

# PHOENIX



## GOODYEAR AIRPORT



1941



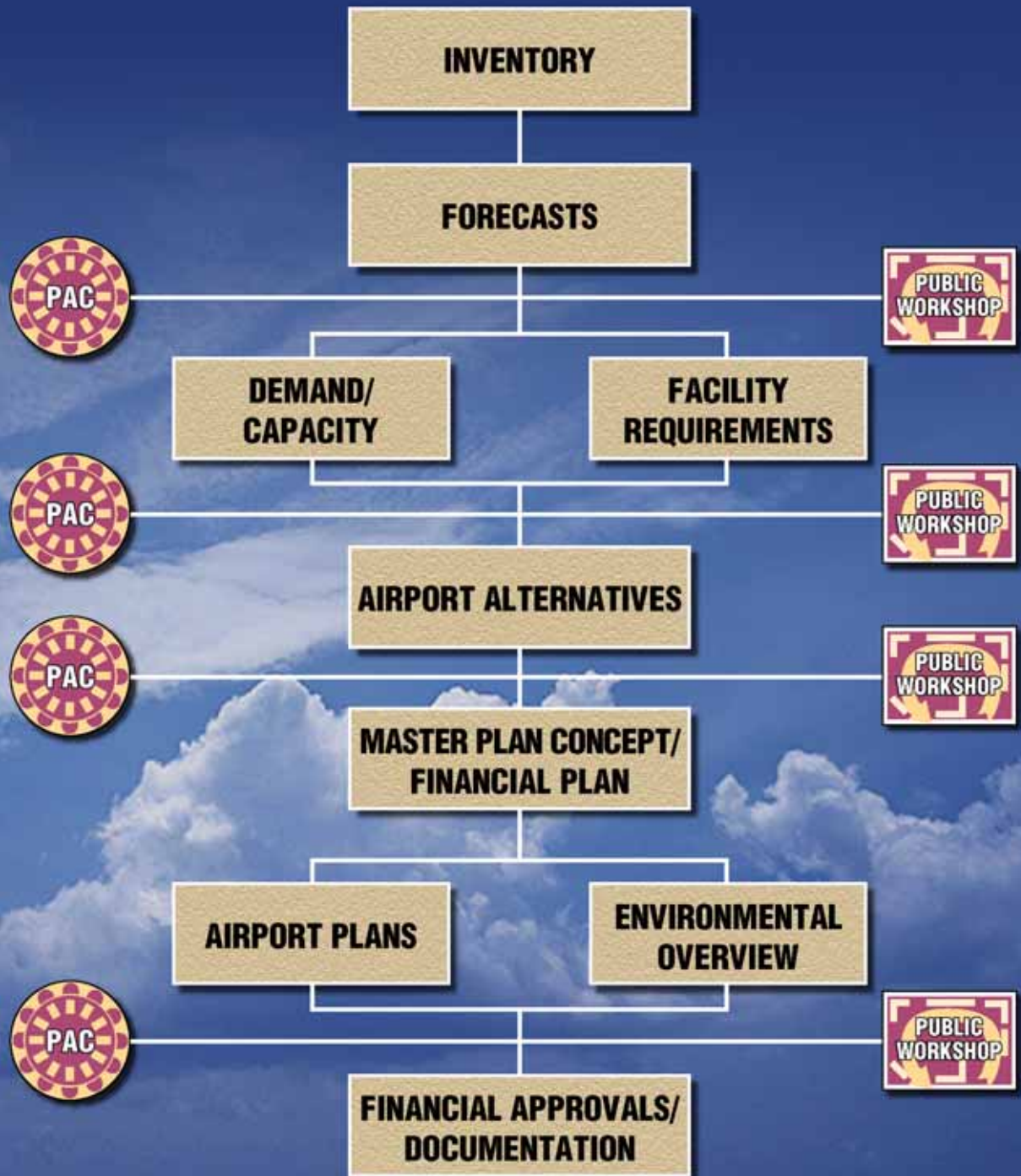
2005

## AIRPORT MASTER PLAN

# PHOENIX GOODYEAR AIRPORT



## *Project Work Flow*







# PHOENIX GOODYEAR AIRPORT

## Existing Landside Facilities



**③ TERMINAL BUILDING**



**④ ATCA MAINTENANCE HANGARS**



**⑤ ATCA DORMITORIES**



**⑥ GERMAN AIR FORCE OFFICES/DORMITORIES**



**⑦ ATCA FLIGHT OPERATIONS AND CAFETERIA**



**① AIRPORT TRAFFIC CONTROL TOWER (ATCT)**



**② TIMCO HANGARS**





# PHOENIX GOODYEAR AIRPORT



## *U.S. Active General Aviation Aircraft Forecasts*

Source: FAA Aerospace Forecasts, Fiscal Years 2004-2015.

Notes: An active aircraft is one that has a current registration and was flown at least one hour during the calendar year.



### U.S. ACTIVE GENERAL AVIATION AIRCRAFT (in thousands)

| Year        | FIXED WING    |              |           |          | ROTORCRAFT |         |              |                |       | Total |
|-------------|---------------|--------------|-----------|----------|------------|---------|--------------|----------------|-------|-------|
|             | PISTON        |              | TURBINE   |          | Piston     | Turbine | Experimental | Sport Aircraft | Other |       |
|             | Single Engine | Multi-Engine | Turboprop | Turbojet |            |         |              |                |       |       |
| 2003 (Est.) | 143.4         | 17.5         | 6.9       | 8.5      | 2.4        | 4.3     | 22.0         | N/A            | 6.4   | 211.2 |
| 2005        | 143.5         | 17.3         | 7.0       | 9.0      | 2.4        | 4.3     | 22.1         | 15.5           | 6.4   | 227.6 |
| 2010        | 146.2         | 16.9         | 7.6       | 12.0     | 2.6        | 4.4     | 22.7         | 18.1           | 6.5   | 236.9 |
| 2015        | 148.5         | 16.5         | 8.1       | 15.5     | 2.7        | 4.5     | 23.1         | 20.9           | 6.6   | 246.4 |



# PHOENIX GOODYEAR AIRPORT

## *Public Airports - West Valley*

| Name               | Longest Runway (ft.) | Approach Minimums (feet-miles) | Based Aircraft | 2004 Annual Operations* |
|--------------------|----------------------|--------------------------------|----------------|-------------------------|
| Phoenix Goodyear   | 8,500                | NA                             | 209            | 105,471                 |
| Phoenix Sky Harbor | 11,490               | 200 - 1/2                      | 237            | 599,105                 |
| Glendale Municipal | 7,150                | 500 - 1 1/4                    | 269            | 118,140                 |
| Buckeye Municipal  | 5,500                | NA                             | 58             | 35,027                  |

\* Tower counts, except for Buckeye, which is an estimate from FAA Form 5010.

Note: Phoenix Sky Harbor general aviation operations totaled 100,818 in 2004.



# PHOENIX GOODYEAR AIRPORT

## *Population Forecasts Primary Service Area*

|                       | Actual        | Forecast       |                |                |
|-----------------------|---------------|----------------|----------------|----------------|
|                       | 2000          | 2010           | 2020           | 2025           |
| Goodyear              | 21,200        | 61,300         | 161,100        | 247,400        |
| Avondale              | 37,800        | 82,100         | 122,500        | 141,600        |
| East Buckeye          | 4,706         | 21,172         | 59,357         | 109,137        |
| Litchfield Park       | 3,800         | 7,000          | 13,700         | 13,700         |
| Southwest Phoenix     | 10,714        | 68,982         | 101,730        | 121,973        |
| Tolleson              | 5,000         | 6,100          | 6,200          | 6,200          |
| Unincorporated County | 2,376         | 2,651          | 8,248          | 11,125         |
| <b>Total</b>          | <b>85,596</b> | <b>249,305</b> | <b>472,835</b> | <b>651,135</b> |
| Avg. Annual % Change  | NA            | 11.3%          | 6.6%           | 6.6%           |
| Maricopa County       | 3,072,149     | 4,134,388      | 5,164,142      | 5,663,999      |
| Area % of County      | 2.8%          | 6.0%           | 9.2%           | 11.5%          |

Source: Interim Projections of Population, Housing, and Employment, Maricopa Association of Governments, July 2003.



# PHOENIX GOODYEAR AIRPORT

## *Employment Forecasts Phoenix Goodyear Airport Service Area*

|                       | Actual        | Forecast       |                |                |
|-----------------------|---------------|----------------|----------------|----------------|
|                       | 2000          | 2010           | 2020           | 2025           |
| Goodyear              | 13,900        | 30,900         | 66,800         | 84,200         |
| Avondale              | 9,000         | 21,900         | 50,800         | 53,800         |
| East Buckeye          | 1,506         | 7,981          | 25,896         | 45,089         |
| Litchfield Park       | 1,200         | 3,600          | 4,600          | 4,400          |
| Southwest Phoenix     | 5,123         | 23,358         | 48,989         | 61,749         |
| Tolleson              | 12,800        | 48,989         | 20,300         | 25,100         |
| Unincorporated County | 676           | 61,749         | 1,637          | 2,907          |
| <b>Total</b>          | <b>44,205</b> | <b>104,616</b> | <b>219,022</b> | <b>277,245</b> |
| Avg. Annual % Change  | NA            | 9.0%           | 7.7%           | 4.8%           |
| Maricopa County       | 1,564,836     | 2,112,000      | 2,705,000      | 3,002,000      |
| Area % of County      | 2.8%          | 5.0%           | 8.1%           | 9.2%           |

Source: Interim Projections of Population, Housing, and Employment, Maricopa Association of Governments, July 2003.



# PHOENIX GOODYEAR AIRPORT

*Based Aircraft Forecasts - West Valley Airports  
Maricopa Association of Governments (September 2001)*

| Year                  | Total | Phoenix Goodyear | Phoenix Sky Harbor | Glendale | Buckeye |
|-----------------------|-------|------------------|--------------------|----------|---------|
| <b>ACTUAL</b>         |       |                  |                    |          |         |
| 1994                  | 625   | 153              | 224                | 178      | 70      |
| 1997                  | 693   | 198              | 265                | 184      | 46      |
| 2000                  | 698   | 198              | 237                | 208      | 55      |
| 2004                  | 773   | 209              | 237                | 269      | 58      |
| % change<br>1994-2004 | 24%   | 37%              | 6%                 | 51%      | -17     |
| <b>FORECAST</b>       |       |                  |                    |          |         |
| 2005                  | 878   | 340              | 231                | 237      | 70      |
| 2015                  | 1,082 | 498              | 183                | 300      | 101     |
| 2025                  | 1,288 | 657              | 135                | 364      | 132     |

Source: MAG-RASP, Working Paper No. 2, September 2001.



# PHOENIX GOODYEAR AIRPORT

## Based Aircraft Forecasts

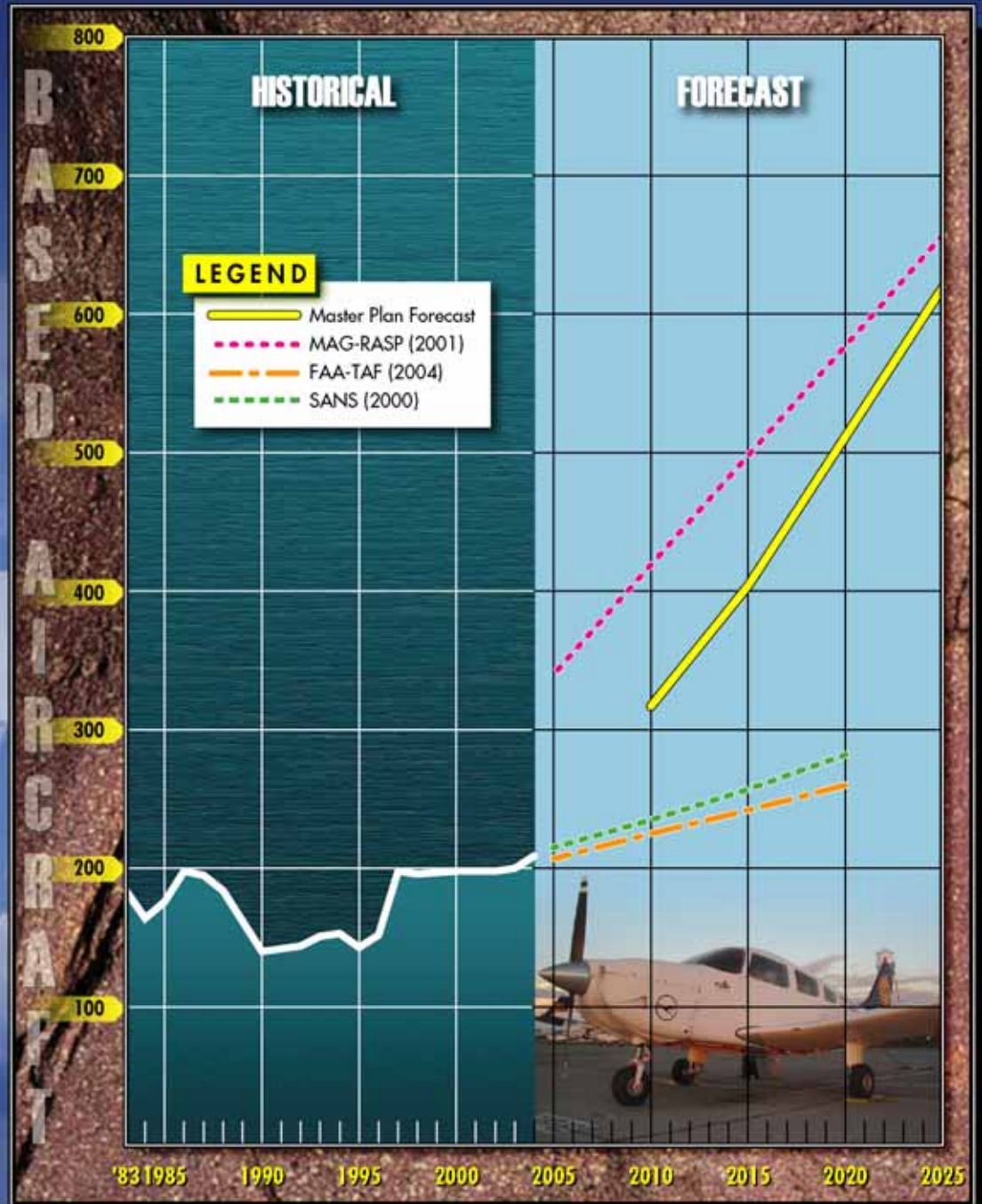
|   | 2000  | 2004 | 2005  | 2010  | 2015  | 2020  | 2025  |
|---|-------|------|-------|-------|-------|-------|-------|
| <b>Maricopa County Based Aircraft Forecasts</b> |       |      |       |       |       |       |       |
| MAG-RASP (2001)                                 | 4,133 |      | 4,615 | 5,282 | 5,950 | 6,618 | 7,288 |
| Updated (2004)*                                 | 4,133 |      | 4,737 | 5,474 | 6,211 | 6,937 | 7,641 |
| <b>Previous GYR Based Aircraft Forecasts</b>    |       |      |       |       |       |       |       |
| Actual  | 198   | 209  |       |       |       |       |       |
| SANS-2000 (1998)                                |       |      | 215   | 235   | 257   | 282   |       |
| MAG-RASP (2001)                                 | 280   |      | 340   | 419   | 498   | 577   | 657   |
| FAA-TAF (2004)                                  | 198   |      | 207   | 225   | 242   | 260   |       |
| <b>Updated GYR Forecast</b>                     |       |      |       |       |       |       |       |
| Master Plan                                     |       |      |       | 317   | 404   | 506   | 619   |
| <i>Percent of Updated County Forecast</i>       |       |      |       | 5.8%  | 6.5%  | 7.3%  | 8.1%  |

\*Update prepared by Coffman Associates to account for additional history and new county population forecasts.

# PHOENIX GOODYEAR AIRPORT



## *Based Aircraft Forecasts*

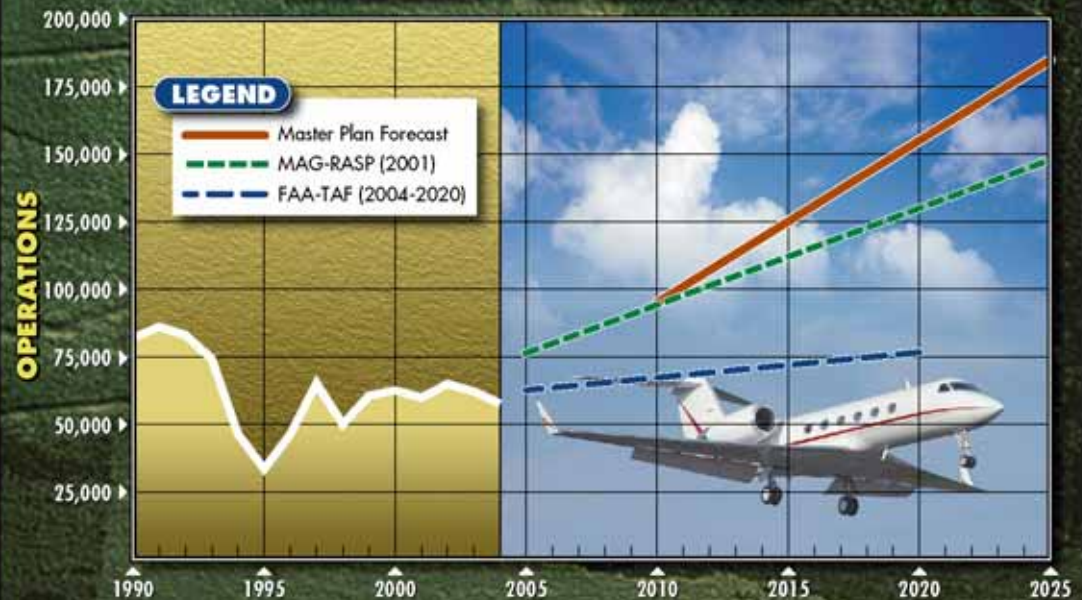


# PHOENIX GOODYEAR AIRPORT

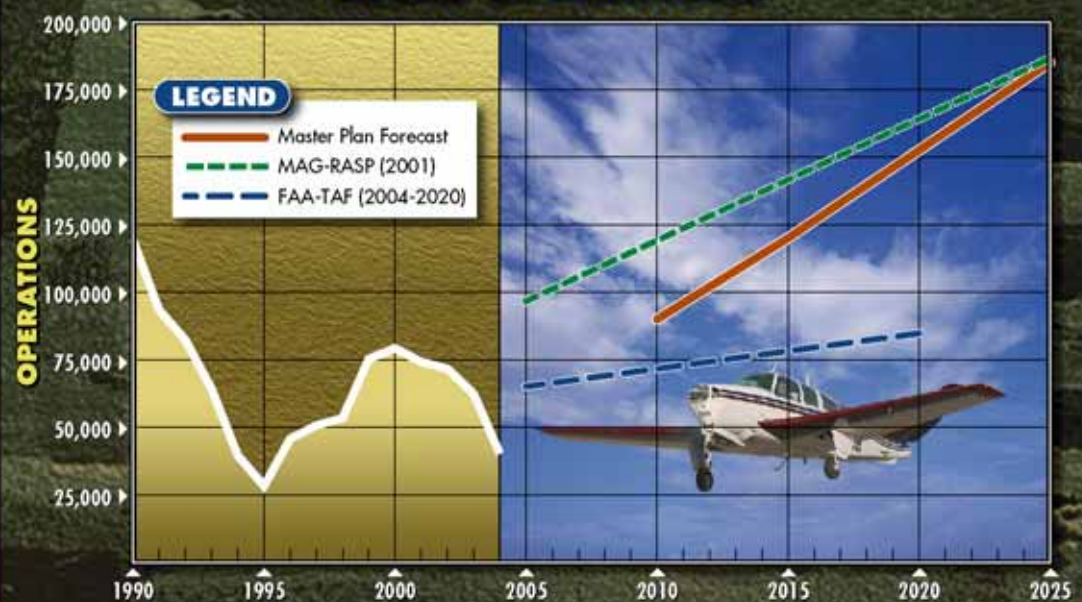


## *General Aviation Operations Forecasts*

### ITINERANT OPERATIONS



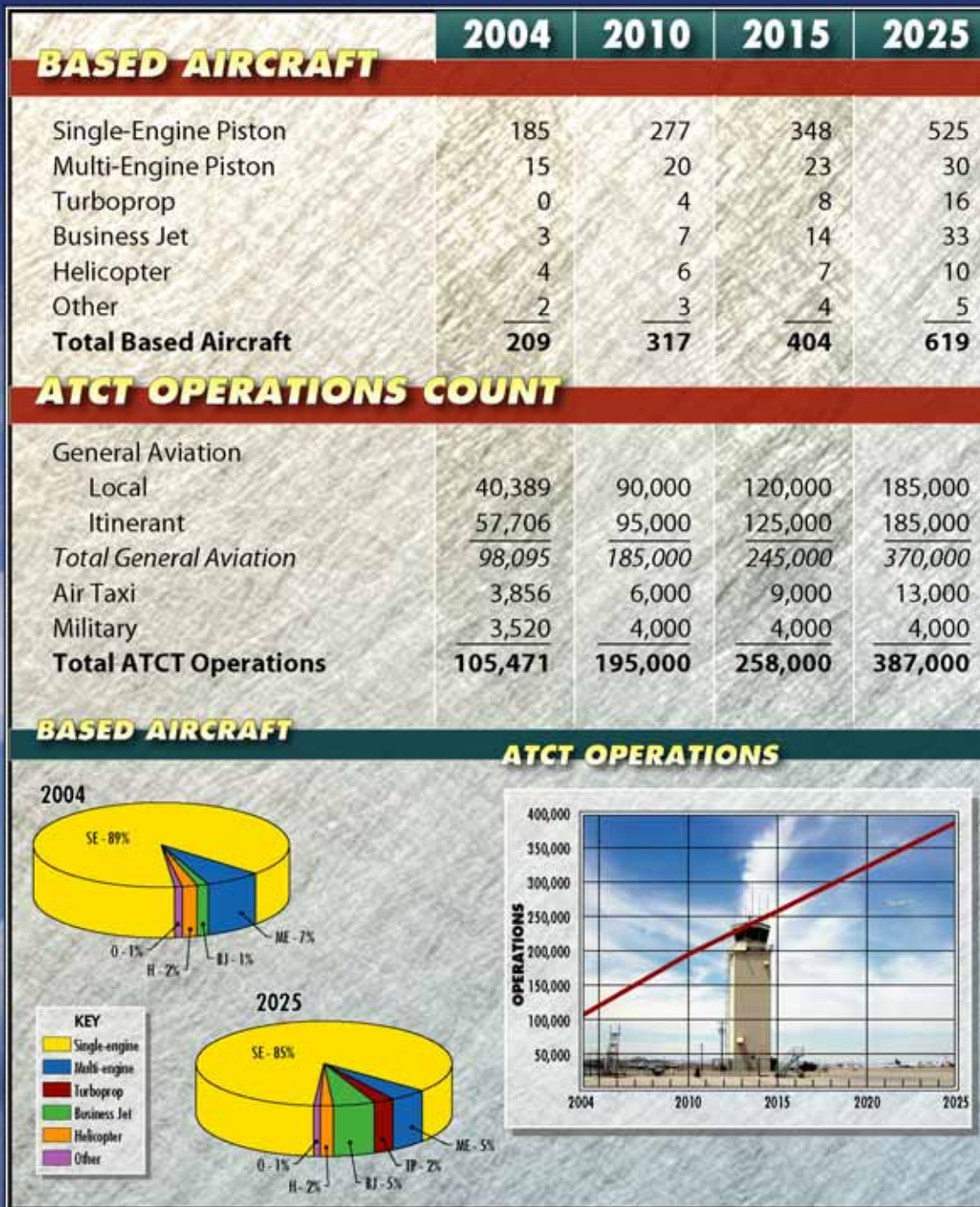
### LOCAL OPERATIONS



# PHOENIX GOODYEAR AIRPORT



## Forecast Summary



# PHOENIX GOODYEAR AIRPORT



*Airfield Capacity Factors*

## AIRFIELD LAYOUT

Runway Configuration



Runway Use



Number of Exits



## WEATHER CONDITIONS

VFR



IFR



PVC



## AIRCRAFT MIX

**A&B**

Small Turboprop

Twin Piston

**C**

Business Jet

Commuter

Regional Jet

Commercial Jet

**D**

Wide Body Jet

## OPERATIONS

Arrivals and Departures



Total Annual Operations



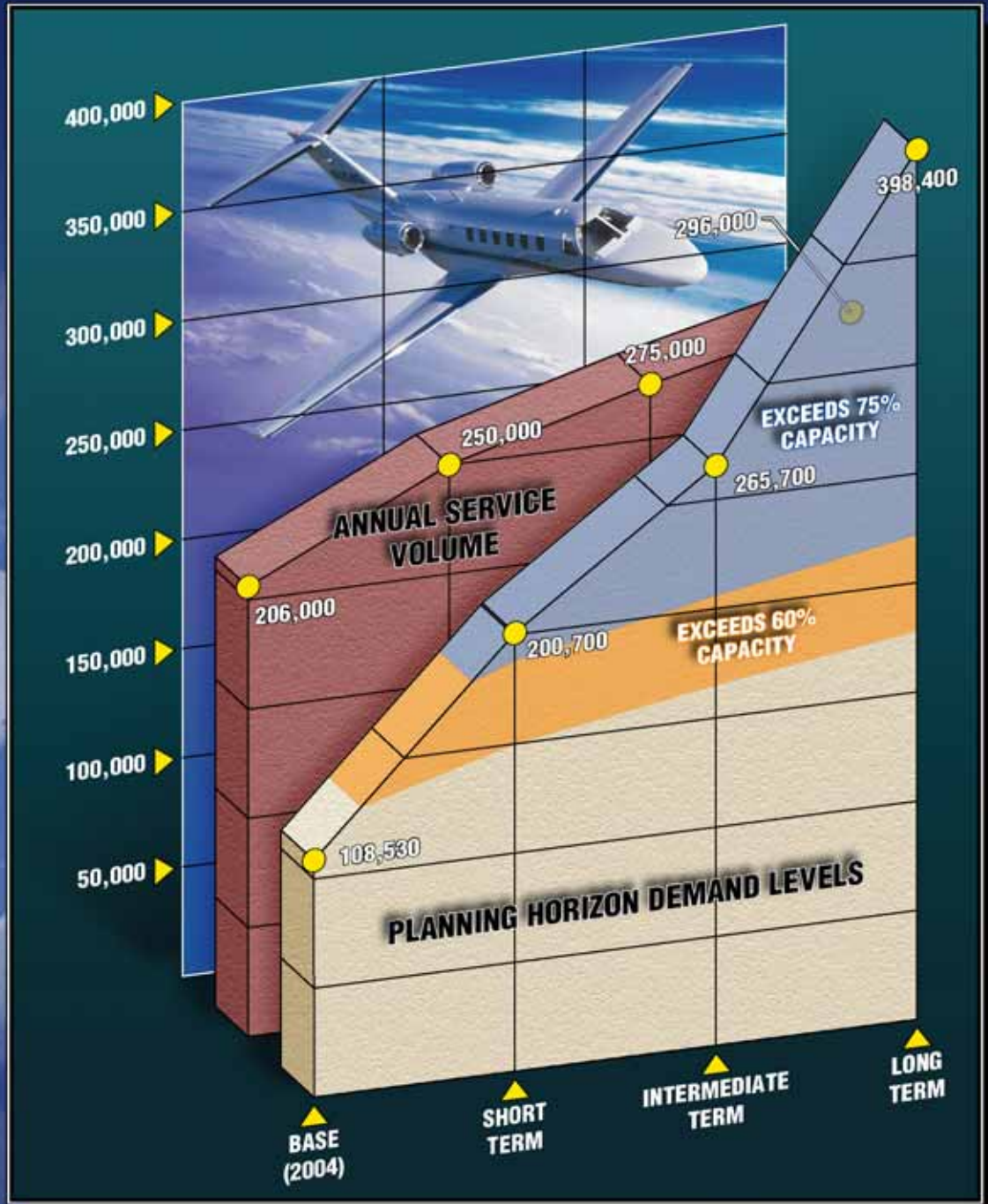
Touch-and-Go Operations



# PHOENIX GOODYEAR AIRPORT



*Airfield Demand vs. Capacity*



# PHOENIX GOODYEAR AIRPORT



## *Airport Reference Codes*

### A-I



- Beech Baron 55
- **Beech Bonanza**
- Cessna 150
- Cessna 172
- Piper Archer
- Piper Seneca

### C-I, D-I



- Beech 400
- **Lear** 25, 31, **35**, 45, 55, 60
- Israeli Westwind
- HS 125-400, 700

### B-I *less than 12,500 lbs.*



- Beech Baron 58
- Beech King Air 100
- Cessna 402
- **Cessna 421**
- Piper Navajo
- Piper Cheyenne
- Swearingen Metroliner
- Cessna Citation I

### C-II, D-II



- Cessna Citation X
- **Gulfstream** II, III, IV
- Canadair 600
- Canadair Regional Jet
- Lockheed JetStar
- Super King Air 350

### B-II *less than 12,500 lbs.*



- **Super King Air 200**
- Cessna 441
- DHC Twin Otter

### C-III, D-III



- Boeing Business Jet
- B 727-200
- **B 737-300 Series**
- MD-80, DC-9
- Fokker 70, 100
- A319, A320
- Gulfstream V
- Global Express

### B-I, II *over 12,500 lbs.*



- Super King Air 300
- Beech 1900
- Jetstream 31
- Falcon 10, 20, 50
- Falcon 200, 900
- **Citation** II, III, IV, V
- Saab 340
- Embraer 120

### C-IV, D-IV



- **B-757**
- B-767
- DC-8-70
- DC-10
- MD-11
- L1011

### A-III, B-III



- DHC Dash 7
- **DHC Dash 8**
- DC-3
- Convair 580
- Fairchild F-27
- ATR 72
- ATP

### D-V







- **B-747 Series**
- B-777

Note: Aircraft pictured is identified in bold type.

# PHOENIX GOODYEAR AIRPORT



*"Unconstrained"*  
Airfield Requirements

|   | EXISTING FACILITY   | SHORT TERM NEED  | LONG TERM NEED  |
|---|---|--|---|
| <b>RUNWAYS</b><br>                | <u>Runway 3-21</u><br>8,500' x 150'<br>200,000# DWL<br>270,000# DTL<br>ARC D-IV   | <u>Runway 3-21</u><br>Improve and Extend<br>RSA/OEA North End<br>Correct RPZ North End<br><br><u>Potential Parallel Runway</u><br>4,300' x 75'<br>12,500 # SWL<br>ARC B-II | <u>Runway 3-21</u><br>Same<br><br><u>Potential Parallel Runway</u><br>7,200' x 100'<br>60,000 # DWL<br>ARC C-II   |
| <b>TAXIWAYS</b><br>               | <u>Runway 3-21</u><br>Full Length Parallel<br>8 Exits<br>75' Wide<br>270,000# DTL<br>Holding Aprons                                 | <u>Runway 3-21</u><br>Same<br><br><u>Potential Parallel Runway</u><br>Full Length Parallel<br>5 Exits<br>35' Wide<br>12,500# SWL<br>Holding Aprons                         | <u>Runway 3-21</u><br>Add: High Speed Exits<br><br><u>Potential Parallel Runway</u><br>Full Length Parallel<br>7 Exits<br>35' Wide<br>60,000# DWL<br>Holding Aprons |
| <b>NAVIGATIONAL AIDS</b><br>     | ATCT (6 a.m. - 9 p.m.)<br>LAWRS<br><br><u>Runway 3-21</u><br>PAPI-2   | ATCT (6 a.m. - 9 p.m.)<br>AWOS-III<br>GPS<br><br><u>Runway 3-21</u><br>PAPI-4<br>GPS<br><br><u>Potential Parallel Runway</u><br>PAPI-4                                     | ATCT (5 a.m. - 12 p.m.)<br>AWOS-III<br>GPS<br><br><u>Runway 3-21</u><br>Same<br><br><u>Potential Parallel Runway</u><br>PAPI-4<br>GPS                               |
| <b>LIGHTING AND MARKING</b><br> | Airport Beacon<br>Segmented Circle<br>MITL<br>Basic Taxiway Marking<br><br><u>Runway 3-21</u><br>MIREL • REILs<br>Precision Marking | Same<br><br><u>Runway 3-21</u><br>MIREL • REILs<br>Precision Marking<br><br><u>Potential Parallel Runway</u><br>MIREL • REILs<br>Nonprecision Marking                      | Same<br><br><u>Runway 3-21</u><br>Same<br><br><u>Potential Parallel Runway</u><br>Same  |

# PHOENIX GOODYEAR AIRPORT



*"Unconstrained"*  
General Aviation and Support  
Facility Requirements

## AIRCRAFT STORAGE HANGAR REQUIREMENTS

|                               | EXISTING | SHORT TERM NEED | INTERMEDIATE NEED | LONG TERM NEED |
|-------------------------------|----------|-----------------|-------------------|----------------|
| Aircraft to be Hangared       | 197      | 302             | 385               | 591            |
| T-Hangars / Shade Hangars     | 206      | 276             | 344               | 514            |
| Conventional Hangar Positions | 0        | 26              | 41                | 77             |

## HANGAR AREA REQUIREMENTS

|  | EXISTING | SHORT TERM NEED | INTERMEDIATE NEED | LONG TERM NEED |
|--|----------|-----------------|-------------------|----------------|
| T-Hangar Area (s.f.)                     |          | 387,000         | 472,000           | 684,000        |
| Conventional Hangar Storage Area         |          | 68,000          | 107,000           | 200,000        |
| Service Hangar Area                      |          | 46,000          | 58,000            | 88,000         |
| <i>Subtotal Conventional Hangar Area</i> |          | <u>501,000</u>  | <u>637,000</u>    | <u>972,000</u> |

## AIRCRAFT PARKING APRON REQUIREMENTS

|                                | EXISTING      | SHORT TERM NEED | INTERMEDIATE NEED | LONG TERM NEED |
|--------------------------------|---------------|-----------------|-------------------|----------------|
| Transient Ramp Positions       | NA            | 92              | 119               | 172            |
| Local Ramp Positions           | NA            | 15              | 19                | 28             |
| <i>Total Ramp Positions</i>    | <u>54</u>     | <u>107</u>      | <u>138</u>        | <u>200</u>     |
| <i>Total Apron Area (s.f.)</i> | <u>38,000</u> | <u>70,000</u>   | <u>90,000</u>     | <u>130,000</u> |

## FUEL STORAGE

|                  | EXISTING | SHORT TERM NEED | INTERMEDIATE NEED | LONG TERM NEED |
|------------------|----------|-----------------|-------------------|----------------|
| Av Gas (gallons) | 60,000   | 30,000          | 50,000            | 75,000         |
| Jet A (gallons)  | 40,000   | 58,000          | 107,000           | 197,000        |

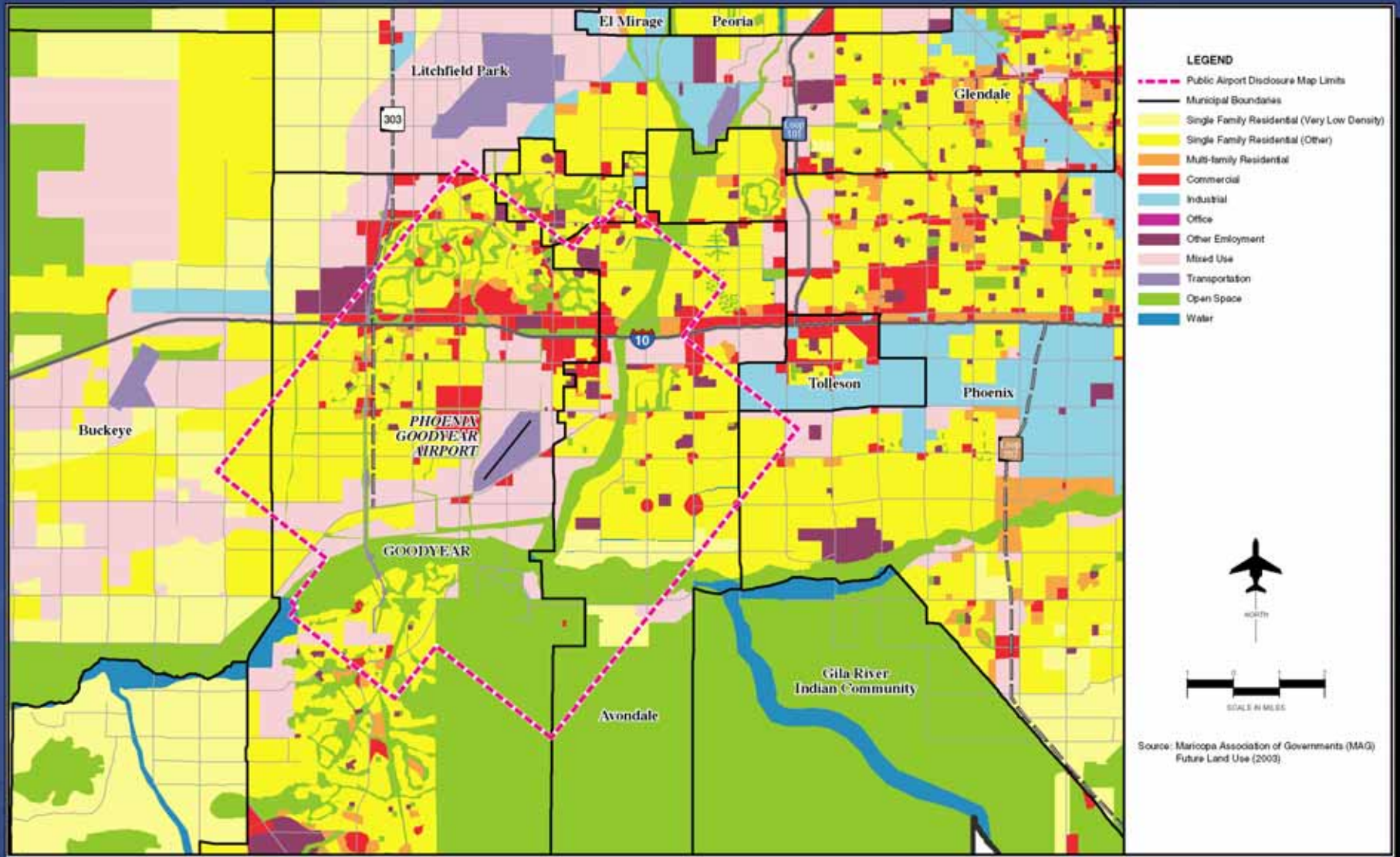
## TERMINAL SPACE AND VEHICLE PARKING

|                                   | EXISTING | SHORT TERM NEED | INTERMEDIATE NEED | LONG TERM NEED |
|-----------------------------------|----------|-----------------|-------------------|----------------|
| General Aviation Parking (spaces) | 32       | 178             | 229               | 326            |
| Terminal Space (s.f.)             | 5,500    | 7,800           | 9,400             | 13,100         |



# PHOENIX GOODYEAR AIRPORT

## Future Land Use



# PHOENIX GOODYEAR AIRPORT



*Generalized  
Service Area*

