Technical Advisory Committee
HWO Master Plan Update

June 21, 2018
TAC Committee

Role:

To provide input on the master planning analysis from the technical and operational perspectives.
Meeting Objectives

• Provide Status Update on Master Plan Update
• Review Activity Forecasts/Demand Scenarios
• Discuss Capacity of Existing Facilities
• Quantify Current and Future Facility Needs
• Identify Development Opportunities and Constraints
Agenda

- Introduction/Status Update
- Meeting #1 Recap
- Baseline Forecast Review
- Alternative Demand Scenario
- Facility Requirements
- Future Development Considerations
- Next Steps
Introduction

• “An airport master plan is a comprehensive study of an airport and usually describes the short-, medium-, and long-term development plans to meet future aviation demand.” – FAA Advisory Circular 150/5070 – 6B Airport Master Plans

• Plans focus on addressing long-term (20+ years) needs by establishing a roadmap for incremental development to meet future demand

• Planning methods vary depending on the size and complexity of the airport but include the following key elements: inventory of existing conditions, forecasting, demand/capacity, alternatives, environmental/sustainability and financial

• Other considerations may include the highest and best use of existing infrastructure given long term development plans
HWO Master Planning Process

PHASE 1

- Update Airport GIS
- Airspace Analysis Tool (IALP)
- Visioning / Stakeholder Engagement Strategy
- Inventory of Existing Conditions
- Demand Capacity / Facility Requirements
- Activity Forecasts (by Others)

PHASE 2

- Alternatives Analyses
- Preferred Airport Improvement Concept
- Capital Improvement Program (CIP) Implementation
- Airport Property Map
- Airport Layout Plans Package / eALP

Stakeholder engagement throughout the Study to occur through Master Plan Committee Meetings, Stakeholder briefings, and Public meetings
HWO Current Conditions

- Airport Size: 536 Acres
- Designated as a General Aviation Reliever Facility
- Classified as a Regional Airport Asset in the FAA’s National Plan of Integrated Airport Systems (NPIAS)
- Restricted to aircraft of 12,500 pounds or less MTOW
- Four paved runways and affiliated taxiways
  - Runway 1L/19R – 3,350 ft. x 100 ft. (Visual)
  - Runway 1R/19L – 3,260 ft. x 100 ft. (Visual)
  - Runway 10L/28R - 3,240 ft. x 100 ft. (Non-precision instrument – 28R)
  - Runway 10R/28L – 3,255 ft. x 100 ft. (Non-precision instrument – 10R)
- Contract Air Traffic Control Tower
General Themes for the Airport

• Continue positioning HWO as a “Community” airport.

• Surplus land at HWO creates opportunities to diversify the revenue base through non-aeronautical development.

• Current infrastructure limitations (runway length, pavement limitations, and airspace constraints) and community sensitivities (noise) will influence future opportunities.

• Opportunities to explore: revenue generating development that is community friendly; light manufacturing; other development that yield benefits for the community.
Historic Operations

Total Annual Operations

Historic Range

Source: FAA ATADS which is consistent with ATC Tower Counts

Forecast Base Year
Based Aircraft Forecast Comparison

Socioeconomic and market share forecasts continue historic trend but do not acknowledge local limitations.

FAA Comparison Recommend as Baseline Based Aircraft Forecast

Socioeconomic and market share forecasts do not draw strong correlations.

OPBA pairs current activity levels with based aircraft forecast.

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Aircraft Operations</td>
<td>171,550</td>
<td>177,534</td>
<td>182,189</td>
<td>195,487</td>
</tr>
<tr>
<td>Itinerant</td>
<td>58,886</td>
<td>63,729</td>
<td>65,400</td>
<td>70,174</td>
</tr>
<tr>
<td>Local</td>
<td>112,664</td>
<td>113,805</td>
<td>116,789</td>
<td>125,314</td>
</tr>
<tr>
<td>Total Based Aircraft</td>
<td>398</td>
<td>412</td>
<td>423</td>
<td>454</td>
</tr>
<tr>
<td>Single-Engine Piston</td>
<td>335</td>
<td>347</td>
<td>356</td>
<td>382</td>
</tr>
<tr>
<td>Multi-Engine Piston</td>
<td>41</td>
<td>42</td>
<td>43</td>
<td>45</td>
</tr>
<tr>
<td>Jet</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Helicopter</td>
<td>21</td>
<td>22</td>
<td>22</td>
<td>24</td>
</tr>
</tbody>
</table>

**Net Increases of 14.0% Since 2015**

Socioeconomic and market share forecasts do not draw strong correlations. OPBA pairs current activity levels with based aircraft forecast.

South Florida General Aviation Airport Traffic Trends

<table>
<thead>
<tr>
<th>Airport Name</th>
<th>2015</th>
<th>2017</th>
<th>Difference</th>
<th>Net Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Perry Airport 1/</td>
<td>171,550</td>
<td>226,379</td>
<td>54,829</td>
<td>32.0%</td>
</tr>
<tr>
<td>Miami Executive Airport 1/</td>
<td>262,166</td>
<td>297,403</td>
<td>35,237</td>
<td>13.4%</td>
</tr>
<tr>
<td>Boca Raton Airport 1/</td>
<td>62,441</td>
<td>70,067</td>
<td>7,626</td>
<td>12.2%</td>
</tr>
<tr>
<td>Fort Lauderdale Executive Airport 1/</td>
<td>160,065</td>
<td>179,023</td>
<td>18,985</td>
<td>11.8%</td>
</tr>
<tr>
<td>Pompano Beach Air Park</td>
<td>140,716</td>
<td>132,486</td>
<td>(8,230)</td>
<td>(5.8%)</td>
</tr>
<tr>
<td>Miami-Opa Locka Executive 1/</td>
<td>143,088</td>
<td>131,544</td>
<td>(11,544)</td>
<td>(8.1%)</td>
</tr>
</tbody>
</table>

Notes:
1/ Denotes airports that are designated as a reliever airport in the Federal Aviation Administration’s National Plan of Integrated Airport Systems (NPIAS).

Sources: Federal Aviation Administration, Air Traffic Activity Data System (ATADS), Accessed June 20, 2018.
• Aircraft operational demand levels for 2016 and 2017 have exceeded those projected under the FAA Approved Baseline Forecast.
  – CY2017 actual demand = 226,379 operations
• The existing based aircraft also exceed those projected under the FAA Approved Baseline Forecasts, but to less of an extent.
  – Existing based aircraft: 411 aircraft
  – FAA Approved based aircraft forecast: 412 (2020) – 454 (2035)
• An Alternative Demand Scenario was derived that applies the CAGR for the FAA Approved Baseline Forecast to the projected 2017 operational demand levels.
Based Aircraft Projections
(Baseline & Sensitivity Analysis)

NOTES:
1. CAGR = Compound Annual Growth Rate
2. 2017 Based aircraft estimate provided by Broward County Aviation Department (BCAD)
3. Historical and forecast based aircraft based upon calendar year (CY)

SOURCES: Broward County Aviation Department (historical); Innovata; FAA Air Traffic Activity Systems; FAA Terminal Area Forecasts; Kimley-Horn and Associates, Inc.
Aircraft Operations Projections (Baseline & Sensitivity Analysis)

NOTES:
1. CAGR = Compound Annual Growth Rate
2. Historical and forecast operations are based upon calendar year (CY)

SOURCES: Historical information from FAA Air Traffic Activity System (ATADS); Approved forecasts from Kimley-Horn and Associates, Inc.
Aircraft Operations Projections (Itinerant Operations)

NOTES:
1. CAGR = Compound Annual Growth Rate
2. Historical and forecast operations are based upon calendar year (CY)

SOURCES: Historical information from FAA Air Traffic Activity System (ATADS); Approved forecasts CAGR from Kimley-Horn and Associates, Inc.
### Alternative Demand Scenario – Sensitivity Analyses

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>2020</th>
<th>2025</th>
<th>2030</th>
<th>2035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Aircraft Operations</td>
<td>171,550</td>
<td>230,900</td>
<td>238,600</td>
<td>246,600</td>
<td>255,000</td>
</tr>
<tr>
<td>Itinerant</td>
<td>58,886</td>
<td>76,100</td>
<td>78,600</td>
<td>81,250</td>
<td>84,000</td>
</tr>
<tr>
<td>Local</td>
<td>112,664</td>
<td>154,800</td>
<td>160,000</td>
<td>165,350</td>
<td>171,000</td>
</tr>
<tr>
<td>Total Based Aircraft</td>
<td>398</td>
<td>419</td>
<td>433</td>
<td>448</td>
<td>463</td>
</tr>
<tr>
<td>Single-Engine Piston</td>
<td>335</td>
<td>353</td>
<td>364</td>
<td>337</td>
<td>390</td>
</tr>
<tr>
<td>Multi-Engine Piston</td>
<td>41</td>
<td>43</td>
<td>45</td>
<td>46</td>
<td>48</td>
</tr>
<tr>
<td>Jet</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Helicopter</td>
<td>21</td>
<td>22</td>
<td>23</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

**Net Increases of 42.6% since 2015**

**Net Increases of 16.4% since 2015**

**SOURCE:** Airfield Safety Enhancement and Geometry Study, Kimley-Horn and Associates, Inc.; April, 2017; Ricondo, Inc. May 2018
Planning Activity Levels and Sensitivity Levels

Due to the recent deviation from the FAA Approved Baseline Forecast, the Master Plan Update will utilize Planning Activity Levels (PALs) and Sensitivity Levels (SLs) in lieu of forecast years:

- PAL 1: Coincides with 2025 demand levels from Baseline Forecast
- PAL 2: Coincides with 2035 demand levels from Baseline Forecast
- SL 1: Coincides with the 2025 demand levels from the Alternative Demand Scenario
- SL 2: Coincides with the 2035 demand levels from the Alternative Demand Scenario

Due to the inherent uncertainty to the growth and timing of future activity at HWO, the use of PALs and SLs will ensure that future facility development correlates to activity demand levels rather than specific years that may be subject to change.
## Planning Activity Levels and Sensitivity Levels

<table>
<thead>
<tr>
<th>Category</th>
<th>2015</th>
<th>PAL 1 ¹/</th>
<th>PAL 2 ²/</th>
<th>SL 1 ³/</th>
<th>SL 2 ⁴/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Aircraft Operations</td>
<td>171,550</td>
<td>177,500</td>
<td>195,500</td>
<td>238,600</td>
<td>255,000</td>
</tr>
<tr>
<td>Itinerant</td>
<td>58,886</td>
<td>63,700</td>
<td>70,200</td>
<td>78,600</td>
<td>84,000</td>
</tr>
<tr>
<td>Local</td>
<td>112,664</td>
<td>113,800</td>
<td>125,300</td>
<td>160,000</td>
<td>171,000</td>
</tr>
<tr>
<td>Total Based Aircraft</td>
<td>398</td>
<td>412</td>
<td>454</td>
<td>433</td>
<td>463</td>
</tr>
<tr>
<td>Single-Engine Piston</td>
<td>335</td>
<td>347</td>
<td>382</td>
<td>364</td>
<td>390</td>
</tr>
<tr>
<td>Multi-Engine Piston</td>
<td>41</td>
<td>42</td>
<td>45</td>
<td>45</td>
<td>48</td>
</tr>
<tr>
<td>Jet</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Helicopter</td>
<td>21</td>
<td>22</td>
<td>24</td>
<td>23</td>
<td>24</td>
</tr>
</tbody>
</table>

Notes:
1/ PAL 1: Coincides with 2025 demand levels from Baseline Forecast
2/ PAL 2: Coincides with 2035 demand levels from Baseline Forecast
3/ SL 1: Coincides with the 2025 demand levels from the Sensitivity Analysis
4/ SL 2: Coincides with the 2035 demand levels from the Sensitivity Analysis

Airfield Capacity

• Airfield capacity is adequate to accommodate forecast demand
  – Annual Service Volume (ASV) = 255,000 – 355,000 operations/year
  – Hourly Capacity
    • Visual Conditions = 178 operations/hour
    • Poor Weather Conditions = 67 operations/hour

• 2035 Annual Operational Demand Projections
  – PAL 2 = 195,500 operations
  – SL 2 = 255,000 operations

• Conclusion:
  – HWO could reach its ASV at SL 2
  – Additional airfield capacity could be achieved without modifying the airfield (i.e, demand management strategies)

General Aviation Aircraft Storage Requirements Summary

<table>
<thead>
<tr>
<th>Aircraft Storage Facilities:</th>
<th>Existing</th>
<th>PAL 1&lt;br&gt;2/</th>
<th>PAL 2&lt;br&gt;3/</th>
<th>SL 1&lt;br&gt;4/</th>
<th>SL 2&lt;br&gt;5/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hangars 6/</td>
<td>355,200</td>
<td>406,100</td>
<td>435,800</td>
<td>415,700</td>
<td>444,500</td>
</tr>
<tr>
<td>Apron 6/</td>
<td>1,445,900</td>
<td>1,573,000</td>
<td>1,682,200</td>
<td>1,692,400</td>
<td>1,803,100</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>1,801,100</td>
<td>1,979,100</td>
<td>2,118,000</td>
<td>2,108,100</td>
<td>2,247,600</td>
</tr>
<tr>
<td><strong>Estimated Capacity</strong> 7/</td>
<td>425</td>
<td>465</td>
<td>5000</td>
<td>495</td>
<td>520</td>
</tr>
</tbody>
</table>

**Notes:**
1/ Unless noted otherwise, all values are express in units of square feet.
2/ PAL 1: Coincides with 2025 demand levels from Baseline Forecast
3/ PAL 2: Coincides with 2035 demand levels from Baseline Forecast
4/ SL 1: Coincides with the 2025 demand levels from the Sensitivity Analysis
5/ SL 2: Coincides with the 2035 demand levels from the Sensitivity Analysis
6/ Assumes 60 percent of based aircraft require hangars
7/ Assumes an average of 4,250 sq. ft. of storage per aircraft.

General Aviation Facility Requirements Summary 1/

<table>
<thead>
<tr>
<th></th>
<th>Existing</th>
<th>PAL 1 2/</th>
<th>PAL 2 3/</th>
<th>SL 1 4/</th>
<th>SL 2 5/</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aircraft Storage Facilities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hangars 6/</td>
<td>355,200</td>
<td>406,100</td>
<td>435,800</td>
<td>415,700</td>
<td>444,500</td>
</tr>
<tr>
<td>Apron 6/</td>
<td>1,445,900</td>
<td>1,573,000</td>
<td>1,682,200</td>
<td>1,692,400</td>
<td>1,803,100</td>
</tr>
<tr>
<td>Subtotal (Aircraft Storage)</td>
<td>1,801,100</td>
<td>1,979,100</td>
<td>2,118,000</td>
<td>2,108,100</td>
<td>2,247,600</td>
</tr>
<tr>
<td>Terminal/Other Buildings 7/</td>
<td>52,100</td>
<td>77,900</td>
<td>81,900</td>
<td>85,300</td>
<td>88,600</td>
</tr>
<tr>
<td>Vehicle Parking</td>
<td>371,500</td>
<td>428,600</td>
<td>458,800</td>
<td>456,500</td>
<td>486,800</td>
</tr>
<tr>
<td>Landscaping/Drainage</td>
<td>785,400</td>
<td>870,000</td>
<td>930,500</td>
<td>927,500</td>
<td>988,100</td>
</tr>
<tr>
<td>Total s.f. (acres)</td>
<td>3,010,100</td>
<td>3,335,600</td>
<td>3,589,200</td>
<td>3,557,400</td>
<td>3,811,100</td>
</tr>
</tbody>
</table>

Notes:
1/ Unless noted otherwise, all values are express in units of square feet.
2/ PAL 1: Coincides with 2025 demand levels from Baseline Forecast
3/ PAL 2: Coincides with 2035 demand levels from Baseline Forecast
4/ SL 1: Coincides with the 2025 demand levels from the Sensitivity Analysis
5/ SL 2: Coincides with the 2035 demand levels from the Sensitivity Analysis
6/ Assumes 60 percent of based aircraft require hangars
7/ Other buildings in administrative offices, classrooms, restaurants, and enclosed storage

# General Aviation Facility Deficiency Summary

<table>
<thead>
<tr>
<th></th>
<th>PAL 1</th>
<th>PAL 2</th>
<th>SL 1</th>
<th>SL 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Aircraft Storage Facilities:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hangars</td>
<td>50,900</td>
<td>80,600</td>
<td>60,500</td>
<td>89,300</td>
</tr>
<tr>
<td>Apron</td>
<td>127,100</td>
<td>236,300</td>
<td>246,500</td>
<td>357,200</td>
</tr>
<tr>
<td><strong>Subtotal (Aircraft Storage)</strong></td>
<td>178,000</td>
<td>316,900</td>
<td>307,000</td>
<td>446,500</td>
</tr>
<tr>
<td><strong>Terminal/Other Buildings</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>26,600</td>
<td>30,600</td>
<td>33,200</td>
<td>36,500</td>
</tr>
<tr>
<td><strong>Vehicle Parking</strong></td>
<td>57,100</td>
<td>87,300</td>
<td>85,000</td>
<td>115,300</td>
</tr>
<tr>
<td><strong>Landscaping/Drainage</strong></td>
<td>84,600</td>
<td>145,100</td>
<td>142,100</td>
<td>202,700</td>
</tr>
<tr>
<td><strong>Grand Total (sq. ft)</strong></td>
<td>345,500 (7.9)</td>
<td>579,100 (12.6)</td>
<td>567,830 (13.0)</td>
<td>801,000 (18.4)</td>
</tr>
<tr>
<td><strong>Net Increase in Requirements</strong></td>
<td>11.5</td>
<td>19.2%</td>
<td>18.8%</td>
<td>26.6%</td>
</tr>
</tbody>
</table>

**Notes:**
1/ Unless noted otherwise, all values are express in units of square feet.
2/ PAL 1: Coincides with 2025 demand levels from Baseline Forecast
3/ PAL 2: Coincides with 2035 demand levels from Baseline Forecast
4/ SL 1: Coincides with the 2025 demand levels from the Sensitivity Analysis
5/ SL 2: Coincides with the 2035 demand levels from the Sensitivity Analysis
6/ Assumes 60 percent of based aircraft require hangars
7/ Other buildings in administrative offices, classrooms, restaurants, and enclosed storage

**Sources:**
- American Infrastructure Development, Inc., Demand Capacity Analysis, July 2017
# Aviation Support Facility Requirements

## Facility Type

<table>
<thead>
<tr>
<th>Facility Type</th>
<th>Existing</th>
<th>Baseline PAL 2 (2035)</th>
<th>Baseline Deficiency</th>
<th>Sensitivity Analysis SL 2 (2035)</th>
<th>Sensitivity Analysis Deficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel Farm</td>
<td>55,200 (Avgas) 23,000 (Jet A)</td>
<td>6,829/wk (AvGas) 4,553/wk (Jet A)</td>
<td>None</td>
<td>8,903/wk (Avgas) 5,935/wk (Jet A)</td>
<td>None</td>
</tr>
<tr>
<td>Fire Station</td>
<td>11,900</td>
<td>11,900</td>
<td>None</td>
<td>11,900</td>
<td>None</td>
</tr>
<tr>
<td>ATC Tower Site:</td>
<td>37,980</td>
<td>25,000</td>
<td>None 4/</td>
<td>25,000</td>
<td>None 4/</td>
</tr>
<tr>
<td>Airfield Electrical Vault</td>
<td>1</td>
<td>1</td>
<td>None 5/</td>
<td>1</td>
<td>None 5/</td>
</tr>
<tr>
<td>BCAD Facilities:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airport Administration</td>
<td>1,600</td>
<td>3,100</td>
<td>1,500</td>
<td>3,100</td>
<td>1,500</td>
</tr>
<tr>
<td>Airport Maintenance</td>
<td>2,800</td>
<td>4,200</td>
<td>1,400</td>
<td>4,200</td>
<td>1,400</td>
</tr>
<tr>
<td>Subtotal (BCAD Facilities)</td>
<td>4,400</td>
<td>7,300</td>
<td>2,900</td>
<td>7,300</td>
<td>2,900</td>
</tr>
</tbody>
</table>

### NOTES:
1/ Unless noted otherwise, all values are expressed in square feet.
2/ PAL 2: Coincides with 2035 demand levels from Baseline Forecast
3/ SL 2: Coincides with the 2035 demand levels from the Sensitivity Analysis
4/ Due to the age and condition of the existing ATC tower, a replacement ATC tower is anticipated during the 20-year planning horizon
5/ Due to the age and condition of the existing airfield electrical vault, a replacement vault is anticipated during the 20-year planning horizon.

### SOURCE:
Airfield Safety Enhancements Study Recommendations

- Study Completed in April 2017
  - Basis for Airfield Development Initiatives for Master Plan Update
- Development planning horizons:
  - Near-term: 0 - 5 years
  - Mid-Term: 6 - 10 years
  - Long-term: 11 – 20 years
Future Facility Development Opportunities

**Parcel ID/Potential Use**

**Acres**

Aeronautical/Non-Aeronautical:
- Parcel 1: 22.8
- Parcel 2: 10.8
- Parcel 3: 9.1
- Parcels 4 & 5: 30.0
- Parcel 6: 5.8
- Parcel 7: 2.0
- Parcel 9: 3.2
- Parcels 10 & 11: 3.6
- Parcel 12: 2.9

Subtotal: 90.2

Non Aeronautical:
- Parcel 8: 8.7

Total Area for Development: 98.9
Future Facility Development Opportunities

- **Aeronautical / Non-Aeronautical Development**
  - 90.2 acres of undeveloped land
    - 78.2 acres has airfield and surface road access
    - 12 acres is limited to airfield access only (Parcel 4)
- **Non-Aeronautical Development**
  - 8.7 acres of developed and undeveloped land
    - Existing Park & Ride Facilities
    - Surplus land not required for aeronautical development
- Approximately 20 acres required for future aeronautical facility development

Legend:

- **PROPOSED PAVEMENT 0-5 YEAR DEVELOPMENT**
- **PROPOSED PAVEMENT 6-10 YEAR DEVELOPMENT**
- **PROPOSED PAVEMENT 11-20 YEAR DEVELOPMENT**
- **NON-AERONAUTICAL DEVELOPMENT LAND**
- **AERONAUTICAL/NON-AERONAUTICAL DEVELOPMENT LAND**
- ***** TENANT LEASE LIMITS

Shortening of Runway 1L-19R
Potential Tenant Facility Development Initiatives

- Current Tenant Development Initiatives
  - Parcel 2: GA/FBO facility expansion
  - Parcels 10 & 11: GA/FBO facility expansion
Potential Tenant Facility Development Initiatives

- Other Potential Development Initiatives
  - Parcel 1: retain for banner towing operations
  - Parcel 3: GA/FBO tenant development (potential development limitations)
  - Parcel 4: dependent on cross-field taxiway construction/alignment
  - Parcel 5: GA/FBO and/or non-aeronautical
  - Parcel 6: GA facility development or non-aeronautical
  - Parcel 7: likely limited to aircraft parking apron
  - Parcels 8: non-aeronautical development
  - Parcel 9: GA/FBO and/or non-aeronautical
  - Parcel 12: non-aeronautical development
Other Potential Facility Development Initiatives

- Dedicated Helipad with Adjacent Helicopter Parking/Storage Facilities (Location TBD)
- Replacement ATC Tower & Airfield Electrical Vault
- BCAD Facility Expansion
- Confirmation of Need and/or Alignment of Crossfield Taxiway
- Dedicated On-Airport Access Road to Parcels 4 and/or 5
Surplus Property Available for Non-Aeronautical Use

<table>
<thead>
<tr>
<th>Parcel</th>
<th>Size (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel 1</td>
<td>22.8</td>
</tr>
<tr>
<td>Parcel 2</td>
<td>10.8</td>
</tr>
<tr>
<td>Parcel 3</td>
<td>9.1</td>
</tr>
<tr>
<td>Parcel 4 and Parcel 5</td>
<td>30.0</td>
</tr>
<tr>
<td>Parcel 6</td>
<td>5.8</td>
</tr>
<tr>
<td>Parcel 7</td>
<td>2.0</td>
</tr>
<tr>
<td>Parcel 9</td>
<td>2.2</td>
</tr>
<tr>
<td>Parcel 10 and Parcel 11</td>
<td>3.6</td>
</tr>
<tr>
<td>Parcel 12</td>
<td>2.9</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>90.2</strong></td>
</tr>
</tbody>
</table>

**Non-Aeronautical Development**

<table>
<thead>
<tr>
<th>Parcel 8</th>
<th>Size (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parcel 8</td>
<td>6.7</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td><strong>6.7</strong></td>
</tr>
</tbody>
</table>

**Total Area for Development**

<table>
<thead>
<tr>
<th>Total</th>
<th>Size (acres)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total</strong></td>
<td><strong>96.9</strong></td>
</tr>
</tbody>
</table>

Note:

1/ Other surplus property includes consideration for Parcel 4 (12 acres)
Candidate Helipad Sites

- **Current Helicopter Operations:**
  - Approximately 750 feet from residential areas

- **Siting Considerations:**
  - Community Impacts – Opportunities to minimize noise exposure
  - 500 feet from nearest runway
  - Accessibility (roadway and airfield)
  - Segregation from fixed wing aircraft
Shortlisted Helipad Sites

• Option 1 (Parcel 1)
  – Designated banner tower area
  – Existing accessibility
  – 2,500 feet from residential area

• Option 2 (Parcel 3)
  – Existing accessibility
  – Potential impacts to banner towing operations
  – 3,000 feet from residential area

• Option 3 (Parcel 4/5)
  – Requires roadway access
  – 2,000 feet from residential areas

• Option 4 (Parcel 6)
  – Existing accessibility
  – 800 feet from residential areas
Next Steps

- HWO Tenant Briefing
- Complete Alternatives Development Evaluation
- Public Workshop(s)
- BOCC Briefing/Workshop(s)
- Final PAC/TAC Meetings

Note: Sequence of activities subject to change
THANK YOU!