bicycle racks. Parking is provided at some stops, but overnight parking is currently not allowed.

Transit information is available within the terminal via direction signs to the bus stops and information brochures available at the Guest Services Information Booth (staffed by the Aspen Chamber Resort Association) in the baggage claim area. The Airport's website provides a link to RFTA's website, directions on what to look for when passengers arrive, and a statement notifying visitors that RFTA services to Aspen and Snowmass are free. The Airport has been working with RFTA to provide more transit information on the Airport's website.

## **Rental Cars**

Five rental car companies are located in the terminal (Alamo, Avis, Budget, Hertz, and National), and two provide service from off-site (Enterprise and Go Rental). The rental car ready lot consists of 59 stalls and is located across the airport circulation drive from the baggage claim area of the terminal. The rental car storage lot is located next to the economy lot and is not striped, but is paved.

## **Private Auto**

Passengers driving to the airport with their private vehicle have 270 spaces for their use with varying charges based on length of stay. Lot A (Premium Parking) is \$2/hr for the first five hours with a maximum of \$12/day, while Lot B (Economy Parking) is \$1/hr for the first five hours with a maximum of \$6/day (first hour is free in both lots). The premium parking lot is located between the terminal and SH 82 and is meant for short-term parking, while economy parking is located south of the terminal and is meant for long-term parking. Those in premium parking must cross the airport circulation drive via sidewalks and crosswalks when moving between the terminal and the lot. The lots are open air and uncovered, as are the pedestrian facilities connecting them to the terminal.

Passengers being dropped off via private auto have the most direct access to/from the terminal, as the airport circulation drive passes directly in front of the ticketing area of the terminal and the baggage claim area. There are over 20 back-in parking spots in front of the terminal along this drive to allow very short term parking to unload or load passengers and their baggage.

## **Bicycle and Pedestrian Access**

The Owl Creek Trail and a trail spur provide multi-use access between Aspen and the airport area along the north side of SH 82. Those using the trail must travel through the AABC via Sage Way and use the new SH 82 underpass to access the terminal. The Owl Creek Trail continues west after the spur (on the southern end of the airport property) to provide access between Snowmass Village and the airport. The trail is grade-separated from SH 82 just north of the intersection of SH 82 and Harmony Road. Two bike racks are provided outside the terminal, which are primarily used by airport employees. Pedestrian access is provided to/from the AABC across SH 82 via crosswalks or the new underpass. Access beyond the airport area is limited to the multi-use trails, as no sidewalks extend beyond the RFTA transit stops along SH 82.

## *Previous Transportation Planning Incorporating the Airport*

Before researching best practices, the team reviewed previous local plans that incorporated the airport to gain an understanding of issues and recommendations already explored relevant to ground transportation and seamless travel. The key recent plans deemed most relevant include:

- Aspen Area Community Plan (2012)
- Aspen/Pitkin County Airport Master Plan Update (2012)

Other planning efforts that preceded the development of the BRT system have noted an interest for light-rail to run from the airport to Aspen.

### **Plan Summaries**

#### Aspen Area Community Plan

*City of Aspen and Pitkin County – 2012*

The *Aspen Area Community Plan* (AACP) is a comprehensive plan that covers an area from the airport to east of Aspen. It covers all planning disciplines including transportation, which covers goals, policies, and suggested implementation ideas specific to the airport.

The AACP states the desire to reduce car rentals from the airport and promote alternative modes, especially to visitors and second home owners. It expresses the need to improve information on travel options at the airport.

Although the implementation strategies are within an appendix and are only suggestions rather than adopted action items, numerous direct and indirect ideas are listed to promote the use of alternative modes at the airport, including:

- Review RFTA's fare structure to achieve greater simplicity and clarity
- Provide information on alternative modes at visitor activity centers (airport, hotels, etc)
- Preserve right-of-way at the airport for future dedicated transit services
- Explore the possibility of final-destination bag delivery
- Improve signage for transit services from the terminal
- Work with shuttles to improve their service

#### Aspen/Pitkin County Airport Master Plan Update

*The Barnard Dunkelberg Company Team – 2012*

The *Aspen/Pitkin County Airport Master Plan Update* was finalized after the AACP and incorporates or notes many ideas from that plan. It provides current conditions at the airport, future use forecasts, and needs to serve future usage. Based on this information, the Master Plan arrives at a preferred alternative for future terminal development, which impacts the possible solutions available to improve the use of alternative modes and implement seamless travel experiences.

Relative to current conditions of ground transportation and seamless travel, the Master Plan notes the following characteristics:

- Curbside check-in is a popular service.
- Hotel/resort shuttles or taxis are the most popular mode for winter visitors, while summer sees higher car rental due to the fact that summer visitors tend to come for camping and other activities which involve exploring the broader region.
- Transit use is a small percentage of locals using the bus during off-peak seasons, which is when locals are more likely to travel.
- "Buses are generally filled with down valley passengers by the time they reach the airport."
- Commercial vehicles (shuttles, taxis, etc) are access controlled and charged by visit/time at the airport.

The Master Plan notes that at a March 31, 2009 meeting between Airport management and County Commissioners there were numerous goals developed for the Airport, including the improvement of transit convenience. This goal is reiterated within the introduction of the analysis of terminal alternatives, including the preferred alternative. This alternative states that a covered parking garage should be built, and within that structure there should be weather-protected pedestrian access between the airport transit stops and the terminal. The map provided (available in the **Appendix**) shows this connection to/from the ticketing area, requiring passengers in the baggage claim to travel through the ticketing area or outside of the terminal to access the walkway.

The Master Plan also notes that there were discussions amongst stakeholders about specific ideas for the pedestrian walkway between the transit stops and the terminal, including heated sidewalks and/or covered walkways. It also notes the suggestion of baggage handling at or near hotels. These ideas suggest that the parking facilities contemplated as part of the future terminal area redevelopment could incorporate a number of airport-oriented transportation facilities in a more comprehensive airport parking and ground transportation center. The focus of this facility would be to provide a wide range of convenient transportation options for airport users and employees. Space could also be reserved to accommodate valley-wide commuter transportation facilities in the event the Airport is deemed to be a logical location for such facilities in the future.

## LITERATURE SEARCH

### *Research Approach*

To conduct the literature search for best practices, the team utilized sources from previous research efforts and conducted an extensive Transportation Research Board (TRB), air travel industry, and general web search. As noted in the study approach, sources focusing on small airports were not readily available. Thus, sources focusing on large airports or airports in general were used, but were reviewed with size differences in mind. The following section summarizes the relevant information found in these sources.

### *Sources Reviewed*

The sources reviewed involve reports, case studies, and guides that cover best practices and/or lessons learned for alternative ground transportation modes and seamless travel experiences. The following sources are reviewed in this section:

- Airport Cooperative Research Program (ACRP) Report 4: Ground Access to Major Airports by Public Transportation (2008)
- Evaluating Improvements in Landside Access for Airports (1998)
- Airport Ground Access Planning Guide (1995)
- Ground Access Strategies: Lessons from UK Airports (2003)
- Best Practice Report: Ground Transportation (2012)
- Processing of Airline Passengers and Their Baggage at Off-airport Bus, Water and Rail Terminals – Successful Intermodal Terminals (2004)
- Air Rail Links: Best Guide to Best Practice (1998)
- Air Transport Industry Insights: The Baggage Report (2013)
- Five Steps of Air Travel that Smartphones will Change by 2020 (2010)
- Disney World Resorts (website)
- Baggage Airline Guest Services (BAGS) VIP – MakeTravelEasier.com (website)

## Source Summaries

### **Reports, Studies, & Guides**

#### ACRP Report 4: Ground Access to Major Airports by Public Transportation

*TRB – 2008*

Although the target audience is large airports, ACRP Report 4 provides numerous lessons and best practices for increasing public transit use to/from all airports.

#### ***Six Steps Of Managing Ground Transportation***

The report presents a six-step process toward managing ground transportation, under which it discusses important details learned from case studies at airports such as Baltimore Washington International Airport and Los Angeles International Airport. The following are summaries of each of the six steps.

## 1. Public Policy Goals

As noted in the *Ground Access Strategies: Lessons from UK Airports* report, ACRP Report 4 highlights that a collaborative effort is essential for improving public transportation to/from an airport. This is due to the airport's reliance on other entities providing service to/from the airport. Collaboration is necessary whether the airport wants to provide a service that links to a greater system, display information about non-airport transport services, or improve the "seamless" travel experience for a passenger. Participating in a regional planning process, if present, is an important way to achieve this collaboration.

### 6 Steps of Managing Ground Transportation

1. Establish public policy goals
2. Develop data gathering and monitoring program
3. Perform market analysis
4. Design ground access program
5. Employ airport management approaches that encourage alternative modes
6. Present ground services to passengers

## 2. Data Gathering and Monitoring

Data gathering and monitoring is necessary to properly analyze market characteristics and demand. The report recommends trip and mode data on both trip purposes and the residential status of the passenger. Data gathering will also allow for performance measurement of reaching modal shift goals and determining if a project is effective or not. However, modes should be analyzed based on their target market, not against the entire airport ground transportation market.

Data are often obtained from a ground access survey of airport users. The report recommends that the following data be gathered:

- Exact origin of the ground access trip (input for GIS analysis)
- Day and time of trip
- Purpose of air trip (business or non-business)
- Traveler residency status (trip from home or non-home end)

These data are then recommended to be sorted into the following groups:

- Resident business
- Resident non-business
- Non-resident business
- Non-resident non-business

Market analyses of these data are then performed, which is discussed in the next step.

## 3. Market Analysis

One of the greatest challenges of decreasing automobile use to/from airports is the nature of the markets served. Auto availability is generally high on the home-end portion of a passenger's trip, whether it's driving and parking at the airport or receiving a ride to the airport. The national average for public transportation's market share of home-end ground transportation trips at airports is 8 percent. On the non-home-end of the trip, passengers are often less familiar with high-occupancy modes, but are more willing to take public transportation to/from the airport as illustrated by the average market share being 15 percent.

Furthermore, the willingness to use public transportation varies upon whether or not the trip is business or non-business based. Thus, it is important to understand potential users and their needs to realistically target a certain level of usage of high occupancy modes and effectively market these modes to potential users. For example, non-business users are typically more willing to use transit, but usually have more baggage.

The report further states that air travelers are usually more concerned with time versus cost, travel in off-peak times, and must manage baggage – all of which create difficulties when using public transportation. Targeting these aspects can help improve high occupancy mode use.

#### 4. Ground Access Program

The report presents numerous strategies to improve public transportation use to/from airports – greater frequency, faster travel time, etc – but stresses that no one metric can by itself be targeted to increase transit's mode share. Instead, a ground access program must be tailored to its specific market, as there are numerous variables to account for and not all apply the same in each market. In short, each airport and its market are unique.

Time, directness, location, and availability (weekend, off-peak, etc.) seem to be some of the most important factors to target. Some airports, such as DIA and LAX, have airport-dedicated service to ensure this accessibility. Airport-dedicated service is transit service whose sole or primary purpose is to provide express service to/from the airport for users and/or employees. Service is often provided to/from the airport via the downtown area and/or other major activity centers with no or limited stops in between.

The report notes that although taxi services are often more attractive at airports close to their primary market (which Aspen is), these airports can serve a greater variety of destinations by high occupancy modes with less transfers. The report finds that distance itself cannot explain a ground transportation modal split at an airport, but longer distances that may impact the number of transfers can impact modal split, as less transfers are typically more attractive and increased distance between the airport and origin/destination may translate into the need for more transfers.

#### 5. Management to Encourage Alternative Modes

The report notes that most access points for high occupancy modes at airports are inconveniently located at a greater distance away from the ticket counter and baggage claim than private car facilities (parking, rental car, drop-off lane), and are usually poorly protected from the elements. Some of the more successful transit access at airports is located near baggage and ticketing, specifically on the same level. Ideally the access would be integrated into the airport terminal, and facilities would be temperature controlled. The report stresses the following when it comes to locating and designing public transportation access:

*“Clearly, if there is a guiding public policy to encourage the use of higher occupancy modes, the level of amenity offered to the connecting public transportation traveler should be as good as or better than that offered to the traveler connecting onward by private mode.”*

Regardless, expectations of public transportation use should be reasonable. Only one of the U.S. airports analyzed in the report had a public mode share above 20 percent (San Francisco at 23 percent) despite well designed facilities and services, while all analyzed airports outside of the U.S. had a public mode share above 20 percent. Thus, the question becomes “What is the most effective approach that can be implemented at a U.S. airport?”

## 6. Ground Services Presentation

The report stresses that, in today's age, most fliers and travel coordinators will use the internet to investigate ground transportation options. Ideally the airport website would document all ground transportation options with relevant data (cost, travel time, service area, etc.) and provide users with trip planning capabilities that incorporate both airport and non-airport controlled services in relation to flight times. Very few airports in the world come near this ideal presentation, and most that come closest are some of the largest airports.

### *Additional Information*

The report discusses both bus and rail, as it argues the success of transit at an airport is more about factors that impact both modes, such as frequency, speed, distance, comfort, and convenience of access. It cautions that providing rail transit does not itself increase transit use, as only two of the top ten transit-using airports by mode share in the United States have rail access. Furthermore, there are examples of airports that have direct rail access but more passengers use bus rather than rail to/from the airport, such as Portland. Instead, rail may best be suited for airports where a regional rail system already exists, and an extension to the airport would make sense for a variety of reasons such as greater regional connectivity. Rail has also been found to be most effective when serving long distance trips rather than short trips, as alternative modes such as taxis and other private modes become more expensive. However, this is all dependent on how each mode access the airport.

Employee demand is also discussed by the report. Airport employees can be a potentially large user of transit to/from the airport. They are also the group of potential users that the airport has the greatest influence over. However, there are factors that can make transit travel difficult for employees, such as where an airport is located in relation to where employees live, availability of transit for airport employees (both frequency and access) given that airports are often open outside of the operating hours of the transit provider, and that many airport employees are not employed by the airport but third parties located at the airport.

The report also touches on seamless travel programming, which involves integrated baggage handling and ticketing. Although some successful cases of these programs exist (Zurich and Hong Kong, for example), the results of numerous case studies suggest that passengers are hesitant to use such services. Zurich is likely successful because of Switzerland's expansive and integrated national rail and baggage handling system, while Hong Kong is likely successful due to its constrained geography, setup, and culture of using transit (a remote terminal connected to the airport via high speed rail is made the most convenient access to the airport). Places such as London, Los Angeles, Newark, Madrid, and more have previously offered baggage handling and off-site check-in services in conjunction with transit use (most often with rail) to theoretically make the mode easier and more convenient to use. However, all these attempts to provide off-site baggage handling have since been abandoned, although off-site check-in services have fared a little better.

A variety of reasons may exist for why these premium services failed, such as low participation by passengers (possibly due to mistrust or a desire to simplify travel planning) or reliance on airlines to operate the service at an increased cost to them. What is certain is that stakeholder engagement and market analysis should take place before any attempt of implementing such services. Furthermore, the successful attempts still in operation either require their use or are operated by a third-party, such as a transit operator, rather than airlines. But it should be noted that many passengers may choose familiarity and simplicity over new interconnectivity and handle their own bags, which is what occurred at the well-connected system formerly in operation at Newark.



The report concludes that many passengers may not know high quality public transportation exists. Thus, it is important to display necessary information in a clear manner within the airport, and provide all necessary details to plan its use on the airport's website.

### Evaluating Improvements in Landside Access for Airports

*Virginia Transportation Research Council – 1998*

This report's purpose was to identify the components of landside airport access and to develop a methodology to evaluate landside access and proposed improvements for passengers. The report provides some ideas for landside best practices, while also discussing the topic of passenger experience.

The report team conducted surveys of numerous airports across the country to see what is currently occurring in terms of ground transportation management and operation. The airports were classified by size as small, medium, or large according to the percent of total annual enplanements at airports under FAA jurisdiction as defined by Airport Operations Council International, of which 22 small airports responded. Of those that responded, 59 percent stated they have public bus serving the airport, but 93 percent stated they are taking no action to reduce private auto trips to the airport.

In summary of the report, the following strategies were identified to improve transit use to the airport:

- Increase bus frequency
- Increase radius of bus service
- Alter parking prices
- Subsidize transit
- Preferential pick-up/drop-off locations
- Build a ground transportation center
- Install people movers or moving sidewalks between drop-off and airline check-in

When looking at improving public transit use, convenience/assistance with luggage transport between the terminal and bus is important, as this transfer can be difficult for passengers. Despite some examples from ACRP Report 4 of resistance towards transit baggage handling, this report states that "when passengers do not have to worry about baggage until they reach their destination, public transportation is made more convenient and more popular to use." It is not clear how the report arrives at this statement, as it only lists a few examples of baggage-handling transit services that have been explored in ACRP Report 4. The report may be making an assumption based on survey responses from passengers stating that baggage help is a plus, but baggage help can mean a number of things such as simply assisting with the loading/unloading onto the high occupancy vehicle and maybe even moving the luggage to/from the terminal. Furthermore, ACRP Report 4 and other reports reviewed infer that passengers may state that baggage integration would increase the likelihood of using transit, but in practice they are hesitant due to trust issues and security of their luggage.

Increasing parking costs could be an effective strategy to disincentivize private auto travel to the airport, as the report notes "parking lot demand is very sensitive to parking cost." Although increasing parking fees can result in greater transit use, it can also increase drop-offs. Furthermore, there is little incentive for airports to alter parking fees too drastically, as it can reduce parking revenue – a major income generator for many airports.

Ground transportation centers have been found “to offer the most favorable prospect for reduction of access trips at many airports.” However, they must provide a high level of service. Furthermore, such a center may not be feasible for smaller airports like the Aspen/Pitkin County Airport, as these centers are essentially a remote terminal handling ground transportation for the airport. A more applicable option could be amenities at existing transit centers, such as on-site airline check-in.

The report also provides some information on improving courtesy shuttle operations. Consolidated services, required on-demand service, holding areas, and dispatchers are solutions noted in the report.

In short, the report states that “to attract ridership, public modes must provide convenience, reliability, and quality that competes with that of the private automobile.”

To evaluate ground access strategies, the report settles on the Intermodal Surface Transportation Efficiency Act (ISTEA) planning model, as the ACRP report had yet to be conducted. This process involves:

1. Define the Problem
2. Establish Performance Measures
3. Collect the Data
4. Understand Present Conditions and Performance
5. Forecast Future Conditions and Performance
6. Develop Candidate Strategies and Actions
7. Assess Effectiveness and Select Actions
8. Monitor and Feedback

This process is meant to be repeated until performance measures or the problem statement is met. It is more detailed than the ACRP Report 4 process, but essentially is comparable.

#### [Airport Ground Access Planning Guide](#)

*Federal Highway Administration (FHWA) – 1995*

Although the only available copy of this planning guide is unfinished, it provides some applicable measures on relevant topics to improving landside transportation operations and improving transit use to/from airports. It does document mode share for some airports, including Palm Springs, which is a peer airport. That airport was reported to have had 8 percent of passengers using courtesy vans and 3 percent by other alternative mode.

The guide notes that visitors, especially non-business, are usually more willing to use alternative modes to/from the airport. Furthermore, “passengers will only use high occupancy modes if they are perceived as reliable and fast.” To influence use of transit, the guide recommends:

- Maximizing passenger convenience and comfort, especially of the transfer
- Study passenger patterns and possibly offer express service to/from activity centers
- Develop performance measures
- Design facilities for disabled passengers, including color blindness
- Prioritize transit and coordinate with local agencies
- Implement simple and easy fare collection

The guide provides desirable traits to make airport rail stations attractive, but these also can apply to any mode of transit:

- Short walking distance (station is within 500 feet of terminal)
- Grade-separated crossing of streets
- Station/walkway designed to accommodate passengers with all kinds of baggage
- Station near the baggage claim
- Visible security measures (lighting, patrols, cameras)
- Sheltered waiting areas with heating and air conditioning

The guide also recommends limiting passenger baggage handling by offering baggage assistance to transport between the terminal and station, baggage trolleys, and/or baggage handling services that take care of baggage from off the plane to the final destination.

Information distribution is another element addressed by the guide. It suggests implementing the following:

- Clear and frequent information about transit, describing routes, fares, and schedules
- A clear path to get to transit
- Info booths/kiosks
- Ground transportation assistants that promote transit
- Airline flight info displays at the station

In conjunction with station and terminal programming, it is important to work with transit providers to provide timed transfers between modes at the airport to minimize waiting.

All things considered, the guide notes that increased private vehicle costs is probably the most effective tool to move people to use transit, but this also can lead to increased pick-ups/drop-offs, which translates into additional trips on local roadways.

It should also be noted that employees make up a large portion of trips to/from the airport. Timing transit and/or providing high-occupancy modes such as van share could be effective in targeting employees.

#### **Ground Access Strategies: Lessons from UK Airports**

*Loughborough University Transport Studies Group – 2003*

This report, a submission to the 2003 TRB Annual Meeting, primarily focuses on the regulatory direction in the UK for large airports to create stakeholder discussion forums that focus on reducing private vehicle travel to airports through increased public transit use and other alternative modes. The report's findings are largely inapplicable to smaller airports like the Aspen/Pitkin County Airport, but the idea of forming a forum of transit-interested stakeholders to coordinate the reduction in private vehicle trips to the airport may be something that would be beneficial. After all, the airport must rely on other entities to achieve this goal, and a forum could help do this more smoothly. The report does conclude these forums are an important mechanism for successful coordination of stakeholders.

The report also reiterates the following strategies for obtaining a modal shift:

- Analyzing travel patterns and behaviors
- Improving transit frequency and routing
- Increasing price of parking
- Improving marketing for transit

Despite these strategies, the authors do wonder how effective they might be, quoting a source that “available evidence suggests that increasing public mode use to airports above 30 percent may be quite challenging.”

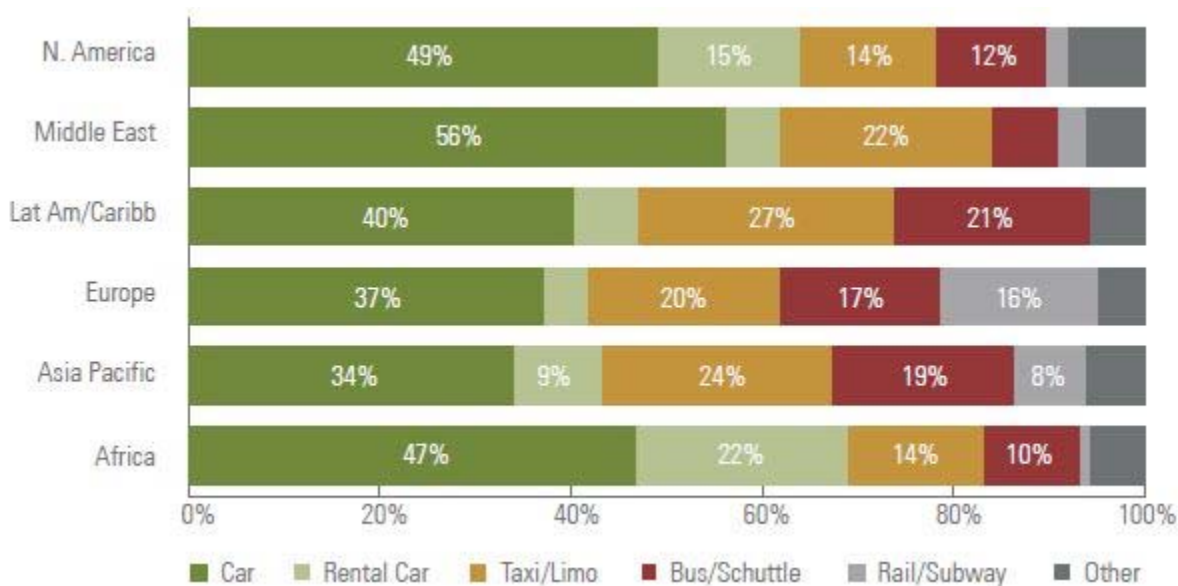
### Best Practice Report: Ground Transportation

#### *Airport Service Quality – 2012*

This publication was produced by Airport Service Quality (ASQ), an organization run by aviation analyst group KDMA and supported by the international association of world airports called Airports Council International. Although this group collects various airport metrics on a monthly basis, this report is not a regular publication, but it may be updated in the future.

The report primarily looks at the state of each ground transportation mode from across the world, including survey information from airports on mode use and modal split. **Figure 1** shows airport ground transportation modal split by global region. Note that private auto (personal and rental cars) is nearly 65 percent of the mode split for North America, while private auto is roughly 40 percent for Europe and Asia. A host of reasons are likely responsible, such as cultural differences towards the private auto, land use density, and transit availability and cohesiveness.

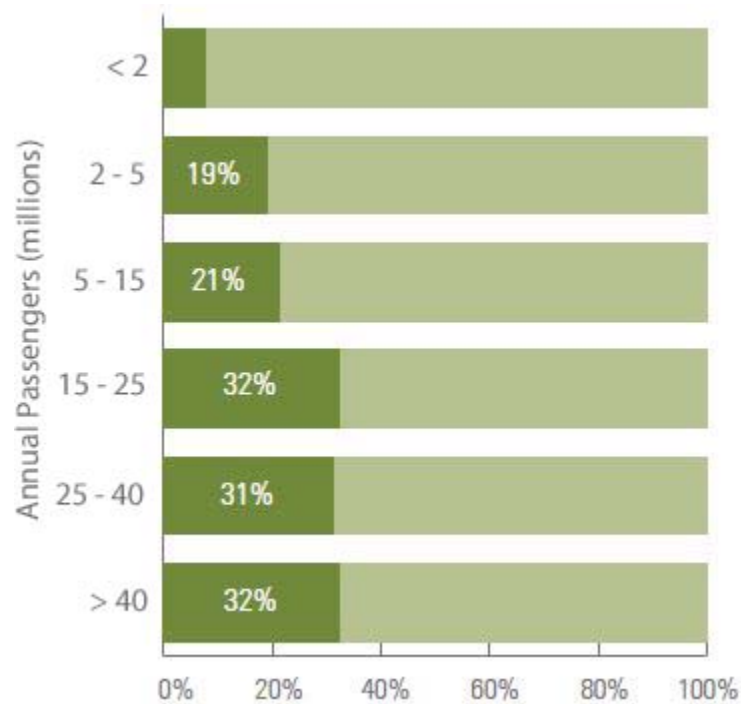
**Figure 1. Modal Split by Global Region**



Source: “Modal Split by Region” graph from the ASQ Best Practice Report: Ground Transportation

The report also notes that the bigger the airport, the more public transportation is used. Airports with less than 2 million passengers annually see a transit mode share of less than 10 percent, while airports serving more than 15 million passengers annually see a transit mode share of around 30 percent. This 30 percent level could be related to the ceiling mode share percentage discussed in the Ground Access Strategies: Lessons from UK Airports report. **Figure 2** shows the public transportation mode share percentage at airports of varying sizes.

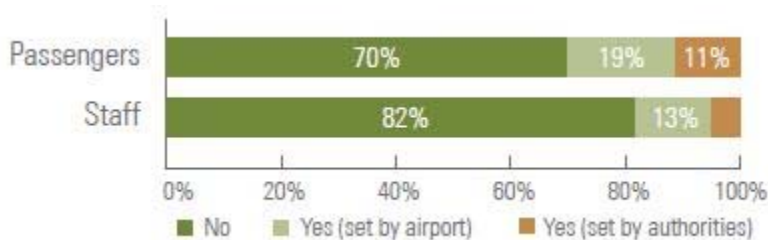
**Figure 2. Public Transportation Airport Mode Share by Airport Size**



Source: "More Passengers Use Public Transport at Bigger Airports" graph from the ASQ Best Practice Report: Ground Transportation

Overall, only 30 percent of airports or other authorities plan for target modal split of passengers, and even fewer plan a target modal split for staff. **Figure 3** shows the percentage of airports that plan for a specific modal split.

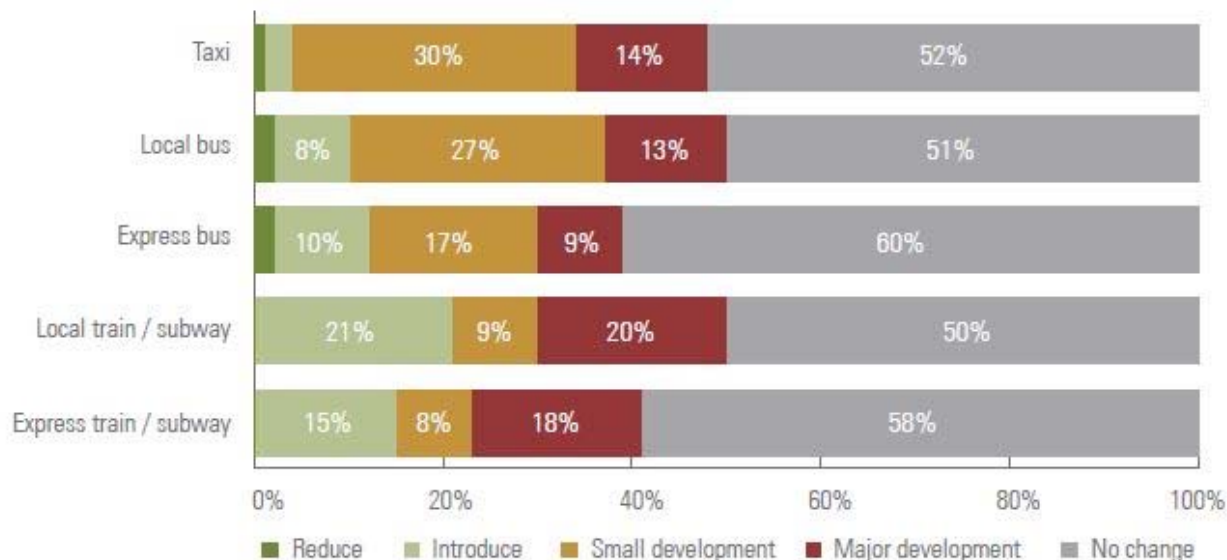
**Figure 3. Airports that Plan for Ground Transportation Modal Split**



Source: "Are There Any Goals Set for Achieving a Modal Split for Your Passengers / Staff in the Future?" graph from the ASQ Best Practice Report: Ground Transportation

Even without targeting a particular modal split, many airports have plans to introduce and expand/modify alternative modes of travel to/from the airport. **Figure 4** shows the percent of airports planning for changes by type of change.

**Figure 4. Airport Plans for Ground Transportation Alternative Modes**



Source: "What are Your Plans for These Different Means of Transport?" graph from the ASQ Best Practice Report: Ground Transportation

Should an airport want to influence its modal split, the report provides a three-step best practice process for changing ground transportation mode split:

1. Modal split goal definition
2. Investment [into desired mode(s)]
3. Promotion [of mode(s) invested in]

The report notes that the first step is important for the planning of changing the modal split, but most airports overlook this step. It also states that coordination with local partners is important to make a positive first impression of any promoted mode.

### Processing of Airline Passengers and Their Baggage at Off-airport Bus, Water and Rail Terminals – Successful Intermodal Terminals

*TRB (for 2005 Annual Meeting) – 2004*

This report is an overview of off-airport check-in facilities from across the globe. An interesting note from the report is that check-in and bag drop at convention centers is valuable for passengers, as they can check-in, leave their bags, attend the conference bags-free, and then easily go to the airport. However, in the U.S. additional requirements for off-airport check-in can make it difficult to implement because they require approval by the Transportation Security Administration (TSA). The main concern is that such a system must ensure to the TSA's satisfaction that bags are secure from the off-airport check-in to the airport and through security scanning.

The report also echoes previous sources by noting that some passengers may be skeptical of baggage handling between their origin and the airport and that “if a transit connection to an airport is available, it needs to be as attractive as possible to persuade people to use it”.

Lastly, the report speculates that door-to-door baggage shipping plus online check-in could render the need for off-site baggage handling unnecessary. Although these services do exist and have become increasingly popular since implementation of baggage fees by airlines, these services have yet to eliminate traditional check-in services.

#### [Air Rail Links: Best Guide to Best Practice](#)

*International Air Rail Organization, Air Transport Action Group, & Airports Council International – 1998*

This report mentions many ideas already documented above. However, it places a greater emphasis on having real-time transit arrival times displayed right at the baggage carousel to make it as easy as possible to choose transit versus a taxi or other mode. It also stresses the importance of making fares easy to understand and pay. These pieces of information should be displayed before any information on any other mode.

#### [Air Transport Industry Insights: The Baggage Report](#)

*SITA – 2013*

This report was produced by aviation consultant SITA in association with Air Transport World to analyze in-house and International Air Transport Association (IATA) survey information about baggage handling. From these surveys, the report sides with the report from the Virginia Transportation Research Council in that passengers will embrace baggage services that make their travel experience less stressful and more convenient. The report finds that bag drop is considered by passengers to be one of the most stressful points of their trip. However, the report does temper this desire for baggage services with the requirement that passengers feel a reassurance their baggage will arrive safely and on time, and that they want more information about their baggage (81 percent of passengers want real-time bag tracking).

The report states that 68 percent of global flyers are interested in self-printed and self bag-drop services. Although such services don’t make a passenger’s experience completely seamless, it does make the check-in process much closer to seamless. It’s estimated that roughly 80 percent of airlines and airports will have such capabilities by 2015. Currently about a third of airlines support self-print baggage tags with assisted bag drop. Alaska Airlines has been piloting a system that lets passengers print their bag tags at home, place them in a tag holder, and self drop the bag at the airport.

#### [Five Steps of Air Travel that Smartphones will Change by 2020](#)

*SITA – 2010*

This report focuses on how travelers will use smartphones while traveling through an airport. An interesting thought is using GPS and/or Wi-Fi at the airport to guide a traveler through their experience at the airport. One of the examples the report gives is such an application could guide an arriving passenger through baggage claim and to the appropriate bus or shuttle stop. Some details would have to be entered by the user, but such actions could be minimal. Previously this type of tracking would be difficult within a terminal due to existing satellite limitations, but given advances in GPS and other technology, such tracking will be available.

This report also mentions real-time baggage tracking via smartphones. Scanning of RFID chips in a passenger’s bag could alert their smartphone that their baggage is arriving on the carousel and is ready for pick-up.



## Website Sources

### [Disney World Resorts – Orlando, FL](#)

#### [Baggage Handling and Airline Check-In Services](#)

Disney World Resorts in Orlando offer two services that attempt to create a more seamless travel experience for visitors flying into Orlando and staying at one of Disney's resorts.

The first service is called Magical Express Transportation, which is a complimentary roundtrip airport transportation service and luggage delivery for guests of select Walt Disney World Resort hotels. If a guest chooses to use this free service, Disney will send tags that the guest must place on their luggage prior to leaving their home (tags will arrive to guests approximately two weeks before their trip via FedEx). These tags allow for baggage handlers at Orlando International Airport to automatically load guest luggage for transport to their resort. Once the bags have been acquired by the handlers, they will be delivered to the resort within three hours of guests checking into the resort. International visitors must take their baggage through customs, but once through can give luggage to the handlers to be transported to the resort.

The second service is called Resort Airline Check-In Service, which allows guests of select Disney World resorts flying with participating airlines and within the United States to check-in for their flight at the hotel up to three hours before departure. It also allows guests to fully use the Magical Express Transportation for the return to the airport, but baggage handling service must be organized by calling Baggage Airline Guest Services (BAGS) – a third party that is contracted for baggage handling and approved by the TSA – directly to pay any baggage fees beforehand. Thus, this check-in service piggybacks onto the Magical Express Transportation to transport guests and their luggage back to the airport, completing the roundtrip. Baggage is transported directly to the TSA for scanning before being moved through the airport's baggage handling system. Guests not using the provided transport can still use the check-in service, and guests not using the check-in service may still ride the Magical Express Transportation but are responsible for their own baggage. Oversized luggage does not qualify for any handling and must be handled by their owner.

### [Baggage Airline Guest Services \(BAGS\) VIP – MakeTravelEasier.com](#)

#### [Private Baggage Handling Service](#)

In addition to providing Disney's baggage handling, BAGS provides this service independently at over 250 airports across the United States, including the Aspen/Pitkin County Airport. Passengers can book up to an hour prior to their departure and no tags are required – passengers provide a description of the bag to the handler at booking. Baggage can be delivered to any destination within 100 miles of the airport, and BAGS provides email updates on the status of the baggage during the entire process. If baggage is delivered to a hotel, it will be sent to the bell stand. Guests must contact the hotel if they would like them to automatically take the luggage to the guest's room. BAGS's service is for travel within the United States, but passengers from an international airport that offers pre-clearance can use the service as well, as baggage cannot be required to go through customs if using this service.

BAGS's delivery service is promoted by two airlines that fly to/from the Aspen/Pitkin County Airport. Both United Airlines and American Airlines provide links to BAGS's website where a unique page for each airline asks customers to fill in flight and baggage information. Each airline's website states that its bag tags will contain baggage delivery information upon check-in at the origin airport that will be used by BAGS at the destination airport. Thus these partnerships are slightly more integrated than using BAGS independently.

BAGS can also implement the services they manage for Disney World resorts for other hotels and activity centers. [Vegas Inc](#) reported in 2012 that BAGS provides services for the Las Vegas Convention Center and for over 200 hotels nationwide, including several Las Vegas casino hotels. The Orange County Convention Center in Orlando lists BAGS's remote baggage and airline check-in services on its website for users of its facilities. According to a brochure on the center's website, BAGS remotely checks in about 2.1 million bags each year.

Other similar services exist, such as Bags To Go which provides baggage delivery from Fort Lauderdale-Hollywood International Airport to nearby cruise ships. However, no service was found to be as extensive as BAGS. In fact, Bags To Go used to operate remote baggage check-in for Las Vegas casino hotels, but it appears BAGS has replaced it.

## Findings

The following is an aggregation of the suggestions and ideas extracted from the sources reviewed. These findings are divided into the two goal categories defined at the beginning of this report: to encourage use of alternative ground transportation modes and to create a seamless travel experience.

### Encourage Use of Alternative Ground Transportation Modes

In general, there are two forms of best practices found from the sources reviewed. The first is a higher level best practices that relate to the process an airport can go through to not only improve the use of alternative modes to/from the airport, but to determine whether it's even feasible. The second is more specific to possible solutions that could be implemented to improve the use of alternative modes to/from airports.

### Process

If the Airport decides that implementing strategies to encourage the use of alternative ground transportation modes is a priority, a process for analyzing goals, current conditions, and possible strategies is available. In general, ACRP Report 4 is an excellent all-in-one guide for helping to focus on alternative ground transportation modes, as it provides step-by-step guidance for improving the use of alternative modes to/from an airport. Other reports provide similar but more detailed steps for this process that are also useful.

Based on the literature review documented above, the team has utilized ACRP Report 4 in combination with the other sources reviewed to form the following seven steps that the Airport can use if/when they pursue strategies to improve the use of alternative ground transportation modes to/from the airport. This process is not intended to be used for analyzing every possible strategy considered, nor must the entire process always be followed. Judgment must be used to determine when and how the process should be applied.

1. Define Goals/Problems
2. Develop Performance Targets
3. Define and Collect Needed Data
4. Market Analysis and Forecasting
5. Develop and Prioritize Ground Transportation Solutions to Encourage Alternative Modes
6. Information Distribution and Marketing of Solutions
7. Monitor Implemented Strategies

Coordination with other stakeholders is necessary during almost any step to ensure the greatest success of implemented strategies. In some cases strategies cannot be implemented unless another entity is involved. For example, introducing or changing a transit service requires the transit provider to be involved. Engagement of potential stakeholders should be done as early as possible in the process. Furthermore, participation in regional planning efforts in addition to stakeholder engagement can help in the prioritization of airport needs at the regional level and build working relationships if they do not already exist.

As noted above, the decision of whether or not to employ all or even parts of this process is dependent on the scope and level of investment necessary for the potential strategy.

## Strategies

Numerous strategies were suggested by the reviewed literature. The following is a list of potential strategies to implement for encouraging greater use of alternative ground transportation modes:

- Improve transit availability and efficiency through a combination of improvements
  - Increase frequency
  - Expand operating hours that ensure passengers on all flights during the day can access transit, including on weekends
  - Improve directness of routes between the airport and primary origins/destinations, which could include dedicated airport transit service
  - Limit the number of transfers necessary to complete a trip
  - Expand service area
  - Improve transit schedules to align with flight schedules
- Stakeholders subsidize transit (typically only for larger airports with greater non-FAA funding)
- Make access to alternative modes as convenient and comfortable as possible, ideally more so than for the private auto
  - Locate facilities as close to the ticketing area and baggage claim as possible, ideally integrated into the terminal itself or within 500 feet of the terminal
  - Prioritize signage within the airport that directs and informs passengers about alternative modes
  - Provide clear, frequent, easy, and detailed information about transit and other modes at the airport and on the airport's website tailored to a passenger's unique needs, including:
    - Cost
    - Routing
    - Schedules
  - Trip Planning - Provide temperature-controlled facilities and walkways to protect users from the elements and accommodates the transport of large baggage
  - Prioritize grade-separated connections between facilities and the terminal to improve pedestrian safety by avoiding vehicle and pedestrian conflicts, and to reduce pedestrian delay from waiting to cross streets

- Equip transit vehicles with baggage storage and provide baggage assistance when transferring bags between transit and the terminal (could be on-site assistants or a full-service baggage handler)
  - Simplify fare structure
  - Prioritize the installation of bike facilities
  - Ensure adequate lighting and security measures to improve the feeling of safety
- Provide ground transportation assistants who can help promote the use of alternative modes when asked for assistance on directions and mode choice
- Provide real-time arrival/departure information
  - Display flight information at transit centers used by passengers
  - Provide real-time transit information at the airport
- Increase parking fees (although this can lead to reduced revenues and some travelers will switch to drop-offs/pick-ups rather than an alternative mode)
- Create a ground transportation center to consolidate all ground transportation modes, which can include amenities such as airline check-in

## **Seamless Travel Experience**

The main element missing from typical air travel that would create a more seamless experience between origin/destination and the airport is the handling of baggage. As stated in several resource reviews, including the Airport Master Plan, this is potentially a desired service in Aspen and at the Airport. Many of the reviewed resources recommend baggage handling in order make alternative modes more attractive, yet few examples of it exist in a formal way, especially in the United States.

It is clear that extensive market research should be executed to determine if users of the Airport would use baggage handling services before any such service might be implemented. Some of the reviewed resources cautioned that passengers might not be willing to part with their bags due to mistrust or a desire to simplify their travel planning. Furthermore, most documentation of failed baggage handling and remote check-in services involve a transit station offering the service to a general travel population, and the check-in process was managed by the airlines. In contrast, the primary success case of these premium services is Disney World with Orlando International Airport. This is likely due to the fact that tourism, and specifically Disney, is the primary reason for air travelers to visit Orlando, and that these travelers perhaps have more baggage than a business traveler or someone visiting family. This service is also managed by a private third party, and is free to Disney World Resort guests.

It should also be noted that baggage handling is easiest to implement from the airport to the destination because airport security is no longer a concern. Security clearance and baggage fees complicate this process for the origin-to-airport portion of a trip.

Currently there are a few companies that provide off-airport baggage handling and even fewer have implemented remote check-in services at hotels and convention centers. BAGS is one such company that offers this suite of services. A primary example is Orlando, where BAGS handles over 2 million pieces of luggage annually via remote check-in. BAGS notes that its service of delivering bags from the airport to the passenger's final destination is currently available at the Aspen/Pitkin County Airport.

Other strategies that aren't necessarily seamless but help make a traveler's experience through the airport more efficient could be the implementation of at-home baggage tag printing and self-serve bag-drops. The combination of these two services would mean the only stop point for a departing passenger would be at the security checkpoint. The tag printing requires support and implementation from airlines as well, but as the SITA report points out, most airlines are expected to have support for such services by 2015.

Smartphone applications could help improve the travel experience for arriving passengers. Real-time baggage tracking could help passengers know how long it will take to acquire their baggage, meaning they can better plan what will be the best transportation mode to leave the airport by if such a decision has not already been made, or allow the passenger to better time their exit from the airport. GPS-based guidance applications could help passengers be directed to a transit stop or even assist in helping the passenger select the best mode to reach their destination, much like a real-time trip planner. For example, such an application could read in route and real-time bus arrival information to suggest a particular bus to take and how to reach that bus.

## AIRPORT RESEARCH & SURVEY

### *General Approach*

This portion of the study focused on researching individual airports to better understand the various elements of their surface transportation system and how those elements function. With this understanding, the research team then explored programs and practices implemented or considered at these airports to achieve the primary goals addressed at the beginning of this report. The research relied on a review of airport websites, Airport Master Plans (if available), other airport related studies, and direct contact with airport management.

Two types of airports were researched:

- Peer Airports – Those airports of relatively similar size, situated in similar communities, and serving similar clientele to the Aspen/Pitkin County Airport, namely regional airports that serve ski and vacation resort communities.
- Other Focus Airports – Other airports that were identified because they exhibited some characteristics similar to the Aspen/Pitkin Airport, but perhaps not on the same scale, or because they were believed to provide an exceptional passenger experience.

The research approach varied between these two types of airports, with the greater effort expended on the peer airports, which were expected to yield practices with the greatest potential for applicability to the Aspen/Pitkin County Airport.

### *Peer Airports*

#### Identification of Peer Airports

The initial list of peer airports was identified by the design guidelines project team based on their familiarity with airports around the country and relying on important metrics characterizing the airports. The primary metrics included:

- Passenger enplanements
- Based aircraft
- Aircraft operations
- Parking
- Car rental characteristics
- Primary seasonal recreational draw

Less important, but still relevant, metrics also considered were area population, distance between the airport and destinations, and distance between the airport and the nearest major metropolitan area.

This preliminary list was reviewed with staff at the Aspen/Pitkin County Airport and also with the Design Guidelines Task Force, and it was revised as appropriate. Based on this approach, the following airports were selected as peer airports:

- Durango-La Plata County Airport (DRO) – Durango, CO
- Eagle County Regional Airport (EGE) – Gypsum, CO / Eagle, CO
- Friedman Memorial Airport (SUN) – Hailey, ID / Sun Valley
- Glacier Park International Airport (FCA) – Kalispell, MT
- Jackson Hole Airport (JAC) – Jackson, WY
- Monterey Regional Airport (MRY) – Monterey, CA
- Montrose Regional Airport (MTJ) – Montrose, CO
- Myrtle Beach International Airport (MYR) – Myrtle Beach, SC
- Palm Springs International Airport (PSP) – Palm Springs, CA
- Santa Barbara Municipal Airport (SBA) – Santa Barbara, CA
- Telluride Regional Airport (TEX) – Telluride, CO
- Yampa Valley Regional Airport (HDN) – Hayden, CO / Steamboat Springs, CO

Metric information about these airports can be found in the **Appendix**.

## Survey Approach

Having identified the peer airports that they were interested in researching, the team compiled a list of managers for these airports and then made initial telephone calls to these managers to explain the purpose of the study and the intent of the survey, and to request their participation in the research. In some cases, the airport managers delegated responsibility to a deputy manager, operations manager or marketing director.

This telephone contact was followed up with a questionnaire prepared by the research team to provide insight into the types of information which were being explored. A sample of the questionnaire is provided in the **Appendix**. The questionnaire was comprised of three elements. The first was a summary of Airport Characteristics related to that specific airport. These characteristics were compiled from a variety of sources, so the respondent was simply asked to review this information for reasonableness and to fill in any gaps in the data. The remaining two sections included a series of questions regarding programs and practices employed at the airport which are directed at the two goals of this research:

- Encouraging the use of alternative modes
- Providing a seamless travel experience

Once respondents had an opportunity to review the questionnaire, telephone interviews were scheduled at their convenience. In several cases, the respondents chose to prepare a written response in lieu of the interview. In one instance, an airport manager, while very interested in the subject matter, declined further participation because he did not believe that he had anything useful to offer. The interviews used the questionnaire as a basic outline, but the interviewers were able to direct the conversation to delve into greater detail on subjects that arose which might be of interest to the Aspen/Pitkin County Airport. The interviews typically lasted about an hour. In some cases, subsequent calls were conducted to further explore a specific topic. The respondents were provided an opportunity to review the summaries to ensure that the information was properly recorded. The summaries of each of these interviews are provided in the **Appendix**.



## Summary of Interviews

The interviews were used to identify the experiences of the peer airports in attempting to address the targeted goals related to encouraging the use of alternative modes and creating a seamless travel experience for their users. Not unexpected, in that the peer airports were chosen because they share certain characteristics, a number of the comments heard through the interviews were similar in nature. However, there were also some unique practices and programs identified through the survey. The following sections itemize both the common and the unique trends and practices that were uncovered in the interviews.

### Encourage Use of Alternative Ground Transportation Modes

It should first be noted that none of the respondents carefully track statistics of ground transportation mode share at the airport. However, they all have a good understanding of the issues and opportunities faced by each of the alternative modes.

#### *Private Autos, Rental Cars, and Taxis*

Use of private automobiles, rental cars and taxis is a prevalent choice at many of the airports for a number of perceived reasons:

- Availability
- Maximum flexibility
- Comfort
- Convenience
- High-end clientele prefer the private nature

For the most part, the airports provide public parking in locations immediately adjacent to or very close to the terminal. Parking is typically free or reasonably priced. At some of the airports where public parking is currently free, consideration is being given to converting to paid parking. This seems to be viewed more as an additional revenue source than as a means to discourage use of the auto. At the Santa Barbara Municipal Airport, the Master Plan includes a new parking garage adjacent to the terminal, largely justified by the resulting ability to eliminate the costly operation (\$750,000 per year) of a shuttle to a remote parking lot. Management at the Yampa Valley Regional Airport will consider several unique ideas in future plans: valet parking and covered premium parking in a lot covered with solar panels.

Rental car companies are typically provided convenient locations near the baggage claim area in the terminal for their desks and very close to the terminal for lots used for staging vehicles. A number of the airports noted that their long range planning includes expanded parking for rental cars. While several airports suggested that they may eventually need or want to strive for less reliance on rental cars, it is also recognized that rental car concessions represent a significant funding source for the airports. (At the Glacier Park International Airport, it was noted that rental car and parking revenues represent 50 percent of the annual operating budget.) Several respondents noted that alternative funding sources would need to be identified if programs were implemented to discourage the use of rental cars at their airports.

Taxis are a favorite choice of many tourists, and some of the airports have felt the need to focus on improving the quality of this service. Through a concerted effort in the permitting process at the Friedman Memorial Airport, vehicles are now inspected and better maintained and drivers wear uniforms, hence making the taxi operators better businesses and improving the experience of the traveler. Management at the Santa Barbara Municipal Airport will soon be undertaking the development of a new commercial transportation plan which will address new equipment requirements, fees, procedures, etc., all aimed at improving the quality of the service. This plan will also consider ways to provide incentives for ground transportation providers to improve their vehicles (for passenger comfort, fuel efficiency and environmental standards).

### ***Shuttles***

Pre-arranged commercial and lodging courtesy shuttles and limousines are an integral part of the ground transportation system at these airports. As such, every effort is made to accommodate them with easy access to the terminal. At many of the airports these shuttles are served curbside right outside the terminal; in others, they are served in separate lots that are typically situated just across the circulation drive from the terminal. At most of the airports, they pay a permit fee; at many of the airports, they also pay a per trip fee. There seems to be a diversity of thoughts regarding management of these operators; some of the airports limit the number of operators who are permitted to pick up passengers who have not pre-arranged their trip, while others take a truly “free enterprise” position.

### ***Transit***

A successful example of public transit serving the airport exists at the Eagle County Regional Airport. ECO Transit, operated by Eagle County, serves the terminal directly, and the service runs buses regularly between the airport and the ski resorts of Vail and Beaver Creek. The management of the bus system works closely with the airport to tailor its schedules to match flight arrival and departure times as much as possible.

At two of the surveyed airports, public transit routes are nearby the airports but do not access the airport site itself. The bus stops are, however, within a five minute walk of the terminal. At these airports, Friedman Memorial Airport and Santa Barbara Municipal Airport, the airport site is too constrained to accommodate these large vehicles. Furthermore, the bus systems do not provide dedicated service just for the airport, but instead serve the airport as part of their larger service plans. As a result, schedules tend to be driven more by commuter patterns (rather than airline schedules) and the vehicles are not specifically designed to accommodate passenger baggage. Therefore, they tend to be used more by employees at the airport than by passengers. To serve the airport adequately, it is believed that dedicated buses would be needed.

Only one of the airports surveyed, the Santa Barbara Municipal Airport, is currently served at all by rail. In Santa Barbara there is an Amtrak stop (nicely designed with benches and lighting, but not considered to be a station) located about one mile from the airport terminal. However, it receives little airport-related use because the train schedule does not coincide well with the timing of the banks of flights at the airport. Although airport management has attempted to work with Amtrak management to modify schedules to improve service to the airport, this has proven to be very challenging because the train schedules are constrained due to freight rail use of the same line. Nor does Amtrak management believe that there is sufficient demand from the airport to justify changing schedules.

Four of the airports surveyed have no public transportation service. At the Jackson Hole Airport a thorough feasibility study was conducted to determine if adding local transit service between Jackson and the airport was feasible. The findings of the study resulted in a recommendation to explore two other alternatives in lieu of adding service:

- Use of subsidies, vouchers, or similar mechanisms to bring down the cost of existing airport-oriented transportation options to encourage their increased use.
- An employee-oriented ridesharing/ride-matching program.

### ***Bicycles***

Bike racks are provided at a number of the airports. They tend to be used mostly by employees. At the Santa Barbara Municipal Airport, bike racks are available at the terminal and free bike lockers are located in the remote parking lot. In addition, the long term plans include bike lockers in the terminal building.

### **Seamless Travel Experience**

Terminal layout can be an effective way to ease the stress of arrival/departure at these airports where many of the travelers may not be frequent travelers. For example, the Yampa Valley Regional Airport has been designed so there are no conflicts between incoming and outgoing pedestrian flow. Pedestrian flow patterns are intuitive and direct, and sight lines are clear. Ceramic tiles have been used on the floor to designate walking areas, while carpet is used in waiting areas. In many of the airports, ground transportation desks are in the baggage claim area.

Also at the Yampa Valley Regional Airport, the restaurant was relocated to a central location within the terminal, which creates a sense of activity in the airport. The airport has recently initiated a new service in the terminal to assist travelers – a ski rental kiosk around the corner from the baggage claim area. The kiosk is operated by a private vendor, and the airport will receive a percent of the gross revenue generated by the vendor.

The use of “ambassadors” or “greeters” was noted in a number of the airports. These individuals are typically situated in the terminal, with their primary responsibility being to welcome travelers and to answer questions that they may have about airport facilities, ground transportation and community activities. These individuals are often volunteers in programs administered either by the airport or another local organization, such as the Chamber of Commerce. A number of the airports have unmanned information kiosks in the terminal. Several noted that these used to be manned, but staffing them became problematic. The Chamber of Commerce recently started to staff a desk at the Santa Barbara Municipal Airport. Management at the Friedman Memorial Airport is planning to offer customer service training for all employees working at the airport and its vendors, with the goal of improving the quality of the traveler experience.

Baggage assistance is a service that is critical to the experience of the traveler, because the travelers at these airports often have a number of bags, oversized bags and recreational equipment. The surveyed airports indicated a few practices that they employ to ease this issue for travelers:

- The Santa Barbara Municipal Airport provides a contracted baggage assistance program to assist passengers with luggage during the peak departure times.

- A very successful program at the Yampa Valley Regional Airport has been the use of Passenger Services personnel, who are hired by the airport and who assist with luggage and transportation arrangements and assist with many types of questions from travelers. Wearing distinctive uniforms for easy recognition, they have become known as the “Red Coats” at the airport. Services are provided about 15 hours a day, 7 days a week by 26 persons in the program during the four month winter season; the program drops back to about 5 part-time staff during the off season. The total annual budget including personnel and operations is \$135,180. One of the key tenants of airport management is that the airport is the first and last impression that visitors have of the area so they need to do everything possible to make sure that impression is as positive as they can make it. Passenger Services is one critical part of that effort.
- Several of the respondents indicated that, in lieu of baggage assistance, shuttle and taxi drivers can assist, which is a common practice at Friedman Memorial Airport. It was further noted that ground transportation rules at the Eagle County Regional Airport were recently relaxed to allow a driver to assist his/her guest from the baggage carousel to the car. This allows for the guest’s needs to be attended to in a more hands-on, personal manner and helps to quell some of the confusion a passenger may have when trying to locate the correct ground transportation provider or vehicle.
- Curbside check-in is also popular at some of the airports surveyed. It is estimated that the curbside check-in is used by as many as 35 percent of airport travelers at the Eagle County Regional Airport.
- United Airlines at the Aspen/Pitkin County Airport has piloted a program to allow for self-serve baggage drop to reduce the need for check-in. Additional information about the logistics and usage of this service were not available at the time of this study. Additional information about the service will be provided should it become available.

Management at all of the airports is very cognizant of the need to provide clear, concise and readily accessible information to the airport traveler regarding their ground transportation options. This needs to be available during their pre-trip planning as well as when they arrive at the airport. All of the airports noted the importance of an extensive signing plan within the terminal to direct passengers to the various ground transportation options. Other techniques noted in the interviews include:

- All of the airports have websites, but the extent of the information on ground transportation options and the ease of their use varies quite a bit.
- The Santa Barbara Municipal Airport also makes use of Twitter and Facebook. In addition, the airport has a mobile app, which provides real time flight schedules, parking rates, a terminal map, rental car phone numbers, concessions and contact numbers at the airport.
- Free Wi-Fi is available in most of the airports, so passengers can readily access information.
- The Glacier Park International Airport utilizes a home-spun, funny (yet very informative) video on their website and at the security checkpoint queue in the terminal to provide guidance to travelers about how to be prepared to complete the check-in process. This video is performed by three musicians in beach wear playing guitars and singing a song about the process.

## *Other Focus Airports*

### Identification of Other Focus Airports

Focus airports included airports that those involved with the Airport felt were similar in some aspects to the Aspen/Pitkin County Airport but perhaps not on the same magnitude, or were airports that some felt were providing an exceptional passenger experience. The other focus airports identified for additional research include:

- Dallas/Fort Worth International Airport (DFW) – Dallas/Fort Worth, TX
- Denver International Airport (DEN) – Denver, CO
- Incheon International Airport (ICN) – Seoul, South Korea
- Innsbruck Airport (INN) – Innsbruck, Austria
- Munich Airport (MUC) – Munich, Germany
- Queenstown Airport (ZQN) – Queenstown, New Zealand
- Sion Airport (SIR) – Sion, Switzerland

### Research of Other Focus Airports

#### Dallas/Fort Worth International Airport (DFW)

Dallas/Fort Worth International Airport is situated between Dallas and Fort Worth, Texas. The region has several transit modes, but only bus service currently accesses the airport directly. The bus services provide connection to the Dallas Area Rapid Transit (DART) light-rail system and the Trinity Railway Express (TRE) commuter rail system, which provides commuter rail between Dallas and Fort Worth. Passengers accessing DART's bus system or TRE's commuter rail system must ride a bus from the terminal to a remote parking lot transfer center. From there they can catch their DART bus or ride a connecting bus to the TRE station. Passengers accessing DART's light-rail system can board a bus that provides direct access from the terminal.

An extension of the DART light-rail system is scheduled to provide in-terminal access in 2014. Other plans call for additional commuter rail lines connecting at DFW; however, no system with this access is currently being built.

DFW's website provides a ground transportation page which users can drill down by mode. Under public transportation, users can select which system (DART or TRE) they would like to use. Each respective transit system page provides detailed text on how to access a particular airport connecting service. No trip planners or links to the transit provider websites are provided. There is also a page for courtesy shuttles provided by hotels which lists each hotel and a phone number to contact.

#### Denver International Airport (DEN)

Denver International Airport (DIA) is the largest airport providing access to ski resorts throughout Colorado and the only airport providing year-round international commercial flights. Travel time to ski resorts varies, but most passengers travel to ski areas along the I-70 corridor, which are within a couple hours by private vehicle. Tour and group shuttles provide service from the airport to numerous ski areas as well.

The main terminal at DIA has two access points (East and West), with both sides supporting access to all modes, with the exception of transit which is available only on the west side. Information booths are available for many of the ground transportation services, including a dedicated booth for Denver's regional transit provider, the

Regional Transportation District (RTD). Riders can obtain information brochures, ask questions, and purchase fares at the booth. There is also a general information booth that can help direct passengers to the correct ground transportation booth.

Three different transit services are provided at DIA by RTD: a local-limited route, an express regional route, and SkyRide routes. By 2016 the airport will be served by a commuter rail line that goes to downtown Denver. The SkyRide routes are dedicated routes for airport users and employees, connecting regional activity centers with DIA. Riders can use the routes to travel between two non-airport stops, but the primary purpose of these routes is for airport users. Vehicles are coach buses with luggage storage below the riders. Drivers assist riders with loading and unloading luggage. The DIA website displays some information about the SkyRide routes, such as general operating hours and fares, but prompts passengers to visit RTD's website for more detailed information.

### **Incheon International Airport (ICN)**

Incheon International Airport is the airport serving Seoul, South Korea. The airport's ground transportation Passenger Terminal serves all modes, designating gates to specific modes. Bus service includes local, regional, and late-night bus lines. An express rail line that connects the airport to downtown Seoul is available below the Passenger Terminal. It also connects to numerous other stations where passengers can transfer to Seoul's subway lines.

The airport website provides two ways to find ground transportation information. There are direct links by mode on the homepage, and there is a ground transportation page. The bus page displays a map with gate information and lists each route with a button that pops up more detailed information, such as cost and frequency. Users can filter bus services by destination. The rail page displays a stop map, transfers available from each stop, a timetable, and directions to the airport station.

### **Innsbruck Airport (INN)**

Innsbruck Airport in Austria is the nearest airport to the Garmisch-Partenkirchen area in Germany, which is home to a number of ski areas and is a sister city to Aspen. It is roughly an hour drive (45 miles) from the airport to Garmisch-Partenkirchen, and about an hour and a half train ride. Riding the train requires some other form of transport from the Innsbruck Airport to the train station, as it is not located on-site. However, public bus does pick-up/drop-off directly in front of the terminal and provides service between the airport and downtown Innsbruck, which takes about 20 minutes. Taxis and private tour/shuttle services are also available, with some providing direct service to resorts. The airport's transit information page hosts a trip planner plug-in for the city's transit provider, and also provides links to transit providers.

The airport notes that it has three "bulky bag" check-in counters to reduce passenger congestion. The airport also provides free baggage trolleys for people parking their cars.

### **Munich Airport (MUC)**

Munich Airport is also near the Garmisch-Partenkirchen area. It is the largest airport in the area with many more flight options compared to Innsbruck. It is roughly an hour and a half drive from the airport to Garmisch-Partenkirchen, and about a two and a half hour train ride. The terminal is directly served by numerous bus lines that are local, regional, and even international to places such as Innsbruck. Two rail lines also directly serve the terminal, providing connections to downtown Munich and numerous suburbs.



Munich Airport's website lists all of its access modes on a ground transportation page, which identifies transit options first, then other modes. Its train page provides a map of where the train stations are at the airport, a map of where the two lines travel, and travel times to stations along the route of each train. The bus page also provides a stop map for the airport, and lists the numerous bus routes serving the airport with links to their respective route-specific webpages. Hotel shuttles are listed on their own page with contact information available for each hotel. The website also actively bills the airport as an airport to use for visiting ski resorts, as it has a "Ski Gateway" page that provides information on a few ski resort transportation services.

The Munich Airport also provides some premium services to passengers. Visitors can arrange to use the airport's meet and assist service (MAAS), which can be used to help with language barriers, move luggage at check-in or arrival, and guidance through the airport. The service must be arranged ahead of time and is only offered within the terminal. For a more full-service experience, passengers can arrange to use the airport's VIP Service. This service provides check-in and baggage handling, transfer to/from the aircraft via private vehicle, and numerous other high-end services.

### **Queenstown Airport (ZQN)**

Queenstown Airport in New Zealand was researched because it is a sister city to Aspen. Its airport is served by the local transit provider, ConnectBus. Buses directly serve the terminal and arrive every 15 minutes. The websites for both the airport and ConnectBus promote the bus as being convenient to most of Queensland's hotels. However, it does not list these hotels on a map or by station, instead recommending passengers ask the bus driver how to get to their destination. The bus serving the airport goes directly to downtown Queensland where passengers can continue on the route (the route serving the airport is not a dedicated service) or transfer to other bus routes. Regional buses and coach lines also serve the airport.

### **Sion Airport (SIR)**

Sion Airport in Switzerland is a small airport located 30-50 miles from numerous ski resorts in the Alps. The airport borders the train tracks that carry numerous rail services into Sion, including high-speed rail. These rail services, and the rest of Sion, can be accessed from the airport by bus. A local bus station lies across the train tracks and is accessible by a pedestrian tunnel. Passengers can also ride a shuttle directly from the terminal to the rail station. The airport's website provides links to maps, schedules, and/or websites of the bus and rail services.

The airport also has a page on their website describing handler services. These services are targeted towards private airplane users and are mainly related to flying (fueling, deicing, etc.). However, this service does coordinate with rental car companies to provide a vehicle. It also can coordinate with local helicopter companies to provide direct transport to numerous ski resorts.

### **Other Sister Cities**

The sister cities of Chamonix (France) and Davos (Switzerland) were reviewed to see what type of airport access exists. Unfortunately, commercial air access to these cities is limited, requiring long-distance drives or train/bus rides. Thus, the airports providing the nearest service to these cities were not analyzed. Shimukappu (Japan) can be reached by airports in Sapporo and Obihiro, but it was difficult to determine what airport ground access is like. Both airports appear to be served by bus that can link to rail to provide alternative mode access to Shimukappu. Bariloche (Argentina) has its own airport, but little information about ground access is available.

## RECOMMENDED IMPLEMENTATION STRATEGIES

Based on this research, the Aspen/Pitkin County Airport employs and is already proactively pursuing many practices that address the stated goals at a level equal to or greater than other airports of a similar size. Nevertheless, the research team has identified a number of strategies that could further enhance the goals of encouraging the use of alternative ground transportation modes and providing a seamless travel experience at the Airport. These strategies as outlined in the following tables are grouped according to the level of anticipated responsibility of the Airport.

### *Encourage Use of Alternative Ground Transportation Modes*

**Table 1** lists recommended strategies that encourage the use of alternative ground transportation modes along with their potential benefits and responsible parties.

**Table 1. Strategies to Encourage Use of Alternative Ground Transportation Modes**

Strategies	Benefits	Responsibility
Provide clear signage in the terminal and outside to direct passengers to the transit stops and the commercial ground transportation loop	Improves information availability	Airport
Display signs for alternative modes to be placed as good or better than the placement of parking and rental car signs	Improves visibility of alternative modes	Airport
Develop marketing materials (advertisement displays, brochures, promotional homepage displays) for alternative modes, including emphasis that transit services to Aspen and Snowmass Village are free	Improves visibility of alternative modes	Airport
Have greeters/passenger assistants promote transit/shuttles when asked about getting to Aspen and/or Snowmass Village	Improves visibility of alternative modes	Airport
Reroute the "Parking and Transportation" link on the airport website homepage to the ground transportation page rather than the parking page, order modes with alternative modes first and parking/rental cars last, and display all transit information on ground transportation page rather than forcing users to click another page	Improves ease of use and visibility of alternative modes	Airport
Develop a smartphone application that helps guide passengers from the terminal to the bus stops (or even their final destination via transit) and commercial vehicle loop using GPS	Improves ease of use and makes alternative modes more convenient	Airport
Continue to participate in regional planning efforts	Better project support and development	Airport
Provide free baggage trolleys that can be used between the transit stops and the terminal (dependent on facility upgrades)	Improves ease of use	Airport

## Surface Transportation Best Practices Study

Strategies	Benefits	Responsibility
Explore the feasibility of installing bike lockers (including TSA regulations)	Promotes bike use	Airport
Consider heated sidewalks between the terminal and the airport bus stops as a short-term improvement	Improves passenger safety and comfort	Airport, RFTA
Ensure that the walkway from terminal to bus stations on SH 82 is enclosed and temperature controlled for the longest distance possible, and is conveniently connected to the baggage claim in addition to the ticketing area	Improves comfort of use during poor weather and improve the convenience of transit	Airport, RFTA (upon terminal redevelopment)
Work with RFTA to install real-time bus information within the terminal, which could include estimated walk time to the bus stations, bus route and time display, and large map digital display with real-time bus locations and estimated arrival times	Improves ease of use	Airport, RFTA
Display flight information at transit centers and hotels/resorts	Improves availability of information	Airport, RFTA, Hotels/Resorts
Ensure adequate lighting and security measures at transit stops and walkway, and on commercial vehicle loop	Improves the feeling of safety	Airport, RFTA, CDOT
Continue to protect the transit corridor identified in the Entrance-to-Aspen ROD	Preserves transit opportunities	Airport, RFTA, Aspen, CDOT
Consider integration of transit stops (including accommodations for possible fixed-guideway transit access) into the terminal in terminal redevelopment plans	Improves the convenience of transit	Airport, RFTA, Aspen, CDOT
Improve bike connection from the grade-separated transit tunnel to the terminal	Improves access to the terminal	Airport, Aspen
Support RFTA in the development of a system-wide trip planner, and incorporate a website plug-in of the trip planner onto the Airport's website with the origin pre-populated with the airport's address	Improves ease of use	RFTA, Airport
Support RFTA in the development of a system-wide map and display on the Airport's website and within the terminal	Improves ease of use	RFTA, Airport
Support RFTA in schedule modifications to better accommodate the schedules of employees at the airport	Improves ease of transit use	RFTA, Airport
Equip a few buses with luggage storage capabilities and use buses on schedules that coincide with known banks of flights	Improves ease of transit use and improves connectivity	RFTA
Consider allowance of overnight parking at park-n-ride facilities to accommodate air travelers	Improves access to transit	RFTA
Consider an extension to the airport stops of Aspen city bus routes traveling downvalley on SH 82	Reduces need for transfers and increases mobility	RFTA, Aspen

## Seamless Travel Experience

Table 2 lists recommended strategies that promote a seamless travel experience along with their potential benefits and responsible parties.

**Table 2. Strategies to Create a Seamless Travel Experience**

Strategies	Benefits	Responsibility
Collect available data and conduct appropriate analyses to determine the demand for baggage check-in/delivery, airport dedicated service to hotels/resorts, and for alternative modes in general	Provides needs of passengers and ensures investment is based on demand	Airport
Include questions regarding to-airport baggage handling services in the next Airport Customer Survey (planned for 2015)	Provides needs of passengers and ensures investment is based on demand	Airport
Expand and improve baggage assistance services to help arriving passengers with their luggage	Provides premium service that reduces passenger stress of handling baggage	Airport, Aspen Portage
Encourage the creation of a forum that brings together the Airport, area hotels/resorts, and RFTA to discuss airline and baggage check-in capabilities on-site at hotels/resorts and the Rubey Park Transit Center (investigate partnering with BAGS or similar service to provide a more integrated airline and baggage check-in/delivery system)	Provides premium service that reduces passenger stress of handling baggage	Airport, RFTA, Hotels/Resorts, Airlines, Aspen Ski Company, Aspen
Work with airlines to integrate at-home baggage check-in, self-serve baggage drop, and real-time baggage tracking	Improves efficiency of check-in process	Airlines, Airport

## APPENDIX

### References

Preferred Terminal Alternative from the 2012 Airport Master Plan

Summary of Peer Airport Metrics

Sample Peer Airport Questionnaire

Peer Airport Interview Summaries

## *References*

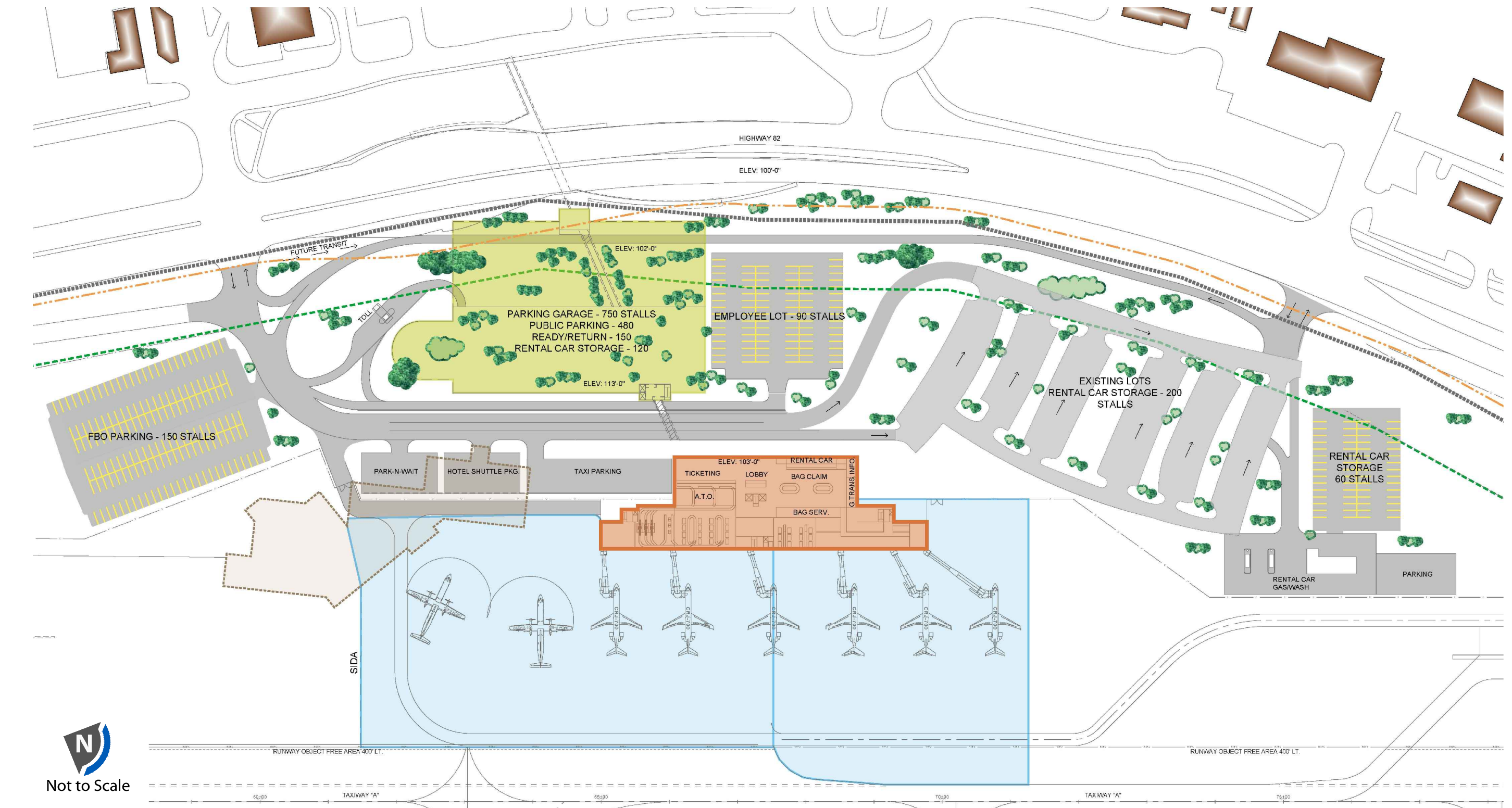


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## Surface Transportation Best Practices Study

### *Preferred Terminal Alternative from the 2012 Airport Master Plan*



Not to Scale



Master Plan Update

Figure 5-7  
**Terminal Area Planning - Alternative 1 "Simple"**

*Summary of Peer Airport Metrics*

## Surface Transportation Best Practices Study

Metric	Aspen (ASE)	Jackson (JAC)	Sun Valley (SUN)	Telluride (TEX)	Myrtle Beach (MYR)
<b>Airport Operations</b>					
Year	2012	2012	2012	2008	2012
Passenger Enplanements	214,892	274,342	47,734	7,828*	722,775
Based Aircraft	100	52	150	42	43
Air Carrier Operations	9,485	6,049	710	-	13,909
Air Taxi Operations	8,797	5,570	8,485	2,152	78,340
General Aviation Operations	18,493	14,110	17,369	9,311	13,629
Military Operations	125	349	119	0	11,004
Total Aircraft Operations	36,900	26,078	26,683	11,463	116,882
<b>Landside Transportation</b>					
Short Term Parking Spaces	115 (\$12/day)	Unknown (Free)	235 (\$8/day)	80 (\$7/day)	600 (\$15/day)
Long Term Parking Spaces	155 (\$6/day)	Unknown (\$10/day)	108 (\$8/day)		500 (\$9/day)
Total Public Parking Spaces	270	390	343	80	1100
Employee Parking Spaces	69	Unknown	35	38	116
Rental Car Agencies	5 in terminal 2 off-site	3 in terminal 4 off-site	3 in terminal 1 off-site	2	11
Rental Car Ready Spaces	59	Unknown	Unknown	60	850
Rental Car Storage Spaces	Not Striped	Unknown	Unknown	Unknown	Unknown
<b>Demographics</b>					
Area Population	16,000	9,700	4,100	2,400	27,800
Primary Winter Recreation	Skiing (Spot)	Skiing (Spot)	Skiing (Spot)	Skiing (Spot)	Golf (Spot and Dispersed)
Primary Summer Recreation	Festivals (Spot), Hiking (Dispersed)	Festivals (Spot), Parks (Dispersed)	Festivals (Spot), Hiking (Dispersed)	Festivals (Spot), Hiking (Dispersed)	Golf, Beach (Spot and Dispersed)
Airport Surroundings	Rural Valley (space constrained)	National Park (space constrained)	Valley (space constrained)	Valley (space constrained)	Beach (somewhat constrained)
Distance to Resort/Destinations	4 Miles (Aspen)	10 Miles (Jackson)	12 Miles (Sun Valley)	5 Miles (Telluride)	1-15 Miles
Distance to Major Metro Area	200 Miles (Denver)	280 Miles (Salt Lake City)	155 Miles (Boise)	320 Miles (Albuquerque)	175 Miles (Charlotte)

\* From 2012



## Surface Transportation Best Practices Study

Metric	Aspen (ASE)	Palm Springs (PSP)	Eagle (EGE)	Durango (DRO)	Kalispell (FCA / GPI)
<b>Airport Operations</b>					
Year	2012	2012	2012	2009	2012
Passenger Enplanements	214,892	867,718	167,901	186,567*	192,437
Based Aircraft	100	98	100	73	159
Air Carrier Operations	9,485	11,781	4,092	8,760	2,893
Air Taxi Operations	8,797	20,059	7,057	3,200	5,883
General Aviation Operations	18,493	24,440	20,120	34,000	15,225
Military Operations	125	1,384	5,117	500	1,074
Total Aircraft Operations	36,900	57,664	36,386	46,460	25,075
<b>Landside Transportation</b>					
Short Term Parking Spaces	115 (\$12/day)	850 (\$12/day)	602 (free, 7 days)	400 (\$7/day)	Unknown (\$8/day)
Long Term Parking Spaces	155 (\$6/day)		773 (free, 30 days)		Unknown (\$48/week)
Total Public Parking Spaces	270	850	1375	400	630
Employee Parking Spaces	69	175	95	Unknown	110
Rental Car Agencies	5 in terminal 2 off-site	10	7	5	4 in terminal 3 off-site
Rental Car Ready Spaces	59	260	240	300	250
Rental Car Storage Spaces	Not Striped	Unknown	163 Return Spaces	Unknown	Unknown
<b>Demographics</b>					
Area Population	16,000	156,800	13,000	17,200	91,600
Primary Winter Recreation	Skiing (Spot)	Golf (Spot and Dispersed)	Skiing (Spot)	Skiing (spot)	Skiing (Spot)
Primary Summer Recreation	Festivals (Spot), Hiking (Dispersed)	Golf (Minimal Demand)	Festivals (Spot), Hiking (Dispersed)	Festivals (Spot), Parks (Dispersed)	Parks (Dispersed)
Airport Surroundings	Rural Valley (space constrained)	City (somewhat constrained)	Valley (space constrained)	Rural, hills (somewhat constrained)	Rural, valley (somewhat constrained)
Distance to Resort/Destinations	4 Miles (Aspen)	1-20 Miles	30 Miles (Vail)	40 Miles (Durango Mtn. Resort)	20-30 Miles
Distance to Major Metro Area	200 Miles (Denver)	110 Miles (Los Angeles)	130 Miles (Denver)	215 Miles (Albuquerque)	240 Miles (Spokane)

\* From 2012



## Surface Transportation Best Practices Study

Metric	Aspen (ASE)	Monterey (MRY)	Yampa Valley (HDN)	Santa Barbara (SBA)	Montrose (MTJ)
<b>Airport Operations</b>					
Year	2012	2012	2008	2012	2012
Passenger Enplanements	214,892	196,268	99,969*	370,409	75,296
Based Aircraft	100	159	7	189	81
Air Carrier Operations	9,485	750	3,404	2,667	5,200
Air Taxi Operations	8,797	16,986	3,458	24,232	10
General Aviation Operations	18,493	37,042	5,513	75,069	21,000
Military Operations	125	1,265	24	1,550	250
Total Aircraft Operations	36,900	56,043	12,399	103,518	26,460
<b>Landside Transportation</b>					
Short Term Parking Spaces	115 (\$12/day)	92 (\$20-\$24/day)	14 (30 min., free)	187 (\$20/day)	Unknown (\$7/day)
Long Term Parking Spaces	155 (\$6/day)	320 (\$10/day)	350 (\$7/day)	1299 (\$12/day)	400 (\$42/week)
Total Public Parking Spaces	270	412	364	1,486	400+
Employee Parking Spaces	69	200+	25	150	60
Rental Car Agencies	5 in terminal 2 off-site	6	3	6	5
Rental Car Ready Spaces	59	200	120	Unknown	Unknown
Rental Car Storage Spaces	Not Striped	Unknown	Unknown	Unknown	Unknown
<b>Demographics</b>					
Area Population	16,000	118,700	22,900	89,600	19,100
Primary Winter Recreation	Skiing (Spot)	Golf (Spot and Dispersed)	Skiing (Spot)	Town (Spot)	Skiing (Spot)
Primary Summer Recreation	Festivals (Spot), Hiking (Dispersed)	Golf, Beach (Spot and Dispersed)	Festivals (Spot), Hiking (Dispersed)	Town, Beach (Spot)	Festivals (Spot), Hiking (Dispersed)
Airport Surroundings	Rural Valley (space constrained)	City, hills (space constrained)	Valley (generally unconstrained)	Town (space constrained)	City, farms, hills (slight constraint)
Distance to Resort/Destinations	4 Miles (Aspen)	1-10 Miles	22 Miles (Steamboat)	7 Miles (Santa Barbara)	65-95 Miles
Distance to Major Metro Area	200 Miles (Denver)	70 Miles (San Jose)	180 Miles (Denver)	95 Miles (Los Angeles)	260 Miles (Denver)

\* From 2012

*Sample Peer Airport Questionnaire*



## Peer Airport Questionnaire: **Yampa Valley Regional Airport (HDN)**

### Surface (Land-side) Transportation Best Practices Study

#### Project Overview

The Aspen/Pitkin County Airport is currently developing design guidelines that will shape the appearance and operations of that facility as it progresses through the 21<sup>st</sup> century. Part of that work effort includes maximizing the efficiency of the surface (land-side) transportation system at the airport (passenger cars, rental cars, shuttle buses, transit, etc.), and a component of that includes researching how other airports ensure their visitors have a pleasant and seamless travel experience from the time they leave home through the time they arrive at their ultimate destination.

The project team has identified your airport as one that exhibits several similarities to the Aspen/Pitkin County Airport, and would like to ask you a few questions about your airport operations and how you address passengers’ land-side travel needs between the airport and the local community.

#### Existing Airport Characteristics

Please verify the following information about your airport:

##### **Air Operations (2012 or latest year available)**

Passenger Enplanements:	99,969
Based Aircraft:	7
Air Carrier Operations (2008):	3,404
Air Taxi Operations (2008):	3,458
General Aviation Operations (2008):	5,513
Military Operations (2008):	24
Total Operations (2008):	12,399

##### **Parking**

Short Term Spaces:	14
Cost per Hour/Day:	\$1/hour, first hour free
Long Term Spaces:	350
Cost per Hour/Day:	\$7/day
Employee Spaces:	25
Number of Rental Car Agencies:	3
Rental Car Spaces:	120

Do you track information on the number or percentage of travelers who use the various land-side transportation choices that are available at your airport? If so, please provide the following information to the best of your ability. If you do not track this information but you are familiar with the choices, even you approximation of the split would be helpful.

Mode	Winter	Summer	Overall
Personal Vehicle			
Rental Car			
Public Bus			
Hotel/Lodging Shuttle			
Private Shuttle Service			
Taxi			
Other			

## Surface (Land-side) Transportation Practices

### Use of Alternate Travel Modes

What programs or practices do you employ to encourage the use of travel modes other than personal vehicle or rental car to get to and from the airport?

What other agencies or businesses are also involved in the program and what are their roles and responsibilities?

How did you implement the program?

How long did the implementation process take?

What is the general budget for the program?

What kinds of technologies do you use as part of the program or to promote the program (i.e., website links, smartphone apps, electronic message boards in the terminal/community, etc.)?

What airports, if any, did you use as examples when researching and developing the program?

Have you strategically designed the layout of your airport terminal (i.e., location of baggage claim, transportation services, rental car companies and public transit stops in relation to the arrival gate) to encourage passengers to choose alternate land-side travel modes? If so, how?

What other alternate travel programs or practices have you tried in the past that you felt were successful?

What key aspects of those programs or practices contributed to their success?

What have you tried in the past that did not work as well as intended?

What were the major issues that limited their success?

Do you have contacts at hotels, transportation providers or local agencies in the community who you feel do a good job of promoting alternate travel modes and influence residents, visitors and guests to not use rental cars or personal vehicles to travel to and from the airport?

### **Seamless Travel Experience**

What programs or practices do you employ to provide a seamless travel experience from the airplane to a visitor's ultimate destination in the community?

What other agencies or businesses are also involved in the program and what are their roles and responsibilities?

How did you implement the program?

How long did the implementation process take?

What is the general budget for the program?

What kinds of technologies do you use as part of the program or to promote the program (i.e., website links, smartphone apps, electronic message boards in the terminal/community, etc.)?

What airports or communities, if any, did you use as examples when researching and developing the program?

What other seamless travel efforts have you tried in the past that you felt were successful?

Why did you consider them successful?

What have you tried in the past that did not work as well as intended?

What were the major issues that limited their success?

Do you have contacts at hotels or transportation providers in the community who you feel do a good job of promoting and providing seamless travel services?





## Surface Transportation Best Practices Study

### *Peer Airport Interview Summaries*

# Peer Airport Survey – Durango-La Plata County Airport (DRO)

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The airport manager, while very interested in the subject matter, declined further participation because he did not believe that he had anything useful to offer. The following information has been extracted from various online sources.

## **Existing Airport Characteristics**

The Durango-La Plata County Airport is situated about 15 miles southwest of Durango in the southwest corner of Colorado. The airport serves the Four Corners region, including nearby ski resorts. It is co-owned by the City of Durango and La Plata County, and is overseen by the Durango-La Plata County Airport Commission.

Four commercial airlines currently operate at the airport. Year round service is provided by United Express to Denver, American Eagle to Dallas-Fort Worth, and US Airways Express to Phoenix. Variable seasonal service is provided by Frontier Airlines to Denver.

## **Use of Alternative Modes**

Five rental car companies operate on the site. Cars are stored and readied adjacent to the terminal. Six shuttle operations serve the airport, and limited public transit access is provided by Road Runner Transit. Ample parking is provided adjacent to the terminal and across the airport circulation drive. No bicycle or pedestrian facilities are provided to/from the airport due to its distance away from Durango.

## **Seamless Travel Experience**

The terminal offers a deli, gift shop, vending machines, newspaper and magazine racks, and an ATM.

# Peer Airport Survey – Eagle County Regional Airport (EGE)

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## Phone Interview Notes

Date: Tuesday, January 7, 2013  
Airport: Eagle County Regional Airport  
Location: Gypsum, CO  
Interviewee: Chris Anderson, Assistant Aviation Director  
Interviewer: Bob Felsburg, FHU

## Existing Airport Characteristics

The Eagle County Regional Airport is located about four miles west of Eagle, Co. The airport serves the heart of the Rocky Mountains, including nearby Vail and Beaver Creek ski resorts. It also provides access to other ski resorts not quite so nearby, including Copper Mountain, Keystone, Breckenridge and even Aspen. EGE is largely seasonal, with the greatest number of scheduled flights operating during the winter months. In the winter, American, Delta, United and Air Canada provide non-stop service to eleven major cities, including Atlanta, Chicago, Dallas, Denver, Houston, Los Angeles, Miami, Minneapolis, New York, Newark and Toronto. Summer operations include non-stop service to Dallas/Fort Worth, Houston and Denver. The terminal was originally constructed in 1996 and was remodeled in 2001 and 2007.

Mr. Anderson provided a number of changes to the statistics which we had provided regarding the existing airport characteristics; however, all of the changes were relatively minor in nature. EGE does not track information on mode share of travel to/from the airport, and Mr. Anderson indicated that it would be very difficult to estimate.

## Use of Alternative Modes

EGE is well served by public transit, provided by ECO Transit. This service runs buses regularly between the airport and the ski resorts of Vail and Beaver Creek. The ECO bus system, run by the County, works closely with the airport to tailor its schedules to match flight arrival and departure times as much as possible. Mr. Anderson noted that the transit service covers most of the banks of flights. The service is very conveniently located curbside at the terminal.

There are seven rental car companies located in the terminal. Also in the terminal are several ground transportation companies, Colorado Mountain Express and High Mountain Taxi. There are also 32 other ground transportation companies listed in the directory on the airport's website. In the terminal, the car rental and ground transportation desks are located directly across from the baggage claim area, and their vehicles ready or pick-up lots are conveniently located just steps from the terminal building via a heated sidewalk.

All public parking lots at the airport are free of charge, regardless of length of stay. During most times of the year, the public parking lots have sufficient capacity. During the peak winter season, an unpaved overflow lot is utilized. In the Master Plan, which includes plans for expanded public parking, it is recommended that the parking become paid parking. In fact, Mr. Anderson noted that an RFP will be issued shortly for a parking operator, so paid parking is likely to be implemented relatively soon.

## **Seamless Travel Experience**

The car rental and ground transportation tenants and providers at the airport are intent on providing a great and comfortable passenger experience. The airport collaborates with its tenants and providers to make sure that rules, regulations and procedures work not just for the airport and the tenants and providers, but also allow for the most convenient and comfortable experience for passengers, e.g. rental ready and ground transportation pick-up lots and public bus stop located just outside the door of the terminal, so there are no shuttles or long walks. This collaboration requires an ongoing communications effort.

Recently the ground transportation rules were relaxed to allow a driver to assist their guest from the baggage carousel to the car. This allows for the guest's needs to be attended to in a more hands-on, personal manner. This also quells some of the confusion a passenger may have when trying to locate the correct ground transportation provider or vehicle, which can be challenging in an environment in which drivers are not allowed to leave their vehicles to meet their guests.

To assist passengers in obtaining up to date information regarding flights, arrival FIDS (Flight Information Display System) displays exist in the ground transportation meeting area. In addition, free wifi is available in the airport, which allows travelers to check flight status and to view airport webcams from personal devices.

In addition to check-in kiosks and ticket counters inside the terminal, the airport offers curbside check-in as well. It is estimated that the curbside check-in is used by as many as 35 percent of airport travelers.

## **Additional Information**

Although not specifically related to either of these topics, Mr. Anderson provided a telling observation about planning for the future of airports. As part of the original landside planning effort for EGE in the 1990's the landside area was planned well for growth based on what was known at the time. The air service program at EGE grew more rapidly than expected, and the original terminal building and landside area constructed in 1996 was nearly doubled in 2001 to meet additional airline growth in the terminal. Since then, passenger numbers and air service has continued with an upward trend, increasing vehicular traffic at EGE, including ground transportation, car rental, and private vehicles. As is always a challenge with a facility that experiences seasonal surges, it cannot be expected to be built to meet the "Easter Sunday" surges. Hindsight being an advantage to the planning process, it would have been advantageous to plan roadways and circulation to allow for as much growth as possible, separating traffic types (ground transportation and private traffic, as well as separation of arriving and departing traffic) to the extent allowable under the funding available and the land constraints. With the new Master Plan, they will be attempting to do so.

# Peer Airport Survey – Friedman Memorial Airport (SUN)

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## Phone Interview Notes

Date: Thursday, November 14, 2013  
Airport: Friedman Memorial Airport  
Location: Hailey, ID  
Interviewee: Rick Baird, Airport Manager  
Interviewer: Bob Felsburg, FHU

## Existing Airport Characteristics

The Friedman Memorial Airport is located in Hailey, approximately 13 miles south of Sun Valley, south of Ketchum and north of the City of Bellevue. While the airport serves significant tourism, there is a very diverse international business climate in the area. It is estimated that approximately 30 percent of the airport users are comprised of local residents or second homeowners. Its setting is similar to Aspen's in that it is located in a narrow valley surrounded by mountains and State Highway 75 borders the airport. The site is very constrained, occupying only 209 acres.

Mr. Baird believes that the statistics which we had provided seemed reasonable. They maintained between 42,000 and 52,000 enplanements through the recession. There was a decrease in the number of airline seats available through those times, but new services (San Francisco) and extended service periods for the Seattle and Los Angeles markets have been added recently, with an estimated increase of enplanements in 2014 of 30 percent. SUN was recently awarded a Department of Transportation Small Community Air Service Development Program Grant which will be used to pursue improved East Coast Connectivity, most likely through Denver. The summer season is busier than the winter season, and the shoulder seasons are getting shorter.

There has been considerable work over the years on planning for a relocated airport because of the constraints of the site and changes in aircraft. This was the result of the last Airport Master Plan prepared in 2004. However, work on the EIS was suspended in August 2011. In the past two years, there was an extensive public process focused on improving the existing airport. There will be \$35 million spent on improvements over the next 19 months. At the same time, a new Master Plan will also be prepared.

Local option taxes were passed in Hailey and in Ketchum this year, and a similar tax was approved in Sun Valley the previous year. These taxes were important to the airport because they will generate nearly \$2 million per year that the community can spend on marketing and bringing more air service to the region.

## **Use of Alternative Modes**

The primary means of travel to/from the airport consists of private automobiles, taxis and shuttles. There is no bus service on the airport grounds.

The airport has worked in recent years to make the taxi experience better. Through the permitting process, taxi operators have now become better businesses – vehicles are inspected and are better maintained, and drivers wear uniforms, hence improving the quality of service.

Resort shuttles are permitted and pay permit fees and an access card fee, but generally operate free. Shuttles do not pay trip fee, but for-pay service providers do. Although Sun Valley Resorts is the biggest operator, most resorts do work together to share rides.

There is bus service provided between Bellevue and Sun Valley, which operates along SH 75. The bus stop closest to the airport is at the hospital clinic, which is approximately 200 yards from the terminal. The airport site is too constrained at this time to accommodate the buses at the terminal. It was also noted that some might consider enhancement of the bus operation to be inappropriate because it could negatively impact the revenues of the taxi operators.

Hailey has a bike share program, and the airport provides bicycle racks at the terminal.

Rental cars are available at the airport. As space becomes more constrained in the future, it may be necessary to consider less reliance on rental cars, but other revenue streams would need to be found before anything could be done in this regard. Further, it was noted the public transportation system in Sun Valley works so well that many repeat travelers staying at the resort do not feel the need to have a car.

Parking fees at the airport and parking availability currently make the use of the private automobile very competitive with alternative modes. As airline seats grow, the demand for parking and the cost of that parking will likely increase. This could tend to push more people to public transportation.

## **Seamless Travel Experience**

Although it is the airport's goal to be as "green" as possible and to provide the "Disney experience", it is currently focused on making those improvements that make the airport operationally efficient and safe. They do try to make the arrival/departure sequence convenient. Drivers of the courtesy shuttles meet their passengers in the terminal by holding up name placards, and they will typically help to pick up and load the luggage. For taxi service, travelers first hire the driver in the terminal and then will be assisted to the taxi vehicle.

Mr. Baird is planning a program that would offer customer service training for employees of all operators at the airport. There are no details on this program yet, but he believes that it will be beneficial to the traveler experience at the airport.

# Peer Airport Survey – Glacier Park International Airport (FCA)

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## Phone Interview Notes

Date: Wednesday, November 20, 2013  
Airport: Glacier Park International Airport  
Location: Kalispell, MT  
Interviewee: Rob Ratkowski, Deputy Airport Director  
Interviewer: Bob Felsburg, FHU

## Existing Airport Characteristics

The Glacier Park International Airport is located approximately six miles northeast of Kalispell along US Highway 2. In addition to serving the nearby communities of Kalispell, Whitefish and Columbia Falls, the airport also serves as a gateway to Glacier National Park and the Canadian Rockies. The airport is owned and operated by the Flathead Municipal Airport Authority.

Mr. Ratkowski thought that the statistics which we had provided regarding the characteristics of the airport seemed reasonable. He indicated that they have experienced a slight growth in enplanements this year to slightly more than 200,000. The busiest commercial airlines operating at the airport are Alaska Airlines (operated by Horizon Air), Delta Connection, United Express and Allegiant Air. The top destinations are Seattle, Salt Lake City, Minneapolis, Denver and Las Vegas. The summer season is definitely their peak; Mr. Ratkowski estimates that their activity in August is about three times their activity in March. The shoulder seasons continue to shorten.

The Airport Master Plan is dated, and the Authority is looking to refresh the Plan in the future.

## Use of Alternative Modes

Because the region is not densely developed and the airport serves a large geographic area, Mr. Ratkowski indicated that much of the transportation to/from the airport is by either private auto or by rental car. There are four rental car agencies on site at the airport and three additional agencies off-site. Because the region is still very car-centric, the airport focuses on making the loading/unloading areas and the circulation patterns efficient. Parking is very conveniently located adjacent to the terminal, with a total of 500 spaces, and it is competitively priced. Revenues from the rental car vendors and the parking lot are important, making up nearly one-half of the airport's operating budget.

A commercial limousine operator, Wild Horse Limousine, provides service to/from the airport and advertises on the airport's website. Shuttles are also operated by the resorts/lodging. Taxi service is available at the airport. There is no public transportation service serving the airport, and there is no bicycle activity.



## **Seamless Travel Experience**

The terminal at the Glacier Park International Airport is relatively small and easy to negotiate. According to Mr. Ratkowski, the building flows well, with a distance of only about 100 feet to the rental car counters and another 100 feet to baggage claim. Yelp reviews indicate that the airport is clean and has a lot of natural light and that the personnel working at the airport are friendly and helpful. There are no luggage-helpers available at the airport, but taxi and limo drivers are willing to help.

The Chamber of Commerce has a self-serve brochure rack at the airport. This used to be a manned desk, but resources no longer allow the necessary staffing.

In an attempt to ease the check-in process, the airport has a home-spun, funny (yet very informative) video on their website which is performed by three musicians in beach wear playing guitars and singing a song that provides guidance to travelers about how to be prepared to complete the check-in process. This is clearly designed to ease the mind of travelers in advance of their arrival at the airport. This same video also plays in the security checkpoint queue.

# Peer Airport Survey – Jackson Hole Airport (JAC)

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## Phone Interview Notes

Date: Wednesday, October 16, 2013  
Airport: Jackson Hole Airport  
Location: Jackson, WY  
Interviewee: Craig Logan, Director of Operations  
Interviewer: Bob Felsburg, FHU

## Existing Airport Characteristics

The Jackson Hole Airport is located approximately seven miles north of the central business district of the Town of Jackson. It is the largest airport in Wyoming and is owned by the Jackson Hole Airport Board. It is the only commercial airport in the United States located inside a national park, Grand Teton National Park. As a result, the airport must work within limited space and must deal with a number of unique environmental conditions.

The airport serves a large number of visitors to the region, who are coming to visit Grand Teton National Park and Yellowstone National Park. It also serves the Jackson Hole Ski Resort, a major destination ski area just outside of Jackson. Hence, the commercial air service tends to be seasonal in nature. Year-round United Express and Delta Connection provide service to Denver and Salt Lake City, respectively. Seasonally American, Delta, Frontier and United provide additional service to Atlanta, Chicago-O'Hare, Dallas/Fort Worth, Houston Intercontinental, Los Angeles, Minneapolis/ St. Paul, Newark, San Francisco and Seattle/Tacoma.

Because the level of activity at the airport has grown substantially over the years, a major \$30 million terminal expansion was undertaken in 2009-10. It currently has nine gates.

## Use of Alternative Modes

Because of the space limitations caused by its location in a national park, parking at the airport is limited, and the airport encourages its users to make use of the shuttle service that is provided between the airport and Jackson and the Jackson Hole Resort. AllTrans provides a high level of shuttle service to/from the airport, and there are also some 25 taxi and limo services operating in the area as well. Three rental car companies are located on the airport grounds, and four others have locations in downtown Jackson.

Although there is no public transit service to the airport, Mr. Logan directed us to a study conducted several years ago by START, the local transit agency. The Jackson Hole Airport Ground Transportation Service Study was an attempt to determine if enhanced ground transportation service to and from the Jackson Hole Airport from various points within Teton County and, to a limited extent, from points outside the county, is an objective that should be pursued utilizing the public and private transportation resources found within the county.

The technical analysis in this study consisted of three separate statistically-significant surveys of Teton County residents, Jackson Hole Airport passengers, and employees. As a result, this study provides a significant amount of data regarding travel patterns to/from the airport and the causal factors behind some of those patterns. This is the most detailed example of this type of data found at any of the peer airports. A copy of the report is included in the Appendix if one is interested in reviewing some of the data.

The study did not recommend the initiation of START bus service between Jackson and the Jackson Hole Airport at that time. The analysis did not provide compelling evidence of latent and transit-supportive demand for such service. It did, however, provide support for the concept of using sales tax funding – but no new revenues – for increased funding of transportation options to and from the airport. The study also found very high usage of private transportation options, such as personal vehicles and rental cars, and correspondingly low usage of the most transit-similar options of shuttles and taxis among both residents and non-residents.

These results were used to evaluate three major policy options moving forward. Rather than initiating new transit service to the airport, two other opportunities were identified:

- Experiment with subsidies, vouchers, or similar mechanisms to bring down the cost of existing airport-oriented transportation options to encourage their increased use.
- Experiment with an employee- oriented ridesharing/ride-matching program.

A copy of this report, less the appendices, is attached to this summary.

## **Seamless Travel Experience**

The design of the terminal expansion very carefully considered the entire experience of the traveler. Hence, travel paths are very clear and all services are conveniently located.

# Jackson Hole Airport Ground Transportation Service Study

*Draft – May 2010*

## *Project Partners/Funders*

**Teton County  
START Bus**

*Prepared by:*



*In association with:*



# **Jackson Hole Airport Ground Transportation Service Study**

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## **Appendices**

- Stakeholders Meeting Summary
- Public Opinion Survey of Teton County Residents
- Airport Intercept Survey
- Employee Survey
- Taxi Fares Establishment and Modification

## **Introduction**

The Jackson Hole Airport Ground Transportation Service Study is an attempt to determine if enhanced ground transportation service to and from the Jackson Hole Airport from various points within Teton County and, to a limited extent, from points outside the county, is an objective that should be pursued utilizing the public and private transportation resources found within the county.

## **Background and Context**

In recent years, the subject of providing enhanced ground transportation service to and from the Jackson Hole Airport has been broached on a fairly regular basis with staff of the START Bus system as well as elected officials of Teton County. The impetus for discussing such enhanced service has generally come from members of the public who were, for one reason or another, not fully satisfied with the options currently available to them. To address this subject in a thorough and evenhanded way, the Teton County Planning and Development Department, in association with START Bus, determined that a study exploring options available for providing enhanced service and examining the support for such options should be undertaken. The project was envisioned as a survey project that would attempt to target one or more user groups at the airport to gauge the desire of those groups for enhanced service.

Nelson Engineering, in association with Charlier Associates, Inc. (CAI), a nationally-recognized multimodal transportation planning firm in Boulder, Colorado, and National Research Center, Inc. (NRC), also based in Boulder, which has a nearly thirty year history of conducting citizen surveys in local government, including extensive experience conducting transportation-related surveys, was selected in a competitive proposal process to carry forward with the project.

## **Summary Conclusions and Recommendations**

This study does not recommend the initiation of START bus service between Jackson and the Jackson Hole Airport at this time. The technical analysis, consisting of three statistically-significant surveys of residents, airport passengers, and employees, does not provide compelling evidence of latent and transit-supportive demand for such service. It does provide support for the concept of using sales tax funding—but not new revenues—for increased funding of transportation options to and from the airport.

The study also found very high usage of private transportation options, such as personal vehicles and rental cars, and correspondingly low usage of the most transit-similar options of shuttles and taxis among both residents (especially) and non-residents.

Together, these results suggest an opportunity to experiment with subsidies, vouchers, or similar mechanisms to bring down the cost of existing airport-oriented transportation options to encourage their increased use. This option is less expensive and more flexible than initiating new bus service. The analysis also indicates an opportunity to experiment with an employee-oriented ridesharing/ride-matching program.



## **Project Approach and Methodology**

The work of the project was conducted in five significant steps:

### Brainstorming Session/Project Kick-off Meeting

The collective expertise and experience of the team members (Nelson Engineering, Charlier Associates, Inc., and National Research Center, Inc.), as well as that of staff of the Teton County Planning and Development Department and START Bus was tapped in an initial brainstorming session. This meeting was then followed by a kick-off meeting in which project stakeholders—START, Teton County Planning and Development, Jackson Hole Airport, Jackson Hole Chamber of Commerce, Town of Jackson, Grand Teton National Park, Jackson Hole Alltrans, taxi service providers, hotel shuttle service providers, and executive service providers—were invited to participate and contribute background, suggestions, and opinions from their multiple perspectives about the proposed effort and the possible outcomes from the effort. A summary of the stakeholder meeting is included in the Appendix.

### Development of the Survey Instruments

The development of three survey instruments followed immediately on the heels of the brainstorming session and kick-off meeting. Utilizing the transit expertise of Charlier Associates, Inc. (CAI) and the survey expertise of National Research Center, Inc. (NRC) and building on the information that the brainstorming session and kick-off meeting yielded, the team developed three targeted survey instruments. The three targeted groups were: residents of Teton County, users of the Jackson Hole Airport, and employees of the airport, Grand Teton National Park, and the National Museum of Wildlife Art.

### Survey Implementation

The three surveys were implemented in different manners. The survey of Teton County residents was implemented through an on-line survey for which participation was solicited through a random mailing to a statistically significant portion of the county's residents. The survey of airport users was implemented through intercept surveys conducted by live interviewers working at the airport. And the survey of employees was implemented by a distribution and collection of survey documents at the three worksites (airport, national park, and museum). This third effort was augmented by the option of completing the survey through on-line means if so desired by individuals taking the survey.

The design and implementation of all three surveys were conducted in accordance with social surveying methodologies and best practices. All three surveys were also designed and conducted to yield statistically significant and valid output data as a sound foundation for data analysis and policy recommendations. More detailed information about survey methodology and statistical validity is contained in the Appendix.

### Data Analysis

The data that resulted from the surveys were reviewed by NRC, CAI, and NE, discussed by the team members, and refined to make the drawing of conclusions straightforward. The conclusions and implications drawn from each of the survey efforts are incorporated within this report.

### Report Preparation & Presentation

The preparation of the project report has been a collaborative effort of the team members, with input from staff of the Teton County Planning and Development Department and START Bus. The final report is to be presented by representatives of Nelson Engineering and Charlier Associates, Inc. at a joint meeting of the START Bus Board and Town and County officials on June 7, 2010.

### **Survey Results – Resident Survey**

The Resident Survey illuminated several informative and interesting findings, particularly in contrast with the Intercept Survey. According to the Resident Survey:

#### Profile of Recent Jackson Hole Airport Fliers

- 84% flew out of JHA at least once in the past year.
- Of those using JHA, about 34% flew 1-2 times, while 66% flew three or more times.
- 81% of flights were for leisure/other, while 19% were business trips.
- Just over half (53%) of fliers traveled alone, while most others flew with one other person, usually (84%) a family member.
- Most trips are multi-day trips, with an average duration of nine days.
- 67% of fliers check luggage, usually one bag.

#### Getting to/from the Airport – Recent Fliers (Past 12 Months)

- 56% were dropped off at JHA; 35% drove and parked. (Many participants noted that they arranged to have their car picked up after they left and then returned to the airport upon their return.)
- For respondents' most recent air travel, 82% were picked up at the airport upon returning to Jackson; 6% each took a taxi, used a commercial van service, or made other arrangements.

#### Level of Support for Various Transportation Options

- 55% strongly or somewhat support the use of sales tax dollars to increase transportation options between Jackson and the airport.
- However, 64% strongly or somewhat oppose raising taxes or developing a new revenue stream for the same purpose.
- If a free parking facility were available in Jackson with connecting bus or van service to the airport, 59% would be very or somewhat likely to use it. If parking were not free, but substantially less than current airport parking rates, only 41% would be very or somewhat likely to use it, with 59% not at all likely.
- Several respondents noted that they live either north of the airport or closer to the airport than to Jackson. Additionally, several respondents noted concern with potential additional time, schedule, and convenience hassles as a reason not to use such a facility. Conversely, others felt they would save money and not have to worry about finding a parking space at the airport. Finally, many also noted concerns about vehicle theft or damage and their existing ease of having friends or family provide transportation to the airport as reasons not to use a parking facility, even if free.

- When asked about support for bus service to the airport with a need to transfer at the parking facility, respondents were evenly split whether they would be likely to use it.
- 70% of respondents would be willing to pay a \$3-\$5 fare for bus or van service between Jackson and the airport. However, only 42% would pay \$6-\$10, and less than 10% would pay more than a \$10 fare.
- The top three reasons for not riding transit service to/from the airport are:
  - Losing the freedom and convenience of driving: 57%
  - Worry about being late and missing a flight: 53%
  - Being stuck at the airport if the plane is late: 44%

### Survey Respondents Profile

- 68% currently do not use START service; 13% each use it 1-2 times a month or more than five times a month.
- 75% have at least two cars in their household. 88% have one or more vehicles available per household member 16 and older.
- 44% live in Jackson, 13% in Wilson, and 12% in unincorporated Teton County.
- 62% own their home, 70% of which are single family residences.
- 40% have annual household incomes of at least \$50,000, with 40% having incomes greater than \$100,000.
- Respondents are very stratified by age, with the two largest ranges being 25-34 (28%) and 45-54 (29%).
- 53% are male, 47% female.

### Conclusions and Implications

The Resident Survey results show very mixed support for increased ground transportation service between Jackson and the airport, particularly potential START service. While residents support—with conditions—increased funding for such service and the concept of a free, in-town park-and-ride lot, they overwhelmingly provide or arrange their own transportation to/from the airport. They do not generally use existing airport transportation options and have multiple vehicles available at home. Support drops substantially if in-town parking is not free, or if transferring is required.

Local residents are the most difficult “customer market” to capture with airport-oriented transit service, particularly in a community like Jackson. Residents have their own door-to-door transportation, and especially in Jackson, a high-degree of car/ride-sharing. Residents prefer point-to-point transportation, the most difficult and expensive public transit service to provide. The most compelling airport transit incentives—time, distance, and parking cost—are largely not present in Jackson, given that the airport is only about 10 miles away and airport parking is relatively inexpensive. (Stakeholders also noted that parking fees are not strictly enforced and many drivers choose not to pay them.) Accordingly, and not surprisingly, residents do not heavily use existing transportation options, such as taxis and Alltrans. As the survey results indicate, residents also do not like to leave their cars in a lot for extended periods, whether at the existing airport parking lot or a conceptual in-town park-and-ride lot. Finally, local residents—unlike visitors and employees—have unpredictable airport travel patterns, both during a “typical” week and even throughout a given day. While the perceived high cost of existing transportation options may provide some incentive for a public transit or other expanded

transportation option, the ease and overwhelming use of private transportation provide just as strong a disincentive and demonstrate lack of latent demand for START service.

### **Survey Results – Airport Intercept Survey**

The Intercept Survey questioned arriving and departing passengers at Jackson Hole Airport Wednesday through Sunday throughout the day during the weeks of March 15<sup>th</sup> and March 22<sup>nd</sup>, 2010. A total of 587 interviews were completed. Approximately 40 percent each were non-resident departures and arrivals. The appendix contains further methodology discussion, the survey form, and detailed results.

#### Summary Profile of Non-Resident Departures

- 86% were in the Jackson area for vacation, and 87% checked luggage.
- Almost 60% stayed for 4-5 days, and 90% stayed for one week or less.
- 75% stayed in Teton Village (45%) or Jackson (30%).
- 55% needed their own transportation during their visit.
- 44% used a rental car to get to the airport; 23% used a taxi, 12% got dropped off by a friend or family member, and 11% used a hotel shuttle. Only 6% used Alltrans.
- 55% would be very or somewhat likely to use bus or van service to/from the airport if it went to the place they visited, even with a transfer in Jackson.

#### Summary Profile of Resident Departures

- 33% live in Jackson, 21% in Wilson, 7% combined in Victor and Driggs, 6% in Teton Village, and 1% in unincorporated Teton County.
- 51% are traveling for vacation, while almost 30% each are traveling also or only for business or to visit family or friends.
- 46% got dropped off at the airport by a friend or family member; another 46% parked their own car at the airport. 6% used a taxi; less than 1% used Alltrans.
- 76% of respondents had to pay to park.
- 82% would strongly (52%) or somewhat (30%) support the use of sales tax to increase transportation options between Jackson and the airport.
- If a free parking facility were available in Jackson with connecting bus or van service to the airport, 76% would be very or somewhat likely to use it. If parking were not free, but substantially less than current airport parking rates, 70% would still be very or somewhat likely to use it.
- When asked about support for bus service to the airport with a need to transfer at the parking facility, 74% said they would be very or somewhat likely to use it.
- 87% of respondents would be willing to pay a \$3-\$5 fare for bus or van service between Jackson and the airport. 63% would pay \$6-\$10, and 31% would pay more than a \$10 fare.

#### Summary Profile of Non-Resident Arrivals

- 88% were in the Jackson area for vacation. Almost half (45%) are visiting for the first time, while 34% visit at least once a year.
- About 65% were to stay for 4-5 days, and 94% were to stay for one week or less.

- 71% will stay in Teton Village (46%) or Jackson (25%).
- About 52% stated they will need their own transportation during their visit.
- About 40% will rent a car to reach their destination, while almost 27% will ride a taxi and 15% will be picked up by a friend or family member. About 17% will take shuttles—Alltrans (8%) or a hotel shuttle (9%).
- 65% would be very or somewhat likely to use bus or van service to/from the airport if it went to the place they visited, even with a transfer in Jackson.

#### Summary Profile of Resident Arrivals

- 44% live in Jackson, 14% in Wilson, 8% in Star Valley, 11% in Driggs (3% in Victor), 6% in Teton Village, and 3% in unincorporated Teton County.
- 58% are traveling to visit family or friends, 22% for business, and 19% specifically for vacation.
- 50% will be picked up at the airport by a friend or family member; another 36% parked their own car at the airport. 11% will a taxi; less than 1% used Alltrans.
- 85% of respondents had to pay to park.
- 86% would strongly (57%), or somewhat (29%), support the use of sales tax to increase transportation options between Jackson and the airport.
- If a free parking facility were available in Jackson with connecting bus or van service to the airport, 81% would be very or somewhat likely to use it. If parking were not free, but substantially less than current airport parking rates, 72% would still be very or somewhat likely to use it.
- When asked about support for bus service to the airport with a need to transfer at the parking facility, 83% said they would be very or somewhat likely to use it.
- 88% of respondents would be willing to pay a \$3-\$5 fare for bus or van service between Jackson and the airport. 50% would pay \$6-\$10, and 39% would pay more than a \$10 fare.

#### Conclusions and Implications

The Intercept Survey results show stronger support for increased ground transportation service between Jackson and the airport among residents arriving or departing than did the Resident Survey. However, resident travel to/from the airport shows similar trends between the two surveys. Additionally, less than half of responding residents actually live in Jackson, meaning any bus service to the airport would likely require at least one transfer—a strong disincentive for airport-oriented transit service. Conversely, residents—whether arriving or departing—indicated higher support levels for funding transportation options as well as for a central parking facility. This increased support may be explained to some extent by the notion that transportation options are of topical and priority concern to residents at the airport as opposed to being a more abstract concept to residents completing the Resident Survey that may not have traveled for months.

The Intercept Survey results show mixed support among non-residents. Over half support the concept of bus or van service if it went to the places they needed to travel. Yet, over half also indicated they needed or would need their own transportation, and almost half rented or will rent a car during their visit. Almost the entire remainder used point-to-point transportation, such as taxi, with few or no stops in between. Together, these trends indicate that visitors prioritize convenience over cost, and that they value point-to-point direct service, the most difficult and

expensive operational model for public transit, or even shuttle service, to provide. Accordingly, only an average of seven percent of non-residents used Alltrans, with less than one percent of residents doing so.

If local residents are the most difficult “customer market” to serve with airport-oriented transit service as noted previously, tourists and visitors are a close second, for many of the same reasons. Non-residents need point-to-point transportation and are not significantly price-sensitive. Their schedules are somewhat more predictable by time of day, but not necessarily by time of week or year. As with residents, the prevalent use of rental cars and other private transportation, and the lack of use of Alltrans, and even taxis, demonstrate lack of latent demand for START service.

## **Survey Results – Employee Survey**

The Employee Survey was targeted to employees at the Jackson Hole Airport, National Museum of Wildlife Art, and Grand Teton National Park. In total, 126 surveys were completed and are summarized below. As with the other surveys, the Appendix contains further methodology discussion, the survey form, and detailed results.

### Summary of Work Commute

- 67% drove alone to work, 20% carpooled, 8% walked or biked, and 2% rode transit. These trends hold true to within a couple percentage points during both winter and summer.
- 38% live within 10 miles of work, 22% within 15 miles, another 17% within 30 miles, and 23% more than 30 miles.
- About 2/3 (64%) left for work between 6:00-9:00 am, and 83% came straight to work.
- 52% have a commute of 20 minutes or fewer; 36% have a 20-60 minute commute, and 13% have a commute longer than one hour.
- Only 54% leave work between 4:00-6:00 pm. 10% each leave between 1:00-2:00 pm and 9:00-10:00 pm.
- 81% indicated their shifts are not tied to specific flight arrivals or departures.
- 68% do not need to travel once they get to work; 13% made one trip, and 14% made two trips. For such trips, 72% drove alone, 14% rode a bus, and 10% carpooled.
- Almost half (45%) indicated their job requires errands or meetings away from the work site. For 85% of these workers, such requirements occur daily. 56% use an employer-provided vehicle, while 40% use their own vehicle.
- 62% of those who drive to work have free parking; 20% park in a paid lot. During a typical period, 58% have free parking and 30% park in a paid lot.

### Level of Support for Various Transportation Options

- Fully 94% support the use of sales tax dollars to develop transit service between Jackson and the airport, museum, and GTNP/Moose.
- If a free parking facility were available in Jackson with connecting bus or van service to place of work, 71% would be very or somewhat likely to use it. If other bus service connected to the facility in Jackson, 66% would be very or somewhat likely to take a bus to work.

- 71% would pay up to a \$5 round trip transit fare to ride to work, but only 8% would pay up to \$10. No one would pay more than \$10.
- The most common reasons for not riding transit service to/from work:
  - Need to run errands before/after work (44%)
  - Like the freedom and convenience of a car (43%)
  - Don't want to be stuck if shift runs late (36%)
  - Don't want to be late to work if the bus is late (34%)
  - Need a car to run work errands or attend meetings (21%)
- The most common reasons for using such transit service:
  - Reduce personal vehicle wear and tear (87%)
  - Better for the environment (77%)
  - Reduce commute cost (74%)
  - Relax, read, or work during commute (58%)
  - Reduce driving amount (49%)
- 88% strongly or somewhat support the use of sales tax dollars to develop vanpooling options for employees of the airport, museum, and GTNP.
- 77% would be strongly or somewhat likely to use a vanpooling service if logistically feasible.

#### Survey Respondents Profile

- 86% have only one job. 93% are full-time.
- 60% have a “typical” daytime work shift. 25% work early mornings to mid-afternoon, and 11% work afternoons to evenings. 3% work evenings/nights, no-one works a “graveyard” shift.
- 33% are office workers, 30% are “other,” 17% work in “security service,” and 12% have clerical positions.
- 17% make \$12 an hour or less, 50% make up to \$25/hour, 33% make more than \$25/hour.
- 26% have average household incomes below \$50,000; 67% have average household incomes of \$50,000 to \$150,000.
- 64% of households have 2-3 vehicles, 98% have at least one, and 75% have at least two. Average household size (16 and older) is 2.15.
- 91% indicate that a vehicle is usually available for commuting to work.
- 37% live in Jackson; 7% in Star Valley; 6% each in Rafter J Ranch, South Park, Colter Bay, and Victor, and 2% in unincorporated Teton County.

#### Conclusions and Implications

The Employee Survey results show strong support for increased transportation options. The prevalent availability and use of private vehicles and free parking are strong disincentives to new START service. However, the high rate of carpooling and other trends, such as commute distance, route directness, single job, and daytime shift, indicate a reasonable opportunity for a large-scale coordinated vanpool and/or ride-sharing/ride-matching program.



## Overall Conclusions and Recommendations

There are three major policy options moving forward:

- Option #1: Do Nothing: Make no changes to existing airport transportation options.
- Option #2: New START service: Implement new START service between Jackson and the airport.
- Option #3: Modify/supplement existing service: Change the service or cost parameters of existing transportation options.

Each is discussed in more detail below.

### Option #1: Do Nothing

Though not politically popular, this is a viable option if no other alternative is compellingly better. This study recommends this option in the short-term, with investigation and possible implementation of Option #3, discussed below.

### Option #2: New START Service

Based on the cumulative results of the three surveys, new START service between Jackson and the Jackson Hole Airport is not recommended. Airport-oriented transit service is difficult to provide in any context, but particularly in the Jackson region, where residents have very high rates of access to and use of private automobiles and ridesharing, the airport is not that far away, and the cost of airport parking is relatively inexpensive. Airport-oriented transit service generally needs to be either “door-to-door,” especially for tourists/visitors, or park-and-ride oriented. The former is not feasible for fixed route transit service. This configuration already exists in the form of Alltrans and taxis that are not highly used, especially by residents. The latter is not feasible in the Jackson area because of the lack of concentrated and productive gathering points to generate ridership close to residential areas, the unpredictable transit need and travel patterns of airport users, the relatively short distance between Jackson and the airport, the lack of strong distance, time, congestion, and cost disincentives to driving, and other similar factors.

### Option #3: Modify/Supplement Existing Service

This study recommends further investigation and possible implementation of two concepts. To address resident and visitor/tourist airport transportation needs, the first concept is to provide a transportation voucher or subsidy to incentivize the increased use of existing airport transportation services. This concept is similar to many ski town airports, including JHA, offering what are known as “minimum revenue guarantees” to guarantee a certain amount and level of airline service by providing financial incentives.

For ground transportation service to/from the airport, the subsidy could be provided to the existing transportation providers, such as Alltrans to lower their fares, or directly to travelers as a voucher to be used on the service option of their choosing. In either case, the objective is to lower the effective fare or cost charged to the passenger as an incentive to increase the use of such transportation options and to discourage driving private vehicles to the airport. Doing so in the form of an incentive mechanism that lowers the price for transportation service—rather than

increasing airport parking rates, for example—is also more politically palatable, an important consideration if the funding for this concept would come from sales tax or other public funds.

This concept could be structured with a time limit and linked to ridership amounts or travel share (the percentage of all airport trips provided by such transportation services) through a periodically-conducted travel diary survey similar to that undertaken for this study. Such a structure would promote credibility, transparency, and accountability in the use of public revenues to fund it.

To address employee transportation needs, this study recommends investigation and possible implementation of a regional Transportation Demand Management (TDM) program emphasizing ridesharing, ride-matching, vanpools, guaranteed ride home, and similar strategies. There are many options and details to consider about how it would be funded and administered, but the objective is to match transportation mobility needs and travel patterns to incentivize shared transportation in a way that is flexible in terms of geography, travel patterns, shift times, and other parameters.

A tailored and flexible TDM program may be more successful than conventional fixed route bus service because it can be more targeted and flexible. A TDM program also has more flexibility in that it can be funded and administered either publicly or privately, and its components can involve everything from funding new transportation service to providing a transportation allowance to employees that they can use to defray carpool costs, pay for parking if they choose to drive alone, or other options. A successful TDM program can also set the stage for bus service in the future.

As a basis of analysis and comparison only, a concept for new START service between Jackson and JHA was defined and costed out. Such service, consisting of an average of four round trips a day, six days a week throughout the year would cost approximately \$101,000 annually in combined capital and operating costs. With a \$5 fare, 50 percent of passengers paying this full fare (due to senior/children discounts, passes, etc.), and presuming a robust level of ridership, approximately half of the annual cost could theoretically be covered by fares. This 50 percent “farebox recovery ratio” is actually quite high, and may or may not be realistic. And, it is important to note that fare revenues come in slowly over time, whereas costs are significant and upfront, particularly capital costs.

The two concepts recommended under Option #3 were not costed out due to their complexity and the need for further analysis. Even so, the comparison with conceptual START service provides a baseline for doing so.

# Peer Airport Survey – Monterey Regional Airport (MRY)

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After numerous attempts to reach key staff at this airport, an interview could not be arranged. The following information has been extracted from various online sources.

## **Existing Airport Characteristics**

The Monterey Regional Airport is a public airport located about three miles southeast of Monterey, in Monterey County, California. It serves the Monterey Region and the Central Coast of California. The airport is owned by several municipalities that make up the Monterey Peninsula Airport District, and its five-member board of directors is publicly elected.

Five airlines provide commercial service at the airport: Alaska Airlines, Allegiant Air, American Eagle, United Express and US Airways. They provide non-stop service to Denver, Las Vegas, Los Angeles, Phoenix, San Diego and San Francisco. There are also five fixed base operators located on the airport. All of this occurs on a relative small 498-acre parcel.

## **Use of Alternative Modes**

All modes of ground transportation are conveniently served curbside right outside of the terminal. Multiple taxicab companies serve the airport. A taxi coordinator is on site to assist travelers with their taxi needs. There is a \$3 surcharge for taxis. Lodging shuttles are also served in the same area as the taxis.

Monterey Salinas Transit provides an extensive public transit system that serves Monterey and the entire region. Routes directly access the airport.

Six rental car companies operate at the airport. The rental car lot is located immediately adjacent to the terminal.

## **Seamless Travel Experience**

The Monterey Airport promotes itself as “America’s Most Convenient Airport” on its website. In their promotional piece it emphasizes the short walk from any mode of transportation to the terminal, quick and efficient security checks and boarding time, and cheap, convenient parking. The promotional clip compares the airport very favorably to airports in the Bay Area in these respects. Both short-term and long-term parking are indeed very close to the terminal. It should be noted that the long-term parking is very reasonably priced, but the short-term parking rates are among the highest found at the peer airports.

# Peer Airport Survey – Montrose Regional Airport (MTJ)

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After numerous attempts to reach key staff at this airport, an interview could not be arranged. The following information has been extracted from various online sources.

## **Existing Airport Characteristics**

The Montrose Regional Airport is a public airport situated on the northwest side of Montrose in the southwest corner of Colorado. The airport serves this region, including the ski areas around Telluride. As such, much of the air service is very seasonal, operating only in the winter season.

The Airport is served year round by United Express operated by SkyWest to Denver. Summer service is provided by United Airlines to Houston and by American Airlines to Dallas-Fort Worth. Winter service expands to Houston and Newark operated by United Airlines, service to Dallas and Chicago with American Airlines, service to Atlanta with Delta Airlines, and service to Los Angeles and Phoenix with Allegiant Air.

The terminal was recently remodeled and expanded, adding nearly 11,000 square feet to provide more space for passenger check in, a larger departure lounge, and a larger security checkpoint area.

## **Use of Alternative Modes**

Four rental car companies operate on the site, and one company functions off the airport. For those situated at the airport, their car lots are immediately outside the terminal.

Two shuttle services are located in the terminal, and three other such services are situated off the airport. All shuttles operate curbside adjacent to the terminal.

There is no public transit service at the airport.

With four travel lanes on the airport road in front of the terminal, there is very adequate space to accommodate all modes of ground transportation at the terminal. All parking is provided directly across the access road from the terminal.

## **Seamless Travel Experience**

The expanded terminal allows for a less crowded environment in the terminal, which makes the traveler experience more enjoyable. Furthermore, the terminal offers a café, gift shop, vending machines, newspaper and magazine racks, and an ATM.

# Peer Airport Survey – Myrtle Beach International Airport (MYR)

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After numerous attempts to reach key staff at this airport, an interview could not be arranged. The following information has been extracted from various online sources.

## **Existing Airport Characteristics**

The Myrtle Beach International Airport is a county-owned public –use airport located approximately three miles southwest of the central business district of Myrtle Beach, in Horry County, South Carolina. The airport serves as the gateway to this popular tourist destination area – 60 miles of beach known as the “Grand Strand” and nearly 100 golf courses. With this number of golf courses, Myrtle Beach markets itself as the “Golf Capital of the World”.

The airport is currently served by six airlines offering non-stop connections to over 25 destinations. The top three domestic destinations are Charlotte, New York and Atlanta. Enplanements are nearly 3 ½ times the number of enplanements at the Aspen\Pitkin County Airport.

The airport has recently undergone a major renovation and expansion project, which included airside and landside improvements to the original terminal plus an addition of a new 240,000 sf passenger terminal and concourse. With this expansion, the number of departure gates increased from seven to thirteen. To support the expansion a new automated baggage handling system and new passenger boarding bridges were added, while the airport’s apron pavement and taxiways were reconstructed and expanded. A new rental car facility with a pedestrian canopy was added to maximize the efficiency of the facility. The existing parking lot, roadway circulation and access roads were also renovated and expanded. The total footprint of the airport terminal is now 430,000 sf. The airport itself covers an area of 3,795 acres.

## **Use of Alternative Modes**

The Waccamaw Regional Transportation Authority, also known as the Coast RTA, provides transit service to the airport seven days a week.

Myrtle Beach Transportation offers transportation service between the airport and all hotels, golf courses, resorts and local vacation destinations. All shuttle pickups at the airport are prearranged; there are not shuttles waiting for passengers. Services such as opening doors, helping with luggage, curbside assistance, airport baggage claim greeting, suit and tie attire, and advance reservations are all standard.

Taxis are also available at the airport and have curbside pick up.

There are numerous car rental companies located on-site. All have offices on the ground floor of the terminal.

Short Term parking is located directly in front of the terminal, a 50-yard walk from the terminal precinct. Long Term parking is also located in close proximity to the terminal. Both offer open, surface parking.

Economy parking is situated about 400 yards from the terminal, but it does provide for covered parking. A free shuttle is available to transport passengers from this lot to the terminal.

### **Seamless Travel Experience**

All ground transportation at the airport is conveniently located and readily accessible. Furthermore, the recent renovation and expansion of the terminal has carefully considered well thought out pathways through the terminal to reach all ground transportation.

# Peer Airport Survey – Palm Springs International Airport (PSP)

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## Phone Interview Notes

Date: Friday, January 17, 2014  
Airport: Palm Springs International Airport  
Location: Palm Springs, CA  
Interviewee: Mark E. Kiehl, Deputy Director of Aviation – Marketing & Development  
Interviewer: Bob Felsburg, FHU

## Existing Airport Characteristics

The Palm Springs International Airport is a public airport located only about two miles east of downtown Palm Springs, California. It serves the Coachella Valley and the Inland Empire; as such it serves a prime tourism area and communities with many second homeowners. Like Aspen, Palm Springs faces some significant seasonal fluctuations in overall activity, and those big swings sometimes create challenges in managing for peak levels of demand. The winter season is clearly the busiest time at the airport. The five busiest airline routes to/from Palm Springs serve San Francisco, Dallas, Seattle, Phoenix and Denver.

Mr. Kiehl believes that the statistics which we had provided regarding the characteristics of the airport seemed reasonable. He further noted that their enplanements grew again in 2013.

## Use of Alternative Modes

PSP does not track the use of the wide mix of transportation mode choices available at the airport. Due to the heavy visitor market served by the airport, approximately 180,000 cars are rented per year, 75,000 taxi rides are provided, and a significant number of pre-arranged vehicles, limos, and shuttles are used. Within the airport's relatively small footprint, airport management has made it a priority to accommodate shuttles, motor coaches, limos, and other transit providers in close proximity to the main passenger terminal and using dedicated transit areas and lanes. As shown on the attached airport layout graphic, traffic circulation flows in a counter-clockwise direction. The general public traffic utilizes the lanes closest to curbside at the terminal, and close in public parking is conveniently located across the circulation drive from the terminal. Commercial vehicles use the outer lanes of the circulation drive (divided by a median from the general public lanes).

Bus service includes a bus link to an Amtrak station and regional transportation links, using an on-airport bus stop located just outside the main passenger terminal near baggage claim. The Sunshine Transit Agency oversees the Coachella Valley's taxi and bus operations, establishing performance standards, regulatory compliance, licensing and other oversight functions. Airport management stays in close contact with the Transit Agency, sharing ongoing information regarding airline flight schedules, seasonal increases/decreases, expected passenger demand, time-of-day operations, and other factors to ensure that service at the airport is responsive and meets customer needs. The Morongo Basin Transit Authority, which serves ten communities in the Morongo Basin located about 30 minutes east of Palm Springs, also operates a bus route serving the Palm Springs Airport. In addition, convention attendees often use pre-arranged motor coach services from the airport to their conference location.



Ten rental car companies operate at the airport. The rental car lot is located immediately adjacent to the terminal in the vicinity of baggage claim.

Several other items of note on the airport layout graphic:

- The airport provides a free waiting “cell phone” parking lot for persons who are coming to the airport to pick up arriving guests. This allows them to wait in an area until their guests arrive, thus minimizing their impact on traffic congestion curbside at the terminal.
- A taxi/bus staging area is provided in a nearby location convenient to the terminal. This staging area allows drivers of commercial vehicles to park their vehicles and use the convenience of the climate controlled shelter to relax while waiting to be called to the terminal.
- There is a CNG station near the staging area for use by commercial vehicles.

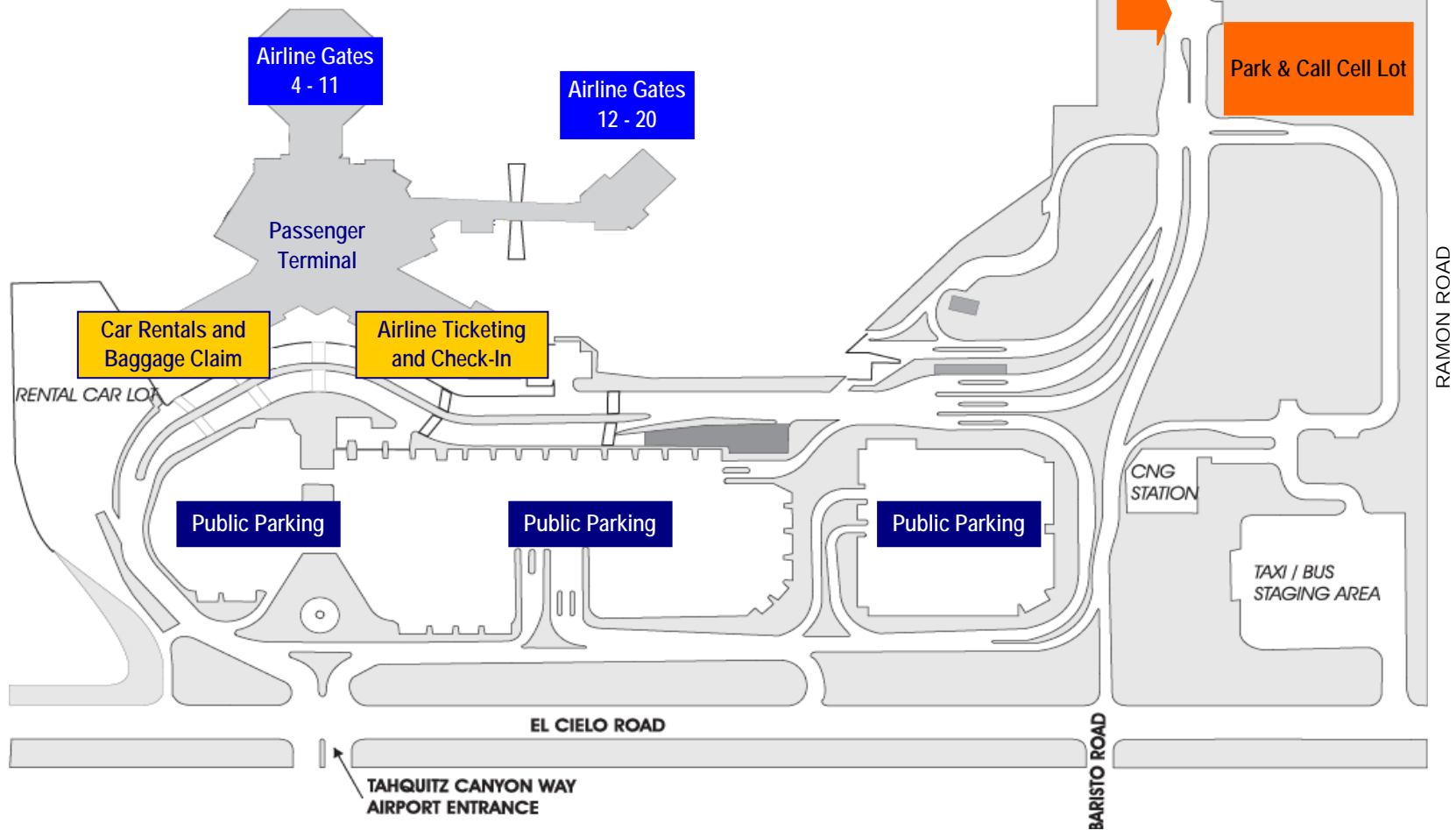
## **Seamless Travel Experience**

The Palm Springs International Airport has been rated as one of the Top Ten “Most Stress Free” Airports in the country. When asked about the attributes of the airport that contribute to this rating, Mr. Kiehl suggested that it is primarily due to the fact that the airport places a very high priority on its outdoor spaces, which is very welcoming and appealing to travelers through the airport. Due to the beautiful weather conditions that they experience, there are lots of gardens/lawn areas/outdoor spaces. In fact, when a traveler arrives he/she is in a building for a short time and then walks to the main terminal building along walkways that are open air and landscaped. This creates an immediate favorable impression of their destination.

As noted earlier, convenience of all of the facilities is also important to the airport. Making it easy to find all of the proper transportation services and positioning those services in close proximity to the terminal are critical. Baggage assistance is provided through a contracted service, which is paid for by the airlines. The airport has briefly discussed a seamless baggage handling service similar to a Disney operation, but the costs are very high and no one entity would benefit sufficiently to warrant the cost.



GENE AUTRY TRAIL



# Peer Airport Survey – Santa Barbara Municipal Airport (SBA)

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## Phone Interview Notes

Date: Wednesday, November 13, 2013  
Airport: Santa Barbara Municipal Airport  
Location: Santa Barbara, CA  
Interviewee: Tracy Lincoln, Airport Operations Manager  
Interviewer: Bob Felsburg, FHU

## Existing Airport Characteristics

The Santa Barbara Municipal Airport is located along the coast of the Pacific Ocean approximately seven miles west of downtown Santa Barbara near the City of Goleta. The airport is owned and operated by the City of Santa Barbara. In 2011 the airport opened a new 72,000 square foot terminal at a cost of approximately \$40 million. The new terminal building features many environmentally sustainable elements and achieved LEED Gold rating.

Mr. Lincoln verified that many of the statistics which we had provided regarding the characteristics of the airport were accurate. However, he also provided some updated data on parking spaces , operations and enplanements. The data indicate that the months of June, July and August are the busiest months of the year, with the least activity occurring during the months of January and February. Five commercial airlines serve the airport. The five most heavily travelled routes (in descending order) are Los Angeles, Phoenix, San Francisco, Denver and Seattle. There are also two fixed base operators on the field, as well as three flight schools.

Mr. Lincoln estimates that 60 percent of the airport travelers are business-related and 40 percent are related to tourism. Surveys conducted in the past have indicated that 70 percent of enplanements are made up by 30 percent of the customers, suggesting a large number of frequent flyers.

There is a very current Draft Airport Master Plan, which is posted on the airport's website. The primary objective of the Master Plan is to provide the community and public officials with proper guidance for future airport development which will address aviation demands and will balance continued growth of aviation activities with the environmental preservation of the surrounding environs. Several elements of the Master Plan address surface transportation enhancements at the airport.

## Use of Alternative Modes

The airport is very cognizant of the importance of all modes of transportation for travel to/from the airport, and management pursues alternatives at every opportunity.

There is an Amtrak stop located about one mile from the airport terminal. It does not include an actual station, but it is a nicely designed stop with benches and lighting. Discussions between airport management and Amtrak staff in the past have not been successful in providing good service, because the passenger train schedules are driven by the schedule of freight traffic on the rails. As a result, the

schedule of passenger rail service does not coincide very well with the banks of flights which need to be served at the airport. Nor does Amtrak management believe that there is sufficient demand from the airport to attempt to switch schedules.

The Santa Barbara Metropolitan Transit District (MTD) operates public buses throughout the area. Service is generally good, but not to the airport. There is a bus stop on Moffett Road across from the airport terminal, approximately a five minute walk, and bus schedules are available in the terminal lobby. However, the service schedules do not support the flight schedules very well. Airport management has had discussions with MTD about this, but it would require schedule revisions or the addition of buses and neither is deemed to be viable at this point in time. Another issue is that none of the buses operated by MTD have accommodations for passenger luggage.

Taxis serve the airport at an on-demand curb section at the terminal. There are currently nine taxi companies serving the airport, and Mr. Lincoln expects that there will many more in the future because the City encourages free enterprise of the taxi companies. Similarly, limousines can operate at the airport with few restrictions. One commercial shuttle service is currently permitted at the airport. Many lodging shuttles serve the airport as well. In the future, consideration will be given to charging either a permit fee or a per trip fee for these courtesy vehicles. Mr. Lincoln is currently responsible for developing a new commercial transportation plan that will address new equipment requirements, fees, procedures, etc. While Mr. Lincoln would like to see incentives for operators to use alternative fuel vehicles, his experience has shown that such incentives have only been successful at much larger airports where the level of business allows operators to be able to bear the additional costs of these vehicles.

There are six rental car companies on the airport, and one additional company is located off the site. A rental car ready/return lot is conveniently located adjacent to the terminal. The Master Plan calls for a relocation of this lot, but it will still be convenient to the terminal.

Uncovered bicycle racks are available in front of the terminal; they are used primarily by University of California – Santa Barbara students. In addition, there are bicycle lockers available at no cost in the long term parking lot. Future terminal plans include covered bicycle accommodations. The Master Plan acknowledges bike path and sidewalk improvements recommended in planning conducted by the Santa Barbara County Association of Governments, and the airport will continue to work with the various entities to ensure that these improvements are realized.

Convenient parking is important to the airport, and the Master Plan incorporates expansion of parking adjacent to the terminal. The Plan currently calls for a surface parking lot, but it also preserves the opportunity for a portion of that lot to be converted to a parking garage. One of the motivating factors is that this parking would eliminate the current need to operate a shuttle from the terminal to a remote parking lot for employees and long-term parking for travelers. The airport spends about \$750,000 per year to operate this shuttle.

## **Seamless Travel Experience**

The terminal and circulation system have been designed to make the arrival/departure experience as convenient as possible. The rental car counters are located in the luggage area. Commercial vehicles serve curb side right outside the terminal.

SBA provides a contracted baggage assistance program to assist passengers with luggage during the peak departure times. In addition, the airport manages an Ambassador program. These volunteers are located in the terminal to answer any questions that travelers may have. The Chamber of Commerce has started to staff a desk in the luggage area to provide information on area activities.

The airport uses numerous sources of social media to advertise and to provide information to travelers. Much information is available on the airport website, and they also use Twitter and Facebook. They even advertise on local buses, as far away as Ventura. They also have a mobile app, which provides real time flight schedules, parking rates, a terminal map, rental car phone numbers, concessions, and contact numbers at the airport.

# Peer Airport Survey – Telluride Regional Airport (TEX)

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## Phone Interview Notes

Date: Friday, November 15, 2013  
Airport: Telluride Regional Airport  
Location: Telluride, CO  
Interviewee: Rich Nuttall, Airport Manager  
Interviewer: Shea Suski, FHU

### Existing Airport Characteristics

Mr. Nuttall responded that the statistics reported were accurate. He said roughly 85% of the airport's business is from private aircraft. Although it is a public airport, it is not funded by local governments. Only one commercial flight operates in and out of the airport each day, a 19-seat turboprop operated by Great Lakes Airlines (codeshared with United and Frontier). In the past, up to 21 commercial flights were operated in and out of the airport.

Mr. Nuttall noted that the decrease to one flight a day is largely due to FAA regulations governing the minimum hours requirements for pilot experience as an issue, as less pilots are available and airlines are focusing their use toward airports with a greater need. The decrease in turboprop use by airlines is also a factor, as the Telluride airport cannot receive regional jet service. Lastly, the Airport is in need of a Category C instrument approach, which would greatly enhance the opportunities for expanding air service utilizing the Bombardier Q-400 aircraft.

### Use of Alternative Modes

Mr. Nuttall noted that the primary modes of travel to/from the airport are private vehicle, rental cars, taxi/limo service, and shuttle service. No public transit services the airport. He stated that there are generally two types of airport users: locals who typically use personal vehicles either to park at the airport or be dropped off, and tourists who typically use either taxi/limo service or shuttle service. Taxi service is the primary mode for tourists, though some resorts do provide shuttle service. He also noted that due to the gondola and other transit options in Telluride, few visitors need a car, but the high-end clientele that use the airport like the private nature of a taxi or rental car.

### Seamless Travel Experience

Mr. Nuttall noted that the airport provides a unique service to any user of the airport to elevate their experience. The airport will arrange for any pick-up, whether it be private vehicle or resort shuttle, to meet the passenger at the aircraft on the tarmac. Airport ground staff and/or the pilot will then transfer baggage to the pick-up vehicle. Mr. Nuttall stated that this service is frequently used, and that few general aviation passengers use the terminal.

# Peer Airport Survey – Yampa Valley Regional Airport (HDN)

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## Phone Interview Notes

Date: Thursday, November 14, 2013  
Airport: Yampa Valley Regional Airport  
Location: Hayden, CO  
Interviewee: David Ruppel, Airport Manager  
Interviewer: Bob Felsburg, FHU

## Existing Airport Characteristics

The Yampa Valley Regional Airport is located two miles southeast of Hayden and approximately 25 miles from Steamboat Springs. The airport serves both a large number of tourists coming to the area and the travel and delivery needs of local businesses. It supports full- or part-time employment for some 450 persons at a variety of transportation-related companies. Owned by Routt County, the airport is fully self-funded by user fees and concession revenues and has operated without the need for county revenue since 2007.

Mr. Ruppel believes that the statistics which we had provided regarding the characteristics of the airport seemed reasonable. He indicated that they anticipate moderate growth in the usage of the airport, likely less than 5 percent per year. Mr. Ruppel estimates that in the winter season approximately 75 percent of the airport travel is related to tourism, while in the other seasons approximately 70 percent of the travel is business related.

## Use of Alternative Modes

Mr. Ruppel further estimates that as much as 80 percent of the travel experienced at the airport is comprised of persons using or being picked up by the taxi service (Go Alpine), prior reservation limousine services (primarily Storm Mountain Express), or resort hotel courtesy shuttles; of the remainder, about two-thirds use rental cars and one-third use private automobiles. PUC licensing limits walk-up shuttle service to Go Alpine. The commercial vehicle lot serving these operators is gated.

The regional bus service does not currently stop at the airport; it is commuter-oriented at the present time. To effectively serve the airport, there would probably need to be a dedicated bus which could serve the airport during the middle of the day when many flights arrive/depart. There are no plans for this at this time.

Rental cars are available at the airport through three companies on site. Mr. Ruppel anticipates that the new Master Plan will identify a need for additional parking, as well as the need for additional spaces for rental cars.

Regarding vehicle use at the airport, Mr. Ruppel indicated that the following are ideas that will be considered in the future:

- Valet parking service
- Covered parking garage or possibly premium covered parking spots (covered by solar panels)
- Expanded use of sustainable vehicles by private vendors serving the airport
- Plug-ins designed into the airport for electric vehicles

## **Seamless Travel Experience**

The terminal at the Yampa Valley Regional Airport has been built over the years through a series of construction stages. Throughout these efforts, considerable thought has been put into making it feel like one building. Connection points are strong, and the terminal has been designed so there are no conflicts between incoming and outgoing pedestrian flow. Pedestrian flow patterns are intuitive; the paths are direct, and sight lines are clear. In the walking areas ceramic tile has been used on the floor, while carpet is used in waiting areas. They have also moved the restaurant to a central location, which creates a feeling of comfortable, welcoming activity in the airport; this has been beneficial for both the airport and the restaurant.

A very successful program has been the use of Passenger Services personnel, who are hired by the airport and who assist with luggage and transportation arrangements and assist with many types of questions from travelers. Wearing distinctive uniforms for easy recognition, they have become known as the “Red Coats” at the airport. This program was started originally as a stopgap program during the construction process for the terminal. With the construction, the process for passengers coming through the terminal could be very confusing, and at about that time the airlines also cut out their customer service personnel who provided services similar to the Red Coat program. The airport felt that having a person there to answer questions was critical to ensuring that the customer experience was as non-disruptive as possible. The program received excellent feedback, so after construction was completed the airport decided to keep it in place. The airport always had a “skycap” program, and they expanded that program and added the Red Coat program to the overall Passenger Service branch. There are currently 7 Passenger Services representatives who handle the Skycap services, 16 Red Coats, and 3 Supervisors. Services are provided about 15 hours a day, 7 days a week during the four month winter season; the program drops back to about 5 part-time staff during the off season. The total annual budget including personnel and operations is \$135,180. One of the key tenants of airport management is that the airport is the first and last impression that visitors have of the area so they need to do everything possible to make sure that impression is as positive as they can make it. Passenger Services is one critical part of that effort.

The Steamboat Ski and Resort Corporation also provides some uniformed ambassadors at the airport.

Mr. Ruppel would like to continue to explore ways to make the luggage check-in process easier and more direct, but he also recognizes that TSA regulations may limit the potential for this.

The airport recently initiated a new service in the terminal to assist travelers – a ski rental kiosk around the corner from the luggage claim area. The kiosk is staffed by a private vendor, who was selected through a competitive process for this pilot program. Although there is no rental fee for the space, the airport will receive a percent of the gross revenue generated by the vendor.



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