Alternative Scenarios
Regional Aviation Strategic Plan

Airport Advisory Committee
RASP Subcommittee

March 18, 2010
Meeting Agenda

1. Project Overview
2. Baseline Scenario
3. Alternative Scenarios
   - Commercial Passenger Optimization
   - California High Speed Rail
   - Tijuana Enhancements
   - Air Cargo and GA Optimization
5. Supplemental Information

Note: Model calibration is ongoing therefore the technical work contained herein remains a preliminary work in progress
Projects Overview

3-Phase Work Plan Culminating in 2011

Phase I
Data Gathering and Model Development
March – Dec 2009

Phase 2
Evaluation of Concepts and Strategies
Fall 2009 – Spring 2010

Phase 3
Regional Aviation Strategic Plan
Spring 2010 – Winter 2011

Stakeholder and public outreach
Task-specific documentation and deliverables

The RASP is on schedule for completion in 2011
2010 Schedule and Work Plan

New Board Standing Committee May Result in Schedule Changes

2010

- Model Calibration
- Scenario Details
- Scenario Evaluation (Model)
- Implementation Factors
- Compile Findings
- Draft RASP
- Final Report

- Board Standing Committee Meeting
- RASP Subcommittee Meeting
- Public Workshop
- Project Phase 2
- Project Phase 3

Regional Aviation Strategic Plan • RASP Subcommittee
Revised Draft • March 18, 2010
Project Study Area

12 Public Use Airports Located in a Densely Populated and Developed Region

Notes: Tijuana Int. Airport not located in San Diego County. Military facilities are excluded from the RASP.
Baseline Scenario
Baseline Scenario – Regional Perspective

Capacity Constraints Will Result in Multiple “Reactions” Over the Long-term

A. Airfield facility constraints “cap” activity at SDIA sometime near 2030 at around 28M annual passengers

B. Federally-mandated slot controls at SDIA result in higher fares, some larger aircraft, and higher load factors

C. Accommodation of some San Diego demand at LA region airports

D. Accommodation of some regional demand at Tijuana International Airport; increased bus service and volumes

E. Increased but restricted commercial service at McClellan-Palomar; continued <30 seat turboprops due to constrained runway length
Baseline Scenario – Specific Projects

Current SDIA Policies and Planned Near-term Improvements Will Be Considered

- Accommodation of existing user groups – commercial, cargo, corporate GA
- Continued nighttime departure curfew
- Includes T-2 West 10 gate addition in 2013 (ongoing)
- Includes Destination Lindbergh “Opening Day” recommendations for North Side
  - Intermodal Transit Center (ITC) sized to accommodate 400-600K annual transit passengers
  - Linkage to trolleys (Blue and Orange lines), Coaster/Amtrak, and MTS
  - Consolidated rental car facility and ground transportation plaza
  - Dedicated on-airport roadway connecting ITC and south side terminals via dedicated buses
- Assumes no new access roadway improvements or freeway ramps

- Assumes 2015 transit ridership goal 6% of Airport passengers (SANDAG assumption)
- No new access roadway improvements or freeway ramps provided
- Cost estimate approximately $535M (per Destination Lindbergh report)
- Additional factors being evaluated
  - Funding sources to be identified with SDCRAA staff input
  - Implementation schedule around 2015; to be refined with SDCRAA staff input
  - SANDAG input
  - Operating environment of LA region airports and Tijuana; specifically, political and physical capacity constraints and planned and approved projects

Current SDIA Policies and Planned Near-term Improvements Will Be Considered
Alternative Scenarios
Summary of Alternative Scenarios

Thirteen Alternative Scenarios for Evaluation of Potential System Changes

1. Commercial Passenger Optimization
   A. Full Build-out of the Intermodal Transit Center at SDIA
   B. Reserve SDIA airfield capacity for commercial passenger service
   C. Enhance commercial passenger service at McClellan-Palomar Airport
   D. Introduce commercial passenger service at Brown Field

2. Enhanced Utilization of Tijuana
   A. Tijuana International Airport focus on commercial service
   B. Tijuana International Airport border processing facility
   C. Cross border airport terminal

3. California High Speed Rail
   Stations in downtown LA, Ontario Airport with:
   A. Station at SDIA
   B. Station in downtown San Diego
   C. Stations at SDIA and downtown San Diego

4. Air Cargo and GA Optimization
   A. Enhance McClellan-Palomar Airport for high-end / corporate GA
   B. Enhance Brown Field for high-end / corporate GA
   C. Introduce cargo service at Brown Field
1. Commercial Passenger Optimization Scenarios

A. Full Build-out of Intermodal Transit Center (ITC) at SDIA

- ITC expanded to accommodate 1.2 - 1.8M passengers
- ITC includes passenger processing facilities including ticketing, baggage claim, and security screening
- Additional improvements to improve access and alleviate congestion
- Automated People Mover (APM) connecting north ITC and south concourses
- Assumes transit ridership goal 10% of Airport passengers (SANDAG assumption)

- Cost estimate approximately $184M (per Destination Lindbergh report)
- Additional factors being evaluated
  - Additional improvements to address access and congestion
  - Funding sources to be identified with SDCRAA staff input
  - Implementation schedule around 2030; to be refined with SDCRAA staff input
  - SANDAG input
1. Commercial Passenger Optimization Scenarios

B. Preserve SDIA Airfield Capacity for Commercial Passenger Service

Encourage non-commercial and GA to use alternative facilities (where available) – not all activities can be relocated

Approximately 22,500 annual turboprop operations (primarily to LAX)

Implementation via rate-setting, lease holds, and other Authority policies

Requires SDIA-similar and/or higher level of service at surrounding airports

- Gillespie: Additional corporate facilities (El Cajon development) required
- Montgomery: New hangars, FBO, etc. required
- Brown: Elements of currently planned private development, including new FBO(s) required
- Various airfield improvements, approach, and utility upgrades necessary

- New FBO development around $25M
- Funding provided primarily from private development sources, although certain airfield improvements could be eligible for federal AIP grants
- User support and proximity to downtown are key criteria to success
- Scenario could be subject to legal scrutiny based on perceived FAA access requirements

SDCRAA Board suggestion to consider additional alternative to de-incentivize commuter aircraft operations at SDIA; this scenario will be considered in conjunction with Scenarios 1C and 1D
1. Commercial Passenger Optimization Scenarios

C. Enhance Commercial Passenger Service at McClellan-Palomar Airport

- Provide facilities for multi-carrier commercial regional jet service to destinations within 1,500 miles of San Diego
- Requires the following for implementation:
  - 1,000-foot runway extension to a total length of 6,000 feet
  - Max expansion of terminal facilities to accommodate about 1.35M annual passengers
  - Full build-out of multi-level parking garage
- Facilitation enhanced via lease incentives and pricing strategies, etc.
- Fleet would be restricted to regional jets; mainline jets (e.g., B-737s) could not be accommodated
- Implementation around 2020, but would require extensive environmental review and approvals
- Incumbent SDIA Airlines unlikely to support split operation between SDIA and CRQ
- Potential funding a combination of federal AIP grants, PFCs, airline fees, general revenue bonds
- Cost estimates in preparation
1. Commercial Passenger Optimization Scenarios

D. Introduce Commercial Passenger Service at Brown Field

- Provide facilities for multi-carrier commercial jet service to destinations within 1,500 miles of San Diego

- Requires the following
  - Runway reconstruction or overlay (for strength)
  - New terminal building
  - Access/entrance roadway improvements
  - New parking facilities
  - Facilities for FAR Part 139 certification (security fencing, fire fighting facilities, etc.)

- Facilitation enhanced via lease incentives and pricing strategies, etc.

- Fleet would be unrestricted, but most likely regional jet service

- Funding sources most likely a combination of AIP and private funds; use of AIP would require airline approvals

- Additional factors being evaluated
  - Implementation timing around 2020, including time for significant environmental review
  - Cost estimates

- Potential constraints to implementation
  - Airline support for a split operations between SDIA and Brown Field unlikely
  - Limited runway instrument approach capability significantly affects viability (i.e. no ILS)
  - Viability also diminished given close proximity to two existing commercial service airports (SDIA and Tijuana International)
  - Potential airspace conflict with Tijuana International
2. California High Speed Rail Scenarios

Three Alternatives Depending on Location of San Diego Station

Stations in Downtown LA and Ontario Airport with station at:

A. San Diego International Airport
   – Potentially enlarges catchment area for both Ontario and SDIA
   – May cause SDIA to reach capacity sooner

B. Downtown San Diego
   – May encourage outbound traffic to Ontario
   – May encourage SDIA capacity constraint

C. SDIA and Downtown San Diego
   – Potentially enlarges catchment area for both Ontario and SDIA
   – May cause SDIA to reach capacity sooner
2. California High Speed Rail Scenarios

Timing, Costs, and Demand Impacts Vary Depending on Station Location

Station Downtown San Diego

- HSR station in downtown San Diego would require “connectivity” to SDIA with direct access to north side ITC (Baseline project)
- Location and requirements for bus or trolley connection/station being evaluated
- Funding sources may include federal HSR funds
- Implementation timing around 2025-2030 to coincide with timing of California HSR concept
- Cost estimates for bus and trolley connections being prepared

Station at SDIA

- HSR station would have to connect to north side of SDIA, near the ITC (Baseline project)
- Funding sources may include federal HSR funds and possibly PFC funds
- Implementation around 2025-2030 to coincide with timing of California HSR concept
- Cost estimates being prepared

The project team will also examine the possible double-tracking of the Coaster line and the recent award of money to increase speeds on the San Diego to Los Angeles portion of the route.
Federal Funding Update – High-Speed Rail Grants (January 2010)

American Recovery and Reinvestment of 2009 (ARRA)

- $7.9B awarded nationally; $2.34B (or 30%) for California
  - $2.25B for Phase I of statewide HSR plan (construction, planning, and environmental)
  - $93M to improve existing Pacific Surfliner Corridor; project will enable increase of speeds to 110 mph between San Diego (including SAN) and Los Angeles
  - Los Angeles–Ontario–San Diego corridor part of Phase II and did not receive funding in this cycle
- FY 2010 to be awarded by September 2010; $2.5B funding level for HSR grants
- FY 2011 proposed budget awaits congressional consideration; $1.0B for HSR grants
- Supporters expected to press Congress for additional funding
3. Tijuana Enhancement Scenarios

A. TIJ / Grupo Aeroportuario del Pacifico Focus on Commercial Service

- Maximize Tijuana International Airport for commercial passenger activity
- No capacity increases, but focused facility construction to include:
  - Terminal upgrades to meet international (IATA) level of service standards
  - Additional automobile parking
  - Bus terminal
- Improved border access and crossings (*Project Smart Border 2010*); does not include cross-border facility for U.S. passengers (see Scenario 3.B)
- Increased shuttle and bus service from LA, San Diego, and border crossings
- Potential increases in air service to Mexican and international markets
- Funding sources may include a combination of airline fees, federal CBP, and private developers
- Cost estimates being prepared
3. Tijuana Enhancement Scenarios

B. New Aviation Passenger Cross-Border Facility

- Cross-border facility offering U.S. passengers access to Tijuana International Airport
- Includes vehicle parking; customs/border control; and landside “connection” or bridge to TIJ
- Exclusive use for ticketed passengers traveling in or out of Tijuana International Airport; ticketing, security screening and baggage handling on Mexican side in the existing terminal
- Similar to a pedestrian port of entry
- Funding likely from private sources
- Additional factors being evaluated
  - Implementation timing could be as early as 2011; environmental approvals and Presidential Permit pending
  - Cost estimates in preparation
3. Tijuana Enhancement Scenarios

C. New Cross-Border Airport Terminal

- U.S. domestic passenger terminal on the U.S. side of the border with arriving and departing passengers using TIJ
- Terminal use by passengers flying to and from U.S. airports and as a pedestrian port of entry for passengers traveling internationally
- Includes parking and redundant Mexican/U.S. facilities (ticketing, security screening, baggage handling, and customs border control, etc.)
- Airport level of service standards would be provided
- Potential funding sources may include private development, federal grants, airline fees
- Cost estimates being prepared

Geneva International Airport lying on the border between Switzerland and France. Passengers may use the cross-border terminal from either nation.
4. Air Cargo and General Aviation Optimization Scenarios

A & B. Enhance McClellan-Palomar and/or Brown Field for High-end / Corporate GA

A. McClellan-Palomar Airport

- Build-out for corporate GA; no additional passenger facilities provided
- Assumes airport operator (County of San Diego) would no longer accommodate commercial passenger activity; existing terminal would be converted to high-end FBO facility
- Require 1,000-foot runway extension to accommodate full-range of high-end GA aircraft
- Facilitated via leasing and pricing strategies; may also require “coordinated” FBO policy with SDCRAA and City of San Diego
- Funding sources likely private developers and user fees
- Additional factors being evaluated
  - Implementation timing potentially around 2015; would require environmental approvals for runway extension
  - Cost estimates in preparation

B. Brown Field

- Construct new and build-out existing facilities exclusively for corporate GA
- Existing runway length is adequate, but may require runway reconstruction for strength
- Facilitated via leasing and pricing strategies; may also require “coordinated” FBO policy with SDCRAA and San Diego County
- Funding sources likely private developers and user fees
- Additional factors being evaluated
  - Implementation timing potentially between 2015-2020; some planning already underway; would require environmental approvals for some projects
  - Cost estimates in preparation
4. Air Cargo and General Aviation Optimization Scenarios

C. Enhance Gillespie Field for Mix-use General Aviation

- Maximum build-out of facilities to support corporate and recreational GA activity
- Assumes implementation of “El Cajon Plaza” a planned 70-acre development including indoor storage hangars and tie-down space
- Facilitated via leasing and pricing strategies; may require “coordinated” FBO policy with SDCRAA and San Diego County
- Primary funding sources include private developers and user fees; some local funding possible; some airfield projects may be eligible for federal AIP grants
- Additional factors being evaluated
  - Implementation timing between 2015-2020; some planning underway; environmental approval needed for various projects
  - Cost estimates in preparation

- Potential implementation “momentum”
  - Orange and Green Trolley lines stop at Gillespie Field providing public transportation between the Airport and downtown San Diego
  - Parallel runways allow segregation of training operations from itinerant operations
  - Completion of CA 52 extension and interchange with CA 67 would improve accessibility
4. Air Cargo and General Aviation Scenarios

D. Introduce Cargo Service at Brown Field

- Construction of facilities at Brown Field to accommodate cargo service

- Requires the following
  - Runway reconstruction and strengthening to support cargo aircraft
  - Facilities for FAR Part 139 certification (security fencing, fire fighting facilities, etc.)
  - Enhanced access roadways and vehicle staging / parking areas
  - Warehouse, storage, and sort facilities

- Facilitated via incentives and pricing strategies

- Funding sources would include combination of federal AIP grants, user fees, and private investment

- Additional factors being evaluated
  - Implementation timing between 2015-2020; requires environmental approvals for various projects
  - Costs estimates in preparation

- Potential constraints to implementation
  - Cargo carriers unwilling to operate from facilities south of SDIA due to increases in delivery times
  - Majority of cargo at SDIA is accommodated on integrated / express carriers (90%) and originates or is destined for downtown San Diego; SDIA is the ideal geographic location
  - Limited runway instrument approach capability significantly affects viability
  - Lack of nearby cargo infrastructure (e.g., freight forwarders)
  - Significant local public and political opposition anticipated
  - AIP funding predicated on airline agreements
GAO advocates Regional Aviation System Plans

GAO uses FACT-2 process (2007), which states
- SDIA will be severely congested by 2025 (with improvements identified by SDIA in 2007)

GAO believes the regional plans should examine
- Capacity sharing among the airports
- Role of surface transportation as a regional connector of airports
- Role of HSR in accommodating short-haul traffic
- “Demand management” strategies that include changes in pricing and other optimization measures

SDCRAA has indicated that RASP will be used, along with other planning processes, to guide future development and policies

FAA is currently beginning the FACT-3 process

FACT-3 will devote greater attention to HSR issue given the recent increases in federal investment (Consultant team is tracking the development of the process)
Supplemental Information
## Baseline Facilities and Operations Data

### Regional Forecast Facility Improvement and Operational Assumptions

Baseline Scenario assumes construction of nine new or expanded airport activity groups in 2010. Continued development of existing and new airport activity groups will contribute to an increase in airport operations. High Scenarios assume significant increases in airport activity groups in 2010, with the potential for 79 additional bed slots.

### Airport Activity Statistics

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<th>Airport</th>
<th>Oceanside Municipal</th>
<th>Fallbrook Community</th>
<th>Borrego Valley</th>
<th>Cuyamata</th>
<th>Aqua Caliente</th>
<th>Jacumba</th>
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<td><strong>Historical 2007</strong></td>
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<td>36,500</td>
<td>35,200</td>
<td>2,320</td>
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<td><strong>Forecast 2020</strong></td>
<td>179,200</td>
<td>59,900</td>
<td>53,200</td>
<td>2,400</td>
<td>4,000</td>
<td>4,000</td>
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### Remarks

- **Notes:**
  - HPWA = Regional Plan of Integrated Airport Systems
  - N/A = Not Applicable
Strategic Assessment Findings

Airports That Should be Considered For Additional Uses/Opportunities

Note: Tijuana International Airport not located in San Diego County.
Strategic Assessment Findings

Airports That May Be Considered For Additional Uses/Opportunities

- Montgomery Field
- San Diego International Airport
- Ramona Airport
- Tijuana International Airport

Proximity to existing facilities, projected population growth, and planned roadway improvements; potential environmental constraints may restrict development.

Destination Lindbergh established that SAN will reach capacity before 2030.

Proximity to population base and existing infrastructure; intergovernmental agreement required for cross border operation.

Note: Tijuana International Airport not located in San Diego County.
Strategic Assessment Findings

Airports That Should Not be Considered For Additional Uses/Opportunities

Note: Tijuana International Airport not located in San Diego County.