Appendix U6

Regional Aviation Strategic Plan and San Diego Airport Multimodal Accessibility Plan

Appendix U6 Contents

Regional Aviation Strategic Plan and San Diego Airport Multimodal Accessibility Plan

The Regional Aviation Strategic Plan (RASP) for San Diego County was prepared by the San Diego County Regional Airport Authority (the Authority) to assess the long-range capabilities of all public-use airports in the county with the goal of improving the performance of the regional Airport System.

California Senate Bill 10 of 2007 (SB 10) requires that airport multimodal planning in San Diego County be conducted and coordinated by the Authority and the San Diego Association of Governments (SANDAG). The main provisions of SB 10 are the development of the RASP (led by the Authority), and an Airport Multimodal Accessibility Plan (AMAP), which was prepared by SANDAG in order to develop a multimodal strategy to improve transportation access to airports. Findings of the RASP and AMAP have been incorporated into the Regional Plan. The RASP and the AMAP reports are included as Appendix U6.

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FINAL REPORT

REGIONAL AVIATION STRATEGIC PLAN

San Diego County Regional Airport Authority

www.sdrasp.com

Prepared for

San Diego County Regional Airport Authority
San Diego, California

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EXECUTIVE SUMMARY

The Regional Aviation Strategic Plan (RASP) for the San Diego County was prepared by the San Diego County Regional Airport Authority (the Authority) to assess the long-range capabilities of all public-use airports in the county with the goal of improving the performance of the regional Airport System. The Federal Aviation Administration (FAA) provided funding for the preparation of the RASP.

KEY TAKEAWAYS

The following summarizes key aspects of RASP analyses and findings:

- **Significant Stakeholder Contributions**. A technical RASP Subcommittee, a formal subset of the Authority's Airport Advisory Committee, was formed at the outset of the RASP to provide input and feedback on the technical aspects of the study. In addition to playing an essential role in identifying the full range of reasonable and feasible options that were ultimately considered, the Subcommittee provided constant feedback to key stakeholders regarding the progress of the RASP.

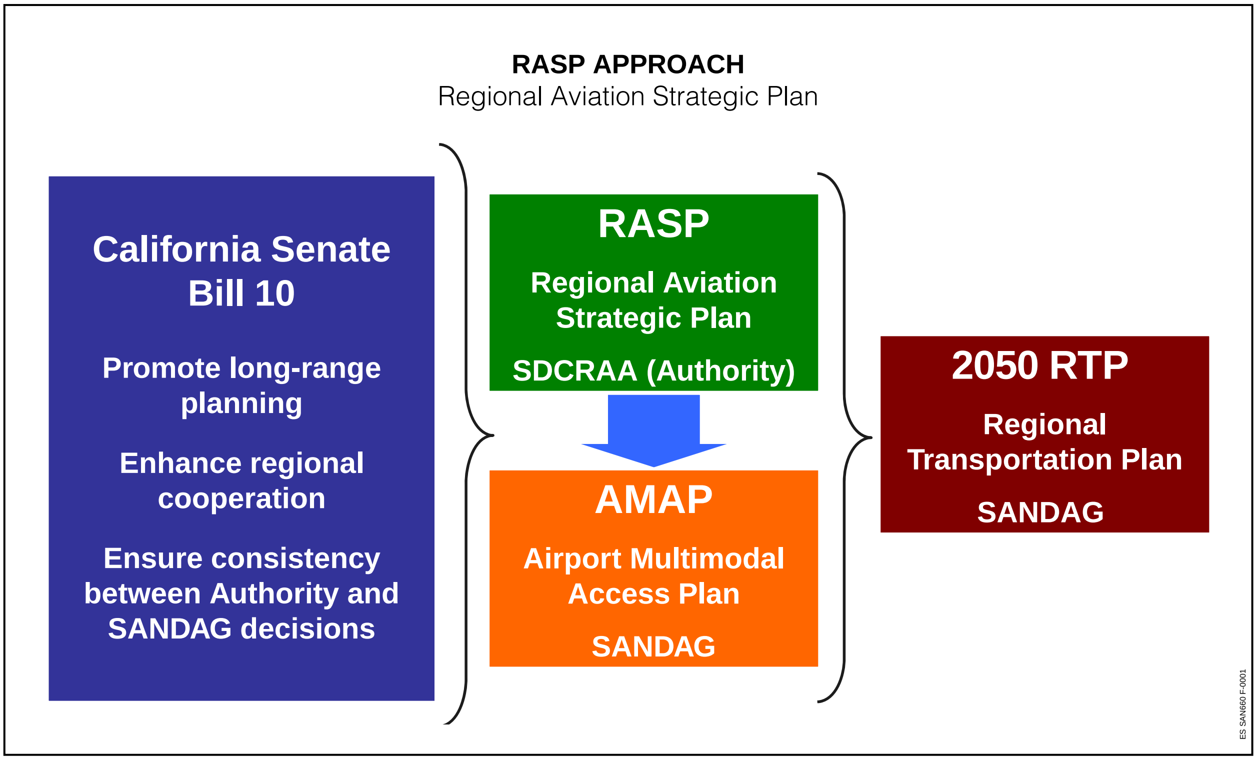
- **All Reasonable Ideas and Concepts Were Evaluated**. The alternatives considered and evaluated in the RASP covered a comprehensive spectrum of possibilities, including: (a) funding, policy, and political factors; (b) surface, rail, and cross border initiatives; (c) physical change in airport capability and/or capacity; (d) expansion of an airport's user base/market; (e) change to an airport's fleet mix; (f) federal, state and/or local aviation initiatives; and (g) changes to surface transportation infrastructure.

- **Regional Airport Improvements Can Be Made**. There is a wide range of improvements and changes to airports in the region that could be made; some potential improvements are positive to airports individually, while some provide benefits to the entire system. However, some positive benefits can only be provided by actions that are legally challenging, impractical, and inadvisable to implement in full.

- **The Passenger Capacity of San Diego International Airport Can Only Marginally Be Improved**. In general, even the most beneficial actions have a nominal effect on improving overall commercial service (passenger airline) capacity in the region, namely at San Diego International Airport.

PROJECT OVERVIEW

California Senate Bill 10 of 2007 (SB-10) and the California Public Utilities Code (sections 132357, 132358 and 132359) requires that airport multimodal planning in San Diego County be conducted and coordinated by the Authority and the San Diego Association of Governments (SANDAG). The main provisions of SB-10 are the development of the RASP (led by the Authority), and an Airport Multimodal Accessibility Plan (AMAP), which is being prepared by SANDAG in order to develop a multimodal strategy to improve transportation access to airports. Findings of the RASP and AMAP will subsequently be incorporated into SANDAG's 2050 Regional Transportation Plan (RTP).



In addition to complying with SB-10, the primary objectives of the RASP are to:

1. Define the region's long-range air transportation needs and the roles of each airport in meeting those needs;

2. Determine opportunities and constraints with respect to accommodating future demand; and

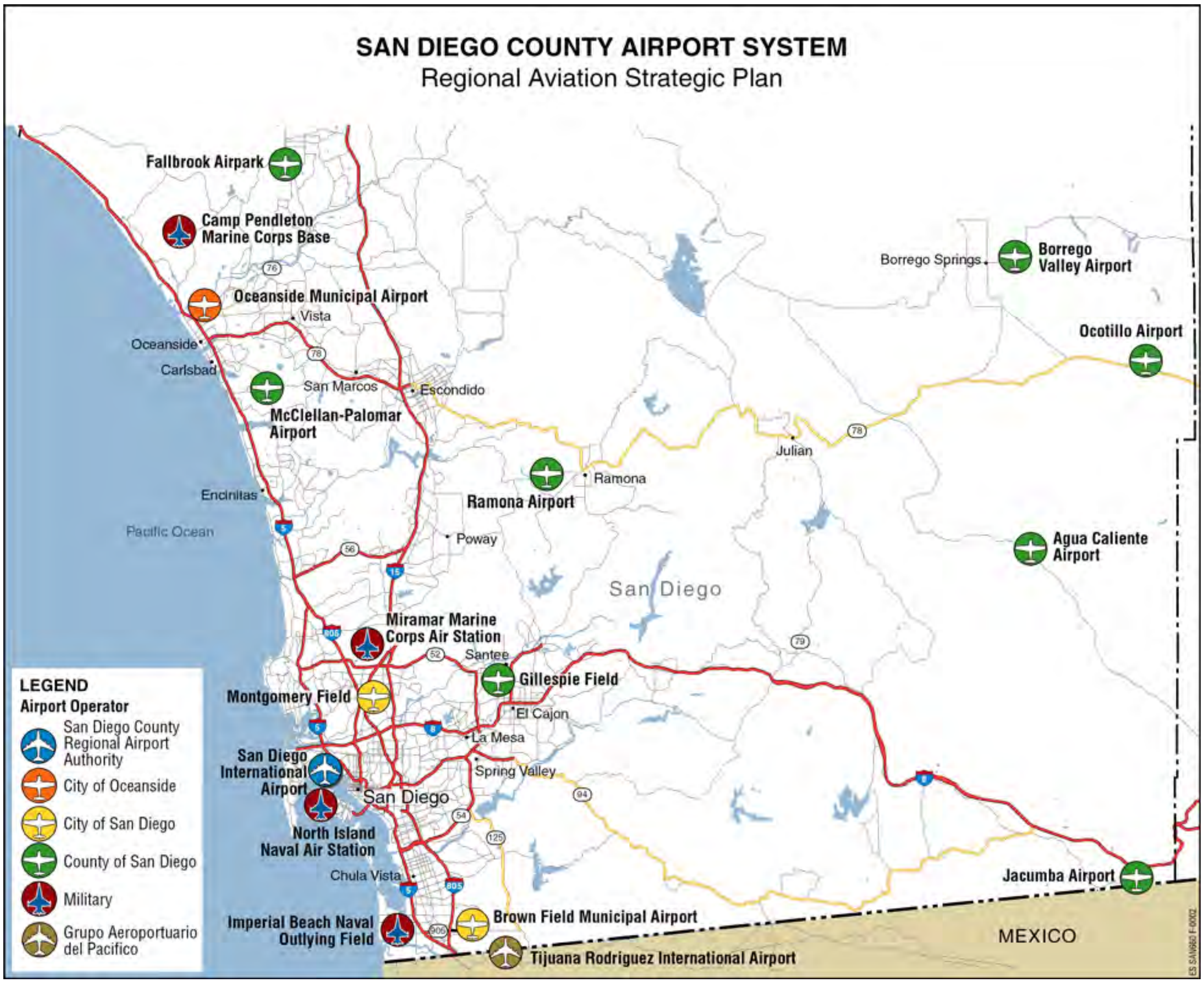
3. Develop strategies to maximize the efficiency and effectiveness of existing and planned facilities.

AIRPORT SYSTEM

The following provides applicable background on the San Diego county "Airport System."

Airport System

The San Diego County "Airport System" is defined by the 12 public-use airports in San Diego County and Tijuana Rodriguez International Airport, which is located just south of the California – Mexico border. Because they do not accommodate civilian air travel, the four military airfields in San Diego County were excluded from the RASP (although airspace impacts were considered).



Planning Challenges

There are a number of important challenges to meeting RASP goals and objectives:

- **Multiple Airport Sponsors**. The San Diego County Airport System includes multiple airport sponsors – the Authority, the County of San Diego, the City of San Diego, the City of Oceanside, and Grupo Aeroportuario del Pacifico (GAP) – and no single sponsor has unilateral authority to implement facility or policy changes for other airports in the region.

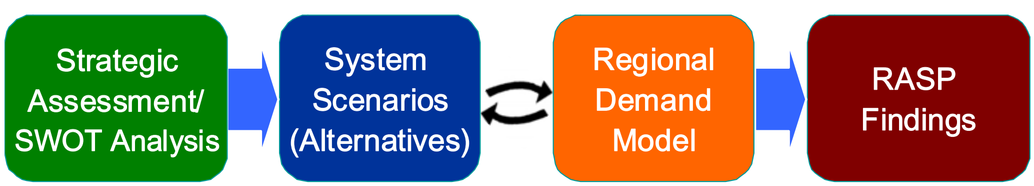
- **Accommodation of Commercial Service**. Of the total airports in San Diego County, only two airports are FAA-certificated for commercial service – McClellan-Palomar and San Diego International. The other public-use airports are general aviation facilities with significant expansion constraints, and San Diego International's growth is constrained by its single-runway airfield.

- **Natural "Balance."** The Airport System has achieved a natural balance with regard to accommodating passenger, cargo, and general aviation activity. This momentum is difficult to change given political, physical, and community factors. Furthermore, the conversion of an existing airport to accommodate new or additional service is complicated by community and political opposition, as well as costs and numerous technical factors.

- **Air Service Options**. Although San Diego International has good domestic air service at competitive airfares, there are large numbers of San Diego County residents and visitors choosing to use other airports, including Tijuana and airports in the greater Los Angeles metropolitan region. These choices are predominantly made based on air service options, rather than cost and accessibility.

STUDY METHODOLOGY AND APPROACH

Four major work elements defined preparation of the RASP.



Strategic Assessment and System Scenarios

A strategic assessment of each system airport was prepared to validate and document existing activity levels and facilities as well as the potential for future changes. Alternative scenarios were established that could have an effect on optimizing the Airport System. The scenarios included a wide range of infrastructure and operational changes intended to accommodate certain aviation activity or distribute activity across multiple airports.

Regional Demand Model

A regional econometric demand model was developed for the RASP and used as a decision support tool to evaluate various "what-if" scenarios and quantify potential outcomes. The model was based on information regarding the propensity for people to travel and the factors that lead to a choice of airport, which primarily include time and costs associated with accessing aviation services. SANDAG's Regional Travel Demand Model was also incorporated into the RASP model to estimate ground transportation changes and access times.

Based on analyses using the demand model, findings were prepared that summarized the impacts and effects of implementing various scenarios. Model findings indicated the number of air trips (or passenger enplanements) that would occur under each scenario and the potential impact various changes would have on the Airport System.

"Expansion" of the RASP Study Area

Although San Diego International provides good domestic air service at competitive airfares, it was determined early in the study that some San Diego County residents and visitors choose to use airports in the greater Los Angeles metropolitan region and Tijuana in order to capitalize on alternative air service options. Therefore, RASP strategies, alternatives, and findings were considered in the context of San Diego County and the larger region, including the following airports in the greater Los Angeles metropolitan region: Los Angeles International, John Wayne/Orange County, Long Beach, Ontario International, and Burbank.

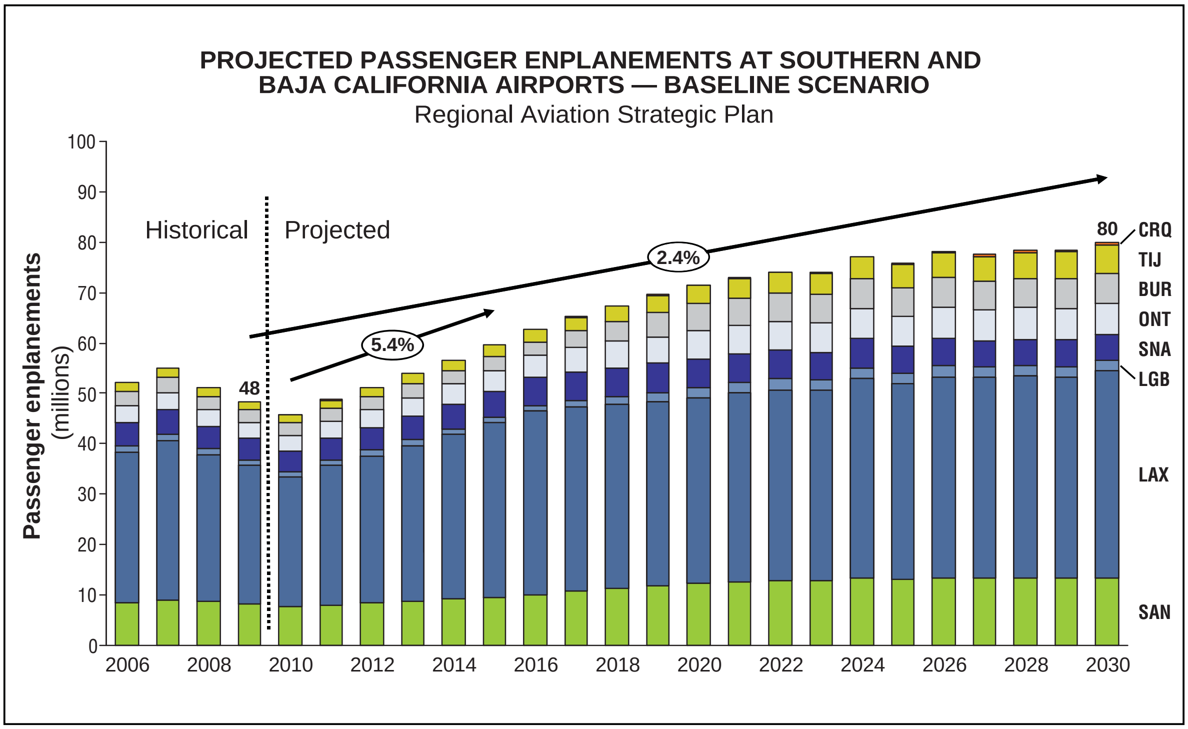
AVIATION ACTIVITY AND AIRPORT CAPACITY

The following summarizes forecast aviation demand in the expanded RASP Study Area; the estimated capacity of the Airport System; and the Baseline Scenario, which is the "do-nothing" scenario against which all alternatives are compared.

Demand for air travel in the U.S. correlates strongly with fluctuations in the U.S. economy. In the post-financial crisis environment, carriers have reduced capacity in an effort to maintain high fares and revenues. Notwithstanding these cuts, the industry was projected to lose billions of dollars in 2009. While 2009 third quarter financials improved, passenger growth and yields remain weak, and a recovery in demand was projected to be modest relative to prior recoveries.

Forecast Aviation Demand

Projected aviation demand (quantified by annual enplaned passengers) in the RASP Study Area – including San Diego, Tijuana, and five airports in the greater Los Angeles metropolitan region – is projected to increase 50% between 2009 and 2030 from 48 to 80 million passenger enplanements. San Diego International's 20-year compound annual growth rate is projected to be 2.5%. Tijuana Rodriguez International is expected to experience the largest demand increase between 2010 and 2030, with passenger enplanements increasing from 1.6 to 5.6 million at a compound annual growth rate of 6.4%.



Airport System Capacity

Numerous studies prepared in the past five years have documented that San Diego County will reach commercial service (passenger airline) capacity during the RASP planning horizon. It has been calculated that San Diego International will reach its airfield capacity sometime between 2020 and 2030, at approximately 28 million annual passengers. Once this occurs, the airport's level of service is expected to decrease and result in (1) increased operating delays on the airfield and in the ground transportation network leading to the airport; and (2) increases in the price of air service.

In addition, the RASP demand model predicted that many Southern California airports will reach capacity during the RASP forecast period. Los Angeles International is projected to reach capacity sometime around 2015. This is expected to result in significant increases in passenger enplanements at the other greater Los Angeles metropolitan region airports, thereby moving forward the time in which these airports will reach their respective capacities.

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Baseline Scenario

The RASP Baseline Scenario, shown below, is defined by the expected outcomes of the capacity constraint at San Diego International and incorporates the following:

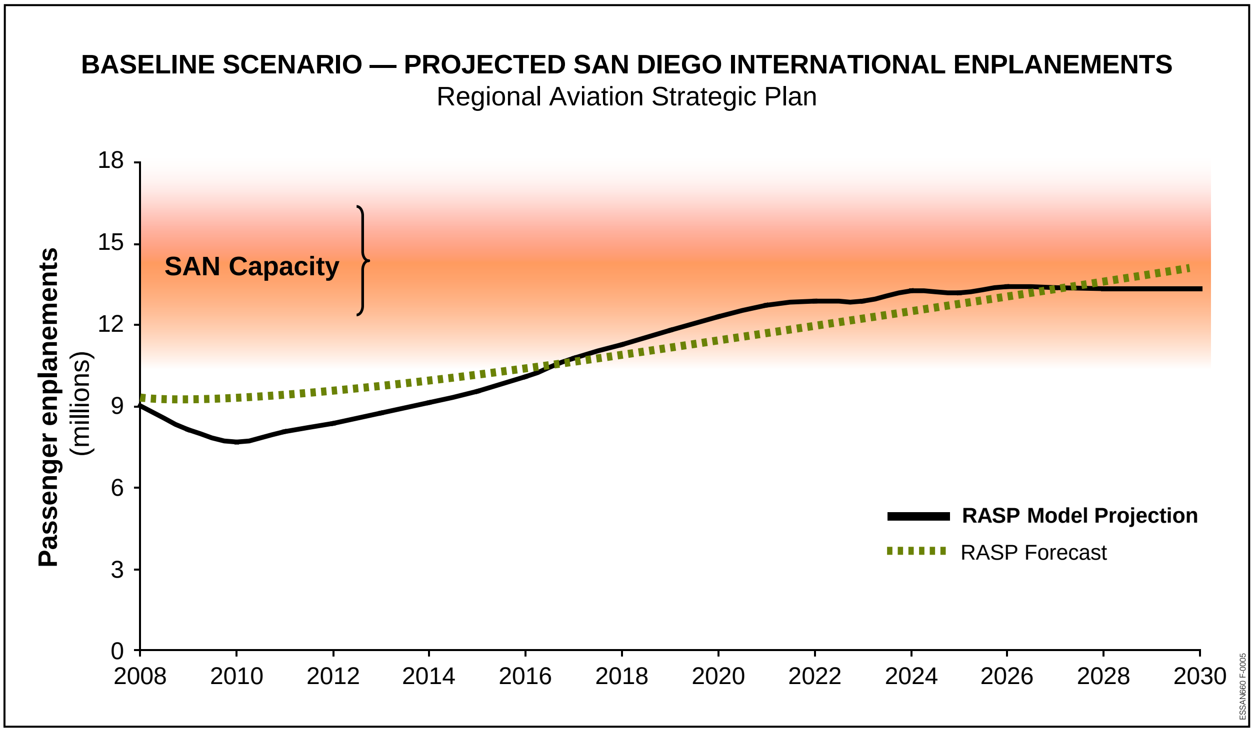
- Reasonably foreseeable "market-driven" reactions to address demand once San Diego International reaches capacity
- Approved improvements in the near-term horizon, such as the Terminal 2 West 10 gate addition in 2013 and *Destination Lindbergh* "Opening Day" recommendation, including an Intermodal Transit Center (ITC) on the north side of the airfield

BASELINE "DO-NOTHING" SCENARIO
Regional Aviation Strategic Plan

- Region-wide surface improvements per SANDAG's 2007 RTP – "Revenue Constrained Scenario"

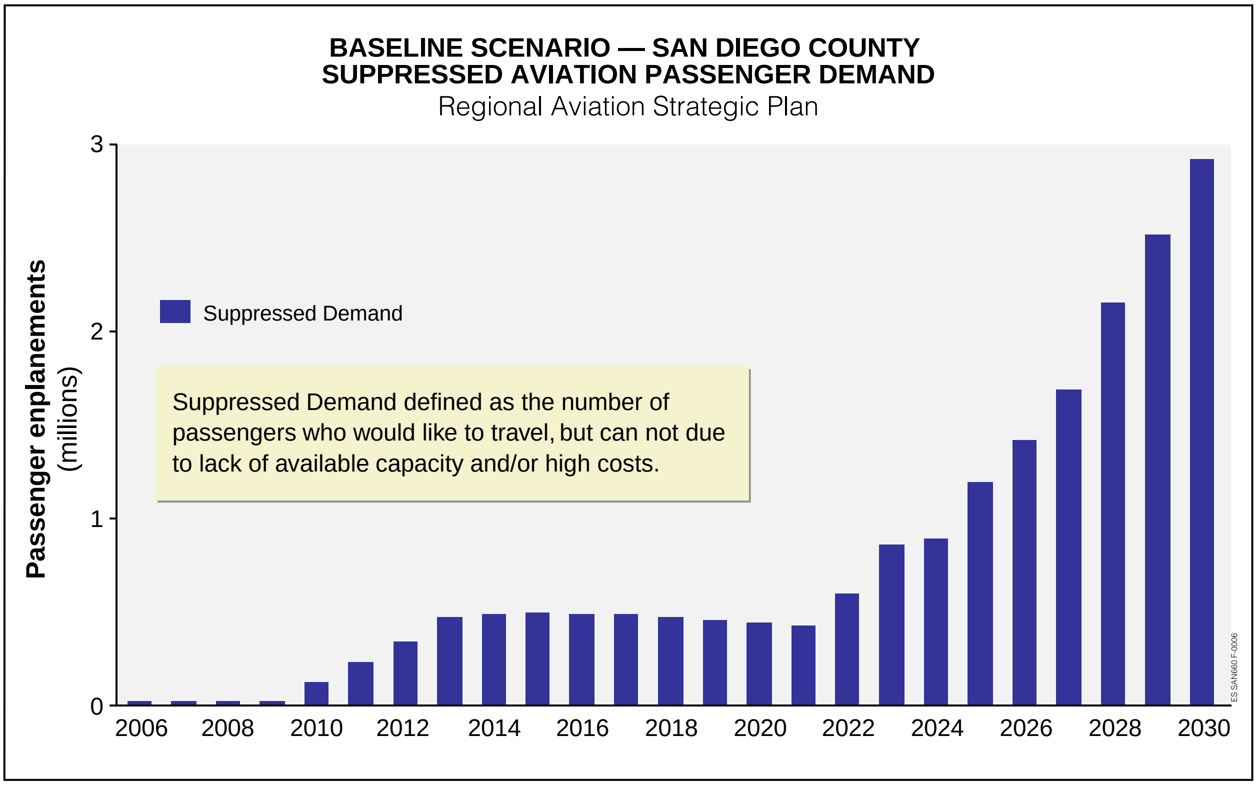
- Capacity constraints at greater Los Angeles metropolitan region airports

The Baseline Scenario assumes the capacity of San Diego International is approximately 14.2 million annual enplanements (28 million passengers), with an implementation cost of approximately $535 million. It should be noted that multiple agencies would be responsible for funding and implementing the various projects in the Baseline Scenario, and not all are the responsibility of the Authority.



Suppressed Demand

The RASP demand model, which incorporates numerous econometric variables as well as capacity constraints at RASP Study Area airports, indicates capacity constraints will occur at San Diego International earlier than previously predicted – beginning between 2020 and 2025. The effects of this capacity constraint will be diminished levels of service, increased operating delays, and higher airline fares. As a result, there will be "lost" or "suppressed" demand, which is defined as potential passengers who desire to utilize air service but do not because of the lack of available capacity and/or prohibitively high costs. As demand eventually nears regional aviation capacity, the number of "suppressed demand" in San Diego County is projected to increase to about 3.0 million annual passengers by 2030.



ALTERNATIVE SCENARIOS

After an extensive process of considering all reasonable measures that could be taken to optimize the Airport System, five families of improvements were identified for analysis. Each family is oriented toward optimizing a certain market or user type associated with the Airport System, and each family includes individual alternatives resulting in the complete set of 15 scenarios developed for detailed evaluation:

Commercial Passenger Optimization: Addresses capacity limitations at San Diego International by developing future facilities, enhancing/introducing airline service at other regional airports, reserving capacity for airline passenger operations, and adjusting the size of aircraft serving the airport.

A. Full build-out of the ITC and north side terminal at San Diego International
B. Preserve San Diego International airfield capacity for commercial service
C. Enhance commercial passenger service at McClellan-Palomar Airport
D. Introduce commercial passenger service at Brown Field Municipal Airport
E. Up-gauge San Diego International's Fleet Mix – Narrow-body Fleet
F. Up-gauge San Diego International's Fleet Mix – Increased Wide-body Fleet

Enhanced Utilization of Tijuana: Focus on improving access to Tijuana Rodriguez International Airport to facilitate the accommodation of future regional passenger demand.

A. Facilitate border crossings
B. Aviation passenger cross border facility
C. Cross border airport terminal

California High Speed Rail (HSR): Offers passengers an alternative ground transportation solution to cities and airports within California; two potential alternative alignments and station locations in San Diego were evaluated.

A. Station at downtown San Diego (line terminates at Santa Fe depot / train station)
B. Station at San Diego International (line terminates at San Diego International)

General Aviation Optimization: Enhancing other airports to accommodate high-end general aviation aircraft (typically corporate users) would provide an attractive alternative to using San Diego International.

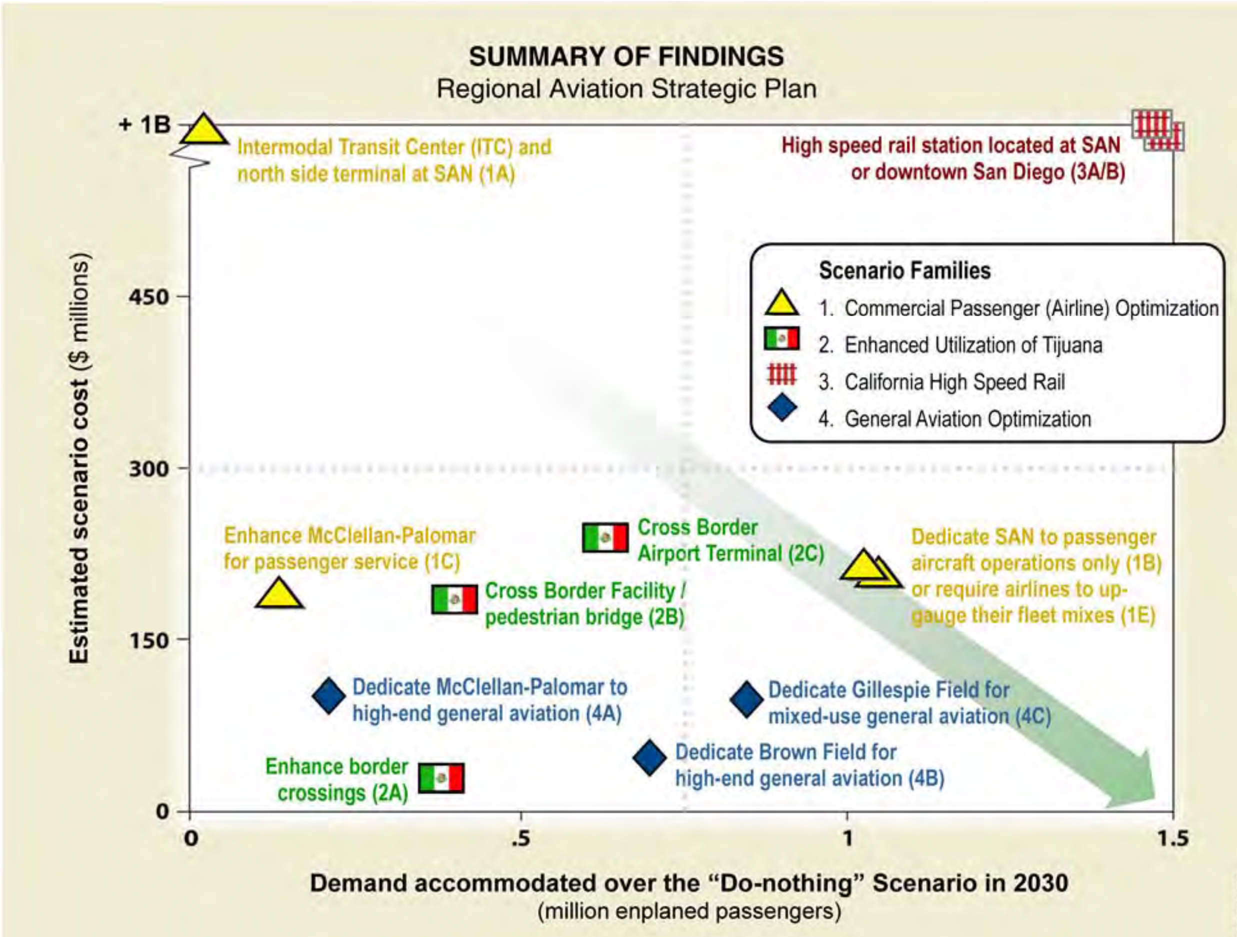
A. Enhance McClellan-Palomar Airport for high-end/corporate general aviation
B. Enhance Brown Field Municipal Airport for high-end/corporate general aviation
C. Enhance Gillespie Field for mixed-use general aviation

Air Cargo Optimization: Alternative locations for air cargo could remove air cargo flights from San Diego International, preserving airfield capacity for commercial passenger airlines.

A. Introduce air cargo service at Brown Field Municipal Airport

The above scenarios include planned and hypothetical measures that could be taken to optimize markets and user types which, if implemented, could serve to optimize the Airport System. Several of the 15 scenarios are designed to measure the maximum possible effect of a particular theoretical action and are legally challenging, impractical, and inadvisable to implement in full. Nevertheless, estimating the impact of these measures was determined valuable by the RASP Subcommittee so as to better understand the full range of available options, benefits, and costs of attempting to address projected demand.

KEY FINDINGS



An evaluation matrix measuring the additional projected demand that could be accommodated over the Baseline Scenario in 2030 for each scenario evaluated in the RASP is presented above. Additional findings are as follows:

1. **Full Build-out of the ITC**. The full build-out of the ITC and north side terminal at San Diego International (Scenario 1A) has no effect on suppressed demand relative to the Baseline Scenario; however, this scenario is expected to yield regional access and other tangible service benefits not captured by RASP analyses.

2. **McClellan-Palomar**. Enhancing commercial passenger service at McClellan-Palomar (Scenario 1C) has little effect on suppressed demand because the maximum capacity of this airport only represents 8% of the total projected suppressed demand in 2030.

3. **Up-gauging the San Diego International Fleet Mix**. Up-gauging the fleet mix at San Diego International (Scenarios 1E and F) provides the same relative

benefits to the region as Scenario 1B (reserving San Diego International capacity for commercial passenger service). San Diego International's fleet mix is already favorable (nearly optimized) as the Airport is projected to have a relatively low proportion of regional jets and turboprops in the future.

4. **Brown Field Municipal Airport**. Brown Field scenarios (Scenarios 1D and 5A) cannot feasibly be implemented for the following reasons: (a) The FAA has determined precision instrument approaches are infeasible at Brown Field due to terrain and airspace complications, thereby precluding commercial operators from conducting all-weather operations; (b) established passenger airlines are reluctant to "split operations" with San Diego International, and there are two other competitive commercial service airports (San Diego International and Tijuana Rodriguez International) in close proximity; (3) air cargo carriers are unwilling to operate from a facility south of San Diego International due to distance from to their demand base in San Diego County and lack of cargo sorting infrastructure.

5. **Tijuana Enhancements**. Tijuana scenarios (Scenarios 2A, B, and C) have a relatively small effect on suppressed demand, which is attributed to the following: (1) significant portions of demand accommodated at Tijuana Rodriguez International prior to 2030 is generated in the greater Los Angeles metropolitan region; and (2) by 2030, more San Diego residents and visitors are already projected to use Tijuana Rodriguez International for international trips with or without airport or access improvements.

6. **California High Speed Rail**. Both California HSR scenarios (Scenarios 3A and B) perform similarly with regard to accommodating intrastate, intercity demand; while a downtown San Diego HSR station shows higher air-rail diversion than a station at San Diego International, their overall regional benefits are similar. Nevertheless, either scenario could play a role to alleviate the region's aviation capacity problems by freeing up scarce San Diego International capacity and accommodating suppressed demand. These benefits may increase beyond the 2030 RASP planning horizon.

7. **General Aviation Optimization**. General aviation scenarios (4A, B, and C) have relatively similar costs and provide nearly the same, but nominal, impact on demand relative to the Baseline Scenario.

OBSERVATIONS AND NEXT STEPS

The following summarizes the key observations of the RASP and identifies next steps for regional airport planning.

- **Even Beneficial Alternatives Yield Marginal Results.** The RASP makes clear that while several scenarios, if implemented, can reduce suppressed demand and allow more passengers to be accommodated they have a marginal effect on increasing overall aviation capacity in San Diego County, especially at San Diego International. Scenarios providing the most benefit outside of HSR (Scenarios 1B, E and F), would provide an additional five years of activity growth at San Diego International (at most). Beyond the end of the forecast period, the region's aviation system will face an imbalance between demand for air service and the supply of infrastructure available to serve it.

- **No Single Entity in the Region Can Implement RASP Findings.** Given the multiple airport sponsors in the region, there is no single entity that can unilaterally implement RASP findings. Implementing any airport improvement or policy change is an individual decision for the sponsor of each airport. The most challenging to implement are RASP scenarios that consider inducing aviation traffic to shift from one airport to another – and therefore, in order for these scenarios to be feasible, two or more airport operators must agree on the implementation costs and policy actions.

- **Regional Airport Sponsors Should Coordinate Future Improvements.** It is recommended that Airport sponsors in San Diego County coordinate future changes and improvements to help optimize overall system performance.

- **A Regional Airport Coordinating Committee Should Be Considered.** Given the multiple Airport sponsors in the region combined with the need to coordinate future changes and improvements, the formation of a regional airport coordinating committee should be considered. This committee should be formed by the airport owners/operators in the region and should include regional planning representatives. The coordinating committee should expand RASP analyses and evaluate economic, environmental, and other qualitative aspects of RASP alternatives that are deemed most appropriate.

Chapter 1

INTRODUCTION AND BACKGROUND

The following sections provide applicable background on the Regional Aviation Strategic Plan (RASP) prepared for the 12 public-use airports located within San Diego County (the Airport System).

1.1 POLICY CONTEXT

California Senate Bill 10 of 2007 (SB-10) and the California Public Utilities Code (Sections 132357, 132358, and 132359) requires airport multimodal planning to be conducted and coordinated in San Diego County by the San Diego County Regional Airport Authority (the Authority) and San Diego Association of Governments (SANDAG). The main planning provisions of SB-10 are the development of RASP and an Airport Multimodal Accessibility Plan (AMAP). The Authority is leading preparation of the RASP, which will identify workable strategies to improve the performance of the Airport System. SANDAG is leading the AMAP, which will develop a multimodal strategy to improve surface transportation access to airports.

The development of the RASP and AMAP is a coordinated process between SANDAG and the Authority, which was given responsibility for preparation of the RASP in SB-10. The overall planning schedule was designed to allow RASP findings to be incorporated into the AMAP, which will subsequently be incorporated into the next update of the Regional Transportation Plan (RTP). SANDAG is required under federal law to update the RTP every four years, with the next update required in 2011.

1.2 STUDY OBJECTIVES

In enacting SB-10, the California Legislature intended to: (a) promote long-range planning for airports in local general plans; (b) advance regional transportation strategies; (c) explore mechanisms for regional cooperation; and (d) ensure consistency between the planning documents prepared or approved by the Authority and SANDAG. The RASP contributes to the accomplishment of these goals by identifying workable strategies to improve the performance of the Airport System.

Accordingly, the primary objectives of the RASP are to:

1. Define the region's long-range air transportation needs and the roles of regional airports in meeting those needs

2. Determine opportunities and constraints with respect to accommodating future aviation demand at regional airports

3. Establish a plan to meet future regional aviation needs while preserving flexibility

4. Develop strategies to maximize the efficiency and effectiveness of existing and planned facilities

5. Comply with SB-10, which requires consideration of: existing airport capacities, forecast demand, ground access, transit facilities and services, compatibility with adjacent communities, and applicable financial issues

The overarching goal of the RASP is to maximize the efficiency and effectiveness of existing and planned aviation facilities. In other words, the goal is not to "force traffic," but rather "optimize assets" across the County's growing areas. Hence, the RASP is unique in that it brings together what have typically been considered separate modal infrastructures to help ensure the region's decisions can be made in an integrated fashion.

1.3 PROJECT OVERVIEW

The RASP was divided into a 3-phase work plan culminating in early 2011.

- **Phase 1** – Conducted between spring and winter 2009, included data gathering and development of the econometric demand model that would be used to assess the various alternative scenarios.

- **Phase 2** – Conducted between spring and summer 2010, included the development of a Baseline or "do-nothing" Scenario, and identification of concepts and strategies intended to optimize the Airport System.

- **Phase 3** – Conducted between fall 2010 and winter 2011, included technical and qualitative evaluations of various alternative scenarios.

Each phase included stakeholder and public outreach (see Section 1.7), as well as individual task-specific documentation and deliverables.

1.4 SAN DIEGO COUNTY AIRPORT SYSTEM

As presented on Figure 1-1, the San Diego County "Airport System" is defined by the 12 public-use airports in San Diego County and Tijuana Rodriguez International Airport, which is located just south of the California – Mexico border. The four military airfields in San Diego County – Camp Pendleton Marine Corps Air Station (NFG); Miramar Marine Corps Air Station (NKX); Imperial Beach Naval Outlying Field (NRS); and North Island Naval Air Station (NZY) – are excluded from the RASP except for consideration of the effects/impacts on regional airspace.

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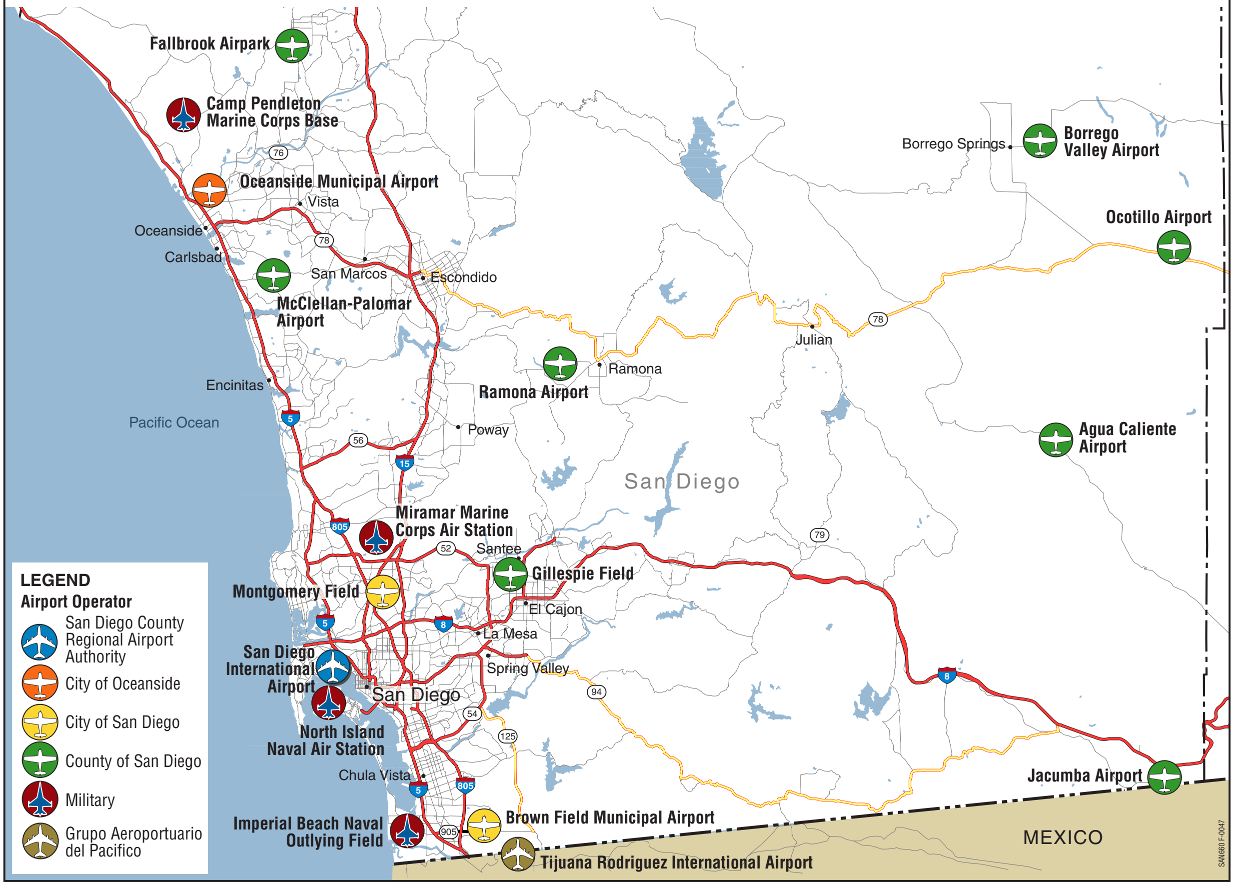
Figure 1-1

RASP APPROACH AND SAN DIEGO COUNTY AIRPORT SYSTEM

Regional Aviation Strategic Plan



1.4.1 Characteristics

San Diego County is the second most populous county in California, with over 3 million residents accounting for 8% of the state's population. However, only two airports in the County – San Diego International and McClellan-Palomar – are certificated by the Federal Aviation Administration (FAA) for commercial airline service, with San Diego International having one of the smallest footprints of any metropolitan airport in the U.S. The other public-use airports in San Diego County are general aviation facilities with various expansion constraints.

Geographically, the County is bounded on the west by the Pacific Ocean and on the east by rising terrain which generally complicates airport development and requires greater use of navigational aids.

Because there are multiple airports in close proximity (12 public-use and 4 military bases with aviation activity), San Diego County is considered one of the busiest and most complex airspace regions in the U.S. There are numerous competing and conflicting interests (commercial, military, corporate, recreational, etc.) operating in the airspace at any given moment. In addition, San Diego County includes various areas designated as special-use and international airspace (e.g., Mexico).

1.4.2 Airport Sponsors and Roles

The operator (i.e., sponsor), classification, and 2007 activity data for each airport in the Study Area is presented in Table 1-1. The following airports are owned and operated by the County of San Diego: Aqua Caliente, Borrego Valley, Fallbrook Airpark, Gillespie Field, Jacumba, Ocotillo, McClellan-Palomar, and Ramona. Brown Field Municipal and Montgomery are owned and operated by the City of San Diego. The City of Oceanside owns and operates Oceanside Municipal; and the Authority owns and operates San Diego International. Tijuana Rodriguez International is owned and operated by Grupo Aeroportuario del Pacifico (GAP).

Table 1-1
SAN DIEGO COUNTY AIRPORT SYSTEM
Regional Aviation Strategic Plan

Airport	Sponsor	Classification	Operations 2007
San Diego International (SAN)	SDCRAA	Large-hub Commercial Service	229,486
McClellan-Palomar (CRQ)	County of San Diego	Non-hub Commercial Service	212,023
Montgomery Field (MYF)	City of San Diego	Reliever	222,492
Gillespie Field (SEE)	County of San Diego	Reliever	295,652
Brown Field Municipal (SDM)	City of San Diego	Reliever	145,661
Ramona (RNM)	County of San Diego	Reliever	164,699
Oceanside Municipal (OKB)	City of Oceanside	General Aviation	14,128
Fallbrook Community (L18)	County of San Diego	General Aviation	33,286
Borrego Valley (L08)	County of San Diego	General Aviation	26,251
Agua Caliente (L54)	County of San Diego	Limited Use General Aviation	4,400
Ocotillo (L90)	County of San Diego	Limited Use General Aviation	800
Jacumba (L78)	County of San Diego	Limited Use General Aviation	325
Tijuana Rodriguez Int (TIJ)	GAP	Not Applicable	

SDCRAA = San Diego County Regional Airport Authority
GAP = Grupo Aeroportuario del Pacifico

Collectively, the 13 airports accommodate the following types of users:

- Commercial Service – Scheduled passenger service, including scheduled air taxi
- General Aviation – Non-scheduled corporate flight activity, training, and recreational activities
- Cargo Service – Scheduled cargo and freight service; only San Diego International currently provides scheduled cargo service

San Diego International, McClellan-Palomar, and Tijuana Rodriguez International accommodate commercial, general aviation, and corporate services. Airports accommodating only general aviation and corporate services include: Brown Field Municipal, Gillespie Field, Montgomery Field, and Ramona. The remaining airports – Agua Caliente, Borrego Valley, Fallbrook Airpark, Jacumba, Oceanside Municipal, and Ocotillo – accommodate general aviation only.

A summary of facilities and operational data for the Airport System is presented on Figure 1-2.

The National Plan of Integrated Airport Systems (NPIAS) designated San Diego International Airport and McClellan-Palomar Airport as primary airports in the San Diego County. According to the FAA Future Airport Capacity Task (FACT) 2, published in 2007, the San Diego County region would need aviation capacity after 2025. FACT 2 also added that the San Diego International Airport should be closely monitored to gauge the effects of swiftly changing industry outlook as changes could expedite the need for additional capacity.

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Figure 1-2

BASELINE FACILITIES AND OPERATIONAL DATA

Regional Aviation Strategic Plan

Airport Activity Statistics

	San Diego International SAN			McClellan-Palomar CRQ			Montgomery Field MYF		
	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)
Annual Enplanements	9.2 Million	14.1 Million	15.5 Million	46,909	50,000	426,200	N/A	N/A	N/A
Annual Operations	229,486	309,800	363,400	212,023	268,700	279,900	222,492	271,800	--

	Brown Field Municipal SDM			Gillespie Field SEE			Ramona RNM			Tijuana-Rodriguez TIJ		
	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)
Annual Enplanements	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.3 Million	4.4 Million	6.9 Million
Annual Operations	145,661	175,900	281,500	295,652	461,000	489,600	164,699	193,000	242,100	56,200	Approx. 70,000	--

	San Diego International SAN	McClellan-Palomar CRQ	Montgomery Field MYF	Brown Field Municipal SDM	Gillespie Field SEE	Ramona RNM	Tijuana-Rodriguez TIJ
Regional Forecast Facility Improvement and Operational Assumptions	Baseline Scenario assumes construction of new gates, airfield improvements, auto parking, and roadway improvements beginning in 2009. Continued deployment of narrow body jets; replacement of small regional jets to larger regional jets; increased use of wide body jets as international activity grows; projected increase of load factors. High Scenario enplanement forecast reflects lower fuel prices more than Baseline Scenario.	Baseline Scenario assumes SkyWest will continue to serve LAX and replace EMB120 aircraft with CRJ200 (or similar) aircraft in 2013. Planned 38,000 square feet of new hangar space developed in 2009. High Scenario assumes Runway extension to accommodate CRJ200, EMB170, EMB190 and 72-seat Q400 or similar aircraft without restrictions (no indication of length required). Markets potentially served in addition to LAX include: LAS, PHX, DEN, and SFO.	None Identified	High Scenario assumes planned 356 acre development in association with Distinctive Projects Company is implemented. Development includes additional hangar capacity to accommodate 290 additional based aircraft; full occupancy realized.	High Scenario assumes planned 70 acre Cajon Air Center development is implemented with 55 acres of new aircraft storage hangars; full occupancy realized. Majority of additional based aircraft would originate from outside San Diego County (as opposed to other County airports). Forecasts represent unconstrained conditions, and activity levels may exceed current capacity.	High Scenario assumes planned development of the Ramona Air Center in 2017-2019, including 56 private hangars and 40 public hangars; full occupancy realized.	Not Included in the regional forecast
Airport Facilities							
FAA NPIAS Designation	Large Hub Primary Commercial	Non-Hub Primary Commercial	Reliever	Reliever	Reliever	Reliever	N/A
California Aviation System Plan Designation	Primary Commercial Hub	Primary Commercial Non-Hub	Metropolitan GA	Regional GA	Regional GA	Regional GA	N/A
Total Airport Acreage	661	487	456	880	775	378	1,112
FAA Airport Reference Code	D-V	B-II	B-II	D-IV	B-II	B-II	ICAO 4E
Runway Data	9/27 - 9,401	6/24 - 4,897	5/23 - 3,400 10L/28R - 4,577 10R/28L - 3,400 Runway strength limited to aircraft weighing less than 20K lbs.	8L/26R - 7,972 8R/26L - 3,180	9L/27R - 5,341 9R/27L - 2,737 17/35 - 4,147	9/27 - 5,000 (Paved)	9/27 - 9,711 10/28 - 8,200 CLOSED
Instrument Approach	Runway 9: ILS CAT I Runway 27 Non-precision	Runway 24: ILS CAT I	Runway 28R: ILS CAT I	Non-precision	Non-precision	Non-precision	Runway 9: ILS

Airport Activity Statistics

	Oceanside Municipal OKB			Fallbrook Community L18			Borrego Valley L08		
	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)
Annual Enplanements	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Annual Operations	14,128	18,200	36,500	33,286	43,200	--	26,251	22,400	--

	Ocotillo L90			Agua Caliente L54			Jacumba L78		
	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)	Historical 2007	Forecast 2030 (Baseline)	Forecast 2030 (High)
Annual Enplanements	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Annual Operations	800	800	--	4,400	4,400	--	325	325	--

	Oceanside Municipal OKB	Fallbrook Community L18	Borrego Valley L08	Ocotillo L90	Agua Caliente L54	Jacumba L78
Regional Forecast Facility Improvement and Operational Assumptions	High Scenario assumes Airport Property Ventures will take over management of airport; 100 new hangars developed for additional based aircraft.	None Identified	None Identified	None Identified	None Identified	None Identified
Airport Facilities						
FAA NPIAS Designation	General Aviation	General Aviation	General Aviation	Not in NPIAS	Not in NPIAS	Not in NPIAS
California Aviation System Plan Designation	Regional GA	General Aviation	General Aviation	General Aviation	General Aviation	General Aviation
Total Airport Acreage	236	290	246	351	160	131
FAA Airport Reference Code	B-I	B-I	B-II	B-I	B-I	B-I
Runway Data	6/24 - 2,712 Runway strength limited to aircraft weighing less than 12K lbs.	18/36 - 2,160 Runway strength limited to aircraft weighing less than 12K lbs.	8/26 - 5,011	9/27 - 2,475 (Dirt) 13/31 - 4,210 (Dirt)	11/29 - 2,500 Runway strength limited to aircraft weighing less than 12K lbs.	7/25 - 2,510 (Gravel) Runway strength limited to aircraft weighing less than 12K lbs.
Instrument Approach	Non-precision	Non-precision	Non-precision	None (visual only)	None (visual only)	None (visual only)

Notes: NPIAS = National Plan of Integrated Airport Systems
N/A = Not Applicable

Sources: Forecast data— *San Diego County Regional Aviation Strategic Plan, Aviation Demand Forecasts*, Landrum & Brown, Inc., December 2008.
Airport facility data—*National Plan of Integrated Airport Systems*, FAA, 2008.
Tijuana-Rodriguez data—*Cross Border Terminal - Market Demand Study*, Infrastructure Management Group, Inc., 2006.

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1.5 SUMMARY OF AVIATION ACTIVITY

Forecasts of aviation activity developed for the RASP were prepared in 2008 as part of the Destination Lindbergh study. As of January 2011, a complete copy of the *San Diego County Regional Aviation Strategic Plan, Aviation Demand Forecasts (*December 2008) can be obtained at the following link:

http://www.san.org/documents/rasp/Aviation_Demand_Forecasts_Draft_December_2008.pdf

Appendix A includes a technical memorandum presenting aviation demand forecasts for 2035 for the 12 public-use airports in San Diego County in support of planning efforts being conducted by SANDAG. The 2035 forecast is an extrapolation of the baseline forecasts which includes enplaned passengers, air cargo, and aircraft operations (passenger and all-cargo airlines and general aviation) for each of the 12 public-use airports in San Diego County.

Understanding that current and projected aviation activity in the San Diego region is an essential and critical component of the RASP, the forecasts were used as a starting point for determining latent demand and facility improvements necessary to meet the region's long-term air service needs. This approach recognizes that potential development scenarios can constrain or further stimulate demand, thereby altering the baseline demand forecast.

Overarching forecast assumptions are summarized below:

- The RASP forecast base year is 2007; consistent with the AMAP, annual operations and fleet mix forecasts are presented for each airport through 2030
- System airports are assumed to maintain their existing roles
- Forecast data was provided from the County of San Diego, City of San Diego, Airport Authority, and FAA sources
- Forecasts account for and consider the following:
  – Continued congestion at San Diego International
  – Planned improvements at San Diego International
  – Potential runway extension at McClellan-Palomar
  – Loss of a flight school at Gillespie Field
  – New high-end fixed based operator (FBO) at Brown Field Municipal
  – Development of the Ramona Air Center
  – Lease of Oceanside Municipal to a private operator
- Forecasts are based on unconstrained demand, which assumes that there are no physical, regulatory, environmental, political, or other impediments to aviation activity growth

The following sections summarize base year (2007) and forecast data for commercial passenger, air taxi, general aviation, and military activity. A summary of actual and forecast operations at each airport is provided on Table 1-2. Total aircraft operations for the Airport System are forecast to increase from 1.35 to 1.77 million operations between 2007 and 2030, representing an average annual growth rate of 1.2%.

1.5.1 Commercial Activity

San Diego International and McClellan-Palomar are the only two airports in San Diego County with scheduled commercial passenger service. San Diego International also has commercial cargo activity. Commercial passenger forecasts were based on regression of domestic origination and destination passengers against personal income and airline yield.

The majority of commercial operations will continue to be accommodated at San Diego International, where the passenger forecast is driven principally by passengers starting and ending their travel in San Diego (over 90% of passengers in 2007). Enplanements are projected to increase from 9.2 million in 2007 to 14.1 million in 2030, an average annual growth rate of 1.9% per year. However, by 2030 McClellan-Palomar is projected to accommodate 0.4% of total commercial passengers and about 25% of commuter passengers. Enplanements at McClellan-Palomar are forecast to return by 2010 to the 50,000 level experienced historically and remain at that level through 2030.

Passenger aircraft operations were derived from enplaned passenger forecasts. The aggregate number of commercial operations at an airport depends on the following three factors: total enplaned passengers, average aircraft size, and average load factor. The domestic passenger operations forecasts were developed based on the following assumptions:

- The historical deployment of 135- to 145-seat narrow-body jets at San Diego International would continue into the future, with the evolution of the fleet being towards similarly sized, next generation replacement aircraft
- Small regional jets are expected to be replaced with larger regional jets
- In general, domestic load factors are expected to increase in the short-term due to increases in fuel prices and corresponding capacity cuts
- International activity is expected to expand somewhat with non-stop service to Europe in 2011 and Pacific destinations by 2015, which will lead to more wide-body aircraft in the fleet. International load factors are expected to increase from almost 70% in 2007 to 75% in 2030

Table 1-2
ACTUAL AND FORECAST AIRCRAFT OPERATIONS — SAN DIEGO COUNTY AIRPORT SYSTEM
Regional Aviation Strategic Plan

		Total operations												
	Year	SAN	CRQ	MYF	SEE	SDM	RNM	OKB	L18	L08	L54	L90	L78	Total
Actual	1990	n.a.	255,369	269,623	188,533	212,293	110,168	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,035,986
	1995	226,994	204,191	227,847	184,291	125,034	133,778	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,102,135
	2000	206,889	255,096	251,645	187,751	112,800	132,407	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,146,588
	2001	206,988	221,898	215,189	175,392	123,761	110,413	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1,053,641
	2002	206,380	204,289	245,643	183,145	140,822	106,429	n.a.	20,896	n.a.	n.a.	n.a.	n.a.	1,107,604
	2003	202,577	193,336	216,571	180,749	105,327	95,328	n.a.	18,292	19,554	452	246	1,626	1,034,058
	2004	208,311	207,866	229,673	208,159	104,387	121,875	11,233	22,728	18,697	500	250	1,500	1,135,179
	2005	219,866	208,768	245,234	242,179	116,898	140,900	11,609	36,124	26,454	650	405	325	1,249,412
	2006	220,620	198,590	232,698	278,388	135,485	155,120	14,352	32,586	20,853	650	405	325	1,290,072
	2007	229,486	212,023	222,492	295,652	145,661	164,699	14,128	33,286	26,251	4,400	800	325	1,349,203
Estimate	2008	228,100	201,000	247,000	262,100	120,800	128,400	11,600	22,302	22,400	4,400	800	325	1,249,227
Forecast	2010	219,800	208,900	250,300	266,200	126,500	138,100	12,000	23,000	22,400	4,400	800	325	1,272,725
	2015	231,800	219,200	251,000	278,100	135,800	158,800	14,500	34,300	22,400	4,400	800	325	1,351,425
	2020	254,600	233,800	255,600	315,000	147,700	167,400	15,500	36,700	22,400	4,400	800	325	1,454,225
	2025	280,300	249,600	262,700	376,300	161,300	178,800	16,600	39,600	22,400	4,400	800	325	1,593,125
	2030	309,800	268,700	271,800	461,000	175,900	193,000	18,200	43,200	22,400	4,400	800	325	1,769,525
	Average annual growth rate:													
	1990-2000	n.a.	0.0%	-0.7%	0.0%	-6.1%	1.9%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.0%
	2000-2007	1.5%	-2.6%	-1.7%	6.7%	3.7%	3.2%	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2.4%
	2007-2010	-1.4%	-0.5%	4.0%	-3.4%	-4.6%	-5.7%	-5.3%	-11.6%	-5.2%	0.0%	0.0%	0.0%	-1.9%
	2010-2020	1.5%	1.1%	0.2%	1.7%	1.6%	1.9%	2.6%	4.8%	0.0%	0.0%	0.0%	0.0%	1.3%
	2020-2030	2.0%	1.4%	0.6%	3.9%	1.8%	1.4%	1.6%	1.6%	0.0%	0.0%	0.0%	0.0%	2.0%
	2007-2030	1.3%	1.0%	0.9%	2.0%	0.8%	0.7%	1.1%	1.1%	-0.7%	0.0%	0.0%	0.0%	1.2%

Note: Tijuana Rodriguez International Airport not included.
Source: *San Diego County Regional Aviation Strategic Plan, Aviation Demand Forecasts*, Landrum & Brown, Inc., December 2008.

Legend:
SAN - San Diego International Airport
CRQ - McClellan-Palomar Airport
MYF - Montgomery Field
SEE - Gillespie Field
SDM - Brown Field Municipal Airport
RNM - Ramona Airport
OKB - Oceanside Municipal Airport
L18 - Fallbrook Community Airpark
L08 - Borrego Valley Airport
L54 - Agua Caliente Airport
L90 - Ocotillo Airport
L78 - Jacumba Airport

As a result, commercial passenger operations are expected to grow at 1.3% per year from 199,900 in 2007 to 269,200 operations by 2030.

Based on the domestic nature of cargo at San Diego International, it was assumed that the long-term forecast growth rate for air cargo would likely be less than the growth projected by national cargo forecasts prepared by the FAA, Boeing, and Airbus. Based on this assumption, cargo tonnage is expected to grow at a rate of 1.7% annually from 155,000 tons in 2007 to 225,600 tons in 2030.

1.5.2 General Aviation and Military Activity

General aviation forecasts were prepared based on an econometric model using a regression analysis of the total San Diego County air taxi and general aviation activity against historical personal income for San Diego County. San Diego International forecast air taxi/general aviation activity was calculated based on a market share analysis. San Diego International's historical contribution of air taxi/general aviation traffic has averaged 2.3 percent of the total air taxi/general aviation activity in San Diego County between 1995 and 2007. However, based on the 2008 air taxi/general aviation activity estimates at the airport, this is expected to fall to 1.9%. Furthermore, as commercial passenger operations increase and airside congestion worsens, it is expected that this amount will decrease even further over time, reaching 1.6% by 2030.

Unconstrained general aviation operations are forecast to grow from 1.0 million to nearly 1.5 million by 2030, with Gillespie Field accounting for the majority of growth. The following assumptions were included in the forecasts:

- **McClellan-Palomar** – Assumes implementation of a 1,000-foot runway extension (under consideration since 2003); construction of a new terminal building; and 38,000 sq ft of new hangar space in 2009. Air taxi operations are forecast to reach 2007 levels by 2010 and increase at an average annual rate of 2.8% from 2010 to 2030, based on FAA growth rates. Itinerant general aviation operations grow based on FAA national forecasts; and local operations remain at 2008 levels through 2030.

- **Montgomery Field** – Assumes construction of a planned 423-foot runway extension, pavement rehabilitations, and 12 aircraft parking positions. Air taxi operations expected to continue to decline. Itinerant general aviation forecast to hold constant at 2008 levels through 2030; local operations projected based on national FAA forecasts.

- **Brown Field Municipal** – Assumes implementation of planned development of FBO and firefighting base and commercial, industrial, hotel, and educational facilities. Air taxi and itinerant general aviation projected based on trend analyses; local operations projected based on national FAA forecasts.

- **Ramona** – Assumes implementation of planned public-private development of hangars for approximately 100 aircraft. By 2012, itinerant general aviation reaches 2007 levels and local general aviation reaches 2006 levels; forecast operations increase based on FAA growth rates.
- **Oceanside Municipal** – General aviation operations expected to recover and reach 2007 levels in 2012; forecast operations increase at FAA growth rates.
- **Fallbrook Community Airpark** – Fallbrook Master Plan 2006 is not adopted for the RASP. General aviation activity projected based on FAA growth rates.
- **Borrego Valley, Agua Caliente, Ocotillo, and Jacumba Airports** – General aviation activity projected to remain constant at 2007 levels.

The future general aviation fleet mix was based on national trends, local demand, and planned development at each airport.

Military forecasts anticipate no growth in annual county-wide operations (approximately 12,500 operations) and no change in share by airport.

1.6 PLANNING CHALLENGES

There are numerous challenges to meeting RASP goals and objectives, as summarized below:

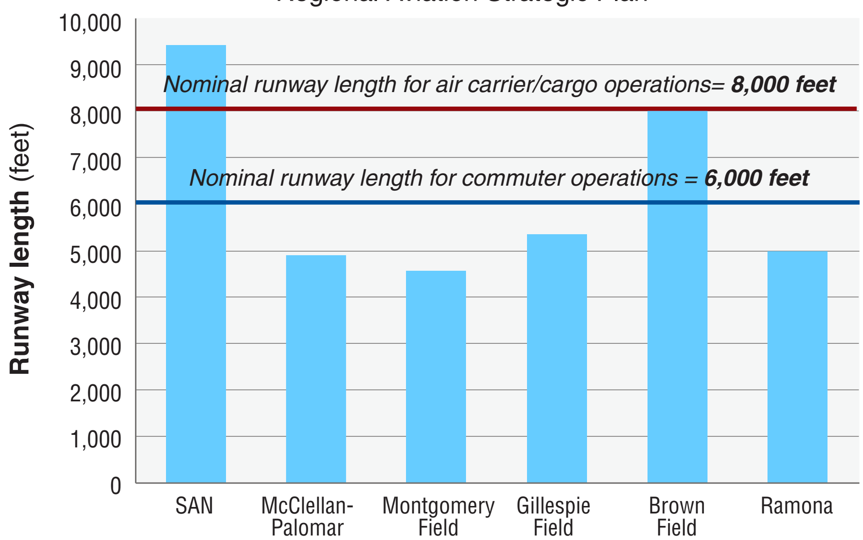
- Of the total system airports, only two are certificated by the FAA for commercial airline service – San Diego International and McClellan-Palomar. The other public-use airports are general aviation facilities with various expansion constraints. Airports with available land are not located near the population/economic base, complicating traffic redistribution strategies.
- San Diego International has one of the smallest footprints of any metropolitan airport in the U.S. The Airport's growth is constrained by the single-runway airfield which will "cap" activity at around 28 million annual passengers. Since San Diego International is currently the only facility equipped to accommodate the full range of commercial service, the airfield constraint will likely ultimately limit regional growth.
- The best use of all aviation infrastructure is possible with an integration of air and ground (i.e., intermodal strategies). The potential for high speed rail to connect San Diego to other airports in Southern California may alleviate some short-haul demand at San Diego County airports, freeing up precious airfield capacity at San Diego International.
- Only San Diego International and Brown Field have runways capable of accommodating the full range of commercial activity (see Figure 1-3). In

addition to runway length, factors related to accommodating commercial service include: runway strength, airfield design standards, ability to lengthen runway, political and/or community opposition. Unrestricted accommodation of commercial aviation demand is not possible at McClellan-Palomar due to its runway length and also existing airfield layout constraints.

Figure 1-3

EXISTING RUNWAY LENGTHS

Regional Aviation Strategic Plan



Note: Nominal runway length includes aircraft payload and range considerations.

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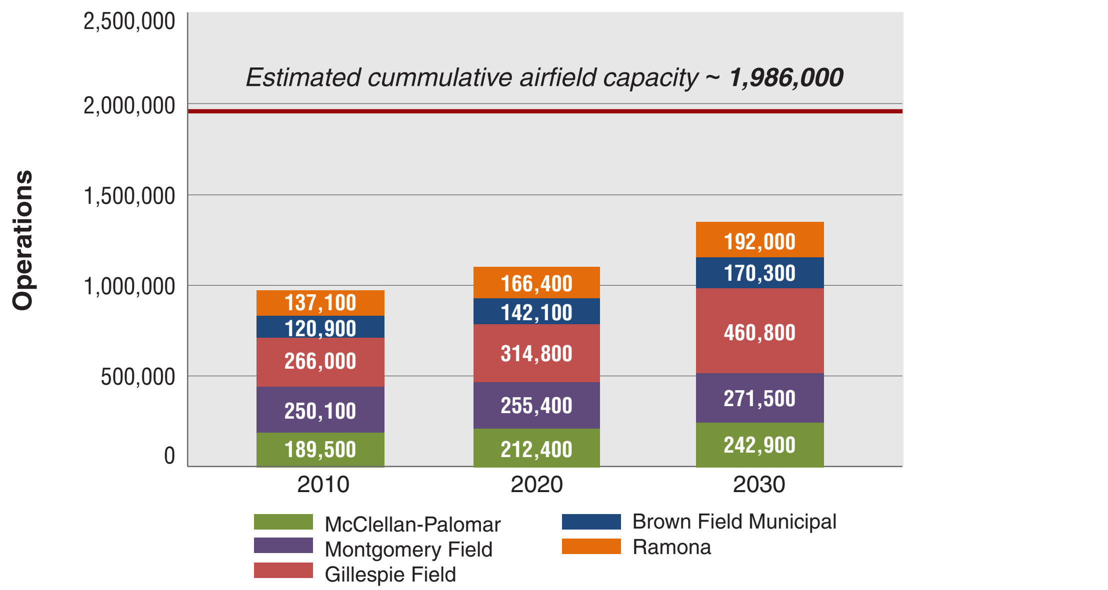
- The conversion of an existing general aviation airport to a FAR Part 139 certificated airport to accommodate commercial service (passenger or cargo) is unlikely due to community and political opposition and significant costs associated with such an action.

- The collective capacity of the five general aviation airports is well above forecast demand (see Figure 1-4). In addition, capacity significantly exceeds demand at all facilities, except at Gillespie Field, where demand is projected to exceed capacity by 10,000 operations in 2030.

Figure 1-4

AIRFIELD DEMAND AND CAPACITY AT GENERAL AVIATION AIRPORTS

Regional Aviation Strategic Plan



- The Airport System has achieved a natural "balance" with regard to accommodating activity (passenger, cargo, general aviation, etc.); this "balance" will be difficult to change given political, physical, and community factors associated with each airport.

- Although San Diego International has good domestic air service at competitive airfares, there are large numbers of passengers choosing to use other airports in the region, including Mexico. These choices are predominantly based on air service options rather than cost. In addition, there have been recent increases in interregional and international travel, with more people working in San Diego but living in Riverside and Imperial counties, and Mexico.

- No single entity has sole authority to implement recommendations, although many interests are part of the process and participated in the RASP.

1.7 COORDINATION AND OUTREACH

Many stakeholders have a vested interest in the outcome of the RASP, including:

- Airport sponsors, including the Airport Authority, the County of San Diego, City of San Diego, City of Oceanside, and GAP
- Federal, state, and regional agencies – FAA, Caltrans, California High Speed Rail Authority, SANDAG
- Regional transportation agencies – San Diego Metropolitan Transit System (MTS) and North County Transit District (NCTD)
- Local communities and the public, including all 18 cities in San Diego County represented by SANDAG
- Public and airport-specific stakeholders

While the Airport Authority led the RASP, significant coordination was required with the other airport sponsors and regional agencies. To meet this need, a technical Subcommittee of the Airport Advisory Committee was formed with representatives from the City of San Diego and County of San Diego, and other entities that have a responsibility in the development and operations of airports in the county.

In addition, and in compliance with SB-10 requirements, the Airport Authority implemented an extensive public outreach program to accompany preparation of the RASP. A summary of the public and stakeholder outreach program is documented separately.

1.8 AMAP INTEGRATION

Throughout the conduct of the RASP, the Authority worked closely with SANDAG, the agency leading the AMAP, to ensure that (1) ground access estimates used in the RASP econometric model were based on actual estimates from SANDAG's latest RTP; (2) RASP analyses were consistent with the planning protocols of the AMAP; and (3) RASP findings could be incorporated into the AMAP and ultimately into the next update of the RTP. Based on RASP findings, the AMAP will identify and prioritize relevant ground access improvements in order to develop workable strategies to improve the overall performance of the ground access to various San Diego County airports. Coordination with SANDAG was accomplished via monthly meetings and regular updates regarding project strategies, technical assumptions, and preliminary findings. The Authority also collaborated with SANDAG and other regional planning agencies to ensure that the assumptions and the findings for scenarios pertaining to California High Speed Rail were consistent with the California High Speed Rail Authority's plans, as well as other regional rail efforts.

Chapter 2

STRATEGIC ASSESSMENT

The following summarizes the results and findings of a Strategic Assessment conducted on the San Diego County Airport System. The data and findings presented herein represent actual conditions during mid-2009.

2.1 OBJECTIVES

The primary objective of the Strategic Assessment is to identify airports in the system that may be considered for a change in their current role in order to optimize the region's aviation infrastructure. Additional objectives include the following:

1. Develop an understanding of system airport capabilities, users, and market potential
2. Collect key inventory and baseline data for ensuing tasks; gather information that will be utilized in the development and evaluation of alternative scenarios
3. Offer opportunities to understand stakeholder needs and issues and provide a forum to initiate discussions with committees and other stakeholders on RASP issues and opportunities

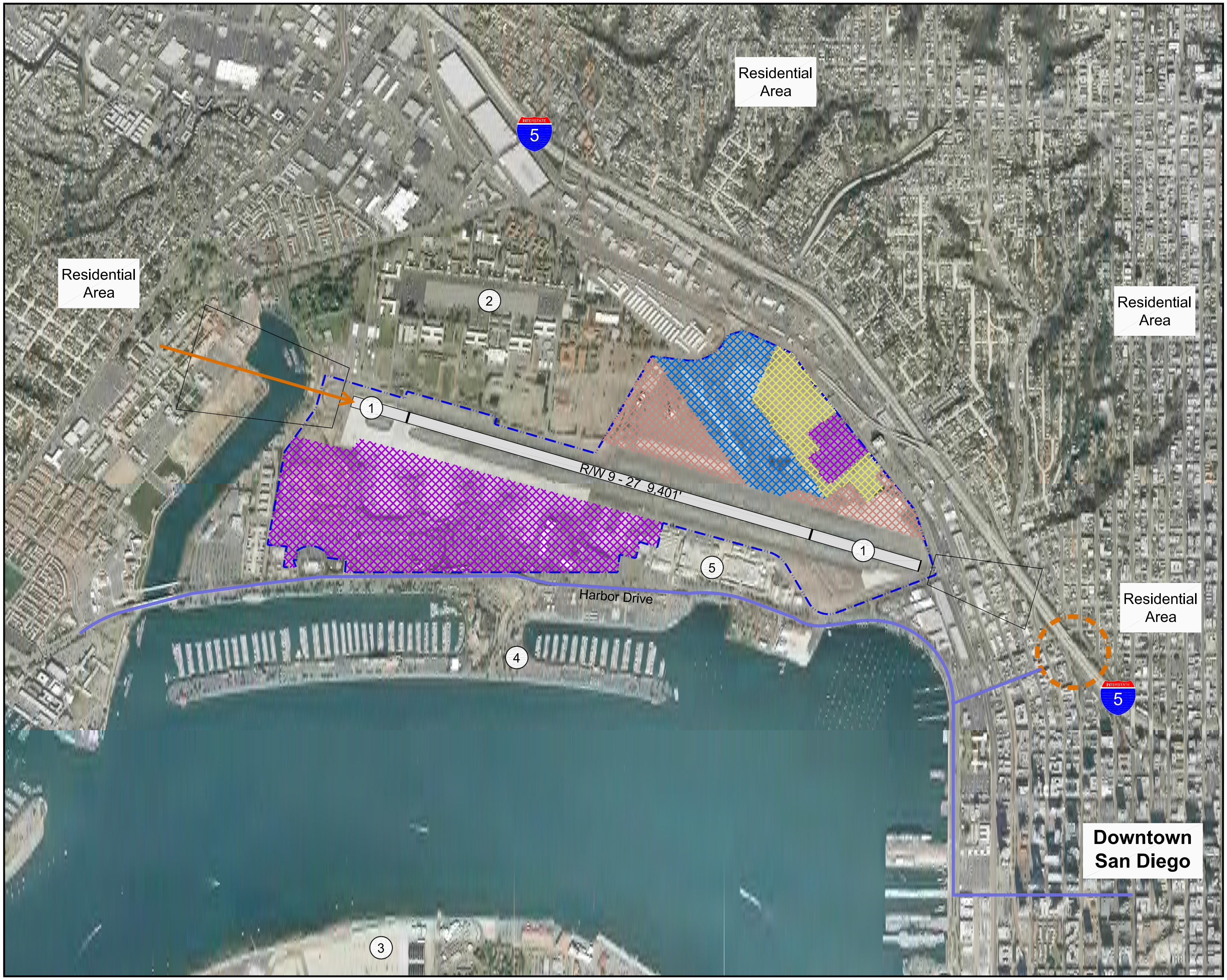
2.2 ASSESSMENT OF SYSTEM AIRPORTS

The strategic assessment prepared for each system airport was organized along on the following:

- **Existing** airport facility Strengths (S) and Weaknesses (W) with regard to accommodating the airport's current market
- **Future** airport Opportunities (O) and Threats (T) with respect to accommodating future aviation demand

2.2.1 San Diego International Airport

San Diego International, depicted on Figure 2-1, is the Airport System's only FAA-designated Large-hub Primary Commercial Service Airport. The airport is operated by the San Diego County Regional Airport Authority and is located three miles west of the downtown business district. Vehicle access is provided via Harbor Drive 1.5 miles west of Interstate 5. The airport provides non-stop service to over 35 domestic and three international markets (Canada and Mexico); with passenger service provided by 14 domestic carriers, including six low-cost carriers and two seasonal carriers. In addition, the airport accommodates the majority of regional cargo demand via passenger airlines (belly cargo) and four dedicated all-cargo air carriers.



LEGEND

- Airport property line
- RPZ
- Instrument approach
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES

- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS

1. Displaced threshold due to obstructions to the approach
2. U.S. Marine Corps Recruit Depot (MCRD)
3. Naval Air Station North Island
4. Harbor Island
5. Former Teledyne - Ryan site

SOURCES

1/ Aerial Photo - Google Earth, May (2009).
2/ *Destination Linbergh - Project Overview*, Jacobs Consultancy, Feb 2009.

NORTH

0' 750' 1500' 3000'

Scale: 1" = 1500'

Figure 2-1
SAN DIEGO INTERNATIONAL AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

JACOBS CONSULTANCY
Airport Management Consulting

In April 2008, the Authority began an effort to define the ultimate configuration for San Diego International Airport. This study, titled *Destination Lindbergh*, is aligned with the San Diego region's long-range multimodal transportation priorities, and identifies the potential for a multimodal transit center to be located near, or adjacent to the airport. As part of the study, the Authority invited SANDAG and the City of San Diego to participate in the planning so as to facilitate a regional decision-making process. *Destination Lindbergh* was accepted by the Authority in February 2009.

Strengths

- Convenient location three miles west of the downtown business district provides a strong origination and destination base
- Historically strong and consistent local economic drivers – military and tourism – provide a steady business and leisure passenger base
- The busiest commercial air service provider in the County
- Efficient and customer-friendly facilities; high passenger satisfaction ratings

Weaknesses

- Single Runway 9-27 (9,401 feet) – considered the "busiest single runway" in the U.S.
- Site constrained by neighboring land uses and environmental and natural obstacles making expansion difficult and expensive
- Terrain and obstacles in the approach and departure paths limit aircraft payloads for some domestic and international markets
- Some outdated infrastructure will require costly upgrades and redevelopment in next 10 years
- Prohibition on takeoffs between 11:30 p.m. and 6:30 a.m. limits potential service in certain international and domestic markets

Opportunities

- Potential to serve additional long-haul domestic (U.S. East Coast) and international destinations
- Leverage proximity to existing intercity and planned public transportation (Amtrak, COASTER, light rail, HSR, etc.) to facilitate momentum for a regional intermodal hub, a key component of *Destination Lindbergh*

- On-airport land available for reconfiguration/optimization of infrastructure, including the former Teledyne-Ryan site expected to be available after remediation

- Construction of new gates, airfield improvements, roadway and parking improvements beginning in 2009 will improve efficiency and flexibility

Threats

- Airfield capacity constraints of the single runway will hinder growth sometime between 2020 and 2030 at around 28 million annual passengers

- Airport and demand base (passenger and cargo) located within the greater Los Angeles metropolitan area airports' catchment area

- Active and vocal community opposition, largely from noise exposure and vehicle traffic congestion

2.2.2 McClellan-Palomar Airport

McClellan-Palomar, depicted on Figure 2-2, is the Airport System's only FAA-designated Non-hub Primary Commercial Service Airport. The airport is operated by the County of San Diego and is located approximately 32 miles north of downtown San Diego and 30 miles south of the center of Orange County. The airport provides non-stop commuter service to Los Angeles (LAX); there are currently seven flights per day offered by a single carrier (Skywest/United Express). The airport's primary market is high-end corporate general aviation activity with some recreational general aviation activity.

Strengths

- Located near population centers in north San Diego County

- FAR Part 139 certification and commuter service already established

- New 18,000 sq ft terminal and support facilities constructed in 2009 include international customs building

- Strong on-airport tenant base – four FBOs, with three recently constructed or remodeled and over 15 aviation-related on-airport businesses

- Relatively small area affected by cumulative noise exposure

- Commercial air service supported by mass transit (bus service only) providing access to north County locations and the COASTER

- On airport property revenue – producing leaseholds from commercial development

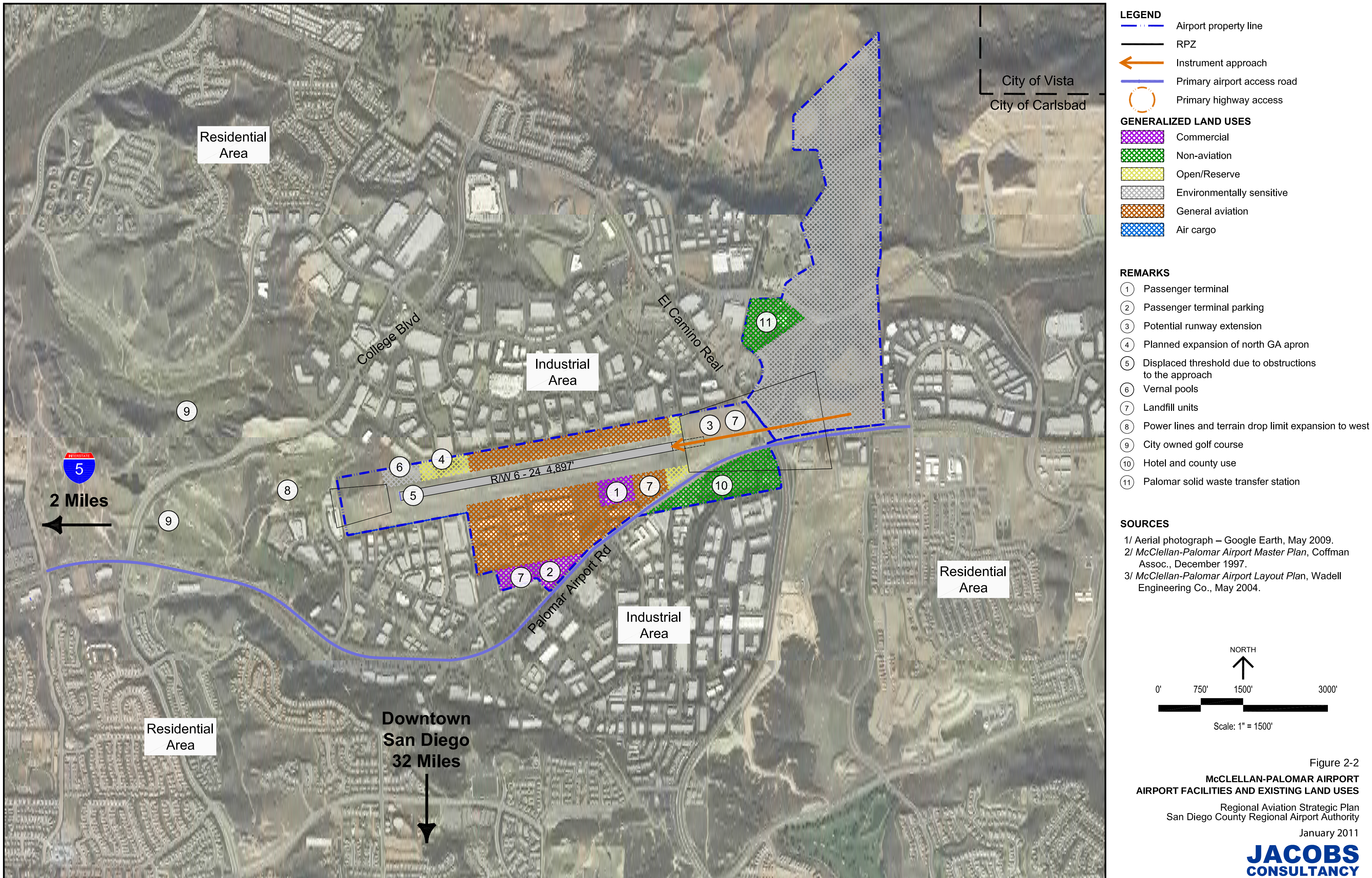


Figure 2-2

McCLELLAN-PALOMAR AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority

January 2011

Weaknesses

- Runway length prohibits most regional jets and some general aviation aircraft from operating at maximum operational capabilities, limiting service to markets within 500 miles
- Low levels of commercial activity; single airline (United Airlines) service to a single market (LAX)
- Cost to maintain FAR Part 139 status not adequately offset by revenues generated by commercial operations

Opportunities

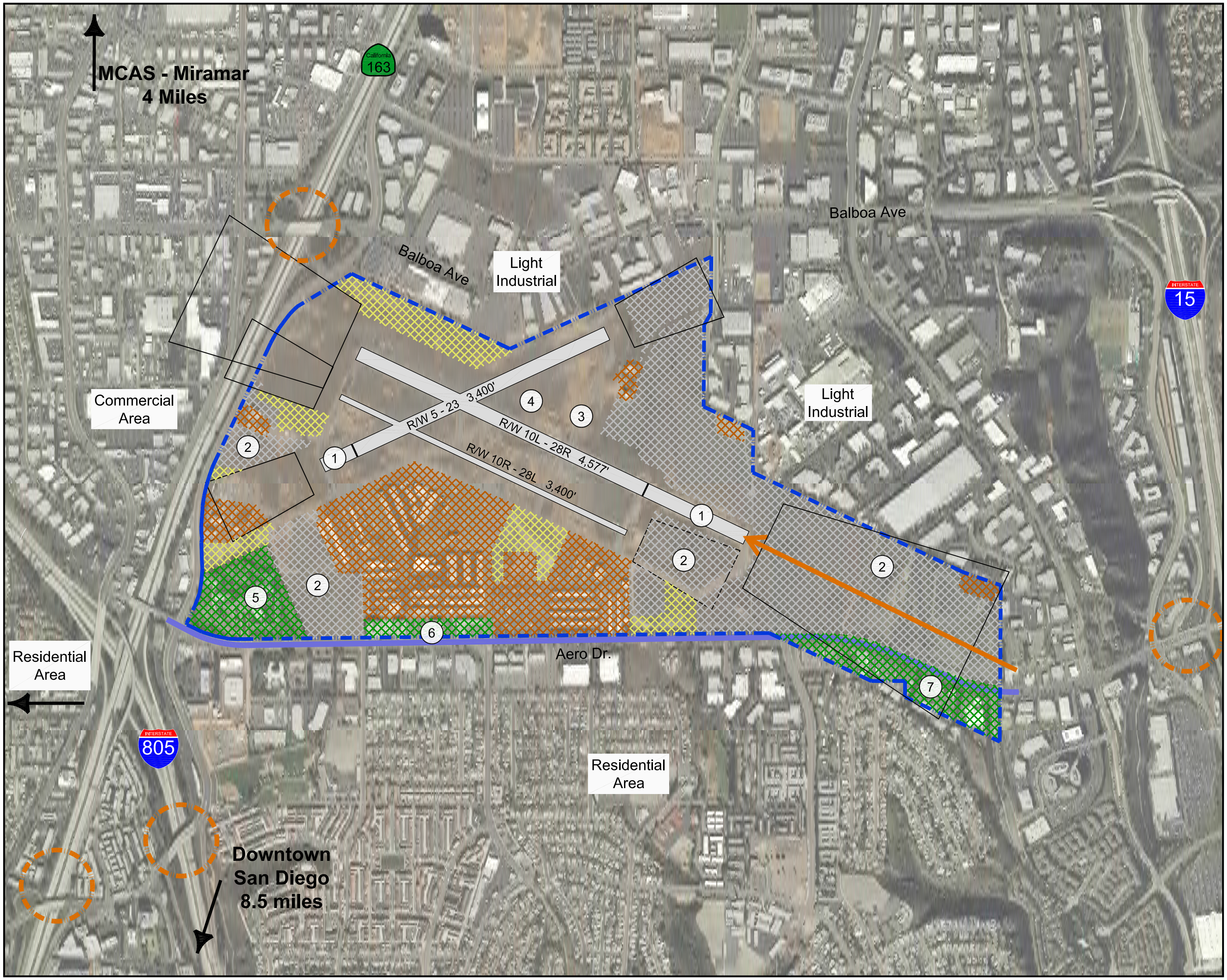
- Potential 1,000-foot runway extension would provide reasonable departure capability for most regional jets (e.g., CRJ200, EMB145) and larger corporate general aviation aircraft
- Proximity of COASTER provides opportunities to attract additional activity
- New terminal facility could be expanded to accommodate up to 240,000 annual passengers
- Potential for San Diego Metropolitan Transit System (MTS) to utilize excess parking facilities for Park & Ride services

Threats

- Significant and costly impediments to runway extensions – eastern extension would require landfill remediation; western extension not practical due to significant grade changes
- On-airport environmental obstacles and sensitive areas (i.e., landfills) would increase development costs
- Some community opposition to airport expansion primarily based on noise

2.2.3 Montgomery Field

Montgomery Field, depicted on Figure 2-3, is one of four FAA-designated Reliever Airports to San Diego International. The airport is operated by the City of San Diego and located approximately 8.5 miles north of downtown San Diego. The airport primarily accommodates recreational general aviation activity. Airspace is shared with MCAS Miramar; interactions are coordinated by military air traffic control services, resulting in minimal operational impacts.



REMARKS

1. Displaced threshold due to obstructions to the approach
2. Protected plant and wildlife habitat area may preclude development
3. City ordinance restricts aircraft weight to 20,000 lbs limiting commercial, cargo and corporate activity
4. Noise abatement restrictions for flight training in place to minimize noise impacts
5. Hotel and golf course
6. Retail and commercial development
7. Light industrial

SOURCES

1/ Aerial photograph – Google Earth, May 2009.
2/ Airport land uses – *Montgomery Field Airport Layout Plan*, Shutt Moen Associates, March 2004.
3/ Airport Facilities – *Montgomery Field Airport Land Use Compatibility Plan, SDCRAA, October 2004*.
4/ Airnav.com.

Figure 2-3
MONTGOMERY FIELD AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

JACOBS CONSULTANCY
Airport Management Consulting

Strengths

- Close proximity to downtown San Diego and large segments of the County's population
- Parallel runways allow segregation of flight training (touch-and-go) activity from other operations
- Runway 10L-28R extended to 4,577 feet to reduce noise exposure for neighborhoods to the west (added length allows aircraft to reach higher altitudes before overflying residential areas)
- Convenient ground access provided via major state roads (CA 163 and CA 274 – Balboa Avenue) and interstates (I-15 and I-805)

Weaknesses

- Operations limited to small general aviation aircraft due to the relatively short runway length (4,577 feet for departures and 3,400 feet for arrivals); and City Ordinance prohibiting operations by aircraft weighing more than 20,000 lbs.
- Noise abatement restrictions further restrict activity: daytime noise limit 88 dB Community Noise Exposure Level (CNEL) 6:30 a.m. to 11:30 p.m.; nighttime noise limit 70 dB CNEL 11:30 p.m. to 6:30 a.m.

Opportunities – On-airport land available for redevelopment

Threats

- Significant impediments to extending primary Runway 10L-28R, including location of CA 163 and environmentally sensitive areas
- On-airport environmental obstacles (vernal pools and protected plant species) may limit facility expansion and increase development costs
- Opposition from nearby residential areas based on aircraft noise, and flight patterns
- Miramar airspace may preclude future instrument operations or changes in airport operational patterns

2.2.4 Brown Field Municipal Airport

Brown Field, depicted on Figure 2-4, is one of four FAA-designated Relievers to San Diego International. The airport is operated by the City of San Diego and is located approximately 20 miles southeast of downtown San Diego, and 1.5 miles north of the Mexican border. The location is near the Otay Mesa Port of Entry (POE), one of the busiest commercial land border POEs in the U.S. The airport serves a mix of corporate and recreational general aviation activity.

Strengths

- Sufficient runway length to accommodate a wide range of aircraft types, including most passenger air carrier and cargo aircraft
- Proximity to Otay Mesa Port of Entry, designation as a Foreign Trade Zone (FTZ), and inclusion in the California Enterprise Zone Program attracts both aviation and non-aviation service providers
- Serves as a "first port of entry" for general aviation aircraft traveling from the Baja region of Mexican to California airspace, driving demand for U.S. Customs and FBO services
- Proximity to State Highways 805 and 125 provides access to the San Diego surface transportation network

Weaknesses

- Limited and older general aviation and FBO facilities do not adequately support the primary general aviation market
- Airspace operations and instrument approach capability complicated by Otay Mountain located directly east of the airport; only instrument approach is to Runway 8L from the west

Opportunities

- On- and off-airport land potentially available for future development
- Agreement with Distinctive Projects Company (private developer) to develop approximately 365 acres of available airport property; proposal includes: new general aviation facilities – FBO/GA center, hangars; helicopter FBO and City/County firefighting services; and the San Diego Air and Space Museum
- Location, airport facilities, and FTZ role could be leveraged to attract corporate, light industrial, and other non-aviation development
- Planned roadway improvements will increase surface transportation access to the airport and nearby development

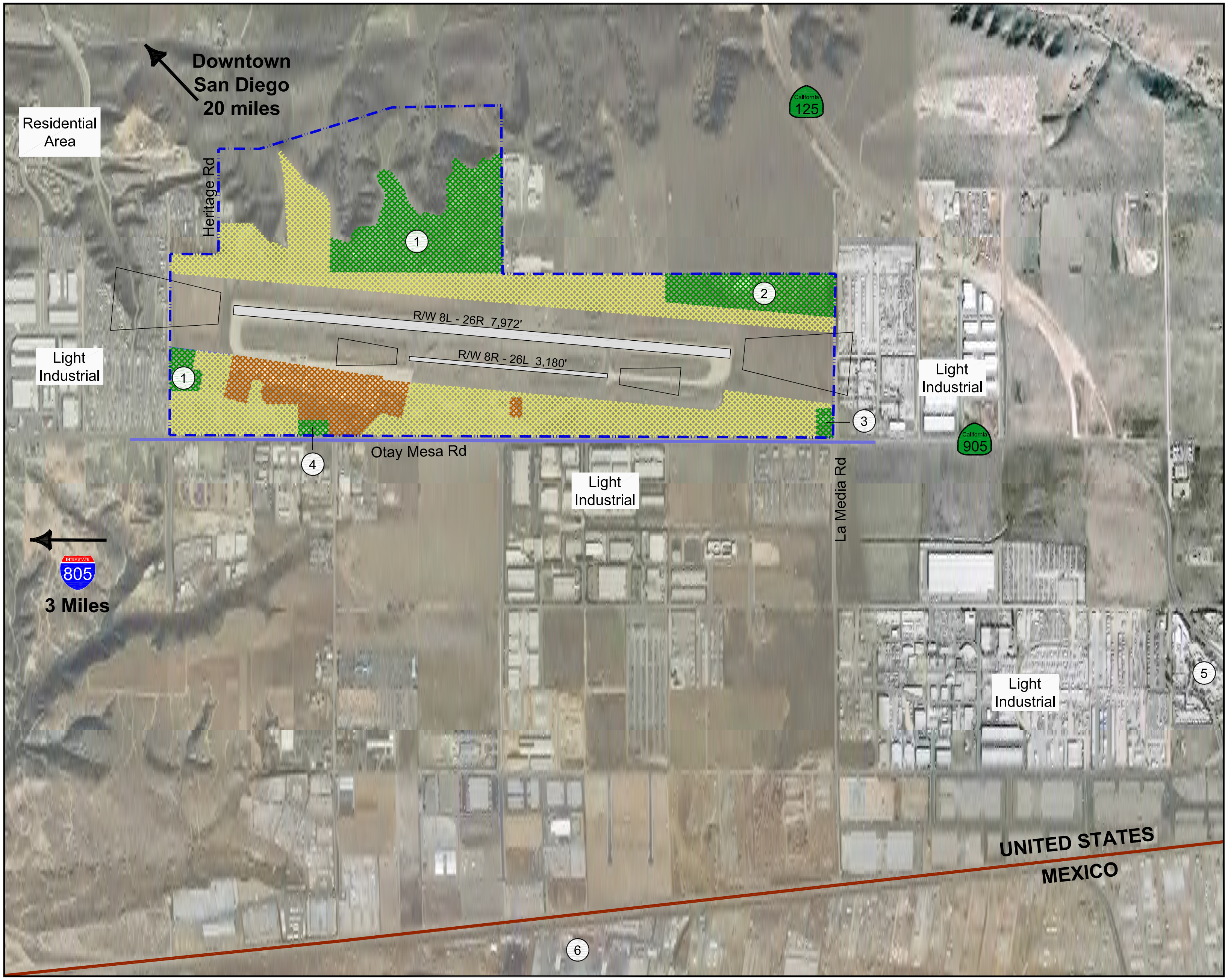


Figure 2-4

BROWN FIELD MUNICIPAL AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

JACOBS CONSULTANCY
Airport Management Consulting

Threats

- Residential areas to the west oppose airport expansion and have resisted prior airport development plans
- Airspace conflicts, including rising terrain and mountains to the east, San Diego International arrival path, and Mexican airspace could limit growth in activity

2.2.5 Gillespie Field

Gillespie Field, depicted on Figure 2-5, is one of four FAA-designated Reliever Airports to San Diego International. The airport is operated by the County of San Diego and is located between El Cajon and Santee, approximately 23 miles northeast of downtown San Diego. The airport primarily accommodates flight school activity (approximately 60% of total operations), recreational general aviation activity, and some limited corporate activity.

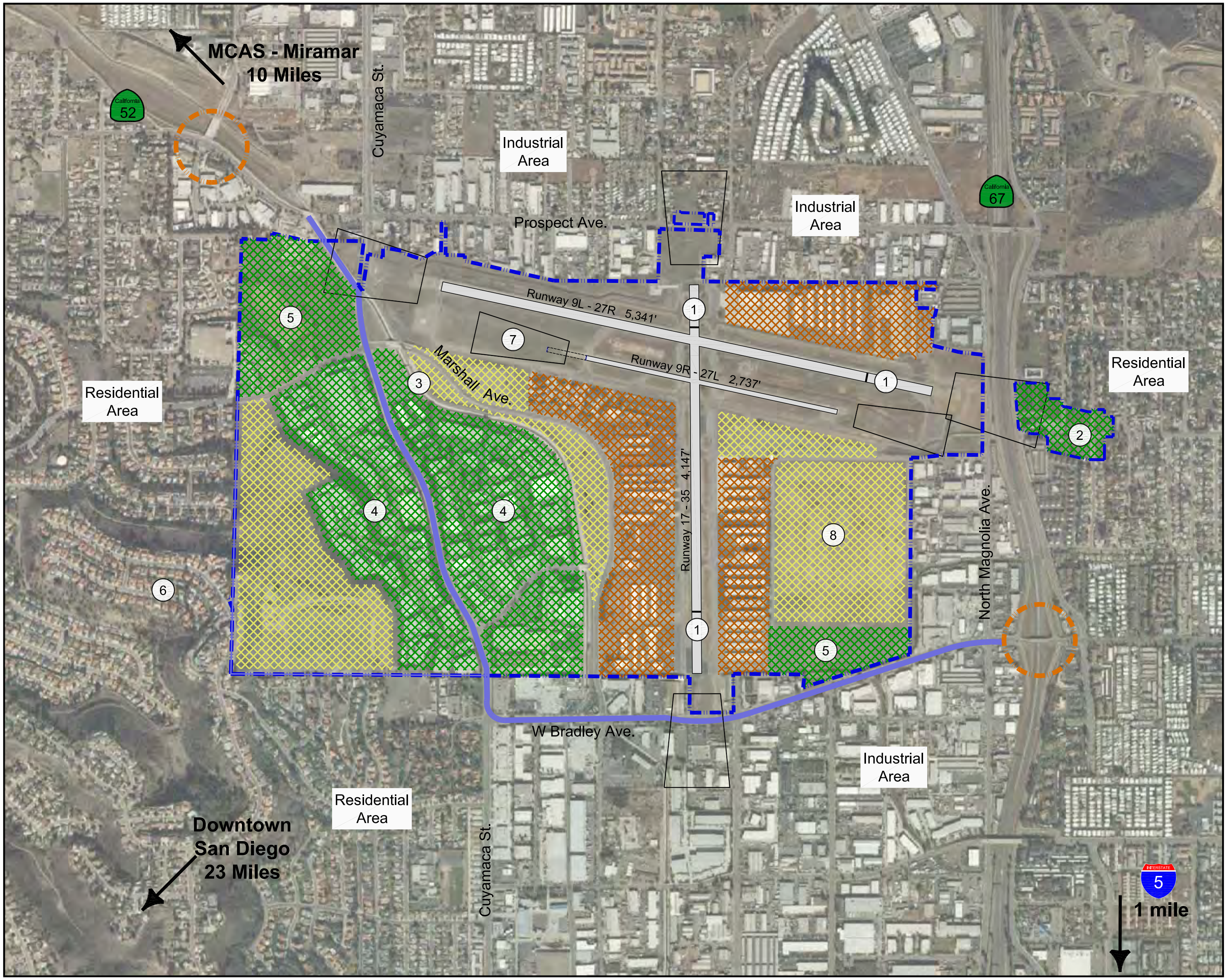
Strengths

- Substantial on-airport land available for development
- Orange and Green Trolley lines stop at Gillespie Field, providing convenient public transportation between the airport, downtown San Diego, and other locations
- Parallel runways allow segregation of training from other operations

Weaknesses – Instrument approach capabilities complicated by surrounding military (MCAS Miramar) airspace and terrain

Opportunities

- El Cajon Plaza, a planned near-term 70-acre development, will provide opportunity to expand the tenant base; proposal includes additional indoor storage hangars and tie-down leaseholds; substantial interest expressed in leasing space
- Potential intermodal public transit link on the west side (connecting with the existing MTS trolley stop) could improve regional access
- Completion of CA 52 extension and interchange with CA 67 will provide improved accessibility to the north side and ease congestion on surrounding roadways



LEGEND

- Airport property line
- RPZ
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES

- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS

1. Displaced thresholds resulting from RSA deficiencies and obstructions to approach
2. Tree farm
3. MTS Gillespie Field trolley station (Orange and Green lines)
4. Industrial park
5. Golf driving range
6. Fletcher Hills neighborhood
7. Planned 423' runway extension to accomodate 95% of small aircraft
8. El Cajon Plaza (future development)

SOURCES

1/ Aerial photograph – Google Earth, May 2009.
2/ *Gillespie Field ALP Update Narrative Report*, P&D Aviation, September 2005.
3/ AirNav.com.

NORTH

0' 500' 1000' 2000'

Scale: 1" = 1000'

Figure 2-5
GILLESPIE FIELD AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority

January 2011

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Threats

- Primary runway bordered by roads on both ends, increasing the cost of a potential runway extension

- Historical opposition from nearby residential areas primarily due to flight training activity; airport expansion and increases in based aircraft/operations may conflict with community redevelopment initiatives

2.2.6 Ramona Airport

Ramona, depicted on Figure 2-6, is one of four FAA-designated Reliever Airports to San Diego International. The airport is operated by the County of San Diego and is located approximately 36 miles northeast of downtown San Diego. The airport primarily accommodates recreational general aviation activity, although 75% of all activity is local flight training.

Strengths

- Strong on-airport general aviation tenant base
- California Department of Forestry (CDF) firefighting is a major anchor tenant
- Available on-airport land for development

Weaknesses

- Terrain to the east precludes implementation of an ILS to Runway 27
- Potential for airspace conflicts between turbo-jet departures from Runway 27 and operations at MCAS Miramar
- Not well connected to the San Diego surface transportation network

Opportunities

- Development of additional general aviation facilities (Ramona Air Center) currently under County of San Diego review; other smaller airport development opportunities exist

- Adjacent undeveloped land may be available for development

Threats

- Land immediately east of the Runway 27 and north of the airport is committed to low density residential uses, which could result in a physical barrier or community opposition to growth due to noise

- Potential development restricted by largest vernal pools in northern San Diego County located in the rare native grasslands supporting endangered spices surrounding the airport

LEGEND

- Airport property line
- RPZ
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES

- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS

1. Planned Ramona Air Center
2. Vernal pool mitigation area
3. Tree farm

SOURCES

1/ Aerial photograph – Google Earth, May 2009.
2/ *Fallbrook Community Airpark Airport Layout Plan*, P&D Aviation, December 2005.
3/ AirNav.com.

0' 500' 1000' 2000'
Scale: 1" = 1000'

Figure 2-6
RAMONA AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

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2.2.7 Oceanside Municipal Airport

Oceanside Municipal, depicted on Figure 2-7, is an FAA-designated Public-use General Aviation Airport. The airport is operated by the City of Oceanside and is located in the eastern section of the City of Oceanside, approximately 35 miles north of downtown San Diego. The airport primarily accommodates recreational general aviation activity.

Strengths

- Close proximity to North San Diego and Orange County market base
- Proximity to Interstate 5 and COASTER along State Highway 76

Weaknesses

- Runway length and pavement strength limit use to small general aviation aircraft weighting less than 12,000 pounds; some areas of the airfield are non-compliant with FAA design standards
- Airfield expansion constrained by a road and river to the west and commercial development to the east
- 2003 settlement with Citizens for a Better Oceanside (CBO) limits potential to expand tenant base

Opportunities

- Proposal for Airport Property Ventures (APV) to lease the airport site and develop FBO and additional aircraft parking, as well as provide FAA-required design criteria
- Leverage proximity of the COASTER for alternative airport access

Threats

- Camp Pendleton airspace may preclude future instrument operations or changes in airport operational patterns
- Community opposition to airport operations

LEGEND

- Airport property line
- RPZ
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES

- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS

1 Pond area

SOURCES

1/ Aerial Photo - Google Earth, May (2009).
2/ *Oceanside Municipal Airport Master Plan*, Heliplanners, Dec 1994.
3/ *Airport Land Use Compatibility Plan*, San Diego Regional Airport authority, Oct 4, 2004.

NORTH

0' 750' 1500' 3000'

Scale: 1" = 1500'

Figure 2-7
OCEANSIDE MUNICIPAL
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

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2.2.8 Fallbrook Community Airpark

Fallbrook Community, depicted on Figure 2-8, is an FAA-designated Public-use General Aviation Airport. The airport is operated by the County of San Diego and is located approximately 58 miles east-northeast of downtown San Diego. The airport primarily accommodates recreational general aviation activity.

Strengths – Located in proximity to North County and Orange County market base

Weaknesses

- Runway length and pavement strength limit use to small general aviation aircraft weighting less than 12,500 pounds
- Borders MCB Camp Pendleton, which prohibits unrestricted operations
- Poor airport access infrastructure

Opportunities

- Open space for potential expansion of airfield and aviation facilities is available on existing airport property
- Airport Master Plan, completed and approved by the County of San Diego Board of Supervisors, includes complete redevelopment of runway, taxiway, and related pavement areas

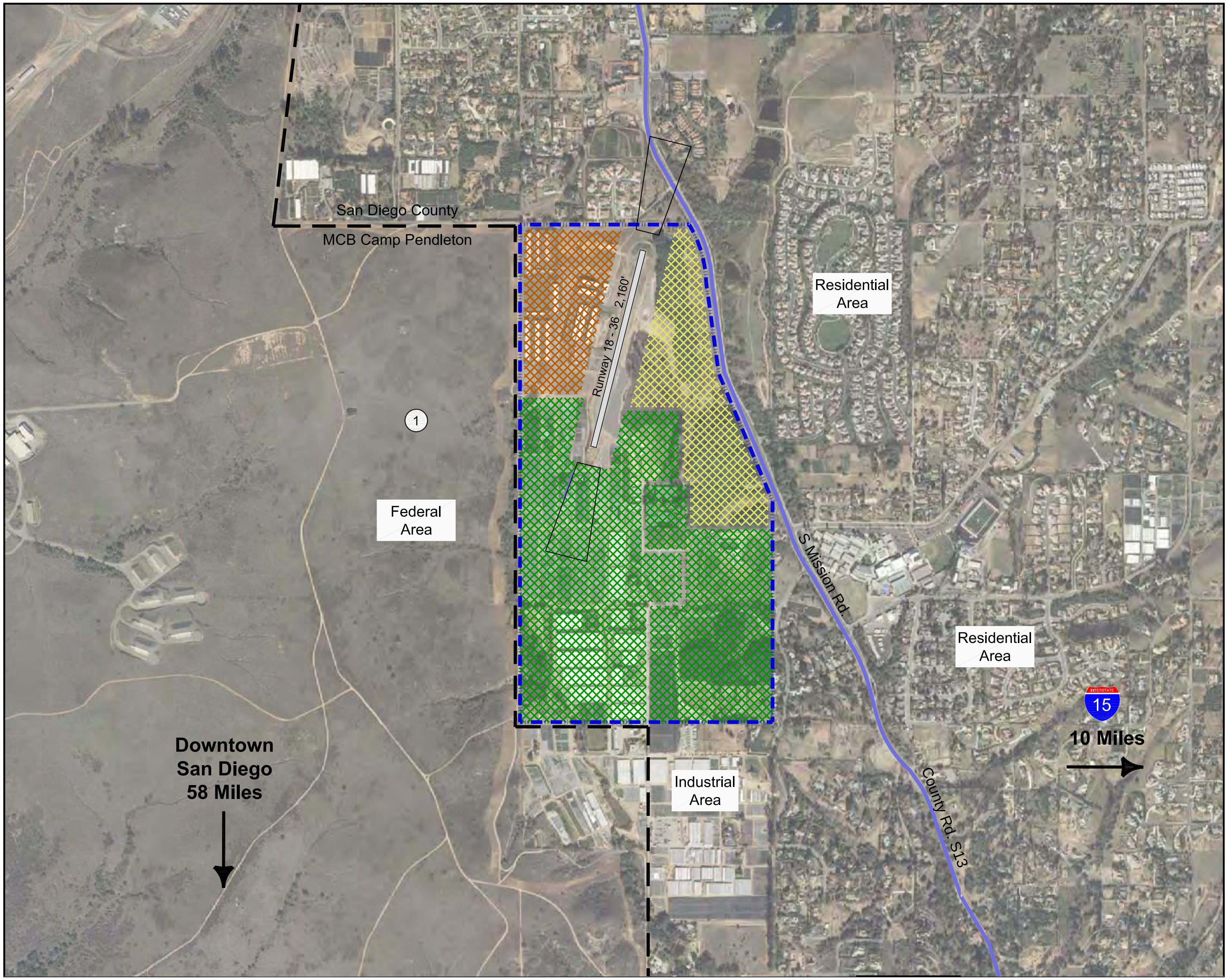
Threats – Camp Pendleton airspace may preclude future instrument operations or changes in airport operational patterns

2.2.9 Borrego Valley Airport

Borrego Valley, depicted on Figure 2-9, is a Limited-use General Aviation Airport. The airport is operated by the County of San Diego and is located approximately 90 miles northeast of downtown San Diego. The airport primarily accommodates recreational general aviation activity, and is the aviation gateway for tourists visiting Anza-Borrego Desert State Park.

Strengths

- Surrounded by vacant/airport-compatible land uses
- Location near the Anza-Borrego State Park attracts recreational general aviation activity to the airport



LEGEND

- Airport property line
- RPZ
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES

- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS

1 Marine Corps Base Camp Pendleton

SOURCES

1/ Aerial photograph – Google Earth, May 2009.
2/ *Fallbrook Community Airpark Airport Layout Plan*, P&D Aviation, December 2005.
3/ AirNav.com.

NORTH

0' 500' 1000' 2000'

Scale: 1" = 1000'

Figure 2-8
FALLBROOK COMMUNITY AIRPARK
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

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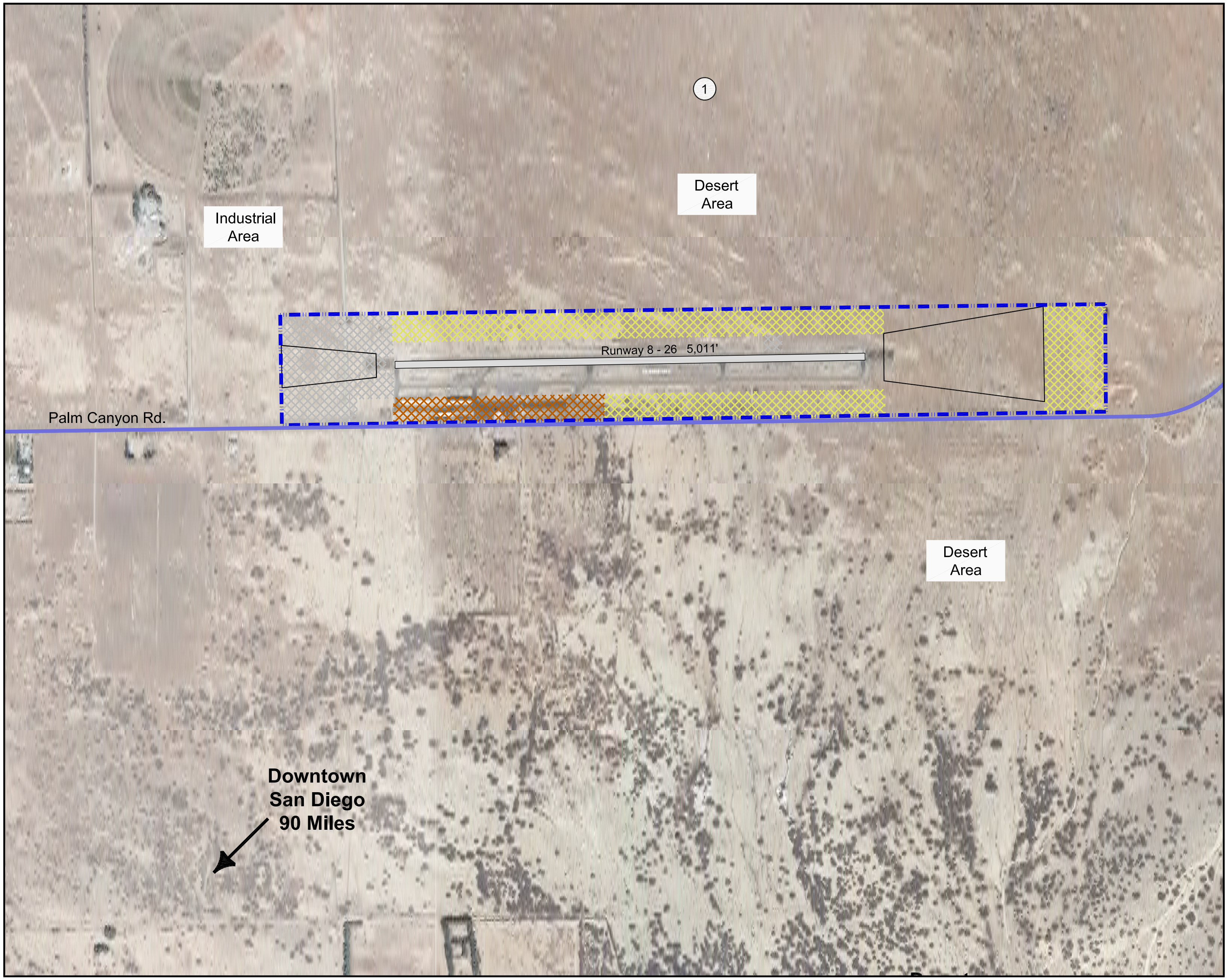

LEGEND

- Airport property line
- RPZ
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES

- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS

1 Proposed Solar Farm

SOURCES

1/ Aerial photograph – Google Earth, May 2009.
2/ *Borrego Valley Airport Layout Plan*, Wadell Engineering Co., June 2007.
3/ AirNav.com.

NORTH

0' 500' 1000' 2000'

Scale: 1" = 1000'

Figure 2-9
BORREGO VALLEY AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

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Weaknesses

- Lack of suitable on- and off-airport infrastructure
- Located within 100-year floodplain

Opportunities – Undeveloped desert land to the north, south and east for potential expansion

Threats – Remote location 90 miles (+ 2 hour drive) from downtown San Diego

2.2.10 Ocotillo Airport

Ocotillo, depicted on Figure 2-10, is a Limited-use General Aviation Airport. The airport is operated by the County of San Diego and is located approximately 65 miles east of downtown San Diego. The airport primarily accommodates recreational general aviation activity; there were 800 operations in 2007.

Strengths

- Surrounded by vacant/airport-compatible land
- Proximity to off-road vehicle park

Weaknesses

- Runway length and lack of paved surface restrict operations to small single-engine aircraft
- Lack of suitable infrastructure; runways are not paved and airport is unlighted

Opportunities – Undeveloped adjacent desert lands could facilitate expansion

Threats – Remote location 65 miles (+ 2 hour drive) from downtown San Diego

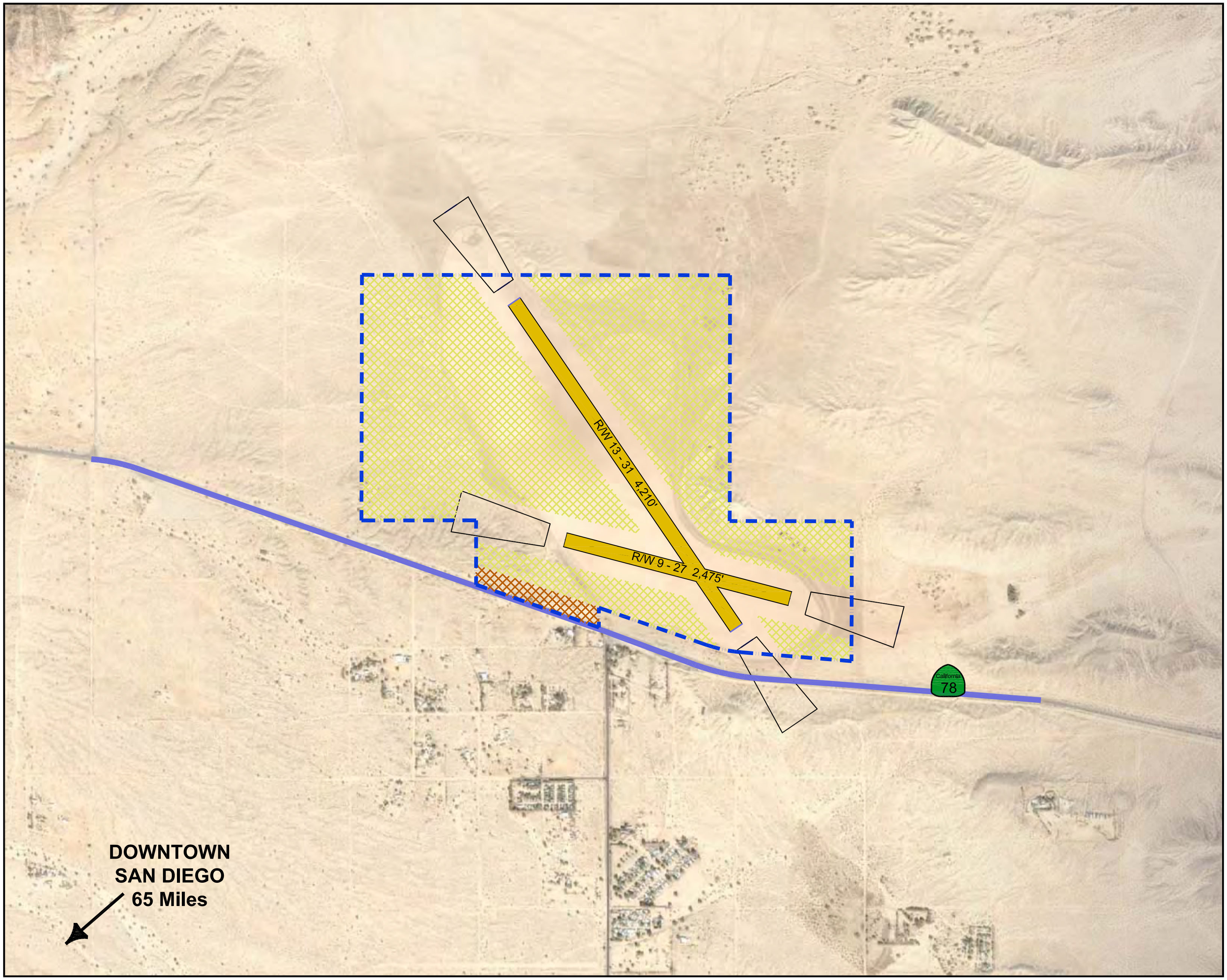
2.2.11 Agua Caliente Airport

Agua Caliente, depicted on Figure 2-11, is a Limited-use General Aviation Airport. The airport is operated by the County of San Diego and is located approximately 77 miles east of downtown San Diego. The airport primarily accommodates recreational general aviation activity; there were 800 operations in 2007.

Strengths – Surrounded by undeveloped land/parklands including Agua Caliente County Park (natural hot springs)

Weaknesses

- Runway length and pavement strength limit use to small general aviation aircraft
- Lack of suitable infrastructure; airport is unlighted and has no aircraft hangar or tie-down facilities, and no FBO
- Surrounded by state-owned parkland with high terrain



LEGEND

- Airport property line
- RPZ
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES

- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS

SOURCES

1/ Aerial Photo - Google Earth, May (2009).
2/ *Ocotillo Airport Land Use Compatibility Plan*, Mead & Hunt, December 2006.

NORTH

0' 500' 1,000' 2,000'

Scale: 1" = 1,000'

Figure 2-10
OCOTILLO AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

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San Diego County Regional Airport Authority
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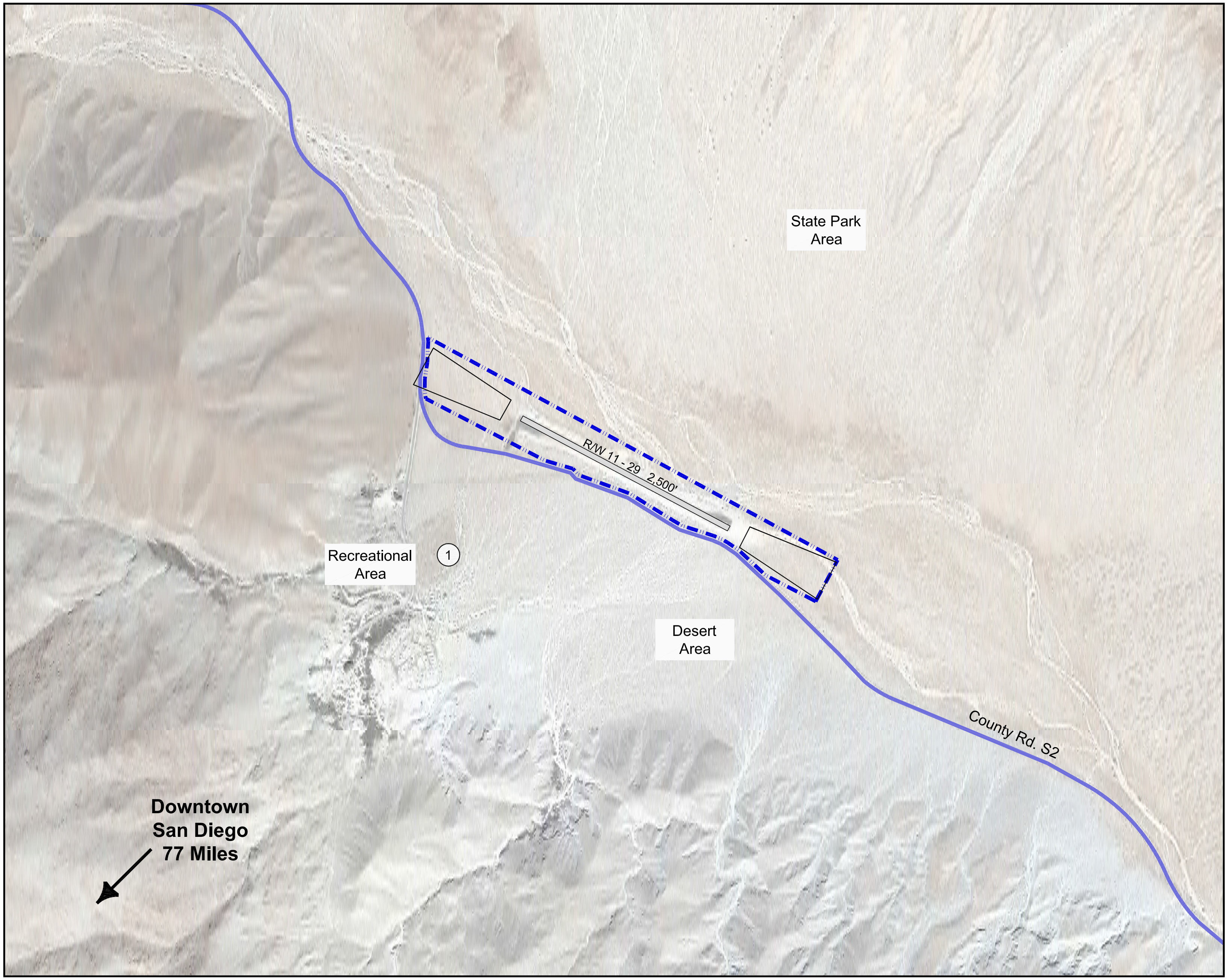

LEGEND
- Airport property line
- RPZ
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES
- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS
1 Agua Caliente County Park

SOURCES
1/ Aerial photograph – Google Earth, May 2009.
2/ *Airport Land Use Compatibility Plan*, San Diego Regional Airport Authority, October 2004.
3/ AirNav.com.

NORTH
0' 500' 1000' 2000'
Scale: 1" = 1000'

Figure 2-11
AGUA CALIENTE AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

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Opportunities – Adjacent undeveloped desert land for potential expansion

Threats

- Remote location 77 miles (+ 1.5 hour drive) from downtown San Diego
- Lease agreement stipulates airport property may not be subleased or developed for more than what is needed for operation of the landing strip

2.2.12 Jacumba Airport

Jacumba, depicted on Figure 2-12, is a Limited-use General Aviation Airport. The airport is operated by the County of San Diego and is located approximately 74 miles east-southeast of downtown San Diego. The airport is primarily used as a glider/sailplane facility; there were 325 operations in 2007.

Strengths – Surrounded by vacant/airport-compatible land

Weaknesses

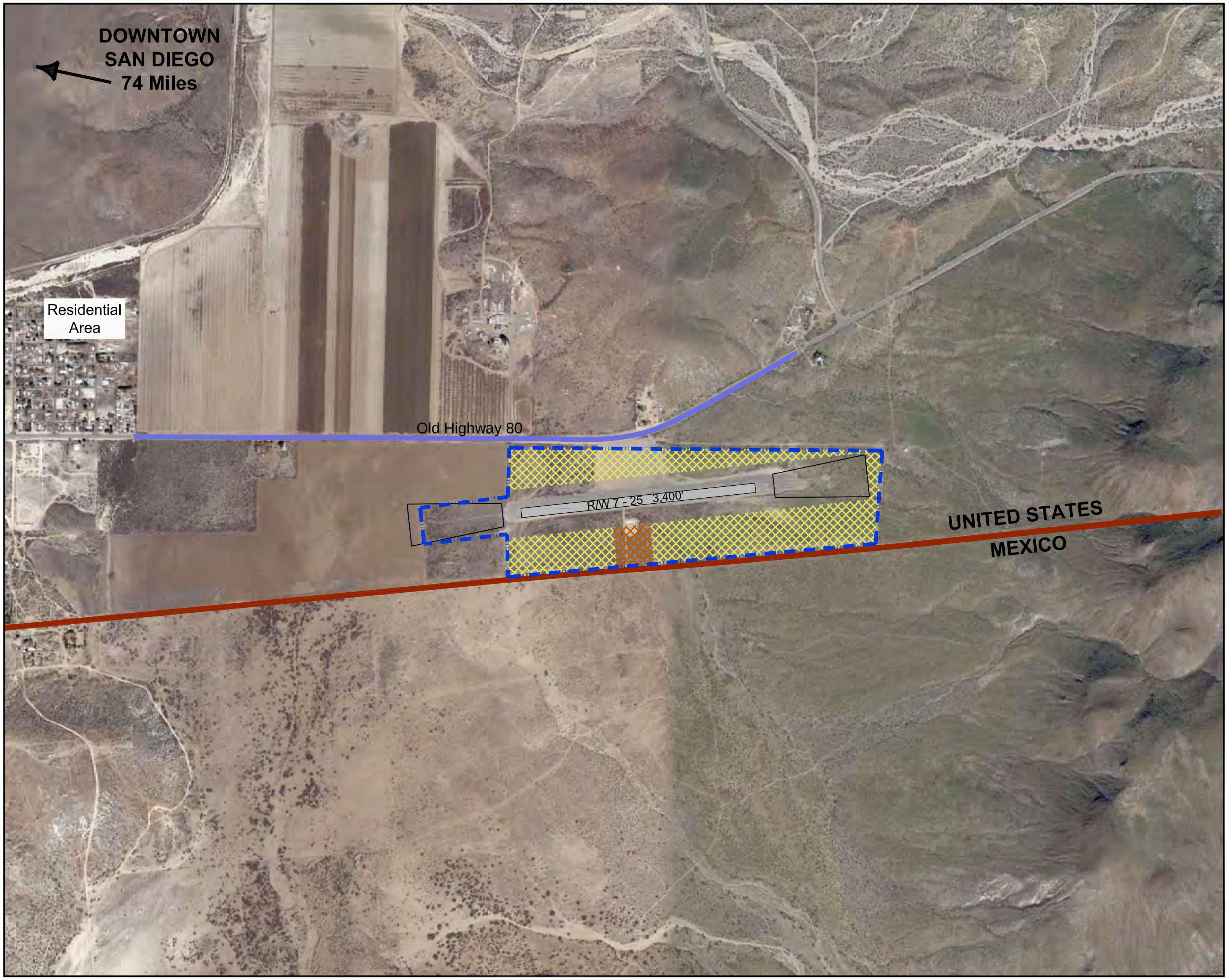
- Runway length and gravel surface restrict operations to small single-engine aircraft
- Lack of suitable infrastructure; airport is unlighted

Opportunities – Adjacent undeveloped desert lands for potential expansion

Threats – Remote location 74 miles (+ 1.5 hour drive) from downtown San Diego

2.2.13 Tijuana Rodriguez International Airport

Tijuana Rodriguez International, depicted on Figure 2-13, is located 20 miles south of downtown San Diego in Tijuana, Mexico, immediately south and adjacent to the Mexico-U.S. border. The airport is operated by the GAP. The airport provides non-stop service to over 26 destinations in Mexico, international service to Asia and Cuba, and is a gateway to many Mexican tourism destinations. Service is provided by 10 carriers including four low cost carriers. However, there has been no U.S. carrier service since Delta ceased operating service to LAX in 2007.



LEGEND

- Airport property line
- RPZ
- International border
- Primary airport access road
- Primary highway access

GENERALIZED LAND USES

- Commercial
- Non-aviation
- Open/Reserve
- Environmentally sensitive
- General aviation
- Air cargo

REMARKS

SOURCES

1/ Aerial Photo - Google Earth, May (2009).
2/ *Jacumba Airport Land Use Compatibility Plan,* Mead & Hunt, December 2006.

NORTH

0' 500' 1,000' 2,000'

Scale: 1" = 1,000'

Figure 2-12
JACUMBA AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES

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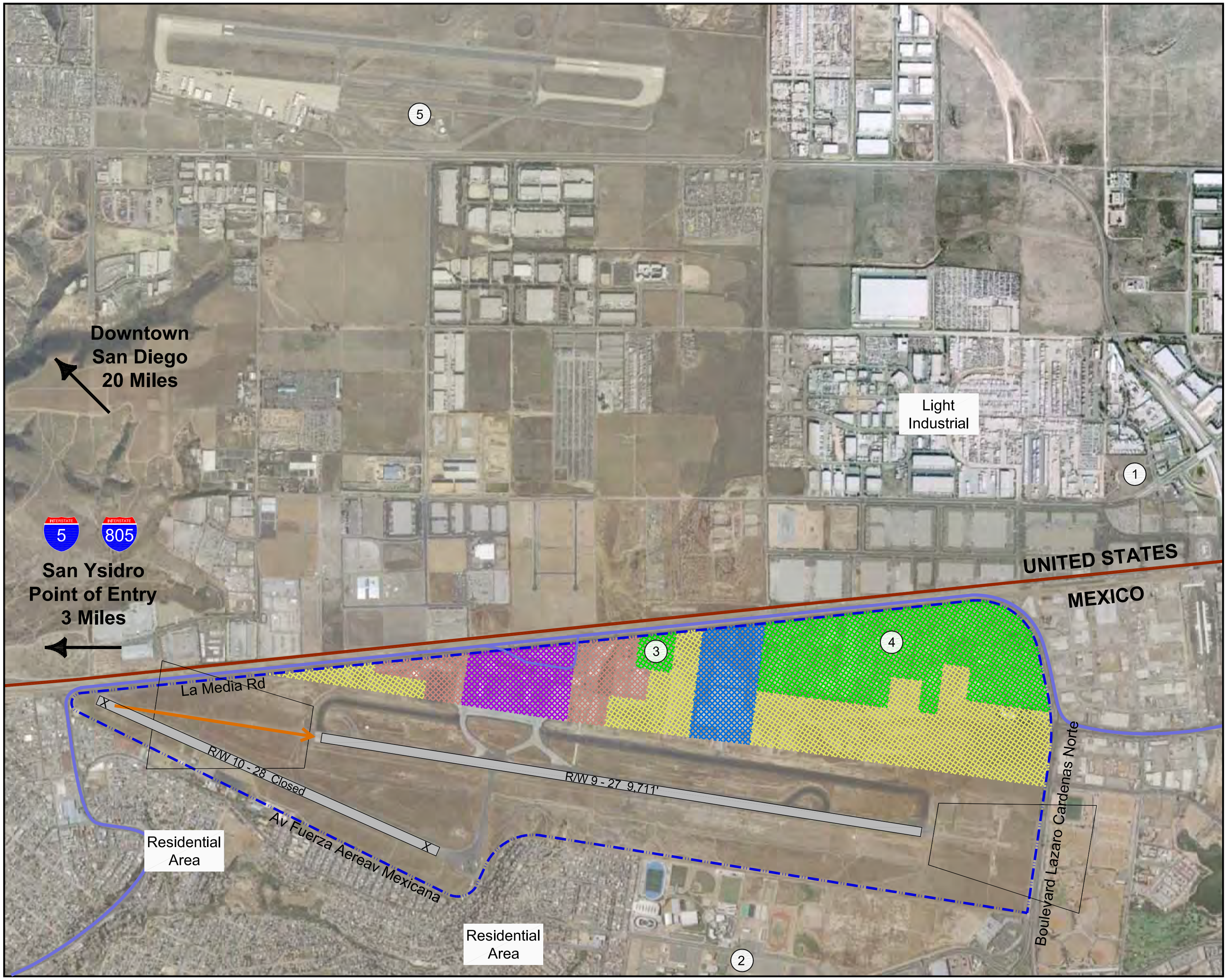

LEGEND
Airport property line
RPZ
International border
Primary airport access road
Primary highway access

GENERALIZED LAND USES
Commercial
Non-aviation
Open/Reserve
Environmentally sensitive
General aviation
Air cargo

REMARKS
1 Otay Mesa Point of Entry
2 La Universidad de Tijuana
3 Recreational field
4 Truck/trailer storage/staging
5 Brown Field Municipal Airport

SOURCES
1/ Aerial photograph – Google Earth, April 2009.
2/ *Cross Border Terminal Market Demand Study*, Infrastructure Management Group, 2006.

NORTH
0' 750' 1500' 3000'
Scale: 1" = 1500'

Figure 2-13
TIJUANA RODRIGUEZ INTERNATIONAL AIRPORT
AIRPORT FACILITIES AND EXISTING LAND USES
Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

JACOBS CONSULTANCY
Airport Management Consulting

Strengths

- Close proximity to large passenger base, including the city of Tijuana, which is Mexico's 3rd largest city; border access via the Blue Line Trolley which connects to downtown San Diego
- Direct service to multiple Mexican destinations at competitive fares attract Mexican and U.S. passengers
- No existing airfield delays or congestion; demand is less than 60% of the estimated airfield capacity
- Sufficient on-airport land for construction of additional facilities; only 30% of available land is already developed

Weaknesses

- Congested and outdated passenger terminal facilities; international facilities inadequate and require major upgrades to satisfy standard international requirements; existing automobile parking demand exceeds capacity
- Language, cultural barriers, and safety concerns deter some U.S. travelers

Opportunities

- U.S. passenger use of the airport is forecast to grow significantly over the next 20 years; potential cross border facility concept could provide a more attractive alternative and further increase activity
- Additional commercial service opportunities as San Diego International nears capacity
- Located in the rapidly developing Otay Mesa area which offers manufacturing, storage, and inexpensive labor; "border economy" projected to continue to flourish
- Improvements to CA 125 and CA 905 will increase regional surface transportation access to the airport

Threats

- International border processing hinders efficient passenger operations and level of service; U.S. passengers may wait in excess of two hours to cross the border
- U.S. perceptions that Mexico is unsafe

2.3 KEY FINDINGS AND RECOMMENDATIONS

Based on the findings of the Strategic Assessment, each system airport was categorized into one of the following three categories:

- **Airports That *Should* Be Considered For Additional Uses/Opportunities** – Defined as airports that are in proximity to the demand base, possess adequate, or potentially adequate, facilities, and have sufficient land area or infrastructure for development opportunities. These airports include McClellan-Palomar, Gillespie Field, and Brown Field.

- **Airports That *May Be* Considered For Additional Uses/Opportunities** – Defined as airports that possess the same characteristics as the group above, but also have significant physical or environmental barriers to future development, thereby prohibiting their potential future use. These airports include San Diego International, Tijuana-Rodriguez International, Montgomery Field, and Ramona.

- **Airports That *Should Not Be* Considered For Additional Uses/Opportunities** – Defined as airports that are too far from the demand base, lack sufficient infrastructure or facilities, include community opposition, and/or lack available land for development. These airports include Oceanside, Fallbrook and the four smaller general aviation airports located in the eastern section of the County.

Figure 2-14 summarizes the key Strategic Assessment findings.

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Figure 2-14

STRATEGIC ASSESSMENT FINDINGS

Regional Aviation Strategic Plan

	Commercial Service		FAA Designated Reliever				General Aviation			Not in FAA NPIAS			
	San Diego International SAN	McClellan-Palomar CRQ	Montgomery Field MYF	Brown Field Municipal SDM	Gillespie Field SEE	Ramona RNM	Oceanside Municipal OKB	Fallbrook Community L18	Borrego Valley L08	Ocotillo L90	Agua Caliente L54	Jacumba L78	Tijuana-Rodriguez TIJ
Current Market/Role													
Ownership/Control	San Diego Regional Airport Authority	San Diego County	City of San Diego	City of San Diego	San Diego County	San Diego County	City of Oceanside	San Diego County	San Diego County	San Diego County	San Diego County	San Diego County	U.S./Mexico partnership
GA - Small/Recreational and Training	—	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—
GA - Large/Corporate Jet and Air Taxi	✓	✓	✓	✓	✓	✓	—	—	—	—	—	—	✓
Air Carrier - Commuter	✓	✓	—	—	—	—	—	—	—	—	—	—	✓
Air Carrier - Mainline	✓	—	—	—	—	—	—	—	—	—	—	—	✓
Air Cargo	✓	—	✓	—	—	—	—	—	—	—	—	—	✓

Facility Assessment/Accommodation of Current Users	SAN	CRQ	MYF	SDM	SEE	RNM	OKB	L18	L08	L90	L54	L78	TIJ
Primary Regional Access	1.5 mi from I-5	2 mi from I-5	2 mi from CA 163	3 mi from I-805	1 mi from CA 67	20 mi from I-15	2 mi from I-15	10 mi from I-15	14 mi from CA 78	<1 mi from CA 78	37 mi from I-8	2 mi from I-8	3 mi from I-5
Airfield - Runway Length	9,401' Paved	4,897' Paved	4,577' Paved 3,400' Paved	7,972' Paved 3,180' Paved	5,341' Paved 4,147' Paved	5,000' Paved	2,712' Paved	2,160' Paved	5,011' Paved	4,210' Dirt 2,475 Dirt	2,500' Paved	2,510' Gravel	9,711' Paved
Instrument Approach	R/W 9: ILS/CAT I, R/W 27R Localizer	R/W 24: ILS/CAT I	R/W 28R: ILS/CAT I	Non precision	Non precision	Non precision	GPS	Non precision	GPS	None	None	None	R/W 9 ILS/CAT I; R/W 27R Localizer
Passenger Terminal Building	41 gates; 18M annual passengers	New terminal w/ 4 gates; 50K annual passengers	None	None	None	None	None	None	None	None	None	None	16 gates; 4M annual passengers
FBO/Corporate Terminal	Existing	Modern	Existing	Planned	Existing	Existing	None	Existing	Existing	None	None	None	Existing
Cargo Facilities	Existing	None	Limited	None	None	None	None	None	None	None	None	None	Existing

Possible Change In Role?

Possible Change In Role?

Development Potential	SAN	CRQ	MYF	SDM	SEE	RNM	OKB	L18	L08	L90	L54	L78	TIJ
Proximity to Users/Market Base *(a)*	3 mi from downtown San Diego	32 mi from downtown San Diego	8 mi from downtown San Diego	20 mi from downtown San Diego	23 mi from downtown San Diego	36 mi from downtown San Diego	40 mi from downtown San Diego	56 mi from downtown San Diego	90 mi from downtown San Diego	95 mi from downtown San Diego	75 mi from downtown San Diego	74 mi from downtown San Diego	25 mi from downtown San Diego
Runway Upgrade	Physical constraints	Runway extension to 6,000' possible	Physical and environmental constraints	On- and off-airport land available	Physical constraints	Environmental constraints	Physical constraints	On-Airport land available	Off-Airport land available	Off-Airport land available	Off-Airport land available	Off-Airport land available	Land available
On-Airport Land Available for Development	40 acres	Terminal upgrade possible; 10 acres	17 acres	257 acres	191 acres	130 acres	17 acres	45 acres	70 acres	238 acres	N/A	56 acres	166 acres
Proximity to Highway/Mass Transit	Close to I-5; bus service	Close to I-5; bus service	Close to I-805 and I-15; bus service	Close to I-805 and I-5, CA 905 ext. planned	CA 52 extension; link to 2 trolley lines	Planned improvements	Close to I-5; bus service	Access difficult; no mass transit	Access difficult; no mass transit	Access difficult; no mass transit	Access difficult; no mass transit	Access difficult; no mass transit	CA 905 extension; bus service
Environmental Concerns/On-Airport	Some contaminated sites; habitat protection	Environmental contamination	Vernal pools, habitat protection	Vernal pools, habitat protection	No known	Extensive vernal pools	No known	No known	100-year floodplain on pg. 2-20	No known	No known	No known	Unknown
Community Concerns	Noise and traffic congestion	Potential noise and development	Aircraft noise	Aircraft noise	Noise and community redevelopment	Potential future residential development	See "Citizens for better oceanside" on pg. 2-15	No known	No known	No known	No known	No known	Social and inter-governmental issues

Summary

Summary

Consideration in the RASP	SAN	CRQ	MYF	SDM	SEE	RNM	OKB	L18	L08	L90	L54	L78	TIJ
Should the airport be considered for additional uses/opportunities to optimize the region's aviation system?	Consideration for additional uses/opportunities not expected; *Destination Lindbergh* established that SAN will reach capacity before 2030	Consideration for additional uses/opportunities should be considered in the RASP because of existing FAA certifications, proximity to population base, terminal infrastructure, and potential for runway extension	Consideration for additional uses/opportunities may be considered in the RASP because of proximity to population base and availability of land for passenger and cargo activity; physical and environmental barriers to runway extension/upgrade may prohibit accomodation of new user groups	Consideration for additional uses/opportunities should be considered in the RASP because of proximity to population base, existing runway length, and availability of developable land for terminal or cargo facilities	Consideration for additional uses/opportunities should be considered in the RASP because of proximity to population base, access to light rail, and availability of developable land to accommodate new user groups	Consideration for additional uses/opportunities may be considered in the RASP because of proximity to existing facilities, projected population growth, and planned roadway improvements; potential environmental constraints may restrict development	Consideration for additional uses/opportunities should not be considered in the RASP because of lack of infrastructure, community opposition, and limited available land for development; significant constraints to runway extension	Consideration for additional uses/opportunities should not be considered in the RASP based on remote location, access, and potential development costs	Consideration for additional uses/opportunities should not be considered in the RASP based on remote location, access, and potential development costs	Consideration for additional uses/opportunities should not be considered in the RASP based on remote location, poor access, and potential development costs	Consideration for additional uses/opportunities should not be considered in the RASP based on remote location, poor access, and potential development costs	Consideration for additional uses/opportunities should not be considered in the RASP based on remote location, poor access, and potential development costs	Consideration for additional uses/opportunities may be considered in the RASP because of proximity to population base and existing infrastructure; intergovernmental agreement required for cross border operation

(a) Proximity to downtown San Diego used as criterion in this matrix.
Note: NPIAS = National Plan of Integrated Airport Systems

LEGEND Compatible Marginal Incompatible

Chapter 3

AIRPORT SYSTEM OPTIMIZATION

This chapter presents the numerous factors that affect aviation and surface capacity and the wide range of Airport System optimization options that were considered in consultation with the RASP Subcommittee and other stakeholders during the completion of the RASP.

3.1 FACTORS AFFECTING AVIATION AND SURFACE CAPACITY

The following summarizes the various factors that affect aviation and surface capacity, and influence the evaluation and selection of optimization options considered.

3.1.1 Funding, Policy, and Political Factors

The following summarizes relevant funding, policy, and political factors that affect aviation and surface capacity. Because of a dynamic political and economic environment, there is a great deal of uncertainty about long-term federal policies and funding programs for transportation.

- **FAA Authorization (Aviation Programs).** Since the previous multi-year authorization expired on September 30, 2007, Congress has passed a series of short-term authorization extensions. However, there is no estimate as to when a multi-year bill will be enacted. When a new multi-year authorization is passed, airports are likely to continue to receive approximately the same amount of formula-based Airport Improvement Program (AIP) funding. It is unclear whether or not airports will receive a Passenger Facility Charge (PFC) increase from the current ceiling of $4.50 (if they do, the ceiling is likely to be between $5.50 and $6.00). A marginal increase in discretionary AIP funds is also possible for significant capacity-enhancing projects.

- **Surface Transportation Authorization (Highways and Transit).** Since the previous multi-year authorization expired on September 30, 2009, Congress has passed a series of short-term authorization extensions (continuing existing authorities). However, there is no estimate as to when a new multi-year bill will be enacted. Due to limitations on the Highway Trust Fund, highway and public transportation programs are unlikely to see significant increases. It is also unclear whether or not the Obama Administration's initiatives to increase funding for multimodal discretionary projects will be incorporated in a future multi-year authorization.

- **FAA Regulatory Policy.** The FAA's Policy on Airport Rates and Charges, governing aeronautical charges to airport users, was recently modified to provide greater rate-setting flexibility to airports deemed by the FAA as congested. This could provide the Authority with an enhanced ability to promote more efficient use of its capacity-constrained airside infrastructure, including incentivizing some existing and future users to take advantage of alternative system airports.

- **U.S. Department of Transportation/FAA Congestion Management.** The U.S. Department of Transportation (USDOT), working with the FAA, has aggressively regulated airports that have become congested and cause delays that impact the National Airspace System. As San Diego International nears capacity within the RASP forecast period, the risk of delays and federal action increase significantly. Actions by USDOT and the FAA could potentially include federal slot controls, which could effectively address delays, but would result in some loss of the Authority's control over the airport. Measures identified in the RASP to accommodate demand offer the potential to delay federal congestion management policies.

- **USDOT/Federal Railroad Administration/Amtrak Rail Policies.** The USDOT and the Federal Railroad Administration (FRA) have sought to aggressively expand the nation's passenger rail system over the last two years. Incremental improvements to the nation's public railroad (Amtrak) and new investments in high speed rail (with tracks dedicated to passenger trains) and higher speed rail (running on shared freight-passenger tracks) have been made as part of the Economic Recovery And Reinvestment Act stimulus program and as part of the rail authorization. Dedicated, multi-year funding for rail improvements, however, has not been identified.

- **Community and Political Views.** Notwithstanding forecasts that highlight a mismatch between future aviation demand and available capacity at San Diego International, there is no public or political consensus in the Study Area that San Diego International in fact will reach its capacity. Many political entities solidified their "capacity" positions regarding the accommodation of long-term aviation demand during the Airport site selection process which concluded in 2006. Their views appear to be driven by strong local concerns about the environmental effects associated with increases in aviation activity and the impacts of infrastructure improvements that would increase capacity to accommodate future demand. Accordingly, measures to address the issue in the Airport System must take into account community views as well as any local political commitments.

3.1.2 Surface, Rail, and Cross Border Initiatives

The following summarizes relevant surface and rail initiatives that will affect aviation and surface transportation capacity and services in the RASP.

- **SANDAG Regional Transportation Plan**. The 2030 Regional Transportation Plan (RTP) provides a regional and integrated surface transportation plan for freeways, roads, and transit. It is the product of collaboration between

SANDAG, the County of San Diego, the County's 18 cities, and a number of regional transportation partners. It serves as the basis for investing in infrastructure from regional, state, and federal sources and prioritizes projects so the plan may be implemented according to the level of funding and changes in transportation needs over the period. Specific projects, such as improved access to San Diego International from I-5 and upgrades to roadways serving San Diego International's air cargo areas, are integral elements of the RTP.

- **California High Speed Rail (HSR)**. The state's largest infrastructure project offers the potential for a new intrastate, intercity mode of transportation. Current planning has the Los Angeles to San Francisco segment (Phase 1) opening in approximately 2019 and the Los Angeles to San Diego segment (Phase 2) opening around 2027. For capacity constrained airports across California, HSR offers the possibility of diverting a significant portion of intrastate point-to-point air traffic to rail, thereby freeing up capacity for long-haul, premium traffic at the larger metropolitan airports and alleviating capacity pressures at congested airports for an additional period of time. For Phase 2, the HSR alignments in Southern California, including Ontario International Airport and a still to be determined location in San Diego (the exact alignment will be identified in 2011), offer the potential to help accommodate intrastate, intercity demand beginning late in the 2020s. The California HSR Authority still faces the significant challenge of developing a funding plan for the full build-out of HSR.

- **Los Angeles to San Diego Rail Improvements**. The LOSSAN Corridor (Los Angeles to San Diego, also running north to San Luis Obispo) is a heavily traveled passenger rail corridor operated by Amtrak, offering a convenient link to San Diego from north San Diego County and south Orange County. The State of California, the federal government, Amtrak, and local agencies have contributed to upgrades in the corridor which will continue to improve the level of service in the coming years. Existing planning would connect the LOSSAN Corridor to a future San Diego International Intermodal Transportation Center.

- **Cross-Border (Tijuana) Initiatives**. Tijuana Rodriguez International may have substantial impacts on the RASP and may provide potential system solutions, but will be highly dependent on U.S.-Mexican economic conditions, especially in the Southern California region; convenience of the border-crossing process; and fare differentials between U.S. and Mexican airlines.

3.2 SYSTEM OPTIMIZATION STRATEGIES

The following summarizes the range of Airport System optimization options considered in consultation with the RASP Subcommittee and other stakeholders.

3.2.1 Change in Airport Capability and/or Capacity

The following summarizes potential changes in airport capability or capacity that were considered in the RASP. Considering the County's multiple airports, such actions offer the potential to optimize the Airport System by shifting traffic among the various facilities.

- **Runway Upgrade or Extension**. Increase runway lengths to accommodate larger aircraft types or serve more distant markets; or enhance runway capabilities (FAA design criteria, pavement strength, etc.) to accommodate larger/heavier aircraft types.

- **Passenger Terminal or Cargo Facility Development**. Enhance existing or construct new passenger terminal or air cargo facilities to accommodate higher levels of demand or accommodate new commercial activity.

- **General Aviation Facility Development**. Construct general aviation facilities to accommodate additional based aircraft and/or itinerant demand; upgrade facilities (enhance apron pavement strengths, high-end fixed base operator, etc.) to attract and accommodate additional user types.

- **On-Airport Access Improvements**. Enhance access roadways and parking facilities to accommodate higher levels of passenger, employee, and cargo demand; construct new roadways and parking facilities to accommodate intended users and development programs.

3.2.2 Change in Airport User or Market Served

Since all system airports can accommodate at least a portion of the general aviation fleet, and the majority are capable of accommodating corporate aviation, measures considered in this category focus on constructing facilities and implementing operating procedures to accommodate new or additional commercial passenger or air cargo activity (policies under FAR Part 139).

For candidate airports, changes required to change an airport's user base/market include: (1) facility construction to meet FAA design standards, (2) policy and operational requirements (e.g., security) to meet FAR Part 139 requirements, and (3) increases in operations and maintenance (O&M) costs. Community and political opinions were also considered.

With regard to the Airport System, Montgomery Field and Gillespie Field would require substantial airfield improvements to accommodate commercial passenger aircraft, such as regional jets. Montgomery has appropriate runway and taxiway separations, but may require relocation of other facilities. Brown Field has the necessary design standards in place, but the runway would need to be reconstructed and strengthened to accommodate all commercial service. In addition, there is considerable community opposition to initiating commercial service at Brown Field.

In most cases, however, this option was deemed infeasible due to cost considerations. Based on rough order of magnitude cost estimates for Brown Field and Montgomery Field, the cost to receive an FAR Part 139 operating certificate from FAA ranges between $20-30 million, primarily for upgrades to airport layout and design standards and facility construction (i.e., security equipment, aircraft rescue, fire fighting, etc.). In addition, approximately $1.0 million would be required annually for increased staffing and O&M costs.

3.2.3 Change in Airport Fleet Mix

Potential changes to the types of aircraft that may operate from San Diego International were suggested as a potential optimization option. Such measures hypothetically would be implemented by a specific policy call to shift to larger capacity aircraft to maximize the efficiency of the airfield and better accommodate long-term passenger demand. However, there are numerous restrictions and complications associated with such a policy, as summarized below:

First, when providing airport funding grants, FAA requires assurances from airport sponsors that limit the sponsor's ability to discriminate against any aircraft, whether they are small commercial service or general aviation aircraft. Therefore, a sponsor cannot dictate the type of aircraft its users operate from the facility. If an airport accepts federal grants, it must accept all and any type of aircraft that wants to operate from the facility (the only exceptions are governed by a federal slot regime).

Second, San Diego International's existing fleet mix is already favorable as the airport has a relatively low proportion of regional jets and turboprops. The airport's largest carrier is Southwest Airlines which flies narrow-body aircraft (i.e., B737). While air carriers can and do fly aircraft with greater capacities from San Diego International (e.g., B757, B767, and B777), the likelihood is that given the size of the markets served, air carriers are unlikely to shift a large proportion of their fleets to wide-body aircraft, especially Southwest, which does not fly larger aircraft. In addition, while average seat capacity has increased in some markets as air carriers have shifted from small 30- and 50-seat regional jets to 70- and 90- seat aircraft, that is unlikely to be widespread at San Diego International due to the fact that a large number of 30- and 50- seat aircraft are used to connect to Los Angeles International Airport (LAX). Frequent service from San Diego, which is necessary to support connecting traffic at LAX, serves to keep the average aircraft size down.

3.2.4 Federal, State, and/or Local Aviation Initiatives

The following summarizes potential Federal, state, and/or local aviation-based initiatives considered in the RASP.

- **Congestion Management (Locally Initiated)**. This strategy is intended to promote more efficient use of existing aviation facilities (airfield or landside) through changes in aeronautical and non-aeronautical rate setting. Such strategies are heavily circumscribed by federal law, FAA regulations, and policy.

- **Airport Rates/Charges by User Type**. In 2008, the FAA clarified its airport rates and charges policy in several areas, including explicitly permitting airport operators to enact a two-part landing fee structure consisting of both an operation charge and a weight-based charge. Such a policy would proportionally reduce the charges on higher-capacity aircraft and raise the charges on smaller-capacity aircraft. Implementation of a two-part landing fee could potentially encourage more flights in larger aircraft and greater passenger throughput. Airports seeking to implement a two-part landing fee would have to conduct an airfield cost allocation study and consult with users prior to its implementation.

- **Traffic to Other Airports**. A strategy of inducing traffic (primarily general aviation traffic) from San Diego International to other system airports could be implemented through a "push" strategy – raising fees (landing fees, leasing costs, etc.) at San Diego International and/or a "pull" strategy – lowering fees at San Diego International's reliever airports and improving facilities at alternative airports. These measures, in combination with facility improvements to meet FAR Part 139 requirements, could also result in a shifting of commuter operations (using smaller aircraft) to alternative airports. Options available under FAA rules to multi-airport systems, such as that of the Metropolitan Airport Commission in Minneapolis-St. Paul (which operates six reliever airports in additional to a large-hub commercial service airport), to explicitly subsidize reliever airports are unavailable in San Diego where governance authority over airports is divided.

- **Slot Control (Federal Management)**. Federal slot controls are imposed by USDOT and the FAA where airport delays become severe and impact an airport, regional air traffic, and/or the National Airspace System. Typically, limits or "caps" are placed on the airport's airside operations, providing preference to current commercial aviation users and reserving a very small allotment for general aviation and new users. Federal controls represent in effect a federal takeover of the airport, severely constraining an airport's ability to attract new air service. Generally, communities prefer to avoid losing control of the airport either through new infrastructure development or through measures to prioritize commercial service traffic while offering alternatives for other users.

- **Enhancement of Tijuana Airport for U.S.-Based Travelers**. Public-private partnerships for enhanced border crossings offer possibilities for better access to Tijuana Rodriguez International Airport. Customs, security, and ease of landside access/connections are important criteria for success.

3.2.5 Changes to Surface Infrastructure

The following summarizes potential changes to surface infrastructure considered in the RASP.

- **Improve Access (links) Between Airports and Regional Surface System**. This strategy would enhance surface capacity and access into or out of system airports through new roadways and better operation of existing infrastructure. Costs vary considerably based on the nature and extent of improvement.

- **Enhance the Regional Transportation System.** This strategy would enhance surface capacity and connections to system airports through multimodal regional infrastructure improvements (e.g., LOSSAN Rail, Transit First, San Diego Bus Rapid Transit, and Corridor System Management Plans).

- **Improve Local Transit Services**. This strategy would enhance surface capacity and access into or out of system airports by improving existing transit systems, including expanded route coverage, frequencies, and connections (e.g., connections from downtown San Diego to San Diego International).

- **Remote Terminals/"HOV" Lanes**. Remote terminals provide aviation passenger express bus service between airport and remotely located passenger terminal/station or parking facilities (e.g., Los Angeles' Van Nuys FlyAway, Boston's Logan Express, or San Francisco's Marin Airporter). In the San Diego Study Area, there is the potential for remote terminals at McClellan-Palomar or Brown Field with bus service to San Diego or Tijuana Rodriguez International Airports.

Chapter 4

DEMAND FINDINGS AND BASELINE SCENARIO

This chapter presents a summary of (1) the myriad factors that affect aviation demand in San Diego County; and (2) the Baseline or "do-nothing" scenario upon which all other alternatives will be compared.

As evidenced in the following sections, although San Diego International provides good domestic air service at competitive airfares, some San Diego County residents choose to use airports in the greater Los Angeles metropolitan region and Tijuana in order to capitalize on enhanced air service options. Therefore, RASP strategies, alternatives, and findings were considered in the context of the San Diego County Airport System, as well as a larger region inclusive of Tijuana and the following five airports in the greater Los Angeles metropolitan area: Los Angeles International (LAX), John Wayne/Orange County, Long Beach, Ontario International, and Burbank (herein referred to as the RASP Study Area).

4.1 DEMAND FINDINGS

A regional econometric demand model ("the Model") was developed for the RASP in order to capture and assess the regional demographics and air travel demand characteristics of the RASP Study Area. In later phases of the study, the Model was used as a decision support tool to evaluate various "what-if" scenarios and quantitatively measure the impact of infrastructure enhancements and/or policy measures on the regional aviation system. The Model basically "computes" the propensity for people to travel and the factors that lead to a choice of airport, which primarily includes the time and costs associated with accessing aviation services. SANDAG's Regional Travel Demand Model was also incorporated into the RASP Model to estimate ground transportation changes and access times. A detailed description of the RASP Model development and output is provided in Appendix B.

The following sections summarize the key air travel demand findings of the RASP Study Area.

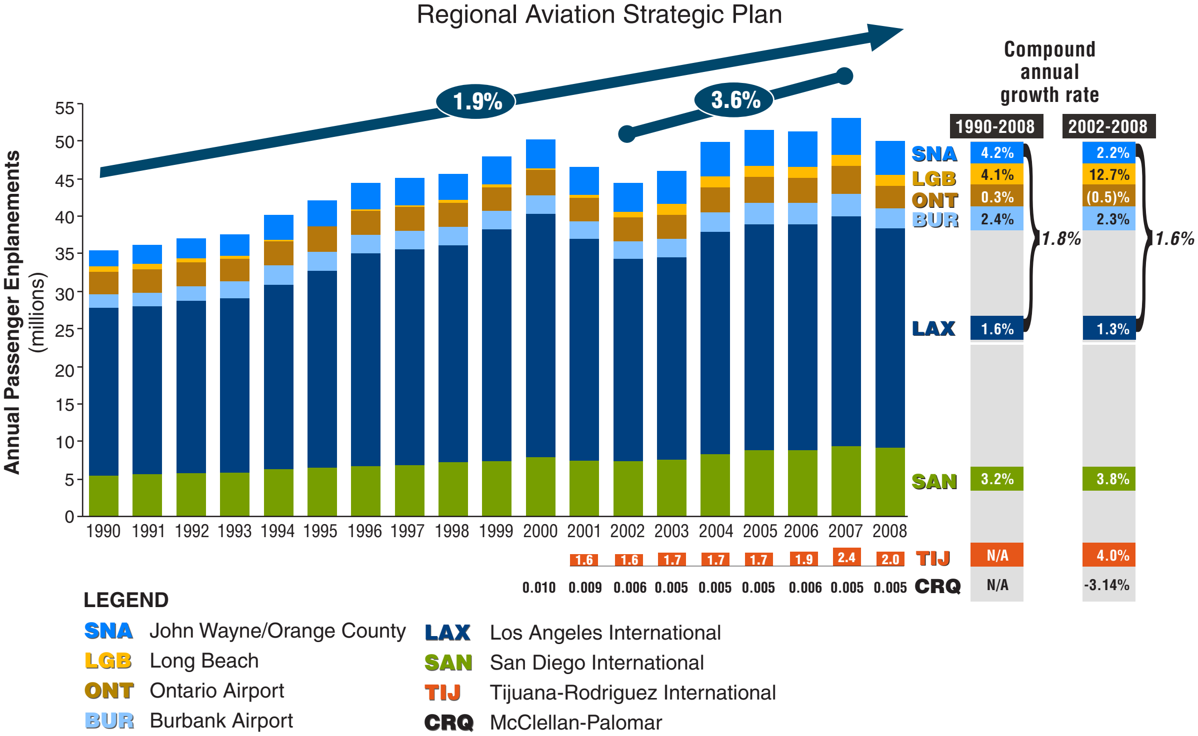
4.1.1 Historic Growth in Regional Aviation Demand

Notwithstanding economic recessions and industry-wide passenger reductions, San Diego has experienced above average growth compared to the greater Los Angeles metropolitan region, Mexico, and the United States as a whole. Historical annual passenger demand for the RASP Study Area is presented on Figure 4-1.

Figure 4-1

HISTORICAL ANNUAL PASSENGER ENPLANEMENTS—RASP STUDY AREA

Regional Aviation Strategic Plan



Notes: TIJ data only available from 2001-2008; enplanements estimated to be 50% of total passengers.

Sources: Jacobs Consultancy, based on T100, Census data, and Bureau of Economic Analysis, September 2009.

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As presented on Figure 4-2, the real GDP and per capita income in San Diego are growing at 4.2% and 4.3% compound annual rates, respectively, compared to 3.5% and 3.3% in the greater Los Angeles metropolitan region. Enplanements in the San Diego region have also substantially outpaced the U.S. average, at 3.0% compound annual growth rate compared to 1.7%. As presented in Figure 4-3, this strong growth in enplanements can be attributable to the steady growth in per capita income and population in San Diego. Since 1990, per capita income and population have grown by 200% and 20% by 2009 respectively.

Except for LAX, aviation growth in the RASP Study Area is significantly influenced by the business model of low cost carriers, which dominate the majority of airports in the region, including Tijuana Rodriguez International and many of the airports in greater Los Angeles metropolitan area. As shown on Figure 4-4, based on 2008 data, low cost carriers – primarily Southwest Airlines and JetBlue Airways – represented the largest share of the market at San Diego International, Ontario, Burbank, and Long Beach airports. Volaris, a Mexican low cost carrier, represented 50% of the market at Tijuana Rodriguez International.

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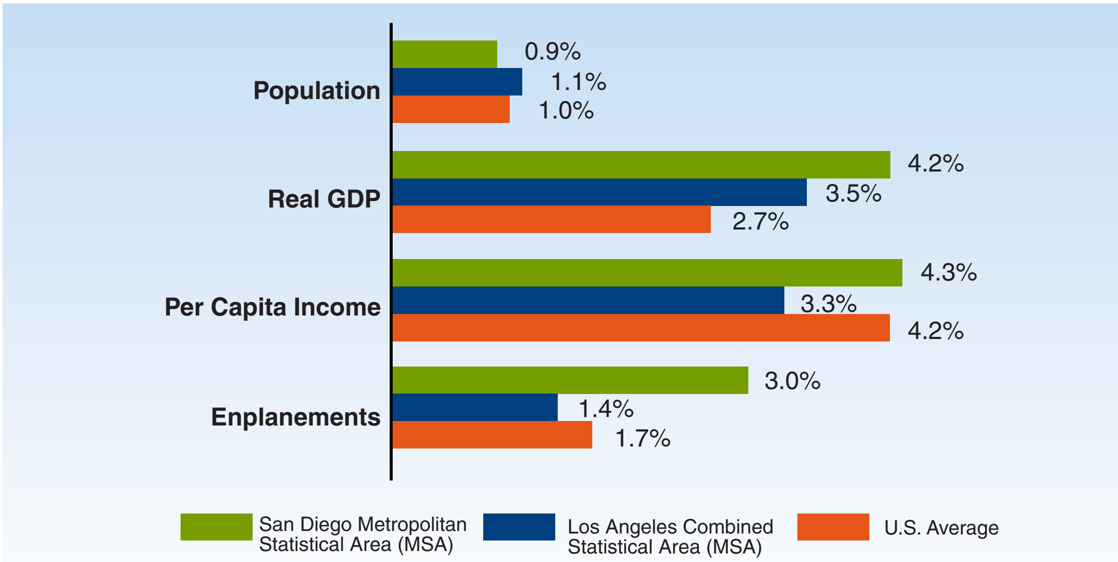
Figure 4-2

KEY ECONOMIC DATA COMPOUND ANNUAL GROWTH RATE (1998-2007)

Regional Aviation Strategic Plan



Sources: Bureau of Economic Analysis, *Interactive Tables for Regional Economic Accounts*; U.S. DOT T100 Database; September 2009.

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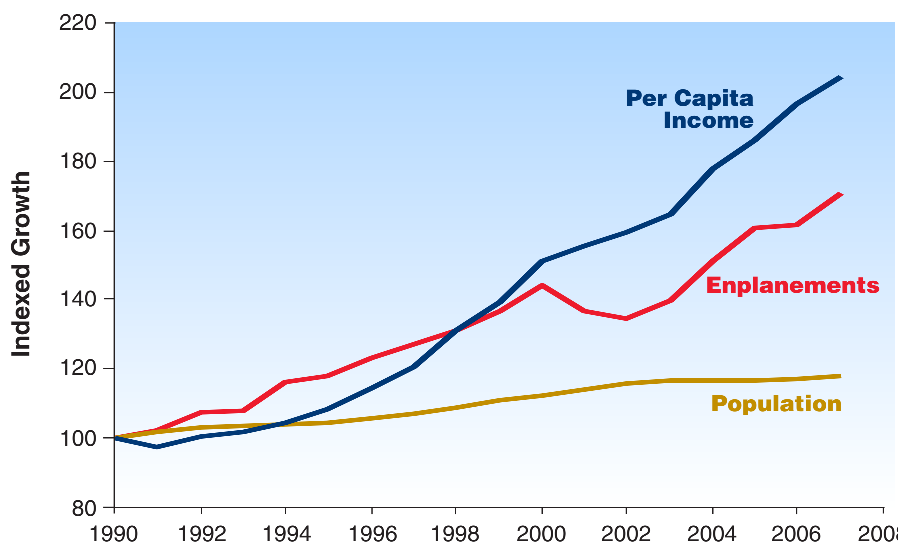
Figure 4-3

INDEXED GROWTH IN SAN DIEGO METROPOLITAN STATISTICAL AREA (INDEXED TO 1990)

Regional Aviation Strategic Plan



Notes: Real GDP compound annual growth rate (CAGR) is for 2001-2006; San Diego Metropolitan Statistical Area (MSA) aligns with San Diego County boundaries.

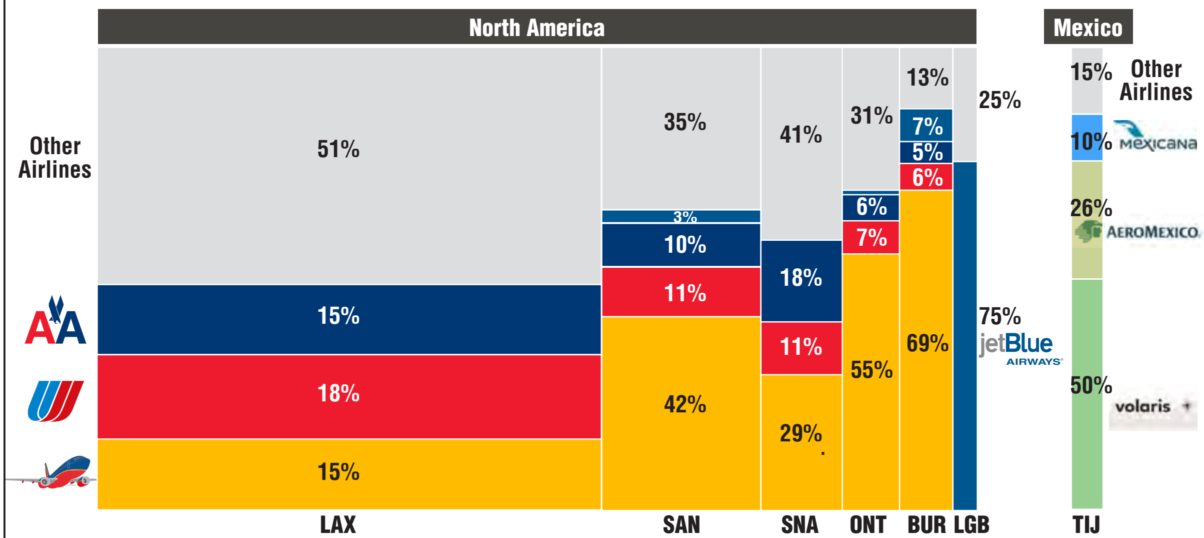
Sources: Jacobs Consultancy, based on *San Diego County Regional Aviation Strategic Plan, Aviation Demand Forecasts*, Landrum & Brown, Inc., December 2008; FAA Terminal Area Forecast; Bureau of Economic Analysis, *Interactive Tables for Regional Economic Accounts*; September 2009.

SAN660 F-0012

Figure 4-4

2008 AIRLINE MARKET SHARE

Regional Aviation Strategic Plan



Notes: Column width proportional to total annual seat capacity from that airport; includes international demand.
LCC = Low Cost Carrier
SNA = John Wayne Airport
ONT = Ontario International Airport
BUR = Bob Hope Burbank Airport
LGB = Long Beach Airport
TIJ = Tijuana Rodriguez International Airport

Sources: Jacobs Consultancy, based on U.S. DOT Airline Origin and Destination Survey (DB1B), September 2009.

SAN660 F-0003

4.1.2 Air Service Background

The following summarizes air service findings for the three dominant commercial service airports in the RASP Study Area – San Diego International, Los Angeles International, and Tijuana Rodriguez International.

4.1.2.1 San Diego International Airport

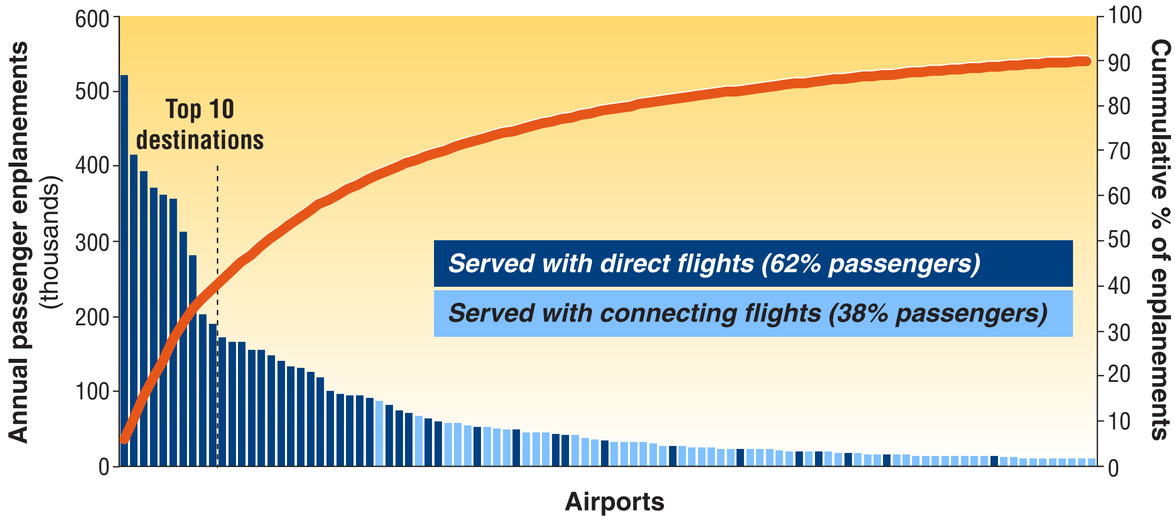
As presented on Figure 4-5, ten destinations account for more than 40% of San Diego International's outbound traffic. Moreover, four of the top ten destinations are located in California: San Francisco, Sacramento, Oakland, and San Jose.

Similar to the region, Southwest Airlines has driven the majority of passenger growth at San Diego International since 1990. As shown on Figure 4-6, the compound annual growth rate (CAGR) of Southwest Airlines between 1990 and 2008 was 7.2%, compared to 1.4% for all other carriers operating at San Diego International. In addition, Southwest's market share increased during this same period from 18% to 38%, while all other carriers cumulatively decreased their market share from 82% to 62%.

Figure 4-5

TOP 100 DESTINATIONS FROM SAN DIEGO INTERNATIONAL AIRPORT

Regional Aviation Strategic Plan



Note: Based on 2008 annual enplanements.

Source: Jacobs Consultancy, based on U.S. DOT Airline Origin and Destination Survey (DB1B), September 2009.

SAN660 F-0002

Figure 4-6

HISTORICAL AIRLINE MARKET SHARE AT SAN DIEGO INTERNATIONAL AIRPORT

Regional Aviation Strategic Plan

Note: CAGR = Compound Annual Growth Rate

Source: Jacobs Consultancy, based on OAG T100 Database, September 2009.

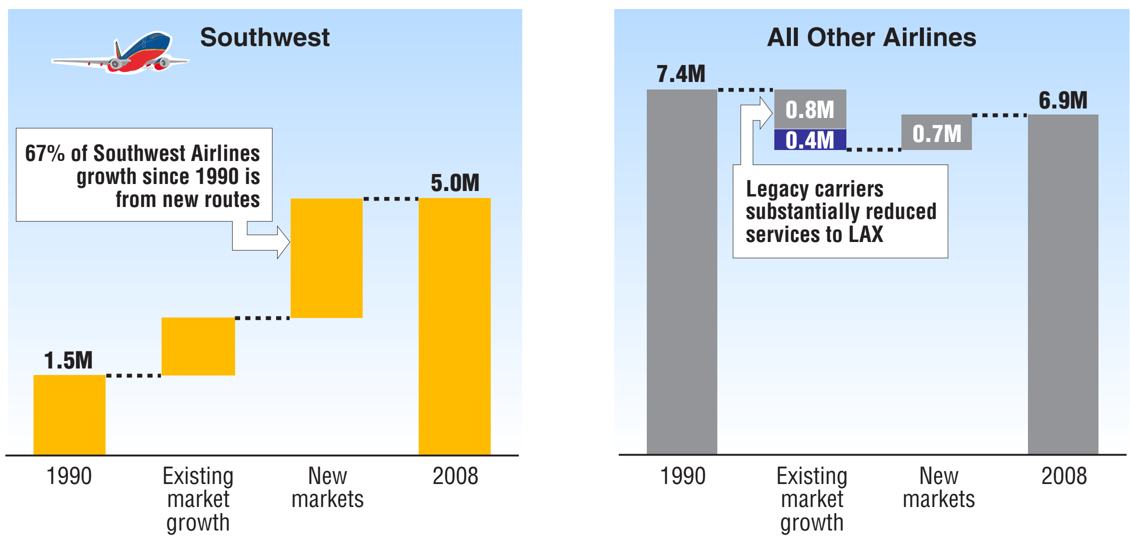
SAN660 F-0004

Southwest Airlines competes vigorously with other airlines at San Diego International. Southwest's growth at San Diego International has primarily been achieved by adding new routes versus adding capacity to existing routes. As presented on Figure 4-7, the seat capacity of Southwest at San Diego International grew from 1.5 to 5.0 million between 1990 and 2008, with 67% of that capacity provided on new routes. Alternatively, the seat capacity of all other carriers at San Diego International decreased from 7.4 to 6.9 million during the same period, with the other air carriers significantly reducing seat capacity to the Los Angeles market.

Figure 4-7

SEATS OFFERED ON SOUTHWEST VS. OTHER AIRLINES

Regional Aviation Strategic Plan



Source: Jacobs Consultancy, based on U.S. DOT Airline Origin and Destination Survey (DB1B) and OAG T100 Database, September 2009.

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The strong growth of Southwest Airlines at San Diego International has facilitated the increase in affordable air service for San Diego residents and visitors. As one of nation's top leisure destinations, San Diego County has benefited immensely from this effect. On the other hand, Southwest Airlines' strong presence has discouraged carriers at San Diego International from adding services to international destinations because Southwest Airlines provides leisure domestic alternatives to international destinations. This has contributed to an increase in San Diego County residents and visitors choosing airports outside of San Diego County for international travel.

4.1.2.2 Los Angeles International Airport

Compared to San Diego International, LAX offers non-stop service to 50 more domestic and 53 more international destinations than San Diego International. With regard to Mexican destinations, in 2009, LAX offered non-stop service to 15 Mexican

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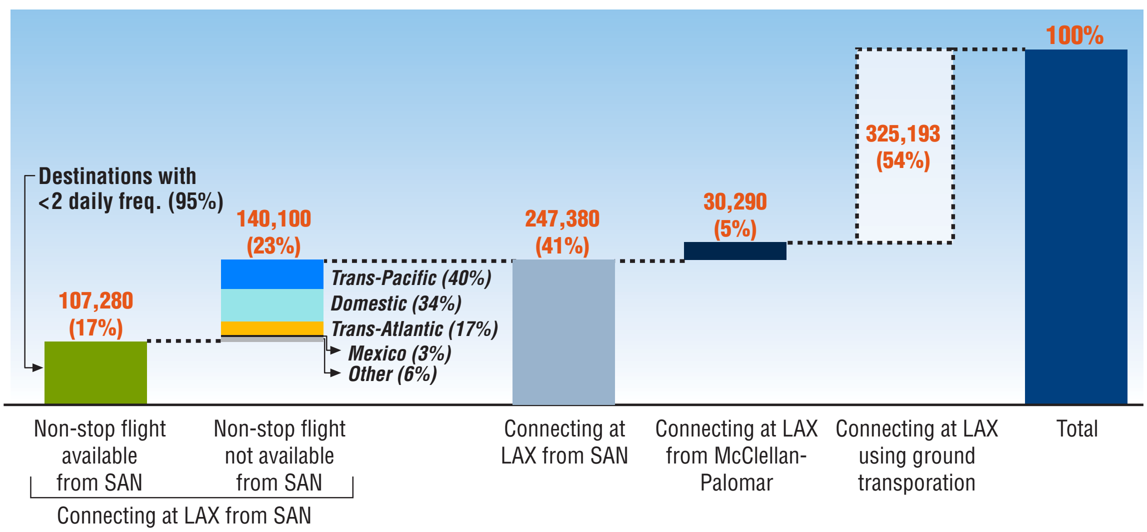
destinations with 31 non-stop flights per day. As a result, many San Diego County residents and visitors choose to connect at LAX based on the frequency of service or the number of destinations offered at that airport.

As shown on Figure 4-8, of the total San Diego County passengers connecting at LAX, approximately 41% (about 250,000 annual passengers) originate their travel at San Diego International, while approximately 54% (about 350,000 annual passengers) connect at LAX using ground transportation (e.g., train, car, bus, etc) to access the facility. Approximately 5% of LAX connecting passengers originate their travel at McClellan-Palomar, which currently only offers commercial service to LAX.

Figure 4-8

CONNECTING PATTERN OF SAN DIEGO COUNTY RESIDENT AND VISITOR USING LAX (2008)

Regional Aviation Strategic Plan



Sources: Jacobs Consultancy, based on U.S. DOT Airline Origin and Destination Survey (DB1B); AMDG, *2006 Air Passenger Survey Final Report, Los Angeles International Airport*, December 2001; September 2009.

4.1.2.3 Tijuana Rodriguez International Airport

When traveling to Mexican destinations, many San Diego County residents choose to use Tijuana Rodriguez International. Compared to San Diego International which only offered service to one Mexican destination in 2009, Tijuana Rodriguez International offered nonstop service to 21 Mexican destinations with 50 non-stop flights per day. In 2009 Tijuana Rodriguez International initiated non-stop service to Tokyo.

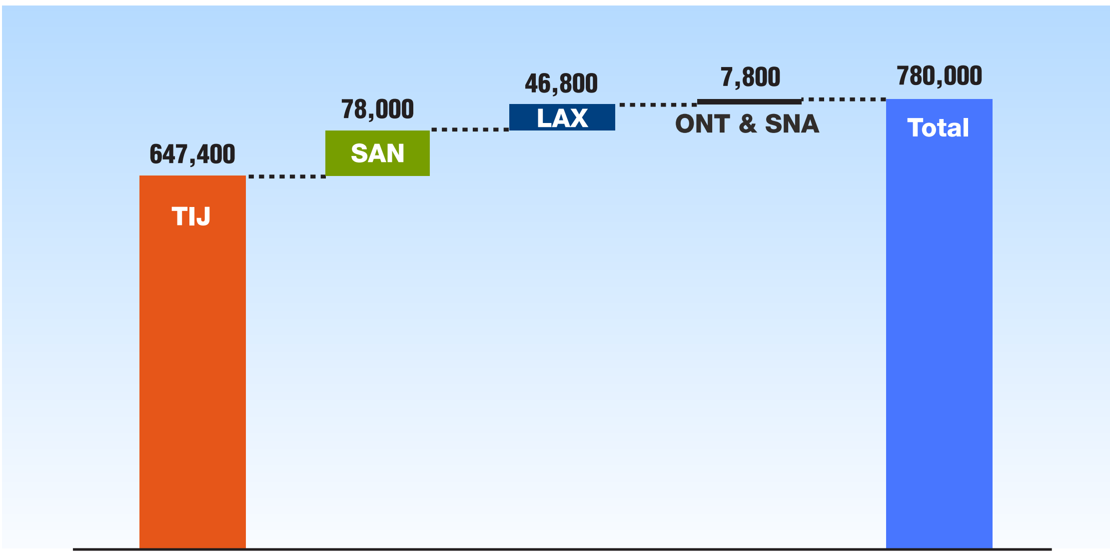
As shown on Figure 4-9, approximately 780,000 San Diego County residents traveled to Mexican destinations in 2006. Of this total, approximately 78,000 passengers originated their travel at San Diego International, representing 10% of the total departure bookings; approximately 46,800 passengers originated their travel at LAX;

approximately 7,800 passengers originated their travel at John Wayne/Orange County or Ontario airports. However, a total of 647,000 (or 83%) originated their travel at Tijuana Rodriguez International after crossing the U.S. - Mexico border.

Figure 4-9

ORIGINATING AIRPORTS FOR SAN DIEGO COUNTY RESIDENTS TRAVELING TO MEXICO (2006)

Regional Aviation Strategic Plan



Notes: Air traffic to Mexico from SAN in 2006 was approximately 78,000 passengers representing 10% of Market Information Data Transfer (MIDT) departure bookings.
Cross Border Terminal Study estimates 475,000 (±75,000) TIJ enplanements are San Diego County residents.
TIJ = Tijuana Rodriguez International Airport
ONT = Ontario International Airport
SNA = John Wayne Airport

Sources: Jacobs Consultancy, based on U.S. DOT; Infrastructure Management Group, *Cross Border Terminal Study, 2007*; OAG T100 data; September 2009.

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For U.S. citizens crossing the border, significant ground access time is associated with using Tijuana Rodriguez International. Figure 4-10, shows the distribution of border crossings at San Ysidro, Tecate, and Otay Mesa, while Figure 4-11 summarizes the border crossing times associated with each. Notably, the time required to cross into Mexico from the U.S. is negligible at approximately 5 minutes for each crossing. However, the time required for vehicles to re-enter the U.S. is substantial, with the average varying from 15 minutes at Tecate to 55 minutes at Otay Mesa.

Figure 4-10

DISTRIBUTION OF BORDER CROSSINGS BY POINT OF ENTRY

Regional Aviation Strategic Plan

Source: U.S. Custom and Border Protection, *Volume of Traffic at U.S. Border Crossings*, 2008.

Figure 4-11

ESTIMATED TIME FOR BORDER CROSSINGS BY POINT OF ENTRY

Regional Aviation Strategic Plan

	Into Mexico	Into the United States	
		Vehicle	Pedestrian
San Ysidro	< 5 min	40 min	5 min
Otay Mesa	< 5 min	55 min	15 min
Tecate	< 5 min	15 min	N/A

Source: Jacobs Consultancy, based on Mexican Border Ports of Entry border wait time reported on U.S. Custom and Border Protection website on November 24, 2009 between 9 a.m. and 4 p.m., September 2009.

4.1.3 Aviation Industry Trends and Outlooks

The following summarizes RASP-applicable trends and generalized outlooks for the commercial airline, general aviation, and air cargo industries.

4.1.3.1 Commercial Airline Industry

Demand for air travel in the U.S. correlates strongly with fluctuations in the U.S. economy. The long-term trend in commercial airline activity is presented on

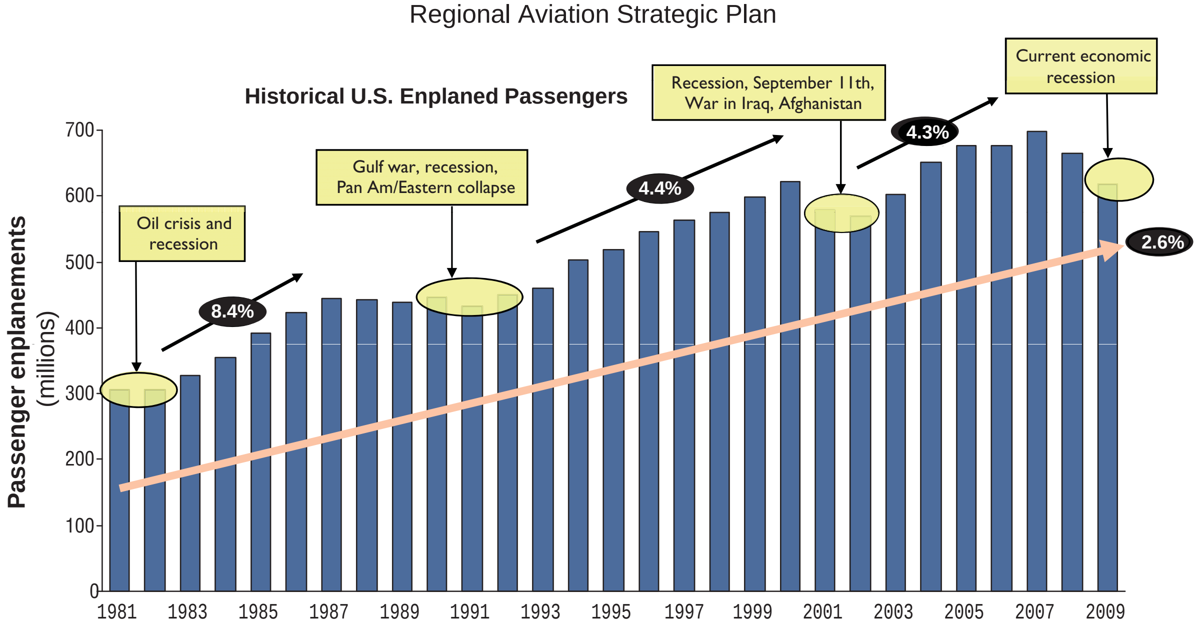
Figure 4-12. As presented, recessionary periods dating back to the 1970s and other external "shocks", such as the Arab Oil Embargo , Gulf Wars, and terrorist attacks, caused periodic downturns in aviation growth. However, as demonstrated on Figure 4-12, after each downturn, commercial airline demand has recovered quickly.

In the post-financial crisis environment, carriers have reduced capacity around 15% in an effort to maintain high fares and revenues. Notwithstanding these cuts, the industry was projected to lose billions of dollars in 2009. While 2009 third quarter financials improved, passenger growth and yields remain weak, and a recovery in demand was projected to be modest relative to prior recoveries.

Figure 4-12

HISTORICAL TREND IN COMMERCIAL AVIATION ACTIVITY

Regional Aviation Strategic Plan



Note: Year 2009 enplanement is estimated; Database reports only through the 3rd quarter of the year 2009.
Source: Jacobs Consultancy, based on OAG T100 Database, February 2010.

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4.1.3.2 General Aviation Activity

All industry forecasts predict declines in recreational general aviation and piston-type aircraft activity but increases in turbojet and helicopter activity associated with corporate aviation. Most corporate general aviation demand is associated with downtown San Diego, with San Diego International representing the ideal geographic location for this type of activity based on proximity and access to the corporate demand base.

As commercial passenger traffic increases and San Diego International becomes more congested, it is expected that increasing numbers of general aviation aircraft will be accommodated at other system airports. The system is well-equipped to accommodate all types of general aviation demand; therefore, it is assumed that there is sufficient overall capacity to accommodate demand over the planning horizon.

4.1.3.3 Air Cargo Activity

Approximately 90% of cargo handled at San Diego International is accommodated on integrated/express carriers and originates in or is destined for central San Diego. Similar to general aviation activity, San Diego International is the ideal geographic location for this type of activity based on its close proximity to the demand base. Moreover, integrated carriers employ vast distribution networks requiring a centralized airport location, with San Diego International again representing the ideal ground transportation base.

It should be noted that no system airport north of San Diego International can accommodate air cargo type aircraft; air cargo carriers are unwilling to operate from facilities south of San Diego International since such locations would increase delivery times to the primary demand base in central San Diego.

4.2 PREVIOUS ESTIMATES OF REGIONAL AVIATION CAPACITY

Numerous studies prepared in the past five years have documented that San Diego County will run out of commercial aviation capacity during the RASP planning horizon. A summary of key capacity findings from previous studies is provided in Table 4-1. Previous studies assumed passengers will still be able to access air service if and when San Diego International reaches capacity; however, the number of passengers or potential demand "lost" to San Diego International has not been quantified to date.

This "lost" demand or "suppressed demand" is defined as potential passengers who desire to travel via air service, but do not due to lack of available capacity and/or prohibitively high costs. Figure 4-13 presents the concept of suppressed demand at San Diego International. As shown, when passenger demand nears the capacity of the airport's airfield, growth in demand will subside due to increasing airfares and operational delays. Eventually, growth in demand will cease and stabilize (or remain flat) at the maximum level that can be accommodated by the airfield's capacity. Potential demand that cannot be accommodated – the difference between unconstrained and constrained demand – is defined as suppressed demand.

Table 4-1
SAN DIEGO INTERNATIONAL AIRPORT CAPACITY FINDINGS FROM PREVIOUS STUDIES
Regional Aviation Strategic Plan

Study	Year	Key capacity findings
Destination Lindbergh	2008	SAN's airfield will reach capacity between 2020 and 2025 likely resulting in airline market responses, including schedule changes and up-gauging to larger aircraft.
SAN PLAN: Southern California Airport Capacity	2008	LAX will reach its policy constrained limit of 78 million annual passengers as early as 2015. Orange County and Long Beach have reached legal constraints. Burbank may reach its capacity as early as 2025. SAN could experience severe congestion by 2020.
FAA: Capacity Needs in the National Airspace System	2007	SAN and the San Diego metropolitan area will need additional aviation capacity by 2025. NextGen improvements, planned Authority improvements, and multi-modal planning will be required.
San Diego International Airport Aviation Activity Forecasts	2004	SAN runway capacity will constrain growth between 2015 - 2022. SAN runway congestion will not allow further growth between 2021 - 2030. Without new investments, SAN may experience a cumulative loss of between 5 – 30M passengers over the forecast period.

4.3 BASELINE SCENARIO

The following summarizes the Baseline Scenario developed for the RASP. The Baseline Scenario is the "do-nothing" scenario with which all other alternatives were compared. The Baseline Scenario is primarily defined by the expected outcome of the capacity constraint at San Diego International. The Baseline Scenario incorporates (1) reasonably foreseeable "market-driven" reactions to address demand once San Diego International reaches capacity; (2) "approved" and funded improvements in the near-term horizon; and (3) capacity constraints at the greater Los Angeles metropolitan region airports. The Baseline Scenario does not include construction of major new facilities, policy options not currently in place, or artificial constraints on demand.

4.3.1 Facility and Policy Assumptions

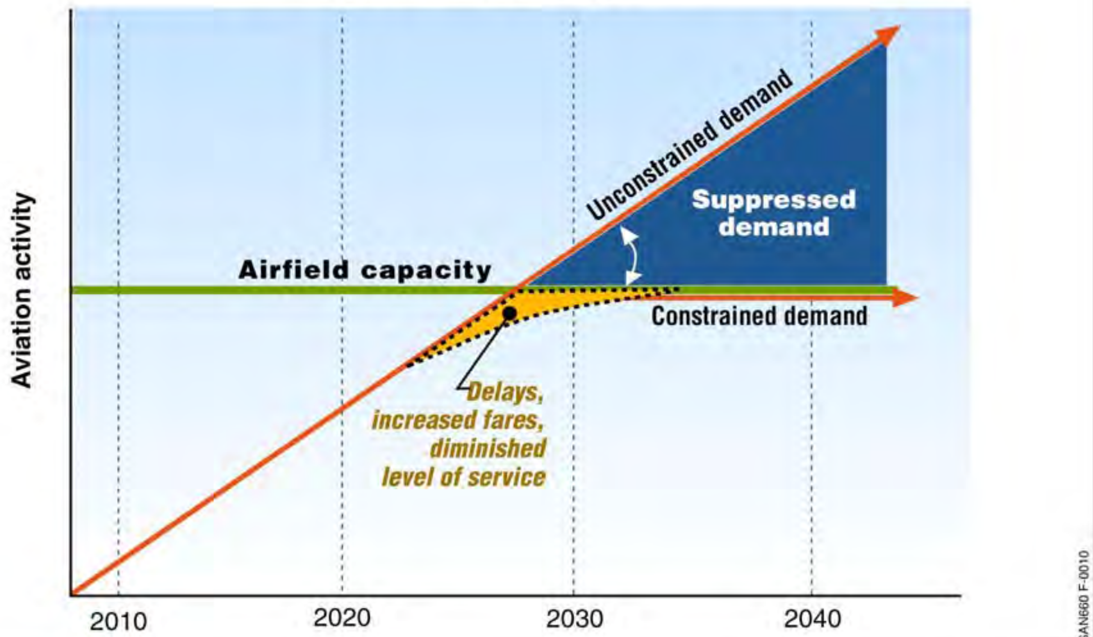
The Baseline Scenario includes the following Authority policies and planned near-term improvements:

- Accommodation of existing user groups at San Diego International, including commercial passenger and air cargo service and corporate general aviation

Figure 4-13

IMPACT OF AIRFIELD CAPACITY CONSTRAINT AT SAN DIEGO INTERNATIONAL AIRPORT

Regional Aviation Strategic Plan



- Continued nighttime departure curfew from 11:30 p.m. to 6:30 a.m.
- Implementation of the Terminal 2 West 10 gate addition in 2013 (ongoing project)
- *Destination Lindbergh* "Opening Day" recommendations for the Airport's north side, including: (1) an Intermodal Transit Center (ITC) sized to accommodate 400-600 thousand annual transit passengers; (2) SANDAG's transit ridership goal for 2015 of 6% of airport passengers, corresponding to the linkage to trolleys (Blue and Orange lines), COASTER, Amtrak, and the San Diego Metropolitan Transit System (MTS); (3) consolidated rental car facility and ground transportation plaza; and (4) dedicated on-airport roadway connecting the ITC and south side terminals via dedicated buses

The Baseline Scenario assumes that no new access roadway improvements or freeway ramps will be provided to facilitate access to San Diego International. However, the Scenario does include region-wide surface improvements per SANDAG's 2007 RTP – "Revenue Constrained Scenario". These improvements in 2010, 2020, and 2030 are depicted on Figures 4-14 through 4-16.

AIRPORT AND OPERATOR

- San Diego County Regional Airport Authority
- City of Oceanside
- City of San Diego
- County of San Diego
- Military
- Grupo Aeroportuario del Pacifico

PROPOSED IMPROVEMENT

- Future road improvement
- Addition to existing road
- New road construction
- New toll road construction
- Rail improvement
- County boundary
- International boundary

N

2 0 2 4
Graphic scale in miles

Note: All improvements reflect the Revenue Constrained Scenario.

Source: SANDAG, *2030 San Diego Regional Transportation Plan*, November 2007.

Figure 4-14
REGIONAL TRANSPORTATION PLAN
2010 PROPOSED IMPROVEMENTS

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

JACOBS CONSULTANCY

AIRPORT AND OPERATOR

- San Diego County Regional Airport Authority
- City of Oceanside
- City of San Diego
- County of San Diego
- Military
- Grupo Aeroportuario del Pacifico
- Los Angeles area airports (multiple operators)

PROPOSED IMPROVEMENT

- Future road improvement
- Addition to existing road
- New road construction
- New toll road construction
- Interchange improvement
- Rail improvement
- County boundary
- International boundary

N

4.5 0 4.5 9
Graphic scale in miles

Note: All improvements within San Diego County reflect the Revenue Constrained Scenario.

Sources: SANDAG, *2030 San Diego Regional Transportation Plan*, November 2007, and Southern California Association of Governments, *2008 Regional Transportation Plan*.

Figure 4-15
REGIONAL TRANSPORTATION PLAN 2020 PROPOSED IMPROVEMENTS
Regional Aviation Strategic Plan
San Diego County Regional Airport Authority
January 2011

JACOBS CONSULTANCY

AIRPORT AND OPERATOR

- San Diego County Regional Airport Authority
- City of Oceanside
- City of San Diego
- County of San Diego
- Military
- Grupo Aeroportuario del Pacifico
- Los Angeles area airports (multiple operators)

PROPOSED IMPROVEMENT

- Future road improvement
- Addition to existing road
- New road construction
- New toll road construction
- Interchange improvement
- Proposed high speed rail corridor
- County boundary
- International boundary

Note: All improvements within San Diego County reflect the Revenue Constrained Scenario.

Sources: SANDAG, *2030 San Diego Regional Transportation Plan*, November 2007, and Southern California Association of Governments, *2008 Regional Transportation Plan.*

Figure 4-16

REGIONAL TRANSPORTATION PLAN
2030 PROPOSED IMPROVEMENTS

Regional Aviation Strategic Plan
San Diego County Regional Airport Authority

January 2011

JACOBS CONSULTANCY

4.3.2 Cost Estimates and Implementation Timeline

Table 4-2 presents the cost estimates associated with the Baseline Scenario. The total cost to build facilities associated with the Baseline Scenario is approximately $535 million, with multiple agencies responsible for funding and implementing the various projects; not all are the responsibility of the Authority. Surface improvements per SANDAG's RTP "Revenue Constrained Scenario" are not included in the cost estimates; and costs associated with the Terminal 2 West Expansion are not included since the project is already funded.

Table 4-2

BASELINE SCENARIO — COST ESTIMATES AND POTENTIAL FUNDING SOURCES

Regional Aviation Strategic Plan

Component	Cost Estimate	Potential Funding Source	
Property Acquisition	$11 M	PFC/Bonds	**Mix of agencies**
Rail Improvements	$ 50 M	SANDAG/Bonds	
Intermodal Transportation Center	$ 39 M	PFC/Bonds	
Dedicated Roadway	$ 50 M	Bonds	**SDCRAA**
Consolidated Rental Car Facility	$300 M	CFC	
Auto Parking	$ 85 M	Private/Bonds	
TOTAL	**$535 M**		

Notes: Various agencies are reponsible for funding and implementing the above projects; not all are responsibility of the Authority. All cost from *Destination Lindbergh* include soft costs and contingency. Costs associated with Terminal 2 West Expansion are not included as the project is ongoing.

Source: Jacobsendaniels Associates, LLC., August 2010.

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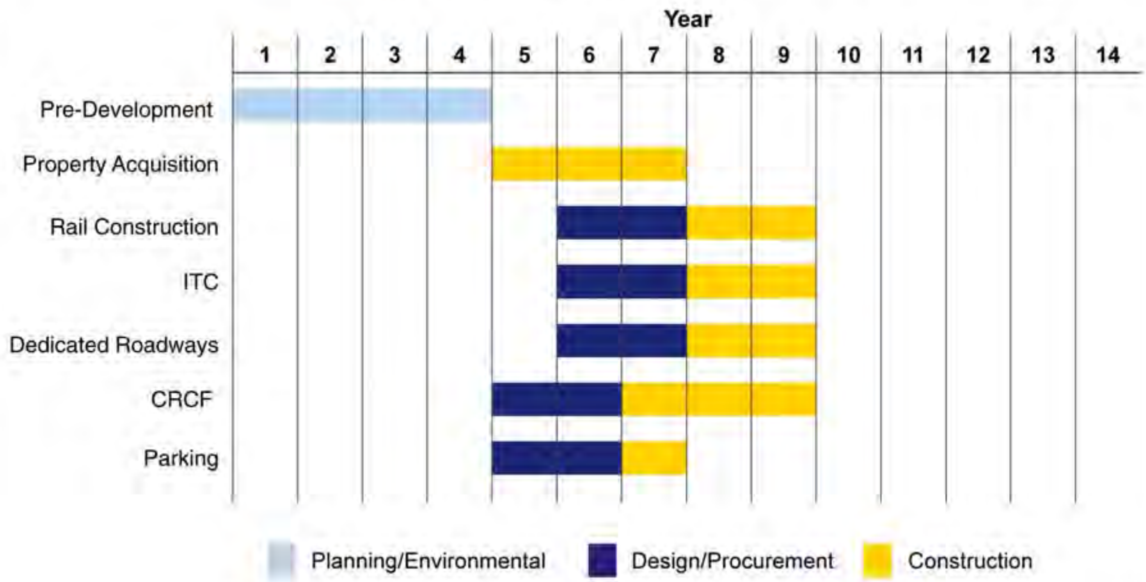
The implementation timeline associated with the Baseline Scenario is presented on Figure 4-17. As presented, the implementation of the various projects is estimated to take approximately ten years, and is assumed to begin around 2015.

Figure 4-17
BASELINE SCENARIO — IMPLEMENTATION SCHEDULE
Regional Aviation Strategic Plan



Source: Jacobsendaniels Associates, LLC., August 2010.

4.3.3 Market Reactions

As presented on Figure 4-18, capacity constraints at San Diego International will result in multiple "market reactions" over the long-term. It is widely recognized that San Diego International will reach its airfield capacity sometime between 2020 and 2030 at approximately 28 million annual passengers. Once this occurs, the airport's level of service is expected to decrease, resulting in increased operating delays (on the airfield and in the ground transportation network leading to the airport); and the price of air service will increase steeply. These consequences will result in the following:

- Accommodation of some San Diego demand at greater Los Angeles metropolitan region airports as well as Tijuana Rodriguez International, including increased bus service and volumes on the surface roadways

- Increased but limited commercial service at McClellan-Palomar via continued turboprop service (<30 seats) due to the airport's constrained runway length

- The potential for Federally-mandated slot controls at San Diego International

- Some limited up-gauging of commercial service aircraft at San Diego International and some international wide-body flights due to LAX capacity constraints and increasing drive times to the greater Los Angeles metropolitan region

Figure 4-18

BASELINE "DO-NOTHING" SCENARIO

Regional Aviation Strategic Plan

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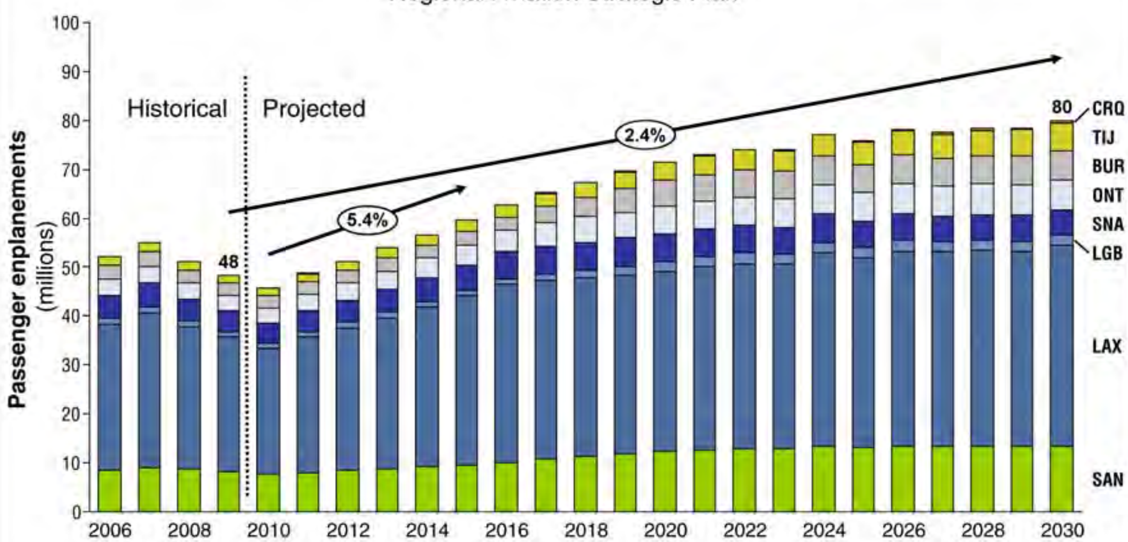
4.3.4 Baseline Findings

Figure 4-19 presents projected passenger enplanements for the RASP Study Area, which includes San Diego, Tijuana, and five airports in the greater Los Angeles mterpolitan region. As presented, annual enplaned passengers are projected to increase 50% between 2009 and 2030 from 48 to 80 million. Passenger demand is projected to recover following the current economic recession at a compound annual growth rate of 5.4% (2010 – 2015); the overall 20-year compound annual growth rate (2010 – 2020) is projected to be 2.4%. For San Diego International, passenger enplanements during the "recovery" period are projected to grow at a compound annual growth rate of 4.7%; while the airport's overall 20-year compound annual growth rate is projected to be 2.5%. As presented, Tijuana Rodriguez International is expected to experience the largest increase in passenger enplanements, increasing from 1.6 to 5.6 million enplanements between 2010 and 2030 at a compound annual growth rate of 6.4%.

Figure 4-19

BASELINE SCENARIO — PROJECTED PASSENGER ENPLANEMENTS AT SOUTHERN AND BAJA CALIFORNIA AIRPORTS

Regional Aviation Strategic Plan



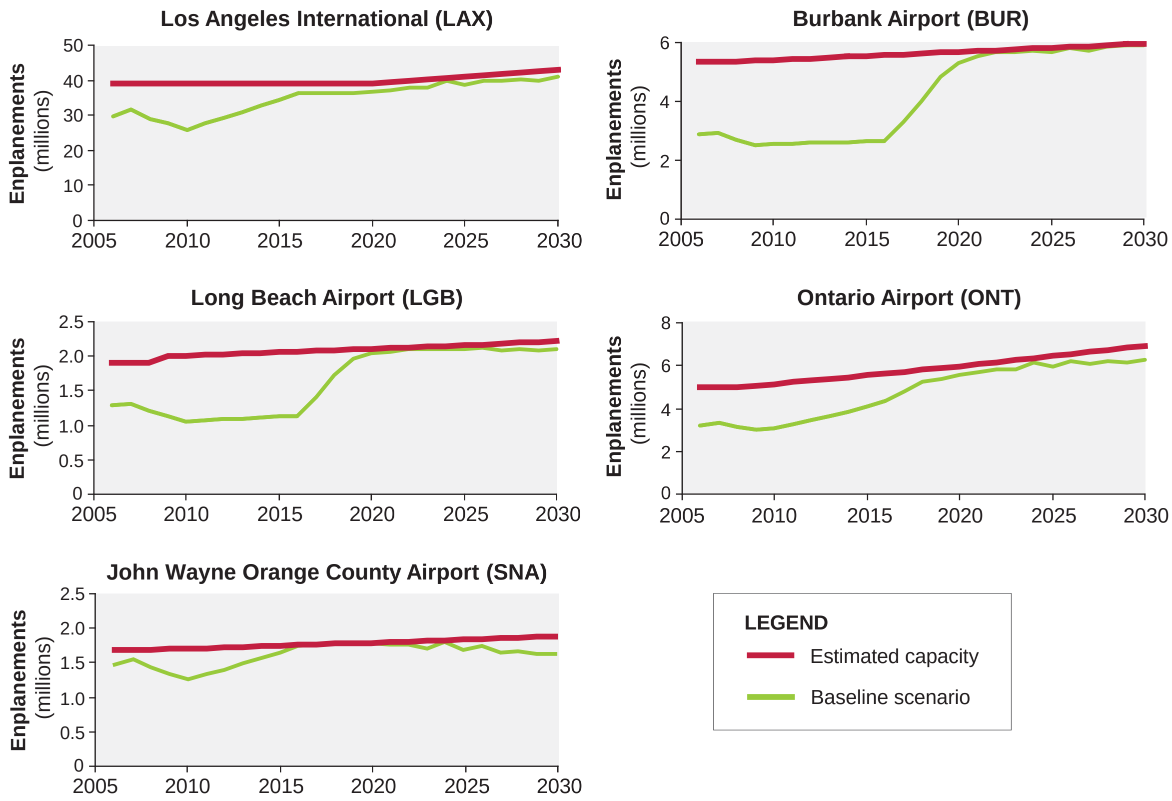
Notes: Passenger enplanements based on forecast demographic data from International Monetary Fund (IMF), LA Economic Development Corporation (LAEDC), and SANDAG.
Model calibrated to actual enplanements from 2006 to 2009; projections may be different from actual.
Results generally correspond to FAA TAF data for 2025.
SAN compound annual growth rate = 4.7% in the "recovery"; 2.5% for the forecast period.

The RASP demand model predicts that many Southern California airports will reach capacity during the RASP forecast period. As presented on Figure 4-20, LAX is projected to reach capacity sometime around 2015, which will result in significant increases in passenger enplanements at John Wayne/Orange County, Long Beach,

Figure 4-20

ANNUAL PASSENGER ENPLANEMENTS AT SOUTHERN CALIFORNIA AIRPORTS

Regional Aviation Strategic Plan



Ontario International, and Burbank. Furthermore, each of these airports is projected to reach its respective capacity between 2015 and 2020.

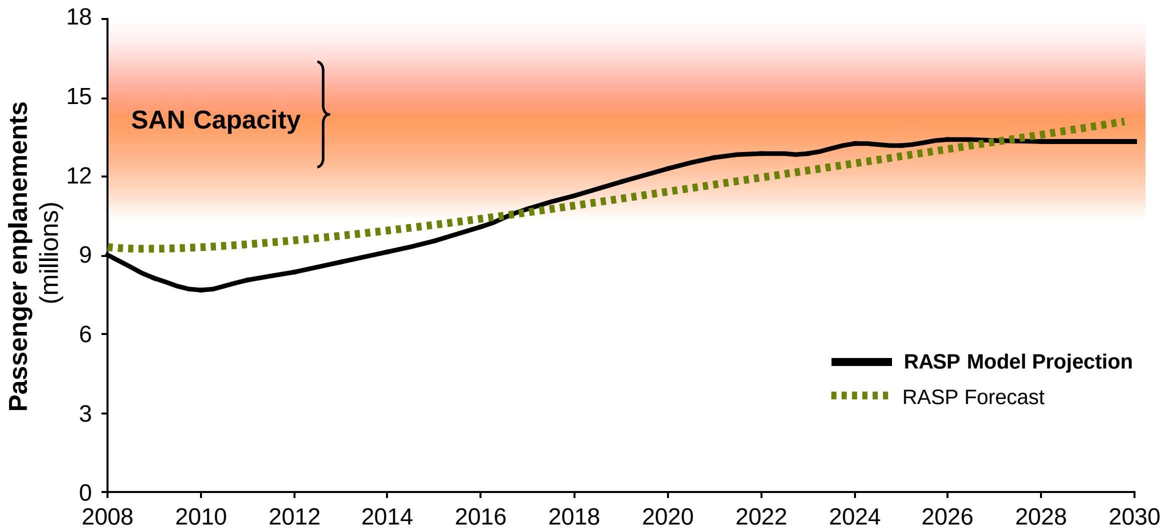
Historical and projected passenger enplanements in the Baseline Scenario for San Diego International are presented on Figure 4-21. As presented, the demand model indicates capacity constraints at San Diego International will begin between 2020 and 2025. The effect of this capacity constraint will be diminished levels of service, increased operating delays, and higher fares for air service. The demand model projects San Diego International will reach its airfield capacity earlier than previously forecasted (see Section 4.2), which is a result of model projections that incorporate numerous econometric variables and capacity constraints at RASP Study Area airports.

As presented on Figure 4-22, the econometric model predicts that San Diego County residents and visitors will increasingly use airports outside San Diego County beginning around 2020 as San Diego International nears capacity. McClellan-Palomar will attract additional passenger demand around 2025 (see Figure 4-19).

Figure 4-21

BASELINE SCENARIO — PROJECTED SAN DIEGO INTERNATIONAL ENPLANEMENTS

Regional Aviation Strategic Plan



Note: Model calibrated to actual enplanements from 2006 to 2009; projections may be different from actual.

Sources: RASP Forecast - Landrum & Brown, Inc., *Draft San Diego County Regional Aviation Strategic Plan Aviation Demand Forecasts*, December 2008.
RASP Model Projection - Jacobs Consultancy, August 2010.

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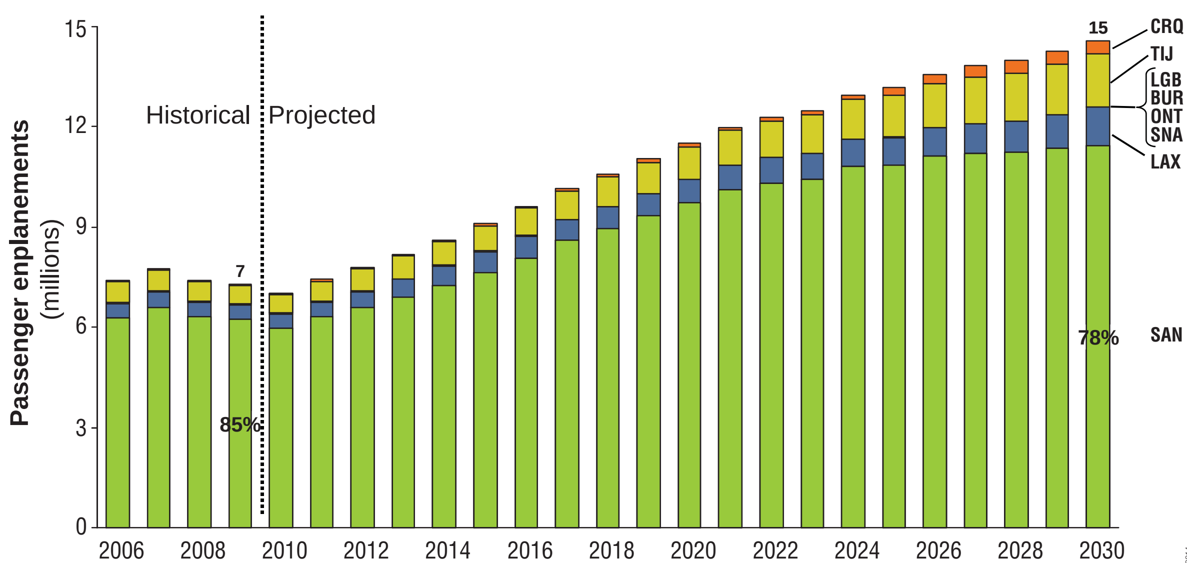
Figure 4-22

BASELINE SCENARIO — PROJECTED SAN DIEGO RESIDENT AND VISITOR ENPLANEMENTS DISTRIBUTION AT RASP STUDY AREA AIRPORTS

Regional Aviation Strategic Plan



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Tijuana Rodriguez International is projected to continue to experience strong growth driven by domestic Mexican traffic, and will continue to be the largest gateway for U.S.-Mexico traffic in the region.

As demand eventually nears overall regional aviation capacity, the number of "suppressed passengers" in San Diego County is also projected to increase. Therefore, suppressed demand is a key metric in comparing performance of various RASP scenarios. Figure 4-23 presents suppressed aviation passenger demand for San Diego County. As presented, suppressed passenger demand in the Baseline Scenario is projected to increase to about 3.0 million annual enplaned passengers by 2030.

Figure 4-23

BASELINE SCENARIO — SAN DIEGO COUNTY
SUPPRESSED AVIATION PASSENGER DEMAND
Regional Aviation Strategic Plan

Note: Suppressed demand presented above is relative to 2006; it is acknowledged that some suppressed demand already exists.

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Chapter 5

ALTERNATIVE SCENARIOS

This chapter presents a summary of the alternative scenarios that were identified in consultation with the RASP Subcommittee and other stakeholders during the conduct of the RASP.

5.1 OVERVIEW OF ALTERNATIVE SCENARIOS

After an extensive process of considering all reasonable measures that could be taken to optimize the San Diego County Airport System (see Chapter 3), the following five families of scenarios were identified for further consideration. Each family is oriented toward optimizing a certain market or user type associated with the Airport System. Each family includes individual alternative scenarios, resulting in a total of 15 scenarios that were developed in detail for further evaluation.

1. **Commercial Passenger Optimization**
   - A. Full build-out of the ITC and north side terminal at San Diego International
   - B. Preserve San Diego International airfield capacity for commercial passenger service
   - C. Enhance commercial passenger service at McClellan-Palomar Airport
   - D. Introduce commercial passenger service at Brown Field Municipal Airport
   - E. Up-gauge San Diego International's Aircraft Fleet Mix – Narrow-body Fleet
   - F. Up-gauge San Diego International's Aircraft Fleet Mix – Increased Wide-body Fleet

2. **Enhanced Utilization of Tijuana**
   - A. Facilitate border crossings
   - B. Aviation passenger cross border facility
   - C. Cross border airport terminal

3. **California High Speed Rail**
   - A. Station at downtown San Diego
   - B. Station at San Diego International

4. **General Aviation Optimization**
   - A. Enhance McClellan-Palomar Airport for high-end/corporate general aviation
   - B. Enhance Brown Field Municipal Airport for high-end/corporate general aviation
   - C. Enhance Gillespie Field for mixed-use general aviation

5. **Air Cargo Optimization**
   - A. Introduce cargo service at Brown Field Municipal Airport

The RASP scenarios include hypothetical measures that could be taken to optimize markets and user types (e.g., preserve San Diego International's airfield for commercial passenger service) and planned measures (e.g., aviation passenger cross border facility at Tijuana Rodriguez International and California High Speed Rail) which, if implemented, would serve to optimize the Airport System. Several of the 15 scenarios are designed to measure the maximum possible effect of a particular theoretical action. For example, given current FAA regulations and requirements, scenarios intended to preserve San Diego International's airfield for commercial passenger service and eliminate all non-commercial services are practically impossible and inadvisable to implement in full. Nevertheless, the RASP Subcommittee and stakeholders believed there was value to estimate the impact of these measures so as to better understand the range of available options as well as the benefits and costs of attempting to address projected suppressed demand. Hence, scenarios should be viewed as providing useful information and evidence for policymakers, airport operators, and other stakeholders who will make decisions as to how best to meet the travel needs of San Diego County into the future.

For modeling purposes, all alternative scenarios assume the implementation of facilities and improvements identified in the Baseline Scenario (see Chapter 4), and that the baseline capacity of San Diego International is approximately 14.2 million annual enplanements.

The following sections present a detailed description and the evaluation factors associated with each alternative scenario.

5.2 COMMERCIAL PASSENGER OPTIMIZATION

The following describes the six scenarios intended to optimize commercial passenger (or airline) activity within the San Diego County Airport System.

5.2.1 Scenario 1A: Full Build-out of the ITC and North Side Terminal at San Diego International

This scenario maximizes the use of San Diego International for commercial passenger activity by expanding the Intermodal Transit Center (ITC) to accommodate between 1.2 and 1.8 million passengers. The full build-out of the ITC would include passenger processing facilities (e.g., ticketing, baggage claim, security screening), and an automated people mover (APM) connecting the ITC to concourses on the south side of the Airport.

Additional facility improvements associated with this scenario include the following:

- Property acquisitions
- Expansion of automobile parking facilities
- Expansion of the consolidated rental car facility (CONRAC)
- Modifications to the I-5 ramps

The total cost for Scenario 1A is estimated to be $1.2 billion and could be funded from a variety of sources, including bonds, private sources, Passenger Facility Charges (PFC), and rental car Customer Facility Charges (CFC). Funding of the non-aviation elements of the ITC requires careful consideration because airline funding support is unlikely given the costs and minimal effects on airfield capacity. A breakdown of the cost estimates, funding sources, and an implementation timeline is provided in Appendix C.

Key assumptions for Scenario 1A include:

- Ground access costs to San Diego International are assumed to decrease over the planning period due to higher transit ridership and improved access

- Ground access time to San Diego International is assumed to remain unchanged (the decrease in average ground access time due to roadway access improvements is offset by the increase in average ground access time due to higher transit ridership)

5.2.2 Scenario 1B: Preserve San Diego International's Airfield Capacity for Commercial Passenger Service

This scenario maximizes the use of San Diego International for commercial passenger activity by encouraging non-commercial and general aviation activity to use alternative facilities. This scenario would be implemented via leasing and pricing strategies and would require a "coordinated" FBO/general aviation policy between the Authority and the other airport sponsors in San Diego County.

To be implementable, Scenario 1B requires facilities at surrounding airports to be similar or with a higher level of service to facilities at San Diego International. The following specific facility improvements were assumed for modeling and cost estimating purposes:

- **Gillespie Field** – Construction of additional FBO/corporate hangars (El Cajon Development); resolve deviations from FAA design standards

- **Montgomery Field** – Construction of new FBO, corporate hangars

- **Brown Field** – Construction of a new FBO, corporate hangars, T-hangars, and helicopter FBO (phase 1 of proposed development)

The total cost for Scenario 1B is estimated to be $188 million and would be funded primarily from private sources. A breakdown of the cost estimates, funding sources, and an implementation timeline is provided in Appendix C.

Additional factors associated with Scenario 1B include potential legal scrutiny based on perceived access restrictions and the fact that there is no legal mechanism to require general aviation users to vacate San Diego International in lieu of reliever airports. In addition, the runway lengths at Montgomery and Gillespie fields are not capable of handling the full range of many high-end corporate general aviation aircraft given range requirements.

Key assumptions for Scenario 1B include:

- All forecast general aviation operations at San Diego International are replaced with commercial aircraft operations

- San Diego International's capacity limit would increase from 14.2 to 15.9 million annual enplaned passengers*

5.2.3 Scenario 1C: Enhance Commercial Passenger Service at McClellan-Palomar

This scenario is intended to optimize regional commercial activity by providing facilities for multi-carrier passenger service at McClellan-Palomar. This scenario would be implemented through leasing and pricing strategies (e.g., strategies making McClellan-Palomar a more attractive option for commercial air service than San Diego International).

To be implementable, Scenario 1C requires the following new or enhanced facilities at McClellan-Palomar:

- 1,000-foot runway extension for a total length of 6,000 feet; requires a bridge foundation due to landfill location
- 8,000 sq ft passenger terminal expansion for a total of 27,000 sq ft
- 2,800 space automobile parking deck

The total cost for Scenario 1C is estimated to be $160 million and would be funded primarily from AIP, PFC, bonds, and/or private sources. A breakdown of the cost estimates, funding sources, and implementation timeline is provided in Appendix C.

Additional factors associated with Scenario 1C include the fact that no mainline jets could use the facility due to irresolvable FAA-required runway-taxiway separation criteria, and therefore, the fleet would remain restricted to regional jet (C-II) type aircraft. Extensive environmental review and approvals would also be required for the runway extension. Finally, most existing airlines at San Diego International are unlikely to split operations between San Diego International and McClellan-Palomar. Therefore, air service would likely be limited to new entrant airlines.

* Based on average seat capacity and load factors provided in the *Destination Lindbergh* report.

Key assumptions for Scenario 1C are as follows:

- Airport capacity would be increased from approximately 500 to 750 thousand annual passenger enplanements

- Non-stop/direct services would be offered to markets within a 1,500 mile radius

- Two subsets of air service "drivers" are considered: (1) McClellan-Palomar infrastructure enhancements where facility expansion attracts more activity; and (2) San Diego International capacity limits where the lack of capacity causes aviation activity to go elsewhere

5.2.4 Scenario 1D: Introduce Commercial Passenger Service at Brown Field Municipal Airport

This scenario maximizes regional commercial passenger activity by providing facilities for multi-carrier commercial service at Brown Field. Such a scenario would be implemented via leasing and pricing strategies (e.g., strategies making Brown Field a more attractive option for commercial air service than San Diego International).

To be implementable, Scenario 1D requires the following new or enhanced facilities at Brown Field:

- New passenger terminal building
- Access/entrance roadway improvements
- 2,800 automobile parking spaces
- Facilities for FAR Part 139 certification (e.g., security fencing, firefighting facilities)
- Various utility upgrades

The total cost for Scenario 1D is estimated to be $100 million and would be funded primarily from AIP and bonds. A breakdown of the cost estimates, funding sources, and an implementation timeline is provided in Appendix C.

Additional factors associated with Scenario 1D include the following:

- The airfield would not restrict the type of aircraft operating at the facility, but service would most likely be provided by regional jets (e.g., ≤70 seat aircraft)

- The proximity of Brown Field to two existing commercial service airports (San Diego and Tijuana Rodriguez International Airports) negatively impacts the viability of this scenario

- The remote location in the southern portion of San Diego County is not desirable for commercial passenger operators
- Terrain and airspace complications hinder the implementation of precision approaches – necessary facilities for the initiation of commercial service
- There has been significant historic public and political opposition to the introduction of commercial service to Brown Field

5.2.5 Scenarios 1E/F: Up-gauge San Diego International's Aircraft Fleet Mix

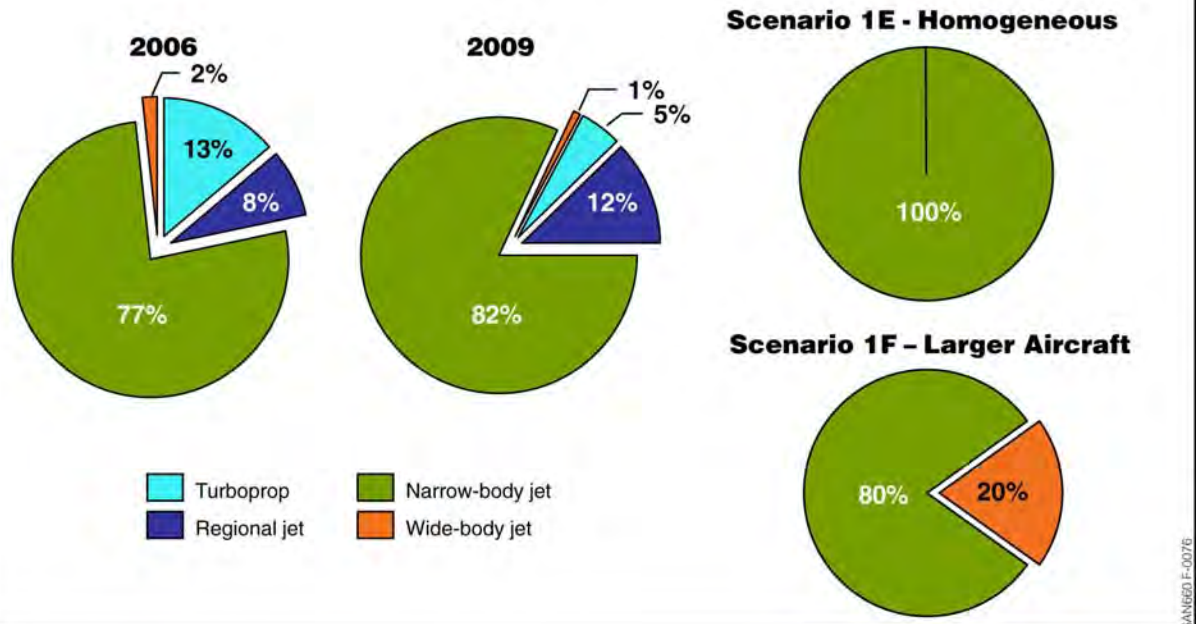
These scenarios maximize the use of San Diego International for commercial passenger activity as follows:

- **Scenario 1E: Homogeneous Narrow-body Fleet** – Encourage air carriers to reduce the use of regional jet or smaller aircraft at San Diego International; aircraft operations would be replaced by narrow-body type aircraft with an average seat capacity of 140 seats
- **Scenario 1F: Increased Wide-body Fleet** – Encourage air carriers to deploy large capacity aircraft at San Diego International; assumes the future fleet mix would comprised of 737 aircraft (50%), 757 aircraft (30%), and 767 aircraft (20%), having an average seat capacity of 180 seats

Figure 5-1

SCENARIOS 1E/1F — SAN DIEGO INTERNATIONAL AIRPORT'S FLEET MIX

Regional Aviation Strategic Plan



Under either scenario, general aviation and air cargo operators would be encouraged to use alternative airports through modified airport rates and charges (see Scenario 1B). To be implementable, Scenarios 1E/F require improvements at the outlying airports, and therefore costs estimates are similar to Scenario 1B ($188 million).

The following summarizes the various constraints associated with implementing either Scenarios 1E/F:

- The Authority has no legal authority to dictate the type of aircraft operated by its users; in the absence of an explicit federal grant authority or federal management, access restrictions for a federally funded transportation facility are not allowed
- San Diego International's fleet mix is already favorable (nearly optimized) as the Airport has a relatively low proportion of regional jets and turboprops
- Market forces normally prevail; air carriers "right size" seat capacity based on the characteristics of their overall network, including destinations served, services, and demand

5.3 ENHANCED UTILIZATION OF TIJUANA

The following three scenarios optimize the utilization of Tijuana Rodriguez International Airport. For modeling purposes, the Baseline Scenario assumes the capacity of Tijuana Rodriguez International would increase from approximately 2.5 to 7.0 million annual passenger enplanements in response to market demands. Costs associated with these improvements are assumed to be incurred by GAP and are not included in the individual scenario costs estimates provided below.

5.3.1 Scenario 2A: Facilitate Border Crossings

This scenario is intended to increase the use of Tijuana Rodriguez International for commercial passenger activity by improving the existing Otay Mesa and San Ysidro international border crossings. Scenario 2A is on Figure 5-2. Scenario 2A assumes the implementation of *Project Smart Border 2010*, which is a San Diego Regional Chamber of Commerce initiative to improve border crossing and access times, but does not propose any new border crossings.

Figure 5-2

CURRENT U.S. PASSENGER ACCESS TO TIJUANA AIRPORT

Regional Aviation Strategic Plan

Key assumptions for Scenario 2A are as follows:

- Border crossing times would be reduced by 40% from approximately 45 minutes*; border crossing costs would remain unchanged from the Baseline Scenario
- Increased shuttle and bus service to Tijuana from the greater Los Angeles metropolitan and San Diego regions
- Increases in air service to Mexican/international markets and limited increases in air service to U.S. markets
- Facility improvements at Tijuana Rodriguez International including upgraded terminal and concourses (i.e., improved and refurbished concessions, holdrooms, ticket counters, etc.); and a new airport bus terminal to accommodate additional passenger activity originating from a U.S. shuttle bus activity

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* Border crossing time is a weighted average wait time computed based on total border crossings reported in 2008, and CBP Border Wait Time reported on U.S. Customs and Border Protection website on 11/24/2009 between 9 a.m. and 4 p.m.

The total cost for Scenario 2A is estimated to be $30 million and could be funded from a variety of sources, including airline fees, federal CBP, and private developers. A breakdown of the cost estimates and funding sources as well as an implementation timeline is provided in Appendix C.

Additional factors associated with Scenario 2B include the distance and time required to travel to Tijuana from downtown San Diego and northern San Diego County, and the myriad cultural factors associated with U.S. passengers entering Mexico (e.g., language barriers, security issues). Cooperation with GAP would be essential for scenario implementation.

5.3.2 Scenario 2B: Aviation Passenger Cross Border Facility

This scenario increases the use of Tijuana Rodriguez International for commercial passenger activity by offering a cross border facility (CBF), allowing U.S. ticketed passengers exclusive and convenient access into the airport. Scenario 2B is depicted in Figure 5-3. The CBF would operate similar to a new pedestrian port of entry and would include vehicle parking, customs/border control, and a landside "connection" or bridge into the airport. Ticketing, security screening, and baggage handling would remain on the Mexican side in the existing terminal building. A user fee to access the CBF would be applied to all users.

Scenario 2B assumes increases in air service to Mexican, international, and U.S. markets; all U.S. origin passengers will access Tijuana Rodriguez International via the CBF, and no U.S. passengers would continue to use existing border crossings to access the airport.

Specific facility improvements associated with this scenario include:

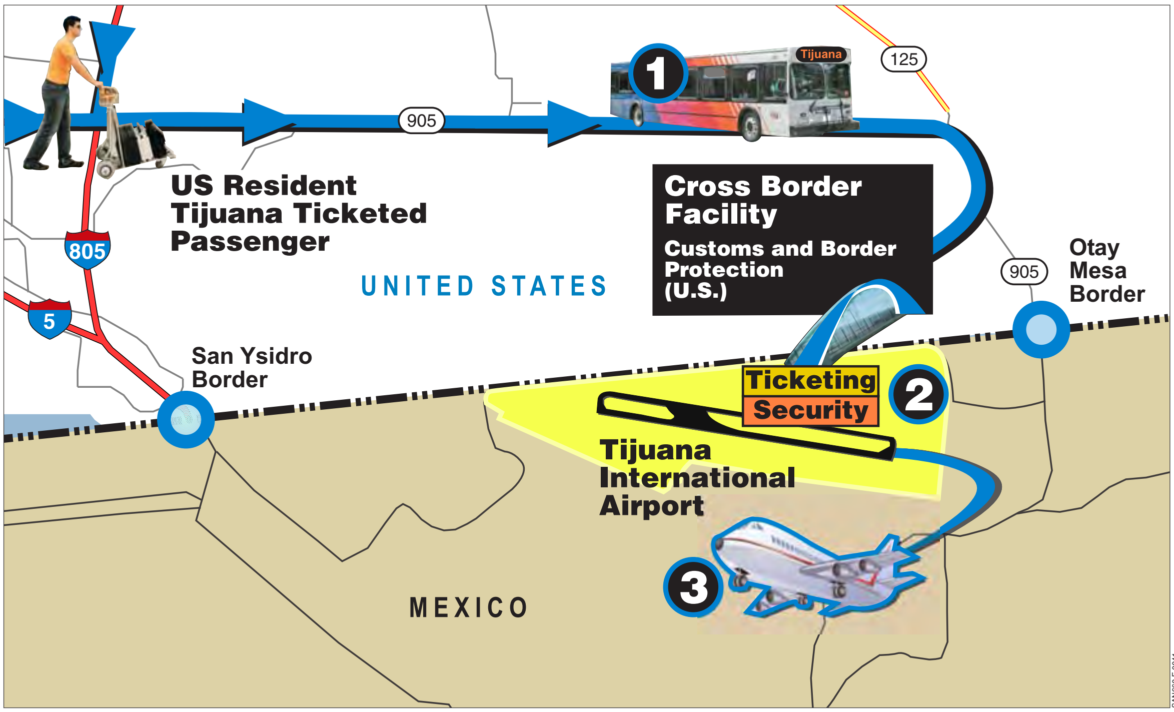
- Tijuana Rodriguez International – Upgraded terminal and concourses (e.g., improved and refurbished concessions, holdrooms, ticket counters)
- CBF – A 50,000 sq ft facility with a connecting bridge to Tijuana Rodriguez International; multimodal curbfront for private vehicles, buses, and taxis; and short- and long-term automobile parking
- Surface Access – Roadway improvements to Highway 905 (Otay Mesa Road) to maintain the level of service assumed in the Baseline Scenario

The total cost for Scenario 2B is estimated to be $165 million and would be funded from private sources. Implementation is assumed in 2012. A breakdown of the cost estimates, funding sources, and implementation timeline is provided in Appendix C.

Additional factors associated with Scenario 2B include the distance and time required to travel to Tijuana from downtown San Diego and northern San Diego County, and the myriad cultural factors associated with U.S. passengers entering

Mexico (e.g., language barriers, security issues). Cooperation with GAP would be essential for scenario implementation.

Figure 5-3
AVIATION PASSENGER CROSS BORDER FACILITY
Regional Aviation Strategic Plan



5.3.3 Scenario 2C: Cross Border Airport Terminal

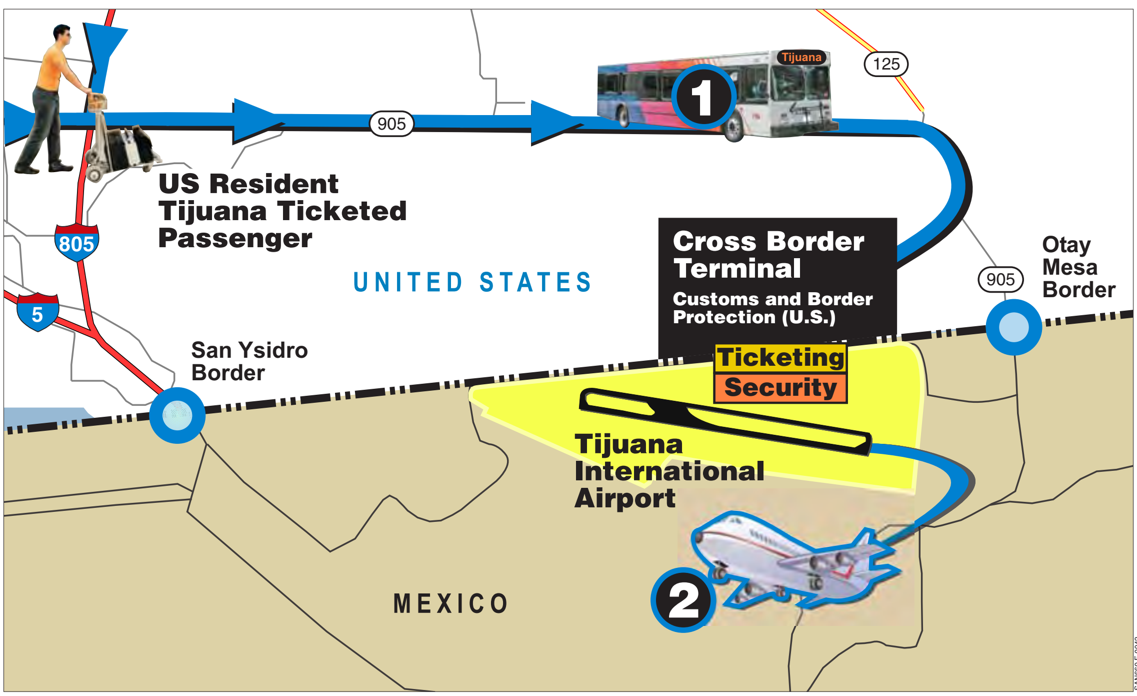
This scenario increases the use of Tijuana Rodriguez International for commercial passenger activity by offering a new passenger cross border terminal (CBT) on the U.S. side of the border to facilitate processing of U.S. passengers utilizing Tijuana Rodriguez International. Scenario 2C is depicted in Figure 5-4. Specifically, the CBT would include parking facilities and redundant Mexican/U.S. passenger processing facilities, such as ticketing, security screening, baggage handling, and customs border control. However, all flights to the U.S. would be considered "international" even if passengers are checked-in on the U.S. side in the CBT. A user fee to access the CBT would be applied to all users.

Similar to Scenario 2B, Scenario 2C also assumes increases in air service to Mexican, international, and U.S. markets; all U.S. origin passengers will access Tijuana Rodriguez International via the CBT and no U.S. passengers would continue to use existing border crossings to access the airport.

Specific facility improvements associated with this scenario include:

- Tijuana Rodriguez International – Upgraded terminal and concourses (i.e., improved and refurbished concessions, holdrooms, ticket counters, etc.); and the capacity of the airport is increased from 7.0 to 10.0 million annual enplanements
- CBT – A 125,000 sq ft terminal facility with a capacity of 3.0 million annual enplanements; multimodal curbfront for private vehicles, buses, and taxis; and short- and long-term automobile parking
- Surface Access – Roadway improvements to Highway 905 (Otay Mesa Road) to maintain the level of service assumed in the Baseline Scenario

Figure 5-4
CROSS BORDER AIRPORT TERMINAL
Regional Aviation Strategic Plan



The total cost for Scenario 2C is estimated to be $235 million and would be funded from private sources. Implementation is assumed in 2020. A breakdown of the cost estimates, funding sources, and implementation timeline is provided in Appendix C.

Additional factors for consideration include political and regulatory factors and the time required to travel to the border from downtown San Diego and northern San Diego County. Cooperation with GAP and between the U.S. and Mexican governments would be imperative.

5.4 CALIFORNIA HIGH SPEED RAIL

The proposed California HSR alignment is presented on Figure 5-5. Under current plans, the southern end of the HSR corridor will terminate in San Diego County, at either the downtown Santa Fe depot /train station or San Diego International Airport, and include stations at downtown Los Angeles Union Station and Ontario International Airport.

Figure 5-5

PROPOSED CALIFORNIA HIGH SPEED RAIL ALIGNMENT

Regional Aviation Strategic Plan

Source: California High Speed Rail Authority, 2010.

HSR can be used as an alternative or replacement for intra-California air travel (see Figure 5-6) or to access an airport within California (see Figure 5-7). Both "mode choices" are assessed in the RASP. Time and cost assumptions for the two mode choices are presented on Figure 5-8.

Figure 5-6

POTENTIAL USE OF HIGH SPEED RAIL AS AN ALTERNATIVE TO AIR TRAVEL

Regional Aviation Strategic Plan

Figure 5-7

HIGH SPEED RAIL FOR AIRPORT ACCESS

Regional Aviation Strategic Plan

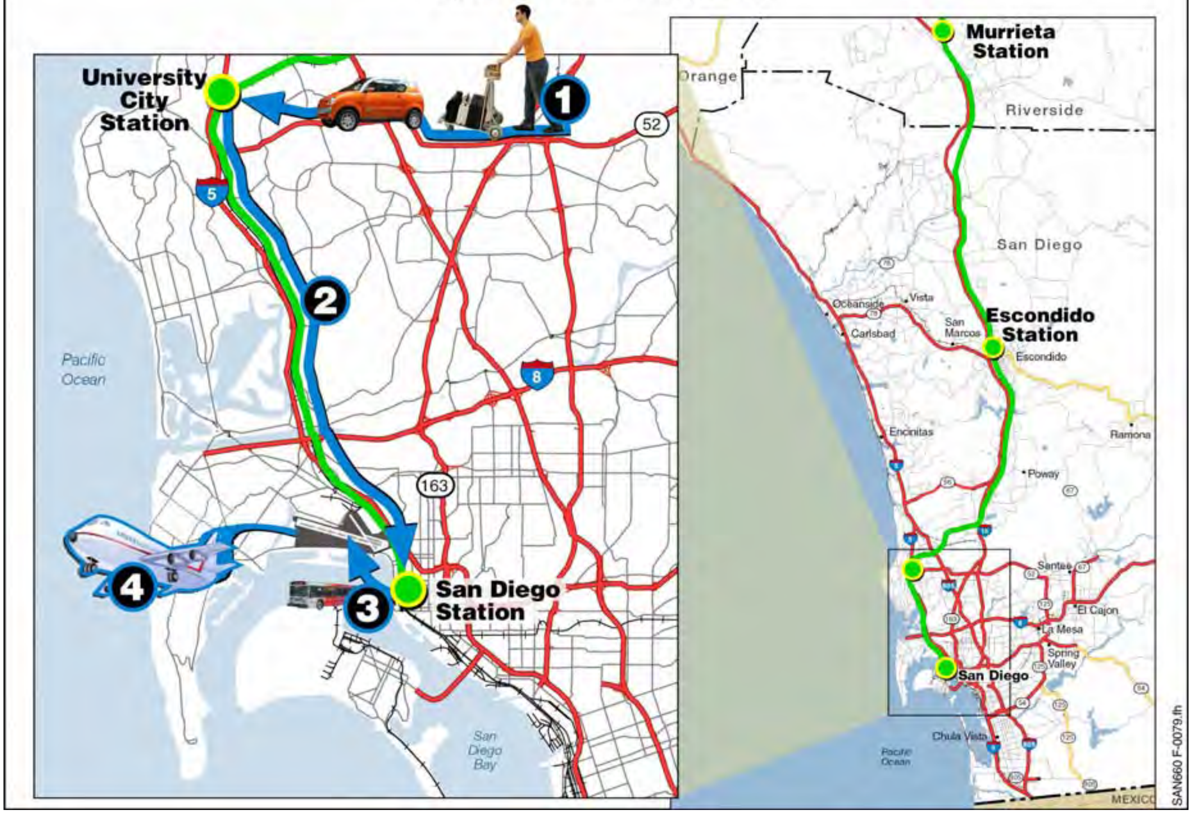


Figure 5-8

TIME AND COST ASSUMPTIONS FOR VARIOUS MODE CHOICES

Regional Aviation Strategic Plan

	Total Time	Total Cost
Air Only Trip (Baseline)	Time to get to airport + Air boarding time (75 min) + Flight time	Cost of driving to airport + Flight ticket cost model-driven
HSR Only Trip	Time to get to HSR station + HSR boarding time (15 min) + HSR travel time	Cost of driving to HSR station + HSR ticket cost
Mixed Mode Trip	Time to get to HSR station + HSR boarding time (15 min) + HSR travel time + Connection time (if any) + Air boarding time (75 min) + Flight time	Cost of driving to HSR station + HSR ticket cost + Connection cost (if any) + Flight ticket cost model-driven

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Red text source = SANDAG/SCAG
Green text source = California High Speed Rail Authority
Blue text = Official Airline Guide
Black text = RASP Model

The following describes the two scenarios assessed in the RASP. For modeling purposes, Phase 1 is estimated to commence service in 2019 (includes Los Angeles Union Station but not Ontario International) and Phase 2 (including Ontario International south to San Diego County) is estimated to start in 2027. The cost estimates and allocation of costs among funding sources is unknown, but is anticipated to be greater than $1.0 billion.

5.4.1 Scenario 3A: HSR Station at Downtown San Diego

This scenario assumes a downtown San Diego HSR terminus at the existing Santa Fe train Station, with ground access connections to the ITC at San Diego International. Options for connectivity between downtown and San Diego International include trolley service (existing trolley lines with new/additional trolleys during peak) and new bus routes (with new/additional buses).

Additionally, this scenario provides San Diego residents and visitors an alterative access to Ontario International Airport via HSR which is proposed to connect the San Diego region via the Inland Empire to the greater Los Angeles metropolitan area. A HSR station at Ontario Airport is assumed to be located within, or the vicinity of, the Airport terminal for optimal connection. Options for connectivity include direct pedestrian access, moving walk and/or airport shuttle.

The California HSR Authority's estimates and assumptions for the "83% Scenario" were adopted for the RASP and used to calibrate the Model. Key assumptions include:

- HSR fares assumed to be 83% of airfare costs
- HSR travel time between San Diego and San Francisco approximately four hours
- Passengers arrive at the HSR station 15 minutes prior to departure (as compared to 75 minutes for air travel)

Assumptions regarding connection times and fares are as follows:

- Downtown HSR station to San Diego International Airport terminal = 30 min connection time / $4
- Ontario International HSR station to the Ontario International Airport terminal = 10 min connection time / $0

5.4.2 Scenario 3B: HSR Station at San Diego International Airport

This scenario assumes a HSR station on the north side of San Diego International, adjacent or connected to the ITC. The HSR station would offer direct pedestrian access to the ITC, and include auto parking, CONRAC, and some passenger processing (see Scenario 1A).

The key assumptions as related to HSR fare, HSR travel times, opening years, pre-boarding times, and Ontario International connection times are the same as Scenario 3A. The assumption regarding connection times at San Diego is the following: ITC HSR station to the San Diego International Airport terminal = 10 min connection time / $0.

5.5 GENERAL AVIATION OPTIMIZATION

The following sections describe the general aviation scenarios intended to optimize the San Diego County Airport System by redistributing general aviation activity and based aircraft away from airports that are dedicated to commercial passenger service. Each scenario is based on the premise that facility improvements (e.g., implementation of an ILS, high-end FBO, new storage facilities) at certain airports may incentivize aircraft owners to relocate to or increase their utilization of the airport being improved.

A separate general aviation demand model (GA Model) was developed independently to evaluate the General Aviation Optimization scenarios. In general, the GA Model evaluates potential changes in general aviation aircraft operations at airports subject to improvements associated with the various scenarios. The Model was developed separately from the econometric demand model because general aviation operations are driven less by airline competitive forces and more principally by factors such as the local economy, number of active pilots, aircraft hours flown, and airport facilities. Also, as opposed to commercial passenger activity, the region has sufficient capacity to accommodate future general aviation demand, and therefore, general aviation activity is not impacted by capacity constraints in San Diego County.

Operations in the GA Model were allocated among two "demand" types – corporate and non-corporate/recreational. Corporate operations are defined as operations associated with FAR Part 91 for "Business" and "Corporate" uses, and FAR Part 135 on-demand "Air Taxi" use. Remaining operations were classified as non-corporate. The number of aircraft operations for each "demand" type in San Diego County was determined based on the number of active aircraft in their relevant categories documented in materials published by General Aviation Manufacturers Association (GAMA). The total number of active aircraft is summarized in Table 5-1.

Table 5-1
NUMBER OF ACTIVE GENERAL AVIATION AIRCRAFT BY AIRCRAFT TYPE IN THE U.S. (2008)
Regional Aviation Strategic Plan

Aircraft Type	Corporate *(a)*	Non-corporate *(b)*	Total active
Jet	9,629	1,410	11,042
Turboprop	5,113	3,794	8,907
Multi-Engine Piston	7,106	10,409	17,515
Single-Engine Piston	15,882	129,617	145,499
Helicopter	2,189	7,689	9,878
Others			
Gliders	9	1,905	1,914
Lighter-Than-Air	44	3,694	3,738
Experimental	988	22,376	23,364
Light-Sport	58	6,753	6,811
Subtotal	1,099	34,728	35,827
Total	41,020	187,642	228,663

Note: Totals may not add due to rounding.

(a) Corporate aircraft include: FAR Part 91 Business, Corporate use, and FAR Part 135 Air Taxi use.

(b) Non-corporate aircraft include: FAR Part 91 Personal, Instructional, Aerial Apps, Aerial Obs, Aerial Other, External Load, Other Work, Sightsee, Air Med, Other; and FAR Part 135 Air Tours.

Source: General Aviation Manufacturers Association, *2009 General Aviation Statistical Databook & Industry Outlook,* Table 2.1.

The breakdown of corporate and non-corporate operations by aircraft type is summarized in Table 5-2.

5.5.1 Scenario 4A: Enhance McClellan-Palomar Airport for High-end / Corporate General Aviation

This scenario increases the use of McClellan-Palomar for high-end/corporate general aviation by providing the necessary airfield, aircraft basing, and other amenities in order to shift aviation activity from San Diego International to McClellan-Palomar. The scenario assumes that McClellan-Palomar would no longer accommodate commercial passenger activity and the existing terminal building would be converted into a high-end FBO facility. The scenario requires a 1,000-foot runway extension to the airport's existing single runway to accommodate a near full range of high-end general aviation aircraft.

Table 5-2
BREAKDOWN OF CORPORATE AND NON-CORPORATE OPERATIONS BY AIRCRAFT TYPE

Regional Aviation Strategic Plan

Aircraft type	Corporate	Non-corporate
Jet	93%	7%
Turboprop	73	27
Multi-Engine Piston	58	42
Single-Engine Piston	20	80
Helicopter	36	64
Other	6	94

Source: Jacobs Consultancy, based on *San Diego County Regional Aviation Strategic Plan, Aviation Demand Forecasts,* Landrum & Brown, Inc., December 2008.

This scenario would be implemented via leasing and pricing strategies; but would also require a "coordinated" FBO/general aviation policy between the Authority and the other airport sponsors in San Diego County.

Figure 5-9 summarizes the key assumptions for Scenario 4A associated with the potential shift in general aviation traffic from existing system airports to McClellan-Palomar based on the improvements and assumed policy and pricing strategies. As presented, McClellan-Palomar would experience a 2% and 21% increase in recreational and corporate general aviation activity, respectively. The assumptions were derived from stakeholder input and information gathered during the Strategic Assessment.

The total cost for Scenario 4A is estimated to be approximately $85 million and would be funded from a combination of federal grants, private sources, and user fees. A breakdown of the cost estimates, funding sources, and an implementation timeline is provided in Appendix C.

Additional factors associated with Scenario 4A include the implications and cost savings for San Diego County if the airport were to cease its FAR Part 139 certification. In addition, extensive environmental review and FAA and state approvals would be required for the runway extension.

Figure 5-9

POTENTIAL GENERAL AVIATION TRAFFIC SHIFT TO McCLELLAN-PALOMAR

Regional Aviation Strategic Plan

San Diego (SAN)	Substantial traffic shift due to high congestion at SAN; significant number of corporate operations would remain due to downtown proximity
Gillespie (SEE)	Some high-end GA traffic may shift due to FBO facility, increased runway length, and ILS
Montgomery Field (MYF)	Some corporate traffic may shift due to FBO facility and ILS
Oceanside (OKB)	No traffic shift since current demand at OKB would not benefit from ILS or longer runway
Brown Field (SDM)	Some corporate traffic may shift due to FBO facility and ILS; however shift likely to be low given 50 mile distance between SDM and CRQ
Ramona (RNM)	No traffic shift since current demand at RNM would not benefit from ILS or longer runway

5.5.2 Scenario 4B: Enhance Brown Field Municipal Airport for High-end / Corporate General Aviation

This scenario maximizes the use of Brown Field for high-end/corporate general aviation by providing the necessary facilities and amenities in order to shift aviation activity from San Diego International to Brown Field. This scenario is consistent with a private developer's current plan and FAA approved ALP, and requires the construction of an additional FBO, corporate hangars, and T-hangars.

This scenario would be implemented via leasing and pricing strategies, but would also require a "coordinated" FBO/general aviation policy between the Authority and the other airport sponsors in San Diego County. It should be noted that the airport's existing runway length is adequate, but may require reconstruction for additional strength in the future.

Figure 5-10 summarizes the key assumptions for Scenario 4B associated with the potential shift in general aviation traffic from existing system airports to Brown Field based on the improvements and assumed policy and pricing strategies. As presented, Brown Field would experience a 2% increase in both recreational and corporate general aviation activity. The assumptions were derived from stakeholder input and information gathered during the Strategic Assessment.

The total cost for Scenario 4B is estimated to be approximately $65 million and would be funded from a combination of federal grants, private sources, and user fees. A breakdown of the cost estimates, funding sources, and an implementation timeline is provided in Appendix C.

Additional factors associated with Scenario 4B include the fact that planning for certain facilities is already underway and community and political support would be anticipated.

5.5.3 Scenario 4C: Enhance Gillespie Field for Mixed-use General Aviation

This scenario maximizes the use of Gillespie Field for both high-end/corporate and recreational general aviation by providing the necessary facilities and amenities in order to shift aviation activity from San Diego International to Gillespie Field. This scenario requires (1) implementation of "El Cajon Plaza", a planned 70-acre development including FBO site, indoor storage hangars, and tie-down space; (2) correction of existing airfield design standard deficiencies; and (3) utility upgrades and drainage improvements.

Such a scenario would be implemented by leasing and pricing strategies; it would also require a "coordinated" FBO/general aviation policy between the Authority and the other airport sponsors in San Diego County. It should be noted that the airport's longest runway could not reasonably be extended to a length sufficient for the full range of corporate jet operations.

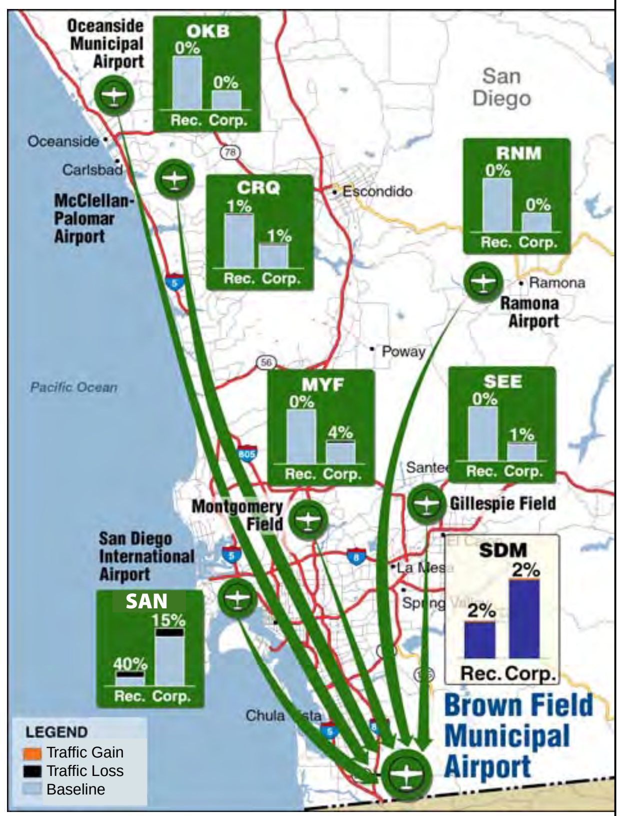
Figure 5-11 summarizes the key assumptions for Scenario 4C associated with the potential shift in general aviation traffic from existing system airports to Gillespie Field based on the improvements and assumed policy and pricing strategies. As presented, Gillespie Field would experience 2% and 37% increases in recreational and corporate general aviation activity, respectively. The assumptions were derived from key inventory data, stakeholder input, and information gathered during the Strategic Assessment.

Figure 5-10

POTENTIAL GENERAL AVIATION TRAFFIC SHIFT TO BROWN FIELD MUNICIPAL AIRPORT

Regional Aviation Strategic Plan

San Diego (SAN)	Substantial traffic shift due to high congestion at SAN; significant number of corporate operations would remain due to downtown proximity
Gillespie (SEE)	Some high-end GA traffic may shift due to FBO facility, increased runway length, and ILS
Montgomery Field (MYF)	Some corporate traffic may shift due to FBO facility and ILS
Oceanside (OKB)	No traffic shift since current demand at OKB would not benefit from ILS or longer runway
Brown Field (SDM)	Some corporate traffic may shift due to FBO facility and ILS; however shift likely to be low given 50 mile distance between SDM and CRQ
Ramona (RNM)	No traffic shift since current demand at RNM would not benefit from ILS or longer runway



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The total cost for Scenario 4C is estimated to be approximately $90 million and would be funded from a combination of federal grants, private sources, and user fees. A breakdown of the cost estimates and funding sources as well as an implementation timeline is provided in Appendix C.

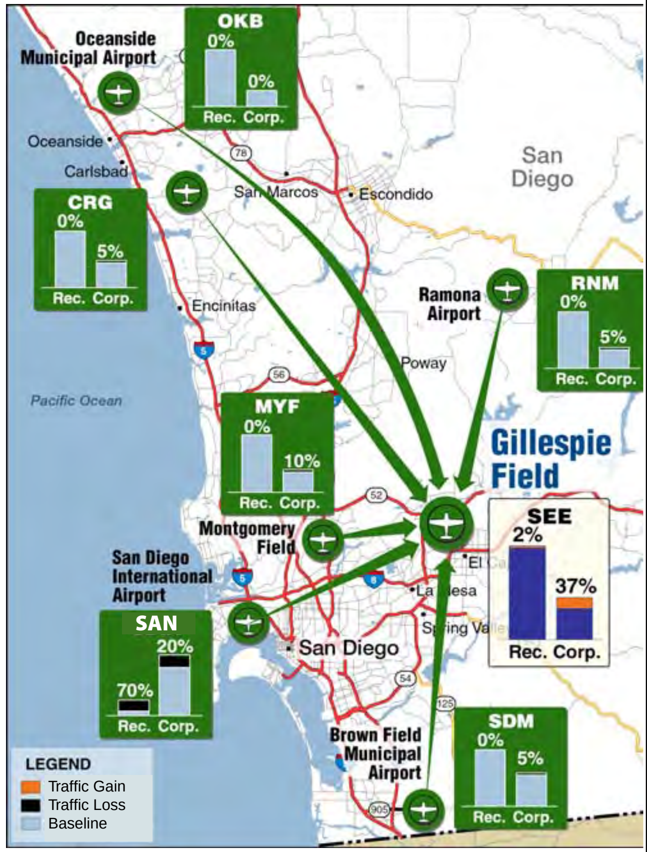
Additional factors associated with Scenario 4C include the fact that planning for certain facilities is already underway and various federal and state environmental approvals would be required for a number of projects.

Figure 5-11

POTENTIAL GENERAL AVIATION TRAFFIC SHIFT TO GILLESPIE FIELD

Regional Aviation Strategic Plan

San Diego (SAN)	Moderate traffic shift due to high congestion at SAN; significant number of corporate operations would remain due to close proximity to downtown
McClellan-Palomar (CRQ)	Some high-end GA traffic shift expected for FBO facility.
Montgomery Field (MYF)	Some corporate traffic shift expected for FBO facility
Oceanside (OKB)	No traffic shift since the existing demand at OKB would not benefit from the enhancement at SEE
Brown Field (SDM)	Some corporate traffic shift expected due to FBO facility
Ramona (RNM)	Some corporate traffic shift expected due to FBO facility



5.6 AIR CARGO OPTIMIZATION

The following describes the single air cargo scenario intended to optimize the capacity of the Airport System by distributing air cargo activity away from airports dedicated to commercial passenger service. Note that this scenario applies only to all-cargo aircraft, since passenger aircraft carry air cargo in their more limited cargo holds.

5.6.1 Scenario 5A: Introduce Air Cargo Service at Brown Field Municipal Airport

This scenario is intended to maximize the use of Brown Field for air cargo activity by providing the necessary facilities and amenities in order to shift this type of user from San Diego International to Brown Field. This scenario requires the following:

- New cargo buildings and apron
- Upgrade airfield pavements for air cargo operations

- Improve access roads around the airport (a number of these improvements are already scheduled through SANDAG)
- Utility upgrades and drainage improvements

Such a scenario would be implemented by leasing and pricing strategies. It should be noted that the airport's existing runway length is adequate, but it may require reconstruction for additional strength in the future. The total cost for Scenario 5A is estimated to be approximately $235 million and would be funded from a combination of federal grants, private sources, and user fees. A breakdown of the cost estimates, funding sources, and implementation timeline is provided in Appendix C.

Based on conversations with the community and stakeholders, the following summarizes the various constraints associated with implementing Scenario 5A:

- Air cargo operators are unwilling to operate from facilities south of San Diego International due to increased distance from air cargo sorting infrastructure
- The majority of San Diego International air cargo is accommodated on integrated/express air cargo carriers (90%) and originates in or is destined for downtown San Diego
- There is a significant lack of cargo infrastructure (e.g., freight forwarders) located nearby Brown Field whereas this type of supporting infrastructure is already in place near San Diego International
- Significant public and political opposition would be anticipated; prior initiatives to upgrade Brown Field for air cargo activity were abandoned based on such opposition

Chapter 6

ALTERNATIVE SCENARIO FINDINGS

This chapter summarizes the findings for each alternative scenarios assessed in the RASP. A description of each alternative scenario is presented in Chapter 5.

6.1 COMMERCIAL PASSENGER OPTIMIZATION SCENARIOS

The following describes the findings related to the six scenarios intended to optimize commercial passenger (or airline) activity within San Diego County.

6.1.1 Scenario 1A: Full Build-out of the ITC and North Side Terminal at San Diego International

Scenario 1A maximizes the use of San Diego International for commercial passenger activity by expanding the ITC to accommodate between 1.2 and 1.8 million passengers. The full build-out of the ITC would include passenger processing facilities (ticketing, baggage claim, security screening, etc.), and an automated people mover (APM) connecting the ITC to the concourses on the south side of the Airport.

Projected annual passenger enplanements at San Diego International under Scenario 1A are presented on Figure 6-1. As presented, projected enplanements under Scenario 1A are virtually the same as for the Baseline Scenario. The slight decrease in enplanements around 2027 is attributable to over-crowding at San Diego International since airport access would be enhanced based on the *Destination Lindbergh* concept (i.e., additional surface transportation options, including a connection platform for the green trolley line and I-5 off-ramp north). Improved surface access would lead to increased congestion, and therefore, the airport would be temporarily less attractive. Demand is projected to stabilize beyond 2029.

Scenario 1A does not reduce use of San Diego International by any user type, nor provide additional airfield facilities. Therefore, the full build-out of the ITC has no impact on the airport's capacity constraints (the intent of the project is to enhance level of service, rather than to increase San Diego International's capacity). As presented on Figure 6-2, Scenario 1A does not reduce the projected suppressed demand associated with the Baseline Scenario.

Figure 6-1

SCENARIO 1A — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan

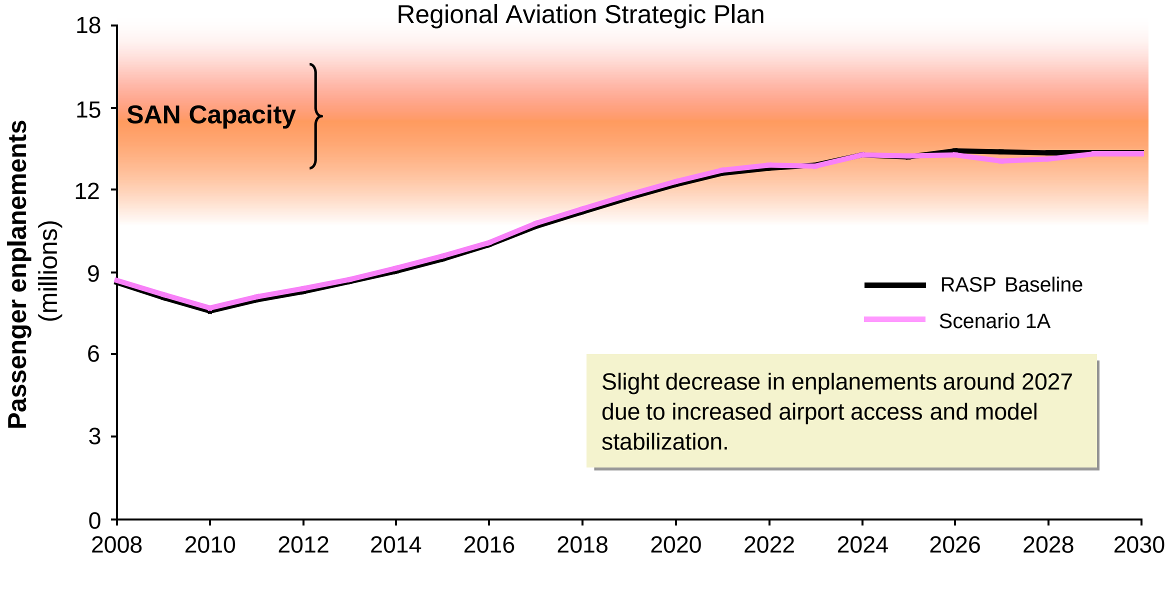
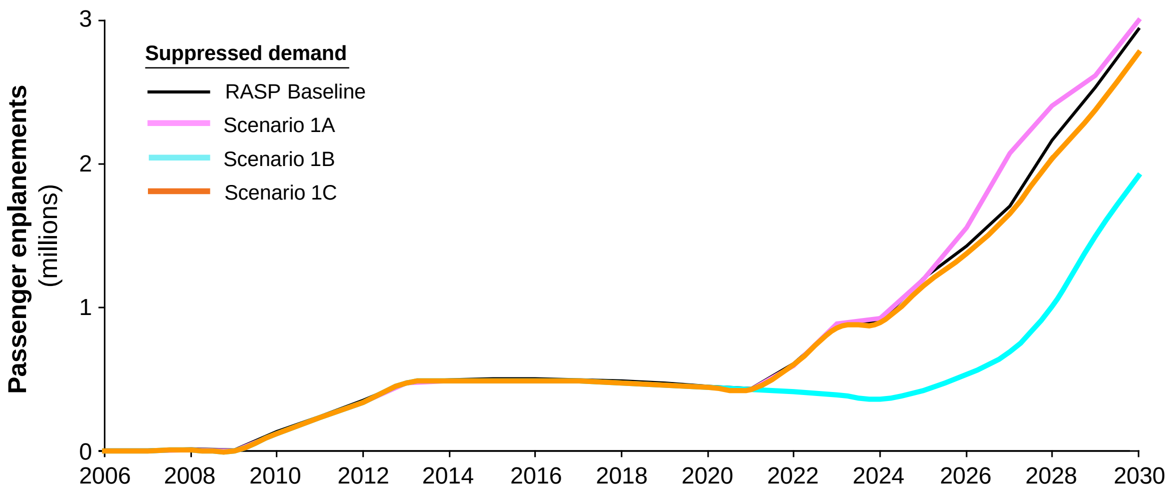


Figure 6-2

SCENARIOS 1A, B, C — EFFECT ON SUPPRESSED AVIATION PASSENGER DEMAND

Regional Aviation Strategic Plan



Notes: Suppressed demand presented above relative to 2006; some suppressed demand already exists. Data for San Diego County residents and visitors only.

6.1.2 Scenario 1B: Preserve San Diego International's Airfield Capacity for Commercial Passenger Service

Scenario 1B maximizes the use of San Diego International for commercial passenger activity by encouraging non-commercial and general aviation activity to use alternative facilities.

It is assumed under Scenario 1B that (1) reductions in non-commercial and general aviation activity would be replaced by commercial service aircraft operations; (2) the airport fleet mix would become more homogeneous with an increasing percentage of air carrier narrow-body type aircraft; and (3) non-commercial activity would be accommodated at other system airports. A more homogeneous fleet mix has the effect of increasing San Diego International's theoretical airfield capacity from approximately 14.0 to 15.9 million annual passenger enplanements.

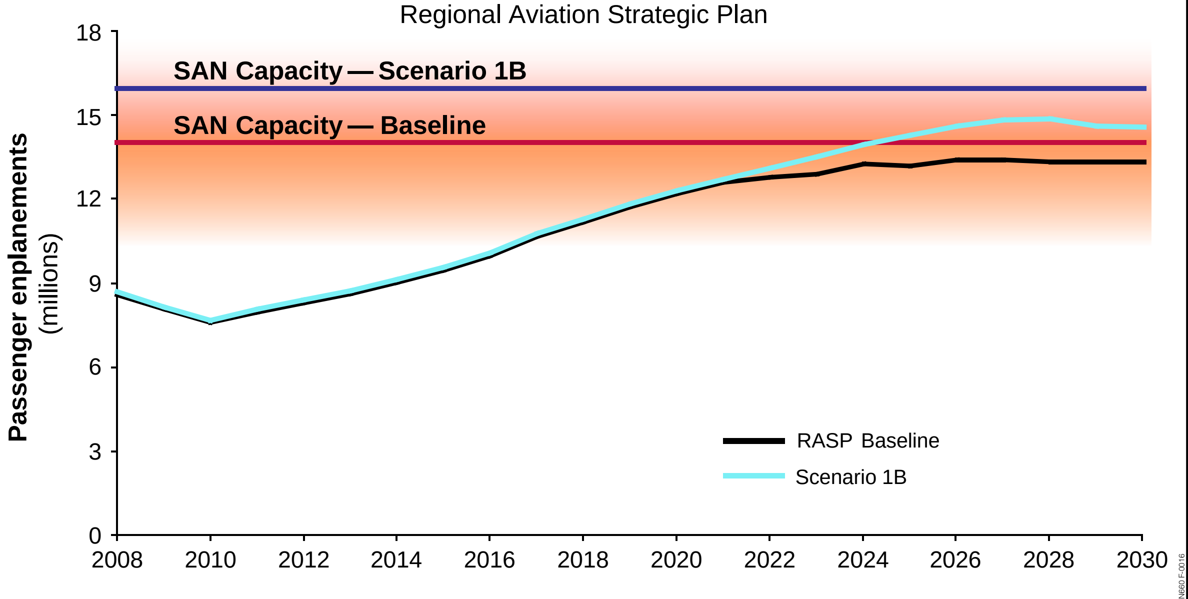
Projected annual passenger enplanements at San Diego International under Scenario 1B are presented on Figure 6-3. As presented, the increase in theoretical capacity results in an increase in projected passenger enplanements over the Baseline Scenario between 2020 and 2028.

As presented on Figure 6-2, Scenario 1B reduces the projected suppressed demand associated with the Baseline Scenario beginning around 2020. Therefore, removing general aviation and air cargo operations would delay the capacity constraints at San Diego International by approximately five years, from approximately 2025 to 2030.

Figure 6-3

SCENARIO 1B — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan



6.1.3 Scenario 1C: Enhance Commercial Passenger Service at McClellan-Palomar

Scenario 1C is intended to maximize regional commercial passenger activity by providing facilities for multi-carrier commercial service at McClellan-Palomar. It is assumed under Scenario 1C that additional terminal and parking facilities at McClellan-Palomar would increase the Airport's capacity from approximately 500,000 to 750,000 annual passenger enplanements.

Two modeling alternates, or subsets, of Scenario 1C, were assessed:

- Scenario 1C: San Diego International Capacity Driven – Growth in demand at McClellan-Palomar is primarily driven by capacity constraints at San Diego International

- Scenario 1C: Infrastructure Driven – Growth in demand at McClellan-Palomar is primarily driven by the facility improvements provided at McClellan-Palomar

Projected annual passenger enplanements at McClellan-Palomar under the Baseline Scenario and two modeling alternates are presented on Figure 6-4. As presented, annual passenger enplanements under the Baseline Scenario increase substantially around 2024, which corresponds to the period when San Diego International is anticipated to reach its airfield capacity. Additional findings are as follows:

- Scenario 1C: San Diego International Capacity Driven – Projected enplanements follow, but then increase beyond the Baseline Scenario beginning in 2024.

- Scenario 1C: Infrastructure Driven – Projected enplanements increase above the Baseline Scenario around 2020.

Projected enplanements under both alternates are similar beginning in 2027, reflecting the fact that demand at McClellan-Palomar is highly affected by when San Diego International reaches capacity.

Projected annual passenger enplanements at San Diego International under Scenario 1C are presented on Figure 6-5. As presented, projected enplanements under Scenario 1C are virtually the same as projected for the Baseline Scenario. Increased commercial passenger service at McClellan-Palomar does not alleviate capacity constraints at San Diego International, primarily because the additional demand that can be accommodated at McClellan-Palomar only accounts for 5% of San Diego International's total traffic and the number of destinations offered at McClellan-Palomar is much more limited compared to San Diego International. As presented on Figure 6-2, Scenario 1C does not reduce the projected suppressed demand associated with the Baseline Scenario.

Figure 6-4

SCENARIO 1C — MCCLELLAN-PALOMAR ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan

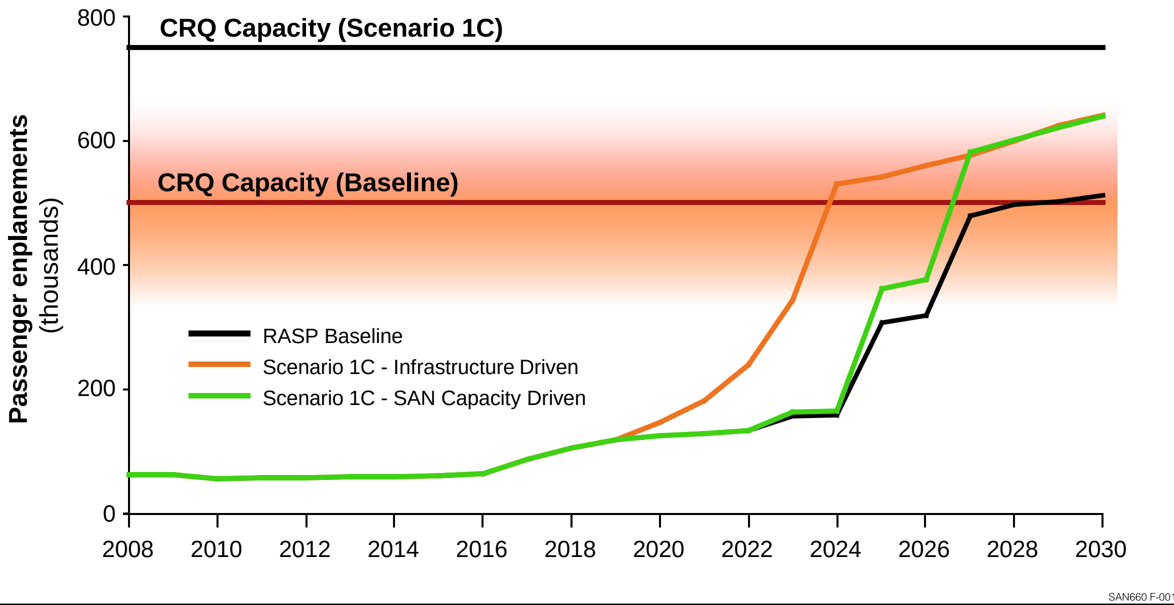
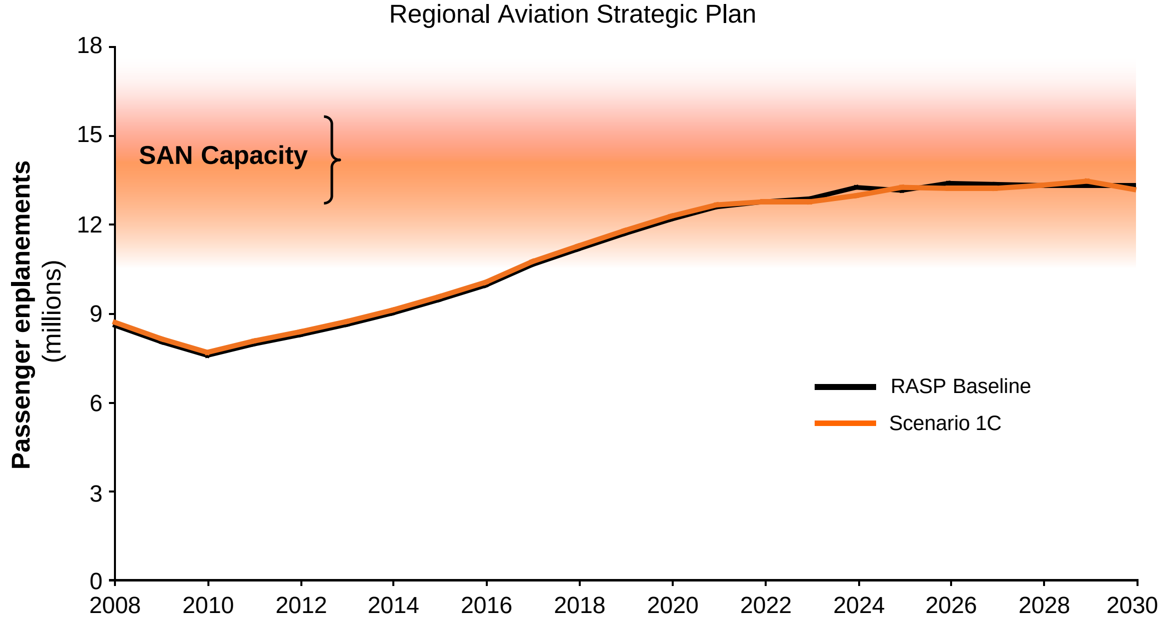


Figure 6-5

SCENARIO 1C — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan



6.1.4 Scenario 1D: Introduce Commercial Passenger Service at Brown Field Municipal Airport

Scenario 1D maximizes regional commercial passenger activity by providing facilities for multi-carrier commercial service at Brown Field. As discussed in Chapter 5, implementation of a precision instrument approach at Brown Field is necessary for the initiation of commercial service.

However, per two FAA determinations (letters to the City of San Diego in 2009 and 2010, provided in Appendix A) provided as part of the RASP planning process, it was determined that precision instrument approaches are infeasible at Brown Field due to terrain and airspace complications. Specifically:

- A precision instrument approach into Runway 26R is infeasible because extremely high terrain is situated to the north and east, and the international border with Mexico is located 1.5 miles south of the airport.

- A precision instrument approach into Runway 8L is infeasible because rapidly rising terrain is located to the northeast; and the international border with Mexico restricts development of a missed approach procedure.

In summary, commercial service at Brown Field is highly unlikely without an instrument approach. Based on all the above, after consultation with the RASP Subcommittee and stakeholders, Scenario 1D was omitted from additional consideration in the RASP.

6.1.5 Scenarios 1E/F: Up-gauge San Diego International's Aircraft Fleet Mix

Scenarios 1E/F maximize the use of San Diego International for commercial passenger activity. It is assumed under Scenarios 1E/F that (1) reductions in non-commercial and general aviation activity would be replaced by commercial service aircraft operations; and (2) the airport's fleet mix would become more homogeneous with an increasing percentage of air carrier narrow-body type aircraft.

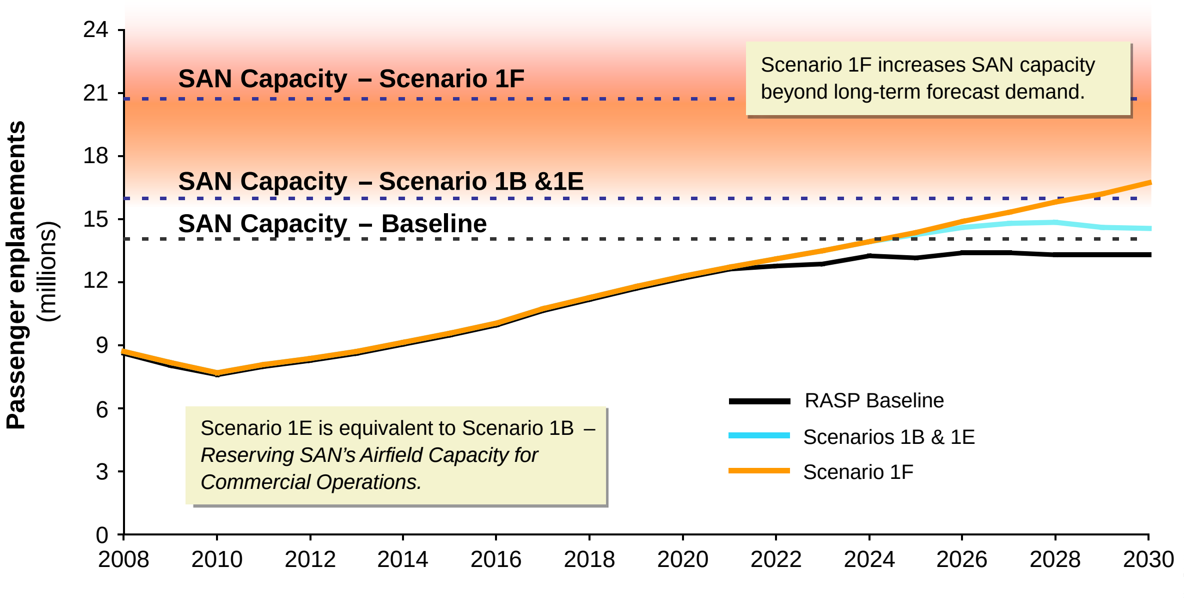
As presented on Figure 6-6, the change in the fleet mix under Scenario 1E has the effect of increasing San Diego International's theoretical airfield capacity from approximately 14.0 to 16.0 million annual passenger enplanements. Similarly, the change in fleet mix under Scenario 1F would increase the theoretical airfield capacity to 19.5 million annual passenger enplanements.

Projected annual passenger enplanements at San Diego International under both Scenarios 1E/F increase over the Baseline Scenario beginning around 2020. The growth in projected enplanements under Scenario 1E begins to slow around 2026 as the scenarios reach the airfield's capacity. The growth in projected enplanements under Scenario 1F does not taper off and this scenario has the capability to accommodate demand at San Diego International through the forecast period. As explained in Chapter 5, however, there are a number of obstacles to implementing these scenarios.

Figure 6-6

SCENARIOS 1E/F — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan



6.2 ENHANCED UTILIZATION OF TIJUANA SCENARIOS

The following describes the findings related to the three scenarios intended to optimize the utilization of Tijuana Rodriguez International Airport. For modeling purposes, the Baseline Scenario assumes the airport's capacity would be increased from approximately 2.5 to 7.0 million annual passenger enplanements, with the costs incurred by Grupo Aeroportuario del Pacifico (GAP).

6.2.1 Scenario 2A: Facilitate Border Crossings

Scenario 2A maximizes the use of Tijuana Rodriguez International for commercial passenger activity by improving border crossing and offering additional means of accessing the airport via the existing Otay Mesa and San Ysidro border crossings.

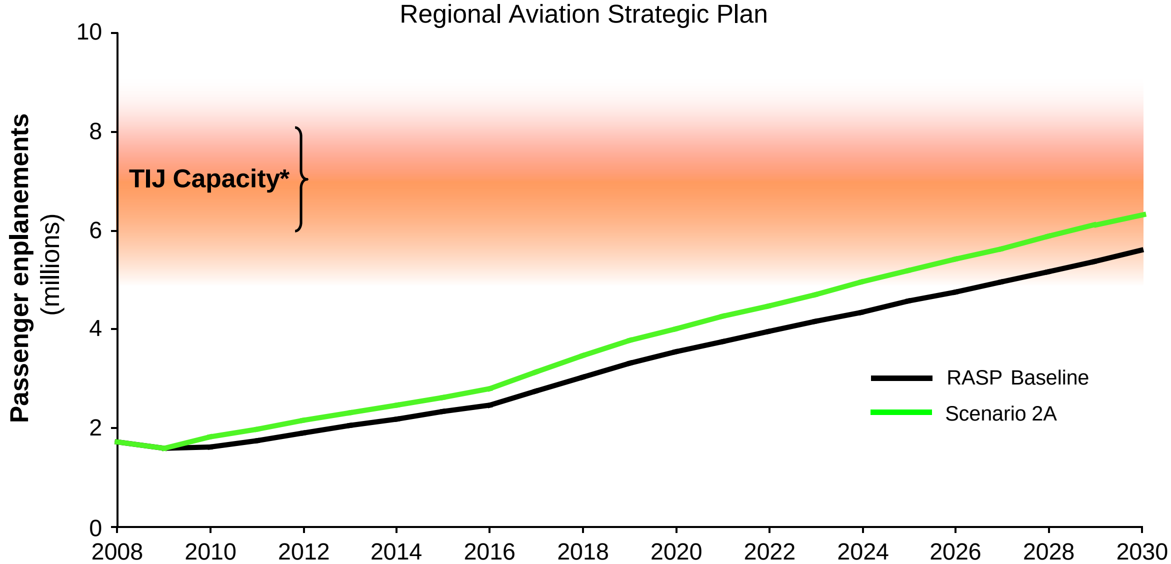
Projected annual passenger enplanements at Tijuana Rodriguez International and San Diego International under Scenario 2A are presented on Figures 6-7 and 6-8, respectively. As compared to the Baseline Scenario, border improvements are projected to result in more passengers using Tijuana Rodriguez International, but fewer passengers using San Diego International. The decrease in San Diego International enplanements is a result of region-wide competitive changes in airfares and services, as passengers are projected to choose other regional airports in addition to Tijuana due to region-wide competitive changes in price and service. This reflects the fact that as airports across Southern California become congested, actions at one airport to increase capacity cascade across the regional airports in ways best depicted by the Model.

As presented on Figure 6-9, the increased usage of Tijuana Rodriguez only marginally alleviates the mid-term capacity constraint at San Diego International.

Figure 6-7

SCENARIO 2A — TIJUANA RODRIGUEZ ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan



Note: The capacity of TIJ is assumed to increase as part of the Baseline Scenario from approximately 2.5M annual enplanements toapproximately 7M annual enplanements. The costs to increase capacity are assumed will be incurred by GAP, and are not included in the RASP costs estimates.

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Figure 6-8

SCENARIO 2A — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan

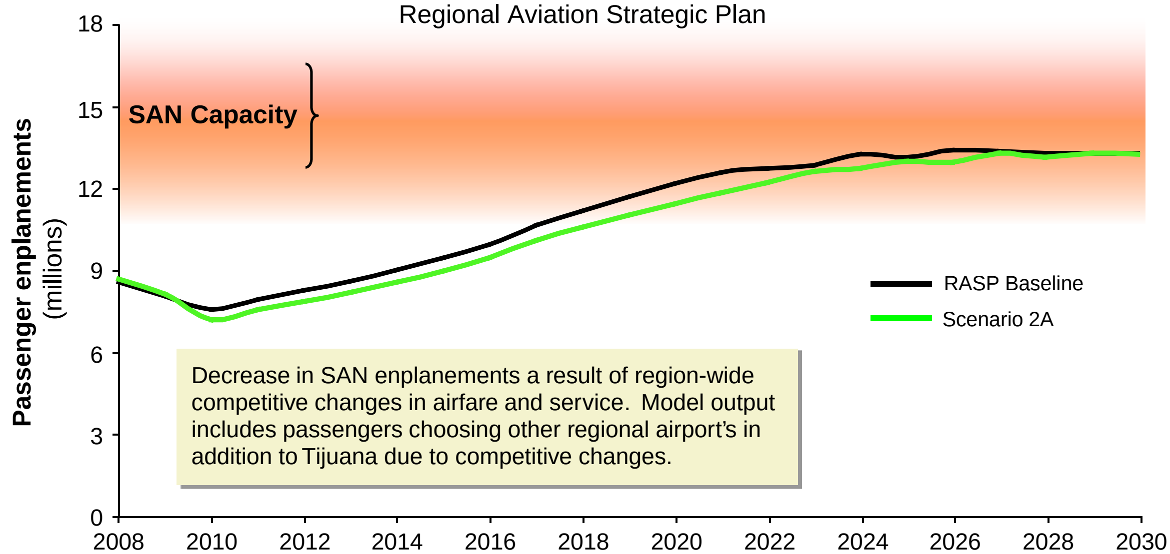
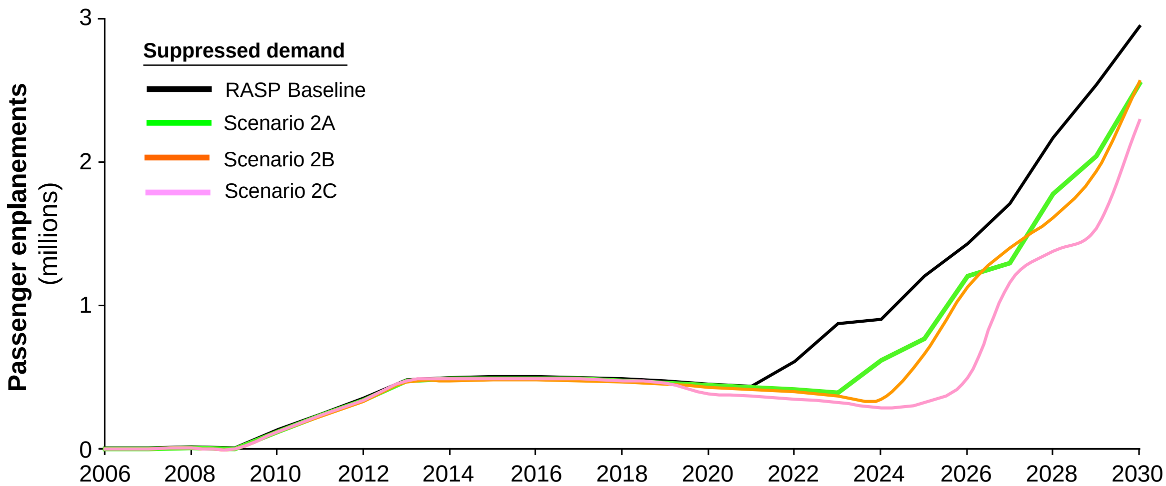


Figure 6-9

SCENARIOS 2A, B, C — EFFECT ON SUPPRESSED AVIATION PASSENGER DEMAND

Regional Aviation Strategic Plan



Notes: Suppressed demand presented above relative to 2006; some suppressed demand already exists.
Data for San Diego County residents and visitors only.

6.2.2 Scenario 2B: Aviation Passenger Cross Border Facility

Scenario 2B maximizes the use of Tijuana Rodriguez International for commercial passenger activity by offering a cross border facility (CBF) allowing U.S. ticketed passengers exclusive and convenient access to Tijuana Rodriguez International.

Projected annual passenger enplanements at Tijuana Rodriguez International and San Diego International under Scenario 2B are presented on Figures 6-10 and 6-11, respectively. As compared to the Baseline Scenario, the CBF is projected to result in a 30% increase in the number of passengers using Tijuana Rodriguez International. Projected enplanements at San Diego International are reduced over the Baseline Scenario, but the CBF only marginally alleviates the mid-term capacity constraint. Similar to Scenario 2A, the decrease in enplanements at San Diego International is a result of interactive regional competitive changes in airfares and services.

Additional Model findings regarding Scenario 2B are summarized below:

- As presented on Figures 6-12, the CBF does not materially affect passenger choice of airport for domestic travel. This is due to the fact that U.S. travel from Tijuana, notwithstanding any form of cross border terminal, is international travel, requiring customs clearance for Mexico departing and U.S. arriving passengers.

Figure 6-10

SCENARIO 2B — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan

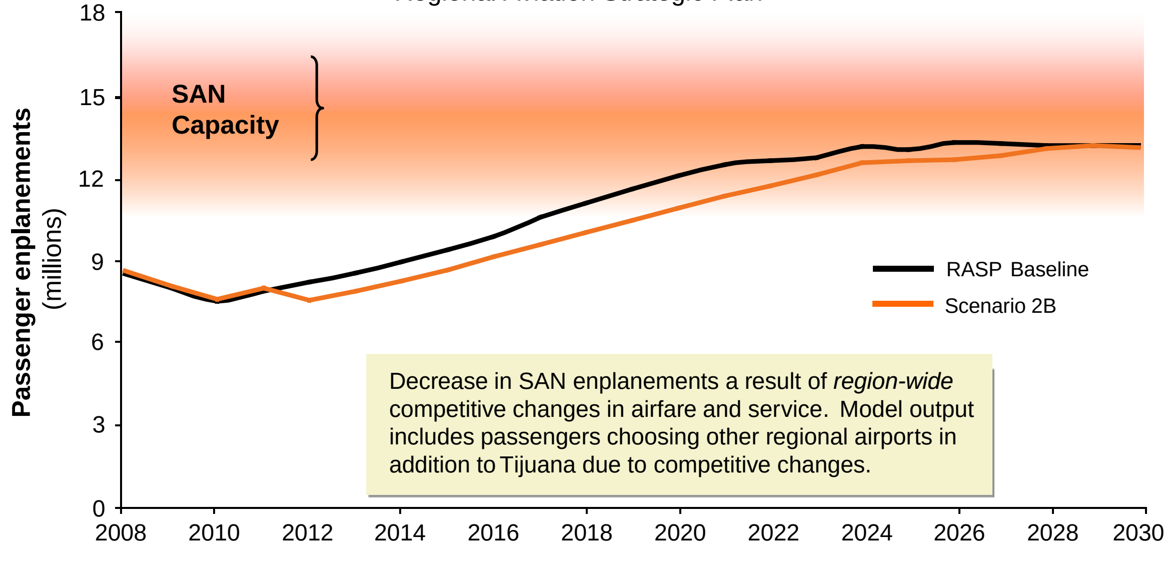
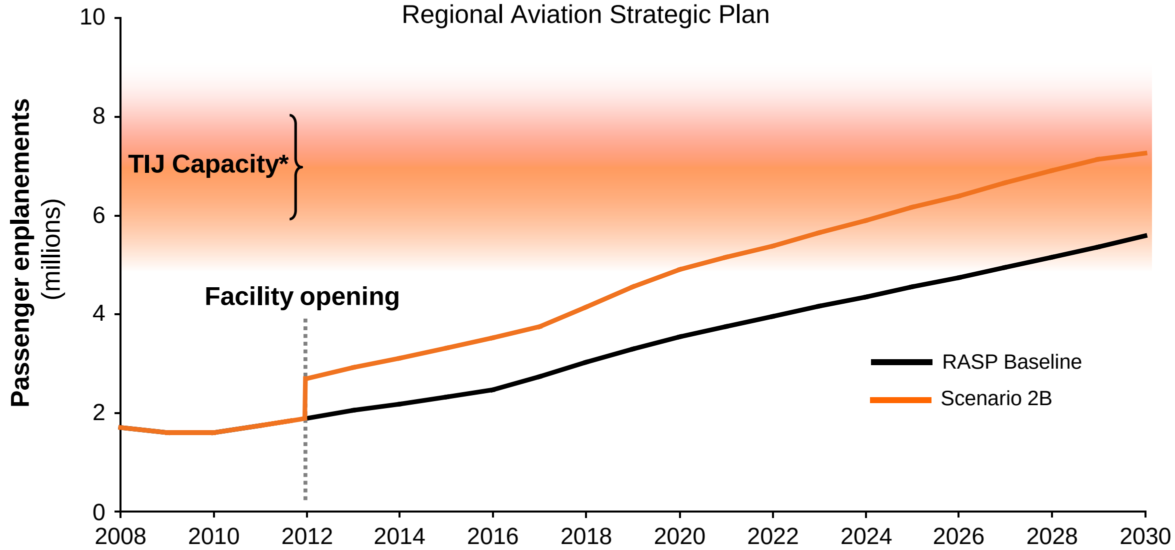


Figure 6-11

SCENARIO 2B — TIJUANA RODRIGUEZ ENPLANEMENT PROJECTIONS

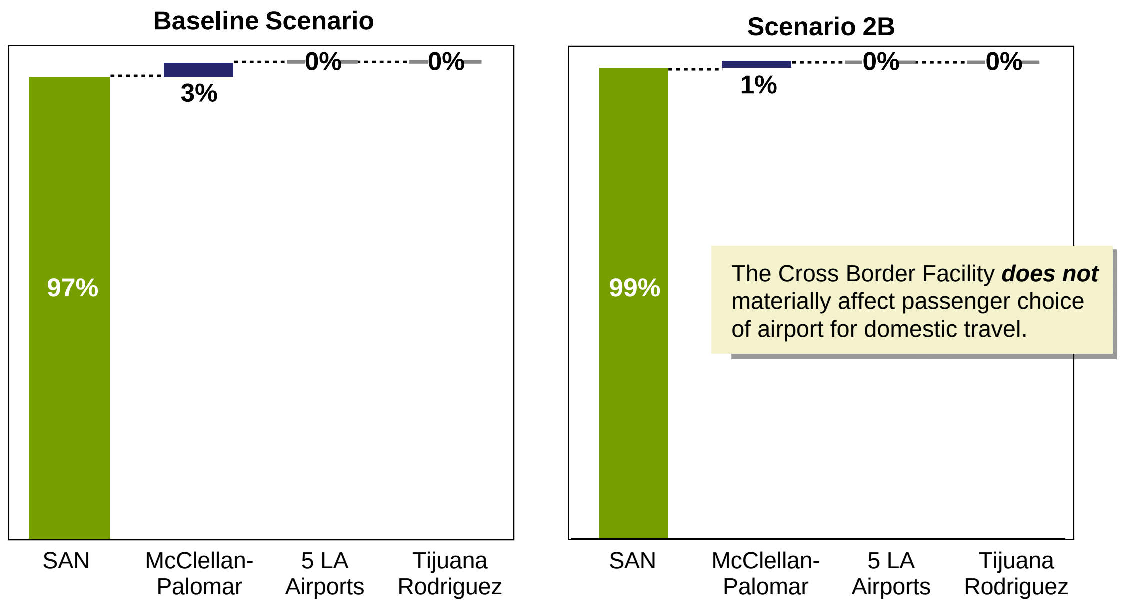
Regional Aviation Strategic Plan



Note: The capacity of TIJ is assumed to increase as part of the Baseline Scenario from approximately 2.5M annual enplanements to approximately 7M annual enplanements. The costs to increase capacity are assumed will be incurred by GAP, and are not included in the RASP costs estimates.

Figure 6-12

SCENARIO 2B — EFFECT ON DOMESTIC AIRPORT CHOICE
Regional Aviation Strategic Plan



- As presented on Figure 6-13, the improvements in airport access represented by the CBF do affect passenger choice of airport for international travel. Use of Tijuana Rodriguez International for international travel increases from 2% to 11% of San Diego County residents and visitors.

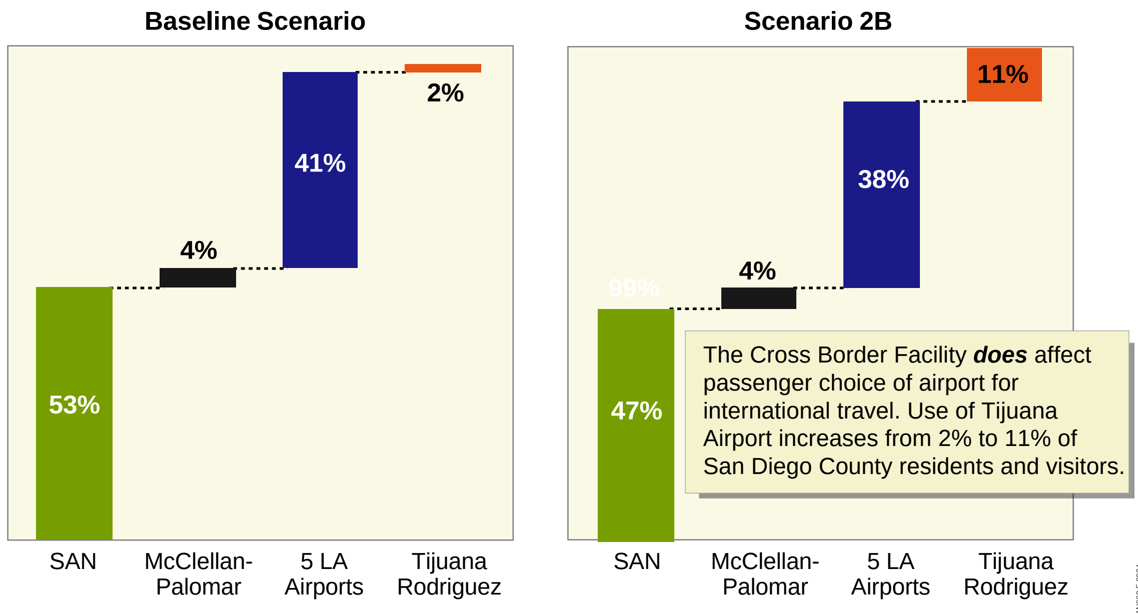
- The CBF attracts more passengers from the greater Los Angeles (LA) metropolitan region than San Diego County. This is primarily attributable to the larger service area of the LA metropolitan region and capacity constraints at LA metropolitan region airports. In addition, the use of Tijuana Rodriguez International by San Diego County residents and visitors is expected to increase over the RASP study period with or without the introduction of CBF given its proximity and capacity constraints at San Diego International.

As presented on Figure 6-9, implementation of the CBF under Scenario 2B alleviates suppressed demand by approximately two years.

Figure 6-13

SCENARIO 2B — EFFECT ON INTERNATIONAL AIRPORT CHOICE

Regional Aviation Strategic Plan



6.2.3 Scenario 2C: Cross Border Airport Terminal

Scenario 2C maximizes the use of Tijuana Rodriguez International for commercial passenger activity by offering a new passenger cross border terminal (CBT) on the U.S. side of the border to facilitate processing of U.S. passengers utilizing Tijuana Rodriguez International.

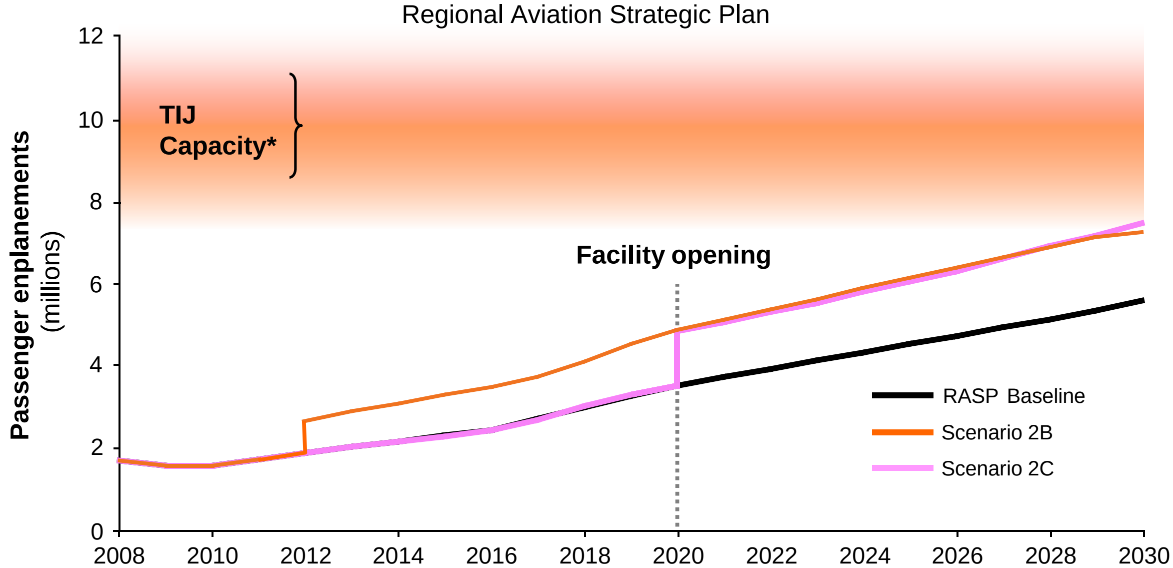
Projected annual passenger enplanements at Tijuana Rodriguez International and San Diego International under Scenario 2B are presented on Figures 6-14 and 6-15, respectively. As compared to the Scenario 2B, the CBT is projected to only marginally affect the number of passengers using Tijuana Rodriguez International. Projected enplanements at San Diego International are reduced over the Baseline Scenario, but the CBT only marginally alleviates the mid-term capacity constraint. Similar to Scenario 2A, the decrease in enplanements at San Diego International is a result of interactive regional competitive changes in airfares and services.

As presented on Figure 6-9, implementation of the CBT under Scenario 2B only alleviates suppressed demand by approximately two years, which is similar to the impact of Scenarios 2A and 2B.

Figure 6-14

SCENARIO 2C — TIJUANA RODRIGUEZ ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan



Note: The capacity of TIJ is assumed to increase to 10M annual enplanements as a result of the additional terminal facilities (Scenario 2 C only). Scenario 2B shown for comparison purposes only and modeled assuming the capacity of TIJ is 7M annual enplanements.

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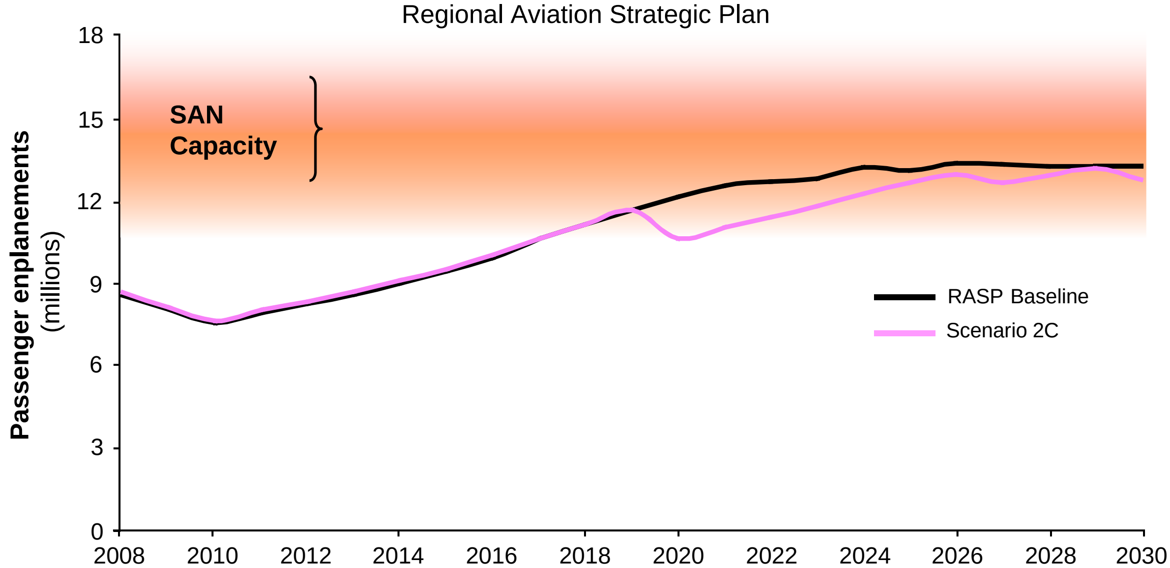
Figure 6-15

SCENARIO 2C — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan



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6.3 CALIFORNIA HIGH SPEED RAIL SCENARIOS

The following describes the findings related to the two scenarios assessed in the RASP regarding California High Speed Rail (HSR). Because of the interactive effects of capacity constraints within the region, the marginal impact of HSR is evident after implementation of Phase 1 in 2019, and increases following implementation of Phase 2 in 2027. It should be noted, therefore, that the true long-term impact of HSR on the region could not be precisely determined as results were evaluated for only three years, with effects being observed only between 2027 and 2030.

6.3.1 Scenario 3A: HSR Station at Downtown San Diego

Scenario 3A assumes a downtown San Diego HSR terminus at the existing Santa Fe Station, with ground access connections to the ITC at San Diego International. The RASP makes no assumptions about the costs of providing an off-airport HSR station at Santa Fe, including the potential cost of providing downtown parking spaces.

Projected annual passenger enplanements at San Diego International under Scenario 3A are presented on Figure 6-16. There is no significant change in projected passenger enplanements over the Baseline Scenario between 2020 and 2030. Using the California HSR assumptions presented on Figure 6-17, approximately 25% of San Diego County residents and visitors are projected to switch to HSR for trips to Northern California under Scenario 3A compared to existing airport choices.

Figure 6-16

SCENARIOS 3A/3B — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan

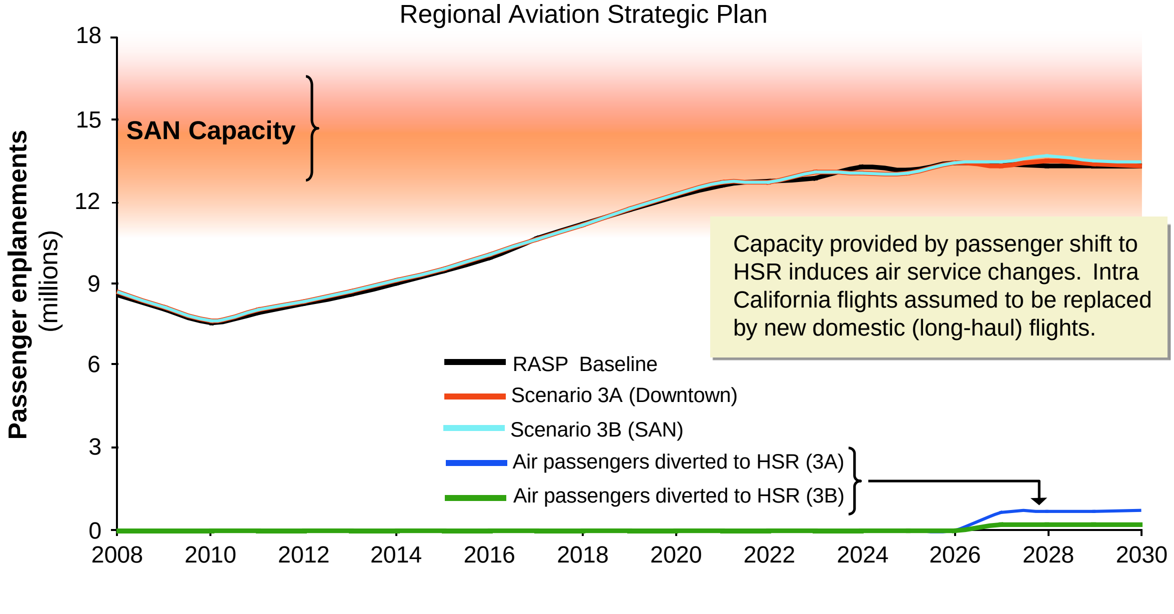
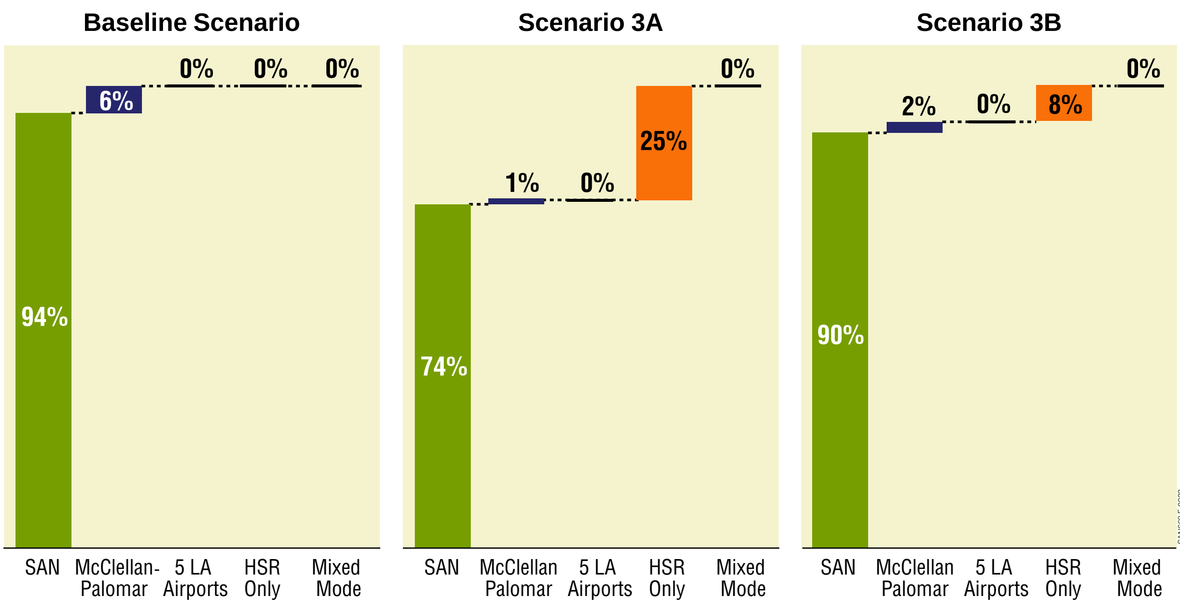


Figure 6-17

AIRPORT CHOICE FOR NORTHERN CALIFORNIA TRIPS SAN DIEGO RESIDENTS AND VISITORS IN 2030

Regional Aviation Strategic Plan



As presented on Figure 6-18, Scenario 3A reduced the projected suppressed demand associated with the Baseline Scenario beginning in 2027, when the Inland Empire and San Diego HSR alignments are introduced. Diverting a portion of aviation operations to HSR, per the assumptions under Scenario 3A, would delay San Diego International capacity constraints by approximately 5 years.

6.3.2 Scenario 3B: HSR Station at San Diego International Airport

Scenario 3B assumes a HSR station on the north side of San Diego International, adjacent or connected to the ITC. The HSR station would offer direct pedestrian access to the ITC, and include auto parking, CONRAC, and passenger processing. Projected annual passenger enplanements at San Diego International under Scenario 3B are presented on Figure 6-16. As presented, there is no significant change in projected passenger enplanements over the Baseline Scenario between 2020 and 2030.

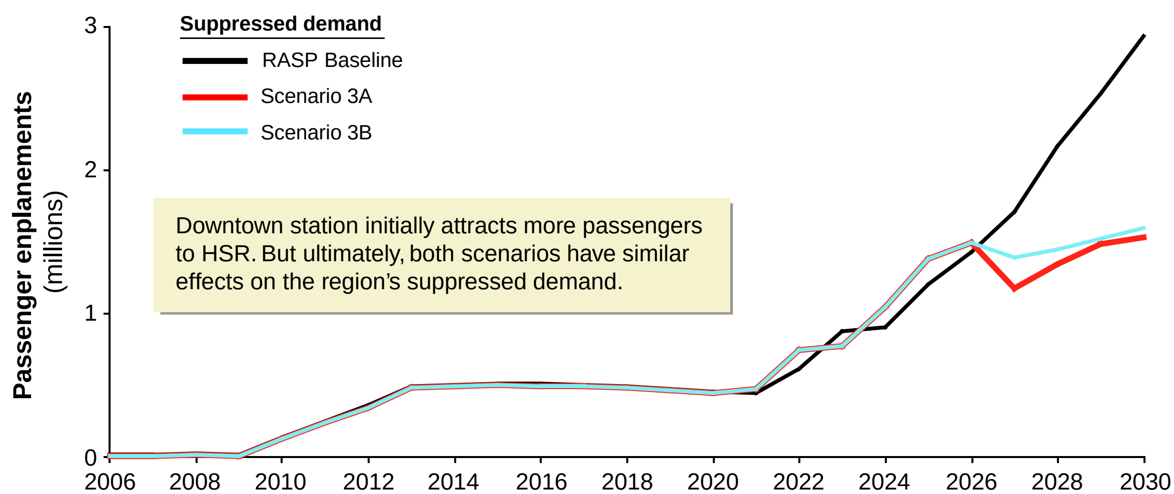
As presented on Figure 6-17, approximately 16% less San Diego County residents and visitors are projected to switch to HSR for trips to Northern California as compared to Scenario 3A. It is important to note that the evaluation did not include airport access links to the ITC as the decision regarding the San Diego alignment has yet to be made. Scenario 3A's air-rail diversion estimates were provided by the California HSR Authority, which did not model the alignment at the ITC (Scenario 3B).

As presented on Figure 6-18, Scenario 3B reduced the projected suppressed aviation passenger demand beginning in 2027, when the Inland Empire and San Diego sections of HSR are introduced. Per the assumptions under Scenario 3B, the capacity constraint in San Diego County would be delayed by approximately five years.

Figure 6-18

SCENARIOS 3A/3B — EFFECT ON SUPPRESSED AVIATION PASSENGER DEMAND

Regional Aviation Strategic Plan



Notes: Suppressed demand presented above relative to 2006; some suppressed demand already exists.
Data for San Diego County residents and visitors only.

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Based on the degree of uncertainty surrounding the timing of HSR, as well as the time and cost of accessing and using the service, the best estimate is that between 8% and 25% of existing demand for aviation would be diverted to rail. The eventual diversion will depend on operation schedule, speed of train, and fare, as well as the degree of integration (if any) with San Diego International, and the surface transportation connections available at the station and at downtown.

6.4 GENERAL AVIATION OPTIMIZATION SCENARIOS

The following describes the findings for the three general aviation scenarios intended to optimize the capacity of the San Diego County Airport System by distributing general aviation activity and based aircraft away from airports that are, or could be, dedicated to commercial passenger service.

It is assumed under each scenario described below that (1) reductions in general aviation activity at San Diego International would be replaced by commercial service aircraft operations; (2) the airport's fleet mix would become more homogeneous with an increasing percentage of air carrier narrow-body type aircraft; and (3) general aviation users would be accommodated at other system airports. The reduction in general aviation activity has the effect of increasing San Diego International's theoretical airfield capacity from approximately 14.0 to around 14.5-14.8 million annual passenger enplanements.

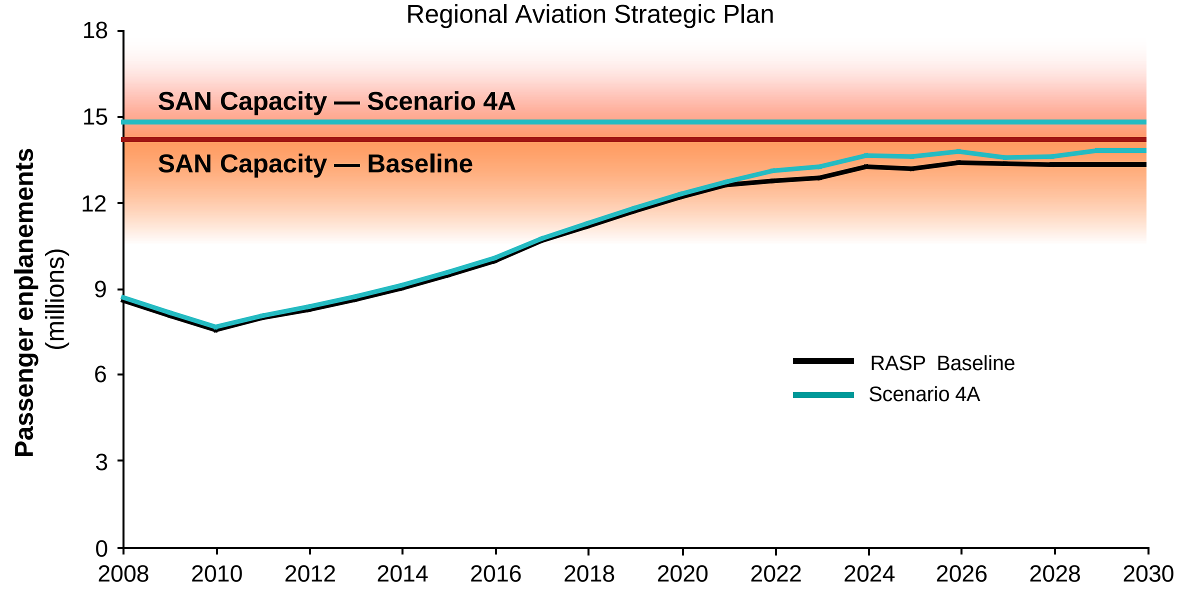
6.4.1 Scenario 4A: Enhance McClellan-Palomar Airport for High-end/ Corporate General Aviation

Scenario 4A maximizes the use of McClellan-Palomar for high-end/corporate general aviation by providing the necessary airfield, basing, and other amenities in order to shift activity from San Diego International to McClellan-Palomar. Projected annual passenger enplanements at San Diego International under Scenario 4A are presented on Figure 6-19. The increase in theoretical capacity results in increased passenger enplanements over the Baseline between 2020 and 2028.

Figure 6-19

SCENARIO 4A — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan



As presented on Figure 6-20, Scenario 4A reduces the projected suppressed demand associated with the Baseline Scenario beginning around 2020. Therefore, redistributing general aviation operations per the assumptions under Scenario 4A would delay the capacity constraint at San Diego International by approximately two years.

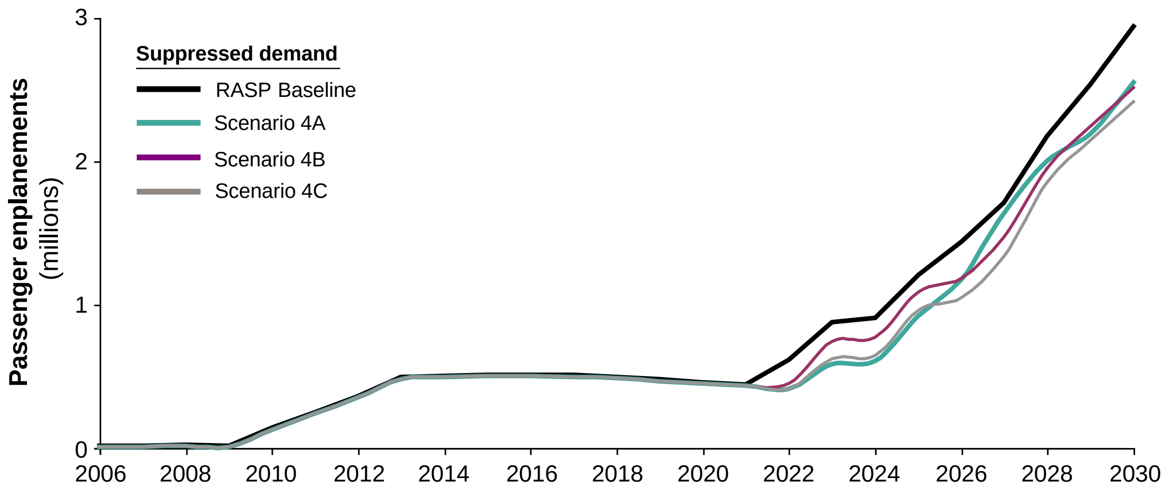
6.4.2 Scenario 4B: Enhance Brown Field Municipal Airport for High-end/Corporate General Aviation

Scenario 4B is intended to maximize the use of Brown Field for high-end/corporate general aviation by providing the necessary facilities and amenities in order to shift aviation activity from San Diego International to Brown Field.

Figure 6-20

SCENARIOS 4A, B, C — EFFECT ON SUPPRESSED AVIATION PASSENGER DEMAND

Regional Aviation Strategic Plan



Notes: Suppressed demand presented above relative to 2006; some suppressed demand already exists.
Data for San Diego County residents and visitors only.

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Projected annual passenger enplanements at San Diego International under Scenario 4B are presented on Figure 6-21. The increase in theoretical capacity results in an increase in passenger enplanements over the Baseline between 2020 and 2028.

As presented on Figure 6-20, Scenario 4B reduces the projected suppressed demand associated with the Baseline Scenario beginning around 2020. Therefore, redistributing general aviation operations per the assumptions under Scenario 4B would delay the capacity constraint at San Diego International by about two years.

6.4.3 Scenario 4C: Enhance Gillespie Field for Mixed-use General Aviation

Scenario 4C is intended to maximize the use of Gillespie Field for both high-end/corporate and recreational general aviation by providing the necessary facilities and amenities in order to shift aviation activity from San Diego International to Gillespie Field. Projected annual passenger enplanements at San Diego International under Scenario 4C are presented on Figure 6-22. As presented, the increase in theoretical capacity results in an increase in projected passenger enplanements over the Baseline Scenario between 2020 and 2028.

As presented on Figure 6-20, Scenario 4C reduces the projected suppressed demand associated with the Baseline Scenario beginning around 2020. Therefore, redistributing general aviation operations per the assumptions under Scenario 4C would delay the capacity constraint at San Diego International by about two years.

Figure 6-21

SCENARIO 4B — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan

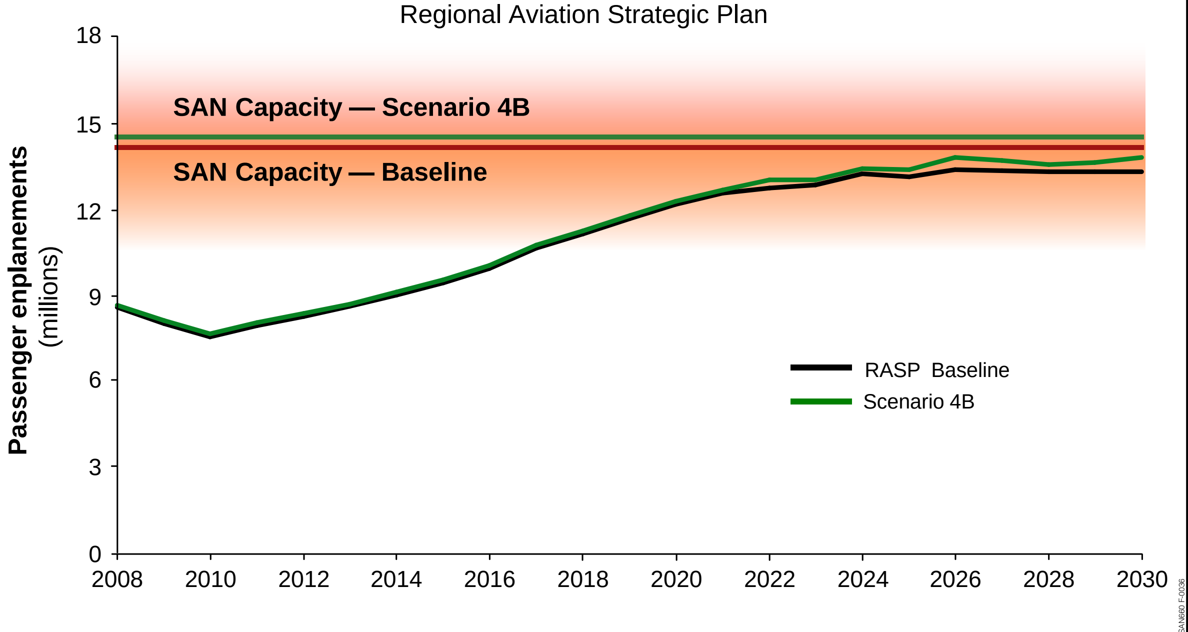
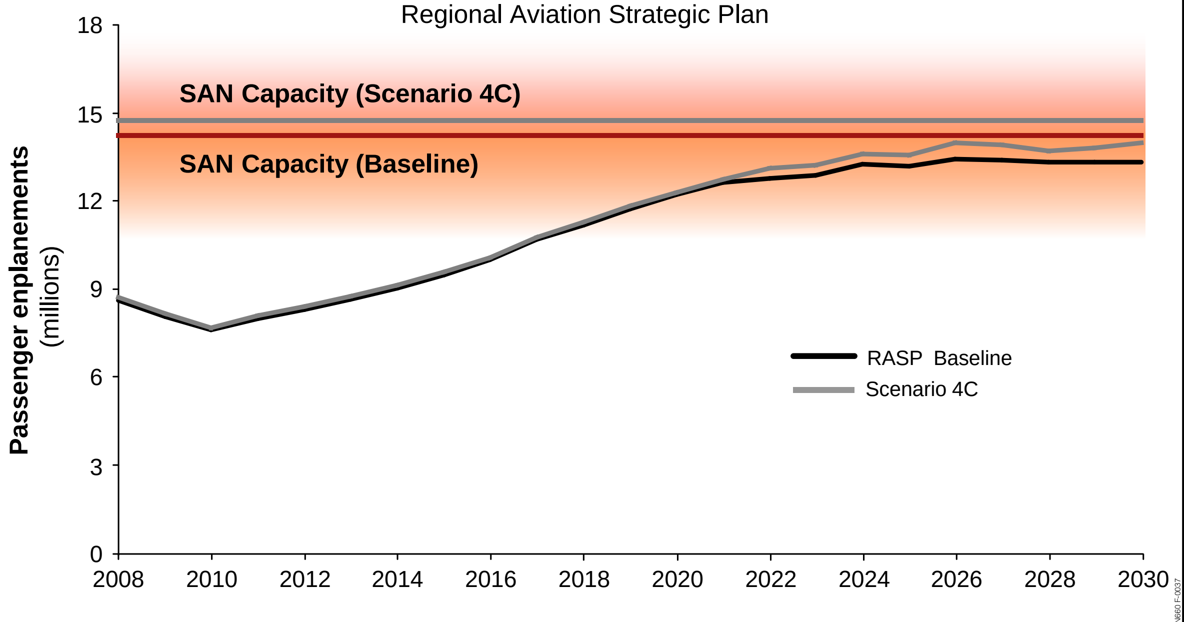


Figure 6-22

SCENARIO 4C — SAN ENPLANEMENT PROJECTIONS

Regional Aviation Strategic Plan



6.5 AIR CARGO OPTIMIZATION SCENARIOS

Only one air cargo optimization scenario was identified for consideration in the RASP. Scenario 5A: Introduce Air Cargo Service at Brown Field Municipal Airport, is intended to maximize the use of Brown Field for cargo by providing the facilities and amenities in order to shift this type of user from San Diego International to Brown Field.

It was determined during the RASP process that this scenario is "fatally flawed" for the following reasons, and would not be considered further in the RASP.

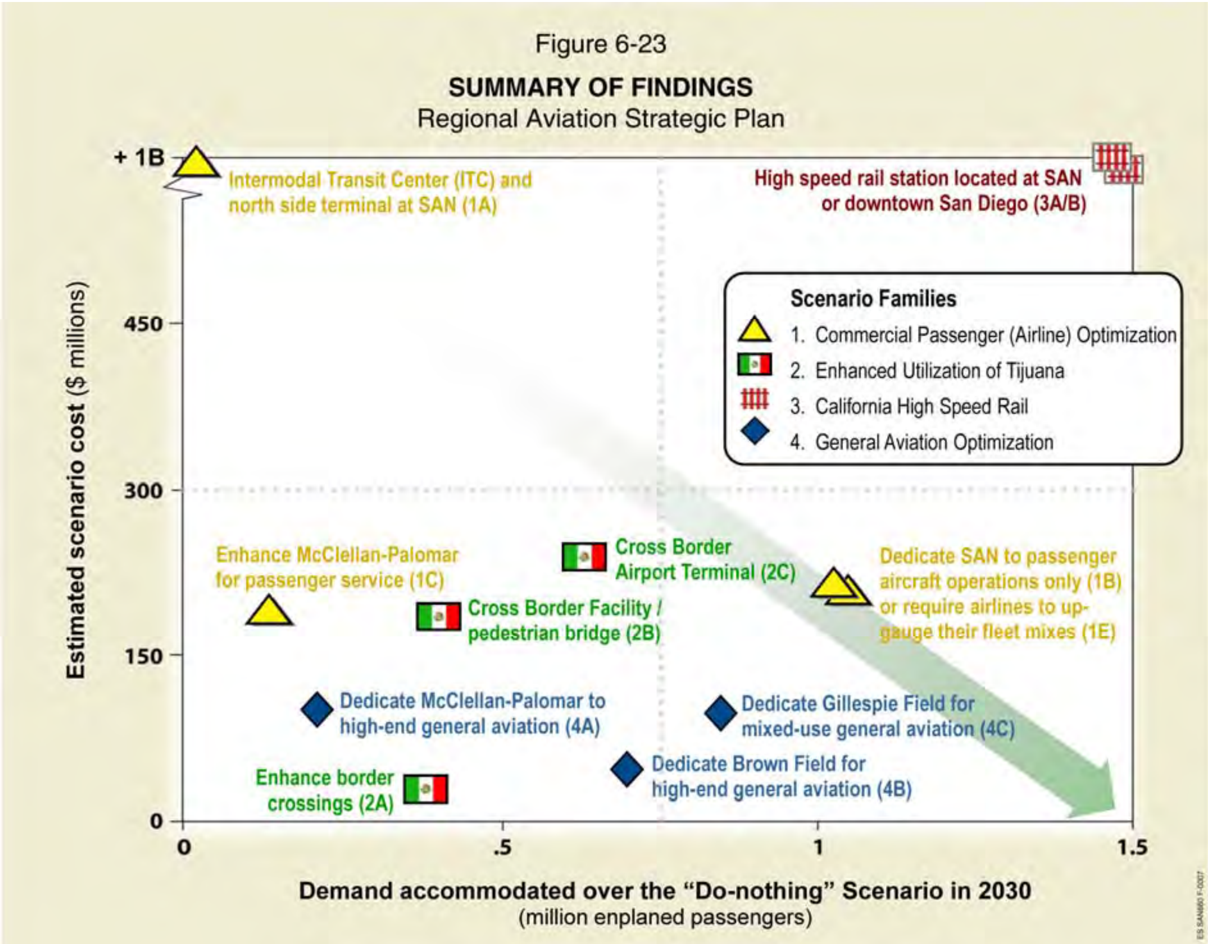
- FAA determinations (letters to the City of San Diego in 2009 and 2010, provided in Appendix A) provided as part of the RASP process state precision instrument approaches are infeasible at Brown Field due to terrain and airspace complications.
- Air cargo carriers are unwilling to operate from facilities south of San Diego International due to increased distance from air cargo sorting infrastructure.
- Significant local public and political opposition would be anticipated.

6.6 SUMMARY OF FINDINGS

An evaluation matrix that provides a basis for comparing the relative costs and benefits of the scenarios evaluated in the study is presented in Figure 6-23. Benefits are measured as the additional projected demand that could be accommodated over the Baseline Scenario in 2030.

Additional findings are summarized below:

1. Scenario 1A: Full build-out of the ITC and north side terminal at SDIA has little effect on suppressed demand relative to the Baseline Scenario although the scenario provides regional access and other benefits not captured by the RASP analyses.
2. Scenario 1C: Enhanced commercial passenger service at McClellan-Palomar has little effect on suppressed demand relative to Baseline because the maximum capacity of the airport represents only a small portion of the total projected suppressed demand in 2030.



3. Up-gauging the fleet mix at San Diego International (Scenarios 1E and F) provides the same relative benefits to the region as Scenario 1B: Reserving San Diego International's Capacity for Commercial Passenger Service. San Diego International's fleet mix is already favorable (nearly optimized) as the Airport is projected to have a relatively low proportion of regional jets and turboprops. Although Scenarios 1B, 1E, and 1F provided the best demand performance relative to the HSR scenarios, implementation of these scenarios would require extensive coordination among the Authority, City of San Diego, County of San Diego, and users and would be difficult and impractical.

4. Tijuana scenarios have a less than expected effect on suppressed demand relative to the Baseline Scenario. This may be attributed to the following: (1) significant portions of demand accommodated at Tijuana Rodriguez International prior to 2030 are generated in the greater Los Angeles metropolitan region; and (2) by 2030, many San Diego residents and visitors are projected to use Tijuana Rodriguez International for international trips with or without the Cross Border Facility/Terminal.

5. Improved accessibility to Tijuana Rodriguez International via Scenarios 2A and 2B attracts approximately 30% additional passengers to that airport, but this only marginally alleviates the mid-term capacity constraint at San Diego International. There does not appear to be any benefit to expanding a Cross Border Facility into a Cross Border Terminal.

6. California HSR Scenarios 3A and B perform similarly with regard to accommodating demand; while a downtown San Diego HSR station shows higher air-rail diversion than a station at SDIA, the overall benefits to the region are similar. Both scenarios could play a role to alleviate the region's aviation capacity problems by accommodating suppressed demand relative to the Baseline, and these benefits may increase beyond 2030.

7. Approximately 25% of San Diego County residents and visitors are projected to switch to HSR for trips to Northern California versus existing airport choices – San Diego International and McClellan Palomar; however, mixed mode (utilizing HSR to access an airport) does not attract significant passengers because it is quicker and more cost effective to drive directly to the closest airport.

8. General aviation optimization scenarios (4A, 4B, and 4C) have similar costs and provide nearly the same, but nominal, impact on demand relative to the Baseline.

Appendix A

EXHIBITS

Leigh | Fisher
Management Consultants

Technical Memorandum

AVIATION DEMAND FORECASTS FOR 2035

San Diego County Public Use Airports

Prepared for

San Diego County Regional Airport Authority
San Diego, California

November 1, 2010

Leigh|Fisher
Management Consultants

Technical Memorandum

AVIATION DEMAND FORECASTS FOR 2035

San Diego County Public Use Airports

Prepared for

San Diego County Regional Airport Authority
San Diego, California

November 1, 2010

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FIGURES

INTRODUCTION

This technical memorandum presents aviation demand forecasts for 2035 for the 12 public-use airports in San Diego County in support of planning efforts being conducted by the San Diego Association of Governments (SANDAG). The 2035 forecast is an extrapolation of the baseline forecasts from the *San Diego County Regional Aviation Strategic Plan (RASP) Aviation Demand Forecasts* prepared in 2007 and 2008. The 2035 forecast includes enplaned passengers, air cargo, and aircraft operations (passenger and all-cargo airlines and general aviation) for each of the 12 public use airports in San Diego County.

FORECAST METHODOLOGY

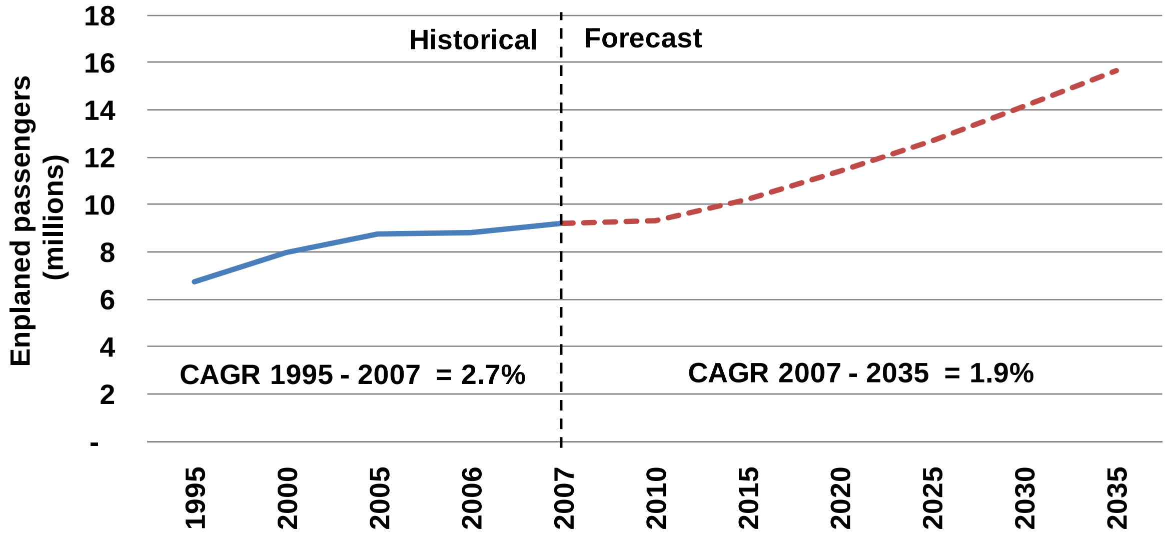
Based on the RASP baseline forecast through 2030, a forecast of 2035 activity was extrapolated for each of the public use airports in San Diego County with consideration of the following factors:

- Socioeconomic forecasts through 2035 prepared by SANDAG in February 2010
- A review of the average annual forecast growth rates through 2030 in the RASP Study, with particular attention to forecast growth rates in 5 year increments
- The assumption that forecast growth rates from 2030 through 2035 are likely to increase at a decreasing rate given the uncertainty associated with future conditions
- Forecast assumptions such as average aircraft size, enplaned passenger load factor, and air cargo per operation are based on and consistent with the assumptions used in the RASP
- The 2035 forecast is unconstrained and does not reflect any facility or other constraints
- The RASP demand model was not used in the preparation of the 2035 forecast
- Year-to-date activity was not reviewed as part of this analysis and no effort was made to reconcile the RASP forecasts to actual activity

ENPLANED PASSENGERS

Table 1 presents the forecasts of enplaned passengers through 2035, including a summary of historical activity from 1995 through 2007 (the base year of the RASP forecasts), the RASP forecasts through 2030, and the extrapolated forecast for 2035. The forecasts of enplaned passengers include activity for San Diego International and McClellan-Palomar airports. (McClellan-Palomar is forecast to enplane approximately 50,000 passengers through 2035 using small commuter aircraft.) The number of enplaned passengers in San Diego County is forecast to increase an average of 1.9% per year between 2007 and 2035, reaching a total of 15.6 million in 2035. Figure 1 presents the enplaned passenger forecasts through 2035.

Figure 1
ENPLANED PASSENGER FORECASTS
San Diego County Public Use Airports

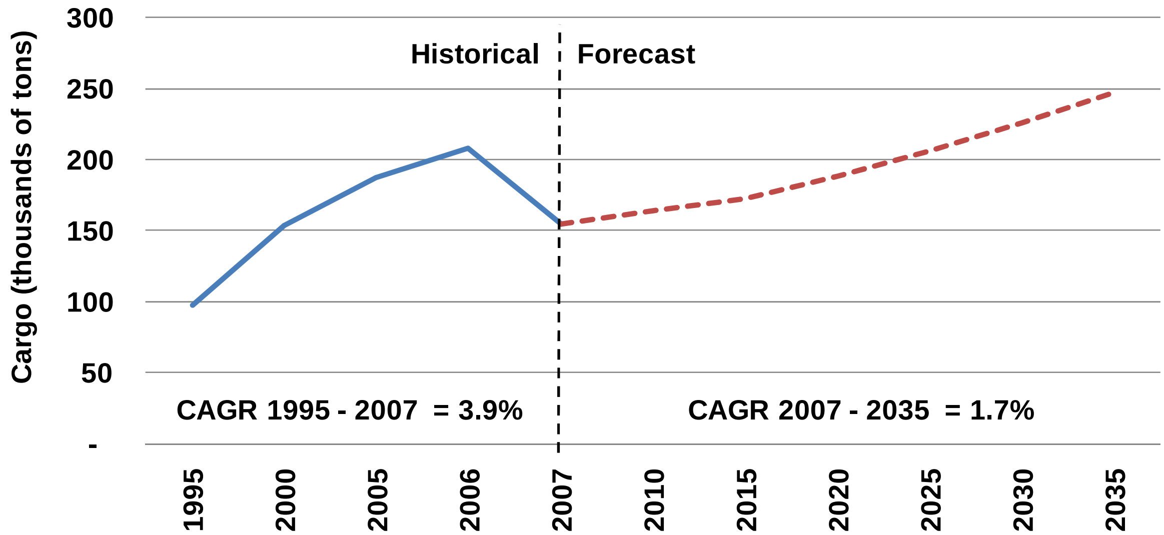


CAGR = Compound annual growth rate
Note: Includes passengers enplaned at San Diego International and McClellan-Palomar airports.
Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional.Aviation Strategic Plan, *Aviation Demand Forecasts*, Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts presented in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

CARGO

Table 1 presents the forecasts of total cargo (enplaned and deplaned) through 2035, including a summary of historical activity from 1995 through 2007 (the base year of the RASP forecasts), the RASP forecasts through 2030, and the extrapolated forecast for 2035. The forecasts of total cargo include activity only for San Diego International Airport. Total cargo tonnage handled at in San Diego International Airport is forecast to increase an average of 1.7% per year between 2007 and 2035, reaching a total of 247,200 tons in 2035. Figure 2 presents the cargo forecasts through 2035.

Figure 2
CARGO FORECASTS
San Diego County Public Use Airports

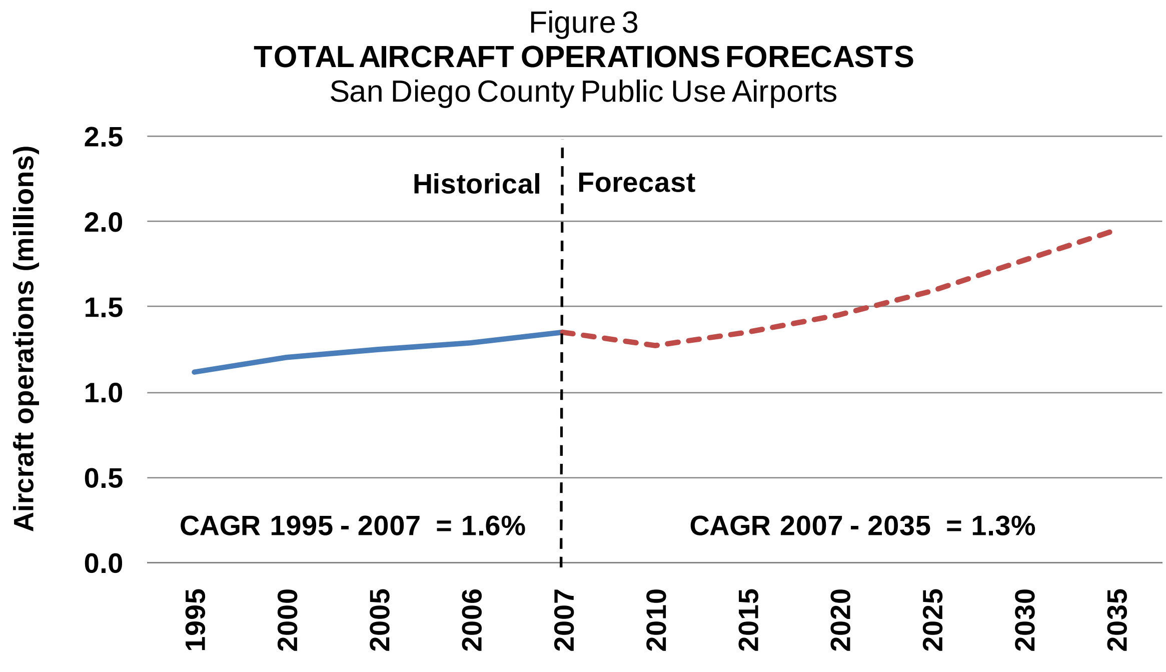


CAGR = Compound annual growth rate
Note: Includes enplaned and deplaned cargo handled at San Diego International Airport.
Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional.Aviation Strategic Plan, *Aviation Demand Forecasts*, Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts presented in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

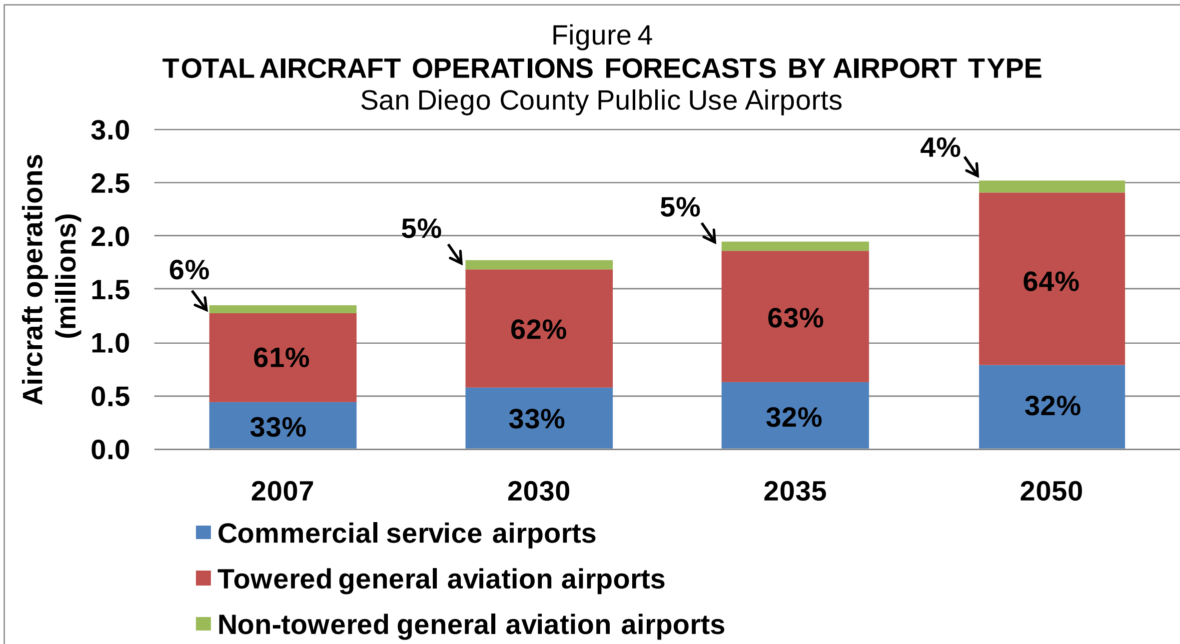
AIRCRAFT OPERATIONS

Table 1 presents the forecasts of total aircraft operations through 2035, including a summary of historical activity from 1995 through 2007 (the base year of the RASP forecasts), the RASP forecasts through 2030, and the extrapolated forecast for 2035. The forecasts of total aircraft operations include activity for all 12 public use airports in San Diego County. The total number of aircraft operations is forecast to increase an average of 1.3% per year between 2007 and 2035, reaching a total of 2.0 million aircraft operations in 2035. Figure 3 presents total aircraft operations forecasts through 2035.

Table 2 presents the forecasts of total aircraft operations by airport through 2035, including a summary of historical activity from 1995 through 2007 (the base year of the RASP forecasts), the RASP forecasts through 2030, and the extrapolated forecast for 2035. Figure 4 presents total aircraft operations forecasts through 2035 by airport type. The two commercial service airports—San Diego International and McClellan-Palomar airports—are forecast to account for 32% of total aircraft operations in 2035. The four towered general aviation airports—Gillespie Field, Montgomery Field, Brown Field Municipal, and Ramona airports—are forecast to account for 63% of total aircraft operations in 2035. The six non-towered airports are forecast to account for the remaining 5% of total aircraft operations in 2035.



CAGR = Compound annual growth rate
Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional.Aviation Strategic Plan, *Aviation Demand Forecasts,* Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts presented in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).



Commercial service airports: San Diego International and McClellan-Palomar airports.
Towered general aviation airports: Gillespie Field, Montgomery Field, Brown Field Municipal, and Ramona airports.
Non-towered general aviation airports: Oceanside Municipal, Fallbrook Community Airpark, Borrego Valley, Agua Caliente, Ocotillo, and Jacumba airports.
Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts,* Landrum & Brown, December 2008.
Forecast (2035-2050): LeighFisher, October 2010, extrapolated from the baseline forecasts presented in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

Table 1

AVIATION ACTIVITY FORECASTS
San Diego County Public Use Airports

	Enplaned passengers (a)	Cargo (tons) (b)	Total aircraft operations
Historical			
1995	6,713,850	97,667	1,116,271
2000	7,985,073	153,370	1,206,740
2005	8,741,621	187,706	1,249,412
2006	8,809,826	207,993	1,290,072
2007	9,219,875	154,689	1,349,204
Forecast			
2010	9,336,400	164,200	1,272,825
2015	10,213,700	172,400	1,351,325
2020	11,401,200	188,200	1,454,325
2025	12,700,400	205,900	1,593,125
2030	14,156,800	225,800	1,769,525
2035	15,637,000	247,200	1,953,025
	Average annual percent change		
1995-2000	3.5%	--	1.6%
2000-2007	2.1%	--	1.6%
2007-2010	0.4%	2.0%	-1.9%
2010-2015	1.8%	1.0%	1.2%
2015-2020	2.2%	1.8%	1.5%
2020-2025	2.2%	1.8%	1.8%
2025-2030	2.2%	1.9%	2.1%
2030-2035	2.0%	1.8%	2.0%
2007-2035	1.9%	1.7%	1.3%

(a) Includes passengers enplaned at San Diego International and McClellan-Palomar airports.
(b) Includes cargo handled at San Diego International Airport.

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts* , Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts included in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

Table 2

TOTAL AIRCRAFT OPERATIONS FORECASTS
San Diego County Public Use Airports

	Commercial service airports			Towered general aviation airports				
	San Diego International	McClellan-Palomar	Total--two airports	Gillespie Field	Montgomery Field	Brown Field Municipal	Ramona	Total--four airports
Historical								
1995	226,994	204,191	431,185	184,291	227,847	125,034	133,978	671,150
2000	206,889	255,096	461,985	187,751	251,645	112,800	132,607	684,803
2005	219,866	208,768	428,634	242,179	245,234	116,898	140,900	745,211
2006	220,620	198,590	419,210	278,388	232,698	135,485	155,120	801,691
2007	229,487	212,023	441,510	295,652	222,492	145,661	164,699	828,504
Forecast								
2010	219,800	208,900	428,700	266,200	250,400	126,500	138,100	781,200
2015	231,800	219,200	451,000	278,100	250,900	135,800	158,800	823,600
2020	254,600	233,800	488,400	315,000	255,700	147,700	167,400	885,800
2025	280,300	249,600	529,900	376,300	262,700	161,300	178,800	979,100
2030	309,800	268,700	578,500	461,000	271,800	175,900	193,000	1,101,700
2035	337,600	289,600	627,200	551,400	280,800	191,600	207,300	1,231,100
	Average annual percent change							
1995-2000	-1.8%	4.6%	1.4%	0.4%	2.0%	-2.0%	-0.2%	0.4%
2000-2007	1.5%	-2.6%	-0.6%	6.7%	-1.7%	3.7%	3.1%	2.8%
2007-2010	-1.4%	-0.5%	-1.0%	-3.4%	4.0%	-4.6%	-5.7%	-1.9%
2010-2015	1.1%	1.0%	1.0%	0.9%	0.0%	1.4%	2.8%	1.1%
2015-2020	1.9%	1.3%	1.6%	2.5%	0.4%	1.7%	1.1%	1.5%
2020-2025	1.9%	1.3%	1.6%	3.6%	0.5%	1.8%	1.3%	2.0%
2025-2030	2.0%	1.5%	1.8%	4.1%	0.7%	1.7%	1.5%	2.4%
2030-2035	1.7%	1.5%	1.6%	3.6%	0.7%	1.7%	1.4%	2.2%
2007-2035	1.4%	1.1%	1.3%	2.3%	0.8%	1.0%	0.8%	1.4%

Table 2 (page 2 of 2)

TOTAL AIRCRAFT OPERATIONS FORECASTS
San Diego County Public Use Airports

	Non-towered general aviation airports							
	Oceanside Municipal	Fallbrook Community Airpark	Borrego Valley	Aqua Caliente	Ocotillo	Jacumba	Total--six airports	All airports
Historical								
1995	n.a.	8,800	5,136	n.a.	n.a.	n.a.	13,936	1,116,271
2000	45,000	8,800	6,152	n.a.	n.a.	n.a.	59,952	1,206,740
2005	11,609	36,124	26,454	650	405	325	75,567	1,249,412
2006	14,352	32,586	20,853	650	405	325	69,171	1,290,072
2007	14,128	33,286	26,251	4,400	800	325	79,190	1,349,204
Forecast								
2010	12,000	23,000	22,400	4,400	800	325	62,925	1,272,825
2015	14,500	34,300	22,400	4,400	800	325	76,725	1,351,325
2020	15,500	36,700	22,400	4,400	800	325	80,125	1,454,325
2025	16,600	39,600	22,400	4,400	800	325	84,125	1,593,125
2030	18,200	43,200	22,400	4,400	800	325	89,325	1,769,525
2035	19,900	46,900	22,400	4,400	800	325	94,725	1,953,025
	Average annual percent change							
1995-2000	n.a.	0.0%	3.7%	n.a.	n.a.	n.a.	33.9%	1.6%
2000-2007	-15.3%	20.9%	23.0%	n.a.	n.a.	n.a.	4.1%	1.6%
2007-2010	-5.3%	-11.6%	-5.2%	0.0%	0.0%	0.0%	-7.4%	-1.9%
2010-2015	3.9%	8.3%	0.0%	0.0%	0.0%	0.0%	4.0%	1.2%
2015-2020	1.3%	1.4%	0.0%	0.0%	0.0%	0.0%	0.9%	1.5%
2020-2025	1.4%	1.5%	0.0%	0.0%	0.0%	0.0%	1.0%	1.8%
2025-2030	1.9%	1.8%	0.0%	0.0%	0.0%	0.0%	1.2%	2.1%
2030-2035	1.8%	1.7%	0.0%	0.0%	0.0%	0.0%	1.2%	2.0%
2007-2035	1.2%	1.2%	-0.6%	0.0%	0.0%	0.0%	0.6%	1.3%

n.a. = not available

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts* , Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts included in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

APPENDIX
FORECASTS BY AIRPORT

Table A-1

AVIATION ACTIVITY FORECASTS
San Diego International Airport

	San Diego County (a)			Enplaned passengers						
				Domestic						
	Population	Work force employment	Per capita income (2000 dollars)	Air carrier	Commuter	Total	International	Total	Percent originating	Originations per person
Historical										
1995	2,504,900	1,215,700	$27,683	6,298,447	308,414	6,606,861	79,283	6,686,144	95%	2.54
2000	2,813,833	1,375,400	$32,776	7,398,719	367,665	7,766,384	138,059	7,904,443	96%	2.70
2005	3,034,388	1,505,900	$32,313	8,067,817	493,897	8,561,714	130,980	8,692,694	96%	2.75
2006	3,058,413	1,520,400	$32,894	8,143,613	490,058	8,633,671	125,998	8,759,669	96%	2.74
2007	3,088,891	1,542,500	$33,337	8,452,620	587,660	9,040,280	132,686	9,172,966	96%	2.86
Forecast										
2010	3,181,349	1,563,713	$32,317	8,612,300	520,600	9,132,900	153,500	9,286,400	96%	2.81
2015	3,364,191	1,629,034	$34,949	9,719,500	218,600	9,938,100	225,600	10,163,700	96%	2.92
2020	3,535,001	1,688,700	$37,817	10,854,600	199,000	11,053,600	297,600	11,351,200	96%	3.10
2025	3,703,825	1,746,169	$40,758	12,097,500	196,700	12,294,200	356,200	12,650,400	97%	3.30
2030	3,870,001	1,802,533	$43,488	13,487,900	191,500	13,679,400	427,400	14,106,800	97%	3.52
2035	4,026,131	1,860,807	$46,177	14,892,000	187,000	15,079,000	508,000	15,587,000	97%	3.74
	Average annual percent change									
1995-2000	2.4%	2.5%	3.4%	3.3%	3.6%	3.3%	11.7%	3.4%	0.2%	1.3%
2000-2007	1.3%	1.7%	0.2%	1.9%	6.9%	2.2%	-0.6%	2.1%	0.0%	0.8%
2007-2010	1.0%	0.5%	-1.0%	0.6%	-4.0%	0.3%	5.0%	0.4%	0.1%	-0.5%
2010-2015	1.1%	0.8%	1.6%	2.4%	-15.9%	1.7%	8.0%	1.8%	0.0%	0.7%
2015-2020	1.0%	0.7%	1.6%	2.2%	-1.9%	2.2%	5.7%	2.2%	0.0%	1.2%
2020-2025	0.9%	0.7%	1.5%	2.2%	-0.2%	2.2%	3.7%	2.2%	0.0%	1.3%
2025-2030	0.9%	0.6%	1.3%	2.2%	-0.5%	2.2%	3.7%	2.2%	0.0%	1.3%
2030-2035	0.8%	0.6%	1.2%	2.0%	-0.5%	2.0%	3.5%	2.0%	0.0%	1.2%
2007-2035	1.0%	0.7%	1.2%	2.0%	-4.0%	1.8%	4.9%	1.9%	0.0%	1.0%

Table A-1 (page 2 of 3)

AVIATION ACTIVITY FORECASTS
San Diego International Airport

					Aircraft operations							
					Commercial passenger							
	Air Cargo (tons)				Domestic							
	Freighter	Belly	Total	Tons per cargo operation	Air carrier	Commuter	International	Total	Air cargo	Civil	Military	Total
Historical												
1995	n.a.	n.a.	97,667	17	137,598	57,761	1,974	197,333	5,593	19,027	5,041	226,994
2000	n.a.	n.a.	153,370	25	145,220	35,819	2,305	183,344	6,016	16,759	770	206,889
2005	167,539	20,167	187,706	26	144,264	39,414	4,160	187,838	7,206	24,595	227	219,866
2006	190,351	17,642	207,993	32	148,114	37,665	3,847	189,626	6,592	24,209	193	220,620
2007	141,653	13,036	154,689	23	155,194	40,433	3,317	198,944	6,682	23,645	216	229,487
Forecast												
2010	151,400	12,800	164,200	25	152,800	34,400	3,400	190,600	6,500	22,500	200	219,800
2015	166,600	5,800	172,400	26	177,000	17,900	4,600	199,500	6,700	25,400	200	231,800
2020	183,300	4,900	188,200	27	197,700	16,300	5,700	219,700	7,100	27,600	200	254,600
2025	201,700	4,200	205,900	27	220,300	16,100	6,700	243,100	7,700	29,300	200	280,300
2030	222,200	3,600	225,800	27	245,700	15,700	7,800	269,200	8,400	32,000	200	309,800
2035	244,100	3,100	247,200	27	271,200	15,300	9,200	295,700	9,200	32,500	200	337,600
	Average annual percent change											
1995-2000	n.a.	n.a.	9.4%	7.9%	1.1%	-9.1%	3.1%	-1.5%	1.5%	-2.5%	-31.3%	-1.8%
2000-2007	n.a.	n.a.	0.1%	-1.4%	1.0%	1.7%	5.3%	1.2%	1.5%	5.0%	-16.6%	1.5%
2007-2010	2.2%	-0.6%	2.0%	3.0%	-0.5%	-5.2%	0.8%	-1.4%	-0.9%	-1.6%	-2.5%	-1.4%
2010-2015	1.9%	-14.6%	1.0%	0.4%	3.0%	-12.2%	6.2%	0.9%	0.6%	2.5%	0.0%	1.1%
2015-2020	1.9%	-3.3%	1.8%	0.6%	2.2%	-1.9%	4.4%	1.9%	1.2%	1.7%	0.0%	1.9%
2020-2025	1.9%	-3.0%	1.8%	0.2%	2.2%	-0.2%	3.3%	2.0%	1.6%	1.2%	0.0%	1.9%
2025-2030	2.0%	-3.0%	1.9%	0.1%	2.2%	-0.5%	3.1%	2.1%	1.8%	1.8%	0.0%	2.0%
2030-2035	1.9%	-3.0%	1.8%	0.0%	2.0%	-0.5%	3.4%	1.9%	1.8%	1.6%	0.0%	1.7%
2007-2035	2.0%	-5.0%	1.7%	0.5%	2.0%	-3.4%	3.7%	1.4%	1.1%	1.1%	-0.3%	1.4%

AVIATION ACTIVITY FORECASTS
San Diego International Airport

	Enplaned passengers per departure				Load factors				Seats per departure			
	Domestic				Domestic				Domestic			
	Air carrier	Commuter	International	Total	Air carrier	Commuter	International	Total	Air carrier	Commuter	International	Total
Historical												
1995	92	11	80	68	64.9%	47.4%	63.2%	63.8%	141.1	22.5	127.2	106.3
2000	102	21	120	86	72.5%	64.9%	89.9%	72.3%	140.6	31.6	133.3	119.2
2005	112	25	63	93	77.2%	70.6%	56.4%	76.4%	144.9	35.5	111.7	121.2
2006	110	26	66	92	76.0%	72.7%	57.4%	75.4%	144.8	35.8	114.0	122.5
2007	109	29	80	92	76.0%	76.0%	69.6%	75.9%	143.3	38.3	115.0	121.5
Forecast												
2010	113	30	90	97	78.3%	77.5%	71.0%	78.1%	144.0	39.0	128.0	124.7
2015	110	24	98	102	79.0%	77.5%	72.0%	78.8%	139.0	31.5	137.0	129.3
2020	110	24	104	103	79.0%	77.5%	73.0%	78.8%	139.0	31.5	142.5	131.1
2025	110	24	106	104	79.0%	77.5%	74.0%	78.8%	139.0	31.5	144.0	132.0
2030	110	24	110	105	79.0%	77.5%	75.0%	78.9%	139.0	31.5	146.0	132.9
2035	110	24	111	105	79.0%	77.5%	75.0%	78.8%	139.0	31.5	148.0	133.7
	Average annual percent change											
1995-2000	2.2%	14.0%	8.3%	4.9%	2.2%	6.5%	7.3%	2.5%	-0.1%	7.0%	0.9%	2.3%
2000-2007	1.0%	5.1%	-5.6%	1.0%	0.7%	2.3%	-3.6%	0.7%	0.3%	2.8%	-2.1%	0.3%
2007-2010	1.1%	1.4%	4.1%	1.9%	1.0%	0.7%	0.7%	1.0%	0.2%	0.6%	3.6%	0.9%
2010-2015	-0.5%	-4.2%	1.7%	0.9%	0.2%	0.0%	0.3%	0.2%	-0.7%	-4.2%	1.4%	0.7%
2015-2020	0.0%	0.0%	1.3%	0.3%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.8%	0.3%
2020-2025	0.0%	0.0%	0.4%	0.1%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.2%	0.1%
2025-2030	0.0%	0.0%	0.6%	0.1%	0.0%	0.0%	0.3%	0.0%	0.0%	0.0%	0.3%	0.1%
2030-2035	0.0%	0.0%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.1%
2007-2035	0.0%	-0.6%	1.2%	0.5%	0.1%	0.1%	0.3%	0.1%	-0.1%	-0.7%	0.9%	0.3%

(a) SANDAG, 2050 Regional Growth Forecast, February 26, 2010.

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): Destination Lindbergh, The Ultimate Build-out, *Aviation Activity Forecast,* Draft, August 2008 and the San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts,* Landrum & Brown, December 2008. Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts included in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

Table A-2

AVIATION ACTIVITY FORECASTS
McClellan-Palomar Airport

	Aircraft operations										Enplaned passenger forecast assumptions		
				General aviation			Military						
	Enplaned passengers	Commercial passenger commuter	Air taxi	Itinerant	Local	Total	Itinerant	Local	Total	Total	Outbound seats	Load factor	Seats per departure
Historical													
1995	27,706	10,070	4,745	131,289	55,619	186,908	2,125	343	2,468	204,191	n.a.	n.a.	n.a.
2000	80,630	10,223	6,322	152,184	78,405	230,589	7,888	74	7,962	255,096	n.a.	n.a.	n.a.
2005	48,927	5,306	9,353	120,128	72,396	192,524	1,414	171	1,585	208,768	83,790	58.4%	32
2006	50,157	5,524	12,699	125,723	53,073	178,796	1,268	303	1,571	198,590	86,906	57.7%	31
2007	46,909	5,318	12,211	132,111	60,720	192,831	1,184	479	1,663	212,023	82,316	57.0%	31
Forecast													
2010	50,000	5,600	12,200	125,000	64,500	189,500	1,100	500	1,600	208,900	83,300	60.0%	30
2015	50,000	3,100	14,500	135,500	64,500	200,000	1,100	500	1,600	219,200	76,900	65.0%	50
2020	50,000	3,100	16,700	147,900	64,500	212,400	1,100	500	1,600	233,800	76,900	65.0%	50
2025	50,000	3,100	18,800	161,600	64,500	226,100	1,100	500	1,600	249,600	76,900	65.0%	50
2030	50,000	3,100	21,100	178,400	64,500	242,900	1,100	500	1,600	268,700	76,900	65.0%	50
2035	50,000	3,100	23,400	197,000	64,500	261,500	1,100	500	1,600	289,600	76,900	65.0%	50
	Average annual percent change												
1995-2000	23.8%	0.3%	5.9%	3.0%	7.1%	4.3%	30.0%	-26.4%	26.4%	4.6%	n.a.	n.a.	n.a.
2000-2007	-7.4%	-8.9%	9.9%	-2.0%	-3.6%	-2.5%	-23.7%	30.6%	-20.0%	-2.6%	n.a.	n.a.	n.a.
2007-2010	2.1%	1.7%	0.0%	-1.8%	2.0%	-0.6%	-2.4%	1.4%	-1.3%	-0.5%	0.4%	1.7%	-1.3%
2010-2015	0.0%	-11.2%	3.5%	1.6%	0.0%	1.1%	0.0%	0.0%	0.0%	1.0%	-1.6%	1.6%	10.8%
2015-2020	0.0%	0.0%	2.9%	1.8%	0.0%	1.2%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%
2020-2025	0.0%	0.0%	2.4%	1.8%	0.0%	1.3%	0.0%	0.0%	0.0%	1.3%	0.0%	0.0%	0.0%
2025-2030	0.0%	0.0%	2.3%	2.0%	0.0%	1.4%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%
2030-2035	2.0%	0.0%	2.1%	2.0%	0.0%	1.5%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%
2007-2035	0.2%	-1.9%	2.4%	1.4%	0.2%	1.1%	-0.3%	0.2%	-0.1%	1.1%	-0.2%	0.5%	1.7%

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts,* Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts presented in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

Table A-3

TOTAL AIRCRAFT OPERATIONS FORECASTS
Gillespie Field

	Aircraft operations						
	General aviation			Military			
	Itinerant (a)	Local	Total	Itinerant	Local	Total	Total
Historical							
1995	87,236	96,889	184,125	79	87	166	184,291
2000	88,137	99,540	187,677	45	29	74	187,751
2005	94,376	147,789	242,165	2	12	14	242,179
2006	112,475	165,905	278,380	2	6	8	278,388
2007	119,950	174,077	294,027	--	1,625	1,625	295,652
Forecast							
2010	101,300	164,700	266,000	--	200	200	266,200
2015	103,600	174,300	277,900	--	200	200	278,100
2020	117,300	197,500	314,800	--	200	200	315,000
2025	140,200	235,900	376,100	--	200	200	376,300
2030	171,700	289,100	460,800	--	200	200	461,000
2035	205,300	345,900	551,200	--	200	200	551,400
	Average annual percent change						
1995-2000	0.2%	0.5%	0.4%	-10.6%	-19.7%	-14.9%	0.4%
2000-2007	4.5%	8.3%	6.6%	--	77.7%	55.5%	6.7%
2007-2010	-5.5%	-1.8%	-3.3%	--	-50.3%	-50.3%	-3.4%
2010-2015	0.5%	1.1%	0.9%	--	0.0%	0.0%	0.9%
2015-2020	2.5%	2.5%	2.5%	--	0.0%	0.0%	2.5%
2020-2025	3.6%	3.6%	3.6%	--	0.0%	0.0%	3.6%
2025-2030	4.1%	4.2%	4.1%	--	0.0%	0.0%	4.1%
2030-2035	3.6%	3.7%	3.6%	--	0.0%	0.0%	3.6%
2007-2035	1.9%	2.5%	2.3%	--	-7.2%	-7.2%	2.3%

(a) Includes air carrier and air taxi operations which account for less than 0.5% of total operations.

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts* , Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts included in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

Table A-4

TOTAL AIRCRAFT OPERATIONS FORECASTS
Montgomery Field

	Total aircraft operations							
		General aviation			Military			
	Air taxi	Itinerant	Local	Total	Itinerant	Local	Total	Total
Historical								
1995	7,672	124,003	95,694	219,697	355	123	478	227,847
2000	7,729	142,160	101,575	243,735	161	20	181	251,645
2005	3,739	126,780	114,511	241,291	166	38	204	245,234
2006	3,756	122,732	104,965	227,697	742	503	1,245	232,698
2007	3,428	121,088	97,069	218,157	156	751	907	222,492
Forecast								
2010	2,700	129,200	118,200	247,400	260	40	300	250,400
2015	2,400	129,200	119,000	248,200	260	40	300	250,900
2020	2,200	129,200	124,000	253,200	260	40	300	255,700
2025	2,000	129,200	131,200	260,400	260	40	300	262,700
2030	1,800	129,200	140,500	269,700	260	40	300	271,800
2035	1,600	129,200	149,700	278,900	260	40	300	280,800
	Average annual percent change							
1995-2000	0.1%	2.8%	1.2%	2.1%	-14.6%	-30.5%	-17.7%	2.0%
2000-2007	-11.0%	-2.3%	-0.6%	-1.6%	-0.4%	67.9%	25.9%	-1.7%
2007-2010	-7.6%	2.2%	6.8%	4.3%	18.6%	-62.4%	-30.8%	4.0%
2010-2015	-2.3%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
2015-2020	-1.7%	0.0%	0.8%	0.4%	0.0%	0.0%	0.0%	0.4%
2020-2025	-1.9%	0.0%	1.1%	0.6%	0.0%	0.0%	0.0%	0.5%
2025-2030	-2.1%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.7%
2030-2035	-1.9%	0.0%	1.3%	0.7%	0.0%	0.0%	0.0%	0.7%
2007-2035	-2.7%	0.2%	1.6%	0.9%	1.8%	-9.9%	-3.9%	0.8%

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts* , Landrum & Brown, December 2008. Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts included in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

Table A-5

TOTAL AIRCRAFT OPERATIONS FORECASTS
Brown Field Municipal Airport

	Total aircraft operations							
		General aviation			Military			
	Air taxi	Itinerant	Local	Total	Itinerant	Local	Total	Total
Historical								
1995	211	26,783	83,273	110,056	1,477	13,290	14,767	125,034
2000	133	16,291	91,888	108,179	522	3,966	4,488	112,800
2005	2,426	27,014	79,987	107,001	2,352	5,119	7,471	116,898
2006	3,405	33,181	91,203	124,384	3,901	3,795	7,696	135,485
2007	3,615	37,690	96,440	134,130	4,260	3,656	7,916	145,661
Forecast								
2010	4,600	40,900	75,400	116,300	3,000	2,600	5,600	126,500
2015	5,800	48,400	76,000	124,400	3,000	2,600	5,600	135,800
2020	7,000	56,000	79,100	135,100	3,000	2,600	5,600	147,700
2025	8,300	63,600	83,800	147,400	3,000	2,600	5,600	161,300
2030	9,500	71,100	89,700	160,800	3,000	2,600	5,600	175,900
2035	10,800	78,700	96,500	175,200	3,000	2,600	5,600	191,600
	Average annual percent change							
1995-2000	-8.8%	-9.5%	2.0%	-0.3%	-18.8%	-21.5%	-21.2%	-2.0%
2000-2007	60.3%	12.7%	0.7%	3.1%	35.0%	-1.2%	8.4%	3.7%
2007-2010	8.4%	2.8%	-7.9%	-4.6%	-11.0%	-10.7%	-10.9%	-4.6%
2010-2015	4.7%	3.4%	0.2%	1.4%	0.0%	0.0%	0.0%	1.4%
2015-2020	3.8%	3.0%	0.8%	1.7%	0.0%	0.0%	0.0%	1.7%
2020-2025	3.5%	2.6%	1.2%	1.8%	0.0%	0.0%	0.0%	1.8%
2025-2030	2.7%	2.3%	1.4%	1.8%	0.0%	0.0%	0.0%	1.7%
2030-2035	2.5%	2.1%	1.5%	1.7%	0.0%	0.0%	0.0%	1.7%
2007-2035	4.0%	2.7%	0.0%	1.0%	-1.2%	-1.2%	-1.2%	1.0%

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts* , Landrum & Brown, December 2008. Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts included in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

Table A-6

TOTAL AIRCRAFT OPERATIONS FORECASTS
Ramona Airport

	Total aircraft operations						
	General aviation (a)			Military			
	Itinerant	Local	Total	Itinerant	Local	Total	Total
Historical							
1995	n.a.	n.a.	133,778	n.a.	n.a.	200	133,978
2000	n.a.	n.a.	132,407	n.a.	n.a.	200	132,607
2005	37,084	102,802	139,886	390	624	1,014	140,900
2006	39,727	113,771	153,498	389	1,233	1,622	155,120
2007	41,647	121,832	163,479	409	811	1,220	164,699
Forecast							
2010	39,200	97,900	137,100	200	800	1,000	138,100
2015	43,300	114,500	157,800	200	800	1,000	158,800
2020	47,200	119,200	166,400	200	800	1,000	167,400
2025	51,600	126,200	177,800	200	800	1,000	178,800
2030	56,900	135,100	192,000	200	800	1,000	193,000
2035	62,400	143,900	206,300	200	800	1,000	207,300
	Average annual percent change						
1995-2000	n.a.	n.a.	-0.2%	n.a.	n.a.	0.0%	-0.2%
2000-2007	n.a.	n.a.	3.1%	n.a.	n.a.	29.5%	3.1%
2007-2010	-2.0%	-7.0%	-5.7%	-21.2%	-0.5%	-6.4%	-5.7%
2010-2015	2.0%	3.2%	2.9%	0.0%	0.0%	0.0%	2.8%
2015-2020	1.7%	0.8%	1.1%	0.0%	0.0%	0.0%	1.1%
2020-2025	1.8%	1.1%	1.3%	0.0%	0.0%	0.0%	1.3%
2025-2030	2.0%	1.4%	1.5%	0.0%	0.0%	0.0%	1.5%
2030-2035	1.9%	1.3%	1.4%	0.0%	0.0%	0.0%	1.4%
2007-2035	1.5%	0.6%	0.8%	-2.5%	0.0%	-0.7%	0.8%

Note: In 2004, the construction of an Air Traffic Control Tower was completed at the Airport. Operations counts prior to 2004 were obtained from the FAA TAF.
n.a. = Not available

(a) Includes air carrier and air taxi operations which account for less than 0.5% of total aircraft operations.

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts* , Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts included in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

Table A-7

TOTAL AIRCRAFT OPERATIONS FORECASTS FOR NON-TOWERED GENERAL AVIATION AIRPORTS
San Diego County Public Use Airports

	Total aircraft operations						
	Oceanside Municipal	Fallbrook Community Airpark	Borrego Valley	Aqua Caliente (a)	Ocotillo	Jacumba Airport	Total--6 airports
Historical							
1995	n.a.	8,800	5,136	n.a.	n.a.	n.a.	n.a.
2000	45,000	8,800	6,152	n.a.	n.a.	n.a.	n.a.
2005	11,609	36,124	26,454	650	405	325	75,567
2006	14,352	32,586	20,853	650	405	325	69,171
2007	14,128	33,286	26,251	4,400	800	325	79,190
Forecast							
2010	12,000	23,000	22,400	4,400	800	325	62,925
2015	14,500	34,300	22,400	4,400	800	325	76,725
2020	15,500	36,700	22,400	4,400	800	325	80,125
2025	16,600	39,600	22,400	4,400	800	325	84,125
2030	18,200	43,200	22,400	4,400	800	325	89,325
2035	19,900	46,900	22,400	4,400	800	325	94,725
	Average annual percent change						
1995-2000	n.a.	n.a.	3.7%	n.a.	n.a.	n.a.	n.a.
2000-2007	-15.3%	n.a.	23.0%	n.a.	n.a.	n.a.	n.a.
2007-2010	-5.3%	-11.6%	-5.2%	0.0%	0.0%	0.0%	-7.4%
2010-2015	3.9%	8.3%	0.0%	0.0%	0.0%	0.0%	4.0%
2015-2020	1.3%	1.4%	0.0%	0.0%	0.0%	0.0%	0.9%
2020-2025	1.4%	1.5%	0.0%	0.0%	0.0%	0.0%	1.0%
2025-2030	1.9%	1.8%	0.0%	0.0%	0.0%	0.0%	1.2%
2030-2035	1.8%	1.7%	0.0%	0.0%	0.0%	0.0%	1.2%
2007-2035	1.2%	1.2%	-0.6%	0.0%	0.0%	0.0%	0.6%

Note: Operations counts prior to 2005 were obtained from the FAA TAF.
n.a. = Not available

(a) Includes an estimated 3,700 military helicopter operations in 2007 through 2050.

Sources: Historical (1995 - 2007) and Forecast (2010 - 2030): San Diego County Regional Aviation Strategic Plan, *Aviation Demand Forecasts* , Landrum & Brown, December 2008.
Forecast 2035: LeighFisher, October 2010, extrapolated from the baseline forecasts included in *Aviation Demand Forecasts* (Landrum & Brown, December 2008).

U.S. Department
of Transportation
**Federal Aviation
Administration**

WESTERN FLIGHT PROCEDURES OFFICE
AJW-327B
1601 Lind Ave., SW., Room 200
Renton, WA 98057

June 29, 2009

RECEIVED
JUL 06 2009
AIRPORTS DIVISION

Mr. M.C. Tussey
Deputy Director of Airports
3750 John J Montgomery Dr
San Diego, CA 92123

Dear Mr. Tussey,

I am writing this letter to follow-up our conversation over the telephone call on 6/26/09 regarding your request to explore the possibilities of developing of a vertically guided Instrument Approach Procedure (IAP) into Runway 8L at Brown Field Municipal, San Diego, CA.

I have conducted a feasibility study for you request and unfortunately your request at the present time is not practical for the following reasons:

a.) Procedure development criteria require the aircraft to climb straight ahead if a missed approach is executed for a certain distance prior to turning. The distance for the straight ahead climb is determined based on the amount of turn. In this particular instance a left turn of more than 120 degrees is required. This amount of turn would require the aircraft to fly a minimum of 7.3 (NM) from the Runway 8L threshold prior to turning. Due to rapidly rising high terrain, northeast of the airport, it makes this option not possible.

b.) Secondly and most important, is the close proximity of the airport to the Mexican boarder. Due to the location of the airport in relationship to the Mexican boarder, the direction of the missed approach is restricted to a left turn only, again restricting capabilities due to the high terrain northeast of the field.

c.) Finally, a procedure into Runway 26R is also not possible due to limited airspace for the procedure and the same problems as mentioned above.

Unfortunately, it would appear that your best option is the minimums published on the current (IAP).

Should you need you have any questions, please do not hesitate to contact Mr. George Reese at (425) 917-6749.

Sincerely,

for Jason E. Pitts
Manager

U.S. Department
of Transportation
**Federal Aviation
Administration**

WESTERN FLIGHT PROCEDURES OFFICE
AJW-3744
FPO North Annex
1601 Lind Ave., SW.
Renton, WA 98057

Mr. M.C. Tussey
Deputy Director of Airports
3750 John J Montgomery Drive
San Diego, CA 92123

Dear Mr. Tussey:

I am writing this letter to follow-up the conversation you had with George Reese on March 23, 2010, regarding your request to develop a Vertically Guided Approach (VGA) on runway 26R at Brown Municipal Airport (KSDM), San Diego, CA.

George conducted a feasibility study of your request. This study consisted of an RNAV (GPS) Localizer Performance with Vertical Guidance (LPV) Wide Area Augmentation System (WAAS), as well as RNAV Required Navigation Performance (RNP) Special Aircraft and Aircrew Authorization Required (SAAAR) capabilities.

George presented his findings to me. Unfortunately neither an LPV approach, nor an RNP approach into runway 26R is practical at KSDM for the following reasons:

a. Extremely high terrain to the north and east of the airport forces a descent gradient that exceeds the maximum allowed for stabilized descent into the airport.

b. Runway 26R threshold is too close to the Mexican border to allow Category "D" aircraft to land at the airport for an LPV approach. The runway is 6.75 miles from the border. Normally the minimum distance required for the final and intermediate segments is 9-11 miles. Aircraft Category would need to be restricted to A and B only based on current distance from the border.

c. Similar issues come up with regards to an RNP approach. The primary protected area for an RNP approach must remain clear of the border. In order to achieve this requirement, an RNP level of 0.11 to 0.15 is required. The RNP level refers to the accuracy required for the aircraft to calculate its position within a given radius block of airspace, (in this case 0.11 nm to 0.15 nm) from the flight track centerline.

   An RNP level such as this severely limits the number of aircraft who can fly the procedure. In addition, this RNP level requires special aircraft equipment upgrades and pilot training, normally only reserved for air carrier fleets.

Typically, the aircraft must have at least dual GNSS sensors, dual flight management system, dual air data systems dual autopilots, and single inertial reference units. Based on the aircraft you stated that would fly into KSDM (i.e. MD-11), it does not appear aircraft operating at KSDM could meets the RNP level required for this approach.

Lastly, in order for us to obtain approval to publish an RNP approach at any airport, there must be an operator certified to fly the designed RNP level.

Should you have any further questions or concerns regarding this matter, please do not hesitate to contact me.

Sincerely,

Jason E. Pitts,
Manager
Western Flight Procedures Office

Appendix B

ECONOMETRIC DEMAND MODEL OVERVIEW AND OUTPUT

CONTENTS

CONTENTS *(continued)*

Appendix B

ECONOMETRIC DEMAND MODEL OVERVIEW AND OUTPUT

An econometric demand model ("the Model") was developed for the RASP in order to capture and assess the regional demographics and air travel demand characteristics of the RASP Study Area. In later phases of the study, the Model was used as a decision support tool to evaluate various "what-if" scenarios and quantitatively measure the impact of infrastructure enhancements and/or policy measures on the regional aviation system. The Model basically "computes" the propensity for people to travel and the factors that lead to a choice of airport, which primarily includes the time and costs associated with accessing aviation services. SANDAG's Regional Travel Demand Model was also incorporated into the RASP Model to estimate ground transportation changes and access times.

Demand generated in the RASP Study Area* can be categorized into commercial air service, general aviation (GA), and air cargo activity, with each category having its own unique operational characteristics and impact on airport use in the region. Figure B-1 captures the various "demand driver" categories, which are further differentiated to capture individual market nuances.

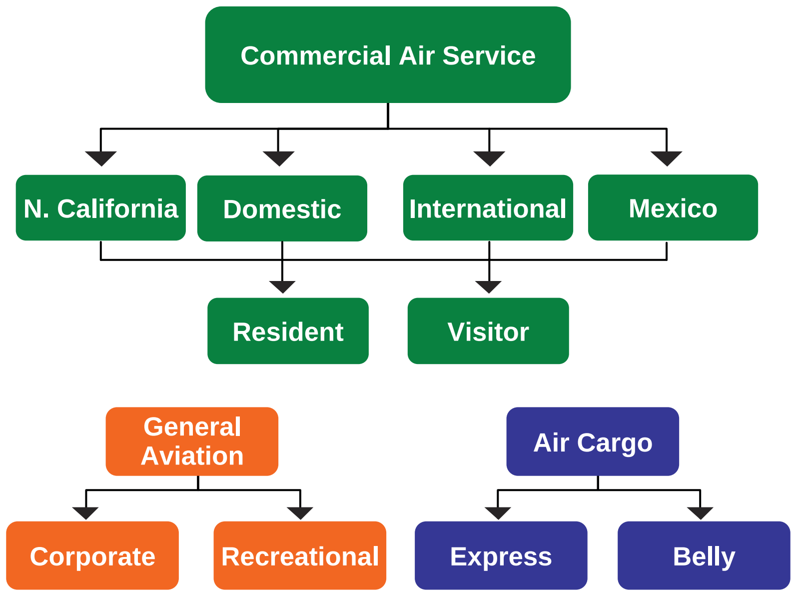
A GA Model was developed separately from the RASP Model because general aviation operations are less driven by airline competitive forces and more principally by the local economy, number of active pilots, aircraft hours flown, airport facilities, etc. Also, as opposed to commercial passenger activity, the region has sufficient capacity to accommodate future general aviation demand, and therefore, general aviation activity is not impacted by capacity constraints in San Diego County. A description of the MS Excel spreadsheet-based model developed to assess GA-related scenarios is provided in Section 1.5.2 of the main report. In addition, the choice of airport for air cargo operations cannot be modeled using the econometric Model because air cargo operators have unique and distinct business operations based on proximity to cargo handling facilities and major business centers, in addition to time and cost. Henceforth, the term "demand" in this Appendix refers to the commercial air service demand and "the Model" refers to the econometric model developed for commercial air service demand only. The following sections summarize the key aspects of the Model, its development, and primary outputs.

---

*Defined as the 12 public use airports in the San Diego County Airport System including Tijuana Rodriguez and the following five airports in the Los Angeles area: Los Angeles International (LAX), John Wayne/Orange County, Long Beach, Ontario International, and Burbank.

Figure B-1

DEMAND DRIVERS
Regional Aviation Strategic Plan



B-1 MODEL OVERVIEW

The Model is based on academically proven methodology for demand allocation and price adjustment. Demand allocation is a multinomial nested-logit model which allocates demand in the region to various airports/modes. The logic mimics passengers' evaluation of multiple airport choices. Details on development and implementation for demand allocation and airline response are provided in later sections.

B-1.1 Model Inputs

The inputs used for the Model are based on published data such as historical population estimates from the Bureau of Economic Analysis and average Gross Domestic Product (GDP) from the International Monetary Fund (IMF). Other inputs to the Model include data or models made available to Jacobs Consultancy such as SANDAG Travel Demand Model and their RTP, and Southern California Association of Governments (SCAG) Travel Demand Model. The data sources used have been documented in individual sections.

B-1.2 Scenario Evaluations

The Model evaluates passenger demand at all airports/modes for each year in the planning horizon between 2006 and 2030. The Model was calibrated based on actual annual passenger enplanements at Study Area airports between 2006 and 2009.

Policy and infrastructure enhancements associated with the Baseline (or Do-Nothing) Scenario and each alternative scenarios were translated into input variables accepted by the Model. All scenarios were evaluated and compared on the same platform by assessing each on the following two high-level metrics in each forecast year: (1) annual activity for each airport/mode; and (2) additional annual regional demand accommodated (or "suppressed aviation demand") over the Baseline . The second metric, although uncommon, provides a holistic perspective of the region's ability to meet demand. The model computes both metrics in units of annual passenger enplanements.

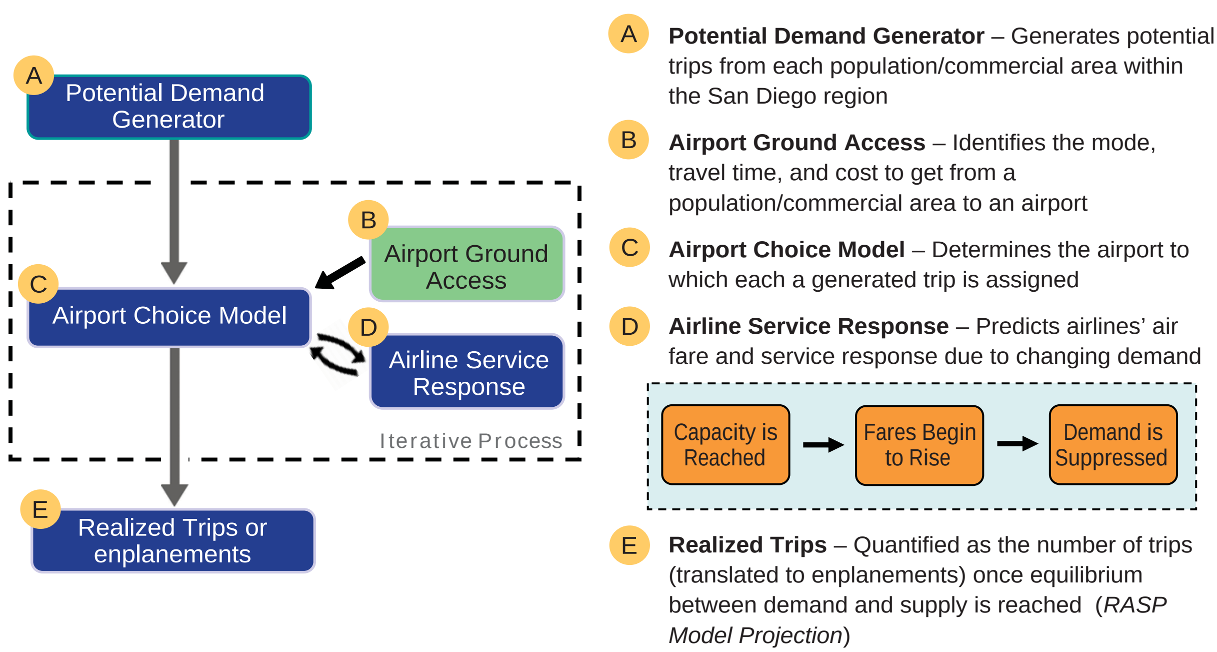
B-2 MODEL STRUCTURE

The Model is comprised of five modules: Potential Demand Generator, Airport Ground Access, Airport Choice, Airline Service Response, and Realized Trips. Figure B-2 illustrates the general structure and high-level logic of the Model. A summary of each module is provided in the following sections.

Figure B-2

MODEL STRUCTURE

Regional Aviation Strategic Plan



B-2.2 Potential Demand Generator Module

The Study Area includes both residential and commercial areas. People living or visiting this region who opt to travel by air represent demand on the system. The Model defines these passengers who opt to travel using air service as “realized demand”.

However, there may be people who would have liked to travel, but could not travel due to unavailability of seats and/or the cost of travel was prohibitive. Typically, this would represent both residents and visitors who would opt out of air travel. This does not however rule out the possibility of them traveling by car or some other mode not evaluated in the Model, to their destination. The Model defines these passengers as “suppressed demand” as this demand is unmet.

The Model defines “potential demand” as all people in the region who would like to travel by air; and therefore, is the sum of realized demand and suppressed demand.

This module generates potential demand in the Study Area using socio-economic data and is represented in terms of annual passenger enplanements. The realized demand is determined by the interaction between Airport Choice Model and Airline Service Response modules, both of which are discussed in detail in later sections. Suppressed demand can then be deduced from the other two values.

This module generates potential demand for various combinations of demand drivers, as follows:

- Destination types
  - Northern California (NCA) intrastate traffic
  - U.S. Domestic (DOM) which excludes intrastate traffic
  - International (INT) which excludes U.S. and Mexico traffic
  - Mexico (MEX) which includes U.S. passenger traffic to/from Mexico
- Originating regions
  - 4605 individual Travel Analysis Zones (TAZs) in San Diego defined by SANDAG
  - Counties in the Los Angeles Combined Statistical Area (CSA)
  - Tijuana in Northern Baja California, Mexico
- Passenger types
  - Residents
  - Visitors

These factors and their levels were selected based on results of the regression models that correlate historical enplanements and demographic factors. It is concluded that passenger enplanements for the above combinations of demand drivers behave very differently from each other. These findings were also confirmed by various airport surveys, including the *San Diego International Airport Passenger Survey (*Landrum & Brown, *2009)* and *2006 Air Passenger Survey Final Report – Los Angeles International Airport (*Applied Management & Planning Group*)*.

Potential demand is based on demographic factors of the Study Area including population, income, GDP, and Gross Regional Product (GRP). Both GDP and GRP provide a measure of the total market value of goods produced by the U.S. economy. Though not commonly used, GRP is used to estimate the regional economy more accurately within the Study Area. The potential demand is also dependent on the minimum cost of travel in the Model. The potential demand is independent of airport/mode choices available.

Methodology

In building the Potential Demand Generator module, multivariate non-linear regression was used to correlate annual enplanements with various independent variables such as population, income, GDP, GRP and fare. Fare was included to capture prevailing cost of travel and sensitivity to changing travel costs. Equations were developed for each nested level of destination type, originating region and passenger type. Any changes in the independent variables such as increase in population in a certain region can then be translated into annual enplanements at the study region's airports.

The data used for fitting the multivariate non-linear regression did not exclusively belong to the study region. This allowed for a better picture to emerge of how people choose airports for their travel, while maintaining the nuances of travel choice patterns. The data set includes various U.S. metropolitan statistical areas (MSAs) or combined statistical areas (CSAs) where suppressed demand can be assumed to be near zero, i.e., all people who wanted to travel by air did in fact travel by air. None were left behind due to unavailability or prohibitive costs. The criteria used for such MSA/CSA selection are as follows:

- **Remote Location.** Most of the travel out of the region is by air. The geographical location of the study region puts it at a disadvantage is terms of average distance to other metropolitan areas in the U.S. This increases the travel time and people choose air travel for most out of the region trips. The passenger choice of travel from the MSA should match this behavior.

- **Abundant Air Service.** There is no lack of air service suppressing aviation demand. Lack of abundant air service could lead to latent demand. Two indicators were used to determine abundance of air service: the capacity of the air service in the MSA/CSA should far exceed enplanements; and presence of low cost carriers serving the MSA/CSA.

The final short-listed MSAs/CSAs included San Diego (CA), Los Angeles Basin, (CA), San Francisco Bay Area Basin (CA), Portland (OR), Albuquerque (NM), Seattle (WA), and Sacramento (CA). For each of the MSA/CSA, various data sets were collected and used for data-fitting.

Data Collection

Historical population for selected MSAs/CSAs was obtained from the Bureau of Economic Analysis. Table B-1 lists the data used which spans eight years.

Historical income data for selected MSAs/CSAs were obtained from the Bureau of Economic Analysis. To compute the Per Capita Income (PCI), the income values were divided by the population estimates from Table B-1. These values were then converted from current dollars to chained 1999 dollars based on Consumer Price Index (CPI) published by the Bureau of Labor Statistics (BLS). Table B-2 lists PCI values, in terms of 1999 dollars, for the selected MSAs/CSAs.

Historical Gross Domestic/Regional Products (GDP/GRP) for selected MSAs were obtained from Bureau of Economic Analysis. In addition, average GDP of the three destinations (i.e. the U.S. excluding California, World, and Mexico) were obtained from Bureau of Economic Analysis and International Monetary Fund. Table B-3 lists the GRPs for MSAs in millions of 2001 U.S. dollars. The U.S. GDP is in billions of 2005 U.S. dollars. The world GDP is in billions of 1999 U.S. dollars and the Mexico GDP is in billions of 2005 Mexican pesos.

Stage-length adjustment is a normalization process to compute non-stage-length-biased revenue of an airline or an airport. In the Model, it is used to eliminate fluctuation of realized fares at selected airports due to different average haul length served at the airport. This is critical to compare multiple regions served by different sizes of airports. The most commonly adopted stage-length adjustment equation is used in the Model, represented by the following equation:

$$\text{SLA Fare} = \text{Realized Fare} - 0.038 \times (989 - \text{Stage Length}) \quad (1)$$

Realized fares for individual itinerary were obtained from U.S. DOT's DB1B database. Fares were adjusted for stage-length and aggregated by destination based on weight (passenger counts) of each itinerary. Table B-4 lists stage-length adjusted fare at selected MSAs by destination type.

Annual passenger enplanements at airports serving selected MSAs/CSAs were obtained from U.S. DOT's DB1B and T100 databases. Annual enplanements were then aggregated by destination. It must be noted that intrastate trips were not separately aggregated as such trips were not applicable at selected MSAs/CSAs in states other than California. Aggregated enplanements were further categorized into two passenger types (i.e. residents and visitors) based on "Trip Qualifier" reported for each itinerary.

The "Trip Qualifier" identifies the point of sale and, whether the trip is in the middle, at the end, or is the only trip within the full itinerary. The four categories of "Trip Qualifier" are:

A: Point of sale (itinerary originates, and trip begins at a selected origin)
M: Trip contained in full itinerary
Z: Final trip in itinerary
O: Only trip in itinerary

Due to the way these categories are defined, passengers categorized under type O could be both residents and visitors. To appropriately allocate these passengers into two groups - residents and visitors, the estimated share of residents and visitors was used. The share of resident vs. visitor can be estimated by the ratio's A/(A+Z) and Z/(Z+A).

All enplanements identified as category M are considered connecting or pass-through and were not included in the analysis. Using "Trip Qualifier", resident enplanements were computed as below:

$$A + O \times \frac{A}{A+Z} \qquad (2)$$

Similarly, visitor enplanements are computed as below:

$$Z + O \times \frac{Z}{A+Z} \qquad (3)$$

Tables B-5 and B-6 summarize total enplanements at each airport serving selected MSA by destination and passenger type.

Table B-1
POPULATION IN SELECTED MSA/CSA
Regional Aviation Strategic Plan

Metropolitan Statistical Area (MSA)	2000	2001	2002	2003	2004	2005	2006	2007
Portland-Vancouver-Beaverton, OR-WA	1,936,110	1,975,944	2,011,436	2,035,389	2,054,913	2,087,066	2,126,475	2,166,491
Albuquerque, NM	731,674	739,327	753,210	765,381	779,751	797,146	815,979	833,044
Seattle-Tacoma-Bellevue, WA	3,052,495	3,094,159	3,120,811	3,136,965	3,160,537	3,197,370	3,253,977	3,298,225
Sacramento-Arden-Arcade-Roseville, CA	2,376,523	2,457,671	2,531,818	2,594,916	2,648,918	2,688,252	2,718,384	2,750,072
San Diego-Carlsbad-San Marcos, CA	2,825,395	2,869,630	2,905,609	2,927,311	2,930,053	2,931,689	2,937,023	2,959,734
Los Angeles Area	16,435,396	16,680,381	16,919,758	17,150,883	17,349,529	17,475,501	17,570,737	17,643,641
Los Angeles-Long Beach-Santa Ana, CA	12,401,030	12,536,598	12,655,506	12,748,533	12,806,778	12,815,345	12,796,978	12,784,612
Riverside-San Bernardino-Ontario, CA	3,277,952	3,378,073	3,486,831	3,617,130	3,753,081	3,871,591	3,982,512	4,066,573
Oxnard-Thousand Oaks-Ventura, CA	756,414	765,710	777,421	785,220	789,670	788,565	791,247	792,456
San Francisco Bay Area	6,133,098	6,183,386	6,152,887	6,135,882	6,128,905	6,150,089	6,189,512	6,253,135
San Francisco-Oakland-Fremont, CA	4,137,271	4,181,279	4,168,561	4,157,602	4,149,620	4,157,603	4,177,611	4,216,125
San Jose-Sunnyvale-Santa Clara, CA	1,739,977	1,746,353	1,730,409	1,726,381	1,728,380	1,742,883	1,762,258	1,786,355
Santa Cruz-Watsonville, CA	255,850	255,754	253,917	251,899	250,905	249,603	249,643	250,655

Source: U.S. Bureau of Economic Analysis data.

Table B-2

PER CAPITA INCOME FOR SELECTED MSA/CSA

Regional Aviation Strategic Plan

Metropolitan Statistical Area (MSA)	2000	2001	2002	2003	2004	2005	2006	2007
Portland-Vancouver-Beaverton, OR-WA	$31,077	$30,437	$29,884	$29,616	$29,755	$29,955	$30,706	$31,210
Albuquerque, NM	25,005	26,330	25,799	25,602	26,007	26,342	26,745	26,761
Seattle-Tacoma-Bellevue, WA	36,513	35,572	35,414	35,105	37,157	36,514	38,058	39,694
Sacramento-Arden-Arcade-Roseville, CA	22,079	22,021	21,838	22,025	22,619	22,801	23,275	23,376
San Diego-Carlsbad-San Marcos, CA	31,727	31,801	32,081	32,363	34,014	34,468	35,304	35,699
Los Angeles Area	28,562	28,756	28,656	28,776	29,453	30,117	31,278	31,599
Los Angeles-Long Beach-Santa Ana, CA	30,040	30,279	30,203	30,366	31,141	32,026	33,500	33,971
Riverside-San Bernardino-Ontario, CA	22,073	22,391	22,350	22,398	22,737	22,852	23,191	23,144
Oxnard-Thousand Oaks-Ventura, CA	32,442	31,898	31,744	32,353	33,995	34,754	36,038	36,715
San Francisco Bay Area	47,790	44,804	42,388	41,845	43,422	44,766	46,915	48,215
San Francisco-Oakland-Fremont, CA	46,766	44,854	42,878	42,313	44,197	45,686	47,805	49,000
San Jose-Sunnyvale-Santa Clara, CA	51,681	46,012	42,345	41,840	42,660	43,862	46,074	47,679
Santa Cruz-Watsonville, CA	37,869	35,730	34,633	34,142	35,835	35,757	37,952	38,839

Sources: U.S. Bureau of Economic Analysis and Bureau of Labor Statistics data.

Table B-3
GROSS DOMESTIC / REGIONAL PRODUCTS
Regional Aviation Strategic Plan

Metropolitan Statistical Area (MSA) / Region	2000	2001	2002	2003	2004	2005	2006	2007
Portland-Vancouver-Beaverton, OR-WA	$ 77,181	$ 78,424	$ 79,893	$ 86,118	$ 89,533	$ 98,458	$103,059	$ 77,181
Albuquerque, NM	26,156	25,234	26,924	29,452	29,804	30,727	31,424	26,156
Seattle-Tacoma-Bellevue, WA	155,695	154,625	156,929	160,738	68,784	174,169	183,495	155,695
Sacramento-Arden-Arcade-Roseville, CA	61,896	65,667	69,841	72,987	77,041	78,711	78,480	61,896
San Diego-Carlsbad-San Marcos, CA	112,435	117,218	121,334	129,176	134,285	137,179	139,471	112,435
Los Angeles Area	604,482	615,287	638,261	674,845	701,883	725,191	730,131	604,482
Los Angeles-Long Beach-Santa Ana, CA	506,513	514,805	532,027	560,371	580,847	600,623	605,948	506,513
Riverside-San Bernardino-Ontario, CA	73,791	75,850	79,982	86,195	91,472	94,313	93,535	73,791
Oxnard-Thousand Oaks-Ventura, CA	24,178	24,632	26,252	28,279	29,564	30,255	30,648	24,178
San Francisco Bay Area	358,547	346,665	348,831	364,097	381,787	398,459	417,365	358,547
San Francisco-Oakland-Fremont, CA	230,363	226,988	228,372	237,767	247,525	253,905	260,156	230,363
San Jose-Sunnyvale-Santa Clara, CA	119,750	111,512	112,422	118,300	126,024	136,148	148,854	119,750
Santa Cruz-Watsonville, CA	8,434	8,165	8,037	8,030	8,238	8,406	8,355	8,434
United States	11,347	11,553	11,841	12,264	12,638	12,976	13,254	11,347
World	31,892	33,187	37,301	41,974	45,385	49,115	55,270	31,892
Mexico	7,370	7,431	7,556	7,858	8,110	8,526	8,810	7,370

Sources: U.S. Bureau of Economic Analysis and International Monetary Fund data.

Table B-4
STAGE LENGTH ADJUSTED FARE
Regional Aviation Strategic Plan

Originating airport	Trip type	2001	2002	2003	2004	2005	2006	2007
Portland International	Domestic	$120.87	$121.03	$126.32	$129.18	$136.82	$149.54	$151.95
Portland International	International	656.02	660.58	643.31	687.81	719.34	755.79	794.06
Portland International	Mexico	272.44	263.39	270.28	275.94	269.71	270.96	269.56
Albuquerque International Sunport	Domestic	102.98	110.67	111.03	112.82	121.34	133.93	135.44
Albuquerque International Sunport	International	543.80	559.95	567.07	595.77	641.04	689.16	718.66
Albuquerque International Sunport	Mexico	232.42	229.65	260.27	270.20	278.43	278.70	279.62
Seattle-Tacoma International	Domestic	158.64	158.07	164.33	164.52	171.14	186.98	190.42
Seattle-Tacoma International	International	567.30	552.45	573.09	540.78	581.77	622.86	693.26
Seattle-Tacoma International	Mexico	279.96	269.12	272.08	285.77	279.20	280.39	279.12
Sacramento International	Domestic	121.10	116.11	120.96	123.25	132.82	142.26	137.97
Sacramento International	International	447.62	426.73	401.45	476.09	489.25	542.21	581.30
Sacramento International	Mexico	267.97	272.37	302.73	305.21	295.46	289.98	285.26
San Diego International	Domestic	128.53	129.79	135.14	138.12	146.07	159.59	157.03
San Diego International	International	597.50	595.26	581.97	616.39	636.01	698.62	759.56
San Diego International	Mexico	202.16	199.96	206.96	238.29	203.07	231.27	240.90
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	Domestic	150.10	147.27	148.58	146.21	162.11	174.98	177.34
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	International	619.86	569.33	559.30	590.10	611.67	649.07	674.32
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	Mexico	196.21	204.55	204.95	211.48	200.28	215.64	207.77
3 SF Bay Area Airports (SFO, OAK, SJC)	Domestic	164.53	153.75	154.36	153.96	164.83	177.45	174.63
3 SF Bay Area Airports (SFO, OAK, SJC)	International	546.61	508.81	476.61	544.53	570.90	593.86	638.89
3 SF Bay Area Airports (SFO, OAK, SJC)	Mexico	231.07	225.91	226.69	251.57	228.28	245.72	238.99

Source: U.S. DOT DB1B database.

Table B-5
ANNUAL RESIDENTS' ENPLANEMENTS AT AIRPORTS SERVING SELECTED MSAS/ CSAS
Regional Aviation Strategic Plan

Originating airport	Trip type	2001	2002	2003	2004	2005	2006	2007
Portland International	Domestic	2,850,837	2,770,271	2,784,484	2,866,193	3,048,220	3,139,755	3,197,574
Portland International	International	169,477	164,790	150,475	179,475	202,512	218,786	232,028
Portland International	Mexico	85,734	86,509	85,579	91,012	103,616	110,612	107,269
Albuquerque Intl. Sunport	Domestic	1,207,721	1,153,243	1,155,746	1,209,966	1,275,758	1,306,094	1,303,066
Albuquerque Intl. Sunport	International	48,906	50,656	49,674	57,500	62,122	66,167	66,338
Albuquerque Intl. Sunport	Mexico	14,539	15,122	16,687	20,040	20,589	22,855	22,287
Seattle-Tacoma International	Domestic	4,975,388	4,892,895	4,920,308	5,134,073	5,383,249	5,467,044	5,561,562
Seattle-Tacoma International	International	321,989	310,296	315,306	366,102	389,858	420,558	434,473
Seattle-Tacoma International	Mexico	138,698	134,703	142,186	153,640	178,310	200,631	197,012
Sacramento International	Domestic	2,290,360	2,405,969	2,456,364	2,685,308	2,868,969	2,921,719	2,942,477
Sacramento International	International	65,830	66,486	71,484	83,604	97,302	106,587	102,818
Sacramento International	Mexico	22,588	23,755	24,731	38,091	43,141	49,328	55,410
San Diego International	Domestic	3,081,038	3,062,670	3,113,147	3,345,858	3,528,961	3,554,510	3,642,891
San Diego International	International	204,723	199,942	201,676	247,995	280,285	295,487	281,498
San Diego International	Mexico	37,973	42,528	45,473	48,364	78,222	69,271	63,878
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	Domestic	13,014,683	12,665,237	13,091,210	14,231,366	14,613,254	14,842,810	14,718,744
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	International	806,661	819,283	828,243	978,365	1,043,623	1,092,245	1,148,452
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	Mexico	314,830	316,566	339,159	392,122	462,498	524,673	554,505
3 SF Bay Area Airports (SFO, OAK, SJC)	Domestic	10,573,186	9,766,264	9,516,535	10,027,654	10,317,115	10,524,803	10,748,187
3 SF Bay Area Airports (SFO, OAK, SJC)	International	947,225	929,241	899,237	988,643	1,029,175	1,099,114	1,137,217
3 SF Bay Area Airports (SFO, OAK, SJC)	Mexico	314,830	316,566	339,159	392,122	462,498	524,673	554,505

Source: U.S. DOT DB1B database.

Table B-6
ANNUAL VISITORS' ENPLANEMENTS AT AIRPORTS SERVING SELECTED MSAS/ CSAS
Regional Aviation Strategic Plan

Originating airport	Trip type	2001	2002	2003	2004	2005	2006	2007
Portland International	Domestic	2,184,374	2,097,740	2,116,417	2,180,228	2,327,201	2,374,806	2,443,237
Portland International	International	80,464	73,231	66,476	77,996	85,689	87,465	91,953
Portland International	Mexico	5,577	5,762	5,202	5,199	6,055	5,609	5,192
Albuquerque International Sunport	Domestic	1,385,980	1,313,638	1,290,965	1,343,335	1,412,813	1,450,497	1,428,985
Albuquerque International Sunport	International	32,665	32,385	31,367	31,501	33,649	36,784	37,463
Albuquerque International Sunport	Mexico	2,152	2,019	1,804	1,851	2,222	2,396	2,454
Seattle-Tacoma International	Domestic	4,166,673	3,994,126	4,003,963	4,282,018	4,519,512	4,617,397	4,673,629
Seattle-Tacoma International	International	216,732	201,725	184,535	200,429	213,233	222,853	233,218
Seattle-Tacoma International	Mexico	10,643	11,108	11,765	12,591	15,411	16,890	15,009
Sacramento International	Domestic	1,633,031	1,678,232	1,671,317	1,796,123	1,872,142	1,948,512	1,993,004
Sacramento International	International	24,921	25,515	27,257	27,347	27,949	30,934	29,673
Sacramento International	Mexico	1,613	1,676	1,460	2,160	1,950	2,463	2,421
San Diego International	Domestic	3,826,293	3,717,551	3,791,524	4,036,283	4,289,400	4,386,921	4,564,430
San Diego International	International	189,098	169,089	179,235	214,096	232,156	235,184	247,683
San Diego International	Mexico	6,917	6,163	5,598	5,277	8,489	8,270	7,523
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	Domestic	11,960,528	11,293,814	11,566,791	12,504,885	12,942,787	13,186,121	13,320,187
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	International	871,960	737,408	722,338	832,116	919,088	918,816	968,449
5 Los Angeles Airports (LAX, LGB, SNA, BUR, ONT)	Mexico	67,691	73,925	60,042	59,069	61,643	68,068	69,726
3 SF Bay Area Airports (SFO, OAK, SJC)	Domestic	8,984,575	8,397,657	8,322,926	8,824,357	9,114,496	9,460,478	9,787,964
3 SF Bay Area Airports (SFO, OAK, SJC)	International	721,456	609,050	578,084	661,008	686,516	714,827	762,554
3 SF Bay Area Airports (SFO, OAK, SJC)	Mexico	5,577	5,762	5,202	5,199	6,055	5,609	5,192

Source: U.S. DOT DB1B database.

Regression Analysis

A number of different regression methods were evaluated to understand changes to annual passenger enplanements by varying the independent variables, discussed in the previous section. These include linear regression, using year-over-year growth of all factors, and multivariate log-regression.

Based on the results of goodness of fit (R-squared values), the multivariate log-regression method was selected. The data used for regression is for the time period 2001-2007. After data-fitting, the following equations and statistics were developed:

Resident Travel to Domestic Destinations

Time Period: 2001 - 2007

Independent Variables:

Income per Population (IpP), Stage Length Adjusted Fare (SLAf), GDP/GRP per Population (GDPpP)

Regression Equation:

Annual Enplanements per Population $= e^{4.973} \times IpP^{0.456} \times SLAf^{-1.357} \times GDPpP^{0.921}$ (4)

Regression Statistics:

Adjusted $R^2 = 0.6219$

Visitor Travel to Domestic Destinations

Time Period: 2001 - 2007

Independent Variables:

Stage Length Adjusted Fare (SLAf), Geometric GDP (GDPgeo), 9/11 Dummy (Dummy)

Regression Equation:

Annual Enplanements per Population $= e^{-0.227} \times SLAf^{-0.055} \times GDPgeo^{1.473} \times Dummy^{0.119}$ (5)

Regression Statistics:

Adjusted $R^2 = 0.9896$

Resident Travel to International Destinations

Time Period: 2001 - 2007

Independent Variables:

Stage Length Adjusted Fare (SLAf), Geometric GDP X Income per Population (GDPIP)

Regression Equation:

$$\text{Annual Enplanements per Population} = e^{-6.896} \times SLAf^{-0.829} \times GDPIP^{0.459} \quad (6)$$

Regression Statistics:

Adjusted $R^2 = 0.8077$

Visitor Travel to International Destinations

Time Period: 2001 - 2007

Independent Variables:

Stage Length Adjusted Fare (SLAf), Geometric GDP (GDPgeo)

Regression Equation:

$$\text{Annual Enplanements per Population} = e^{-5.617} \times SLAf^{-0.508} \times GDPgeo^{1.947} \quad (7)$$

Regression Statistics:

Adjusted $R^2 = 0.9076$

$$\text{Geometric GDP} = \sqrt{GDP_{origin} \times GDP_{destination}}$$

9/11 Dummy variable is applied to years 2002, 2003 and 2004 with 1, 1, 0.5 values respectively. All other years have a null value.

It is important to note that the regression method heavily relies on a set of credible historical data. As credible historical data for Tijuana (Mexico) is unavailable, this method cannot be replicated for MEX trip type.

Additionally, the study region is uniquely located from the selected MSAs (San Diego and Los Angeles basin) in which the residents have a higher propensity of travel to Mexican destinations. Therefore, for this trip type, a more traditional segment based bottom-up traffic analysis was performed. Actual estimation is discussed in the next section.

Data Extrapolation to 2030

Using the calibrated equations discussed in the previous sections, the potential demand for air travel from the Study Area was generated. The data used includes forecasted personal income, GDP/GRP provided by SANDAG, SCAG, and IMF – World Economic Outlook 2009.

In San Diego, 4,605 individual TAZs was defined as an originating region. In Los Angeles Basin, individual 5 County was defined as an originating region.

Gross Domestic/Regional Products forecast was not available for the complete study period as IMF reports their GDP forecasts up to year 2014. Simple moving-average method was used on year-over-year growth rate. Over the study period, GDP was assumed to grow at 3.05% in Los Angeles basin, 3.13% in San Diego, 2.9% domestically, and 4% internationally. Note the world GDP was weighted based on each continent's influence over the RASP study region expressed in terms of historical passenger enplanements to the study region.

Minimum available fare among all available airports in 2006 was selected and kept constant over the study period. Jacobs Consultancy closely monitors and reports airline profitability. Based on historical analysis, year 2006 has been considered a "stable and profitable" year for airlines.

Initially, regressions were applied to originating regions without further differentiating demands between Northern California (intrastate) and other Domestic trips because of lack of applicable relationships at the selected MSAs. A split was applied to differentiate the two demands because the study region has historically shown a stable breakdown (i.e. approximately 20 %). Table B-7 summarizes potential demands by year.

Traditional bottom-up forecasting was used to generate potential demands from the study region to Mexico as well as all demands originating from Tijuana, Mexico. This methodology was based on limitedly available sources including GAP (operator of Tijuana Rodriguez International Airport), San Diego-Tijuana Cross Border Study, and Marketing Information Data Transfer (MIDT) databases. Bottom-up forecasts were derived from realized-demands of the study region and all potential demands are assumed to be realized. The last constraint is similar to the zero suppressed demand criterion used in MSA short-listing for the regression analysis.

Overall, the GDP of Mexico was assumed to grow at 4.9% compound annual growth rate (CAGR) for the duration of study period based on World Economic Outlook published by IMF. The GDP elasticity, which impacts passenger enplanements, was assumed in the range 1.2-1.5 based on segments. The historical elasticity of GDP versus enplanement is 2.5 in Mexico.

- **San Diego to Mexico.** The San Diego-Tijuana Cross Border Study reported the number of passengers who had traveled via airports to Mexico in 2006 and, had originated from San Diego. 78,000 had opted for San Diego International airport, 475,000 for Tijuana Airport and 46,800 via Los Angeles International Airport. Their choices were likely based on cost of travel and ground access costs prevalent at that time. Based on San Diego and Mexico GDP growth assumption, the potential demand was generated as is presented in Table B-8.

- **Los Angeles Basin to Mexico.** Based on U.S. DOT T100 database, it was estimated that in 2008 approximately 1.6 million passengers (in enplanements) traveled from the five Los Angeles airports to Mexican destinations. Additionally, the San Diego-Tijuana Cross Border Study reported approximately 380,000 passengers (in enplanements) used Tijuana airport to Mexican destinations in 2006. Based on Los Angeles and Mexico GDP growth, the potential demand was forecasted and is presented in Table B-9.

- **Tijuana to Mexico, U.S. and International.** Tijuana Rodriguez International Airport is a privately operated airport. Centralized and publicly available data for Tijuana is not available. The only publicly available data was the overall passenger counts at the airport. Therefore, benchmarks and other available resources were used to generate historical demand drivers and then applied assumed GDP growth rate to forecasts. The forecasted potential demand is available in Table B-10.

Table B-7
POTENTIAL ANNUAL DEMAND FOR SELECTED TRIP TYPES FROM THE STUDY AREA
Regional Aviation Strategic Plan

	Los Angeles						San Diego					
	Residents			Visitors			Residents			Visitors		
	International	Nor Cal	Domestic	International	Nor Cal	Domestic	International	Nor Cal	Domestic	International	Nor Cal	Domestic
2006	3,111,022	6,255,472	29,813,402	2,492,359	2,751,884	10,817,752	361,875	1,369,954	5,501,006	492,596	781,447	3,197,584
2007	3,210,376	6,739,798	30,485,940	2,676,532	2,925,954	11,175,594	374,305	1,516,726	5,657,708	534,669	867,502	3,301,009
2008	3,269,140	6,904,838	30,743,730	2,848,139	2,932,075	11,264,527	387,184	1,608,496	5,891,990	581,223	890,490	3,374,444
2009	3,312,861	6,826,350	29,960,743	2,829,883	2,935,315	10,578,623	391,992	1,578,969	5,765,431	577,497	876,251	3,183,598
2010	3,392,157	6,877,732	30,709,238	2,836,509	2,949,206	10,864,461	397,542	1,580,562	5,881,007	578,850	883,566	3,266,327
2011	3,499,159	7,059,159	32,102,010	3,057,758	3,054,213	11,463,673	412,118	1,628,410	6,170,275	624,000	916,793	3,444,661
2012	3,601,664	7,216,110	33,172,303	3,266,520	3,149,551	11,973,214	426,121	1,673,934	6,395,100	666,602	946,258	3,596,914
2013	3,704,645	7,396,122	34,259,555	3,492,349	3,253,474	12,484,893	441,064	1,729,086	6,660,101	716,549	980,258	3,767,223
2014	3,814,878	7,635,242	35,360,473	3,735,962	3,375,519	12,961,217	456,254	1,798,189	6,908,949	769,499	1,021,868	3,920,534
2015	3,929,606	7,919,553	36,421,965	3,997,571	3,543,127	13,520,920	471,762	1,873,306	7,156,707	826,082	1,071,379	4,103,862
2016	4,041,177	8,226,647	37,499,885	4,277,796	3,720,082	14,103,657	487,513	1,956,655	7,412,515	888,302	1,128,945	4,296,640
2017	4,157,991	8,514,179	38,640,754	4,582,561	3,896,718	14,720,535	503,664	2,037,613	7,675,233	955,605	1,189,614	4,495,610
2018	4,279,486	8,776,866	39,846,251	4,911,834	4,073,730	15,372,364	519,829	2,103,377	7,930,707	1,025,018	1,243,940	4,697,678
2019	4,402,985	9,035,607	41,101,302	5,269,506	4,261,094	16,050,740	536,380	2,166,111	8,191,102	1,099,687	1,299,698	4,906,564
2020	4,530,483	9,286,718	42,396,846	5,657,604	4,435,050	16,781,067	553,415	2,229,391	8,460,291	1,180,789	1,353,496	5,129,527
2021	4,652,665	9,554,765	43,718,337	6,053,246	4,622,620	17,538,039	570,063	2,298,087	8,738,296	1,262,541	1,410,259	5,358,059
2022	4,779,315	9,843,627	45,067,740	6,479,373	4,824,299	18,322,954	586,689	2,365,043	8,996,042	1,346,730	1,467,875	5,583,197
2023	4,909,813	10,148,577	46,445,095	6,936,702	5,039,445	19,138,324	603,620	2,434,379	9,255,741	1,436,408	1,528,820	5,815,371
2024	5,042,573	10,469,975	47,858,414	7,429,468	5,268,121	19,986,043	621,027	2,508,318	9,524,537	1,533,553	1,594,329	6,058,353
2025	5,311,631	11,137,990	50,808,117	8,504,330	5,756,310	21,796,541	658,361	2,680,353	10,158,488	1,757,507	1,743,565	6,613,188
2026	5,179,832	10,801,607	49,310,044	7,961,610	5,507,888	20,870,592	639,146	2,588,321	9,816,799	1,641,165	1,664,860	6,320,310
2027	5,447,582	11,477,178	52,359,240	9,086,614	6,013,167	22,766,337	676,868	2,756,449	10,447,339	1,870,855	1,816,549	6,887,659
2028	5,582,964	11,822,339	53,961,938	9,675,556	6,279,769	23,780,999	695,915	2,845,775	10,792,581	1,994,324	1,898,516	7,200,839
2029	5,722,422	12,177,666	55,613,762	10,304,444	6,557,504	24,841,570	715,239	2,935,797	11,140,491	2,124,954	1,983,065	7,524,794
2030	5,894,524	12,604,794	57,587,230	10,978,954	6,846,362	25,950,600	735,672	3,039,847	11,539,365	2,273,888	2,077,315	7,886,470

Table B-8
ANNUAL ENPLANEMENTS TO MEXICO FROM SAN DIEGO COUNTY
Regional Aviation Strategic Plan

	via San Diego International	via Los Angeles International	via Tijuana Rodriguez International	Total
2006	46,800	78,000	475,000	599,800
2007	48,321	80,535	512,573	641,429
2008	48,356	80,593	512,938	641,887
2009	45,199	75,332	479,458	599,990
2010	46,656	77,761	494,913	619,330
2011	48,980	81,633	519,562	650,176
2012	51,563	85,938	546,960	684,461
2013	54,186	90,310	574,785	719,281
2014	56,662	94,436	601,047	752,146
2015	59,387	98,979	629,958	788,324
2016	62,244	103,740	660,259	826,242
2017	65,238	108,730	692,017	865,984
2018	68,376	113,959	725,303	907,638
2019	71,665	119,441	760,190	951,296
2020	75,112	125,186	796,755	997,053
2021	78,724	131,207	835,079	1,045,011
2022	82,511	137,519	875,247	1,095,276
2023	86,480	144,133	917,346	1,147,959
2024	90,640	151,066	961,470	1,203,176
2025	94,999	158,332	1,007,717	1,261,049
2026	99,569	165,948	1,056,188	1,321,705
2027	104,358	173,930	1,106,991	1,385,279
2028	109,378	182,296	1,160,237	1,451,911
2029	114,639	191,065	1,216,045	1,521,748
2030	120,153	200,255	1,274,536	1,594,944

Table B-9
ANNUAL ENPLANEMENTS TO MEXICO FROM LOS ANGELES BASIN
Regional Aviation Strategic Plan

	via 5 LA Airports	via Tijuana Airport	Total
2006	1,597,706	385,112	1,982,818
2007	1,647,160	387,735	2,034,895
2008	1,559,216	382,935	1,942,151
2009	1,517,117	372,595	1,889,713
2010	1,542,908	378,930	1,921,838
2011	1,585,616	389,418	1,975,034
2012	1,627,127	399,613	2,026,741
2013	1,667,643	409,564	2,077,206
2014	1,703,180	418,291	2,121,472
2015	1,745,760	428,749	2,174,509
2016	1,789,404	439,468	2,228,871
2017	1,834,139	450,454	2,284,593
2018	1,879,992	461,716	2,341,708
2019	1,926,992	473,258	2,400,251
2020	1,975,167	485,090	2,460,257
2021	2,024,546	497,217	2,521,763
2022	2,075,160	509,648	2,584,807
2023	2,127,039	522,389	2,649,427
2024	2,180,215	535,448	2,715,663
2025	2,234,720	548,835	2,783,555
2026	2,290,588	562,556	2,853,144
2027	2,347,853	576,619	2,924,472
2028	2,406,549	591,035	2,997,584
2029	2,466,713	605,811	3,072,524
2030	2,528,381	620,956	3,149,337

Table B-10
ANNUAL ENPLANEMENTS FROM TIJUANA
Regional Aviation Strategic Plan

	to Mexico	to U.S.	to International	Total
2006	756,657	130,000	37,620	924,277
2007	802,008	136,493	38,762	977,264
2008	821,465	139,253	39,933	1,000,651
2009	712,909	123,917	41,139	877,965
2010	754,731	129,975	42,381	927,087
2011	821,219	139,517	43,661	1,004,398
2012	902,440	151,016	44,980	1,098,436
2013	974,677	163,104	46,338	1,184,120
2014	1,046,293	175,089	47,738	1,269,120
2015	1,123,196	187,958	49,179	1,360,333
2016	1,205,751	201,773	50,665	1,458,188
2017	1,294,373	216,603	52,195	1,563,171
2018	1,389,510	232,523	53,771	1,675,804
2019	1,491,639	249,614	55,395	1,796,648
2020	1,601,274	267,960	57,068	1,926,303
2021	1,718,968	287,656	58,791	2,065,415
2022	1,845,312	308,798	60,567	2,214,677
2023	1,980,943	331,495	62,396	2,374,833
2024	2,126,542	355,860	64,280	2,546,682
2025	2,282,843	382,016	66,221	2,731,080
2026	2,450,632	410,094	68,221	2,928,947
2027	2,630,753	440,236	70,282	3,141,270
2028	2,824,113	472,593	72,404	3,369,110
2029	3,031,686	507,328	74,591	3,613,605
2030	3,254,515	544,617	76,843	3,875,975

B-2.2 Airport Ground Access Module

This module identifies the mode, travel time, and cost to travel from a population center to an airport or High-Speed Rail (HSR) station. The Model reflects the fact that the choice set for modes of airport access may differ within the region primarily based on distance to airport. The Model handles the ground accessibility as a part of the utility function. Utility is defined as an airport's attractiveness to passengers from each originating zone (see Section B-2.3)

The ground access trip origin is assigned to the appropriate TAZ. There are 4605 TAZs within the Study Area. For LA counties, a similar data set was obtained from SCAG.

Due to lack of data at the TIJ airport, the access estimates are based on TIJ border and an assumed fixed cost and time from the border to the airport.

Important Variables

Ground accessibility is defined in two parts – cost and time. The ground access cost reflects cost to travel from a specific zone/area within the study region to an airport/ HSR station. The cost is determined in 1999 cents. The ground access time reflects the time it would take from a specific zone/area within the study region to an airport/ HSR station. The access time is expressed in minutes.

The travel time and cost are annual weighted average values based on average weekday conditions, the number of trips for each period (a.m./p.m./Off-Peak) as well as outbound and inbound. For zones which have no data, an algorithm was used to find the closest zone to be used as a proxy to estimate associated travel time and cost. The search radius for closest available zone was set at ten miles.

Annual average airport ground access costs and time estimates are computed from all originating regions (TAZs and Counties) to all airports in the study region. The calculation is based on SANDAG and SCAG's travel demand model. For San Diego County, the analysis is based on SANDAG's 2007 RTP – Revenue Constrained Scenario.

For access time and costs estimates for HSR only travel modes, if available, the calculations were based on the results of SANDAG's 2007 RTP – Revenue Constrained Scenario. The Model assumes that access choice set would include MTS, taxicab, personal vehicle etc. and exclude HSR. The access time for HSR only mode also includes pre-boarding time of 75 minutes.

With regards to multi-modal access to the airport, the cost and time estimates consists of two portions: for the ride on HSR, which were derived from California High Speed Rail Authority estimates available on their website as of October 2010 and; for the access to the HSR station, which were based on SANDAG's 2007 RTP – Revenue Constrained Scenario. The HSR estimates are assumed to remain the same for the duration of the planning horizon. The access time estimate includes time to transfer between modes and pre-boarding time at each mode. The access cost estimate also includes cost of transfer between modes, if applicable.

For most of the scenarios, the access choice is limited to vehicular ground access to the airport or HSR station. The choice set is expanded when HSR is available for multi-modal access to the airport. The Model implicitly assumes that a passenger has full information about the existence, cost and service attributes of all available choices a priori. The Model relates travelers' choice of a mode to the level of service and price attributes of the competing options.

Income is an important underlying variable to consider because it determines the significance of cost in the utility function. For high income travelers, cost is less important compared to time in determining modal utility and selecting ground access mode.

Data provided by SANDAG model is grouped by TAZs. Table B-11 shows some examples of TAZs defined in the Model. The number of trips from each TAZ was provided for the years 2003, 2010, 2015, 2020, and 2030.

Table B-11
EXAMPLE OF TRAVEL ANALYSIS ZONES
Regional Aviation Strategic Plan

Destination zone	TAZ identifier number
Tijuana Cross Border Facility	4587
I-5 at Orange County	12
I-15 at Riverside County	10
Downtown San Diego	3693
Santa Fe HSR station	3666
University City HSR Station	2062
Escondido Howard Ave HSR Station	1094
Murrieta	10
Riverside	10
Ontario	10

Source: SANDAG, August 2009.

SANDAG Travel Demand Model

Year 2003 and 2030 trips tables and network skims from the SANDAG travel demand model were used as the basis for development of RASP data. Year 2030 trip tables and network skims reflect the revenue constrained plan in 2030 Regional Transportation Plan: Pathways for the Future, November 2007. Given recent economic conditions, it was expected that projected Year 2010 land use and traffic volumes in the travel demand model would be substantially higher than observed conditions. Because of this and based on SANDAG direction, validated Year 2003 data was used in lieu of Year 2010 projections as the starting point for data development. Assuming projected Year 2030 conditions will still be realized, a steady growth rate from Year 2003 to Year 2030 is assumed for interim years.

In San Diego County, total daily auto trips increase at an annual growth rate of 1.2 percent a year from approximately 11.5 million in 2003 to 15.7 million in 2030. Auto trips to the RASP destinations increase from 196,000 daily trips to 323,000 daily trips in 2030, at about 1.9 percent each year. Average daily travel times on toll facilities to RASP destinations are substantially higher than non-toll facility travel times in 2003 and 2030. This is because existing and planned toll facilities are limited to portions of I-15, SR 25, I-5, and I-805. Trips using these facilities to access RASP destinations originate from locations that are further away. Therefore the average toll trip is a longer distance trip with higher travel time and travel cost than a non-toll trip.

The SANDAG travel demand model produces trip tables, travel times, and travel costs for peak and off-peak periods. The morning and evening peak periods extend from 6:00 am to 9:00 am and from 3:00 p.m. to 6:00 p.m. respectively. The off-peak period covers the remaining hours of the day. Total daily trips were obtained by summing trips from all time periods. Average travel times and travel costs are trip-weighted averages for the three time periods.

In additional to general purpose roadway facilities, San Diego County includes three types of restricted use roadway facilities: high occupancy vehicle (HOV) lanes, high-occupancy toll (HOT) lanes, and toll roads. Use of HOV lanes is restricted to buses and shared-ride vehicles access HOT, or managed, lanes. Toll roads require all vehicles to pay a toll to use the facility. Currently, HOV lanes are in place on I-5 north of SR 56. HOT lanes are on I-15 between SR 163 and Miramar. The SR 125 toll facility extending from the Mexican border to SR 54 is the only facility of this type in the San Diego County.

RASP data was developed for the following auto travel modes:

- SOV No Toll – Drive alone trips that do not pay or use toll roads or managed lanes.
- SOV Toll – Drive alone toll-paying trips that can use all facilities except HOV-only lanes.
- Carpool No HOV – Two or more person shared ride trips that do not pay or use tolled facilities and do not use HOV lanes.
- Carpool HOV – Two or more person shared ride trips that can use all types of facilities.

RASP vehicle data is provided at the trip distribution zone (TDZ) level used in the SANDAG travel demand model. The region is divided in 2,000 zones. Trip tables are developed and available at a more detailed traffic analysis zone (TAZ) system which divides the region into 4,605 zones. Vehicle travel times and travel costs are only available at the TDZ level.

The following travel time and cost assumptions from the SANDAG travel demand model were carried forth into development of RASP data:

- Auto operating costs are assumed to be $0.135 per mile (1999 dollars) and are assumed constant.
- Parking costs are assumed to exist in Centre City San Diego, universities, Lindberg Field, and business districts in Oceanside, Escondido, La Jolla, and Hillcrest. Although some individual lots charge more, the highest average parking rates of $8.00 per day are found in Centre San Diego. These rates are made into a per trip basis by dividing by two.
- Managed lane tolls are $0.26 per mile in peak periods and $0.10 per mile in the off-peak.
- Toll rates on SR 125 are $0.33 per mile in peak periods and $0.27 per mile in the off-peak.

The RASP Model leverages SANDAG Regional Travel Demand Model to determine key ground access routes to/from airports, travel time between population centers and regional airports, and level of service in ground access facilities. Existing and planned ground infrastructure and performance characteristics are considered in these estimates.

1. Gathered data from SANDAG's 2007 RTP – Revenue Constrained Scenario, HSR Authority website, and SCAG's travel demand model.
2. Generated two matrices which sum the time and cost from the following components. These matrices are from each zone to all airports/modes and for each year.
   a. *Ground access cost.* In case of multi-modal access, the cost is to the closest HSR station.
   b. *Ground access time*. In case of multi-modal access, the time is to the closest HSR station.
   c. *HSR ride cost*. This component has zero value for ground access to airport.
   d. *HSR ride time*. This component has zero value for ground access to airport.
   e. Transfer time between modes.

The RASP Model implicitly assumes that the access mode choice is dependent on income. The airport choice model, discussed in next section, uses the various values in this matrix to determine the realized trip demand at each airport. The realized trip demand at any airport/mode is affected by the availability and performance of ground access infrastructure including mode choice (MTS, taxicab, personal vehicle, etc.), travel time, and travel cost (parking fees, fuel, etc.).

The ground access estimates do not account for capacity of the roadways, parking capacity at the airport, number of people in the group, perceived travel time, perceived mode change issues, frequency of service and time of day, and type of travel. However, these inadequacies stem from the use of the SANDAG travel demand model and its limitations. Tables B-12 through B-15 presents the ground access cost and time estimates for the year 2010 and 2030.

Table B-12
2010 AVERAGE GROUND ACCESS TIME BY CITY / REGION (MINUTES)
Regional Aviation Strategic Plan

City/Region	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
Carlsbad	72.11	165.56	135.50	102.58	99.36	200.55	125.48	53.07
Chula Vista	63.96	171.83	141.77	108.85	111.89	206.83	116.23	47.08
Coronado	56.16	176.23	146.17	113.26	123.73	211.23	108.56	57.64
Del Mar	45.31	160.19	130.12	97.21	119.12	195.18	105.18	39.72
El Cajon	42.83	195.68	165.62	132.71	123.44	230.68	101.87	72.29
Encinitas	39.51	199.40	169.34	136.43	112.28	234.40	97.85	77.14
Escondido	38.04	192.15	162.09	129.17	106.05	227.14	87.78	80.12
LA	178.25	96.70	92.15	101.90	78.16	90.25	218.20	160.32
TIJ	27.07	199.95	169.89	136.98	72.82	234.95	60.00	79.59

Source: SANDAG, August 2009.

Table B-13
2010 AVERAGE GROUND ACCESS COST BY CITY / REGION (in U.S. dollars)
Regional Aviation Strategic Plan

City/Region	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
Carlsbad	$29.80	$124.71	$103.62	$63.22	$83.04	$164.30	$49.17	$18.10
Chula Vista	25.39	129.20	108.11	67.71	87.61	168.80	44.08	18.21
Coronado	21.11	130.29	109.20	68.80	92.05	169.89	40.30	19.96
Del Mar	17.57	124.33	103.24	62.84	92.32	163.92	39.74	15.36
El Cajon	16.84	134.09	113.00	72.60	94.22	173.69	38.58	23.35
Encinitas	14.78	134.03	112.94	72.54	89.97	173.62	36.66	24.06
Escondido	14.01	133.19	112.10	71.69	87.32	172.78	32.31	26.56
LA	105.83	60.44	59.88	67.43	54.98	58.49	116.22	99.56
TIJ	10.44	136.06	114.97	74.57	73.09	175.65	20.00	27.27

Source: SANDAG, August 2009.

Table B-14
2030 AVERAGE GROUND ACCESS TIME BY CITY / REGION (MINUTES)
Regional Aviation Strategic Plan

City/Region	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
Carlsbad	88.95	153.28	147.01	106.40	100.71	167.96	139.90	55.38
Chula Vista	74.43	164.31	158.05	117.43	117.89	178.99	127.01	51.44
Coronado	68.10	181.09	174.83	134.22	143.15	195.77	130.96	66.84
Del Mar	52.75	163.77	157.50	116.89	138.64	178.45	115.37	43.58
El Cajon	53.08	186.75	180.49	139.88	149.61	201.43	111.13	76.92
Encinitas	49.46	192.91	186.65	146.04	148.61	207.59	102.94	79.64
Escondido	45.56	183.34	177.08	136.47	137.06	198.02	92.63	81.34
LA	170.36	68.92	69.39	72.71	62.17	67.60	215.14	147.01
TIJ	34.71	83.25	76.98	36.37	222.15	97.93	60.00	84.60

Source: SANDAG, August 2009.

Table B-15
2030 AVERAGE GROUND ACCESS COST BY CITY / REGION (in U.S. dollars)
Regional Aviation Strategic Plan

City/Region	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
Carlsbad	$28.17	$101.20	$281.39	$68.98	$83.25	$157.63	$48.42	$18.60
Chula Vista	23.98	104.98	285.17	72.76	87.11	161.40	44.84	18.40
Coronado	20.01	107.93	288.12	75.71	94.29	164.35	43.61	20.20
Del Mar	16.62	103.31	283.50	71.09	91.31	159.74	41.62	15.42
El Cajon	15.94	110.02	290.21	77.80	94.70	166.44	38.98	23.47
Encinitas	13.97	110.81	291.00	78.59	94.92	167.23	36.09	24.33
Escondido	13.21	109.74	289.93	77.52	92.62	166.16	33.33	26.31
LA	115.81	54.97	73.06	64.60	54.67	54.19	112.74	115.14
TIJ	9.85	75.29	255.48	43.07	103.73	131.71	20.00	25.86

Source: SANDAG, August 2009.

B-2.3 Airport Choice Model

A basic assumption in the airport choice model is that airports do not have unique or geographically bound catchment areas. The Model allows passengers to choose between all airports/modes serving the region and not necessarily the closest airport.

The study region has a lot of airports which provides more choices for the passenger and allows for competition between airports. The airport choice/demand allocation process can be summarized in the following steps and proceeds through an iterative process, as shown on Figure B-3.

1. Apply price sensitivity to potential demand to determine adjusted demand
2. Determine utility of each airport
3. Determine the probability to travel at each airport
4. Determine the total realized trips at each airport

As detailed in Section B-2.1, the potential demand is generated at each zone, and is based on income and other demographic factors. However, the realized number of passengers, the realized demand, could be less than potential demand when cost and other factors are introduced. Therefore, the Model determines the realized demand by incorporating the cost to travel at each zone, and the price sensitivity of the trip type.

Once the Model has determined the realized demand in the current iteration, these values are exchanged with the Airline Service Response module in an iterative process until equilibrium is reached. The Model defines "adjusted demand" as the total regional realized demand in the current iteration. The calculated demand in the current iteration could need some adjustment to reach equilibrium. The adjusted demand at each zone, $Adj_{z,p,t}$, can be calculated as:

$$Adj_{z,p,t,y} = \lambda_y * [P_{z,p,t,y} - (\partial_{p,t} * P_{z,p,t,y} * CostDiff_{z,p,t})] \quad (8)$$

Where

λ_y is the economy instability factor to adjust for decrease in realized demand that is unaccounted by income, population trend, GDP/GRP, and stage-length adjusted fare factors

$Adj_{z,p,t,y}$ is demand from zone z for passenger type p, trip type t in year y

$P_{z,p,t,y}$ is potential demand (trips) generated from zone z for passenger type p, trip type t in year y

$\partial_{p,t}$ is Price sensitivity factor for passenger type p and trip type t

$CostDiff_{z,p,t}$ is the ratio of actual cost to travel to the initial estimated lowest cost to travel

$$CostDiff_{z,p,t} = CostActual_{z,p,t} / CostEstimated_{z,p,t} . \quad (9)$$

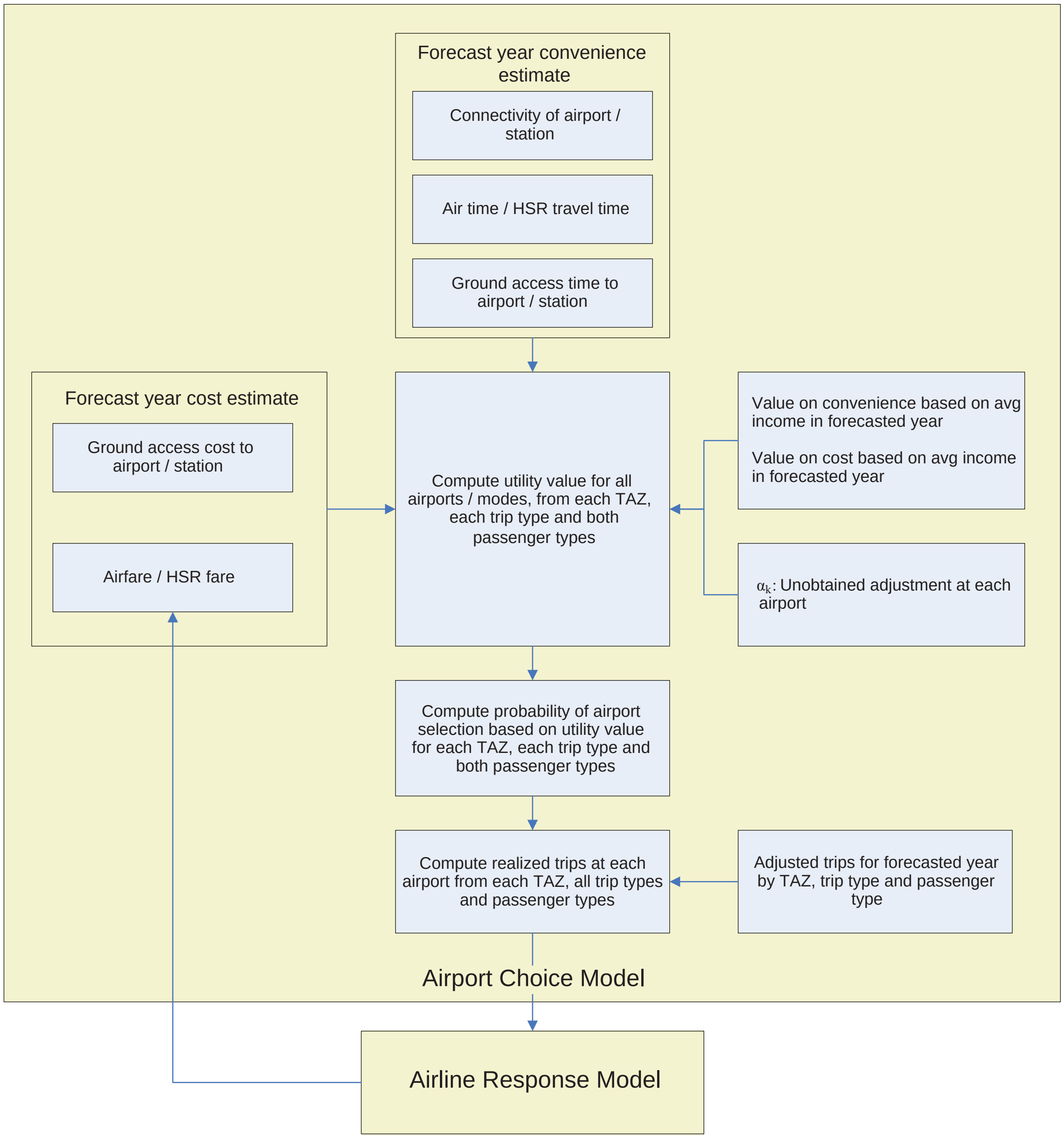
Where

$CostActual_{z,p,t}$ includes ground access cost and model-adjusted air fare from zone z and trip type t

$CostEstimated_{z,p,t}$ includes only the lowest pre-determined air fare for trip type t for any zone in the region

Figure B-3

AIRPORT CHOICE MODEL FLOWCHART
Regional Aviation Strategic Plan



As the Model attempts to stabilize demand and supply, the changes in air fare could cause the adjusted demand to increase/decrease in the successive iteration. The core of the airport choice model is a nested multinomial logit choice model type that considers the total generalized utility of using each alternative airport for travel type. The generalized utility combines the actual cost and travel time components into a single value and includes the costs and travel time involved in the surface access and egress segments of the trip. The airport choice model structure is nested with passengers classified by trip type, passenger type and region of trip origin.

The utility of travel at each airport is computed for each trip type, originating region and passenger type. Utility is defined as an airport's attractiveness to passengers from each study zone. The utility equation is defined as follows:

$$Utility_{z,p,t,a} = (1\text{- w})\ \text{Cost} + (\text{w})\ \text{Convenience}$$

$$= (1\text{- w})\ (\partial_f \times \text{Cost}) + (\text{w})\ (\partial_c \times \text{Connectivity} + \partial_t \times \text{Time}) \quad (10)$$

The cost variable comprises of air fare and ground access cost to the airport. Air fare is determined via the iterative process between this airport choice model and the airline response model until equilibrium is reached. Equilibrium is defined as all airports are under capacity and the change between iterations is less than 5%.

The time variable comprises flight/HSR travel time and ground access time. Refer to Section B-2.2 for details in ground access time, which remain constant for the planning horizon. The flight time for NCA trip type represents the total flight time. Whereas for DOM and INT trip types, the average transfer time at airports makes up the flight time parameter. For MEX trip types, the average transfer time was used.

Connectivity is the measure of the service level at an airport /node. Measuring the connectivity allows for a qualitative assessment of the quality of an airports' airside connections. It can also be used to evaluate an airports' competitive position in the network. The mathematical formulation of connectivity as put forth by the International Air Transport Association (IATA) is as below.

$$\text{Connectivity i (t)} = \frac{1}{1000}\sum_{j=1}^{n}(F_j \bullet SF_j) \bullet w_j = \frac{1}{1000}\sum_{j=1}^{n} SC_j \bullet w_j \quad (11)$$

with wj(t) = Paxj / Pax max

Where

i is the origin airport
j are other airports in the network that have direct connections to the origin airport
n is the sum of all airports j

Fj is the frequency on route ij
SFj is the seat capacity per flight on route ij
wj is the weight assigned to the destination airport
SCj is the seat capacity offered on route ij
Paxj is the passenger volume at destination airport j
Paxmax is the worldwide biggest passenger volume at an airport

Connectivity and aviation activity are strongly correlated. Jacobs Consultancy used regression between connectivity (natural log of) and enplanements by destinations types at fifty (50) U.S. airports. Figures B-4 through B-7 below shows regression equations by trip types.

Figure B-4

RELATIONSHIP BETWEEN CONNECTIVITY AND ENPLANEMENTS FOR NORTHERN CALIFORNIA TRAVEL (2006)

Regional Aviation Strategic Plan

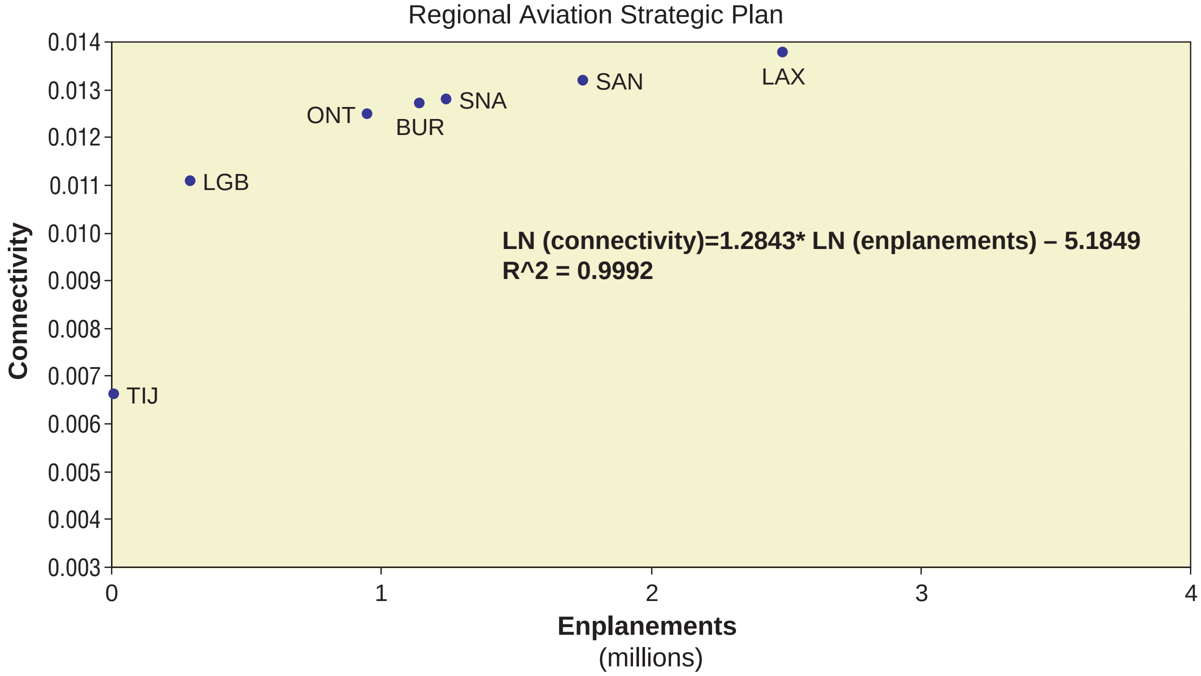


Figure B-5

RELATIONSHIP BETWEEN CONNECTIVITY AND ENPLANEMENTS
FOR DOMESTIC TRAVEL (2006)
Regional Aviation Strategic Plan

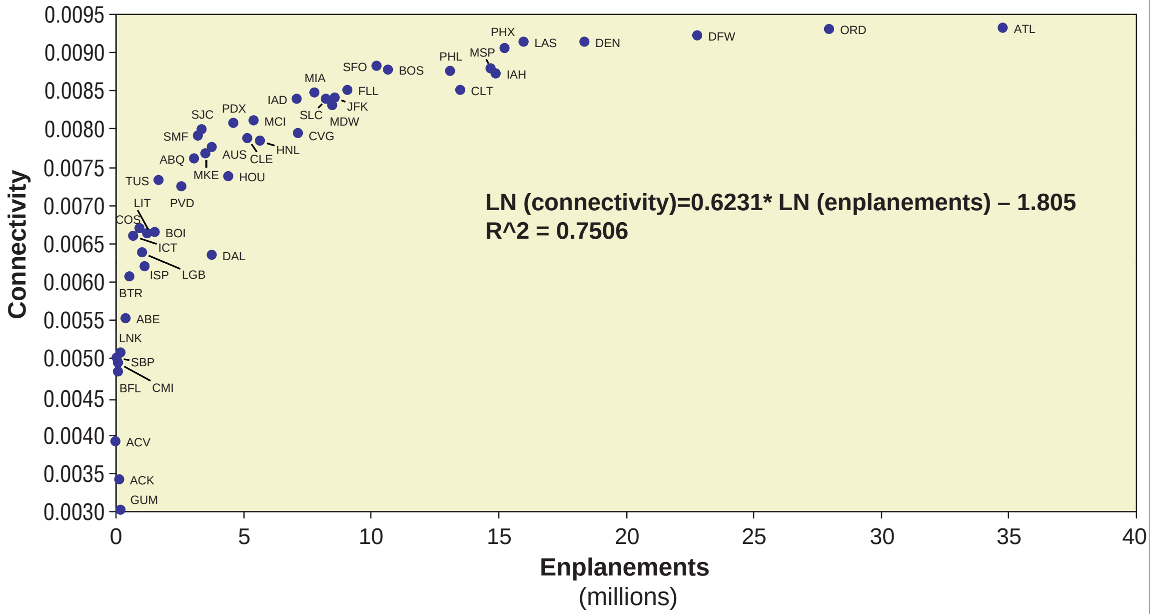


Figure B-6

RELATIONSHIP BETWEEN CONNECTIVITY AND ENPLANEMENTS
FOR INTERNATIONAL TRAVEL (2006)
Regional Aviation Strategic Plan

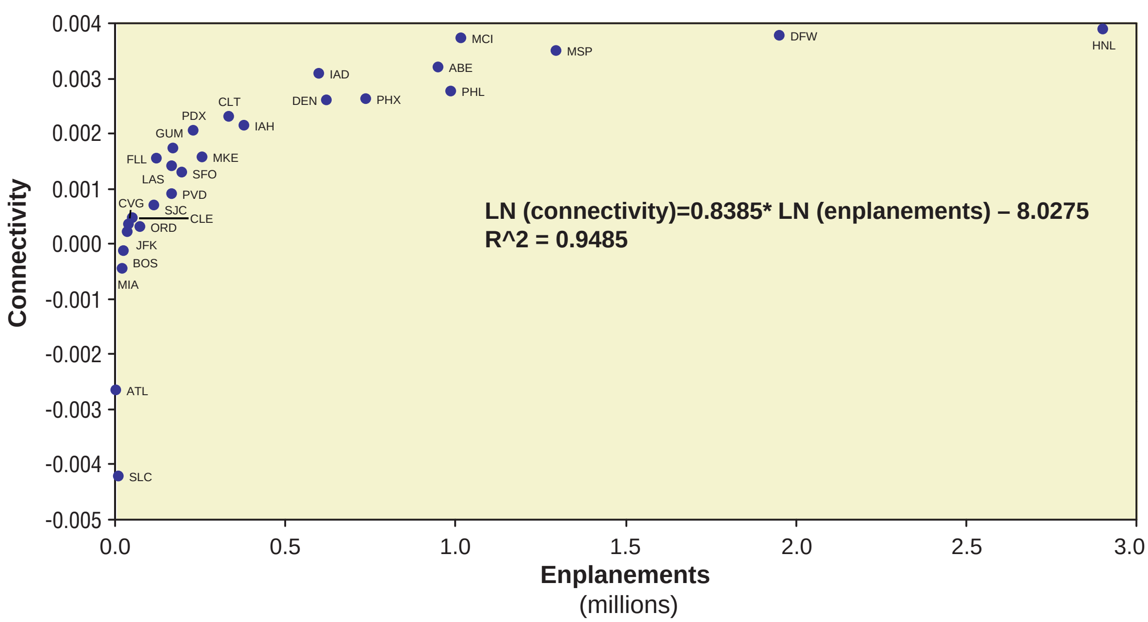
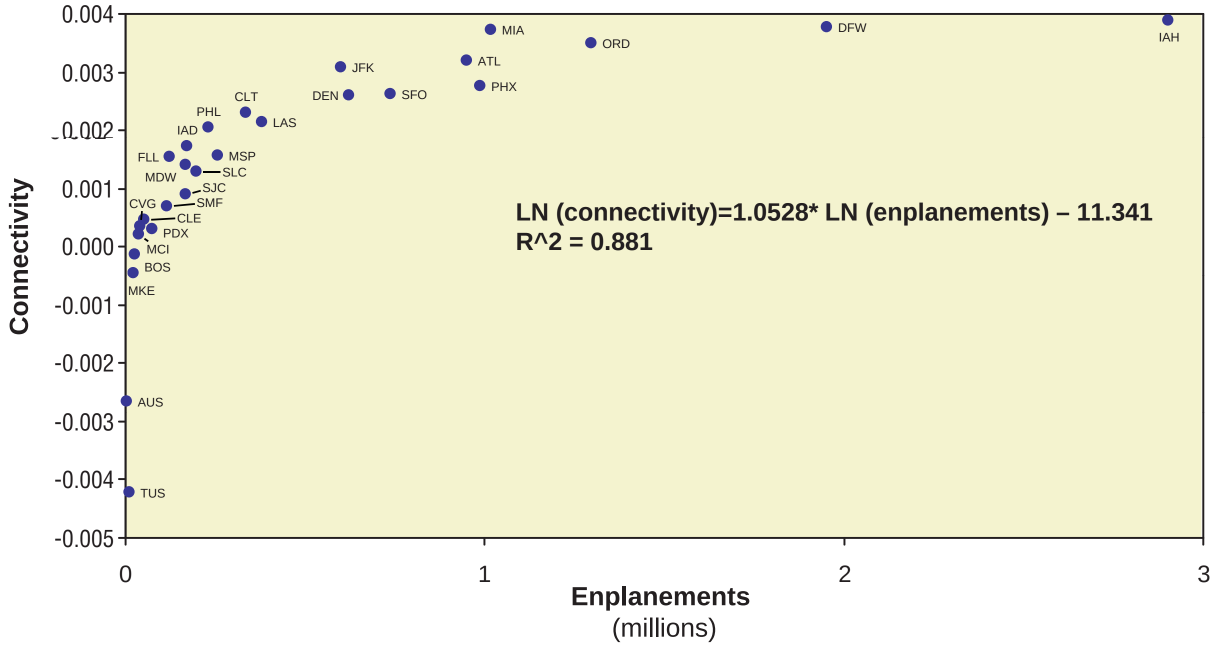


Figure B-7

RELATIONSHIP BETWEEN CONNECTIVITY AND ENPLANEMENTS FOR MEXICAN TRAVEL (2006)

Regional Aviation Strategic Plan



The IATA formula for connectivity is used once for the first year of the Model. For the remaining study time period, the connectivity index is updated once each year based on regression equations using previous year's realized enplanements. To limit extreme volatility, the Model is setup such that the year-to-year change in connectivity of an airport/mode is limited to a range of 5% to +25%.

The cost, time, and connectivity components are then normalized to eliminate the effects of the differences in underlying units. Each airport is assigned three scores – one for cost, one for connectivity, and one for time. Normalization is performed as indicated below.

$$Cost_{z,p,t,a} = 1 - \frac{Cost_{z,p,t,a}}{Max(Cost_{z,p,t})} \tag{12}$$

$$Time_{z,p,t,a} = 1 - \frac{Time_{z,p,t,a}}{Max(Time_{z,p,t})} \tag{13}$$

$$Connectivity_{z,p,t,a} = 1 - \frac{Connectivity_{t,a}}{Max(Connectivity_{t})} \tag{14}$$

Where

$Cost_{z,p,t,a}$ is the actual cost from zone z, passenger type p, trip type t, using airport/mode a

$Time_{z,p,t,a}$ is the actual time from zone z, passenger type p, trip type t, using airport/mode a
$Connectivity_{t,a}$ is the computed connectivity for trip type t using airport/mode a

Note that for the HSR scenario, the cost and time estimates differ from other scenarios due to differences in travel time, pre-boarding time, transfer to airport, and HSR costs. These differences have been previously discussed in Section 2.2.1. Utility can then be re-written in terms of the normalized scores as below.

$$Utility_{z,p,t,a} = (1- w)\ \partial_f\ (Cost_{z,p,t,a}) + w\ [(\partial_c \times Connectivity_{t,a}) + \partial_t\ (Time_{z,p,t,a})] \quad (15)$$

Where

$Utility_{z,p,t,a}$ is the utility of zone z, passenger type p, using airport a for trip type t
∂_f is the cost utility coefficient
∂_t is the time utility coefficient
∂_c is the connectivity utility coefficient
w is the tradeoff utility coefficient

The trade-off utility coefficient, w, is a value between 0 and 1. It is a numerical representation of the tradeoff a passenger would make between cost and convenience. A value of 0 would indicate extreme cost sensitivity and vice versa.

It is apparent that the income of an individual is highly correlated with the value placed on convenience by that individual. This correlation can be generalized to larger sets of individuals. Hence the average income of a zone, made available by SANDAG, was used to estimate the value of w. A zone/TAZ, with very low income, would have a low w and place more value on cost and vice versa. Although it cannot be guaranteed that all individuals from that zone would have the same cost-convenience trade-off, using this approach allows for data driven modeling. For details refer to Section B-2.2.

The Model implicitly assumes that a passenger has full information about the existence, cost and service attributes for all available mode choices a priori. The flight fares at each airport are adjusted iteratively for consistency with the passenger allocation, using assumptions about typical airline service response which is detailed in the next section. The algorithm of the airport choice model allows the introduction of HSR only and mixed mode choices with no additional changes.

Every passenger trip is assigned based on utility value of choices available. Adjusted (realized) demand at each regional airport is affected by ground access and level of service (frequency of service, fares, etc.). Likewise, future ground access options and airline service is affected by realized demand at each airport. However, with other things being equal, airports with a better level of service or better connectivity in the network will attract more passengers.

The Model, however, does not account for travelers' choice of destination; party size; type of travel; amount of luggage; gender differences; and the overall accessibility offered by the transportation system. These parameters were not included due to lack on prior data and lack of validated models. The unobtained adjustment at each airport or the airport attractiveness factor, $K_{p,a,t,}$ is designed to capture these variances.

It is a coefficient applied to the total utility at an airport for each trip type. The unobtained adjustment variable was calibrated based on actual enplanements observed at each airport. Therefore, final utility at an airport is represented by:

$$\text{Utility}_{z,p,t,a} = K_{p,a,t,} \times \text{Utility}_{z,p,t,a} \qquad (16)$$

Once the utility values for all airports/modes are calculated, they are compared to each other to develop estimates of the probabilities of mode selection by passengers making particular types of trips. The output of the model development and calibration efforts was a set of utility equations for each passenger type. The probability of airport / mode selection is computed for all nested levels using the following formulation of the multinomial logit type, and is defined as follows:

$$\Pr_{z,p,t,a} = \frac{B_{p,t}^{\;Utility_{z,p,t,a}}}{\sum_{a=1}^{A} B_{p,t}^{\;Utility_{z,p,t,a}}} \qquad (17)$$

Where

$\Pr_{z,p,a,t}$ is the probability of mode being selected for trip type by passenger type from TAZ

$B_{p,t}$ is the base power for the passenger type p and trip type t

A is the total number of airports available for trip type t to travel from airport a

Once the Model determines the probability of travel at each airport, the total number of trips is distributed amongst the airports/modes being considered in the study accordingly. The number of adjusted trips at each airport/mode, from each zone can be calculated as:

$$\text{Adj}_{z,p,t,a} = \text{Adj}_{z,p,t} \times \Pr_{z,p,t,a} \qquad (18)$$

Calibration

The airport choice model was calibrated to historical data for the years 2006-2009. Historical enplanements for airports in the study region were obtained for residents and visitors separately, as described in Section B-2.2 and Table B-6.

The demand is calibrated at the aggregated level regardless of airport choice. In doing so, the price sensitivity factor can be determined by minimizing the difference between the calculated and actual historical potential demand for each trip type. MS Excel Solver was used in each case to find the optimal solution. Table B-16 presents the calibrated price sensitivity factors:

Table B-16

PRICE SENSITIVITY FACTORS ($\partial_{p,t}$)

Regional Aviation Strategic Plan

	Resident	Visitor
NCA	0.1992	0.3444
DOM	0.4264	0.8570
INT	0.0000	1.1296
MEX	0.1148	0.0000

Source: Jacobs Consultancy, August 2009.

For visitors to the study region, the income data cannot be assimilated in a meaningful manner as they come from geographically diverse regions. This ruled out using the same methodology as residents to determine the tradeoff coefficient w. Hence, w was calibrated using historical visitor enplanements data. Table B-17 lists the calibrated w parameter values for visitor type of passengers.

Table B-17
CALIBRATED VALUES OF TRADEOFF COEFFICIENT W FOR VISITORS
Regional Aviation Strategic Plan

NCA	0.7946
DOM	0.5815
INT	0.4982
MEX	0.3553

Source: Jacobs Consultancy, August 2009.

From Table B-17, it can be seen that visitors show a high price-sensitivity for short-haul trips. This can be attributed to the fact that auto and rail each offer a cheaper, but slower, alternative to air travel.

The demand at each airport/mode can be calculated using equations 8 through 18. These calculated values can then be compared against actual historical demand to estimate the values for ∂_f, ∂_t, ∂_c, and $\kappa_{p,a,t}$. Tables B-18 through B-20 list the calibrated values.

Table B-18
UTILITIES COEFFICIENTS
Regional Aviation Strategic Plan

∂_f	1.34192
∂_t	9.25685
∂_C	0.54321

Source: Jacobs Consultancy, August 2009.

Table B-19
ATTRACTIVENESS FACTOR ($K_{P,A,T}$) FOR ALL AIRPORTS IN STUDY REGION FOR RESIDENTS
Regional Aviation Strategic Plan

Trip Type	BUR	CRQ	LAX	LGB	ONT	SAN	SNA	TIJ
DOM	1.77872	2.11000	1.90412	1.76430	1.68579	1.97005	1.73603	0.99998
INT	1.88509	4.45189	6.23287	0.86700	3.78743	3.32794	7.81935	0.38226
MEX	-1.78385	-1.86590	2.84564	-2.22805	2.37230	3.59430	-1.02950	5.46255
NCA	1.68566	2.32000	1.71107	1.72332	1.74183	2.12269	1.69906	1.00000

Source: Jacobs Consultancy, August 2009.

Table B-20
ATTRACTIVENESS FACTOR ($K_{P,A,T}$) FOR ALL AIRPORTS IN STUDY REGION FOR VISITORS
Regional Aviation Strategic Plan

Trip Type	BUR	CRQ	LAX	LGB	ONT	SAN	SNA	TIJ
DOM	1.15829	1.55000	1.28175	1.16370	1.27992	1.75071	1.36802	0.99842
INT	0.79594	-10.00000	2.04039	0.60285	1.44859	0.90709	1.87758	0.87111
MEX	-0.35106	0.27014	1.67804	-0.38939	2.41638	1.78400	1.00887	2.35121
NCA	1.13492	2.92000	1.13175	1.16307	1.30657	2.08035	1.41323	1.00170

Source: Jacobs Consultancy, August 2009.

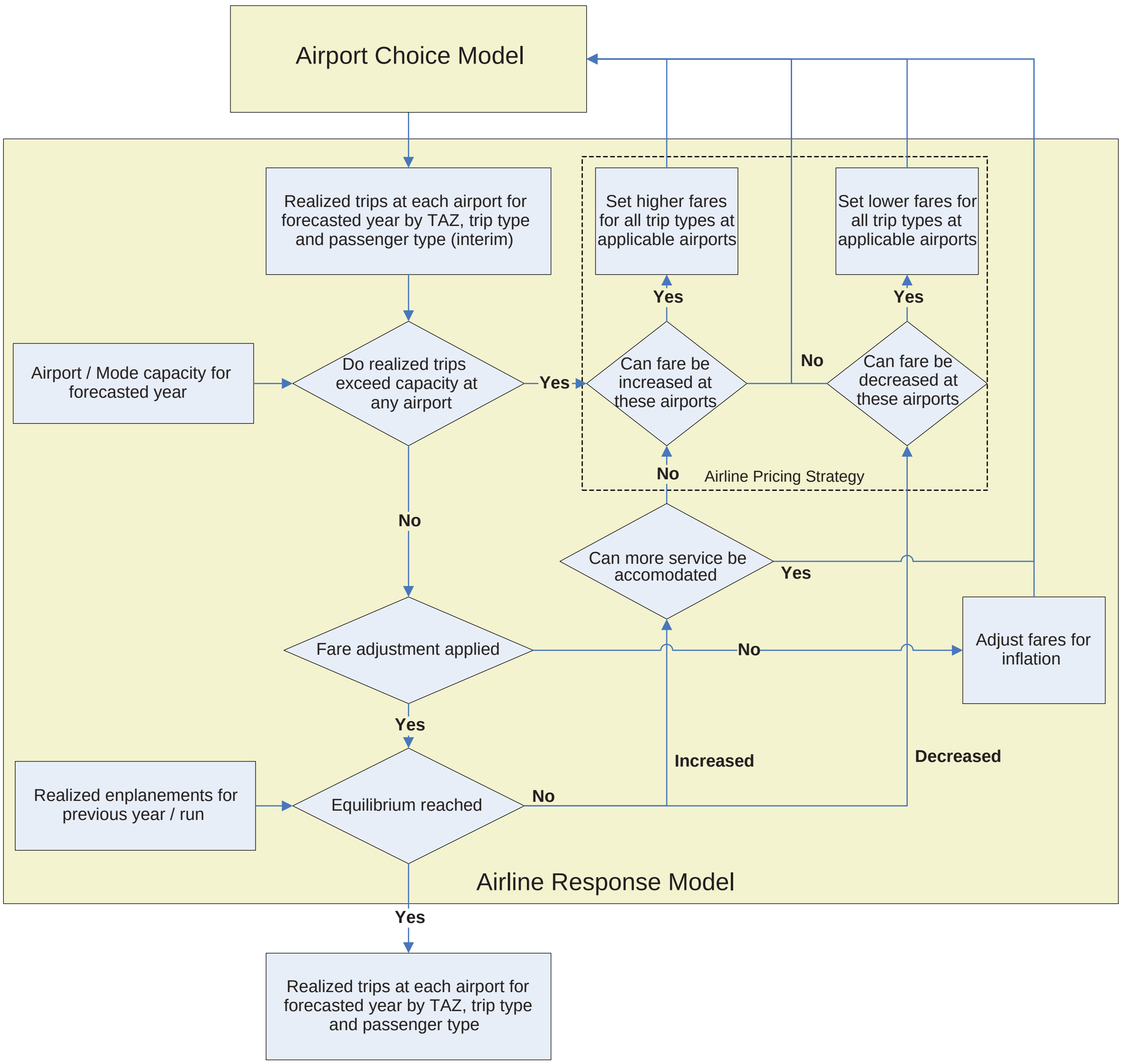
B-2.4 Airline Service Response Module

This component is the feedback mechanism which drives the iterative process of the Model. This element predicts the airline response to changing demand by varying airfare and service levels as shown on Figure B-8.

This component of the Model is a multi-stage evaluation process. Adjusted demand from the airport choice model is compared against airports' capacities and airlines respond accordingly. For instance, as an airport nears capacity, air fares begin to rise. The airport choice model module and the airline service response module loops through an iterative process until all airports are under capacity and the change between iterations is less than 5%.

Figure B-8

AIRLINE RESPONSE MODEL
Regional Aviation Strategic Plan



Airlines adjust service and airfare to maximize revenue/profit when demand changes. As more passengers choose to use a particular airport, airlines can afford more frequency or destination services in that market. This makes the airport more attractive to potential travelers. Thus a positive feedback process exists between the airport choice process and the air service offered. To mimic this behavior, the Model algorithm gives preference to increased service offerings at an airport over increased air fare to maximize ridership and revenue. Air service is increased at an airport/mode with high demand until capacity of airport is reached.

The airline pricing strategy allows fare changes in both directions. The percentage fare change is dependent on which case triggers the price change and the input variables supplied at the start of the simulation. The Model also accounts for price elasticity in the fare adjustment to allow for revenue maximization. The Model caps the fare change in both directions based on input variables supplied at the start of simulation. This cap ensures the enplanements gap between airports does not widen to extreme levels between consecutive years.

Intrinsic to the Model is that an airline decision to accommodate more service is based only on demand and available capacity at the airport/station. The airline decision making model does not account for yield in the market, load factor changes, fleet assumptions, the type of service provided from each airport, costs of using the airport and the logistical feasibility of improving service operations at that airport such as increased ground operations, fleet size and capability.

The Model does not distinguish between low-cost carriers and established carriers. It also assumes that the competitive response by airlines would be same at both primary and secondary airports.

Type of Airline Response

In the Model, an airline is presumed to respond in three different types. These vary by the condition that triggers the airline response.

When an airport is near-capacity i.e. above 90% of the stated capacity, the Model presumes that the airlines will respond by adjusting fares upwards. It is not however implicit that the upwards adjustment would be initiated by the airlines themselves. The airport or the governing authority may increase landing fees to suppress demand, which in turn may cause the airlines to revise their fares to/from that airport. The fare adjustment is based on price elasticity and is computed as shown below.

nAdj a,t′ = nAdj a,t + Adjustment a (19)

$$c_{a,t} = \frac{\left(\sum Adj_{a,t}' \big/ \sum Adj_{a,t}\right) - 1}{\xi_{a,t}} \tag{20}$$

F a,t,f = F a,t,i x (1+c a,t) (21)

Where

Adja,t is the adjusted demand at airport a for the trip type t in the current iteration

Adja,t′ is the adjusted demand at airport a for the trip type t for the next iteration

Table B-21 lists the adjustment for various ranges of % capacity reached. The values of adjustment used vary in real-time based on the airports' enplanements and capacity.

Table B-21
DEMAND ADJUSTMENT
Regional Aviation Strategic Plan

Total demand D_t	Adjustment
90-95% of capacity	-1%
95.1-97.4% of capacity	-2%
97.5-100% of capacity	-4%
100%+ of capacity	100% of capacity

Source: Jacobs Consultancy, August 2009.

$\xi_{a,t}$ is the price elasticity of the trip type *t* from airport *a* and were sourced from a 2007 IATA report* estimating air travel demand elasticity. For trips to Northern California (intrastate), domestic and international, the price elasticity is relatively inelastic. Hence the percentage change in seats demanded is smaller than that in price and when the price is raised, the total revenue rises, and vice versa. For trips to Mexico, the price elasticity is relatively elastic. Hence the change in seats demanded is greater than that in price and when the price is raised, the total revenue falls, and vice versa.

c a,t is the amount of % fare increase to be applied

F a,t,i is the initial fare for trip type t from airport a in current iteration

F a,t,f is the fare for trip type t from airport a for next iteration

When passenger enplanements at an airport drop from the year before, the Model presumes that airlines would respond by adjusting fares downwards to attract lost passengers. The Model does not speculate on cause of traffic loss. It could be interpreted based on each iteration results. In most cases, it could be due to over-adjustment of fares to maintain below capacity in the previous iteration. Price elasticity determines the amount of fare adjustment downwards as indicated below.

Adj a,t ' = Adja,t x (1 - ca)xt (22)

When

*InterVISTAS Consulting Inc. (2007). Estimating Air Travel Demand Elasticities: Final Report. *Prepared for IATA* [PDF Document]. Available at http://www.iata.org/whatwedo/Documents/economics/Intervistas_Elasticity_Study_2007.pdf

$$\sum_{t=1}^{T} Adj_t = \text{Adjr}$$

F a,t ' = Fa,t x (1 + ca) (23)

Where

Adja,t is the adjusted demand (enplanements) at airport a for the trip type t in the current iteration

Adja,t ' is the adjusted demand (enplanements) at airport a for the trip type t for the next iteration

xt is the price elasticity of the trip type t

ca is the amount of % fare decrease to be applied when total demand at an airport is equal to the new demand required by the model. The new demand is approximated as a value between demand in previous year and the demand in current iteration.

When an airport is neither near-capacity (case 1) or has not lost passengers (case 2), the Model presumes that airlines would apply a growth factor to airfare. This real growth is not specific to the airport and accounts for assumed level of sustainable profitability for airlines; it is assumed that during years 2006-2009, airlines are operating at margin or lower, and such operation is not sustainable beyond economic recovery. Table B-22 lists the growth factors used.

Fa, t, f = Fa,t,i x G t (24)

Where

Gt is the growth factor for trip type t

F a,t,i is the fare for trip type t from airport a in the current iteration

F a,t,f is the fare for trip type t from airport a for the next iteration

Table B-22
GROWTH FACTORS
Regional Aviation Strategic Plan

Trip type	2006-2009	2010-2013	2014-2030
North California (except HSR)	0.01%	1.5%	0.01%
North California (HSR only)	--	--	0
Domestic	0.01	1.5	0.01
International	0.01	0.01	0.01
Mexico	0.01	0.01	0.01

Source: Jacobs Consultancy, August 2009.

Airport Interaction

The Model architecture allows Jacobs Consultancy to study the impact of capacity and fares at an airport on surrounding airports. For example, if enplanements at an airport *i* reach 90% or above of its capacity, airlines would increase fares at airport *i* causing the passengers to re-evaluate their choices. Surrounding airport *j*, when linked through input files and below 90% of their capacity, could offer now-cheaper alternative and induce traffic at *j*. Airline could respond to this demand surge by increasing prices at airport *j* to maximize their revenue.

The Model allows this mechanism by defining airport interactions in input files. This interaction was used for scenario of maximizing commercial service at CRQ, where the impact of SDIA capacity on operations and enplanements at CRQ was evaluated.

B-2.5 Realized Trips Module

The realized trips are finalized once equilibrium is reached between demand and supply at all airports/modes as determined by the interaction between the airport choice model and airline response model. This element outputs the number of trips, in enplanements, at each airport by trip type and passenger type. Enplanement is defined as the number of passengers boarding a flight or a HSR train. However, this element is not hard-coded and all calculations are performed offline after the Model run is completed.

Realized trips generated from the demand model only account for originating passengers. This is to ensure consistency with the Trip Qualifier assumption in Section B-2.2. Enplanements identified as category M, considered connecting or pass-through, were excluded from the analysis. To account for connecting passengers at each airport in the study region, an O&D factor was computed as an average percentage for the time period 2006-2009. Table B-23 lists the percentage values used. The time period used is consistent with the time period used for model calibration.

Table B-23
AIRPORT/MODE O&D PERCENTAGES
Regional Aviation Strategic Plan

Airport	O&D Percentage
BUR	100%
SNA	98
LAX	74
LGB	100
ONT	100
SAN	94
CRQ	100
TIJ	100
HSR only modes	100
Mixed modes	100

Source: Jacobs Consultancy, August 2009.

With regards to demand on HSR only modes, it is important to note that the Model does not estimate total ridership. It only estimates diversion from air and any model driven inducement. There will be other passengers on HSR including local commuters and diversion from automobile trips. The connecting or pass-through passengers on HSR would be local commuters or passengers on mixed mode. Hence both have been assigned a 100% value. The realized demand can then calculated as:

$$\text{Trip a} = \left(\sum_{z=1}^{4605} \sum_{t=1}^{4} \sum_{p} Adj_{z,p,t,a} \right) \Big/ O\,\&\,D\% \qquad (24)$$

Total passenger counts are twice the number of enplanements. For commercial service, realized trips are translated into annual enplanements and operations at a given airport. For general aviation, realized trips are translated into annual GA flight operations at a given airport. For air cargo, realized trips are translated into total cargo flight operations and tonnage at a given airport. The realized trips are not translated into vehicle trips.

B-3 MODEL CALIBRATION

The following is a description of steps taken for calibrating the Model, the calibration results and the tools used for calibration.

B-3.1 Baseline Calibration

Calibration is an important step in capturing the characteristics of aviation demand particular to the study region in the Model framework. This section describes the methodology used in calibrating the Model for the Do-Nothing ("Baseline") scenario. The Model was calibrated based on the actual annual passenger enplanements at all airports in the study region from 2006 to 2009.

In developing tools for the use of calibration, Jacobs Consultancy used MS Excel based Solver. It is an optimization tool that employs a generalized reduced gradient algorithm to find the best values for specified inputs based on an objective function. Details of the Solver and how it was used can be found in Section B-3.3.

Calibration Target

The inputs for the calibrating the Baseline scenario include actual enplaned passengers by airport for each trip type, income distribution and population data, and tradeoff utility coefficient. Tables B-24 through B-28 reflect the actual enplanements at each airport in the study region.

Table B-24
RESIDENT PASSENGER ENPLANEMENTS IN 2006
Regional Aviation Strategic Plan

	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
NCA	683,832	826,679	145,915	507,677	469,547	552,362	742	6,479
DOM	2,825,128	7,307,715	542,988	1,765,785	1,432,981	1,141,539	2,969	35,611
INT	220,285	3,467,809	1,051	35,388	19,145	3,123	1,590	1,950
MEX	98,425	1,024,409	919	14,018	65,632	3,517	1,027,742	769
Total	3,827,670	12,626,612	690,873	2,322,868	1,987,305	1,700,541	1,033,043	44,809

Source: Jacobs Consultancy based on U.S. DOT DB1B, T100 data, August 2009.

Table B-25
VISITORS PASSENGER ENPLANEMENTS IN 2006
Regional Aviation Strategic Plan

	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
NCA	825,419	936,772	121,626	613,314	403,904	507,979	3,258	1,612
DOM	3,495,773	6,632,616	464,243	1,751,916	944,750	640,202	13,031	7,790
INT	151,856	2,160,103	180	12,033	5,386	978	2,385	351
MEX	25,895	391,673	52	963	28,519	74	847,240	12
Total	4,498,943	10,121,164	586,101	2,378,226	1,382,559	1,149,233	865,913	9,765

Source: Jacobs Consultancy based on U.S. DOT DB1B, T100 data, August 2009.

Table B-26
VISITORS PASSENGER ENPLANEMENTS IN 2007
Regional Aviation Strategic Plan

	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
NCA	912,485	948,726	124,049	649,949	412,216	533,355	3,390	1,692
DOM	3,588,150	6,577,076	502,197	1,811,551	902,625	671,030	13,560	8,020
INT	165,034	2,240,047	466	14,230	5,771	936	15,263	366
MEX	20,402	358,486	23	1,014	15,325	75	820,574	31
Total	4,686,071	10,124,335	626,735	2,476,744	1,335,937	1,205,396	852,788	10,109

Source: Jacobs Consultancy based on U.S. DOT DB1B, T100 data, August 2009.

Table B-27
VISITORS PASSENGER ENPLANEMENTS IN 2008
Regional Aviation Strategic Plan

	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
NCA	900,989	983,421	144,096	555,934	366,878	473,703	3,428	1,154
DOM	3,538,192	6,381,652	471,431	1,696,608	796,410	628,433	13,711	5,436
INT	177,802	2,280,834	139	13,942	6,253	749	22,661	566
MEX	15,763	352,743	14	765	12,251	66	682,294	12
Total	4,632,746	9,998,650	615,680	2,267,249	1,181,792	1,102,951	722,093	7,168

Source: Jacobs Consultancy based on U.S. DOT DB1B, T100 data, August 2009.

Table B-28
VISITORS PASSENGER ENPLANEMENTS IN 2009
Regional Aviation Strategic Plan

	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
NCA	883,832	945,284	150,479	604,381	316,241	449,298	2,571	805
DOM	3,378,423	6,202,973	460,598	1,622,336	705,288	551,850	10,283	3,922
INT	169,713	2,145,248	259	13,404	5,600	843	23,046	363
MEX	15,920	316,667	34	864	13,901	132	584,726	0
Total	4,447,887	9,610,172	611,369	2,240,985	1,041,030	1,002,124	620,626	5,091

Source: Jacobs Consultancy based on U.S. DOT DB1B, T100 data, August 2009.

The tradeoff utility coefficient (w) represents the effect of annual income on the tradeoff between cost and convenience. The Model presumed that passengers would make choices based entirely on cost if the average annual income is below $20,000 (in 1999 dollars). Conversely, it they would make choices based entirely on convenience if the average annual income is above $100,000 (in 1999 dollars). All three income brackets are summarized in Table B-29.

Table B-29
TRADEOFF UTILITY COEFFICIENT FOR VARIOUS INCOME BRACKETS
Regional Aviation Strategic Plan

Avg. Income	w
More than $100,000	1
$20,000 - $100,000	$1/\ e^{-\beta(Avg.Income-20,000)}$
Less than $20,000	0

Source: Jacobs Consultancy, August 2009.

where β was a factor determined using a cumulative normal distributions by the following method:

1. Randomize 1000 numbers
2. Create a Normal distribution of these 1000 numbers
3. Find the cumulative percentage of each value
4. Fit the values by a logit regression
5. Estimate β

Calibration Output

A result of the baseline calibration was αk estimates for all airports for various trip types. Tables B-30 through B-33 list the results for each of the four trip types.

Table B-30
α_K **ESTIMATES FOR NORTHERN CALIFORNIA TRIP TYPE**
Regional Aviation Strategic Plan

Airport / Station	α_K Residents	α_K Visitors
SAN	2.12269	2.08035
LAX	1.711073	1.13175
LGB	1.723321	1.163075
SNA	1.699057	1.413225
ONT	1.74183	1.306571
BUR	1.685661	1.134922
TIJ	0.999999	1.001695
CRQ	2.32	2.92

Source: Jacobs Consultancy, August 2009.

Table B-31

α_K ESTIMATES FOR DOMESTIC TRIP TYPE

Regional Aviation Strategic Plan

Airport / Station	α_K Residents	α_K Visitors
SAN	1.970045	1.750712
LAX	1.904115	1.281745
LGB	1.764301	1.163695
SNA	1.736028	1.368015
ONT	1.685792	1.279918
BUR	1.778725	1.158293
TIJ	0.999985	0.998416
CRQ	2.11	1.55

Source: Jacobs Consultancy, August 2009.

Table B-32

α_K ESTIMATES FOR INTERNATIONAL TRIP TYPE

Regional Aviation Strategic Plan

Airport / Station	α_K Residents	α_K Visitors
SAN	3.327937	0.907091
LAX	6.232871	2.040393
LGB	0.867001	0.602853
SNA	7.819348	1.877578
ONT	3.78743	1.448592
BUR	1.885089	0.795942
TIJ	0.382261	0.871107
CRQ	4.45189	-10

Source: Jacobs Consultancy, August 2009.

Table B-33
α_K **ESTIMATES FOR MEXICO TRIP TYPE**
Regional Aviation Strategic Plan

Airport / Station	α_K Residents	α_K Visitors
SAN	3.594296	1.784003
LAX	2.845644	1.67804
LGB	-2.22805	-0.38939
SNA	-1.0295	1.008875
ONT	2.372298	2.416384
BUR	-1.78385	-0.35106
TIJ	5.462553	2.351213
CRQ	-1.8659	0.270144

Source: Jacobs Consultancy, August 2009.

B-3.2 HSR Calibration

The state of California has been planning a statewide high-speed rail line to serve as a backbone and a needed alternative to the state's existing transportation network. The project's goal is to increase and maintain California's mobility as its population grows to a projected 50 million by 2035.* The California High-Speed Rail Authority (*HSR Authority*) is the state entity charged with planning, designing, building, and operating the planned system.

With the introduction of HSR, the airport choice set widens for passengers as new modes are available. These new mode choices need to be calibrated in terms of α_k. Setting an arbitrary value could result in incorrect results. Setting a value too high may lead more passengers to opt for HSR and vice versa.

The baseline calibration methodology cannot be successfully repeated as is for HSR calibration also because the target years differ. Historical enplanements for the period 2006-2009 were available for baseline calibration. Numbers for HSR for the same time period are not available because HSR is not scheduled to be operational before 2019. The LA – San Diego link is subject to future funding and is not expected to be operational before 2027.

*California High Speed Rail Authority (2009.) California High-Speed Rail Authority: Report to the Legislature December 2009 [PDF Document]. Retrieved from http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx.

The HSR Authority has been regularly putting out ridership forecasts, track alignments and business plans for the system. These detail the plans for building the system, logistical and operational details. The HSR Authority also conducted detailed modeling for ridership on HSR, air and vehicular traffic. Their forecasts of high-speed train riders and revenue are developed from predicted future travel volumes and conditions within California, and future high-speed train operations planned. Their October 2010 estimates for diversion from air to rail in the year 2030 serve as the only marker post for the HSR calibration efforts.

The fare for HSR is a key factor in HSR ridership and the revenue forecast. Forecasts for the programmatic EIR/EIS work set the LA-SF HSR fares at half (50 percent) of the 2005 air fare, and varied proportionally with distance for other trips. The HSR Authority found that the 66 percent higher case (which becomes the "83 percent" of air fare case) would generate the highest revenue, and reduces the operating costs and the number of train-sets needed. The HSR Authority has since adopted the 83 percent fare scenario for its business plans. The fare is calculated in the same manner as the 50 percent, but is anchored by an LA-SF HST fare at 83 percent of the air fare.* Their October 2010 estimates reflect this 83% fare structure.

It is important to note that HSR Authority estimated ridership only for the year 2030. By 2030, the HSR network can be expected to be functional. Some of the key relevant assumptions for estimating ridership include:

- **Capacity**: HSR would operate with single-level train-sets either singly with 450-500 seats each or two sets coupled together with 900-1,000 seats.* As of October 2010, the HSR Authority estimates that a maximum of 12 trains can run between stations per hour in each direction. This equates to a maximum capacity of 12 trains/hr x 1000 seats x 15 hrs/day x 350 days = 63 million passengers annually in each direction.

- **Pre-boarding Time**. Wait time for passengers departing from an airport (to account for security checks) would be 75 minutes as compared to 15 minutes for HSR and conventional rail in the year 2030*. The forecasts assume that high-speed train travelers will not face airport-style security checks and processing time, in line with practice in the Washington-New York-Boston 150-mph Acela train services, and all but one of the high-speed train services overseas.*

- **Travel Time**. Air travel would take the same amount of time in 2030 as in 2005.* The travel time between HSR stations are taken from the HSR Authority's website (as of 09/25/10) and are summarized in Table B-34.

*California High Speed Rail Authority (2009.) California High-Speed Rail Authority: Report to the Legislature December 2009 [PDF Document]. Retrieved from http://www.cahighspeedrail.ca.gov/Business_Plan_reports.aspx.

Table B-34
HSR TRAVEL TIMES
Regional Aviation Strategic Plan

Trip	Travel time (min)
LA to/from SF	158
ONT to/from SF	182
SAN (Santa Fe/SDIA) to/from SF	236
ONT to/from SAN (Santa Fe/SDIA)	57
LA to/from ONT	25
University City to/from San Diego	10
Escondido to/from San Diego	23
University City to/from ONT	49
Escondido to/from ONT	37

Source: California High Speed Rail Authority website.

- **HSR Fare.** The estimate of HSR fare between intermediate stations used in the Model is presented in Table B-35. The values used were sourced from the 2006 report by Cambridge Systematics* (Table 2.4.).

The Model is structurally different that the model used by the HSR Authority. The Model requires additional assumptions, above and beyond the assumptions made by the HSR Authority, for it to complete iterations. These are listed below.

- **Start Year.** For any new service/mode introduction such as HSR, the Model requires that a start year of service be specified. The RASP model then includes the For the purposes of calibration and other scenarios, the input files specify 2019 for the North California – LA Union station mode and 2027 for all other modes.

- **Starting Fare.** The RASP model allows fares to change based on supply and demand relationship. However, it requires a starting fare estimate for the first year of service.

*Cambridge Systematics Inc, Systra Consulting Inc and Citilabs (2006). Bay Area/ California High-Speed Rail Ridership and Revenue Forecasting Study: Level-of-Service and Forecast Alternatives [PDF Document]. Retrieved from http://www.cahighspeedrail.ca.gov/WorkArea/DownloadAsset.aspx?id=7923.

Table B-35
HSR FARE ESTIMATES
Regional Aviation Strategic Plan

Origin	Los Angeles	Norwalk	Anaheim	Irvine	City of Industry	Ontario Airport(ONT)	Riverside	Murrieta/Temecula	Escondido	University City	San Diego
SF	$55	$57	$58	$59	$58	$59	$61	$64	$67	$69	$70
LA	--	8	9	10	9	9	11	12	26	28	30
NWK	8	--	8	9	--	--	--	--	--	--	--
ANA	9	8	--	8	--	--	--	--	--	--	--
IRV	10	9	8	--	--	--	--	--	--	--	--
IND	9	--	--	--	--	8	9	11	24	26	27
ONT	9	--	--	--	8	--	8	10	22	25	26
RVR	11	--	--	--	9	8	--	9	21	23	24
TEM	12	--	--	--	11	10	9	--	9	10	11
ESC	26	--	--	--	24	22	21	9	--	8	9
UNI	28	--	--	--	26	25	23	10	8	--	8
SD	30	--	--	--	27	26	24	11	9	8	--

Source: California High-Speed Rail Authority online library.

To match the 83% assumption made by the HSR Authority, the RASP model assumes that the HSR fare from the Los Angeles to North California (intrastate) is 83% of the region's (5 airports) air fare to North California (intrastate) in 2018. In 2018, the intrastate air fares for the region's five airports are $96 (LAX), $49 (LGB), $123 (SNA), $67 (ONT), and $71 (BUR). Hence the HSR fare for the Los Angeles – North California segment is set at $67.396 in 2019.

When the Inland Empire section is operational in 2027, the fares from Ontario and San Diego are proportionally higher based on values from Table 35. The HSR fare for Ontario – North California segment is set at $72.2975 whereas an HSR ride on the San Diego – North California segment is set at $85.7767.

- **Intermodal Transfer**. The HSR Authority did not model any multi-modal choices. Since the Model allows some multi-modal choices, it inherently requires that the cost and time associated with the transfer between modes be specified. The transfer time from HSR to an airport terminal could significantly be impacted by the location of the HSR station and the quality of connection. The Model assumed that for an HSR station located in the proximity of an airport, the transfer time (using the automated people mover system, walking time etc) between nodes is 10 minutes (for all years in service.) In contrast, the transfer time between Santa Fe station and SDIA was assumed to be 30 min (for all years in service) and $4 (in 2030.) The values for cost are based on ground access costs. The values for transfer time were educated guesses.

- **Connectivity**. The Model requires a quantitative formulation of connectivity for the HSR modes. Assuming a passenger opting for mixed mode travel is essentially evaluating only the connectivity of the airport, the model assumes that the connectivity of the mixed modes equals the connectivity of [that] airport. For HSR only travel the connectivity is not be based on the enplanements. This is to avoid circular logic as enplanements are dependent on connectivity and other variables. The RASP model uses the same equation for computing the connectivity of HSR only modes as the ones used for air travel, but is based on capacity of the station rather than annual enplanements at airport.

- **Fare Adjustment for Mixed Mode Travel**. The airline service response element in the Model is based on supply-demand relationship. When enplanements at an airport exceed capacity, airlines respond by increasing air fares to suppress demand. The Model also assumes that for such cases, the total cost of travel for mixed mode also increases as air fare is a component of travel costs. Similarly, if HSR ridership exceeds capacity, only the HSR fare component is impacted.

Other High-Speed Rail Projects and Observed Demand Diversion

Prior research indicates that there are distance-time thresholds where HSR has a clear advantage. These thresholds are of the order of one to three hours of travel by HSR which would equate to distances of 150–500 miles. HSR cannot compete against the flexibility and lower access times by car for short distance travel. Air travel presents inconvenience factors, but at longer distances the faster air travel overcomes these. HSR has a window of opportunity available between these two modes.

- **Japan "Shinkansen".** Research indicates for the Sanyo Shinkansen, 55% of the traffic was diverted to the new line from other rail lines, 23% from the aircraft, 16% from the car and bus, and 6% was induced demand.* The diversion estimate is probably explained by a combination of factors that

*Sands, B. (1993). The development effects of high-speed rail stations and implications for Japan. *Built Environment*, 19(3/4), pp. 257–284.

include the geographical constraints of the land, the level of service and the then-regulated aviation industry.

- **France TGV, German ICE and Spain AVE**. Following the inauguration of the HSR service in France and Spain, the share held by air transport fell significantly with road transportation suffering to a lesser extent. Table B-36 provides the modal share change before and after the introduction of the first HSR corridor.* On the Madrid-Sevilla route on the Spain AVE, air traffic suffered an estimated 60% reduction. Research indicated 32% of passengers diverted from air, 25% from car and 26% were newly generated.** Models evaluating HSR between Madrid and Barcelona, where the current airline share is 67%, suggested that the demand diversion would not exceed 13% with a worst case scenario of 35%. The worst case scenario used was a combination of 30 min delay in flights and a 50% increase in waiting time for airline travel.***

Table B-36
MADE SHARE CHANGE WITH INTRODUCTION ON FRANCE TGV AND SPAIN AVE
Regional Aviation Strategic Plan

Mode	Paris-Lyon (1981-1984) 264 miles	Madrid-Seville (1991-1994) 292 miles
Airports	-24	-27
Rail	+32	+35
Road	-8	-8
Total	37	35

Source: Albalate, D., & Bel, G., 2010.

- **Korea KTX**. KTX started plying trains on the 205 mile Seoul-Busan route in 2004. The Seoul-Busan route has High Speed Rail for the Seoul-Daegu segment. At the time, there were only two airlines serving the Seoul-Busan route. When introduced in April 2004, KTX ridership was an average of 70,900 passengers per day, well short of initial expectations of 200,000. From 2004-2007, the airline market share between Seoul and Busan dropped by a total of

*Albalate, D., & Bel, G. (2010). High-Speed Rail: Lessons for Policy Makers from Experiences Abroad. Research Institute of Applied Economics, working paper: 2010/03 [PDF Document]. Retrieved from http://www.ub.edu/irea/working_papers/2010/201003.pdf.

**Vickerman, R. (1997). High-speed rail in Europe: experience and issues for future development. The Annals of Regional Science, 31, 21-38.

***Román, C., Espino, R., & Martin, J.C. (2007). Competition of High-Speed Train with Air Transport: The Case of Madrid-Barcelona. Journal of Air Transport Management, 13, pp. 277-284.

49.07%. The drop in airline market share between Seoul and Daegu for the same time period is 96.6%, with most airlines opting out of that market.*

Calibration Target

The HSR Authority provided estimates for diversion of passengers from air to rail for the 83% scenario for the year 2030. These are summarized in the Table B-37.

Table B-37
AIR TO HSR DIVERSION ESTIMATE
Regional Aviation Strategic Plan

Region pair	Diversion estimate
LA region – Bay Area	35%
LA region - Sacramento	20%
San Diego region – Bay Area	30%
San Diego region - Sacramento	5%

Source: California High-Speed Rail Authority, October 2010.

To determine the weighted average for all trips to Northern California, the number of enplaned passengers in the no-build scenario was used.** Table B-38 summarizes the number of air passengers in the no-build scenario for the year 2030.

Table B-38
TOTAL PASSENGERS USING AIRPORTS IN NO-BUILD SCENARIO
Regional Aviation Strategic Plan

Destination	San Diego region	LA region
Sacramento	1,099,745	1,819,829
Bay Area	4,842,881	8,562,048

Source: Outwater et. al, 2009.

Thus the targeted value of diversion for passengers from San Diego region traveling intrastate (Northern California destinations only) was 24.4% for the year 2030. The

*Korean Civil Aviation Development Association (KADA) (2008). Aviation Demand Forecast 2009-2020. Korean Ministry of Land, Transport, and Maritime Affairs.
**Outwater, M., Tierney, K., Bradley, M., Sall, E., Kuppam, A., & Modugula, V. (2009). California Statewide Model for High-Speed Rail. Journal of Choice Modelling, 3(1), 55-83.

targeted value of diversion for passengers from LA region traveling intrastate (Northern California destinations only) was 31.4% for the year 2030.

Calibration Methodology

The appropriate input files, based on assumptions discussed above, were prepared. The Model was run for a single iteration with target year of 2030. After the Model run was successfully completed, the Demand Allocation Solver (HSR version) was used to match enplanements. As the diversion estimate was on a regional level and differed by region, two different solver objectives were used

$$\sum_{L.A.region} Trips_a \mid \text{HSR scenario enplanements in 2030}$$
$$- \left(\sum_{L.A.region} Trips_a \mid \text{Baseline scenario enplanements in 2030}\right) \times \text{Diversion estimate for L.A. region} = 0 \qquad (25)$$

$$\sum_{S.D.region} Trips_a \mid \text{HSR scenario enplanements in 2030}$$
$$- \left(\sum_{S.D.region} Trips_a \mid \text{Baseline scenario enplanements in 2030}\right) \times \text{Diversion estimate for San Diego region} = 0 \qquad (26)$$

The solver achieved these objectives by varying values of α_K for all new nodes. This process was repeated until the actual diversion was within 1% of targeted diversion.

Calibration Output

Interim calibration results indicated that enplanements at SNA, ONT (visitor passenger type) and CRQ far exceeded the capacity limits and hence the α_K scores for ground access to airport needed modification. It was assumed that with the introduction of HSR to the airport choice set, driving to SNA, ONT and CRQ would lose some of their attractiveness by 5%-25% as they are located away from the population centers. Passengers could opt to go to the HSR stations located closer to their point of origin. The updated α_K scores are reported in Table B-39.

Table B-39
HSR CALIBRATION RESULTS
Regional Aviation Strategic Plan

Travel mode (direction if any)	Airport / Station	α_K Residents	α_K Visitors
Air only	SAN	2.123	2.080
Air only	LAX	1.711	1.132
Air only	LGB	1.723	1.163
Air only	SNA	1.699	1.339
Air only	ONT	1.742	1.265
Air only	BUR	1.686	1.135
Air only	TIJ	1.000	1.002
Air only	CRQ	1.856	2.226
HSR only	SD Santa Fe Station	2.140	2.960
HSR only	Ontario HSR Station	1.610	1.294
HSR only	LA Union Station	1.793	1.169
Mixed mode (southbound)	ONT	1.500	1.000
Mixed mode	SAN	1.655	1.190
Mixed mode (northbound)	ONT	1.500	1.000

Source: Jacobs Consultancy, December 2010.

B-3.3 Calibration Methods

The following is a brief description of the tools used for calibration.

Adjusted Demand Solver

The Adjusted Demand Solver was designed to calibrate and to solve for appropriate adjustment variables for the adjusted demand in equation (1) in the Airport Choice Model. It follows the same logic and assumptions as the Model for calculating potential demand and adjusted demand for each trip type and passenger type. The Adjusted Demand Solver aims to determine all the adjustment variables required in the equations, which include:

1. Economic instability factor (λ_y)
2. Price sensitivity factor ($\partial_{p,t}$)

The objective function is to minimize the sum of absolute percentage difference between total actual demand and total adjusted demand in each trip type

The Solver consists of one worksheet per passenger type, which combines the potential demand from the Potential Demand Generator and the actual cost to travel compared to lowest air fare ($CostDiff_{z,p,t}$). Then using equation (1), the adjusted demand is determined for each zone. The Solver runs through numerous iterations to compute all the adjustment variables until it finds the optimal solution to objective function and the associating constraints are satisfied. Based on this optimal solution, the adjustment variables are calibrated.

Demand Allocation Solver

The Demand Allocation Solver was designed and developed so as to aid the model development and calibration efforts as related to the airport choice probability modeling and to solve for appropriate unobtained adjustment variables for all airports /modes. The Solver uses a generalized reduced gradient algorithm and allows target enplanement numbers to be achieved at various airports within appropriate constraints. The Demand Allocation Solver aims to determine all the adjustment variables required in the equations (5) and (6), which include:

1. Cost utility coefficient (∂_f)
2. Time utility coefficient (∂_t)
3. Connectivity utility coefficient (∂_c)
4. Trade-off utility coefficient (w), for visitors only
5. Airport attractiveness factor ($\kappa_{p,a,t}$)

The Solver consists of multiple worksheets. The input worksheets acquire the normalized scores for fare, time and connectivity from an output file that is generated by the model run for each of the target year. The Solver revises the input cells which includes unobtained adjustment values and power base for each trip type. Based on these revised values, a utility value is computed for every trip type for both passenger types from all TAZs. The probability of airport/mode selection is then computed using the multinomial logit model type discussed in earlier sections. The number of adjusted trips for each forecasted year is readily available as an output of the model run. The Solver then converts these adjusted trips to realized trips at each airport/mode based on the probability.

B-4 MODEL OUTPUT

This section details the outputs for the Baseline and alternative scenarios for evaluations of potential system changes. Refer to main report for discussion and interpretation of these outputs.

B-4.1 Baseline Scenario

Table B-40
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810
2007	8,496,685	22,979,001	1,310,691	4,778,356	3,341,752	2,947,173	1,846,043	67,427
2008	8,055,185	21,557,508	1,206,206	4,454,960	3,124,465	2,712,986	1,716,840	63,162
2009	7,789,833	20,945,017	1,128,241	4,199,937	3,029,193	2,521,583	1,602,930	62,428
2010	7,234,385	19,213,690	1,054,361	3,911,131	3,062,237	2,534,337	1,611,396	56,119
2011	7,606,328	20,562,860	1,080,163	4,165,096	3,280,048	2,578,657	1,748,423	57,389
2012	7,899,196	21,765,959	1,092,804	4,383,482	3,467,500	2,592,387	1,903,522	58,125
2013	8,226,216	23,038,195	1,098,916	4,636,979	3,654,462	2,605,017	2,056,192	58,938
2014	8,601,062	24,314,234	1,107,078	4,882,386	3,864,312	2,611,689	2,187,792	60,021
2015	9,013,376	25,675,585	1,122,837	5,151,638	4,102,187	2,629,170	2,331,799	61,142
2016	9,490,555	27,087,569	1,138,750	5,415,417	4,347,709	2,651,992	2,477,988	64,004
2017	10,141,573	27,089,526	1,412,011	5,506,331	4,818,605	3,276,782	2,748,539	88,063
2018	10,622,004	27,105,289	1,717,662	5,533,210	5,219,006	3,977,979	3,031,654	105,108
2019	11,126,997	27,107,647	1,973,002	5,561,242	5,345,146	4,837,281	3,306,555	119,059
2020	11,579,427	27,419,774	2,043,127	5,583,739	5,584,160	5,297,400	3,551,545	126,332
2021	11,971,528	27,737,642	2,071,276	5,521,137	5,720,451	5,536,699	3,761,724	129,525
2022	12,120,212	28,184,714	2,110,106	5,499,824	5,836,982	5,674,613	3,962,076	134,351
2023	12,135,544	28,073,874	2,098,206	5,338,545	5,828,042	5,674,985	4,167,734	156,904
2024	12,495,217	29,492,684	2,110,817	5,621,857	6,134,702	5,725,759	4,351,492	158,607
2025	12,410,373	28,767,046	2,096,343	5,248,047	5,978,694	5,668,949	4,567,384	307,213
2026	12,634,943	29,678,230	2,124,235	5,437,401	6,195,830	5,803,215	4,753,776	319,390
2027	12,608,593	29,535,396	2,086,604	5,145,041	6,076,592	5,715,406	4,957,877	479,082
2028	12,552,145	29,784,761	2,104,078	5,177,358	6,193,318	5,856,516	5,166,787	496,710
2029	12,555,203	29,708,065	2,090,650	5,088,578	6,144,552	5,908,332	5,380,516	501,678
2030	12,556,899	30,545,566	2,099,219	5,072,097	6,260,924	5,911,157	5,599,399	511,676

Source: Jacobs Consultancy, December 2010.

Table B-41

TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810
2007	9,079,447	31,557,771	1,310,691	4,947,983	3,341,752	2,947,173	1,846,043	67,427
2008	8,693,049	29,076,651	1,206,206	4,589,902	3,124,465	2,712,986	1,716,840	63,162
2009	8,156,269	27,596,451	1,128,241	4,253,692	3,029,193	2,521,583	1,602,930	62,428
2010	7,679,662	25,839,093	1,054,361	4,011,206	3,062,237	2,536,645	1,611,396	56,119
2011	8,074,499	27,653,493	1,080,163	4,271,669	3,280,048	2,581,005	1,748,423	57,389
2012	8,385,393	29,271,453	1,092,804	4,495,642	3,467,500	2,594,747	1,903,522	58,125
2013	8,732,541	30,982,390	1,098,916	4,755,626	3,654,462	2,607,388	2,056,192	58,938
2014	9,130,459	32,698,442	1,107,078	5,007,312	3,864,312	2,614,067	2,187,792	60,021
2015	9,568,150	34,529,224	1,122,837	5,283,453	4,102,187	2,631,564	2,331,799	61,142
2016	10,074,700	36,428,099	1,138,750	5,553,981	4,347,709	2,654,406	2,477,988	64,004
2017	10,765,788	36,430,730	1,412,011	5,647,222	4,818,605	3,279,765	2,748,539	88,063
2018	11,275,790	36,451,929	1,717,662	5,674,789	5,219,006	3,981,601	3,031,654	105,108
2019	11,811,865	36,455,100	1,973,002	5,703,538	5,345,146	4,841,685	3,306,555	119,059
2020	12,292,143	36,874,857	2,043,127	5,726,611	5,584,160	5,302,223	3,551,545	126,332
2021	12,708,377	37,302,334	2,071,276	5,662,407	5,720,451	5,541,740	3,761,724	129,525
2022	12,866,212	37,903,569	2,110,106	5,640,549	5,836,982	5,679,779	3,962,076	134,351
2023	12,882,488	37,754,509	2,098,206	5,475,143	5,828,042	5,680,151	4,167,734	156,904
2024	13,264,299	39,662,562	2,110,817	5,765,704	6,134,702	5,730,972	4,351,492	158,607
2025	13,174,233	38,686,704	2,096,343	5,382,329	5,978,694	5,674,110	4,567,384	307,213
2026	13,412,625	39,912,089	2,124,235	5,576,528	6,195,830	5,808,498	4,753,776	319,390
2027	13,384,653	39,720,003	2,086,604	5,276,687	6,076,592	5,720,610	4,957,877	479,082
2028	13,324,731	40,055,356	2,104,078	5,309,831	6,193,318	5,861,848	5,166,787	496,710
2029	13,327,977	39,952,213	2,090,650	5,218,780	6,144,552	5,913,711	5,380,516	501,678
2030	13,329,777	41,078,507	2,099,219	5,201,877	6,260,924	5,916,538	5,599,399	511,676

Source: Jacobs Consultancy, December 2010.

Table B-42
TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092
2007	1,644,170	1,843,518	290,465	1,181,931	910,663	1,120,975	0	8,725
2008	1,578,512	1,729,935	267,294	1,102,490	854,474	1,052,165	0	8,363
2009	1,534,085	1,679,649	261,644	1,050,347	847,772	1,004,009	0	7,889
2010	1,457,330	1,508,470	229,293	947,678	781,861	891,730	0	7,427
2011	1,527,490	1,580,515	230,231	1,015,612	833,334	917,580	0	7,137
2012	1,590,728	1,644,764	229,367	1,081,683	881,261	936,074	0	6,821
2013	1,664,156	1,717,754	227,800	1,157,490	932,136	955,772	0	6,569
2014	1,746,721	1,796,719	226,032	1,240,376	991,403	977,055	0	6,472
2015	1,840,734	1,889,817	227,095	1,340,213	1,064,258	1,004,710	0	6,410
2016	1,950,042	1,985,066	227,951	1,450,180	1,141,216	1,028,701	0	6,766
2017	2,061,612	1,857,962	250,506	1,434,497	1,188,648	1,105,217	0	7,106
2018	2,144,551	1,806,046	279,648	1,489,865	1,272,549	1,215,198	0	7,318
2019	2,231,663	1,742,420	299,056	1,541,979	1,321,297	1,327,714	0	7,515
2020	2,311,066	1,701,627	298,224	1,582,423	1,379,836	1,375,916	0	7,669
2021	2,391,930	1,675,997	297,781	1,619,176	1,425,525	1,394,507	0	7,422
2022	2,453,508	1,668,797	299,722	1,669,095	1,470,174	1,409,652	0	7,385
2023	2,503,168	1,642,064	298,881	1,686,256	1,489,898	1,396,668	0	14,613
2024	2,587,920	1,688,175	295,733	1,805,652	1,570,968	1,426,616	0	14,442
2025	2,579,412	1,618,169	303,763	1,762,939	1,560,946	1,402,834	0	121,398
2026	2,658,100	1,617,964	310,719	1,852,715	1,628,746	1,441,994	0	125,975
2027	2,651,485	1,566,495	316,839	1,816,714	1,621,472	1,426,259	0	261,173
2028	2,705,346	1,531,294	323,532	1,863,966	1,666,195	1,455,276	0	266,092
2029	2,773,042	1,482,496	328,493	1,883,358	1,682,525	1,470,410	0	266,415
2030	2,850,208	1,487,223	339,472	1,932,013	1,730,284	1,505,134	0	271,151

Source: Jacobs Consultancy, December 2010.

Table B-43
TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286
2007	6,356,756	14,120,831	1,017,194	3,547,170	2,328,687	1,823,868	0	44,017
2008	6,020,442	13,195,157	936,317	3,301,674	2,182,204	1,658,818	0	41,550
2009	5,777,120	12,540,574	864,218	3,101,381	2,098,651	1,515,712	0	39,987
2010	5,293,011	11,199,363	822,919	2,924,769	2,200,477	1,640,901	0	33,270
2011	5,558,588	12,003,096	847,663	3,113,156	2,366,507	1,659,267	0	34,288
2012	5,753,418	12,685,686	861,049	3,267,356	2,505,266	1,654,398	0	34,852
2013	5,968,001	13,391,674	868,611	3,446,868	2,640,129	1,647,227	0	35,426
2014	6,225,539	14,151,545	878,452	3,611,724	2,790,023	1,632,536	0	36,296
2015	6,506,846	14,950,371	893,028	3,783,378	2,953,246	1,622,257	0	37,103
2016	6,826,104	15,777,098	908,013	3,940,165	3,118,244	1,621,008	0	39,252
2017	7,239,053	15,606,175	1,160,374	4,053,824	3,528,140	2,170,550	0	42,425
2018	7,579,083	15,386,832	1,437,534	4,030,269	3,838,426	2,762,334	0	45,178
2019	7,944,801	15,099,134	1,673,648	4,008,566	3,923,771	3,509,306	0	48,329
2020	8,265,558	15,028,127	1,744,666	3,991,754	4,105,001	3,921,287	0	50,623
2021	8,531,155	14,913,309	1,773,289	3,893,144	4,197,686	4,142,025	0	51,354
2022	8,571,756	14,865,179	1,810,191	3,822,283	4,269,136	4,264,807	0	52,596
2023	8,477,143	14,264,351	1,799,139	3,643,824	4,237,150	4,278,167	0	62,057
2024	8,689,256	15,042,793	1,814,895	3,807,687	4,458,615	4,298,990	0	62,997
2025	8,529,211	13,836,812	1,792,393	3,476,339	4,305,713	4,265,965	0	98,304
2026	8,587,818	14,137,436	1,813,323	3,575,548	4,449,079	4,361,066	0	102,448
2027	8,478,695	13,421,008	1,769,568	3,319,004	4,331,519	4,288,987	0	121,986
2028	8,285,435	13,056,330	1,780,340	3,302,596	4,393,545	4,401,068	0	128,016
2029	8,171,337	12,304,026	1,761,936	3,190,758	4,316,954	4,437,731	0	128,015
2030	8,085,061	12,277,689	1,759,518	3,123,006	4,376,524	4,405,817	0	129,335

Source: Jacobs Consultancy, December 2010.

Table B-44

TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536
2007	375,998	5,569,079	71	44,692	21,003	29	19,867	11,798
2008	350,032	5,362,709	68	46,875	16,760	27	17,241	10,772
2009	379,173	5,472,045	68	44,547	13,774	25	18,386	12,212
2010	392,448	5,292,355	64	35,325	13,876	23	19,982	13,247
2011	423,853	5,697,722	68	32,798	11,270	24	21,672	13,680
2012	453,794	6,088,070	70	30,738	9,200	24	23,159	14,057
2013	487,833	6,512,504	73	28,744	7,666	25	24,807	14,436
2014	519,362	6,898,717	76	26,277	6,498	26	26,204	14,662
2015	552,366	7,311,148	78	23,852	5,522	27	27,628	14,917
2016	596,560	7,735,347	82	20,705	4,617	29	29,775	15,178
2017	721,207	8,080,607	92	15,052	18,107	40	32,884	37,108
2018	785,404	8,438,406	94	11,207	27,017	44	33,502	51,906
2019	844,851	8,843,507	93	9,323	23,168	48	34,306	62,761
2020	901,550	9,287,554	92	8,418	20,266	49	35,584	67,685
2021	949,456	9,747,135	91	7,795	14,341	49	35,168	70,442
2022	997,416	10,231,918	92	7,476	10,595	50	35,099	74,085
2023	1,058,569	10,730,236	94	7,517	9,224	53	35,389	79,961
2024	1,118,561	11,269,958	96	7,543	7,571	57	36,238	80,893
2025	1,203,295	11,820,103	100	7,812	7,288	61	38,583	87,246
2026	1,288,831	12,384,263	105	8,149	6,639	67	40,997	90,698
2027	1,376,688	12,974,715	108	8,304	5,912	71	43,195	95,651
2028	1,458,661	13,579,688	115	9,727	7,197	81	46,251	102,324
2029	1,506,337	14,257,588	124	13,318	10,312	97	48,986	106,957
2030	1,516,323	15,063,905	131	15,888	10,106	110	50,160	110,894

Source: Jacobs Consultancy, December 2010.

Table B-45
TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897
2007	119,761	1,445,572	2,962	4,563	81,399	2,302	1,826,176	2,888
2008	106,198	1,269,708	2,527	3,922	71,027	1,976	1,699,598	2,478
2009	99,455	1,252,749	2,311	3,661	68,996	1,838	1,584,544	2,339
2010	91,596	1,213,503	2,084	3,360	66,023	1,683	1,591,414	2,175
2011	96,398	1,281,527	2,201	3,531	68,937	1,786	1,726,751	2,284
2012	101,256	1,347,439	2,318	3,704	71,773	1,889	1,880,362	2,395
2013	106,227	1,416,262	2,432	3,878	74,531	1,992	2,031,385	2,506
2014	109,440	1,467,253	2,518	4,008	76,387	2,071	2,161,587	2,591
2015	113,431	1,524,249	2,636	4,196	79,161	2,176	2,304,171	2,712
2016	117,850	1,590,058	2,704	4,366	83,632	2,254	2,448,213	2,807
2017	119,701	1,544,781	1,038	2,958	83,711	974	2,715,654	1,423
2018	112,967	1,474,006	387	1,870	81,014	403	2,998,152	707
2019	105,682	1,422,586	204	1,375	76,910	214	3,272,249	454
2020	101,254	1,402,466	144	1,144	79,056	148	3,515,960	356
2021	98,987	1,401,201	115	1,022	82,899	117	3,726,555	307
2022	97,531	1,418,820	101	971	87,077	104	3,926,976	285
2023	96,665	1,437,224	93	948	91,769	97	4,132,345	273
2024	99,479	1,491,758	93	974	97,548	97	4,315,254	276
2025	98,456	1,491,962	87	958	104,747	89	4,528,801	265
2026	100,194	1,538,567	88	990	111,366	89	4,712,778	268
2027	101,725	1,573,178	88	1,019	117,689	88	4,914,681	271
2028	102,703	1,617,449	91	1,069	126,381	90	5,120,536	278
2029	104,487	1,663,955	97	1,144	134,761	95	5,331,530	291
2030	105,306	1,716,749	99	1,190	144,009	96	5,549,239	296

Source: Jacobs Consultancy, December 2010.

Table B-46

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415
2007	3,945,162	12,795,788	701,074	2,391,545	2,069,301	1,723,671	1,080,579	58,230
2008	3,778,756	11,949,205	638,504	2,236,856	1,945,696	1,573,810	996,653	55,096
2009	3,742,821	12,102,279	632,694	2,189,485	1,955,405	1,490,591	954,254	56,230
2010	3,509,727	11,403,989	632,630	2,182,381	2,108,516	1,627,349	953,003	51,691
2011	3,698,331	12,242,555	646,883	2,259,772	2,243,072	1,624,189	1,020,704	52,856
2012	3,848,818	13,003,520	653,103	2,309,947	2,352,996	1,599,910	1,094,557	53,545
2013	4,019,699	13,812,417	653,562	2,375,717	2,458,657	1,575,138	1,168,983	54,324
2014	4,190,120	14,591,208	653,834	2,416,095	2,576,086	1,538,680	1,230,356	55,352
2015	4,364,219	15,387,029	658,891	2,448,498	2,705,718	1,504,085	1,298,184	56,396
2016	4,544,621	16,238,239	665,126	2,457,075	2,833,894	1,479,626	1,360,977	58,832
2017	4,788,493	15,993,360	905,797	2,403,268	3,135,813	2,042,079	1,537,434	82,062
2018	4,938,062	15,675,134	1,173,393	2,245,923	3,314,925	2,634,193	1,732,421	98,282
2019	5,098,697	15,295,111	1,394,508	2,078,520	3,227,437	3,368,206	1,912,383	111,312
2020	5,237,585	15,316,751	1,459,633	1,969,950	3,304,533	3,761,199	2,057,858	117,984
2021	5,374,891	15,464,240	1,498,038	1,847,106	3,339,395	3,980,526	2,179,613	121,156
2022	5,430,561	15,722,060	1,547,271	1,751,070	3,372,214	4,109,893	2,286,708	126,037
2023	5,452,697	15,763,272	1,573,259	1,670,125	3,392,760	4,179,681	2,393,111	147,304
2024	5,551,492	16,556,635	1,572,971	1,646,238	3,515,515	4,162,747	2,474,123	148,783
2025	5,500,825	16,286,401	1,619,699	1,564,109	3,513,718	4,253,520	2,595,256	261,684
2026	5,579,002	16,765,821	1,646,270	1,544,459	3,600,465	4,353,739	2,685,499	273,797
2027	5,548,328	16,800,577	1,657,862	1,479,882	3,610,241	4,385,571	2,788,111	371,455
2028	5,577,804	16,902,509	1,697,364	1,481,906	3,714,824	4,564,179	2,889,716	392,795
2029	5,633,125	16,831,015	1,725,493	1,507,677	3,772,153	4,715,802	2,990,841	404,691
2030	5,703,857	17,308,600	1,756,534	1,495,068	3,902,533	4,766,983	3,094,016	418,243

Source: Jacobs Consultancy, December 2010.

Table 47
TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395
2007	4,551,523	10,183,213	609,618	2,386,811	1,272,451	1,223,502	765,464	9,197
2008	4,276,429	9,608,303	567,702	2,218,104	1,178,769	1,139,177	720,187	8,066
2009	4,047,013	8,842,738	495,547	2,010,452	1,073,789	1,030,992	648,677	6,199
2010	3,724,657	7,809,701	421,731	1,728,750	953,721	906,988	658,392	4,427
2011	3,907,997	8,320,305	433,279	1,905,325	1,036,976	954,468	727,719	4,533
2012	4,050,378	8,762,439	439,701	2,073,535	1,114,505	992,477	808,965	4,580
2013	4,206,518	9,225,777	445,354	2,261,262	1,195,806	1,029,878	887,209	4,614
2014	4,410,943	9,723,025	453,244	2,466,291	1,288,227	1,073,009	957,436	4,669
2015	4,649,157	10,288,556	463,945	2,703,140	1,396,469	1,125,085	1,033,615	4,746
2016	4,945,934	10,849,330	473,624	2,958,341	1,513,815	1,172,365	1,117,012	5,172
2017	5,353,080	11,096,166	506,213	3,103,063	1,682,793	1,234,703	1,211,105	6,001
2018	5,683,942	11,430,155	544,269	3,287,288	1,904,081	1,343,787	1,299,233	6,826
2019	6,028,300	11,812,536	578,494	3,482,722	2,117,709	1,469,074	1,394,171	7,747
2020	6,341,842	12,103,023	583,493	3,613,789	2,279,627	1,536,201	1,493,687	8,348
2021	6,596,637	12,273,402	573,238	3,674,031	2,381,056	1,556,173	1,582,112	8,369
2022	6,689,650	12,462,655	562,835	3,748,754	2,464,768	1,564,721	1,675,368	8,315
2023	6,682,847	12,310,602	524,947	3,668,420	2,435,281	1,495,304	1,774,623	9,600
2024	6,943,725	12,936,049	537,846	3,975,619	2,619,188	1,563,012	1,877,369	9,824
2025	6,909,549	12,480,645	476,644	3,683,938	2,464,976	1,415,430	1,972,128	45,529
2026	7,055,941	12,912,408	477,964	3,892,942	2,595,365	1,449,475	2,068,277	45,593
2027	7,060,264	12,734,818	428,742	3,665,159	2,466,351	1,329,835	2,169,766	107,627
2028	6,974,341	12,882,253	406,715	3,695,452	2,478,494	1,292,337	2,277,071	103,915
2029	6,922,078	12,877,051	365,158	3,580,901	2,372,399	1,192,530	2,389,675	96,987
2030	6,853,042	13,236,966	342,685	3,577,029	2,358,390	1,144,174	2,505,383	93,433

Source: Jacobs Consultancy, December 2010.

Table B-48
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,332,011	1	5	86	103	0	0	6,150
2007	1,476,619	1	6	97	115	0	0	6,944
2008	1,420,764	1	6	97	115	0	0	6,940
2009	1,421,057	1	5	96	110	0	0	7,188
2010	1,356,663	0	3	81	94	0	0	7,019
2011	1,426,170	0	2	81	76	0	0	6,761
2012	1,489,114	0	2	78	61	0	0	6,475
2013	1,562,017	0	2	77	52	0	0	6,249
2014	1,643,748	1	1	75	50	0	0	6,172
2015	1,736,386	1	1	71	53	0	0	6,123
2016	1,841,600	1	1	74	63	0	0	6,415
2017	1,950,489	1	1	49	75	0	0	6,710
2018	2,028,633	0	1	30	86	0	0	6,836
2019	2,106,880	0	1	19	91	0	0	6,924
2020	2,183,721	0	0	14	102	0	0	6,984
2021	2,265,391	0	0	11	123	0	0	6,743
2022	2,329,162	0	0	10	134	0	0	6,713
2023	2,381,800	0	0	9	142	0	0	12,885
2024	2,467,877	0	0	10	155	0	0	12,712
2025	2,463,680	0	0	15	159	0	0	84,391
2026	2,545,972	0	0	23	193	0	0	88,915
2027	2,543,528	0	0	30	216	0	0	160,775
2028	2,600,918	0	0	69	259	0	0	168,948
2029	2,671,227	1	0	157	304	0	0	175,327
2030	2,750,780	1	0	211	365	0	0	183,608

Source: Jacobs Consultancy, December 2010.

Table B-49

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	779	6	0	27,931
2007	4,735,170	210	280	2,253	807	6	0	28,947
2008	4,510,420	205	272	2,182	784	6	0	28,120
2009	4,404,154	175	225	2,040	722	5	0	28,524
2010	4,227,063	75	147	1,906	697	3	0	26,110
2011	4,458,644	84	138	1,941	592	3	0	26,627
2012	4,635,239	94	127	1,941	492	4	0	26,773
2013	4,836,542	104	117	2,010	431	5	0	26,937
2014	5,077,798	116	107	2,002	402	5	0	27,302
2015	5,342,644	129	97	1,969	392	6	0	27,536
2016	5,623,001	145	90	1,992	420	7	0	28,921
2017	5,915,579	75	84	1,229	452	8	0	30,484
2018	6,150,622	43	78	728	473	10	0	31,696
2019	6,392,155	26	64	435	439	11	0	32,889
2020	6,647,634	20	49	312	440	13	0	34,000
2021	6,907,739	16	37	236	433	13	0	34,186
2022	6,982,852	14	31	199	440	14	0	34,986
2023	6,974,136	12	25	173	451	14	0	42,151
2024	7,186,638	13	22	177	500	16	0	42,708
2025	7,151,397	10	17	165	516	15	0	69,743
2026	7,245,921	12	15	192	616	18	0	73,389
2027	7,245,007	12	13	201	710	19	0	89,411
2028	7,137,640	12	12	237	871	22	0	95,407
2029	7,125,186	13	10	320	1,032	25	0	96,563
2030	7,119,399	16	10	478	1,255	30	0	99,956

Source: Jacobs Consultancy, December 2010.

Table B-50

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087
2007	354,149	445,567	59	41,464	1,201	12	17,157	11,354
2008	346,619	440,603	59	40,223	1,185	13	17,173	10,766
2009	371,993	434,155	60	35,825	1,162	13	17,785	12,193
2010	371,015	406,705	56	32,744	1,070	12	17,089	12,868
2011	401,404	448,743	59	30,291	971	14	18,405	13,282
2012	430,472	489,330	62	28,297	885	15	19,578	13,641
2013	463,697	536,041	65	26,358	822	17	20,955	14,003
2014	494,713	579,447	68	23,964	767	18	22,154	14,215
2015	527,222	626,038	71	21,697	723	20	23,395	14,456
2016	570,421	668,691	75	18,848	658	22	25,221	14,724
2017	689,459	622,194	84	13,459	830	28	27,917	36,290
2018	751,201	629,172	87	10,182	841	32	28,431	50,759
2019	808,885	647,692	87	8,585	689	36	29,097	61,323
2020	865,159	678,497	87	7,831	612	39	30,168	66,119
2021	916,270	716,414	86	7,241	531	42	30,861	69,386
2022	968,787	753,710	88	6,897	469	45	32,052	73,321
2023	1,038,278	776,448	91	6,778	416	49	34,109	79,112
2024	1,105,851	813,575	95	6,643	385	53	35,746	80,222
2025	1,195,935	832,086	99	6,604	349	58	38,376	86,740
2026	1,285,253	863,426	104	6,598	334	64	40,906	90,404
2027	1,374,918	889,893	108	6,489	316	69	43,151	95,474
2028	1,457,534	930,093	115	7,074	335	78	46,226	102,183
2029	1,505,387	1,013,291	123	8,700	360	92	48,971	106,817
2030	1,515,727	1,154,298	130	10,261	410	106	50,151	110,794

Source: Jacobs Consultancy, December 2010.

Table B-51
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,818	633	8	21	136	19	583,232	7
2007	32,687	650	9	22	138	19	602,366	7
2008	30,096	597	8	20	126	17	557,169	6
2009	26,589	387	6	16	98	13	532,391	5
2010	22,825	233	3	11	76	7	529,455	4
2011	24,885	260	3	12	78	8	568,408	4
2012	27,168	289	4	14	80	9	610,273	5
2013	29,659	322	5	15	83	10	654,438	6
2014	31,397	348	5	16	84	9	691,392	6
2015	33,385	381	5	17	87	9	731,956	6
2016	35,149	404	5	17	85	9	775,181	7
2017	37,056	328	6	15	84	8	820,922	7
2018	36,297	268	4	12	76	6	863,029	6
2019	34,348	225	2	9	63	3	908,299	5
2020	33,929	212	2	8	57	2	954,074	5
2021	33,800	200	2	7	51	2	1,001,949	5
2022	34,141	199	2	7	47	2	1,051,527	5
2023	34,723	198	2	7	43	2	1,103,161	5
2024	36,774	208	2	7	41	2	1,155,823	5
2025	37,519	205	2	7	37	2	1,212,438	5
2026	39,439	213	2	7	35	2	1,270,625	6
2027	41,294	219	2	7	33	2	1,331,783	6
2028	42,723	226	2	8	32	2	1,396,151	6
2029	43,928	231	2	8	32	2	1,462,876	6
2030	45,006	243	2	8	33	2	1,533,458	6

Source: Jacobs Consultancy, December 2010.

Table B-52
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,600
2009	--
2010	123,711
2011	229,885
2012	341,768
2013	473,882
2014	486,268
2015	492,356
2016	492,161
2017	488,814
2018	476,365
2019	460,668
2020	442,107
2021	427,815
2022	599,236
2023	859,124
2024	891,083
2025	1,190,225
2026	1,419,517
2027	1,693,661
2028	2,153,995
2029	2,520,450
2030	2,926,137

Source: Jacobs Consultancy, December 2010

B-4.2 Commercial Passenger Optimization

B-4.2.1 Full Build-Out of the Intermodal Transit Center at SAN

Table B-53
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810
2007	8,496,685	22,979,001	1,310,691	4,778,356	3,341,752	2,947,173	1,846,043	67,427
2008	8,055,185	21,557,508	1,206,206	4,454,960	3,124,465	2,712,986	1,716,840	63,162
2009	7,789,833	20,945,017	1,128,241	4,199,937	3,029,193	2,521,583	1,602,930	62,428
2010	7,234,385	19,213,690	1,054,361	3,911,131	3,062,237	2,534,337	1,611,396	56,119
2011	7,606,328	20,562,860	1,080,163	4,165,096	3,280,048	2,578,657	1,748,423	57,389
2012	7,899,196	21,765,959	1,092,804	4,383,482	3,467,500	2,592,387	1,903,522	58,125
2013	8,226,216	23,038,195	1,098,916	4,636,979	3,654,462	2,605,017	2,056,192	58,938
2014	8,601,062	24,314,234	1,107,078	4,882,386	3,864,312	2,611,689	2,187,792	60,021
2015	9,013,376	25,675,585	1,122,837	5,151,638	4,102,187	2,629,170	2,331,799	61,142
2016	9,490,555	27,087,569	1,138,750	5,415,417	4,347,709	2,651,992	2,477,988	64,004
2017	10,141,573	27,089,526	1,412,011	5,506,331	4,818,605	3,276,782	2,748,539	88,063
2018	10,622,004	27,105,289	1,717,662	5,533,210	5,219,006	3,977,979	3,031,654	105,108
2019	11,126,997	27,107,647	1,973,002	5,561,242	5,345,146	4,837,281	3,306,555	119,059
2020	11,579,427	27,419,774	2,043,127	5,583,739	5,584,160	5,297,400	3,551,545	126,332
2021	11,980,823	27,734,527	2,070,644	5,519,844	5,730,624	5,535,364	3,761,319	129,460
2022	12,139,317	28,177,184	2,110,649	5,497,787	5,844,893	5,673,010	3,964,529	134,195
2023	12,113,207	28,016,322	2,074,270	5,318,381	5,808,692	5,640,727	4,168,756	157,229
2024	12,480,775	29,430,828	2,086,675	5,599,050	6,111,595	5,690,598	4,352,329	158,818
2025	12,453,583	29,187,840	2,055,895	5,378,114	6,034,393	5,719,156	4,562,489	306,894
2026	12,492,766	30,617,296	2,053,154	5,461,730	6,198,656	5,695,437	4,749,782	319,212
2027	12,270,807	29,478,423	2,081,107	5,067,240	6,013,662	5,812,858	4,979,714	336,834
2028	12,351,440	29,449,909	2,084,090	5,025,957	6,056,410	5,889,563	5,187,719	352,196
2029	12,515,786	30,174,820	2,091,354	5,053,816	6,191,051	5,876,673	5,396,480	364,056
2030	12,523,383	31,801,958	2,069,100	5,162,170	6,369,700	5,792,998	5,609,283	378,290

Source: Jacobs Consultancy, December 2010.

Table B-54

TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810
2007	9,079,447	31,557,771	1,310,691	4,947,983	3,341,752	2,947,173	1,846,043	67,427
2008	8,693,049	29,076,651	1,206,206	4,589,902	3,124,465	2,712,986	1,716,840	63,162
2009	8,156,269	27,596,451	1,128,241	4,253,692	3,029,193	2,521,583	1,602,930	62,428
2010	7,679,662	25,839,093	1,054,361	4,011,206	3,062,237	2,536,645	1,611,396	56,119
2011	8,074,499	27,653,493	1,080,163	4,271,669	3,280,048	2,581,005	1,748,423	57,389
2012	8,385,393	29,271,453	1,092,804	4,495,642	3,467,500	2,594,747	1,903,522	58,125
2013	8,732,541	30,982,390	1,098,916	4,755,626	3,654,462	2,607,388	2,056,192	58,938
2014	9,130,459	32,698,442	1,107,078	5,007,312	3,864,312	2,614,067	2,187,792	60,021
2015	9,568,150	34,529,224	1,122,837	5,283,453	4,102,187	2,631,564	2,331,799	61,142
2016	10,074,700	36,428,099	1,138,750	5,553,981	4,347,709	2,654,406	2,477,988	64,004
2017	10,765,788	36,430,730	1,412,011	5,647,222	4,818,605	3,279,765	2,748,539	88,063
2018	11,275,790	36,451,929	1,717,662	5,674,789	5,219,006	3,981,601	3,031,654	105,108
2019	11,811,865	36,455,100	1,973,002	5,703,538	5,345,146	4,841,685	3,306,555	119,059
2020	12,292,143	36,874,857	2,043,127	5,726,611	5,584,160	5,302,223	3,551,545	126,332
2021	12,718,245	37,298,145	2,070,644	5,661,081	5,730,624	5,540,404	3,761,319	129,460
2022	12,886,494	37,893,442	2,110,649	5,638,459	5,844,893	5,678,175	3,964,529	134,195
2023	12,858,777	37,677,110	2,074,270	5,454,463	5,808,692	5,645,862	4,168,756	157,229
2024	13,248,968	39,579,376	2,086,675	5,742,313	6,111,595	5,695,778	4,352,329	158,818
2025	13,220,103	39,252,599	2,055,895	5,515,724	6,034,393	5,724,363	4,562,489	306,894
2026	13,261,697	41,174,971	2,053,154	5,601,480	6,198,656	5,700,622	4,749,782	319,212
2027	13,026,077	39,643,384	2,081,107	5,196,896	6,013,662	5,818,151	4,979,714	336,834
2028	13,111,673	39,605,037	2,084,090	5,154,557	6,056,410	5,894,925	5,187,719	352,196
2029	13,286,134	40,579,918	2,091,354	5,183,128	6,191,051	5,882,023	5,396,480	364,056
2030	13,294,199	42,768,137	2,069,100	5,294,254	6,369,700	5,798,272	5,609,283	378,290

Source: Jacobs Consultancy, December 2010.

Table B-55
TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092
2007	1,644,170	1,843,518	290,465	1,181,931	910,663	1,120,975	0	8,725
2008	1,578,512	1,729,935	267,294	1,102,490	854,474	1,052,165	0	8,363
2009	1,534,085	1,679,649	261,644	1,050,347	847,772	1,004,009	0	7,889
2010	1,457,330	1,508,470	229,293	947,678	781,861	891,730	0	7,427
2011	1,527,490	1,580,515	230,231	1,015,612	833,334	917,580	0	7,137
2012	1,590,728	1,644,764	229,367	1,081,683	881,261	936,074	0	6,821
2013	1,664,156	1,717,754	227,800	1,157,490	932,136	955,772	0	6,569
2014	1,746,721	1,796,719	226,032	1,240,376	991,403	977,055	0	6,472
2015	1,840,734	1,889,817	227,095	1,340,213	1,064,258	1,004,710	0	6,410
2016	1,950,042	1,985,066	227,951	1,450,180	1,141,216	1,028,701	0	6,766
2017	2,061,612	1,857,962	250,506	1,434,497	1,188,648	1,105,217	0	7,106
2018	2,144,551	1,806,046	279,648	1,489,865	1,272,549	1,215,198	0	7,318
2019	2,231,663	1,742,420	299,056	1,541,979	1,321,297	1,327,714	0	7,515
2020	2,311,066	1,701,627	298,224	1,582,423	1,379,836	1,375,916	0	7,669
2021	2,392,991	1,675,768	297,720	1,618,946	1,426,772	1,394,322	0	7,400
2022	2,455,729	1,668,706	299,817	1,668,906	1,471,090	1,409,617	0	7,340
2023	2,502,464	1,639,263	296,713	1,680,978	1,485,322	1,390,075	0	14,555
2024	2,588,100	1,685,450	293,648	1,799,813	1,565,788	1,419,808	0	14,348
2025	2,583,554	1,627,725	297,351	1,788,638	1,571,663	1,411,437	0	121,741
2026	2,649,730	1,656,957	305,571	1,873,763	1,637,105	1,438,740	0	127,055
2027	2,685,550	1,562,701	318,303	1,823,905	1,627,094	1,437,489	0	129,342
2028	2,754,690	1,518,384	324,442	1,853,213	1,657,894	1,455,130	0	132,964
2029	2,840,281	1,510,845	333,155	1,909,858	1,709,395	1,478,663	0	137,090
2030	2,921,616	1,552,950	341,835	1,995,107	1,772,753	1,512,439	0	143,125

Source: Jacobs Consultancy, December 2010.

Table B-56

TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286
2007	6,356,756	14,120,831	1,017,194	3,547,170	2,328,687	1,823,868	0	44,017
2008	6,020,442	13,195,157	936,317	3,301,674	2,182,204	1,658,818	0	41,550
2009	5,777,120	12,540,574	864,218	3,101,381	2,098,651	1,515,712	0	39,987
2010	5,293,011	11,199,363	822,919	2,924,769	2,200,477	1,640,901	0	33,270
2011	5,558,588	12,003,096	847,663	3,113,156	2,366,507	1,659,267	0	34,288
2012	5,753,418	12,685,686	861,049	3,267,356	2,505,266	1,654,398	0	34,852
2013	5,968,001	13,391,674	868,611	3,446,868	2,640,129	1,647,227	0	35,426
2014	6,225,539	14,151,545	878,452	3,611,724	2,790,023	1,632,536	0	36,296
2015	6,506,846	14,950,371	893,028	3,783,378	2,953,246	1,622,257	0	37,103
2016	6,826,104	15,777,098	908,013	3,940,165	3,118,244	1,621,008	0	39,252
2017	7,239,053	15,606,175	1,160,374	4,053,824	3,528,140	2,170,550	0	42,425
2018	7,579,083	15,386,832	1,437,534	4,030,269	3,838,426	2,762,334	0	45,178
2019	7,944,801	15,099,134	1,673,648	4,008,566	3,923,771	3,509,306	0	48,329
2020	8,265,558	15,028,127	1,744,666	3,991,754	4,105,001	3,921,287	0	50,623
2021	8,539,022	14,910,829	1,772,718	3,892,082	4,206,157	4,140,876	0	51,304
2022	8,588,337	14,860,902	1,810,641	3,820,445	4,275,678	4,263,241	0	52,491
2023	8,454,862	14,212,127	1,777,371	3,628,913	4,222,239	4,250,503	0	62,064
2024	8,673,660	14,986,309	1,792,839	3,790,694	4,440,574	4,270,637	0	62,931
2025	8,572,974	14,233,561	1,758,359	3,580,757	4,352,015	4,307,570	0	98,186
2026	8,507,173	14,967,538	1,747,401	3,579,738	4,449,242	4,256,550	0	103,676
2027	8,144,693	13,352,771	1,762,614	3,234,678	4,262,948	4,375,215	0	109,959
2028	8,059,842	12,731,898	1,759,446	3,162,570	4,264,510	4,434,265	0	114,685
2029	8,130,561	12,685,284	1,757,991	3,132,002	4,338,328	4,397,830	0	118,131
2030	8,090,352	13,352,575	1,727,054	3,154,293	4,448,327	4,280,371	0	122,537

Source: Jacobs Consultancy, December 2010.

Table B-57
TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536
2007	375,998	5,569,079	71	44,692	21,003	29	19,867	11,798
2008	350,032	5,362,709	68	46,875	16,760	27	17,241	10,772
2009	379,173	5,472,045	68	44,547	13,774	25	18,386	12,212
2010	392,448	5,292,355	64	35,325	13,876	23	19,982	13,247
2011	423,853	5,697,722	68	32,798	11,270	24	21,672	13,680
2012	453,794	6,088,070	70	30,738	9,200	24	23,159	14,057
2013	487,833	6,512,504	73	28,744	7,666	25	24,807	14,436
2014	519,362	6,898,717	76	26,277	6,498	26	26,204	14,662
2015	552,366	7,311,148	78	23,852	5,522	27	27,628	14,917
2016	596,560	7,735,347	82	20,705	4,617	29	29,775	15,178
2017	721,207	8,080,607	92	15,052	18,107	40	32,884	37,108
2018	785,404	8,438,406	94	11,207	27,017	44	33,502	51,906
2019	844,851	8,843,507	93	9,323	23,168	48	34,306	62,761
2020	901,550	9,287,554	92	8,418	20,266	49	35,584	67,685
2021	949,461	9,746,915	91	7,795	14,548	49	35,168	70,449
2022	997,447	10,231,739	92	7,475	10,747	50	35,098	74,082
2023	1,058,774	10,729,410	94	7,547	9,337	53	35,489	80,339
2024	1,118,806	11,269,119	96	7,574	7,662	57	36,339	81,265
2025	1,197,511	11,827,143	99	7,768	6,779	61	38,423	86,703
2026	1,236,297	12,444,913	99	7,280	3,932	63	38,940	88,224
2027	1,340,229	13,012,748	105	7,660	4,435	70	42,131	97,268
2028	1,434,299	13,604,760	113	9,117	5,876	80	45,528	104,272
2029	1,440,275	14,331,362	118	10,853	6,271	91	46,196	108,555
2030	1,406,133	15,187,367	119	11,641	4,467	100	45,341	112,346

Source: Jacobs Consultancy, December 2010.

Table B-58
TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897
2007	119,761	1,445,572	2,962	4,563	81,399	2,302	1,826,176	2,888
2008	106,198	1,269,708	2,527	3,922	71,027	1,976	1,699,598	2,478
2009	99,455	1,252,749	2,311	3,661	68,996	1,838	1,584,544	2,339
2010	91,596	1,213,503	2,084	3,360	66,023	1,683	1,591,414	2,175
2011	96,398	1,281,527	2,201	3,531	68,937	1,786	1,726,751	2,284
2012	101,256	1,347,439	2,318	3,704	71,773	1,889	1,880,362	2,395
2013	106,227	1,416,262	2,432	3,878	74,531	1,992	2,031,385	2,506
2014	109,440	1,467,253	2,518	4,008	76,387	2,071	2,161,587	2,591
2015	113,431	1,524,249	2,636	4,196	79,161	2,176	2,304,171	2,712
2016	117,850	1,590,058	2,704	4,366	83,632	2,254	2,448,213	2,807
2017	119,701	1,544,781	1,038	2,958	83,711	974	2,715,654	1,423
2018	112,967	1,474,006	387	1,870	81,014	403	2,998,152	707
2019	105,682	1,422,586	204	1,375	76,910	214	3,272,249	454
2020	101,254	1,402,466	144	1,144	79,056	148	3,515,960	356
2021	99,350	1,401,015	115	1,022	83,148	117	3,726,150	307
2022	97,804	1,415,836	99	960	87,379	102	3,929,430	282
2023	97,107	1,435,521	93	943	91,794	96	4,133,267	272
2024	100,209	1,489,950	93	969	97,571	96	4,315,990	274
2025	99,543	1,499,410	87	951	103,936	88	4,524,066	263
2026	99,566	1,547,887	83	949	108,377	84	4,710,842	258
2027	100,335	1,550,203	85	999	119,185	85	4,937,582	266
2028	102,608	1,594,867	89	1,057	128,129	88	5,142,191	275
2029	104,670	1,647,329	91	1,102	137,057	89	5,350,284	281
2030	105,282	1,709,066	92	1,129	144,153	89	5,563,941	282

Source: Jacobs Consultancy, December 2010.

Table B-59

TOTAL ENPLANEMENT BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415
2007	3,945,162	12,795,788	701,074	2,391,545	2,069,301	1,723,671	1,080,579	58,230
2008	3,778,756	11,949,205	638,504	2,236,856	1,945,696	1,573,810	996,653	55,096
2009	3,742,821	12,102,279	632,694	2,189,485	1,955,405	1,490,591	954,254	56,230
2010	3,509,727	11,403,989	632,630	2,182,381	2,108,516	1,627,349	953,003	51,691
2011	3,698,331	12,242,555	646,883	2,259,772	2,243,072	1,624,189	1,020,704	52,856
2012	3,848,818	13,003,520	653,103	2,309,947	2,352,996	1,599,910	1,094,557	53,545
2013	4,019,699	13,812,417	653,562	2,375,717	2,458,657	1,575,138	1,168,983	54,324
2014	4,190,120	14,591,208	653,834	2,416,095	2,576,086	1,538,680	1,230,356	55,352
2015	4,364,219	15,387,029	658,891	2,448,498	2,705,718	1,504,085	1,298,184	56,396
2016	4,544,621	16,238,239	665,126	2,457,075	2,833,894	1,479,626	1,360,977	58,832
2017	4,788,493	15,993,360	905,797	2,403,268	3,135,813	2,042,079	1,537,434	82,062
2018	4,938,062	15,675,134	1,173,393	2,245,923	3,314,925	2,634,193	1,732,421	98,282
2019	5,098,697	15,295,111	1,394,508	2,078,520	3,227,437	3,368,206	1,912,383	111,312
2020	5,237,585	15,316,751	1,459,633	1,969,950	3,304,533	3,761,199	2,057,858	117,984
2021	5,380,088	15,463,619	1,497,594	1,846,872	3,348,309	3,979,635	2,179,231	121,093
2022	5,440,966	15,718,561	1,547,990	1,750,657	3,378,769	4,108,946	2,289,029	125,885
2023	5,455,918	15,754,309	1,554,440	1,672,178	3,390,045	4,157,228	2,393,912	147,700
2024	5,559,224	16,546,064	1,554,161	1,648,020	3,510,577	4,140,159	2,474,736	149,067
2025	5,517,726	16,487,412	1,566,977	1,575,602	3,501,014	4,258,354	2,590,931	260,288
2026	5,555,218	17,310,392	1,559,725	1,479,228	3,524,877	4,188,767	2,683,783	272,202
2027	5,551,342	16,711,234	1,651,890	1,430,412	3,529,283	4,468,178	2,808,485	294,238
2028	5,628,424	16,700,978	1,689,180	1,443,140	3,626,024	4,621,648	2,908,960	311,925
2029	5,735,008	17,079,908	1,715,521	1,432,548	3,747,116	4,644,753	3,008,042	325,062
2030	5,828,533	18,020,384	1,697,584	1,389,878	3,837,150	4,551,145	3,107,770	339,477

Source: Jacobs Consultancy, December 2010.

Table B-60

TOTAL ENPLANEMENTS BY AIRPORT–- VISITORS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395
2007	4,551,523	10,183,213	609,618	2,386,811	1,272,451	1,223,502	765,464	9,197
2008	4,276,429	9,608,303	567,702	2,218,104	1,178,769	1,139,177	720,187	8,066
2009	4,047,013	8,842,738	495,547	2,010,452	1,073,789	1,030,992	648,677	6,199
2010	3,724,657	7,809,701	421,731	1,728,750	953,721	906,988	658,392	4,427
2011	3,907,997	8,320,305	433,279	1,905,325	1,036,976	954,468	727,719	4,533
2012	4,050,378	8,762,439	439,701	2,073,535	1,114,505	992,477	808,965	4,580
2013	4,206,518	9,225,777	445,354	2,261,262	1,195,806	1,029,878	887,209	4,614
2014	4,410,943	9,723,025	453,244	2,466,291	1,288,227	1,073,009	957,436	4,669
2015	4,649,157	10,288,556	463,945	2,703,140	1,396,469	1,125,085	1,033,615	4,746
2016	4,945,934	10,849,330	473,624	2,958,341	1,513,815	1,172,365	1,117,012	5,172
2017	5,353,080	11,096,166	506,213	3,103,063	1,682,793	1,234,703	1,211,105	6,001
2018	5,683,942	11,430,155	544,269	3,287,288	1,904,081	1,343,787	1,299,233	6,826
2019	6,028,300	11,812,536	578,494	3,482,722	2,117,709	1,469,074	1,394,171	7,747
2020	6,341,842	12,103,023	583,493	3,613,789	2,279,627	1,536,201	1,493,687	8,348
2021	6,600,735	12,270,908	573,051	3,672,972	2,382,315	1,555,729	1,582,087	8,367
2022	6,698,352	12,458,623	562,658	3,747,130	2,466,124	1,564,064	1,675,500	8,310
2023	6,657,289	12,262,013	519,831	3,646,202	2,418,647	1,483,499	1,774,845	9,529
2024	6,921,551	12,884,763	532,515	3,951,030	2,601,018	1,550,439	1,877,593	9,751
2025	6,935,857	12,700,427	488,917	3,802,513	2,533,379	1,460,802	1,971,559	46,606
2026	6,937,548	13,306,904	493,430	3,982,502	2,673,779	1,506,670	2,065,999	47,010
2027	6,719,465	12,767,189	429,216	3,636,828	2,484,380	1,344,680	2,171,228	42,597
2028	6,723,015	12,748,931	394,910	3,582,817	2,430,386	1,267,915	2,278,759	40,271
2029	6,780,778	13,094,912	375,833	3,621,268	2,443,935	1,231,920	2,388,437	38,994
2030	6,694,850	13,781,574	371,515	3,772,292	2,532,550	1,241,853	2,501,513	38,813

Source: Jacobs Consultancy, December 2010.

Table B-61

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,332,011	1	5	86	103	0	0	6,150
2007	1,476,619	1	6	97	115	0	0	6,944
2008	1,420,764	1	6	97	115	0	0	6,940
2009	1,421,057	1	5	96	110	0	0	7,188
2010	1,356,663	0	3	81	94	0	0	7,019
2011	1,426,170	0	2	81	76	0	0	6,761
2012	1,489,114	0	2	78	61	0	0	6,475
2013	1,562,017	0	2	77	52	0	0	6,249
2014	1,643,748	1	1	75	50	0	0	6,172
2015	1,736,386	1	1	71	53	0	0	6,123
2016	1,841,600	1	1	74	63	0	0	6,415
2017	1,950,489	1	1	49	75	0	0	6,710
2018	2,028,633	0	1	30	86	0	0	6,836
2019	2,106,880	0	1	19	91	0	0	6,924
2020	2,183,721	0	0	14	102	0	0	6,984
2021	2,265,882	0	0	11	123	0	0	6,722
2022	2,330,169	0	0	10	134	0	0	6,669
2023	2,379,582	0	0	9	141	0	0	12,834
2024	2,466,066	0	0	10	155	0	0	12,625
2025	2,464,903	0	0	15	158	0	0	83,973
2026	2,534,481	0	0	23	192	0	0	88,924
2027	2,575,092	0	0	31	227	0	0	94,251
2028	2,647,621	1	0	69	274	0	0	99,457
2029	2,735,308	1	0	156	330	0	0	104,424
2030	2,818,646	1	0	213	407	0	0	110,753

Source: Jacobs Consultancy, December 2010.

Table B-62
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	779	6	0	27,931
2007	4,735,170	210	280	2,253	807	6	0	28,947
2008	4,510,420	205	272	2,182	784	6	0	28,120
2009	4,404,154	175	225	2,040	722	5	0	28,524
2010	4,227,063	75	147	1,906	697	3	0	26,110
2011	4,458,644	84	138	1,941	592	3	0	26,627
2012	4,635,239	94	127	1,941	492	4	0	26,773
2013	4,836,542	104	117	2,010	431	5	0	26,937
2014	5,077,798	116	107	2,002	402	5	0	27,302
2015	5,342,644	129	97	1,969	392	6	0	27,536
2016	5,623,001	145	90	1,992	420	7	0	28,921
2017	5,915,579	75	84	1,229	452	8	0	30,484
2018	6,150,622	43	78	728	473	10	0	31,696
2019	6,392,155	26	64	435	439	11	0	32,889
2020	6,647,634	20	49	312	440	13	0	34,000
2021	6,909,998	16	37	236	435	13	0	34,158
2022	6,987,694	14	31	198	442	14	0	34,913
2023	6,944,860	12	25	174	451	14	0	42,219
2024	7,158,178	13	22	178	500	16	0	42,711
2025	7,145,880	11	16	167	516	16	0	69,422
2026	7,121,077	14	15	182	609	19	0	74,272
2027	6,909,490	12	13	187	714	20	0	80,633
2028	6,915,591	12	12	226	870	23	0	85,435
2029	7,044,410	14	11	302	1,056	26	0	88,926
2030	7,055,584	20	11	456	1,289	33	0	94,500

Source: Jacobs Consultancy, December 2010.

Table B-63
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087
2007	354,149	445,567	59	41,464	1,201	12	17,157	11,354
2008	346,619	440,603	59	40,223	1,185	13	17,173	10,766
2009	371,993	434,155	60	35,825	1,162	13	17,785	12,193
2010	371,015	406,705	56	32,744	1,070	12	17,089	12,868
2011	401,404	448,743	59	30,291	971	14	18,405	13,282
2012	430,472	489,330	62	28,297	885	15	19,578	13,641
2013	463,697	536,041	65	26,358	822	17	20,955	14,003
2014	494,713	579,447	68	23,964	767	18	22,154	14,215
2015	527,222	626,038	71	21,697	723	20	23,395	14,456
2016	570,421	668,691	75	18,848	658	22	25,221	14,724
2017	689,459	622,194	84	13,459	830	28	27,917	36,290
2018	751,201	629,172	87	10,182	841	32	28,431	50,759
2019	808,885	647,692	87	8,585	689	36	29,097	61,323
2020	865,159	678,497	87	7,831	612	39	30,168	66,119
2021	916,272	716,402	86	7,241	535	42	30,861	69,393
2022	968,812	753,686	88	6,897	472	45	32,051	73,319
2023	1,038,465	775,771	91	6,801	418	49	34,205	79,482
2024	1,106,070	812,868	95	6,665	386	53	35,845	80,587
2025	1,190,466	838,254	98	6,586	346	58	38,219	86,220
2026	1,234,015	919,484	99	6,213	322	61	38,858	88,034
2027	1,338,914	925,541	105	6,260	316	67	42,090	97,124
2028	1,433,360	953,208	112	6,902	329	77	45,505	104,146
2029	1,439,692	1,080,767	117	8,070	363	88	46,182	108,461
2030	1,405,860	1,268,691	119	9,074	405	98	45,334	112,296

Source: Jacobs Consultancy, December 2010.

Table B-64
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,818	633	8	21	136	19	583,232	7
2007	32,687	650	9	22	138	19	602,366	7
2008	30,096	597	8	20	126	17	557,169	6
2009	26,589	387	6	16	98	13	532,391	5
2010	22,825	233	3	11	76	7	529,455	4
2011	24,885	260	3	12	78	8	568,408	4
2012	27,168	289	4	14	80	9	610,273	5
2013	29,659	322	5	15	83	10	654,438	6
2014	31,397	348	5	16	84	9	691,392	6
2015	33,385	381	5	17	87	9	731,956	6
2016	35,149	404	5	17	85	9	775,181	7
2017	37,056	328	6	15	84	8	820,922	7
2018	36,297	268	4	12	76	6	863,029	6
2019	34,348	225	2	9	63	3	908,299	5
2020	33,929	212	2	8	57	2	954,074	5
2021	33,816	200	2	7	51	2	1,001,943	5
2022	34,056	198	2	7	47	2	1,051,622	5
2023	34,618	198	2	7	43	2	1,103,277	5
2024	36,672	208	2	7	41	2	1,155,936	5
2025	37,535	208	2	7	37	2	1,212,431	5
2026	38,936	221	2	7	35	2	1,271,133	6
2027	40,088	212	2	7	32	2	1,332,997	6
2028	41,824	217	2	8	32	2	1,397,290	6
2029	43,155	228	2	8	32	2	1,465,158	6
2030	44,201	246	2	8	33	2	1,536,632	6

Source: Jacobs Consultancy, December 2010.

Table B-65
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,600
2009	--
2010	123,711
2011	229,885
2012	341,768
2013	473,882
2014	486,268
2015	492,356
2016	492,161
2017	488,814
2018	476,365
2019	460,668
2020	442,107
2021	425,103
2022	593,493
2023	890,589
2024	921,429
2025	1,195,243
2026	1,554,964
2027	2,072,914
2028	2,408,567
2029	2,614,143
2030	2,997,962

Source: Jacobs Consultancy, December 2010.

B-4.2.2 Preserve SAN Airfield Capacity for Commercial Passenger Service

Table B-66
TOTAL ENPLANEMENTS Y AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,120,898	22,133,431	1,279,646	4,621,043	3,212,261	2,870,832	1,776,288	54,222
2007	8,479,310	22,978,412	1,309,960	4,788,298	3,341,768	2,950,362	1,863,405	55,613
2008	8,058,738	21,557,301	1,205,692	4,463,623	3,124,422	2,715,869	1,713,211	52,457
2009	7,791,434	20,946,080	1,127,688	4,208,546	3,029,099	2,523,902	1,601,823	50,591
2010	7,218,644	19,215,674	1,053,733	3,919,698	3,062,207	2,536,135	1,628,098	43,467
2011	7,598,252	20,565,837	1,079,373	4,173,800	3,280,021	2,580,081	1,757,273	44,327
2012	7,892,833	21,769,762	1,091,859	4,392,307	3,467,464	2,593,516	1,910,535	44,699
2013	8,215,684	23,031,274	1,098,763	4,648,120	3,660,305	2,612,897	2,063,478	45,034
2014	8,591,236	24,298,341	1,107,473	4,886,828	3,870,134	2,617,973	2,193,860	45,923
2015	9,003,924	25,602,388	1,122,381	5,153,947	4,103,810	2,630,337	2,332,389	46,845
2016	9,508,640	26,037,894	1,178,770	5,223,520	4,323,773	2,666,223	2,378,586	50,668
2017	10,031,028	26,590,169	1,224,664	5,321,918	4,557,151	2,695,657	2,436,094	54,483
2018	10,462,634	26,889,582	1,264,643	5,351,723	4,756,635	2,712,390	2,456,078	58,194
2019	10,994,043	27,511,964	1,396,592	5,360,215	5,056,321	2,908,621	2,459,641	63,683
2020	11,599,779	28,214,965	1,531,230	5,507,198	5,378,006	3,134,908	2,488,962	69,229
2021	12,226,100	28,535,210	1,775,049	5,578,518	5,612,515	3,569,878	2,511,152	74,431
2022	12,827,169	28,806,684	2,037,046	5,635,611	5,826,974	4,128,928	2,548,790	79,748
2023	13,495,549	29,105,855	2,071,052	5,636,122	5,907,712	4,783,458	2,584,244	86,320
2024	13,546,490	29,179,241	2,060,910	5,673,488	5,885,169	5,003,419	2,611,443	95,513
2025	13,561,065	29,249,338	2,036,221	5,696,772	5,991,133	5,149,310	2,626,948	122,263
2026	13,584,812	29,629,097	2,051,127	5,720,385	6,190,146	5,218,971	2,652,830	127,497
2027	13,601,216	30,148,597	2,054,955	5,767,453	6,304,985	5,266,021	2,691,985	132,024
2028	13,550,173	30,306,746	2,051,024	5,777,963	6,314,532	5,263,224	2,720,211	136,460
2029	13,674,735	30,876,558	2,045,602	5,827,501	6,408,712	5,249,382	2,740,050	140,802
2030	14,052,413	31,113,630	2,069,909	5,862,798	6,476,430	5,329,576	2,773,456	142,381

Source: Jacobs Consultancy, December 2010.

Table B-67
TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,543,255	29,676,419	1,279,646	4,732,133	3,212,261	2,870,832	1,776,288	54,222
2007	9,060,881	31,556,961	1,309,960	4,958,279	3,341,768	2,950,362	1,863,405	55,613
2008	8,696,883	29,076,372	1,205,692	4,598,827	3,124,422	2,715,869	1,713,211	52,457
2009	8,157,946	27,597,853	1,127,688	4,262,412	3,029,099	2,523,902	1,601,823	50,591
2010	7,662,952	25,841,761	1,053,733	4,019,991	3,062,207	2,538,444	1,628,098	43,467
2011	8,065,925	27,657,496	1,079,373	4,280,595	3,280,021	2,582,430	1,757,273	44,327
2012	8,378,638	29,276,567	1,091,859	4,504,694	3,467,464	2,595,877	1,910,535	44,699
2013	8,721,360	30,973,082	1,098,763	4,767,052	3,660,305	2,615,276	2,063,478	45,034
2014	9,120,027	32,677,069	1,107,473	5,011,867	3,870,134	2,620,357	2,193,860	45,923
2015	9,558,117	34,430,786	1,122,381	5,285,821	4,103,810	2,632,731	2,332,389	46,845
2016	10,093,898	35,016,467	1,178,770	5,357,175	4,323,773	2,668,650	2,378,586	50,668
2017	10,648,440	35,759,182	1,224,664	5,458,090	4,557,151	2,698,112	2,436,094	54,483
2018	11,106,610	36,161,840	1,264,643	5,488,658	4,756,635	2,714,859	2,456,078	58,194
2019	11,670,728	36,998,836	1,396,592	5,497,367	5,056,321	2,911,269	2,459,641	63,683
2020	12,313,747	37,944,252	1,531,230	5,648,111	5,378,006	3,137,762	2,488,962	69,229
2021	12,978,618	38,374,926	1,775,049	5,721,256	5,612,515	3,573,128	2,511,152	74,431
2022	13,616,683	38,740,011	2,037,046	5,779,810	5,826,974	4,132,687	2,548,790	79,748
2023	14,326,201	39,142,345	2,071,052	5,780,334	5,907,712	4,787,813	2,584,244	86,320
2024	14,380,278	39,241,036	2,060,910	5,818,656	5,885,169	5,007,974	2,611,443	95,513
2025	14,395,750	39,335,305	2,036,221	5,842,535	5,991,133	5,153,998	2,626,948	122,263
2026	14,420,959	39,846,014	2,051,127	5,866,753	6,190,146	5,223,722	2,652,830	127,497
2027	14,438,373	40,544,652	2,054,955	5,915,025	6,304,985	5,270,815	2,691,985	132,024
2028	14,384,188	40,757,335	2,051,024	5,925,804	6,314,532	5,268,016	2,720,211	136,460
2029	14,516,416	41,523,634	2,045,602	5,976,610	6,408,712	5,254,161	2,740,050	140,802
2030	14,917,341	41,842,454	2,069,909	6,012,810	6,476,430	5,334,428	2,773,456	142,381

Source: Jacobs Consultancy, December 2010.

Table B-68
TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,484,877	1,717,729	275,945	1,107,347	850,551	1,044,997	4,089	8,092
2007	1,639,774	1,843,524	290,465	1,181,935	910,677	1,120,978	4,367	8,726
2008	1,578,355	1,729,945	267,295	1,102,498	854,502	1,052,171	102	8,365
2009	1,531,280	1,679,655	261,644	1,050,353	847,790	1,004,012	2,769	7,892
2010	1,446,370	1,508,476	229,294	947,683	781,880	891,734	10,924	7,430
2011	1,516,107	1,580,527	230,232	1,015,623	833,394	917,587	11,283	7,144
2012	1,578,794	1,644,781	229,370	1,081,699	881,357	936,084	11,783	6,831
2013	1,651,578	1,717,880	227,861	1,157,398	932,333	955,794	12,424	6,582
2014	1,733,715	1,796,959	226,197	1,239,867	991,737	977,145	12,820	6,488
2015	1,827,302	1,889,991	227,222	1,339,749	1,064,590	1,004,799	13,159	6,430
2016	1,936,344	1,943,956	232,280	1,411,900	1,133,151	1,032,842	13,042	6,794
2017	2,049,623	2,004,964	236,123	1,488,947	1,204,187	1,055,441	13,630	7,158
2018	2,131,125	2,033,864	237,954	1,539,852	1,260,285	1,064,038	14,039	7,411
2019	2,213,633	2,016,178	254,329	1,581,068	1,332,833	1,116,993	14,291	7,670
2020	2,292,456	2,001,045	270,984	1,651,815	1,420,399	1,183,805	14,302	7,933
2021	2,379,607	1,932,269	306,155	1,709,094	1,506,882	1,299,999	10,496	7,791
2022	2,465,028	1,826,329	348,295	1,744,792	1,600,698	1,445,454	9,655	7,682
2023	2,556,150	1,633,517	374,789	1,729,145	1,684,544	1,613,039	10,685	7,626
2024	2,600,957	1,468,563	396,127	1,719,957	1,729,889	1,749,185	11,016	7,953
2025	2,645,013	1,366,321	408,952	1,718,369	1,791,462	1,873,264	10,397	16,376
2026	2,701,304	1,293,427	435,562	1,722,069	1,882,241	1,979,663	10,385	17,157
2027	2,753,788	1,213,211	457,721	1,734,241	1,957,105	2,075,265	9,062	17,907
2028	2,811,963	1,109,786	472,583	1,741,269	2,017,918	2,153,484	5,507	18,769
2029	2,799,407	1,029,490	486,833	1,746,583	2,102,741	2,236,993	5,561	20,004
2030	2,845,370	919,199	494,761	1,750,037	2,170,533	2,344,994	6,685	20,965

Source: Jacobs Consultancy, December 2010.

Table B-69
TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,157,228	13,695,982	1,001,425	3,455,585	2,260,626	1,820,262	16,090	43,286
2007	6,339,590	14,120,862	1,017,196	3,547,187	2,328,707	1,823,872	17,091	44,019
2008	6,020,301	13,195,216	936,322	3,301,700	2,182,245	1,658,826	0	41,553
2009	5,776,998	12,540,622	864,222	3,101,404	2,098,690	1,515,718	0	39,991
2010	5,282,983	11,199,393	822,920	2,924,789	2,200,508	1,640,906	9,937	33,273
2011	5,556,356	12,003,141	847,666	3,113,182	2,366,555	1,659,274	2,100	34,292
2012	5,753,187	12,685,731	861,052	3,267,385	2,505,316	1,654,406	93	34,856
2013	5,963,958	13,379,784	869,495	3,449,207	2,646,001	1,654,154	13	35,325
2014	6,222,649	14,144,889	879,906	3,608,731	2,795,776	1,637,945	1	36,216
2015	6,506,926	14,953,067	893,828	3,778,159	2,954,394	1,622,744	0	37,106
2016	6,889,958	15,841,613	944,904	3,787,459	3,094,515	1,630,530	0	40,882
2017	7,274,168	16,795,224	986,303	3,814,449	3,248,608	1,637,135	0	44,653
2018	7,596,272	17,652,217	1,023,193	3,797,649	3,384,841	1,644,270	0	48,351
2019	7,967,165	18,232,064	1,129,538	3,768,562	3,598,397	1,777,518	0	53,122
2020	8,342,645	18,762,230	1,228,292	3,845,634	3,819,587	1,911,873	0	57,735
2021	8,732,672	19,107,698	1,372,212	3,861,708	3,952,852	2,136,485	0	61,997
2022	9,117,761	19,505,814	1,519,008	3,884,972	4,057,360	2,386,934	0	66,550
2023	9,522,522	19,967,611	1,555,831	3,902,568	4,039,204	2,646,469	0	72,081
2024	9,367,246	20,523,027	1,507,051	3,949,440	3,956,361	2,560,831	0	79,569
2025	9,177,144	21,000,956	1,466,642	3,974,445	3,988,959	2,489,748	0	97,012
2026	8,998,122	21,607,348	1,453,647	3,994,562	4,086,190	2,445,726	0	101,546
2027	8,820,341	22,063,509	1,429,329	4,029,464	4,117,195	2,379,658	0	105,054
2028	8,554,591	22,189,587	1,383,310	4,032,699	4,055,503	2,256,194	0	107,816
2029	8,538,839	22,649,468	1,340,731	4,076,607	4,052,270	2,136,805	0	110,689
2030	8,711,947	22,844,487	1,309,822	4,108,069	4,037,018	2,051,070	1	110,309

Source: Jacobs Consultancy, December 2010.

Table B-70

TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	361,361	5,309,333	1,206	44,748	20,986	3,267	15,977	1,754
2007	380,382	5,571,929	1,274	45,876	21,078	3,214	17,008	1,778
2008	354,061	5,365,356	1,231	47,978	16,743	2,899	14,616	1,599
2009	383,895	5,475,866	1,122	45,796	13,763	2,338	15,631	1,820
2010	397,901	5,296,954	941	36,857	13,970	1,818	16,945	1,935
2011	429,615	5,703,310	875	34,195	11,328	1,440	18,307	2,016
2012	459,838	6,094,488	816	31,997	9,232	1,144	19,510	2,088
2013	494,212	6,520,049	766	29,870	7,681	965	20,851	2,154
2014	525,204	6,891,424	723	26,325	6,389	822	21,849	2,211
2015	553,855	7,235,310	685	23,641	5,418	638	22,436	2,262
2016	509,690	6,642,300	1,337	11,803	4,105	1,230	14,633	2,330
2017	465,841	6,097,747	2,115	6,788	3,043	1,953	9,877	2,243
2018	401,029	5,449,802	3,410	3,369	2,224	3,290	5,451	2,122
2019	346,678	5,473,907	12,651	1,026	2,589	13,545	1,558	2,634
2020	376,374	5,622,955	31,888	875	3,210	38,829	1,542	3,331
2021	408,590	5,640,775	96,625	763	3,301	133,125	1,447	4,433
2022	431,429	5,601,446	169,693	664	2,561	296,358	1,356	5,318
2023	450,297	5,614,203	140,390	596	1,734	523,838	1,252	6,435
2024	454,132	5,266,720	157,699	462	1,217	693,336	881	7,835
2025	471,631	4,916,348	160,597	440	948	786,243	844	8,719
2026	483,311	4,708,972	161,889	412	759	793,532	836	8,635
2027	499,044	4,794,352	167,879	400	629	811,054	829	8,907
2028	517,242	4,869,002	195,108	422	574	853,510	794	9,726
2029	521,097	4,988,120	218,018	462	571	875,553	701	9,968
2030	533,866	5,071,794	265,309	540	617	933,485	646	10,971

Source: Jacobs Consultancy, December 2010.

Table B-71

TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,432	1,410,388	1,071	13,362	80,098	2,306	1,740,132	1,090
2007	119,564	1,442,098	1,025	13,300	81,307	2,299	1,824,939	1,090
2008	106,022	1,266,784	844	11,447	70,931	1,973	1,698,493	940
2009	99,262	1,249,938	700	10,993	68,857	1,833	1,583,423	888
2010	91,391	1,210,851	578	10,369	65,849	1,678	1,590,293	829
2011	96,174	1,278,858	600	10,799	68,744	1,780	1,725,584	876
2012	101,014	1,344,762	620	11,226	71,559	1,882	1,879,149	924
2013	105,935	1,413,561	641	11,646	74,291	1,984	2,030,189	973
2014	109,668	1,465,069	647	11,904	76,233	2,061	2,159,190	1,008
2015	115,842	1,524,020	646	12,398	79,408	2,155	2,296,794	1,047
2016	172,648	1,610,025	249	12,359	92,002	1,620	2,350,910	662
2017	241,396	1,692,235	123	11,734	101,313	1,129	2,412,586	429
2018	334,207	1,753,698	86	10,853	109,286	793	2,436,588	310
2019	466,568	1,789,814	74	9,558	122,502	564	2,443,792	256
2020	588,303	1,828,737	66	8,874	134,810	402	2,473,117	229
2021	705,232	1,854,468	57	6,953	149,481	269	2,499,208	211
2022	812,951	1,873,095	50	5,183	166,355	183	2,537,778	198
2023	966,580	1,890,525	42	3,813	182,230	113	2,572,306	178
2024	1,124,155	1,920,931	32	3,629	197,701	68	2,599,546	157
2025	1,267,278	1,965,714	30	3,518	209,765	55	2,615,706	156
2026	1,402,076	2,019,349	29	3,342	220,957	49	2,641,608	159
2027	1,528,043	2,077,525	26	3,348	230,057	43	2,682,093	156
2028	1,666,378	2,138,370	23	3,573	240,538	37	2,713,910	149
2029	1,815,391	2,209,480	20	3,850	253,131	31	2,733,788	141
2030	1,961,230	2,278,149	18	4,152	268,262	27	2,766,125	135

Source: Jacobs Consultancy, December 2010.

Table B-72

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,775,818	12,399,017	694,063	2,324,575	1,990,858	1,703,676	1,038,954	44,827
2007	3,943,824	12,792,414	700,339	2,401,352	2,069,211	1,726,853	1,084,942	46,416
2008	3,781,179	11,946,477	637,985	2,245,388	1,945,632	1,576,680	996,843	44,391
2009	3,743,688	12,100,721	632,136	2,197,963	1,955,292	1,492,901	956,665	44,392
2010	3,503,691	11,403,334	631,999	2,190,821	2,108,371	1,629,140	962,893	39,039
2011	3,697,656	12,242,637	646,089	2,268,337	2,242,963	1,625,601	1,025,287	39,794
2012	3,849,619	13,004,218	652,151	2,318,628	2,352,902	1,601,024	1,097,733	40,119
2013	4,017,319	13,801,952	653,185	2,386,934	2,463,996	1,582,149	1,172,554	40,426
2014	4,188,944	14,586,412	653,979	2,422,562	2,581,233	1,544,041	1,233,235	41,258
2015	4,366,879	15,393,326	658,335	2,453,008	2,706,989	1,504,969	1,296,992	42,097
2016	4,626,874	16,318,756	703,231	2,337,893	2,809,687	1,504,371	1,280,667	45,353
2017	4,883,897	17,294,515	737,490	2,232,079	2,918,020	1,494,925	1,269,374	48,570
2018	5,103,493	18,131,628	768,653	2,086,610	2,999,791	1,483,656	1,231,382	51,653
2019	5,392,389	18,652,054	880,913	1,925,177	3,136,581	1,628,527	1,177,308	56,270
2020	5,665,365	19,101,472	994,249	1,829,532	3,275,364	1,793,600	1,136,897	60,857
2021	5,953,581	19,213,292	1,207,609	1,665,134	3,293,514	2,151,220	1,098,685	65,235
2022	6,209,134	19,268,262	1,438,121	1,504,012	3,266,262	2,622,479	1,065,376	69,609
2023	6,483,763	19,342,601	1,448,035	1,304,292	3,083,559	3,178,276	1,035,194	75,010
2024	6,609,655	19,746,046	1,440,485	1,162,486	2,927,623	3,388,796	1,009,078	83,481
2025	6,717,546	20,251,230	1,422,103	1,039,149	2,915,983	3,529,615	994,165	107,033
2026	6,834,312	20,908,379	1,435,087	914,726	2,965,924	3,573,963	982,895	111,821
2027	6,946,541	21,492,584	1,444,887	825,610	2,978,396	3,617,124	977,895	116,117
2028	7,082,488	21,888,387	1,462,711	766,367	2,965,114	3,656,273	966,329	120,699
2029	7,224,684	22,505,212	1,469,564	693,416	2,980,050	3,661,857	953,737	124,920
2030	7,414,216	22,971,417	1,512,660	648,198	3,003,679	3,778,547	952,041	126,594

Source: Jacobs Consultancy, December 2010.

Table B-73
TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,345,081	9,734,414	585,583	2,296,468	1,221,403	1,167,157	737,334	9,395
2007	4,535,487	10,185,998	609,621	2,386,947	1,272,557	1,223,509	778,463	9,197
2008	4,277,558	9,610,824	567,708	2,218,235	1,178,789	1,139,189	716,368	8,066
2009	4,047,747	8,845,359	495,552	2,010,582	1,073,807	1,031,001	645,158	6,199
2010	3,714,953	7,812,341	421,734	1,728,877	953,836	906,995	665,205	4,428
2011	3,900,596	8,323,200	433,285	1,905,463	1,037,058	954,480	731,987	4,533
2012	4,043,214	8,765,544	439,707	2,073,679	1,114,562	992,492	812,802	4,580
2013	4,198,365	9,229,322	445,578	2,261,187	1,196,309	1,030,748	890,924	4,608
2014	4,402,291	9,711,929	453,494	2,464,266	1,288,902	1,073,932	960,626	4,665
2015	4,637,046	10,209,061	464,047	2,700,939	1,396,821	1,125,367	1,035,397	4,747
2016	4,881,765	9,719,138	475,539	2,885,627	1,514,086	1,161,852	1,097,918	5,316
2017	5,147,132	9,295,654	487,175	3,089,839	1,639,131	1,200,733	1,166,719	5,913
2018	5,359,141	8,757,954	495,990	3,265,113	1,756,844	1,228,733	1,224,696	6,540
2019	5,601,654	8,859,909	515,679	3,435,037	1,919,740	1,280,094	1,282,333	7,413
2020	5,934,414	9,113,494	536,981	3,677,666	2,102,642	1,341,308	1,352,065	8,372
2021	6,272,519	9,321,918	567,440	3,913,385	2,319,002	1,418,658	1,412,467	9,197
2022	6,618,035	9,538,422	598,925	4,131,599	2,560,712	1,506,449	1,483,414	10,140
2023	7,011,786	9,763,254	623,017	4,331,830	2,824,153	1,605,181	1,549,050	11,310
2024	6,936,835	9,433,195	620,425	4,511,002	2,957,545	1,614,623	1,602,365	12,032
2025	6,843,518	8,998,108	614,118	4,657,623	3,075,151	1,619,695	1,632,783	15,230
2026	6,750,500	8,720,718	616,040	4,805,659	3,224,222	1,645,008	1,669,934	15,676
2027	6,654,675	8,656,013	610,068	4,941,843	3,326,589	1,648,896	1,714,090	15,907
2028	6,467,684	8,418,359	588,314	5,011,596	3,349,419	1,606,951	1,753,882	15,761
2029	6,450,050	8,371,346	576,038	5,134,085	3,428,662	1,587,525	1,786,313	15,882
2030	6,638,197	8,142,213	557,250	5,214,600	3,472,750	1,551,029	1,821,416	15,787

Source: Jacobs Consultancy, December 2010.

Table B-74
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,331,955	1	5	86	102	0	57	6,150
2007	1,476,555	1	6	97	114	0	64	6,945
2008	1,420,698	1	6	97	113	0	64	6,943
2009	1,420,971	1	5	96	104	0	88	7,191
2010	1,356,560	0	3	81	84	0	109	7,023
2011	1,426,142	0	2	81	73	0	24	6,768
2012	1,489,102	0	2	78	61	0	1	6,486
2013	1,562,003	0	2	78	52	0	0	6,263
2014	1,643,731	1	1	74	50	0	0	6,189
2015	1,736,366	1	1	71	53	0	0	6,143
2016	1,841,587	1	1	61	64	0	0	6,441
2017	1,950,462	1	1	53	76	0	0	6,730
2018	2,028,550	1	1	45	89	0	0	6,901
2019	2,106,724	1	1	31	103	0	0	7,056
2020	2,183,378	1	1	23	119	0	0	7,195
2021	2,264,785	1	1	15	142	0	0	7,003
2022	2,346,129	1	0	8	154	0	0	6,829
2023	2,431,638	0	0	4	161	0	0	6,666
2024	2,472,471	0	0	3	171	0	0	6,844
2025	2,513,104	0	0	4	183	0	0	13,269
2026	2,571,754	0	1	7	217	0	5	13,839
2027	2,624,076	1	1	12	156	1	118	14,330
2028	2,680,394	1	1	22	175	1	156	14,884
2029	2,674,121	2	3	61	233	2	181	15,735
2030	2,728,328	3	4	135	320	5	222	16,560

Source: Jacobs Consultancy, December 2010.

Table B-75

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	778	6	0	27,931
2007	4,735,169	210	280	2,254	807	6	0	28,949
2008	4,510,417	205	272	2,182	784	6	0	28,123
2009	4,404,150	175	225	2,040	722	5	0	28,527
2010	4,227,060	75	147	1,906	697	3	0	26,112
2011	4,458,640	84	138	1,941	592	3	0	26,630
2012	4,635,235	94	127	1,941	492	4	0	26,777
2013	4,836,584	103	117	2,013	432	4	0	26,894
2014	5,077,839	115	106	1,990	402	5	0	27,269
2015	5,342,650	129	97	1,956	392	6	0	27,539
2016	5,622,771	150	97	1,601	413	8	0	29,514
2017	5,914,342	174	97	1,378	438	9	0	31,473
2018	6,148,553	198	96	1,156	465	11	0	33,188
2019	6,389,341	180	97	840	495	14	0	35,086
2020	6,643,044	163	98	687	517	17	0	36,941
2021	6,901,383	128	100	498	511	19	0	37,885
2022	7,149,674	101	100	352	507	23	0	38,788
2023	7,404,252	83	90	249	502	27	0	39,950
2024	7,176,453	97	98	241	515	32	0	41,724
2025	6,967,871	111	101	252	551	37	0	50,297
2026	6,806,255	132	107	264	643	43	0	52,527
2027	6,669,291	158	112	289	756	49	0	54,246
2028	6,496,609	198	123	352	904	57	0	56,283
2029	6,566,615	272	140	478	1,106	67	0	58,901
2030	6,835,969	352	159	696	1,348	80	0	61,497

Source: Jacobs Consultancy, December 2010.

Table B-76
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	339,757	421,357	579	41,541	1,141	12	13,451	1,663
2007	358,332	452,074	605	42,636	1,215	13	14,401	1,688
2008	350,654	446,901	573	41,343	1,198	13	14,364	1,594
2009	376,733	440,963	448	37,116	1,175	13	14,926	1,811
2010	376,234	413,486	341	34,263	1,084	12	14,279	1,860
2011	406,879	456,047	286	31,674	983	14	15,348	1,937
2012	436,191	497,087	240	29,539	896	15	16,305	2,006
2013	469,721	544,296	203	27,466	833	17	17,432	2,069
2014	500,217	586,786	173	24,092	774	18	18,300	2,123
2015	528,507	626,117	149	21,566	721	20	18,838	2,171
2016	486,348	578,503	209	10,923	566	16	12,289	2,232
2017	444,663	531,027	277	6,335	444	14	8,278	2,142
2018	382,770	443,379	392	3,154	333	11	4,540	2,021
2019	330,594	303,153	1,142	952	290	16	1,344	2,518
2020	359,072	297,442	2,291	816	339	42	1,333	3,201
2021	391,722	284,166	5,901	711	336	141	1,300	4,341
2022	416,322	278,051	10,618	619	321	424	1,264	5,254
2023	441,687	277,015	9,777	550	296	1,267	1,220	6,391
2024	451,419	258,497	12,126	426	281	2,763	874	7,818
2025	470,990	261,197	13,038	411	286	4,553	841	8,714
2026	483,153	274,379	13,749	390	304	6,121	835	8,633
2027	498,986	282,510	14,272	383	311	7,942	829	8,907
2028	517,211	286,793	16,148	408	329	10,554	793	9,725
2029	521,081	304,355	19,003	450	386	14,606	701	9,968
2030	533,855	312,766	22,212	529	457	20,107	646	10,971

Source: Jacobs Consultancy, December 2010.

Table B-77

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,825	633	2	91	136	19	583,163	6
2007	32,694	649	2	92	138	19	602,296	6
2008	30,103	597	2	85	126	17	557,105	6
2009	26,598	387	2	62	98	13	532,340	5
2010	22,835	233	1	40	76	7	529,417	4
2011	24,896	260	1	44	78	8	568,367	4
2012	27,180	289	2	47	80	9	610,230	5
2013	29,663	322	2	51	83	10	654,402	5
2014	31,576	350	2	53	85	9	691,176	6
2015	34,309	394	2	57	90	10	730,980	6
2016	58,116	706	4	93	149	17	751,763	9
2017	96,329	1,210	6	141	242	27	760,458	13
2018	158,957	1,954	9	196	384	42	738,137	18
2019	252,741	2,535	11	214	561	48	686,820	24
2020	337,521	2,828	10	213	683	37	646,972	26
2021	405,101	2,796	7	157	742	23	627,050	25
2022	458,894	2,709	5	110	778	14	623,175	22
2023	547,638	2,843	5	82	840	9	586,473	21
2024	629,570	3,431	3	87	947	6	558,558	18
2025	677,927	3,918	3	89	991	5	567,012	18
2026	717,409	4,298	3	87	1,007	4	587,239	18
2027	757,814	4,698	3	89	1,006	4	609,424	18
2028	801,130	5,203	3	98	1,030	4	631,591	17
2029	844,883	5,909	2	110	1,102	3	656,245	16
2030	888,286	6,460	2	121	1,165	3	684,740	16

Source: Jacobs Consultancy, December 2010.

Table B-78
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,600
2009	--
2010	123,711
2011	229,885
2012	341,768
2013	473,804
2014	489,135
2015	507,893
2016	699,756
2017	885,897
2018	1,110,453
2019	1,377,019
2020	1,427,189
2021	1,482,603
2022	1,533,842
2023	1,584,608
2024	2,211,870
2025	2,815,021
2026	3,428,778
2027	3,966,557
2028	4,609,979
2029	5,084,702
2030	5,374,866

Source: Jacobs Consultancy, December 2010.

B-4.2.3 Enhance Commercial Passenger Service at McClellan-Palomar Airport

Table B-79
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810
2007	8,496,685	22,979,001	1,310,691	4,778,356	3,341,752	2,947,173	1,846,043	67,427
2008	8,055,185	21,557,508	1,206,206	4,454,960	3,124,465	2,712,986	1,716,840	63,162
2009	7,789,833	20,945,017	1,128,241	4,199,937	3,029,193	2,521,583	1,602,930	62,428
2010	7,234,385	19,213,690	1,054,361	3,911,131	3,062,237	2,534,337	1,611,396	56,119
2011	7,606,328	20,562,860	1,080,163	4,165,096	3,280,048	2,578,657	1,748,423	57,389
2012	7,899,196	21,765,959	1,092,804	4,383,482	3,467,500	2,592,387	1,903,522	58,125
2013	8,226,216	23,038,195	1,098,916	4,636,979	3,654,462	2,605,017	2,056,192	58,938
2014	8,601,062	24,314,234	1,107,078	4,882,386	3,864,312	2,611,689	2,187,792	60,021
2015	9,013,376	25,675,585	1,122,837	5,151,638	4,102,187	2,629,170	2,331,799	61,142
2016	9,490,555	27,087,569	1,138,750	5,415,417	4,347,709	2,651,992	2,477,988	64,004
2017	10,141,573	27,089,526	1,412,011	5,506,331	4,818,605	3,276,782	2,748,539	88,063
2018	10,622,004	27,105,289	1,717,662	5,533,210	5,219,006	3,977,979	3,031,654	105,108
2019	11,126,997	27,107,647	1,973,002	5,561,242	5,345,146	4,837,281	3,306,555	119,059
2020	11,563,043	27,418,255	2,042,764	5,583,738	5,581,969	5,296,866	3,551,347	147,427
2021	11,930,414	27,733,065	2,070,280	5,519,071	5,728,874	5,534,423	3,760,828	181,883
2022	12,039,315	28,173,791	2,110,905	5,493,733	5,840,957	5,670,584	3,964,061	239,182
2023	12,030,555	27,999,100	2,082,278	5,306,606	5,792,494	5,613,324	4,162,651	343,810
2024	12,246,100	29,292,447	2,111,035	5,542,634	6,051,517	5,707,044	4,350,303	530,375
2025	12,494,914	30,260,038	2,147,245	5,587,660	6,171,721	5,758,237	4,541,954	542,922
2026	12,473,109	30,024,619	2,104,896	5,323,687	6,103,976	5,708,658	4,761,264	560,687
2027	12,464,114	29,669,510	2,070,458	5,111,427	6,022,356	5,704,525	4,968,982	577,519
2028	12,564,334	30,143,197	2,105,572	5,202,289	6,192,324	5,835,388	5,174,533	600,318
2029	12,704,871	31,707,970	2,117,167	5,496,950	6,474,789	5,896,795	5,377,633	623,969
2030	12,424,773	29,865,965	2,076,931	4,673,730	5,994,384	5,831,534	5,636,202	641,355

Source: Jacobs Consultancy, December 2010.

Table B-80
TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810
2007	9,079,447	31,557,771	1,310,691	4,947,983	3,341,752	2,947,173	1,846,043	67,427
2008	8,693,049	29,076,651	1,206,206	4,589,902	3,124,465	2,712,986	1,716,840	63,162
2009	8,156,269	27,596,451	1,128,241	4,253,692	3,029,193	2,521,583	1,602,930	62,428
2010	7,679,662	25,839,093	1,054,361	4,011,206	3,062,237	2,536,645	1,611,396	56,119
2011	8,074,499	27,653,493	1,080,163	4,271,669	3,280,048	2,581,005	1,748,423	57,389
2012	8,385,393	29,271,453	1,092,804	4,495,642	3,467,500	2,594,747	1,903,522	58,125
2013	8,732,541	30,982,390	1,098,916	4,755,626	3,654,462	2,607,388	2,056,192	58,938
2014	9,130,459	32,698,442	1,107,078	5,007,312	3,864,312	2,614,067	2,187,792	60,021
2015	9,568,150	34,529,224	1,122,837	5,283,453	4,102,187	2,631,564	2,331,799	61,142
2016	10,074,700	36,428,099	1,138,750	5,553,981	4,347,709	2,654,406	2,477,988	64,004
2017	10,765,788	36,430,730	1,412,011	5,647,222	4,818,605	3,279,765	2,748,539	88,063
2018	11,275,790	36,451,929	1,717,662	5,674,789	5,219,006	3,981,601	3,031,654	105,108
2019	11,811,865	36,455,100	1,973,002	5,703,538	5,345,146	4,841,685	3,306,555	119,059
2020	12,274,749	36,872,813	2,042,764	5,726,610	5,581,969	5,301,689	3,551,347	147,427
2021	12,664,732	37,296,179	2,070,280	5,660,288	5,728,874	5,539,461	3,760,828	181,883
2022	12,780,336	37,888,879	2,110,905	5,634,302	5,840,957	5,675,747	3,964,061	239,182
2023	12,771,037	37,653,951	2,082,278	5,442,387	5,792,494	5,618,434	4,162,651	343,810
2024	12,999,849	39,393,279	2,111,035	5,684,454	6,051,517	5,712,239	4,350,303	530,375
2025	13,263,978	40,694,521	2,147,245	5,730,632	6,171,721	5,763,479	4,541,954	542,922
2026	13,240,830	40,377,923	2,104,896	5,459,904	6,103,976	5,713,855	4,761,264	560,687
2027	13,231,282	39,900,363	2,070,458	5,242,214	6,022,356	5,709,719	4,968,982	577,519
2028	13,337,670	40,537,391	2,105,572	5,335,400	6,192,324	5,840,700	5,174,533	600,318
2029	13,486,858	42,641,740	2,117,167	5,637,601	6,474,789	5,902,164	5,377,633	623,969
2030	13,189,520	40,164,561	2,076,931	4,793,317	5,994,384	5,836,843	5,636,202	641,355

Source: Jacobs Consultancy, December 2010.

Table B-81
TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092
2007	1,644,170	1,843,518	290,465	1,181,931	910,663	1,120,975	0	8,725
2008	1,578,512	1,729,935	267,294	1,102,490	854,474	1,052,165	0	8,363
2009	1,534,085	1,679,649	261,644	1,050,347	847,772	1,004,009	0	7,889
2010	1,457,330	1,508,470	229,293	947,678	781,861	891,730	0	7,427
2011	1,527,490	1,580,515	230,231	1,015,612	833,334	917,580	0	7,137
2012	1,590,728	1,644,764	229,367	1,081,683	881,261	936,074	0	6,821
2013	1,664,156	1,717,754	227,800	1,157,490	932,136	955,772	0	6,569
2014	1,746,721	1,796,719	226,032	1,240,376	991,403	977,055	0	6,472
2015	1,840,734	1,889,817	227,095	1,340,213	1,064,258	1,004,710	0	6,410
2016	1,950,042	1,985,066	227,951	1,450,180	1,141,216	1,028,701	0	6,766
2017	2,061,612	1,857,962	250,506	1,434,497	1,188,648	1,105,217	0	7,106
2018	2,144,551	1,806,046	279,648	1,489,865	1,272,549	1,215,198	0	7,318
2019	2,231,663	1,742,420	299,056	1,541,979	1,321,297	1,327,714	0	7,515
2020	2,304,968	1,701,349	298,167	1,582,123	1,379,472	1,375,727	0	14,940
2021	2,375,149	1,674,760	297,577	1,617,569	1,426,182	1,393,668	0	28,301
2022	2,417,770	1,665,767	299,535	1,664,227	1,468,713	1,407,713	0	56,294
2023	2,438,103	1,634,049	297,012	1,668,229	1,476,855	1,383,835	0	119,657
2024	2,457,531	1,659,154	294,054	1,752,879	1,536,008	1,407,788	0	255,336
2025	2,534,665	1,672,490	303,098	1,826,578	1,592,242	1,435,903	0	259,931
2026	2,595,213	1,627,144	308,857	1,819,606	1,606,428	1,426,783	0	261,220
2027	2,647,629	1,572,526	313,793	1,814,632	1,616,550	1,424,055	0	261,623
2028	2,715,861	1,550,915	322,295	1,877,855	1,671,863	1,458,102	0	267,676
2029	2,795,317	1,574,965	328,157	1,997,175	1,752,339	1,501,139	0	277,426
2030	2,852,266	1,460,224	339,999	1,851,595	1,689,119	1,481,494	0	272,772

Source: Jacobs Consultancy, December 2010.

Table B-82

TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286
2007	6,356,756	14,120,831	1,017,194	3,547,170	2,328,687	1,823,868	0	44,017
2008	6,020,442	13,195,157	936,317	3,301,674	2,182,204	1,658,818	0	41,550
2009	5,777,120	12,540,574	864,218	3,101,381	2,098,651	1,515,712	0	39,987
2010	5,293,011	11,199,363	822,919	2,924,769	2,200,477	1,640,901	0	33,270
2011	5,558,588	12,003,096	847,663	3,113,156	2,366,507	1,659,267	0	34,288
2012	5,753,418	12,685,686	861,049	3,267,356	2,505,266	1,654,398	0	34,852
2013	5,968,001	13,391,674	868,611	3,446,868	2,640,129	1,647,227	0	35,426
2014	6,225,539	14,151,545	878,452	3,611,724	2,790,023	1,632,536	0	36,296
2015	6,506,846	14,950,371	893,028	3,783,378	2,953,246	1,622,257	0	37,103
2016	6,826,104	15,777,098	908,013	3,940,165	3,118,244	1,621,008	0	39,252
2017	7,239,053	15,606,175	1,160,374	4,053,824	3,528,140	2,170,550	0	42,425
2018	7,579,083	15,386,832	1,437,534	4,030,269	3,838,426	2,762,334	0	45,178
2019	7,944,801	15,099,134	1,673,648	4,008,566	3,923,771	3,509,306	0	48,329
2020	8,255,087	15,026,922	1,744,361	3,992,048	4,103,138	3,920,942	0	64,438
2021	8,506,365	14,910,119	1,772,497	3,892,679	4,204,968	4,140,588	0	83,155
2022	8,526,467	14,860,051	1,811,179	3,821,065	4,274,098	4,262,719	0	108,968
2023	8,432,343	14,198,057	1,785,078	3,629,843	4,214,404	4,229,337	0	144,472
2024	8,565,904	14,876,340	1,816,789	3,781,179	4,410,400	4,299,100	0	193,738
2025	8,686,920	15,203,840	1,843,962	3,752,781	4,472,082	4,322,185	0	200,491
2026	8,527,269	14,439,001	1,795,854	3,495,730	4,382,059	4,281,725	0	211,574
2027	8,362,969	13,534,397	1,756,471	3,288,012	4,282,310	4,280,314	0	221,522
2028	8,315,069	13,372,050	1,783,074	3,314,523	4,387,205	4,377,119	0	232,340
2029	8,388,620	14,103,904	1,788,803	3,488,609	4,582,280	4,395,478	0	242,692
2030	7,995,709	11,615,139	1,736,710	2,807,387	4,147,955	4,349,842	0	254,542

Source: Jacobs Consultancy, December 2010.

Table B-83
TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536
2007	375,998	5,569,079	71	44,692	21,003	29	19,867	11,798
2008	350,032	5,362,709	68	46,875	16,760	27	17,241	10,772
2009	379,173	5,472,045	68	44,547	13,774	25	18,386	12,212
2010	392,448	5,292,355	64	35,325	13,876	23	19,982	13,247
2011	423,853	5,697,722	68	32,798	11,270	24	21,672	13,680
2012	453,794	6,088,070	70	30,738	9,200	24	23,159	14,057
2013	487,833	6,512,504	73	28,744	7,666	25	24,807	14,436
2014	519,362	6,898,717	76	26,277	6,498	26	26,204	14,662
2015	552,366	7,311,148	78	23,852	5,522	27	27,628	14,917
2016	596,560	7,735,347	82	20,705	4,617	29	29,775	15,178
2017	721,207	8,080,607	92	15,052	18,107	40	32,884	37,108
2018	785,404	8,438,406	94	11,207	27,017	44	33,502	51,906
2019	844,851	8,843,507	93	9,323	23,168	48	34,306	62,761
2020	901,704	9,287,343	92	8,422	20,301	49	35,594	67,693
2021	949,869	9,746,800	91	7,799	14,572	49	35,178	70,119
2022	997,904	10,231,694	92	7,479	10,764	50	35,110	73,637
2023	1,062,744	10,726,084	94	7,574	9,545	53	35,545	79,404
2024	1,122,924	11,264,987	96	7,593	7,815	57	36,422	81,023
2025	1,173,250	11,859,290	98	7,336	5,156	59	37,067	82,232
2026	1,251,020	12,429,999	101	7,383	4,369	63	39,183	87,630
2027	1,352,273	13,003,632	106	7,770	4,555	69	42,136	94,105
2028	1,430,350	13,614,494	112	8,849	5,338	79	44,796	100,026
2029	1,416,481	14,363,847	115	10,066	4,818	89	44,733	103,571
2030	1,471,487	15,113,599	125	13,561	7,060	104	47,835	113,745

Source: Jacobs Consultancy, December 2010.

Table B-84

TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897
2007	119,761	1,445,572	2,962	4,563	81,399	2,302	1,826,176	2,888
2008	106,198	1,269,708	2,527	3,922	71,027	1,976	1,699,598	2,478
2009	99,455	1,252,749	2,311	3,661	68,996	1,838	1,584,544	2,339
2010	91,596	1,213,503	2,084	3,360	66,023	1,683	1,591,414	2,175
2011	96,398	1,281,527	2,201	3,531	68,937	1,786	1,726,751	2,284
2012	101,256	1,347,439	2,318	3,704	71,773	1,889	1,880,362	2,395
2013	106,227	1,416,262	2,432	3,878	74,531	1,992	2,031,385	2,506
2014	109,440	1,467,253	2,518	4,008	76,387	2,071	2,161,587	2,591
2015	113,431	1,524,249	2,636	4,196	79,161	2,176	2,304,171	2,712
2016	117,850	1,590,058	2,704	4,366	83,632	2,254	2,448,213	2,807
2017	119,701	1,544,781	1,038	2,958	83,711	974	2,715,654	1,423
2018	112,967	1,474,006	387	1,870	81,014	403	2,998,152	707
2019	105,682	1,422,586	204	1,375	76,910	214	3,272,249	454
2020	101,283	1,402,640	144	1,145	79,058	148	3,515,753	356
2021	99,030	1,401,386	115	1,023	83,151	118	3,725,649	307
2022	97,173	1,416,280	99	961	87,382	102	3,928,951	282
2023	97,365	1,440,910	95	960	91,690	99	4,127,106	277
2024	99,741	1,491,966	95	984	97,295	98	4,313,881	278
2025	100,080	1,524,417	88	965	102,241	90	4,504,887	267
2026	99,606	1,528,474	85	968	111,120	86	4,722,081	263
2027	101,244	1,558,954	88	1,013	118,942	87	4,926,846	270
2028	103,054	1,605,739	90	1,061	127,919	88	5,129,737	276
2029	104,453	1,665,255	92	1,100	135,352	89	5,332,900	280
2030	105,311	1,677,004	97	1,186	150,250	94	5,588,367	296

Source: Jacobs Consultancy, December 2010.

Table B-85

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415
2007	3,945,162	12,795,788	701,074	2,391,545	2,069,301	1,723,671	1,080,579	58,230
2008	3,778,756	11,949,205	638,504	2,236,856	1,945,696	1,573,810	996,653	55,096
2009	3,742,821	12,102,279	632,694	2,189,485	1,955,405	1,490,591	954,254	56,230
2010	3,509,727	11,403,989	632,630	2,182,381	2,108,516	1,627,349	953,003	51,691
2011	3,698,331	12,242,555	646,883	2,259,772	2,243,072	1,624,189	1,020,704	52,856
2012	3,848,818	13,003,520	653,103	2,309,947	2,352,996	1,599,910	1,094,557	53,545
2013	4,019,699	13,812,417	653,562	2,375,717	2,458,657	1,575,138	1,168,983	54,324
2014	4,190,120	14,591,208	653,834	2,416,095	2,576,086	1,538,680	1,230,356	55,352
2015	4,364,219	15,387,029	658,891	2,448,498	2,705,718	1,504,085	1,298,184	56,396
2016	4,544,621	16,238,239	665,126	2,457,075	2,833,894	1,479,626	1,360,977	58,832
2017	4,788,493	15,993,360	905,797	2,403,268	3,135,813	2,042,079	1,537,434	82,062
2018	4,938,062	15,675,134	1,173,393	2,245,923	3,314,925	2,634,193	1,732,421	98,282
2019	5,098,697	15,295,111	1,394,508	2,078,520	3,227,437	3,368,206	1,912,383	111,312
2020	5,221,227	15,316,546	1,459,376	1,970,332	3,302,839	3,761,008	2,057,661	136,448
2021	5,334,114	15,463,604	1,497,367	1,847,317	3,347,615	3,979,437	2,178,744	165,872
2022	5,351,382	15,718,205	1,548,505	1,751,042	3,377,835	4,108,609	2,288,556	211,918
2023	5,330,851	15,760,103	1,563,635	1,676,198	3,388,155	4,139,792	2,388,192	290,274
2024	5,318,743	16,466,974	1,580,623	1,648,242	3,483,685	4,176,061	2,472,722	399,186
2025	5,393,732	17,011,683	1,618,614	1,562,348	3,495,054	4,202,467	2,573,561	412,729
2026	5,426,415	16,985,793	1,624,573	1,483,759	3,514,050	4,256,279	2,694,055	438,654
2027	5,453,108	16,867,642	1,640,038	1,453,071	3,547,266	4,366,644	2,799,063	463,955
2028	5,512,717	17,091,219	1,689,283	1,454,288	3,666,918	4,514,549	2,898,171	489,259
2029	5,593,134	17,879,809	1,689,911	1,441,216	3,768,390	4,515,701	2,992,861	510,854
2030	5,646,687	16,954,003	1,763,732	1,426,173	3,801,072	4,777,862	3,129,446	546,970

Source: Jacobs Consultancy, December 2010.

Table B-86

TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395
2007	4,551,523	10,183,213	609,618	2,386,811	1,272,451	1,223,502	765,464	9,197
2008	4,276,429	9,608,303	567,702	2,218,104	1,178,769	1,139,177	720,187	8,066
2009	4,047,013	8,842,738	495,547	2,010,452	1,073,789	1,030,992	648,677	6,199
2010	3,724,657	7,809,701	421,731	1,728,750	953,721	906,988	658,392	4,427
2011	3,907,997	8,320,305	433,279	1,905,325	1,036,976	954,468	727,719	4,533
2012	4,050,378	8,762,439	439,701	2,073,535	1,114,505	992,477	808,965	4,580
2013	4,206,518	9,225,777	445,354	2,261,262	1,195,806	1,029,878	887,209	4,614
2014	4,410,943	9,723,025	453,244	2,466,291	1,288,227	1,073,009	957,436	4,669
2015	4,649,157	10,288,556	463,945	2,703,140	1,396,469	1,125,085	1,033,615	4,746
2016	4,945,934	10,849,330	473,624	2,958,341	1,513,815	1,172,365	1,117,012	5,172
2017	5,353,080	11,096,166	506,213	3,103,063	1,682,793	1,234,703	1,211,105	6,001
2018	5,683,942	11,430,155	544,269	3,287,288	1,904,081	1,343,787	1,299,233	6,826
2019	6,028,300	11,812,536	578,494	3,482,722	2,117,709	1,469,074	1,394,171	7,747
2020	6,341,815	12,101,708	583,389	3,613,407	2,279,130	1,535,858	1,493,687	10,979
2021	6,596,300	12,269,461	572,913	3,671,754	2,381,259	1,554,985	1,582,084	16,010
2022	6,687,933	12,455,586	562,400	3,742,692	2,463,122	1,561,975	1,675,505	27,264
2023	6,699,703	12,238,997	518,643	3,630,408	2,404,339	1,473,531	1,774,459	53,536
2024	6,927,357	12,825,474	530,411	3,894,392	2,567,832	1,530,983	1,877,581	131,189
2025	7,101,182	13,248,355	528,631	4,025,312	2,676,667	1,555,769	1,968,393	130,192
2026	7,046,694	13,038,826	480,324	3,839,928	2,589,926	1,452,379	2,067,209	122,033
2027	7,011,007	12,801,868	430,420	3,658,356	2,475,091	1,337,881	2,169,920	113,564
2028	7,051,617	13,051,979	416,289	3,748,001	2,525,406	1,320,839	2,276,362	111,059
2029	7,111,737	13,828,161	427,256	4,055,734	2,706,398	1,381,094	2,384,772	113,115
2030	6,778,086	12,911,962	313,200	3,247,557	2,193,312	1,053,672	2,506,756	94,385

Source: Jacobs Consultancy, December 2010.

Table B-87
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,332,011	1	5	86	103	0	0	6,150
2007	1,476,619	1	6	97	115	0	0	6,944
2008	1,420,764	1	6	97	115	0	0	6,940
2009	1,421,057	1	5	96	110	0	0	7,188
2010	1,356,663	0	3	81	94	0	0	7,019
2011	1,426,170	0	2	81	76	0	0	6,761
2012	1,489,114	0	2	78	61	0	0	6,475
2013	1,562,017	0	2	77	52	0	0	6,249
2014	1,643,748	1	1	75	50	0	0	6,172
2015	1,736,386	1	1	71	53	0	0	6,123
2016	1,841,600	1	1	74	63	0	0	6,415
2017	1,950,489	1	1	49	75	0	0	6,710
2018	2,028,633	0	1	30	86	0	0	6,836
2019	2,106,880	0	1	19	91	0	0	6,924
2020	2,177,638	0	0	13	101	0	0	13,069
2021	2,248,837	0	0	10	121	0	0	23,107
2022	2,293,784	0	0	8	129	0	0	41,666
2023	2,317,261	0	0	7	133	0	0	79,800
2024	2,338,723	0	0	6	139	0	0	140,388
2025	2,417,880	0	0	14	152	0	0	145,850
2026	2,483,120	0	0	21	183	0	0	153,667
2027	2,539,646	0	0	30	216	0	0	160,777
2028	2,610,976	1	0	68	258	0	0	168,913
2029	2,691,981	1	0	156	307	0	0	177,133
2030	2,753,237	1	0	210	365	0	0	187,542

Source: Jacobs Consultancy, December 2010.

Table B-88
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	779	6	0	27,931
2007	4,735,170	210	280	2,253	807	6	0	28,947
2008	4,510,420	205	272	2,182	784	6	0	28,120
2009	4,404,154	175	225	2,040	722	5	0	28,524
2010	4,227,063	75	147	1,906	697	3	0	26,110
2011	4,458,644	84	138	1,941	592	3	0	26,627
2012	4,635,239	94	127	1,941	492	4	0	26,773
2013	4,836,542	104	117	2,010	431	5	0	26,937
2014	5,077,798	116	107	2,002	402	5	0	27,302
2015	5,342,644	129	97	1,969	392	6	0	27,536
2016	5,623,001	145	90	1,992	420	7	0	28,921
2017	5,915,579	75	84	1,229	452	8	0	30,484
2018	6,150,622	43	78	728	473	10	0	31,696
2019	6,392,155	26	64	435	439	11	0	32,889
2020	6,637,585	19	47	304	432	12	0	44,067
2021	6,884,524	15	35	224	420	12	0	57,431
2022	6,939,994	12	27	181	417	12	0	76,529
2023	6,936,690	10	21	155	415	12	0	104,108
2024	7,074,069	10	17	148	443	12	0	142,764
2025	7,222,782	11	15	151	480	14	0	148,255
2026	7,179,116	11	13	162	559	15	0	158,857
2027	7,130,551	11	11	180	662	16	0	168,623
2028	7,147,196	12	10	215	815	18	0	178,946
2029	7,240,618	15	9	293	996	23	0	188,412
2030	7,074,812	14	8	428	1,189	24	0	204,100

Source: Jacobs Consultancy, December 2010.

Table B-89

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087
2007	354,149	445,567	59	41,464	1,201	12	17,157	11,354
2008	346,619	440,603	59	40,223	1,185	13	17,173	10,766
2009	371,993	434,155	60	35,825	1,162	13	17,785	12,193
2010	371,015	406,705	56	32,744	1,070	12	17,089	12,868
2011	401,404	448,743	59	30,291	971	14	18,405	13,282
2012	430,472	489,330	62	28,297	885	15	19,578	13,641
2013	463,697	536,041	65	26,358	822	17	20,955	14,003
2014	494,713	579,447	68	23,964	767	18	22,154	14,215
2015	527,222	626,038	71	21,697	723	20	23,395	14,456
2016	570,421	668,691	75	18,848	658	22	25,221	14,724
2017	689,459	622,194	84	13,459	830	28	27,917	36,290
2018	751,201	629,172	87	10,182	841	32	28,431	50,759
2019	808,885	647,692	87	8,585	689	36	29,097	61,323
2020	865,304	678,333	87	7,834	612	39	30,176	66,127
2021	916,666	716,316	86	7,245	535	42	30,869	69,072
2022	969,261	753,658	88	6,900	472	45	32,062	72,884
2023	1,042,262	772,821	92	6,819	417	48	34,255	78,569
2024	1,109,948	809,148	95	6,675	383	53	35,924	80,343
2025	1,167,446	867,222	97	6,346	343	56	36,876	81,861
2026	1,248,436	905,400	100	6,249	320	61	39,099	87,422
2027	1,350,848	916,737	105	6,295	308	67	42,095	93,963
2028	1,429,470	962,152	112	6,810	326	76	44,774	99,919
2029	1,416,018	1,111,113	115	7,827	358	86	44,720	103,504
2030	1,471,034	1,199,112	124	9,624	392	101	47,827	113,661

Source: Jacobs Consultancy, December 2010.

Table B-90
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,818	633	8	21	136	19	583,232	7
2007	32,687	650	9	22	138	19	602,366	7
2008	30,096	597	8	20	126	17	557,169	6
2009	26,589	387	6	16	98	13	532,391	5
2010	22,825	233	3	11	76	7	529,455	4
2011	24,885	260	3	12	78	8	568,408	4
2012	27,168	289	4	14	80	9	610,273	5
2013	29,659	322	5	15	83	10	654,438	6
2014	31,397	348	5	16	84	9	691,392	6
2015	33,385	381	5	17	87	9	731,956	6
2016	35,149	404	5	17	85	9	775,181	7
2017	37,056	328	6	15	84	8	820,922	7
2018	36,297	268	4	12	76	6	863,029	6
2019	34,348	225	2	9	63	3	908,299	5
2020	33,938	212	2	8	57	2	954,066	5
2021	33,816	200	2	7	51	2	1,001,724	5
2022	34,043	198	2	7	47	2	1,051,305	5
2023	34,940	198	2	7	43	2	1,102,609	5
2024	36,835	207	2	7	40	2	1,155,412	5
2025	38,261	215	2	7	38	2	1,211,319	5
2026	39,206	212	2	7	35	2	1,270,475	6
2027	40,995	214	2	7	33	2	1,331,671	6
2028	42,733	221	2	8	32	2	1,395,940	6
2029	44,029	236	2	8	33	2	1,463,816	6
2030	44,459	225	2	8	32	2	1,535,915	6

Source: Jacobs Consultancy, December 2010.

Table B-91
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,600
2009	-
2010	123,711
2011	229,885
2012	341,768
2013	473,882
2014	486,268
2015	492,356
2016	492,161
2017	488,814
2018	476,365
2019	460,668
2020	442,107
2021	428,219
2022	601,350
2023	832,644
2024	905,544
2025	1,025,097
2026	1,399,448
2027	1,733,277
2028	2,051,167
2029	2,289,621
2030	2,858,426

Source: Jacobs Consultancy, December 2010.

B-4.2.4 Introduce Commercial Passenger Service at Brown Field Municipal

This scenario is considered fatally flawed and was not evaluated using the Model. Refer to Chapter 5.2 and Chapter 6.1 for details.

B-4.3 Enhanced Utilization of Tijuana

B-4.3.1 Tijuana Rodriguez International Airport Focus on Commercial Service

Table B-92
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810
2007	8,495,780	22,983,472	1,311,411	4,773,868	3,341,853	2,947,339	1,845,936	67,444
2008	8,054,312	21,561,969	1,206,909	4,450,464	3,124,571	2,713,145	1,716,742	63,176
2009	7,788,945	20,949,409	1,128,973	4,195,421	3,029,389	2,521,752	1,602,827	62,443
2010	6,783,540	19,207,002	1,027,963	3,887,085	3,181,686	2,722,732	1,826,921	40,723
2011	7,135,161	20,532,261	1,054,019	4,149,117	3,414,217	2,772,622	1,980,171	41,392
2012	7,413,894	21,707,241	1,067,622	4,376,485	3,614,911	2,789,571	2,151,555	41,693
2013	7,729,488	22,960,422	1,079,474	4,615,960	3,819,307	2,806,657	2,321,590	41,993
2014	8,091,978	24,208,021	1,089,732	4,868,295	4,044,428	2,816,166	2,467,445	42,482
2015	8,491,137	25,544,523	1,109,190	5,136,078	4,298,493	2,837,618	2,627,249	43,210
2016	8,936,821	26,927,239	1,135,365	5,390,080	4,566,466	2,873,057	2,793,094	45,078
2017	9,538,975	26,392,334	1,499,860	5,506,381	5,099,564	3,832,121	3,140,691	71,504
2018	9,998,803	26,078,441	1,837,793	5,534,545	5,205,242	4,758,290	3,478,380	88,131
2019	10,393,113	26,741,016	1,966,028	5,552,441	5,299,511	5,127,664	3,767,095	93,051
2020	10,788,364	27,224,093	2,018,880	5,589,463	5,478,303	5,314,145	4,018,957	97,086
2021	11,169,969	27,380,721	2,019,470	5,572,499	5,591,871	5,423,376	4,257,159	99,589
2022	11,535,458	28,043,757	2,034,953	5,620,249	5,775,267	5,490,487	4,478,728	100,883
2023	11,906,357	28,615,290	2,051,547	5,630,182	5,875,647	5,517,882	4,710,401	102,631
2024	12,023,907	28,788,204	2,042,593	5,562,989	5,904,647	5,563,831	4,972,035	108,244
2025	12,263,319	29,703,565	2,030,096	5,674,653	6,059,675	5,558,907	5,184,159	111,751
2026	12,230,594	29,747,402	2,017,383	5,602,636	6,060,605	5,561,031	5,422,847	149,391
2027	12,543,332	31,090,765	2,014,478	5,767,916	6,293,761	5,535,109	5,632,693	152,672
2028	12,387,181	31,232,914	2,026,555	5,695,776	6,231,050	5,585,549	5,888,335	253,042
2029	12,527,041	31,198,426	2,049,728	5,623,602	6,182,900	5,493,541	6,106,254	268,988
2030	12,503,965	31,055,246	2,033,804	5,600,413	6,350,350	5,401,755	6,336,036	289,624

Source: Jacobs Consultancy, December 2010.

Table B-93

TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810
2007	9,078,480	31,563,911	1,311,411	4,943,336	3,341,853	2,947,339	1,845,936	67,444
2008	8,692,106	29,082,669	1,206,909	4,585,270	3,124,571	2,713,145	1,716,742	63,176
2009	8,155,340	27,602,239	1,128,973	4,249,119	3,029,389	2,521,752	1,602,827	62,443
2010	7,201,068	25,830,098	1,027,963	3,986,544	3,181,686	2,725,211	1,826,921	40,723
2011	7,574,331	27,612,343	1,054,019	4,255,280	3,414,217	2,775,147	1,980,171	41,392
2012	7,870,220	29,192,487	1,067,622	4,488,466	3,614,911	2,792,110	2,151,555	41,693
2013	8,205,239	30,877,800	1,079,474	4,734,069	3,819,307	2,809,213	2,321,590	41,993
2014	8,590,040	32,555,605	1,089,732	4,992,861	4,044,428	2,818,730	2,467,445	42,482
2015	9,013,768	34,352,968	1,109,190	5,267,495	4,298,493	2,840,202	2,627,249	43,210
2016	9,486,884	36,212,483	1,135,365	5,527,996	4,566,466	2,875,673	2,793,094	45,078
2017	10,126,100	35,493,128	1,499,860	5,647,273	5,099,564	3,835,610	3,140,691	71,504
2018	10,614,231	35,070,996	1,837,793	5,676,157	5,205,242	4,762,622	3,478,380	88,131
2019	11,032,811	35,962,044	1,966,028	5,694,512	5,299,511	5,132,332	3,767,095	93,051
2020	11,452,389	36,611,699	2,018,880	5,732,481	5,478,303	5,318,983	4,018,957	97,086
2021	11,857,482	36,822,337	2,019,470	5,715,083	5,591,871	5,428,314	4,257,159	99,589
2022	12,245,467	37,714,006	2,034,953	5,764,055	5,775,267	5,495,485	4,478,728	100,883
2023	12,639,195	38,482,619	2,051,547	5,774,242	5,875,647	5,522,905	4,710,401	102,631
2024	12,763,980	38,715,159	2,042,593	5,705,329	5,904,647	5,568,896	4,972,035	108,244
2025	13,018,128	39,946,161	2,030,096	5,819,850	6,059,675	5,563,968	5,184,159	111,751
2026	12,983,389	40,005,115	2,017,383	5,745,991	6,060,605	5,566,094	5,422,847	149,391
2027	13,315,376	41,811,705	2,014,478	5,915,500	6,293,761	5,540,148	5,632,693	152,672
2028	13,149,613	42,002,871	2,026,555	5,841,514	6,231,050	5,590,634	5,888,335	253,042
2029	13,298,082	41,956,491	2,049,728	5,767,493	6,182,900	5,498,543	6,106,254	268,988
2030	13,273,585	41,763,939	2,033,804	5,743,711	6,350,350	5,406,673	6,336,036	289,624

Source: Jacobs Consultancy, December 2010.

Table B-94

TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092
2007	1,644,176	1,843,611	290,532	1,181,652	910,724	1,121,025	0	8,725
2008	1,578,517	1,730,026	267,360	1,102,217	854,535	1,052,214	0	8,363
2009	1,534,091	1,679,774	261,755	1,049,952	847,859	1,004,075	0	7,890
2010	1,422,744	1,590,166	219,773	857,718	762,385	965,575	0	5,428
2011	1,493,030	1,667,188	220,625	915,695	812,831	997,328	0	5,200
2012	1,556,701	1,736,004	219,810	971,729	860,008	1,021,505	0	4,942
2013	1,630,634	1,814,422	218,895	1,034,533	910,758	1,047,770	0	4,664
2014	1,713,550	1,899,016	217,427	1,104,534	969,698	1,076,042	0	4,512
2015	1,807,614	1,999,490	218,912	1,188,278	1,042,177	1,112,090	0	4,484
2016	1,915,013	2,098,930	220,768	1,279,321	1,119,446	1,145,190	0	4,728
2017	2,025,911	1,917,454	250,012	1,268,912	1,174,778	1,263,506	0	4,977
2018	2,109,276	1,856,064	279,111	1,319,572	1,218,451	1,398,927	0	5,098
2019	2,191,778	1,859,229	285,167	1,366,538	1,263,038	1,461,950	0	5,190
2020	2,268,882	1,850,611	284,567	1,408,617	1,311,876	1,490,807	0	5,274
2021	2,349,497	1,826,991	281,405	1,443,805	1,350,322	1,497,054	0	5,041
2022	2,429,991	1,834,550	279,869	1,499,663	1,405,065	1,513,598	0	4,876
2023	2,515,065	1,841,889	279,661	1,553,651	1,449,459	1,524,452	0	4,751
2024	2,582,815	1,825,672	277,709	1,590,332	1,479,902	1,526,149	0	4,842
2025	2,664,261	1,850,690	274,137	1,665,960	1,534,933	1,540,016	0	4,929
2026	2,715,039	1,832,537	272,121	1,701,534	1,558,539	1,535,931	0	21,251
2027	2,801,159	1,867,646	274,113	1,794,062	1,630,289	1,560,632	0	21,933
2028	2,796,833	1,831,936	281,309	1,828,704	1,656,377	1,574,435	0	92,813
2029	2,879,274	1,804,198	290,429	1,864,375	1,682,515	1,577,989	0	97,918
2030	2,950,049	1,778,872	295,348	1,897,720	1,716,528	1,589,542	0	104,308

Source: Jacobs Consultancy, December 2010.

Table B-95

TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286
2007	6,356,980	14,122,710	1,017,847	3,543,897	2,329,059	1,823,984	0	44,020
2008	6,020,656	13,196,968	936,955	3,298,512	2,182,566	1,658,929	0	41,553
2009	5,777,341	12,542,379	864,839	3,098,259	2,099,018	1,515,814	0	39,990
2010	4,920,719	11,263,271	806,685	2,993,205	2,354,385	1,755,997	0	20,442
2011	5,168,764	12,050,714	831,804	3,199,583	2,536,785	1,774,065	0	20,845
2012	5,351,988	12,713,228	846,138	3,372,765	2,690,171	1,766,766	0	20,965
2013	5,557,848	13,408,189	858,822	3,551,251	2,843,186	1,757,517	0	21,100
2014	5,805,116	14,145,417	870,485	3,735,878	3,009,029	1,738,698	0	21,469
2015	6,075,766	14,924,045	888,372	3,922,714	3,189,424	1,724,028	0	21,848
2016	6,374,946	15,726,619	912,672	4,088,888	3,377,242	1,726,343	0	23,151
2017	6,738,163	15,160,464	1,249,206	4,221,948	3,837,742	2,568,066	0	24,951
2018	7,042,450	14,686,437	1,558,343	4,202,443	3,901,784	3,359,073	0	26,586
2019	7,328,731	14,968,340	1,680,622	4,175,746	3,963,447	3,665,521	0	28,062
2020	7,598,200	15,038,425	1,734,100	4,171,561	4,094,204	3,823,172	0	29,273
2021	7,844,550	14,803,594	1,737,867	4,119,711	4,167,118	3,926,172	0	29,172
2022	8,081,535	14,978,920	1,754,895	4,111,864	4,293,309	3,976,747	0	29,151
2023	8,319,953	15,031,094	1,771,702	4,067,884	4,346,540	3,993,293	0	29,223
2024	8,314,466	14,705,236	1,764,705	3,963,739	4,340,854	4,037,548	0	30,050
2025	8,407,979	15,007,994	1,755,777	3,999,474	4,435,771	4,018,755	0	30,894
2026	8,241,876	14,515,083	1,745,076	3,891,449	4,406,396	4,024,960	0	45,524
2027	8,402,117	15,171,380	1,740,177	3,964,704	4,562,593	3,974,334	0	46,697
2028	8,196,017	14,717,085	1,745,054	3,857,461	4,467,832	4,010,965	0	68,858
2029	8,220,172	13,973,064	1,759,090	3,747,006	4,382,554	3,915,383	0	71,924
2030	8,045,921	13,097,169	1,738,213	3,684,208	4,494,989	3,812,008	0	76,198

Source: Jacobs Consultancy, December 2010.

Table B-96
TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536
2007	374,864	5,571,579	71	43,749	20,673	28	19,763	11,811
2008	348,941	5,365,268	67	45,808	16,445	27	17,146	10,782
2009	378,059	5,474,508	68	43,544	13,517	25	18,285	12,224
2010	387,810	5,282,916	61	33,610	13,771	22	35,868	13,262
2011	418,739	5,687,279	64	31,157	11,164	23	38,980	13,681
2012	448,234	6,076,698	66	29,176	9,057	23	41,814	14,044
2013	481,717	6,500,054	69	27,229	7,499	24	45,085	14,412
2014	512,687	6,885,242	72	24,836	6,338	25	47,997	14,627
2015	545,329	7,296,951	74	21,891	5,303	26	51,046	14,918
2016	582,390	7,727,544	76	18,560	4,369	26	54,124	15,205
2017	714,136	8,054,774	87	13,476	21,256	39	60,641	40,688
2018	791,046	8,401,062	92	11,071	24,085	46	64,251	55,928
2019	820,959	8,850,788	88	9,010	13,687	43	64,051	59,431
2020	871,466	9,301,670	88	8,236	10,714	44	66,764	62,217
2021	927,398	9,746,006	88	7,989	8,593	45	69,276	65,082
2022	975,902	10,228,642	88	7,758	6,532	46	71,183	66,579
2023	1,023,439	10,743,396	89	7,692	4,764	48	73,224	68,391
2024	1,079,799	11,278,804	90	7,969	3,844	51	77,267	73,093
2025	1,144,053	11,851,584	93	8,241	3,092	55	81,702	75,667
2026	1,227,404	12,409,840	98	8,649	2,892	60	88,452	82,354
2027	1,293,022	13,025,555	100	8,122	2,220	64	91,784	83,779
2028	1,347,867	13,658,124	104	8,548	2,052	71	96,172	91,106
2029	1,378,117	14,352,631	112	11,037	2,474	83	100,407	98,858
2030	1,456,486	15,068,954	127	17,090	4,934	100	111,037	108,788

Source: Jacobs Consultancy, December 2010.

Table B-97

TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897
2007	119,759	1,445,572	2,962	4,570	81,398	2,302	1,826,173	2,888
2008	106,197	1,269,707	2,527	3,927	71,026	1,976	1,699,596	2,477
2009	99,454	1,252,748	2,311	3,666	68,995	1,838	1,584,542	2,339
2010	52,268	1,070,648	1,444	2,552	51,145	1,138	1,791,053	1,591
2011	54,627	1,127,080	1,526	2,682	53,437	1,207	1,941,191	1,665
2012	56,971	1,181,310	1,607	2,814	55,675	1,277	2,109,741	1,741
2013	59,290	1,237,757	1,687	2,947	57,864	1,347	2,276,505	1,817
2014	60,625	1,278,347	1,748	3,048	59,363	1,401	2,419,448	1,874
2015	62,428	1,324,037	1,833	3,195	61,589	1,474	2,576,203	1,959
2016	64,472	1,374,147	1,850	3,311	65,409	1,498	2,738,970	1,994
2017	60,765	1,259,642	554	2,045	65,788	510	3,080,050	888
2018	56,030	1,134,879	247	1,458	60,923	244	3,414,129	519
2019	51,646	1,062,659	152	1,146	59,339	149	3,703,043	368
2020	49,815	1,033,387	126	1,049	61,510	122	3,952,193	321
2021	48,524	1,004,129	110	994	65,838	105	4,187,883	293
2022	48,031	1,001,645	101	964	70,361	95	4,407,545	277
2023	47,901	998,911	94	954	74,884	88	4,637,176	267
2024	46,826	978,493	89	949	80,047	82	4,894,768	259
2025	47,026	993,297	89	977	85,879	81	5,102,456	261
2026	46,275	989,942	88	1,004	92,778	80	5,334,395	262
2027	47,034	1,026,184	88	1,028	98,660	79	5,540,909	262
2028	46,464	1,025,768	88	1,063	104,789	79	5,792,163	266
2029	49,478	1,068,533	97	1,184	115,356	87	6,005,846	288
2030	51,509	1,110,252	116	1,395	133,900	104	6,224,999	330

Source: Jacobs Consultancy, December 2010.

Table B-98

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415
2007	3,944,705	12,798,595	701,724	2,388,503	2,069,265	1,723,710	1,080,576	58,246
2008	3,778,342	11,952,024	639,138	2,233,777	1,945,668	1,573,844	996,650	55,109
2009	3,742,450	12,105,019	633,358	2,186,347	1,955,461	1,490,625	954,251	56,244
2010	3,345,709	10,950,761	588,439	2,393,906	2,296,317	1,719,086	1,136,176	38,891
2011	3,524,298	11,742,960	602,955	2,499,269	2,448,510	1,713,328	1,217,532	39,507
2012	3,666,779	12,458,962	610,403	2,576,780	2,573,748	1,684,814	1,305,124	39,780
2013	3,831,032	13,227,320	616,542	2,655,882	2,697,734	1,655,904	1,394,002	40,057
2014	3,994,856	13,957,941	619,193	2,726,099	2,832,290	1,613,650	1,467,155	40,520
2015	4,162,619	14,704,442	628,080	2,785,747	2,980,090	1,572,695	1,548,093	41,213
2016	4,335,991	15,493,760	643,701	2,815,589	3,129,145	1,549,334	1,627,699	42,914
2017	4,562,746	14,794,752	961,820	2,767,162	3,454,599	2,410,078	1,868,226	68,923
2018	4,723,360	14,180,935	1,256,671	2,594,686	3,365,566	3,200,202	2,107,611	85,196
2019	4,860,331	14,385,517	1,369,959	2,468,612	3,307,561	3,475,827	2,299,762	89,873
2020	4,988,868	14,615,394	1,426,426	2,388,752	3,372,853	3,621,233	2,448,590	93,749
2021	5,121,876	14,737,556	1,448,090	2,313,673	3,422,251	3,739,089	2,591,674	96,303
2022	5,239,273	15,125,635	1,472,193	2,239,940	3,502,399	3,784,584	2,715,660	97,603
2023	5,356,512	15,487,926	1,502,721	2,161,247	3,528,991	3,811,362	2,843,471	99,392
2024	5,400,639	15,643,393	1,521,027	2,084,033	3,533,632	3,894,364	2,990,721	105,105
2025	5,480,017	16,185,462	1,517,140	2,040,231	3,591,405	3,874,731	3,104,855	108,627
2026	5,491,283	16,291,553	1,537,987	1,992,322	3,609,168	3,945,654	3,236,243	145,424
2027	5,589,679	17,054,434	1,533,268	1,937,945	3,699,289	3,877,822	3,342,490	148,667
2028	5,548,242	17,153,327	1,574,132	1,889,830	3,655,635	3,990,243	3,482,678	245,283
2029	5,648,079	17,208,138	1,639,234	1,906,717	3,708,308	4,022,048	3,585,832	261,752
2030	5,730,426	17,270,576	1,675,346	2,006,071	4,011,160	4,089,181	3,688,765	283,011

Source: Jacobs Consultancy, December 2010.

Table B-99
TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395
2007	4,551,074	10,184,877	609,687	2,385,365	1,272,588	1,223,629	765,360	9,198
2008	4,275,970	9,609,946	567,770	2,216,687	1,178,903	1,139,301	720,092	8,067
2009	4,046,495	8,844,391	495,614	2,009,075	1,073,928	1,031,126	648,576	6,199
2010	3,437,832	8,256,241	439,524	1,493,179	885,369	1,003,646	690,745	1,832
2011	3,610,863	8,789,301	451,064	1,649,848	965,707	1,059,294	762,639	1,885
2012	3,747,115	9,248,278	457,219	1,799,704	1,041,163	1,104,757	846,431	1,912
2013	3,898,456	9,733,102	462,933	1,960,079	1,121,573	1,150,754	927,588	1,935
2014	4,097,122	10,250,080	470,539	2,142,196	1,212,138	1,202,516	1,000,291	1,962
2015	4,328,518	10,840,081	481,111	2,350,331	1,318,403	1,264,924	1,079,156	1,997
2016	4,600,830	11,433,479	491,664	2,574,490	1,437,321	1,323,723	1,165,395	2,164
2017	4,976,229	11,597,582	538,040	2,739,218	1,644,965	1,422,043	1,272,465	2,581
2018	5,275,443	11,897,506	581,122	2,939,859	1,839,677	1,558,087	1,370,769	2,935
2019	5,532,782	12,355,499	596,069	3,083,829	1,991,950	1,651,837	1,467,333	3,178
2020	5,799,495	12,608,699	592,454	3,200,711	2,105,451	1,692,912	1,570,367	3,338
2021	6,048,093	12,643,165	571,380	3,258,826	2,169,620	1,684,288	1,665,485	3,286
2022	6,296,185	12,918,122	562,760	3,380,309	2,272,868	1,705,903	1,763,068	3,280
2023	6,549,846	13,127,363	548,826	3,468,935	2,346,656	1,706,520	1,866,930	3,239
2024	6,623,267	13,144,812	521,566	3,478,955	2,371,015	1,669,467	1,981,315	3,139
2025	6,783,302	13,518,103	512,956	3,634,422	2,468,270	1,684,176	2,079,304	3,124
2026	6,739,311	13,455,849	479,396	3,610,314	2,451,436	1,615,377	2,186,604	3,967
2027	6,953,653	14,036,330	481,210	3,829,971	2,594,473	1,657,287	2,290,203	4,004
2028	6,838,939	14,079,587	452,423	3,805,946	2,575,415	1,595,306	2,405,658	7,759
2029	6,878,961	13,990,288	410,495	3,716,885	2,474,592	1,471,494	2,520,422	7,236
2030	6,773,538	13,784,670	358,458	3,594,342	2,339,190	1,312,574	2,647,271	6,613

Source: Jacobs Consultancy, December 2010.

Table B-100
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,332,011	1	5	86	103	0	0	6,150
2007	1,476,619	1	6	97	115	0	0	6,944
2008	1,420,764	1	6	97	115	0	0	6,940
2009	1,421,057	1	5	95	110	0	0	7,189
2010	1,358,289	0	3	86	96	0	0	5,386
2011	1,427,764	0	2	86	79	0	0	5,159
2012	1,490,676	0	2	85	65	0	0	4,902
2013	1,563,628	0	2	85	60	0	0	4,623
2014	1,645,426	0	1	85	62	0	0	4,471
2015	1,738,040	1	1	83	70	0	0	4,441
2016	1,843,303	1	1	87	86	0	0	4,677
2017	1,952,244	0	1	54	105	0	0	4,919
2018	2,030,407	0	1	36	115	0	0	5,027
2019	2,108,654	0	1	26	129	0	0	5,105
2020	2,185,366	0	0	22	148	0	0	5,179
2021	2,266,727	0	0	20	163	0	0	4,945
2022	2,348,052	0	0	19	180	0	0	4,778
2023	2,433,392	0	0	19	196	0	0	4,650
2024	2,501,644	0	0	20	215	0	0	4,738
2025	2,583,327	1	0	30	241	0	0	4,823
2026	2,635,185	1	0	42	277	0	0	20,677
2027	2,721,711	1	0	74	329	0	0	21,347
2028	2,717,604	1	0	152	369	0	0	88,585
2029	2,799,846	1	0	207	440	0	0	93,839
2030	2,871,443	1	0	252	552	0	0	100,564

Source: Jacobs Consultancy, December 2010.

Table B-101

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	779	6	0	27,931
2007	4,735,157	210	280	2,242	807	6	0	28,948
2008	4,510,407	205	272	2,170	784	6	0	28,121
2009	4,404,160	175	225	2,029	722	5	0	28,525
2010	4,235,591	41	113	1,956	718	1	0	17,577
2011	4,467,493	46	105	1,978	608	2	0	17,794
2012	4,644,279	51	96	1,965	509	2	0	17,763
2013	4,845,829	57	87	1,958	442	2	0	17,747
2014	5,087,292	64	79	1,942	396	3	0	17,929
2015	5,352,232	72	71	1,890	379	3	0	18,096
2016	5,633,040	81	66	1,876	413	4	0	19,074
2017	5,926,138	32	63	1,047	452	4	0	20,176
2018	6,161,457	17	58	642	419	5	0	21,034
2019	6,403,219	15	48	445	413	6	0	21,871
2020	6,657,887	13	40	362	425	7	0	22,703
2021	6,917,213	11	30	305	445	7	0	22,504
2022	7,166,359	10	25	267	488	7	0	22,388
2023	7,420,814	9	20	240	533	8	0	22,370
2024	7,458,303	8	16	221	587	9	0	23,105
2025	7,581,562	9	14	260	655	10	0	23,858
2026	7,481,360	9	13	285	767	11	0	36,447
2027	7,661,856	11	12	321	910	12	0	37,521
2028	7,516,145	12	11	400	1,032	14	0	57,029
2029	7,597,968	13	12	628	1,204	16	0	60,292
2030	7,501,219	15	12	958	1,512	19	0	65,569

Source: Jacobs Consultancy, December 2010.

Table B-102
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087
2007	353,131	447,494	58	40,638	1,200	12	17,065	11,364
2008	345,594	442,527	59	39,410	1,184	12	17,079	10,776
2009	370,945	436,034	59	35,079	1,161	13	17,688	12,205
2010	365,050	396,749	53	31,242	1,044	12	34,443	12,965
2011	394,792	437,745	57	28,863	945	13	37,383	13,370
2012	423,253	477,350	60	26,946	861	15	40,076	13,720
2013	455,788	522,932	63	25,055	799	16	43,230	14,075
2014	486,161	565,279	65	22,735	745	18	46,063	14,280
2015	518,247	610,970	68	20,009	704	19	49,043	14,560
2016	554,453	659,572	71	17,043	642	21	52,014	14,843
2017	679,712	599,144	81	12,120	843	28	58,330	40,005
2018	752,608	590,516	86	9,932	697	32	61,827	55,008
2019	783,462	643,866	83	8,344	566	34	61,637	58,401
2020	833,679	681,117	84	7,704	492	37	64,255	61,144
2021	893,330	707,676	85	7,337	429	39	67,486	64,449
2022	948,097	743,487	86	6,970	380	42	70,141	66,168
2023	1,005,674	781,636	87	6,637	330	45	72,874	67,998
2024	1,070,452	815,273	90	6,459	293	49	77,147	72,807
2025	1,140,336	855,967	93	6,346	267	53	81,658	75,527
2026	1,225,807	883,785	97	6,381	251	58	88,432	82,275
2027	1,292,403	935,932	99	6,160	242	62	91,775	83,742
2028	1,347,535	1,001,929	104	6,515	240	69	96,167	91,079
2029	1,377,851	1,098,228	112	7,992	245	80	100,404	98,829
2030	1,456,175	1,154,855	127	10,548	296	97	111,035	108,744

Source: Jacobs Consultancy, December 2010.

Table B-103
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,818	633	8	21	136	19	583,232	7
2007	32,687	650	9	22	138	19	602,366	7
2008	30,096	597	8	20	126	17	557,169	6
2009	26,589	387	6	16	98	13	532,391	5
2010	10,776	110	1	5	36	3	541,679	2
2011	11,706	122	2	6	37	4	581,780	2
2012	12,731	135	2	6	38	4	624,923	2
2013	13,841	149	2	7	39	4	670,492	3
2014	14,576	159	2	7	40	4	708,465	3
2015	15,422	173	2	8	41	4	750,193	3
2016	16,183	181	3	8	40	4	794,436	3
2017	17,005	134	3	7	39	4	841,232	3
2018	16,471	107	2	5	31	2	883,076	3
2019	15,843	99	1	4	27	2	926,975	3
2020	15,991	97	1	4	25	1	972,168	2
2021	16,026	90	1	4	22	1	1,019,661	2
2022	16,423	89	1	4	20	1	1,069,068	2
2023	16,973	88	1	4	19	1	1,120,717	3
2024	17,219	86	1	4	17	1	1,175,182	3
2025	17,935	87	1	4	16	1	1,231,801	3
2026	18,325	87	1	4	15	1	1,291,508	3
2027	19,344	91	1	4	14	1	1,353,471	3
2028	19,682	91	1	4	13	1	1,419,148	3
2029	21,165	93	1	4	14	1	1,486,851	3
2030	22,328	92	2	5	15	1	1,558,203	4

Source: Jacobs Consultancy, December 2010.

Table B-104
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,624
2009	--
2010	123,714
2011	229,888
2012	341,772
2013	473,906
2014	486,293
2015	492,386
2016	492,184
2017	488,814
2018	476,382
2019	460,671
2020	443,242
2021	430,582
2022	411,537
2023	389,003
2024	613,396
2025	765,912
2026	1,200,095
2027	1,289,893
2028	1,777,240
2029	2,035,099
2030	2,538,241

Source: Jacobs Consultancy, December 2010.

B-4.3.2 Aviation Passenger Cross Border Facility (Currently Proposed)

Table B-105
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810
2007	8,496,685	22,979,001	1,310,691	4,778,356	3,341,752	2,947,173	1,846,043	67,427
2008	8,055,185	21,557,508	1,206,206	4,454,960	3,124,465	2,712,986	1,716,840	63,162
2009	7,788,728	20,945,071	1,128,252	4,199,853	3,029,180	2,521,585	1,601,666	64,828
2010	7,231,710	19,213,810	1,054,378	3,910,967	3,062,186	2,534,342	1,607,811	62,451
2011	7,594,469	20,583,607	1,081,713	4,166,507	3,284,772	2,586,852	1,758,652	63,303
2012	7,179,842	21,491,268	1,016,081	4,235,998	3,584,434	2,950,352	2,712,865	36,739
2013	7,487,922	22,700,935	1,027,234	4,475,507	3,793,244	2,973,827	2,928,537	36,439
2014	7,843,611	23,907,772	1,037,406	4,727,729	4,023,767	2,990,551	3,114,233	36,211
2015	8,235,165	25,200,249	1,055,872	4,999,345	4,281,502	3,019,683	3,316,953	35,974
2016	8,671,947	26,548,340	1,075,668	5,266,046	4,541,433	3,066,552	3,528,137	37,424
2017	9,123,362	27,930,143	1,117,717	5,482,571	4,832,598	3,146,090	3,758,745	39,765
2018	9,528,050	28,184,938	1,279,932	5,527,160	5,191,068	3,500,624	4,143,275	52,103
2019	9,952,943	28,171,945	1,558,444	5,541,301	5,548,757	4,212,721	4,571,422	68,641
2020	10,378,711	28,155,050	1,907,848	5,549,159	5,789,767	5,080,525	4,907,449	81,687
2021	10,776,911	28,372,197	2,090,372	5,572,908	5,872,493	5,545,546	5,162,241	87,735
2022	11,142,562	29,089,243	2,111,551	5,645,997	6,029,719	5,638,628	5,401,891	90,000
2023	11,521,338	29,344,415	2,104,310	5,633,983	6,085,141	5,698,169	5,654,986	93,893
2024	11,940,412	29,320,522	2,088,619	5,658,745	6,027,774	5,645,683	5,917,928	99,397
2025	12,019,240	29,316,351	2,072,739	5,698,763	6,007,225	5,599,938	6,172,825	108,216
2026	12,040,024	29,093,065	2,053,440	5,683,321	5,979,725	5,570,744	6,414,551	117,894
2027	12,184,871	29,661,930	2,110,912	5,691,984	6,179,982	5,705,333	6,664,150	123,955
2028	12,424,607	30,407,564	2,174,113	5,771,626	6,396,902	5,832,712	6,913,137	158,640
2029	12,540,646	30,769,129	2,179,707	5,744,930	6,470,782	5,819,278	7,147,115	196,454
2030	12,471,581	30,707,219	2,168,643	5,762,624	6,479,623	5,785,036	7,268,955	273,037

Source: Jacobs Consultancy, December 2010.

Table B-106

TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810
2007	9,079,447	31,557,771	1,310,691	4,947,983	3,341,752	2,947,173	1,846,043	67,427
2008	8,693,049	29,076,651	1,206,206	4,589,902	3,124,465	2,712,986	1,716,840	63,162
2009	8,155,112	27,596,523	1,128,252	4,253,607	3,029,180	2,521,585	1,601,666	64,828
2010	7,676,823	25,839,253	1,054,378	4,011,038	3,062,186	2,536,650	1,607,811	62,451
2011	8,061,909	27,681,393	1,081,713	4,273,115	3,284,772	2,589,207	1,758,652	63,303
2012	7,621,762	28,902,040	1,016,081	4,344,385	3,584,434	2,953,038	2,712,865	36,739
2013	7,948,804	30,528,834	1,027,234	4,590,022	3,793,244	2,976,535	2,928,537	36,439
2014	8,326,386	32,151,821	1,037,406	4,848,698	4,023,767	2,993,273	3,114,233	36,211
2015	8,742,040	33,889,979	1,055,872	5,127,264	4,281,502	3,022,433	3,316,953	35,974
2016	9,205,706	35,702,929	1,075,668	5,400,788	4,541,433	3,069,343	3,528,137	37,424
2017	9,684,906	37,561,215	1,117,717	5,622,854	4,832,598	3,148,955	3,758,745	39,765
2018	10,114,502	37,903,870	1,279,932	5,668,584	5,191,068	3,503,811	4,143,275	52,103
2019	10,565,548	37,886,397	1,558,444	5,683,086	5,548,757	4,216,556	4,571,422	68,641
2020	11,017,522	37,863,676	1,907,848	5,691,146	5,789,767	5,085,150	4,907,449	81,687
2021	11,440,232	38,155,701	2,090,372	5,715,502	5,872,493	5,550,595	5,162,241	87,735
2022	11,828,388	39,120,005	2,111,551	5,790,462	6,029,719	5,643,762	5,401,891	90,000
2023	12,230,478	39,463,167	2,104,310	5,778,140	6,085,141	5,703,356	5,654,986	93,893
2024	12,675,346	39,431,035	2,088,619	5,803,535	6,027,774	5,650,823	5,917,928	99,397
2025	12,759,026	39,425,425	2,072,739	5,844,578	6,007,225	5,605,036	6,172,825	108,216
2026	12,781,089	39,125,145	2,053,440	5,828,741	5,979,725	5,575,815	6,414,551	117,894
2027	12,934,851	39,890,169	2,110,912	5,837,625	6,179,982	5,710,527	6,664,150	123,955
2028	13,189,343	40,892,917	2,174,113	5,919,305	6,396,902	5,838,022	6,913,137	158,640
2029	13,312,525	41,379,161	2,179,707	5,891,926	6,470,782	5,824,576	7,147,115	196,454
2030	13,239,208	41,295,903	2,168,643	5,910,073	6,479,623	5,790,302	7,268,955	273,037

Source: Jacobs Consultancy, December 2010.

Table B-107

TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092
2007	1,644,170	1,843,518	290,465	1,181,931	910,663	1,120,975	0	8,725
2008	1,578,512	1,729,935	267,294	1,102,490	854,474	1,052,165	0	8,363
2009	1,533,773	1,679,649	261,643	1,050,319	847,770	1,004,009	0	8,232
2010	1,455,837	1,508,470	229,293	947,634	781,857	891,731	0	8,967
2011	1,525,215	1,581,171	230,633	1,014,905	833,723	917,658	0	8,593
2012	1,550,405	1,859,833	196,949	827,582	783,568	1,148,717	0	3,646
2013	1,624,066	1,940,465	195,826	882,162	833,396	1,182,398	0	3,363
2014	1,706,698	2,027,636	194,350	942,774	891,487	1,218,666	0	3,166
2015	1,800,500	2,132,406	195,570	1,015,360	962,457	1,263,942	0	3,002
2016	1,906,359	2,254,626	196,633	1,079,987	1,032,384	1,316,687	0	3,122
2017	2,015,917	2,355,431	198,191	1,135,814	1,100,988	1,365,689	0	3,276
2018	2,094,173	2,253,768	203,393	1,124,325	1,131,583	1,403,919	0	3,384
2019	2,173,546	2,215,742	225,976	1,154,661	1,196,673	1,550,357	0	3,471
2020	2,250,358	2,155,900	250,921	1,187,819	1,252,184	1,700,597	0	3,549
2021	2,331,586	2,125,416	262,049	1,223,542	1,291,992	1,779,201	0	3,546
2022	2,412,366	2,135,450	260,977	1,269,767	1,344,314	1,813,882	0	3,554
2023	2,497,849	2,117,099	258,739	1,304,836	1,381,580	1,828,970	0	3,559
2024	2,589,933	2,099,149	256,762	1,348,481	1,404,233	1,828,482	0	3,582
2025	2,656,792	2,081,699	254,393	1,395,443	1,436,024	1,829,798	0	3,789
2026	2,727,641	2,057,979	252,853	1,435,552	1,470,296	1,840,403	0	4,073
2027	2,801,689	2,060,870	256,522	1,486,211	1,536,546	1,886,903	0	4,259
2028	2,878,591	2,077,163	259,986	1,550,389	1,614,847	1,941,309	0	20,471
2029	2,948,863	2,080,790	261,549	1,600,621	1,671,779	1,972,119	0	42,831
2030	2,979,665	2,005,385	271,244	1,640,946	1,729,273	2,074,763	0	92,497

Source: Jacobs Consultancy, December 2010.

Table B-108
TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286
2007	6,356,756	14,120,831	1,017,194	3,547,170	2,328,687	1,823,868	0	44,017
2008	6,020,442	13,195,157	936,317	3,301,674	2,182,204	1,658,818	0	41,550
2009	5,775,106	12,540,593	864,229	3,101,325	2,098,634	1,515,712	0	42,045
2010	5,288,357	11,199,389	822,935	2,924,647	2,200,417	1,640,902	0	38,061
2011	5,549,954	11,990,746	848,713	3,115,043	2,372,091	1,667,344	0	38,675
2012	5,189,173	12,795,223	818,378	3,378,114	2,761,854	1,801,077	0	18,206
2013	5,392,249	13,480,304	830,617	3,565,015	2,921,114	1,790,842	0	17,775
2014	5,636,647	14,205,605	842,237	3,759,032	3,093,807	1,771,274	0	17,494
2015	5,904,317	14,969,554	859,444	3,960,406	3,280,259	1,755,100	0	17,127
2016	6,194,271	15,757,076	878,154	4,164,650	3,468,338	1,749,203	0	18,177
2017	6,499,643	16,563,182	918,801	4,329,622	3,690,114	1,779,847	0	19,333
2018	6,759,421	16,744,910	1,076,258	4,390,448	4,015,521	2,096,488	0	20,469
2019	7,036,542	16,601,244	1,332,305	4,376,925	4,300,284	2,662,248	0	21,724
2020	7,323,979	16,325,306	1,656,791	4,353,097	4,481,875	3,379,838	1	22,969
2021	7,588,648	16,163,066	1,828,195	4,341,709	4,525,974	3,766,263	1	23,756
2022	7,828,221	16,396,447	1,850,449	4,368,897	4,630,886	3,824,665	1	24,450
2023	8,070,333	16,179,074	1,845,448	4,321,897	4,647,933	3,869,118	1	25,141
2024	8,316,057	15,680,862	1,831,728	4,302,480	4,565,861	3,817,115	1	25,867
2025	8,243,844	15,169,063	1,818,208	4,294,399	4,509,842	3,770,046	0	27,454
2026	8,147,050	14,808,022	1,800,449	4,238,006	4,444,043	3,730,244	0	29,973
2027	8,179,941	14,991,051	1,854,255	4,196,636	4,573,484	3,818,335	0	31,865
2028	8,324,121	15,366,894	1,913,996	4,212,353	4,707,065	3,891,306	0	46,984
2029	8,418,099	15,558,316	1,918,032	4,135,351	4,718,361	3,847,060	0	58,532
2030	8,330,465	15,599,866	1,897,263	4,110,923	4,640,422	3,710,159	0	74,845

Source: Jacobs Consultancy, December 2010.

Table B-109
TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536
2007	375,998	5,569,079	71	44,692	21,003	29	19,867	11,798
2008	350,032	5,362,709	68	46,875	16,760	27	17,241	10,772
2009	379,173	5,472,045	68	44,547	13,774	25	18,386	12,212
2010	392,448	5,292,355	64	35,325	13,876	23	19,982	13,247
2011	426,252	5,735,704	68	32,950	11,279	24	22,039	13,680
2012	420,494	6,069,585	60	28,790	9,091	22	121,619	14,057
2013	451,216	6,492,063	63	26,743	7,557	23	132,732	14,440
2014	479,593	6,876,445	65	24,276	6,396	23	143,084	14,668
2015	509,238	7,286,940	67	21,851	5,424	24	154,100	14,926
2016	549,543	7,706,157	70	19,612	4,679	25	168,726	15,185
2017	586,189	8,171,506	71	15,452	3,978	26	178,350	16,341
2018	656,083	8,528,460	74	11,323	7,105	30	188,262	27,870
2019	727,799	8,904,514	78	8,992	11,084	35	199,165	43,232
2020	791,529	9,328,110	81	7,675	11,217	39	210,044	55,007
2021	844,619	9,772,305	82	7,146	8,354	41	219,904	60,289
2022	890,116	10,256,743	82	6,836	6,042	42	229,434	61,857
2023	941,413	10,762,333	82	6,757	4,732	44	241,645	65,058
2024	1,022,451	11,258,972	86	7,260	4,734	48	265,697	69,808
2025	1,106,638	11,787,885	92	8,359	5,182	53	296,401	76,827
2026	1,153,120	11,950,615	92	9,180	5,008	56	306,976	83,699
2027	1,191,053	12,337,256	91	8,575	3,989	58	310,972	87,688
2028	1,209,571	12,691,386	91	8,336	3,251	61	306,424	91,047
2029	1,161,037	12,858,639	88	8,414	2,557	65	277,463	94,955
2030	1,140,739	12,764,157	88	10,077	3,614	72	258,984	105,530

Source: Jacobs Consultancy, December 2010.

Table B-110
TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897
2007	119,761	1,445,572	2,962	4,563	81,399	2,302	1,826,176	2,888
2008	106,198	1,269,708	2,527	3,922	71,027	1,976	1,699,598	2,478
2009	100,676	1,252,784	2,312	3,661	69,002	1,839	1,583,280	2,339
2010	95,069	1,213,596	2,085	3,361	66,036	1,686	1,587,829	2,175
2011	93,047	1,275,986	2,299	3,609	67,680	1,826	1,736,613	2,355
2012	19,769	766,627	694	1,512	29,922	536	2,591,245	831
2013	20,390	788,103	728	1,587	31,176	564	2,795,805	861
2014	20,673	798,087	754	1,647	32,077	586	2,971,149	883
2015	21,110	811,349	792	1,728	33,362	617	3,162,853	920
2016	21,774	830,481	811	1,796	36,031	636	3,359,410	940
2017	21,613	840,024	654	1,684	37,517	528	3,580,394	816
2018	18,373	657,800	207	1,064	36,859	187	3,955,012	380
2019	15,057	450,445	85	723	40,715	80	4,372,256	214
2020	12,845	345,734	55	568	44,491	51	4,697,404	162
2021	12,058	311,410	45	510	46,173	42	4,942,336	144
2022	11,859	300,603	43	498	48,477	39	5,172,456	139
2023	11,743	285,909	41	493	50,896	37	5,413,341	135
2024	11,970	281,540	43	524	52,947	39	5,652,231	141
2025	11,966	277,704	45	562	56,177	41	5,876,423	147
2026	12,213	276,449	46	583	60,379	41	6,107,574	150
2027	12,188	272,753	43	562	65,964	38	6,353,178	143
2028	12,323	272,121	40	548	71,739	35	6,606,712	137
2029	12,646	271,384	39	544	78,086	34	6,869,652	135
2030	20,711	337,812	47	678	106,314	42	7,009,970	165

Source: Jacobs Consultancy, December 2010.

Table B-111

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415
2007	3,945,162	12,795,788	701,074	2,391,545	2,069,301	1,723,671	1,080,579	58,230
2008	3,778,756	11,949,205	638,504	2,236,856	1,945,696	1,573,810	996,653	55,096
2009	3,741,715	12,102,333	632,705	2,189,401	1,955,391	1,490,593	952,990	58,630
2010	3,507,057	11,404,105	632,647	2,182,218	2,108,465	1,627,354	949,420	58,023
2011	3,686,352	12,225,346	648,124	2,261,707	2,247,462	1,631,345	1,029,246	58,780
2012	3,568,208	11,935,683	555,217	2,703,734	2,648,566	1,738,377	1,730,970	35,640
2013	3,728,909	12,652,101	560,655	2,798,279	2,779,652	1,708,933	1,854,624	35,325
2014	3,889,816	13,331,180	563,218	2,885,622	2,922,524	1,666,321	1,957,949	35,080
2015	4,054,519	14,021,325	571,192	2,967,631	3,077,877	1,624,294	2,071,339	34,823
2016	4,227,072	14,755,181	580,865	3,036,870	3,230,136	1,593,162	2,178,903	36,183
2017	4,401,935	15,486,449	610,863	3,064,279	3,402,499	1,594,189	2,302,657	38,422
2018	4,546,995	15,436,921	753,117	2,990,008	3,626,393	1,898,278	2,567,808	50,606
2019	4,692,914	15,073,652	990,854	2,839,042	3,770,269	2,457,566	2,850,536	66,972
2020	4,832,060	14,674,854	1,295,274	2,672,939	3,785,324	3,160,392	3,038,992	79,819
2021	4,970,257	14,639,536	1,466,411	2,568,251	3,726,741	3,541,041	3,172,983	85,820
2022	5,090,102	15,041,459	1,493,775	2,506,494	3,769,715	3,589,081	3,296,675	88,080
2023	5,213,291	15,252,779	1,509,807	2,437,135	3,768,840	3,658,664	3,422,169	92,011
2024	5,346,057	15,392,657	1,528,462	2,422,381	3,720,771	3,671,821	3,544,179	97,596
2025	5,387,389	15,525,465	1,546,774	2,423,264	3,713,598	3,696,410	3,665,266	106,498
2026	5,442,508	15,726,356	1,558,605	2,388,087	3,688,630	3,726,641	3,791,575	116,241
2027	5,512,397	16,126,108	1,620,214	2,290,670	3,767,690	3,827,764	3,927,786	122,300
2028	5,602,671	16,633,586	1,681,045	2,207,622	3,836,143	3,902,732	4,068,684	156,543
2029	5,685,128	17,137,881	1,700,243	2,112,640	3,835,747	3,894,014	4,213,711	194,118
2030	5,730,229	17,670,779	1,710,008	2,064,822	3,806,524	3,922,461	4,291,850	270,213

Source: Jacobs Consultancy, December 2010.

Table B-112

TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395
2007	4,551,523	10,183,213	609,618	2,386,811	1,272,451	1,223,502	765,464	9,197
2008	4,276,429	9,608,303	567,702	2,218,104	1,178,769	1,139,177	720,187	8,066
2009	4,047,013	8,842,738	495,547	2,010,452	1,073,789	1,030,992	648,677	6,199
2010	3,724,653	7,809,705	421,731	1,728,750	953,721	906,989	658,392	4,428
2011	3,908,117	8,358,260	433,589	1,904,799	1,037,311	955,507	729,406	4,523
2012	3,611,634	9,555,585	460,864	1,532,264	935,868	1,211,975	981,895	1,100
2013	3,759,012	10,048,834	466,579	1,677,228	1,013,592	1,264,894	1,073,914	1,115
2014	3,953,795	10,576,592	474,188	1,842,107	1,101,244	1,324,230	1,156,284	1,131
2015	4,180,646	11,178,924	484,681	2,031,715	1,203,624	1,395,390	1,245,614	1,152
2016	4,444,875	11,793,159	494,802	2,229,176	1,311,297	1,473,390	1,349,234	1,241
2017	4,721,427	12,443,694	506,854	2,418,292	1,430,098	1,551,902	1,456,088	1,343
2018	4,981,054	12,748,017	526,815	2,537,152	1,564,675	1,602,346	1,575,467	1,498
2019	5,260,029	13,098,293	567,590	2,702,259	1,778,488	1,755,155	1,720,886	1,670
2020	5,546,651	13,480,196	612,573	2,876,221	2,004,443	1,920,133	1,868,457	1,868
2021	5,806,655	13,732,661	623,961	3,004,657	2,145,752	2,004,505	1,989,258	1,915
2022	6,052,459	14,047,784	617,777	3,139,503	2,260,004	2,049,548	2,105,216	1,920
2023	6,308,047	14,091,636	594,502	3,196,847	2,316,301	2,039,505	2,232,817	1,882
2024	6,594,355	13,927,865	560,158	3,236,364	2,307,004	1,973,863	2,373,749	1,802
2025	6,631,850	13,790,886	525,965	3,275,499	2,293,628	1,903,527	2,507,559	1,718
2026	6,597,516	13,366,710	494,835	3,295,234	2,291,095	1,844,103	2,622,976	1,653
2027	6,672,473	13,535,822	490,698	3,401,315	2,412,292	1,877,569	2,736,364	1,655
2028	6,821,935	13,773,977	493,068	3,564,004	2,560,760	1,929,980	2,844,453	2,097
2029	6,855,518	13,631,248	479,464	3,632,290	2,635,036	1,925,263	2,933,404	2,336
2030	6,741,352	13,036,440	458,635	3,697,802	2,673,099	1,862,574	2,977,105	2,823

Source: Jacobs Consultancy, December 2010.

Table B-113
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,332,011	1	5	86	103	0	0	6,150
2007	1,476,619	1	6	97	115	0	0	6,944
2008	1,420,764	1	6	97	115	0	0	6,940
2009	1,420,745	1	4	68	108	0	0	7,531
2010	1,355,171	0	2	38	89	0	0	8,560
2011	1,424,760	0	2	37	70	0	0	8,220
2012	1,491,948	0	2	75	66	0	0	3,640
2013	1,564,903	0	1	75	61	0	0	3,357
2014	1,646,744	0	1	77	64	0	0	3,159
2015	1,739,488	1	1	78	73	0	0	2,994
2016	1,844,862	1	1	86	91	0	0	3,114
2017	1,953,854	1	1	89	112	0	0	3,267
2018	2,032,001	1	1	74	136	0	0	3,374
2019	2,110,234	1	1	61	160	0	0	3,460
2020	2,186,941	0	0	55	183	0	0	3,537
2021	2,268,058	0	0	60	204	0	0	3,535
2022	2,349,183	0	0	75	230	0	0	3,542
2023	2,434,475	0	0	96	258	0	0	3,547
2024	2,525,877	1	0	130	289	0	0	3,570
2025	2,592,187	1	0	185	332	0	0	3,777
2026	2,663,477	1	0	203	393	0	0	4,060
2027	2,737,351	1	0	212	463	0	0	4,246
2028	2,816,207	1	0	238	539	0	0	20,427
2029	2,885,625	2	0	279	615	0	0	42,738
2030	2,918,969	2	0	310	692	0	0	92,305

Source: Jacobs Consultancy, December 2010.

Table B-114

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	779	6	0	27,931
2007	4,735,170	210	280	2,253	807	6	0	28,947
2008	4,510,420	205	272	2,182	784	6	0	28,120
2009	4,402,139	194	235	1,983	705	6	0	30,582
2010	4,222,416	98	163	1,784	634	4	0	30,900
2011	4,454,332	108	152	1,829	536	4	0	31,068
2012	4,645,776	52	94	1,810	480	2	0	16,455
2013	4,847,824	57	85	1,805	407	2	0	15,947
2014	5,089,834	62	76	1,792	374	2	0	15,570
2015	5,355,396	67	67	1,756	371	3	0	15,092
2016	5,636,236	77	63	1,811	408	3	0	15,965
2017	5,928,692	85	59	1,706	450	4	0	16,916
2018	6,164,105	59	55	1,183	497	5	0	17,765
2019	6,406,054	34	51	717	525	6	0	18,641
2020	6,660,901	20	47	435	519	7	0	19,512
2021	6,919,490	15	39	329	501	7	0	20,134
2022	7,167,914	14	33	299	514	8	0	20,761
2023	7,422,902	13	26	279	522	9	0	21,402
2024	7,688,531	11	22	303	531	10	0	22,118
2025	7,659,715	11	20	368	564	11	0	23,707
2026	7,604,958	12	18	419	641	13	0	26,177
2027	7,660,270	14	16	426	757	15	0	27,998
2028	7,818,938	17	15	453	887	18	0	41,830
2029	7,933,028	22	14	514	1,035	22	0	52,558
2030	7,865,081	32	18	684	1,240	29	0	67,838

Source: Jacobs Consultancy, December 2010.

Table B-115
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087
2007	354,149	445,567	59	41,464	1,201	12	17,157	11,354
2008	346,619	440,603	59	40,223	1,185	13	17,173	10,766
2009	371,993	434,155	60	35,825	1,162	13	17,785	12,193
2010	371,015	406,705	56	32,744	1,070	12	17,089	12,868
2011	403,803	452,748	60	30,443	980	14	18,772	13,282
2012	397,172	433,802	52	26,349	775	13	118,036	13,641
2013	427,084	475,146	55	24,359	717	14	128,876	14,007
2014	454,949	513,448	57	21,966	668	15	139,028	14,220
2015	484,102	554,555	59	19,701	630	17	149,858	14,464
2016	523,336	588,771	63	17,630	576	19	164,140	14,733
2017	559,204	638,511	65	14,023	544	21	173,571	15,853
2018	626,445	635,160	68	10,324	607	24	183,288	27,157
2019	695,604	628,905	72	8,239	607	28	193,976	42,230
2020	757,600	639,034	76	7,097	525	32	204,643	53,752
2021	812,979	660,949	77	6,567	434	35	215,593	59,429
2022	862,786	694,399	78	6,234	377	37	226,424	61,283
2023	922,881	718,363	79	6,010	324	40	240,420	64,494
2024	1,009,598	710,437	84	6,134	270	44	265,185	69,320
2025	1,098,372	702,516	91	6,374	237	49	296,172	76,422
2026	1,148,621	688,708	92	6,187	209	52	306,876	83,412
2027	1,189,210	720,695	91	5,745	210	54	310,928	87,542
2028	1,208,752	779,420	90	5,712	218	59	306,403	90,969
2029	1,160,652	882,072	87	6,084	232	63	277,452	94,910
2030	1,140,398	905,434	88	6,729	265	69	258,978	105,477

Source: Jacobs Consultancy, December 2010.

Table B-116
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,818	633	8	21	136	19	583,232	7
2007	32,687	650	9	22	138	19	602,366	7
2008	30,096	597	8	20	126	17	557,169	6
2009	27,810	422	6	16	103	15	531,127	5
2010	26,296	322	4	12	90	10	525,875	4
2011	26,100	320	4	13	85	10	567,122	4
2012	3,695	47	1	2	12	1	634,084	1
2013	3,959	50	1	2	12	2	680,511	1
2014	4,103	52	1	2	12	2	719,085	1
2015	4,244	54	1	2	12	1	761,532	1
2016	4,415	56	1	2	12	1	806,370	1
2017	4,611	57	1	2	11	1	853,742	1
2018	4,780	48	1	2	11	1	894,854	1
2019	4,435	33	0	1	9	1	938,473	1
2020	4,066	25	0	1	8	0	984,189	1
2021	3,983	23	0	1	7	0	1,031,793	1
2022	4,068	22	0	1	6	0	1,081,511	1
2023	4,170	21	0	1	5	0	1,133,607	1
2024	4,394	21	0	1	5	0	1,188,090	1
2025	4,554	20	0	1	4	0	1,245,268	1
2026	4,811	21	0	1	4	0	1,305,106	1
2027	4,974	22	0	1	4	0	1,367,927	1
2028	5,186	23	0	1	4	0	1,433,729	1
2029	5,444	24	0	1	4	0	1,502,658	1
2030	9,090	41	0	1	8	0	1,571,506	1

Source: Jacobs Consultancy, December 2010.

Table B-117
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,600
2009	--
2010	123,711
2011	222,951
2012	334,208
2013	465,602
2014	477,283
2015	482,610
2016	481,565
2017	477,284
2018	463,980
2019	447,392
2020	428,992
2021	415,350
2022	395,290
2023	370,398
2024	342,369
2025	659,837
2026	1,127,727
2027	1,398,172
2028	1,611,039
2029	1,935,301
2030	2,557,593

Source: Jacobs Consultancy, December 2010.

B-4.3.3 Cross Border Airport Terminal

Table B-118
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810
2007	8,496,233	22,981,241	1,311,051	4,776,108	3,341,802	2,947,256	1,845,990	67,436
2008	8,054,737	21,559,807	1,206,568	4,452,641	3,124,519	2,713,068	1,716,790	63,169
2009	7,788,273	20,947,334	1,128,628	4,197,524	3,029,281	2,521,672	1,601,613	64,836
2010	7,232,009	19,215,476	1,054,882	3,908,142	3,062,389	2,534,440	1,607,813	62,503
2011	7,604,306	20,564,783	1,080,703	4,161,925	3,280,271	2,578,772	1,744,813	63,391
2012	7,897,720	21,768,015	1,093,354	4,380,143	3,467,809	2,592,513	1,899,827	63,592
2013	8,225,483	23,040,370	1,099,464	4,633,481	3,654,856	2,605,154	2,052,399	63,708
2014	8,600,988	24,316,533	1,107,624	4,878,720	3,864,782	2,611,839	2,184,121	63,965
2015	9,014,139	25,679,855	1,123,800	5,144,685	4,103,153	2,629,460	2,328,526	64,110
2016	9,488,357	27,092,959	1,142,237	5,398,006	4,351,292	2,655,751	2,474,953	67,183
2017	10,053,011	27,859,186	1,282,417	5,496,132	4,703,568	2,938,140	2,706,694	78,857
2018	10,544,720	27,774,194	1,579,932	5,526,101	5,177,625	3,595,304	3,039,569	97,648
2019	11,035,998	27,753,675	1,893,601	5,541,098	5,404,353	4,336,150	3,339,840	112,553
2020	10,055,576	24,691,094	1,868,424	4,736,721	5,497,797	5,527,992	4,888,052	66,591
2021	10,433,497	25,837,751	1,850,559	4,924,024	5,727,569	5,386,211	5,100,326	65,984
2022	10,805,541	27,028,939	1,848,343	5,114,375	5,942,031	5,335,045	5,324,579	66,147
2023	11,188,659	28,206,863	1,860,567	5,345,212	6,174,321	5,322,080	5,561,449	67,360
2024	11,604,429	28,955,704	1,964,241	5,474,221	6,260,504	5,477,824	5,820,725	70,356
2025	11,982,353	29,863,645	2,006,500	5,612,981	6,432,743	5,538,191	6,066,326	73,246
2026	12,273,833	30,424,930	2,080,121	5,646,146	6,445,941	5,666,944	6,332,507	78,772
2027	11,994,335	30,056,624	2,020,767	5,582,963	6,315,093	5,655,131	6,622,546	116,032
2028	12,234,388	30,369,781	2,111,890	5,656,410	6,327,446	5,832,187	6,926,415	117,438
2029	12,455,643	31,178,981	2,103,885	5,545,533	6,412,394	5,830,943	7,186,069	152,260
2030	12,085,000	30,830,709	2,099,655	5,635,571	6,306,556	5,720,047	7,500,365	281,320

Source: Jacobs Consultancy, December 2010.

Table B-119
TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810
2007	9,078,964	31,560,846	1,311,051	4,945,656	3,341,802	2,947,256	1,845,990	67,436
2008	8,692,566	29,079,752	1,206,568	4,587,513	3,124,519	2,713,068	1,716,790	63,169
2009	8,154,636	27,599,504	1,128,628	4,251,249	3,029,281	2,521,672	1,601,613	64,836
2010	7,677,140	25,841,495	1,054,882	4,008,140	3,062,389	2,536,748	1,607,813	62,503
2011	8,072,352	27,656,079	1,080,703	4,268,417	3,280,271	2,581,119	1,744,813	63,391
2012	8,383,825	29,274,218	1,093,354	4,492,218	3,467,809	2,594,873	1,899,827	63,592
2013	8,731,762	30,985,315	1,099,464	4,752,039	3,654,856	2,607,526	2,052,399	63,708
2014	9,130,380	32,701,535	1,107,624	5,003,552	3,864,782	2,614,217	2,184,121	63,965
2015	9,568,960	34,534,967	1,123,800	5,276,322	4,103,153	2,631,854	2,328,526	64,110
2016	10,072,367	36,435,348	1,142,237	5,536,125	4,351,292	2,658,169	2,474,953	67,183
2017	10,671,776	37,465,790	1,282,417	5,636,761	4,703,568	2,940,815	2,706,694	78,857
2018	11,193,749	37,351,490	1,579,932	5,667,498	5,177,625	3,598,577	3,039,569	97,648
2019	11,715,265	37,323,897	1,893,601	5,682,878	5,404,353	4,340,098	3,339,840	112,553
2020	10,674,498	33,205,255	1,868,424	4,857,920	5,497,797	5,533,025	4,888,052	66,591
2021	11,075,680	34,747,310	1,850,559	5,050,016	5,727,569	5,391,115	5,100,326	65,984
2022	11,470,624	36,349,251	1,848,343	5,245,237	5,942,031	5,339,902	5,324,579	66,147
2023	11,877,323	37,933,355	1,860,567	5,481,980	6,174,321	5,326,926	5,561,449	67,360
2024	12,318,683	38,940,417	1,964,241	5,614,290	6,260,504	5,482,811	5,820,725	70,356
2025	12,719,869	40,161,440	2,006,500	5,756,601	6,432,743	5,543,233	6,066,326	73,246
2026	13,029,289	40,916,272	2,080,121	5,790,614	6,445,941	5,672,103	6,332,507	78,772
2027	12,732,588	40,420,964	2,020,767	5,725,814	6,315,093	5,660,280	6,622,546	116,032
2028	12,987,416	40,842,106	2,111,890	5,801,141	6,327,446	5,837,497	6,926,415	117,438
2029	13,222,290	41,930,340	2,103,885	5,687,427	6,412,394	5,836,252	7,186,069	152,260
2030	12,828,834	41,461,974	2,099,655	5,779,768	6,306,556	5,725,255	7,500,365	281,320

Source: Jacobs Consultancy, December 2010.

Table B-120
TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092
2007	1,644,173	1,843,565	290,498	1,181,791	910,693	1,121,000	0	8,725
2008	1,578,515	1,729,982	267,328	1,102,349	854,505	1,052,190	0	8,363
2009	1,533,776	1,679,713	261,701	1,050,116	847,815	1,004,043	0	8,232
2010	1,455,839	1,508,529	229,352	947,439	781,901	891,761	0	8,967
2011	1,526,075	1,580,581	230,293	1,015,353	833,384	917,615	0	8,595
2012	1,589,414	1,644,838	229,434	1,081,407	881,322	936,114	0	8,171
2013	1,663,030	1,717,835	227,868	1,157,197	932,207	955,816	0	7,724
2014	1,745,829	1,796,808	226,102	1,240,064	991,485	977,103	0	7,389
2015	1,840,126	1,889,981	227,224	1,339,656	1,064,411	1,004,797	0	7,042
2016	1,949,372	1,983,715	228,340	1,447,734	1,141,166	1,029,018	0	7,455
2017	2,060,842	1,936,188	236,812	1,455,387	1,183,512	1,057,768	0	7,856
2018	2,142,538	1,867,312	266,162	1,497,655	1,269,330	1,163,390	0	8,130
2019	2,227,838	1,816,614	295,964	1,556,416	1,332,014	1,274,008	0	8,382
2020	2,242,081	1,955,851	273,756	1,090,273	1,161,963	1,554,874	0	2,644
2021	2,323,521	2,022,173	268,136	1,145,375	1,217,879	1,570,735	0	2,606
2022	2,405,424	2,087,908	264,542	1,206,817	1,276,051	1,601,366	0	2,586
2023	2,491,589	2,150,298	261,823	1,273,495	1,339,384	1,636,860	0	2,565
2024	2,584,799	2,177,905	270,083	1,328,840	1,385,634	1,688,615	0	2,560
2025	2,678,873	2,215,435	271,828	1,388,132	1,443,908	1,727,012	0	2,602
2026	2,772,783	2,226,162	278,551	1,433,307	1,490,138	1,765,848	0	2,734
2027	2,790,750	2,254,552	254,053	1,373,496	1,466,296	1,840,085	0	16,194
2028	2,895,838	2,166,449	283,899	1,503,205	1,548,949	1,802,510	0	4,131
2029	2,975,467	2,234,784	268,383	1,449,277	1,566,336	1,913,812	0	21,309
2030	2,911,890	2,251,182	270,912	1,416,815	1,565,143	1,967,063	0	98,878

Source: Jacobs Consultancy, December 2010.

Table B-121

TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286
2007	6,356,868	14,121,770	1,017,521	3,545,533	2,328,873	1,823,926	0	44,019
2008	6,020,553	13,196,090	936,646	3,300,044	2,182,391	1,658,875	0	41,551
2009	5,775,220	12,541,524	864,548	3,099,716	2,098,823	1,515,765	0	42,047
2010	5,288,479	11,200,508	823,380	2,922,628	2,200,679	1,640,970	0	38,063
2011	5,554,331	12,004,395	848,139	3,110,809	2,366,760	1,659,343	0	38,786
2012	5,749,549	12,687,131	861,532	3,264,818	2,505,583	1,654,482	0	38,928
2013	5,964,610	13,393,252	869,089	3,444,149	2,640,512	1,647,318	0	39,005
2014	6,222,713	14,153,272	878,927	3,608,810	2,790,466	1,632,635	0	39,292
2015	6,504,876	14,953,779	893,861	3,777,704	2,954,155	1,622,458	0	39,390
2016	6,824,992	15,779,404	911,126	3,926,153	3,122,036	1,624,462	0	41,698
2017	7,201,531	16,177,691	1,044,251	4,022,864	3,430,371	1,879,174	0	44,660
2018	7,543,447	15,939,180	1,313,332	4,015,722	3,812,317	2,431,508	0	47,614
2019	7,894,858	15,654,017	1,597,384	3,974,211	3,975,777	3,061,921	0	50,756
2020	7,017,253	12,790,265	1,594,537	3,638,564	4,296,644	3,973,034	1	12,005
2021	7,268,238	13,390,177	1,582,289	3,770,795	4,469,592	3,815,388	1	12,324
2022	7,512,169	14,007,433	1,583,664	3,899,753	4,624,861	3,733,587	1	12,689
2023	7,761,856	14,585,748	1,598,603	4,063,788	4,792,081	3,685,125	1	13,069
2024	8,028,892	14,752,512	1,694,015	4,137,459	4,831,775	3,789,113	1	13,535
2025	8,252,007	15,029,693	1,734,527	4,216,897	4,944,252	3,811,080	1	14,192
2026	8,384,391	14,989,505	1,801,424	4,205,007	4,910,579	3,900,995	1	15,300
2027	7,992,306	14,024,837	1,766,554	4,200,254	4,801,675	3,814,933	1	26,608
2028	8,087,984	13,772,192	1,827,831	4,143,787	4,729,376	4,029,561	1	24,985
2029	8,236,336	13,725,964	1,835,339	4,085,908	4,793,096	3,917,008	1	38,900
2030	7,873,494	12,616,186	1,828,545	4,201,019	4,684,357	3,752,828	0	69,827

Source: Jacobs Consultancy, December 2010.

Table B-122
TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536
2007	375,431	5,570,333	71	44,217	20,837	29	19,815	11,805
2008	349,472	5,364,027	68	46,323	16,597	27	17,192	10,778
2009	378,602	5,473,314	68	44,029	13,641	25	18,334	12,219
2010	392,623	5,292,844	64	34,711	13,773	23	19,984	13,298
2011	424,017	5,698,170	68	32,227	11,180	24	21,674	13,726
2012	453,947	6,088,480	70	30,209	9,122	24	23,162	14,098
2013	487,978	6,512,879	73	28,254	7,597	25	24,809	14,473
2014	519,496	6,899,051	76	25,834	6,439	26	26,207	14,694
2015	552,587	7,311,699	78	23,122	5,426	27	27,632	14,966
2016	593,043	7,740,251	81	19,748	4,482	28	29,425	15,235
2017	667,741	8,159,735	85	14,674	7,148	32	30,978	24,703
2018	744,603	8,504,464	88	10,954	14,173	38	32,012	41,248
2019	808,376	8,899,674	91	9,220	14,545	42	33,098	53,011
2020	785,319	9,591,378	77	7,355	5,565	34	209,692	51,792
2021	830,646	10,062,170	79	7,297	4,183	35	222,222	50,900
2022	876,685	10,561,809	81	7,219	3,086	37	234,785	50,713
2023	923,773	11,090,983	82	7,314	2,444	40	248,931	51,563
2024	979,204	11,647,130	84	7,289	1,840	42	263,786	54,098
2025	1,039,896	12,241,875	87	7,302	1,490	46	280,937	56,288
2026	1,105,207	12,841,606	89	7,175	1,137	49	299,148	60,576
2027	1,199,975	13,409,783	97	8,475	1,391	56	340,622	73,054
2028	1,239,419	14,078,568	99	8,692	1,143	62	351,098	88,150
2029	1,232,620	14,867,222	102	9,594	1,024	69	341,047	91,877
2030	1,288,719	15,600,839	120	16,798	1,872	86	386,243	112,407

Source: Jacobs Consultancy, December 2010.

Table B-123
TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897
2007	119,760	1,445,572	2,962	4,566	81,398	2,302	1,826,174	2,888
2008	106,198	1,269,707	2,527	3,925	71,026	1,976	1,699,597	2,477
2009	100,676	1,252,784	2,312	3,664	69,001	1,839	1,583,279	2,339
2010	95,068	1,213,596	2,085	3,364	66,036	1,686	1,587,828	2,175
2011	99,883	1,281,636	2,202	3,535	68,947	1,789	1,723,138	2,284
2012	104,810	1,347,565	2,319	3,708	71,782	1,893	1,876,665	2,395
2013	109,865	1,416,404	2,434	3,882	74,539	1,996	2,027,590	2,506
2014	112,950	1,467,403	2,519	4,012	76,392	2,074	2,157,914	2,591
2015	116,549	1,524,397	2,637	4,202	79,162	2,178	2,300,893	2,712
2016	120,950	1,589,589	2,690	4,371	83,608	2,243	2,445,528	2,795
2017	122,897	1,585,572	1,270	3,207	82,538	1,166	2,675,715	1,637
2018	114,132	1,463,238	350	1,770	81,805	368	3,007,557	656
2019	104,926	1,383,370	162	1,252	82,016	179	3,306,741	404
2020	10,922	353,600	53	529	33,625	51	4,678,359	150
2021	11,093	363,230	55	557	35,915	53	4,878,103	154
2022	11,262	371,789	57	585	38,032	54	5,089,793	158
2023	11,441	379,834	59	615	40,412	55	5,312,517	162
2024	11,534	378,157	58	633	41,254	54	5,556,938	163
2025	11,578	376,642	58	651	43,092	54	5,785,388	163
2026	11,453	367,657	57	657	44,086	52	6,033,358	162
2027	11,303	367,452	64	738	45,730	58	6,281,923	176
2028	11,146	352,572	60	727	47,978	54	6,575,316	172
2029	11,221	351,011	62	754	51,938	54	6,845,021	174
2030	10,898	362,502	78	938	55,184	69	7,114,122	208

Source: Jacobs Consultancy, December 2010.

Table B-124
TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415
2007	3,944,935	12,797,195	701,399	2,390,021	2,069,282	1,723,691	1,080,578	58,238
2008	3,778,544	11,950,658	638,831	2,235,267	1,945,681	1,573,827	996,651	55,103
2009	3,741,526	12,103,745	633,047	2,187,782	1,955,420	1,490,611	952,988	58,637
2010	3,507,289	11,405,247	633,111	2,180,184	2,108,586	1,627,375	949,418	58,075
2011	3,696,254	12,243,884	647,379	2,257,478	2,243,199	1,624,216	1,017,093	58,857
2012	3,847,295	13,004,921	653,604	2,307,567	2,353,194	1,599,938	1,090,864	59,011
2013	4,018,923	13,813,881	654,057	2,373,257	2,458,924	1,575,168	1,165,193	59,091
2014	4,190,007	14,592,734	654,323	2,413,558	2,576,413	1,538,711	1,226,689	59,293
2015	4,364,871	15,389,808	659,751	2,443,763	2,706,400	1,504,147	1,294,916	59,361
2016	4,544,054	16,239,714	668,284	2,446,162	2,836,773	1,482,988	1,358,290	62,004
2017	4,758,059	16,593,893	790,006	2,389,467	3,060,640	1,728,068	1,498,896	73,038
2018	4,914,750	16,226,622	1,050,361	2,251,091	3,310,534	2,284,083	1,741,248	91,007
2019	5,067,960	15,860,203	1,325,811	2,073,085	3,320,667	2,912,157	1,944,807	105,051
2020	4,675,725	12,504,345	1,362,538	2,710,470	3,909,521	3,835,042	3,018,409	65,970
2021	4,808,886	13,185,654	1,348,572	2,742,855	4,039,406	3,647,554	3,127,195	65,362
2022	4,935,057	13,832,899	1,345,032	2,752,007	4,136,904	3,532,649	3,241,873	65,519
2023	5,060,219	14,453,911	1,355,424	2,785,399	4,242,376	3,453,965	3,361,657	66,725
2024	5,195,901	14,793,168	1,458,542	2,766,926	4,222,695	3,554,982	3,491,662	69,716
2025	5,323,630	15,252,088	1,505,183	2,751,672	4,282,789	3,570,240	3,619,215	72,605
2026	5,442,549	15,522,486	1,589,615	2,692,228	4,223,008	3,678,453	3,756,972	78,136
2027	5,399,934	15,470,525	1,581,633	2,770,098	4,219,910	3,740,957	3,892,825	115,298
2028	5,587,097	15,562,772	1,684,059	2,670,213	4,127,467	3,969,955	4,062,793	116,830
2029	5,697,767	15,967,378	1,700,361	2,644,421	4,220,619	3,937,691	4,211,473	151,542
2030	5,680,520	15,971,469	1,754,871	2,894,301	4,318,060	3,984,117	4,356,664	280,365

Source: Jacobs Consultancy, December 2010.

Table B-125
TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395
2007	4,551,298	10,184,046	609,652	2,386,088	1,272,520	1,223,566	765,412	9,197
2008	4,276,193	9,609,149	567,737	2,217,374	1,178,838	1,139,241	720,138	8,067
2009	4,046,747	8,843,589	495,582	2,009,742	1,073,861	1,031,061	648,625	6,199
2010	3,724,720	7,810,229	421,770	1,727,958	953,803	907,065	658,394	4,428
2011	3,908,052	8,320,899	433,324	1,904,447	1,037,072	954,555	727,720	4,534
2012	4,050,425	8,763,094	439,750	2,072,576	1,114,615	992,575	808,964	4,581
2013	4,206,559	9,226,489	445,407	2,260,224	1,195,931	1,029,986	887,206	4,616
2014	4,410,981	9,723,799	453,301	2,465,163	1,288,369	1,073,128	957,431	4,671
2015	4,649,268	10,290,048	464,049	2,700,922	1,396,753	1,125,314	1,033,610	4,750
2016	4,944,303	10,853,246	473,953	2,951,844	1,514,519	1,172,764	1,116,663	5,179
2017	5,294,952	11,265,293	492,411	3,106,664	1,642,928	1,210,072	1,207,798	5,820
2018	5,629,970	11,547,572	529,571	3,275,010	1,867,091	1,311,221	1,298,322	6,641
2019	5,968,038	11,893,472	567,790	3,468,013	2,083,686	1,423,993	1,395,033	7,502
2020	5,379,851	12,186,749	505,885	2,026,251	1,588,276	1,692,951	1,869,643	621
2021	5,624,611	12,652,097	501,987	2,181,170	1,688,163	1,738,657	1,973,131	622
2022	5,870,484	13,196,039	503,312	2,362,367	1,805,127	1,802,395	2,082,706	628
2023	6,128,441	13,752,952	505,143	2,559,813	1,931,945	1,868,115	2,199,792	635
2024	6,408,528	14,162,536	505,699	2,707,295	2,037,809	1,922,842	2,329,063	640
2025	6,658,723	14,611,557	501,317	2,861,309	2,149,953	1,967,951	2,447,110	640
2026	6,831,283	14,902,444	490,506	2,953,917	2,222,933	1,988,491	2,575,534	635
2027	6,594,401	14,586,099	439,134	2,812,864	2,095,183	1,914,174	2,729,720	735
2028	6,647,291	14,807,009	427,831	2,986,198	2,199,979	1,862,232	2,863,621	608
2029	6,757,876	15,211,603	403,524	2,901,112	2,191,775	1,893,252	2,974,596	718
2030	6,404,480	14,859,240	344,784	2,741,269	1,988,497	1,735,931	3,143,701	955

Source: Jacobs Consultancy, December 2010.

Table B-126
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,332,011	1	5	86	103	0	0	6,150
2007	1,476,619	1	6	97	115	0	0	6,944
2008	1,420,764	1	6	97	115	0	0	6,940
2009	1,420,745	1	4	68	108	0	0	7,531
2010	1,355,171	0	2	38	89	0	0	8,560
2011	1,424,762	0	2	38	70	0	0	8,219
2012	1,487,812	0	1	37	54	0	0	7,826
2013	1,560,910	1	1	38	44	0	0	7,404
2014	1,642,876	1	1	38	41	0	0	7,088
2015	1,735,799	1	1	38	43	0	0	6,754
2016	1,840,960	1	1	39	51	0	0	7,104
2017	1,949,773	1	1	30	60	0	0	7,458
2018	2,027,843	1	1	19	71	0	0	7,652
2019	2,106,024	0	0	12	78	0	0	7,801
2020	2,187,853	0	0	84	138	0	0	2,641
2021	2,268,948	0	0	145	160	0	0	2,603
2022	2,350,035	0	0	227	183	0	0	2,584
2023	2,435,178	0	0	305	212	0	0	2,563
2024	2,526,578	0	0	368	240	0	0	2,558
2025	2,619,051	0	0	426	283	0	0	2,599
2026	2,711,368	0	0	444	340	0	0	2,732
2027	2,730,288	1	0	507	416	0	0	16,190
2028	2,831,384	1	0	552	504	0	0	4,128
2029	2,910,700	1	0	640	617	0	0	21,304
2030	2,845,783	1	0	740	723	0	0	98,862

Source: Jacobs Consultancy, December 2010.

Table B-127
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	779	6	0	27,931
2007	4,735,164	210	280	2,248	807	6	0	28,948
2008	4,510,413	205	272	2,176	784	6	0	28,121
2009	4,402,142	194	235	1,978	705	6	0	30,582
2010	4,222,420	98	163	1,778	634	4	0	30,901
2011	4,454,283	109	153	1,821	535	4	0	31,122
2012	4,631,271	119	141	1,830	456	5	0	30,845
2013	4,833,056	131	129	1,900	412	6	0	30,511
2014	5,074,878	142	117	1,898	395	7	0	30,291
2015	5,340,427	154	105	1,865	395	7	0	29,816
2016	5,620,651	173	97	1,862	423	9	0	31,349
2017	5,912,779	131	91	1,399	454	10	0	33,047
2018	6,147,757	72	84	808	488	12	0	34,447
2019	6,389,096	43	78	499	474	14	0	35,822
2020	6,669,452	3	17	274	519	2	0	11,169
2021	6,928,135	4	14	304	564	2	0	11,491
2022	7,176,734	5	12	338	604	3	0	11,848
2023	7,430,720	5	10	384	652	3	0	12,220
2024	7,696,570	5	9	405	673	4	0	12,659
2025	7,924,359	6	7	485	728	4	0	13,301
2026	8,066,098	6	6	522	816	5	0	14,383
2027	7,710,625	6	5	669	963	6	0	25,407
2028	7,817,255	7	5	773	1,132	8	0	23,939
2029	7,975,467	10	4	937	1,353	9	0	37,509
2030	7,657,096	11	4	1,564	1,795	11	0	68,175

Source: Jacobs Consultancy, December 2010.

Table B-128
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087
2007	353,641	446,532	59	41,048	1,200	12	17,111	11,359
2008	346,093	441,593	59	39,803	1,185	13	17,124	10,772
2009	371,455	435,122	59	35,439	1,161	13	17,735	12,199
2010	371,200	407,023	56	32,188	1,071	12	17,091	12,918
2011	401,574	449,039	59	29,776	971	14	18,407	13,328
2012	430,629	489,604	62	27,822	885	15	19,581	13,682
2013	463,844	536,293	65	25,920	823	17	20,957	14,039
2014	494,847	579,672	68	23,572	767	18	22,156	14,246
2015	527,442	626,407	71	21,055	724	20	23,398	14,504
2016	567,063	673,113	74	18,038	659	22	24,917	14,772
2017	639,103	686,579	78	13,474	711	26	26,245	24,047
2018	713,216	679,067	82	10,135	791	30	27,123	40,261
2019	775,173	692,018	85	8,595	690	34	28,035	51,763
2020	752,603	690,386	72	6,903	439	29	204,543	50,520
2021	800,755	725,472	75	6,782	389	31	218,106	50,151
2022	851,251	759,859	77	6,637	339	34	231,911	50,253
2023	908,339	790,334	80	6,542	300	37	247,780	51,189
2024	971,611	821,033	83	6,340	254	40	263,348	53,868
2025	1,036,847	859,096	86	6,204	230	44	280,761	56,180
2026	1,104,013	901,920	89	6,031	204	48	299,072	60,524
2027	1,199,259	881,053	96	6,450	198	54	340,581	73,011
2028	1,239,075	954,628	99	6,641	186	60	351,077	88,116
2029	1,232,445	1,113,030	101	7,549	203	67	341,036	91,856
2030	1,288,543	1,153,513	119	10,507	237	83	386,234	112,375

Source: Jacobs Consultancy, December 2010.

Table B-129
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,818	633	8	21	136	19	583,232	7
2007	32,687	650	9	22	138	19	602,366	7
2008	30,096	597	8	20	126	17	557,169	6
2009	27,810	422	6	16	103	15	531,127	5
2010	26,296	322	4	12	90	10	525,875	4
2011	28,365	354	4	14	93	11	564,812	4
2012	30,713	391	5	15	95	12	606,605	5
2013	33,285	430	6	17	98	13	650,683	6
2014	34,892	455	7	17	99	13	687,769	6
2015	36,486	478	7	18	100	12	728,740	7
2016	38,286	505	7	18	98	11	771,926	7
2017	40,288	452	7	17	96	11	817,549	7
2018	38,615	321	4	12	88	6	860,645	6
2019	35,647	248	2	9	73	3	906,967	5
2020	3,516	24	0	1	5	0	984,743	1
2021	3,710	25	0	1	5	0	1,032,065	1
2022	3,915	26	0	1	5	0	1,081,661	1
2023	4,138	27	0	1	5	0	1,133,634	1
2024	4,329	27	0	1	4	0	1,188,149	1
2025	4,515	27	0	1	4	0	1,245,301	1
2026	4,636	27	0	1	3	0	1,305,277	1
2027	4,748	26	0	1	3	0	1,368,151	1
2028	4,827	26	0	1	3	0	1,440,632	1
2029	4,996	26	0	1	3	0	1,509,967	1
2030	4,991	26	0	1	3	0	1,582,818	1

Source: Jacobs Consultancy, December 2010.

Table B-130
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,612
2009	--
2010	123,713
2011	229,887
2012	341,770
2013	473,884
2014	486,270
2015	492,360
2016	492,174
2017	488,814
2018	476,346
2019	460,663
2020	386,258
2021	369,652
2022	346,545
2023	319,683
2024	288,186
2025	320,249
2026	493,633
2027	1,158,630
2028	1,376,117
2029	1,531,604
2030	2,288,662

Source: Jacobs Consultancy, December 2010.

B-4.4 California High-Speed Rail

B-4.4.1 Stations at Downtown LA, ONT Airport and Downtown San Diego

Table B-131
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810	0	0	0	0	0	0
2007	8,496,685	22,979,001	1,310,691	4,778,356	3,341,752	2,947,173	1,846,043	67,427	0	0	0	0	0	0
2008	8,055,185	21,557,508	1,206,206	4,454,960	3,124,465	2,712,986	1,716,840	63,162	0	0	0	0	0	0
2009	7,789,833	20,945,017	1,128,241	4,199,937	3,029,193	2,521,583	1,602,930	62,428	0	0	0	0	0	0
2010	7,234,385	19,213,690	1,054,361	3,911,131	3,062,237	2,534,337	1,611,396	56,119	0	0	0	0	0	0
2011	7,606,328	20,562,860	1,080,163	4,165,096	3,280,048	2,578,657	1,748,423	57,389	0	0	0	0	0	0
2012	7,899,196	21,765,959	1,092,804	4,383,482	3,467,500	2,592,387	1,903,522	58,125	0	0	0	0	0	0
2013	8,226,216	23,038,195	1,098,916	4,636,979	3,654,462	2,605,017	2,056,192	58,938	0	0	0	0	0	0
2014	8,601,062	24,314,234	1,107,078	4,882,386	3,864,312	2,611,689	2,187,792	60,021	0	0	0	0	0	0
2015	9,013,376	25,675,585	1,122,837	5,151,638	4,102,187	2,629,170	2,331,799	61,142	0	0	0	0	0	0
2016	9,490,555	27,087,569	1,138,750	5,415,417	4,347,709	2,651,992	2,477,988	64,004	0	0	0	0	0	0
2017	10,030,657	28,077,725	1,256,914	5,491,338	4,686,415	2,872,346	2,697,314	73,176	0	0	0	0	0	0
2018	10,515,195	28,198,745	1,503,036	5,530,052	5,119,568	3,399,103	3,004,862	89,692	0	0	0	0	0	0
2019	11,053,437	28,245,792	1,787,669	5,514,611	5,331,621	3,641,827	3,310,848	104,255	0	2,989,556	0	0	0	0
2020	11,558,481	28,286,062	2,086,112	5,577,814	5,686,164	4,433,536	3,604,141	117,471	0	3,116,009	0	0	0	0
2021	11,986,461	28,244,861	2,115,797	5,539,203	5,726,848	5,296,434	3,873,305	126,619	0	3,219,713	0	0	0	0
2022	11,993,419	27,892,303	2,073,202	5,388,893	5,712,049	5,435,163	4,089,774	136,340	0	3,364,675	0	0	0	0
2023	12,334,017	29,298,985	2,096,194	5,653,548	6,027,918	5,472,497	4,259,367	138,564	0	3,484,642	0	0	0	0
2024	12,312,130	29,119,862	2,076,893	5,572,968	6,010,213	5,693,118	4,493,338	249,943	0	3,630,251	0	0	0	0
2025	12,284,289	28,853,001	2,035,343	5,380,125	5,952,291	5,679,480	4,699,836	267,946	0	3,781,768	0	0	0	0
2026	12,652,459	30,331,660	2,058,680	5,653,883	6,297,377	5,730,369	4,875,705	280,041	0	3,912,169	0	0	0	0
2027	12,529,440	29,776,673	1,971,534	5,312,599	5,988,976	5,659,412	6,122,778	166,856	96,890	4,529,226	82,749	212,374	684,792	1,084
2028	12,793,193	30,982,490	2,030,655	5,596,752	6,288,573	5,830,862	6,367,251	173,673	102,604	4,704,059	86,718	220,762	717,266	1,136
2029	12,913,739	30,623,771	2,026,405	5,299,422	6,235,762	5,726,843	6,638,861	231,116	91,365	4,791,677	78,995	234,716	719,563	1,182
2030	13,242,213	30,738,580	2,095,220	5,256,305	6,311,628	5,872,503	6,915,861	311,036	87,125	4,873,651	75,496	247,699	753,668	1,278

Source: Jacobs Consultancy, December 2010.

Table B-132
TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810	0	0	0	0	0	0
2007	9,079,447	31,557,771	1,310,691	4,947,983	3,341,752	2,947,173	1,846,043	67,427	0	0	0	0	0	0
2008	8,693,049	29,076,651	1,206,206	4,589,902	3,124,465	2,712,986	1,716,840	63,162	0	0	0	0	0	0
2009	8,156,269	27,596,451	1,128,241	4,253,692	3,029,193	2,521,583	1,602,930	62,428	0	0	0	0	0	0
2010	7,679,662	25,839,093	1,054,361	4,011,206	3,062,237	2,536,645	1,611,396	56,119	0	0	0	0	0	0
2011	8,074,499	27,653,493	1,080,163	4,271,669	3,280,048	2,581,005	1,748,423	57,389	0	0	0	0	0	0
2012	8,385,393	29,271,453	1,092,804	4,495,642	3,467,500	2,594,747	1,903,522	58,125	0	0	0	0	0	0
2013	8,732,541	30,982,390	1,098,916	4,755,626	3,654,462	2,607,388	2,056,192	58,938	0	0	0	0	0	0
2014	9,130,459	32,698,442	1,107,078	5,007,312	3,864,312	2,614,067	2,187,792	60,021	0	0	0	0	0	0
2015	9,568,150	34,529,224	1,122,837	5,283,453	4,102,187	2,631,564	2,331,799	61,142	0	0	0	0	0	0
2016	10,074,700	36,428,099	1,138,750	5,553,981	4,347,709	2,654,406	2,477,988	64,004	0	0	0	0	0	0
2017	10,648,045	37,759,687	1,256,914	5,631,845	4,686,415	2,874,961	2,697,314	73,176	0	0	0	0	0	0
2018	11,162,407	37,922,439	1,503,036	5,671,550	5,119,568	3,402,198	3,004,862	89,692	0	0	0	0	0	0
2019	11,733,778	37,985,709	1,787,669	5,655,714	5,331,621	3,645,143	3,310,848	104,255	0	2,989,556	0	0	0	0
2020	12,269,907	38,039,864	2,086,112	5,720,534	5,686,164	4,437,573	3,604,141	117,471	0	3,116,009	0	0	0	0
2021	12,724,229	37,984,456	2,115,797	5,680,935	5,726,848	5,301,256	3,873,305	126,619	0	3,219,713	0	0	0	0
2022	12,731,615	37,510,327	2,073,202	5,526,779	5,712,049	5,440,112	4,089,774	136,340	0	3,364,675	0	0	0	0
2023	13,093,178	39,402,071	2,096,194	5,798,205	6,027,918	5,477,479	4,259,367	138,564	0	3,484,642	0	0	0	0
2024	13,069,944	39,161,182	2,076,893	5,715,564	6,010,213	5,698,301	4,493,338	249,943	0	3,630,251	0	0	0	0
2025	13,040,388	38,802,300	2,035,343	5,517,786	5,952,291	5,684,651	4,699,836	267,946	0	3,781,768	0	0	0	0
2026	13,431,220	40,790,841	2,058,680	5,798,549	6,297,377	5,735,586	4,875,705	280,041	0	3,912,169	0	0	0	0
2027	13,300,628	40,044,478	1,971,534	5,448,532	5,988,976	5,664,564	6,122,778	166,856	96,890	4,529,226	82,749	212,374	684,792	1,084
2028	13,580,616	41,666,094	2,030,655	5,739,957	6,288,573	5,836,171	6,367,251	173,673	102,604	4,704,059	86,718	220,762	717,266	1,136
2029	13,708,582	41,183,680	2,026,405	5,435,019	6,235,762	5,732,056	6,638,861	231,116	91,365	4,791,677	78,995	234,716	719,563	1,182
2030	14,057,273	41,338,078	2,095,220	5,390,799	6,311,628	5,877,849	6,915,861	311,036	87,125	4,873,651	75,496	247,699	753,668	1,278

Source: Jacobs Consultancy, December 2010.

JACOBS CONSULTANCY

Table B-133
TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092	0	0	0	0	0	0
2007	1,644,170	1,843,518	290,465	1,181,931	910,663	1,120,975	0	8,725	0	0	0	0	0	0
2008	1,578,512	1,729,935	267,294	1,102,490	854,474	1,052,165	0	8,363	0	0	0	0	0	0
2009	1,534,085	1,679,649	261,644	1,050,347	847,772	1,004,009	0	7,889	0	0	0	0	0	0
2010	1,457,330	1,508,470	229,293	947,678	781,861	891,730	0	7,427	0	0	0	0	0	0
2011	1,527,490	1,580,515	230,231	1,015,612	833,334	917,580	0	7,137	0	0	0	0	0	0
2012	1,590,728	1,644,764	229,367	1,081,683	881,261	936,074	0	6,821	0	0	0	0	0	0
2013	1,664,156	1,717,754	227,800	1,157,490	932,136	955,772	0	6,569	0	0	0	0	0	0
2014	1,746,721	1,796,719	226,032	1,240,376	991,403	977,055	0	6,472	0	0	0	0	0	0
2015	1,840,734	1,889,817	227,095	1,340,213	1,064,258	1,004,710	0	6,410	0	0	0	0	0	0
2016	1,950,042	1,985,066	227,951	1,450,180	1,141,216	1,028,701	0	6,766	0	0	0	0	0	0
2017	2,061,964	1,971,401	235,626	1,477,452	1,193,314	1,055,826	0	7,115	0	0	0	0	0	0
2018	2,143,099	1,904,140	258,228	1,505,666	1,263,378	1,135,833	0	7,341	0	0	0	0	0	0
2019	2,215,970	641,622	152,460	1,285,069	1,104,935	484,220	0	8,341	0	2,989,556	0	0	0	0
2020	2,291,141	596,257	174,715	1,300,388	1,165,950	491,682	0	9,066	0	3,116,009	0	0	0	0
2021	2,367,886	561,772	188,336	1,299,129	1,193,452	495,498	0	9,495	0	3,219,713	0	0	0	0
2022	2,416,699	542,062	199,609	1,335,820	1,236,144	489,898	0	10,361	0	3,364,675	0	0	0	0
2023	2,491,867	534,639	209,299	1,411,785	1,308,137	495,467	0	10,989	0	3,484,642	0	0	0	0
2024	2,493,503	518,177	220,788	1,456,348	1,347,176	494,338	0	84,834	0	3,630,251	0	0	0	0
2025	2,547,338	507,046	233,181	1,510,448	1,395,611	493,978	0	92,839	0	3,781,768	0	0	0	0
2026	2,635,544	502,920	243,420	1,596,572	1,470,561	501,843	0	100,664	0	3,912,169	0	0	0	0
2027	2,240,368	1,083,167	377,965	1,224,484	857,542	1,152,905	0	8,090	859	4,529,226	6,245	212,374	684,792	3
2028	2,287,896	1,077,375	398,002	1,283,360	900,791	1,183,175	0	8,648	861	4,704,059	6,272	220,762	717,266	4
2029	2,260,770	1,015,377	414,410	1,291,848	922,673	1,149,047	0	19,552	833	4,791,677	6,126	234,716	719,563	4
2030	2,293,768	961,114	432,102	1,313,257	955,524	1,132,249	0	46,457	780	4,873,651	5,975	247,699	753,668	5

Source: Jacobs Consultancy, December 2010.

Table B-134

TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286	0	0	0	0	0	0
2007	6,356,756	14,120,831	1,017,194	3,547,170	2,328,687	1,823,868	0	44,017	0	0	0	0	0	0
2008	6,020,442	13,195,157	936,317	3,301,674	2,182,204	1,658,818	0	41,550	0	0	0	0	0	0
2009	5,777,120	12,540,574	864,218	3,101,381	2,098,651	1,515,712	0	39,987	0	0	0	0	0	0
2010	5,293,011	11,199,363	822,919	2,924,769	2,200,477	1,640,901	0	33,270	0	0	0	0	0	0
2011	5,558,588	12,003,096	847,663	3,113,156	2,366,507	1,659,267	0	34,288	0	0	0	0	0	0
2012	5,753,418	12,685,686	861,049	3,267,356	2,505,266	1,654,398	0	34,852	0	0	0	0	0	0
2013	5,968,001	13,391,674	868,611	3,446,868	2,640,129	1,647,227	0	35,426	0	0	0	0	0	0
2014	6,225,539	14,151,545	878,452	3,611,724	2,790,023	1,632,536	0	36,296	0	0	0	0	0	0
2015	6,506,846	14,950,371	893,028	3,783,378	2,953,246	1,622,257	0	37,103	0	0	0	0	0	0
2016	6,826,104	15,777,098	908,013	3,940,165	3,118,244	1,621,008	0	39,252	0	0	0	0	0	0
2017	7,196,089	16,324,262	1,019,909	3,996,390	3,406,610	1,815,304	0	41,977	0	0	0	0	0	0
2018	7,529,560	16,265,882	1,244,316	4,011,503	3,766,187	2,262,814	0	44,705	0	0	0	0	0	0
2019	7,959,734	17,228,318	1,634,972	4,219,687	4,138,647	3,157,407	0	48,269	0	0	0	0	0	0
2020	8,327,435	16,959,945	1,911,211	4,268,669	4,424,348	3,941,708	0	51,090	0	0	0	0	0	0
2021	8,633,967	16,557,570	1,927,300	4,232,221	4,437,666	4,800,818	0	52,736	0	0	0	0	0	0
2022	8,535,918	15,758,932	1,873,436	4,045,375	4,376,364	4,945,151	0	54,395	0	0	0	0	0	0
2023	8,744,413	16,606,202	1,886,736	4,234,093	4,615,158	4,976,912	0	55,031	0	0	0	0	0	0
2024	8,651,061	15,923,456	1,855,946	4,109,054	4,551,678	5,198,661	0	86,025	0	0	0	0	0	0
2025	8,495,509	15,098,265	1,802,005	3,862,242	4,438,501	5,185,383	0	90,038	0	0	0	0	0	0
2026	8,697,561	15,946,864	1,815,098	4,049,984	4,701,805	5,228,402	0	92,873	0	0	0	0	0	0
2027	9,015,272	15,118,264	1,593,533	4,084,903	4,866,774	4,506,466	0	155,004	90,268	0	75,136	0	0	272
2028	9,154,127	15,705,371	1,632,616	4,309,915	5,109,063	4,647,642	0	160,919	95,870	0	79,047	0	0	284
2029	9,238,740	14,749,418	1,611,955	4,003,797	5,017,220	4,577,747	0	206,317	84,664	0	71,458	0	0	277
2030	9,427,290	14,214,516	1,663,074	3,938,302	5,042,806	4,740,199	0	257,583	80,385	0	68,081	0	0	292

Source: Jacobs Consultancy, December 2010.

Table B-135

TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536	0	0	0	0	0	0
2007	375,998	5,569,079	71	44,692	21,003	29	19,867	11,798	0	0	0	0	0	0
2008	350,032	5,362,709	68	46,875	16,760	27	17,241	10,772	0	0	0	0	0	0
2009	379,173	5,472,045	68	44,547	13,774	25	18,386	12,212	0	0	0	0	0	0
2010	392,448	5,292,355	64	35,325	13,876	23	19,982	13,247	0	0	0	0	0	0
2011	423,853	5,697,722	68	32,798	11,270	24	21,672	13,680	0	0	0	0	0	0
2012	453,794	6,088,070	70	30,738	9,200	24	23,159	14,057	0	0	0	0	0	0
2013	487,833	6,512,504	73	28,744	7,666	25	24,807	14,436	0	0	0	0	0	0
2014	519,362	6,898,717	76	26,277	6,498	26	26,204	14,662	0	0	0	0	0	0
2015	552,366	7,311,148	78	23,852	5,522	27	27,628	14,917	0	0	0	0	0	0
2016	596,560	7,735,347	82	20,705	4,617	29	29,775	15,178	0	0	0	0	0	0
2017	653,980	8,178,030	83	14,303	5,846	31	30,390	22,435	0	0	0	0	0	0
2018	730,088	8,526,939	86	11,023	10,868	36	31,607	36,933	0	0	0	0	0	0
2019	777,184	8,942,858	88	8,681	10,382	41	31,557	47,266	0	0	0	0	0	0
2020	845,014	9,366,774	90	7,812	11,333	45	33,106	57,026	0	0	0	0	0	0
2021	894,638	9,818,905	85	7,056	7,092	46	32,505	64,150	0	0	0	0	0	0
2022	952,505	10,286,937	86	6,935	5,707	48	33,154	71,360	0	0	0	0	0	0
2023	1,006,442	10,797,672	87	6,883	4,660	51	32,932	72,315	0	0	0	0	0	0
2024	1,076,325	11,320,694	89	6,780	3,857	55	34,256	78,860	0	0	0	0	0	0
2025	1,150,684	11,882,848	91	6,657	3,199	59	36,100	84,849	0	0	0	0	0	0
2026	1,226,026	12,460,257	95	6,524	2,663	64	37,836	86,283	0	0	0	0	0	0
2027	1,222,261	13,263,874	29	2,836	2,386	34	7,471	3,715	1,346	0	10	0	0	683
2028	1,298,628	13,885,806	30	3,088	2,351	38	7,895	4,058	1,416	0	11	0	0	723
2029	1,363,706	14,558,097	33	3,377	2,478	42	8,532	5,198	1,466	0	12	0	0	778
2030	1,472,506	15,268,876	36	4,327	2,844	48	9,465	6,946	1,597	0	13	0	0	858

Source: Jacobs Consultancy. December 2010.

Table B-136
TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897	0	0	0	0	0	0
2007	119,761	1,445,572	2,962	4,563	81,399	2,302	1,826,176	2,888	0	0	0	0	0	0
2008	106,198	1,269,708	2,527	3,922	71,027	1,976	1,699,598	2,478	0	0	0	0	0	0
2009	99,455	1,252,749	2,311	3,661	68,996	1,838	1,584,544	2,339	0	0	0	0	0	0
2010	91,596	1,213,503	2,084	3,360	66,023	1,683	1,591,414	2,175	0	0	0	0	0	0
2011	96,398	1,281,527	2,201	3,531	68,937	1,786	1,726,751	2,284	0	0	0	0	0	0
2012	101,256	1,347,439	2,318	3,704	71,773	1,889	1,880,362	2,395	0	0	0	0	0	0
2013	106,227	1,416,262	2,432	3,878	74,531	1,992	2,031,385	2,506	0	0	0	0	0	0
2014	109,440	1,467,253	2,518	4,008	76,387	2,071	2,161,587	2,591	0	0	0	0	0	0
2015	113,431	1,524,249	2,636	4,196	79,161	2,176	2,304,171	2,712	0	0	0	0	0	0
2016	117,850	1,590,058	2,704	4,366	83,632	2,254	2,448,213	2,807	0	0	0	0	0	0
2017	118,625	1,604,033	1,296	3,192	80,644	1,185	2,666,924	1,650	0	0	0	0	0	0
2018	112,448	1,501,785	405	1,860	79,135	420	2,973,255	714	0	0	0	0	0	0
2019	100,549	1,432,994	150	1,174	77,656	160	3,279,290	379	0	0	0	0	0	0
2020	94,891	1,363,085	97	946	84,532	102	3,571,034	289	0	0	0	0	0	0
2021	89,969	1,306,613	77	796	88,638	72	3,840,800	237	0	0	0	0	0	0
2022	88,297	1,304,373	72	763	93,834	66	4,056,620	225	0	0	0	0	0	0
2023	91,295	1,360,472	72	786	99,963	67	4,226,435	228	0	0	0	0	0	0
2024	91,242	1,357,535	70	785	107,502	64	4,459,082	225	0	0	0	0	0	0
2025	90,758	1,364,843	66	778	114,979	61	4,663,736	219	0	0	0	0	0	0
2026	93,327	1,421,619	67	802	122,347	61	4,837,869	222	0	0	0	0	0	0
2027	51,539	311,368	7	376	262,275	6	6,115,306	47	4,417	0	1,356	0	0	125
2028	52,542	313,938	7	389	276,368	6	6,359,356	48	4,458	0	1,388	0	0	125
2029	50,524	300,879	7	399	293,391	6	6,630,328	49	4,401	0	1,399	0	0	124
2030	48,649	294,074	8	418	310,455	7	6,906,396	51	4,363	0	1,427	0	0	122

Source: Jacobs Consultancy, December 2010.

Table B-137

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415	0	0	0	0	0	0
2007	3,945,162	12,795,788	701,074	2,391,545	2,069,301	1,723,671	1,080,579	58,230	0	0	0	0	0	0
2008	3,778,756	11,949,205	638,504	2,236,856	1,945,696	1,573,810	996,653	55,096	0	0	0	0	0	0
2009	3,742,821	12,102,279	632,694	2,189,485	1,955,405	1,490,591	954,254	56,230	0	0	0	0	0	0
2010	3,509,727	11,403,989	632,630	2,182,381	2,108,516	1,627,349	953,003	51,691	0	0	0	0	0	0
2011	3,698,331	12,242,555	646,883	2,259,772	2,243,072	1,624,189	1,020,704	52,856	0	0	0	0	0	0
2012	3,848,818	13,003,520	653,103	2,309,947	2,352,996	1,599,910	1,094,557	53,545	0	0	0	0	0	0
2013	4,019,699	13,812,417	653,562	2,375,717	2,458,657	1,575,138	1,168,983	54,324	0	0	0	0	0	0
2014	4,190,120	14,591,208	653,834	2,416,095	2,576,086	1,538,680	1,230,356	55,352	0	0	0	0	0	0
2015	4,364,219	15,387,029	658,891	2,448,498	2,705,718	1,504,085	1,298,184	56,396	0	0	0	0	0	0
2016	4,544,621	16,238,239	665,126	2,457,075	2,833,894	1,479,626	1,360,977	58,832	0	0	0	0	0	0
2017	4,748,817	16,749,883	765,907	2,372,433	3,042,354	1,658,166	1,490,650	67,402	0	0	0	0	0	0
2018	4,906,882	16,564,040	980,677	2,249,821	3,278,955	2,103,197	1,709,137	83,156	0	0	0	0	0	0
2019	5,041,013	15,649,002	1,187,942	2,058,170	3,257,136	2,225,418	1,919,774	96,238	0	1,898,747	0	0	0	0
2020	5,182,028	15,290,737	1,444,018	1,927,380	3,349,520	2,877,827	2,110,338	108,423	0	1,984,198	0	0	0	0
2021	5,326,571	14,945,872	1,464,624	1,774,859	3,184,440	3,616,785	2,287,295	116,992	0	2,042,342	0	0	0	0
2022	5,356,838	14,795,886	1,457,828	1,663,005	3,142,481	3,779,309	2,408,255	127,020	0	2,146,693	0	0	0	0
2023	5,453,425	15,557,755	1,463,219	1,622,521	3,259,802	3,732,167	2,481,749	128,982	0	2,236,054	0	0	0	0
2024	5,420,147	15,438,208	1,471,016	1,532,483	3,191,683	3,959,512	2,607,970	222,743	0	2,345,776	0	0	0	0
2025	5,452,485	15,367,998	1,472,124	1,428,645	3,154,533	4,006,475	2,720,447	240,645	0	2,457,914	0	0	0	0
2026	5,568,322	16,154,004	1,478,645	1,382,887	3,285,215	3,970,810	2,801,537	251,654	0	2,559,920	0	0	0	0
2027	5,840,375	15,918,059	1,417,763	1,638,600	3,428,918	3,746,219	3,899,071	150,249	20,131	2,123,651	2,959	102,747	807	179
2028	5,948,612	16,478,767	1,460,014	1,621,616	3,535,218	3,821,447	4,038,834	156,488	20,807	2,231,415	3,089	107,280	882	177
2029	5,968,717	16,334,977	1,506,618	1,556,517	3,598,338	3,840,003	4,194,761	208,140	18,802	2,377,898	3,140	115,575	1,083	179
2030	6,036,126	16,362,417	1,601,266	1,546,481	3,683,671	4,040,172	4,352,075	274,345	17,196	2,514,639	2,963	122,642	1,360	196

Source: Jacobs Consultancy, December 2010.

Table B-138

TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395	0	0	0	0	0	0
2007	4,551,523	10,183,213	609,618	2,386,811	1,272,451	1,223,502	765,464	9,197	0	0	0	0	0	0
2008	4,276,429	9,608,303	567,702	2,218,104	1,178,769	1,139,177	720,187	8,066	0	0	0	0	0	0
2009	4,047,013	8,842,738	495,547	2,010,452	1,073,789	1,030,992	648,677	6,199	0	0	0	0	0	0
2010	3,724,657	7,809,701	421,731	1,728,750	953,721	906,988	658,392	4,427	0	0	0	0	0	0
2011	3,907,997	8,320,305	433,279	1,905,325	1,036,976	954,468	727,719	4,533	0	0	0	0	0	0
2012	4,050,378	8,762,439	439,701	2,073,535	1,114,505	992,477	808,965	4,580	0	0	0	0	0	0
2013	4,206,518	9,225,777	445,354	2,261,262	1,195,806	1,029,878	887,209	4,614	0	0	0	0	0	0
2014	4,410,943	9,723,025	453,244	2,466,291	1,288,227	1,073,009	957,436	4,669	0	0	0	0	0	0
2015	4,649,157	10,288,556	463,945	2,703,140	1,396,469	1,125,085	1,033,615	4,746	0	0	0	0	0	0
2016	4,945,934	10,849,330	473,624	2,958,341	1,513,815	1,172,365	1,117,012	5,172	0	0	0	0	0	0
2017	5,281,840	11,327,842	491,007	3,118,904	1,644,060	1,214,180	1,206,664	5,774	0	0	0	0	0	0
2018	5,608,313	11,634,705	522,358	3,280,231	1,840,613	1,295,906	1,295,725	6,536	0	0	0	0	0	0
2019	6,012,424	12,596,790	599,727	3,456,442	2,074,484	1,416,409	1,391,075	8,017	0	1,090,809	0	0	0	0
2020	6,376,453	12,995,325	642,094	3,650,434	2,336,644	1,555,710	1,493,803	9,047	0	1,131,811	0	0	0	0
2021	6,659,890	13,298,989	651,173	3,764,344	2,542,408	1,679,649	1,586,011	9,627	0	1,177,371	0	0	0	0
2022	6,636,580	13,096,418	615,374	3,725,889	2,569,569	1,655,854	1,681,519	9,320	0	1,217,982	0	0	0	0
2023	6,880,593	13,741,230	632,975	4,031,027	2,768,116	1,740,330	1,777,618	9,582	0	1,248,588	0	0	0	0
2024	6,891,984	13,681,655	605,876	4,040,485	2,818,531	1,733,606	1,885,368	27,200	0	1,284,475	0	0	0	0
2025	6,831,804	13,485,003	563,219	3,951,480	2,797,758	1,673,006	1,979,389	27,301	0	1,323,854	0	0	0	0
2026	7,084,137	14,177,657	580,035	4,270,996	3,012,161	1,759,559	2,074,168	28,387	0	1,352,248	0	0	0	0
2027	6,689,065	13,858,613	553,770	3,673,999	2,560,058	1,913,193	2,223,706	16,607	76,759	2,405,575	79,790	109,627	683,985	906
2028	6,844,582	14,503,723	570,641	3,975,136	2,753,355	2,009,416	2,328,416	17,184	81,797	2,472,644	83,629	113,483	716,384	959
2029	6,945,022	14,288,795	519,787	3,742,905	2,637,424	1,886,839	2,444,100	22,976	72,563	2,413,779	75,855	119,141	718,481	1,003
2030	7,206,087	14,376,163	493,954	3,709,824	2,627,957	1,832,330	2,563,786	36,691	69,929	2,359,012	72,533	125,057	752,308	1,082

Source: Jacobs Consultancy, December 2010.

Table B-139
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	1,332,011	1	5	86	103	0	0	6,150	0	0	0	0	0	0
2007	1,476,619	1	6	97	115	0	0	6,944	0	0	0	0	0	0
2008	1,420,764	1	6	97	115	0	0	6,940	0	0	0	0	0	0
2009	1,421,057	1	5	96	110	0	0	7,188	0	0	0	0	0	0
2010	1,356,663	0	3	81	94	0	0	7,019	0	0	0	0	0	0
2011	1,426,170	0	2	81	76	0	0	6,761	0	0	0	0	0	0
2012	1,489,114	0	2	78	61	0	0	6,475	0	0	0	0	0	0
2013	1,562,017	0	2	77	52	0	0	6,249	0	0	0	0	0	0
2014	1,643,748	1	1	75	50	0	0	6,172	0	0	0	0	0	0
2015	1,736,386	1	1	71	53	0	0	6,123	0	0	0	0	0	0
2016	1,841,600	1	1	74	63	0	0	6,415	0	0	0	0	0	0
2017	1,950,479	1	1	59	75	0	0	6,709	0	0	0	0	0	0
2018	2,028,595	1	1	38	87	0	0	6,864	0	0	0	0	0	0
2019	2,105,950	1	1	18	73	0	0	7,874	0	0	0	0	0	0
2020	2,182,226	0	1	12	87	0	0	8,495	0	0	0	0	0	0
2021	2,259,642	0	0	8	93	0	0	8,874	0	0	0	0	0	0
2022	2,312,589	0	0	8	106	0	0	9,692	0	0	0	0	0	0
2023	2,392,430	0	0	9	126	0	0	10,289	0	0	0	0	0	0
2024	2,396,754	0	0	8	134	0	0	69,182	0	0	0	0	0	0
2025	2,453,202	0	0	18	157	0	0	76,311	0	0	0	0	0	0
2026	2,544,472	0	0	27	200	0	0	83,425	0	0	0	0	0	0
2027	2,084,448	1	0	31	16	0	0	3,313	10	0	0	1	666,593	3
2028	2,145,823	1	0	46	20	0	0	3,689	11	0	0	2	697,125	3
2029	2,137,297	1	0	77	27	0	0	8,667	12	0	0	2	697,114	4
2030	2,185,443	2	0	135	35	1	0	22,478	13	0	0	3	728,906	5

Source: Jacobs Consultancy, December 2010.

Table B-140

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	4,596,390	202	271	2,191	779	6	0	27,931	0	0	0	0	0	0
2007	4,735,170	210	280	2,253	807	6	0	28,947	0	0	0	0	0	0
2008	4,510,420	205	272	2,182	784	6	0	28,120	0	0	0	0	0	0
2009	4,404,154	175	225	2,040	722	5	0	28,524	0	0	0	0	0	0
2010	4,227,063	75	147	1,906	697	3	0	26,110	0	0	0	0	0	0
2011	4,458,644	84	138	1,941	592	3	0	26,627	0	0	0	0	0	0
2012	4,635,239	94	127	1,941	492	4	0	26,773	0	0	0	0	0	0
2013	4,836,542	104	117	2,010	431	5	0	26,937	0	0	0	0	0	0
2014	5,077,798	116	107	2,002	402	5	0	27,302	0	0	0	0	0	0
2015	5,342,644	129	97	1,969	392	6	0	27,536	0	0	0	0	0	0
2016	5,623,001	145	90	1,992	420	7	0	28,921	0	0	0	0	0	0
2017	5,915,292	121	84	1,503	452	8	0	30,452	0	0	0	0	0	0
2018	6,150,385	72	78	932	486	10	0	31,706	0	0	0	0	0	0
2019	6,391,917	46	76	531	493	13	0	32,951	0	0	0	0	0	0
2020	6,647,374	28	64	332	492	15	0	34,168	0	0	0	0	0	0
2021	6,873,516	17	38	201	434	16	0	34,394	0	0	0	0	0	0
2022	6,851,605	13	28	163	424	16	0	35,661	0	0	0	0	0	0
2023	7,059,338	14	25	167	462	19	0	35,965	0	0	0	0	0	0
2024	7,032,560	11	18	138	459	18	0	58,481	0	0	0	0	0	0
2025	6,985,887	10	14	136	489	19	0	62,219	0	0	0	0	0	0
2026	7,190,555	12	13	165	592	23	0	64,405	0	0	0	0	0	0
2027	7,677,185	14	11	281	808	21	0	115,244	879	0	0	0	0	103
2028	7,830,778	17	10	333	948	25	0	120,462	943	0	0	0	0	110
2029	8,087,899	19	10	438	1,171	30	0	160,580	937	0	0	0	0	118
2030	8,386,006	22	10	652	1,449	36	0	207,930	965	0	0	0	0	142

Source: Jacobs Consultancy, December 2010.

JACOBS CONSULTANCY

Table B-141

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087	0	0	0	0	0	0
2007	354,149	445,567	59	41,464	1,201	12	17,157	11,354	0	0	0	0	0	0
2008	346,619	440,603	59	40,223	1,185	13	17,173	10,766	0	0	0	0	0	0
2009	371,993	434,155	60	35,825	1,162	13	17,785	12,193	0	0	0	0	0	0
2010	371,015	406,705	56	32,744	1,070	12	17,089	12,868	0	0	0	0	0	0
2011	401,404	448,743	59	30,291	971	14	18,405	13,282	0	0	0	0	0	0
2012	430,472	489,330	62	28,297	885	15	19,578	13,641	0	0	0	0	0	0
2013	463,697	536,041	65	26,358	822	17	20,955	14,003	0	0	0	0	0	0
2014	494,713	579,447	68	23,964	767	18	22,154	14,215	0	0	0	0	0	0
2015	527,222	626,038	71	21,697	723	20	23,395	14,456	0	0	0	0	0	0
2016	570,421	668,691	75	18,848	658	22	25,221	14,724	0	0	0	0	0	0
2017	626,024	702,707	76	13,206	687	25	25,732	21,804	0	0	0	0	0	0
2018	699,509	697,313	81	10,237	756	29	26,766	36,015	0	0	0	0	0	0
2019	745,601	729,042	82	8,180	695	34	26,694	46,065	0	0	0	0	0	0
2020	811,893	744,850	84	7,392	640	38	28,004	55,610	0	0	0	0	0	0
2021	864,290	778,205	80	6,650	501	41	28,525	62,542	0	0	0	0	0	0
2022	925,758	802,699	82	6,472	430	44	30,308	69,578	0	0	0	0	0	0
2023	985,537	840,502	85	6,342	394	48	31,786	70,587	0	0	0	0	0	0
2024	1,057,820	867,227	88	6,224	341	52	33,807	77,010	0	0	0	0	0	0
2025	1,133,180	901,693	91	6,124	304	56	35,916	82,882	0	0	0	0	0	0
2026	1,208,870	949,608	94	6,036	292	62	37,757	84,368	0	0	0	0	0	0
2027	1,203,296	1,193,093	29	1,518	470	32	7,453	3,615	224	0	7	0	0	681
2028	1,279,792	1,248,925	30	1,566	486	36	7,883	3,956	235	0	7	0	0	722
2029	1,345,027	1,321,796	32	1,653	559	39	8,525	5,072	252	0	8	0	0	777
2030	1,454,714	1,367,224	36	1,840	663	45	9,459	6,746	282	0	9	0	0	858

Source: Jacobs Consultancy, December 2010.

Table B-142

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	31,818	633	8	21	136	19	583,232	7	0	0	0	0	0	0
2007	32,687	650	9	22	138	19	602,366	7	0	0	0	0	0	0
2008	30,096	597	8	20	126	17	557,169	6	0	0	0	0	0	0
2009	26,589	387	6	16	98	13	532,391	5	0	0	0	0	0	0
2010	22,825	233	3	11	76	7	529,455	4	0	0	0	0	0	0
2011	24,885	260	3	12	78	8	568,408	4	0	0	0	0	0	0
2012	27,168	289	4	14	80	9	610,273	5	0	0	0	0	0	0
2013	29,659	322	5	15	83	10	654,438	6	0	0	0	0	0	0
2014	31,397	348	5	16	84	9	691,392	6	0	0	0	0	0	0
2015	33,385	381	5	17	87	9	731,956	6	0	0	0	0	0	0
2016	35,149	404	5	17	85	9	775,181	7	0	0	0	0	0	0
2017	37,050	385	6	16	84	8	820,871	7	0	0	0	0	0	0
2018	36,718	301	4	12	78	6	862,572	6	0	0	0	0	0	0
2019	33,304	243	2	8	67	3	909,322	5	0	0	0	0	0	0
2020	32,038	204	1	7	61	2	955,973	4	0	0	0	0	0	0
2021	30,789	179	1	5	52	1	1,004,776	4	0	0	0	0	0	0
2022	30,895	174	1	5	47	1	1,054,482	4	0	0	0	0	0	0
2023	32,698	182	1	5	44	1	1,104,868	4	0	0	0	0	0	0
2024	33,418	177	1	5	40	1	1,158,864	4	0	0	0	0	0	0
2025	34,312	179	1	5	37	1	1,215,308	4	0	0	0	0	0	0
2026	36,445	190	1	6	35	1	1,273,260	5	0	0	0	0	0	0
2027	26,904	183	0	5	72	0	1,358,391	2	9	0	2	0	0	19
2028	28,273	189	0	5	68	0	1,423,641	2	10	0	2	0	0	20
2029	28,116	186	1	5	65	0	1,493,633	2	9	0	2	0	0	20
2030	28,019	186	1	5	61	0	1,566,919	3	9	0	2	0	0	21

Source: Jacobs Consultancy, December 2010.

Table B-143
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,600
2009	--
2010	123,711
2011	229,885
2012	341,768
2013	473,882
2014	486,268
2015	492,356
2016	492,161
2017	488,814
2018	476,346
2019	460,660
2020	442,101
2021	465,720
2022	743,805
2023	772,413
2024	1,044,500
2025	1,382,238
2026	1,491,280
2027	1,172,378
2028	1,344,980
2029	1,481,255
2030	1,531,546

Source: Jacobs Consultancy, December 2010.

B-4.4.2 Stations at Downtown LA, ONT Airport and Station at SAN

Table B-144
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810	0	0	0	0	0	0
2007	8,496,685	22,979,001	1,310,691	4,778,356	3,341,752	2,947,173	1,846,043	67,427	0	0	0	0	0	0
2008	8,055,185	21,557,508	1,206,206	4,454,960	3,124,465	2,712,986	1,716,840	63,162	0	0	0	0	0	0
2009	7,789,833	20,945,017	1,128,241	4,199,937	3,029,193	2,521,583	1,602,930	62,428	0	0	0	0	0	0
2010	7,234,385	19,213,690	1,054,361	3,911,131	3,062,237	2,534,337	1,611,396	56,119	0	0	0	0	0	0
2011	7,606,328	20,562,860	1,080,163	4,165,096	3,280,048	2,578,657	1,748,423	57,389	0	0	0	0	0	0
2012	7,899,196	21,765,959	1,092,804	4,383,482	3,467,500	2,592,387	1,903,522	58,125	0	0	0	0	0	0
2013	8,226,216	23,038,195	1,098,916	4,636,979	3,654,462	2,605,017	2,056,192	58,938	0	0	0	0	0	0
2014	8,601,062	24,314,234	1,107,078	4,882,386	3,864,312	2,611,689	2,187,792	60,021	0	0	0	0	0	0
2015	9,013,376	25,675,585	1,122,837	5,151,638	4,102,187	2,629,170	2,331,799	61,142	0	0	0	0	0	0
2016	9,490,555	27,087,569	1,138,750	5,415,417	4,347,709	2,651,992	2,477,988	64,004	0	0	0	0	0	0
2017	10,030,657	28,077,725	1,256,914	5,491,338	4,686,415	2,872,346	2,697,314	73,176	0	0	0	0	0	0
2018	10,515,195	28,198,745	1,503,036	5,530,052	5,119,568	3,399,103	3,004,862	89,692	0	0	0	0	0	0
2019	11,053,437	28,245,792	1,787,669	5,514,611	5,331,621	3,641,827	3,310,848	104,255	0	2,989,556	0	0	0	0
2020	11,558,481	28,286,062	2,086,112	5,577,814	5,686,164	4,433,536	3,604,141	117,471	0	3,116,009	0	0	0	0
2021	11,986,461	28,244,861	2,115,797	5,539,203	5,726,848	5,296,434	3,873,305	126,619	0	3,219,713	0	0	0	0
2022	11,993,419	27,892,303	2,073,202	5,388,893	5,712,049	5,435,163	4,089,774	136,340	0	3,364,675	0	0	0	0
2023	12,334,017	29,298,985	2,096,194	5,653,548	6,027,918	5,472,497	4,259,367	138,564	0	3,484,642	0	0	0	0
2024	12,312,130	29,119,862	2,076,893	5,572,968	6,010,213	5,693,118	4,493,338	249,943	0	3,630,251	0	0	0	0
2025	12,284,289	28,853,001	2,035,343	5,380,125	5,952,291	5,679,480	4,699,836	267,946	0	3,781,768	0	0	0	0
2026	12,652,459	30,331,660	2,058,680	5,653,883	6,297,377	5,730,369	4,875,705	280,041	0	3,912,169	0	0	0	0
2027	12,672,263	29,845,625	1,980,062	5,300,653	6,029,379	5,634,538	6,123,534	176,931	198,995	4,558,805	82,608	213,848	206,157	1,108
2028	13,066,636	31,055,148	2,039,066	5,579,941	6,315,339	5,799,118	6,369,094	186,984	207,076	4,712,419	86,562	221,545	212,582	1,165
2029	13,104,496	30,582,294	2,018,160	5,201,166	6,202,376	5,619,334	6,643,651	402,064	179,885	4,726,963	77,516	232,331	218,894	1,204
2030	13,145,681	30,585,439	2,024,501	5,205,367	6,207,070	5,641,587	6,926,553	520,840	148,198	4,719,762	71,944	242,764	240,535	1,458

Source: Jacobs Consultancy, December 2010.

Table B-145

TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810	0	0	0	0	0	0
2007	9,079,447	31,557,771	1,310,691	4,947,983	3,341,752	2,947,173	1,846,043	67,427	0	0	0	0	0	0
2008	8,693,049	29,076,651	1,206,206	4,589,902	3,124,465	2,712,986	1,716,840	63,162	0	0	0	0	0	0
2009	8,156,269	27,596,451	1,128,241	4,253,692	3,029,193	2,521,583	1,602,930	62,428	0	0	0	0	0	0
2010	7,679,662	25,839,093	1,054,361	4,011,206	3,062,237	2,536,645	1,611,396	56,119	0	0	0	0	0	0
2011	8,074,499	27,653,493	1,080,163	4,271,669	3,280,048	2,581,005	1,748,423	57,389	0	0	0	0	0	0
2012	8,385,393	29,271,453	1,092,804	4,495,642	3,467,500	2,594,747	1,903,522	58,125	0	0	0	0	0	0
2013	8,732,541	30,982,390	1,098,916	4,755,626	3,654,462	2,607,388	2,056,192	58,938	0	0	0	0	0	0
2014	9,130,459	32,698,442	1,107,078	5,007,312	3,864,312	2,614,067	2,187,792	60,021	0	0	0	0	0	0
2015	9,568,150	34,529,224	1,122,837	5,283,453	4,102,187	2,631,564	2,331,799	61,142	0	0	0	0	0	0
2016	10,074,700	36,428,099	1,138,750	5,553,981	4,347,709	2,654,406	2,477,988	64,004	0	0	0	0	0	0
2017	10,648,045	37,759,687	1,256,914	5,631,845	4,686,415	2,874,961	2,697,314	73,176	0	0	0	0	0	0
2018	11,162,407	37,922,439	1,503,036	5,671,550	5,119,568	3,402,198	3,004,862	89,692	0	0	0	0	0	0
2019	11,733,778	37,985,709	1,787,669	5,655,714	5,331,621	3,645,143	3,310,848	104,255	0	2,989,556	0	0	0	0
2020	12,269,907	38,039,864	2,086,112	5,720,534	5,686,164	4,437,573	3,604,141	117,471	0	3,116,009	0	0	0	0
2021	12,724,229	37,984,456	2,115,797	5,680,935	5,726,848	5,301,256	3,873,305	126,619	0	3,219,713	0	0	0	0
2022	12,731,615	37,510,327	2,073,202	5,526,779	5,712,049	5,440,112	4,089,774	136,340	0	3,364,675	0	0	0	0
2023	13,093,178	39,402,071	2,096,194	5,798,205	6,027,918	5,477,479	4,259,367	138,564	0	3,484,642	0	0	0	0
2024	13,069,944	39,161,182	2,076,893	5,715,564	6,010,213	5,698,301	4,493,338	249,943	0	3,630,251	0	0	0	0
2025	13,040,388	38,802,300	2,035,343	5,517,786	5,952,291	5,684,651	4,699,836	267,946	0	3,781,768	0	0	0	0
2026	13,431,220	40,790,841	2,058,680	5,798,549	6,297,377	5,735,586	4,875,705	280,041	0	3,912,169	0	0	0	0
2027	13,452,242	40,137,208	1,980,062	5,436,281	6,029,379	5,639,668	6,123,534	176,931	198,995	4,558,805	82,608	213,848	206,157	1,108
2028	13,870,889	41,763,806	2,039,066	5,722,715	6,315,339	5,804,398	6,369,094	186,984	207,076	4,712,419	86,562	221,545	212,582	1,165
2029	13,911,080	41,127,900	2,018,160	5,334,249	6,202,376	5,624,449	6,643,651	402,064	179,885	4,726,963	77,516	232,331	218,894	1,204
2030	13,954,799	41,132,129	2,024,501	5,338,557	6,207,070	5,646,724	6,926,553	520,840	148,198	4,719,762	71,944	242,764	240,535	1,458

Source: Jacobs Consultancy, December 2010.

JACOBS CONSULTANCY

Table B-146
TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092	0	0	0	0	0	0
2007	1,644,170	1,843,518	290,465	1,181,931	910,663	1,120,975	0	8,725	0	0	0	0	0	0
2008	1,578,512	1,729,935	267,294	1,102,490	854,474	1,052,165	0	8,363	0	0	0	0	0	0
2009	1,534,085	1,679,649	261,644	1,050,347	847,772	1,004,009	0	7,889	0	0	0	0	0	0
2010	1,457,330	1,508,470	229,293	947,678	781,861	891,730	0	7,427	0	0	0	0	0	0
2011	1,527,490	1,580,515	230,231	1,015,612	833,334	917,580	0	7,137	0	0	0	0	0	0
2012	1,590,728	1,644,764	229,367	1,081,683	881,261	936,074	0	6,821	0	0	0	0	0	0
2013	1,664,156	1,717,754	227,800	1,157,490	932,136	955,772	0	6,569	0	0	0	0	0	0
2014	1,746,721	1,796,719	226,032	1,240,376	991,403	977,055	0	6,472	0	0	0	0	0	0
2015	1,840,734	1,889,817	227,095	1,340,213	1,064,258	1,004,710	0	6,410	0	0	0	0	0	0
2016	1,950,042	1,985,066	227,951	1,450,180	1,141,216	1,028,701	0	6,766	0	0	0	0	0	0
2017	2,061,964	1,971,401	235,626	1,477,452	1,193,314	1,055,826	0	7,115	0	0	0	0	0	0
2018	2,143,099	1,904,140	258,228	1,505,666	1,263,378	1,135,833	0	7,341	0	0	0	0	0	0
2019	2,215,970	641,622	152,460	1,285,069	1,104,935	484,220	0	8,341	0	2,989,556	0	0	0	0
2020	2,291,141	596,257	174,715	1,300,388	1,165,950	491,682	0	9,066	0	3,116,009	0	0	0	0
2021	2,367,886	561,772	188,336	1,299,129	1,193,452	495,498	0	9,495	0	3,219,713	0	0	0	0
2022	2,416,699	542,062	199,609	1,335,820	1,236,144	489,898	0	10,361	0	3,364,675	0	0	0	0
2023	2,491,867	534,639	209,299	1,411,785	1,308,137	495,467	0	10,989	0	3,484,642	0	0	0	0
2024	2,493,503	518,177	220,788	1,456,348	1,347,176	494,338	0	84,834	0	3,630,251	0	0	0	0
2025	2,547,338	507,046	233,181	1,510,448	1,395,611	493,978	0	92,839	0	3,781,768	0	0	0	0
2026	2,635,544	502,920	243,420	1,596,572	1,470,561	501,843	0	100,664	0	3,912,169	0	0	0	0
2027	2,644,373	1,095,900	381,410	1,233,205	867,424	1,162,904	0	8,479	2,870	4,558,805	6,329	213,848	206,157	4
2028	2,697,927	1,082,790	400,546	1,286,904	906,983	1,186,400	0	9,113	2,905	4,712,419	6,301	221,545	212,582	4
2029	2,679,446	996,413	413,392	1,272,832	916,686	1,125,164	0	101,166	2,716	4,726,963	5,962	232,331	218,894	4
2030	2,724,258	914,527	415,159	1,285,152	936,990	1,074,822	0	120,620	2,189	4,719,762	5,570	242,764	240,535	8

Source: Jacobs Consultancy, December 2010.

Table B-147
TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286	0	0	0	0	0	0
2007	6,356,756	14,120,831	1,017,194	3,547,170	2,328,687	1,823,868	0	44,017	0	0	0	0	0	0
2008	6,020,442	13,195,157	936,317	3,301,674	2,182,204	1,658,818	0	41,550	0	0	0	0	0	0
2009	5,777,120	12,540,574	864,218	3,101,381	2,098,651	1,515,712	0	39,987	0	0	0	0	0	0
2010	5,293,011	11,199,363	822,919	2,924,769	2,200,477	1,640,901	0	33,270	0	0	0	0	0	0
2011	5,558,588	12,003,096	847,663	3,113,156	2,366,507	1,659,267	0	34,288	0	0	0	0	0	0
2012	5,753,418	12,685,686	861,049	3,267,356	2,505,266	1,654,398	0	34,852	0	0	0	0	0	0
2013	5,968,001	13,391,674	868,611	3,446,868	2,640,129	1,647,227	0	35,426	0	0	0	0	0	0
2014	6,225,539	14,151,545	878,452	3,611,724	2,790,023	1,632,536	0	36,296	0	0	0	0	0	0
2015	6,506,846	14,950,371	893,028	3,783,378	2,953,246	1,622,257	0	37,103	0	0	0	0	0	0
2016	6,826,104	15,777,098	908,013	3,940,165	3,118,244	1,621,008	0	39,252	0	0	0	0	0	0
2017	7,196,089	16,324,262	1,019,909	3,996,390	3,406,610	1,815,304	0	41,977	0	0	0	0	0	0
2018	7,529,560	16,265,882	1,244,316	4,011,503	3,766,187	2,262,814	0	44,705	0	0	0	0	0	0
2019	7,959,734	17,228,318	1,634,972	4,219,687	4,138,647	3,157,407	0	48,269	0	0	0	0	0	0
2020	8,327,435	16,959,945	1,911,211	4,268,669	4,424,348	3,941,708	0	51,090	0	0	0	0	0	0
2021	8,633,967	16,557,570	1,927,300	4,232,221	4,437,666	4,800,818	0	52,736	0	0	0	0	0	0
2022	8,535,918	15,758,932	1,873,436	4,045,375	4,376,364	4,945,151	0	54,395	0	0	0	0	0	0
2023	8,744,413	16,606,202	1,886,736	4,234,093	4,615,158	4,976,912	0	55,031	0	0	0	0	0	0
2024	8,651,061	15,923,456	1,855,946	4,109,054	4,551,678	5,198,661	0	86,025	0	0	0	0	0	0
2025	8,495,509	15,098,265	1,802,005	3,862,242	4,438,501	5,185,383	0	90,038	0	0	0	0	0	0
2026	8,697,561	15,946,864	1,815,098	4,049,984	4,701,805	5,228,402	0	92,873	0	0	0	0	0	0
2027	8,783,662	15,150,210	1,598,615	4,064,253	4,896,845	4,471,593	0	164,312	186,639	0	74,915	0	0	283
2028	9,053,911	15,742,670	1,638,482	4,289,573	5,129,374	4,612,672	0	173,236	194,503	0	78,865	0	0	297
2029	9,064,576	14,681,932	1,604,728	3,924,613	4,990,271	4,494,120	0	294,757	167,718	0	70,143	0	0	281
2030	9,022,206	14,007,012	1,609,292	3,913,647	4,959,251	4,566,704	0	385,802	137,422	0	64,875	0	0	358

Source: Jacobs Consultancy, December 2010.

Table B-148

TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536	0	0	0	0	0	0
2007	375,998	5,569,079	71	44,692	21,003	29	19,867	11,798	0	0	0	0	0	0
2008	350,032	5,362,709	68	46,875	16,760	27	17,241	10,772	0	0	0	0	0	0
2009	379,173	5,472,045	68	44,547	13,774	25	18,386	12,212	0	0	0	0	0	0
2010	392,448	5,292,355	64	35,325	13,876	23	19,982	13,247	0	0	0	0	0	0
2011	423,853	5,697,722	68	32,798	11,270	24	21,672	13,680	0	0	0	0	0	0
2012	453,794	6,088,070	70	30,738	9,200	24	23,159	14,057	0	0	0	0	0	0
2013	487,833	6,512,504	73	28,744	7,666	25	24,807	14,436	0	0	0	0	0	0
2014	519,362	6,898,717	76	26,277	6,498	26	26,204	14,662	0	0	0	0	0	0
2015	552,366	7,311,148	78	23,852	5,522	27	27,628	14,917	0	0	0	0	0	0
2016	596,560	7,735,347	82	20,705	4,617	29	29,775	15,178	0	0	0	0	0	0
2017	653,980	8,178,030	83	14,303	5,846	31	30,390	22,435	0	0	0	0	0	0
2018	730,088	8,526,939	86	11,023	10,868	36	31,607	36,933	0	0	0	0	0	0
2019	777,184	8,942,858	88	8,681	10,382	41	31,557	47,266	0	0	0	0	0	0
2020	845,014	9,366,774	90	7,812	11,333	45	33,106	57,026	0	0	0	0	0	0
2021	894,638	9,818,905	85	7,056	7,092	46	32,505	64,150	0	0	0	0	0	0
2022	952,505	10,286,937	86	6,935	5,707	48	33,154	71,360	0	0	0	0	0	0
2023	1,006,442	10,797,672	87	6,883	4,660	51	32,932	72,315	0	0	0	0	0	0
2024	1,076,325	11,320,694	89	6,780	3,857	55	34,256	78,860	0	0	0	0	0	0
2025	1,150,684	11,882,848	91	6,657	3,199	59	36,100	84,849	0	0	0	0	0	0
2026	1,226,026	12,460,257	95	6,524	2,663	64	37,836	86,283	0	0	0	0	0	0
2027	1,195,176	13,288,276	29	2,822	2,408	35	7,580	4,093	3,521	0	11	0	0	695
2028	1,265,235	13,916,261	31	3,077	2,360	39	8,042	4,587	3,664	0	11	0	0	738
2029	1,315,657	14,602,877	33	3,323	2,453	43	8,729	6,093	3,705	0	12	0	0	794
2030	1,366,378	15,361,234	41	6,122	3,811	54	10,963	14,365	3,567	0	15	0	0	966

Source: Jacobs Consultancy, December 2010.

Table B-149
TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897	0	0	0	0	0	0
2007	119,761	1,445,572	2,962	4,563	81,399	2,302	1,826,176	2,888	0	0	0	0	0	0
2008	106,198	1,269,708	2,527	3,922	71,027	1,976	1,699,598	2,478	0	0	0	0	0	0
2009	99,455	1,252,749	2,311	3,661	68,996	1,838	1,584,544	2,339	0	0	0	0	0	0
2010	91,596	1,213,503	2,084	3,360	66,023	1,683	1,591,414	2,175	0	0	0	0	0	0
2011	96,398	1,281,527	2,201	3,531	68,937	1,786	1,726,751	2,284	0	0	0	0	0	0
2012	101,256	1,347,439	2,318	3,704	71,773	1,889	1,880,362	2,395	0	0	0	0	0	0
2013	106,227	1,416,262	2,432	3,878	74,531	1,992	2,031,385	2,506	0	0	0	0	0	0
2014	109,440	1,467,253	2,518	4,008	76,387	2,071	2,161,587	2,591	0	0	0	0	0	0
2015	113,431	1,524,249	2,636	4,196	79,161	2,176	2,304,171	2,712	0	0	0	0	0	0
2016	117,850	1,590,058	2,704	4,366	83,632	2,254	2,448,213	2,807	0	0	0	0	0	0
2017	118,625	1,604,033	1,296	3,192	80,644	1,185	2,666,924	1,650	0	0	0	0	0	0
2018	112,448	1,501,785	405	1,860	79,135	420	2,973,255	714	0	0	0	0	0	0
2019	100,549	1,432,994	150	1,174	77,656	160	3,279,290	379	0	0	0	0	0	0
2020	94,891	1,363,085	97	946	84,532	102	3,571,034	289	0	0	0	0	0	0
2021	89,969	1,306,613	77	796	88,638	72	3,840,800	237	0	0	0	0	0	0
2022	88,297	1,304,373	72	763	93,834	66	4,056,620	225	0	0	0	0	0	0
2023	91,295	1,360,472	72	786	99,963	67	4,226,435	228	0	0	0	0	0	0
2024	91,242	1,357,535	70	785	107,502	64	4,459,082	225	0	0	0	0	0	0
2025	90,758	1,364,843	66	778	114,979	61	4,663,736	219	0	0	0	0	0	0
2026	93,327	1,421,619	67	802	122,347	61	4,837,869	222	0	0	0	0	0	0
2027	49,052	311,240	7	373	262,702	6	6,115,954	47	5,964	0	1,352	0	0	126
2028	49,563	313,426	7	387	276,622	6	6,361,051	48	6,004	0	1,385	0	0	126
2029	44,817	301,073	7	399	292,966	6	6,634,922	49	5,746	0	1,399	0	0	124
2030	32,839	302,666	8	445	307,018	7	6,915,590	53	5,021	0	1,485	0	0	127

Source: Jacobs Consultancy, December 2010.

Table B-150
TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415	0	0	0	0	0	0
2007	3,945,162	12,795,788	701,074	2,391,545	2,069,301	1,723,671	1,080,579	58,230	0	0	0	0	0	0
2008	3,778,756	11,949,205	638,504	2,236,856	1,945,696	1,573,810	996,653	55,096	0	0	0	0	0	0
2009	3,742,821	12,102,279	632,694	2,189,485	1,955,405	1,490,591	954,254	56,230	0	0	0	0	0	0
2010	3,509,727	11,403,989	632,630	2,182,381	2,108,516	1,627,349	953,003	51,691	0	0	0	0	0	0
2011	3,698,331	12,242,555	646,883	2,259,772	2,243,072	1,624,189	1,020,704	52,856	0	0	0	0	0	0
2012	3,848,818	13,003,520	653,103	2,309,947	2,352,996	1,599,910	1,094,557	53,545	0	0	0	0	0	0
2013	4,019,699	13,812,417	653,562	2,375,717	2,458,657	1,575,138	1,168,983	54,324	0	0	0	0	0	0
2014	4,190,120	14,591,208	653,834	2,416,095	2,576,086	1,538,680	1,230,356	55,352	0	0	0	0	0	0
2015	4,364,219	15,387,029	658,891	2,448,498	2,705,718	1,504,085	1,298,184	56,396	0	0	0	0	0	0
2016	4,544,621	16,238,239	665,126	2,457,075	2,833,894	1,479,626	1,360,977	58,832	0	0	0	0	0	0
2017	4,748,817	16,749,883	765,907	2,372,433	3,042,354	1,658,166	1,490,650	67,402	0	0	0	0	0	0
2018	4,906,882	16,564,040	980,677	2,249,821	3,278,955	2,103,197	1,709,137	83,156	0	0	0	0	0	0
2019	5,041,013	15,649,002	1,187,942	2,058,170	3,257,136	2,225,418	1,919,774	96,238	0	1,898,747	0	0	0	0
2020	5,182,028	15,290,737	1,444,018	1,927,380	3,349,520	2,877,827	2,110,338	108,423	0	1,984,198	0	0	0	0
2021	5,326,571	14,945,872	1,464,624	1,774,859	3,184,440	3,616,785	2,287,295	116,992	0	2,042,342	0	0	0	0
2022	5,356,838	14,795,886	1,457,828	1,663,005	3,142,481	3,779,309	2,408,255	127,020	0	2,146,693	0	0	0	0
2023	5,453,425	15,557,755	1,463,219	1,622,521	3,259,802	3,732,167	2,481,749	128,982	0	2,236,054	0	0	0	0
2024	5,420,147	15,438,208	1,471,016	1,532,483	3,191,683	3,959,512	2,607,970	222,743	0	2,345,776	0	0	0	0
2025	5,452,485	15,367,998	1,472,124	1,428,645	3,154,533	4,006,475	2,720,447	240,645	0	2,457,914	0	0	0	0
2026	5,568,322	16,154,004	1,478,645	1,382,887	3,285,215	3,970,810	2,801,537	251,654	0	2,559,920	0	0	0	0
2027	5,746,816	15,968,224	1,425,528	1,633,042	3,470,475	3,716,347	3,899,790	160,295	47,301	2,121,820	2,978	102,789	625	190
2028	5,853,397	16,532,112	1,468,554	1,616,051	3,567,264	3,791,362	4,040,087	169,793	47,580	2,230,015	3,103	107,615	680	192
2029	5,771,015	16,360,040	1,508,646	1,541,956	3,614,003	3,777,057	4,197,300	333,555	41,208	2,379,298	3,137	116,454	862	186
2030	5,672,199	16,362,180	1,556,218	1,601,967	3,704,634	3,914,306	4,353,873	455,817	26,971	2,520,661	2,962	126,184	1,652	273

Source: Jacobs Consultancy, December 2010.

Table B-151

TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395	0	0	0	0	0	0
2007	4,551,523	10,183,213	609,618	2,386,811	1,272,451	1,223,502	765,464	9,197	0	0	0	0	0	0
2008	4,276,429	9,608,303	567,702	2,218,104	1,178,769	1,139,177	720,187	8,066	0	0	0	0	0	0
2009	4,047,013	8,842,738	495,547	2,010,452	1,073,789	1,030,992	648,677	6,199	0	0	0	0	0	0
2010	3,724,657	7,809,701	421,731	1,728,750	953,721	906,988	658,392	4,427	0	0	0	0	0	0
2011	3,907,997	8,320,305	433,279	1,905,325	1,036,976	954,468	727,719	4,533	0	0	0	0	0	0
2012	4,050,378	8,762,439	439,701	2,073,535	1,114,505	992,477	808,965	4,580	0	0	0	0	0	0
2013	4,206,518	9,225,777	445,354	2,261,262	1,195,806	1,029,878	887,209	4,614	0	0	0	0	0	0
2014	4,410,943	9,723,025	453,244	2,466,291	1,288,227	1,073,009	957,436	4,669	0	0	0	0	0	0
2015	4,649,157	10,288,556	463,945	2,703,140	1,396,469	1,125,085	1,033,615	4,746	0	0	0	0	0	0
2016	4,945,934	10,849,330	473,624	2,958,341	1,513,815	1,172,365	1,117,012	5,172	0	0	0	0	0	0
2017	5,281,840	11,327,842	491,007	3,118,904	1,644,060	1,214,180	1,206,664	5,774	0	0	0	0	0	0
2018	5,608,313	11,634,705	522,358	3,280,231	1,840,613	1,295,906	1,295,725	6,536	0	0	0	0	0	0
2019	6,012,424	12,596,790	599,727	3,456,442	2,074,484	1,416,409	1,391,075	8,017	0	1,090,809	0	0	0	0
2020	6,376,453	12,995,325	642,094	3,650,434	2,336,644	1,555,710	1,493,803	9,047	0	1,131,811	0	0	0	0
2021	6,659,890	13,298,989	651,173	3,764,344	2,542,408	1,679,649	1,586,011	9,627	0	1,177,371	0	0	0	0
2022	6,636,580	13,096,418	615,374	3,725,889	2,569,569	1,655,854	1,681,519	9,320	0	1,217,982	0	0	0	0
2023	6,880,593	13,741,230	632,975	4,031,027	2,768,116	1,740,330	1,777,618	9,582	0	1,248,588	0	0	0	0
2024	6,891,984	13,681,655	605,876	4,040,485	2,818,531	1,733,606	1,885,368	27,200	0	1,284,475	0	0	0	0
2025	6,831,804	13,485,003	563,219	3,951,480	2,797,758	1,673,006	1,979,389	27,301	0	1,323,854	0	0	0	0
2026	7,084,137	14,177,657	580,035	4,270,996	3,012,161	1,759,559	2,074,168	28,387	0	1,352,248	0	0	0	0
2027	6,925,447	13,877,402	554,534	3,667,611	2,558,905	1,918,191	2,223,745	16,636	151,694	2,436,985	79,630	111,059	205,531	918
2028	7,213,239	14,523,036	570,512	3,963,890	2,748,074	2,007,756	2,329,006	17,191	159,496	2,482,405	83,458	113,931	211,902	973
2029	7,333,481	14,222,255	509,515	3,659,211	2,588,373	1,842,276	2,446,352	68,509	138,677	2,347,665	74,379	115,877	218,032	1,017
2030	7,473,482	14,223,258	468,283	3,603,400	2,502,436	1,727,282	2,572,680	65,023	121,227	2,199,101	68,982	116,580	238,883	1,186

Source: Jacobs Consultancy, December 2010.

Table B-152
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	1,332,011	1	5	86	103	0	0	6,150	0	0	0	0	0	0
2007	1,476,619	1	6	97	115	0	0	6,944	0	0	0	0	0	0
2008	1,420,764	1	6	97	115	0	0	6,940	0	0	0	0	0	0
2009	1,421,057	1	5	96	110	0	0	7,188	0	0	0	0	0	0
2010	1,356,663	0	3	81	94	0	0	7,019	0	0	0	0	0	0
2011	1,426,170	0	2	81	76	0	0	6,761	0	0	0	0	0	0
2012	1,489,114	0	2	78	61	0	0	6,475	0	0	0	0	0	0
2013	1,562,017	0	2	77	52	0	0	6,249	0	0	0	0	0	0
2014	1,643,748	1	1	75	50	0	0	6,172	0	0	0	0	0	0
2015	1,736,386	1	1	71	53	0	0	6,123	0	0	0	0	0	0
2016	1,841,600	1	1	74	63	0	0	6,415	0	0	0	0	0	0
2017	1,950,479	1	1	59	75	0	0	6,709	0	0	0	0	0	0
2018	2,028,595	1	1	38	87	0	0	6,864	0	0	0	0	0	0
2019	2,105,950	1	1	18	73	0	0	7,874	0	0	0	0	0	0
2020	2,182,226	0	1	12	87	0	0	8,495	0	0	0	0	0	0
2021	2,259,642	0	0	8	93	0	0	8,874	0	0	0	0	0	0
2022	2,312,589	0	0	8	106	0	0	9,692	0	0	0	0	0	0
2023	2,392,430	0	0	9	126	0	0	10,289	0	0	0	0	0	0
2024	2,396,754	0	0	8	134	0	0	69,182	0	0	0	0	0	0
2025	2,453,202	0	0	18	157	0	0	76,311	0	0	0	0	0	0
2026	2,544,472	0	0	27	200	0	0	83,425	0	0	0	0	0	0
2027	2,488,082	1	0	33	18	0	0	3,647	42	0	0	1	195,787	3
2028	2,554,549	1	0	52	22	0	0	4,136	46	0	0	2	201,629	3
2029	2,554,780	1	0	106	28	0	0	48,023	47	0	0	3	207,094	4
2030	2,626,196	2	0	198	48	1	0	70,243	52	0	0	5	227,154	7

Source: Jacobs Consultancy, December 2010.

Table B-153
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	4,596,390	202	271	2,191	779	6	0	27,931	0	0	0	0	0	0
2007	4,735,170	210	280	2,253	807	6	0	28,947	0	0	0	0	0	0
2008	4,510,420	205	272	2,182	784	6	0	28,120	0	0	0	0	0	0
2009	4,404,154	175	225	2,040	722	5	0	28,524	0	0	0	0	0	0
2010	4,227,063	75	147	1,906	697	3	0	26,110	0	0	0	0	0	0
2011	4,458,644	84	138	1,941	592	3	0	26,627	0	0	0	0	0	0
2012	4,635,239	94	127	1,941	492	4	0	26,773	0	0	0	0	0	0
2013	4,836,542	104	117	2,010	431	5	0	26,937	0	0	0	0	0	0
2014	5,077,798	116	107	2,002	402	5	0	27,302	0	0	0	0	0	0
2015	5,342,644	129	97	1,969	392	6	0	27,536	0	0	0	0	0	0
2016	5,623,001	145	90	1,992	420	7	0	28,921	0	0	0	0	0	0
2017	5,915,292	121	84	1,503	452	8	0	30,452	0	0	0	0	0	0
2018	6,150,385	72	78	932	486	10	0	31,706	0	0	0	0	0	0
2019	6,391,917	46	76	531	493	13	0	32,951	0	0	0	0	0	0
2020	6,647,374	28	64	332	492	15	0	34,168	0	0	0	0	0	0
2021	6,873,516	17	38	201	434	16	0	34,394	0	0	0	0	0	0
2022	6,851,605	13	28	163	424	16	0	35,661	0	0	0	0	0	0
2023	7,059,338	14	25	167	462	19	0	35,965	0	0	0	0	0	0
2024	7,032,560	11	18	138	459	18	0	58,481	0	0	0	0	0	0
2025	6,985,887	10	14	136	489	19	0	62,219	0	0	0	0	0	0
2026	7,190,555	12	13	165	592	23	0	64,405	0	0	0	0	0	0
2027	7,516,162	16	12	297	870	23	0	124,671	3,081	0	0	0	0	114
2028	7,807,056	19	11	360	1,036	28	0	132,834	3,290	0	0	0	0	123
2029	8,009,208	20	10	462	1,276	30	0	237,001	3,058	0	0	0	0	125
2030	8,213,001	29	13	902	2,167	50	0	329,643	3,101	0	0	0	0	212

Source: Jacobs Consultancy, December 2010.

Table B-154

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087	0	0	0	0	0	0
2007	354,149	445,567	59	41,464	1,201	12	17,157	11,354	0	0	0	0	0	0
2008	346,619	440,603	59	40,223	1,185	13	17,173	10,766	0	0	0	0	0	0
2009	371,993	434,155	60	35,825	1,162	13	17,785	12,193	0	0	0	0	0	0
2010	371,015	406,705	56	32,744	1,070	12	17,089	12,868	0	0	0	0	0	0
2011	401,404	448,743	59	30,291	971	14	18,405	13,282	0	0	0	0	0	0
2012	430,472	489,330	62	28,297	885	15	19,578	13,641	0	0	0	0	0	0
2013	463,697	536,041	65	26,358	822	17	20,955	14,003	0	0	0	0	0	0
2014	494,713	579,447	68	23,964	767	18	22,154	14,215	0	0	0	0	0	0
2015	527,222	626,038	71	21,697	723	20	23,395	14,456	0	0	0	0	0	0
2016	570,421	668,691	75	18,848	658	22	25,221	14,724	0	0	0	0	0	0
2017	626,024	702,707	76	13,206	687	25	25,732	21,804	0	0	0	0	0	0
2018	699,509	697,313	81	10,237	756	29	26,766	36,015	0	0	0	0	0	0
2019	745,601	729,042	82	8,180	695	34	26,694	46,065	0	0	0	0	0	0
2020	811,893	744,850	84	7,392	640	38	28,004	55,610	0	0	0	0	0	0
2021	864,290	778,205	80	6,650	501	41	28,525	62,542	0	0	0	0	0	0
2022	925,758	802,699	82	6,472	430	44	30,308	69,578	0	0	0	0	0	0
2023	985,537	840,502	85	6,342	394	48	31,786	70,587	0	0	0	0	0	0
2024	1,057,820	867,227	88	6,224	341	52	33,807	77,010	0	0	0	0	0	0
2025	1,133,180	901,693	91	6,124	304	56	35,916	82,882	0	0	0	0	0	0
2026	1,208,870	949,608	94	6,036	292	62	37,757	84,368	0	0	0	0	0	0
2027	1,176,400	1,219,175	29	1,553	522	33	7,562	3,977	466	0	7	0	0	694
2028	1,246,592	1,281,087	31	1,612	552	36	8,031	4,465	487	0	7	0	0	737
2029	1,297,233	1,368,087	33	1,711	664	40	8,721	5,931	518	0	8	0	0	794
2030	1,349,676	1,461,988	41	2,453	1,254	51	10,957	13,850	631	0	10	0	0	965

Source: Jacobs Consultancy, December 2010.

JACOBS CONSULTANCY

Table B-155

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ	HSR_ SAN	LAX_ HSR	LAX_ HSR_ONT	ONT_ HSR	SAN_ HSR	SAN_ HSR_ONT
2006	31,818	633	8	21	136	19	583,232	7	0	0	0	0	0	0
2007	32,687	650	9	22	138	19	602,366	7	0	0	0	0	0	0
2008	30,096	597	8	20	126	17	557,169	6	0	0	0	0	0	0
2009	26,589	387	6	16	98	13	532,391	5	0	0	0	0	0	0
2010	22,825	233	3	11	76	7	529,455	4	0	0	0	0	0	0
2011	24,885	260	3	12	78	8	568,408	4	0	0	0	0	0	0
2012	27,168	289	4	14	80	9	610,273	5	0	0	0	0	0	0
2013	29,659	322	5	15	83	10	654,438	6	0	0	0	0	0	0
2014	31,397	348	5	16	84	9	691,392	6	0	0	0	0	0	0
2015	33,385	381	5	17	87	9	731,956	6	0	0	0	0	0	0
2016	35,149	404	5	17	85	9	775,181	7	0	0	0	0	0	0
2017	37,050	385	6	16	84	8	820,871	7	0	0	0	0	0	0
2018	36,718	301	4	12	78	6	862,572	6	0	0	0	0	0	0
2019	33,304	243	2	8	67	3	909,322	5	0	0	0	0	0	0
2020	32,038	204	1	7	61	2	955,973	4	0	0	0	0	0	0
2021	30,789	179	1	5	52	1	1,004,776	4	0	0	0	0	0	0
2022	30,895	174	1	5	47	1	1,054,482	4	0	0	0	0	0	0
2023	32,698	182	1	5	44	1	1,104,868	4	0	0	0	0	0	0
2024	33,418	177	1	5	40	1	1,158,864	4	0	0	0	0	0	0
2025	34,312	179	1	5	37	1	1,215,308	4	0	0	0	0	0	0
2026	36,445	190	1	6	35	1	1,273,260	5	0	0	0	0	0	0
2027	25,807	184	0	5	73	0	1,359,483	2	11	0	2	0	0	19
2028	26,899	190	0	5	69	0	1,425,011	2	11	0	2	0	0	20
2029	25,330	188	1	5	65	0	1,496,415	3	10	0	2	0	0	20
2030	19,727	189	1	6	60	1	1,574,969	3	9	0	2	0	0	22

Source: Jacobs Consultancy, December 2010.

Table B-156
SUPPRESSED DEMAND– SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	-
2007	-
2008	7,600
2009	-
2010	123,711
2011	229,885
2012	341,768
2013	473,882
2014	486,268
2015	492,356
2016	492,161
2017	488,814
2018	476,346
2019	460,660
2020	442,101
2021	465,720
2022	743,805
2023	772,413
2024	1,044,500
2025	1,382,238
2026	1,491,280
2027	1,388,482
2028	1,440,129
2029	1,514,381
2030	1,592,993

Source: Jacobs Consultancy, December 2010.

B-4.5 General Aviation Optimization

B-4.5.1 Enhance McClellan-Palomar Airport for High-End / Corporate General Aviation

Table B-157
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,175,436	22,177,769	1,284,143	4,617,052	3,227,142	2,870,954	1,694,855	0
2007	8,536,836	23,023,639	1,314,557	4,784,381	3,357,604	2,950,580	1,777,140	0
2008	8,094,019	21,596,517	1,209,690	4,460,299	3,140,207	2,716,009	1,653,546	0
2009	7,829,675	20,987,157	1,131,800	4,205,229	3,043,606	2,524,500	1,536,821	0
2010	7,271,822	19,258,576	1,057,860	3,916,326	3,073,649	2,537,041	1,542,482	0
2011	7,643,806	20,612,584	1,083,920	4,170,302	3,290,219	2,581,566	1,675,486	0
2012	7,936,315	21,820,164	1,096,830	4,388,700	3,476,571	2,595,507	1,826,551	0
2013	8,263,068	23,096,716	1,103,219	4,642,240	3,662,566	2,608,357	1,975,084	0
2014	8,638,482	24,380,009	1,112,528	4,881,367	3,872,326	2,615,480	2,103,525	0
2015	9,050,666	25,745,140	1,128,606	5,150,388	4,109,741	2,633,243	2,243,788	0
2016	9,527,288	27,163,195	1,144,873	5,414,315	4,354,373	2,656,380	2,386,261	0
2017	10,080,859	28,121,476	1,266,019	5,492,612	4,696,575	2,888,758	2,595,277	0
2018	10,586,578	28,153,971	1,546,610	5,514,303	5,153,358	3,499,163	2,870,436	0
2019	11,091,546	28,208,293	1,867,405	5,550,866	5,463,980	4,241,063	3,120,830	0
2020	11,599,124	28,201,392	2,087,672	5,536,487	5,658,323	5,134,124	3,367,621	0
2021	12,011,251	28,042,305	2,066,975	5,476,966	5,704,707	5,466,699	3,555,528	0
2022	12,392,432	28,403,401	2,102,031	5,463,719	5,838,462	5,649,664	3,737,927	0
2023	12,528,941	28,520,110	2,088,015	5,371,710	5,902,544	5,744,460	3,925,135	0
2024	12,515,023	28,054,094	2,056,304	5,179,638	5,832,360	5,769,586	4,115,229	0
2025	12,903,440	29,559,699	2,048,631	5,470,411	6,127,729	5,764,059	4,277,884	0
2026	12,926,374	29,487,533	2,061,831	5,287,882	6,107,962	5,799,539	4,461,403	0
2027	12,934,719	29,374,197	2,071,296	5,124,190	6,107,841	5,767,453	4,645,989	0
2028	13,079,923	30,038,011	2,081,762	5,178,254	6,233,065	5,760,928	4,834,149	0
2029	13,100,734	30,494,589	2,121,531	5,221,918	6,313,974	5,889,534	5,034,195	0
2030	13,051,057	30,334,675	2,097,020	4,922,295	6,192,136	5,842,711	5,246,665	0

Source: Jacobs Consultancy, December 2010.

Table B-158

TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,600,630	29,735,866	1,284,143	4,728,046	3,227,142	2,870,954	1,694,855	0
2007	9,122,352	31,619,073	1,314,557	4,954,223	3,357,604	2,950,580	1,777,140	0
2008	8,734,958	29,129,267	1,209,690	4,595,403	3,140,207	2,716,009	1,653,546	0
2009	8,197,985	27,651,974	1,131,800	4,259,052	3,043,606	2,524,500	1,536,821	0
2010	7,719,404	25,899,456	1,057,860	4,016,534	3,073,649	2,539,351	1,542,482	0
2011	8,114,284	27,720,363	1,083,920	4,277,007	3,290,219	2,583,916	1,675,486	0
2012	8,424,797	29,344,349	1,096,830	4,500,994	3,476,571	2,597,870	1,826,551	0
2013	8,771,661	31,061,092	1,103,219	4,761,021	3,662,566	2,610,732	1,975,084	0
2014	9,170,181	32,786,898	1,112,528	5,006,267	3,872,326	2,617,861	2,103,525	0
2015	9,607,736	34,622,764	1,128,606	5,282,172	4,109,741	2,635,640	2,243,788	0
2016	10,113,693	36,529,803	1,144,873	5,552,852	4,354,373	2,658,798	2,386,261	0
2017	10,701,338	37,818,524	1,266,019	5,633,152	4,696,575	2,891,388	2,595,277	0
2018	11,238,183	37,862,225	1,546,610	5,655,398	5,153,358	3,502,349	2,870,436	0
2019	11,774,232	37,935,278	1,867,405	5,692,896	5,463,980	4,244,924	3,120,830	0
2020	12,313,052	37,925,998	2,087,672	5,678,150	5,658,323	5,138,798	3,367,621	0
2021	12,750,545	37,712,054	2,066,975	5,617,105	5,704,707	5,471,676	3,555,528	0
2022	13,155,188	38,197,665	2,102,031	5,603,519	5,838,462	5,654,808	3,737,927	0
2023	13,300,099	38,354,618	2,088,015	5,509,156	5,902,544	5,749,689	3,925,135	0
2024	13,285,324	37,727,907	2,056,304	5,312,170	5,832,360	5,774,838	4,115,229	0
2025	13,697,648	39,752,686	2,048,631	5,610,383	6,127,729	5,769,307	4,277,884	0
2026	13,721,994	39,655,636	2,061,831	5,423,183	6,107,962	5,804,819	4,461,403	0
2027	13,730,853	39,503,218	2,071,296	5,255,303	6,107,841	5,772,704	4,645,989	0
2028	13,884,994	40,395,933	2,081,762	5,310,750	6,233,065	5,766,173	4,834,149	0
2029	13,907,085	41,009,951	2,121,531	5,355,532	6,313,974	5,894,896	5,034,195	0
2030	13,854,351	40,794,895	2,097,020	5,048,242	6,192,136	5,848,030	5,246,665	0

Source: Jacobs Consultancy, December 2010.

Table B-159
TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,490,656	1,718,342	276,034	1,107,755	851,011	1,045,336	0	0
2007	1,646,098	1,844,073	290,545	1,182,300	911,094	1,121,280	0	0
2008	1,580,461	1,730,371	267,357	1,102,782	854,829	1,052,403	0	0
2009	1,536,164	1,679,871	261,674	1,050,498	847,925	1,004,129	0	0
2010	1,459,448	1,508,591	229,309	947,763	781,954	891,795	0	0
2011	1,529,197	1,580,619	230,244	1,015,691	833,423	917,635	0	0
2012	1,592,018	1,644,852	229,378	1,081,756	881,349	936,121	0	0
2013	1,665,053	1,717,828	227,808	1,157,557	932,225	955,811	0	0
2014	1,747,297	1,796,911	226,155	1,240,004	991,609	977,157	0	0
2015	1,840,987	1,890,014	227,221	1,339,792	1,064,490	1,004,814	0	0
2016	1,950,526	1,985,301	228,086	1,449,729	1,141,495	1,028,822	0	0
2017	2,062,625	1,964,329	235,982	1,472,591	1,191,554	1,056,317	0	0
2018	2,144,191	1,886,814	262,794	1,500,610	1,267,234	1,150,112	0	0
2019	2,228,713	1,833,750	293,158	1,559,917	1,342,184	1,263,052	0	0
2020	2,310,729	1,749,301	306,611	1,591,609	1,398,936	1,364,989	0	0
2021	2,391,702	1,688,571	299,657	1,612,937	1,426,492	1,378,411	0	0
2022	2,471,785	1,673,202	300,682	1,660,581	1,474,107	1,395,389	0	0
2023	2,534,724	1,648,360	298,029	1,690,415	1,507,960	1,394,853	0	0
2024	2,588,785	1,603,282	294,811	1,693,041	1,515,774	1,377,444	0	0
2025	2,678,703	1,644,531	295,181	1,812,285	1,598,090	1,408,016	0	0
2026	2,746,439	1,602,588	306,032	1,821,740	1,622,781	1,415,223	0	0
2027	2,803,781	1,564,115	316,816	1,831,659	1,647,672	1,419,001	0	0
2028	2,882,753	1,558,147	325,709	1,892,679	1,697,567	1,440,857	0	0
2029	2,957,057	1,530,176	336,545	1,946,099	1,740,239	1,474,618	0	0
2030	3,036,807	1,489,388	346,583	1,923,086	1,742,339	1,484,586	0	0

Source: Jacobs Consultancy, December 2010.

Table B-160

TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,202,403	13,700,970	1,001,972	3,457,314	2,266,647	1,821,150	0	0
2007	6,386,942	14,125,689	1,017,728	3,548,884	2,334,520	1,824,726	0	0
2008	6,049,746	13,199,430	936,792	3,303,222	2,187,365	1,659,573	0	0
2009	5,806,752	12,544,026	864,614	3,102,719	2,103,136	1,516,349	0	0
2010	5,319,723	11,201,639	823,158	2,925,733	2,203,130	1,641,300	0	0
2011	5,585,988	12,005,405	847,909	3,114,163	2,369,409	1,659,693	0	0
2012	5,781,093	12,687,998	861,299	3,268,397	2,508,391	1,654,847	0	0
2013	5,995,950	13,393,986	868,867	3,447,959	2,643,476	1,647,699	0	0
2014	6,254,286	14,156,834	879,504	3,607,841	2,794,431	1,633,216	0	0
2015	6,535,955	14,955,994	894,090	3,779,141	2,958,054	1,622,990	0	0
2016	6,856,752	15,783,277	909,089	3,935,575	3,123,393	1,621,793	0	0
2017	7,230,132	16,299,599	1,025,837	3,998,893	3,417,007	1,829,073	0	0
2018	7,572,977	16,124,978	1,282,351	3,999,019	3,797,895	2,347,747	0	0
2019	7,925,033	15,865,184	1,573,470	3,979,156	4,036,664	2,977,298	0	0
2020	8,297,811	15,508,336	1,780,545	3,935,166	4,184,923	3,768,686	0	0
2021	8,561,102	14,955,725	1,766,842	3,854,801	4,206,634	4,087,893	0	0
2022	8,803,981	14,822,169	1,800,910	3,794,321	4,294,297	4,253,912	0	0
2023	8,820,012	14,423,559	1,789,563	3,672,619	4,324,358	4,349,255	0	0
2024	8,662,324	13,462,301	1,761,057	3,477,619	4,242,974	4,391,774	0	0
2025	8,886,875	14,294,025	1,753,001	3,648,930	4,453,774	4,355,661	0	0
2026	8,757,254	13,658,071	1,755,347	3,456,838	4,405,907	4,383,925	0	0
2027	8,598,517	12,964,969	1,754,010	3,282,709	4,375,084	4,348,038	0	0
2028	8,588,976	12,954,218	1,755,567	3,274,803	4,445,078	4,319,636	0	0
2029	8,510,224	12,673,009	1,784,484	3,262,915	4,476,584	4,414,457	0	0
2030	8,331,563	11,741,617	1,749,904	2,982,867	4,343,006	4,357,625	0	0

Source: Jacobs Consultancy, December 2010.

Table B-161

TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	365,482	5,299,004	82	44,078	31,367	42	18,578	0
2007	384,592	5,560,245	87	45,169	32,515	43	19,887	0
2008	357,936	5,353,383	83	47,285	28,495	42	17,261	0
2009	387,424	5,464,331	83	45,141	24,808	40	18,404	0
2010	400,961	5,286,437	78	36,209	23,601	36	19,998	0
2011	432,182	5,694,033	80	33,493	19,577	36	21,686	0
2012	461,981	6,086,341	81	31,249	16,254	35	23,171	0
2013	495,959	6,512,469	84	29,078	13,647	35	24,817	0
2014	527,682	6,900,882	85	25,591	11,332	34	26,216	0
2015	560,695	7,314,435	86	23,121	9,529	34	27,638	0
2016	602,710	7,741,779	87	20,195	7,863	34	29,623	0
2017	667,610	8,182,210	87	14,273	10,467	36	30,413	0
2018	754,865	8,529,651	90	10,784	20,714	42	31,434	0
2019	831,879	8,919,127	93	9,161	25,028	47	32,723	0
2020	893,332	9,366,926	89	7,834	19,573	48	33,398	0
2021	962,583	9,804,175	89	7,532	16,141	49	33,907	0
2022	1,020,479	10,282,305	89	7,229	12,717	50	33,862	0
2023	1,077,990	10,791,702	90	7,141	10,319	52	33,748	0
2024	1,166,474	11,300,597	94	7,400	10,412	56	35,883	0
2025	1,236,125	11,874,729	97	7,546	8,420	60	37,511	0
2026	1,319,624	12,445,557	100	7,626	7,098	64	39,678	0
2027	1,426,584	13,019,772	106	8,065	7,380	71	42,668	0
2028	1,499,234	13,643,545	112	8,935	7,290	79	44,851	0
2029	1,522,397	14,355,952	118	10,992	8,017	91	46,153	0
2030	1,569,417	15,125,401	126	14,313	9,567	106	48,586	0

Source: Jacobs Consultancy, December 2010.

Table B-162

TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	116,895	1,459,454	6,055	7,904	78,118	4,426	1,676,277	0
2007	119,205	1,493,632	6,197	8,028	79,474	4,530	1,757,252	0
2008	105,876	1,313,333	5,458	7,011	69,519	3,991	1,636,285	0
2009	99,336	1,298,929	5,429	6,871	67,738	3,982	1,518,417	0
2010	91,690	1,261,909	5,314	6,621	64,963	3,909	1,522,484	0
2011	96,441	1,332,527	5,688	6,955	67,810	4,202	1,653,800	0
2012	101,224	1,400,972	6,071	7,299	70,577	4,503	1,803,379	0
2013	106,106	1,472,434	6,460	7,646	73,217	4,812	1,950,267	0
2014	109,217	1,525,381	6,784	7,931	74,954	5,072	2,077,308	0
2015	113,030	1,584,697	7,209	8,334	77,668	5,404	2,216,150	0
2016	117,299	1,652,838	7,612	8,816	81,622	5,731	2,356,637	0
2017	120,492	1,675,338	4,112	6,854	77,547	3,333	2,564,863	0
2018	114,544	1,612,528	1,375	3,889	67,515	1,263	2,839,002	0
2019	105,921	1,590,231	685	2,631	60,103	666	3,088,106	0
2020	97,251	1,576,830	426	1,878	54,891	401	3,334,223	0
2021	95,864	1,593,835	387	1,696	55,439	346	3,521,620	0
2022	96,187	1,625,724	350	1,589	57,341	314	3,704,065	0
2023	96,216	1,656,489	334	1,535	59,907	299	3,891,387	0
2024	97,440	1,687,914	342	1,578	63,199	311	4,079,346	0
2025	101,737	1,746,415	353	1,650	67,445	322	4,240,373	0
2026	103,057	1,781,317	351	1,677	72,175	326	4,421,725	0
2027	105,837	1,825,342	363	1,758	77,704	343	4,603,321	0
2028	108,960	1,882,102	375	1,837	83,130	356	4,789,298	0
2029	111,055	1,935,452	385	1,913	89,135	367	4,988,042	0
2030	113,270	1,978,269	406	2,030	97,224	394	5,198,079	0

Source: Jacobs Consultancy, December 2010.

Table B-163

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,815,067	12,429,093	697,988	2,319,049	2,013,970	1,702,851	972,499	0
2007	3,985,127	12,823,091	704,373	2,395,980	2,093,765	1,726,165	1,014,459	0
2008	3,817,349	11,972,661	641,493	2,240,826	1,969,247	1,576,052	935,923	0
2009	3,782,508	12,128,479	635,844	2,193,731	1,978,321	1,492,919	891,581	0
2010	3,547,161	11,432,336	635,789	2,186,819	2,128,970	1,629,594	888,721	0
2011	3,735,783	12,274,878	650,280	2,264,184	2,262,933	1,626,625	952,598	0
2012	3,885,904	13,039,501	656,747	2,314,345	2,372,410	1,602,545	1,022,606	0
2013	4,056,521	13,851,853	657,458	2,380,128	2,477,799	1,577,979	1,093,093	0
2014	4,227,357	14,635,945	658,766	2,416,122	2,595,477	1,541,767	1,151,438	0
2015	4,401,328	15,434,634	664,103	2,448,448	2,725,252	1,507,412	1,215,683	0
2016	4,582,138	16,288,592	670,700	2,457,259	2,853,827	1,483,238	1,275,322	0
2017	4,796,809	16,776,592	774,194	2,376,850	3,069,681	1,674,676	1,395,783	0
2018	4,969,872	16,507,210	1,019,524	2,240,741	3,324,082	2,193,503	1,585,098	0
2019	5,132,384	16,196,919	1,300,382	2,077,688	3,410,027	2,819,102	1,742,468	0
2020	5,291,508	15,818,974	1,492,723	1,911,281	3,378,376	3,587,411	1,890,344	0
2021	5,446,647	15,692,212	1,495,440	1,827,999	3,362,643	3,922,618	1,990,301	0
2022	5,574,846	15,888,895	1,541,688	1,740,099	3,410,384	4,096,546	2,081,037	0
2023	5,633,099	16,001,835	1,555,178	1,660,277	3,452,591	4,225,291	2,171,008	0
2024	5,657,924	15,843,203	1,573,338	1,613,601	3,472,238	4,354,266	2,255,995	0
2025	5,765,978	16,703,173	1,554,415	1,597,840	3,594,042	4,286,068	2,328,947	0
2026	5,806,058	16,717,469	1,603,970	1,531,760	3,626,744	4,398,283	2,416,125	0
2027	5,831,925	16,731,028	1,654,721	1,503,227	3,716,713	4,465,297	2,499,655	0
2028	5,904,586	17,121,031	1,682,167	1,492,401	3,818,325	4,486,980	2,582,947	0
2029	5,963,106	17,282,889	1,740,910	1,496,697	3,891,172	4,650,087	2,672,810	0
2030	6,030,794	17,244,543	1,774,739	1,501,516	3,987,409	4,761,089	2,768,205	0

Source: Jacobs Consultancy, December 2010.

Table B-164

TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,369	9,748,675	586,155	2,298,004	1,213,172	1,168,102	722,356	0
2007	4,551,710	10,200,548	610,184	2,388,401	1,263,839	1,224,415	762,681	0
2008	4,276,670	9,623,856	568,197	2,219,473	1,170,961	1,139,957	717,623	0
2009	4,047,167	8,858,678	495,956	2,011,498	1,065,285	1,031,580	645,240	0
2010	3,724,662	7,826,240	422,071	1,729,508	944,680	907,447	653,761	0
2011	3,908,023	8,337,706	433,640	1,906,118	1,027,286	954,941	722,889	0
2012	4,050,411	8,780,663	440,083	2,074,356	1,104,161	992,962	803,945	0
2013	4,206,548	9,244,864	445,761	2,262,112	1,184,767	1,030,378	881,990	0
2014	4,411,125	9,744,064	453,762	2,465,245	1,276,849	1,073,713	952,087	0
2015	4,649,338	10,310,506	464,503	2,701,940	1,384,489	1,125,831	1,028,105	0
2016	4,945,150	10,874,604	474,174	2,957,056	1,500,546	1,173,142	1,110,939	0
2017	5,284,050	11,344,883	491,825	3,115,762	1,626,894	1,214,083	1,199,494	0
2018	5,616,705	11,646,761	527,086	3,273,562	1,829,276	1,305,660	1,285,338	0
2019	5,959,162	12,011,374	567,024	3,473,178	2,053,953	1,421,961	1,378,362	0
2020	6,307,616	12,382,418	594,949	3,625,206	2,279,947	1,546,713	1,477,277	0
2021	6,564,604	12,350,093	571,535	3,648,967	2,342,064	1,544,081	1,565,226	0
2022	6,817,586	12,514,506	560,343	3,723,620	2,428,077	1,553,119	1,656,890	0
2023	6,895,842	12,518,275	532,837	3,711,433	2,449,952	1,519,169	1,754,127	0
2024	6,857,098	12,210,890	482,966	3,566,037	2,360,122	1,415,320	1,859,235	0
2025	7,137,462	12,856,526	494,216	3,872,570	2,533,688	1,477,992	1,948,937	0
2026	7,120,317	12,770,064	457,861	3,756,122	2,481,218	1,401,256	2,045,278	0
2027	7,102,794	12,643,169	416,575	3,620,963	2,391,127	1,302,156	2,146,334	0
2028	7,175,337	12,916,979	399,595	3,685,853	2,414,740	1,273,948	2,251,202	0
2029	7,137,628	13,211,700	380,621	3,725,221	2,422,802	1,239,447	2,361,385	0
2030	7,020,263	13,090,132	322,281	3,420,779	2,204,727	1,081,622	2,478,460	0

Source: Jacobs Consultancy, December 2010.

Table B-165

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,333,661	1	6	90	104	0	0	0
2007	1,478,501	1	6	102	117	0	0	0
2008	1,422,668	1	6	103	116	0	0	0
2009	1,423,105	1	5	99	111	0	0	0
2010	1,358,751	0	3	84	94	0	0	0
2011	1,427,840	0	2	83	77	0	0	0
2012	1,490,361	0	2	80	61	0	0	0
2013	1,562,871	1	2	79	52	0	0	0
2014	1,644,273	1	1	75	51	0	0	0
2015	1,736,589	1	1	72	53	0	0	0
2016	1,842,033	1	1	75	64	0	0	0
2017	1,951,170	1	1	59	76	0	0	0
2018	2,029,531	1	1	36	88	0	0	0
2019	2,107,972	0	1	23	98	0	0	0
2020	2,184,887	0	0	14	105	0	0	0
2021	2,265,982	0	0	11	125	0	0	0
2022	2,347,131	0	0	9	135	0	0	0
2023	2,412,452	0	0	9	144	0	0	0
2024	2,469,437	0	0	9	154	0	0	0
2025	2,561,356	0	0	18	172	0	0	0
2026	2,633,602	0	0	25	207	0	0	0
2027	2,695,282	1	0	35	248	0	0	0
2028	2,777,165	1	0	74	300	0	0	0
2029	2,853,733	1	0	160	363	0	0	0
2030	2,936,656	1	0	215	451	0	0	0

Source: Jacobs Consultancy, December 2010.

Table B-166
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,623,917	231	308	2,464	813	7	0	0
2007	4,763,687	242	320	2,543	842	7	0	0
2008	4,538,109	238	312	2,471	817	7	0	0
2009	4,432,250	204	259	2,324	753	6	0	0
2010	4,252,829	87	169	2,163	723	3	0	0
2011	4,484,966	97	158	2,189	616	4	0	0
2012	4,661,723	107	144	2,177	514	4	0	0
2013	4,863,197	118	132	2,241	454	5	0	0
2014	5,104,837	131	120	2,208	425	6	0	0
2015	5,369,927	145	108	2,165	417	7	0	0
2016	5,651,662	163	101	2,192	446	8	0	0
2017	5,945,546	133	94	1,649	480	9	0	0
2018	6,182,017	74	88	962	517	11	0	0
2019	6,424,785	43	81	584	522	13	0	0
2020	6,680,521	25	60	331	487	15	0	0
2021	6,940,800	18	42	252	462	15	0	0
2022	7,191,036	15	33	208	465	16	0	0
2023	7,263,979	13	27	179	480	16	0	0
2024	7,215,033	10	21	165	506	17	0	0
2025	7,443,079	12	19	190	566	19	0	0
2026	7,414,779	12	16	197	652	21	0	0
2027	7,366,598	12	15	218	773	22	0	0
2028	7,423,672	13	13	256	929	26	0	0
2029	7,415,609	14	12	330	1,102	30	0	0
2030	7,373,686	15	11	483	1,306	34	0	0

Source: Jacobs Consultancy, December 2010.

Table B-167

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	340,271	420,285	54	41,787	1,145	11	15,948	0
2007	358,791	450,859	59	42,866	1,219	12	17,157	0
2008	351,030	445,612	59	41,553	1,203	13	17,172	0
2009	377,159	439,641	60	37,347	1,181	13	17,784	0
2010	376,608	412,182	56	34,526	1,089	12	17,087	0
2011	407,196	454,613	59	31,897	986	14	18,403	0
2012	436,464	495,540	62	29,726	897	15	19,576	0
2013	469,917	542,557	65	27,618	833	17	20,953	0
2014	501,412	586,663	68	24,253	777	18	22,155	0
2015	534,160	633,352	71	21,890	733	20	23,395	0
2016	575,506	678,166	74	19,140	667	22	25,083	0
2017	638,098	712,005	77	13,600	708	25	25,750	0
2018	721,623	711,236	80	10,311	809	29	26,617	0
2019	795,869	723,156	84	8,777	767	33	27,706	0
2020	856,329	755,628	83	7,529	647	37	28,260	0
2021	928,263	774,959	83	7,171	552	40	29,763	0
2022	990,959	806,029	85	6,814	489	43	30,951	0
2023	1,057,829	837,717	87	6,596	443	46	32,563	0
2024	1,152,979	846,985	92	6,656	407	51	35,399	0
2025	1,229,435	886,381	96	6,581	382	56	37,316	0
2026	1,316,496	923,990	100	6,479	368	61	39,592	0
2027	1,424,792	935,909	105	6,544	374	67	42,625	0
2028	1,498,184	993,051	111	6,996	394	75	44,828	0
2029	1,521,667	1,107,005	117	8,292	434	87	46,140	0
2030	1,568,820	1,213,674	126	10,094	482	101	48,577	0

Source: Jacobs Consultancy, December 2010.

Table B-168

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS
(O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,310	613	8	21	133	18	568,393	0
2007	32,175	630	8	22	135	18	587,012	0
2008	29,632	580	8	20	124	17	542,941	0
2009	26,206	377	5	15	96	13	518,763	0
2010	22,534	229	3	11	74	7	515,877	0
2011	24,574	255	3	12	77	8	553,789	0
2012	26,834	285	4	13	79	8	594,538	0
2013	29,299	317	5	15	82	9	637,544	0
2014	31,023	343	5	16	83	9	673,533	0
2015	32,989	376	5	17	86	9	713,044	0
2016	34,746	400	5	17	84	9	755,196	0
2017	36,640	379	5	16	82	8	799,756	0
2018	35,564	283	4	12	76	5	841,239	0
2019	32,979	221	2	8	66	3	886,141	0
2020	31,201	186	1	6	58	2	932,236	0
2021	31,252	172	1	6	51	1	978,552	0
2022	32,049	172	1	5	47	1	1,026,333	0
2023	32,855	174	1	5	44	1	1,075,227	0
2024	34,016	175	1	6	40	1	1,125,329	0
2025	36,224	186	1	6	38	2	1,178,658	0
2026	37,518	187	1	6	35	2	1,233,864	0
2027	39,357	192	2	6	33	2	1,291,530	0
2028	41,196	202	2	7	32	2	1,352,549	0
2029	42,233	209	2	7	33	2	1,417,158	0
2030	43,261	211	2	7	33	2	1,485,095	0

Source: Jacobs Consultancy, December 2010.

Table B-169
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	-
2007	-
2008	7,428
2009	-
2010	123,351
2011	229,323
2012	341,236
2013	473,272
2014	485,688
2015	491,823
2016	491,381
2017	487,756
2018	475,038
2019	459,097
2020	441,413
2021	427,627
2022	407,444
2023	587,575
2024	912,649
2025	951,364
2026	1,323,731
2027	1,670,882
2028	1,957,703
2029	2,321,582
2030	2,772,476

Source: Jacobs Consultancy, December 2010.

JACOBS CONSULTANCY

B-4.5.2 Enhance Brown Field Municipal for High-End / Corporate General Aviation

Table B-170
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810
2007	8,496,685	22,979,001	1,310,691	4,778,356	3,341,752	2,947,173	1,846,043	67,427
2008	8,055,185	21,557,508	1,206,206	4,454,960	3,124,465	2,712,986	1,716,840	63,162
2009	7,789,833	20,945,017	1,128,241	4,199,937	3,029,193	2,521,583	1,602,930	62,428
2010	7,234,385	19,213,690	1,054,361	3,911,131	3,062,237	2,534,337	1,611,396	56,119
2011	7,606,328	20,562,860	1,080,163	4,165,096	3,280,048	2,578,657	1,748,423	57,389
2012	7,899,196	21,765,959	1,092,804	4,383,482	3,467,500	2,592,387	1,903,522	58,125
2013	8,226,216	23,038,195	1,098,916	4,636,979	3,654,462	2,605,017	2,056,192	58,938
2014	8,601,062	24,314,234	1,107,078	4,882,386	3,864,312	2,611,689	2,187,792	60,021
2015	9,013,376	25,675,585	1,122,837	5,151,638	4,102,187	2,629,170	2,331,799	61,142
2016	9,490,555	27,087,569	1,138,750	5,415,417	4,347,709	2,651,992	2,477,988	64,004
2017	10,141,573	27,089,526	1,412,011	5,506,331	4,818,605	3,276,782	2,748,539	88,063
2018	10,622,004	27,105,289	1,717,662	5,533,210	5,219,006	3,977,979	3,031,654	105,108
2019	11,126,997	27,107,647	1,973,002	5,561,242	5,345,146	4,837,281	3,306,555	119,059
2020	11,578,054	27,419,828	2,043,137	5,583,739	5,584,266	5,297,411	3,551,566	126,348
2021	11,968,692	27,737,741	2,071,296	5,521,148	5,720,668	5,536,722	3,761,761	129,554
2022	12,341,117	28,171,367	2,110,404	5,496,679	5,850,669	5,671,016	3,963,672	131,886
2023	12,711,338	28,122,525	2,088,096	5,401,455	5,828,765	5,663,969	4,158,383	135,746
2024	13,139,433	29,540,624	2,100,201	5,687,832	6,133,946	5,713,046	4,341,840	136,818
2025	13,242,403	29,351,837	2,076,886	5,475,049	6,062,098	5,678,035	4,551,495	143,183
2026	13,560,061	30,634,301	2,082,503	5,566,523	6,238,270	5,649,292	4,737,075	145,769
2027	13,477,354	29,644,365	2,094,696	5,177,693	6,055,358	5,822,582	4,973,702	237,155
2028	13,484,857	29,505,968	2,083,222	5,077,575	6,039,994	5,853,693	5,182,815	251,019
2029	13,691,092	30,233,920	2,091,378	5,106,814	6,177,988	5,839,570	5,391,766	259,908
2030	13,894,996	32,027,952	2,099,402	5,372,645	6,468,632	5,882,341	5,603,407	268,787

Source: Jacobs Consultancy, December 2010.

Table B-171
TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810
2007	9,079,447	31,557,771	1,310,691	4,947,983	3,341,752	2,947,173	1,846,043	67,427
2008	8,693,049	29,076,651	1,206,206	4,589,902	3,124,465	2,712,986	1,716,840	63,162
2009	8,156,269	27,596,451	1,128,241	4,253,692	3,029,193	2,521,583	1,602,930	62,428
2010	7,679,662	25,839,093	1,054,361	4,011,206	3,062,237	2,536,645	1,611,396	56,119
2011	8,074,499	27,653,493	1,080,163	4,271,669	3,280,048	2,581,005	1,748,423	57,389
2012	8,385,393	29,271,453	1,092,804	4,495,642	3,467,500	2,594,747	1,903,522	58,125
2013	8,732,541	30,982,390	1,098,916	4,755,626	3,654,462	2,607,388	2,056,192	58,938
2014	9,130,459	32,698,442	1,107,078	5,007,312	3,864,312	2,614,067	2,187,792	60,021
2015	9,568,150	34,529,224	1,122,837	5,283,453	4,102,187	2,631,564	2,331,799	61,142
2016	10,074,700	36,428,099	1,138,750	5,553,981	4,347,709	2,654,406	2,477,988	64,004
2017	10,765,788	36,430,730	1,412,011	5,647,222	4,818,605	3,279,765	2,748,539	88,063
2018	11,275,790	36,451,929	1,717,662	5,674,789	5,219,006	3,981,601	3,031,654	105,108
2019	11,811,865	36,455,100	1,973,002	5,703,538	5,345,146	4,841,685	3,306,555	119,059
2020	12,290,685	36,874,929	2,043,137	5,726,611	5,584,266	5,302,234	3,551,566	126,348
2021	12,705,367	37,302,467	2,071,296	5,662,418	5,720,668	5,541,763	3,761,761	129,554
2022	13,100,715	37,885,620	2,110,404	5,637,323	5,850,669	5,676,179	3,963,672	131,886
2023	13,493,722	37,819,935	2,088,096	5,539,663	5,828,765	5,669,125	4,158,383	135,746
2024	13,948,167	39,727,033	2,100,201	5,833,367	6,133,946	5,718,248	4,341,840	136,818
2025	14,057,474	39,473,148	2,076,886	5,615,140	6,062,098	5,683,204	4,551,495	143,183
2026	14,394,684	41,197,840	2,082,503	5,708,954	6,238,270	5,654,435	4,737,075	145,769
2027	14,306,887	39,866,547	2,094,696	5,310,175	6,055,358	5,827,883	4,973,702	237,155
2028	14,314,852	39,680,427	2,083,222	5,207,495	6,039,994	5,859,023	5,182,815	251,019
2029	14,533,781	40,659,397	2,091,378	5,237,483	6,177,988	5,844,886	5,391,766	259,908
2030	14,750,235	43,072,060	2,099,402	5,510,116	6,468,632	5,887,696	5,603,407	268,787

Source: Jacobs Consultancy, December 2010.

Table B-172

TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS
(O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092
2007	1,644,170	1,843,518	290,465	1,181,931	910,663	1,120,975	0	8,725
2008	1,578,512	1,729,935	267,294	1,102,490	854,474	1,052,165	0	8,363
2009	1,534,085	1,679,649	261,644	1,050,347	847,772	1,004,009	0	7,889
2010	1,457,330	1,508,470	229,293	947,678	781,861	891,730	0	7,427
2011	1,527,490	1,580,515	230,231	1,015,612	833,334	917,580	0	7,137
2012	1,590,728	1,644,764	229,367	1,081,683	881,261	936,074	0	6,821
2013	1,664,156	1,717,754	227,800	1,157,490	932,136	955,772	0	6,569
2014	1,746,721	1,796,719	226,032	1,240,376	991,403	977,055	0	6,472
2015	1,840,734	1,889,817	227,095	1,340,213	1,064,258	1,004,710	0	6,410
2016	1,950,042	1,985,066	227,951	1,450,180	1,141,216	1,028,701	0	6,766
2017	2,061,612	1,857,962	250,506	1,434,497	1,188,648	1,105,217	0	7,106
2018	2,144,551	1,806,046	279,648	1,489,865	1,272,549	1,215,198	0	7,318
2019	2,231,663	1,742,420	299,056	1,541,979	1,321,297	1,327,714	0	7,515
2020	2,310,950	1,701,628	298,224	1,582,422	1,379,847	1,375,917	0	7,671
2021	2,391,690	1,675,997	297,782	1,619,176	1,425,545	1,394,508	0	7,425
2022	2,472,070	1,668,604	299,844	1,668,742	1,472,871	1,409,478	0	7,207
2023	2,556,461	1,645,975	297,095	1,697,336	1,491,940	1,397,883	0	6,990
2024	2,646,880	1,692,471	293,972	1,817,401	1,572,854	1,427,424	0	6,849
2025	2,717,659	1,649,397	300,523	1,822,488	1,587,368	1,419,902	0	7,124
2026	2,811,967	1,674,086	309,838	1,907,113	1,653,553	1,445,794	0	7,388
2027	2,830,408	1,575,010	321,156	1,854,401	1,643,308	1,448,087	0	59,477
2028	2,896,305	1,526,700	327,586	1,870,457	1,663,389	1,457,657	0	61,901
2029	2,987,830	1,519,095	337,207	1,926,886	1,715,028	1,480,871	0	64,096
2030	3,087,562	1,561,066	346,682	2,042,962	1,796,931	1,532,047	0	67,140

Source: Jacobs Consultancy, December 2010.

Table B-173

TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286
2007	6,356,756	14,120,831	1,017,194	3,547,170	2,328,687	1,823,868	0	44,017
2008	6,020,442	13,195,157	936,317	3,301,674	2,182,204	1,658,818	0	41,550
2009	5,777,120	12,540,574	864,218	3,101,381	2,098,651	1,515,712	0	39,987
2010	5,293,011	11,199,363	822,919	2,924,769	2,200,477	1,640,901	0	33,270
2011	5,558,588	12,003,096	847,663	3,113,156	2,366,507	1,659,267	0	34,288
2012	5,753,418	12,685,686	861,049	3,267,356	2,505,266	1,654,398	0	34,852
2013	5,968,001	13,391,674	868,611	3,446,868	2,640,129	1,647,227	0	35,426
2014	6,225,539	14,151,545	878,452	3,611,724	2,790,023	1,632,536	0	36,296
2015	6,506,846	14,950,371	893,028	3,783,378	2,953,246	1,622,257	0	37,103
2016	6,826,104	15,777,098	908,013	3,940,165	3,118,244	1,621,008	0	39,252
2017	7,239,053	15,606,175	1,160,374	4,053,824	3,528,140	2,170,550	0	42,425
2018	7,579,083	15,386,832	1,437,534	4,030,269	3,838,426	2,762,334	0	45,178
2019	7,944,801	15,099,134	1,673,648	4,008,566	3,923,771	3,509,306	0	48,329
2020	8,264,355	15,028,156	1,744,676	3,991,754	4,105,097	3,921,298	0	50,628
2021	8,528,658	14,913,364	1,773,308	3,893,155	4,197,882	4,142,048	0	51,363
2022	8,767,820	14,859,074	1,810,370	3,819,537	4,279,390	4,261,386	0	51,823
2023	8,975,410	14,320,925	1,790,812	3,695,577	4,234,801	4,265,933	0	52,001
2024	9,247,654	15,100,177	1,806,038	3,861,840	4,455,092	4,285,467	0	52,530
2025	9,203,957	14,385,498	1,776,175	3,643,794	4,363,450	4,257,981	0	53,845
2026	9,371,212	14,993,909	1,772,478	3,650,945	4,470,749	4,203,346	0	55,320
2027	9,170,891	13,530,100	1,773,351	3,314,591	4,287,298	4,374,340	0	87,140
2028	9,018,311	12,801,899	1,755,435	3,196,865	4,242,125	4,395,869	0	91,336
2029	9,123,287	12,760,214	1,753,962	3,167,837	4,319,115	4,358,519	0	93,910
2030	9,245,408	13,610,097	1,752,507	3,316,382	4,521,346	4,350,103	0	96,425

Source: Jacobs Consultancy, December 2010.

Table B-174

TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536
2007	375,998	5,569,079	71	44,692	21,003	29	19,867	11,798
2008	350,032	5,362,709	68	46,875	16,760	27	17,241	10,772
2009	379,173	5,472,045	68	44,547	13,774	25	18,386	12,212
2010	392,448	5,292,355	64	35,325	13,876	23	19,982	13,247
2011	423,853	5,697,722	68	32,798	11,270	24	21,672	13,680
2012	453,794	6,088,070	70	30,738	9,200	24	23,159	14,057
2013	487,833	6,512,504	73	28,744	7,666	25	24,807	14,436
2014	519,362	6,898,717	76	26,277	6,498	26	26,204	14,662
2015	552,366	7,311,148	78	23,852	5,522	27	27,628	14,917
2016	596,560	7,735,347	82	20,705	4,617	29	29,775	15,178
2017	721,207	8,080,607	92	15,052	18,107	40	32,884	37,108
2018	785,404	8,438,406	94	11,207	27,017	44	33,502	51,906
2019	844,851	8,843,507	93	9,323	23,168	48	34,306	62,761
2020	901,516	9,287,578	92	8,419	20,266	49	35,585	67,694
2021	949,394	9,747,177	91	7,795	14,341	49	35,170	70,459
2022	1,002,593	10,228,257	91	7,442	10,778	50	34,944	72,576
2023	1,078,711	10,712,688	94	7,582	10,007	53	35,430	76,478
2024	1,140,973	11,250,580	96	7,603	8,215	57	36,234	77,160
2025	1,217,677	11,811,735	99	7,794	6,985	60	38,193	81,945
2026	1,272,430	12,413,296	100	7,486	4,543	63	39,036	82,795
2027	1,371,272	12,988,939	104	7,699	4,655	69	41,637	90,271
2028	1,463,873	13,582,304	112	9,190	5,993	79	44,989	97,505
2029	1,471,722	14,307,046	117	10,982	6,406	90	45,737	101,620
2030	1,452,563	15,147,154	119	12,158	5,024	101	45,458	104,938

Source: Jacobs Consultancy, December 2010.

Table B-175

TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897
2007	119,761	1,445,572	2,962	4,563	81,399	2,302	1,826,176	2,888
2008	106,198	1,269,708	2,527	3,922	71,027	1,976	1,699,598	2,478
2009	99,455	1,252,749	2,311	3,661	68,996	1,838	1,584,544	2,339
2010	91,596	1,213,503	2,084	3,360	66,023	1,683	1,591,414	2,175
2011	96,398	1,281,527	2,201	3,531	68,937	1,786	1,726,751	2,284
2012	101,256	1,347,439	2,318	3,704	71,773	1,889	1,880,362	2,395
2013	106,227	1,416,262	2,432	3,878	74,531	1,992	2,031,385	2,506
2014	109,440	1,467,253	2,518	4,008	76,387	2,071	2,161,587	2,591
2015	113,431	1,524,249	2,636	4,196	79,161	2,176	2,304,171	2,712
2016	117,850	1,590,058	2,704	4,366	83,632	2,254	2,448,213	2,807
2017	119,701	1,544,781	1,038	2,958	83,711	974	2,715,654	1,423
2018	112,967	1,474,006	387	1,870	81,014	403	2,998,152	707
2019	105,682	1,422,586	204	1,375	76,910	214	3,272,249	454
2020	101,233	1,402,466	144	1,144	79,057	148	3,515,980	356
2021	98,950	1,401,203	115	1,022	82,900	117	3,726,590	307
2022	98,634	1,415,432	99	959	87,629	102	3,928,728	282
2023	100,756	1,442,937	95	961	92,017	99	4,122,953	277
2024	103,926	1,497,396	96	988	97,786	99	4,305,606	280
2025	103,109	1,505,207	89	974	104,294	92	4,513,302	270
2026	104,452	1,553,010	87	979	109,425	88	4,698,039	266
2027	104,783	1,550,316	85	1,003	120,096	85	4,932,064	267
2028	106,369	1,595,064	90	1,063	128,487	88	5,137,826	277
2029	108,254	1,647,565	92	1,109	137,440	90	5,346,028	282
2030	109,463	1,709,636	93	1,143	145,332	90	5,557,948	285

Source: Jacobs Consultancy, December 2010.

Table B-176

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415
2007	3,945,162	12,795,788	701,074	2,391,545	2,069,301	1,723,671	1,080,579	58,230
2008	3,778,756	11,949,205	638,504	2,236,856	1,945,696	1,573,810	996,653	55,096
2009	3,742,821	12,102,279	632,694	2,189,485	1,955,405	1,490,591	954,254	56,230
2010	3,509,727	11,403,989	632,630	2,182,381	2,108,516	1,627,349	953,003	51,691
2011	3,698,331	12,242,555	646,883	2,259,772	2,243,072	1,624,189	1,020,704	52,856
2012	3,848,818	13,003,520	653,103	2,309,947	2,352,996	1,599,910	1,094,557	53,545
2013	4,019,699	13,812,417	653,562	2,375,717	2,458,657	1,575,138	1,168,983	54,324
2014	4,190,120	14,591,208	653,834	2,416,095	2,576,086	1,538,680	1,230,356	55,352
2015	4,364,219	15,387,029	658,891	2,448,498	2,705,718	1,504,085	1,298,184	56,396
2016	4,544,621	16,238,239	665,126	2,457,075	2,833,894	1,479,626	1,360,977	58,832
2017	4,788,493	15,993,360	905,797	2,403,268	3,135,813	2,042,079	1,537,434	82,062
2018	4,938,062	15,675,134	1,173,393	2,245,923	3,314,925	2,634,193	1,732,421	98,282
2019	5,098,697	15,295,111	1,394,508	2,078,520	3,227,437	3,368,206	1,912,383	111,312
2020	5,237,139	15,316,764	1,459,643	1,969,946	3,304,633	3,761,206	2,057,874	117,999
2021	5,373,986	15,464,262	1,498,054	1,847,104	3,339,597	3,980,542	2,179,640	121,185
2022	5,497,834	15,716,931	1,547,791	1,750,174	3,383,021	4,107,216	2,288,624	123,577
2023	5,628,980	15,798,588	1,561,605	1,695,182	3,384,783	4,164,704	2,384,917	127,848
2024	5,744,077	16,593,349	1,560,976	1,671,478	3,506,386	4,146,455	2,465,800	128,716
2025	5,795,954	16,591,174	1,581,644	1,598,789	3,504,568	4,203,885	2,581,663	135,617
2026	5,897,837	17,343,042	1,585,980	1,518,200	3,554,269	4,141,999	2,672,932	138,157
2027	5,864,151	16,796,887	1,656,874	1,450,391	3,526,436	4,453,877	2,804,678	217,215
2028	5,910,517	16,753,236	1,686,496	1,457,258	3,601,280	4,581,448	2,906,128	232,441
2029	6,015,914	17,135,539	1,713,590	1,446,390	3,725,027	4,602,965	3,005,362	241,961
2030	6,124,540	18,107,517	1,712,100	1,423,993	3,844,556	4,592,073	3,103,686	250,470

Source: Jacobs Consultancy. December 2010.

Table B-177

TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395
2007	4,551,523	10,183,213	609,618	2,386,811	1,272,451	1,223,502	765,464	9,197
2008	4,276,429	9,608,303	567,702	2,218,104	1,178,769	1,139,177	720,187	8,066
2009	4,047,013	8,842,738	495,547	2,010,452	1,073,789	1,030,992	648,677	6,199
2010	3,724,657	7,809,701	421,731	1,728,750	953,721	906,988	658,392	4,427
2011	3,907,997	8,320,305	433,279	1,905,325	1,036,976	954,468	727,719	4,533
2012	4,050,378	8,762,439	439,701	2,073,535	1,114,505	992,477	808,965	4,580
2013	4,206,518	9,225,777	445,354	2,261,262	1,195,806	1,029,878	887,209	4,614
2014	4,410,943	9,723,025	453,244	2,466,291	1,288,227	1,073,009	957,436	4,669
2015	4,649,157	10,288,556	463,945	2,703,140	1,396,469	1,125,085	1,033,615	4,746
2016	4,945,934	10,849,330	473,624	2,958,341	1,513,815	1,172,365	1,117,012	5,172
2017	5,353,080	11,096,166	506,213	3,103,063	1,682,793	1,234,703	1,211,105	6,001
2018	5,683,942	11,430,155	544,269	3,287,288	1,904,081	1,343,787	1,299,233	6,826
2019	6,028,300	11,812,536	578,494	3,482,722	2,117,709	1,469,074	1,394,171	7,747
2020	6,340,916	12,103,064	583,495	3,613,793	2,279,633	1,536,205	1,493,692	8,348
2021	6,594,706	12,273,479	573,241	3,674,044	2,381,070	1,556,180	1,582,120	8,369
2022	6,843,283	12,454,437	562,613	3,746,505	2,467,648	1,563,800	1,675,047	8,309
2023	7,082,358	12,323,937	526,491	3,706,273	2,443,981	1,499,265	1,773,466	7,899
2024	7,395,356	12,947,274	539,225	4,016,354	2,627,561	1,566,592	1,876,040	8,102
2025	7,446,449	12,760,664	495,242	3,876,260	2,557,530	1,474,150	1,969,832	7,566
2026	7,662,224	13,291,259	496,523	4,048,324	2,684,001	1,507,293	2,064,143	7,611
2027	7,613,203	12,847,478	437,822	3,727,303	2,528,922	1,368,705	2,169,023	19,939
2028	7,574,340	12,752,732	396,726	3,620,317	2,438,714	1,272,245	2,276,687	18,578
2029	7,675,178	13,098,381	377,788	3,660,424	2,452,962	1,236,604	2,386,404	17,946
2030	7,770,456	13,920,435	387,302	3,948,652	2,624,076	1,290,267	2,499,721	18,317

Source: Jacobs Consultancy, December 2010.

Table B-178

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,332,011	1	5	86	103	0	0	6,150
2007	1,476,619	1	6	97	115	0	0	6,944
2008	1,420,764	1	6	97	115	0	0	6,940
2009	1,421,057	1	5	96	110	0	0	7,188
2010	1,356,663	0	3	81	94	0	0	7,019
2011	1,426,170	0	2	81	76	0	0	6,761
2012	1,489,114	0	2	78	61	0	0	6,475
2013	1,562,017	0	2	77	52	0	0	6,249
2014	1,643,748	1	1	75	50	0	0	6,172
2015	1,736,386	1	1	71	53	0	0	6,123
2016	1,841,600	1	1	74	63	0	0	6,415
2017	1,950,489	1	1	49	75	0	0	6,710
2018	2,028,633	0	1	30	86	0	0	6,836
2019	2,106,880	0	1	19	91	0	0	6,924
2020	2,183,615	0	0	14	102	0	0	6,986
2021	2,265,171	0	0	11	123	0	0	6,746
2022	2,346,643	0	0	10	134	0	0	6,536
2023	2,432,186	0	0	9	141	0	0	6,339
2024	2,523,815	0	0	10	154	0	0	6,195
2025	2,598,264	0	0	17	169	0	0	6,478
2026	2,695,789	1	0	25	205	0	0	6,727
2027	2,718,512	0	0	32	232	0	0	47,087
2028	2,788,510	1	0	68	279	0	0	50,084
2029	2,882,463	1	0	155	340	0	0	52,518
2030	2,984,045	1	0	215	425	0	0	55,505

Source: Jacobs Consultancy, December 2010.

Table B-179

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS
(O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	779	6	0	27,931
2007	4,735,170	210	280	2,253	807	6	0	28,947
2008	4,510,420	205	272	2,182	784	6	0	28,120
2009	4,404,154	175	225	2,040	722	5	0	28,524
2010	4,227,063	75	147	1,906	697	3	0	26,110
2011	4,458,644	84	138	1,941	592	3	0	26,627
2012	4,635,239	94	127	1,941	492	4	0	26,773
2013	4,836,542	104	117	2,010	431	5	0	26,937
2014	5,077,798	116	107	2,002	402	5	0	27,302
2015	5,342,644	129	97	1,969	392	6	0	27,536
2016	5,623,001	145	90	1,992	420	7	0	28,921
2017	5,915,579	75	84	1,229	452	8	0	30,484
2018	6,150,622	43	78	728	473	10	0	31,696
2019	6,392,155	26	64	435	439	11	0	32,889
2020	6,646,599	20	49	312	440	13	0	34,004
2021	6,905,584	16	37	236	434	13	0	34,195
2022	7,154,565	14	31	197	437	14	0	34,287
2023	7,410,124	12	24	179	440	14	0	34,358
2024	7,676,255	13	22	183	486	16	0	34,553
2025	7,727,463	12	18	181	516	16	0	35,768
2026	7,923,219	14	16	197	606	19	0	36,966
2027	7,848,664	11	12	190	683	18	0	61,212
2028	7,808,923	12	11	226	826	21	0	65,515
2029	7,974,990	14	10	297	1,002	24	0	68,122
2030	8,121,712	19	10	448	1,219	31	0	71,507

Source: Jacobs Consultancy, December 2010.

Table B-180
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087
2007	354,149	445,567	59	41,464	1,201	12	17,157	11,354
2008	346,619	440,603	59	40,223	1,185	13	17,173	10,766
2009	371,993	434,155	60	35,825	1,162	13	17,785	12,193
2010	371,015	406,705	56	32,744	1,070	12	17,089	12,868
2011	401,404	448,743	59	30,291	971	14	18,405	13,282
2012	430,472	489,330	62	28,297	885	15	19,578	13,641
2013	463,697	536,041	65	26,358	822	17	20,955	14,003
2014	494,713	579,447	68	23,964	767	18	22,154	14,215
2015	527,222	626,038	71	21,697	723	20	23,395	14,456
2016	570,421	668,691	75	18,848	658	22	25,221	14,724
2017	689,459	622,194	84	13,459	830	28	27,917	36,290
2018	751,201	629,172	87	10,182	841	32	28,431	50,759
2019	808,885	647,692	87	8,585	689	36	29,097	61,323
2020	865,128	678,519	87	7,831	612	39	30,169	66,127
2021	916,212	716,454	86	7,242	531	42	30,862	69,403
2022	973,736	750,419	88	6,865	465	45	31,904	71,849
2023	1,057,466	760,624	91	6,812	402	48	34,128	75,710
2024	1,127,022	796,105	95	6,670	369	53	35,732	76,525
2025	1,209,750	823,967	98	6,580	328	57	37,986	81,481
2026	1,269,421	889,387	100	6,276	303	61	38,951	82,588
2027	1,369,607	902,418	104	6,214	288	67	41,595	90,124
2028	1,462,702	931,265	111	6,847	295	76	44,965	97,376
2029	1,470,994	1,056,950	116	8,023	324	87	45,724	101,523
2030	1,452,187	1,229,617	119	9,162	361	98	45,450	104,881

Source: Jacobs Consultancy, December 2010.

Table B-181
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS
(O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,818	633	8	21	136	19	583,232	7
2007	32,687	650	9	22	138	19	602,366	7
2008	30,096	597	8	20	126	17	557,169	6
2009	26,589	387	6	16	98	13	532,391	5
2010	22,825	233	3	11	76	7	529,455	4
2011	24,885	260	3	12	78	8	568,408	4
2012	27,168	289	4	14	80	9	610,273	5
2013	29,659	322	5	15	83	10	654,438	6
2014	31,397	348	5	16	84	9	691,392	6
2015	33,385	381	5	17	87	9	731,956	6
2016	35,149	404	5	17	85	9	775,181	7
2017	37,056	328	6	15	84	8	820,922	7
2018	36,297	268	4	12	76	6	863,029	6
2019	34,348	225	2	9	63	3	908,299	5
2020	33,924	212	2	8	57	2	954,080	5
2021	33,790	200	2	7	51	2	1,001,959	5
2022	34,456	198	2	7	47	2	1,051,213	5
2023	35,939	198	2	7	43	2	1,101,945	5
2024	38,136	208	2	7	41	2	1,154,461	5
2025	39,049	207	2	7	38	2	1,210,906	5
2026	40,985	219	2	7	35	2	1,269,073	6
2027	42,104	211	2	7	33	2	1,330,970	6
2028	43,725	216	2	8	32	2	1,395,377	6
2029	45,109	227	2	8	32	2	1,463,191	6
2030	46,478	243	2	8	33	2	1,534,342	6

Source: Jacobs Consultancy, December 2010.

Table B-182
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	-
2007	-
2008	7,600
2009	-
2010	123,711
2011	229,885
2012	341,768
2013	473,882
2014	486,268
2015	492,356
2016	492,161
2017	488,814
2018	476,365
2019	460,668
2020	443,242
2021	430,178
2022	410,926
2023	387,093
2024	360,211
2025	591,432
2026	711,000
2027	1,056,941
2028	1,443,694
2029	1,609,186
2030	1,844,755

Source: Jacobs Consultancy, December 2010.

B-4.5.3 Enhance Gillespie Field for Mix-Use General Aviation

Table B-183
TOTAL ENPLANEMENTS BY AIRPORT (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,137,047	22,134,499	1,280,422	4,611,067	3,212,276	2,867,596	1,759,904	65,810
2007	8,496,685	22,979,001	1,310,691	4,778,356	3,341,752	2,947,173	1,846,043	67,427
2008	8,055,185	21,557,508	1,206,206	4,454,960	3,124,465	2,712,986	1,716,840	63,162
2009	7,789,833	20,945,017	1,128,241	4,199,937	3,029,193	2,521,583	1,602,930	62,428
2010	7,234,385	19,213,690	1,054,361	3,911,131	3,062,237	2,534,337	1,611,396	56,119
2011	7,606,328	20,562,860	1,080,163	4,165,096	3,280,048	2,578,657	1,748,423	57,389
2012	7,899,196	21,765,959	1,092,804	4,383,482	3,467,500	2,592,387	1,903,522	58,125
2013	8,226,216	23,038,195	1,098,916	4,636,979	3,654,462	2,605,017	2,056,192	58,938
2014	8,601,062	24,314,234	1,107,078	4,882,386	3,864,312	2,611,689	2,187,792	60,021
2015	9,013,376	25,675,585	1,122,837	5,151,638	4,102,187	2,629,170	2,331,799	61,142
2016	9,490,555	27,087,569	1,138,750	5,415,417	4,347,709	2,651,992	2,477,988	64,004
2017	10,141,573	27,089,526	1,412,011	5,506,331	4,818,605	3,276,782	2,748,539	88,063
2018	10,622,004	27,105,289	1,717,662	5,533,210	5,219,006	3,977,979	3,031,654	105,108
2019	11,126,997	27,107,647	1,973,002	5,561,242	5,345,146	4,837,281	3,306,555	119,059
2020	11,578,054	27,419,828	2,043,137	5,583,739	5,584,266	5,297,411	3,551,566	126,348
2021	11,979,401	27,734,582	2,070,656	5,519,844	5,730,736	5,535,376	3,761,337	129,475
2022	12,353,663	28,169,059	2,110,650	5,495,370	5,827,820	5,670,703	3,962,953	145,908
2023	12,436,268	28,005,839	2,074,730	5,315,011	5,786,167	5,637,657	4,166,455	152,955
2024	12,815,593	29,419,860	2,087,156	5,595,275	6,088,920	5,687,355	4,350,002	154,488
2025	12,786,237	29,184,759	2,056,142	5,377,413	6,020,557	5,711,656	4,560,752	225,087
2026	13,181,754	30,638,317	2,074,064	5,658,920	6,335,146	5,768,195	4,739,155	230,647
2027	13,109,246	30,494,044	2,061,869	5,437,740	6,246,454	5,809,026	4,962,602	474,080
2028	12,912,034	29,391,503	2,070,051	4,987,779	6,033,860	5,810,356	5,193,239	488,458
2029	13,003,264	30,272,097	2,093,329	5,125,428	6,228,965	5,893,821	5,400,881	501,400
2030	13,177,249	32,029,410	2,100,288	5,398,754	6,525,314	5,960,264	5,611,824	514,795

Source: Jacobs Consultancy, December 2010.

Table B-184

TOTAL ENPLANEMENTS BY AIRPORT (CONNECTING AND O&D ENPLANEMENTS)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	8,560,244	29,677,850	1,280,422	4,721,917	3,212,276	2,867,596	1,759,904	65,810
2007	9,079,447	31,557,771	1,310,691	4,947,983	3,341,752	2,947,173	1,846,043	67,427
2008	8,693,049	29,076,651	1,206,206	4,589,902	3,124,465	2,712,986	1,716,840	63,162
2009	8,156,269	27,596,451	1,128,241	4,253,692	3,029,193	2,521,583	1,602,930	62,428
2010	7,679,662	25,839,093	1,054,361	4,011,206	3,062,237	2,536,645	1,611,396	56,119
2011	8,074,499	27,653,493	1,080,163	4,271,669	3,280,048	2,581,005	1,748,423	57,389
2012	8,385,393	29,271,453	1,092,804	4,495,642	3,467,500	2,594,747	1,903,522	58,125
2013	8,732,541	30,982,390	1,098,916	4,755,626	3,654,462	2,607,388	2,056,192	58,938
2014	9,130,459	32,698,442	1,107,078	5,007,312	3,864,312	2,614,067	2,187,792	60,021
2015	9,568,150	34,529,224	1,122,837	5,283,453	4,102,187	2,631,564	2,331,799	61,142
2016	10,074,700	36,428,099	1,138,750	5,553,981	4,347,709	2,654,406	2,477,988	64,004
2017	10,765,788	36,430,730	1,412,011	5,647,222	4,818,605	3,279,765	2,748,539	88,063
2018	11,275,790	36,451,929	1,717,662	5,674,789	5,219,006	3,981,601	3,031,654	105,108
2019	11,811,865	36,455,100	1,973,002	5,703,538	5,345,146	4,841,685	3,306,555	119,059
2020	12,290,685	36,874,929	2,043,137	5,726,611	5,584,266	5,302,234	3,551,566	126,348
2021	12,716,734	37,298,220	2,070,656	5,661,081	5,730,736	5,540,416	3,761,337	129,475
2022	13,114,033	37,882,516	2,110,650	5,635,981	5,827,820	5,675,865	3,962,953	145,908
2023	13,201,722	37,663,013	2,074,730	5,451,007	5,786,167	5,642,789	4,166,455	152,955
2024	13,604,394	39,564,626	2,087,156	5,738,442	6,088,920	5,692,533	4,350,002	154,488
2025	13,573,232	39,248,457	2,056,142	5,515,005	6,020,557	5,716,856	4,560,752	225,087
2026	13,993,093	41,203,240	2,074,064	5,803,715	6,335,146	5,773,446	4,739,155	230,647
2027	13,916,122	41,009,218	2,061,869	5,576,876	6,246,454	5,814,315	4,962,602	474,080
2028	13,706,771	39,526,491	2,070,051	5,115,401	6,033,860	5,815,646	5,193,239	488,458
2029	13,803,617	40,710,738	2,093,329	5,256,573	6,228,965	5,899,187	5,400,881	501,400
2030	13,988,310	43,074,020	2,100,288	5,536,893	6,525,314	5,965,690	5,611,824	514,795

Source: Jacobs Consultancy, December 2010.

Table B-185

TOTAL ENPLANEMENTS BY AIRPORT – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,488,965	1,717,729	275,945	1,107,347	850,552	1,044,997	0	8,092
2007	1,644,170	1,843,518	290,465	1,181,931	910,663	1,120,975	0	8,725
2008	1,578,512	1,729,935	267,294	1,102,490	854,474	1,052,165	0	8,363
2009	1,534,085	1,679,649	261,644	1,050,347	847,772	1,004,009	0	7,889
2010	1,457,330	1,508,470	229,293	947,678	781,861	891,730	0	7,427
2011	1,527,490	1,580,515	230,231	1,015,612	833,334	917,580	0	7,137
2012	1,590,728	1,644,764	229,367	1,081,683	881,261	936,074	0	6,821
2013	1,664,156	1,717,754	227,800	1,157,490	932,136	955,772	0	6,569
2014	1,746,721	1,796,719	226,032	1,240,376	991,403	977,055	0	6,472
2015	1,840,734	1,889,817	227,095	1,340,213	1,064,258	1,004,710	0	6,410
2016	1,950,042	1,985,066	227,951	1,450,180	1,141,216	1,028,701	0	6,766
2017	2,061,612	1,857,962	250,506	1,434,497	1,188,648	1,105,217	0	7,106
2018	2,144,551	1,806,046	279,648	1,489,865	1,272,549	1,215,198	0	7,318
2019	2,231,663	1,742,420	299,056	1,541,979	1,321,297	1,327,714	0	7,515
2020	2,310,950	1,701,628	298,224	1,582,422	1,379,847	1,375,917	0	7,671
2021	2,392,871	1,675,768	297,721	1,618,945	1,426,783	1,394,323	0	7,401
2022	2,468,916	1,668,615	299,933	1,668,551	1,469,394	1,409,558	0	14,139
2023	2,530,434	1,639,601	296,992	1,680,857	1,483,353	1,390,156	0	14,118
2024	2,617,054	1,686,054	293,991	1,799,552	1,563,780	1,419,805	0	13,917
2025	2,648,789	1,632,561	298,669	1,796,865	1,576,081	1,414,256	0	56,409
2026	2,744,937	1,660,806	305,083	1,915,223	1,663,227	1,455,090	0	58,445
2027	2,695,659	1,597,299	311,212	1,882,365	1,655,251	1,449,544	0	264,523
2028	2,742,646	1,512,030	323,716	1,824,271	1,640,843	1,440,972	0	263,190
2029	2,817,530	1,506,412	331,952	1,901,863	1,702,802	1,477,573	0	269,232
2030	2,908,971	1,544,772	339,876	2,017,739	1,785,208	1,530,636	0	278,320

Source: Jacobs Consultancy, December 2010.

Table B-186

TOTAL ENPLANEMENTS BY AIRPORT – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	6,173,315	13,695,982	1,001,425	3,455,585	2,260,628	1,820,262	0	43,286
2007	6,356,756	14,120,831	1,017,194	3,547,170	2,328,687	1,823,868	0	44,017
2008	6,020,442	13,195,157	936,317	3,301,674	2,182,204	1,658,818	0	41,550
2009	5,777,120	12,540,574	864,218	3,101,381	2,098,651	1,515,712	0	39,987
2010	5,293,011	11,199,363	822,919	2,924,769	2,200,477	1,640,901	0	33,270
2011	5,558,588	12,003,096	847,663	3,113,156	2,366,507	1,659,267	0	34,288
2012	5,753,418	12,685,686	861,049	3,267,356	2,505,266	1,654,398	0	34,852
2013	5,968,001	13,391,674	868,611	3,446,868	2,640,129	1,647,227	0	35,426
2014	6,225,539	14,151,545	878,452	3,611,724	2,790,023	1,632,536	0	36,296
2015	6,506,846	14,950,371	893,028	3,783,378	2,953,246	1,622,257	0	37,103
2016	6,826,104	15,777,098	908,013	3,940,165	3,118,244	1,621,008	0	39,252
2017	7,239,053	15,606,175	1,160,374	4,053,824	3,528,140	2,170,550	0	42,425
2018	7,579,083	15,386,832	1,437,534	4,030,269	3,838,426	2,762,334	0	45,178
2019	7,944,801	15,099,134	1,673,648	4,008,566	3,923,771	3,509,306	0	48,329
2020	8,264,355	15,028,156	1,744,676	3,991,754	4,105,097	3,921,298	0	50,628
2021	8,537,770	14,910,861	1,772,729	3,892,082	4,206,258	4,140,887	0	51,308
2022	8,782,629	14,856,620	1,810,527	3,818,418	4,260,339	4,260,993	0	59,071
2023	8,740,467	14,206,122	1,777,552	3,625,714	4,201,759	4,247,351	0	60,416
2024	8,969,696	14,979,875	1,792,977	3,787,233	4,419,988	4,267,398	0	61,206
2025	8,833,397	14,228,780	1,757,289	3,571,892	4,333,962	4,297,252	0	83,582
2026	9,054,670	15,021,435	1,768,792	3,734,913	4,556,091	4,312,953	0	85,847
2027	8,940,295	14,343,173	1,750,467	3,546,382	4,466,703	4,359,328	0	117,730
2028	8,610,049	12,706,618	1,746,136	3,153,194	4,256,317	4,369,218	0	124,650
2029	8,614,906	12,817,951	1,761,169	3,211,224	4,379,791	4,416,068	0	127,511
2030	8,711,512	13,639,248	1,760,200	3,367,342	4,586,875	4,429,438	0	129,229

Source: Jacobs Consultancy, December 2010.

Table B-187

TOTAL ENPLANEMENTS BY AIRPORT – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	357,139	5,306,823	67	43,566	20,914	28	18,559	11,536
2007	375,998	5,569,079	71	44,692	21,003	29	19,867	11,798
2008	350,032	5,362,709	68	46,875	16,760	27	17,241	10,772
2009	379,173	5,472,045	68	44,547	13,774	25	18,386	12,212
2010	392,448	5,292,355	64	35,325	13,876	23	19,982	13,247
2011	423,853	5,697,722	68	32,798	11,270	24	21,672	13,680
2012	453,794	6,088,070	70	30,738	9,200	24	23,159	14,057
2013	487,833	6,512,504	73	28,744	7,666	25	24,807	14,436
2014	519,362	6,898,717	76	26,277	6,498	26	26,204	14,662
2015	552,366	7,311,148	78	23,852	5,522	27	27,628	14,917
2016	596,560	7,735,347	82	20,705	4,617	29	29,775	15,178
2017	721,207	8,080,607	92	15,052	18,107	40	32,884	37,108
2018	785,404	8,438,406	94	11,207	27,017	44	33,502	51,906
2019	844,851	8,843,507	93	9,323	23,168	48	34,306	62,761
2020	901,516	9,287,578	92	8,419	20,266	49	35,585	67,694
2021	949,429	9,746,938	91	7,795	14,547	49	35,169	70,458
2022	1,002,786	10,228,268	91	7,441	10,736	50	34,941	72,416
2023	1,066,164	10,724,511	93	7,496	9,315	53	35,262	78,148
2024	1,126,505	11,263,908	95	7,520	7,641	56	36,101	79,091
2025	1,202,939	11,823,981	98	7,706	6,698	60	38,173	84,833
2026	1,278,271	12,401,927	102	7,808	5,522	65	39,964	86,090
2027	1,368,508	12,989,039	105	8,001	5,026	71	42,334	91,563
2028	1,453,742	13,588,905	112	9,267	6,212	80	45,381	100,346
2029	1,463,574	14,311,061	118	11,246	6,848	92	46,402	104,378
2030	1,448,077	15,147,942	121	12,543	5,521	103	46,243	106,965

Source: Jacobs Consultancy, December 2010.

Table B-188

TOTAL ENPLANEMENTS BY AIRPORT – MEXICO TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	117,628	1,413,966	2,985	4,568	80,181	2,308	1,741,345	2,897
2007	119,761	1,445,572	2,962	4,563	81,399	2,302	1,826,176	2,888
2008	106,198	1,269,708	2,527	3,922	71,027	1,976	1,699,598	2,478
2009	99,455	1,252,749	2,311	3,661	68,996	1,838	1,584,544	2,339
2010	91,596	1,213,503	2,084	3,360	66,023	1,683	1,591,414	2,175
2011	96,398	1,281,527	2,201	3,531	68,937	1,786	1,726,751	2,284
2012	101,256	1,347,439	2,318	3,704	71,773	1,889	1,880,362	2,395
2013	106,227	1,416,262	2,432	3,878	74,531	1,992	2,031,385	2,506
2014	109,440	1,467,253	2,518	4,008	76,387	2,071	2,161,587	2,591
2015	113,431	1,524,249	2,636	4,196	79,161	2,176	2,304,171	2,712
2016	117,850	1,590,058	2,704	4,366	83,632	2,254	2,448,213	2,807
2017	119,701	1,544,781	1,038	2,958	83,711	974	2,715,654	1,423
2018	112,967	1,474,006	387	1,870	81,014	403	2,998,152	707
2019	105,682	1,422,586	204	1,375	76,910	214	3,272,249	454
2020	101,233	1,402,466	144	1,144	79,057	148	3,515,980	356
2021	99,331	1,401,015	115	1,022	83,148	117	3,726,168	307
2022	99,332	1,415,556	99	960	87,351	102	3,928,011	282
2023	99,203	1,435,606	93	944	91,739	96	4,131,193	272
2024	102,338	1,490,024	93	970	97,511	96	4,313,901	274
2025	101,112	1,499,437	86	950	103,816	88	4,522,579	263
2026	103,877	1,554,148	87	976	110,306	87	4,699,191	265
2027	104,785	1,564,533	85	992	119,474	84	4,920,267	264
2028	105,597	1,583,949	87	1,046	130,488	86	5,147,858	273
2029	107,254	1,636,672	90	1,095	139,524	88	5,354,479	279
2030	108,688	1,697,448	91	1,130	147,709	88	5,565,581	282

Source: Jacobs Consultancy, December 2010.

Table B-189

TOTAL ENPLANEMENTS BY AIRPORT – RESIDENTS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	3,776,811	12,402,651	694,840	2,314,712	1,990,968	1,700,439	1,034,952	56,415
2007	3,945,162	12,795,788	701,074	2,391,545	2,069,301	1,723,671	1,080,579	58,230
2008	3,778,756	11,949,205	638,504	2,236,856	1,945,696	1,573,810	996,653	55,096
2009	3,742,821	12,102,279	632,694	2,189,485	1,955,405	1,490,591	954,254	56,230
2010	3,509,727	11,403,989	632,630	2,182,381	2,108,516	1,627,349	953,003	51,691
2011	3,698,331	12,242,555	646,883	2,259,772	2,243,072	1,624,189	1,020,704	52,856
2012	3,848,818	13,003,520	653,103	2,309,947	2,352,996	1,599,910	1,094,557	53,545
2013	4,019,699	13,812,417	653,562	2,375,717	2,458,657	1,575,138	1,168,983	54,324
2014	4,190,120	14,591,208	653,834	2,416,095	2,576,086	1,538,680	1,230,356	55,352
2015	4,364,219	15,387,029	658,891	2,448,498	2,705,718	1,504,085	1,298,184	56,396
2016	4,544,621	16,238,239	665,126	2,457,075	2,833,894	1,479,626	1,360,977	58,832
2017	4,788,493	15,993,360	905,797	2,403,268	3,135,813	2,042,079	1,537,434	82,062
2018	4,938,062	15,675,134	1,173,393	2,245,923	3,314,925	2,634,193	1,732,421	98,282
2019	5,098,697	15,295,111	1,394,508	2,078,520	3,227,437	3,368,206	1,912,383	111,312
2020	5,237,139	15,316,764	1,459,643	1,969,946	3,304,633	3,761,206	2,057,874	117,999
2021	5,379,633	15,463,632	1,497,603	1,846,868	3,348,413	3,979,643	2,179,246	121,108
2022	5,499,677	15,716,901	1,548,189	1,750,152	3,362,928	4,107,420	2,287,916	135,776
2023	5,550,204	15,752,288	1,555,119	1,671,270	3,369,201	4,155,040	2,392,292	143,428
2024	5,654,578	16,543,994	1,554,870	1,647,094	3,489,958	4,137,855	2,473,127	144,740
2025	5,644,180	16,490,644	1,567,403	1,572,577	3,485,803	4,249,678	2,589,839	203,498
2026	5,760,851	17,292,211	1,572,118	1,543,924	3,608,846	4,238,256	2,673,627	208,581
2027	5,671,957	17,259,512	1,599,983	1,486,590	3,599,323	4,371,574	2,793,773	360,322
2028	5,687,225	16,712,812	1,680,506	1,451,835	3,637,453	4,565,797	2,914,859	386,527
2029	5,757,955	17,127,906	1,711,959	1,453,724	3,759,435	4,650,224	3,012,388	400,908
2030	5,855,192	18,070,458	1,709,466	1,434,689	3,881,413	4,661,610	3,109,813	412,744

Source: Jacobs Consultancy, December 2010.

Table B-190

TOTAL ENPLANEMENTS BY AIRPORT – VISITORS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,360,237	9,731,848	585,583	2,296,355	1,221,309	1,167,157	724,952	9,395
2007	4,551,523	10,183,213	609,618	2,386,811	1,272,451	1,223,502	765,464	9,197
2008	4,276,429	9,608,303	567,702	2,218,104	1,178,769	1,139,177	720,187	8,066
2009	4,047,013	8,842,738	495,547	2,010,452	1,073,789	1,030,992	648,677	6,199
2010	3,724,657	7,809,701	421,731	1,728,750	953,721	906,988	658,392	4,427
2011	3,907,997	8,320,305	433,279	1,905,325	1,036,976	954,468	727,719	4,533
2012	4,050,378	8,762,439	439,701	2,073,535	1,114,505	992,477	808,965	4,580
2013	4,206,518	9,225,777	445,354	2,261,262	1,195,806	1,029,878	887,209	4,614
2014	4,410,943	9,723,025	453,244	2,466,291	1,288,227	1,073,009	957,436	4,669
2015	4,649,157	10,288,556	463,945	2,703,140	1,396,469	1,125,085	1,033,615	4,746
2016	4,945,934	10,849,330	473,624	2,958,341	1,513,815	1,172,365	1,117,012	5,172
2017	5,353,080	11,096,166	506,213	3,103,063	1,682,793	1,234,703	1,211,105	6,001
2018	5,683,942	11,430,155	544,269	3,287,288	1,904,081	1,343,787	1,299,233	6,826
2019	6,028,300	11,812,536	578,494	3,482,722	2,117,709	1,469,074	1,394,171	7,747
2020	6,340,916	12,103,064	583,495	3,613,793	2,279,633	1,536,205	1,493,692	8,348
2021	6,599,767	12,270,951	573,053	3,672,977	2,382,324	1,555,734	1,582,092	8,367
2022	6,853,987	12,452,159	562,460	3,745,219	2,464,892	1,563,283	1,675,037	10,132
2023	6,886,064	12,253,552	519,611	3,643,741	2,416,966	1,482,617	1,774,163	9,527
2024	7,161,015	12,875,865	532,287	3,948,181	2,598,962	1,549,501	1,876,875	9,748
2025	7,142,057	12,694,116	488,739	3,804,836	2,534,754	1,461,978	1,970,913	21,588
2026	7,420,903	13,346,106	501,946	4,114,996	2,726,299	1,529,939	2,065,528	22,066
2027	7,437,290	13,234,532	461,886	3,951,150	2,647,131	1,437,452	2,168,829	113,757
2028	7,224,809	12,678,690	389,546	3,535,943	2,396,407	1,244,560	2,278,380	101,931
2029	7,245,309	13,144,191	381,370	3,671,705	2,469,530	1,243,597	2,388,493	100,492
2030	7,322,057	13,958,952	390,822	3,964,066	2,643,901	1,298,654	2,502,011	102,051

Source: Jacobs Consultancy, December 2010.

Table B-191

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – NORTH CALIFORNIA TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	1,332,011	1	5	86	103	0	0	6,150
2007	1,476,619	1	6	97	115	0	0	6,944
2008	1,420,764	1	6	97	115	0	0	6,940
2009	1,421,057	1	5	96	110	0	0	7,188
2010	1,356,663	0	3	81	94	0	0	7,019
2011	1,426,170	0	2	81	76	0	0	6,761
2012	1,489,114	0	2	78	61	0	0	6,475
2013	1,562,017	0	2	77	52	0	0	6,249
2014	1,643,748	1	1	75	50	0	0	6,172
2015	1,736,386	1	1	71	53	0	0	6,123
2016	1,841,600	1	1	74	63	0	0	6,415
2017	1,950,489	1	1	49	75	0	0	6,710
2018	2,028,633	0	1	30	86	0	0	6,836
2019	2,106,880	0	1	19	91	0	0	6,924
2020	2,183,615	0	0	14	102	0	0	6,986
2021	2,265,772	0	0	11	123	0	0	6,723
2022	2,341,942	0	0	9	132	0	0	12,335
2023	2,405,637	0	0	9	140	0	0	12,398
2024	2,493,176	0	0	10	153	0	0	12,193
2025	2,528,541	0	0	16	162	0	0	43,338
2026	2,627,763	0	0	25	199	0	0	45,139
2027	2,582,695	0	0	31	215	0	0	158,857
2028	2,634,380	0	0	66	253	0	0	167,618
2029	2,711,555	1	0	152	300	0	0	175,012
2030	2,804,760	1	0	210	360	0	0	183,328

Source: Jacobs Consultancy, December 2010.

Table B-192

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – DOMESTIC TRIPS (O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	4,596,390	202	271	2,191	779	6	0	27,931
2007	4,735,170	210	280	2,253	807	6	0	28,947
2008	4,510,420	205	272	2,182	784	6	0	28,120
2009	4,404,154	175	225	2,040	722	5	0	28,524
2010	4,227,063	75	147	1,906	697	3	0	26,110
2011	4,458,644	84	138	1,941	592	3	0	26,627
2012	4,635,239	94	127	1,941	492	4	0	26,773
2013	4,836,542	104	117	2,010	431	5	0	26,937
2014	5,077,798	116	107	2,002	402	5	0	27,302
2015	5,342,644	129	97	1,969	392	6	0	27,536
2016	5,623,001	145	90	1,992	420	7	0	28,921
2017	5,915,579	75	84	1,229	452	8	0	30,484
2018	6,150,622	43	78	728	473	10	0	31,696
2019	6,392,155	26	64	435	439	11	0	32,889
2020	6,646,599	20	49	312	440	13	0	34,004
2021	6,908,920	16	37	236	435	13	0	34,162
2022	7,156,211	13	30	194	430	14	0	39,487
2023	7,194,210	11	24	171	439	14	0	40,639
2024	7,416,893	13	21	175	486	16	0	41,050
2025	7,375,753	11	16	167	509	16	0	58,005
2026	7,600,742	13	15	197	614	18	0	59,839
2027	7,577,998	12	12	203	701	19	0	84,768
2028	7,416,226	11	11	222	834	20	0	92,099
2029	7,469,582	13	10	297	1,012	24	0	95,139
2030	7,586,516	18	10	450	1,232	30	0	98,211

Source: Jacobs Consultancy. December 2010.

Table B-193
TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – INTERNATIONAL TRIPS (O&D ENPLANEMENTS ONLY)
Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	335,735	415,168	54	40,371	1,127	11	15,948	11,087
2007	354,149	445,567	59	41,464	1,201	12	17,157	11,354
2008	346,619	440,603	59	40,223	1,185	13	17,173	10,766
2009	371,993	434,155	60	35,825	1,162	13	17,785	12,193
2010	371,015	406,705	56	32,744	1,070	12	17,089	12,868
2011	401,404	448,743	59	30,291	971	14	18,405	13,282
2012	430,472	489,330	62	28,297	885	15	19,578	13,641
2013	463,697	536,041	65	26,358	822	17	20,955	14,003
2014	494,713	579,447	68	23,964	767	18	22,154	14,215
2015	527,222	626,038	71	21,697	723	20	23,395	14,456
2016	570,421	668,691	75	18,848	658	22	25,221	14,724
2017	689,459	622,194	84	13,459	830	28	27,917	36,290
2018	751,201	629,172	87	10,182	841	32	28,431	50,759
2019	808,885	647,692	87	8,585	689	36	29,097	61,323
2020	865,128	678,519	87	7,831	612	39	30,169	66,127
2021	916,242	716,423	86	7,242	535	42	30,861	69,401
2022	973,918	750,397	88	6,865	464	45	31,902	71,692
2023	1,045,507	771,152	91	6,755	407	48	33,979	77,341
2024	1,113,352	808,026	94	6,620	376	53	35,607	78,441
2025	1,195,661	835,220	98	6,542	338	57	37,969	84,361
2026	1,275,072	879,352	101	6,445	325	62	39,877	85,852
2027	1,366,899	902,955	105	6,376	306	68	42,292	91,416
2028	1,452,656	937,997	112	6,909	315	77	45,357	100,216
2029	1,462,890	1,061,473	118	8,153	350	88	46,388	104,281
2030	1,447,714	1,231,067	121	9,339	393	100	46,235	106,907

Source: Jacobs Consultancy, December 2010.

Table B-194

TOTAL ENPLANEMENTS BY AIRPORT FOR SAN DIEGO COUNTY – MEXICO TRIPS
(O&D ENPLANEMENTS ONLY)

Regional Aviation Strategic Plan

Year	SAN	LAX	LGB	SNA	ONT	BUR	TIJ	CRQ
2006	31,818	633	8	21	136	19	583,232	7
2007	32,687	650	9	22	138	19	602,366	7
2008	30,096	597	8	20	126	17	557,169	6
2009	26,589	387	6	16	98	13	532,391	5
2010	22,825	233	3	11	76	7	529,455	4
2011	24,885	260	3	12	78	8	568,408	4
2012	27,168	289	4	14	80	9	610,273	5
2013	29,659	322	5	15	83	10	654,438	6
2014	31,397	348	5	16	84	9	691,392	6
2015	33,385	381	5	17	87	9	731,956	6
2016	35,149	404	5	17	85	9	775,181	7
2017	37,056	328	6	15	84	8	820,922	7
2018	36,297	268	4	12	76	6	863,029	6
2019	34,348	225	2	9	63	3	908,299	5
2020	33,924	212	2	8	57	2	954,080	5
2021	33,810	200	2	7	51	2	1,001,948	5
2022	34,488	198	2	7	47	2	1,051,091	5
2023	35,224	198	2	7	43	2	1,102,672	5
2024	37,305	208	2	7	41	2	1,155,304	5
2025	38,024	208	2	7	37	2	1,211,943	5
2026	40,312	220	2	7	36	2	1,269,757	6
2027	41,734	218	2	7	33	2	1,331,357	6
2028	42,754	214	2	7	32	2	1,396,390	6
2029	43,965	224	2	8	32	2	1,463,880	6
2030	45,308	240	2	8	33	2	1,534,516	6

Source: Jacobs Consultancy, December 2010.

Table B-195
SUPPRESSED DEMAND – SAN DIEGO COUNTY
Regional Aviation Strategic Plan

Year	Suppressed Demand
2006	--
2007	--
2008	7,600
2009	--
2010	123,711
2011	229,885
2012	341,768
2013	473,882
2014	486,268
2015	492,356
2016	492,161
2017	488,814
2018	476,365
2019	460,668
2020	443,242
2021	426,285
2022	403,084
2023	617,220
2024	637,716
2025	953,787
2026	1,040,206
2027	1,328,058
2028	1,846,390
2029	2,136,481
2030	2,405,763

Source: Jacobs Consultancy, December 2010.

B-4.6 Air Cargo Optimization

B-4.6.1 Introduce Cargo Service at Brown Field Municipal

This scenario is considered fatally flawed and was not evaluated using the Model. Refer to Chapter 5.2 and Chapter 6.1 for details.

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Appendix C

ALTERNATIVE SCENARIO DETAILS AND COST ESTIMATES

INTRODUCTION

The following sections present detailed cost estimates, potential funding sources, and implementation timelines for 11 of the 15 alternative scenarios that were identified in consultation with the RASP Subcommittee and other stakeholders during the conduct of the RASP. Specifically, details are provided for the following families and scenarios:

1. Commercial Passenger Optimization

A. Full build-out of the Intermodal Transportation Center (ITC) and north side terminal at San Diego International
B. Preserve San Diego International airfield capacity for commercial passenger service
C. Enhance commercial passenger service at McClellan-Palomar Airport
D. Introduce commercial passenger service at Brown Field Municipal

2. Enhanced Utilization of Tijuana

A. Facilitated border crossings
B. Aviation passenger cross border facility
C. Cross border airport terminal

4 General Aviation Optimization

A. Enhance McClellan-Palomar Airport for high-end / corporate general aviation
B. Enhance Brown Field Municipal for high-end / corporate general aviation
C. Enhance Gillespie Field for mix-use general aviation

5. Air Cargo Optimization

A. Introduce cargo service at Brown Field Municipal

Details are not provided for the two California High Speed Rail Scenarios (Family 3) because the cost responsibility would primarily be with the state of California and the federal government; implementation timelines were provided in previously published HSR planning documentation.

Details were not provided for Commercial Passenger Optimization Scenarios 1E/F as these scenarios were identified late in the study period, and the resulting costs, timelines and funding sources would be similar to Commercial Passenger Optimization Scenario 1B.

AIRPORT FUNDING AND FINANCE

This section describes the types of funding sources available. U.S. airports, such as San Diego International, are large and complex organizations that are owned and operated by public authorities. While many generate millions of dollars of annual revenue, the ways in which they raise and spend that revenue is heavily circumscribed by federal law and use and lease agreements with their tenants and users.

User Charges and Cost-Recovery

Commercial service and general aviation airports in the U.S. are funded principally by the fees they charge users. These include *aeronautical charges* (e.g. landing fees, gate and terminal rents, and fuel flowage fees) and *non-aeronautical charges* (e.g. concessions, parking and advertising). Whatever their unique form of lease agreements with their users and tenants, airports operate ultimately on a cost-recovery basis; the fees they charge users provide the capital to operate, maintain and develop new capacity.

In order to impose charges, airports must at minimum consult with their users and, under the terms of many *use and lease agreements*, airports must receive approval from air carriers and users prior to increasing fees. In addition, under federal law, these fees must be spent on the airport and contribute its being self-sustaining. The cost-recovery model, consultation and/or approval requirements, laws that require an airport be self-sustaining, as well as prohibitions on diverting airport revenue off the airport, distinguish airports from surface transportation authorities who are not self-sustaining (the farebox generally provides less than half of their revenue) and who rely on local government and federal grants to operate.

Airport Improvement Program

In addition to revenue provided by users, airports receive federal capital grants under the Federal Aviation Administration Airport Improvement Program (AIP). These funds are prioritized to aeronautical infrastructure, including runways, taxiways and non-revenue producing parts of airport terminals and roadways. These funds are targeted mostly to smaller commercial service and general aviation airports and must be used on developing and maintaining infrastructure; they cannot be used on operations. Federal law also forbids using these funds off-airport or an airport controlled right-of-way.

Passenger Facility Charges and Customer Facility Charges

With federal authorization, airport authorities may assess a passenger facility charge (PFCs) of up to $4.50 for each passenger at their airport. With rules similar to those governing AIP, these fees fund FAA-approved capital projects that enhance safety, security, or capacity; reduce noise; or increase air carrier competition. Airport authorities can also authorize a customer facility charge (CFC) which is levied on the passengers and collected by rental car companies.

Revenue Bonds and Airport Infrastructure

Given that many airport projects, such as new runways or terminals, may cost well over $1 billion, many airports use debt-financing to finance major capital projects. Depending on the revenue source—user charges, AIP or PFCs—the airport will likely require approval for the project from the airlines and other aeronautical users and/or the FAA. Airports access the municipal bond market for these funds (typically for a term of 30 years), build their project and then repay the principal and interest after the asset goes into service. For a major commercial service airport, much of the revenue generated is pledged to repay the bonds they have used to construct the airport's infrastructure.

SCENARIO 1A: FULL BUILD-OUT OF THE ITC AND NORTHSIDE TERMINAL AT SAN DIEGO INTERNATIONAL

COST ESTIMATE AND FUNDING SOURCES

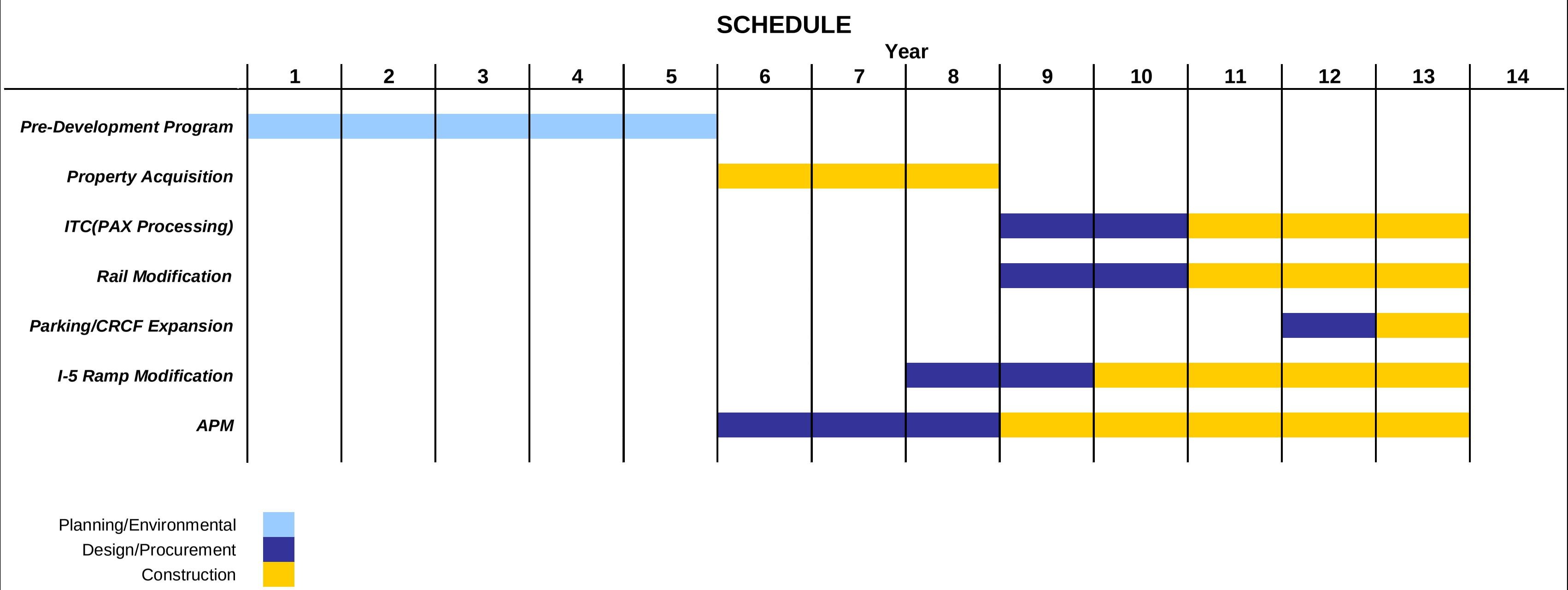
	ITC build-out and associated costs		Potential funding sources
1	Property Acquisition	$ 9,600,000	PFC / Bonds
	Rail Right-of-Way	3,700,000	PFC / Bonds
2	Rail Alignment and Platform	12,900,000	SANDAG / PFC / Bonds
3	Roadways (Flyovers - Freeway Ramps)	19,800,000	SANDAG / Bonds
	Roadways (Elevated - Freeway Ramps)	23,400,000	SANDAG / Bonds
4	Roadways (Flyovers - Terminal/RAC)	84,300,000	SANDAG / Bonds / PFC
	Roadways (Flyovers - ITC)	13,200,000	SANDAG / Bonds / PFC
	Roadways (Flyovers - ITC/Airport)	213,400,000	SANDAG / Bonds / PFC
5	Rental Car Support	5,100,000	CFC / Bonds
	Parking (Rental Car RR)	13,600,000	CFC / Bonds
	Parking (RAC Storage)	5,400,000	CFC / Bonds
6	Parking (Airport/Public)	208,400,000	Private / Bonds
	Parking (Transit)	16,300,000	Private / Bonds
7	People Mover (Elevated)	40,100,000	PFC / Private / Bonds
	People Mover (Cut and Cover)	263,500,000	PFC / Private / Bonds
	People Mover (Bored)	285,300,000	PFC / Private / Bonds
	People Mover (At Grade)	21,700,000	PFC / Private / Bonds
	Total	$1,239,700,000	

Note: Destination Lindbergh "Opening day" projects and costs are associated with the Baseline Scenario and would be in addition to costs depicted above.

Costs associated with enhancing the ITC for passenger processing estimates are not included.

Source: Jacobsendaniels Associates, LLC., August 2010, based on *Destination Lindbergh*, Jacobs Consultancy, March 2009

SCENARIO 1A: FULL BUILD-OUT OF THE ITC AND NORTHSIDE TERMINAL AT SAN DIEGO INTERNATIONAL



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 1B: PRESERVE SAN DIEGO INTERNATIONAL AIRFIELD CAPACITY FOR COMMERCIAL PASSENGER SERVICE

COST ESTIMATE AND FUNDING SOURCES

	Cost estimate	Potential funding sources
Gillespie Field		
El Cajon Development *(a)*	$ 65,000,000	Private /Bonds
Corrections to Deviations/Standards	50,000,000	Private / Bonds / AIP
Montgomery Field - FBO at Gibbs/Hotel Locations *(a)*	25,000,000	Private / Bonds
Brown Field		
Phase 1 – Area A (FBO) *(b)*	38,500,000	Private / Bonds
Phase 1 – Area B (Small Hangars) *(b)*	3,400,000	Private / Bonds
Phase 1 – Area E (Helicopter FBO and ARFF) *(b)*	6,100,000	Private / Bonds
Total	$188,000,000	

(a) Costs for FBOs at Gillespie Field and Montgomery Field based on the range of prices from McClellan-Palomar.
(b) Costs for Brown Field from the City of San Diego and reflect costs proposed by the private developer.

Source: Jacobsendaniels Associates, LLC., August 2010.

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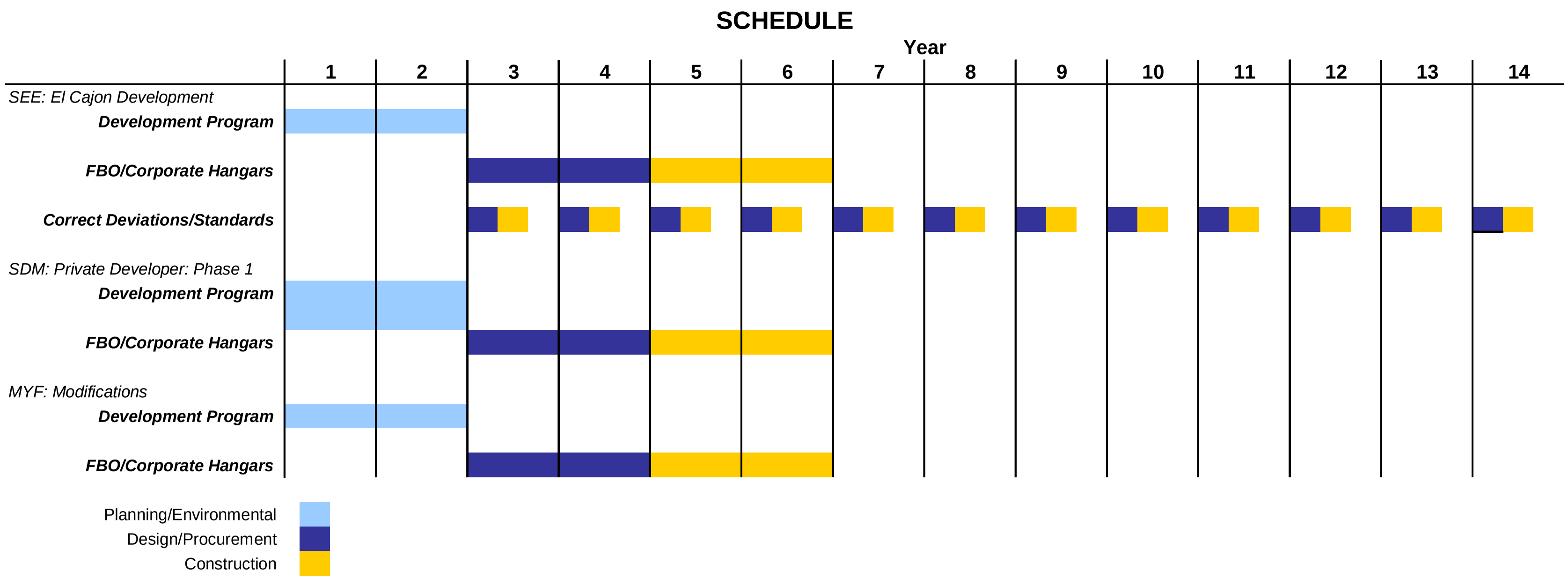
SCENARIO 1B: PRESERVE SAN DIEGO INTERNATIONAL AIRFIELD CAPACITY FOR COMMERCIAL PASSENGER SERVICE



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 1C: ENHANCE COMMERCIAL PASSENGER SERVICE AT MCCLELLAN-PALOMAR AIRPORT

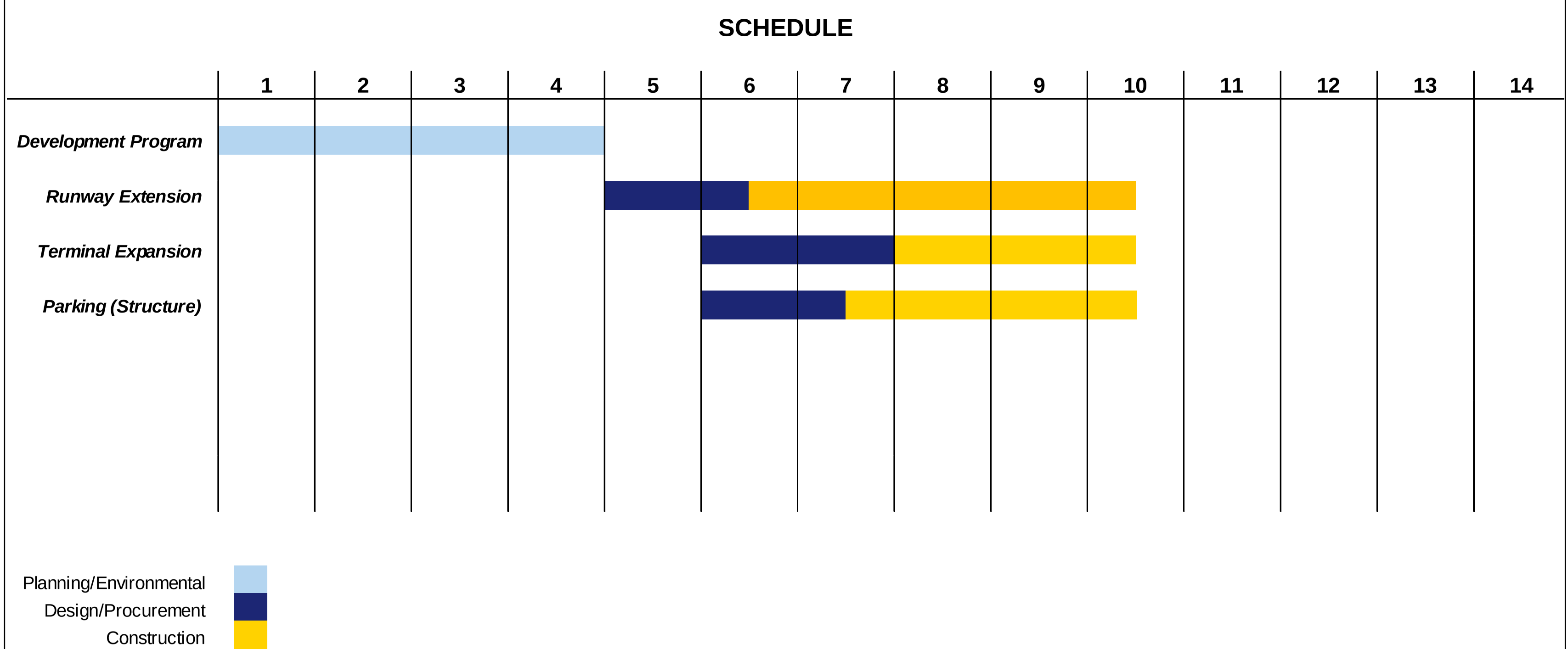
COST ESTIMATE AND FUNDING SOURCES

	Cost estimate	Soft cost	Contingency	Total cost	Potential funding sources
Runway Extension *(a)*	$80,000,000			$80,000,000	AIP / PFC
Terminal Building *(b)*	2,800,000	$700,000	$700,000	4,200,000	PFC / Bonds
Landside/Access					
Structured Parking *(c)*	50,400,000	12,600,000	12,600,000	75,600,000	Private / Bonds
Intersection Improvements	150,000			150,000	Private / Bonds
Totals	$133,350,000	$13,300,000	$13,300,000	$ 159,950,000	

(a) Cost estimate for runway extension provided by the County of San Diego and involves bridging over a landfill.
(b) Terminal building cost ($350/SF) from *Destination Lindbergh*.
(c) Structured parking cost ($24,000/space) based on industry standards.

Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 1C: ENHANCE COMMERCIAL PASSENGER SERVICE AT MCCLELLAN PALOMAR AIRPORT



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 1D: INTRODUCE COMMERCIAL PASSENGER SERVICE AT BROWN FIELD MUNICIPAL

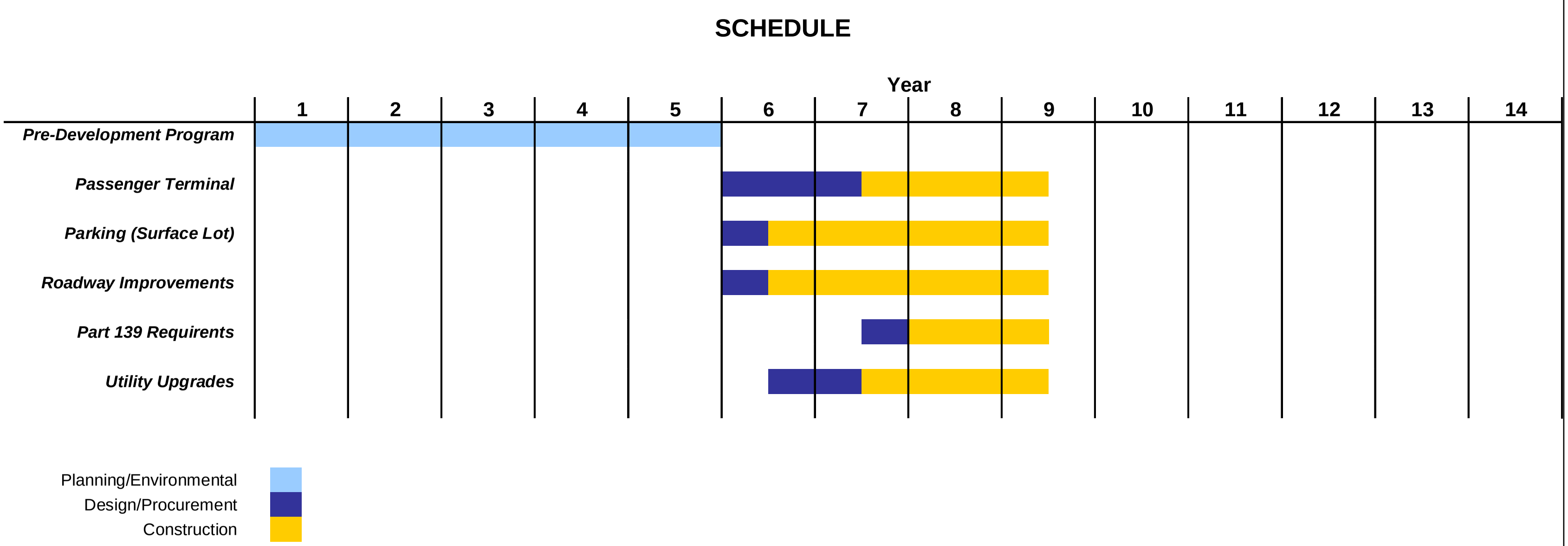
COST ESTIMATE AND FUNDING SOURCES

	Cost estimate	Soft cost	Contingency	Total cost	Potential funding sources
Terminal					
Apron *(a)*	$ 3,100,000	$ 775,000	$ 775,000	$ 4,650,000	PFC / Bonds
Building *(b)*	9,450,000	2,362,500	2,362,500	14,175,000	PFC / Bonds
Landside/Access					
Surface Parking *(c)*	8,400,000	2,100,000	2,100,000	12,600,000	Private / Bonds
Roadway Improvements	10,000,000			10,000,000	CalDOT / FHWA / PFC / Bonds
Utilities					
Fuel Farm	30,000,000			30,000,000	AIP / PFC / Bonds
Wastewater	10,000,000			10,000,000	AIP / PFC / Bonds
Drainage & Stormwater	10,000,000			10,000,000	AIP / PFC / Bonds
FAR Part 139 Facilities	9,000,000			9,000,000	AIP / PFC / Bonds
Total	$79,950,000	$5,237,500	$5,237,500	$100,425,000	

(a) Apron unit cost ($200/SY) from *Destination Lindbergh*; the estimated 15,500 SY of apron space is approximately equal to the space needed to park 6 B737s (2,555 SY/space).
(b) 27,000 SF terminal building represents full build-out of the McClellan Palomar terminal; terminal building expansion cost ($350/SF) from *Destination Lindbergh*.
(c) Surface parking cost ($3,000/space + soft cost + contingency) based on industry standards.

Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 1D: INTRODUCE COMMERCIAL PASSENGER SERVICE AT BROWN FIELD MUNICIPAL



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 2A: FACILITATED BORDER CROSSINGS

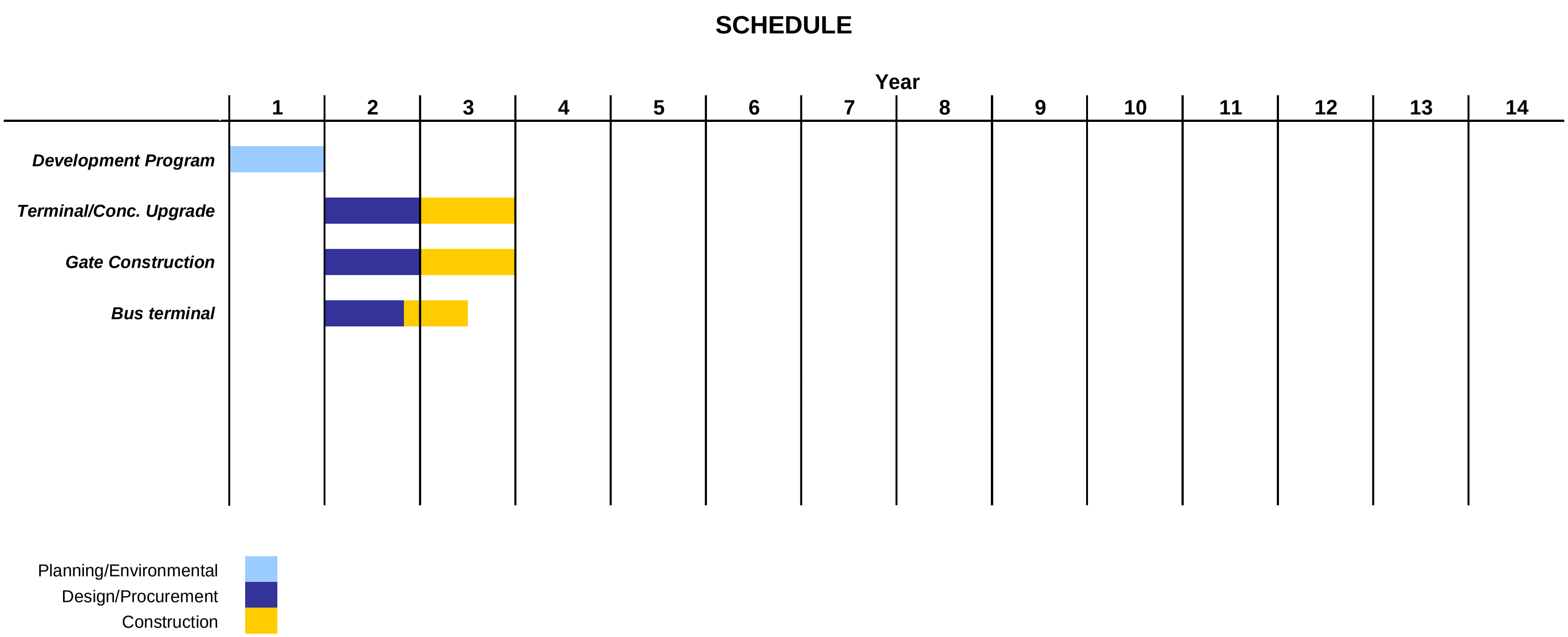
COST ESTIMATE AND FUNDING SOURCES

Component	Cost estimate	Potential funding sources
TIJ Terminal Upgrades	$19 M	Private/Bonds
New TIJ Gates	7 M	Private/Bonds
Bus Terminal	1 M	Private/Bonds
Total	$27 M	

TIJ = Tijuana Rodriguez International Airport

Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 2A: FACILITATED BORDER CROSSINGS



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 2B: AVIATION PASSENGER CROSS BORDER FACILITY

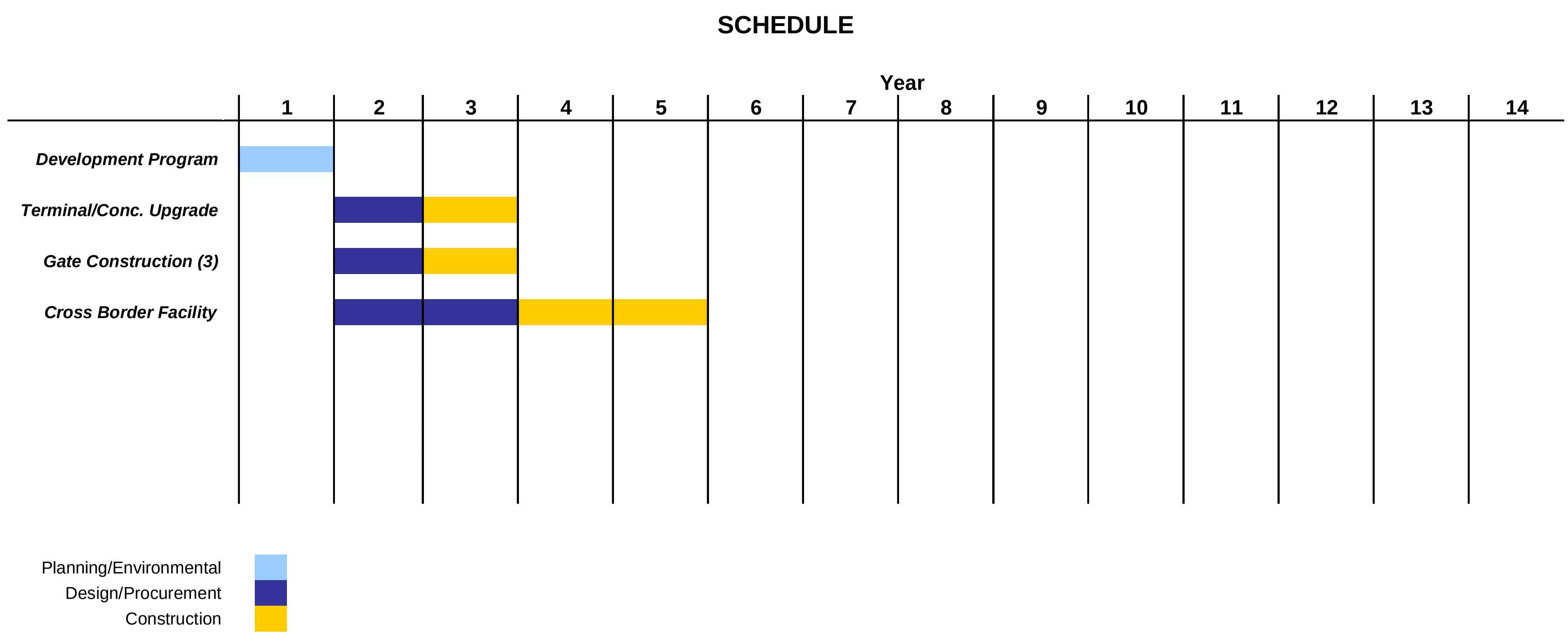
COST ESTIMATE AND FUNDING SOURCES

	Cross Border Facility – Initial build out (*for reference only*)	Cross Border Facility – Full build out	Potential funding sources
Land	$15,330,000	$ 15,330,000	Private / Bonds
Entitlements	3,625,000	3,625,000	Private / Bonds
Design *(a)*	9,835,000	18,872,400	Private / Bonds
Construction	49,130,000	125,816,000	Private / Bonds
Bridge *(b)*	6,930,000	6,930,000	Private / Bonds
CBF Building *(c)*	26,550,000	44,250,000	Private / Bonds
Roadways/Curbs *(d)*	10,500,000	15,750,000	Private / Bonds
Surface Parking *(b)*	5,150,000	5,150,000	Private / Bonds
Structured Parking *(e)*	0	53,736,000	Private / Bonds
Total	$77,920,000	$163,643,400	

(a) Design assumed to be 15% of construction costs (nearly 20% of CBF Initial Build-out construction).
(b) Sunk cost for the full build-out of the CBF.
(c) CBF Building increased from 45,000 SF to 75,000 SF between initial and full build-out phases.
(d) Roadways/curbs increased by 50% from the initial to full build-out of the CBF.
(e) Garage is 2,239 spaces in the full build-out.

Source: Jacobsendaniels Associates, LLC., based on Permit Application for the San Diego-Tijuana Airport Cross-Border Facility, August 2010.

SCENARIO 2B: AVIATION PASSENGER CROSS BORDER FACILITY



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 2C: CROSS BORDER AIRPORT TERMINAL

COST ESTIMATE AND FUNDING SOURCES

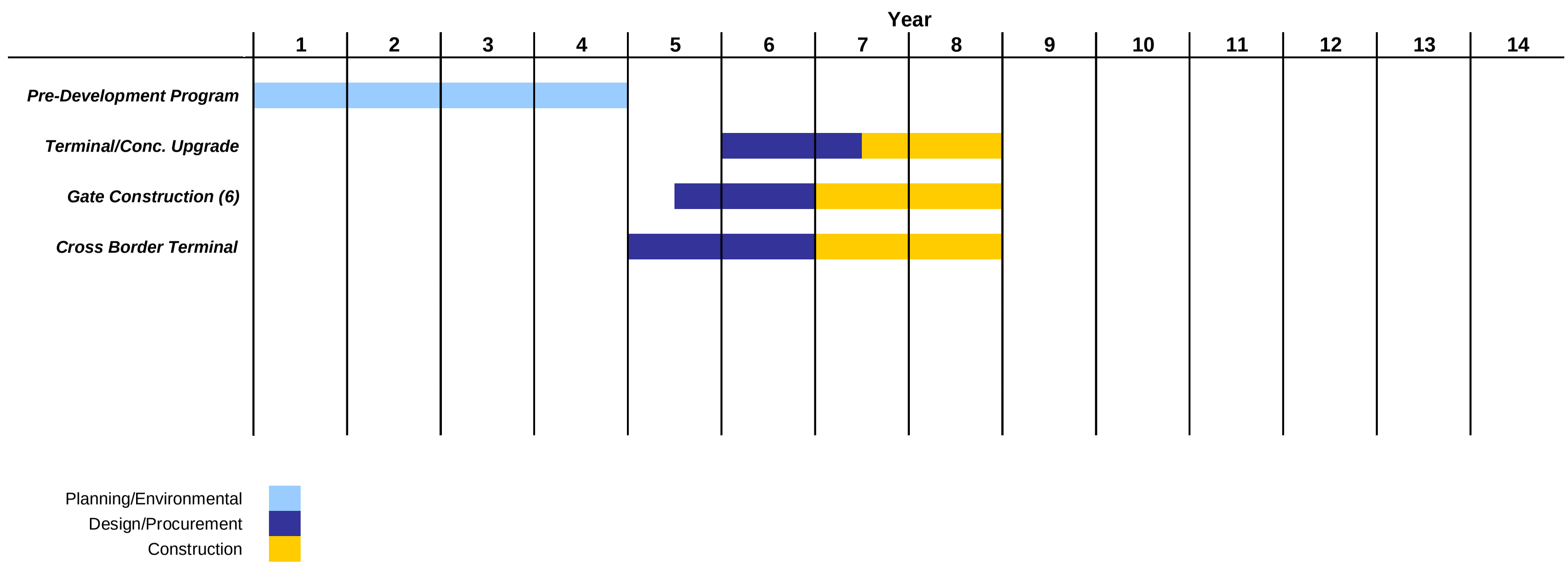
	Cross Border Facility *(for reference only)*	Cross Border Terminal	Potential funding sources
Land	$15,330,000	$15,330,000	Private / Bonds
Entitlements	3,625,000	3,625,000	Private / Bonds
Design *(a)*	18,872,400	28,271,850	Private / Bonds
Construction	125,816,000	188,479,000	Private / Bonds
Bridge *(b)*	6,930,000	10,500,000	Private / Bonds
CBF Building	44,250,000		Private / Bonds
CBT Building *(c)*		73,750,000	Private / Bonds
Roadways/Curbs *(d)*	15,750,000	23,625,000	Private / Bonds
Surface Parking	5,150,000		Private / Bonds
Structured Parking *(e)*	53,736,000	80,604,000	Private / Bonds
Total	$163,643,400	$235,705,850	

(a) Design assumed to be 15% of construction costs (nearly 20% of CBF initial build out construction).
(b) Bridge widened from 33 feet (CBF) to 50 feet (CBT).
(c) CBT building assumed at 125,000 SF.
(d) CBT roadways/curbs increased by 50% over the CBF.
(e) CBT structured parking increased 50% over CFB.

Source: Jacobsondaniels Associates, LLC., August 2010.

SCENARIO 2C: CROSS BORDER AIRPORT TERMINAL

SCHEDULE



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 4A: ENHANCE MCCLELLAN-PALOMAR AIRPORT FOR HIGH-END / CORPORATE GENERAL AVIATION

COST ESTIMATE AND FUNDING SOURCES

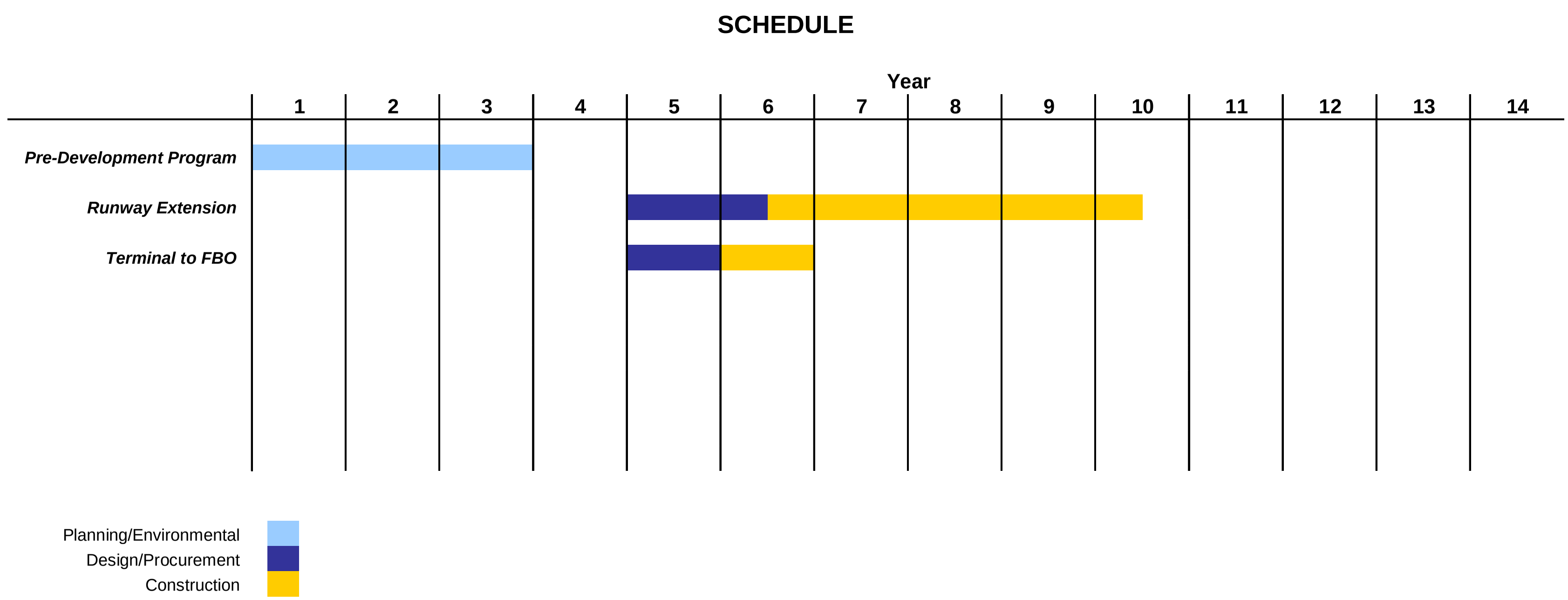
	Cost estimate	Soft cost	Contingency	Total cost	Potential funding sources
Runway Extension *(a)*	\$80,000,000			\$80,000,000	AIP / Bonds
Terminal Building *(b)*	950,000	\$237,500	\$ 237,500	1,425,000	Private / Bonds
Total	\$80,950,000	\$237,500	\$237,500	\$81,425,000	

(a) Cost estimate for Runway Extension (\$80M) from the County of San Diego and involves a bridge over the landfill.

(b) Terminal building conversion cost (\$50/SF) from industry sources.

Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 4A: ENHANCE MCCLELLAN-PALOMAR AIRPORT FOR HIGH END / CORPORATE GENERAL AVIATION



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 4B: ENHANCE BROWN FIELD MUNICIPAL FOR HIGH-END / CORPORATE GENERAL AVIATION

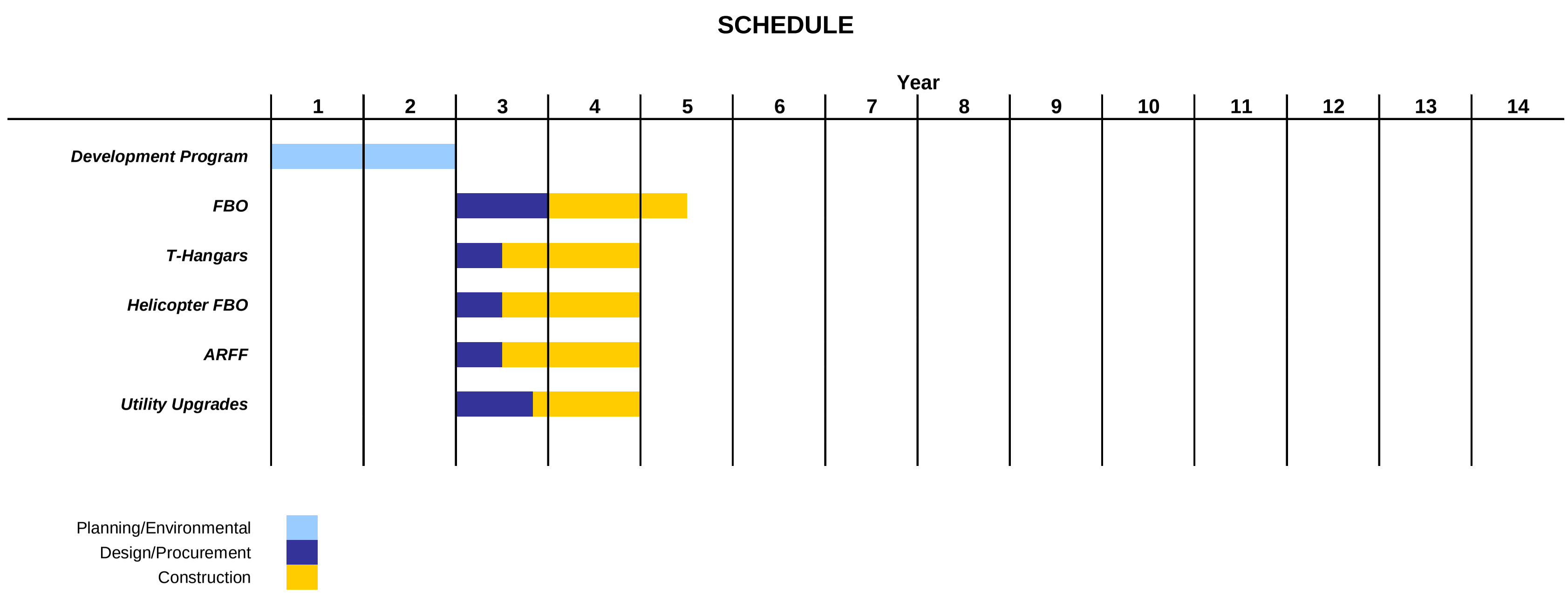
COST ESTIMATE AND FUNDING SOURCES

	Cost estimate	Potential funding sources
Private Developer Plans (Phase 1) *(a)*	$48,000,000	
FBO (Area A)	38,500,000	Private
Small Hangars (Area B)	3,400,000	Private
Helicopter FBO and ARFF (Area E)	6,100,000	Private / AIP
Utilities	15,000,000	
Fuel Farm	10,000,000	Private / Bonds
Wastewater	2,500,000	Private / Bonds
Drainage & Stormwater	2,500,000	Private / Bonds
Total	$63,000,000	

(a) Costs obtained taken from a Private Developer's Proposal.
(b) Based on recent industry costs.

Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 4B: ENHANCE BROWN FIELD MUNICIPAL FOR HIGH END / CORPORATE GENERAL AVIATION



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 4C: ENHANCE GILLESPIE FIELD FOR MIX-USE GENERAL AVIATION

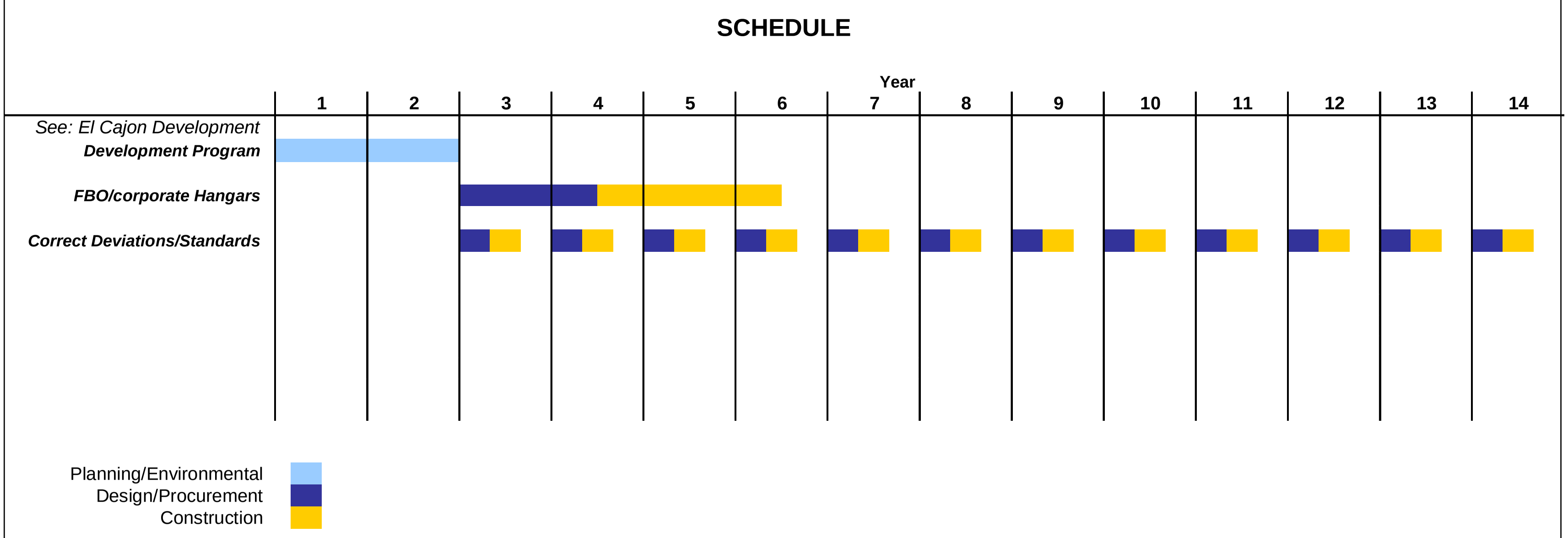
COST ESTIMATE AND FUNDING SOURCES

Project	Cost estimate	Potential funding sources
El Cajon Development *(a)*	$ 65,000,000	AIP / Private / Bonds
Runway/Taxiway Deviations	50,000,000	AIP / Bonds
Total	$115,000,000	

(a) Includes both utility infrastructure ($40M) and FBO ($25M)

Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 4C: ENHANCE GILLESPIE FIELD FOR MIX USE GENERAL AVIATION



Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 5A – INTRODUCE CARGO SERVICE AT BROWN FIELD MUNICIPAL

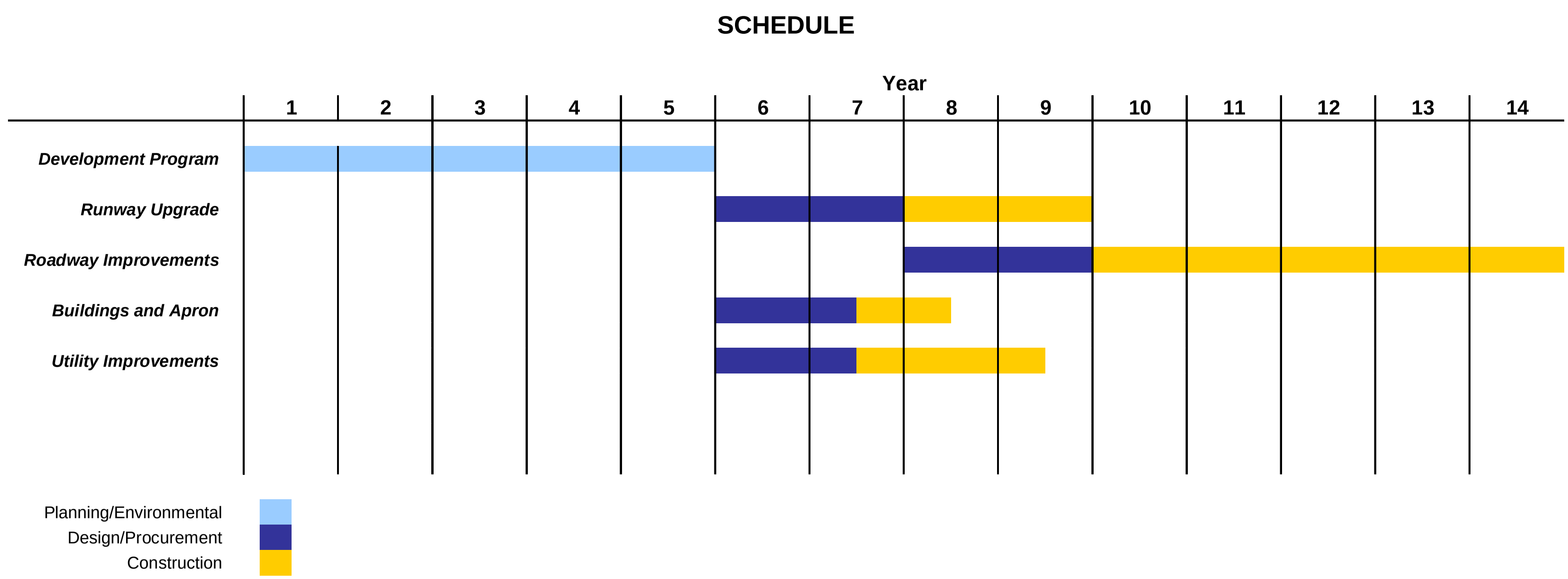
COST ESTIMATE AND FUNDING SOURCES

	Cost estimate	Soft cost	Contingency	Total cost	Potential funding sources
Airfield Pavement *(a)*	$53,333,200	$13,333,300	$13,333,300	$79,999,800	AIP / Bonds
Cargo					
Apron *(b)*	59,000,000	14,750,000	14,750,000	88,500,000	Private / Bonds
Buildings *(a)*	3,750,000	937,500	937,500	5,625,000	Private / Bonds
Utilities					
Fuel Farm	30,000,000			30,000,000	Bonds
Wastewater	10,000,000			10,000,000	Bonds
Drainage & Stormwater	10,000,000			10,000,000	Bonds
Roadways	10,000,000			10,000,000	SANDAG / FHWA / Bonds
Total	$176,083,200	$29,020,800	$29,020,800	$234,124,800	

(a) Based on industry standard costs.
(b) Apron unit cost ($200/SY) from *Destination Lindbergh*.

Source: Jacobsendaniels Associates, LLC., August 2010.

SCENARIO 5A – INTRODUCE CARGO SERVICE AT BROWN FIELD MUNICIPAL



Source: Jacobsendaniels Associates, LLC., August 2010.

Appendix D

COMMENTS RECEIVED ON RASP REPORT AND RESPONSES

Included herein are the following comments received on the Draft RASP Report, which was provided to agencies and the general public on January 25, 2011.

1. **February 2011 correspondence received from Southern California Association of Governments (SCAG) Aviation Technical Advisory Committee (ATAC) Commercial Passenger Optimization**

   A response to the issues raised is provided on page D-4.

2. **March 2011 correspondence received from the County of San Diego**

   A response to this correspondence was not warranted.

3. **March 2011 correspondence received from San Diego Regional Economic Development Corporation**

   A response to this correspondence was not warranted.

4. **March 2011 correspondence received from San Diego East County Economic Development Council**

   A response to this correspondence was not warranted.

5. **March 2011 correspondence received from South County Economic Development Council**

   A response to this correspondence was not warranted.

LONG BEACH AIRPORT
Building a Better Way to Fly

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Mr. Ted Anasis
Manager of Airport Planning
San Diego County Regional Airport Authority
P.O. Box 82776
San Diego, California 92138-2776

Dear Mr. Anasis:

Thank you very much for presenting an overview of the San Diego Region's Draft Regional Aviation Strategic Plan (RASP) to SCAG's Aviation Technical Advisory Committee (ATAC) on February 17 at Brackett Field. It was a very informative presentation and much appreciated by ATAC members. ATAC recognizes the close interrelationship between our two regions that share many aviation-related problems and issues, and has had an ongoing interest in how aviation issues in San Diego County could potentially impact commercial and non-commercial airports in the 6-county SCAG Region.

At its last meeting on February 17, ATAC unanimously approved a number of comments on the Draft RASP. These comments were made in the spirit of the published RASP Fact Sheet which says that the RASP will "Consider interregional aviation plans from the regions bordering San Diego County." In its 2004 and 2008 Regional Transportation Plans (RTPs), SCAG did not confine its analysis of future aviation issues to the SCAG Region, and included aviation demand from Northern San Diego County in its allocation of forecast aviation demand to the SCAG region's commercial airports.

The comments on the Draft RASP that were unanimously approved by the SCAG Aviation Technical Advisory Committee at its February 17, 2011 meeting are as follows:

- SCAG's 2004 and 2008 RTPs allocated a significant amount of passenger and cargo demand from Northern San Diego County to March Inland Port (MIP) in 2035. A proposed station of the Los Angeles to San Diego via the Inland Empire proposed segment of the California High-Speed Rail Project would be located at MIP, which would facilitate serving demand from Northern San Diego County at MIP. However, MIP is entirely missing from the RASP analysis in chapter four of projected passenger enplanements at airports in the combined SCAG/SANDAG regions. San Bernardino International Airport (SBD) is missing as well. Both MIP and SBD should be included in the RASP enplanement forecasts at levels consistent with the 2008 RTP Constrained Scenario that will be the basis for new 2035 forecasts prepared for the 2012 RTP.

- Chapter four of the RASP (pg. 4-20) states that "LAX is projected to reach capacity sometime around 2015, which will result in significant increases in passenger enplanements at John Wayne/Orange County, Long Beach, Ontario International, and Burbank." However, according to a presentation given at the 9/23/10 ATAC meeting by Diego Alvarez, Los Angeles World

Airport's coordinator for ground transportation, LAWA does not forecast LAX to meet its 78.9 MAP Settlement Agreement constraint until 2024. John Wayne and Long Beach should reach their legally-enforceable capacity constraints (10.8 MAP and 4.2 MAP, respectively) well before 2024.

- In Figure 4-20 of the RASP (pg. 4-21), Burbank Airport (BUR) should be renamed Bob Hope Airport. The capacity of BUR in the Figure-20 is around 12 MAP. This significantly exceeds the 9.4 MAP physical capacity of the airport estimated by SCAG and adopted for the 2008 RTP, corresponding to the airport's 14 gates.

- Figure 4-20 also shows a physical capacity of around 14 MAP for Ontario Airport (ONT), which is far lower than the 31.6 MAP capacity of the airport estimated by SCAG and adopted for the 2008 RTP, corresponding to the airport's two runways (LAWA also estimates over 30 MAP of ultimate physical capacity for ONT). It is impossible to tell what the RASP assumes for the legally-enforceable Settlement Agreement capacity of John Wayne Airport since it is missing from Figure 4-20.

I hope that these comments are helpful to the San Diego County Regional Aviation Authority in finalizing the RASP. The SCAG Aviation Technical Advisory Committee looks forward to working closely with the Airport Authority on aviation issues of mutual concern, including the development of a new Regional Aviation Element with new 2035 aviation demand forecasts for SCAG's 2012 Regional Transportation Plan. Contact Michael Armstrong, SCAG Aviation Program Manager (213-236-1914) or myself (562-570-2678) if you have any questions.

Sincerely,

Chris Kunze
ATAC Chairman
Staff Advisor, Long Beach Airport

cc: Mr. Michael Armstrong
Aviation Program Manager
Southern California Association of Governments
818 W 7th Street 12th Floor
Los Angeles CA 90017-3435

Response to SCAG Correspondence

California Senate Bill 10 (SB-10) mandated the RASP focus on the 12 public use airports in San Diego County. In recognition of the important interrelationships between San Diego County and the SCAG region in regard to air travel demand, the RASP Study Area was expanded to include (a) five counties of the SCAG region, including: Orange, Los Angeles, San Bernardino, Riverside and Ventura; and (b) the five commercial service airports serving the region, including: Los Angeles International (LAX), Burbank (BUR), John Wayne (SNA), Ontario (ONT), and Long Beach (LGB). Second, analyses that included airports in the SCAG region were purposely kept at a high-level because, again, the focus of the RASP is the 12 public use airports in San Diego County.

Responses to the individual comments are provided below:

- **March Inland Port (MIP) and San Bernardino International Airport (SBD)**: SB-10 mandates that the RASP consider alternative or optimized use(s) of currently existing facilities in San Diego County only. These airports are outside of San Diego County, and therefore, were not considered in the analyses and recommendations.

- **Capacity Constraints at Los Angeles International (LAX)**: The Authority recognizes the differences in forecasts. Consistent with historical U.S. enplanements, denoted on Figure 4-12 in the RASP Technical Report (page 4-10), the RASP projects a strong recovery from the current recession beginning in the near-term. This recovery may advance capacity constraints at LAX compared to the forecasts provided to ATAC on September 23, 2010. In summary, this is primarily a question of future actual activity level forecasts, and when capacity limits at various airports will actually be reached.

- **Capacity of Burbank, Ontario, and John Wayne airports**: The Authority recognizes the differences in the capacity assumptions for three airports. The capacities of all airports in the SCAG region were based on available information including existing master plans or information maintained on individual airport websites. For example, Ontario Airport's website notes "*The twin terminals can accommodate up to 10 million passengers a year…*" The RASP Baseline Scenario did not consider construction of additional facilities (e.g., terminals, runways) that would increase the capacity of these airports, and this is documented in the RASP report. SDCRAA also recognizes that the Settlement Agreement capacity of John Wane Airport was omitted from consideration in the RASP.

Finally, the Authority recognizes that there are a number of issues at the local level that may differ from RASP findings that are focused on the system level. However, based on the RASP analyses, variations in individual airport capacity estimates would not materially change the outcome of the RASP findings. The conclusions would remain unchanged, in large part because of the system structure and the available and planned facilities at airports in San Diego County.

BILL HORN
CHAIRMAN
SUPERVISOR, FIFTH DISTRICT
SAN DIEGO COUNTY BOARD OF SUPERVISORS

March 10, 2011

Robert H. Gleason, Chairman
San Diego County Regional Airport Authority Board
P.O. Box 82778
San Diego, CA 92138

Dear Mr. Gleason:

On behalf of the San Diego County Board of Supervisors, I appreciated the presentation provided at the March 2, 2011 board meeting on the Regional Aviation Strategic Plan (RASP). Having reviewed the RASP thoroughly, County staff has concluded that the RASP recommendations are consistent with the County Airports Master Plans for both Gillespie Field and McClellan-Palomar airports.

In regard to the Airport Multimodal Accessibility Plan (AMAP), we request that the Bradley Avenue/State Route 67 interchange be evaluated in the analysis of the Proposed Ground Access Improvements for Gillespie Field Airport.

At the presentation there was additional discussion by Board of Supervisors on other aspects of the RASP and future airport planning that should also be considered. You can view these comments on our archived meetings page by visiting http://sdpublic.sdcounty.ca.gov, clicking on the "Board Meeting Video" link, and viewing the Board of Supervisors March 2, 2011 Land Use Meeting.

If you have any questions or need additional information, please contact Richard Crompton, Director of Public Works, at (858) 694-2233.

Sincerely,

BILL HORN
Chairman
Supervisor, 5th District

BH:cc

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San Diego
Regional
Economic
Development
Corporation

March 2, 2011

Robert H. Gleason Chair
San Diego County Regional Airport Authority
P.O. Box 82776 San Diego, California 92138-2776

Chairman Gleason:

The San Diego Regional Economic Development Corporation (EDC) would like to take this opportunity to express its appreciation for inclusion in the Regional Airport Strategic Plan (RASP) process over the last year. Holding a public open house that included our membership demonstrated real commitment to conducting meaningful outreach to San Diego's business community.

San Diego's employers increasingly look to global markets to maintain our regional prosperity – and we know from first-hand discussions how important enhanced air service is to this objective. We are delighted to be working with the Authority to welcome British Airways back to San Diego – and welcome the chance to evaluate and propose further service expansion.

The report appropriately demonstrates both the necessity of expanding air service, and the best available options to do so. The report is a contribution to the quality of life and economic base of our region – and the EDC looks forward to working with the Airport Authority to implement its conclusions.

Sincerely,

Andrew Poat
Vice President - Policy

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Seventh Floor
San Diego
CA 92101

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San Diego East County Economic Development Council

March 2, 2011

Robert H. Gleason
Chair
San Diego County Regional Airport Authority
P.O. Box 82776
San Diego, California 92138-2776

Dear Chairman Gleason,

The East County Economic Development Council (East County EDC) would like to take this opportunity to express its appreciation for inclusion in the Regional Airport Strategic Plan (RASP) process over the last year. Holding a public open house in the East County showed real commitment to conducting meaningful outreach to the entire San Diego region.

We look forward to the Board's official adoption of the RASP and are particularly keen to see the recommendation that Gillespie Field airport be enhanced to accommodate additional General Aviation services come to fruition. The Council's Gillespie Field Development Committee, which has met continuously since 1993, is already exploring economic development strategies to address the infrastructure, business, and workforce training initiatives required to take advantage of increased Gillespie Field operations.

The Gillespie Field Development Committee includes public, private, and non-profit sector stakeholders that have, through its spirit of cooperation and pure perseverance, worked to increase the visibility and value of Gillespie Field. These efforts include championing infrastructure improvements to the Bradley Avenue/SR-67 interchange and ongoing planning for quality development at the adjacent Gillespie Field airport and surrounding commercial and industrial area.

Sincerely,

Jo Marie Diamond
Interim President and CEO
East County Economic Development Council

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dc.org

San Diego's Voice for
Binational Business

South County Economic Development Council

March 3, 2011

Robert Gleason
San Diego County Regional Airport Authority
PO Box 82776
San Diego, CA 92138-2776

Honorable Chairman Gleason,

The South County Economic Development Council (SCEDC) would like to take this opportunity to express our appreciation for inclusion in the Regional Airport Strategic Plan (RASP) process over the last year. It was our privilege to host a public open house in South County and we appreciate the Airport Authority's commitment to devote the necessary resources to ensure a successful event in South County.

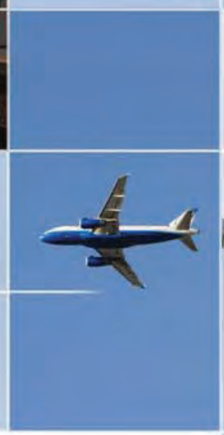
SCEDC is particularly interested in the economic opportunities that can occur with the enhancements at Brown Field and the building of the Cross Border Terminal. We greatly appreciate you acknowledging those in the RASP and look forward to working collaboratively with you to bring those projects to fruition. SCEDC views these projects as critical infrastructure to the future of our region. We look forward to the Board's adoption of the RASP and the subsequent implementation of the many efforts outlined in this report.

Sincerely,

Cindy Gompper Graves
Chief Executive Officer

FINAL

San Diego Airport Multimodal Accessibility Plan



Prepared for
San Diego Association of Governments (SANDAG)

SANDAG

401 B Street, Suite 800
San Diego, California 92101

Prepared by

CH2MHILL.

HNTB

March 2012

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Appendixes

Tables

Figures

Acronyms

ADT	Average Daily Traffic
Airport Authority	San Diego County Regional Airport Authority
AMAP	Airport Multimodal Accessibility Plan
BRT	Bus Rapid Transit
CHSRA	California High-Speed Rail Authority
Caltrans	California Department of Transportation
CBF	Cross Border Facility
CBT	Cross-Border Terminal
CONRAC	Consolidated Rental Car Facility
CPUC	California Public Utilities Commission
ETC	Escondido Transit Center
FAA	Federal Aviation Administration
FTA	Federal Transit Administration
HOV	High-Occupancy Vehicle
HSR	California High-Speed Rail
HST	High-Speed Train
HUD	U.S. Department of Housing and Urban Development
I	Interstate
ITC	Intermodal Transportation Center
LRT	Light Rail Transit
LAX	Los Angeles International Airport
LOS	Level of Service
MCRD	Marine Corps Recruit Depot
MOU	Memorandum of Understanding
MTS	San Diego Metropolitan Transit System
NCTD	North County Transit District
NPIAS	National Plan of Integrated Airport Systems
P3s	Public/Private Partnerships
POE	Port of Entry
RASP	Regional Aviation Strategic Plan
RTP	Regional Transportation Plan
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
SANDAG	San Diego Association of Governments
SB	Senate Bill
SDIA	San Diego International Airport
SOCAL ICG	Southern California High-Speed Rail Inland Corridor Group

SR	State Route
SWG	Stakeholder Working Group
TGR	Trip Generation Rate
TIFIA	Transportation Infrastructure Finance and Innovation Act
TIGER	Transportation Investment Generating Economic Recovery
TIJ	Tijuana Rodriguez International Airport
U.S.	United States
USDOT	United States Department of Transportation

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Executive Summary

Introduction

Airports help to link local, regional, statewide, national, and global economic activities and are essential features of comprehensive local transportation systems, including streets, highways, rail transit, transit over water (e.g. cargo ships), and mass transit. Because of the significant regional consequences of airport development and operations, it is important that the future development of major airport facilities in San Diego County be addressed in the context of a regional decision making process that has regional representation.

In enacting Senate Bill 10 (SB 10) in 2007 (California Legislature, 2007), the intent of the Legislature was to:

1. Promote long-range planning for airports in local general plans
2. Advance regional transportation strategies
3. Explore mechanisms for regional cooperation
4. Ensure consistency between the planning documents prepared or approved by the San Diego County Regional Airport Authority (Airport Authority) and the San Diego Association of Governments (SANDAG).

These goals are accomplished by the main planning provisions of SB 10, which are the development of a Regional Aviation Strategic Plan (RASP) and an Airport Multimodal Accessibility Plan (AMAP). The Airport Authority, as lead for the RASP, analyzed scenarios to improve the performance of the regional airport system. SANDAG is the lead for the AMAP, which develops a multimodal strategy to improve surface transportation access to these airports. The overarching goal of the RASP and AMAP is to maximize the efficiency and effectiveness of existing and planned aviation facilities by using all modal infrastructures.

Currently, ground access to the region's airports is primarily roadway- and automobile-focused. As a result, aviation demand puts pressures on already crowded freeways and roadways, further limiting their ability to efficiently serve the region. The AMAP develops ground access improvement alternatives at San Diego regional airports as identified in the RASP. These alternatives include roadway and highway modifications, reconfiguration of existing and development of new transit services and facilities, and new express bus service for direct connections to San Diego International Airport (SDIA), McClellan-Palomar Airport, and the future Cross Border Facility (CBF). The AMAP incorporates the advanced planning for the Airport Intermodal Transportation Center (ITC) at SDIA and future high-speed train (HST) service at both the ITC and the CBF.

Background

San Diego County, with more than 3 million residents, is the second most populous county in California and accounts for 8 percent of the state's population. In the Tijuana, Baja California region, there are over 1.6 million residents (INEGI 2010). Each year, more than 11.5 million air passengers within San Diego County primarily use one of three airports certified for commercial airline service (Airport Authority, 2011) –SDIA with 9.2 million enplanements, Tijuana Rodriguez International Airport (TIJ) with 2.3 million enplanements, or McClellan-Palomar Airport with 47,000 enplanements. The San Diego County public-use airport system includes a total of 12 airports in San Diego County and TIJ in Tijuana, Mexico (Figure ES.1). TIJ was included in the RASP because it serves passengers from the entire Southern California region. The AMAP also includes TIJ with regards to the proposed Cross-Border Facility (CBF)/Cross Border Terminal (CBT) on the U.S. side that would facilitate processing of U.S. passengers utilizing TIJ.

One requirement of SB 10 of 2007 was a memorandum of understanding (MOU) between the Airport Authority and SANDAG to work cooperatively on multimodal airport planning in the region and specifically on the RASP and AMAP. Through this MOU, approved in June 2009 by both agencies, SANDAG outlined the major components of the AMAP:

1. The identification of multimodal transportation investments that will improve surface transportation access to the airports in San Diego County, other counties, and Mexico if appropriate
2. A program of investments and the anticipated schedule for the development of the projects that comprise the program
3. A financial element that estimates for the period of the plan the amount of funding that can be expected, the likely revenue sources from which the funding will be derived, and the program of investments supported by the expected revenue.

The AMAP furthers the utility and successful implementation of the RASP objectives through the identification of multimodal transportation investments that will improve surface transportation access to the airports in San Diego County and to other counties, if appropriate.

Stakeholder and Public Outreach

The AMAP stakeholder working group (SWG) was established to provide input on the development of the proposed ground access transportation improvements. The SWG met over a 15-month period, between March 2010 and June 2011, reviewing RASP modeling results and the development of the proposed surface transportation improvements at each regional airport evaluated in the RASP study.

During this planning process, joint presentations were held on various dates by SANDAG and the Airport Authority to their respective boards. The SWG included the following agencies:

- SANDAG
- Airport Authority
- California Department of Transportation (Caltrans)
- San Diego Metropolitan Transit System (MTS)
- North County Transit District (NCTD)

The proposed ground access alternatives were discussed with the SWG at monthly coordination meetings. Additional meetings were held with various local agencies including the County of San Diego, City of San Diego, City of Carlsbad, City of El Cajon, Otay-Tijuana Venture LLC, MTS and NCTD.

Staff participated in Open Houses organized by the Airport Authority in September 2010 and January 2011 to both present the draft findings from both the RASP and AMAP and staff informational booths on both plans.

The SANDAG Board of Directors released the draft plan for a 60-day public comment period on June 24, 2011. The draft report was also made available on the SANDAG website during this time. Several presentations were made during this time including to SANDAG's Regional Planning Technical Working Group and Cities/County Transportation Advisory Committee, Regional Chamber of Commerce Transportation Committee, and County of San Diego, Airports staff.

2050 Regional Transportation Plan

The 2050 Regional Transportation Plan (RTP) is the long-range transportation blueprint for major transportation modes in the San Diego region. Since SANDAG updates the RTP every four years, the schedule for the RASP and AMAP were driven by the schedule for developing and finalizing the current RTP, the 2050 RTP. The 2050 RTP was finalized by the SANDAG Board of Directors in October 2011 and major findings from both the RASP and the draft AMAP report were included.

Summary of Findings

The ground access improvements included in the AMAP were developed in conjunction with the findings identified in the RASP. The RASP included a strategic assessment of the San Diego County Airport System, which identified the regional airports that could be considered for service role changes to optimize the region's aviation infrastructure. These regional airports were then evaluated in the AMAP for ground access improvements.

Following the completion of the RASP Strategic Assessment, airports that were determined to have physical, operational, environmental, or other significant constraints that hindered their ability to meet the long-term needs of the region were dropped from further study in the RASP and the AMAP. Those airports included the following:

- Oceanside
- Fallbrook
- Borrego Valley
- Ocotillo
- Agua Caliente
- Jacumba

Both the RASP and AMAP continued further evaluation of the following airports:

- McClellan-Palomar
- Gillespie Field
- Brown Field
- SDIA
- TIJ
- Montgomery Field
- Ramona

As the RASP progressed, Montgomery Field and the Ramona Airport were not included in the family of scenarios which were identified to optimize the regional airport system. These two airports were eventually discovered to be among those that had physical, operational, environmental or other constraints. Scenarios for Brown Field were found to be infeasible because of a number of factors, including terrain and airspace complications, reluctance of passenger airlines to "split operations" with SDIA, distance from demand base, and lack of facilities for air cargo carriers.

Based on these findings, the AMAP then evaluated potential ground access improvements at the airports found to be candidates for future expansion. During the AMAP planning process, interim findings from the RASP such as aviation modeling results, were shared with the SWG to assess and refine the initial ground access improvements. The major findings of the RASP and AMAP are summarized below for both short-term (2020) and long-term (2035) time frames.

SDIA Short-term (2020)

The RASP results indicated that the full north side build-out of the SDIA would have no effect on projected enplanements relative to the baseline scenario because it would not provide airfield capacity improvements.

However, there are other reasons for full build-out of the north side terminal complex as well as construction of the Phase 1 Airport ITC, including regional intermodal transportation connections, alternatives to driving alone to the airport, and congestion relief. The advanced planning and preliminary design for the Airport ITC is currently under way and will include connections from the north side airport development to trolley, commuter rail, and local and regional buses. Connections from the north side improvements, including the Airport ITC, would be via shuttle bus on a dedicated on-airport Terminal Link Roadway around the east end of the runway. Sassafras Street would provide access into the north side airport facilities, with existing access routes from the airport. These ITC ground access improvements are included in the AMAP and are also consistent with *Destination Lindbergh* (Airport Authority, 2009), which provides the long-range strategy to optimize the efficiency of SDIA's facilities and functions.

The AMAP also includes three potential express bus service routes to SDIA. These services may provide connections to Inland North County, McClellan-Palomar Airport, and the CBF.

SDIA Mid-to-Long-term (2035)

The AMAP study calls for the full build-out of the Airport ITC which builds upon the Phase 1 scenario, and will include a high-speed train station and direct connector ramps from Interstate 5 (I-5). A potential people mover would replace the shuttle bus connection between the north and south sides of the airport. In the long-term, all passenger access and processing could occur on the north side of the airport property, and direct ground access from North Harbor Drive would cease.

The RASP evaluated two HST alignments and both would offer passengers a ground transportation alternative to air-travel between cities and airports within California. The study found that diverting a portion of intrastate commercial passenger operations from Northern California to HST, would delay SDIA capacity constraints (expected to occur between 2020 and 2025) by approximately 5 years. This would alleviate the region's aviation capacity and accommodate suppressed demand. It should be noted that the true long-term impact of HSTs on the region could not be precisely determined because results were evaluated for only 3 years, with effects being observed only between 2027 (when the California High-Speed Rail Authority [CHSRA] expects to be running service to San Diego) and 2030.

Based on the degree of uncertainty surrounding the timing of HST, as well as the time and cost of accessing and using the service, the best estimate is that between 8 percent and 25 percent of the region's aviation demand to northern California would be diverted to rail (Airport Authority, 2011).

The eventual diversion will depend on the schedule of operations, average train speeds, and fares, as well as the degree of integration with SDIA and the surface transportation connections.

Cross Border Facility Short-term (2020)

The CBF is a privately-funded venture by the Otay-Tijuana Venture, LLC that will provide a pedestrian bridge for ticketed passengers to cross the U.S.-Mexico border to the TIJ terminal.

The RASP forecasts a 30 percent increase in the number of passengers using TIJ with the introduction of the CBF, but the CBF would only marginally alleviate the short-term capacity constraint at the SDIA. This is because U.S. travel from Tijuana, notwithstanding any form of a cross border terminal, is international travel, requiring customs clearance for Mexico-departing and U.S.-arriving passengers. The RASP also found that the CBF would attract more passengers from the Los Angeles region than from San Diego County. This is primarily attributable to the larger service area of the Los Angeles region and capacity constraints at Los Angeles region airports. In addition, the use of TIJ by San Diego County residents and visitors is expected to increase over the RASP study period with or without the introduction of the CBF given its proximity and the capacity constraints at SDIA.

The AMAP reviewed a number of ground access improvements to the CBF during the short-term phase. These include future local bus routes between Otay Mesa Port of Entry (POE) and the CBF, additional arterial widening projects consistent with the draft Otay Mesa Community Plan update under development by the City of San Diego planning staff, and additional improvements to the interchange between State Route 905 (SR 905) and Britannia Boulevard. The additional demand generated by the CBF would require roadway improvements in the vicinity of the proposed facility to accommodate increased ADT on surrounding arterials. All of the roadway improvements included in the AMAP provide better access to and from the CBF by allowing the arterials and ramps to operate at an acceptable LOS D or better.

Express bus service (or “FlyAway” service that provides a one seat ride directly to the terminal) from the Airport ITC, North County Inland, and the H Street trolley station located in the City of Chula Vista also are possible.

Cross Border Facility/Cross Border Terminal Mid-to-Long-term (2035)

The RASP also evaluated increasing the use of TIJ for commercial passenger activity by offering a new passenger Cross Border Terminal (CBT) on the U.S. side of the border to facilitate processing of U.S. passengers utilizing TIJ. The CBT would function as a full-service terminal, allowing passengers to purchase tickets and check-in luggage for TIJ-originating flights on the U.S. side of the border.

The future CBF would provide access to flights and increased international destinations not offered at SDIA. The RASP includes an evaluation of the CBF as a future CBT, but for purposes of the proposed ground access improvements, the AMAP evaluates this as one facility.

The AMAP incorporates the recommendations included in the SANDAG feasibility study which evaluated the feasibility of extending current and future rail services to the CBF/CBT. For the long-term build-out of the facility, the state's future HST system would be extended to the CBF/CBT. The SANDAG feasibility study identified the I-5 corridor as potentially feasible to extend the HST system from its terminus in downtown San Diego or the Airport ITC, to the CBF/CBT and the Otay Mesa POE (SANDAG, 2010a). This extension is included in the 2050 RTP Unconstrained Network (SANDAG, 2011).

McClellan-Palomar Airport

The RASP evaluated enhanced commercial passenger service at McClellan-Palomar Airport driven by either capacity constraints at SDIA or facility improvements at McClellan-Palomar Airport. Increased commercial passenger service at McClellan-Palomar Airport would not alleviate capacity constraints at SDIA primarily because the additional demand that can be accommodated at McClellan-Palomar Airport only would account for 5 percent of SDIA's total traffic and because the number of destinations offered at McClellan-Palomar Airport is limited. The RASP also evaluated the use of McClellan-Palomar Airport for high-end/corporate general aviation and estimated that this would delay the capacity constraint at SDIA by approximately 2 years.

The AMAP ground access improvement alternatives included additional lanes on Palomar Airport Road, widening of arterial streets, and an additional entrance to the McClellan-Palomar Airport for better transit and vehicular access directly to the terminal. Proposals to be carried forward include the arterial roadway and transit improvements including express bus service to and from SDIA via the I-5 corridor. NCTD Route 445 would be modified to provide direct service to the airport terminal and would provide connectivity to COASTER service at the Carlsbad Poinsettia Station.

Gillespie Field

The RASP evaluated maximizing the use of Gillespie Field for both high-end/corporate and recreational general aviation by providing the necessary facilities and amenities in order to shift aviation activity from SDIA to Gillespie Field. The RASP estimated that redistributing general aviation operations per the assumptions under this scenario would delay the capacity constraint at SDIA by approximately 2 years.

General aviation is traditionally a difficult market for transit to serve in an efficient and cost effective manner. That said, to provide better connectivity to Gillespie Field, AMAP improvements include the completion of the Bradley Avenue/SR 67 interchange to facilitate better access to the airport and enhanced transit connections at the Gillespie Field trolley station. Additional coordination and input with the City of El Cajon, County of San Diego, and MTS will be required to refine these concepts

Summary of Cost Estimates

Following development of the ground access improvements, preliminary, planning-level capital and operational cost estimates were developed for the roadway and transit improvements for the airports carried forward as part of the AMAP and RASP study process. Total planning level capital costs by airport include the following as shown in Table ES-1

Table ES-1 Summary of Preliminary Costs

Airport	Constrained Cost	Unconstrained Cost	Notes
SDIA	$1.6 billion	-	Does not include HST and I-5 Direct Connectors
CBF/CBT	17.3 million	$3.6 billion	Unconstrained cost includes future HST/Commuter Rail Extension
McClellan-Palomar Airport	$19.5 million	-	-
Gillespie Field	$30.2 million	$0.8 million	Constrained cost includes Bradley Avenue/SR 67 interchange improvement

The AMAP also identified five different express bus service routes with a total capital cost of $25.5 million and annual operating costs of $33.5 million.

A more detailed description of the capital and operational cost estimates for the ground access improvements identified in the AMAP is included in Chapter 4 of this report.

Implementation Strategies

Completion of the RASP and AMAP has showcased the benefits of collaboration between SANDAG, the Airport Authority, and regional stakeholders. Aviation planning and airport ground access have been incorporated into the 2050 RTP at a level above and beyond previous plans. Further collaboration is warranted both in terms of future updates to the RASP and RTP, but also to identify the necessary steps toward successful implementation of the ground access improvements identified in the AMAP.

Additional steps following completion of the AMAP include continued collaboration with staff from the Cities of San Diego, Carlsbad, and El Cajon, as well as the airport owners to assess the feasibility of incorporating ground access improvements in local plans, airport layout and master plans, and coordination with other planning efforts. Any AMAP recommendations on airport property would be subject to federal approval processes.

Implementation of the AMAP findings will be dependent on funding and policy changes which are needed to further the goals of SB 10. The reauthorization of the surface transportation program, SAFETEA-LU (Safe, Accountable, Flexible and Efficient Transportation Equity Act: A Legacy for Users), has been deferred until at least April 2012 and there is little agreement on how to raise federal funds to address the current funding shortfall in the Highway Trust Fund. Compounding this problem is the current economic condition and its impact on state funding for transportation. It is unlikely that any additional state funds will be accessible until the national, state, regional and local economies improve. As a result, there appear to be few federal or state funding options to implement the proposed ground access improvements in the short term.

That said, several strategies could be explored for funding opportunities with the goal of leveraging local funding with state, federal and private dollars. These sources are listed below and discussed in detail in Chapter 5.

Federal Sources

- Potential Intermodal Airport Funding Pilot Program
- Federal Livability Initiative
- Transportation Investment Generating Economic Recovery
- FTA Funds
- Complete Streets
- Environmental and Natural Resources Grants
- TIFIA Loan

State Sources

- Intermodal Connectivity Funding
- High Speed Rail Funding
- CPUC Grade Separation Funding
- CTC Prop. 1B Grade Crossing Funds

- Caltrans Transportation Planning Grant Program

Local and Regional Sources

- Restructured Local Bus Service to Serve Airport

Private Sources

- Private Shuttles to Airports
- Joint Development around stations
- Establishment of Assessment Districts
- Public/Private Partnerships

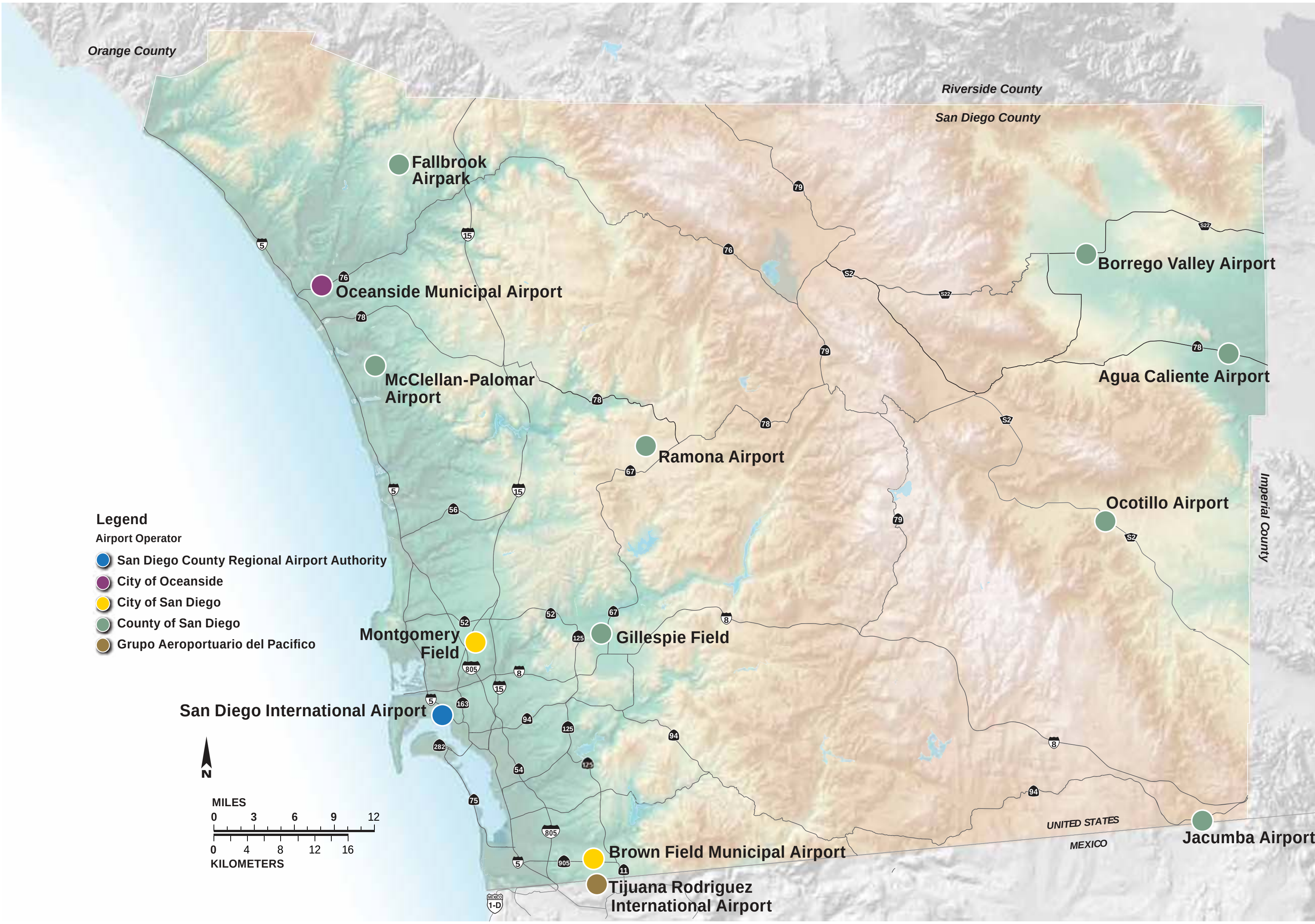

FIGURE ES.1
San Diego Region Airports
Airport Multimodal Accessibility Plan

SANDAG

Source: SANDAG 2011

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1 Purpose and Need

San Diego County, with more than 3 million residents, is the second most populous county in California and accounts for 8 percent of the state's population. In the Tijuana, Baja California region there are over 1.6 million residents. Each year, more than 11.5 million air passengers use one of three airports certified for commercial airline service (Airport Authority, 2011) – San Diego International Airport (SDIA) with 9.2 million enplanements, Tijuana Rodriguez International Airport (TIJ) with 2.3 million enplanements, or McClellan-Palomar Airport with 47,000 enplanements.

In addition, ten airports provide general aviation and air cargo services, and together, make up the region's public-use airport system (Figure 1.1).

Currently, ground access to the region's airports is primarily roadway- and automobile-focused. Public transportation options are limited. Because of the focus on roadway infrastructure, aviation demand puts pressures on already crowded freeways and roadways, further limiting their ability to efficiently serve the region. For example, the level of service (LOS) along major arterials serving SDIA is at LOS D or higher during certain times of the year when air travel is at its peak. Offering additional choices to airline passengers can potentially alleviate some of this congestion. For example, the Airport ITC could increase the mode share for transit to SDIA from the current 1 percent to up to 13 percent at full build out.

The Airport Multimodal Accessibility Plan (AMAP) develops ground access improvement alternatives at San Diego regional airports as identified in the Regional Aviation Strategic Plan (RASP). These alternatives include roadway and highway modifications, reconfiguration of existing and development of new transit services and facilities, and new express bus service for direct connections to SDIA, McClellan-Palomar Airport, and the future Cross Border Facility (CBF) from the region's major travel corridors. The AMAP also incorporates the advanced planning for the Airport Intermodal Transportation Center (ITC) at SDIA and future high-speed train (HST) service at both the ITC and the CBF.

One requirement of Senate Bill 10 (SB 10) of 2007 was a memorandum of understanding (MOU) between the San Diego County Regional Airport Authority (Airport Authority) and the San Diego Association of Governments (SANDAG) to work cooperatively on multimodal airport planning in the region and specifically on the RASP and AMAP. Through this MOU, approved in June 2009 by both agencies, SANDAG outlined the major components of the AMAP:

1. The identification of multimodal transportation investments that will improve surface transportation access to the airports in San Diego County, other counties, and Mexico if appropriate
2. A program of investments and the anticipated schedule for the development of the projects that comprise the program
3. A financial element that estimates for the period of the plan the amount of funding that can be expected, the likely revenue sources from which the funding will be derived, and the program of investments supported by the expected revenue

The AMAP furthers the utility and successful implementation of the RASP objectives through the identification of multimodal transportation investments that will improve surface transportation access to the airports in San Diego County and to other counties, if appropriate.

1.1 Relationship to Regional Aviation Strategic Plan

As a result, the AMAP is part of a two-pronged process completed by SANDAG and the Airport Authority. The Airport Authority is the lead for the RASP, which identified workable strategies to improve the performance of the regional airport system. SANDAG is the lead for the AMAP, which develops a multimodal strategy to improve surface transportation to airports. The development of the RASP and AMAP will be a coordinated process between the Airport Authority and SANDAG (Figure 1.2).

1.2 Relationship to 2050 Regional Transportation Plan

The Regional Transportation Plan (RTP) is the long-range blueprint for major transportation modes in the San Diego region and is the first step in designing, securing funding, and ultimately building transportation projects. SANDAG is required by federal law to update the RTP every 4 years. The current plan, the 2050 RTP, was adopted by the SANDAG Board of Directors in October 2011. The 2050 RTP looked at the region between now and 2050 and phases transportation improvements by 2018, 2020, 2030, 2035, 2040, and 2050. The major findings from the RASP and AMAP, as required by SB 10 and the interagency MOU, were included in the final 2050 RTP.

While the 2050 RTP outlines phases to 2050, the AMAP follows the timeline of the RASP in addressing improvements through 2035. Because aviation facilities and technologies are difficult to plan for beyond 25 years, the RASP forecasts and airport improvements extend to 2035. While SANDAG consulted the draft 2050 transit and roadway networks for potential inclusion in this plan, ground access findings in this report are discussed for 2020 and 2035.

According to analyses by the Airport Authority, capacity constraints are likely at SDIA beyond 2030. This will result in the inability of the region to accommodate all demand, potential service disruptions and higher air fares. Although new aircraft will be deployed in the future (with designs like the Boeing 787 Dreamliner) that may have greater range for nonstop flights to international destinations from SDIA, no aircraft technologies now under development will increase the daily operation capacity of SDIA.

The RASP identified a series of measures that could accommodate additional demand up to 2030; several of these options, including high-speed rail, could also accommodate additional demand in the 2030 to 2050 timeframe. High speed rail is predicted to accommodate additional passenger demand for intrastate and intercity travel to Northern California. Airport Authority analyses noted that even including all these options, however, the region will likely face an inability to meet all commercial passenger demand within this timeframe.

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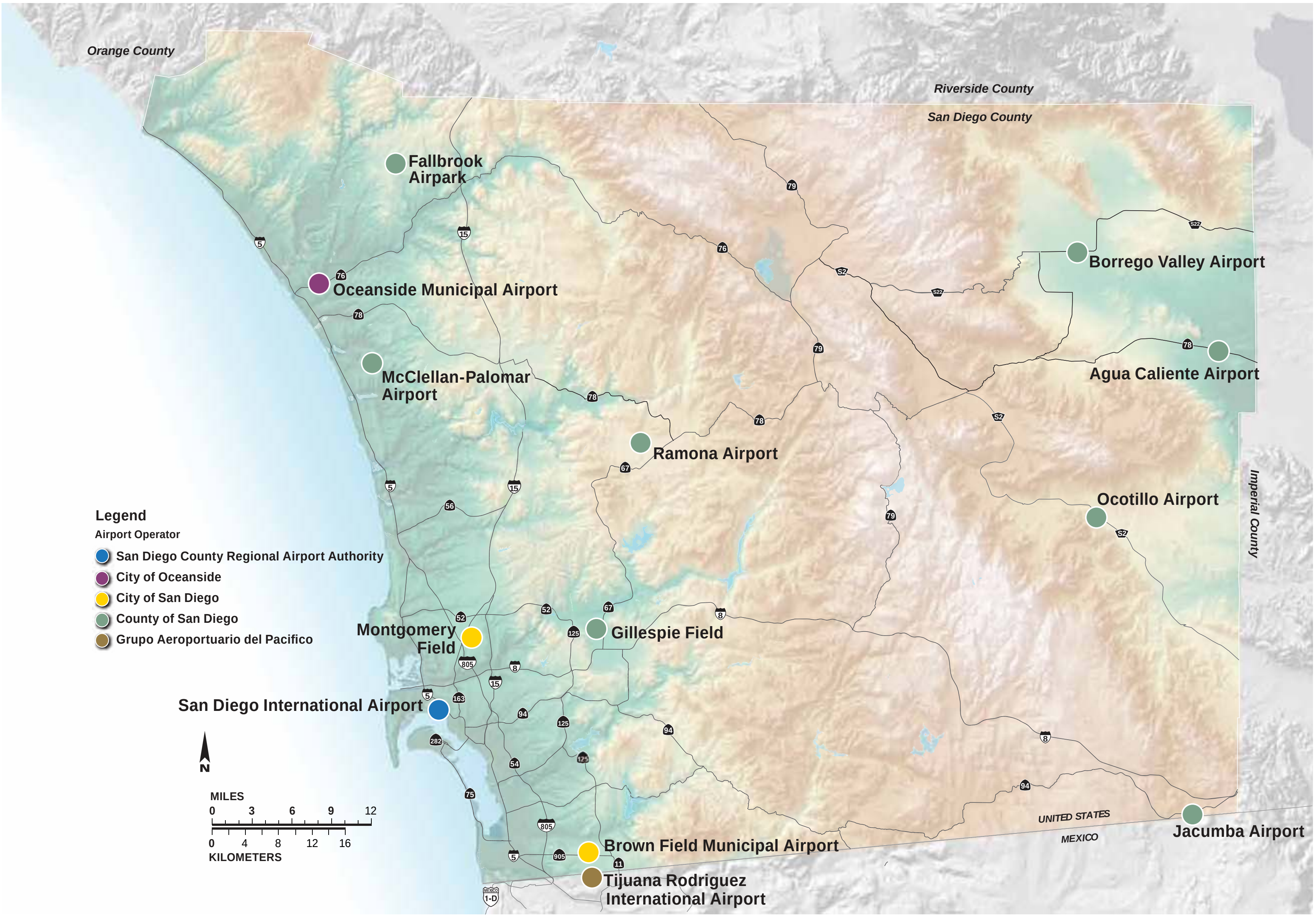

FIGURE 1.1
San Diego Region Airports
Airport Multimodal Accessibility Plan

SANDAG

Source: SANDAG 2011

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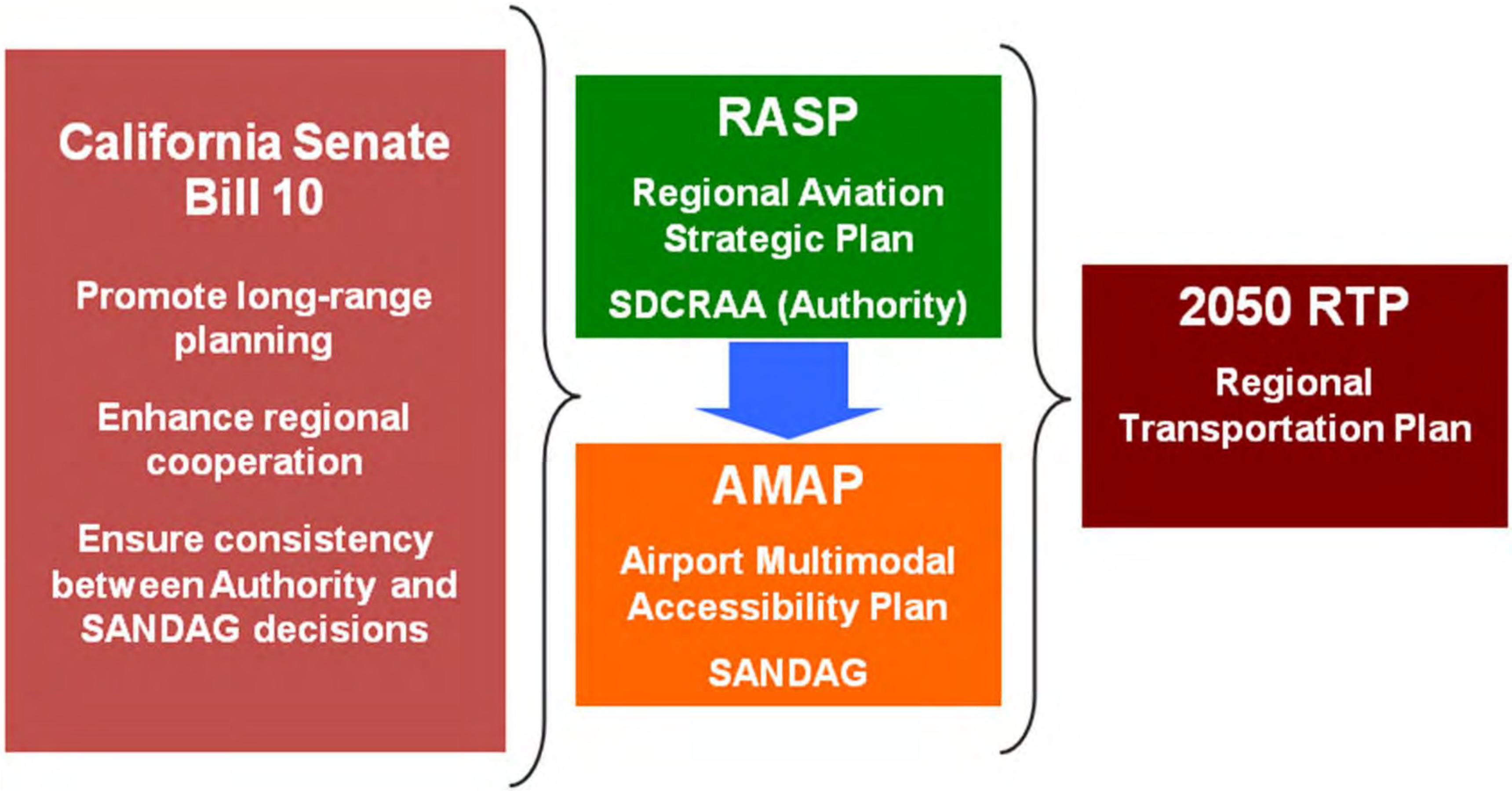

FIGURE 1.2
Coordinated RASP and AMAP Development Process
Airport Multimodal Accessibility Plan

Source: Airport Authority 2011

2 AMAP Study Process and Approach

The purpose of this plan was to develop ground access transportation improvements at specific airports in the San Diego region, based on the RASP analysis and findings. Ground access alternatives were developed to coincide with the various scenarios developed as part of the RASP study. The AMAP ground transportation improvements included roadway and highway modifications, reconfiguration of existing and planned transit facilities, new express bus service and modifications to existing or proposed local bus service.

The AMAP study process, in addition to being completed in conjunction with the RASP, included a review of both air and landside planning studies and efforts.

2.1 Planning Studies Reviewed and Considered

The development of proposed ground access improvements for the AMAP included a review of existing planning documents related to airport improvements, as well as other local planned transportation modes, to gain an understanding of future airport, transportation and land-use improvements. Relevant plans are described below, along with important elements of the plans that were used to develop the ground access alternatives evaluated in this study.

2.1.1 Destination Lindbergh

The goal of *Destination Lindbergh* (Airport Authority, 2009) was to provide a fundamental, long-range strategy to optimize the efficiency of SDIA's facilities and functions. The plan envisions the ultimate build-out configuration of SDIA, evaluates and plans to minimize airport-related traffic impacts to adjacent communities, and improves intermodal access to SDIA.

Design features described in the study were included as potential ground access improvements as part of the AMAP study. These include HST terminus and new Interstate 5 (I-5) direct connectors, and the Airport ITC located north of the existing airport between Pacific Highway and I-5. The ITC was studied in the *SANDAG Airport Intermodal Transit Center (ITC) – Phase I Final Report* (SANDAG, 2010b), which is described below.

2.1.2 SANDAG Airport Intermodal Transit Center (ITC) – Phase I Final Report

The purpose of the *SANDAG Airport Intermodal Transit Center (ITC) – Phase I Final Report* (SANDAG, 2010b) was to verify the feasibility of and refine the concepts proposed by *Destination*

Lindbergh (Airport Authority, 2009) for the ITC facility. Phased alternatives were developed as part of the study that connects the ITC facility to existing and planned airport facilities. Plans for a trolley, bus, commuter rail and HST connection with SDIA were included as ground access improvements in the AMAP.

2.1.3 2050 Regional Transportation Plan

The *2050 Regional Transportation Plan* (SANDAG, 2011), contains an integrated set of public policies, strategies, and investments to maintain, manage, and improve the transportation system in the region through the year 2050. Ground access improvements proposed in the AMAP study were designed to be consistent with planned 2050 highway and transit networks. For example, interchange improvements programmed in the 2050 RTP were considered as potential ground access routes. Both the RASP and draft AMAP were completed ahead of schedule in order for major findings to be incorporated into the final 2050 RTP.

2.1.4 Airport Planning Documents

The following airport planning documents were reviewed for planned land use and future improvements to airport facilities:

- The San Diego International Airport Master Plan (Airport Authority, 2008a)
- Cross Border Terminal Presidential Permit and associated technical reports (Otay-Tijuana Venture, L.L.C., 2009)
- Brown Field Municipal Airport Master Plan Update (Brown Field, 2010)
- Gillespie Field Land Use Compatibility Plan (Gillespie Field, 1974)
- McClellan-Palomar Airport Land Use Compatibility Plan (McClellan-Palomar Airport, 2010)
- San Diego International Airport – Airport Transit Plan (Airport Authority, 2008b)

Improvements proposed for the AMAP study were developed to be consistent with elements of these airport planning documents.

2.1.5 Community Planning Documents

The following community general plans were reviewed for existing and planned land use, and planned transportation circulation elements:

- City of Carlsbad General Plan (City of Carlsbad, 2004)
- City of El Cajon General Plan (City of El Cajon, 2001)
- Downtown Community Plan (Centre City Development Corporation, 2006)

- Midway/Pacific Highway Corridor Community Plan (City of San Diego, 1991)
- Otay Mesa Community Plan (City of San Diego, 2010)

Ground access improvements proposed in the AMAP study were developed to be consistent with elements of these community and general plans.

2.1.6 San Diego High-Speed Train Feasibility Studies

SANDAG conducted the *San Diego High-Speed Train Feasibility Studies* (SANDAG, January 2010) to examine the feasibility of extending the HST from a proposed terminus in downtown San Diego or Airport ITC to the United States (U.S.)-Mexico border with direct access to TIJ. In addition, the *San Diego High-Speed Train Feasibility Studies* also evaluated the development of a high-speed commuter rail service that would extend from southwest Riverside County to the U.S.-Mexico international border along the Los Angeles to San Diego via the Inland Empire HST corridor. SANDAG and the California High-Speed Rail Authority (CHSRA) are currently coordinating efforts to assess the feasibility of operating commuter rail service alongside the HST system.

The AMAP assumes an HST/commuter rail station as part of the proposed ground access improvements at the CBF.

2.1.7 Preliminary Alternatives Analysis Report: Los Angeles to San Diego via the Inland Empire Section (CHSRA)

SANDAG is working closely with the CHSRA, the state agency responsible for planning, designing, building, and operating a statewide HST system connecting major metropolitan areas including San Diego. San Diego is connected to this system through the Los Angeles to San Diego via the Inland Empire HST section, which is currently in the Alternatives Analysis phase of the project level environmental document. This work is guided by the Southern California High-Speed Rail Inland Corridor Group (SOCAL ICG), of which SANDAG is a member.

The southern portion of the Los Angeles to San Diego via the Inland Empire HST section will provide connections at the future Airport ITC and Ontario International Airport and is included in AMAP.

2.2 Public and Stakeholder Outreach

The AMAP stakeholder working group (SWG) was established to provide input on the development of the proposed ground transportation improvements. The SWG met over a 15-month period from

March 2010 to June 2011 reviewing RASP modeling results and the development of the proposed ground transportation improvements at each aviation facility and included the following agencies:

- SANDAG
- Airport Authority
- California Department of Transportation (Caltrans)
- San Diego Metropolitan Transit System (MTS)
- North County Transit District (NCTD)

2.2.1 Progress Updates and Presentations

Progress updates and presentations were given to the respective boards and stakeholders by SANDAG and the Airport Authority (Table 2.1).

Staff participated in Open Houses organized by the Airport Authority in September 2010 and January 2011 to both present the draft findings from both the RASP and AMAP and staff informational booths on both plans.

2.2.2 Public Comment Period

The SANDAG Board of Directors released the draft AMAP report for a 60-day public comment period on June 24, 2011. The intention was to provide an opportunity to the public and stakeholders for comment in time to make changes to the final 2050 RTP. In addition, a number of stakeholder comments were received and addressed in the revised draft document. The draft report was provided on the SANDAG webpage along with other information on AMAP and a link to the RASP final report. Public comments received during the comment period are included in Appendix A.

Table 2.1 Summary of Stakeholder Meetings

Date	Meeting Participants	Purpose
March 19, 2010	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to SANDAG Transportation Committee
April 26, 2010	• SANDAG • Airport Authority • MTS • NCTD • Caltrans District 11	– Brainstorming potential ground access improvements
June 8, 2010	• SANDAG • Airport Authority • Caltrans District 11 • MTS	– Project Initiation – Overview of ongoing RASP and 2030 RTP planning efforts as basis for AMAP study
August 18, 2010	• SANDAG • Airport Authority • Caltrans District 11 • MTS	– Overview of AMAP, RASP, and Draft 2050 RTP studies. Review of preliminary ground access improvements
September 8, 2010	• SANDAG • Airport Authority • Caltrans District 11 • MTS	– Overview of AMAP, RASP, and Draft 2050 RTP studies. Review of recommended ground access improvements
October 21, 2010	• SANDAG • City of San Diego Planning Department	– AMAP overview and discussion of potential ground access improvements within Otay Mesa Community Planning area
October 28, 2010	• SANDAG • City of Carlsbad Transportation Department	– AMAP overview and discussion of potential ground access improvements within McClellan-Palomar Airport and local roadways
November 30, 2010	• SANDAG • Airport Authority • Caltrans District 11 • MTS	– Overview of RASP modeling results and Draft 2050 RTP scenarios. AMAP overview of ground access improvements
January 5, 2011	• SANDAG • Airport Authority • Otay-Tijuana Venture LLC (CBF)	– AMAP and CBF overview and discuss potential ground access improvements in Cross Border Terminal (CBT) project area
January 11, 2011	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to Airport Authority RASP Board Committee
January 21, 2011	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to SANDAG Transportation Committee
February 16, 2011	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to City of San Diego Rules Committee
March 2, 2011	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to County of San Diego Board of Supervisors
April 13, 2011	• Transit/Roadway Committee (Airport Authority)	– Review draft AMAP improvements

Table 2.1 Summary of Stakeholder Meetings

Date	Meeting Participants	Purpose
June 17, 2011	• SANDAG Transportation Committee	– Review draft AMAP plan and recommend public release to the Board of Directors
June 24, 2011	• SANDAG Board of Directors	– Release the draft AMAP report for a 60-day public comment period.
July 11, 2011	• SANDAG Cities/County Transportation Advisory Committee	– Overview of the draft plan, request for comments.
August 11, 2011	• SANDAG Regional Planning Technical Working Group	– Overview of the draft plan, request for comments.
August 23, 2011	• Regional Chamber of Commerce Transportation Committee	– Overview of the draft plan, request for comments.
December 19, 2011	• County Airports staff	– Overview of the specific recommendations at McClellan-Palomar Airport
January 19, 2012	• Palomar Advisory Committee	– Overview of the specific recommendations at McClellan-Palomar Airport
January 30, 2012	• County Airports staff	– Overview of the specific recommendations at Gillespie Field
March 16, 2012	• SANDAG Transportation Committee	– Overview of specific recommendations, recommend approval to Board
March 23, 2012	• SANDAG Board of Directors	– Overview; consideration of final approval

2.2.2 Public Workshops

Joint public workshops on the preliminary findings of the RASP and AMAP studies were presented to the public at four public workshops held on the following dates:

- September 14, 2010, at SDIA
- September 16, 2010, at McClellan-Palomar Airport
- September 22, 2010, at Gillespie Field
- September 30, 2010, at South County Economic Development Council

A final joint public workshop was held on January 26, 2011, to present the final results of the RASP study as well as to provide an update on the AMAP study. Information regarding these public workshops is included in Appendix A.

2.3 Development of Ground Access Improvements

The airport improvements discussed as part of the RASP study were used to develop the ground access improvements proposed by the AMAP. Increased enplanements and operations from the RASP were used to generate future airport-demand based traffic volumes for key roadways providing access to regional airports. These traffic volumes were compared to expected baseline traffic volumes along the same key roadways to develop the proposed ground access improvements necessary to accommodate the forecasted airport-related traffic volumes. The proposed ground access improvements would provide multimodal access to the various airports. Ground access concepts were presented to the AMAP stakeholder working group as they were developed. Based on stakeholder input, these concepts were further defined throughout the study process. Lastly, the proposed transit improvements were modeled by SANDAG to evaluate their ridership potential and benefits associated with the proposed ground access improvements (Appendix B).

Freeway, arterial and transit improvements were proposed at airports or related airport facilities based on the increase in enplanement numbers and operations at the airports listed in the RASP study, which included:

- SDIA
- TIJ
- McClellan-Palomar Airport
- Gillespie Field

Roadway improvements were developed by converting the airport operation or enplanement numbers to estimated Average Daily Traffic (ADT) volumes to measure the expected increase in traffic for each potential airport ground access scenario. A trip generation rate (TGR) of 2.001 was used to calculate the ADT. The arterial roadway lane requirements were proposed to operate at LOS D or better, based on the City of San Diego Traffic Impact Study Manual (City of San Diego, 1998), which is also applicable to other jurisdictions such as the City of Carlsbad and the City of El Cajon.

Transit improvements were developed by initially reviewing the existing 2030 RTP and the Draft 2050 RTP, and community and general plans for the airports and areas surrounding the airports. The initial improvements were then presented to and discussed with SANDAG, MTS, NCTD, and City of San Diego and City of Carlsbad staff.

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3 Airport Authority Regional Aviation Strategic Plan

The RASP for San Diego County was prepared by the Airport Authority to assess the long-range capabilities of all public-use airports in San Diego County with the goal of improving the overall performance of the regional airport system. The RASP study was defined to identify the airport infrastructure needed to meet future aviation demand in the San Diego region.

3.1 Airports within and Near the Study Area

This section provides information on existing airport facilities within San Diego County and TIJ to the south, as well as airports to the north in the greater Los Angeles area.

3.1.1 Greater San Diego Regional Airport System (including Tijuana)

The San Diego County public-use airport system includes a total of 12 airports in San Diego County and TIJ in Tijuana, Mexico. Of the 13 regional airports, three provide commercial air service: SDIA, McClellan-Palomar Airport, and TIJ. These three commercial airports are part of the broader airport system that combines with 10 other city or county airports. In addition to commercial air service, SDIA, McClellan-Palomar Airport, and TIJ accommodate general aviation and corporate services. Airports designated as Federal Aviation Administration (FAA) Relievers, which accommodate general aviation and corporate services, include Brown Field Municipal Airport, Gillespie Field, Montgomery Field, and Ramona Airport. The remaining six county airports accommodate general aviation only (Oceanside Municipal Airport, Fallbrook Airpark, Borrego Valley Airport) or are not designated in FAA's National Plan of Integrated Airport Systems (NPIAS) (Ocotillo Airport, Agua Caliente Airport, Jacumba Airport).

3.1.2 Airports outside the San Diego Region

A number of airports are located outside of San Diego County and region, most notably are those to the north: Los Angeles International Airport (LAX), Ontario International Airport, John Wayne Airport, Long Beach Airport, and Bob Hope Burbank Airport. All five airports provide domestic commercial airline service, with international destinations being provided by LAX and Ontario International Airport. In addition, Palmdale Municipal Airport and Van Nuys Municipal Airport provide limited commercial airline service, while Hawthorn Municipal Airport, Santa Monica Municipal Airport, and Torrance Municipal Airport serve commuter and general aviation aircraft.

3.2 Strategic Assessment

A strategic assessment of the San Diego County Airport System was conducted to identify airports that could be considered for service role changes to optimize the region's aviation infrastructure. Each regional airport was assessed for current or existing strengths and weaknesses, as well as its potential to accommodate future aviation demand. Items assessed included but were not limited to location, proximity to demand base, airport and land side infrastructure, physical and built environment constraints, available land, proximity to existing and planned mass transportation facilities, existing airspace constraints, and community acceptance.

Based on the results of the strategic assessment, each regional airport was grouped into one of three categories that defined its ability to accommodate future service role changes to accommodate future demand and support the optimization of the regional airport system:

Airports That *Should* Be Considered For Additional Uses/Opportunities – Defined as airports that are in proximity to the demand base, possess adequate or potentially adequate facilities, and have sufficient land area or infrastructure for development opportunities.

- McClellan-Palomar
- Gillespie Field
- Brown Field

Airports That *May Be* Considered For Additional Uses/Opportunities – Defined as airports that possess the same characteristics as the group above, but that also have significant physical or environmental barriers to future development, thereby prohibiting their potential use.

- SDIA
- TIJ
- Montgomery Field
- Ramona

Airports That *Should Not Be* Considered For Additional Uses/Opportunities – Defined as airports that are too far from the demand base, lack sufficient infrastructure or facilities, include community opposition, and/or lack available land for development.

- Oceanside
- Fallbrook
- Borrego Valley
- Ocotillo
- Agua Caliente
- Jacumba

Following the completion of the RASP Strategic Assessment, airports that were determined to have physical, operational, environmental, or other significant constraints that hindered their ability to meet the long-term needs of the region were dropped from further study in the RASP and the AMAP. Both the RASP and AMAP continued further evaluation of the following airports:

- McClellan-Palomar
- Gillespie Field
- Brown Field
- SDIA
- TIJ
- Montgomery Field
- Ramona

Ground access improvements were developed early in the RASP and AMAP process for Montgomery Field, Brown Field, and Ramona Airport. As the RASP progressed, Montgomery Field and Ramona Airport were not included in the family of scenarios which were identified to optimize the regional airport system. These two airports were among those that had physical, operational, environmental or other constraints that hindered their ability to meet the long-term needs of the region. As a result, the ground access improvements to these airports were dropped from further study. Similarly, ground access improvements for Brown Field were developed, but as the RASP progressed it was found that all airport-related scenarios for Brown Field were fatally flawed because of a number of factors, including terrain and airspace complications, reluctance of passenger airlines to ”split operations” with SDIA, distance from demand base, and lack of facilities for air cargo carriers. Appendix C contains additional information on the early ground access concepts developed for Montgomery Field, Ramona Airport, and Brown Field.

3.3 Alternative RASP Scenarios

After an extensive process of considering reasonable measures that could be taken to optimize the San Diego County Airport System, five families of improvements were identified for analysis. Each family is oriented toward optimizing a certain market or user type associated with the San Diego County Airport System and each includes individual alternatives resulting in a set of 15 scenarios developed for detailed evaluation. A discussion of the five families of improvements is provided below.

1. Commercial Passenger Optimization: Scenarios addressed capacity limitations at SDIA by developing future facilities, enhancing/introducing airline service at other regional airports, reserving capacity for airline passenger operations, and adjusting the size of aircraft serving the airport.

- Scenario 1A – Full Build-Out of the Airport ITC and North Side Terminal at SDIA
- Scenario 1B – Preserve SDIA's Airfield Capacity for Commercial Passenger Service
- Scenario 1C – Enhance Commercial Passenger Service at McClellan-Palomar
- Scenario 1D – Introduce Commercial Passenger Service at Brown Field Municipal Airport
- Scenario 1E/F – Up-Gauge SDIA's Aircraft Fleet Mix

2. Enhanced Utilization of Tijuana: Scenarios focus on improving access to TIJ to facilitate the accommodation of future regional passenger demand through improvements to the existing San Ysidro and Otay Mesa border crossings, construction of the proposed CBF on the U.S. side with direct pedestrian access to TIJ, and construction of the Cross Border Terminal (CBT) on the U.S. side where complete passenger processing services would be available for TIJ passengers.

- Scenario 2A – Facilitate Border Crossings
- Scenario 2B – Aviation Passenger CBF
- Scenario 2C – CBT

3. California High-Speed Train (HST): Alternatives analyzed the potential for HST service to offer passengers an alternative ground transportation solution to cities and airports within California.

- Scenario 3A – HST station at Santa Fe Depot, ground access connections to the Airport ITC
- Scenario 3B – HST station at the Airport ITC

4. General Aviation Optimization: Scenarios addressed enhanced services at other airports to accommodate high end general aviation aircraft (typically corporate users) to provide an attractive alternative to using SDIA.

- Scenario 4A – Enhance McClellan-Palomar Airport for High-End/Corporate General Aviation Services
- Scenario 4B – Enhance Brown Field Municipal Airport for High-End/Corporate General Aviation Services
- Scenario 4C – Enhance Gillespie Field for Mixed-Use General Aviation

5. Air Cargo Optimization: Alternative locations for air cargo could remove air cargo flights from SDIA, preserving airfield capacity for commercial passenger airlines.

- Scenario 5A – Maximize use of Brown Field Municipal Airport for air cargo activities

2030 Baseline Scenario: The RASP study developed a number of scenarios to evaluate in terms of demand and cost. A 2030 baseline scenario was developed against which all other alternatives were compared. The Baseline Scenario does not include major new facilities not currently planned, policy options not currently in place, or artificial constraints on demand.

3.4 Summary of RASP Findings by Airport

The discussion below provides an overview of the RASP findings for airports that were found to be candidates for enhanced aviation services and analysis of the HST alternatives.

3.4.1 San Diego International Airport

RASP results indicate that the full build-out of the north side terminal at SDIA would have no effect on projected enplanements relative to the baseline scenario because it would not provide airfield capacity improvements. However, there are other reasons for full build-out of the north side terminal as well as construction of the opening day Airport ITC (2015), including regional intermodal transportation connections, alternatives to driving alone to the airport, and congestion relief.

3.4.2 Cross Border Facility/Cross Border Terminal

The RASP projected a 30 percent increase in the number of passengers using TIJ with the introduction of the CBF, but the CBF would provide only a marginal alleviation of the projected mid-term capacity constraints. This is because U.S. travel from Tijuana, notwithstanding any form of CBF, is international travel requiring customs clearance for Mexico-departing and U.S.-arriving passengers. The RASP also evaluated increasing the use of TIJ for commercial passenger activity by offering a new passenger CBT on the U.S. side of the border to facilitate processing of U.S. passengers utilizing TIJ. The study found that the CBT was also projected to only marginally increase the number of passengers using TIJ.

3.4.3 McClellan-Palomar Airport

The RASP evaluated enhanced commercial passenger service at McClellan-Palomar Airport driven by either capacity constraints at SDIA or facility improvements at McClellan-Palomar Airport. Increased commercial passenger service at McClellan-Palomar Airport would not alleviate capacity constraints at SDIA primarily because the additional demand that can be accommodated at McClellan-Palomar Airport accounts for only five percent of SDIA's total traffic, and because the number of destinations offered at McClellan-Palomar Airport is limited. The RASP also evaluated the use of McClellan-Palomar Airport for high-end/corporate general aviation and estimated that this would delay the capacity constraint at SDIA by approximately two years.

3.4.4 Gillespie Field

The RASP evaluated maximizing the use of Gillespie Field for both high-end/corporate and recreational general aviation by providing the necessary facilities and amenities in order to shift aviation activity from SDIA to Gillespie Field. The increase in theoretical capacity results in an increase in projected passenger enplanements over the baseline scenario between 2020 and 2028. The study estimated that redistributing general aviation operations per the assumptions under this scenario would delay the capacity constraint at SDIA by approximately two years.

3.4.5 High Speed Train

The RASP evaluated two HST alignments which would offer passengers an alternative ground transportation solution to cities and airports within California. The study found that diverting a portion of aviation operations to HST, per the assumptions in both alignments, would delay SDIA capacity constraints by approximately five years. It should be noted that the true long-term impact of HSTs on the region could not be precisely determined as results were evaluated for only three years, with effects being observed only between 2027 (when the HST is expects to be running service to San Diego) and 2030.

Additional details on the RASP alternatives and findings are included in the *Regional Aviation Strategic Plan* (Airport Authority, 2011) at www.sdrasp.com.

4 Multimodal Ground Access Improvements

The following discussion includes an overview of the existing facilities and operations at SDIA, TIJ, McClellan-Palomar Airport and Gillespie Field (Figure 4.1), as well as a discussion of existing land use, existing and future ground access conditions, alternatives considered, and associated analysis, and finally the recommended ground access improvements.

The RASP process defined SDIA and TIJ as airports that are in proximity to the demand base, possess adequate or potentially adequate facilities, but that have significant physical or environmental barriers to future development. McClellan-Palomar Airport and Gillespie Field were defined as airports that possess the same characteristics as SDIA and TIJ, but that have sufficient land area or infrastructure for development opportunities. The above noted RASP designations helped guide the alternatives considered and recommended as part of the AMAP.

All federally obligated airports such as those commercial and general aviation facilities in the San Diego region are required to keep up to date Airport Layout Plans, which show the airport boundaries, location and type of existing and proposed airport facilities and structures, and the location of existing and proposed non-aviation facilities. These plans and updates are subject to FAA approval as a requirement to receive federal aviation funds. Any AMAP ground access recommendations on airport property would be subject to this process and will be advanced by working with stakeholders including the Airport Authority, County of San Diego, City of San Diego, other airport owners, and the FAA.

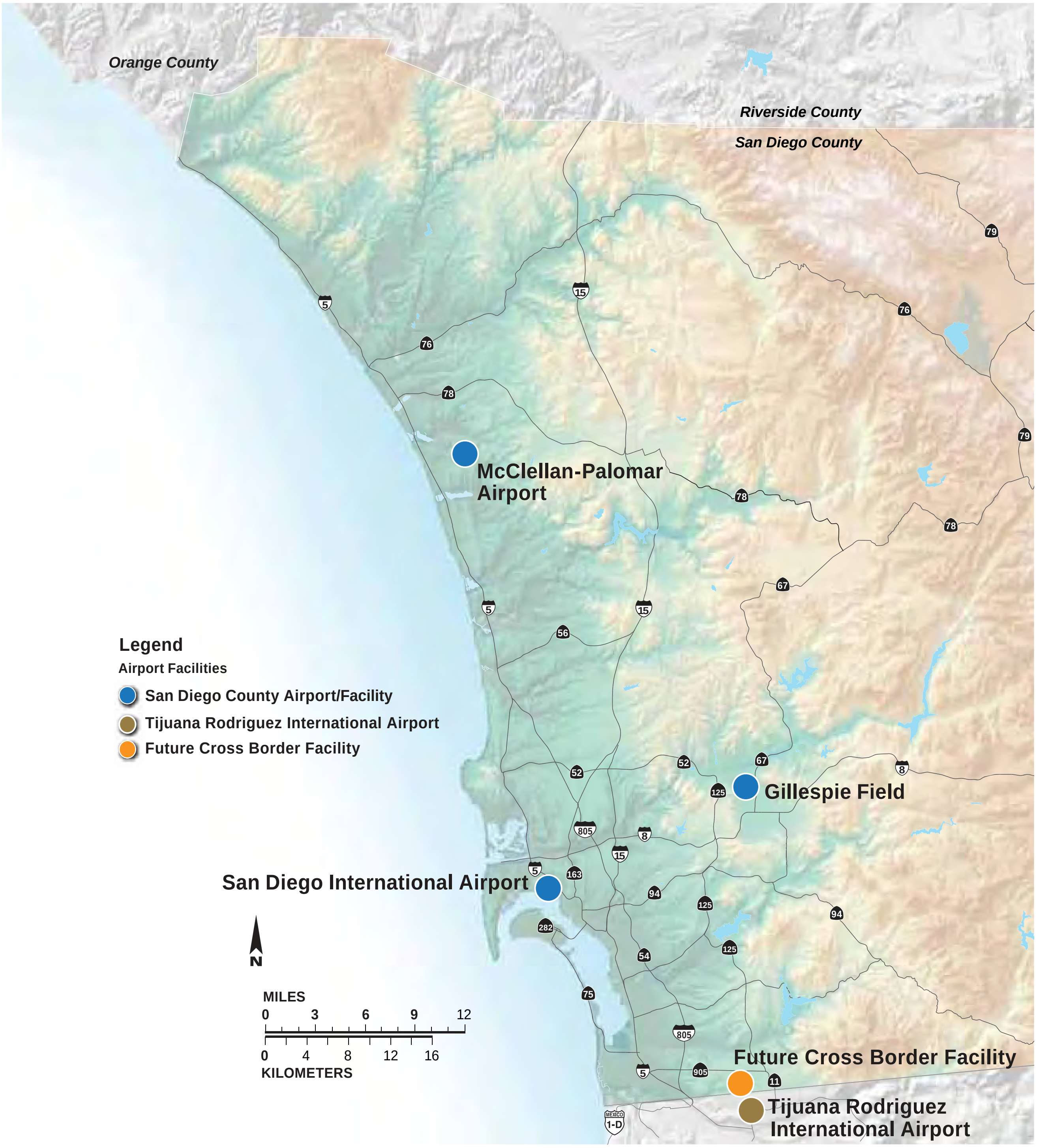


FIGURE 4.1
Airport Facilities Recommended for Multimodal Access Improvements
Airport Multimodal Accessibility Plan

Source: SANDAG 2011

4.1 San Diego International Airport

SDIA is the primary airport serving San Diego County. Located on 661 acres between San Diego Harbor and I-5, the airport is land-constrained and has the smallest footprint of any major U.S. metropolitan airport. SDIA is the busiest single-runway commercial service airport in the United States and is served by 16 passenger airlines and four air cargo carriers, with non-stop service to 46 destinations in the United States, Canada, Mexico, and London, UK. The airport has one paved runway that is 9,401 feet in length with 41 gates in Terminals 1 and 2 and four gates at the Commuter Terminal.

The RASP projected that annual aircraft operations will increase from nearly 230,000 in 2007 to approximately 300,000 between 2021 and 2030. Annual passengers could grow from 9.2 million annual passengers in 2007 to a projected demand of approximately 28 million annual passengers in 2030.

4.1.1 Surrounding and Adjacent Land Uses

SDIA is located approximately three miles from the central business district in downtown San Diego and approximately 20 miles north of the U.S.-Mexico border (Figure 4.1). SDIA is located northwest of downtown San Diego, along the northern edge of San Diego Bay within the City of San Diego, adjacent to the Marine Corps Recruit Depot (MCRD). There are three planning communities immediately adjacent to SDIA which include Peninsula, Midway/Pacific Highway Corridor, and Centre

City. The Peninsula community planning area is a highly urbanized area with a number of residential neighborhoods and established commercial areas, a liberal arts college (Point Loma Nazarene University), regional recreational resources (Sunset Cliffs, Shelter Island, and Cabrillo National Monument) and military property controlled by the Navy. The Midway/Pacific Highway Corridor community planning area is primarily an urbanized commercial area with a few residential areas. Industrial areas are located mainly along Pacific Highway. The Centre City community planning area is a highly urbanized area located downtown San Diego and includes eight different neighborhoods (Gaslamp, East Village, Columbia, Marina, Cortez, Little Italy, Horton Plaza, and Core). This community includes a mix of residential, retail, office, entertainment, hotels, and light industrial. Academic institutions are also located downtown San Diego.

The surrounding land use (Figure 4.2) primarily consists of military, industrial and commercial with residences located northwest of the airport in Point Loma, east of I-5, and in downtown San Diego. Additional business and retail centers as well as residential areas are located within the vicinity of the airport.

4.1.2 Existing Ground Access and Conditions

SDIA is uniquely situated in the San Diego urban area, which makes it an important element of the area's transportation network and overall LOS. Access to the airport is primarily auto-oriented with 56 percent of air passengers using a private auto, 18 percent using a rental car, 13 percent by taxi, and 12 percent by shared-ride vans. Furthermore, 66 percent of auto traffic comes from interstate highways and 34 percent from local streets. Primary access is from North Harbor Drive and I-5, with connections to State Route 163 (SR 163), and Interstate 8 (I-8) and Interstate 15 (I-15). Many of the roadways currently operate at LOS D, including North Harbor Drive, Grape Street and Hawthorn Street.

Transit options are limited at SDIA, resulting in only one percent of the trips to the airport served by public transportation. Bus Route 992 provides 15-minute service from Terminals 1 and 2 and the Commuter Terminal, to and from downtown San Diego, with connections to the MTS Trolley, numerous bus routes, and COASTER and Amtrak passenger rail services. Bus Route 923 serves Terminal 1 from the Point Loma area with hourly service on Saturdays only. Existing ground access associated with SDIA is shown in Figure 4.3.

4.1.3 Future Ground Access Conditions

As envisioned in the *Destination Lindbergh* and Airport ITC studies, future direct access to SDIA will be via I-5 and Pacific Highway with all access to the gates from the future north side terminal and the Airport ITC. By the year 2030, passenger numbers at SDIA are projected to increase by 60 percent to 28.2 million passengers per year (Airport Authority, 2009). This increase in airside operations will result in additional traffic demand on the access roadways. Relocation of access to the north side as well as proposed improvements summarized in *Destination Lindbergh* and the ITC Reports will help alleviate the increased demand. Without the improvements recommended in *Destination Lindbergh*, traffic in the surrounding arterials would increase as shown in Table 4.1.

Table 4.1 2008 and 2030 Traffic Data for Major Access Roads to SDIA

Access Route	Road Segment	2008 LOS[1]	2008 ADT[1]	2030 ADT[2]	% Increase in ADT 2008 to 2030
Harbor Drive	Rental Road to Laurel Street	F	80,000	107,000	+ 25
Grape Street	Kettner Boulevard to I-5	F	30,000	42,000	+29
Hawthorne Street	Kettner Boulevard to I-5	F	27,500	42,000	+35
India Street	Sassafras Street to Washington Street	F	21,000	29,000	+28
Laurel Street	Pacific Highway to Kettner Boulevard	D	23,300	34,500	+32
Pacific Highway	Laurel Street to Palm Avenue	A	19,000	25,000	+ 24

[1] Destination Lindbergh (Airport Authority, 2009)
[2] Baseline Scenario. Destination Lindbergh (Airport Authority, 2009)

4.1.4 Improvements Considered but Not Carried Forward

Several ground access improvements were considered for SDIA as part of the AMAP analysis but were dismissed based on input from the AMAP stakeholder working group or based on modeling results from the RASP. Alternative considered but not carried forward are described below.

Feeder Service from Santa Fe Depot in Downtown San Diego

As a ground access improvement to coincide with the RASP Scenario 3A (High-Speed Rail Station at Downtown San Diego with no stop at SDIA) a direct feeder service was proposed to travel from the

Downtown San Diego HSR Station to SDIA. After input from the AMAP stakeholder working group and MTS, this improvement was dropped due to its overlapping service with the MTS Trolley Blue Line.

Bus Rapid Transit Route between SDIA and McClellan–Palomar Airport

A bus rapid transit (BRT) route connecting SDIA to McClellan-Palomar Airport was initially considered. The route would travel along I-5 and El Camino Real taking advantage of the proposed Direct Access Ramps at Manchester Avenue. The same BRT route would serve the SPRINTER Rail Station at El Camino Real. This BRT route was eliminated from consideration after the proposed BRT service along El Camino Real was removed from the Draft 2050 RTP.

4.1.5 Recommended Improvements

SANDAG, the Airport Authority, and the City of San Diego completed *Destination Lindbergh* in 2009. That effort provided a vision for multimodal transportation improvements that SANDAG's current ITC advanced planning studies and the Airport Authority's upcoming SDIA Airport Master Plan update can build from in terms of specific improvements. As shown in Table 4.1, arterial improvements, in addition to the Airport ITC, will also need to be addressed. There are also improvements identified in *Destination Lindbergh* that are currently underway including a consolidated rental car facility and express bus services, both of which are discussed below. These improvements were reviewed by the AMAP stakeholder working group, and are included as recommended improvements in the AMAP.

Major Infrastructure Improvements

The Airport ITC will be located west of I-5, south of Washington Street, east of Pacific Highway, and north of Sassafras Street (Figure 4-4), and adjacent to the proposed northside airport terminal complex. The facility will be designed to provide direct connections to the airport terminal for regional transit services (COASTER, Trolley, and local bus services), Amtrak intercity rail services, as well as terminus station for the planned HST system.

Since 2009, SANDAG efforts have focused on an advanced planning study to assess site design options for the Airport ITC and outline of a Phase I Airport ITC improvement plan. This planning study has been closely coordinated with the Airport Authority's work effort for Phase I on-airport improvements, which include development of a Consolidated Car Rental Facility (CONRAC) on the northside of the airport and operation of an on-airport shuttle connection between the CONRAC facility and the existing southside terminal and gates. The City of San Diego also is participating in both work efforts.

One scenario for the Airport ITC facility is designed to coordinate with the Airport Authority's first phase efforts on northside airport improvements. . The consolidated Airport ITC station could serve trolley and bus services, and potentially commuter and intercity rail services that would be connected to the CONRAC and on-airport shuttle by an elevated pedestrian walkway over Pacific Highway (Figure 4.4 and Figure 4.5). Identifying the specific local bus and future bus rapid transit connections that will serve the ITC will be part of SANDAG's next phase of planning. *Destination Lindbergh* estimated the short-term Airport ITC facilities could accommodate four to six percent of airport passengers.

In the second scenario, the Airport ITC facility would be expanded to include the proposed southern terminus station for the HST system. In addition, conceptual design is currently underway on direct connector ramps from I-5 to Pacific Highway and potential rail grade separations as part of this second scenario. All passengers, whether arriving by train, trolley, bus, shuttle or private vehicles, would access SDIA through the north terminal. *Destination Lindbergh* envisioned all passenger processing occurring in the north terminal, including security screening and baggage claim. All passengers would then board an automated people mover to travel to the concourses on the south side. North Harbor Drive would no longer provide passenger access to these terminal facilities. Transit mode share of SDIA trips was forecast to increase to 13 percent.

Roadway Access Improvements

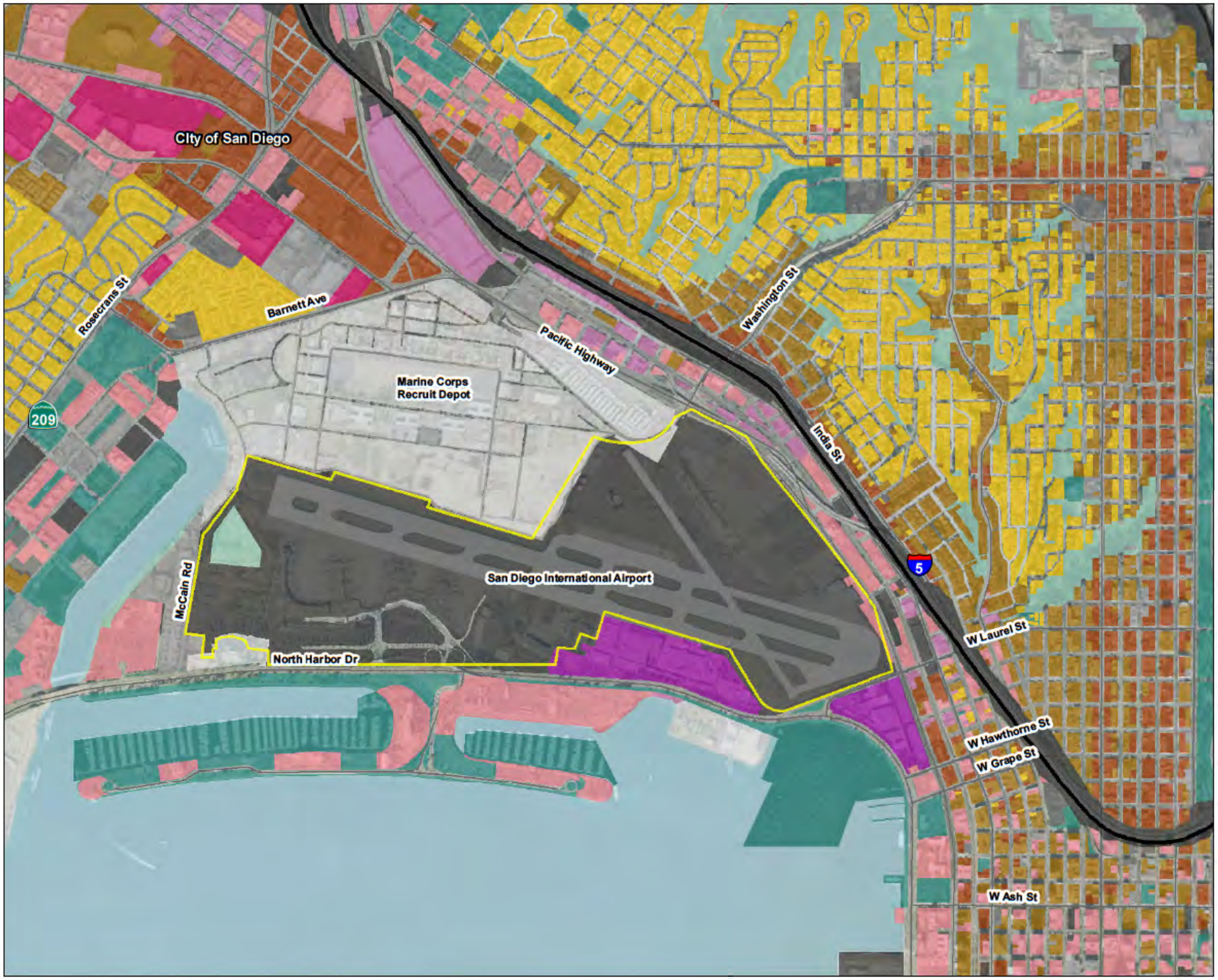
The AMAP does not propose any new roadway access improvements outside of those proposed in *Destination Lindbergh.*

Transit Access Improvements

The 2050 RTP identifies the Airport ITC as a regional activity center with multimodal connections to a variety of transportation services. These include local and regional transit services, limited stop express bus and express trolley services. In addition, three express bus service routes were evaluated for service to and from the Airport ITC/SDIA. From this planning-level analysis as well as more detailed analysis by the Airport Authority, the 2050 RTP includes express bus services to SDIA from the I-5 and I-15 corridors. Section 4.5.1 of this report describes these routes in greater detail.

HST Los Angeles to San Diego Section Terminus at ITC

The RASP found that diverting a portion of aviation operations to HST service would delay by about five years the time when SDIA capacity becomes constrained. It should be noted that the true long-term impact of high-speed trains on the region could not be precisely determined. This is because results were evaluated for only three years, with effects being observed only between 2027, when the CHSRA expects to be running service to San Diego, and 2030. Based on the degree of uncertainty surrounding the timing of HST, as well as the time and cost of accessing and using the service, the best estimate is that between 8 percent and 25 percent of the region's aviation demand to northern California would be diverted to high-speed trains.



LEGEND

- Freeways
- Major Roads
- Airport Property Line

Existing Land Use

RESIDENTIAL
- Single Family Residential
- Multi-Family Residential
- Mixed Use

COMMERCIAL AND OFFICE
- Shopping Centers
- Commercial and Office

INDUSTRIAL
- Heavy Industry
- Light Industry

PUBLIC FACILITIES AND UTILITIES
- Transportation, Communications, Utilities
- Education
- Institutions
- Military

PARKS AND RECREATION
- Recreation
- Open Space Parks

OTHER
- Water

Source: SANDAG, 2009
Airport Boundary – RASP, January 2011

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FIGURE 4.2
San Diego International Airport Surrounding Land Use
Airport Multimodal Accessibility Plan

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FIGURE 4.3
San Diego International Airport
Existing Ground Access
Airport Multimodal Accessibility Plan

Source: SANDAG 2011, MTS 2009

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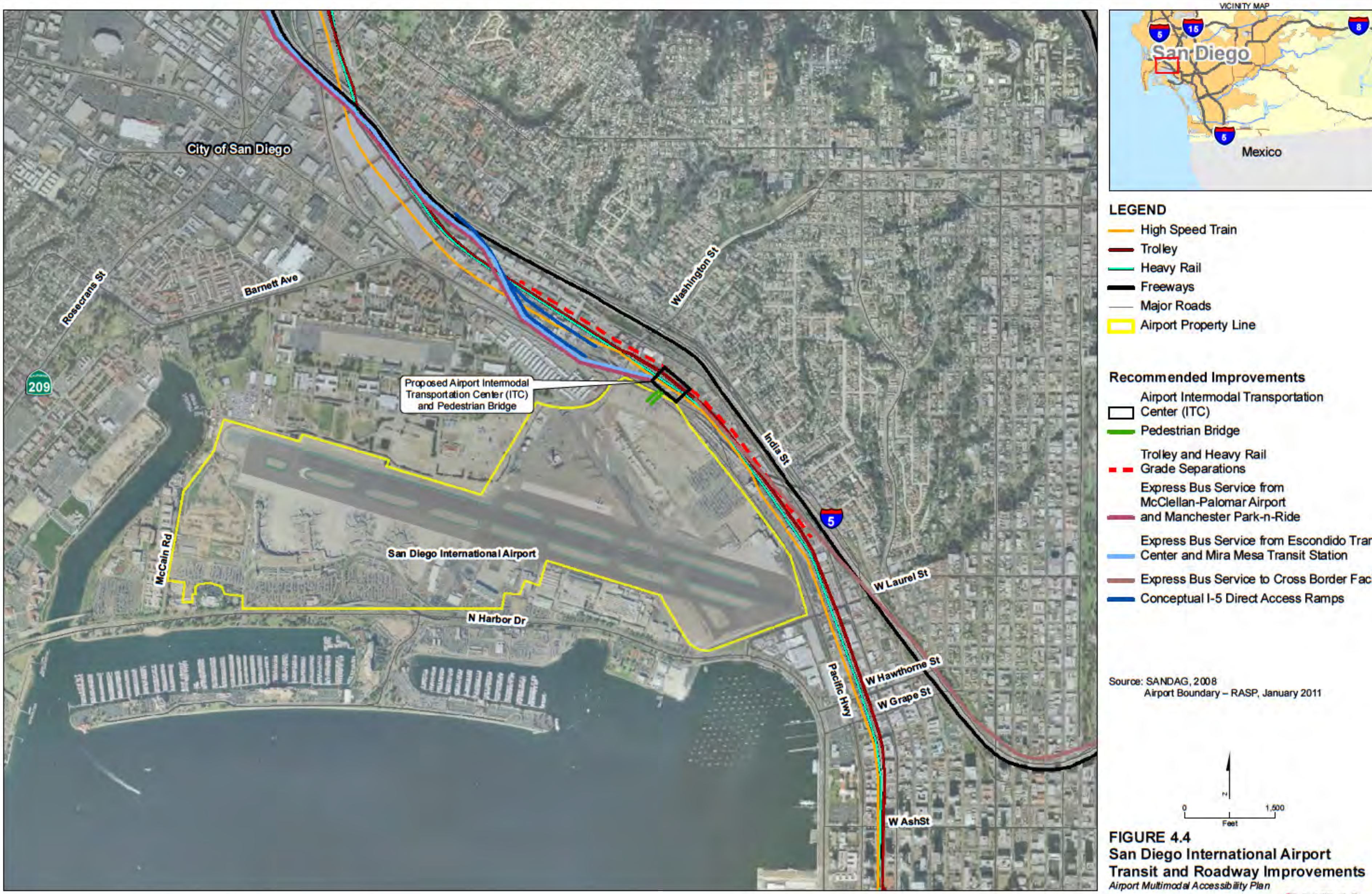

LEGEND

- High Speed Train
- Trolley
- Heavy Rail
- Freeways
- Major Roads
- Airport Property Line

Recommended Improvements

- Airport Intermodal Transportation Center (ITC)
- Pedestrian Bridge
- Trolley and Heavy Rail Grade Separations
- Express Bus Service from McClellan-Palomar Airport and Manchester Park-n-Ride
- Express Bus Service from Escondido Transit Center and Mira Mesa Transit Station
- Express Bus Service to Cross Border Facility
- Conceptual I-5 Direct Access Ramps

Source: SANDAG, 2008
Airport Boundary – RASP, January 2011

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FIGURE 4.4
San Diego International Airport Transit and Roadway Improvements
Airport Multimodal Accessibility Plan

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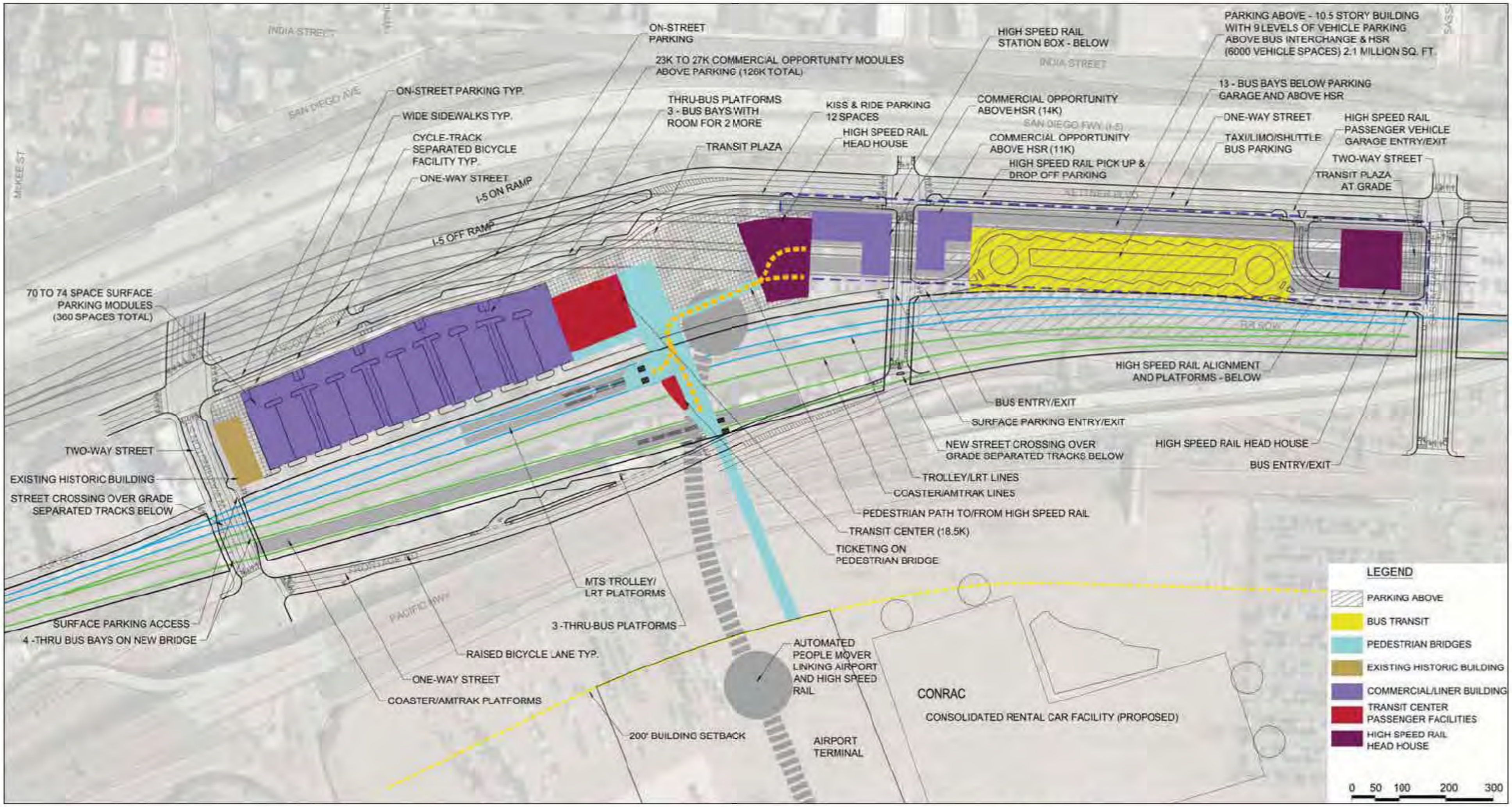

FIGURE 4.5
Proposed ITC Site Plan - Preferred Alternative (HSR Concept A)
Airport Multimodal Accessibility Plan

Source: SANDAG Airport Intermodal Transit Center (ITC), December 2010
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4.2 Cross Border Facility -Tijuana Rodriguez International Airport

The Tijuana Rodriguez International Airport is the fifth busiest airport in Mexico. In 2006, approximately 3.8 million passengers flew out of TIJ. This airport is a part of the Grupo Aeroportuario del Pacifico, a holding group that controls 12 international airports in central and northern Mexico. The airport has one runway with two terminals for commercial/passenger aviation and military aviation with some general aviation. Five airlines provide service to various destinations in Mexico (Grupo Aeroportuario del Pacifico, 2011). In addition, Aeromexico also provides direct international service to China and Japan.

The Department of State issued a Presidential Permit, effective August 3, 2010 (Otay-Tijuana Venture, L.L.C., 2009), authorizing Otay-Tijuana Venture L.L.C. to construct, operate, and maintain a Cross Border Facility (CBF). The CBF will serve as a connection to TIJ from the U.S. side of the U.S.-Mexico border with the facility straddling the border directly adjacent to the TIJ terminal. Passengers will be able to park on the U.S. side and walk across the border using a pedestrian bridge which will serve as a dedicated Port of Entry (POE). Construction of the CBF is scheduled to start late 2012 and be completed by the end of 2013 The CBF would be designed to serve up to 2 million passengers annually (Otay-Tijuana Venture, L.L.C., 2009).

The key benefit of the CBF is to provide potential passengers the ability to bypass the delays at the existing POEs at San Ysidro and Otay Mesa to access TIJ. The CBF would improve accessibility to passengers in the San Diego region. A secondary benefit of the planned CBF is the potential reduction in vehicle traffic crossing the border to TIJ, helping to relieve congestion at SDIA. The future CBF would provide access to flights and increased international destinations not offered at SDIA. This facility could ultimately become an airport terminal, with ticketing and baggage facilities for enplaning passengers from the United States that are departing from TIJ. The RASP includes an evaluation of the CBF as a future CBT, but for purposes of the proposed ground access improvements, the AMAP evaluates this as one facility.

4.2.1 Surrounding and Adjacent Land Uses

The future CBF would be located in the City of San Diego community of Otay Mesa west of the Otay Mesa POE, approximately 22 miles southeast of downtown San Diego (Figure 4.1). The surrounding land use (Figure 4.6) primarily consists of industrial, institutional, and vacant/undeveloped areas with some commercial use. Two major freeway corridors, State Route 905 (SR 905) and State Route 125 (SR 125) provide access to the future CBF. The City of San Diego is currently updating the Otay Mesa Community Plan. Future land uses in proximity to the CBF include a mixed-use urban village, commercial uses supporting business and international trade, technology, and light industrial uses.

4.2.2 Existing Ground Access Conditions

Existing access to TIJ from the U.S. is currently through the San Ysidro and Otay Mesa POEs. Passengers can drive across the international border to access TIJ or take transit to the POEs and walk across the border into Mexico and take a taxi, shuttle, or bus to TIJ. Transit passengers can access the San Ysidro POE via bus routes 929 and 932, or the MTS Trolley Blue Line. The Otay Mesa POE can be accessed via local bus route 905. Average weekday peak wait times for northbound passengers returning by vehicle to the U.S. from the TIJ are 43 minutes at Otay Mesa POE and 58 minutes at San Ysidro POE (Caltrans, 2008).

Primary access to the CBF would be via Siempre Viva Road. Siempre Viva Road can be accessed from SR 905 using Heritage Road, Britannia Boulevard or La Media Road. SR 905 can be reached from the west via I-5 and Interstate 805 (I-805), and from the east via SR 125. Traffic volumes on arterials in the vicinity of the CBF are currently low, because the area is not fully developed. Existing ground access associated with the future CBF is shown in Figure 4.7.

ADT for the arterials providing access to the CBF would more than double by the year 2030 as a result of traffic generated by the CBF. As an example, the ADT along Britannia Boulevard would increase to approximately 35,000 from the current 14,640.

4.2.3 Future Ground Access Conditions

Several improvements to the roadway infrastructure in the vicinity of the CBF are included in the Otay Mesa Community Plan. These improvements are intended to improve access to the CBF and include widening of Siempre Viva Road and Britannia Boulevard to 6-lane arterials. In addition to these arterial projects, two new freeways are proposed in the area. SR 905 is a new 6-lane freeway with local interchanges at Caliente Avenue, Heritage Road, Britannia Boulevard and La Media Road. State Route 11

(SR 11) will be a new 4-lane toll facility extending east from SR 125 to the proposed East Otay Mesa POE scheduled to open in 2015.

Primary access to the CBF will be via Siempre Viva Road, Britannia Boulevard, and La Media Road. Future traffic volumes at key segments of these arterials are listed in Table 4.2 (City of San Diego, 2011). Based on data from the 2010 Presidential Permit, by 2030 the CBF may serve as many as 6.3 million passengers per year. Key arterials would show ADT of as much as 49,000 with the highest volumes forecast for Britannia Boulevard and Siempre Viva Road by 2025.

Table 4.2 2030 Average Daily Traffic for Arterials in the Vicinity of the CBF

Arterial	From	To	2025 ADT[1] (thousands)
Siempre Viva Road	Cactus Road	Britannia Boulevard	8
Siempre Viva Road	Britannia Boulevard	CBF	34
Britannia Boulevard	SR 905	Airway Road	47
Britannia Boulevard	Airway Road	Siempre Viva Road	49
La Media Road	SR 905	Airway Road	27
La Media Road	Airway Road	Siempre Viva Road	19

1. Otay-Tijuana Cross Border Facility Recirculated Draft Environmental Document, City of San Diego, 2011.

4.2.4 Improvements Considered but Not Carried Forward

Several ground access improvements considered for the CBF and TIJ by the AMAP stakeholder working group were dismissed based on input from the group or on modeling results from the RASP. Below is a summary of these improvements.

Redirect Proposed Rapid Bus Route from Siempre Viva Road to the CBF

The proposed alignment for Rapid Bus Route 905 was modified to travel along Siempre Viva Road with a stop at the CBF. Route 905 connects to the MTS Trolley System via the Iris Avenue Trolley Station and to the proposed 2050 RTP BRT Routes, which will stop near the Otay Mesa POE.

After meeting with both City of San Diego Planning and MTS staff, this improvement was eliminated due to the desire for the rapid bus route to travel along Airway Road as called for in the updated Otay Mesa Community Plan.

High-Occupancy Vehicle (HOV) lanes and Direct HOV connectors at I-805 and SR 125 Connection to SR 905

High-occupancy vehicle (HOV) lanes along SR 905 between I-805 and SR 125 were considered to provide system connectivity to the regional HOV network to allow HOV and BRT access directly to the CBF from the proposed managed lanes along I-805 and the SR 125 Toll lanes. In addition to the HOV lanes, HOV direct connectors were considered at the following locations:

- South to east and west to north at the SR 905/I-805 Interchange
- East to north and south to west at the SR 905/SR 125 Interchange
- East to south and north to west to and from the CBF
- West to south and north to east to and from the CBF

After consultation with the AMAP stakeholder working group and consideration of the forecasted LOS along SR 905 these improvements were eliminated from consideration.

Extend Light Rail Transit (LRT) service from San Ysidro POE to Otay Mesa POE

One option considered included extending the light rail transit (LRT) system from the San Ysidro POE to the Otay Mesa POE with a stop at the CBF. This option would provide a connection between the Blue Line at San Ysidro and a proposed LRT line (Route 564) that was to travel from Chula Vista to the Otay Mesa POE along the SR 125 corridor.

This alternative was eliminated from consideration in favor of extending the HST system to the CBF.

4.2.5 Recommended Improvements

A number of ground access improvements for the CBF were proposed in the Otay Mesa Community Plan and the Presidential Permit for the CBF. These improvements were evaluated in terms of providing regional access to the CBF and reviewed by the SWG, and are included as recommended improvements in the AMAP (Figure 4.8).

Major Infrastructure Improvements

The CBF would include a pedestrian POE that would allow U.S. air passengers direct access to TIJ. The opening day facility will include a parking structure, customs and border protection, and traveler services. The proposed CBF will generate approximately 35,000 ADT in 2030 based on information from the 2010 Presidential Permit Application. Of the traffic generated by the CBF, it was assumed that 60 percent of the traffic would access the CBF from the SR 905/Britannia Boulevard Interchange and 40 percent via the SR

905/La Media Road Interchange. The ultimate configuration is proposed as a fully-functional airport terminal with ticketing and customs available on the U.S. side.

Roadway Access Improvements

The additional demand generated by the CBF would require roadway improvements in the vicinity of the proposed facility to accommodate increased ADT on surrounding arterials (Figure 4.8). All of the roadway improvements listed below would provide better access to and from the CBF by allowing the arterials and ramps to operate at an acceptable LOS D or better. These would include:

- Widening of Siempre Viva Road from 4 to 6 lanes between Britannia Boulevard and Avenida Costa Brava.
- Widening of Britannia Boulevard from 4 to 6 lanes between Siempre Viva Road and SR 905.
- Addition of a lane to the westbound ramps at the SR 905/Britannia Boulevard Interchange.
- Addition of a lane to the eastbound entrance ramp at the SR 905/Britannia Boulevard Interchange.

Transit Access Improvements

A transit stop at the CBF and modifications to the future MTS Route 661 are recommended to provide improved transit service to the CBF. The route would be diverted south to provide a stop at the CBF, which would provide access to and from the Otay Mesa area. This would provide connectivity to the MTS Trolley system at the Iris Avenue Station to the west and to the proposed BRT service at the Otay Mesa POE to the east. As with other rapid bus routes in the 2050 RTP, transit priority measures would be in place along key congested segments of the route.

Extension of HST/Commuter Rail from Downtown San Diego to the Otay Mesa POE

The *San Diego High Speed Train (HST) Feasibility Studies* (SANDAG, 2010a) analyzed the feasibility of extending the HST system from downtown San Diego or Airport ITC to the U.S.-Mexico border along with a local commuter rail service that would share the same right-of-way. The alignment parallels the I-5 corridor from downtown San Diego to the San Ysidro POE, then runs parallel to the U.S./Mexico border along Siempre Viva Road. This would provide connectivity from downtown San Diego or the Airport ITC to the CBF. Due to the project cost and because this extension is not currently included in the State's HST system, this project is included in the unconstrained scenario of the 2050 RTP.

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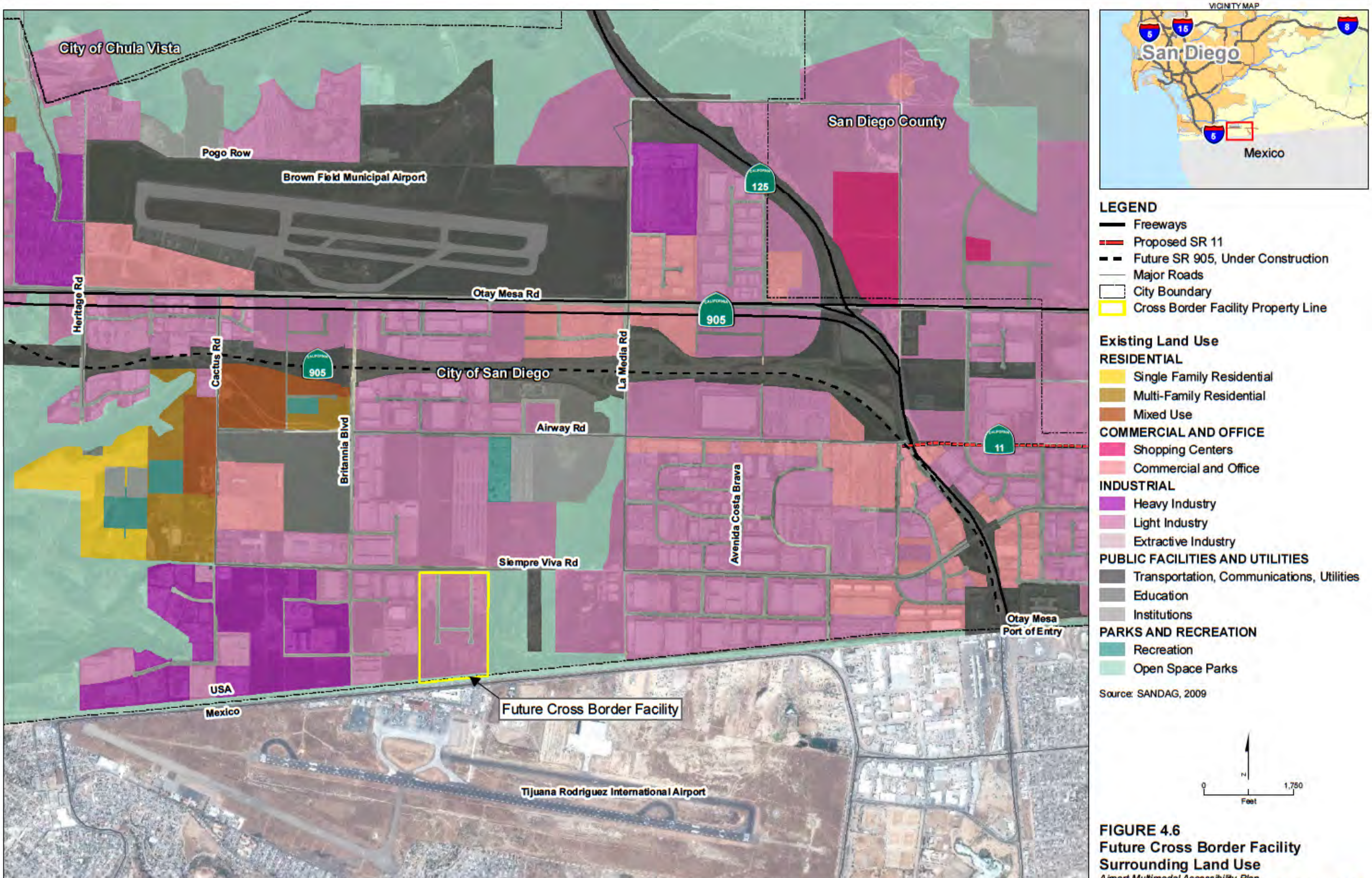

FIGURE 4.6
Future Cross Border Facility Surrounding Land Use
Airport Multimodal Accessibility Plan

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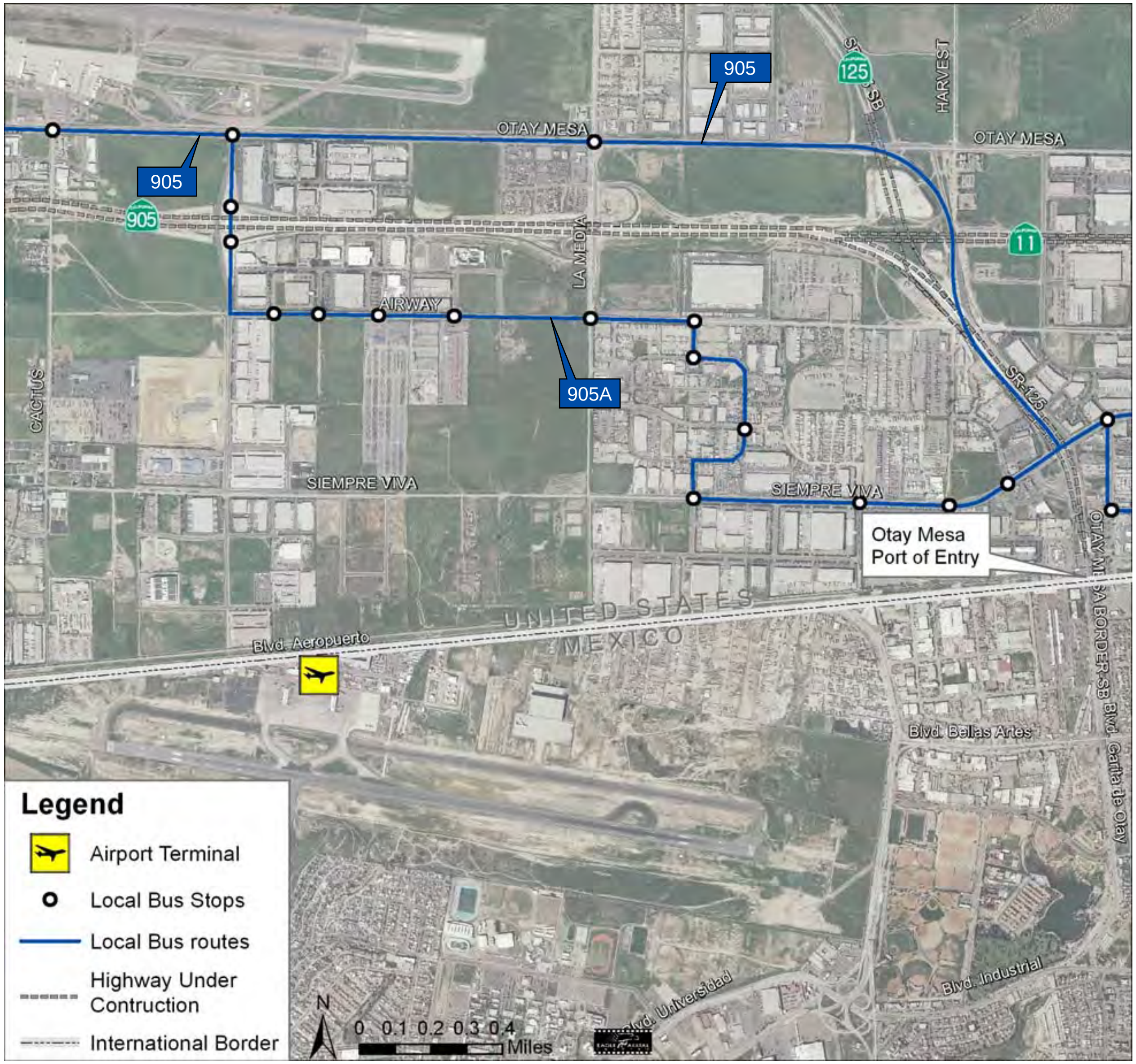

FIGURE 4.7
Future Cross Border Facility
Existing Ground Access
Airport Multimodal Accessibility Plan

Source: SANDAG 2011, MTS 2009

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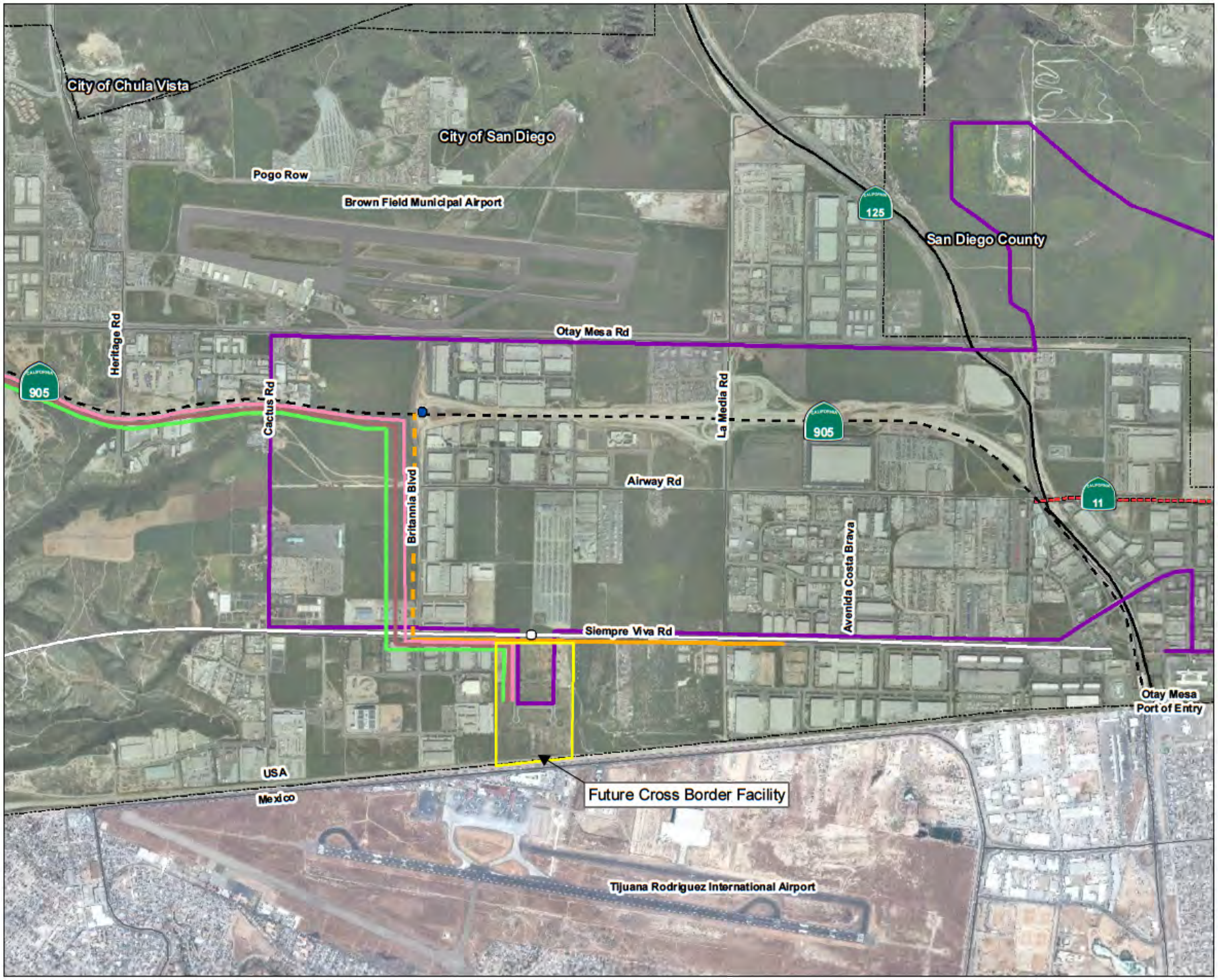

LEGEND

- Freeways
- Proposed SR 11
- Future SR 905, Under Construction
- Major Roads
- City Boundary
- Cross Border Facility Property Line

Recommended Improvements

- Increase capacity of ramps at SR 905/Britannia Blvd Interchange
- Widen Siempre Viva Rd to 6 lanes
- Widen Britannia Blvd to 6 lanes from SR 905 to Siempre Viva Rd
- Modify Proposed Local Bus Route 661
- High Speed Train - Extension from Downtown San Diego to Otay Mesa
- High Speed Train Station
- Express Bus Service from H St Trolley Station
- Express Bus Service from Airport Intermodal Transportation Center
- Express Bus Service from Escondido and Mira Mesa Transit Stations

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FIGURE 4.8
Cross Border Facility Transit and Roadway Improvements
Airport Multimodal Accessibility Plan

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4.3 McClellan-Palomar Airport

McClellan-Palomar Airport is owned by the County of San Diego and is located in north county San Diego east of the I-5 freeway in the City of Carlsbad. Classified as a public use primary commercial airport, 274 aircraft are based at the airport, and United Express flies round trip service to LAX from this location. In 2010, 132,077 annual aircraft operations were reported for the airport. The airport's single runway is 4,897 feet in length, and airport facilities include a recently renovated terminal with passenger and baggage screening areas, a passenger lobby and boarding lounge, and access to the terminal from three new parking lots via a new elevator and walkway. The airport is an important part of the community, contributing $108 million per year to the local economy.

4.3.1 Surrounding and Adjacent Land Uses

McClellan-Palomar Airport is located along the north side of Palomar Airport Road and west of El Camino Real. The surrounding land use (Figure 4.9) primarily consists of industrial, commercial, and institutional with a planned community (Bressie Ranch) located southeast of the airport and other residential areas in the vicinity. The Carlsbad Oaks North Conservation Area is located east of the runway and office parks located to the north and south of the airport. A golf course is located to the west of the airport, with some areas of vacant/undeveloped land surrounding the airport.

4.3.2 Existing Ground Access Conditions

The main access to the McClellan-Palomar Airport is from Palomar Airport Road. Faraday Avenue and Poinsettia Lane are east-west corridors located to the north and south of the airport respectively. College Boulevard provides local access to Palomar Airport Road from the west and El Camino Real provides local access to Palomar Airport Road from the east. Camino Vida Roble connects Palomar Airport Road to Owens Avenue. Airport parking is located at the end of Owens Avenue and is accessible from the front of the terminal via an access road and pedestrian bridge. In addition, rental cars, taxi cabs, and shuttle services provide access to McClellan-Palomar Airport. I-5 is located approximately 3 miles west of the airport and has a local interchange at Palomar Airport Road.

The nearest COASTER station is the Carlsbad-Poinsettia Station located approximately 2.5 miles southwest of the airport on Avenida Encinas, west of I-5 and north of Poinsettia Lane. Bus Route 321 and Route 445 connect with this COASTER station and include stops at the entrance to the airport at Yarrow Drive and Palomar Airport Road. In addition, Route 309 includes a stop at Yarrow Drive as it travels along Palomar Airport Road. Existing ground access associated with McClellan-Palomar Airport is shown in Figure 4.10.

The most congested segment of Palomar Airport Road is between I-5 and Hidden Valley Road with an ADT of approximately 58,000. Existing ADT for other segments of Palomar Airport Road are shown in Table 4.3.

4.3.3 Future Ground Access Conditions

SANDAG Series 11 Growth Forecasts indicate that by 2030, traffic volumes along Palomar Airport Road will increase by as much as 18 percent in some segments. Table 4.3 summarizes the forecasted ADT volumes at key segments along Palomar Airport Road. Based on data from the RASP (Scenario 1C), operations at McClellan-Palomar Airport may increase from 57,000 enplanements per year to 641,355 enplanements per year. Using a trip generation rate of 2.001, this increase in operations would add an additional 7,032 ADT to Palomar Airport Road. That volume would be in addition to the forecasted volumes for Palomar Airport Road. Based on reviewing existing and forecasted traffic data along Palomar Airport Road, it is assumed that 60 percent of the vehicular traffic would access the McClellan-Palomar Airport from the west and the remaining 40 percent from the east.

Table 4.3 Existing and 2030 Average Daily Traffic for Palomar Airport Road

Arterial	From	To	Exist ADT (thousands)	2030 ADT[1] (thousands)
Palomar Airport Road	I-5	Paseo Del Norte	58	63
Palomar Airport Road	Paseo Del Norte	Armada Drive	53	58
Palomar Airport Road	Armada Drive	Hidden Valley Road	44	51
Palomar Airport Road	Camino Vida Roble	Yarrow Drive	30	33
Palomar Airport Road	Yarrow Drive	El Camino Real	33	40

1. SANDAG 2010.

4.3.4 Improvements Considered but Not Carried Forward

Several ground access improvements were considered for the McClellan-Palomar Airport as part of the AMAP analysis, but dismissed based on input from the SWG or based on modeling results from the RASP.

Realign Proposed Rapid Bus Route to stop at the McClellan-Palomar Airport

Two options for modifying the proposed Rapid Bus Route 440 to provide a stop at McClellan-Palomar Airport were considered:

- Constructing a bus stop along Palomar Airport Road just south of the airport visitor parking. This would include a pedestrian bridge over Palomar Airport Road for eastbound bus patrons.
- Diverting the proposed route from Palomar Airport Road to provide a stop at the McClellan-Palomar Airport Terminal.

These two options were dropped from consideration based on NCTD staff comments on taking the route off to serve the terminal and the decision not to include in the 2050 RTP.

Changes to Local Bus Service

This option included realigning the local bus (Route 321) to serve the McClellan-Palomar Airport Terminal. The route would start at the proposed Cannon Road direct access ramps to I-5 and travel along Paseo del Norte Road and Palomar Airport Road, and access the terminal via a new entrance at Owens Avenue, then join its original route at Palomar Airport Road. The headway for the bus route would also be increased to provide more frequent service. This option was eliminated from consideration after discussion with the AMAP stakeholder working group. An option to improve access from McClellan-Palomar Airport to the Carlsbad-Poinsettia station was considered to be more feasible.

Improvements to the Palomar Airport Road/I-5 Interchange

Based on traffic generated by the increased operations at the McClellan-Palomar Airport, widening of the ramps at the Palomar Airport Road/I-5 interchange was initially considered. This interchange improvement was developed using forecast volumes from the SANDAG Series 10: 2030 Regional Growth Forecast. This ground access improvement was eliminated from consideration after updating the volumes using the SANDAG Series 11: 2050 Regional Growth Forecast, which resulted in lower traffic volumes on the freeway ramps.

4.3.5 Recommended Improvements

Based on the enplanement projections for the McClellan-Palomar Airport under the RASP Scenario 1C, traffic demand would increase. To accommodate this increase in traffic, several roadway and transit improvements are recommended to provide additional multimodal access to the airport (Figure 4.11). These improvements are proposed to be located on airport property and therefore, subject to federal approval processes.

Major Infrastructure Improvements

No major infrastructure improvements are recommended.

Roadway Access Improvements

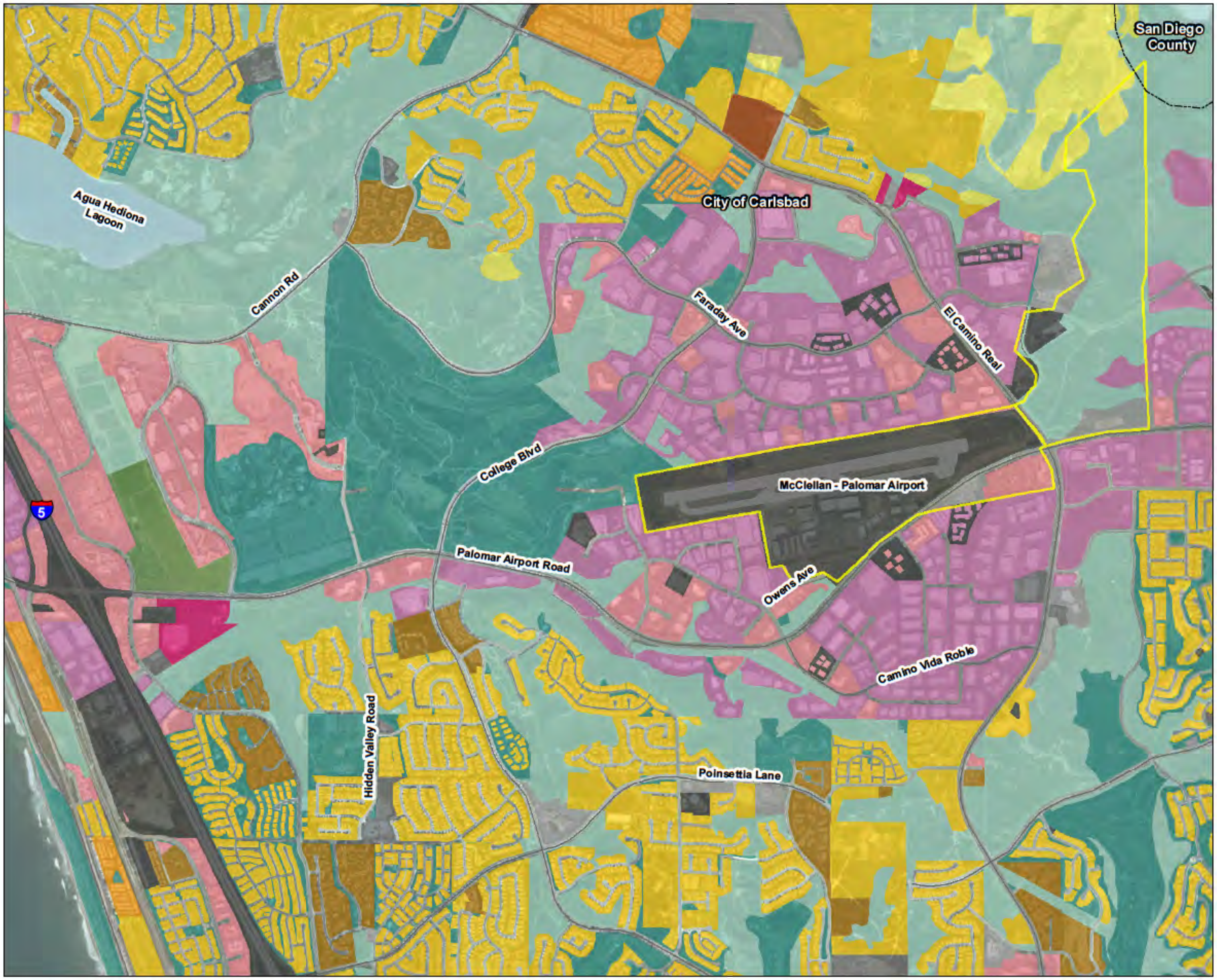
Based on the increased traffic generated by the McClellan-Palomar Airport under the RASP Scenario 1C, these roadway improvements are recommended to provide direct access to the airport and acceptable traffic operations along Palomar Airport Road:

- Widen Palomar Airport Road from 6 to 8 lanes between I-5 and Hidden Valley Road. Widening of Palomar Airport road would increase capacity and allow operation at LOS D, an acceptable level. A major element of this improvement would be the placement of retaining walls along both sides of Palomar Airport Road.

- Construct additional entrance to the airport terminal at Owens Avenue. This new access point would require construction of turning lanes and new traffic signalization at the Owens Ave/Camino Vida Roble intersection. It would also include the extension of Owens Avenue to connect with the existing access road that connects the airport terminal to visitor parking facilities from located southwest of the terminal and just north of Palomar Airport Road. This additional entrance and roadway extension would provide more direct access to and from the terminal for transit and other airport traffic. Upon discussion with the County of San Diego, the additional entrance is recommended in the unconstrained plan and additional analysis will be needed on traffic flows and travel times.

Transit Access Improvements

NCTD Route 445 could be modified to serve the airport terminal for more direct access to the terminal. This route modification would provide connectivity to COASTER service at the Carlsbad Poinsettia Station. A bus stop would be located near the terminal building.



LEGEND

- Freeways
- Major Roads
- City Boundary
- Airport Property Line

Existing Land Use

RESIDENTIAL
- Spaced Rural Residential
- Single Family Residential
- Mobile Homes
- Multi-Family Residential
- Mixed Use

COMMERCIAL AND OFFICE
- Shopping Centers
- Commercial and Office

INDUSTRIAL
- Light Industry

PUBLIC FACILITIES AND UTILITIES
- Transportation, Communications, Utilities
- Education
- Institutions
- Military

PARKS AND RECREATION
- Recreation
- Open Space Parks

AGRICULTURE
- Intensive Agriculture

OTHER
- Water

Source: SANDAG, 2009
Airport Boundary – RASP, January 2011

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FIGURE 4.9
McClellan-Palomar Airport Surrounding Land Use
Airport Multimodal Accessibility Plan

SANDAG

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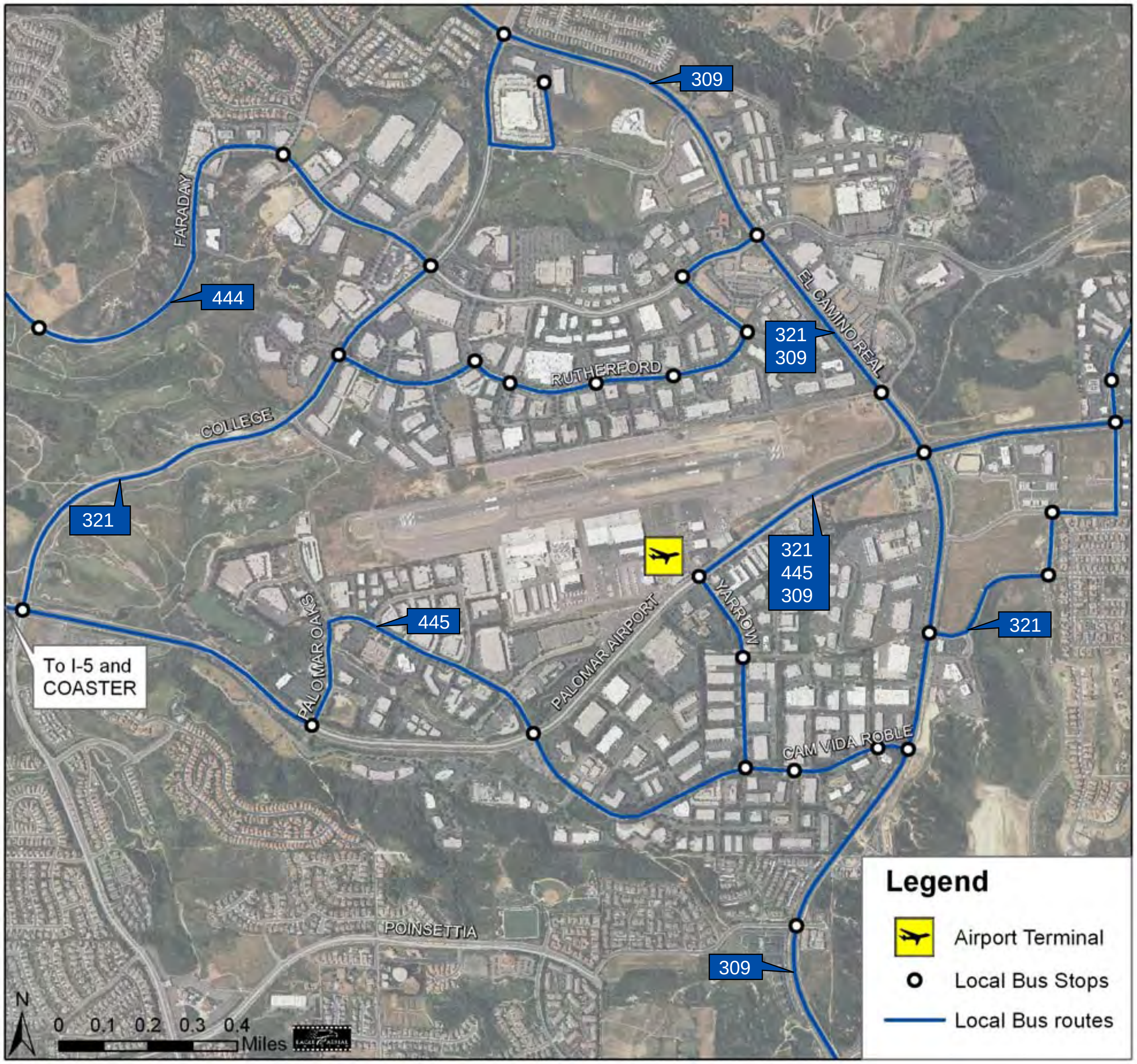

FIGURE 4.10
McClellan-Palomar Airport
Existing Ground Access
Airport Multimodal Accessibility Plan

Source: SANDAG 2011, MTS 2009

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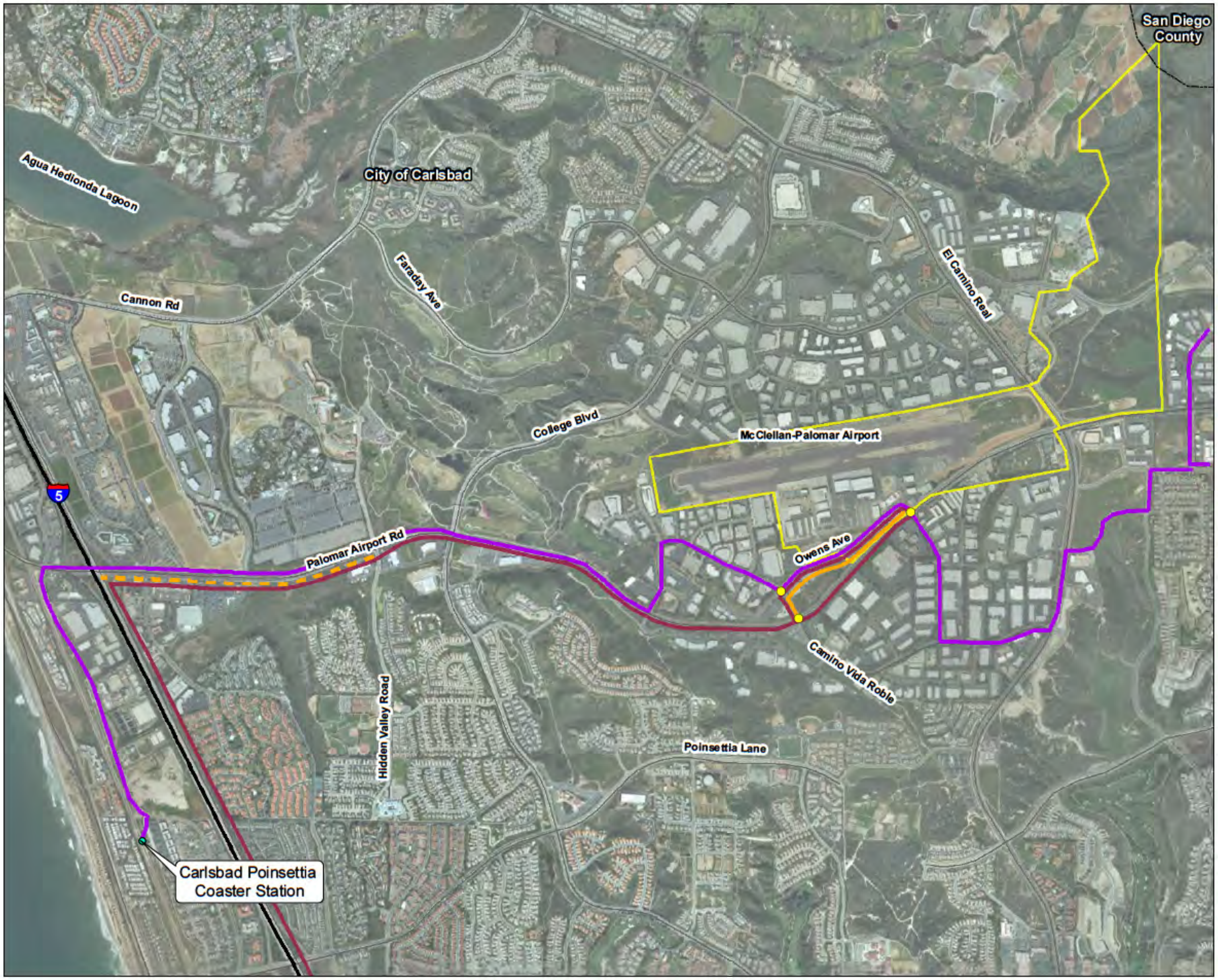

LEGEND

- Freeways
- Major Roads
- City Boundary
- Airport Property Line

Recommended Improvements

- Widen Palomar Airport Rd from 6 to 8 lanes
- Airport entrance at Owens Ave
- Intersection Improvement
- Modify local bus route 445 to serve airport terminal and Carlsbad Poinsettia Station
- Express Bus Service to San Diego International Airport

Source: Airport Boundary – RASP, January 2011

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FIGURE 4.11
McClellan-Palomar Transit and Roadway Improvements
Airport Multimodal Accessibility Plan

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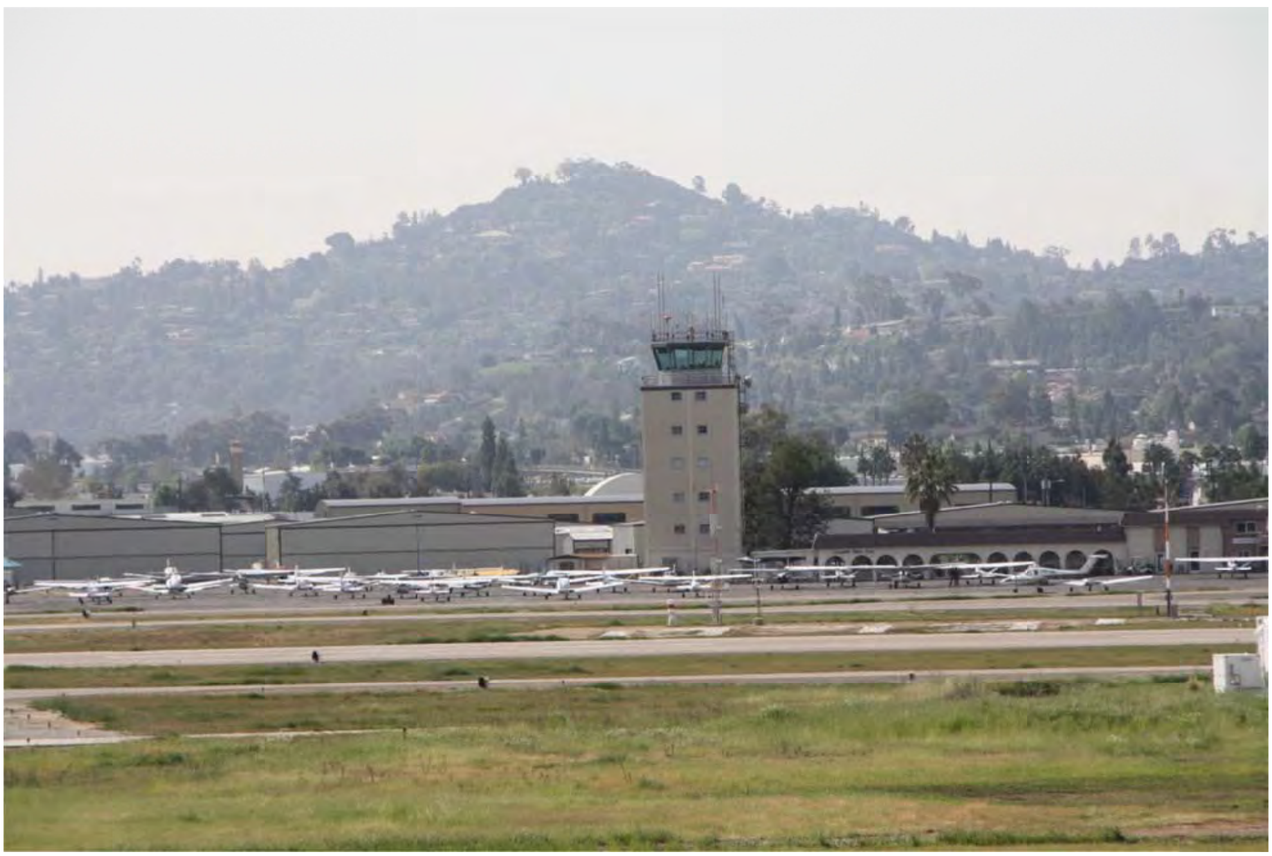
4.4 Gillespie Field

Gillespie Field is owned and operated by the County of San Diego and is located in the City of El Cajon, approximately 10 miles northeast of downtown San Diego (Figure 4.1). The airport's property encompasses approximately 775 acres and is home to more than 900 based aircraft. Gillespie Field serves the general aviation community with three paved runways. Operations at the airport numbered 209,345 in 2010 (County of San Diego, 2011). In addition to the runways, tower, and a terminal, Gillespie Field supports many airport-related businesses including two business parks which provide more than 2,000 jobs in the City of El Cajon and a $40 million boost to the local economy.



4.4.1 Surrounding and Adjacent Land Uses

Gillespie Field is located along the north side of West Bradley Avenue, west of North Magnolia Avenue, south of Prospect Avenue, and east of Cuyamaca Street. The surrounding land use primarily consists of industrial and residential with some mobile home parks, commercial, and vacant/undeveloped areas located north and east of the airport (Figure 4.12). Schools are located within the vicinity of the airport.

Three major freeway corridors, I-8, State Route 67 (SR 67), and the recently opened portion of State Route 52 (SR 52), surround the airport.

4.4.2 Existing Ground Access Conditions

There are a number of roadways that provide access to Gillespie Field; however, the primary access is via Marshall Avenue which is accessed from the south by West Bradley Avenue and from the north via Cuyamaca Street. Gillespie Field is approximately 0.25 mile west of SR 67 and 0.25 mile south of SR 52. From SR 52, Gillespie Field can be accessed using Cuyamaca Street. From SR 67, access is via West Bradley Avenue, where current traffic operations are LOS F at the SR 67 interchange.

Trolley service to the Gillespie Field Trolley stop, located over a half-mile from the main airport entrance, is provided by both the Green and the Orange Trolley Lines. The Orange line provides service to downtown San Diego and the Green Line provides service to Old Town and connections to the Blue Line at Old Town. Existing ground access associated with Gillespie Field is shown in Figure 4-13.

4.4.3 Future Ground Access Conditions

Forecast volumes for arterials that provide access to Gillespie Field are shown in Table 4.4. The increase in general aviation operations and Gillespie Field per the RASP Scenario 4C produces approximately 1,165 ADT.

Table 4.4 2030 Average Daily Traffic for Arterials Providing Access to Gillespie Field

Arterial	From	To	2030 ADT[1] (thousands)
Cuyamaca Street	SR 52	Marshall Avenue	36
Cuyamaca Street	Bradley Avenue	Billy Mitchell Drive	19
Marshall Avenue	Bradley Avenue	Billy Mitchell Drive	16
Marshall Avenue	Billy Mitchell Drive	Cuyamaca Street	11
Bradley Avenue	Marshall Avenue	N. Magnolia Avenue	17
Bradley Avenue	N. Magnolia Avenue	SR 67	18

1. SANDAG 2010.

In March 2011, SR 52 was extended as a 4-lane freeway from SR 125 east to SR 67. A local interchange at Cuyamaca Street was included in this project and provides access to Gillespie Field from SR 52.

The existing Bradley Avenue/SR 67 interchange is proposed to be reconstructed to improve the existing traffic congestion, operations and access to the surrounding community (County of San Diego, 2007). This project includes the following improvements:

- Bradley Avenue overcrossing widened from 2 lanes to 6 lanes, including 2 turn lanes.
- Bradley Avenue widened to 4 lanes between Graves Avenue and Mollison Avenue.
- Southbound and northbound ramps widened to accommodate turning movements.

The existing traffic conditions along Bradley Avenue at both northbound and southbound ramps are LOS F but with the proposed improvements, these facilities are expected to operate at LOS B. Although the projected aviation growth of Gillespie Field is not expected to be a major contributor to the congestion projected at the interchange, the interchange improvements will aid access to Gillespie Field from the SR 67 corridor.

4.4.4 Improvements Considered but Not Carried Forward

General aviation is traditionally a difficult market for transit to service efficiently. Additional transit improvements were evaluated but upon further discussion with the County of San Diego, were eliminated from further study:

- Relocate Gillespie Field Trolley Station. This improvement would relocate the existing Gillespie Field Trolley Station and its parking facility closer to the main entrance of Gillespie Field. The proposed station would be on the existing LRT alignment along a tangent section just south and west of the Gillespie Field entrance on Marshall Avenue. Upon more detailed evaluation, the location identified as the relocation site was already identified for future development by the County of San Diego.

4.4.5 Recommended Improvements

The anticipated changes in general aviation operations at Gillespie Field would require the following roadway and transit improvements to provide enhanced multimodal access to the airport.

Major Infrastructure Improvements

No major infrastructure improvements are recommended.

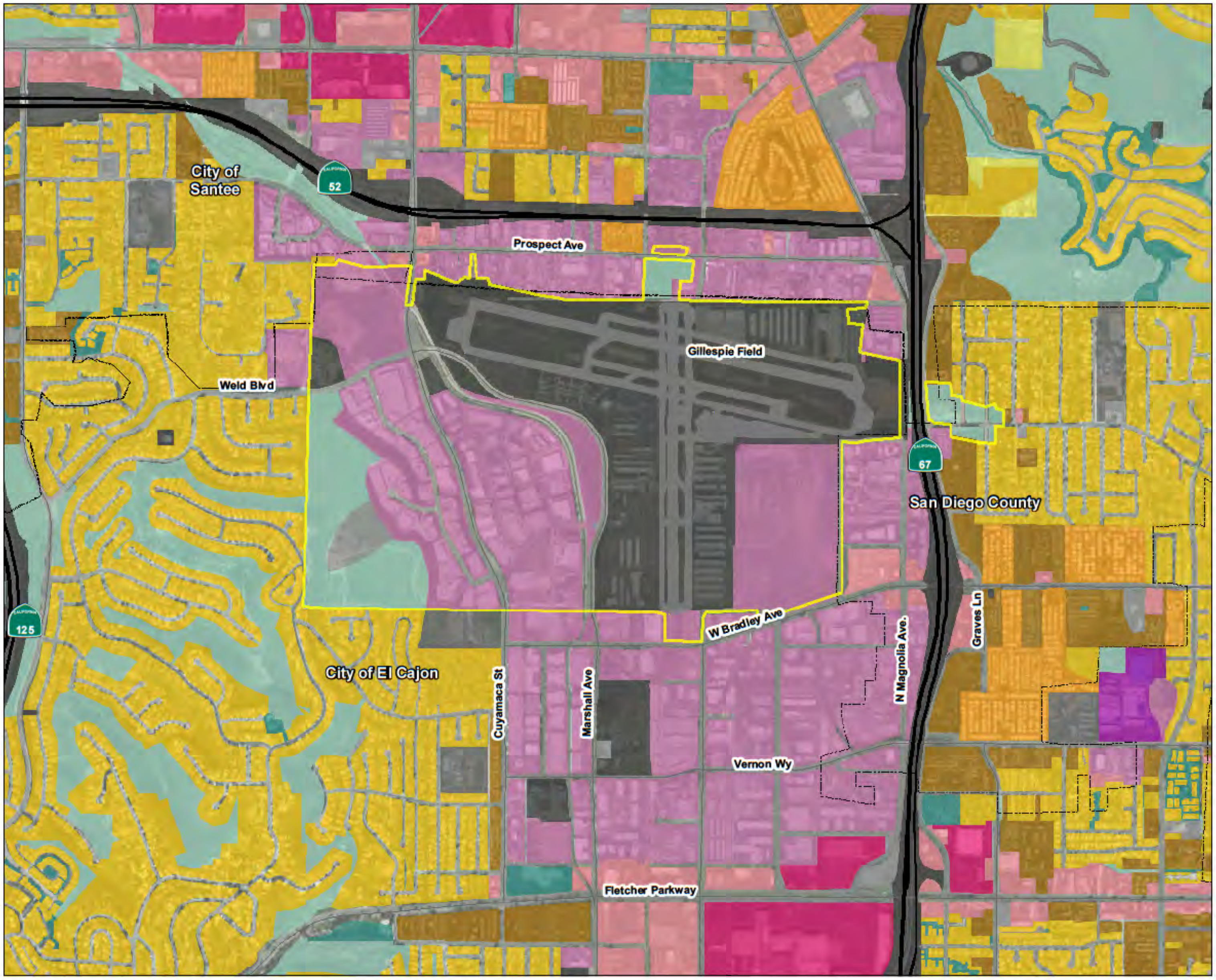
Roadway Access Improvements

Improvements to the Bradley Avenue/SR 67 interchange as described previously are recommended.

Transit Access Improvements

Better local and regional transit connections to the existing trolley station are recommended:

- Modify BRT Routes 90, 870, and/or 890. The BRT Routes (RTP Routes 90, 870 and/or 890) that are proposed to travel along Cuyamaca Street would be modified to provide more direct service to Gillespie Field by changing the routing to North Marshall Avenue from Cuyamaca Street between the El Cajon Transit Center and Cuyamaca Street, with a direct connection at the Gillespie Field Trolley Station.



LEGEND

- Freeways
- Major Roads
- City Boundary
- Airport Property Line

Existing Land Use

RESIDENTIAL
- Spaced Rural Residential
- Single Family Residential
- Mobile Homes
- Multi-Family Residential

COMMERCIAL AND OFFICE
- Shopping Centers
- Commercial and Office

INDUSTRIAL
- Heavy Industry
- Light Industry

PUBLIC FACILITIES AND UTILITIES
- Transportation, Communications, Utilities
- Education
- Institutions

PARKS AND RECREATION
- Recreation
- Open Space Parks

Source: SANDAG, 2009
Airport Boundary – RASP, January 2011

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FIGURE 4.12
Gillespie Field Surrounding Land Use
Airport Multimodal Accessibility Plan

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FIGURE 4.13
Gillespie Field
Existing Ground Access
Airport Multimodal Accessibility Plan

Source: SANDAG 2011, MTS 2009

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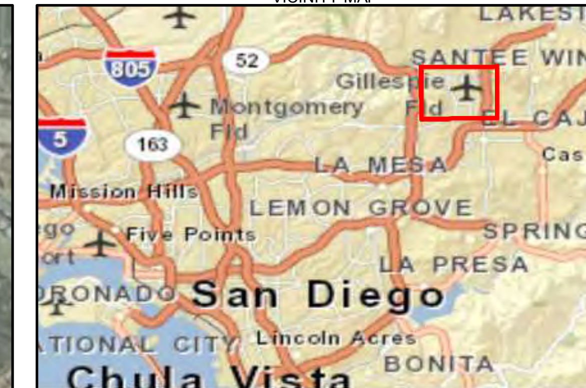
VICINITY MAP



LEGEND

- Trolley
- Freeways
- Major Roads
- City Boundary
- Airport Property Line
- Trolley Station

Recommended Improvements

- BRT Transit Station
- Modify Proposed BRT Routes
- Modify Bradley Ave / SR 67 Interchange

Source: Airport Boundary – RASP, January 2011

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FIGURE 4.14
Gillespie Field Transit and Roadway Improvements
Airport Multimodal Accessibility Plan

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4.5 Express Bus Service to Regional Airports

It is not uncommon for direct bus services to be offered from remote terminal/parking lots and the airport from a distance of over 10 miles away as a way to address traffic congestion and parking demand constraints at the airport. Services range from an express bus service linking a parking facility directly to the airport to remote terminal facilities at the Park-n Ride lots where airline passengers can check in for flights and check luggage. For example, Los Angeles World Airports, which operates LAX, offers four non-stop express bus or FlyAway services to LAX from Los Angeles Union Station, Van Nuys, Irvine, and Westwood. Boston's Logan Express service provides direct transit service from Braintree, Framingham, Woburn, and Peabody. The LAX Flyaway and Boston's Logan Express are the only remove terminal services at commercial airports in the U.S. operated by the airport operator. Some other express bus services such as the Marin Airporter at San Francisco International Airport are operated by private companies. Airport express bus services commonly offer other amenities such as onboard Wi-Fi, luggage assistance, and car detailing/light maintenance at the parking location as a way to increase ridership. As long as these types of services are point-to-point for the benefit of airline passengers, the use of airport funds may be possible to subsidize service costs. However, the FAA would need to review and approve any contribution of airport revenues for these services.

The Airport Authority's SDIA Airport Transit Plan, Phase II, cites the following considerations for a successful airport express bus service:

- Service is provided 7 days per week.
- Maximum headways are 30 minutes.
- Remote terminal is located a minimum of 10 miles or 30 minutes from the airport.
- Non-stop service, or for longer routes a maximum of one stop, is required for consideration for FAA funding.
- Sufficient secured parking and visible location.
- Passenger amenities.

The AMAP evaluated the potential to provide remote terminal/express bus services to SDIA, CBF and McClellan-Palomar Airports following these criteria and consistency with the Airport Authority's Airport Transportation Plan (Figure 4.15). It should be noted that the location of the remote terminal parking lot is crucial to the success of the service and the identified express bus service listed below require further study to determine passenger catchment areas, station locations, expected demand, and appropriate turn-around and stop times, and hours of service. The Airport Authority recently completed the SDIA Airport Transit Plan, Phase II report, which provides study results for remote terminal locations along the I-5, I-15, I-8 and I-805 corridors. This report focuses on feasibility analysis of recommended airport transit improvement measures identified in the Airport Transit Plan including Remote Parking/Terminal with express bus service. Development of the report was coordinated with members of the Airport Transit/Roadway Committee which includes representatives from the local and regional transportation agencies. The analysis concluded that the I-5 and I-15 corridors were the most promising for remote terminal service with either non-stop service from a location near the I-56 interchange or one-stop service with an additional remote terminal/parking location in the City of Carlsbad along the I-5 corridor or City of Escondido along the I-15 corridor.

4.5.1 SDIA

Three express bus service routes are recommended for service to and from SDIA. These services also provide connections to McClellan-Palomar Airport and the CBF.

- I-5 express bus service: This route originates at McClellan-Palomar Airport and was assumed to make one stop before terminating at the Airport ITC. In the near term the mid-point stop is in the I-5/State Route 56 (SR 56) area and for the long-term, a stop at the Manchester Park-n-Ride should be evaluated. Service was assumed to be every 30 minutes daily, roughly between 4:30 a.m. and 1:00 a.m.

- I-15 Corridor express bus service: The route originates at the Escondido Transit Center (ETC) and would make one stop at the Mira Mesa Transit Center, taking advantage of the future Direct Access Ramp, before terminating at the Airport ITC. Service was assumed to be every 30 minutes daily between roughly 4:30 a.m. and 1:00 a.m. One consideration for this route is parking availability at ETC, as this is already an important regional transit connection for SPRINTER light rail, local bus, and future I-15 BRT service.

- CBF express bus service from the Airport ITC: This route originates at the Airport ITC and proceeds directly to the CBF via I-5, SR 94, and I-805. Service was assumed to be every 30 minutes between approximately 4:30 a.m. and 1:00 a.m.

Through a planning level evaluation of the ridership forecast for these routes, the I-5 and I-15 express bus services to SDIA were included in the 2050 RTP (Appendix B).

4.5.2 Cross Border Facility

Express bus service to the CBF would be provided from several key locations in the San Diego region. These locations were determined through coordination with SANDAG, MTS, and the Airport Authority and taking into account projected population densities and connectivity to the region's transportation system. In addition to the express bus service to and from the Airport ITC discussed above, two other express bus routes are proposed to provide service to the CBF.

- I-15 Corridor express bus service: The route originates at the ETC and makes one stop at the Mira Mesa Transit Center before terminating at the CBF. Service was assumed to be every 30 minutes daily. As noted above, parking availability at ETC should be explored further, as this is already an important regional transit connection for SPRINTER light rail, local bus, and future I-15 BRT service.
- H Street Trolley Station (Chula Vista): This route would travel non-stop on I-5 and SR 905 from the H Street Trolley Station to the CBF. Service was assumed to be every 30 minutes daily. This service recommendation should be further studied for feasibility, in terms of passenger catchment area and distance; as route may be too short to effectively draw passengers.

Through a planning level evaluation of the ridership forecast for these routes, the I-15 express bus service to the CBF was included in the 2050 RTP (Appendix B).

4.5.3 McClellan-Palomar Airport

No express bus service routes are proposed for McClellan-Palomar Airport as part of the AMAP. As noted above it would serve as remote parking for the I-5 express bus to SDIA.

4.5.4 Gillespie Field

No express bus service routes are proposed for Gillespie Field as part of the AMAP.

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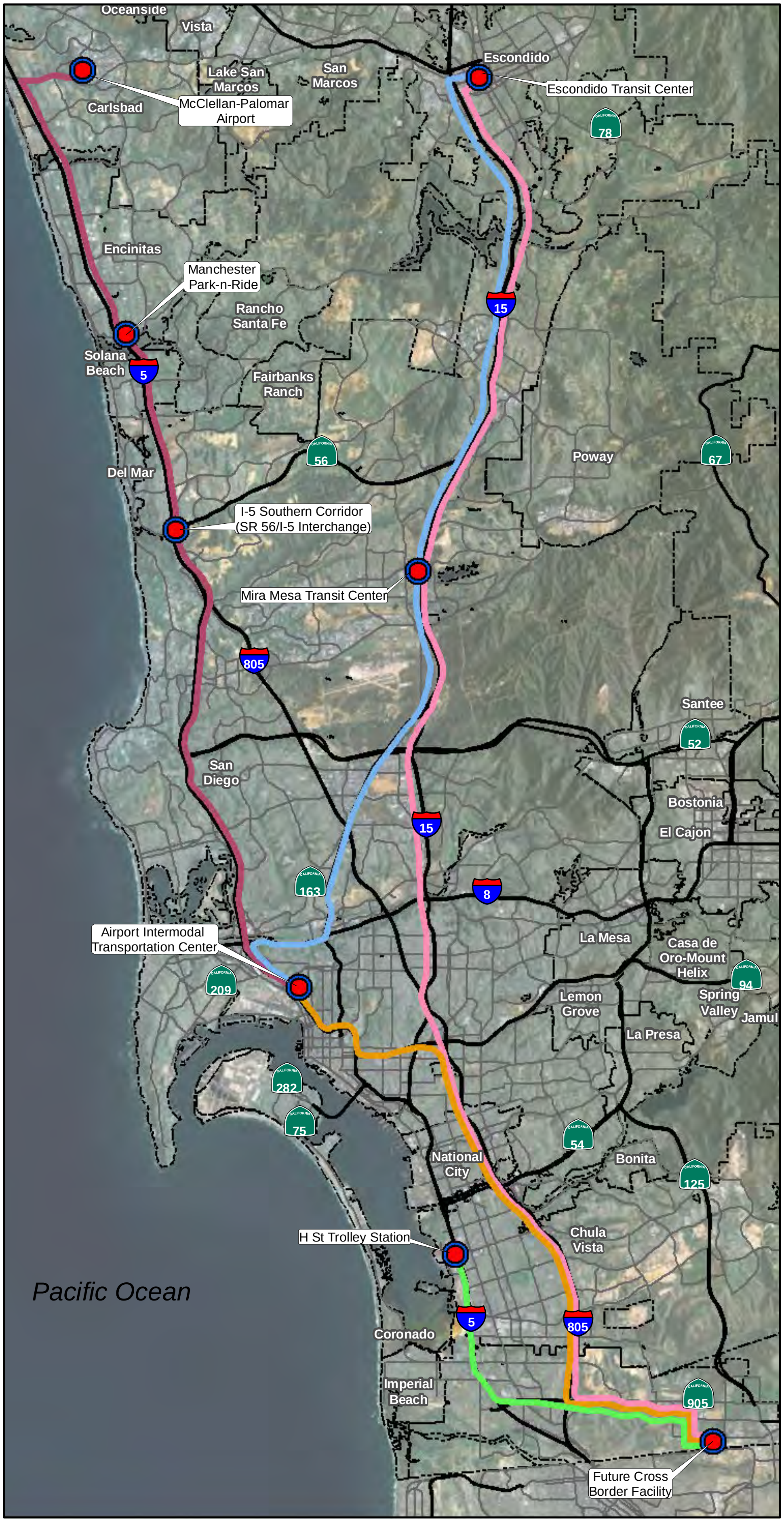

LEGEND

Freeways

Major Roads

City Boundary

Recommended Improvements (Project Number)

San Diego International Airport Express Bus Service

From McClellan-Palomar Airport and Manchester Park-n-Ride (1)

From Escondido Transit Center and Mira Mesa Transit Station (2)

From Cross Border Facility (3)

Express Bus Service Stops

Cross Border Facility Express Bus Service

From Airport Intermodal Transportation Center (3)

From Escondido and Mira Mesa Transit Stations (4)

From H St Trolley Station (5)

Express Bus Service Stops

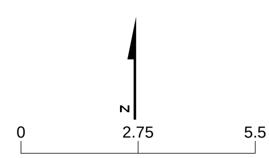

FIGURE 4.15
San Diego International Airport and Cross Border Facility Express Bus Service
Airport Multimodal Accessibility Plan

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4.6 Cost Estimates

Conceptual, planning level cost estimates for both capital and operating costs were developed to help inform and evaluate the various AMAP roadway and transit ground access improvements. The following discussion provides information on the development of costs and assumptions.

4.6.1 Capital Cost Estimates

Capital costs for the improvements at the SDIA were obtained from the *SANDAG Intermodal Transit Center (ITC)-Phase 1 Final Report* (SANDAG, 2010), and by consultation with SANDAG staff. Preliminary, planning-level capital costs estimates for the proposed ground access improvements at other airports were developed using costs from similar regional roadway and transit projects (Table 4.5). Projects used as reference when developing the planning-level unit costs for the AMAP projects included the following:

SANDAG Green Line Extension: The costs for demolition and reconstruction of the station platforms and shelters from the Gaslamp Quarter Trolley station reconstruction were used to determine the costs for the Gillespie Field Trolley Station.

SANDAG SR 15 Mid-City BRT: This project includes freeway widening, ramp improvements and BRT stations along SR 15. Unit costs from this project were used to determine conceptual level costs for BRT stations, ramp improvements and pedestrian crossings for AMAP efforts.

SANDAG I-15 Mira Mesa DAR and Transit Station: This project includes the construction of direct access ramps, arterial widening and a new transit station with parking. Unit costs from this project were used to help determine AMAP proposed transit and arterial improvement costs.

All capital costs include a 35 percent contingency to account for the limited level of analysis and detail for these planning level estimates. Additional information and detail on the individual capital cost estimates is included in Appendix D. Appendix D also contains information regarding the potential phasing of the proposed projects as assumed in the 2050 RTP.

4.6.2 Operating Cost Estimates

Preliminary, planning-level operations costs were estimated for express bus and local transit service operations. Service costs were based on current MTS 2011 cost per mile rates, providing a conservative estimate for operations. Headways for the express bus services to/from the Airport ITC were developed for 30 minute headways from approximately 4:30 a.m. to 1:00 a.m., again providing a conservative estimate for planning-level operations purposes. Headways to/from the CBF at TIJ were estimated for daily 30 minute service, with no break in service to account for TIJ's round-the-clock operations, unlike SDIA that has prohibitions to take-offs between 11:30 p.m. and 6:30 a.m. Detailed operational cost estimates and additional assumptions can be found in Appendix D.

Conceptual, planning-level capital and annual operating costs for the proposed roadway and transit ground access improvements to the Airport ITC, CBF, McClellan-Palomar Airport and Gillespie Field are summarized as follows:

Table 4.5 Summary of Preliminary Planning-Level Capital and Operating Cost Estimates (2011 dollars)

Project	Capital Costs ($ Millions)	Annual Operational Cost ($ Millions)
San Diego International Airport		
Airport ITC with Pedestrian Bridge	$164.0	n/a
Trolley Rail Grade Separation	$551.6	n/a
Heavy Rail Grade Separation	$850.0	n/a
High-Speed Train Station	TBD	-
Direct Connector Ramps from I-5	TBD	n/a
Cross Border Facility		
Modify SR 905/Britannia Boulevard Interchange	$9.3	n/a
Widen Siempre Viva Road	$5.2	n/a
Widen Britannia Boulevard	$2.5	n/a
Modify Local Bus Route 661	$0.3	$0.1
HST Service with CBF Station	$3,557.0	n/a
McClellan-Palomar Airport		
Widen Palomar Airport Road	$15.7	n/a
Additional airport access at Owens Avenue and improvements to the Owens Avenue/Camino Vida Roble intersection	$3.5	n/a
Modification of Local Route 445	$0.3	$0.2
Gillespie Field		
Construct BRT Station at Gillespie Field Trolley Station	$0.6	n/a

Table 4.5 Summary of Preliminary Planning-Level Capital and Operating Cost Estimates (2011 dollars)

Project	Capital Costs ($ Millions)	Annual Operational Cost ($ Millions)
Modification of proposed BRT Routes	No net capital or operational cost increase	n/a
Modification of Bradley Avenue/SR 67 Interchange	$30.0	n/a
Express Bus Service		
I-5 Express Bus Service to SDIA from McClellan-Palomar Airport and the Manchester Park-n-Ride/I-5/SR 56 location	$7.6	$5.5
I-15 Express Bus Service to SDIA from Escondido and the Mira Mesa Transit Station	$7.6	$5.3
Express Bus Service between ITC and CBF	$5.4	$3.9
I-15 Express Bus Service to CBF from Escondido and the Mira Mesa Transit Stations	$8.6	$8.6
H Street Trolley to/from CBF	$4.3	$2.2

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5 Implementation Strategies and Summary

The AMAP develops a multimodal strategy to improve surface transportation access to the airports identified in the RASP for future enhancements. Currently, ground access to the region's airports is primarily roadway and auto focused. Improvements focus on providing public transportation or direct express bus service options in addition to minor arterial and roadway improvements in order to meet the future demand associated with these aviation improvements.

The AMAP has been completed in close cooperation with the Airport Authority and the development of the RASP. SANDAG focused on ground access improvements to airports which were identified by the RASP as candidates for future enhancements rather than identifying potential improvements to all airports in the region. Aviation forecasts developed as part of the RASP were used in the ADT analysis that provided the basis for the evaluation of the AMAP ground access improvements.

Major findings from both the RASP and AMAP are also compatible with the 2050 RTP in terms of the systems development section and transportation networks.

5.1 Summary of Findings

In 2009, the Airport Authority initiated the development of the RASP, beginning with a strategic assessment of each of the 12 public use airports in San Diego County as well as Tijuana International Airport. Next, detailed alternatives analysis was completed on 15 service scenarios and through this analysis, the RASP identified four facilities for future enhancements: SDIA, CBF/CBT, McClellan-Palomar, and Gillespie Field. In addition, the Airport Authority analyzed the potential for high-speed train service to alleviate airport demand at SDIA. The RASP was finalized in March 2011 by the Airport Authority Board of Directors and is available at www.sdrasp.com.

SANDAG initiated the AMAP in 2010 and began by evaluating a range of ground access alternatives to the subset of airports that had been identified by the Airport Authority through the Strategic Assessment as candidates for enhancements. These facilities were SDIA, CBF/CBT, McClellan-Palomar, Gillespie Field, Montgomery Field, Brown Field, and Ramona Airport. Through additional analysis by the Airport Authority, the latter three airports were subsequently dropped from further evaluation.

For SDIA, the AMAP focuses on the Airport ITC as the major ground access improvement, which is closely coordinated with the work of the Airport Authority on the north side airport development. Bus, trolley, commuter and intercity rail, and future high-speed train service will be accommodated at this facility. Direct connector ramps from I-5 will be designed and incorporated to serve the facility. For the short-term, express bus service from the I-5 and I-15 corridors is also evaluated.

For the CBF, the AMAP focuses on transit and arterial improvements and express bus services in the near term. The feasibility of extending the HST system from the Airport ITC to the U.S. - Mexico border is evaluated as a future phase.

For McClellan-Palomar Airport, the AMAP focuses on direct transit shuttle service between the airport terminal and the Poinsettia COASTER commuter rail station, with service increases matched to increases in COASTER service between now and 2035. Arterial improvements to facilitate more direct access to the terminal are also analyzed. Any improvements on airport property would need to be coordinated through the airport layout plan and future plans by the County of San Diego.

The RASP recommends enhancements to general aviation at Gillespie Field, an activity that is traditionally difficult to be served by public transportation. Therefore, only minor roadway improvements are called for in the AMAP. The future Bradley Avenue/SR 67 interchange improvement will also facilitate access. Future transit improvements including the realignment of future Bus Rapid Transit services are evaluated.

5.2 Implementation Strategies

Regional Collaboration

Completion of the RASP and AMAP has showcased the benefits of collaboration between SANDAG, the Airport Authority, and regional stakeholders. Aviation planning and airport ground access has been incorporated into the 2050 RTP at a level above and beyond previous plans. Further collaboration is warranted both in terms of future updates to the RASP and RTP, but also to identify the necessary steps toward successful implementation of the ground access improvements identified in the AMAP.

Encourage Incorporation into Local Plans

SANDAG supports continued collaboration at the local level in terms of working with staff from the Cities of San Diego, Carlsbad, and El Cajon, as well as the airport owners to assess the feasibility of incorporating ground access improvements in local plans, airport layout and master plans, and coordination with other planning efforts.

SANDAG will continue to monitor these local projects through our Intergovernmental Review Program which oversees the review of local environmental documents and monitors current and future development plans for potential impacts on the regional transportation network and will comment regarding particular ground access improvements through this process.

Financial Strategies

The total capital cost of ground access improvements identified in the AMAP is $1.65 billion for the Revenue Constrained Plan and $3.6 billion for the Revenue Unconstrained Plan. The annual operational cost is $25.5 million for the 2020 phase. These improvements have been included in the 2050 RTP either as a separate transit improvement receiving dedicated funding such as the express bus services or included in local transportation networks.

Implementation of the AMAP findings will be dependent on funding and policy changes which are needed to further the goals of SB 10. The reauthorization of the surface transportation program, SAFETEA-LU, has been deferred until at least April 2012 and there is little agreement on how to raise federal funds to address the current funding shortfall in the Highway Trust Fund. Compounding this problem is the current economic state and its impact on state funding for transportation. It is unlikely that any additional state funds will be accessible until the national, state, regional and local economies improve. As a result, there appear to be few federal or state funding options to implement the proposed ground access improvements in the short term.

That said, the following strategies could be explored for funding opportunities with the goal of leveraging local funding with state, federal and private dollars:

Federal Sources

- Potential Intermodal Airport Funding Pilot Program: Explore the potential of a federal pilot program in the surface transportation reauthorization bill between FAA, Federal Transit Administration, Federal Highway Administration, and Federal Railroad Administration to fund intermodal projects to serve airports. This pilot could include nontraditional sources of funding for ground access improvements. One example is the ITC in which a number of transportation modes will converge to also serve SDIA. SANDAG will also work with other Metropolitan Planning Organizations in California to coordinate statewide support of this concept.
- Federal Livability Initiative: There are new and continuing funding sources that relate to the Federal Livability Initiative. In June 2009, the Partnership for Sustainable Communities was formed by the U.S. Department of Housing and Urban Development (HUD), the U.S. Department of Transportation (DOT), and the U.S. Environmental Protection Agency (EPA) Up to $25.7 million was made available for alternatives analysis for transit projects in 2010. The funds were distributed in support of the Department of Transportation’s Livability Initiative.

- Transportation Investment Generating Economic Recovery (TIGER) The TIGER Discretionary Grant Program was included in the American Recovery and Reinvestment Act to spur a national competition for innovative, multimodal, and multi-jurisdictional transportation projects that promise significant economic and environmental benefits to an entire metropolitan area, a region, or the nation. In February 2010, USDOT selected 51 projects to be funded with the $1.5 billion allocated in the Recovery Act, including improvements to roads, bridges, rail, ports, and transit and intermodal facilities. There is currently a call for application for a fourth round of TIGER funding.
- FTA Funds: There are a variety of traditional discretionary Federal Transit Administration Funds that could be pursued as part of this program, such as New Starts (light rail, heavy rail), Small Starts (Bus Rapid Transit) and Very Small Starts (trolleys and streetcars).
- Complete Streets: The federal “Complete Streets” program may have funding to enhance the roadway network, and non-motorized (bicycle and pedestrian) components of the capital program. Caltrans has adopted a Complete Streets policy and program as well.
- Environmental and Natural Resources Grants: There are a variety of non-traditional funding sources for transit projects that target the environmental mitigation components of a project.
- TIFIA Loan: Consider a federal Transportation Infrastructure Finance and Innovation Act (TIFIA) loan. The strategic goal of the TIFIA program is to leverage limited Federal resources and stimulate capital investment in transportation infrastructure by providing credit rather than grants to projects of critical importance to the nation's transportation system. Although there is limited TIFIA budget authority currently, this financing technique should be considered once the Reauthorization bill is approved. This loan would be paid back with local or regional funds. The most successful projects for this program would be the larger, regionally significant ones.

State Sources

- Intermodal Connectivity Funding: Review Statewide Transportation Funding Program for options to incorporate a directed funding source for intermodal connectivity projects at regional airports.
- High Speed Rail Funding: Continue to support the CHSRA efforts to secure state and federal funding for the Los Angeles to San Diego via Inland Empire HST corridor. Also pursue cooperative funding opportunities with the CHSRA related to intermodal connectivity and station development along the HST corridor. In addition to state and federal HSR funding, there is a private funding component in the CHSRA business plan that should be considered.
- CPUC Grade Separation Funding: Consider California Public Utilities Commission (CPUC) Section 190 Grade Separation funding for the grade separations in the proposed plan. Although not a large program at $15 million per year, it can help leverage other local funding.

- CTC Prop. 1B Grade Crossing Funds: Although there is no new Proposition 1B funding, the California Transportation Commission is soliciting projects to replace the projects in the current programs that have stalled due to lack of local match. One program that may be of interest is the Proposition 1B Highway-Railroad Crossing Safety Account.
- Caltrans Transportation Planning Grant Program: These funds are available for planning projects that improve mobility and lead to the planning, programming, and implementation of transportation improvement projects. In 2010, SANDAG received a planning grant for initial planning studies for the Airport ITC through this program.

Local and Regional Sources

- Restructured Local Bus Service to Serve Airport: Encourage MTS and NCTD to incorporate local bus service to airports in their service plans and capital improvement plans. Assist by identifying potential funding sources and to further define the capital and operating plans.

Private Sources

- Private Shuttles to Airports: Explore models from other transit systems whereby larger employers within the service area provide private shuttle service to the airports either directly or via transit stations adjacent to the airports.
- Joint Development: Analyze the potential for Joint Development around transit stations, along transit corridors and along the perimeter of the airport to help fund transit service and roadway improvements.
- Assessment Districts: Explore the implementation of an assessment district on the adjacent development whereby a rate would be charged based on value of airport access via transit and roadway improvements. The funds generated could be financed to provide funding for the improvements.
- Public/Private Partnerships (P3s): P3s are a viable consideration for the larger capital plan projects. P3s provide a new delivery alternative and potential private investment.

5.3 Project Refinements

While the AMAP provides planning-level cost estimates and project concepts, additional work is needed in order to complete the planning, design, and ultimately construction and implementation of these ground access improvements:

Express Bus Services

- Support Airport Authority's efforts to implement express bus service to SDIA by continuing to participate on the Authority's stakeholder working groups to refine route alignments and service plans. Support the Authority's requests for funding as needed.
- Provide AMAP analysis to the Otay-Tijuana Venture LLC on future express bus services from the Airport ITC and I-15 Corridor to the CBF.

High-Speed Train Service

- Work with CHSRA and southern California regional partners on HST connection to San Diego, including the continued analysis of Air-Rail Connectivity in order to alleviate airport demand at SDIA.
- Work with the Cities of San Diego and Escondido on HST station area planning efforts as requested.

San Diego International Airport

- Secure funding and complete the planning and design of the Airport ITC including traffic analysis, engineering and design of the initial transit station including pedestrian bridge and continue to work with agency stakeholders on this initial phase.
- Work with CHSRA and Caltrans on the engineering and final design of the HST station and Direct Connector Ramps from I-5.

Cross Border Facility

- Work with MTS and Otay-Tijuana Venture LLC to provide the necessary infrastructure to support local transit service to the facility on opening day.
- Continue to support efforts by the City of San Diego to update the Otay Mesa Community Plan, including the necessary arterial improvements to support the CBF.
- Reassess the feasibility of extending the HST network from the Airport ITC to the CBF and the potential to include the project in the Revenue Constrained 2014 RTP.

McClellan-Palomar Airport

- Work with the City of Carlsbad and County of San Diego Airports, Airport Authority, FAA, and NCTD to continue to refine arterial and transit improvements to the terminal.
- Continue to construct capital improvements on the coastal rail corridor in order to facilitate additional COASTER commuter rail service. Support NCTD efforts to increase local bus services including a shuttle connection to the airport.

Gillespie Field

- Support efforts to secure funds for construction of the Bradley Avenue/SR 67 interchange project.

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Appendix A
Public and Stakeholder Outreach

Airport Multimodal Access Plan
Public Workshop Materials

Joint public workshops on the preliminary findings of the Regional Aviation Strategic Plan and the Airport Multimodal Access Plan studies were presented to the public at four public workshops held on the following dates.

- September 14, 2010 at SDIA
- September 16, 2010 at McClellan-Palomar Airport
- September 22, 2010 at Gillespie Field
- September 30, 2010 at South County Economic Development Council
- January 26, 2011 at SDIA

Materials presented at the Public Workshops included the following:

1. San Diego International Airport Transit and Roadway Improvements
2. Cross Border Facility Transit Improvements
3. Cross Border Facility Roadway Improvements
4. McClellan-Palomar Transit and Roadway Improvements
5. Gillespie Field Transit and Roadway Improvements
6. Express Bus Service to/from SDIA and CBF
7. 2050 RTP Fact Sheet (English and Spanish) – available at *www.sandag.org*
8. 2050 RTP Comment Cards
9. General SANDAG Fact Sheet (English and Spanish) – available at *www.sandag.org*
10. AMAP Fact Sheet (included)
11. AMAP Comment Form (included)

Summary of Stakeholder Meetings

Date	Meeting Participants	Purpose
March 19, 2010	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to SANDAG Transportation Committee
April 26, 2010	• SANDAG • Airport Authority • MTS • NCTD • Caltrans District 11	– Brainstorming potential ground access improvements
June 8, 2010	• SANDAG • Airport Authority • Caltrans District 11 • MTS	– Project Initiation – Overview of ongoing RASP and 2030 RTP planning efforts as basis for AMAP study
August 18, 2010	• SANDAG • Airport Authority • Caltrans District 11 • MTS	– Overview of AMAP, RASP, and Draft 2050 RTP studies. Review of preliminary ground access improvements
September 8, 2010	• SANDAG • Airport Authority • Caltrans District 11 • MTS	– Overview of AMAP, RASP, and Draft 2050 RTP studies. Review of recommended ground access improvements
October 21, 2010	• SANDAG • City of San Diego Planning Department	– AMAP overview and discussion of potential ground access improvements within Otay Mesa Community Planning area
October 28, 2010	• SANDAG • City of Carlsbad Transportation Department	– AMAP overview and discussion of potential ground access improvements within McClellan-Palomar Airport and local roadways
November 30, 2010	• SANDAG • Airport Authority • Caltrans District 11 • MTS	– Overview of RASP modeling results and Draft 2050 RTP scenarios. AMAP overview of ground access improvements
January 5, 2011	• SANDAG • Airport Authority • Otay-Tijuana Venture LLC (CBF)	– AMAP and CBF overview and discuss potential ground access improvements in Cross Border Terminal (CBT) project area
January 11, 2011	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to Airport Authority RASP Board Committee
January 21, 2011	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to SANDAG Transportation Committee
February 16, 2011	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to City of San Diego Rules Committee
March 2, 2011	• SANDAG • Airport Authority	– Joint Update on RASP/AMAP to County of San Diego Board of Supervisors

Summary of Stakeholder Meetings

Date	Meeting Participants	Purpose
April 13, 2011	• Transit/Roadway Committee (Airport Authority)	– Review draft AMAP improvements
June 17, 2011	• SANDAG Transportation Committee	– Review draft AMAP plan and recommend public release to the Board of Directors
June 24, 2011	• SANDAG Board of Directors	– Release the draft AMAP report for a 60-day public comment period.
July 11, 2011	• SANDAG Cities/County Transportation Advisory Committee	– Overview of the draft plan, request for comments.
August 11, 2011	• SANDAG Regional Planning Technical Working Group	– Overview of the draft plan, request for comments.
August 23, 2011	• Regional Chamber of Commerce Transportation Committee	– Overview of the draft plan, request for comments.
December 19, 2011	• County Airports staff	– Overview of the specific recommendations at McClellan-Palomar Airport
January 19, 2012	• Palomar Advisory Committee	– Overview of the specific recommendations at McClellan-Palomar Airport
January 30, 2012	• County Airports staff	– Overview of the specific recommendations at Gillespie Field
March 16, 2012	• SANDAG Transportation Committee	– Overview of specific recommendations, recommend to Board they approve
March 23, 2012	• SANDAG Board of Directors	– Overview; consideration of final approval

Draft Airport Multimodal Accessibility Plan Public Comments and Responses

June 24, 2011 through August 24, 2011

Date	Individual/ Organization	Name	Comment	Response
08/15/2011	Individual	Joyce Hassell	Looking over the information, it is not clear how trains will be able to get to the airport. I like to take the Coaster but the public bus is not on time nor has room for luggage. At least while construction is going on, provide an airport shuttle so people can be encouraged to take public transportation to the airport.	The COASTER will stop at the future Airport Intermodal Transportation Center adjacent to the north side of the airport. A shuttle bus in the near term and possibly a people mover in the future will be available to connect passengers between the ITC and airport terminals.
08/11/2011	Individual	Doug McKennon	I would like to offer another proposal. Add a people mover automatic circular loop that would connect Old Town, Santa Fe Train/trolley area and all three current terminals at the airport. That way you have a feeder system coming from the north to Old Town and another feeder system coming from the south from San Diego/Mexico to Santa Fe Train/trolley area. If necessary, future terminals could easily be connected. Parking structures could be added to Old Town and the Santa Fe Train/trolley area for cars to park without taking up space at the Airport.	Dedicated systems such as your suggestion were not evaluated as part of this effort due mainly to their expense and lack of flexibility. Rather, improvements that take advantage of the region's past transportation investments were identified. For example, an Airport Intermodal Transportation Center adjacent to the existing rail corridor is identified as the rail improvement for San Diego International Airport. Service by both existing commuter and intercity rail services is an option, as are connections from local bus and future Bus Rapid Transit, as well as future high-speed passenger rail. With a robust transit hub, the need for parking would be minimized.

Draft Airport Multimodal Accessibility Plan Public Comments and Responses

June 24, 2011 through August 24, 2011

Date	Individual / Organization	Name	Comment	Response
08/12/2011	Individual	Robert G. Baker	Unless you provide for direct access for cars from Interstate 5 to the terminals I consider the airport access totally unacceptable. Every major airport I have visited has direct freeway access. Access on the city street system is far too time consuming and inefficient. Any funds available to spend on trolley or bus access should be diverted to improving automobile access to the terminals. The problem with all modes of access on the north side is that passengers have to heft luggage onto a shuttle and off the shuttle to the terminal entrance. Even carry-on that is rolled is a hassle. Presently one gets dropped off at the entrance and rolls to the selected gate. I suggest a ramp off of Pacific Highway that curves around to the main terminal without using any surface streets. Multi-modal could use the same ramp.	Direct access from Interstate 5 is included in the draft report, however, not with direct access to the existing terminals but to the Airport Intermodal Transportation Center, consistent with the San Diego County Regional Airport Authority's *Destination Lindbergh* plan.
08/18/2011	Individual	Walter Brewer	Question # 1), Do you agree the principal objective for airport ground access is to provide the large majority of passengers with the most direct fast convenient access possible to aircraft at gates? (Compatible with efficient flight operations of course.) I suggest San Diego International airport is one of the country's most convenient and fast for the large majority of passengers. There is direct access to convenient parking, and a short walk to three conveniently separated terminals. (Construction periods ignored of course.)Bus, taxis, and vans provide virtually curbside service to terminals. Question 2), Why does the Airport Multimodal Access Plan eliminate this and raise the following: a), Complicating access by all autos, taxis, and vans to a single terminal across the airport, requiring a transfer by another mode back to where terminals are now? b), Multimodal Old Town Transit Center handles about 12,000 passenger movements daily at a fraction of the proposed facilities' complexities and cost. Extrapolating from the current about 1 percent, do you project mass transit use to approach OTTC capability? c), For the modes of mass transit listed, and expected volume, why is an expensive multimodal facility and pedestrian bridge needed? d), Have you considered an express bus from OTTC to SDIA, possible with modes additions at OTTC as an alternative to the multimodal transit center? If not, why not?	We agree, however, it is a regional priority to design transportation systems in the future that offer competitive choices among all modes seeking to access a major regional facility such as SDIA. The draft AMAP builds upon past studies that call for a multimodal approach with direct access ramps from Interstate 5, an Airport Intermodal Transportation Center with access from the region's commuter, intercity, and future high-speed rail lines, and convenient bus connections. One such report, *Destination Lindbergh*, estimated as much as 13 percent mode share for public transportation. Part of the future planning for the Airport ITC will be the study of potential local bus connections as you suggest.

Draft Airport Multimodal Accessibility Plan Public Comments and Responses

June 24, 2011 through August 24, 2011

Date	Individual/ Organization	Name	Comment	Response
			Question # 3), Why is the terminal for the proposed California High Speed Rail located at the airport? a), The large majority of HSR users would seem to come from more central locations in the region, and have very little interaction with air travel at SDIA. Please show HSR user projections that may say otherwise. b), Wouldn't one of several other more central locations for HSR that also have direct transfer connection so the mass transit network be more useful? Question 4), The RASP states; full build out of the ITC and north side terminal has no effect on suppressed demand which limits SDIA effectiveness by 2025 or so. As the Agency responsible for access, has a comparison been made with a Plan to provided improved access to the current expanded terminals by routing the planned ramp from Interstate-5 directly to the current terminal locations? In addition to relief of Harbor Dr. traffic, and help develop property to the south, with added parking, including rentals, this would preserve current simple convenient air passenger access. a), if so, has a cost estimate for this option been prepared? How does it compare with AMAP as proposed? b), If not, what are the quantitative reasons for rejection? c), Has a Plan like this been described and discussed with stakeholders and the public; at least as an option to AMAP? d), Recognizing insufficient land for a taxiway on the north side of the runway a small terminal might be desired if air passenger volume approaches extreme estimates… Assuming care in choosing flight schedules from the north side terminal, what numerical impact on daily flight operations would be expected? Question 5), This planning timescale reaches to 2050 at least. In that period extended versions of the automated personal "podcars" now operating at Heathrow airport in England could deliver passengers directly to airport terminals, or possibly gate areas; security needs recognized. This also would reduce need for current access modes, traffic on Harbor Dr. and in addition reduce parking needs. In multiple community locations, pod access terminals would be in high volume use areas, including those with mass transit access.	The California High-Speed Rail Authority has studied two alternative terminus locations for high-speed trains in the San Diego region - Qualcomm Stadium and the Santa Fe Depot. Engineering and service reasons are cited in the Authority's Alternatives Analysis report, released in March 2011, for why these locations should be dropped from further study. Impacts of daily flight operations were not part of the AMAP scope of work. The planning horizon for AMAP is 2030/2035, consistent with the RASP, and therefore, future technologies such as podcars were not evaluated as part of this scope of work. However, future Regional Transportation Plans, as was the case with the 2008 and 2011 RTPs, will complete an evaluation of future transportation technologies.

Draft Airport Multimodal Accessibility Plan Public Comments and Responses

June 24, 2011 through August 24, 2011

Date	Individual / Organization	Name	Comment	Response
			a), Has a Plan to evaluate and phase in this form of access been prepared? b), If not what are reasons for not doing so? c), What additional information and authorizations are needed to install and operate at least one demonstration facility?	
08/12/2011	Individual	Leah Patti Martin	Thank you for receiving our comments regarding the Airport Multimodal Accessibility Plan. I have a suggestion that addresses two safety issues: a Lindbergh Freeway connecting 8 at Hotel Circle with the proposed transportation center on the north side of Lindbergh Field. The safety issues are avoiding commuter gridlock on 5/PCH and permitting faster evacuations in case of fires along 15. The proposed Lindbergh Freeway allows faster commute times for taxis, ambulances, and city buses by separating the airport bound traffic on 8 west from the other westbound traffic headed towards Sea World, UCSD, or Del Mar. The Sunset Cove Stage is already a security risk without PCH "carmaggedon." If some of the traffic could be directed over PCH and Washington Street, north and east, PCH and 5 wouldn't be the only escape routes. Putting on/off ramps near UCSD Medical Center would be useful. The dollar value of safety is not easily calculated. A toll could be charged those who are parking at the airport to offset some of the cost. Tolls encourage people-who-want-to-save-money to use public transportation without holding up the creation of jobs. Qualcomm Stadium will still be an attraction of some sort, even if we do build a new Charger Stadium down-town. The traffic won't diminish even with increased use of public transportation because population will increase and tourism. I hear SANDAG is considering spending $345 million SR-125. I think it would be smarter to lease the SR-125 to another private company. Let them take in the tolls, pay the fifty toll-taker salaries and pensions, and make a profit. SANDAG will still have the $345 million, the lease payments, and TransNet.	Improved connectivity from Interstate 5 to an Airport Intermodal Transportation Center adjacent to the airport is included in the draft plan. The study did not evaluate additional freeway improvements beyond those called for in the 2050 RTP, which includes I-8 operational improvements.

Appendix B
AMAP Modeling Results

AMAP Modeling Results

Background

SANDAG has produced transportation forecasts since 1981. The SANDAG forecasts are used by policymakers and the general public, as well as by public and private agencies throughout the region. For example, SANDAG uses the forecasts to develop the Regional Transportation Plan (RTP), the Regional Comprehensive Plan (RCP), and the Air Quality Conformity Plan. Local jurisdictions use the forecasts for general plan updates and capital facilities planning, including environmental impact reports (EIR), as well as for local transportation planning. The SANDAG transportation model provides an analytical platform so that different alternatives and inputs can be evaluated in an iterative and controlled environment. SANDAG uses an enhanced four-step transportation model. Four-step models have been the standard in transportation modeling since the late 1950s, and they are used by nearly every Metropolitan Planning Organization (MPO) in the United States for the development of transportation plans, corridor studies, Federal Transit Administration New Starts proposals, and air quality analyses.

For assisting in evaluating the proposed transportation improvements in the AMAP, the SANDAG transportation model was used both to identify future travel patterns and transit ridership forecasts. The report identifies the average daily traffic associated with the particular roadway facility in 2030, based in part on the aviation forecasts generated through the RASP. Table B-1 shows the initial transit ridership forecasts that were generated for both the modified local transit routes and the proposed express bus services discussed in the plan and completed for the 2050 RTP.

Table B-1
RIDERSHIP FORECASTS FOR PROPOSED BUS IMPROVEMENTS
(Average Daily Weekday Riders Before/After AMAP Improvements)

Description	*2050 (RTP)*	*2050 (RTP with AMAP)*
Express Bus to Airports[1]:		
H St Trolley Station to CBF	-	8
SDIA / Airport ITC to CBF	-	104
Escondido to CBF via I-15	-	967
Escondido to SDIA / Airport ITC via I-15	-	829
McClellan Palomar to SDIA / Airport ITC via I-5	-	409
Local Bus:		
McClellan Palomar to Poinsettia COASTER Station[2]	333	1,082
CBF to Otay Mesa and Iris Avenue Trolley[2]	2,317	9,222
BRT From El Cajon Gillespie Field Trolley Station to UTC	985	978
BRT From El Cajon to Gillespie Field Trolley Station to Sorrento Mesa	1,364	1,458

[1] $8 one way fare and $8 daily parking charge assumed.
[2] Increases in ridership not solely attributable to airport riders.
– not available; route not included prior to AMAP.

Overall, the express bus services from both the I-5 and I-15 corridors performed fairly well. The express routes from both the H Street Trolley Station and SDIA/Airport ITC to the CBF compete with other transit modes with lower fares such as the San Diego Trolley, and therefore, did not perform as well. For the modifications proposed to the local bus services, increases were forecast for the McClellan-Palomar and CBF routes, although not all of this increase can be attributable solely to airport passengers as route changes were beneficial to riders overall. The proposed modifications to the BRT services to more closely serve Gillespie Field were mixed, with ridership on one route decreasing and slightly increasing on the other. Further analysis of these changes is warranted.

While the modeling effort provided another planning tool to assist in the ground access recommendations made in the report, the San Diego County Regional Airport Authority has completed more extensive analysis of both air passenger demand volume and passenger density per acre for the express bus services proposed for service directly to SDIA. Using both sets of information, the recommended services are the I-15 to SDIA, I-5 to SDIA, and I-15 to CBF express bus routes. These corridors were included in the 2050 RTP as a result.

Context

It is important to note that SANDAG's transportation model is a regional model and as such has proved very accurate over the years in terms of overall highway travel and transit ridership forecasts. When measuring specific trips such as transit ridership to airports, there are several assumptions that SANDAG's 4-step regional model does not adequately address such as the various parking choices available around the airport, the availability of mode choices such as shuttles and taxis, and the lack of current transit options that can be used to calibrate the transit mode choice for airport trips.

Appendix C
Ground Access Alternatives/Improvements at Airports Not Carried Forward

Ground Access Alternatives/Improvements at Airports Not Carried Forward

At the early stages of the AMAP, preliminary ground access improvements were developed for the following airports that were eventually dropped from consideration from the RASP and AMAP process:

- Brown Field Municipal Airport
- Montgomery Field
- Ramona Airport

These airports were determined to have physical, operational, environmental, or other significant constraints that hindered their ability to meet the long-term needs of the region were dropped from further study in the RASP. Initial evaluation of the ground access improvements considered for these airports which was completed prior to these facilities being dropped from further study, is summarized below.

Brown Field

Several ground access improvements were considered for Brown Field Municipal Airport early in the project development. These improvements were to coincide with RASP Scenarios 1D, 4B and 5A. All improvements to Brown Field Municipal Airport were eventually dropped from the RASP due to its location, potential for public opposition and the infeasibility of precision instrument approaches. The roadway and transit improvements considered in the early part of the AMAP study process are summarized below:

Realign Proposed Rapid Bus Route 638

The proposed Rapid Bus Route was to be realigned to continue easterly on Otay Mesa Road as opposed to traveling south on Heritage Road. There would be a stop along Otay Mesa Road with a pedestrian overcrossing providing access to Brown Field Municipal Airport.

Increase the Service on local MTS Route 905

Increasing the service frequency on the local bus route 905 was evaluated as a way to provide more frequent service between a proposed LRT station near SR 125 and Otay Mesa Road and the terminal.

Construct Additional Entrance

An additional entrance to Brown Field Municipal Airport was considered at Britannia Boulevard. This additional entrance would provide more direct access to and from Brown Field. It also would be consistent with the Brown Field Airport Master Plan.

Widening of Heritage Road and La Media Road

Both Heritage Road and La Media Road were to be widened from 2 to 4 lanes between Otay Mesa Road and Pogo Row. These roadway improvements would provide better access to the proposed industrial development to the north of Brown Field Municipal Airport.

Improvements to Pogo Row

Pogo Row which runs east and west just north of Brown Field Municipal Airport was to be realigned and extended to connect Heritage Road and La Media Road. This widening was proposed to improve circulation around Brown Field Municipal Airport and provide access to the proposed improvements industrial to the north of Brown Field Municipal Airport.

Montgomery Field

Early in the development of the RASP and the AMAP, construction of northbound ramps along Aero Drive at either SR 163 or I-805 was considered. As with other airports in the San Diego region, runway length, the ability to lengthen the runways, as well as political and or public opposition, restrict commercial use of Montgomery Field. Additionally, the capacity for general aviation use also surpasses demand. For these reasons no major improvements were identified at Montgomery Field that warranted ground access improvements, therefore the identified ground access improvements were dropped from further study.

Ramona Airport

Early in the development of both the RASP and AMAP, ground access improvements discussed for the Ramona Airport that included both roadway and transit access changes. Ramona Airport is primarily reached via an undivided, two-lane road (Montecito) – the two ground access improvements under consideration were as follows:

- Widen Montecito Road to four lanes
- Extend local rural bus service from Ramona Station to the Ramona Airport.

The Ramona Airport is not located near a population/economic base to provide commercial service. Additionally, the general aviation capacity exceeds the demand. For these reasons, no significant improvements to the Ramona Airport were identified in the RASP. Similarly, after review of the RASP and consultation with the AMAP stakeholder working group, no ground access improvements were carried forward in the AMAP.

Appendix D
Preliminary Capital and Operating Cost Estimates and Phasing

Preliminary Capital and Operating Cost Estimates and Project Phasing

Conceptual, planning level cost estimates for both capital and operating costs were developed to help inform and evaluate the various AMAP roadway and transit ground access improvements. The following discussion provides information on the development of costs and assumptions.

Capital Cost Estimates

Preliminary, planning-level capital costs estimates for the various ground access improvements were developed using costs from similar regional roadway and transit projects, including the following:

> **SANDAG Green Line Extension**: The costs for demolition and reconstruction of the station platforms and shelters from the Gaslamp Quarter Trolley station reconstruction were used to determine the costs for the Gillespie Field Trolley Station.
>
> **SANDAG SR 15 Mid-City BRT:** This project includes freeway widening, ramp improvements and BRT stations along SR 15. Unit costs from this project were used to determine conceptual level costs for BRT stations, ramp improvements and pedestrian crossings for AMAP efforts.
>
> **SANDAG SR 15 Mira Mesa DAR and Transit Station:** This project includes the construction of direct access ramps, arterial widening and a new transit station with parking. Unit costs from this project were used to help determine AMAP proposed transit and arterial improvement costs.

All capital costs include a 35 percent contingency to account for the limited level of analysis and detail for these planning level estimates. Planning level cost estimate sheets for the proposed projects are provided immediately following the cost estimate summary table for each airport.

Transit Costs:

Preliminary-level transit operating costs were estimated using a current cost per mile price and anticipated route distance.

Direct Service Cost Estimate Assumptions:

- 30 minute headways.
    - Intermodal Transportation Center service between 4:30AM and 1:00AM.
    - Cross Border Facility service provided 24 hours per day. 60 minute headways between 12:00AM and 4:00AM.
- Based on maximum service (serving 100% of aircraft seats). This represents bus service during all currently scheduled arrival and departure flights.
- Operating cost per mile based on MTS FY11 rate.

- Average travel time based on an estimated 35 MPH average speed.
- 5 minute turnaround times at each stop (minimum).
- Buses purchased.
- One extra bus per route.

Local Transit Service Cost Estimate Assumptions:

- Operational costs only include additional distance added to the proposed route.
- No additional buses needed.
- Operational cost per mile based on MTS FY11 rate.
    - Route 445
        - 20 minute headways during peak hours.
        - 60 minute headways during off-peak hours.
        - No nighttime service.
    - Route 661
        - 10 minute headways during peak hours.
        - 10 minute headways during off-peak hours.
        - 30 minute headways during nighttime service.

Organization of Cost Estimate Information

The following cost data covering the AMAP capital and operational costs are included in this appendix.

- *AMAP Project Costs*: Summarizes the capital and operational costs for ground access improvements at each airport facility.

- *Preliminary Cost Summary Sheets*: Individual cost data sheets for roadway ground access improvements at the CBT, the McClellan-Palomar Airport and Gillespie Field.

- *AMAP Estimated Express Bus Service Costs*: Summarizes the conceptual operating costs for the proposed express bus service routes.

- *AMAP Estimated Bus Route Modifications Costs*: Summarizes the added conceptual operating costs for the proposed modified bus routes 445 and 661.

AMAP Project Costs (2010 Dollars)

San Diego International Airport Transit and Roadway Improvements

PROJECT	DESCRIPTION	Major Features	COST ($ millions)	ANNUAL TRANSIT OPERATION COST ($ millions)	RTP Phase [1]	APPLICABLE RASP SCENARIO
1	Airport Intermodal Transportation Center with Pedestrian Bridge					
	1) Opening Day Scenario	Intermodal Transportation Center with Commuter Rail, BRT, local bus and roadway access to SAN	$164.0 [2]		2020	1A and 3B
	2) High Speed Train	Addition of High Speed Train facilities & services	TBD	TBD	2035	1A and 3B
2	Trolley Rail Grade Separation	LRT Grade Separation from just north of Noelle St to the Middletown Trolley Station	$551.6 [2]		2035	1A and 3B
3	Heavy Rail Grade Separation	Rail grade separation to accommodate both LRT and heavy rail from Witherby St to Laurel St	$850.0 [2]		2035	1A and 3B
4	Conceptual I-5 Direct Access Ramps	Direct access ramps from northbound and southbound Interstate 5	TBD		2035	1A and 3B

1. 2050 Regional Transportation Plan(RTP) Revenue Phases. "2020" and "2035" are phases of the draft constrained plan. Improvements in the draft unconstrained plan are labeled accordingly.
2. Costs from SANDAG AIRPORT INTERMODAL TRANSIT CENTER (ITC)-PHASE 1 FINAL REPORT 2010.
3. Includes 35% construction contingency cost.

AMAP Project Costs (2010 Dollars)

Cross Border Facility (CBF) Transit and Roadway Improvements

PROJECT	DESCRIPTION	Major Features	COST ($ millions)	ANNUAL TRANSIT OPERATION COST ($ millions)	RTP Phase [1]	APPLICABLE RASP SCENARIO
1	Increase SR 905/Britannia Interchange Capacity	Add a single lane to both westbound ramps and the eastbound entrance ramp, construct retaining walls along widened ramps	$9.3 [4]		2035	2B and 2C
2	Widening of Siempre Viva Road from 4 to 6 lanes and construction of new roadway between CBF and La Media Rd [2]	Widening of Siempre Viva Road, construction of new roadway, signal modifications at CBF entrance	$5.2 [4]		2035	2B and 2C
3	Widening of Britannia from SR 905 to Siempre Viva Rd [2]	Widening of Britannia from 4 to 6 lanes	$2.5 [4]		2035	2B and 2C
4	Modify proposed local bus route (RTP Route 661)	Modify local bus route to provide access to the CBF (10 minute peak and off peak headway, 30 minute night service headway)	$0.3 [4]	$0.1	2020	2B and 2C
5,6	High Speed Train (HST) service with CBF station	HST with commuter rail overlay along I-5 Corridor frc	$3,557.0 [3]		Unconstrained	2B and 2C

1. 2050 Regional Transportation Plan(RTP) Revenue Phases. "2020" and "2035" are phases of the draft constrained plan. Improvements in the draft unconstrained plan are labeled accordingly.

2. OTAY MESA PUBLIC FACILITIES FINANCING PLAN 2007

3. SAN DIEGO HIGH-SPEED TRAIN (HST) FEASIBILITY STUDIES, SANDAG 2010

4. Includes 35% construction contingency cost

AMAP Project Costs (2010 Dollars)

McClellan-Palomar Airport Transit and Roadway Improvements

PROJECT	DESCRIPTION	Major Features	COST ($ millions)	ANNUAL TRANSIT OPERATION COST (millions)	RTP Phase [1]	APPLICABLE RASP SCENARIO[4]
1	Widen Palomar Airport Road from 6 to 8 thru lanes between I-5 and Hidden Valley Rd.	Construct 1 thru lane in each direction and maintain current turn and bicycle lane configuration, construct retaining walls along Palomar Airport Rd	$15.7 [2]		2020	1C and 4A
2	Additional airport access at Owens Avenue and improvements to the Owens Ave/Camino Vida Roble intersection.	Construct new access road along existing parking, widen Owens Ave and Camino Vida Roble to accommodate turn lanes, signalize Owens Ave/Camino Vida Roble intersection and construct retaining walls	$3.5 [2]		2020	1C and 4A
3	Modification of Route 445 to provide service to the terminal and the Carlsbad Poinsettia Train Station.	Operational modifications to future Route 445 (20 minute peak headway , 60 minute off-peak headway, no night service)	$0.25 [2]	$0.23 [3]	2020	1C and 4A

1. 2050 Regional Transportatin Plan(RTP) Revenue Phases. "2020" and "2035" are phases of the draft constrained plan. Improvements in the draft unconstrained plan are labeled accordingly.
2. Includes 35% construction contingency cost
3. Additional cost for route modification
4. AMAP improvements based on RASP scenario 1C.

AMAP Project Costs (2010 Dollars)

Gillespie Field Transit and Roadway Improvements

PROJECT	DESCRIPTION	Major Features	COST ($ millions)	ANNUAL TRANSIT OPERATION COST (millions)	RTP Phase [1]	APPLICABLE RASP SCENARIO
1	Relocate Trolley Station	New trolley station across from airport entrance along Marshall Ave to replace the existing Gillespie Field Trolley Station, parking lot and pedestrian bridge over Forrester Creek Channel	$6.4 [3]		Unconstrained	4C
2	Bus Rapid Transit (BRT) Station	BRT Station with access to future trolley station	$0.6 [3]		Unconstrained	4C
3	Intersection Improvements	Signalization of the airport entrance along Marshall Avenue	$0.2 [3]		2035	4C
4	Modification of proposed BRT Routes [2]	Divert proposed BRT (RTP Routes 90, 870 and/or 890) from Cuyamaca St to travel along Marshall Ave between W. Bradley Ave and Weld Blvd.			Unconstrained	4C
5	Modification of Bradley Ave/SR 67 Interchange	Widen the Bradley Overcrossing from 2 to 6 lanes (including turn lanes), widen Bradley Ave from 2 thru lanes to 4 thru lanes from Graves to Mollison Ave, reconstruct southbound and northbound ramps	$30 [4]		2020	4C

1. 2050 Regional Transportation Plan(RTP) Revenue Phases. "2020" and "2035" are phases of the draft constrained plan. Improvements in the draft unconstrained plan are labeled accordingly.
2. No net, capital or operational cost increase.
3. Includes 35% construction contingency cost
4. 2007 Bradley Ave/SR 67 Project Report

Widen Britannia Blvd to 6 Lanes
Roadway Improvements for CBF access
Preliminary Design - Cost Opinion Summary

2010 Dollars

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	**PAVEMENT REMOVAL**	sq.yd		2,400	$7.63	$19,000
2	**PAVEMENT**					
	Mainline	sq.yd			$177.00	$0
	Ramp	sq.yd			$53.0	$0
	Arterial	sq.yd		17100	$37.0	$633,000
					Subtotal Pavement Costs	$652,000
3	**EARTHWORK**	L.S.	12	% of Items 1-2	N/A	$79,000
4	**DRAINAGE**	L.S.	15	% of Items 1-2	N/A	$98,000
5	**EROSION CONTROL**	L.S.	2	% of Items 1-2	N/A	$14,000
6	**TRAFFIC CONTROL**	L.S.	25	% of Items 1-2	N/A	$163,000
7	**LIGHTING**	L.S.	6	% of Items 1-2	N/A	$40,000
8	**SIGNING/MARKINGS**	L.S.	6	% of Items 1-2	N/A	$40,000
9	**TYPICAL UTILITIES**	L.S.	15	% of Items 1-2	N/A	$98,000
10	**INCIDENTAL**	L.S.	20	% of Items 1-2	N/A	$131,000
11	**LANDSCAPING**	L.S.	10	% of Items 1-2	N/A	$66,000
12	**BICYCLE FACILITIES**	L.S.	2	% of Items 1-2	N/A	$14,000
13	**TRAFFIC SIGNALS**	E.A.	0		$200,000	$0
TOTAL ROADWAY ITEMS COST (Items 1-13)						**$1,395,000**
14	**RETAINING WALL**					
	MSE	sq. ft			$133.00	$0
	Tangent Pile	sq. ft			$239.00	$0
					Subtotal Retaining Wall	$0
15	**RETAINING WALL INCIDENTALS**	L.S.	15	% of Retaining Wall	N/A	$0
TOTAL RETAINING WALL COSTS (Items 14-15)						**$0**
TOTAL ROADWAY & RETAINING WALL COSTS (Items 1-15)						**$1,395,000**
16	**STRUCTURES**					
	Bridge Removal	sq. ft			$27.00	$0
	New Bridge	sq. ft			$212.00	$0
	Rehabilitation	sq. ft			$106.00	$0
	Bridge Widening	sq. ft			$212.00	$0
					Subtotal Structure Costs	$0
17	**STRUCTURAL INCIDENTAL**	L.S.	15	% of Structures	N/A	$0
TOTAL STRUCTURE COSTS (Items 16-17)						**$0**
18	**RAILROAD RELOCATION**	MILE		0	$2,120,000.00	$0
19	**CONTINGENCY**	L.S.	35%	% of items 1-18	N/A	$ 489,000
TOTAL CONSTRUCTION COSTS (Items 1-19)						**$1,884,000**
20	**ENGINEERING**					
	Preliminary Design & PSE	L.S.	12	% Items 1-19	N/A	$227,000
	Environmental Mitigation	L.S.	10	% Items 1-19	N/A	$189,000
	Final Engineering	L.S.	10	% Items 1-19	N/A	$189,000
TOTAL ENGINEERING COSTS						**$605,000**
	TOTAL PROJECT COST					**$ 2,500,000**

Widen Siempre Viva Rd to 6 Lanes
Roadway Improvements for CBF access
Preliminary Design - Cost Opinion Summary

2010 Dollars

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	**PAVEMENT REMOVAL**	sq.yd			$7.63	$0
2	**PAVEMENT**					
	Mainline	sq.yd			$177.00	$0
	Ramp	sq.yd			$53.0	$0
	Arterial	sq.yd		34000	$37.0	$1,258,000
					Subtotal Pavement Costs	$1,258,000
3	**EARTHWORK**	L.S.	12	% of Items 1-2	N/A	$151,000
4	**DRAINAGE**	L.S.	15	% of Items 1-2	N/A	$189,000
5	**EROSION CONTROL**	L.S.	2	% of Items 1-2	N/A	$26,000
6	**TRAFFIC CONTROL**	L.S.	25	% of Items 1-2	N/A	$315,000
7	**LIGHTING**	L.S.	6	% of Items 1-2	N/A	$76,000
8	**SIGNING/MARKINGS**	L.S.	6	% of Items 1-2	N/A	$76,000
9	**TYPICAL UTILITIES**	L.S.	15	% of Items 1-2	N/A	$189,000
10	**INCIDENTAL**	L.S.	20	% of Items 1-2	N/A	$252,000
11	**LANDSCAPING**	L.S.	10	% of Items 1-2	N/A	$126,000
12	**BICYCLE FACILITIES**	L.S.	2	% of Items 1-2	N/A	$26,000
13	**TRAFFIC SIGNALS**	E.A.	1		$200,000	$200,000
TOTAL ROADWAY ITEMS COST (Items 1-13)						**$2,884,000**
14	**RETAINING WALL**					
	MSE	sq. ft		0	$133.00	$0
	Tangent Pile	sq. ft			$239.00	$0
					Subtotal Retaining Wall	$0
15	**RETAINING WALL INCIDENTALS**	L.S.	15	% of Retaining Wall	N/A	$0
TOTAL RETAINING WALL COSTS (Items 14-15)						**$0**
TOTAL ROADWAY & RETAINING WALLCOSTS (Items 1-15)						**$2,884,000**
16	**STRUCTURES**					
	Bridge Removal	sq. ft			$27.00	$0
	New Bridge	sq. ft			$212.00	$0
	Bridge Rehabilitation	sq. ft			$106.00	$0
	Bridge Widening	sq. ft			$212.00	$0
					Subtotal Structure Costs	$0
17	**STRUCTURAL INCIDENTAL**	L.S.	15	% of Structures	N/A	$0
TOTAL STRUCTURE COSTS (Items 16-17)						**$0**
18	**RAILROAD RELOCATION**	MILE			$2,120,000.00	$0
19	**CONTINGENCY**	L.S.	35%	% of items 1-18	N/A	$ 1,010,000
TOTAL CONSTRUCTION COSTS (Items 1-19)						**$3,894,000**
20	**ENGINEERING**					
	Preliminary Design & PSE	L.S.	12	% Items 1-19	N/A	$468,000
	Environmental Mitigation	L.S.	10	% Items 1-19	N/A	$390,000
	Final Engineering	L.S.	10	% Items 1-19	N/A	$390,000
TOTAL ENGINEERING COSTS						**$1,248,000**
TOTAL PROJECT COST						**$5,200,000**

Increase Capacity of Ramps at SR 905/Britannia Blvd Interchange
Widening of both EB ramps and the WB entrance ramp
Preliminary Design - Cost Opinion Summary

2010 Dollars

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	**PAVEMENT REMOVAL**	sq.yd		3,600	$7.63	$28,000
2	**PAVEMENT**					$0
	Mainline	sq.yd			$177.00	$0
	Ramp	sq.yd		5,400	$53.0	$287,000
	Arterial	sq.yd			$37.0	$0
					Subtotal Pavement Costs	$315,000
3	**EARTHWORK**	L.S.	12	% of Items 1-2	N/A	$38,000
4	**DRAINAGE**	L.S.	15	% of Items 1-2	N/A	$48,000
5	**EROSION CONTROL**	L.S.	2	% of Items 1-2	N/A	$7,000
6	**TRAFFIC CONTROL**	L.S.	25	% of Items 1-2	N/A	$79,000
7	**LIGHTING**	L.S.	6	% of Items 1-2	N/A	$19,000
8	**SIGNING/MARKINGS**	L.S.	6	% of Items 1-2	N/A	$19,000
9	**TYPICAL UTILITIES**	L.S.	15	% of Items 1-2	N/A	$48,000
10	**INCIDENTAL**	L.S.	20	% of Items 1-2	N/A	$63,000
11	**LANDSCAPING**	L.S.	10	% of Items 1-2	N/A	$32,000
12	**BICYCLE FACILITIES**	L.S.	2	% of Items 1-2	N/A	$7,000
13	**TRAFFIC SIGNALS**	E.A.	0		$200,000	$0
TOTAL ROADWAY ITEMS COST (Items 1-13)						**$675,000**
14	**RETAINING WALL**					
	MSE	sq. ft		0	$133.00	$0
	Caltrans Standard Ret Wall (Spread Footing)	LF		5,240	$750.00	$3,930,000
					Subtotal Retaining Wall	$3,930,000
15	**RETAINING WALL INCIDENTALS**	L.S.	15	% of Retaining Wall	N/A	$590,000
TOTAL RETAINING WALL COSTS (Items 14-15)						**$4,520,000**
TOTAL ROADWAY & RETAINING WALLCOSTS (Items 1-15)						**$5,195,000**
16	**STRUCTURES**					
	Bridge Removal	sq. ft			$27.00	$0
	New Bridge	sq. ft			$212.00	$0
	Bridge Rehabilitation	sq. ft			$106.00	$0
	Bridge Widening	sq. ft			$212.00	$0
					Subtotal Structure Costs	$0
17	**STRUCTURAL INCIDENTAL**	L.S.	15	% of Structures	N/A	$0
TOTAL STRUCTURE COSTS (Items 16-17)						**$0**
18	**RAILROAD RELOCATION**	MILE			$2,120,000.00	$0
19	**CONTINGENCY**	L.S.	35%	% of items 1-18	N/A	$ 1,819,000
TOTAL CONSTRUCTION COSTS (Items 1-19)						**$7,014,000**
20	**ENGINEERING**					
	Preliminary Design & PSE	L.S.	12	% Items 1-19	N/A	$842,000
	Environmental Mitigation	L.S.	10	% Items 1-19	N/A	$702,000
	Final Engineering	L.S.	10	% Items 1-19	N/A	$702,000
TOTAL ENGINEERING COSTS						**$2,246,000**
TOTAL PROJECT COST						**$9,300,000**

Palomar Airport Road Widening
Add 1 lane in each direction from I-5 to Hidden Valley Road
Preliminary Design - Cost Opinion Summary

2010 Dollars

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	TOTAL
1	**PAVEMENT REMOVAL**	sq.yd	14,200	$7.63	$109,000
2	**PAVEMENT**				
	Mainline	sq.yd		$177.00	$0
	Ramp	sq.yd	0	$53.0	$0
	Arterial	sq.yd	33,800	$37.0	$1,251,000
				Subtotal Pavement Costs	$1,360,000
3	**EARTHWORK**	L.S.	12 % of Items 1-2	N/A	$164,000
4	**DRAINAGE**	L.S.	15 % of Items 1-2	N/A	$204,000
5	**EROSION CONTROL**	L.S.	2 % of Items 1-2	N/A	$28,000
6	**TRAFFIC CONTROL**	L.S.	25 % of Items 1-2	N/A	$340,000
7	**LIGHTING**	L.S.	6 % of Items 1-2	N/A	$82,000
8	**SIGNING/MARKINGS**	L.S.	6 % of Items 1-2	N/A	$82,000
9	**TYPICAL UTILITIES**	L.S.	15 % of Items 1-2	N/A	$204,000
10	**INCIDENTAL**	L.S.	20 % of Items 1-2	N/A	$272,000
11	**LANDSCAPING**	L.S.	10 % of Items 1-2	N/A	$136,000
12	**BICYCLE FACILITIES**	L.S.	2 % of Items 1-2	N/A	$28,000
13	**TRAFFIC SIGNALS**	E.A.	0	$200,000	$0
TOTAL ROADWAY ITEMS COST (Items 1-13)					**$2,900,000**
14	**RETAINING WALL**				
	MSE	sq. ft	0	$133.00	$0
	Caltrans Standard Ret Wall (Spread Footing)	LF	6,795	$750.00	$5,097,000
				Subtotal Retaining Wall	$5,097,000
15	**RETAINING WALL INCIDENTALS**	L.S.	15 % of Retaining Wall	N/A	$765,000
TOTAL RETAINING WALL COSTS (Items 14-15)					**$5,862,000**
TOTAL ROADWAY & RETAINING WALL COSTS (Items 1-15)					**$8,762,000**
16	**STRUCTURES**				
	Bridge Removal	sq. ft		$27.00	$0
	New Bridge	sq. ft		$212.00	$0
	Rehabilitation	sq. ft		$106.00	$0
	Bridge Widening	sq. ft		$212.00	$0
				Subtotal Structure Costs	$0
17	**STRUCTURAL INCIDENTAL**	L.S.	15 % of Structures	N/A	$0
TOTAL STRUCTURE COSTS (Items 16-17)					**$0**
18	**RAILROAD RELOCATION**	MILE	0	$2,000,000.00	$0
19	**CONTINGENCY**	L.S.	35 % of items 1-18	N/A	$ 3,067,000
TOTAL CONSTRUCTION COSTS (Items 1-19)					**$11,829,000**
20	**ENGINEERING**				
	Preliminary Design & PSE	L.S.	12 % Items 1-19	N/A	$1,420,000
	Environmental Mitigation	L.S.	10 % Items 1-19	N/A	$1,183,000
	Final Engineering	L.S.	10 % Items 1-19	N/A	$1,183,000
TOTAL ENGINEERING COSTS					**$3,786,000**
TOTAL PROJECT COST					**$ 15,700,000**

Aircraft road widening and connection with Owens Ave
New access to McClellan-Palomar airport terminal from Owens Ave
Preliminary Design - Cost Opinion Summary

2010 Dollars

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	**PAVEMENT REMOVAL**	sq.yd	10,300		$7.63	$79,000
2	**PAVEMENT**					
	Mainline	sq.yd			$177.00	$0
	Ramp	sq.yd			$53.0	$0
	Arterial	sq.yd	13,000		$37.0	$481,000
					Subtotal Pavement Costs	$560,000
3	**EARTHWORK**	L.S.	12	% of Items 1-2	N/A	$68,000
4	**DRAINAGE**	L.S.	15	% of Items 1-2	N/A	$84,000
5	**EROSION CONTROL**	L.S.	2	% of Items 1-2	N/A	$12,000
6	**TRAFFIC CONTROL**	L.S.	25	% of Items 1-2	N/A	$140,000
7	**LIGHTING**	L.S.	6	% of Items 1-2	N/A	$34,000
8	**SIGNING/MARKINGS**	L.S.	6	% of Items 1-2	N/A	$34,000
9	**TYPICAL UTILITIES**	L.S.	15	% of Items 1-2	N/A	$84,000
10	**INCIDENTAL**	L.S.	20	% of Items 1-2	N/A	$112,000
11	**LANDSCAPING**	L.S.	10	% of Items 1-2	N/A	$56,000
12	**BICYCLE FACILITIES**	L.S.	2	% of Items 1-2	N/A	$12,000
13	**TRAFFIC SIGNALS**	E.A.	1		$200,000	$200,000
TOTAL ROADWAY ITEMS COST (Items 1-13)						**$1,396,000**
14	**RETAINING WALL**					
	MSE	sq. ft	0		$133.00	$0
	Caltrans Standard Ret Wall (Spread Footing)	LF	560		$750.00	$420,000
					Subtotal Retaining Wall	$420,000
15	**RETAINING WALL INCIDENTALS**	L.S.	15	% of Retaining Wall	N/A	$63,000
TOTAL RETAINING WALL COSTS (Items 14-15)						**$483,000**
TOTAL ROADWAY & RETAINING WALLCOSTS (Items 1-15)						**$1,879,000**
16	**STRUCTURES**					
	Bus Shelter	E.A.	1		$50,000.00	$50,000
	New Bridge	sq. ft			$212.00	$0
	Bridge Rehabilitation	sq. ft			$106.00	$0
	Bridge Widening	sq. ft			$212.00	$0
					Subtotal Structure Costs	$50,000
17	**STRUCTURAL INCIDENTAL**	L.S.	15	% of Structures	N/A	$8,000
TOTAL STRUCTURE COSTS (Items 16-17)						**$58,000**
18	**RAILROAD RELOCATION**	MILE			$2,000,000.00	$0
19	**CONTINGENCY**	L.S.	35	% of items 1-18	N/A	$ 678,000
TOTAL CONSTRUCTION COSTS (Items 1-19)						**$2,615,000**
20	**ENGINEERING**					
	Preliminary Design & PSE	L.S.	12	% Items 1-19	N/A	$314,000
	Environmental Mitigation	L.S.	10	% Items 1-19	N/A	$262,000
	Final Engineering	L.S.	10	% Items 1-19	N/A	$262,000
TOTAL ENGINEERING COSTS						**$838,000**
TOTAL PROJECT COST						**$ 3,500,000**

Gillespie Field
New Trolley Station and Parking
Preliminary Design - Cost Opinion Summary

2010 Dollars

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	**PAVEMENT REMOVAL**	sq.yd		10,100	$7.63	$78,000
2	**PAVEMENT**					
	Mainline	sq.yd			$177.00	$0
	Ramp	sq.yd			$53.0	$0
	Arterial	sq.yd		9400	$37.0	$348,000
					Subtotal Pavement Costs	$426,000
3	**EARTHWORK**	L.S.	12	% of Items 1-2	N/A	$52,000
4	**DRAINAGE**	L.S.	15	% of Items 1-2	N/A	$64,000
5	**EROSION CONTROL**	L.S.	2	% of Items 1-2	N/A	$9,000
6	**TRAFFIC CONTROL**	L.S.	25	% of Items 1-2	N/A	$107,000
7	**LIGHTING**	L.S.	6	% of Items 1-2	N/A	$26,000
8	**SIGNING/MARKINGS**	L.S.	6	% of Items 1-2	N/A	$26,000
9	**TYPICAL UTILITIES**	L.S.	15	% of Items 1-2	N/A	$64,000
10	**INCIDENTAL**	L.S.	20	% of Items 1-2	N/A	$86,000
11	**LANDSCAPING**	L.S.	10	% of Items 1-2	N/A	$43,000
12	**BICYCLE FACILITIES**	L.S.	2	% of Items 1-2	N/A	$9,000
13	**TRAFFIC SIGNALS**	E.A.	1		$200,000	$200,000
TOTAL ROADWAY ITEMS COST (Items 1-13)						**$1,112,000**
14	**RETAINING WALL**					
	MSE	sq. ft			$133.00	$0
	Tangent Pile	sq. ft			$239.00	$0
					Subtotal Retaining Wall	$0
15	**RETAINING WALL INCIDENTALS**	L.S.	15	% of Retaining Wall	N/A	$0
TOTAL RETAINING WALL COSTS (Items 14-15)						**$0**
TOTAL ROADWAY & RETAINING WALL COSTS (Items 1-15)						**$1,112,000**
16	**STRUCTURES**					
	Bridge Removal	sq. ft			$27.00	$0
	New Bridge	sq. ft		1,722	$223.00	$385,000
	Rehabilitation	sq. ft			$106.00	$0
	Bridge Widening	sq. ft			$212.00	$0
					Subtotal Structure Costs	$385,000
17	**STRUCTURAL INCIDENTAL**	L.S.	15	% of Structures	N/A	$58,000
TOTAL STRUCTURE COSTS (Items 16-17)						**$443,000**
18	**RAILROAD RELOCATION**	MILE		0	$2,120,000.00	$0
19	**NEW TROLLEY STATION**	LS	0	1	$2,000,000.00	$2,000,000
20	**CONTINGENCY**	L.S.	35%	% of items 1-18	N/A	$ 1,245,000
TOTAL CONSTRUCTION COSTS (Items 1-19)						**$4,800,000**
21	**ENGINEERING**					
	Preliminary Design & PSE	L.S.	12	% Items 1-19	N/A	$576,000
	Environmental Mitigation	L.S.	10	% Items 1-19	N/A	$480,000
	Final Engineering	L.S.	10	% Items 1-19	N/A	$480,000
TOTAL ENGINEERING COSTS						**$1,536,000**
TOTAL PROJECT COST						**$ 6,400,000**

Gillespie Field
BRT along Marshall Ave
Preliminary Design - Cost Opinion Summary

2010 Dollars

ITEM	ITEM DESCRIPTION	UNIT	QUANTITY		UNIT PRICE	TOTAL
1	**PAVEMENT REMOVAL**	sq.yd		200	$7.63	$2,000
2	**PAVEMENT**					
	Mainline	sq.yd			$177.00	$0
	Ramp	sq.yd			$53.0	$0
	Arterial	sq.yd		700	$37.0	$26,000
					Subtotal Pavement Costs	$28,000
3	**EARTHWORK**	L.S.	12	% of Items 1-2	N/A	$4,000
4	**DRAINAGE**	L.S.	15	% of Items 1-2	N/A	$5,000
5	**EROSION CONTROL**	L.S.	2	% of Items 1-2	N/A	$1,000
6	**TRAFFIC CONTROL**	L.S.	25	% of Items 1-2	N/A	$7,000
7	**LIGHTING**	L.S.	6	% of Items 1-2	N/A	$2,000
8	**SIGNING/MARKINGS**	L.S.	6	% of Items 1-2	N/A	$2,000
9	**TYPICAL UTILITIES**	L.S.	15	% of Items 1-2	N/A	$5,000
10	**INCIDENTAL**	L.S.	20	% of Items 1-2	N/A	$6,000
11	**LANDSCAPING**	L.S.	10	% of Items 1-2	N/A	$3,000
12	**BICYCLE FACILITIES**	L.S.	2	% of Items 1-2	N/A	$1,000
13	**TRAFFIC SIGNALS**	E.A.	1		$200,000	$200,000
TOTAL ROADWAY ITEMS COST (Items 1-13)						**$264,000**
14	**RETAINING WALL**					
	MSE	sq. ft			$133.00	$0
	Tangent Pile	sq. ft			$239.00	$0
					Subtotal Retaining Wall	$0
15	**RETAINING WALL INCIDENTALS**	L.S.	15	% of Retaining Wall	N/A	$0
TOTAL RETAINING WALL COSTS (Items 14-15)						**$0**
TOTAL ROADWAY & RETAINING WALL COSTS (Items 1-15)						**$264,000**
16	**STRUCTURES**					
	Bridge Removal	sq. ft			$27.00	$0
	New Bridge	sq. ft		0	$212.00	$0
	Rehabilitation	sq. ft		0	$106.00	$0
	Bus Shelters	E.A.		2	$25,000.00	$50,000
					Subtotal Structure Costs	$50,000
17	**STRUCTURAL INCIDENTAL**	L.S.	15	% of Structures	N/A	$8,000
TOTAL STRUCTURE COSTS (Items 16-17)						**$58,000**
18	**RAILROAD RELOCATION**	MILE		0	$2,120,000.00	$0
19	**NEW TROLLEY STATION**	LS	0	0	$2,000,000.00	$0
20	**CONTINGENCY**	L.S.	35%	% of items 1-18	N/A	112700
TOTAL CONSTRUCTION COSTS (Items 1-19)						**$434,700**
21	**ENGINEERING**					
	Preliminary Design & PSE	L.S.	12	% Items 1-19	N/A	$53,000
	Environmental Mitigation	L.S.	10	% Items 1-19	N/A	$44,000
	Final Engineering	L.S.	10	% Items 1-19	N/A	$44,000
TOTAL ENGINEERING COSTS						**$141,000**
	TOTAL PROJECT COST					**$ 600,000**

AMAP Estimated Express Bus Service Costs (2011 Dollars)

San Diego International Airport Express Bus Service

Routes	Distance	Average Travel Time	Bus Hours of Operation		Trips Per Day (One-Way)	Operating Cost (Per Mile)	Bus Operating Cost (Per Year)	Number of Buses	Bus Purchase Price (EA)	Initial Bus Capital Cost[1]
I-5 - McClellan-Palomar and SR 56/Manchester Park-n-Ride	33	62	3:50 AM	1:40 AM	80	$5.66	**$5,500,000**	7	$800,000	**$7,560,000**
I-15 - Escondido and Mira Mesa Transit Stations	32	60	3:00 AM	2:00 AM	80	$5.66	**$5,300,000**	7	$800,000	**$7,560,000**
Cross Border Facility	23	39	3:50 AM	1:40 AM	80	$5.66	**$3,900,000**	5	$800,000	**$5,400,000**

1. Includes 35% contingency.

Cross Border Facility Express Bus Service

Routes	Distance	Average Travel Time	Bus Hours of Operation	Trips Per Day (One-Way)	Operating Cost (Per Mile)	Bus Operating Cost (Per Year)	Number of Buses	Bus Purchase Price (EA)	Initial Bus Capital Cost[1]
I-15 Route - Escondido and Mira Mesa Transit Stations	47	86	24 Hour Service	88	$5.66	**$8,600,000**	8	$800,000	**$8,640,000**
H Street Trolley Station	12	21	24 Hour Service	88	$5.66	**$2,200,000**	4	$800,000	**$4,320,000**

1. Includes 35% contingency.

AMAP Estimated Bus Route Modification Costs

Modification of Proposed Bus Route 445 and 661 Estimated Operational Costs

Routes	Additional Distance	Average Travel Time	Peak Hour Trips (6-9AM and 3-6PM)	Off-Peak Hour Trips (9AM-3PM and 6-10PM)	Nighttime Trips (10PM-6AM)	Total Trips Per Day (one-way)	Operating Cost (Per Mile)	Bus Operating Cost (Per Year)
Modification of Route 445	1	7	36	20	0	56	$5.60	**$120,000**
Modification of Proposed RTP Route 661	0.25	3	72	40	32	144	$5.60	**$80,000**