

CHAPTER 5. IMPACT THE CBT MAY HAVE ON SDIA AND ON TIJ PASSENGER GROWTH RATES

5.1. Introduction

The general purpose of this chapter is to determine the impact of the CBT on air service demand at SDIA and TIJ, along with a general economic impact analysis of the CBT to the San Diego Region.

The objectives of this chapter are to:

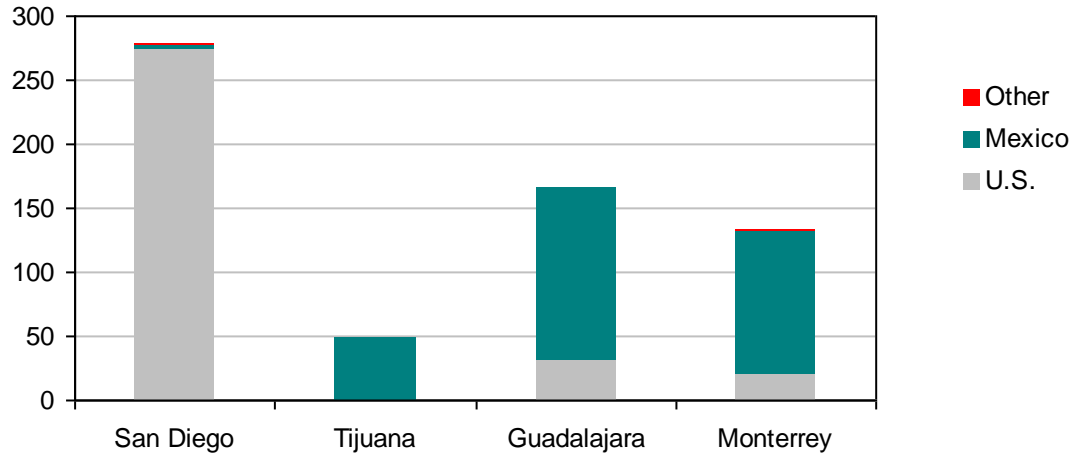
- Establish the impact of the CBT on the demand of air service at SDIA and anticipated passenger growth at TIJ.
- Evaluate whether the CBT may present market openings for presently un-served or under-served markets.
- Assess the economic impact of the CBT in the region.

This chapter builds on the work done previously in this project to provide an estimate of demand for the CBT.

As discussed in a prior chapter, SDIA and TIJ serve different roles in providing the region's air service. TIJ specializes in service to Mexico and attracts a high proportion of San Diego County travelers to Mexico. SDIA is the sole provider of air service to the United States among the two airports and attracts both San Diego County and Tijuana travelers to the U.S.

The complementary roles of the two airports are unique. As illustrated on the next page, both Guadalajara and Monterrey, which are located in large metropolitan areas in Mexico, have a mix of service to Mexico and the U.S. Yet, TIJ has air service only to Mexico. As for SDIA, other large U.S. airports have far more air service to Mexico than does SDIA.

Daily Departures by Airport ⁸⁸



In summary:

- Without TIJ, SDIA would have more non-stop service to Mexico.
- Without SDIA, TIJ would have non-stop service to the U.S.

5.2. Methodology

The IMG Team developed aggregate passenger demand forecasts for TIJ considering:

- Passengers currently crossing the border to travel out of TIJ.
- Passengers from the San Diego Region that currently travel to Mexico through SDIA and LAX.
- Passengers that would be attracted to fly out of TIJ due to the ease of use of a CBT.

The forecasts established the estimated air passenger market size for year 2030 and are the basis for determining the type of services that would be most likely added to TIJ as demand grows.

Forecast scenarios included:

- Current use of TIJ by San Diego County Residents.
- Future use of TIJ by San Diego County Residents.
- Assessment on the perspective that international service (other than to U.S.) would be offered from TIJ.

⁸⁸. Source: OAG February 2008

Interviews with route planning executives at carriers serving approximately 75% of the passengers currently using SDIA were carried out to reinforce the understanding of the future role of TIJ and the CBT.

The forecasts were complemented with a sensitivity analysis of key market demand triggers to determine the range in the size of the demand resulting from the CBT activity. Triggers considered included:

- New TIJ flights to U.S.
- Increase in use of TIJ for Mexico travel from San Diego County travelers currently using SDIA as result of CBT convenience.
- Increase in use of TIJ for Mexico travel from San Diego County travelers currently using LAX as result of CBT convenience.
- Increase in use of TIJ as result of constraints at SDIA.

Two additional sensitivity scenarios were run considering:

- A high estimate of incremental market assuming 5.8% natural growth in demand from San Diego for travel to Mexico.
- A low estimate of incremental market assuming lower rate (4%) of natural growth in demand from San Diego for travel to Mexico.

5.3. Air Service in Metropolitan Areas with Multiple Airports

To provide background and perspective on the potential demand for air service at a CBT, it is important to understand how air service is distributed in other metropolitan areas with multiple airports.

In studying other metropolitan areas, three observations apply:

Airlines will seek to serve the region from a single airport to the extent possible:

- A single airport offers economies of scale. When air service is offered at a single airport, the airline is able to concentrate demand, permitting the use of larger aircraft, more frequencies, and/or service to smaller markets than may be possible if regional demand is fragmented among multiple airports. In addition, the fixed costs associated with serving any airport are minimized, if the airline is able to serve the region from a single airport.

- Service to multiple airports may be forced by competition. Depending on the level of competition among airlines, once an airline serves more than one airport within a region, other airlines also may be forced to serve multiple airports in order to remain competitive.
- Airlines with the largest number of flights are better able to economically serve multiple airports in a region. In some cases, an airline will conclude that it has sufficient scale within a region to justify service to more than one airport – and that doing so will provide a competitive advantage.

Even when secondary airports are successful, they take decades to develop:

- TIJ is unique as it is the primary airport for the Tijuana metro area, but a secondary airport for the San Diego metro area. In all regions of the U.S., there is a large disparity in air service between the primary airport in a region and other airports within the same region. Even when secondary airports are successful, they take decades to develop.

Airports must be located in reasonable proximity to population centers to be successful – even in the largest metropolitan areas:

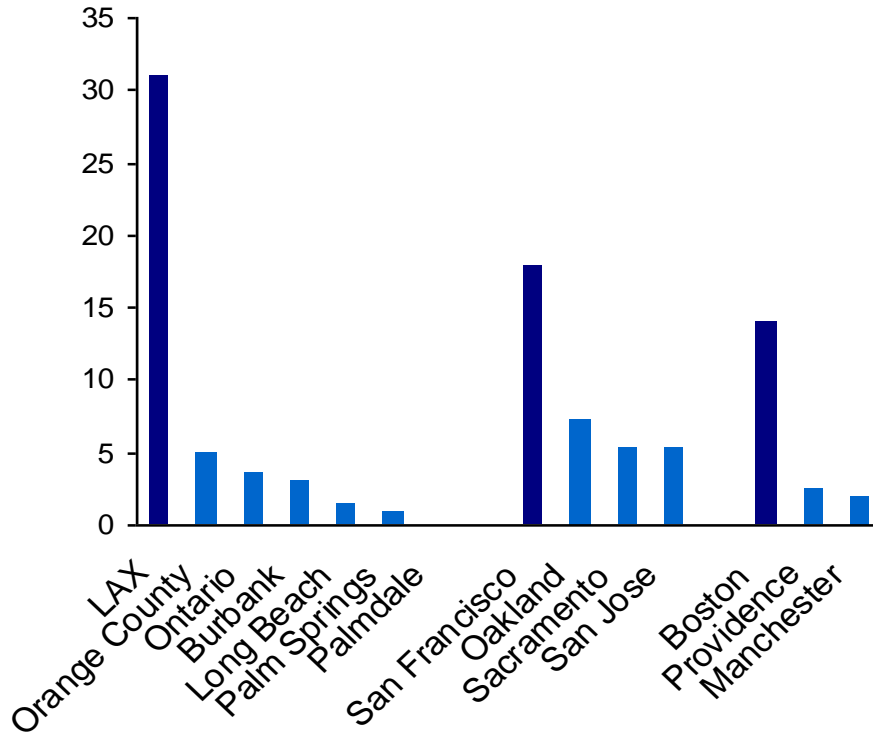
- Airports must be located in reasonable proximity to population centers to be successful. But being located close to a major population center is not sufficient in itself to assure that an airport will attract substantial air service.

These principles are illustrated further below.

THE DISPARITY BETWEEN PRIMARY AND SECONDARY AIRPORTS

Looking first at the disparity between primary and secondary airports in terms of enplanements, the three metropolitan areas of Los Angeles, San Francisco and Boston illustrate that the primary airport in each area attracts far more passengers than do any of the other airports.

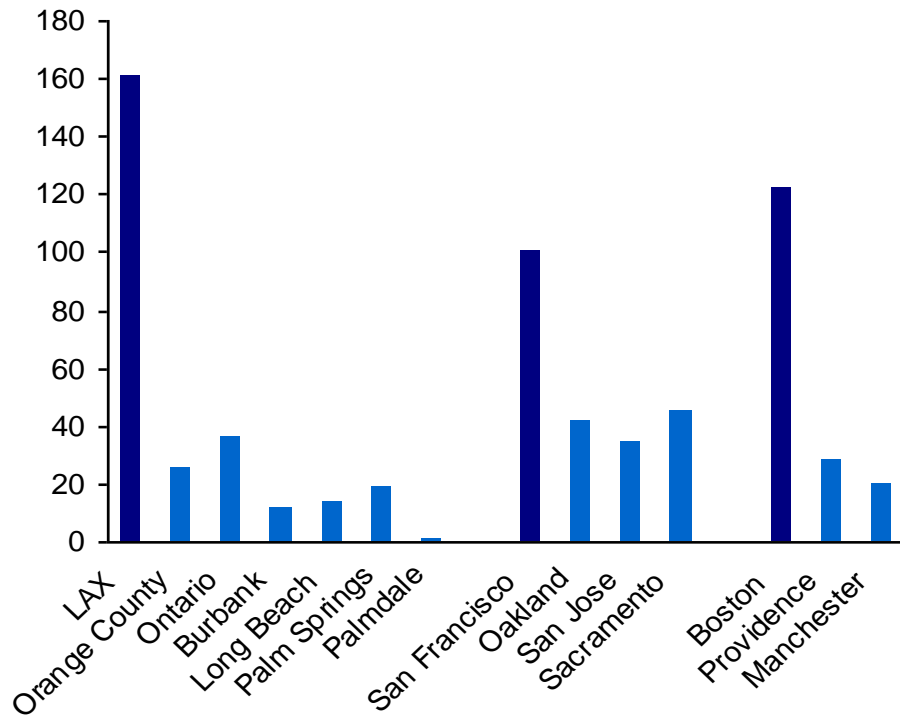
Annual Enplanements
Millions (2007)⁸⁹



The same conclusion applies when the primary airport in each area is compared to the other airports in terms of the number of non-stop destinations.

⁸⁹. Source: Airport reports

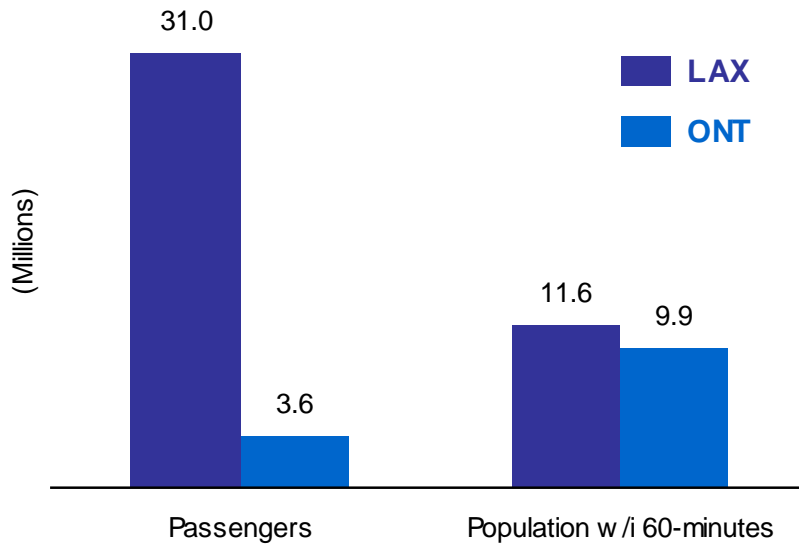
Non-stop Destinations (2007) ⁹⁰



When comparing the primary airport in a region with other airports, the difference in enplanements and number of non-stop destinations typically *far exceeds* the difference in population located near each airport. For example, nearly 10 million people live within an hour of ONT, compared with 11.6 million living within an hour of LAX. Yet the number of passengers using LAX is nearly nine times as many as the number using ONT. The huge advantage of the primary airport in each region must be taken into account in projecting the demand for newly-developing or secondary airports within the same metropolitan area.

⁹⁰ Source: Official Airline Guide, 2007

LAX and ONT Enplanements (2007) and Population Base ⁹¹



Two other examples of airports that struggle because they are in the shadow of larger airports are in the Phoenix metropolitan area, which is slightly larger than the San Diego metropolitan area, and in the St. Louis area.

In the Phoenix metropolitan area are two commercial service airports – Phoenix Sky Harbor (PHX) with nearly 19 million enplanements and, only 30 miles away in the rapidly growing area of Mesa, Arizona; Williams Gateway (recently renamed Phoenix/Mesa Airport, ID locator IWA) with about 50,000 enplanements. Both airports are located within reasonable proximity to a large number of people – similar to the situation in San Diego County with regard to SDIA and TIJ. Approximately 3.2 million people live within a 60-minute drive of PHX compared with 2.2 million people for IWA. Approximately 1.7 million people live within a 30-minute drive of PHX compared with 600,000 people for IWA.

Airport	2007 Enplanements	Population w/i Driving Range	
		30 Min	60 Min
Phoenix Sky Harbor Int'l	18.9	1.7	3.2
Williams Gateway	0.05	0.6	2.2

Phoenix Sky Harbor Int'l – Williams Gateway 30 drive miles

⁹¹ Source: Airport web sites and Microsoft MapQuest 2006



Consistent with the observations made previously, despite the reasonable proximity of both Phoenix area airports to large population centers, the differences in passengers and air service between the two airports is enormous – with PHX having more than 300 times as many passengers as IWA. Simply stated, air service tends to concentrate at the primary airport in a region.

The St. Louis metropolitan area also has two commercial service airports – St. Louis International and Mid-America Airport. As with PHX, the two airports – 38 miles apart – are reasonably close to large population centers. Also, as with PHX, there is an enormous disparity in the air service at the primary airport than that at the secondary airport.

Airport	2007	Population w/i Driving Range	
	Enplanements	30 Min	60 Min
St. Louis	6.4	1.6	2.5
MidAmerica	0.005	0.2	2.1
St. Louis – MidAmerica 38 drive miles			

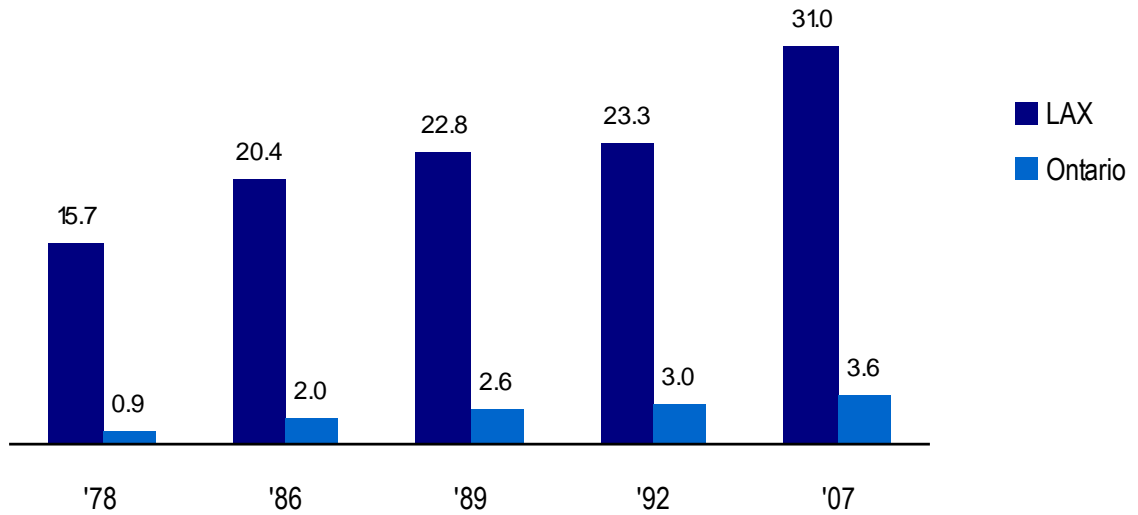


Secondary airports, even when successful, take many years to develop

The next important principle that applies to secondary airports in metropolitan areas is that even when those airports are ultimately successful, they take many years to develop. Two examples are provided.

ONT is an example of a successful secondary airport in the Los Angeles metropolitan area. Yet even in this metropolitan area with the second largest U.S. population and given the roadway traffic and other congestion issues associated with LAX, it has taken ONT decades to increase enplanements and its share of the region's passengers. As illustrated in the chart on the next page, ONT grew from 900,000 enplanements in 1978 to 3.6 million enplanements in 2007 – an increase of 2.7 million. During this same period, LAX grew from 15.7 million enplanements to 31 million enplanements – an increase of 15.3 million. During this nearly 30 year period from 1978 to 2007, ONT passengers as a percentage of LAX passengers increased from 6% to 12%.

Enplanements (Millions)⁹²

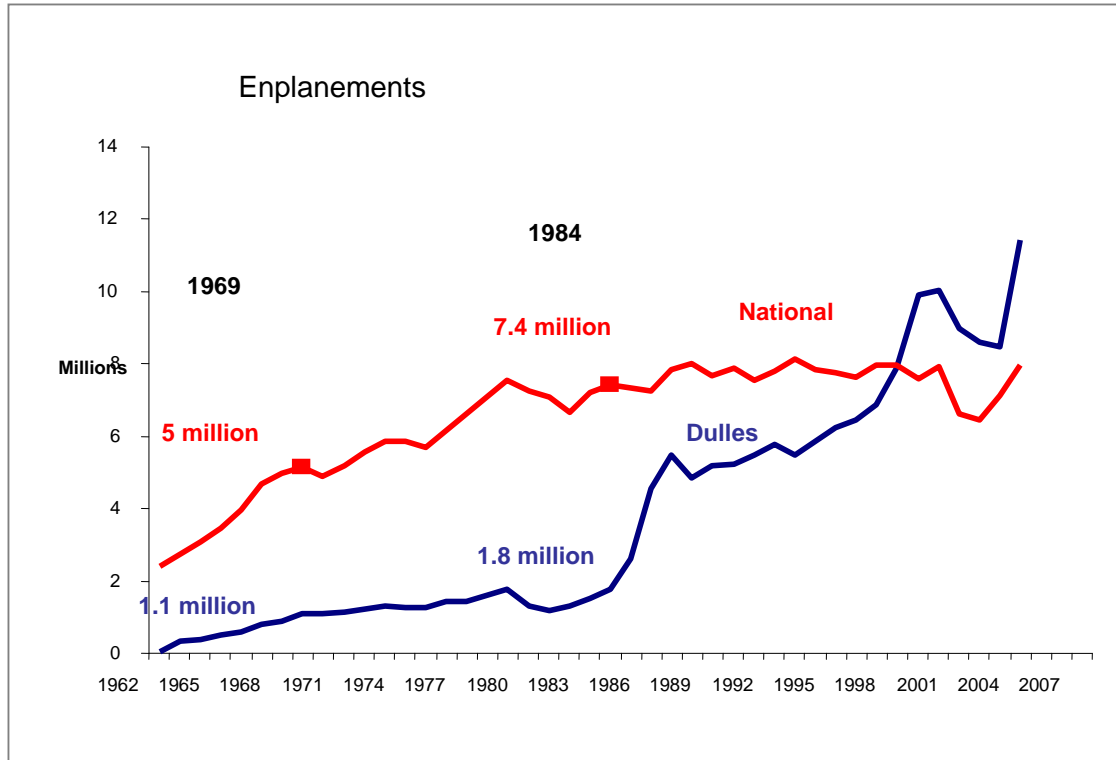


The second example of the long development time for secondary airports is Washington Dulles International Airport (IAD). Since 1966, attempts have been made to limit air service at the primary Washington airport – Ronald Reagan Washington National Airport (DCA) – and to encourage air service at IAD. In 1966, a flight limit of 40 flights/hour was imposed at DCA. Also that year, a perimeter rule was imposed at DCA, which prohibited non-stop flights in excess of 1,250 miles. In addition, all international flights were required to use IAD as no international facilities were provided at DCA. Yet, despite these efforts to encourage air service at IAD and to discourage the further growth of DCA, enplanements at DCA continued to climb, reaching five million in year 1969 and nearly eight million enplanements by year 1979. In 1980, the number of flights per hour permitted at DCA was reduced further, and a passenger ceiling was imposed.

During this period, IAD enplanements grew slowly, from 1.1 million in 1969 to only 1.8 million in 1984. Finally in 1985 – 19 years after flight limits and a perimeter rule were imposed at DCA – United Airlines established a hub at IAD and enplanements sharply increased. The long time period required for IAD to build up air service despite multiple forces supporting that effort again shows the likelihood that air service will develop slowly at secondary airports in large metropolitan areas.

⁹² Source: Airport web sites and Microsoft MapQuest 2006

DCA-IAD Example ⁹³



5.4. Passenger Decisions Regarding Which Airport to Use

As noted previously, in many cases, the service offered at different airports within the same metropolitan area will not be comparable. However, when multiple airports within the same region have attractive air service – as measured by reasonable air fares, the number of non-stop markets served, the number of flights in individual markets and service by preferred air carriers, as well as with accepted aircraft – passengers will prefer the airport that is most convenient. Convenience is usually determined by which airport is closest in terms of the time it takes to drive there.

There are several ways to look at the issue of “drive time” to the airport. The map on the next page shows, the “line of indifference” between SDIA and the CBT for San Diego County residents. In other words, San Diego County residents who live north of the line are able to drive to SDIA more quickly than to the CBT, while residents who live south of the line are able to drive to the CBT

⁹³ Source: FAA reported data

more quickly. The shaded green area north and south of the line reflects the fact that during rush hour, the line moves depending on which direction the traveler is driving. Along the green line – the line of indifference – travelers are indifferent as to which airport location they drive to – as driving to either location takes the same amount of time.

**Line of Indifference to/from SDIA and CBT
During Morning Peak⁹⁴**



When the line of indifference is in the southern part of San Diego County, a majority of San Diego County residents are located closer to SDIA. In fact, in year 2000, 86.7% of San Diego County population lived closer to SDIA than to the CBT. By 2030, that percentage decreases to 82.0% as the southern part of the County grows more rapidly than the northern part.

⁹⁴ Source: Ricondo & Associates analysis of SANDAG TAZ data

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Location	2000			2030			2000-2030
	To Airport	From Airport	Average	To Airport	From Airport	Average	Change
<u>Percent Population Closer To:</u>							
SDIA	84.4%	89.1%	86.7%	79.1%	84.9%	82.0%	-4.7%
Tijuana Cross Border	15.6%	10.9%	13.3%	20.9%	15.1%	18.0%	4.7%
<u>Population Closer To:</u>							
SDIA	2,373,337	2,505,807	2,439,572	3,049,294	3,271,148	3,160,221	720,649
Tijuana Cross Border	439,357	306,887	373,122	803,375	581,520	692,447	319,326

* "To Airport" measures the percentage of population that is closer to the airport as determined during the morning peak when driving to the airport; "From Airport" measures the percentage of population that is closer to the airport when driving from the airport.

The above analysis⁹⁵ is based on the assumption that the time required to cross the border is zero. To the extent that additional time is required to cross the border to reach the CBT, the percentage of San Diego County population located closer to the CBT drops rapidly. For example, if it takes 15 minutes to cross the border, then the percentage of San Diego County population who are closer to the CBT drops from 18.0% in 2030 to 7.6%. A thirty-minute border-crossing means that only 0.7% of San Diego County residents would be able to reach the CBT in less time than it would take them to drive to SDIA.

Location	<u>2000</u> Average	<u>2030</u> Average
<u>Percent Population Closer To:</u>		
Tijuana Cross Border	13.3%	18.0%
Tijuana Cross Border + 15 min	1.9%	7.6%
Tijuana Cross Border + 30 min	0.0%	0.7%

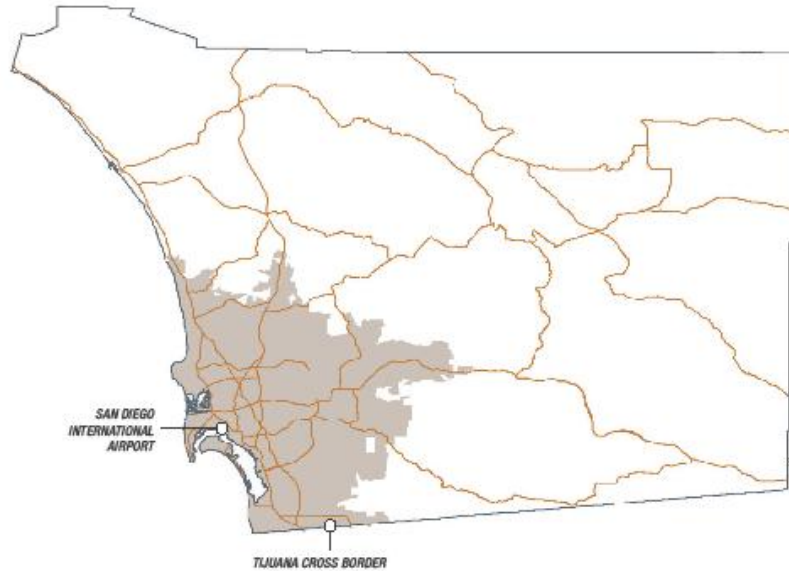
Another way to look at the convenience of the location of both SDIA and the CBT is to estimate the number of San Diego County residents who are located within

⁹⁵ Source: Ricondo & Associates analysis of SANDAG TAZ data

a specified drive time of either location. In other words, knowing which airport is closer may not be the deciding factor so long as both airports are reasonably close.

Shown below are the geographic areas that are within a 45-minute drive of both locations. Also listed are the number of residents and the number of employees who are within a 45-minute drive of each location as of 2000 and as projected in 2030. Using a 45-minute driving time threshold, both locations capture a majority of San Diego County residents and employees in 2000 and 2030 – assuming no additional time is required for the border-crossing.

**San Diego International Airport
45 Minute Travel Time - 2030⁹⁶**



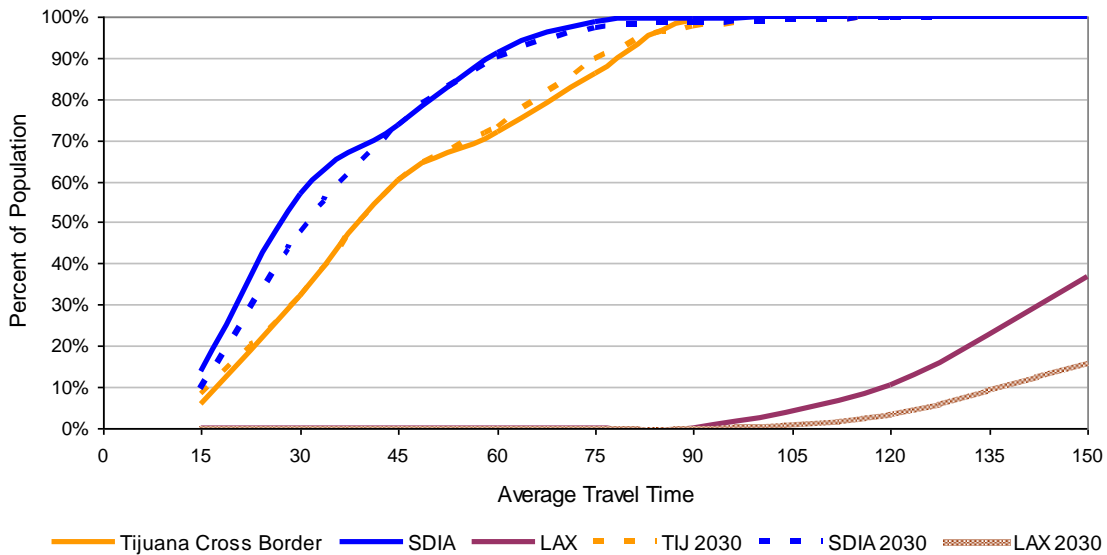
Within 45-Minute Drive

	<u>2000</u>	<u>2030</u>
SDC Residents		
SDIA	70.4%	68.6%
TIJ	60.2%	60.0%
SDC Employees		
SDIA	75.3%	74.0%
TIJ	67.4%	65.7%

⁹⁶ Source: Ricondo & Associates analysis of SANDAG TAZ data

One final way of understanding the locational advantages of SDIA and the CBT is to plot the percentage of population within various driving times. As shown in the chart on the next page, the percentage of San Diego County residents located within a reasonable drive to either SDIA or the CBT is high and remains high through the year 2030. Applying the same criteria to LAX shows that it only becomes accessible to even a small part of San Diego County population when a minimum 90+ minute drive time is assumed, and that the required drive time to LAX worsens substantially in the future, much more so than does the SDIA or CBT drive time.

Population Weighted Travel Time Profile - San Diego County Residents Assumes No Delay for Border Crossing⁹⁷

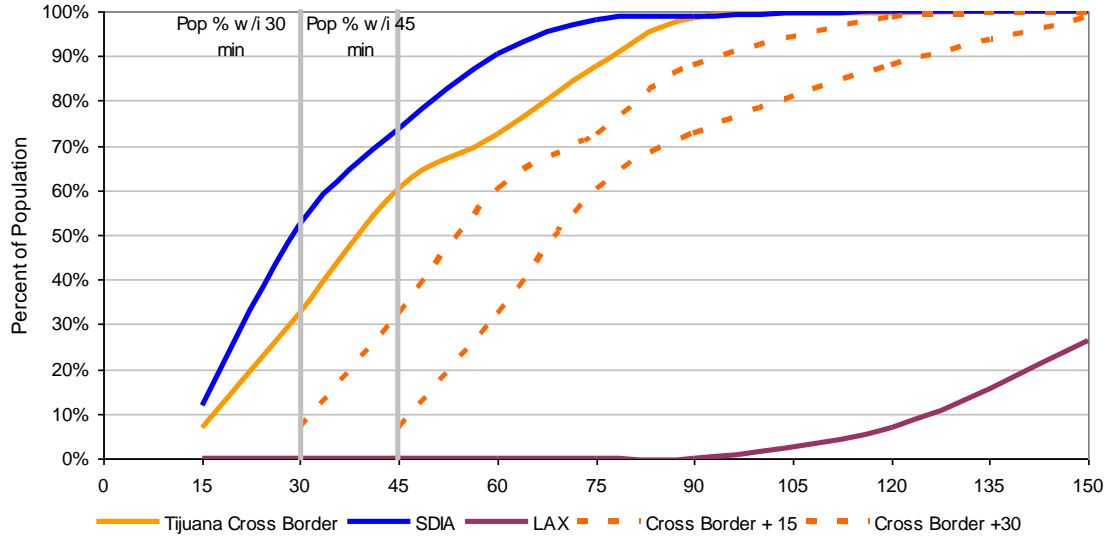


When assumed border-crossing times are added to the analysis, the apparent similarity in average travel time between SDIA and the CBT diverges. For example as of year 2000, 52.3% of San Diego County residents were within a 30-minute drive of SDIA, which is a primary reason why so many people think SDIA is such a convenient airport. About 32% of San Diego County residents were within a 30-minute drive of the CBT. When a 15-minute border-crossing is assumed; however, the percentage of San Diego County residents located within 30-minutes drops to 7.0%, and when a 30-minute border-crossing is assumed no one is within 30-minutes. Similar large drops in the percentage of population located within 45-minutes occur when border crossing times of 15 and 30

⁹⁷ Source: Ricondo & Associates analysis of SANDAG TAZ data

minutes are added. In short, as various border-crossing times are assumed, the time required to reach the CBT becomes problematic.

Population Weighted Travel Time Profile - San Diego County Residents⁹⁸



Population % Within Time Bands			
Average Travel Time (min)	30	45	60
SDIA	52.3%	73.6%	90.6%
Tijuana Cross Border	32.3%	60.1%	72.6%
Cross Border + 15	7.0%	32.3%	60.1%
Cross Border + 30	0.0%	7.0%	32.3%
LAX	0.0%	0.0%	0.0%

⁹⁸ Source: Ricondo & Associates analysis of SANDAG TAZ data

5.5. Tijuana Air Service

To understand the future role of TIJ and of the CBT, it is important first to understand TIJ's current role as a provider of air service for the region. In that regard, TIJ currently offers:

- Frequent non-stop service to a broad range of Mexican destinations.
- No air service to the U.S.
- A single flight to Tokyo, Japan, with announced service to Shanghai, China.

Tijuana Service Compared with Other Airports
Number of Destinations and Weekly Departures
(October 15-21, 2007) ⁹⁰

Destination	Tijuana (25)	Los Angeles (20)	San Diego (2)	Ontario (1)	Total
Guadalajara	105	61		8	174
Mexico City	65	82			147
Los Cabos	14	40	15		69
Hermosillo	41	7			48
Culiacan	44	4			48
Toluca	35				35
La Paz	26	7			33
Leon/Guanajuato	17	15			32
Los Mochis	19	4			23
Puerto Vallarta	5	17	1		23
Ciudad Juarez	22				22
Morelia	17	5			22
Uruapan	19				19
Cancun		16			16
Monterrey	10	6			16
Zacatecas	7	8			15
Mazatlan		14			14
Aguascalientes	7	3			10
Tepic	10				10
Torreon	5	4			9
Puebla	9				9
Acapulco	9				9
Durango	9				9
Loreto		8			8
Ciudad Obregon	7				7
Colima	5				5
Chihuahua	4				4
Ixtapa/Zihuatanejo		3			3
Manzanillo		2			2
Tokyo(Narita)	2	50			52

⁹⁰ Source: OAG and airline web sites

As will be discussed in more detail later in the chapter, TIJ currently attracts a high percentage of San Diego County travelers that are flying to Mexico. As for Asia, only about 2% of the San Diego County residents using TIJ are estimated to be using it for travel to Asia.¹⁰⁰

TIJ's geographic location in the far northwest corner of Mexico makes it unlikely to serve as a major connecting hub. SDIA's location in the far southwest corner of the U.S. puts it in a similar position.

Location of Primary Mexican Airports



Mexico City serves as Mexico's largest origin and destination market, and its primary connecting hub.

Largest Ten Mexican Airports Enplaned Passengers 2007¹⁰¹

Rank	Airport	Full Year 07 Passengers
1	Mexico City	25,882
2	Cancun	11,340
3	Guadalajara	7,333
4	Monterrey	6,560
5	Tijuana	4,740
6	Puerto Vallarta	3,139
7	San Jose Del Cabo	2,901
8	Toluca*	2,435
9	Hermosillo	1,338
10	Del Bajio	1,274
11	Merida	1,268
12	Culiacan	1,138
13	Acapulco	1,057

¹⁰⁰ Assumes 30 enplanements per flight from SDC and 6 flights/week = 9,360 enplanements/year
¹⁰¹ Source: Airport reports for 2007, except Toluca, which is for year ended June 2007

WHAT INTEREST DO U.S. CARRIERS HAVE IN ADDING SERVICE AT TIJ?

As additional background information for understanding the future role of TIJ and the CBT, the IMG Team conducted interviews with route planning executives at airlines carrying approximately 75% of the passengers currently using SDIA.

The airline executives spoke on the condition that their remarks remained confidential and were only released as an aggregate summary. They made the following observations regarding their future plans for TIJ:

- SDIA is the airport they prefer to serve in the San Diego County area.
- Their goal was to serve the primary business airport located close to downtown.
- They said they were not interested in splitting their San Diego area operations between two airports. There would need to be a compelling reason for them to serve TIJ, in addition to SDIA.
- They would be interested in serving TIJ, only if there were a sufficient critical mass of air service there by other U.S. carriers that forced them to respond to the competition.
- They specifically said that avoiding the San Diego “curfew” was not a sufficient incentive for them to serve TIJ.
- They mentioned that the Delta-LAX flight – intended to connect with Delta’s growing LAX connecting bank – was unsuccessful.
- Our conversations with Mexican carriers suggest that they are focusing their U.S. expansion efforts elsewhere.

The above should not be interpreted to mean that U.S. airlines will never serve TIJ, only that it will not happen in the short term.

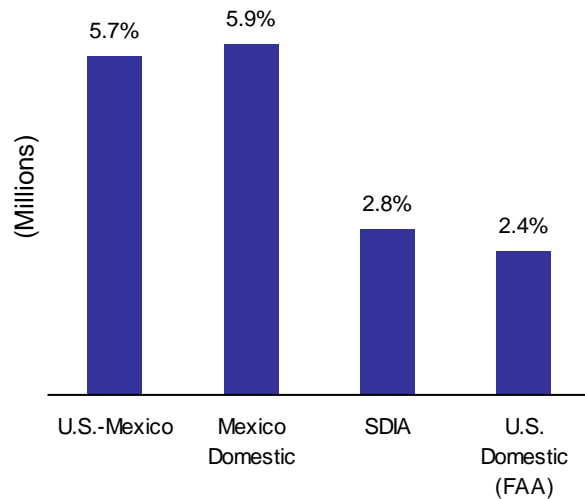
OVER THE LONGER TERM, WHAT AIR SERVICE IS LIKELY TO BE ADDED AT TIJ?

Over the longer term, air service at TIJ is likely to develop as follows:

- TIJ is likely to continue to grow more rapidly than SDIA. This is based on forecasts of U.S.-Mexico air traffic growth. For example, the widely disseminated Airbus Global Market Forecast for 2007-2026 projects U.S.-Mexico passengers will grow by 5.7% annually, while Mexico domestic

passengers will grow by 5.9% annually for the same period. By comparison, SDIA’s Terminal Development Plan forecast growth rate under the SDIA “high growth” forecast alternative is 2.8% annually. The higher rate of growth for Mexico air passengers is consistent with Mexico’s economic development and the development of its airline industry:

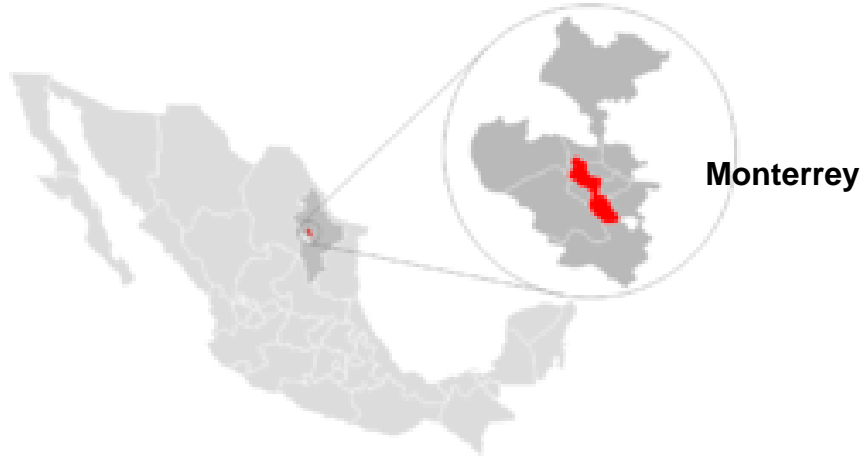
Forecast Long-Term Growth Rates for U.S. and Mexico Air Passengers



- Over the longer term, TIJ growth is expected to be primarily intra-Mexico with international service (other than Mexico-U.S.) very limited.
- At some point, TIJ may add service to a handful of large U.S. markets and hubs. However, those markets already have ample air service from San Diego.

Each of these conclusions is discussed further below.

TIJ is unique among Mexico’s airports in being located so close to a large U.S. airport. A sense of the U.S.–Mexico air service that might be expected at TIJ, if it stood alone is provided by examining the international air service at Monterrey Airport (MTY). Monterrey is Mexico’s third largest metropolitan area with 3.7 million people (Mexico Census 2005) as compared with Tijuana with 1.48 million people and Guadalajara with 4.1 million people. Monterrey has the highest GDP per capital in Mexico, which is typically correlated with a high propensity for air travel. MTY has no competition from other nearby airports and had 38% more passengers than TIJ in year 2007 (3.28 million enplanements versus 2.37 million).



MTY's international flights are listed below. MTY has non-stop service to seven U.S. airports. It has frequent service to the large U.S. hubs of Houston and Dallas, with less frequent service to four other very large U.S. markets plus San Antonio.

International Air Service from Monterrey¹⁰³

Destination	Carrier	Feb 08 Avg Daily Depts
Madrid	Aeromexico	0.3
Atlanta	Delta Air Lines	2.2
Dallas/Fort Worth	American Airlines	4.9
Houston	Continental, AVIACSA	8.1
Las Vegas	AVIACSA, Aeromexico	1.3
Los Angeles	Mexicana, AVIACSA	1.1
Chicago O'Hare	Mexicana	1.0
San Antonio	Aeromexico, Mexicana	2.9
		<u>21.7</u>

To the extent that MTY provides an example of what TIJ air service would look like if SDIA were not located nearby, it suggests that TIJ would have service to the U.S., but that service would be limited to the largest U.S. markets and would not constitute a large percentage of the airport's total service.

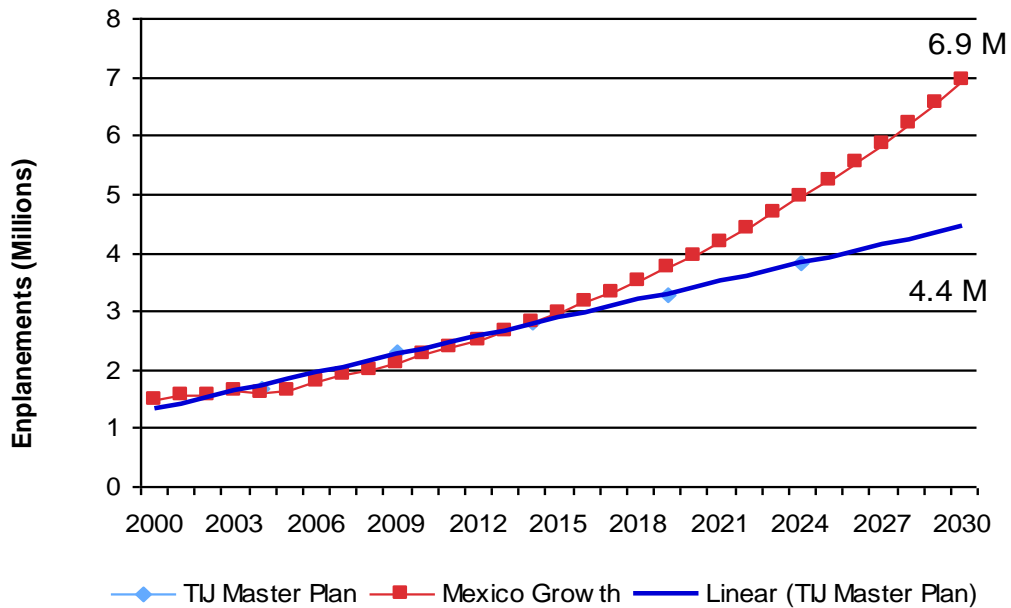
TIJUANA FORECASTS

San Diego County residents will participate in the increase in air travel between the U.S. and Mexico. Applying the Airbus Mexico passenger growth rate¹⁰² to TIJ results in the TIJ forecast shown on the next page. In addition, a separate TIJ forecast is provided based on information from a TIJ master plan of several years ago, which uses a lower growth rate of 4.1%. TIJ passengers increased by

¹⁰² Airbus forecast for domestic Mexico passenger growth for 2007-2026 is 5.9% annually, and for U.S.-Mexico passenger growth is 5.7% annually. The average of the two is used to forecast growth at TIJ.

32% in 2007 as low cost carriers offered very low fares at TIJ. To compensate for this surge in passengers, which may not be sustainable, the forecasts below use TIJ's 2006 passenger numbers as the baseline. The higher forecast is used as the baseline for further analysis. The lower forecast is shown as well to demonstrate that the difference in forecast growth rates has a significant impact on total projected TIJ enplanements in the year 2030. The higher forecast calls for TIJ to have 6.9 million enplanements in 2030, while the lower forecast calls for TIJ to have 4.4 million enplanements then.

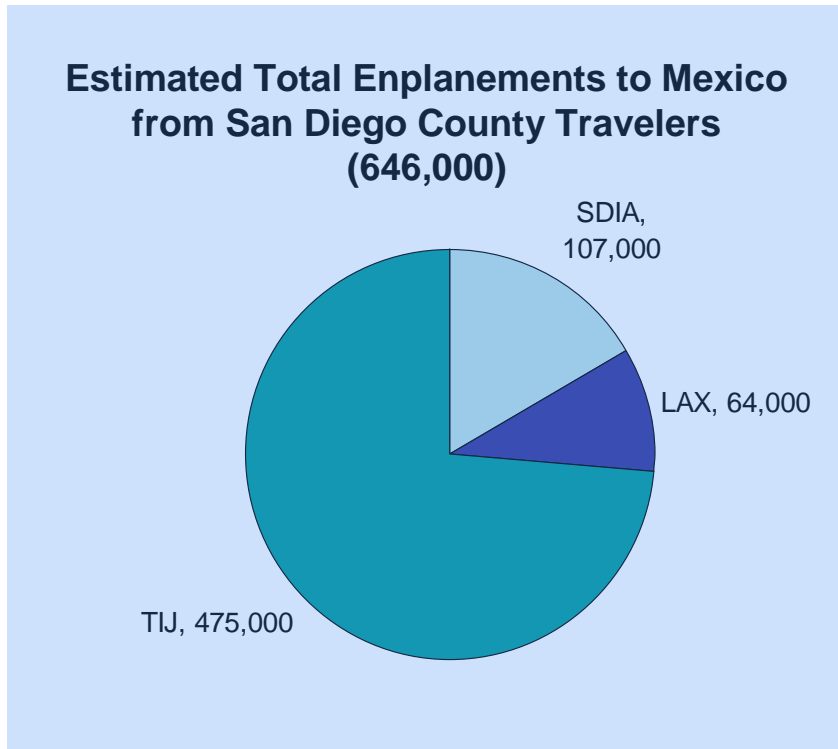
Projected TIJ Enplanements ¹⁰⁴



CURRENT USE OF TIJ BY SAN DIEGO COUNTY RESIDENTS

To forecast future use of TIJ by San Diego County residents requires an estimate of current use by San Diego County residents. Multiple estimating methods have been employed to produce a current estimate, including analysis of MIDT zip code data, telephone and in person survey results, and comparison of Mexico demand in other markets. Three examples of such analysis are included in the Appendix. Based on all of the analysis and interviews, it is estimated that approximately 475,000 TIJ enplanements (+/- 75,000) originated in San Diego County in 2006. An additional 107,000 San Diego County residents traveled to Mexico using SDIA and 64,000 traveled to Mexico using LAX.¹⁰³

¹⁰³ Oliver Wyman Analysis



The following additional and supporting information is available with regard to the use of TIJ by San Diego County residents and others from north of the border.

- The estimated 475,000 TIJ enplanements from San Diego County amount to 26.5% of the 1,792,000 total TIJ enplanements in 2006.
- MIDT zip code analysis points to an equal number of Orange County residents using TIJ to travel to Mexico. The percentage of Orange County residents that use TIJ as opposed to LAX to travel to Mexico is lower than that from San Diego County, but the total number of Orange County travelers to Mexico is higher than that of San Diego County is—so the total use of TIJ from both counties is almost exactly the same.
- Based on interviews with travel agents, airlines and airport officials, well over half of TIJ’s enplanements originate north of the border. This would be consistent with 26.5% from San Diego County, 26.5% from Orange County and a smaller percentage from elsewhere in California and other western states (traveling to TIJ by bus and car to travel onward).
- The table on the next page shows the reported Mexican passengers as a percentage of domestic passengers in other metropolitan areas.

**Metro Areas with Highest %
of Travel to Mexico¹⁰⁴**

	<u>Mexico % of Domestic</u>
San Diego County	8.0%
Houston	6.4%
Chicago	5.1%
San Francisco	3.7%
South Florida	2.9%
New York New ark	2.4%
Denver	2.3%
San Antonio	2.3%
Detroit	2.2%
Sacramento	2.2%

- Based on the location and population of San Diego County, we expect San Diego to have close to or even the highest percentage of travelers to Mexico. The estimated total San Diego County passengers to Mexico of 646,000 enplanements produces a result of over 8% - the highest in the country. (The reported LAX percentage of 6.4% may be artificially low because some Los Angeles passengers are driving as well to TIJ.)

In summary, the estimate of 475,000 TIJ enplanements originating in San Diego County is consistent with the other information available.

The use of TIJ by San Diego County travelers to Mexico affords some amount of capacity relief to SDIA. In other words, TIJ handles 475,000 travelers who might otherwise use SDIA (or at least a combination of SDIA and LAX).

- Estimated TIJ enplanements from SDC 475,000 (+/- 75,000)
- Total SDIA enplanements (2006) 8,659,669

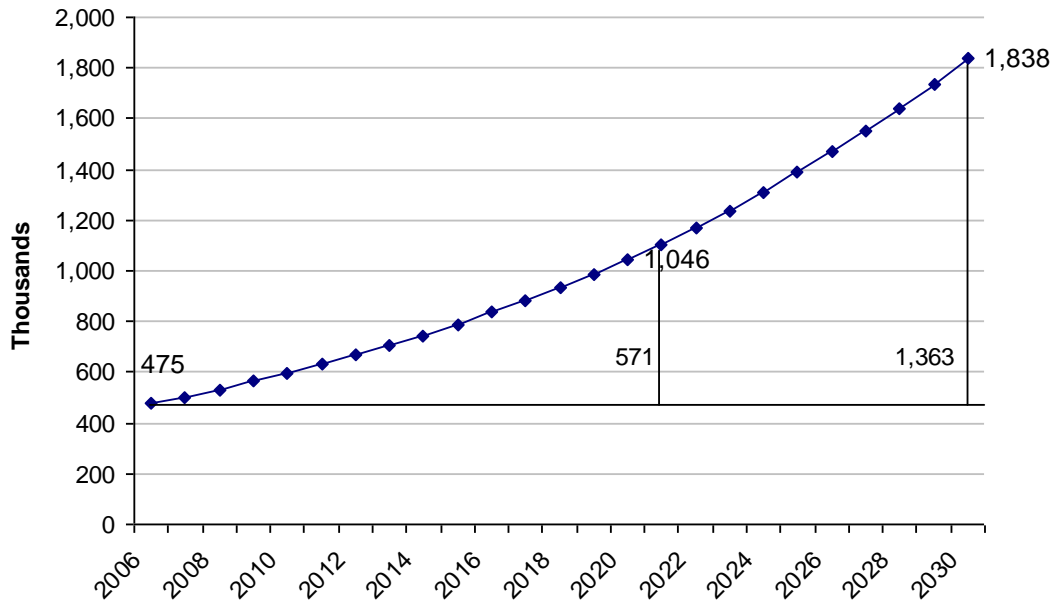
FUTURE USE OF TIJ BY SAN DIEGO COUNTY RESIDENTS

On the assumption that the use of TIJ by San Diego County residents will grow in the future at the overall rate of growth of U.S.-Mexico air passengers (5.8% annually), the 475,000 TIJ enplanements from San Diego County in 2006 will grow to 1,838,000 enplanements by 2030. The chart on the next page illustrates

¹⁰⁴ Source: U.S. DOT T-100 and O&D

the growth, and shows that the number of additional TIJ enplanements from San Diego County will be approximately 571,000 by 2020 and 1,363,000 by 2030.

Total and Additional Passengers from San Diego County Using TIJ to Fly to Mexico



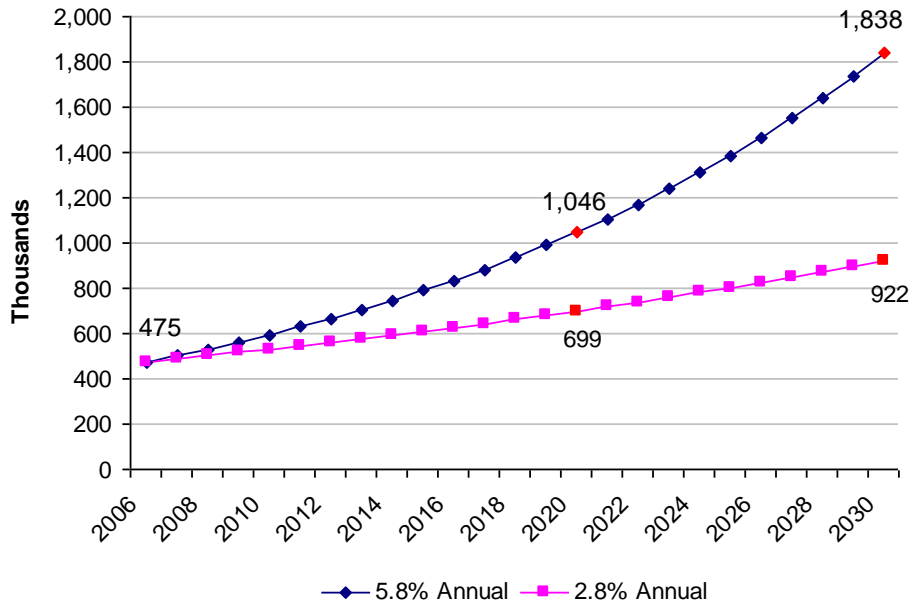
It is important to point out that the increase projected is expected to occur simply as a result of increasing travel between the U.S. and Mexico and is not related to the CBT. Two factors are likely to affect the results – although the factors will tend to offset each other. First, as overall demand to Mexico increases, it is likely that some additional non-stop service to Mexico will be offered from SDIA, which will have the effect of drawing back San Diego County passengers that might otherwise have flown from TIJ. Second, however, the increasingly broad range of destinations and frequent service offered at TIJ to all Mexico destinations will make TIJ an even more attractive airport to use for Mexico travel in the future than it is today. One additional factor that is impossible to weigh is the impact of new border-crossing requirements in the future – how will these requirements impact overall travel between the U.S. and Mexico?

The projected 1,363,000 additional TIJ enplanements coming from San Diego County residents in the year 2030 would represent a 10% relief of forecasted passengers at SDIA, without any special inducement caused by the CBT.

The above conclusions rest on the assumption that TIJ enplanements will grow by 5.8% annually. Should that rate of growth not be achieved, then total TIJ enplanements and TIJ enplanements originating from San Diego County will be less. For example, if TIJ enplanements and San Diego County residents' use of

TIJ increase only at the projected rate of increase for SDIA of 2.8% annually, then San Diego County residents' use of TIJ would grow to only 922,000 enplanements by year 2030 as opposed to the 1,838,000 enplanements projected previously. The low growth rate shown below is considered a worst case scenario and shown for that purpose only.

Projected TIJ Enplanements from San Diego County at High and Low Growth Rates



PERSPECTIVE ON INTERNATIONAL SERVICE (OTHER THAN TO U.S.) FROM TIJ

As mentioned previously, the increased use of TIJ by San Diego County residents is expected to be almost exclusively for travel to/from Mexico. TIJ's Asia service is expected to attract a very small number of San Diego County residents, and little additional service is expected other than to points in the U.S. The reasons for these conclusions are as follows:

- TIJ's geographic location in the far northwest of Mexico means that the only natural flow of passengers from other points in Mexico is to the north (i.e., the U.S. and Canada) and west (i.e., Asia).
- The huge Mexico City market, local Tijuana business ties to Asia, and local cargo may support limited service to Japan and China that originates in Mexico City. However, these same factors do not apply to Europe, where the flight would need to originate in TIJ to avoid backtracking.

- Other large Mexico markets, such as Guadalajara and Monterrey, have minimal non-U.S. international service. Monterrey has a non-stop flight to Madrid twice a week, and Guadalajara has service to Panama City, Florida, five days a week.
- TIJ and SDIA remain in the shadow of LAX with its huge array of international flights.
- The largest SDIA non-Mexico international markets are London, Japan, Paris, Rome and Manila. SDIA recently announced the introduction of non-stop service to London and tentative new service to Manila via Vancouver.

5.6. Cross Border Terminal Impacts

As discussed previously, the use of TIJ by San Diego County residents will increase over time without the development of a CBT because of the overall increase in the number of travelers to Mexico and TIJ's specialized role as the region's primary provider of air service to Mexico.

The development of a CBT would further increase the use of TIJ by San Diego County travelers in the following ways:

- Over the long term, TIJ is likely to offer non-stop service to a limited number of markets in the U.S.
- Although TIJ already captures a large percentage of San Diego County travelers to Mexico, the increased convenience of a CBT is likely to attract additional San Diego County passengers that are currently flying to Mexico from SDIA or LAX.
- As capacity constraints at SDIA limit the number of passengers that are able to fly from SDIA at preferred fares/times, it is possible that TIJ will attract some of those passengers on flights to U.S. destinations.

FARE DIFFERENTIAL IMPACT ON RESULTS

TIJ attracts San Diego County travelers because of offerings to destinations not served on a non-stop basis from SDIA and lower fares to those destinations. Current savings on roundtrip flights from TIJ are generally \$100 or more as compared to SDIA and LAX flights. San Diego County telephone survey results show that a \$100 or more round-trip savings means a favorable reaction to the use of TIJ, while greater savings do not result in any significant further increase in the likelihood of using TIJ.

The wide scope and frequency of Mexico air service at TIJ is expected to remain and grow over the long term. Less certain is the degree to which TIJ's air fare differential with SDIA and LAX will remain. The 2007 surge in TIJ enplanements of 32% was driven partly by TIJ's low fares. (As noted, because some of those fares are not believed to be sustainable over the long term, the forecast results use 2006 as the baseline year.) Nevertheless, based on airfare cost differences observed in other countries, it is likely that some TIJ air fare differential will remain with regard to service to Mexico.

The subject of air fare costs is also important in forecasting future air service from TIJ to U.S. points because that service is expected to be directly competitive with service offered to the same points from SDIA. Currently, international air service to the U.S. is subject to a variety of fees that do not apply to domestic air service. For example, there is an international arrival fee of \$13.70 per passenger, an international departure fee of \$13.70 per passenger, an immigration fee of \$7 per arriving passenger, and a customs fee of \$5 per arriving passenger. Whether or not those fees apply to service from the CBT to points in the U.S. is very important. To the extent that San Diego County passengers traveling to destinations in the U.S. have a choice of buying tickets on flights with those fees or without, they will strongly favor flights without.

USE OF CBT FOR U.S. SERVICE WOULD BE DRIVEN BY DEMAND FROM TRAVELERS NORTH OF THE BORDER

Most demand for travel from the CBT to points in the U.S. will be driven by U.S. travelers, not from Tijuana travelers. This conclusion is based on an analysis of the propensity of Mexican travelers in other parts of Mexico to travel by air to the U.S. In Guadalajara and Monterrey, for example, the average person travels by air to the U.S. 0.19 times per year, or about once every five years. When this ratio is applied to Tijuana's population of 1,483,992, it suggests that the true demand from Tijuana to U.S. points is 283,986 enplanements per year. That demand is currently satisfied by Tijuana travelers crossing the border and flying from SDIA. (The available data shows a negligible number of Tijuana travelers flying to the U.S. via other Mexico gateways.) The true demand from Tijuana to U.S. points amounts to only 3.7% of the 7,744,710 U.S. enplanements from SDIA for 2006. In other words, the much higher U.S. propensity to travel in general and to travel to the U.S. in particular means that most demand for U.S. air service from the CBT will come from north of the border. Please refer to table on the next page.

Population, Enplanements and Propensity to Travel to the U.S.

	2005 Metro Population	Total (2006) Enplanements	Enplanements to U.S.	U.S. % of Total Airport Enplanements	% U.S. Enplanements Originating in Mexico
Guadalajara	4,095,853	3,064,569	1,080,428	35.3%	34.7%
Monterrey	3,664,331	2,433,180	404,608	16.6%	48.6%
	7,760,184	5,497,749	1,485,036	27.0%	
Guadalajara/ Monterrey Propensity to Travel					
Overall	0.71	Enplanements per capita			
To U.S.	0.19	Enplanements per capita			
Applying G/M Propensity to Travel to U.S. to Tijuana Population					
Tijuana Population	1,483,992				
Projected TIJ Enplanements to US	283,986				
Comparison with SDIA U.S. Enplanements	7,744,710				
Tijuana % of SDIA U.S. Enplanements	3.7%				

ONLY A FEW U.S. DESTINATIONS ARE LARGE ENOUGH TO SUPPORT SEPARATE SERVICE FROM TIJ

Estimating which U.S. markets may be large enough to support separate non-stop service from the CBT is difficult because, as noted previously, the airline planners contacted currently see no reason to offer service from both the CBT and SDIA, nor do they have any intention of abandoning SDIA to serve the CBT at TIJ. Over time, however, as air service continues to grow in the San Diego region, the likelihood that air carriers will offer non-stop U.S. service from the CBT will increase.

In order to project the U.S. destinations more likely to receive non-stop service by year 2030, the following assumptions were made:

- The number of passengers in each of SDIA's markets was increased by 2.8% annually, consistent with SDIA forecast growth rate.

- In most markets, it was assumed that the carriers were likely to operate a minimum of three flights/day to U.S. markets and would not serve the CBT if there were insufficient passengers to support that number of flights.
- Narrow-body service was assumed to require a 75% load factor on a 120-seat aircraft or a total of 270 daily passengers each way (PDEWs).
- Regional jet service was assumed to require a 75% load factor on a 50-seat aircraft or a minimum of 112.5 PDEWs.
- Regional jets lack the range required for east coast service and can only be used on shorter-haul flights.
- Finally, to provide the initial screening, it was assumed that the 18% of San Diego County residents that will live closer to TIJ in the year 2030 would consider flying from the CBT. In other words, for the initial screening of markets, each market was analyzed to determine whether 18% of the projected total SDIA market demand would be sufficient to support non-stop service.

The largest SDIA markets are listed in the table on the next page with the projected total passenger traffic in 2030 in each market, along with an estimate of passengers in each market on the assumption that 18% of total passengers flew from the CBT.

**Top SDIA U.S. Destinations Ranked by Daily Passengers Each Way
(PDEWs) for the Year Ended 3rd Quarter 2007¹⁰⁵**

Rank	Market	PDEWs	Grow by 2.8% to 2030	Live closer to TIJ 18%
1	Oakland	1,489	2,810	506
2	Sacramento	1,153	2,176	392
3	Las Vegas	1,118	2,109	380
4	San Jose	1,086	2,050	369
5	Phoenix	1,053	1,987	358
6	Seattle/Tacoma	810	1,529	275
7	San Francisco	708	1,336	240
8	Denver	659	1,245	224
9	New York Kennedy	638	1,205	217
10	Chicago O'Hare	580	1,094	197
11	Portland	468	884	159
12	Dallas/Fort Worth	461	870	157
13	Washington Dulles	427	806	145
14	New York Newark	423	798	144
15	Minneapolis/St. Paul	415	782	141
16	Boston	397	749	135
17	Philadelphia	366	690	124
18	Salt Lake City	355	670	121
19	Chicago Midway	342	645	116
20	Atlanta	330	622	112
21	Houston	302	570	103

Realistically, not everyone who lives closer to the CBT will fly from that terminal. Just as is the case with airports in all other metropolitan areas that have multiple airports, the primary airport will be heavily favored by airlines and in turn by passengers. Therefore, the assumption that the 18% of San Diego County residents who live closer to the CBT would fly from that terminal was modified to assume that only half of those who live closer to the CBT would fly from the CBT. However, the circumstances of each flight are more complicated than simply analyzing the demand for service from the San Diego Region to the destination of each flight because on each flight to, e.g., Phoenix, about half of the passengers are traveling from the San Diego Region to Phoenix, while the remaining half are traveling to points beyond Phoenix. Although the number of residents that are assumed to use the CBT is set at 50% of those that are closer to the CBT, the actual number of passengers on the flight is set at double that to

¹⁰⁵ Source: U.S. DOT O&D Survey

reflect the fact that in the markets most likely to receive service about half of the passengers will be traveling onward to other destinations.

Based on this analysis, the destinations that are most likely to receive non-stop service from the CBT are listed below, along with the estimated passengers in 2030. The basic assumption made about the operation of the CBT is that it will have very easy access from the U.S. so that passengers could consider it to be a convenient and viable alternative to SDIA. Apart from the other market size assumptions listed previously, a study of Southwest Airlines' service in other markets leads us to conclude that Southwest is unlikely to divide its San Diego Region operations to Oakland, Sacramento and San Jose between SDIA and TIJ and, therefore, all of Southwest Airlines' San Diego area service to those markets is assumed to remain at SDIA.

Possible New TIJ-U.S. Service by 2030

	<u>Live Closer PDEWs</u>	<u>Annual Enplanements</u>
Las Vegas	380	
Phoenix	358	
San Francisco	240	
Denver	224	
Dallas/Fort Worth	157	
	<u>1,359</u>	
Assume 50% who live closer to TIJ fly from TIJ	680	248,018
Equal number flying through hub	680	<u>248,018</u>
		496,035
Alternatively assume: Six hubs with three round-trips/day 1,800 daily seats each way 75% load factor	1,350	<u>492,750</u>

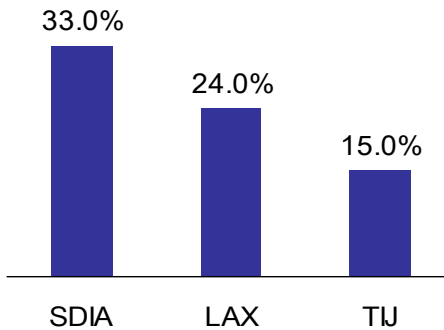
Comparing the projected service from the CBT to the U.S. with the current service from MTY to the U.S., MTY has non-stop service to seven U.S. destinations, while the CBT is projected to have service to five or six. MTY has 21 departures per day to the U.S., while the CBT is projected to have 18. MTY is able to support service to the U.S. because it has no competing U.S. service from nearby service; however, in 2030, TIJ is projected to have nearly three

times as many passengers as MTY has currently, and SDIA is projected to have over seven times as many passengers as MTY has today. These comparisons may help provide perspective on the amount of service that is projected from the CBT.

ADDITIONAL USE OF TIJ BY SAN DIEGO COUNTY RESIDENTS FOR MEXICO TRAVEL AS A RESULT OF THE CBT

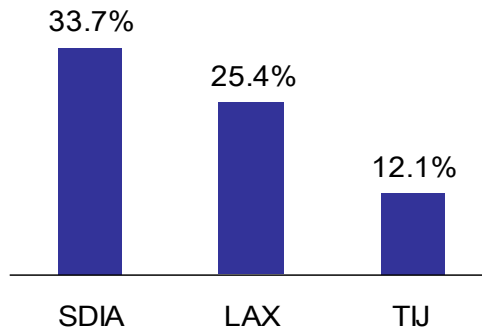
Although TIJ already attracts a high proportion of San Diego County travelers to Mexico, the development of a very convenient CBT is likely to attract additional San Diego County travelers. For example, currently, the percentage of business travelers is higher at SDIA than at LAX or TIJ.

Percentage of International Passengers Buying Business Fares**



** Analysis of San Diego County MIDT bookings

Percentage of San Diego County Passengers Who Fly for Business Some or All of the Time*



* Based on telephone survey results

The shift in passengers from LAX is expected to be greater than from SDIA because of passenger interest in avoiding the long drive to LAX given a better alternative. There will remain some number of SDIA passengers to Mexico under any scenario because of the convenient location of SDIA. Even with very

limited non-stop service to Mexico, a number of SDIA passengers will fly to Mexico by connecting at Houston, Dallas or Phoenix.

The table below shows the projected additional San Diego County passengers that would use the CBT instead of LAX or SDIA. An estimated 60% of the passengers currently using LAX are projected to shift to the CBT. Another 40% of the passengers currently using SDIA are projected to shift to the CBT.

Current Estimate of SDC Choice of Airport for Mexico Travel		Assumed shift to TIJ	2006	2020	2030
		20%	21,400	47,121	82,808
		40%	42,800	94,242	165,615
		60%	64,200	141,363	248,423
TIJ	475,000				
SDIA	107,000				
LAX	64,000				
	<u>646,000</u>				
		20%	12,800	28,184	49,530
		40%	25,600	56,369	99,059
		60%	38,400	84,553	148,589

San Diego County travel to Mexico assumed to grow at 5.8% annually

IMPACT OF CONSTRAINTS AT SDIA

The SDIA Terminal Development Plan includes both constrained and unconstrained forecasts, as shown in the table on the next page. When airports become constrained, airlines react in multiple ways – increasing aircraft size, raising fares, accepting long delays, etc. Examples of airports that have experienced severe capacity constraints include New York LaGuardia, Chicago O’Hare, London Heathrow, Newark and New York JFK.

It is reasonable to conclude that when an airport becomes severely constrained, fares at that airport will increase, making nearby “unconstrained” airports more attractive. There is evidence, for example, that U.S.-London fares to London Heathrow are higher than to the other London area airports. In the U.S., there is some evidence that airport constraints lead to higher fares, but the evidence is very mixed as competitive issues frequently overwhelm the issue of constraint. For example, the average domestic fare at highly constrained New York LaGuardia is lower than the average domestic fare at less-constrained Newark or New York JFK, and the average domestic fare at highly constrained DCA is lower than the average fare at unconstrained IAD. Moreover, there is no practical data that demonstrates that “excess demand” at the constrained airport is “pushed” to nearby airports.

Forecast SDIA Enplanements

	2020	2030
Unconstrained	12,965,248	16,336,283
Constrained	12,544,500	14,120,000
Difference	420,748	2,216,283

Is it reasonable to assume that TIJ will capture a portion of the “excess” demand at SDIA?

Based on the above, and assuming that TIJ remains an unconstrained airport, the following possible additional demand may be captured by the CBT:

Forecast SDIA Enplanements		
	2020	2030
Unconstrained	12,965,248	16,336,283
Constrained	12,544,500	14,120,000
Difference	420,748	2,216,283
%	3.2%	13.6%
Assume TIJ Captures	<u>Additional TIJ Enplanements</u>	
10%		221,628

It should be stressed that the assumed TIJ capture of “excess demand” from SDIA is limited to the year 2030, when not more than 10% of the “excess demand” might be captured by the CBT. In 2020, it is unlikely that the 3.2% difference in passengers between the constrained and unconstrained SDIA forecasts would result in any transfer of passenger demand to the CBT. Note that the additional TIJ enplanements would be almost all domestic as that is the composition of the SDIA passengers that would be subject to SDIA’s constraints. Finally, it should also be stressed that this portion of the CBT impact forecast is more speculative than the others.

IMPERIAL COUNTY

Because of the relatively small population of Imperial County and their lower propensity to travel, as reported in the telephone survey, the net impact of Imperial County travel demand on the CBT is expected to be modest. Imperial County residents report that they make an average of 1.74 annual trips per capita, while San Diego County residents report 2.89 annual trips per capita.

When combined with the smaller population of Imperial County, the resulting travel demand estimates as a percentage of San Diego County demand are:

	<u>2000</u>	2020	<u>2030</u>
Imperial County	142,361	239,149	283,694
San Diego County	2,813,833	3,550,714	3,950,757
Population Ratio	5.1%	6.7%	7.2%
Imperial/San Diego County Air Travel Percentage	3.1%	4.1%	4.3%

VARIATIONS OF THE CBT

The projected increase in flights to the U.S. resulting from the CBT is most dependent on easy access to the CBT from the U.S. side and much less so on easy access from the Mexico side. This is because San Diego County residents who are flying to U.S. destinations already have many options at SDIA and, therefore, the CBT must compete for their business. Tijuana residents who are flying to the U.S. currently cross the border and fly from SDIA. Therefore, non-stop service to the U.S. from the CBT by itself is more convenient than crossing the border and flying from SDIA.

With regard to the projected increase in use of the CBT by travelers to Mexico who were previously using LAX and SDIA, it is important that the CBT be as convenient as possible because travelers will be evaluating whether to use it or to continue using LAX or SDIA (primarily for connecting flights).

Clearly, the greatest positive impact on the use of the CBT will be for the CBT to have an integrated terminal/border crossing. All elements that add time to the border-crossing process will decrease the attractiveness of the CBT passengers and airlines.

ECONOMIC IMPACT OF CROSS BORDER

The CBT is not expected to result in more than a minimal increase in the total number of passengers flying. The primary economic impact of the CBT would be to shift passengers and economic activity from the SDIA Region to the CBT area of San Diego County. However, measuring this shift of economic activity within San Diego County is beyond the scope of this project.

San Diego County would, therefore, benefit from the economic impact generated by an increase in demand at the CBT from passengers that reside outside the San Diego Region and who are currently using LAX. Typical economic impact multipliers suggest that those 149,000 LAX enplanements that would be transferred to the CBT would have a direct economic impact of \$22-\$67 million per year and a total economic impact of \$104-\$298 million per year.

SUMMARY OF IMPACTS FROM THE CROSS BORDER TERMINAL

Shown in the table on the next page are the projected impacts of developing a CBT in terms of enplanements. By year 2030, approximately 1 million enplaned passengers are projected to use the Cross Border Terminal, which is about seven percent of the projected passengers for SDIA at that time.

It is worth noting that 149,000 out of the 1 million San Diego County enplanements projected to use the CBT are being drawn back from LAX, thus further relieving SDIA.

Summary of Incremental Market Demand Resulting from CBT

(Thousands of Enplaned Passengers)

	Base	2020 Increase	2030 Increase
Impact of Cross Border Terminal			
New TIJ Flights to U.S.	0	376	496
Increase in Use of TIJ for Mexico Travel as Result of Cross Border Convenience - SDIA Capture	0	94	166
Increase in Use of TIJ for Mexico Travel as Result of Cross Border Convenience - LAX Capture	0	85	149
Increase in Use of TIJ as Result of Constraints at SDIA	0	0	222
		555	1,033

Also, there will be natural growth in demand from San Diego County residents for travel from TIJ. In fact, that growth – which is unrelated to the CBT – will exceed that caused by the CBT. The projected increase in travel from TIJ by San Diego County residents as a result of natural growth in travel to Mexico is 1.36 million enplaned passengers in 2030.

Natural Growth in Demand from San Diego County for Travel from TIJ

(Thousands of Enplaned Passengers)

	Base	2020 Increase	2030 Increase
Increase in Use of TIJ for Mexico Travel from Natural Growth of Mexico Travel	475	571	1,363

The above projections regarding both the natural growth in demand and the incremental impacts of the CBT are based on a projected growth rate of 5.8% in travel to Mexico. Should a different growth rate be achieved, the results in all categories except for the “Increase in Use of TIJ as Result of Constraints at TIJ” will be impacted. Set forth in the table on the next page are “high” and “low” estimates of the market demand for the CBT.

**High Estimate of Incremental Market Demand Resulting
from CBT**

	Assumption	Rate	Annual Passengers Increase (000s)	
			2020	2030
New TIJ Flights to U.S.	TIJ Capture of Residents Living Closer	50%	752	992
Increase in Use of TIJ for Mexico Travel as Result of Cross Border Convenience - SDIA	TIJ Capture of % of SDIA Mexico Passengers	60%	282	496
Increase in Use of TIJ for Mexico Travel as Result of Cross Border Convenience - LAX	TIJ Capture of % of LAX Mexico Passengers	80%	224	396
Increase in Use of TIJ as Result of Constraints at SDIA	TIJ Capture of "Excess Demand"	10%	0	444
			1,258	2,328

**Low Estimate of Incremental Market Demand Resulting
from CBT**

	Assumption	Rate	Annual Passengers Increase (000s)	
			2020	2030
New TIJ Flights to U.S.	TIJ Capture of Residents Living Closer	25%	204	408
Increase in Use of TIJ for Mexico Travel as Result of Cross Border Convenience - SDIA	TIJ Capture of % of SDIA Mexico Passengers	20%	74	110
Increase in Use of TIJ for Mexico Travel as Result of Cross Border Convenience - LAX	TIJ Capture of % of LAX Mexico Passengers	20%	44	66
Increase in Use of TIJ as Result of Constraints at SDIA	TIJ Capture of "Excess Demand"	0%	0	0
			322	584

In terms of relief provided to SDIA, the high estimate of 1.164 million enplaned passengers using the CBT in year 2030 means that SDIA is relieved by approximately 7% of its forecasted traffic. The low estimate of 292,000 enplaned passengers means that SDIA is relieved by approximately 2% of passengers forecasted by year 2030.

It important to point out that both the high and low estimates capture only the incremental market demand resulting from the CBT. They do not capture the separate natural increase in use of TIJ by San Diego County residents that will occur because of increasing travel to Mexico. High and low estimates of the separate increase are provided on the next page:

	Assumption	Rate	Annual Passengers Increase (000s)	
			2020	2030
Increase in Use of TIJ for Mexico Travel from Natural Growth of Mexico Travel	Annual Growth	5.8%	1,142	2,726
		4.0%	696	1,486

5.7. Factors that Could Change the Results

What factors could change the results? Among the most important assumptions are: (1) those regarding the fees imposed on flights from the CBT to destinations in the U.S. and (2) the projected rate of growth in air travel between the U.S. and Mexico over the long term. A number of other important assumptions are also identified in the report. Perhaps the factor with the most uncertainty that could change the results is future U.S. policy regarding Mexican immigration and work permit issues.

Apart from the assumptions that have been discussed previously, the results could also change if the SDCRAA took action to shift traffic from SDIA to the CBT. Other airport operators have taken action to attempt to shift traffic from one airport to another within major metropolitan areas. Further research needs to be done on the outcome when the shift of traffic involves two countries. The measures that have been used elsewhere in the past are: (1) the imposition of a perimeter rule at SDIA that would require flights longer than a certain distance to use the CBT instead of TIJ; (2) the imposition of a cap on the number of operations at SDIA; and (3) the prohibition of international flights at SDIA. Each of these possible actions is discussed below. Note that a separate analysis is required to determine whether any of these actions are lawful under current federal legislation regulating commercial air service. This analysis discusses only the practical impact of each action.

PERIMETER RULE

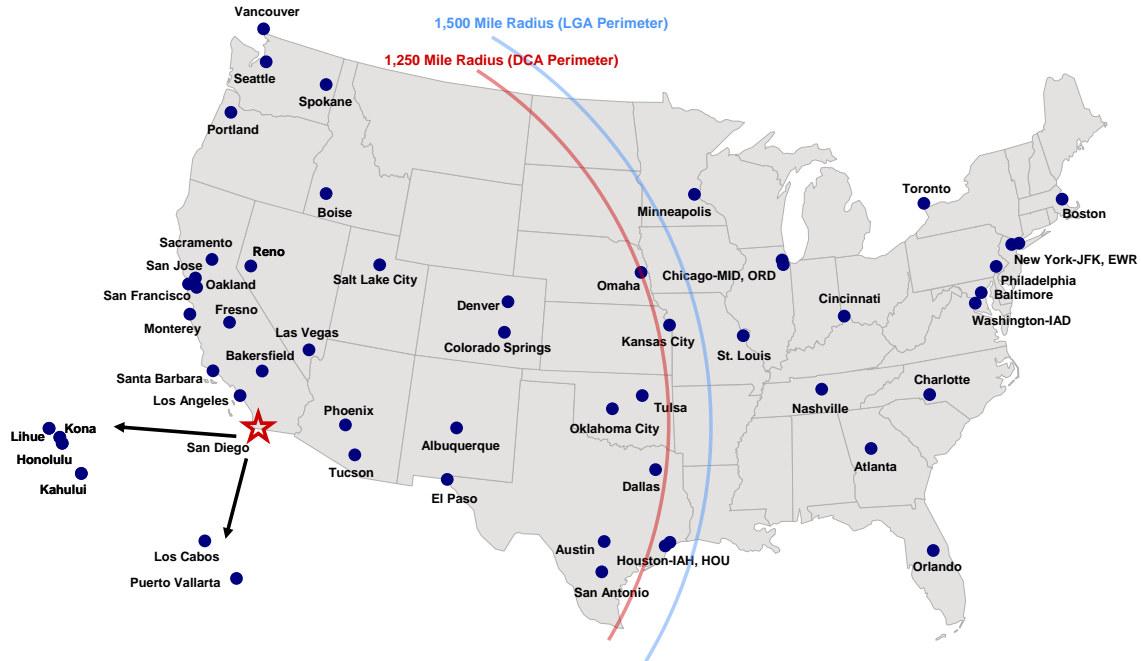
The Port Authority of New York and New Jersey (Port Authority) has a perimeter rule in effect at LaGuardia Airport that prohibits non-stop flights beyond 1500 miles. The rule is intended to force long-haul flights to JFK and Newark, the other two airports operated by the Port Authority. Similarly, there is a perimeter rule in effect at DCA that prohibits non-stop flights in excess of 1250 miles, which has been subject to a number of exemptions. That rule was originally intended to force long-haul flights to IAD, the other airport operated by the Metropolitan Washington Airports Authority.

Putting aside the question of whether the SDCRAA could impose a perimeter rule at SDIA, the imposition of a 1250-mile perimeter rule would impact flights to the following markets:

**CHAPTER 5. IMPACT THE CBT MAY HAVE ON
SDIA AND ON TIJ PASSENGER GROWTH RATES**

Destination	Carrier	Miles	Feb 2008
			Departs/Day
Houston	Continental	1300	6.1
Atlanta	Delta	1885	5.9
Chicago Midway	Southwest	1723	4.9
Chicago O'Hare	United	1719	4.2
Chicago O'Hare	American	1719	3.9
Minneapolis/St. Paul	Northwest	1530	3.5
Washington Dulles	United	2247	3.0
New York Newark	Continental	2418	2.9
Omaha	Southcentral Air	1309	2.0
Nashville	Southwest	1745	2.0
Atlanta	AirTran Airways	1885	2.0
Baltimore	Southwest	2288	2.0
Philadelphia	US Airways	2363	2.0
New York Kennedy	JetBlue	2438	2.0
Charlotte	US Airways	2071	1.9
Kansas City	Southwest	1329	1.9
Cincinnati	Delta	1872	1.9
Kansas City	Midwest Express	1329	1.6
Detroit	Northwest	1951	1.2
Houston Hobby	Southwest	1307	1.0
Minneapolis/St. Paul	Sun Country Airlines	1530	1.0
St. Louis	American	1562	1.0
Washington Dulles	JetBlue	2247	1.0
New York Kennedy	American	2438	1.0
New York Kennedy	Delta	2438	1.0
Kahului	Hawaiian Airlines	2536	1.0
Boston	American	2580	1.0
Boston	JetBlue	2580	1.0
Honolulu	Hawaiian Airlines	2609	1.0
Toronto	Air Canada	2151	0.9
Kahului	Aloha Airlines	2536	0.6
Lihue	Aloha Airlines	2671	0.6
Kona	Aloha Airlines	2552	0.4
Honolulu	United	2609	0.1
Orlando	AirTran Airways	2141	0.1

See also the map on the next page that shows the cities currently serving non-stop flights from SDIA that would lose non-stop service.



Based on analysis of the air carriers' response to the perimeter rule in effect at DCA and LaGuardia, the expected response to the imposition of a perimeter rule at SDIA is that all airlines with a hub located within the perimeter would increase their service to that hub or hubs and provide connecting service from there to points beyond the perimeter. For example, Delta Air Lines would increase its service to Salt Lake City, where passengers would change planes and fly to Atlanta. The same would be true of United Airlines, which would need to use Denver to connect passengers flying to Chicago and Washington. Service to LAX would also increase as many more passengers would fly from SDIA to LAX to change planes. The most affected carriers would be those without a hub within the perimeter. In that regard, Continental Airlines and Northwest Airlines are most impacted among the large carriers. Carriers such as Hawaiian Airlines might decide to drop service to the San Diego Region entirely and concentrate on LAX. It is difficult to say how much passenger traffic would shift traffic to the CBT, if a perimeter rule were imposed. The primary impact of such a rule would be the inconvenience of a large number of SDIA passengers that would lose access to non-stop flights and be forced to take connecting flights.

LIMITING INTERNATIONAL FLIGHTS TO TIJ

Another approach to shifting passenger traffic has been to limit international flights to one airport. This was used to attempt to jump start the development of IAD in the 60s and 70s. There are several difficulties with this approach. The first is that some of SDIA's limited international service relies on passengers that begin their journey elsewhere in the U.S. Forcing all international service to TIJ prevents airlines from using those domestic passengers to help support international flights. The second difficulty is that given a choice of serving TIJ or relying on LAX to serve San Diego County's international passengers may result

in airlines' retrenching to LAX. In other words, it may be counterproductive for the San Diego region, which has been interested in attracting more international service, to discourage that service by forcing it to TIJ. As with the discussion of the perimeter rule, this discussion does not address the question of whether this type of action is consistent with federal law.

LIMITING FLIGHT OPERATIONS AT SDIA

At some point in the future as SDIA reaches and exceeds capacity, difficult decisions will be required regarding the operation of the airport and the best way to allocate capacity. Similar issues are currently being considered and debated in the context of the severe congestion recently experienced at JFK and other New York area airports.

Assuming that SDIA ultimately adopts a flight operation limit at SDIA, will that limit increase the use of the CBT? There is a temptation to think of airport capacity as analogous to a tea cup, which when filled, will simply overflow and be caught by the saucer – or in this case by another nearby airport, TIJ. However, as seen in the examples of DCA, New York LaGuardia, London Heathrow, and others, the tea cup analogy is flawed. Prices rise, airlines use larger aircraft, etc. At some point, when demand exceeds capacity by a wide margin, air carriers will consider alternatives, but that occurs only in extreme cases.

In summary, of the three options, the first two – imposing a perimeter rule and limiting international flights to TIJ – would seriously inconvenience San Diego travelers and are likely to have little impact on further developing the CBT. The ultimate imposition of flight limits at SDIA may encourage airlines to service TIJ, but the impact is likely to be less than expected and observed far in the future.

5.8. Conclusions

- The current number of San Diego County travelers using TIJ is estimated at 475,000 enplanements +/- 75,000 (as of 2006).
- This number is expected to increase substantially over time as San Diego-Mexico traffic grows more rapidly than San Diego-domestic traffic.
- TIJ already attracts the majority of San Diego County demand to Mexico, but the CBT is likely to further increase the use of TIJ for travel to Mexico.
- The relationship of TIJ to SDIA is unique and complementary in that TIJ specializes in Mexico travel and SDIA specializes in U.S. travel with the two separated by a national border.

- If the convenience of the CBT matches/approaches that of SDIA, airlines – over the long term – are likely to offer service from TIJ to a limited number of U.S. markets.
- The U.S. service offered from TIJ will be to large cities/hubs that already have frequent service from San Diego – and not to new or underserved U.S. destinations.
- The amount of service that will be offered from TIJ to large U.S. markets is difficult to predict and the estimate of approximately 500,000 enplanements in 2030 is subject to wide variability.
- As SDIA exceeds its estimated capacity, fares are likely to rise, increasing the attractiveness of alternate service from TIJ. However, experience in other markets shows that actual “demand transfer” from the congested airport to other nearby airports is limited.
- Currently, TIJ passengers traveling to Mexico originating in San Diego County constitute the equivalent of approximately 5% of SDIA traffic.
- Future growth at TIJ resulting from San Diego County travelers to Mexico may constitute, in terms of relief to SDIA, approximately 10% of forecasted passengers by year 2030.
- CBT-induced service may constitute a relief to SDIA between 2-7% based on low and high estimates of forecasted passengers at SDIA by year 2030.
- Use of TIJ for service other than U.S.-Mexico is likely to be very limited. Japan and China service offered from TIJ is not expected to be followed by other international destinations.
- The projected results are highly dependent on:
 - Growth rate of U.S.-Mexico travel.
 - Border crossing process.
 - Fare differentials between U.S. and Mexico airlines.
 - Cost differences in operating at SDIA and TIJ for air service to the U.S.
 - U.S. policy regarding Mexican immigration and work permits.