

## **CHAPTER TWO PURPOSE AND NEED**

This chapter provides a thorough discussion of the purpose and need for the action proposed by the Salt Lake City Department of Airports (SLCDA) for the Salt Lake City International Airport (Airport). For an EA, the purpose and need section should identify “the problem facing the proponent (that is, the need for an action), the purpose of the action (that is, the proposed solution to the problem), and the proposed timeframe for implementing the action.”<sup>1</sup> The purpose and need for the Proposed Action discussed in this section are justified and stated in terms that are understandable to individuals who are not familiar with aviation or commercial aerospace activities.”<sup>2</sup> This helps ensure that the Proposed Action (discussed in Chapter Three, *Alternatives*) can achieve the SLCDA’s purpose and need for development at the Airport, can meet the SLCDA’s goals and objectives to serve passenger needs and meet long-term facility requirements, and also meet applicable airport design and planning standards.<sup>3</sup> Generally, the purpose of the Proposed Action at the Airport is to improve and expand public access to the Airport without increasing traffic congestion or air emissions. The following sections provide a thorough discussion of SLCDA’s goals and objectives of the Proposed Action, the problem statement and need for the Proposed Action, and the purpose of the project.

### **2.1 SPONSOR’S GOALS AND OBJECTIVES**

The Proposed Action is intended to meet the goals of the SLCDA 2006 ALP<sup>4</sup> Update, which are to serve future passenger needs and meet facility requirements in the long-term. To meet these goals, the ALP update includes a light-rail transit system to provide service to the existing Terminal 1. This project, which is listed on the Airport’s Capital Improvement Plan, refers to the On-Airport component of the Airport TRAX Line.

Automobile traffic along the West-East corridor is projected to continue to increase due to growth in population, employment, and associated economic development. According to the Salt Lake City Government, a 36.8 percent increase in population is estimated in Salt Lake County by 2030 as compared to the year 2007.<sup>5</sup> A 12.4 percent increase in population is projected for Salt Lake City by 2030 as compared to 2007 data. This economic growth will increase the traffic volumes in the West-East corridor and increase the demand for parking at the Airport.

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<sup>1</sup> FAA Order 1050.1E, Change 1, *Environmental Impacts: Policies and Procedures*. Effective date: March 20, 2006; Paragraph 405c.

<sup>2</sup> FAA Order 1050.1E, Change 1, *Environmental Impacts: Policies and Procedures*. Effective date: March 20, 2006; Paragraph 405c.

<sup>3</sup> FAA Order 5050.4B *National Environmental Policy Act (NEPA) Implementing Instructions for Airport Actions*. Effective date: April 28, 2006; Section 706b.

<sup>4</sup> Salt Lake City Department of Airports (SLCDA), *Salt Lake City International Airport, Airport Layout Plan Update*, dated May 2006 and signed in November 2008 (SLCDA 2006 ALP Update)

<sup>5</sup> See Chapter Four, *Affected Environment*, Section 4.3.2, *Secondary (Induced) Impacts (includes Acquisitions, Displacements, and Relocations)*, Table 4-2, *Population of Salt Lake City and Salt Lake County – Historical and Projected*.

The On-Airport component of the Airport TRAX Line, combined with the sections of the TRAX line already in operation and the Off-Airport component of the Airport TRAX line preparing for construction, will meet the goals of the SLCDA summarized below:

- Provide a vital west-east link as recommended in the WFRC 2008 LRTP Update;
- Encourage a change in travel habits by providing an efficient, safe, and economical alternative to surface vehicle transportation;
- Meet the recommendations of the Long Range Transit Analysis;<sup>6</sup> and
- Offer a logical west-east extension to complement the North-South LRT line.<sup>7</sup>

The On-Airport component of the Airport TRAX line, together with the Off-Airport component offers:<sup>8</sup>

- Short-term higher capital cost compared to bus service, where these costs would be offset by lower LRT operating and maintenance (O&M) cost per passenger in the long-term;
- An aesthetic environment for passengers as compared to riding a bus (people who are uncomfortable riding a bus do ride LRT) and will have minimal impacts on the environment, and sociological and aesthetic values;
- Completion of an important transportation link to a major airport beneficial to transportation over a wide regional system where other congestion and bottlenecks occur;
- Convenient and valuable high capacity mode of transportation for business and other travelers from the Airport to hotels, places of business, convention centers, and shopping centers;
- Competitive edge for attracting business, conventions, and tourism with flexible capacity;
- Proactive approach to solve future traffic congestion at the Airport; and
- Support the SLCDA 2006 ALP Update and assist in directing land use and development.

Completion of the On-Airport component, which would complete the Airport TRAX Line, will accomplish the following objectives:

- Reduce number of vehicles on downtown streets;
- Emit less air pollutants when compared to emissions from buses and cars, and generally improve the region's air quality;

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<sup>6</sup> WFRC, *Wasatch Front Regional Transportation Plan: 2007-2030 Technical Report 46* (May 2007 amended October 23, 2008).

<sup>7</sup> The Sandy/Salt Lake Line is a line in the TRAX light rail system in Salt Lake City, operated by the UTA. It is the first line in the TRAX system, extending from downtown Salt Lake City, through South Salt Lake, Murray, and Midvale, to Sandy; opened December 4, 1999.

<sup>8</sup> Information obtained from the UTA website at <http://rideuta.com/projects/airportLightRail/faq.aspx>.

- Provide a more reliable schedule than buses, particularly in an increasingly congested traffic area and in inclement winter weather; and
- Accommodate transportation requirements in the corridor.

## **2.2 PROBLEM STATEMENT AND NEED FOR THE PROJECT**

The Airport is located on the west end of the west-east corridor and approximately five miles west of downtown Salt Lake City. The Airport is a vital element of the county's transportation infrastructure and serves the air travel needs of the majority of Utah and portions of the surrounding states of Nevada, Idaho, Wyoming, and Colorado.

Annual vehicle trips to the Airport are projected to increase to 5.9 million by 2030 as compared to 4.9 million in 2007 based on the projected number of originating and destination (O&D) passengers at the Airport. The increase is expected due to the anticipated strong population growth along the north-south freeways and along the west-east corridor that includes the Airport, downtown Salt Lake City, the University of Utah, and the counties surrounding Salt Lake County. The University TRAX line was completed in September 2003 and planning for the Off-Airport component of the Airport TRAX Line has been approved for construction to begin in 2009. The only remaining portion yet to be approved is the On-Airport component leading to the Airport's Terminal 1.

The SLCDA determined that the projected increase in surface transportation demands would require additional capacity for the Airport's existing surface transportation infrastructure and parking facilities. The ability of the Airport to accommodate the future surface transportation demand is limited by the following:

- Inadequate on-Airport parking facilities to accommodate the increase in O&D passengers;
- Insufficient surface transportation infrastructure to accommodate increased traffic and reduce traffic congestion at the Airport; and
- Inefficient intermodal transfer of passengers along the west-east corridor that is not economical and is unreliable.

### **2.2.1 Inadequate On-Airport Parking Facilities to Accommodate the Increase in O&D Passengers**

Since 1996, changes in the operations of Delta Air Lines has slightly reduced the number of connecting passengers at the Airport while the number of O&D passengers has roughly increased in proportion to the population growth in Salt Lake County. An increase in O&D passengers would necessitate an increase in parking capacity at the Airport.

#### **THE NEED TO ACCOMMODATE PARKING FOR ADDITIONAL O&D PASSENGERS**

It is expected that the number of O&D passengers will continue to grow over time. Growth at the Airport is tied to the growth of the region's economy including population, employment, and income. Employee and passenger parking areas will

need to expand in order to meet increasing demand as facilities approach capacity. The Airport's parking structure occasionally reaches capacity during periods of high demand, which also increases traffic congestion on Airport roadways.

Consequently, the SLCDA continues to explore alternative strategies to increase parking facilities. Light-rail transit to the Airport could provide access for business and leisure travelers, Airport-area employees, park-and-ride commuters, and area residents, while reducing the need for new parking facilities.

### **2.2.2 Insufficient Surface Transportation Infrastructure**

According to the FAA Air Traffic Activity Data System, enplanements (O&D passengers) at the Airport are expected to grow 20.5 percent, from 6.13 million in 2007 to a projected 7.38 million in 2030; O&D passengers could climb to 7.86 million by 2050. The projected increase in population in Salt Lake County combined with the expected increase in aircraft operations at the Airport would cause an increase in surface traffic that would burden the existing surface transportation infrastructure. The increases would cause deterioration of the level of service at intersections and along the arrival and departure curb fronts at the passenger terminals.

#### **THE NEED TO REDUCE TRAFFIC CONGESTION AT THE AIRPORT**

Population and aircraft operations at the Airport will continue to grow into the foreseeable future. The Airport's surface transportation infrastructure will need to be modified and expanded to avoid unreasonable congestion at intersections and along Airport roadways. As an alternative, an LRT would allow passengers, employees, vendors, and other visitors to access the Airport without increasing the congestion at intersections and on Airport roadways. Ridership on the LRT would decrease the number of surface vehicles at the Airport and would also reduce fuel consumption, and reduce mobile sources of air pollutants as well. This is particularly relevant because the primary pollutant from motor vehicles is carbon monoxide and Salt Lake County has experienced problems with carbon monoxide emissions in the past. Further, the use of LRT may be viewed as a catalyst for more deliberate sustainable land use considerations in planning.

### **2.2.3 Inefficient Intermodal Transfer of Passengers, Employees, and Vendors Along the West-East Corridor That is Not Economical, and is Unreliable**

The Airport currently lacks the infrastructure to transfer passengers between various modes of transportation. Under current conditions, arriving and departing passengers are transported by taxis, buses, and private vehicles. Airport patrons originating along the University TRAX line must transfer to a bus or taxi or private vehicle once arriving at the downtown station.

**THE NEED TO PROVIDE INTERMODAL TRANSFER OF PASSENGER, EMPLOYEES, AND VENDORS ALONG THE WEST-EAST CORRIDOR THAT IS EFFICIENT, ECONOMICAL, AND TIMELY**

The three greatest generators of traffic along the West-East Corridor are the Airport, activities/businesses in downtown Salt Lake City, and the University of Utah. The eastern section of light rail between the downtown Salt Lake City and the University of Utah is complete and has been operating since September 2003. The western section of the West-East Corridor remaining for development would be the Airport TRAX Line, which would operate between downtown Salt Lake City and the Airport. The Off-Airport component of the Airport TRAX Line has been approved and construction will begin in 2009. Completion of the On-Airport component of the Airport TRAX Line will allow passengers, employees, vendors, and other visitors from the other two largest generators of surface traffic in the area, downtown Salt Lake City and the University of Utah, to access the Airport without causing traffic congestion and without requiring parking facilities. Transportation to the Airport along the corridor would be convenient, economical, and more time-efficient than buses, taxis, or private vehicles that can be delayed by roadway traffic.

Based on these deficiencies and the potential affect on passengers, employees, and vendors, the following needs have been identified at the Airport:

- The need to accommodate future growth of O&D passengers while reducing the requirement for additional parking facilities at the airport;
- The need to accommodate future growth in surface traffic at the Airport; and
- The need to improve intermodal transfer of passengers, employees, and vendors along the West-East corridor that is efficient, economical, and timely.

In order for a project alternative to be considered viable and appropriate for detailed NEPA evaluation within this EA, the alternative must address one or more of these needs.

## **2.3 PURPOSE OF THE PROPOSAL**

The purpose of the Proposed Action is to complete the On-Airport component of the western section of the W-E TRAX Line that provides light-rail service between the Airport and downtown Salt Lake City. The completed W-E TRAX Line that would extend from the Airport to downtown, to the University of Utah, will help to alleviate the increasing demands of on-Airport parking and traffic congestion on Airport roadways caused by the projected increase in aircraft operations and population in the Salt Lake City metropolitan area.

## **2.4 PROJECT IMPLEMENTATION SCHEDULE**

Initiation of the proposed LRT development would occur if and when the FAA has issued a FONSI on this EA. Subject to a FONSI, it is anticipated that the start of construction would be in 2009 and would be phased over several years. The first full year of operation of the On-Airport component would be no later than 2015. Should this EA demonstrate the potential for significant adverse environmental impacts, an EIS would be conducted prior to implementation of any portion of the project.