Alternative A8 – PAL 2

Traffic Analysis

Level Of Service
Street Segments:
- LOS A, B & C
- LOS D
- LOS E & F

AADT
Average Annual Daily Traffic
- 1,000
- 10,000
- 50,000
- 100,000

SAN DIEGO INTERNATIONAL AIRPORT
## Traffic Analysis Results (1 of 2)

### Key:
- LOA A, B, C = 1, LOS D = 2,
- LOS E = 3, LOS F = 4

### Harbor Drive
- LOS F for A3 and without project
- Improves to acceptable LOS with A2 and B1 (from F to C)
- Slight improvement but still unacceptable LOS with A8 (from F to E)

### Grape Street
- LOS F on all segments without project
- Harbor/Pacific segment improves to acceptable LOS with A8 (from F to C)
- Pacific/Kettner and Kettner/I-5 segments remain LOS F with all alternatives

### Hawthorn Street
- LOS F on all segments without project
- Harbor/Pacific segment improves to acceptable LOS with A8 (from F to C)
- Pacific/Kettner and Kettner/I-5 segments remain LOS F with all alternatives

### Laurel Street
- Unacceptable LOS on all segments without project
- Harbor/Pacific segment improves to LOS A under all alternatives
- Pacific/Kettner segment improves but remains at unacceptable LOS under all alternatives
- Kettner/I-5 segment improves to LOS C under all alternatives

<table>
<thead>
<tr>
<th>TRAFFIC SEGMENTS</th>
<th>A2</th>
<th>A3</th>
<th>A8</th>
<th>B1</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Harbor Drive</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rental Car Rd / Laurel</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Grape Street</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harbor / Pacific</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pacific / Kettner</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Kettner / I-5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Hawthorn Street</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harbor / Pacific</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Pacific / Kettner</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Kettner / I-5</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Laurel Street</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Harbor / Pacific</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Pacific / Kettner</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Kettner / I-5</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Subtotal</td>
<td>22</td>
<td>27</td>
<td>23</td>
<td>22</td>
</tr>
</tbody>
</table>
### Traffic Analysis Results (2 of 2)

**TRAFFIC SEGMENTS** | A2 | A3 | A8 | B1 |
--- | --- | --- | --- | --- |
Pacific Highway | | | | |
  Washington / Sassafras | 1 | 1 | 1 | 1 |
  Sassafras / Palm | 1 | 1 | 1 | 1 |
  Palm / Laurel | 1 | 1 | 1 | 1 |
  Laurel / Hawthorn | 1 | 1 | 1 | 1 |
  Hawthorn / Grape | 1 | 1 | 1 | 1 |
India Street | | | | |
  Laurel / Palm | 4 | 4 | 4 | 4 |
  Palm / Sassafras | 4 | 4 | 4 | 4 |
  Sassafras / Washington | 4 | 4 | 4 | 4 |
Rosecrans | | | | |
  Barnett / Sport Arena | 1 | 2 | 2 | 1 |
  Quimby / Barnett | 2 | 2 | 2 | 2 |
  Nimitz / Quimby | 2 | 2 | 2 | 2 |
Subtotal | 22 | 22 | 23 | 22 |
TOTAL | 44 | 49 | 46 | 44 |

**OVERALL RANKING** | 1 | 4 | 3 | 1 |

**Key:**
LOA A, B, C = 1, LOS D = 2, LOS E = 3, LOS F = 4

- **Pacific Highway**
  - LOS acceptable for all segments with or without project
  - Slightly higher use with A2, A3 and B1
  - Slight improvement to LOS with A8 on select segments

- **India Street**
  - LOS F on all segments with or without project

- **Rosecrans**
  - LOS unacceptable on all segments without project
  - Barnett/Sport Arena segment improves to acceptable LOS with A2 and B1; remains unacceptable LOS with A3 and A8
  - Quimby/Barnett segment remains at unacceptable LOS with all alternatives
  - Nimitz/Quimby segment improves slightly with all alternatives but remains at unacceptable LOS (from E to D in all cases)
Relationship of Goals and Objectives to the Alternatives Evaluation

- Goals and objectives
- Quantitative criteria
- Qualitative criteria
Process – Evaluation of Alternatives

**Goals & Objectives**

1. Improve access and parking
2. Develop intermodal facility regional connectivity
3. Develop efficient terminal facilities and user satisfaction
4. Develop best airfield configuration for horizon PAL
5. Incorporate environmental stewardship best practices
6. Develop a financially feasible plan
7. Provide social and economic benefits
8. Integrate airport facilities into fabric of community through urban design

**Screening Matrix**

<table>
<thead>
<tr>
<th>QUANTITATIVE SCORE</th>
<th>QUALITATIVE SCORE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Economic / Financial</td>
<td></td>
</tr>
<tr>
<td>2 Operational</td>
<td></td>
</tr>
<tr>
<td>3 Environmental</td>
<td></td>
</tr>
<tr>
<td>4 Social Responsibility</td>
<td></td>
</tr>
</tbody>
</table>

**Alternatives**

- Family A
- ITC
- Family B
The vision statement will be developed based on agreed-upon goals and objectives.

Preliminary goals and objectives are presented on the following slides for Policy Committee consideration.

- **Vision:**
  *concise focus of the airport, typically defining the role of the airport in the regional air network and development pattern*

- **Goals:**
  *specific statements expanding upon the vision statement to guide future airport development*

- **Objectives:**
  *under each goal, identify the specific items that would be important to achieve; objectives are measurable under either objective or subjective criteria*
Goals and Objectives (1 of 8)

Ground Transportation

- **Goal**
  - Improve access and parking

- **Objectives**
  - Provide direct access from I-5 to the Airport by auto
  - Reduce traffic on city streets in the Airport vicinity
  - Accommodate appropriate levels of airport and regional demand for long-term and short-term parking spaces to ensure sufficient user satisfaction

Applicable Screening Criteria

- **Economic**
  - Landside capital cost allowance

- **Operational**
  - Overall roads level of service
  - Vehicle miles traveled (VMT)
  - Competitive position of auto v. transit
  - Impacts to Interstate 5
  - Short-term parking
  - Long-term parking

- **Environmental**
  - Total emissions (based on VMT)

- **Social**
  - Land acquisition
  - Community controversy (includes overall roads LOS)
Goals and Objectives (2 of 8)

Intermodal Facility

- **Goal**
  - Develop intermodal facility regional connectivity

- **Objectives**
  - Increase transit ridership and provide ITC
  - Accommodate the parking requirements for both airport and transit passengers
  - Provide a land envelope necessary to accommodate the ITC

Applicable Screening Criteria

- **Economic**
  - Landside capital cost allowance

- **Operational**
  - Overall roads level of service
  - Vehicle miles traveled (VMT)
  - Competitive position of auto v. transit
  - Impacts to Interstate 5
  - Short-term parking
  - Long-term parking

- **Environmental**
  - Total emissions (based on VMT)

- **Social**
  - Land acquisition
  - Community controversy (includes overall roads LOS)
Goals and Objectives (3 of 8)

Passenger Terminal

Goal
• Develop efficient terminal facilities and user satisfaction

Objectives
• Ensure a positive passenger experience
• Maintain appropriate level of service throughout terminal
• Minimize walking distances

Applicable Screening Criteria

Economic
• Terminal capital cost allowance
• Support facilities capital cost allowance
• Operational costs
  • Baggage transport system
  • APM
  • Duplication of passenger processing functions

Operational
• Passenger experience
  • Complexity of phasing – duration
  • Complexity of phasing – passenger service
• Short-term / Long-term parking
• Average walking distance
• Complexity of baggage system
Goals and Objectives (4 of 8)

Airfield/Airspace

Goal

• Develop best airfield configuration

Objectives

• Provide the necessary flexibility to accommodate industry changes
• Minimize airfield and airspace congestion
• Develop airfield in accordance with FAA safety regulations

Applicable Screening Criteria

Economic

• Airside capital cost allowance

Operational

• Runway crossings

Environmental

• Impervious surface area

Social

• Enhance MCRD mission
• Land acquisition
• Community controversy (eliminated concept involving shifted runway)
Goals and Objectives (5 of 8)

Environment

Goal
• Incorporate environmental stewardship best practices

Objectives
• Mitigate noise on surrounding communities
• Reduce emissions through improved access
• Utilize sustainability solutions in all parts of the Airport

Applicable Screening Criteria

Economic
• Environmental mitigation costs

Operational
• Vehicle miles traveled (VMT)

Environmental
• Air quality emissions (total and concentration)
• Impervious surface area
• Hazardous materials
• Effect on T&E species
• Historic properties
• Aesthetics (view shed)

Social
• Community controversy
Goals and Objectives (6 of 8)

Financial

Goal

• Develop a financially feasible plan

Objectives

• Balance short-term, long-term and legacy benefits for new investments
• Maximize existing funding resources through appropriate facility planning
• Seek innovative funding methods and expand pool of potential funding sources

Applicable Screening Criteria

Economic

• Revenue evaluation
• Capital cost allowances
• Operational costs
  • APM
  • Baggage transport
  • Duplication of passenger processing functions
• Funding sources
• Environmental mitigation costs

Social

• Land acquisition
• Change in revenue to governmental entities
• Opportunities for off-airport land development
Greater San Diego County/ Southern California

Goal
- Provide social and economic benefits

Objectives
- Provide necessary air service to support and grow the regional economy
- Enhance surface transportation access to support the economy and quality of life of the region
- Improve the regional quality of life for visitors and residents
- Work with regional entities to provide opportunities for satellite development to strengthen regional economic development

Applicable Screening Criteria

Economic
- Capital cost allowances
- Revenue evaluation

Operational
- Overall roads level of service
- Vehicle miles traveled (VMT)
- Competitive position of auto v. transit

Environmental
- Air quality - total emissions
- Historic properties
- Aesthetics

Social
- Enhance MCRD mission
- Community controversy
- Change in revenue to governmental entities
- Opportunities for off-airport land development
Downtown, Convention Center, Adjacent Communities, and Cruise Terminal

- **Goal**
  - Integrate airport facilities into fabric of community through urban design

- **Objectives**
  - Ensure airport facilities fit within the context of plans for central San Diego
  - Recognize the importance of the scale relationships between airport facilities and surrounding communities
  - Integrate architectural building design and landscaping to soften the effects of airport facilities

---

**Applicable Screening Criteria**

- **Environmental**
  - Aesthetics

- **Social**
  - Enhance MCRD mission
  - Community controversy
  - Opportunities for off-airport land development
Evaluation Criteria

- **Quantitative criteria**
  - Goal to maximize quantitative criteria within all categories
  - Sought out quantifiable differences between alternatives
    - e.g. capital costs, walking distance

- **Qualitative criteria**
  - More
    - Aesthetics
    - Community controversy
    - Enhance MCRD mission
  - Subjectivity
  - Less
    - Environmental mitigation
    - Hazardous materials
    - T&E species
    - Historic properties
Enhance MCRD Mission

- Rankings assumed that acquisition of MCRD land would not enhance MCRD mission

- Rank 1 – A2, A3, A8
  - Because terminal concourse is located south of runway, there is no requirement for Taxiway C

- Rank 4 – B1
  - Taxiway C extension required, which requires approximately 27 acres of MCRD land (~330 feet setback from current property line)
Hazardous Materials

- **Rankings based on:**
  - **Extent of new development on known hazardous sites:**
    - Former General Dynamics Facility
    - Former Teledyne-Ryan Facility
    - Former Naval Training Center (NTC) Landfill
  - T2 West expansion on NTC landfill is common to all alternatives = non-discriminator
  - ITC complex development is common to all alternatives = non-discriminator

- **Rank 1 - A2 and A3**
  - 8 gates on the former Teledyne-Ryan site

- **Rank 3 - A8**
  - 12 gates on the former Teledyne-Ryan site

- **Rank 4 - B1**
  - 36 gates on the former General Dynamics site. Some of the support facilities will be on the former Teledyne-Ryan site
Threatened and Endangered Species

- **Rankings based on:**
  - Disturbance of the California Least tern nesting sites on the south east end of the airport, east of the former Teledyne-Ryan facility
  - **Rank 1 – B1**
    - no impacts to the nesting areas
  - **Rank 2 – A2**
    - shift of south side Taxiway B would affect the nesting areas
  - **Rank 3 – A3 and A8**
    - shift of south side Taxiway B would affect the nesting areas
    - gates/apron area would affect the nesting areas
Historic Properties

Rankings based on:

- Extent of new development on National Register of Historic Places (NRHP) sites:
  - ASIG Building (former United Airlines building)
  - Teledyne-Ryan historic district
  - Allied Aerospace building
- Impacts to Allied Aerospace and Teledyne-Ryan are common to all alternatives

- Rank 1 – B1
  - avoids the ASIG building
- Rank 2 – A2, A3 and A8
  - potentially requires the relocation of the ASIG building
Environmental mitigation cost ranking was based on a combination of other criteria:

- Hazardous materials
- Effect on T&E species
- Historic properties

<table>
<thead>
<tr>
<th>Hazardous materials</th>
<th>A2</th>
<th>A3</th>
<th>A8</th>
<th>B1</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Effect on T&amp;E species</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Historic properties</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Sum of rankings</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Potential controversy ranking</td>
<td>1</td>
<td>2</td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>
Aesthetics ranking was based on:

- Change in land uses visible from Mission Hills or North Harbor Drive
- Scale and extent of development in proximity to Mission Hills and North Harbor Drive.
- ITC complex is common to all alternatives = non-discriminator

**Rank 1 - A2 and A3**
- represent the least change in land use, maintaining terminal/concourse facility on the south side and support facilities on the north side. Facilities would be redeveloped over time.

**Rank 3 - A8**
- alters the view on the south side by placing terminal/concourse facility, parking garage and airport road closer to North Harbor Drive.

**Rank 4 - B1**
- changes the land uses on both the north and south sides. Future terminal/concourse facility would be closer to Mission Hills. Support facilities would be closer to North Harbor Drive.
Potential community controversy was based on a combination of other criteria:

- Concentration of emissions near residential areas
- Changes in aesthetics
- Local traffic impacts

<table>
<thead>
<tr>
<th></th>
<th>A2</th>
<th>A3</th>
<th>A8</th>
<th>B1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emissions concentration ranking</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>Aesthetics ranking</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Overall roads LOS ranking</td>
<td>1</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Sum of rankings</td>
<td>5</td>
<td>7</td>
<td>7</td>
<td>9</td>
</tr>
<tr>
<td>Potential controversy ranking</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
</tbody>
</table>
Revenue Evaluation

- Ranking not presented in November 8 workshop
- Potential for revenue was based on a combination of the following:
  - ITC complex (passenger flow)
  - Terminal core area (pre-security)
  - Contiguous gate area (post-security)

<table>
<thead>
<tr>
<th></th>
<th>A2</th>
<th>A3</th>
<th>A8</th>
<th>B1</th>
</tr>
</thead>
<tbody>
<tr>
<td>ITC complex</td>
<td>1</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Terminal core area</td>
<td>3</td>
<td>4</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Contiguous gate area</td>
<td>2</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Sum of rankings</td>
<td>6</td>
<td>11</td>
<td>6</td>
<td>5</td>
</tr>
<tr>
<td>Revenue potential ranking</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>
Conclusions and Next Steps

- Project schedule
- Next steps
## Schedule

<table>
<thead>
<tr>
<th>Task</th>
<th>2008 April</th>
<th>May</th>
<th>June</th>
<th>July</th>
<th>Aug</th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>2009 Jan</th>
<th>Feb</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Vision Structure</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Goal Setting/Community Input A</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Forecasting</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Context and Opportunities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Community Input B</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Intermodal Concept Development</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Preliminary Vision</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Community Input C</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Final Vision and Concept</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Legend
- **Project Task**
- **Meeting**
- **Report**

**Time now**
Next Steps

- Continue to refine alternatives analysis
- Prepare for December 11 Ad Hoc Policy Committee meeting
Thank You!

- Questions
- Comments
- Discussion
Appendix

- Supplemental traffic analysis
Traffic Changes Due to Alternatives

• North Harbor Drive
  • Alternatives A2 and B1 place all passenger processing on the north removing terminal traffic from North Harbor Drive
  • Alternative B1 would incur slightly greater traffic than Alternative A2 on North Harbor Drive due to relocation of cargo facilities; however both alternatives result in an acceptable LOS
  • Alternative A8 places all terminal traffic coming from I-5 and I-8 (66% of total terminal traffic) on an internal airport access roadway removing it from North Harbor Drive; however all local terminal traffic (34% of total terminal traffic) remains on North Harbor Drive; this results in an unacceptable LOS
  • Alternative A3 places passenger processing for 70% of the airline gates on the north; however, the remaining 30% of passengers would be processed in a southern terminal facility along North Harbor Drive resulting in an unacceptable LOS
Traffic Changes Due to Alternatives

Grape and Hawthorn Streets
- Alternatives A8, A2 and B1 move all terminal traffic arriving from I-5 and I-8 to direct freeway ramps
- Alternatives A2 and B1 funnel Grape and Hawthorn Street airport traffic to Pacific Highway to access passenger processing in the north (removing airport traffic from Kettner Boulevard and North Harbor Drive)
- Alternative B1 relocates cargo traffic arriving from I-5 south from Washington Street ramps to Grape and Hawthorn ramps to access southern cargo facilities
- Under Alternative A3, 30% of terminal traffic arriving from I-5 south continues to use Grape and Hawthorn Streets to reach southern terminal facilities

Laurel and India Streets
- Alternatives A2 and B1 move all terminal traffic arriving from I-5 and I-8 to direct freeway ramps reducing traffic along Laurel and India Streets
- Alternatives A3 and A8 maintain a portion of terminal traffic along Laurel to access southern facilities
  - 30% of terminal traffic in Alternative A3
  - 34% of terminal traffic (non-freeway traffic) in Alternative A8
- All Alternatives reduce traffic on India Street; however, LOS remains poor due to the overall volume of traffic
Traffic Changes Due to Alternatives

- **Pacific Highway**
  - Pacific Highway operates at an acceptable LOS C or better under all alternatives
  - Alternative A8 maintains passenger processing in the south and reduces traffic along Pacific Highway by developing an internal on-Airport roadway adjacent to Pacific Highway
  - Alternative A3 places passenger processing for 70% of the aircraft gates on the north and utilizes Pacific Highway for local traffic accessing these facilities
  - Alternatives A2 and B1 place all passenger processing in the north and utilize Pacific Highway for local traffic accessing these facilities

- **Rosecrans Street**
  - Alternatives A2, A3 and B1 move a portion of terminal traffic to the north reducing traffic along Rosecrans Street
  - Alternative A8 maintains all processing facilities in the south and a portion of terminal traffic continues to utilize Rosecrans Street