

**Appendix K**

**Public Parking Space Requirements Review**



# Public Parking Space Requirements Review

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## Executive Summary

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In light of recent reviews of the validity of previously developed aviation activity forecasts for Dallas Love Field (DAL or the Airport), the City of Dallas requested that Ricondo & Associates, Inc. (R&A), also assess the validity of previously estimated future public parking facility requirements for the Airport. R&A completed a public parking requirements analysis for the Airport in 2008 based on data collected for October 2006 through September 2007.<sup>1</sup> Future requirements for on-Airport public parking facilities were estimated based on anticipated changes in numbers of enplaned passengers forecast for the 2008 *Five Party Agreement Terminal Area Redevelopment Program Study* (TARPS). Requirements were also estimated by Unison Consulting, Inc. (Unison) in 2009 to support the development of public parking facilities.<sup>2</sup>

It was determined that, although the previous base demand analyses are most likely still valid, the forecasts identifying when additional facilities would be required most likely are not. R&A recommends that, if new activity forecasts are developed, public parking demand should be reevaluated using the most recent data available to ensure that the most current demand profiles and trends are reflected. It should be noted that there is no evidence to indicate that the demand profiles and trends have significantly changed since the 2008 analyses were completed.

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## Findings

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Public parking demand was estimated by R&A based on transaction, overnight occupancy, and duration report data. Public parking demand was estimated by Unison based on transaction, overnight occupancy, and flight schedule data. A variety of facility requirements to accommodate demand were defined in both assessments based on service factor and forecast assumptions. **Exhibit 1** shows forecast enplaned passengers used as a basis for determining future parking requirements in both assessments. R&A requirements were only forecast for one TARPS future activity level, corresponding with passenger activity expected to occur in 2014. Unison requirements

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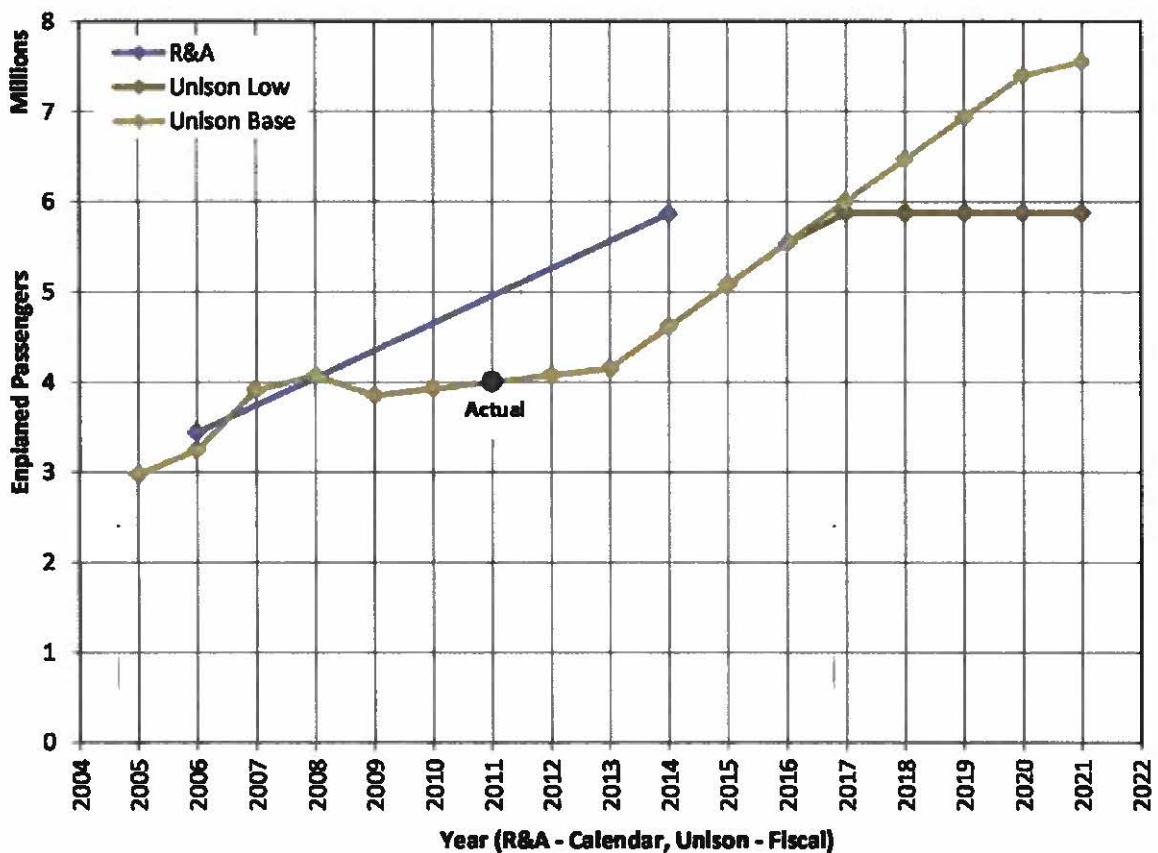
<sup>1</sup> Ricondo & Associates, Inc., *Dallas Love Field Public Parking Assessment*, January 4, 2008.

<sup>2</sup> Unison Consulting, Inc., *Dallas Love Field Assessment of Public Parking Demand and Space Requirements (DRAFT)*, October 7, 2009.

were forecast under two growth scenarios beyond 2016. Annual enplaned passengers at the Airport numbered just over 4.0 million in 2011, confirming at least the near-term portion of the forecasts used by Unison.

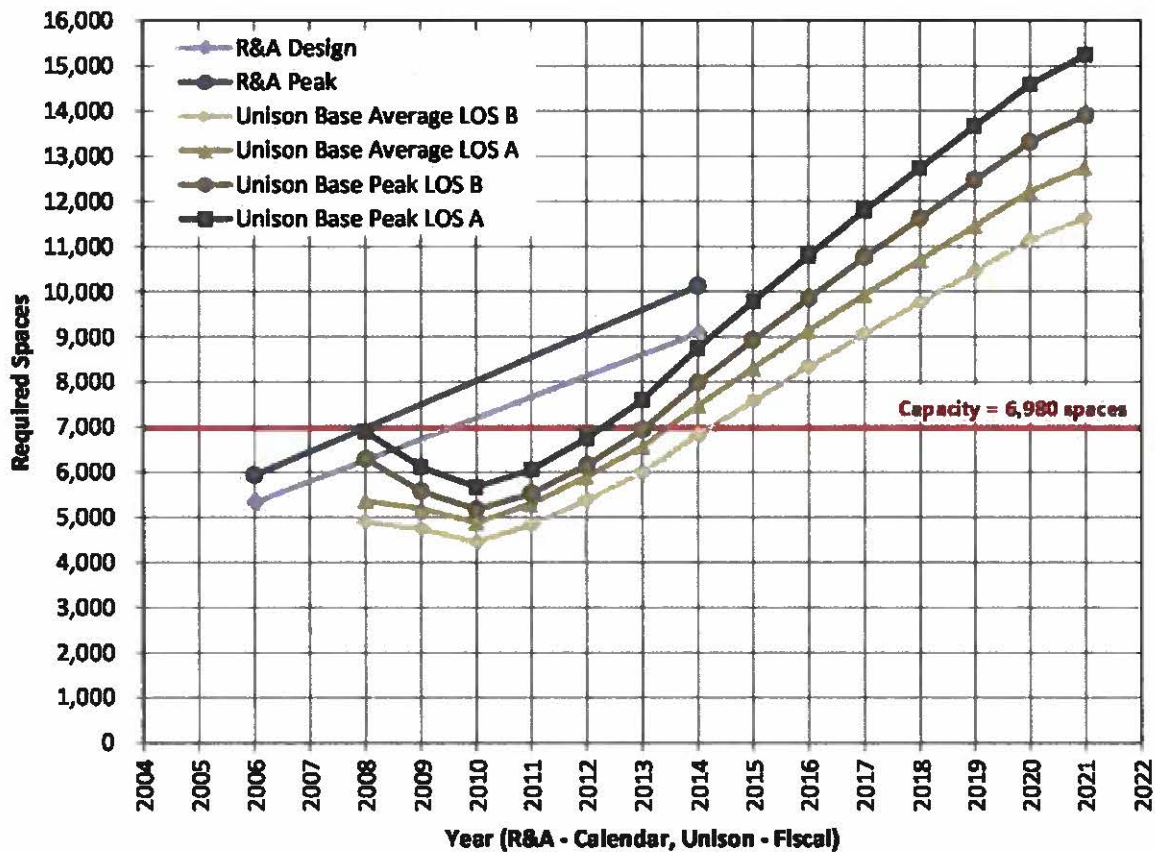
**Exhibit 2** shows forecast parking requirements for both studies. R&A assumed a direct relationship between public parking demand and passenger activity. Unison also attempted to account for the impact of changes in parking rates and economic trends, which resulted in the relationship between parking demand and aviation activity to change over time. A forecast predicts when additional capacity will be needed to meet requirements, though continuously changing socioeconomic conditions may impact aviation and other associated activity and make forecasts obsolete. According to the R&A study and the TARPS forecast, public parking demand could have been expected to exceed capacity on a regular basis by as early as 2009. This forecast of requirements was rendered obsolete by the economic recession and associated decrease in aviation activity that occurred in 2008-2009. The Unison study predicted that demand would exceed capacity on a regular basis sometime between 2012 and 2014.

**Exhibit 1: Aviation Activity Forecasts**



SOURCES: Ricondo & Associates, Inc., *Dallas Love Field Public Parking Assessment*, January 4, 2008; Unison Consulting, Inc., *Dallas Love Field Assessment of Public Parking Demand and Space Requirements (DRAFT)*, October 7, 2009.  
 PREPARED BY: Ricondo & Associates, Inc., October 2012.

Exhibit 2: Previously Forecast Public Parking Space Requirements



LOS = LEVEL OF SERVICE

SOURCES: Ricondo & Associates, Inc. *Dallas Love Field Public Parking Assessment*, January 4, 2008; Unison Consulting, Inc., *Dallas Love Field Assessment of Public Parking Demand and Space Requirements (DRAFT)*, October 7, 2009.

PREPARED BY: Ricondo & Associates, Inc., October 2012.

Table 1 and Exhibit 3 show the most relevant results (those determined using comparable assumptions) from each assessment. The activity level at which demand is expected to exceed capacity can be identified by referencing the relationship between passenger activity and parking demand and disregarding time. Despite the application of differing methodologies, both assessments indicate that public parking demand is expected to exceed capacity somewhere between 4.0 million and 5.0 million annual enplaned passengers. The R&A results indicate that capacity should be increased to meet design day demand before the annual number of enplaned passengers reaches 4.5 million, or by 2014, according to the forecasts used in the Unison assessment.

The timing of required facility expansions is dependent on expected changes in future activity. If it is determined that new forecasts are warranted to account for the most recent and anticipated conditions (in terms of population, economic, and airline activity trends), then parking requirements should be also be re-evaluated so that demand can be accommodated as it occurs.

**Table 1: Comparison of Previously Estimated Public Parking Space Requirements**

ENPLANED PASSENGERS	R&A		UNISON <sup>1/</sup>	
	DESIGN DAY <sup>2/</sup>	PEAK DAY <sup>3/</sup>	AVERAGE DAY	PEAK DAY
3,439,050	5,330	5,930	-	-
<b>4,008,070 <sup>4/</sup></b>	<b>6,210</b>	<b>6,920</b>	<b>4,829</b>	<b>5,521</b>
4,075,000	6,320	7,030	5,382	6,156
5,865,580	9,070	10,120	8,839	10,485

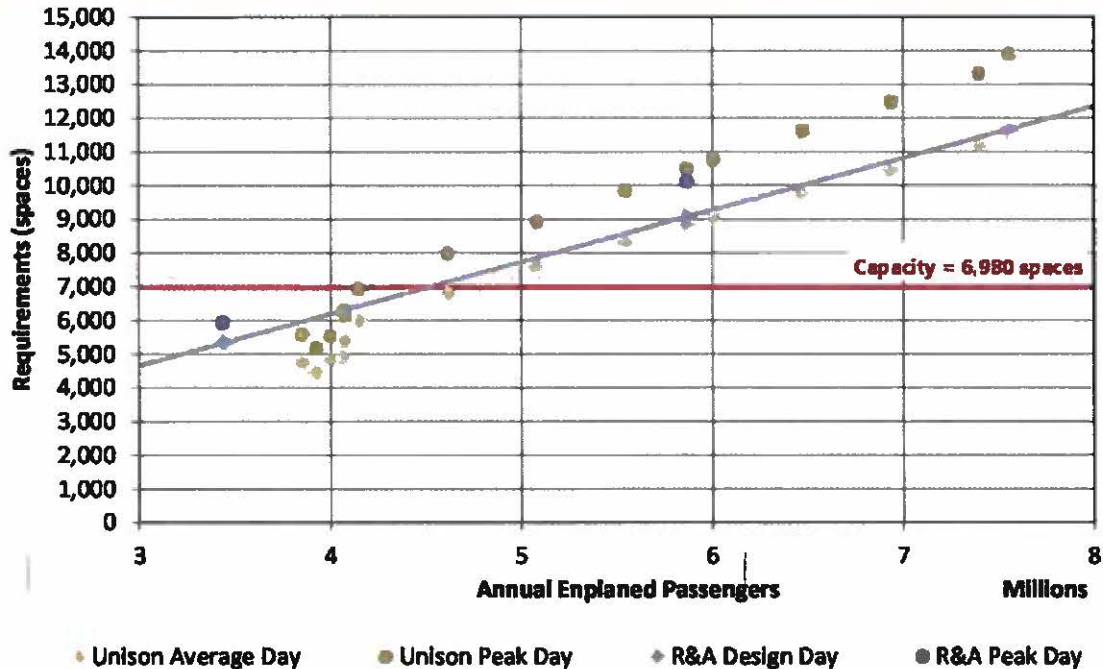
NOTES:

- 1/ Base demand + 4 percent buffer (Level of Service B)
- 2/ Demand + 5 percent buffer, rounded up to the nearest 10 spaces
- 3/ Demand rounded up to the nearest 10 spaces
- 4/ 2011 enplaned passenger activity; corresponding requirements were interpolated from previous analyses

SOURCES: Ricondo & Associates, Inc., *Dallas Love Field Public Parking Assessment*, January 4, 2008; Unison Consulting, Inc., *Dallas Love Field Assessment of Public Parking Demand and Space Requirements (DRAFT)*, October 7, 2009; City of Dallas Aviation Department, <http://www.dallas-lovefield.com/pdf/statistics/201112Enplanements.pdf>, accessed October 2012.

PREPARED BY: Ricondo & Associates, Inc., October 2012.

**Exhibit 3: Relationship between Estimated Public Parking Space Requirements and Aviation Activity**



SOURCES: Ricondo & Associates, Inc., *Dallas Love Field Public Parking Assessment*, January 4, 2008; Unison Consulting, Inc., *Dallas Love Field Assessment of Public Parking Demand and Space Requirements (DRAFT)*, October 7, 2009.

PREPARED BY: Ricondo & Associates, Inc., October 2012.