ADDENDUM C

Palm Beach International Airport Air Service Analysis

Technical Report #2 - Final

Palm Beach International Airport

Airport System Study - Phase I Air Service Analysis

Prepared for:

Palm Beach County Department of Airports

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Contents

Tables

Exhibits

Summary

The air service analyses presented in this report represent an update to the Palm Beach County Department of Airports (DOA) air service analyses conducted in 1998 as part of the Strategic Master Plan Update for Palm Beach International Airport (PBI) completed in 2001. These analyses, presented separately for domestic and international air services, were conducted in order to identify gaps in air service as well as opportunities for new air service to and from PBI. For comparison purposes, the 1998 air service analyses results are also summarized in this update.

The analyses expand on the information presented to the airlines earlier in the System Study process, included in Appendices D, E, and F. The results of the air service analyses will be used as input into the forecasting task for PBI and may ultimately be embedded into the forecast chapter of the System Plan Study document. To complement the air service analyses, a market awareness survey targeting travel agencies, hotels/resorts, and corporations also was conducted and is presented here.

SECTION 1

Domestic Air Service Analysis

This section provides an in-depth assessment of PBI's top 100 domestic Origin and Destination (O&D) markets. Current air service provided in these markets is evaluated in order to obtain a better understanding of passenger characteristics and to target potential new air service needs or the demand for increased service to these markets. A summary of the methodology and results of the air service demand analysis are provided. Appendix A contains the detailed data supporting the air service demand analysis. The analyses utilize the following data sources. It should be noted that at the time the analyses were conducted, the most recent information available from the U.S. Department of Transportation (USDOT) was for calendar year 2004.

- USDOT 2004 local O&D passenger demand, average fare, and yield
- USDOT T-100 2004 statistics for load factors and seating capacity
- The corresponding Official Airline Guide (OAG) Airline Schedules for two sample seasonal periods for calendar year 2004, March 15-21 for the winter season and July 19-25 for the summer season
- OAG Airline Schedule for March 15, 2005, representative of the 2005 peak month average day

1.1 Methodology

For each of PBI's top 100 O&D markets, several factors were analyzed to determine PBI's deficient domestic markets. Key factors considered included but were not limited to the following:

- Local O&D passenger volumes;
- Ratio of local O&D passenger volumes to available seats (seating capacity on an aircraft); and
- Ratio of local O&D passenger volumes to onboard passengers, including enplaning local passengers and pass-through passengers.

Deficient domestic markets for PBI were grouped into three categories:

- **Deficiency 1:** Markets without existing nonstop service
  - **1.A** Assessment of potential markets for mainline airline service
  - **1.B** Assessment of potential markets for regional jet service
- **Deficiency 2:** Markets where the local O&D passenger volumes exceed the available nonstop seats
- **Deficiency 3:** Markets where the local O&D passenger volumes are a high percentage of the onboard passengers.

Consistent with the 1998 analyses, a threshold of 100 round-trip passengers was established as a target for identifying new nonstop markets for mainline airline service. Similarly, thresholds of 50 to 99 roundtrip passengers and a range of 1,000 nautical miles (NM) were defined as candidate new nonstop markets for regional service.

The second category of a deficient domestic market, where the local O&D volume exceeds the available nonstop seats, indicates that even if all of the local O&D passengers wanted to travel nonstop, there would be an insufficient number of seats to accommodate them. As a result, some local O&D passengers are being forced to take one-stop service, and therefore, nonstop service is deficient.

The third category, markets where the local O&D passenger volume represents a high percentage of the onboard traffic, requires an analysis to determine whether local passengers are being "squeezed off" nonstop flights by flow traffic. Two steps were involved in the analysis. First, the ratio of local O&D passengers to onboard passengers was examined to determine if the ratio is high – above 70 percent for purposes of this analysis. Second, the load factors of the airline or airlines carrying the bulk of the traffic in that market were reviewed. If the load factor is high (above 70 percent), it was concluded that local O&D passengers are being displaced. If load factors are below this threshold, then it was concluded that local O&D passengers are not being displaced.

Limitations to these methodologies are similar to those in the 1998 analyses: the methodologies utilized in this update do not quantify PBI market leakages to other commercial service airports in the region. These market leakages would likely be the result of insufficient air service at PBI and/or more competitive airfare structures at nearby airports. Additional market research, which is outside the scope of this air service analyses update, is needed to quantify these market leakages and the extent to which these leakages would contribute to supporting new or expanded air service at PBI.

1.2 Overview of O&D Passenger Traffic at PBI

The results of the O&D passenger traffic assessment showed that 63 percent of the passengers in PBI's top 100 O&D markets initiate their trips in a city other than West Palm Beach; the results confirmed that PBI is primarily a destination market.

Table 1.1 shows the 19 cities that are part of PBI's top 100 O&D markets where passengers initiated their trips from PBI. Table 1.2 displays the largest markets to which passengers originated travel at PBI.

1.3 Deficiency 1: Markets with No Existing Nonstop Service

Currently, PBI has nonstop commercial jet service to 23 domestic destinations. Exhibit 1.1 depicts the existing nonstop destinations from PBI. With the exception of Dallas and Houston, all nonstop markets are east of the Mississippi River. As part of Deficiency 1.A, markets both east and west of the Mississippi River that currently do not have nonstop service from PBI were analyzed. West of the Mississippi, there are five markets that averaged at least 100 round-trip passengers per day and are without nonstop air service.

TABLE 1.1
Markets where passengers initiated their trips from PBI

• Las Vegas (LAS)	• San Diego (SAN)	• Reno (RNO)
• Los Angeles (LAX)	• John Wayne (SNA)	• Albuquerque (ABQ)
• San Francisco (SFO)	• Salt Lake City (SLC)	• Asheville (AVL)
• Denver (DEN)	• Seattle (SEA)	• Savannah (SAV)
• Tallahassee (TLH)	• San Antonio (SAT)	• Tucson (TUS)
• Phoenix (PHX)	• Honolulu (HNL)	
• New Orleans (MSY)	• Hobby (HOU)	

Sources: USDOT O&D Survey, CY 2004; T100 Data, CY 2004; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

TABLE 1.2
Markets with the Largest Number of Originating Passengers (2004 compared to 1998)

2004:

From PBI to:	Passengers Originating at PBI	2004 Annual O&D Passengers[1/]
Las Vegas (LAS)	86.2%	76,050
Los Angeles (LAX)	50.1%	58,440
San Francisco (SFO)	53.2%	41,690
Denver (DEN)	58.6%	38,920
Tallahassee (TLH)	50.7%	38,460

1998:

From PBI to:	Passengers Originating at PBI	1998 Annual O&D Passengers[2/]
Los Angeles (LAX)	51.9%	67,860
Denver (DEN)	60.4%	52,760
Orlando (MCO)	61.3%	47,800
San Francisco (SFO)	55.9%	47,730
Las Vegas (LAS)	87.5%	43,550

Notes:
[1/] Corresponds to the USDOT Origin-Destination survey for year-end data for calendar year 2004. O&D passengers correspond to round-trip passengers.

[2/] Corresponds to the USDOT Origin-Destination survey for year-end data up to the second quarter of 1998.

Sources: USDOT Survey, CY 2004; T100 Data, CY 2004; 1998 Air Service Demand Analysis, Strategic Master Plan, 2001; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Table 1.3 summarizes these markets. As shown, these markets include Los Angeles (LAX), Las Vegas (LAS), Minneapolis (MSP), San Francisco (SFO), and Denver (DEN). With the exception of Minneapolis, these markets were also identified in the 1998 analysis. Similarly, east of the Mississippi, there are a total of eight markets that averaged at least 100 round-trip passengers per day and are without nonstop air service, compared to only three markets in the 1998 study. These markets are summarized in Table 1.4.

Note:
[1/] In 2004, BNA had 7 weekly nonstop flights by Southwest. This service was discontinued in 2005. Multistop service to BNA in 2005 is provided by other carriers

Source: U.S. DOT O&D Survey CY 2004; Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit 1.1

Existing Nonstop Destinations from Palm Beach International Airport (CY 2004)[1/]

TABLE 1.3
Western Markets without Nonstop Service [1/] (2004 compared to 1998)

2004:

PBI To/From	Nonstop Miles	2004 Round-trip Passengers per Day
Las Vegas (LAS)	2,158	209
Los Angeles (LAX)	2,330	161
Minneapolis (MSP)	1,451	127
San Francisco (SFO)	2,567	115
Denver (DEN)	1,679	107

1998:

PBI To/From	Nonstop Miles	1998 Round-trip Passengers per Day
Los Angeles (LAX)	2,330	185
Denver (DEN)	1,679	145
San Francisco (SFO)	2,567	131
Las Vegas (LAS)	2,158	119

Note:
[1/] Corresponds to markets west of the Mississippi River with at least 100 roundtrip O&D passengers per day. These markets are also not reflected in the OAG schedule (as of May 2005).

Sources: U.S. DOT Survey, CY 2004; 1998 Air Service Demand Analysis, Strategic Master Plan, 2001; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

TABLE 1.4
Eastern Markets without Nonstop Service [1/] (2004 compared to 1998)

2004:

PBI To/From [2/]	Nonstop Miles	2004 Round-trip Passengers per Day
Providence, Rhode Island (PVD)	1,148	320
Buffalo (BUF)	1,123	175
Manchester (MHT)	1,222	155
Albany (ALB)	1,163	156
Raleigh/Durham (RDU)	638	118
Port Columbus (CMH)	931	119
Rochester (ROC)	1,141	119
Syracuse (SYR)	1,155	120

1998:

PBI To/From	Nonstop Miles	1998 Roundtrip Passengers per Day
Providence (PVD)	1,148	181
Albany (ALB)	1,163	114
Buffalo (BUF)	1,263	108

Notes:
[1/] Corresponds to markets east of the Mississippi River with at least 100 roundtrip O&D passengers per day. These markets are also not reflected in the OAG schedule (as of May 2005).
[2/] In 2004, BNA had 7 weekly nonstop flights by Southwest. In 2005, BNA service by Southwest includes a one-stop at TPA. Multistop service to BNA in 2005 by other carriers existed.

Sources: U.S. DOT Survey, CY 2004; 1998 Air Service Demand Analysis, Strategic Master Plan, 2001; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Exhibit 1.2 illustrates the largest PBI markets without nonstop service capable of supporting mainline service. For comparison purposes, Exhibit 1.3 depicts the nonstop destinations from Fort Lauderdale-Hollywood International Airport (FLL) in calendar year 2004. As shown, FLL provides nonstop service to those potential PBI markets west of the Mississippi: Los Angeles (LAX), Las Vegas (LAS), San Francisco (SFO), and Denver (DEN). This raises the question of whether some of this service at FLL presently fills demand from the PBI market. Appendices B and C provide more detailed exhibits of airlines' nonstop destinations from PBI and FLL. It is believed that PBI could grow to recapture passenger leakage from the PBI service area to FLL. Recent forecasts conducted for the state of Florida by Woods and Poole Economics Inc., an independent firm that specializes in long-term county economic and demographic projections, identified PBI's service area among the fastest-growing counties in Florida. In addition, its geographic location allows PBI to support the air transportation needs of its four-county service area (Palm Beach, Martin, Indian River, and St. Lucie counties) and communities to the south as capacity constraints and delays become more prevalent in FLL. Therefore, PBI should obtain one-stop flights to further develop traffic in the markets identified in Tables 1.3 and 1.4 in advance of nonstop service. In particular, the DOA should seek carriers to provide nonstop service to Providence, Rhode Island (Delta, US Airways), and Los Angeles (Delta, United) due to the higher number of round-trip passengers per day identified in those tables.

Appendices D, E, and F provide additional analyses for growth opportunities at PBI for American and Southwest Airlines. These additional analyses were prepared in support of the DOA market initiatives undertaken at the time this study was being conducted.

Another consideration is that markets east of the Mississippi and within a 1,000 NM radius of PBI are potential candidates for regional jet (RJ) service. Table 1.5 lists the markets that average between 50 and 100 round-trip passengers per day.

Based on the 2005 OAG schedule (as of June 2005), IAD and IND are served by Independence Air (using A319) and Pinnacle Airlines (using Canadair RJs, or CRJs), respectively. Exhibit 1.4 illustrates the largest PBI markets without nonstop service that could use RJ service.

Note:
[1/] Assumes more than 100 rountrip O&D passengers per day.

Source: U.S. DOT O&D Survey CY 2004; Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit 1.2

Largest PBI Markets without Nonstop Service Capable of Supporting Mainline Service[1/]

Source: Official Airline Guide (OAG); Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit 1.3

Existing Nonstop Destinations from Fort Lauderdale-Hollywood International Airport (CY 2004)

TABLE 1.5
Potential Markets for Regional Jet Service [1/] (2004 Compared to 1998)

2004:

PBI To/From	Nonstop Miles	2004 Round-trip Passengers per Day
New Orleans (MSY)	659	80
Dayton (DAY)	941	71
Washington (IAD) [2/]	858	59
Indianapolis (IND) [2/]	967	64
Greensboro (GSO)	648	57
Richmond (RIC)	763	57
Akron (CAK)	984	56
Birmingham (BHM)	619	50

1998:

PBI To/From	Nonstop Miles	1998 Round-trip Passengers per Day
Indianapolis (IND)	967	89
Nashville (BNA)	758	78
Washington (IAD)	858	75
Louisville (SDF)	858	62
Norfolk (ORF)	740	60
Richmond (RIC)	763	54
Memphis (MEM)	822	54
Dayton (DAY)	941	53

Notes:
[1/] Includes markets within 1,000 miles with an average of 50-99 round-trip O&D passengers.
[2/] IAD and IND are served by Independence Air (using A319) and Pinnacle Airlines (using CRJs), respectively, based on the 2005 OAG schedules as of May 2005.

Source: USDOT Survey, CY 2004; 1998 Air Service Demand Analysis, Strategic Master Plan, 2001; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Note:
[1/] Assumes 50 to 99 roundtrip O&D passengers per day.

Source: U.S. DOT O&D Survey CY 2004; Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

Exhibit 1.4

Largest PBI Markets without Nonstop Service Capable of Regional Jet Service[1/]

1.4 Deficiency 2: Markets Where the Local O&D Passenger Volumes Exceed the Available Nonstop Seats

This analysis compared local O&D passenger volumes to the available weekly seating capacity offered by carriers operating with nonstop flights. For example, the 1998 analysis for the PBI-Hartford (BDL) market has ratios of 219 percent based on two daily nonstop flights during the summer and 86.5 percent during the winter, when air service doubled to four daily nonstop flights, for an average combined ratio of 124.1 percent. The combined ratio indicated that because of the summer service reductions, on average 24.1 percent more people were traveling in the market than there were year-round nonstop seats. The 2004 analysis revealed that in the case of BDL, air service actually doubled during the summer with two nonstop daily flights compared to one nonstop daily flight during the winter season; these ratios were 73.2 percent and 146.5 percent, respectively. The combined ratio, however, averaged 97.6 percent, suggesting that passengers were able to fly nonstop to BDL.

While ratios over 100 percent suggest that certain passengers are not able to fly nonstop due to capacity constraints, ratios over 75 percent may also have the potential for passenger "displacement" to accommodate belly cargo loads. This ratio would obviously vary by airlines; thus for purposes of this analysis, markets with summer ratios of 75 percent or more were analyzed using the winter/summer combined ratio. The results are summarized in Table 1.6. As shown, Hartford, Cleveland, Islip, New York (La Guardia), and, to a lesser extent, Boston are the only markets that indicate potentially deficient levels of existing nonstop service.

Table 1.7 provides a comparison between CY 2004 and CY 2005 scheduled nonstop seating capacity for the markets listed in Table 1.6. As shown, the 2005 scheduled seats increased for Hartford (BDL) and Islip (ISP), while they decreased for Cleveland (CLE), New York (LGA), and Boston (BOS). Therefore, the demand growth for the latter three markets should be monitored against seat capacity for potential increased nonstop service.

TABLE 1.6
Markets with High Local O&D Passengers [1/](2004 Compared to 1998)

2004:

PBI To/From	2004 Local O&D Passengers as a Percent of Nonstop Seats [2/]
Hartford (BDL)	97.6%
Cleveland (CLE)	95.4%
Islip (ISP)	90.7%
New York (LGA)	77.9%
Boston (BOS)	77.1%
New York (JFK)	73.9%
New York (EWR)	70.0%
Philadelphia (PHL)	63.1%
Pittsburgh (PIT)	62.2%
Washington (DCA)	55.6%
Chicago (ORD)	52.7%

1998:

PBI To/From	1998 Local O&D Passengers as a Percent of Nonstop Seats [2/]
Hartford (BDL)	124.1
Boston (BOS)	89.1
Baltimore (BWI)	72.5
New York (LGA)	60.2
Chicago (ORD)	54.2
Islip (ISP)	50.0
Washington (DCA)	48.0
New York (EWR)	46.8

Notes:
1/ Represents the average share for the combined ratios of the Winter and Summer seasons as represented by the March 15-21 2004, and July 19-25, 2004, OAG schedules).
2/ It is assumed that markets with ratios over 75% have a high local O&D passenger demand (consistent with the 1998 Air Service methodology).

Sources: USDOT Survey, CY 2004; OAG; 1998 Air Service Demand Analysis, Strategic Master Plan, 2001; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

TABLE 1.7
CY 2004 and CY 2005 Comparison of Scheduled Nonstop Seating Capacity for Deficiency 2

PBI To/From	2004 Local O&D Passengers as a Percent of Nonstop Seats	CY 2004 Roundtrip Departing Seats	CY 2005 Roundtrip Departing Seats	Percent Change (%)
Hartford (BDL)	97.6%	217,308	226,462	4.2
Cleveland (CLE)	95.4%	65,092	59,576	-8.5
Islip (ISP)	90.7%	203,856	235,092	15.3t
New York (LGA)	77.9%	726,300	677,250	-6.8
Boston (BOS)	77.1%	475,260	411,480	-13.4
New York (JFK)	73.9%	1,050,824	1,277,092	21.5
New York (EWR)	70.0%	633,422	586,448	-7.4
Philadelphia (PHL)	63.1%	545,274	602,276	10.5
Pittsburgh (PIT)	62.2%	121,644	109,512	-10.0
Washington (DCA)	55.6%	271,536	220,428	-18.8
Chicago (ORD)	52.7%	212,546	152,296	-28.3

Sources: USDOT Survey, CY 2004; OAG; Ricondo & Associates, Inc.
Prepared by: Ricondo & Associates, Inc.

1.5 Deficiency 3: Markets Where the Local O&D Passenger Volume Is a High Percentage of the Onboard Passengers

Consistent with the 1998 Air Service Analysis, the Deficiency 3 assessment involved a two-step process. First, a ratio (percentage) of local O&D passengers to onboard passengers (passengers occupying a seat on the aircraft) traveling on the nonstop flight (derived from USDOT T-100 data) was calculated to determine potential capacity constraints for local O&D passengers. Markets with a ratio (percentage) of 70 percent or higher were identified.

As an example, the ratio for PBI-Boston is 111 percent. This ratio indicates that there were at least 11 percent more passengers traveling in the local market who could not utilize the nonstop service, presumably due to capacity constraints. For the winter schedule period, Table 1.8 lists the markets with ratios greater than 70 percent.

The second step was to identify the load factors in the markets listed in Table 1.8 by the airline or airlines carrying most of the traffic to that particular market. Table 1.9 summarizes these load factors.

TABLE 1.8
Markets with High O&D Passenger Demand (2004 Compared to 1998)

2004:

PBI To/From	2004 Local O&D Passengers as a Percent of Total Onboard Passengers [1/]
Nashville (BNA)	300.8
Hartford (BDL)	146.6
Cleveland (CLE)	122.2
Islip (ISP)	114.1
Boston (BOS)	110.7
New York (LGA)	104.5
Tallahassee (TLH)	101.3
Atlantic City (ACY)	101.0
New York (EWR)	93.9
New York (JFK)	93.2
Pittsburgh (PIT)	89.6
Washington (DCA)	80.6
Philadelphia (PHL)	77.8
Baltimore (BWI)	73.5
Chicago (ORD)	71.1

1998:

PBI To/From	1998 Local O&D Passengers as a Percent of Total Onboard Passengers [1/]
Columbus (CMH)	283.6
Jacksonville (JAX)	261.1
Hartford (BDL)	220.9
Cleveland (CLE)	206.8
Boston (BOS)	157.6
Islip (ISP)	126.4
Baltimore (BWI)	124.1
New York (JFK)	114.4
New York (LGA)	101.4
Chicago (ORD)	98.1
New York (EWR)	95.7
St. Louis (STL)	81.8
Philadelphia (PHL)	78.0

1998:

PBI To/From	1998 Local O&D Passengers as a Percent of Total Onboard Passengers [1/]
Washington (DCA)	73.9

Note:
[1/] Reflects the O&D passenger demand in the winter season.

Sources: GKMG Consulting Services; USDOT Survey, CY 2004; T100 Data, CY 2004; OAG; 1998 Air Service Demand Analysis, Strategic Master Plan, 2001; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

TABLE 1.9
Load Factors for High O&D Demand Markets (2004 Compared to 1998)

2004:

PBI To/From	Airlines[1/]	2004 Load Factors (%)
New York (JFK)	Jetblue	85.9
Islip (ISP)	Southwest	82.6
Pittsburgh (PIT)[2/]	US Airways	81.1
Chicago (ORD)	United	79.5
New York (EWR)	Continental	79.1
New York (LGA)	Delta	79.0
Philadelphia (PHL)[2/]	US Airways	78.1
Washington (DCA)	US Airways	77.3
Atlantic City (ACY)	Spirit	77.1
Cleveland (CLE)	Continental	71.7
Boston (BOS)	Delta	70.1
Hartford (BDL)	Delta	68.1
Baltimore (BWI)	Southwest	66.6
Nashville (BNA)	Southwest	57.6
Tallahassee (TLH)	Chautauqua	54.6

1998:

PBI To/From	Airlines[1/]	1998 Load Factors (%)
Boston (BOS)	Delta	83.4
Hartford (BDL)	Delta	82.9
New York (EWR)	Continental	82.8
Washington (DCA)	US Airways	82.8
New York (LGA)	Delta	82.7
Philadelphia (PHL)	US Airways	81.5

1998:

PBI To/From	Airlines[1/]	1998 Load Factors (%)
Baltimore (BWI)	US Airways	79.7
Chicago (ORD)	United	78.8
Cleveland (CLE)	Continental	77.9
St. Louis (STL)	TWA	73.2
New York (JFK)	TWA	72.8
Islip (ISP)	Kiwi	68.5
Jacksonville (JAX)	US Express (Mesa)	41.3
Columbus (CMH)	America West	40.5
Boston (BOS)	Delta	83.4

Notes:
[1/] Represents the airline serving the majority of the traffic from PBI to these markets.
[2/] In 2005, Southwest added service to Philadelphia (PHL) and Pittsburgh (PIT) and thus may be an alternate airline for serving some or all of this demand.

Sources: GKMG Consulting Services; USDOT Survey CY2004; T100 Data, CY2004; 1998 Air Service Demand Analysis, Strategic Master Plan, 2001; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Of these 15 markets, load factors were 70 percent or greater in 11 markets, three of which had extremely high load factors, exceeding 80 percent. These are shown below in **Table 1.10**.

TABLE 1.10
Summary of Markets with the Largest Load Factors (Above 70 percent)

PBI To/From	Airlines[1/]	Load Factors (%)
New York (JFK)	Jetblue	85.9
Islip (ISP)	Southwest	82.6
Pittsburgh (PIT)	US Airways	81.1
Chicago (ORD)	United	79.5
New York (EWR)	Continental	79.1
New York (LGA)	Delta	79.0
Philadelphia (PHL)	US Airways	78.1
Washington (DCA)	US Airways	77.3
Atlantic City (ACY)	Spirit	77.1
Cleveland (CLE)	Continental	71.7
Boston (BOS)	Delta	70.1

Note:
[1/] Reflects the load factors for the airline carrying the majority of the traffic.

Source: GKMG Consulting Services; U.S. DOT O&D Survey, CY 2004; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

Tables 1.11a and 1.11b provide a more detailed comparison of CY 2004 and CY 2005 scheduled seating capacity for those markets listed in Table 1.8. They identify which markets require close monitoring of demand growth against seat capacity for potential new service in 2006/2007, i.e., Nashville (BNA), Tallahassee (TLH), New York (JFK), Philadelphia (PHL), and Baltimore (BWI), and which markets are potential candidates for new/additional service in 2005/2006, i.e., Hartford (BDL), Cleveland (CLE), Islip (ISP), Boston (BOS), New York (JFK and EWR), Atlantic City (ACY), Pittsburgh (PIT), and Washington (DCA).

TABLE 1.11a
CY 2004 and CY 2005 Comparison of Scheduled Nonstop Seating Capacity for Deficiency 3

PBI To/From	Airlines	CY 2004 Load Factors	CY 2004 Round-trip Seats	CY 2005 Round-trip Seats	Percent Change (%)	Notes
Nashville (BNA)	Southwest	57.6%	25,756	0	-100.0	
	Others	0.0%	0	0	n/a	1/
	Total	57.6%	25,756	0	-100.0	
Hartford (BDL)	Delta	68.1%	217,308	226,462	4.2	
	Others	0.0%	0	0	n/a	2/
	Total	68.1%	217,308	226,462	4.2	
Cleveland (CLE)	Continental	71.7%	46,792	38,776	-17.1	
	Others	84.9%	18,300	20,800	13.7	2/
	Total	77.6%	65,092	59,576	-8.5	
Islip (ISP)	Southwest	82.6%	203,856	235,092	15.3	
	Others	0.0%	0	0	n/a	2/
	Total	82.6%	203,856	235,092	15.3	
Boston (BOS)	Delta	70.1%	346,260	371,334	7.2	
	Others	76.8%	129,000	40,146	-68.9	2/
	Total	72.0%	475,260	411,480	-13.4	
New York (LGA)	Delta	79.0%	561,180	564,762	0.6	
	Others	84.0%	165,120	112,488	-31.9	2/
	Total	80.2%	726,300	677,250	-6.8	
Tallahassee (TLH)	Chautauqua	54.6%	73,400	109,500	49.2	
	Others	53.5%	9,300	0	-100.0	1/
	Total	54.5%	82,700	109,500	32.4	

TABLE 1.11a
CY 2004 and CY 2005 Comparison of Scheduled Nonstop Seating Capacity for Deficiency 3

PBI To/From	Airlines	CY 2004 Load Factors	CY 2004 Round-trip Seats	CY 2005 Round-trip Seats	Percent Change (%)	Notes
Atlantic City (ACY)	Spirit	77.1%	51,600	51,696	0.2	
	Others	0.0%	0	0	n/a	2/
	Total	77.1%	51,600	51,696	0.2	
New York (EWR)	Continental	79.1%	633,422	586,448	-7.4	
	Others	0.0%	0	0	n/a	2/
	Total	79.1%	633,422	586,448	-7.4	
New York (JFK)	Jetblue	85.9%	786,552	970,632	23.4	
	Others	67.2%	264,272	306,460	16.0	1/
	Total	81.2%	1,050,824	1,277,092	21.5	
Pittsburgh (PIT)	US Airways	81.1%	121,644	109,512	-10.0	
	Others	0.0%	0	0	n/a	2/
	Total	81.1%	121,644	109,512	-10.0	

Notes:
1/ Monitor demand growth against seat capacity for potential new service in 2006/2007.
2/ Potential candidate for new/additional service in 2005/2006.

Sources: USDOT O&D Survey, CY 2004; T100 Data, CY 2004; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

TABLE 1.11b
CY 2004 and CY 2005 Comparison of Scheduled Nonstop Seating Capacity for Deficiency 3

PBI To/From	Airlines	CY 2004 Load Factors	CY 2004 Round-trip Seats	CY 2005 Round-trip Seats	Percent Change (%)	Notes
Washington (DCA)	US Airways	77.3%	228,948	220,428	-3.7	
	Others	52.2%	42,588	0	-100.0	2/
	Total	73.3%	271,536	220,428	-18.8	
Philadelphia (PHL)	US Airways	78.1%	455,472	452,892	-0.6	
	Others	68.2%	89,802	149,384	66.3	1/
	Total	76.5%	545,274	602,276	10.5	
Baltimore (BWI)	Southwest	66.6%	388,228	383,868	-1.1	
	Others	0.0%	0	0	n/a	1/
	Total	66.6%	388,228	383,868	-1.1	
Chicago (ORD)	United	79.5%	134,372	95,268	-29.1	
	Others	74.8%	78,174	57,028	-27.0	2/
	Total	77.7%	212,546	152,296	-28.3	

Notes:
[1/] Monitor demand growth against seat capacity for potential new service in 2006/2007.
[2/] Potential candidate for new/additional service in 2005/2006.

Sources: USDOT O&D Survey, CY 2004; T100 Data, CY 2004; Ricondo & Associates, Inc.

Prepared by: Ricondo & Associates, Inc.

1.6 Summary of Deficient Domestic Markets

Based on the preceding analyses, the markets summarized below are deficient under each of the three defined categories of deficient markets and emerge as potential candidates for enhanced air service based on the number of round-trip O&D passenger per day. The priorities are listed in decreasing order of daily round-trip O&D passengers.

Deficiency 1.A Results Summary

Priority 1 – More than 200 round-trip O&D passengers per day:

Providence (PVD)
Las Vegas (LAS)

Priority 2 – More than 150 but less than 200 round-trip O&D passengers per day:

Los Angeles (LAX)
Buffalo (BUF)
Manchester (MHT)
Albany (ALB)

Priority 3 – More than 100 but less than 150 roundtrip O&D passengers per day:

Minneapolis (MSP)
Raleigh/Durham (RDU)
Port Columbus (CMH)
Rochester (ROC)
San Francisco (SFO)
Syracuse (SYR)
Denver (DEN)
Nashville (BNA)

Deficiency 1.B Results Summary

Priority 1 – More than 70 but less than 99 round-trip O&D passengers per day:

New Orleans (MSY)
Dayton (DAY)

Priority 2 – More than 50 but less than 69 round-trip O&D passengers per day:

Greensboro (GSO)
Richmond (RIC)
Akron (CAK)
Birmingham (BHM)

Deficiency 2 Results Summary

Considering the scheduled nonstop seats available for 2005 from the OAG, the following markets indicate deficient levels of existing nonstop service:

Priority 1:
Cleveland (CLE)
Islip (ISP)
New York (LGA)

Priority 2:
Hartford (BDL)
Boston (BOS)

Deficiency 3 Results Summary

Considering the scheduled nonstop seats available for 2005 from the Official Airline Guide (OAG), the following markets indicate deficient levels of existing nonstop service:

Priority 1:
Chicago (ORD)
Islip (ISP)
Pittsburgh (PIT)
New York (LGA)
Washington (DCA)
Cleveland (CLE)

Priority 2:
New York (EWR)
Boston (BOS)

Priority 3:
Atlantic City (ACY)

SECTION 2

International Air Service Analysis

2.1 Methodology

The methodology used for the international air service analysis is similar to the one used in the 1998 Air Service Analysis completed as part of the Strategic Master Plan Update for PBI. It involved a different approach than the one used for the domestic air service analysis due to limitations on the availability of quantitative data. The USDOT International O&D Survey excludes most foreign flag carriers' operations because foreign carriers do not participate in the USDOT survey. Thus the data derived from the survey only describe the size of a market relative to others in the analysis. Data for calendar year 2004 were used for the update of the international air service analysis. PBI currently has only four international markets with nonstop scheduled service to Toronto, Canada, and Freeport, Marsh-Harbor, and Nassau in the Bahamas. Other international destinations from PBI are conducted through gateway airports such as Miami International Airport (MIA), Los Angeles International Airport (LAX), or Hartsfield-Jackson Atlanta International Airport (ATL), to name a few.

Instead of ranking all international O&D markets, the USDOT International O&D Survey data were segmented into five major world regions for purposes of this analysis: Europe, Latin America/Caribbean, Canada, Asia/Pacific, and Middle East/Africa. For each region, the top 20 O&D markets were ranked based on the USDOT International O&D Survey for the following South Florida Airports: PBI, FLL, and MIA. These airports were selected to better assess South Floridians' preferred international destinations. The following is a summary of the results for each region, with very minor variations from the previous (1998) analysis.

2.2 Results

Latin America/Caribbean

Given South Florida's ethnic composition and international business focus, Latin America/Caribbean is South Florida's largest international aviation market. The region accounted for 71.2 percent of the international traffic in South Florida in 2004. Markets in South America (Venezuela), Mexico, and the Caribbean (the Bahamas, Haiti, and the Dominican Republic) occupy the top five markets of the region and accounted for 28.3 percent of Latin America/Caribbean traffic.

Latin America/Caribbean is South Florida's best-served international aviation region. All of the top 20 markets in this region have nonstop service. Seven destinations of the region's top 20 markets also appear on PBI's top 20 lists. These are: Nassau, Bahamas; Los Cabos, Mexico City, and Cancun, Mexico; San Jose, Costa Rica; Guatemala City, Guatemala; and Lima, Peru.

The PBI-Latin America/Caribbean market accounted for just 1.7 percent of South Florida's traffic to the region. PBI has nonstop service to three of the top 20 Latin America/Caribbean markets, all in the Bahamas, accounting for 83.7 percent of the total international traffic served from PBI.

Europe

Europe is South Florida's second-largest international aviation market, with nonstop service to 10 of the top 20 markets. These markets are: London (Gatwick and Heathrow) and Manchester, United Kingdom; Paris, France; Frankfurt and Munich, Germany; Zurich, Switzerland; Madrid, Spain; Amsterdam, Netherlands; Milan, Italy; and Helsinki, Finland. For calendar year 2004, traffic to/from Europe represented 14.9 percent of South Florida's total international traffic.

The top 20 markets accounted for approximately 83 percent of all South Florida-Europe traffic. London was the largest single market, accounting for 14.4 percent of traffic, followed by Paris, Madrid, and Frankfurt with 10.6, 6.2, and 4.6 percent, respectively.

The PBI-Europe market during this period represented 7.6 percent of total South Florida-Europe traffic. This market shared 14 of South Florida's top 20 European markets; London/Gatwick was PBI's largest market, followed by Frankfurt and Paris. Other markets included: London (Heathrow) and Manchester, United Kingdom; Munich, Germany; Dublin, Ireland; Amsterdam, Netherlands; Milan and Rome, Italy; Brussels, Belgium; Zurich, Switzerland; and Barcelona and Madrid, Spain.

PBI has no nonstop service to Europe. As a result, the PBI passengers who traveled to Europe connected through another gateway, primarily Atlanta (ATL) or New York (JFK).

Canada

Canada is the third-largest international region for South Florida. Canada accounted for 8.4 percent of South Florida's international traffic for calendar year 2004.

Montreal, Toronto, and Vancouver are the only markets with nonstop flights from South Florida, and together they accounted for more than three-quarters of the region's traffic. Like Europe, travel between other cities in Canada and South Florida required a connection via another gateway.

PBI-Canada traffic represented approximately 12 percent of South Florida's traffic to the region in terms of passenger. Travel to Toronto and Montreal predominates, accounting for 62.4 percent of the total PBI-Canada traffic; however, PBI has nonstop service to Toronto only. As such, Montreal could be a viable international market for new scheduled service, since service to Montreal represents 27.5 percent of the traffic in the PBI-Canada market. Traffic to Toronto represents 34.9 percent of the PBI-Canada market.

Asia/Pacific

The South Florida-Asia/Pacific market accounted for 4.5 percent of the region's international traffic. No South Florida airport has nonstop service to the Asia/Pacific region. Therefore, travel to the Asia/Pacific region requires using gateway airports such as Los Angeles (LAX), New York (JFK), San Francisco (SFO), or Chicago (ORD).

Tokyo, Japan, was by far the largest single market in this region for South Florida, with 18.5 percent of traffic, followed by Manila, Philippines, with 9.6 percent.

The passengers in the PBI-Asia/Pacific market represent 6.7 percent of South Florida's traffic in the region. Tokyo is also PBI's single largest market, with 17.7 percent of the traffic. LAX is the primary U.S. gateway airport for PBI-Asia/Pacific connecting passengers.

Middle East/Africa

The Middle East/Africa region was the smallest international aviation market for South Florida, accounting for 1.1 percent of traffic in 2004. Only Capetown, South Africa, has nonstop service to South Florida airports (MIA). Tel Aviv, Israel, was by far the largest single market, accounting for 43.4 percent of the traffic, followed by Johannesburg, South Africa, and Istanbul, Turkey, with 14.3 and 10.4 percent of traffic, respectively. Because there is no nonstop service from PBI, its traffic to the region connects through New York's Kennedy International Airport (JFK) or through Atlanta' s Hartsfield International Airport (ATL).

SECTION 3

2005 Market Survey Results

To validate the results of the air service analyses, interviews were conducted with representatives of travel agencies, hotel/resorts, and corporations/businesses located in Palm Beach County from July 22 through August 31, 2005. Representatives of the Palm Beach County Convention and Visitors Bureau, the Business Development Board, and the Workforce Development Board of Palm Beach County helped identify the travel agencies, hotels/resorts, and corporations in PBI's market area that would provide a representative sampling of PBI's existing and potential customers.

In addition, this market survey was expanded beyond Palm Beach County to Martin, St. Lucie, and Indian River counties. Local chambers of commerce, economic development councils, and business leadership groups in those counties were consulted to help identify key survey participants in those counties.

This section presents a summary of the results, and Appendix G provides detailed results of the market survey.

3.1 Interview Results Summary

Travel Agencies

- In 2004, eight travel agencies interviewed had, on average, $2.9 million sales for the year, with total sales of $23.8 million between the eight agencies. Business air travel reservations represent, on average, about 34 percent of their sales, and leisure air travel reservations account for approximately 66 percent. Two respondents, one in Palm Beach County and one in Indian River County, said all the travel they book for clients through PBI is leisure travel.
- Among the travel agencies, 63 percent stated that PBI's service area is strictly Palm Beach County, while the remaining 37 percent included Martin, St. Lucie, and Indian River counties to the north.
- Domestic air travel reservations represent 59 percent of the travel reservations scheduled through PBI, compared to the 41 percent representing international travel.
- Respondents from Palm Beach County reported their percentages of flight reservations at PBI to range from 50 percent to 75 percent. Respondents from Martin County reported that 65 percent of the reservations are schedules through PBI instead of FLL. St. Lucie respondents booked 75 percent of travel through PBI instead of FLL. The respondent from Indian River stated that only 25 percent of the company's air travel is booked through PBI because most clients prefer to use Orlando International Airport.
- The top domestic destinations scheduled by the travel agencies are located in the Northeast: New York, Boston, Washington D.C., Newark, and Philadelphia. Other top destinations

cited were Dallas, Las Vegas, Chicago, Los Angeles , and San Francisco. Houston and Denver were also cited as popular destinations during the winter months.

- The agencies overwhelmingly used Delta Airlines for domestic air travel.
- The top international destinations scheduled by the agencies are the Bahamas, London, Paris, Rome, and Frankfurt. Other popular destinations include Jamaica, Tokyo, and Brazil. Respondents also noted that travel to Central and South America is on the rise (particularly to Argentina, Chile, and Venezuela) and that there is renewed interest in Australia and New Zealand.
- The agencies primarily schedule international flights from PBI through Delta Airlines.
- The agencies estimated their flight reservations at international gateways. Miami (MIA) was listed as an international gateway for passengers from the PBI market area by all eight travel agencies. Six respondents also listed New York (JFK); five respondents also listed Atlanta (ATL); and three respondents also listed Los Angeles (LAX) and San Francisco (SFO). Respondents pointed out that MIA is typically the gateway for travel to Latin America, and Los Angeles and San Francisco are gateways for travel to Asia.
- All the agencies identified a need for an increase in nonstop service from PBI to New York (JFK). Other airports cited for increased or new service from PBI included New York (EWR), Los Angeles (LAX), Boston (BOS), Dallas (DAL), Las Vegas (LAS), Denver (DEN), San Francisco (SFO), Washington D.C. (DCA), Providence (PVD), and Chicago (ORD).

Hotel/Resorts

- For the hotel/resort representatives interviewed, corporate-related reservations, on average, account for 64 percent of their sales, while leisure reservations represent about 36 percent of sales.
- Domestic travelers account for the overwhelming majority of reservations, at 82 percent of the total, compared to 18 percent of international reservations.
- Hotels/resorts reported that their guests use PBI in lieu of FLL an average of 65 percent of the time. One respondent said his guests use both airports equally, and another reported that his guests use PBI 98 percent of the time.
- Delta Airlines, Southwest Airlines, and US Airways transport most of the hotel/resorts' domestic guests.
- Delta Airlines, British Airways, and American Airlines transport most of the hotel/resorts' international guests.
- By a large margin, New York, Boston, and Florida cities are the hotel/resorts' top domestic markets. Other domestic markets include Newark, Philadelphia, Atlanta, Los Angeles, San Francisco, Las Vegas, and Denver.
- London, Frankfurt, the Bahamas, and Canada represent most of the originating markets for international guests.

- The hotel/resorts estimated their guests' use of international gateways as follows: six respondents cited Miami (MIA) as the primary gateway; five cited New York (JFK) and Atlanta (ATL); and one identified Orlando (MCO).
- The hotel/resorts identified New York, Philadelphia, and Boston as the domestic destinations to which they believed new or increased nonstop service from PBI is most needed and economically viable. Six respondents also listed Boston, while four listed Los Angeles and Las Vegas.. Two respondents identified Denver as a destination needing increased service from PBI.
- According to the hotel/resort respondents, the seasonal variation in the tourist market in Palm Beach County is reflected in a decrease in room rates rather than occupancy rates during the summer off-season.

Corporations

- The survey found that the five corporations interviewed spent a total of $2.2 million on air travel per year; however, seven of those eight spent between $7,700 and $100,000 per year, with total annual expenditures of those seven averaging $31,614.
- According to the corporations, convenient and efficient air service is critical to their operations.
- An estimated 86 percent of corporate travel in Palm Beach, Martin, St. Lucie, and Indian River counties is booked through PBI instead of FLL. One of the eight survey respondents reported using PBI and FLL equally for business travel.
- Six of the eight respondents cited Delta Airlines as their primary air carrier. Two respondents reported that they use Continental Airlines frequently. All eight respondents indicated that they make their primary air carrier selection based on flight schedules. Four respondents said they choose carriers because of frequent flyer points, and two respondents said their selected primary carriers consistently had the lowest fares.
- The corporations interviewed identified their top domestic destinations as:
  - Washington, D.C.
  - New York
  - Newark
  - Boston
  - Atlanta
  - Dallas
  - Philadelphia
  - Los Angeles
  - Houston
  - San Francisco
  - Denver
  - Wichita
- The corporations identified London and Tokyo as their most-visited international destinations.

- Seven of the eight corporate respondents identified Miami International Airport (MIA) as the primary gateway for international air travel from South Florida. Six respondents listed New York (JFK), and four respondents listed Atlanta (ATL), and Los Angeles (LAX).
- The corporations identified New York (JFK), Philadelphia (PHL), Los Angeles (LAX), and Houston (HOU) as the domestic destinations to which they believe new or increased nonstop service from PBI would be most useful to them.

3.2 Assessment of South Florida Airports

Similar to the 1998 survey, the interview participants continue to unanimously praise PBI as an efficient and user-friendly airport compared to FLL and MIA. In particular, respondents primarily cited PBI's convenient location near Interstate 95 for ease of access; the variety of shops and restaurants; rapid throughput of the terminal facilities; and the availability of free wireless Internet service.

A greater share of interview participants said PBI and FLL fares are competitive, while a smaller segment of respondents said fares at PBI are still higher than those at FLL. A few respondents said the difference in fares has a greater impact on leisure travelers than on business travelers. In reality, it is the availability of more nonstop flights to popular destinations out of FLL that is viewed as one of the main advantages FLL has over PBI. Respondents stated, however, that in spite of more nonstop destinations offered at FLL, getting in and out of FLL is problematic. Similarly, all respondents identified the number of international flights at MIA as being the primary advantage of that airport over PBI for international travel. However, participants said MIA suffers from the same drawbacks as FLL. As a result, they primarily use MIA for nonstop flights to international destinations.

Although PBI is among the top five destinations for fractional ownership destinations, 75 percent of the travel agencies said they never used Netjets, one of the leading fractional jet ownership companies. The remaining 25 percent seldom use Netjets and do not expect to use it frequently in the future.

3.3 Conclusions

The 2005 market survey complements the quantitative air service analysis in identifying markets that require increased or new service. Increased services to the following destinations were cited: New York, Boston, Chicago, Washington, Atlanta, Dallas, Philadelphia, Providence, and Atlanta. New nonstop services to Los Angeles, San Francisco, and Las Vegas were also considered essential by a majority of the respondents.