Attachment A Noise Model Input Memorandums

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MEMORANDUM

To:	Ms. Danielle Gresser, Community Involvement Specialist Air Traffic Organization (ATO) Central Service Center Operations Support Group, ECINA (AJV-C25) Federal Aviation Administration (FAA)
From:	Missi Shumer, SETIS 2405 Technical Project Manager, HMMH Scott Polzin, Environmental Engineer I, HMMH
Cc:	Lesley Walcourt, Program Analyst, Concept Solutions Robert Mentzer, Jr., Environmental Engineer I and PHX EA Noise Lead, HMMH
Date:	August 28, 2025
Re:	Phoenix Area FAA Modernization Project Environmental Assessment Aircraft Noise and Air Quality Modeling Input
Reference:	Contract 693KA8-22-D-00024 Task Order 693KA8-25-F-00015

This memorandum details the aircraft noise assessment element to be included in the Phoenix Area Federal Aviation Administration (FAA) Modernization Project Environmental Assessment (the PHX EA). Team CS, consisting of prime contractor Concept Solutions and teammates, Harris Miller Miller & Hanson Inc. (HMMH), has reviewed data for calendar year (CY) 2024 (January 1, 2024, through December 31, 2024). The purpose of this technical memorandum is to summarize the existing condition (CY 2024) aircraft noise and air quality modeling inputs for the following 10 airports:

- PHX – Phoenix Sky Harbor International Airport
- DVT – Phoenix Deer Valley Airport
- FFZ – Falcon Field Airport
- IWA – Mesa Gateway Airport
- CHD – Chandler Municipal Airport
- GYR – Phoenix Goodyear Airport
- GEU – Glendale Regional Airport
- SDL – Scottsdale Airport
- BXK - Buckeye Municipal Airport
- P19 - Stellar Airpark Airport

The existing condition year consists of a single modeling scenario of operations and airspace within the study areas for the 10 airports. The FAA's Aviation Environmental Design Tool (AEDT) Version 3g[1] will be used to model the noise effects resulting from proposed changes to the airspace and based on the inputs provided in this technical memorandum, ensuring consistency in the assessment of existing conditions.

The subsequent sections describe the AEDT required noise and air quality modeling inputs for the existing and future conditions, which include:

- AEDT Input Data Sources
- Physical Description of the Airport Layout
- Aircraft Operations
- Aircraft Noise and Performance Characteristics

[1] AEDT Version 3g released on August 28, 2024. https://aedt.faa.gov/3g_information.aspx.

- Runway Utilization
- Meteorological Conditions
- Terrain Data
- Operational Emissions Methodology and Inputs
- Flight Track Geometry
- Attachment A. Airport Operations Stage Lengths Detailed Breakdown
- Attachment B. Runway Utilization Detailed Breakdown

AEDT INPUT DATA SOURCES

Table 1 lists each category of AEDT input data and the source(s) of the data to be used in the PHX EA. The subsequent sections address each category individually.

Table 1. Data Sources/Needs for Noise Model Inputs

AEDT Input Category	Data Source(s)
Physical Description of the Airfield Layout	FAA ADIP and NASR
Aircraft Operations	PDARS
Aircraft Noise and Performance Characteristics	AEDT database flight profiles
Runway Utilization	PDARS
Flight Track Geometry and Use	PDARS
Meteorological Conditions	AEDT database (10-year average)
Terrain Data	USGS NED TIFF

Notes: ADIP = Airport Data and Information Portal; AEDT = Aviation Environmental Design Tool; NASR = National Airspace System Resource; NED = National Elevation Dataset; PDARS = Performance Data Analysis and Reporting System; TIFF = Tagged Image File Format; USGS = United States Geological Services
Source: HMMH 2025

PHYSICAL DESCRIPTION OF THE AIRPORT LAYOUT

This section provides a detailed description of the physical characteristics of the airport layout relevant to the modeling of existing conditions. Information includes runway orientation, length, width, instrumentation, and special features such as helipads. These characteristics are essential for understanding operational capacity, aircraft utilization patterns, and how proposed changes may affect overall airport functionality and planning considerations. The following subsections describe each airport.

The number used to designate each runway end reflects, with the addition of a trailing "0", the magnetic heading of the runway to the nearest 10 degrees from the perspective of the pilot. For example, Runway 8/26 at PHX is oriented along approximate magnetic headings of 78 degrees and 258 degrees and is 11,489 feet long by 150 feet wide.

The airport layouts described below are expected to be used for the existing conditions noise analysis for year 2024.

Phoenix Sky Harbor International Airport (PHX)

PHX is considered the Major Study Airport for the PHX EA due to the focus for procedures and airspace optimization. PHX serves as the primary commercial airport classified as a large hub primary commercial service airport under the FAA's National Plan of Integrated Airport Systems (NPIAS)[2] and is located approximately 3 miles east of downtown Phoenix in Maricopa County, Arizona. The airport is a publicly owned airport by the City of Phoenix, and the layout consists of three parallel east-west runways: Runway 8/26, Runway 7L/25R, and Runway 7R/25L. **Exhibit 1** shows the current airport diagram, and **Table 2** provides the runway specifications used in modeling of the existing conditions.

[2] U.S. Department of Transportation, Federal Aviation Administration, *National Plan of Integrated Airport Systems*, 2025-2029, Appendix A. October 28, 2024.

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Table 2. PHX Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds (feet)
8	33.440861	-112.029794	1,111.1	11,489	3.0	55*	898
26	33.440823	-111.992136	1,134.7	11,489	3.0	55*	0
7L	33.431058	-112.027102	1,110.2	10,300	3.0	57*	0
25R	33.431036	-111.993345	1,134.0	10,300	3.0	55*	0
7R	33.428859	-112.027102	1,111.0	7,800	3.0	57*	0
25L	33.428843	-112.001539	1,126.3	7,800	3.0	49*	0

Notes: MSL = mean sea level; * Threshold crossing heights set to IAPs (ILS/RNAV) values where available.
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025

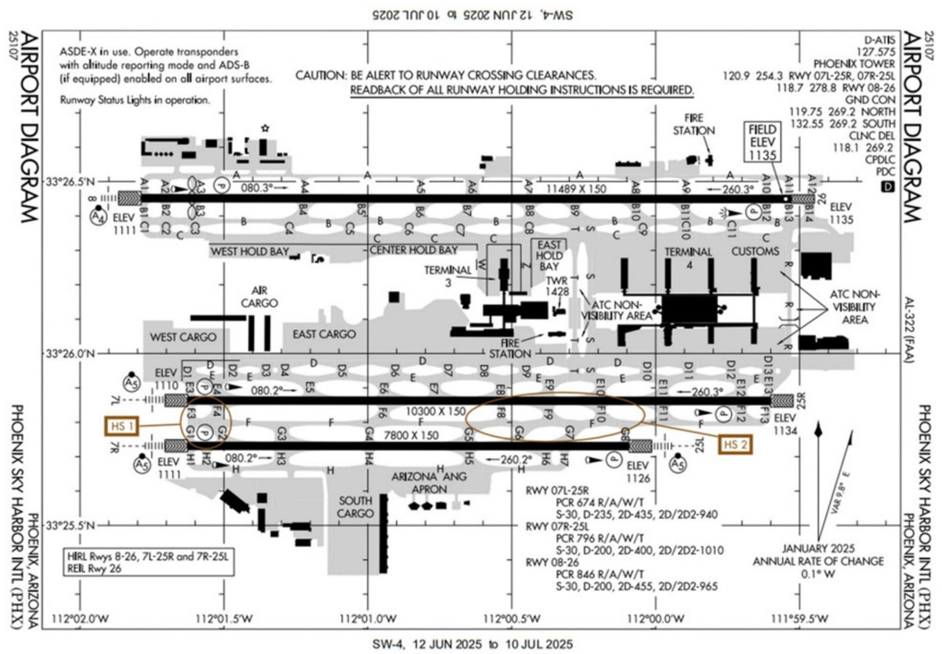


Exhibit 1. PHX Airport Diagram
Source: FAA, accessed on June 23, 2025

Phoenix Deer Valley Airport (DVT)

DVT is a Satellite Study Airport for the PHX EA. DVT is classified as a national level reliever airport under the NPIAS and is located approximately 15 miles north of PHX in Maricopa County, Arizona. The airport is a publicly owned airport by the City of Phoenix and is a busy general aviation airport, serving flight training, corporate, and recreational aviation. The airport layout consists of two parallel runways: Runway 7L/25R and Runway 7R/25L. **Exhibit 2** shows the current airport diagram, and **Table 3** provides the runway specifications used in modeling of the existing and forecast conditions.

Phoenix Area FAA Modernization Project
Environmental Assessment

Table 3. DVT Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
7L	33.689160	-112.089452	1,455.1	4,500	3.5	53	0
25R	33.690020	-112.074696	1,476.8	4,500	4.0	51	0
7R	33.686834	-112.096269	1,439.9	8,196	3.0	42*	898
25L	33.688401	-112.069393	1,478.1	8,196	3.0	40*	916

Notes: MSL = mean sea level; * Threshold crossing heights set to IAPs (ILS/RNAV) values where available.
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025

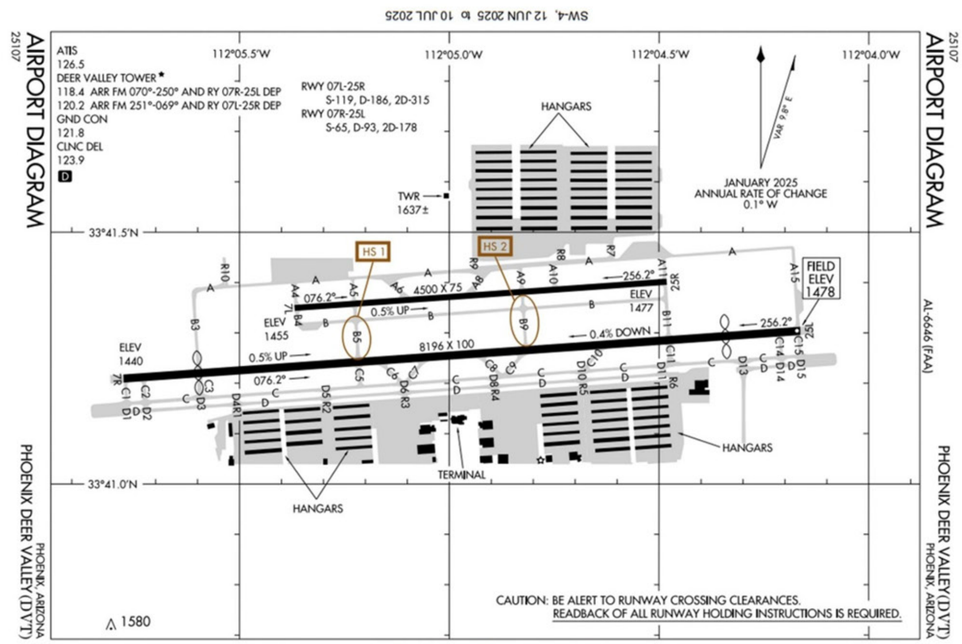


Exhibit 2. DVT Airport Diagram
Source: FAA, accessed on June 23, 2025

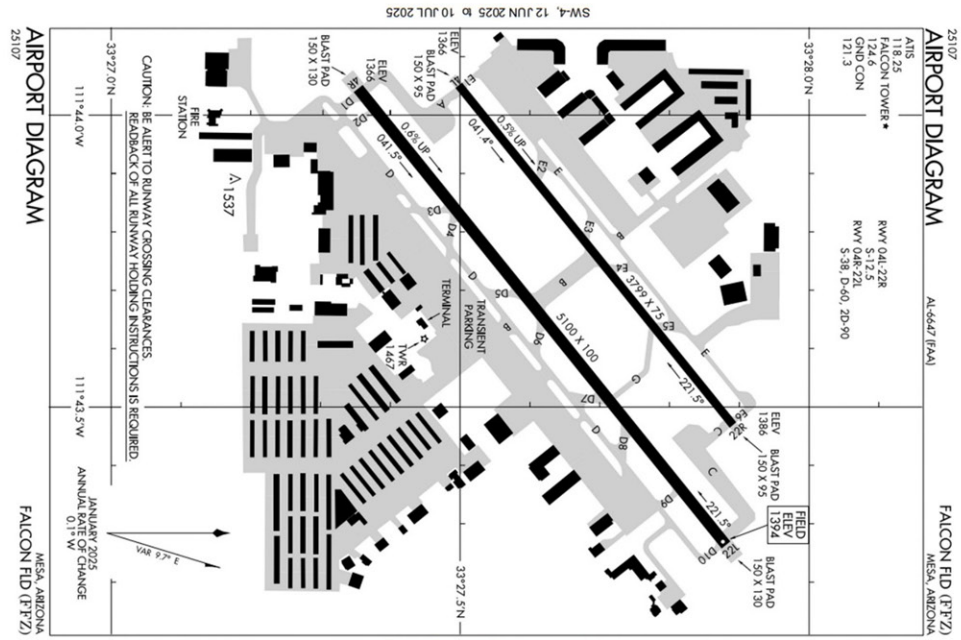
Falcon Field Airport (FFZ)

FFZ is a Satellite Study Airport for the PHX EA. FFZ is classified as a regional level reliever airport in the NPIAS and is located approximately 14 miles east of PHX in Maricopa County, Arizona. The airport is a publicly owned airport by the City of Mesa, Arizona, and is a busy general aviation airport, serving flight training, corporate, and recreational aviation. The airport layout consists of two parallel runways: Runway 4L/22R and Runway 4R/22L. **Exhibit 3** displays the current airport diagram, and **Table 4** lists the runway specifications used in modeling current and forecast conditions.

Table 4. FFZ Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
4L	33.458300	-111.734184	1,365.7	3,799	4.0	39*	0
22R	33.464849	-111.724483	1,386.0	3,799	4.0	42	0
4R	33.455900	-111.734087	1,365.6	5,100	4.0	41*	0
22L	33.464686	-111.721061	1,394.0	5,100	4.0	49	0

Notes: MSL = mean sea level; * Threshold crossing heights set to IAPs (ILS/RNAV) values where available.
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025



SW-4, 12 JUN 2025 to 10 JUL 2025

Exhibit 3. FFZ Airport Diagram
Source: FAA, accessed on June 23, 2025

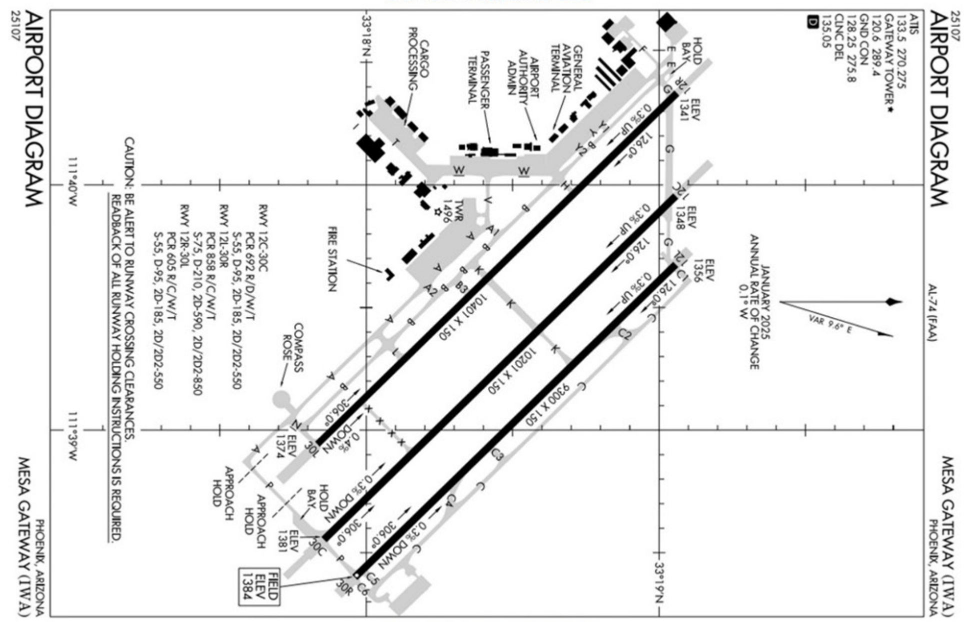
Mesa Gateway Airport (IWA)

IWA is a Satellite Study Airport for the PHX EA and is the second largest commercial airport in the region. IWA is classified as a small hub primary commercial service airport under the NPIAS and is located approximately 19 miles southeast of PHX in Mesa, Arizona. The airport is a publicly owned airport by the Mesa Gateway Airport Authority, and the airport layout consists of three parallel runways: Runway 12C/30C, Runway 12L/30R, and Runway 12R/30L. **Exhibit 4** shows the current airport diagram, and **Table 5** provides the runway specifications used in modeling of the existing conditions.

Table 5. IWA Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
12C	33.317613	-111.665923	1,347.7	10,201	3.0	50*	0
30C	33.297594	-111.642553	1,380.5	10,201	3.0	41*	0
12L	33.317590	-111.661313	1,356.3	9,300	3.0	74	0
30R	33.299337	-111.640007	1,384.1	9,300	3.0	55*	0
12R	33.317671	-111.672868	1,341.2	10.401	3.0	45*	0
30L	33.297262	-111.649036	1,374.2	10,401	3.0	55*	0

Notes: MSL = mean sea level; * Threshold crossing heights set to IAPs (ILS/RNAV) values where available.
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025



SW-4, 12 JUN 2025 to 10 JUL 2025

Exhibit 4. IWA Airport Diagram
Source: FAA, accessed on June 23, 2025

Chandler Municipal Airport (CHD)

CHD is a Satellite Study Airport for the PHX EA. CHD is classified as a regional level reliever airport in the NPIAS and is located approximately 14 miles southeast of PHX in Maricopa County, Arizona. The airport is a publicly owned airport by the City of Chandler, Arizona, and is a general aviation airport, serving flight training, corporate, and recreational aviation. The airport layout includes two parallel runways: Runway 4L/22R and Runway 4R/22L. **Exhibit 5** shows the current airport diagram, and **Table 6** provides the runway specifications used in modeling of the existing and forecast conditions.

Table 6. CHD Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
4L	33.264113	-111.819952	1,231.0	4,401	3.5	48	0
22R	33.271948	-111.808986	1,236.4	4,401	3.0	40	0
4R	33.265725	-111.814163	1,235.9	4.870	3.0	39*	0
22L	33.274392	-111.802026	1,243.3	4,870	3.0	45	0

Notes: MSL = mean sea level; * Threshold crossing heights set to IAPs (ILS/RNAV) values where available.
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025

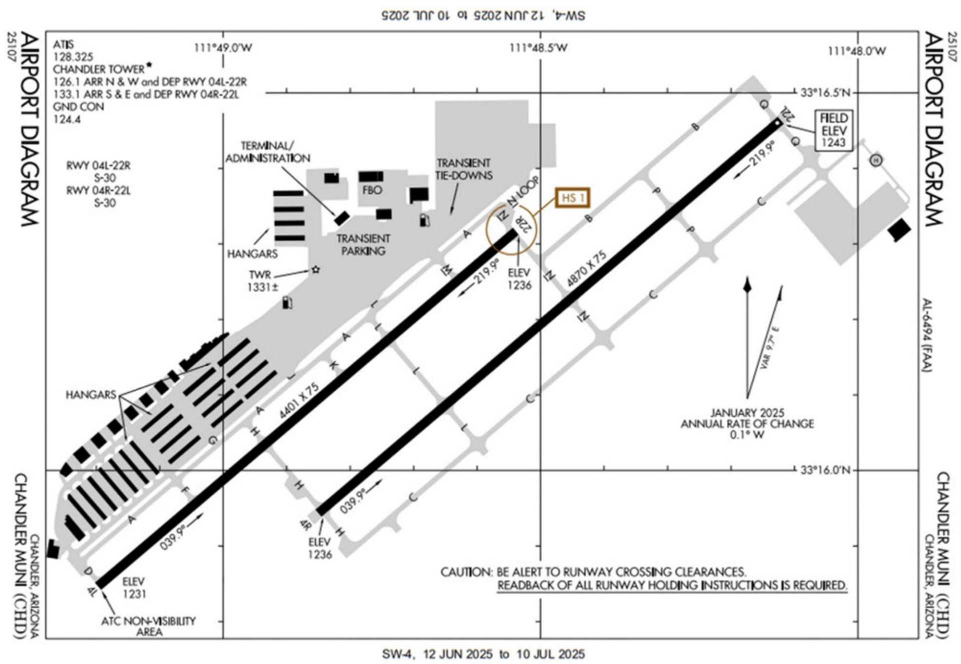


Exhibit 5. CHD Airport Diagram
Source: FAA, accessed on June 23, 2025

Phoenix Goodyear Airport (GYR)

GYR is a Satellite Study Airport for the PHX EA. GYR is classified as a national level reliever airport under the NPIAS and is located approximately 18 miles west of PHX in Maricopa County, Arizona. The airport is a publicly owned airport by the City of Phoenix and is a busy general aviation airport, serving flight training, corporate, and recreational aviation. The airport includes a single runway: Runway 3/21. **Exhibit 6** shows the current airport diagram, and **Table 7** provides the runway specifications used in modeling of the existing and forecast conditions.

Table 7. GYR Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
3	33.414089	-112.383954	942.8	8,500	3.0	53	0
21	33.432473	-112.366769	969.1	8,500	3.0	53	0

Note: MSL = mean sea level
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025

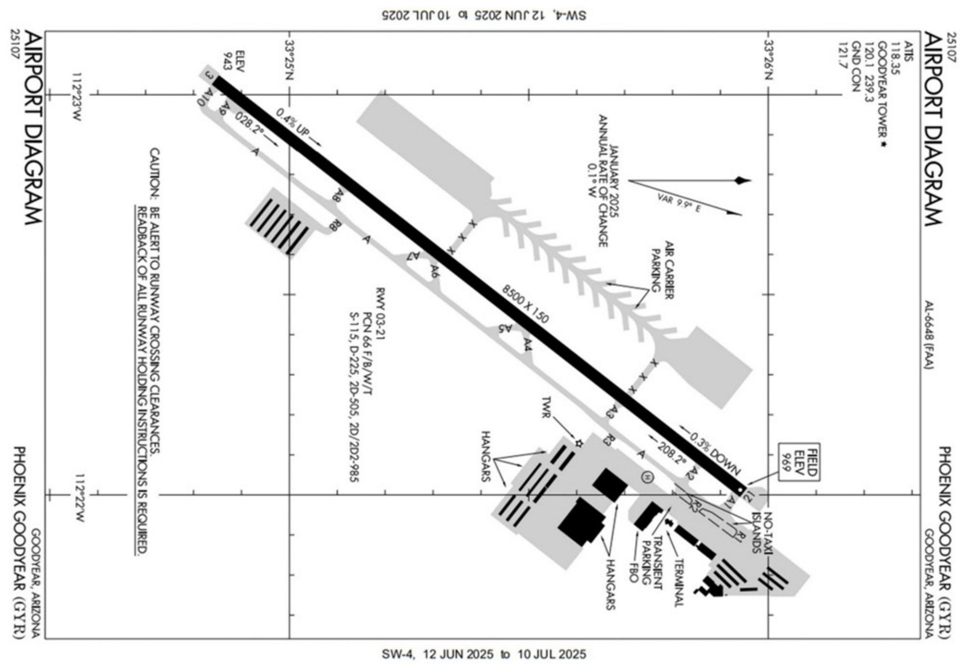


Exhibit 6. GYR Airport Diagram
Source: FAA, accessed on June 23, 2025

Glendale Regional Airport (GEU)

GEU is a Satellite Study Airport for the PHX EA. GEU is classified as a regional level reliever airport in the NPIAS and is located approximately 15 miles west of PHX in Maricopa County, Arizona. The airport is a publicly owned airport by the City of Glendale, Arizona, and is a general aviation airport, serving flight training, corporate, and recreational aviation The airport includes a single runway: Runway 1/19. **Exhibit 7** shows the current airport diagram, and **Table 8** provides the runway specifications used in modeling of the existing and forecast conditions.

Table 8. GEU Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
1	33.518060	-112.300215	1,041.4	7,150	3.0	40*	701
19	33.535763	-112.290040	1,071.3	7,150	3.0	55*	1,001

Notes: MSL = mean sea level; * Threshold crossing heights set to IAPs (ILS/RNAV) values where available.
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025

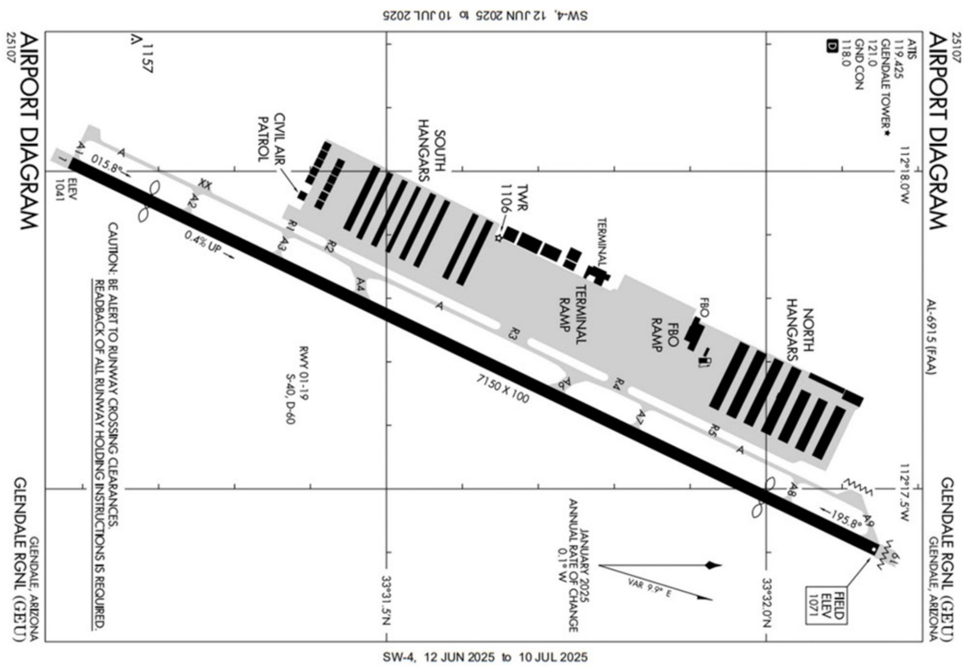


Exhibit 7. GEU Airport Diagram
Source: FAA, accessed on June 23, 2025

Scottsdale Airport (SDL)

SDL is a Satellite Study Airport for the PHX EA. SDL is classified as a national level reliever airport under the NPIAS and is located approximately 12 miles northeast of PHX in Maricopa County, Arizona. The airport is a publicly owned airport by the City of Scottsdale and is a general aviation airport, serving flight training, corporate, and recreational aviation. The airport includes a single runway: Runway 3/21. **Exhibit 8** shows the current airport diagram, and **Table 9** provides the runway specifications used in modeling of the existing and forecast conditions.

Table 9. SDL Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
3	33.614725	-111.919940	1,444.2	8,249	3.00	60*	740
21	33.631033	-111.901122	1,510.1	8,249	3.53	60*	400

Notes: MSL = mean sea level; * Threshold crossing heights set to IAPs (ILS/RNAV) values where available.
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025

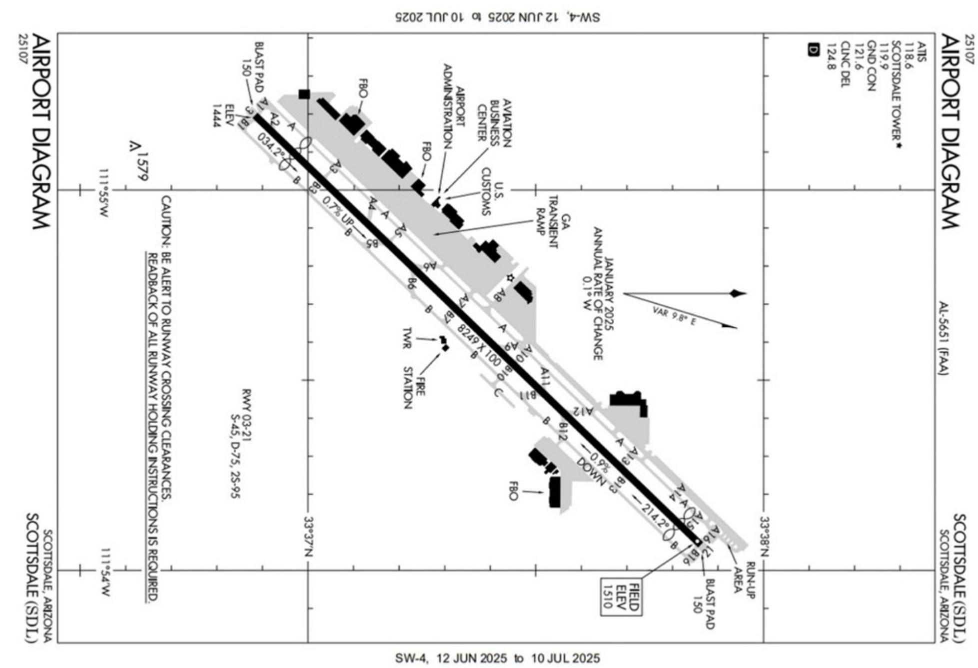


Exhibit 8. SDL Airport Diagram
Source: FAA, accessed on June 23, 2025

Buckeye Municipal Airport (BXK)

BXK is a Satellite Study Airport for the PHX EA. BXK is classified as a local general aviation airport under the NPIAS and is located approximately 35 miles west of PHX in Maricopa County, Arizona. The airport is a publicly owned airport by the City of Buckeye and is a general aviation airport, serving mostly flight training and recreational aviation. The airport consists of a single runway: Runway 17/35. **Exhibit 9** shows the current airport diagram, and **Table 10** provides the runway specifications used in modeling of the existing and forecast conditions.

Table 10. BXK Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
17	33.430086	-112.685931	1,033.0	5,500	3.13	40	0
35	33.414981	-112.686536	994.5	5,500	3.00	50	0

Note: MSL = mean sea level
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025

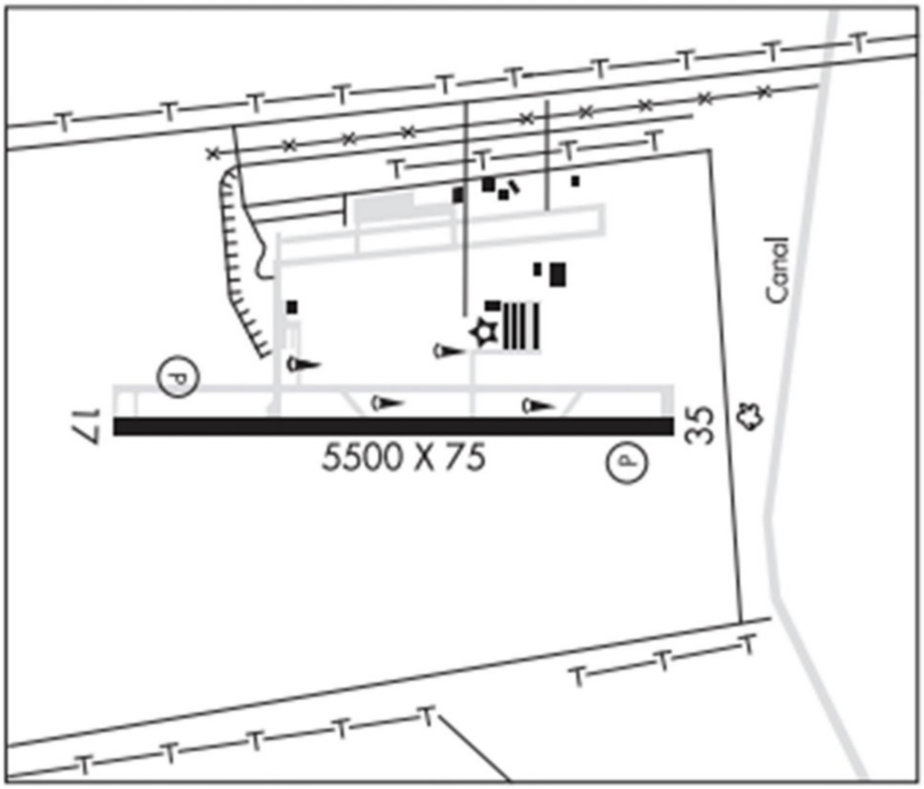


Exhibit 9. BXK Airport Diagram
Source: FAA, accessed on June 23, 2025

Stellar Airpark Airport (P19)

P19 is a Satellite Study Airport for the PHX EA. P19 is not classified in the NPIAS and is located approximately 9 miles southeast of PHX in Maricopa County, Arizona. The airport is a privately owned public use airport by Stellar Runway Utilizers Association, Inc. and is a general aviation airport. The airport includes a single runway: Runway 17/35. **Exhibit 10** shows the current airport diagram, and **Table 11** outlines the runway specifications used for modeling existing and forecast conditions.

Table 11. P19 Runway Specifications

Runway End	Latitude	Longitude	Elevation (feet MSL)	Length (feet)	Approach Angle (degrees)	Threshold Crossing Height (feet)	Displaced Thresholds
17	33.304840	-111.915782	1,178.0	4,417	3.25	39	366
35	33.292703	-111.915793	1,173.7	4,417	3.25	40*	349

Note: MSL = mean sea level; * Threshold crossing heights set to IAPs (ILS/RNAV) values where available.
Source: HMMH 2025, FAA National Airspace System Resource (NASR), effective August 7, 2025

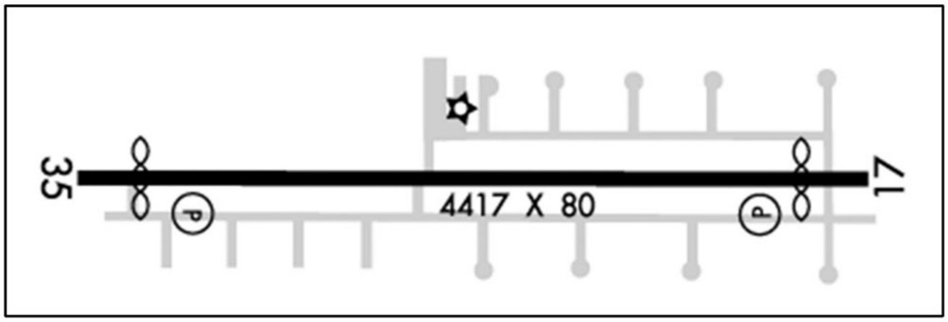


Exhibit 10. P19 Airport Diagram
Source: FAA, accessed on June 23, 2025

AIRCRAFT OPERATIONS

The FAA Operations Network (OPSNET) tower counts by category for CY 2024 and FAA Traffic Flow Management System Counts (TFMSC) were used to develop the aircraft operations levels for the existing conditions fleet mix. The FAA's 2024 Terminal Area Forecast (TAF), issued in January 2025 as the most recent TAF, was used as the basis for the PHX EA forecast, including the generation of the existing and future years noise exposure levels. The TAF is the official forecast of aviation activity at FAA facilities and is updated annually. The FAA's Performance Data Analysis and Reporting System (PDARS) flight track data for the 12-month period (January 1, 2024, through December 31, 2024) was used to develop the existing aircraft fleet mix for each airport.

The forecasts developed for the PHX EA are based on the itinerant operations included in the TAF. The existing and forecast level of operations for the PHX EA only include operations conducted by aircraft operating under Instrument Flight Rules (IFR) because the Proposed Action involves the design of standard instrument arrival and departure procedures, which are only used by aircraft operating under IFR.[3] The forecast data presented in this memo was approved by the FAA for use in the PHX EA on August 11, 2025. **Table 12** provides a summary of the operations in the approved forecast.

[3] Aircraft operate under two distinct categories of flight rules: Visual Flight Rules (VFR) and Instrument Flight Rules (IFR). These flight rules generally correspond with two categories of weather conditions: Visual Meteorological Conditions (VMC) and Instrument Meteorological Conditions (IMC). VMC generally exist during fair to good weather with good visibility. IMC occur during periods when visibility falls to less than three statute miles or the ceiling (the distance from the ground to the bottom layer of clouds when the clouds cover more than 50 percent of the sky) drops to lower than 1,000 feet. Under VFR, pilots are able to fly whatever route they choose and are responsible to "see and avoid" other aircraft and obstacles such as terrain to maintain safe separation. Under IFR, ATC is responsible for providing separation from other aircraft and terrain, and pilots use cockpit instruments and radar to fly routes specified by ATC and to comply with ATC instructions. Pilots must follow IFR during IMC; however, due to various factors such as the general requirement for aircraft to operate under IFR in Class A airspace [i.e., en route airspace between 18,000 feet and 60,000 feet Mean Sea Level (MSL)], the majority of commercial air traffic operates under IFR regardless of weather conditions.

Table 12. IFR Annual Operation Counts by Airport and Year

Airport	Year	Air Carrier	Air Taxi	General Aviation	Military	Total
PHX	2024	427,520	29,326	15,890	1,947	474,683
PHX	2027	486,283	32,771	15,890	1,947	536,891
PHX	2032	531,873	34,834	15,890	1,947	584,544
DVT	2024	-	7,331	7,485	44	14,860
DVT	2027	-	7,676	8,734	44	16,454
DVT	2032	-	8,289	8,989	44	17,322
FFZ	2024	-	3,873	6,067	90	10,030
FFZ	2027	-	4,160	6,119	90	10,369
FFZ	2032	-	4,665	6,207	90	10,962
IWA	2024	13,613	9,721	6,151	1,058	30,543
IWA	2027	15,744	9,941	6,973	1,058	33,716
IWA	2032	17,191	10,448	7,218	1,058	35,915
CHD	2024	-	2,281	2,750	16	5,041
CHD	2027	-	2,479	2,992	16	5,487
CHD	2032	-	2,849	3,069	16	5,934
GYR	2024	338	8,992	2,106	114	11,550
GYR	2027	341	9,543	2,699	114	12,697
GYR	2032	368	10,536	2,835	114	13,853
GEU	2024	-	1,084	2,236	8	3,328
GEU	2027	-	1,679	2,295	8	3,982
GEU	2032	-	2,734	2,397	8	5,139
SDL	2024	-	33,574	33,335	288	67,197
SDL	2027	-	37,876	36,217	288	74,381
SDL	2032	-	46,304	36,821	288	83,413
BXK	2024	-	14	316	-	330
BXK	2027	-	15	344	-	359
BXK	2032	-	17	353	-	370
P19	2024	-	-	670	-	670
P19	2027	-	-	729	-	729
P19	2032	-	-	748	-	748

Note: Totals may not match exactly due to rounding.
Sources: PDARS Data (1/1/2024-12/31/2024), OPSNET accessed July 2025, TFMSC accessed July 2025

The derivation of the fleet mix utilized existing IFR aircraft operations at the Airports and included itinerant passenger, cargo, air taxi, general aviation, and military operations. The aircraft operations data entered into AEDT included the number of day and night arrivals, and departures operations. The fleet mix for the forecast years (2027 and 2032) was adjusted based on aircraft no longer in production, airline orders, and aircraft retirements. Details of the fleet mix developed for each year and airport are provided in Attachment A of the Forecast Memorandum.

Since the Proposed Action will not affect airport capacity, the operations for the No Action and Proposed Action are the same for a given modeling year in 2027 and 2032.

AIRCRAFT NOISE AND PERFORMANCE CHARACTERISTICS

AEDT requires the use of specific noise and performance data for each aircraft type operating at the airport. Noise data is in the form of Sound Exposure Level (SEL) at a range of distances (from 200 feet to 25,000 feet) from a particular aircraft with engines at a range of thrust levels. Performance data include thrust, speed, and altitude profiles for takeoff and landing operations. The AEDT database contains standard noise and performance data for over 300 different fixed-wing types of aircraft, most of which are civilian aircraft.

Within the AEDT database, it is standard for aircraft takeoff or departure profiles to be defined by a range of trip distances identified as "stage lengths." Higher stage lengths (longer trip distances) are associated with heavier aircraft due to the increase in fuel requirements for the flight. For the PHX EA, stage lengths are defined using city pair distances, determined by the great-circle distance from the originating airport to the planned arrival city. **Table 13** shows the trip length, in nautical miles, for each stage length.

Table 13. Stage Lengths Defined in AEDT

Stage Length Number	Trip Length (nautical miles)
1	0-500
2	500-1,000
3	1,000-1,500
4	1,500-2,500
5	2,500-3,500
6	3,500-4,500
7	4,500-5,500
8	5,500-6,500
9	6,500-11,000
M	Maximum range at max takeoff weight

Source: AEDT Version 3g User Guide, Page 138

The number of stage lengths available depends on the AEDT type in the model. Most commercial aircraft and large business jets in the AEDT have multiple stage lengths available. Most small jets, turboprops and pistons only have one stage length available (i.e., one departure takeoff weight). The detailed breakdown of departure stage lengths for each airport and year is provided in **Attachment A** (see **Table A-1** through **Table A-30**).

Aside from identifying the aircraft type in the database, AEDT has STANDARD and International Civil Aviation Organization (ICAO) aircraft flight profiles for takeoffs, landings, and flight patterns or touch-and-go operations. The PHX EA used STANDARD profiles for all civilian aircraft types and military aircraft types in the existing condition.

RUNWAY UTILIZATION

The primary factor affecting runway use at airports is weather; specifically, the wind direction and wind speed. An additional factor that may affect runway use includes the position of the facility or ramp the aircraft is destined for relative to the runway.

Team CS utilized data obtained from PDARS to compile airport runway use tables and categorized this information by arrival and departure, as well as day and night. Team CS separated the data by engine type (i.e., jet, turboprop, piston) since these categories of aircraft types may use the runways differently.

Table 14 presents the combined runway utilization rates for arrivals and departures for each Study Airport used to model the aircraft noise contours for the existing conditions. As there are currently no changes to airfield layouts under the No Action cases, the runway utilization rates for these scenarios are expected to be the same as the Existing Condition. Runway use broken down by aircraft category for each airport is provided in **Attachment B** (see **Table B-1** through **Table B-10**).

CONCEPT SOLUTIONS

Table 14. Existing Runway Use by Airport

Airport	Airport Runway	Arrivals	Departures
PHX	8	25.8%	3.1%
PHX	26	34.0%	1.9%
PHX	7L	1.2%	40.6%
PHX	25R	1.8%	48.6%
PHX	7R	16.2%	3.3%
PHX	25L	21.0%	2.5%
PHX	**Total**	**100.0%**	**100.0%**
DVT	07L	2.0%	10.4%
DVT	25R	6.8%	2.8%
DVT	07R	38.2%	49.8%
DVT	25L	53.0%	37.0%
DVT	**Total**	**100.0%**	**100.0%**
FFZ	04L	4.0%	3.6%
FFZ	22R	10.8%	6.5%
FFZ	04R	28.4%	39.7%
FFZ	22L	56.9%	50.2%
FFZ	**Total**	**100.0%**	**100.0%**
IWA	12C	19.1%	23.4%
IWA	30C	17.9%	13.9%
IWA	12L	0.7%	1.5%
IWA	30R	0.8%	0.6%
IWA	12R	32.8%	41.3%
IWA	30L	28.7%	19.4%
IWA	**Total**	**100.0%**	**100.0%**
CHD	04L	19.0%	29.0%
CHD	22R	49.4%	47.8%
CHD	04R	10.9%	10.6%
CHD	22L	20.7%	12.6%
CHD	**Total**	**100.0%**	**100.0%**
GYR	3	19.0%	24.8%
GYR	21	81.0%	75.2%
GYR	**Total**	**100.0%**	**100.0%**
GEU	1	37.9%	37.1%
GEU	19	62.1%	62.9%
GEU	**Total**	**100.0%**	**100.0%**
SDL	3	9.4%	13.6%
SDL	21	90.6%	86.4%
SDL	**Total**	**100.0%**	**100.0%**
BXK	1	76.1%	58.3%
BXK	19	23.9%	41.7%
BXK	**Total**	**100.0%**	**100.0%**

Airport	Airport Runway	Arrivals	Departures
P19	17	79.4%	97.5%
P19	35	20.6%	2.5%
P19	**Total**	**100.0%**	**100.0%**

Note: Totals may not match exactly due to rounding.
Source: PDARS Data (1/1/2024-12/31/2024)

METEOROLOGICAL CONDITIONS

The AEDT has several settings that affect aircraft performance profiles and sound propagation based on meteorological data. Meteorological settings include average annual temperature, barometric pressure, and relative humidity at the airport. The AEDT contains the following 10-year average default values for weather conditions (2014 through 2023) for each of the Study Airports. The values listed in **Table 15** will be used for existing condition and future condition modeling.

Table 15. Average Meteorological Conditions by Study Airport

Airport	Temperature (°F)	Pressure (millibars)	Sea-Level Pressure (millibars)	Relative Humidity (%)	Dew Point (°F)	Wind Speed (Knots)
PHX	76.68	973.01	1,011.34	25.95	39.10	5.75
DVT	73.28	960.66	1,011.74	27.65	37.82	5.02
FFZ	76.26	963.59	1,012.08	26.17	38.86	5.97
IWA	69.81	964.49	-	32.72	39.10	5.76
CHD	77.26	968.92	-	25.17	38.77	5.55
GYR	77.40	978.57	-	26.65	40.40	6.01
GEU	78.25	975.26	-	24.18	38.61	4.40
SDL	74.31	959.94	1,012.02	27.99	39.05	3.29
BXK	72.79	976.70	-	29.19	38.79	5.25
P19	77.26	968.92	-	25.17	38.77	5.55

Note: Data for P19 is not available in AEDT so CHD data will be used for P19.
Source: FAA AEDT version 3g, National Oceanic and Atmospheric Administration (NOAA) Integrated Surface Database (ISD)

TERRAIN DATA

Terrain data describes the elevation of the ground surrounding the airport and on airport property. The AEDT uses terrain data to adjust the ground level under the flight paths. The terrain data does not change the aircraft's performance or noise levels but alters the vertical distance between the aircraft and a "receiver" on the ground. This affects assumptions about how noise propagates over ground. Team CS obtained the terrain data from the United States Geological Survey (USGS) National Elevation Dataset with one-third arc second (approximately 33 feet) resolution for the extent of the Supplemental Study Area. Terrain data was utilized in conjunction with the terrain feature of the AEDT to generate the noise contours for the existing condition.

OPERATIONAL EMISSIONS METHODOLOGY AND INPUTS

Aircraft taxiing has a negligible effect on off-airport noise levels, but it can be a factor in the assessment of air pollutant emissions. Since there is no change in the number of aircraft operations between the No Action and the Proposed Action alternatives, the emissions inventory results will only show changes in emissions due to taxi times, differences in runway usage, and routes flown. Team CS will conduct the analysis following FAA's *Aviation Emissions and Air Quality Handbook, Version 4*[4] and AEDT. AEDT is the FAA-required computer model for assessing air

[4] FAA, *Aviation Emissions and Air Quality Handbook*, https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook.

emissions associated with airports. The fleet mix and landing and takeoff (LTO) operations will be consistent with the noise analysis.

The United States Environmental Protection Agency (US EPA) enforces the Clean Air Act (CAA), established in 1970 and last amended in 1990, which requires the review of seven criteria pollutants in analysis of air quality according to the National Ambient Air Quality Standards (NAAQS). The seven criteria air pollutants analyzed for the purposes of the PHX EA plan include:[5]

1. Carbon monoxide (CO)
2. Nitrogen dioxide (NO_2), calculated and expressed as nitrogen oxides (NOx)
3. Particulate matter with a diameter of 10 micrometers or less (PM_{10})
4. Particulate matter with a diameter of 2.5 micrometers or less ($PM_{2.5}$)
5. Sulfur dioxide (SO_2)
6. Lead (Pb)
7. Ozone (O_3)

Regarding the seventh pollutant, O_3 is an indirect or secondary pollutant that occurs due to chemical reactions primarily between NOx and volatile organic compounds (VOCs). As a result, VOCs and NOx, the primary precursors to ozone formation, provide surrogate information for assessing ozone levels.

Changes to flight paths under the Proposed Action for the PHX EA will mostly occur at or above 3,000 feet above ground level (AGL) and are presumed to conform to the applicable state implementation plans (SIPs).[6] Furthermore, changes to flight paths below the mixing height are also presumed to conform when modifications to procedures are designed to enhance operational efficiency. However, some changes to flight procedures below 3,000 feet AGL may occur and will be assessed as needed for the PHX EA.

AEDT requires additional input data for air quality analysis including the aircraft engine type operating at the airport and taxi times are needed to determine air quality pollutant emissions, including fuel burn. Since there would be no change in aircraft operations between the No Action and Proposed Action, ground support equipment (GSE) and auxiliary power unit (APU) usage will not be modeled. For taxi times, Team CS will use the default taxi times provided in the AEDT version 3g database for each airport. **Table 16** presents the average taxi-in and taxi-out times by runway end for each airport and modeling condition.

Table 16. Existing and Future Taxi Times

Airport	Taxi Out Time (Minutes)	Taxi In Time (Minutes)
PHX	894	406
DVT	738	366
FFZ	738	366
IWA	738	366
CHD	738	366
GYR	738	366
GEU	738	366
SDL	1140	420
BXK	1140	420
P19	738	366

Source: HMMH 2025, AEDT version 3g

[5] US EPA, 2017, *NAAQS Table*, https://www.epa.gov/criteria-air-pollutants/naaqs-table, accessed August 27, 2025.

[6] Federal Presumed to Conform Actions under General Conformity, 72 Fed. Reg. 41565 (July 30, 2007).

Annual aircraft taxiing emissions are a function of the number of aircraft operations expressed as LTO cycles, the aircraft fleet mix (specific types of aircraft/engines used), and the length of time aircraft spend in taxiing mode of operation defined in AEDT.

Pollutant emissions for aircraft taxiing operations using the above assumptions will be estimated using AEDT for the LTO modes and touch-and-go (e.g., circuit model) operations in taxing. Lead emissions are associated with leaded aviation fuel used in general aviation piston engine aircraft. AEDT does not estimate lead emissions directly. Therefore, Team CS will calculate these emissions based on fuel consumption and lead fuel content consistent with FAA/US EPA methodology described in the *Aviation Emissions and Air Quality Handbook*.[7]

FLIGHT TRACK GEOMETRY

The flight tracks to be used in the modeling were developed from the PDARS radar data. Team CS used an industry-standard method to develop model tracks that entail analyzing all radar data for each airport by splitting the flight tracks into similar and manageable groups. The standard procedure separates tracks by operation type, (i.e., arrival, departure, circuit) and runway end, aircraft type (i.e., jet, piston prop, and turboprop) and destination/direction. Team CS analyzed flight tracks with the same operation type, runway end, and destination direction for similar geometry, and this resulted in the final radar track bundles used to create model tracks. Geometrically similar groups with wide dispersion have a 'backbone' track and one to four 'dispersion' sub tracks on either side of the backbone, for three, five, seven, or nine total tracks (e.g., one backbone and two, four, six, or eight 'dispersion' tracks).

The AEDT model tracks and radar tracks used to develop the model tracks for BXK are shown in **Exhibit 11** to **Exhibit 14**. **Exhibit 11** and **Exhibit 13** provide a close in view of the tracks within 10 nautical miles of the airport and **Exhibit 12** and **Exhibit 14** display the tracks across the two Study Areas. Due to the limited number of BXK tracks, only backbone model tracks were developed, and the tracks are tagged as Jet but represent jet, piston, and turboprop. Currently, BXK does not have any instrument procedures.

Each exhibit displays the track labels which can be decoded as follows:

A17J07 – (A) Arrival, (17) Runway 17, (J) Jet, (07) Track number 7

D35J03 – (D) Departure, (35) Runway 35, (J) Jet, (03) Track number 3

Model tracks for the other nine airports are being completed. The tracks for the other airports, which do have instrument procedures, will have expanded labeling and details. **Team CS would appreciate FAA's input on the level of detail desired for the track review. Is this set of scaling sufficient? Does FAA want to review each procedure for each airport/runway?**

FAA would like to review track data for most used RWY and Procedures.

FAA Concurs with the Team CS proposal.

DANIELLE MARISA GRESSER
Digitally signed by DANIELLE MARISA GRESSER
Date: 2025.09.18 09:30:20 -05'00'

[7] FAA, *Aviation Emissions and Air Quality Handbook,* Equation A1-3 (Lead Emission Calculation), page 4 of Appendix A, page 119 of the full document, https://www.faa.gov/regulations_policies/policy_guidance/envir_policy/airquality_handbook/media/Air_Quality_Handbook_Appendices.pdf

CONCEPT SOLUTIONS

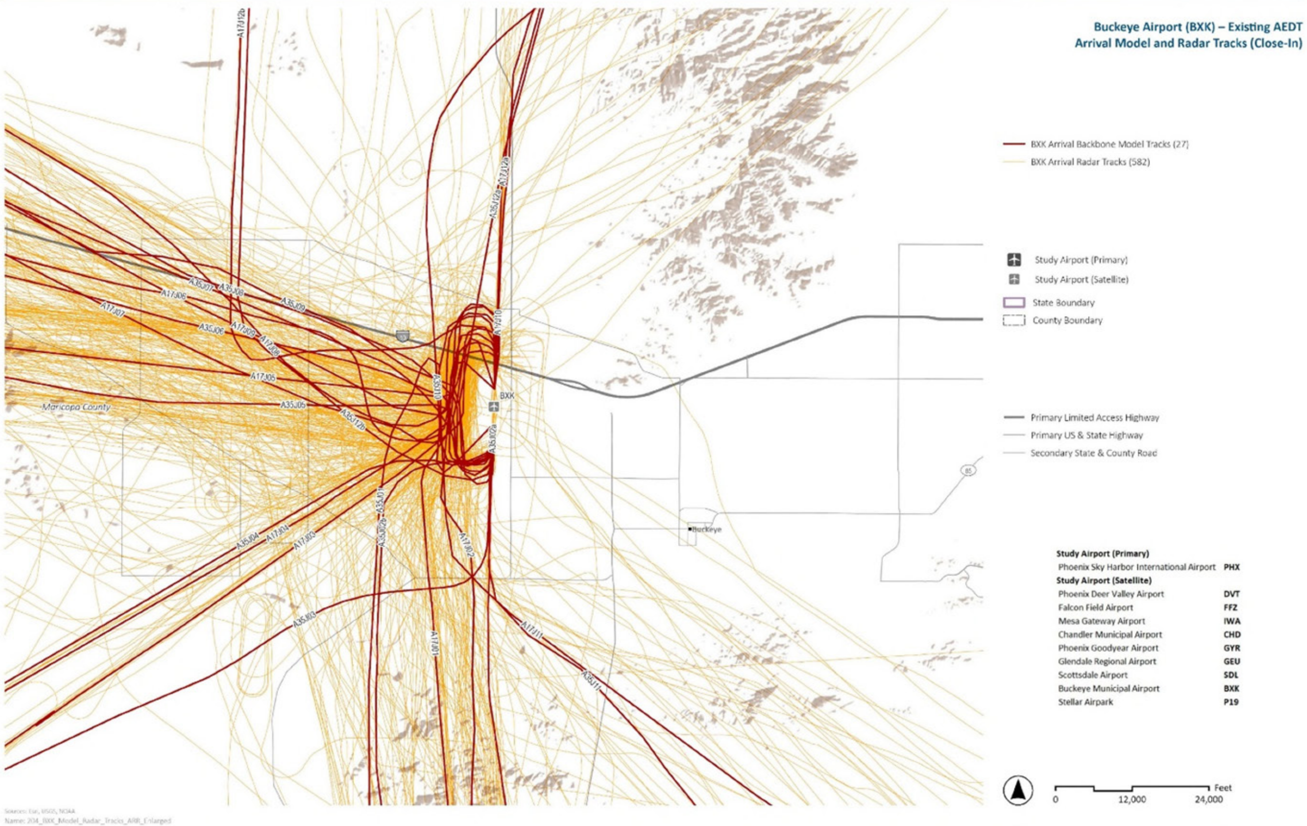


Exhibit 11. Buckeye Airport (BXK) – Existing AEDT Arrival Model and Radar Tracks (Close-In)
Source: FAA PDARS, HMMH, August 2025

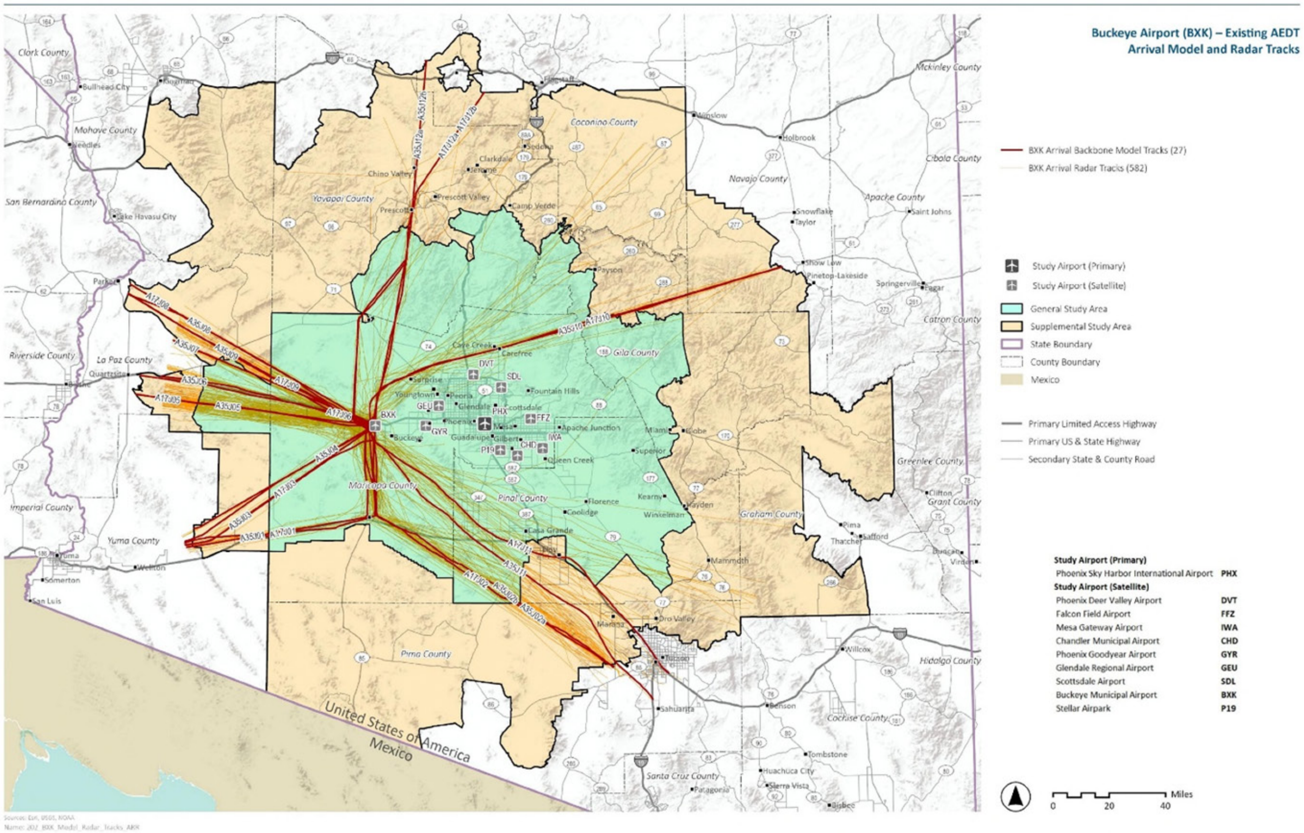


Exhibit 12. Buckeye Airport (BXK) – Existing AEDT Arrival Model and Radar Tracks
Source: FAA PDARS, HMMH, August 2025

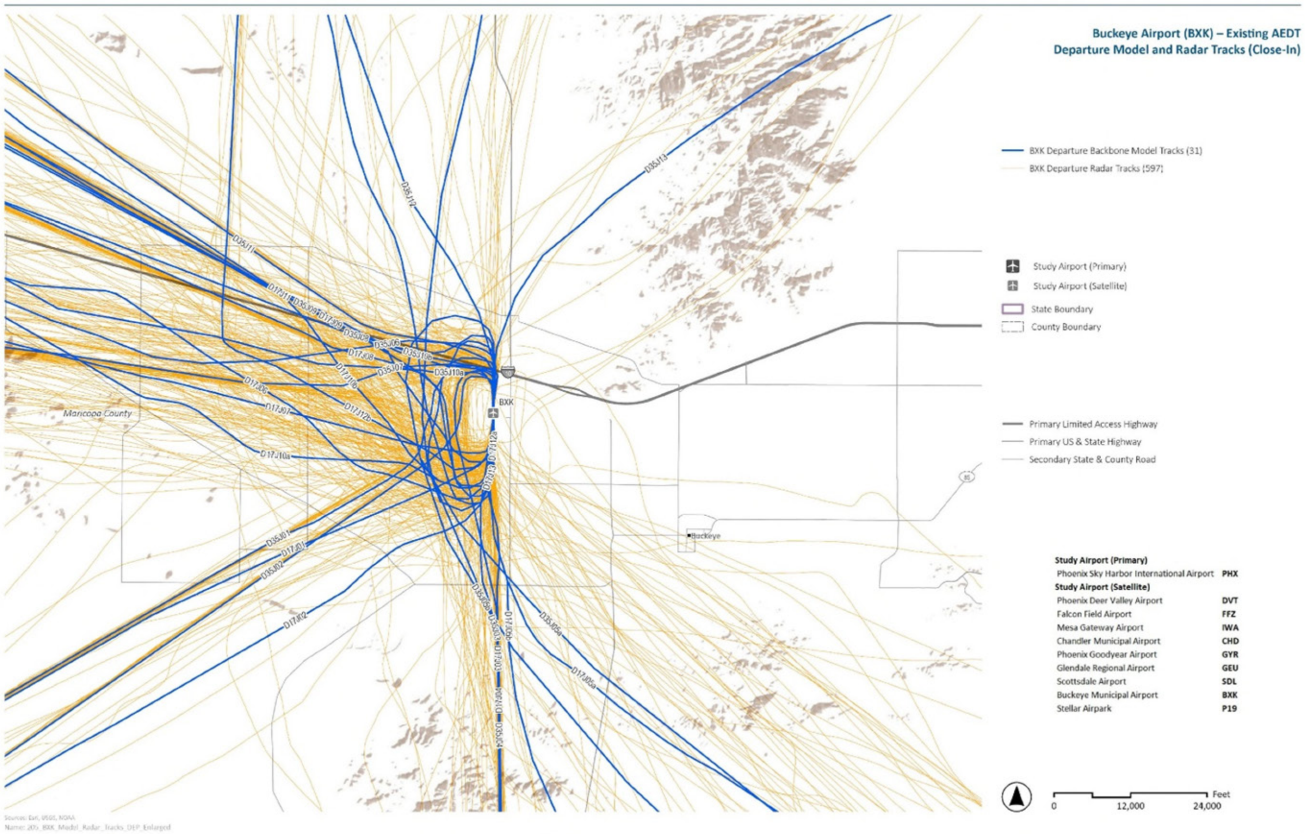


Exhibit 13. Buckeye Airport (BXK) – Existing AEDT Departure Model and Radar Tracks (Close-In)
Source: FAA PDARS, HMMH, August 2025

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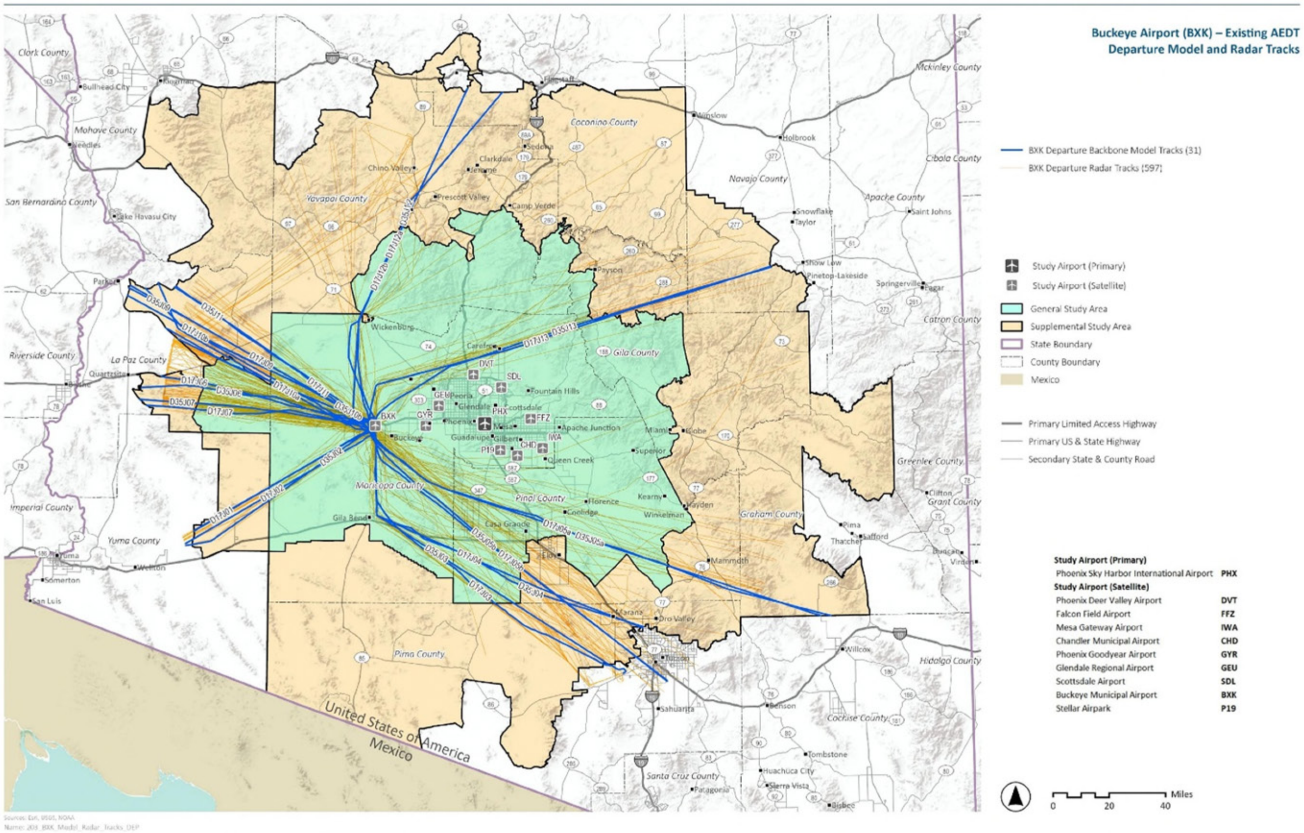

Exhibit 14. Buckeye Airport (BXK) – Existing AEDT Departure Model and Radar Tracks
Source: FAA PDARS, HMMH, August 2025

Phoenix Area FAA Modernization Project
Environmental Assessment

ATTACHMENT A – AIRPORT OPERATIONS STAGE LENGTH DETAILED BREAKDOWN

Table A-1. PHX Modeled 2024 Departure Stage Length Day and Night Operations

FAA Category and Market	Engine	Aircraft Designator	AEDT equip ID	AEDT Airframe	AEDT ANP Type	Total Operations	Total Arrivals	Total Departures	SL 1 (Day)	SL 2 (Day)	SL 3 (Day)	SL 4 (Day)	SL 5 (Day)	SL 6 (Day)	SL 7 (Day)	SL 1 (Night)	SL 2 (Night)	SL 3 (Night)	SL 4 (Night)	SL 5 (Night)	SL 6 (Night)	SL 7 (Night)
Air Carrier Cargo	Jet	A306	704	Airbus A300F4-600 Series	A300-622R	305	152	152	33	-	59	-	-	-	-	-	-	60	-	-	-	-
Air Carrier Cargo	Jet	A306	710	Airbus A300F4-600 Series	A300-622R	71	36	36	-	-	5	-	-	-	-	-	-	31	-	-	-	-
Air Carrier Cargo	Jet	B738	6418	Boeing 737-800BCF	737800	664	332	332	136	142	-	-	-	-	-	54	-	-	-	-	-	-
Air Carrier Cargo	Jet	B752	3917	Boeing 757-200 Series Freighter	757RR	433	217	217	12	-	140	-	-	-	-	-	-	56	9	-	-	-
Air Carrier Cargo	Jet	B762	3921	Boeing 767-200 Series Freighter	767CF6	358	179	179	40	23	70	-	-	-	-	8	3	5	31	-	-	-
Air Carrier Cargo	Jet	B762	4054	Boeing 767-200 Series Freighter	767CF6	368	184	184	21	-	74	-	-	-	-	8	-	12	69	-	-	-
Air Carrier Cargo	Jet	B763	4087	Boeing 767-300 ER Freighter	7673ER	4,139	2,070	2,070	76	353	872	-	-	-	-	159	10	599	-	-	-	-
Air Carrier Cargo	Jet	B763	6670	Boeing 767-300BCF	7673ER	2,354	1,177	1,177	145	56	445	-	-	-	-	26	198	306	-	-	-	-
Air Carrier Cargo	Jet	B77L	4038	Boeing 777 Freighter	777300	365	182	182	-	-	180	-	-	-	-	-	-	2	-	-	-	-
Air Carrier Cargo	Jet	MD11	3969	Boeing MD-11 Freighter	MD11GE	441	221	221	106	-	21	-	-	-	-	18	-	75	-	-	-	-
Air Carrier Cargo	Jet	MD11	3970	Boeing MD-11 Freighter	MD11PW	356	178	178	87	-	20	-	-	-	-	14	-	57	-	-	-	-
Air Carrier Cargo	Jet	MD11	5270	Boeing MD-11 Freighter	MD11PW	214	107	107	41	-	10	-	-	-	-	11	-	46	-	-	-	-
Air Carrier Passenger	Jet	A20N	5314	Airbus A320-NEO	A320-270N	13,206	6,603	6,603	2,188	2,013	643	109	-	-	-	438	546	474	194	-	-	-
Air Carrier Passenger	Jet	A20N	6384	Airbus A320-NEO	A320-270N	1,720	860	860	222	344	14	113	-	-	-	17	90	-	60	-	-	-
Air Carrier Passenger	Jet	A21N	5976	Airbus A321-NEO	A321-232	23,336	11,668	11,668	2,198	1,138	72	5,734	723	-	-	52	102	-	1,650	-	-	-
Air Carrier Passenger	Jet	A21N	5978	Airbus A321-NEO	A321-232	3,416	1,708	1,708	171	137	360	250	-	-	-	154	46	153	438	-	-	-
Air Carrier Passenger	Jet	A21N	6385	Airbus A321-NEO	A321-232	3,482	1,741	1,741	282	240	112	338	-	-	-	164	76	83	446	-	-	-
Air Carrier Passenger	Jet	A319	957	Airbus A319-100 Series	A319-131	7,677	3,839	3,839	1,506	1,491	578	21	-	-	-	181	54	7	-	-	-	-
Air Carrier Passenger	Jet	A319	962	Airbus A319-100 Series	A319-131	357	178	178	-	-	-	127	-	-	-	-	-	-	51	-	-	-
Air Carrier Passenger	Jet	A319	967	Airbus A319-100 Series	A319-131	8,684	4,342	4,342	1,715	1,697	658	24	-	-	-	185	55	7	-	-	-	-
Air Carrier Passenger	Jet	A320	1003	Airbus A320-200 Series	A320-211	3,597	1,799	1,799	357	883	350	150	-	-	-	16	32	10	-	-	-	-
Air Carrier Passenger	Jet	A320	1019	Airbus A320-200 Series	A320-232	8,634	4,317	4,317	796	1,961	782	335	-	-	-	35	70	22	315	-	-	-

FAA Category and Market	Engine	Aircraft Designator	AEDT equip ID	AEDT Airframe	AEDT ANP Type	Total Operations	Total Arrivals	Total Departures	SL 1 (Day)	SL 2 (Day)	SL 3 (Day)	SL 4 (Day)	SL 5 (Day)	SL 6 (Day)	SL 7 (Day)	SL 1 (Night)	SL 2 (Night)	SL 3 (Night)	SL 4 (Night)	SL 5 (Night)	SL 6 (Night)	SL 7 (Night)
Air Carrier Passenger	Jet	A320	2454	Airbus A320-200 Series	A320-211	1,229	615	615	148	277	95	37	-	-	-	16	25	13	5	-	-	-
Air Carrier Passenger	Jet	A320	2587	Airbus A320-200 Series	A320-232	439	220	220	-	181	-	38	-	-	-	-	-	-	-	-	-	-
Air Carrier Passenger	Jet	A320	4631	Airbus A320-200 Series	A320-211	1,561	781	781	255	127	321	-	-	-	-	21	29	22	7	-	-	-
Air Carrier Passenger	Jet	A320	4632	Airbus A320-200 Series	A320-232	823	411	411	96	80	10	65	-	-	-	37	12	-	111	-	-	-
Air Carrier Passenger	Jet	A320	4900	Airbus A320-200 Series	A320-232	350	175	175	-	111	-	23	-	-	-	-	-	-	41	-	-	-
Air Carrier Passenger	Jet	A321	1031	Airbus A321-100 Series	A321-232	15,665	7,832	7,832	1,040	1,146	2,470	742	-	-	-	110	226	1,545	551	-	-	-
Air Carrier Passenger	Jet	A321	1039	Airbus A321-100 Series	A321-232	13,991	6,995	6,995	1,197	1,670	857	1,429	-	-	-	81	324	108	1,330	-	-	-
Air Carrier Passenger	Jet	A321	2456	Airbus A321-200 Series	A321-232	696	348	348	61	85	44	63	-	-	-	5	20	7	63	-	-	-
Air Carrier Passenger	Jet	A321	4896	Airbus A321-200 Series	A321-232	4,722	2,361	2,361	437	610	312	451	-	-	-	29	116	39	366	-	-	-
Air Carrier Passenger	Jet	A321	4924	Airbus A321-100 Series	A321-232	332	166	166	-	14	-	107	-	-	-	-	-	-	45	-	-	-
Air Carrier Passenger	Jet	A332	1094	Airbus A330-200 Series	A330-343	116	58	58	-	-	-	-	58	-	-	-	-	-	-	-	-	-
Air Carrier Passenger	Jet	A332	5292	Airbus A330-200 Series	A330-343	182	91	91	-	-	-	-	89	-	-	-	-	-	-	2	-	-
Air Carrier Passenger	Jet	A35K	6531	Airbus A350-1000 Series	A350-941	766	383	383	-	-	-	-	-	-	363	-	-	-	-	-	-	20
Air Carrier Passenger	Jet	B38M	6172	Boeing 737-8	7378MAX	7,673	3,836	3,836	808	770	339	1,151	-	-	-	14	34	44	675	-	-	-
Air Carrier Passenger	Jet	B38M	6472	Boeing 737-8	7378MAX	40,453	20,227	20,227	3,506	7,722	3,656	2,245	417	-	-	428	1,397	455	400	-	-	-
Air Carrier Passenger	Jet	B39M	6406	Boeing 737-9	7378MAX	5,921	2,960	2,960	82	1,652	279	333	-	-	-	139	198	128	149	-	-	-
Air Carrier Passenger	Jet	B737	176	Boeing 737-700 Series	737700	58,543	29,271	29,271	11,086	9,970	3,847	836	-	-	-	1,064	1,716	637	117	-	-	-
Air Carrier Passenger	Jet	B737	178	Boeing 737-700 Series	737700	7,380	3,690	3,690	1,422	1,277	432	111	-	-	-	136	219	79	15	-	-	-
Air Carrier Passenger	Jet	B737	2495	Boeing 737-700 Series	737700	371	186	186	73	65	23	5	-	-	-	6	10	4	1	-	-	-
Air Carrier Passenger	Jet	B737	6604	Boeing 737-700 Series	737700	339	169	169	-	11	155	-	-	-	-	-	0	4	-	-	-	-
Air Carrier Passenger	Jet	B738	203	Boeing 737-800 Series	737800	3,019	1,510	1,510	196	473	566	101	-	-	-	20	57	48	48	-	-	-
Air Carrier Passenger	Jet	B738	2496	Boeing 737-800 Series	737800	1,239	620	620	8	178	314	28	-	-	-	7	34	17	33	-	-	-
Air Carrier Passenger	Jet	B738	2498	Boeing 737-800 Series	737800	9,623	4,812	4,812	999	1,652	1,470	386	-	-	-	53	80	129	42	-	-	-
Air Carrier Passenger	Jet	B738	2499	Boeing 737-800 Series	737800	15,745	7,873	7,873	882	3,806	1,485	384	-	-	-	120	675	218	303	-	-	-
Air Carrier Passenger	Jet	B738	6585	Boeing 737-800 Series	737800	8,183	4,091	4,091	817	1,621	928	266	-	-	-	80	230	104	45	-	-	-

CONCEPT SOLUTIONS

FAA Category and Market	Engine	Aircraft Designator	AEDT equip ID	AEDT Airframe	AEDT ANP Type	Total Operations	Total Arrivals	Total Departures	SL 1 (Day)	SL 2 (Day)	SL 3 (Day)	SL 4 (Day)	SL 5 (Day)	SL 6 (Day)	SL 7 (Day)	SL 1 (Night)	SL 2 (Night)	SL 3 (Night)	SL 4 (Night)	SL 5 (Night)	SL 6 (Night)	SL 7 (Night)
Air Carrier Passenger	Jet	B738	6611	Boeing 737-800 Series	737800	24,441	12,221	12,221	2,605	5,114	2,213	752	-	-	-	274	822	315	126	-	-	-
Air Carrier Passenger	Jet	B738	6612	Boeing 737-800 Series	737800	7,967	3,983	3,983	839	1,383	1,221	316	-	-	-	39	59	95	31	-	-	-
Air Carrier Passenger	Jet	B739	2416	Boeing 737-900-ER	737800	829	415	415	22	183	94	44	-	-	-	12	29	19	12	-	-	-
Air Carrier Passenger	Jet	B739	2417	Boeing 737-900-ER	737800	1,898	949	949	50	417	214	102	-	-	-	28	67	45	27	-	-	-
Air Carrier Passenger	Jet	B739	2503	Boeing 737-900 Series	737800	2,493	1,247	1,247	30	806	180	119	-	-	-	9	78	15	9	-	-	-
Air Carrier Passenger	Jet	B739	2569	Boeing 737-900-ER	737800	2,422	1,211	1,211	61	528	271	130	-	-	-	37	89	60	36	-	-	-
Air Carrier Passenger	Jet	B739	6596	Boeing 737-900-ER	737800	7,121	3,561	3,561	665	1,740	703	83	-	-	-	-	289	81	-	-	-	-
Air Carrier Passenger	Jet	B752	385	Boeing 757-200 Series	757PW	1,082	541	541	37	42	384	14	-	-	-	26	19	19	-	-	-	-
Air Carrier Passenger	Jet	B752	392	Boeing 757-200 Series	757RR	445	223	223	-	-	-	134	-	-	-	-	-	-	89	-	-	-
Air Carrier Passenger	Jet	B753	376	Boeing 757-300 Series	757300	1,751	876	876	-	-	605	-	-	-	-	-	-	271	-	-	-	-
Air Carrier Passenger	Jet	B772	603	Boeing 777-200 Series	777200	852	426	426	-	22	-	90	12	-	282	-	2	-	4	1	-	12
Air Carrier Passenger	Jet	B788	5287	Boeing 787-8 Dreamliner	7878R	175	88	88	-	-	-	86	-	-	-	-	-	-	2	-	-	-
Air Carrier Passenger	Jet	B788	6569	Boeing 787-8 Dreamliner	7878R	332	166	166	-	41	-	25	100	-	-	-	-	-	-	-	-	-
Air Carrier Passenger	Jet	B789	6364	Boeing 787-9 Dreamliner	7879	356	178	178	-	-	-	106	-	-	72	-	-	-	-	-	-	-
Air Carrier Passenger	Jet	B789	6627	Boeing 787-9 Dreamliner	7879	416	208	208	-	-	-	-	206	-	-	-	-	-	-	2	-	-
Air Carrier Passenger	Jet	BCS3	6633	Airbus A220-300	737700	212	106	106	-	-	-	-	-	-	-	-	-	-	106	-	-	-
Air Carrier Passenger	Jet	BCS3	6634	Airbus A220-300	737700	825	413	413	156	-	-	226	-	-	-	-	-	-	30	-	-	-
Air Carrier Passenger	Jet	CRJ7	1253	Bombardier CRJ-700	CRJ9-ER	30,825	15,413	15,413	8,817	5,579	297	-	-	-	-	645	74	-	-	-	-	-
Air Carrier Passenger	Jet	CRJ7	2546	Bombardier CRJ-700	CRJ9-ER	1,737	869	869	496	313	17	-	-	-	-	39	4	-	-	-	-	-
Air Carrier Passenger	Jet	CRJ9	2547	Bombardier CRJ-900	CRJ9-ER	1,434	717	717	-	434	182	-	-	-	-	-	101	-	-	-	-	-
Air Carrier Passenger	Jet	CRJ9	3148	Bombardier CRJ-705-LR	CRJ9-LR	689	344	344	-	174	169	-	-	-	-	-	2	-	-	-	-	-
Air Carrier Passenger	Jet	E170	2559	Embraer ERJ170	EMB170	3,786	1,893	1,893	567	1,236	-	-	-	-	-	27	64	-	-	-	-	-
Air Carrier Passenger	Jet	E170	2560	Embraer ERJ170	EMB170	11,323	5,662	5,662	3,012	2,650	-	-	-	-	-	-	-	-	-	-	-	-
Air Carrier Passenger	Jet	E170	2572	Embraer ERJ170-LR	EMB170	2,409	1,205	1,205	388	817	-	-	-	-	-	-	-	-	-	-	-	-
Air Carrier Passenger	Jet	E75L	3071	Embraer ERJ175-LR	EMB175	38,160	19,080	19,080	8,260	9,043	524	-	-	-	-	915	338	-	-	-	-	-

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FAA Category and Market	Engine	Aircraft Designator	AEDT equip ID	AEDT Airframe	AEDT ANP Type	Total Operations	Total Arrivals	Total Departures	SL 1 (Day)	SL 2 (Day)	SL 3 (Day)	SL 4 (Day)	SL 5 (Day)	SL 6 (Day)	SL 7 (Day)	SL 1 (Night)	SL 2 (Night)	SL 3 (Night)	SL 4 (Night)	SL 5 (Night)	SL 6 (Night)	SL 7 (Night)
Air Taxi Cargo	Jet	CRJ2	5458	Bombardier (Canadair) CRJ200PF Bulk Freighter	CL600	525	263	263	260	-	-	-	-	-	-	3	-	-	-	-	-	-
Air Taxi Cargo	Jet	LJ35	2028	Bombardier Learjet 35	LEAR35	171	86	86	62	-	3	-	-	-	-	18	-	3	-	-	-	-
Air Taxi Cargo	Turboprop	B190	36	Raytheon Beech 1900-C	1900D	697	348	348	285	-	-	-	-	-	-	63	-	-	-	-	-	-
Air Taxi Cargo	Turboprop	BE99	1474	Raytheon Beech 99	DHC6	1,169	585	585	372	-	-	-	-	-	-	213	-	-	-	-	-	-
Air Taxi Cargo	Turboprop	BE99	3258	Raytheon Beech 99	DHC6	358	179	179	112	-	-	-	-	-	-	67	-	-	-	-	-	-
Air Taxi Cargo	Turboprop	C208	2106	Cessna 208 Caravan	CNA208	2,588	1,294	1,294	1,265	-	-	-	-	-	-	29	-	-	-	-	-	-
Air Taxi Cargo	Turboprop	E120	1710	Embraer EMB120 Brasilia	EMB120	1,126	563	563	432	-	-	-	-	-	-	131	-	-	-	-	-	-
Air Taxi Cargo	Turboprop	SH36	3141	Shorts 360-200 Series	SD330	291	146	146	119	-	-	-	-	-	-	27	-	-	-	-	-	-
Air Taxi Cargo	Turboprop	SH36	798	Shorts 360-100 Series	SD330	538	269	269	230	-	-	-	-	-	-	39	-	-	-	-	-	-
Air Taxi Cargo	Turboprop	SW4	1449	Fairchild SA-227-AC Metro III	DHC6	797	398	398	362	-	-	-	-	-	-	36	-	-	-	-	-	-
Air Taxi Passenger	Jet	E135	1738	Embraer ERJ135-LR	EMB145	1,331	666	666	666	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Taxi Passenger	Jet	E135	1745	Embraer ERJ140	EMB145	2,516	1,258	1,258	1,254	-	-	-	-	-	-	4	-	-	-	-	-	-
Air Taxi Passenger	Jet	E145	1759	Embraer ERJ145-LR	EMB14L	300	150	150	150	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Taxi Passenger	Jet	J328	1313	Dornier 328 Jet	CNA750	489	245	245	245	-	-	-	-	-	-	-	-	-	-	-	-	-
Air Taxi Passenger	Turboprop	PC12	3122	Pilatus PC-12	CNA208	1,280	640	640	591	20	-	-	-	-	-	30	-	-	-	-	-	-
Air Taxi Passenger	Turboprop	SW4	1449	Fairchild SA-227-AC Metro III	DHC6	1,297	648	648	646	-	-	-	-	-	-	2	-	-	-	-	-	-
Air Taxi	Jet	BE40	2024	Raytheon Beechjet 400	MU3001	116	58	58	50	-	-	-	-	-	-	8	-	-	-	-	-	-
Air Taxi	Jet	C560	1298	Cessna 560 Citation V	CNA560U	259	129	129	67	-	-	-	-	-	-	62	-	-	-	-	-	-
Air Taxi	Jet	C56X	6070	Cessna 560 Citation XLS	CNA560XL	341	170	170	167	-	-	-	-	-	-	3	-	-	-	-	-	-
Air Taxi	Jet	C680	3047	Cessna 680 Citation Sovereign	CNA680	230	115	115	106	-	-	-	-	-	-	9	-	-	-	-	-	-
Air Taxi	Jet	C68A	6386	Cessna 680-A Citation Latitude	CNA680	1,919	959	959	868	-	-	-	-	-	-	91	-	-	-	-	-	-
Air Taxi	Jet	C750	1309	Cessna 750 Citation X	CNA750	298	149	149	144	-	-	-	-	-	-	5	-	-	-	-	-	-
Air Taxi	Jet	CL30	4205	Bombardier Challenger 300	CL600	194	97	97	90	-	-	-	-	-	-	7	-	-	-	-	-	-
Air Taxi	Jet	CL30	4856	Bombardier Challenger 300	CL600	161	81	81	74	-	-	-	-	-	-	7	-	-	-	-	-	-
Air Taxi	Jet	CL35	6656	Bombardier Challenger 3500	CL600	959	480	480	442	-	-	-	-	-	-	38	-	-	-	-	-	-

Phoenix Area FAA Modernization Project
Environmental Assessment