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Airport Master Plan Update

Chapter 3
Aviation Activity Forecasts

Prepared for:

DeLand
MUNICIPAL AIRPORT
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3. AVIATION ACTIVITY FORECASTS

This aviation activity forecasting effort was prepared as part of the Master Plan Update for the DeLand Municipal Airport–Sidney H. Taylor Field (DED or the Airport). The forecasts were based on the most current information available and are utilized to determine near-term, mid-term, and long-term facility requirements and to identify the various development alternatives and recommendations. The forecasts are presented over a 20-year planning period that extends from 2024 through 2044.

Baseline scenario forecasts were prepared in accordance with the guidance in the Federal Aviation Administration (FAA) Memorandum dated August 12, 2024, *Forecast Review and Approval Information* (FAA Memorandum). Based on the guidance in the FAA Memorandum, General Aviation (GA) airports that exceed 90,000 annual operations must conduct detailed forecasts of operations, based aircraft, peak activity trends, critical aircraft by runway, and other factors. Historical events, ongoing trends, and other local factors are also discussed in this chapter because they have the potential to affect activity levels at airports over time and are explored to illustrate how they can influence aviation activity. This forecast report is organized into the following sections:

- Forecasting Limitations
- Base Year and Planning Horizons
- Historical and Baseline Activity Analysis
- Factors and Opportunities Affecting Aviation Activity
- Forecast of Aircraft Operations
- Forecast of Based Aircraft
- Forecast of Peak Activity
- Forecast of Critical Aircraft
- Forecast Summary

3.1 Forecasting Limitations

Forecasting aviation activity is a complex process that considers a multitude of factors, both controllable and those beyond an airport's control. Forecasts are not to be construed as predictions of the future, but rather a realistic expectation of future activity based on a variety of predictors, calculations, assumptions, and trends. The accuracy of the estimates potentially declines as the planning term is extended because of unforeseen local or geo-political events, natural disasters, and/or climatological events.

As indicated in the FAA Memorandum, the FAA's forecast approval is limited to the 10-year projection. The FAA will "accept (not approve) for planning purposes only" the period beyond 10 years, which allows the airport sponsor to depict projects that are consistent with the long-term growth expectations on the Airport Layout Plan (ALP). In most cases, prior to issuing a grant, the FAA will require updated information demonstrating that a proposed project is justified by the level of activity at the time or by the level of activity that would directly result from the implementation of the proposed project. This policy helps to ensure that funding is directed towards critical and needed projects throughout the U.S.

3.2 Base Year and Planning Horizons

Aviation activity forecasts were developed for the near-term (2025–2029), mid-term (2030–2034), and long-term (2035–2044) planning horizons. The near-term forecasts are used to plan and justify airport developments shown within an airport's five-year Airport Capital Improvement Plan (ACIP). According to the FAA Memorandum, mid-term forecasts (years 6 to 10) are used to identify potential projects that are reasonably needed to accommodate demands and maintain acceptable service levels beyond the initial five-year ACIP and long-term forecasts (years 11 to 20) are used to communicate the future vision of an airport sponsor, to preserve options for aeronautical development, to protect the airspace and land use on and around an airport, and to illustrate aspirational concepts.

3.3 Historical and Baseline Activity Analysis

Many elements compose the broad definition of GA activity. In simplest terms, GA includes all segments of the aviation industry except those conducted by scheduled air carriers and the U.S. military. GA activity may include pilot training, sightseeing, aerial photography, law enforcement, skydiving, and medical flights, as well as business, corporate, and personal travel. GA operations are divided into categories of local and itinerant. Local operations are arrivals or departures performed by aircraft that remain within the airport traffic pattern, or those that occur within sight of the airport. Local operations are most often associated with training activity and flight instruction (e.g., touch-and-go operations). They also include skydiving activity, which is frequent at DED. Itinerant operations are arrivals or departures that do not remain within the airport traffic pattern and/or that originate from another airport. The FAA defines an operation as either a single aircraft landing or takeoff. Under this definition, touch-and-go operations are considered two operations (one takeoff plus one landing) and are deemed local operations. Itinerant operations are typically comprised of private, business/corporate, and air taxi flight activity, but may also include law enforcement and medical flights. The following sections present the historical and baseline activity analysis for the following variables at DED:

- Historical Annual Operations
- Historical Operations by Aircraft Type

- Historical Instrument Operations
- Historical Operations by Aircraft Approach Category (AAC)
- Historical Operations by Airplane Design Group (ADG)
- Historical Operations by Taxiway Design Group (TDG)
- Historical Based Aircraft Fleet Mix

3.3.1 Historical Annual Operations

As DED does not have an Airport Traffic Control Tower (ATCT), there were no official records of annual operations for the Airport until recently. In October 2020, the Airport began tracking operations virtually using technology provided by a private company known as Virtower, which records the number of operations and surface movements at airports through Automatic Dependent Surveillance-Broadcast (ADS-B) data that is broadcast from aircraft transponders. According to the FAA, ADS-B utilizes Global Positioning System (GPS) technology to provide information related to aircraft location, altitude, ground speed, and other data that is transmitted from the aircraft once per second (i.e., in real time).

Prior to 2021, the number of annual operations at DED were estimated and incorporated into the FAA's Terminal Area Forecast (TAF) and Airport Master Record (AMR). The TAF is published annually and is based on the FAA's Fiscal Year (FY) that runs from October 1st through September 30th. The TAF presents the long-term forecasts of all airports that are included in the National Plan of Integrated Airport Systems (NPIAS) and is used to estimate the long-term planning, budgeting, and staffing requirements of the FAA. The 2024 TAF is the most recent edition.

Table 3-1 presents the last ten years of historical annual operations data for DED from both the Virtower dataset and the 2024 TAF. The term Compound Annual Growth Rate (CAGR), as used throughout this chapter, represents the average annual rate of growth for various historical and forecast factors (e.g., historical and forecast annual rate of growth for operations, based aircraft, and economic indicators). The Virtower count of aircraft operations increased at a CAGR of 14.30 percent from 2021 through 2024 and 10.36 percent from 2023 to 2024. The TAF count of operations mostly held stable during the period shown except for a slight increase in 2023. Much of the recent growth in operations at DED has been associated with a high volume of flight training activities that usually originate from neighboring airports such as Embry-Riddle Aeronautical University at Daytona Beach International Airport (DAB). Consequently, the 2024 base year annual operations number for DED was determined to be 126,220 as reported by Virtower because it represents an actual count of operations at DED compared to the estimated number in the TAF.

TABLE 3-1 HISTORICAL ANNUAL OPERATIONS

Year	Virtower	Terminal Area Forecast
2014	No Data	117,460
2015	No Data	117,460
2016	No Data	117,460
2017	No Data	117,460
2018	No Data	117,460
2019	No Data	117,460
2020	No Data	117,460
2021	84,533 [1]	117,460
2022	98,746	119,706
2023	114,370	119,705
2024	126,220	117,460 [2]
Compound Annual Growth Rate		
2014–2024	N/A	0.00%
2021–2024	14.30%	0.00%
2023–2024	10.36%	-1.88%

Notes: 1. Virtower began tracking operations at DeLand Municipal Airport on October 7, 2020. 2. Terminal Area Forecast data for 2024 does not represent historical counts and is forecast.

Sources: Virtower, LLC, December 2024 (airport-provided data); Federal Aviation Administration, Terminal Area Forecast for DeLand Municipal Airport, queried March 2025.

3.3.2 Historical Operations by Aircraft Type

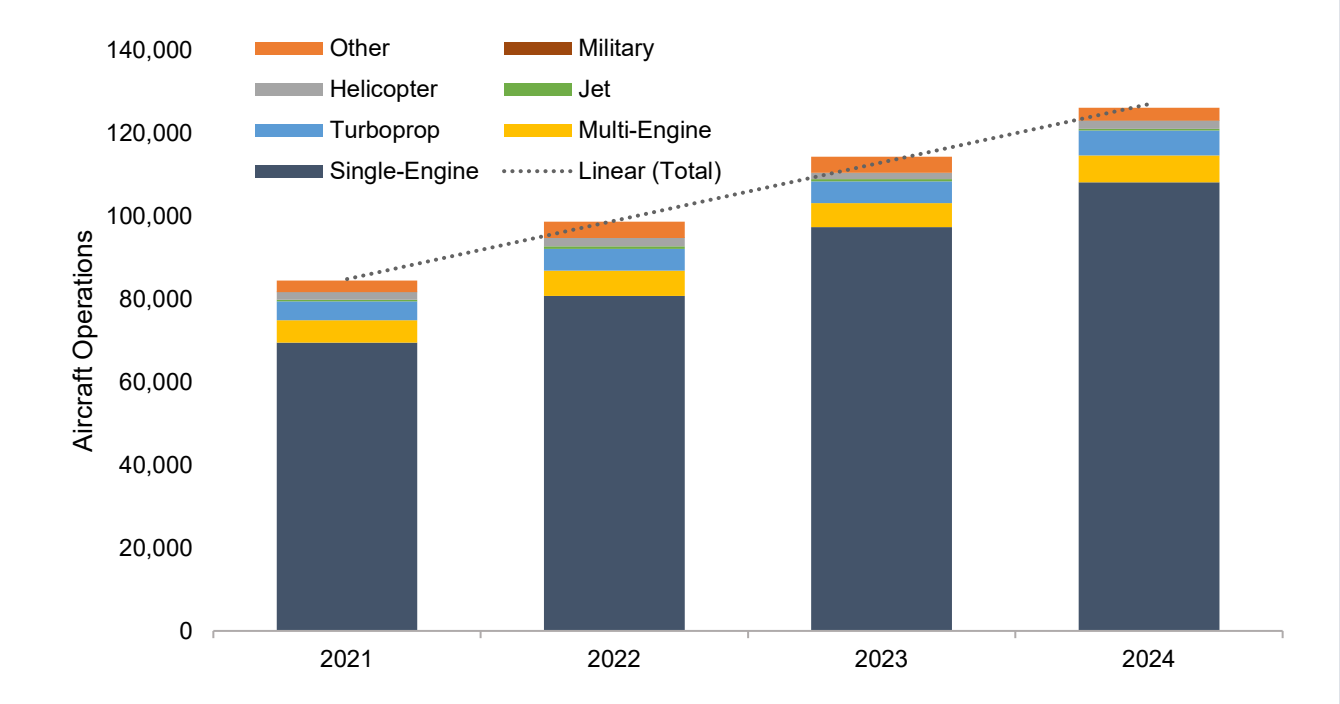
The Virtower dataset includes a summary of operations by specific aircraft models (Cessna, Cirrus, Gulfstream, etc.) and by aircraft type (piston, turboprop, jet, helicopter, etc.). **Table 3-2** and **Figure 3-1** summarize the historical operations by aircraft type as reported by Virtower from 2021 to 2024, with the "other" aircraft category primarily consisting of light sport and experimental aircraft. The number of jet operations at DED has historically exceeded 500 annual operations and, although they declined in 2024, the forecast of operations by aircraft type presented later in this chapter illustrates that they will continue to increase and support the FAA's definition of "critical aircraft" for DED. According to FAA Advisory Circular (AC) 150/5000-17, *Critical Aircraft and Regular Use Determination*, "The critical aircraft is the most demanding aircraft type, or grouping of aircraft with similar characteristics, that make regular use of the airport. Regular use is 500 annual operations, including both itinerant and local operations but excluding touch-and-go operations. An operation is either a takeoff or landing."

TABLE 3-2 HISTORICAL OPERATIONS BY AIRCRAFT TYPE

Year	Total Operations	Single-Engine Piston	Multi-Engine Piston	Turboprop	Jet	Helicopter	Military	Other
2021	84,533	69,532	5,387	4,579	399	1,859	6	2,771
2022	98,746	80,802	6,069	5,291	598	1,991	1	3,994
2023	114,370	97,404	5,779	5,287	543	1,456	49	3,852
2024	126,220	108,177	6,547	5,985	413	1,965	48	3,085
Compound Annual Growth Rate								
2021–2024	14.30%	15.87%	6.72%	9.34%	1.16%	1.87%	100.00%	3.64%
2023–2024	10.36%	11.06%	13.29%	13.20%	-23.94%	34.96%	-2.04%	-19.91%

Source: Virtower, LLC, December 2024 (airport-provided data).

FIGURE 3-1 HISTORICAL OPERATIONS BY AIRCRAFT TYPE



Source: Virtower, LLC, December 2024 (airport-provided data).

3.3.3 Historical Instrument Operations

The FAA's Traffic Flow Management System Counts (TFMSC) database records all historical flight plan activity data, which primarily includes operations that pilots file with the FAA when they intend to fly during Instrument Flight Rules (IFR) conditions or within controlled airspace. **Table 3-3** presents a summary of the flight plan activity records from 2014 through 2024. As shown, the flight plan activity data only represents a

small percentage of the total activity that occurs at DED, but it represents the best estimate of annual IFR activity for the Airport.

TABLE 3-3 HISTORICAL INSTRUMENT OPERATIONS

Year	Total Operations	TFMSC Operations	Percent of Total
2014	117,460 (TAF)	2,523	2.15%
2015	117,460 (TAF)	3,325	2.83%
2016	117,460 (TAF)	1,754	1.49%
2017	117,460 (TAF)	1,860	1.58%
2018	117,460 (TAF)	1,930	1.64%
2019	117,460 (TAF)	1,424	1.21%
2020	117,460 (TAF)	1,528	1.30%
2021	84,533 (Virtower)	2,031	2.40%
2022	98,746 (Virtower)	1,975	2.00%
2023	114,370 (Virtower)	2,003	1.75%
2024	126,220 (Virtower)	2,341	1.85%
Compound Annual Growth Rate			
2014–2024	N/A	-0.75%	---
2021–2024	14.30%	4.85%	---
2023–2024	10.36%	16.87%	---

Notes: TAF – Terminal Area Forecast, TFMSC – Traffic Flow Management System Counts.

Sources: Virtower, LLC, December 2024 (airport-provided data); Federal Aviation Administration, Terminal Area Forecast for DeLand Municipal Airport, queried March 2025; Federal Aviation Administration, Traffic Flow Management System Counts, queried March 2025.

3.3.4 Historical Operations by Aircraft Approach Category

According to Change 1 of FAA AC 150/5300-13B, *Airport Design*, the Aircraft Approach Category (AAC) is "a grouping of aircraft based on a reference landing speed (VREF), if specified, or if VREF is not specified, 1.3 times stall speed (VSO) at the maximum certificated landing weight." Each runway at an airport is designated with an AAC that is based on the most demanding aircraft that regularly operates on the associated pavement section, with regular use defined as 500 annual operations, excluding touch-and-go operations. **Table 3-4** presents the historical operations by AAC from 2021 to 2024 at DED, with the "other" column representing operations by helicopters and other unclassified aircraft. This data was from the Virtower dataset. As shown, the most demanding aircraft category that conducts 500 or more annual operations at DED is AAC B. Because the FAA design standards for AACs C and D are mostly the same, they were combined in a separate column in the table. For example, DED experienced 136 operations by aircraft with an AAC of C or higher in 2024. It is noted that Runway 12-30 at the Airport is designed to accommodate regular operations by AAC C or higher approach categories because there have been jets based at DED in previous years that fall under that classification. Furthermore, there are several businesses located at the Airport that cater to paint and

maintenance activities for larger corporate jets that fall under the AAC C or higher classification. The justification for individual projects would be reevaluated based on the actual activity at the time of development.

TABLE 3-4 HISTORICAL OPERATIONS BY AIRCRAFT APPROACH CATEGORY

Year	Total Operations	AAC A	AAC B	AAC C	AAC D	Other	AAC C or Higher
2021	84,533	81,185	1,050	96	8	2,194	104
2022	98,746	94,277	1,430	143	11	2,885	154
2023	114,370	109,447	969	162	19	3,773	181
2024	126,220	121,096	906	115	21	4,082	136
Compound Annual Growth Rate							
2021–2024	14.30%	14.26%	-4.80%	6.20%	37.95%	22.99%	9.35%
2023–2024	10.36%	10.64%	-6.50%	-29.01%	10.53%	8.19%	-24.86%

Notes: AAC – Aircraft Approach Category.
Source: Virtower, LLC, December 2024 (airport-provided data).

3.3.5 Historical Operations by Airplane Design Group

According to Change 1 of AC 150/5300-13B, the Airplane Design Group (ADG) is "A classification of aircraft based on wingspan and tail height. When the aircraft wingspan and tail height fall in different groups, the larger group applies." Each runway and taxiway at an airport is designated with an ADG that is based on the most demanding aircraft that regularly operates on the associated pavement section. **Table 3-5** presents the historical operations by ADG from 2020 to 2024 at DED, with the "other" column representing operations by helicopters and other unclassified aircraft. This data was obtained from the Virtower dataset. As shown, the most demanding aircraft category that conducts 500 or more annual operations at DED is ADG II with 8,449 operations in 2024.

3.3.6 Historical Operations by Taxiway Design Group

According to Change 1 of AC 150/5300-13B, the Taxiway Design Group (TDG) is "A classification of airplanes based on outer-to-outer Main Gear Width (MGW) and Cockpit to Main Gear Distance (CMG) distance." Each taxiway at an airport is designated with a TDG that is based on the most demanding aircraft that regularly operates on the associated pavement section. **Table 3-6** presents the historical operations by TDG from 2021 to 2024 at DED, with the "other" column representing operations by helicopters and other unclassified aircraft. This data was obtained exclusively from the FAA's TFMSC database because the Virtower dataset does not identify aircraft operations by TDG, which means that the information shown in the table only represents a small sample of total operations (2,341 represents 1.85 percent of total operations of 126,220 in 2024). While the information from the TFMSC database shows that most aircraft that operate at DED are TDG 1A, there

are also high numbers of operations by TDG 2A and larger aircraft. All taxiways at DED are currently designed to accommodate TDG 2A and larger aircraft.

TABLE 3-5 HISTORICAL OPERATIONS BY AIRPLANE DESIGN GROUP

Year	Total Operations	ADG I	ADG II	ADG III	Other
2021	84,533	75,054	7,273	12	2,194
2022	98,746	87,077	8,765	19	2,885
2023	114,370	101,575	8,822	196	3,777
2024	126,220	113,669	8,449	20	4,082
Compound Annual Growth Rate					
2021–2024	14.30%	14.84%	5.12%	18.56%	22.99%
2023–2024	10.36%	11.91%	-4.23%	-89.80%	8.08%

Notes: ADG – Airplane Design Group.
Source: Virtower, LLC, December 2024 (airport-provided data).

TABLE 3-6 HISTORICAL OPERATIONS BY TAXIWAY DESIGN GROUP

Year	TFMSC Operations	TDG 1A	TDG 1B	TDG 2A	TDG 2B	TDG 3	Other	TDG 2A+
2021	2,031	1,403	166	356	12	0	94	368
2022	1,975	1,296	170	391	16	2	100	409
2023	2,003	1,350	146	350	14	0	143	364
2024	2,341	1,645	171	289	11	1	224	301
Compound Annual Growth Rate								
2021–2024	4.85%	5.45%	0.99%	-6.71%	-2.86%	N/A	33.57%	-6.48%
2023–2024	16.87%	21.85%	17.12%	-17.43%	-21.43%	N/A	56.64%	-17.31%

Notes: TFMSC – Traffic Flow Management System Counts, TDG – Taxiway Design Group.
Source: Federal Aviation Administration, Traffic Flow Management System Counts, queried March 2025.

3.3.7 Historical Based Aircraft by Type

Records at the Airport indicate that the based aircraft count has historically been underreported. As part of this planning effort, the Airport conducted an exercise to verify the current based aircraft count. This exercise was completed and uploaded to BasedAircraft.com on February 21, 2025, and resulted in a verified count of 194 based aircraft. **Table 3-7** presents the historical based aircraft fleet mix for DED from 2014 through 2024. Based on the information provided by the Airport, DED had the most based aircraft in 2024. It is noted that new hangars were recently constructed at DED, which resulted in an increase in based aircraft levels. At the time of this writing, the Airport had a waiting list with 78 aircraft (and their respective owners) seeking hangar storage space at DED. New hangars are currently under construction at the Mustang Pointe Aerodrome that

should help to partially alleviate the based aircraft hangar storage demands in the short-term, but there is a significant hangar storage deficiency at most airports in the state as evidenced in the Hangar Demand Initiative for the Florida Aviation System Plan 2043 Update (FASP 2043 Update). Specifically, the Hangar Demand Initiative determined that 99.32 percent of all T-hangars and 99.64 percent of all box hangars in the state are currently occupied and that most airports have sizeable waiting lists for based aircraft hangar storage. It is also noted that the Airport routinely provides storage space for approximately 220 to 230 aircraft during several months of the year as individuals fly south from colder environments to the north to enjoy the warmer weather in Florida.

TABLE 3-7 HISTORICAL BASED AIRCRAFT FLEET MIX

Fiscal Year	Airport Provided					Terminal Area Forecast
	Single-Engine	Multi-Engine	Jet	Helicopter	Total	
2014	147	35	7	4	193	197
2015	145	34	7	4	190	190
2016	141	32	6	6	185	188
2017	133	32	7	7	179	180
2018	56	17	2	4	79	81
2019	126	19	6	7	158	141
2020	121	19	6	7	153	160
2021	113	18	6	6	143	160
2022	111	17	5	6	139	160
2023	108	16	4	5	133	161
2024	168	18	3	5	194	150
Compound Annual Growth Rate						
2014–2024	1.34%	-6.43%	-8.12%	2.26%	0.05%	-2.69%
2021–2024	14.13%	0.00%	-20.63%	-5.90%	10.70%	-2.13%
2023–2024	55.56%	12.50%	-25.00%	0.00%	45.86%	-6.83%

Source: Based Aircraft History, Summary of Validated Based Aircraft, DeLand Municipal Airport, February 2025.Federal Aviation Administration, Terminal Area Forecast, accessed January 2025.

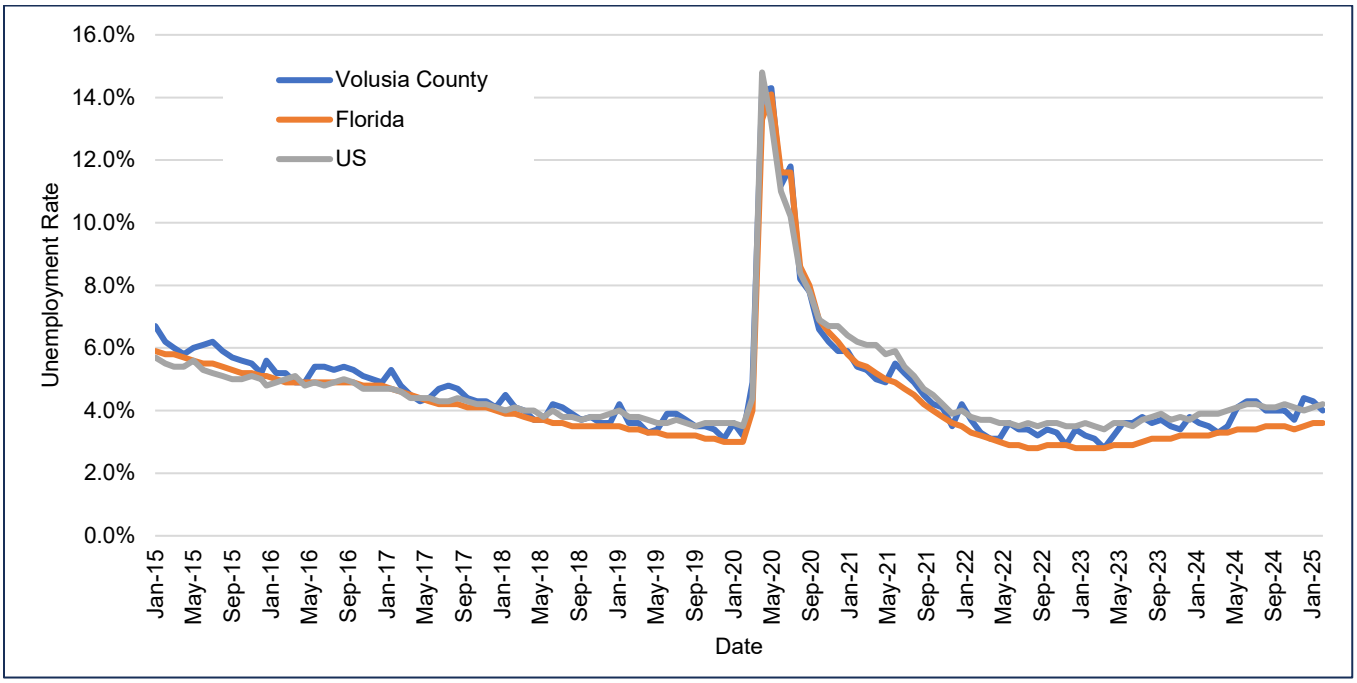
3.4 Factors and Opportunities Affecting Aviation Activity

This section describes past and present trends that may influence DED's operations and based aircraft levels. As part of any forecasting effort, the FAA recommends the identification of historical factors that represented turning points for the U.S. aviation industry such as the terrorist attacks on September 11, 2001, sharp fuel price increases after Hurricane Katrina damaged Gulf Coast refineries in August 2005, the economic recession of the late 2000s, and the global Coronavirus (COVID-19) pandemic that began in early 2020. The impact of

the COVID-19 pandemic can be seen in **Figure 3-2** by the large spike in unemployment rates in the U.S., Florida, and Volusia County. Although most of those events were impossible to predict, their resulting consequences had considerable impacts on aviation activity throughout the U.S. Local trends are important because they provide airport-specific information that can be used to support the selection of preferred forecasts. Some of the trends evaluated for this purpose include the following:

- Economic Conditions
- FAA Next Generation Air Transportation System (NextGen)
- FAA Aerospace Forecast
- FAA Terminal Area Forecast
- Historical Growth Trends at Nearby Airports

FIGURE 3-2 HISTORICAL UNEMPLOYMENT RATES



Source: U.S. Bureau of Labor Statistics accessed April 2025.

3.4.1 Economic Conditions

The economic conditions surrounding an airport have the potential to influence activity levels. For example, the growth or decline in a local population may correlate to the growth or decline in operations and based aircraft levels at an airport. **Table 3-8** summarizes historical economic conditions and forecasts population, average household income, and per capita income statistics for the U.S., Florida, Volusia County, and the City of DeLand. Demographic and economic projections for DeLand and Volusia County show a favorable

environment for growth in aviation activity at DED during the 20-year planning period. From 2020 to 2029, DeLand's population is expected to increase by nearly 11 percent with a CAGR of 1.01 percent from 2024 to 2029. This steady growth should expand the local base of potential airport users, including student pilots, business travelers, and recreational flyers. Additionally, average household income in DeLand is projected to rise from $77,724 in 2020 to $94,742 in 2029, while per capita income is forecast to grow from $31,604 to $39,287 over the same period. These income gains, which outpace national averages, suggest rising discretionary spending and historically correlate with increased demand for general aviation services. Volusia County mirrors these trends with a growing population and stronger economic indicators, which further support the potential for increased business activity and regional aviation use.

3.4.2 FAA Next Generation Air Transportation System (NextGen)

NextGen includes a series of improvements to the national aviation system that are intended to make air travel more safe, convenient, and dependable. By investing in new technologies and replacing aging systems, NextGen initiatives are focused on improving schedule predictability for both GA and commercial flights, reducing environmental impacts, flying more direct routes, limiting airfield congestion, providing better options for circumventing poor weather, providing better approaches and access to airports, and improving safety for accident avoidance. The FAA's investment in NextGen initiatives should help to improve both access and approach capability for airports around the U.S., as has been the case at DED with the rollout of Localizer Performance with Vertical Guidance (LPV) approaches that provide horizontal and vertical course guidance to aircraft via GPS. As the only state with four large-hub commercial service airports, the FAA has made significant strides to improve air navigation in Florida as part of the South-Central Florida Metroplex project. Through the recommendations of this Master Plan Update and the FAA's ongoing NextGen initiatives, it is anticipated that DED will continue to become more accessible.

TABLE 3-8 HISTORICAL ECONOMIC CONDITIONS AND FORECAST

Year	City of Deland	Volusia County	Florida	US
Population				
2010	29,195	494,592	18,800,813	308,743,293
2020	37,395	553,543	21,538,187	331,449,181
2024	39,254	583,699	22,621,901	335,480,631
2029	41,267	606,400	23,597,340	342,843,469
Compound Annual Growth Rate				
2010 to 2020	2.51%	1.13%	1.37%	0.71%
2020 to 2024	1.22%	1.33%	1.23%	0.30%
2024 to 2029	1.01%	0.77%	0.85%	0.44%
Average Household Income				
2010	$54,871	$58,979	$67,706	$73,387
2020	$77,724	$73,173	$85,625	$93,368
2024	$86,100	$82,930	$95,609	$101,307
2029	$94,742	$91,304	$106,807	$111,985
Compound Annual Growth Rate				
2010 to 2020	3.54%	2.18%	2.38%	2.44%
2020 to 2024	2.59%	3.18%	2.80%	2.06%
2024 to 2029	1.93%	1.94%	2.24%	2.02%
Per Capita Income				
2010	$22,732	$25,199	$27,039	$28,088
2020	$31,604	$31,689	$35,231	$36,322
2024	$35,764	$36,226	$39,983	$40,471
2029	$39,287	$40,011	$44,787	$44,892
Compound Annual Growth Rate				
2010 to 2020	3.35%	2.32%	2.68%	2.60%
2020 to 2024	3.14%	3.40%	3.21%	2.74%
2024 to 2029	1.90%	2.01%	2.30%	2.10%

Source: DemographicsNow, accessed February 2025.

3.4.3 FAA Aerospace Forecast

The *FAA Aerospace Forecast* is produced annually by the FAA's Forecast and Performance Analysis Branch of the Office of Aviation Policy and Plans (APO-100), with the latest edition being the FAA Aerospace Forecast Fiscal Years 2024–2044. The report covers the following subject areas: U.S. airlines (passenger and cargo), GA, U.S. commercial aircraft fleet, Unmanned Aircraft Systems (UAS), and commercial space transportation. Although the FAA Aerospace Forecast does not contain airport-specific data, the aggregate measures are useful for establishing order-of-magnitude growth rates that may be used for forecasting purposes. The FAA Aerospace Forecast Fiscal Years 2024–2044 projects a steady recovery and growth in GA activity following the impacts of COVID-19.

- GA operations accounted for 55 percent of total U.S. operations in 2023, which is slightly higher than the 51 percent share in 2019 and indicates a robust recovery and increased reliance on GA post-pandemic.
- The active GA fleet is projected to grow from 204,405 aircraft in 2021 to 208,905 by 2042, which represents a small 2.2 percent overall increase over the forecast period.
- Total GA hours flown are expected to rise by 17.4 percent from 2022 to 2044 at a CAGR of approximately 0.7 percent. The highest growth rates in GA hours flown are expected for turbine, rotorcraft, and experimental aircraft.
- The FAA addresses the emerging sector of Electric Vertical Takeoff and Landing (eVTOL) aircraft under the broader category of Advanced Air Mobility (AAM). While AAM services have not yet commenced in the U.S., the forecast acknowledges that projections for AAM demand are challenging and somewhat hypothetical. The FAA provides estimates based on industry research, presenting both base-case and low-case scenarios for eVTOL operations.

Various additional factors/forecast variables from the FAA Aerospace Forecast Fiscal Years 2024–2044 are presented in this chapter for the forecasts of operations and based aircraft.

3.4.4 FAA Terminal Area Forecast

The FAA's 2024 TAF projects growth for both itinerant and local operations and for based aircraft at DED. Total operations are projected to increase at a CAGR of 1.92 percent from 2024 to 2044 and based aircraft are projected to increase at a CAGR of 0.94 percent during the same period. Those growth rates are substantially higher than the anticipated growth that is projected for GA activity in the U.S. per the FAA Aerospace Forecast Fiscal Years 2024–2044.

3.4.5 Historical Growth Trends at Nearby Airports

Table 3-9 and **Figure 3-4** show the activity levels from prior to the COVID-19 pandemic (2019) to the most recent year of available activity data (2024) that were experienced at the four GA airports (those with ATCTs) closest to DED. The information is presented to characterize how the following nearby airports have been performing in recent years:

- Ormond Beach Municipal Airport (OMN) – 16.6 nautical miles northeast of DED
- New Smyrna Beach Municipal Airport (EVB) – 17.6 nautical miles east of DED
- Flagler Executive Airport (FIN) – 24.2 nautical miles north of DED
- Leesburg International Airport (LEE) – 31.2 nautical miles southwest of DED

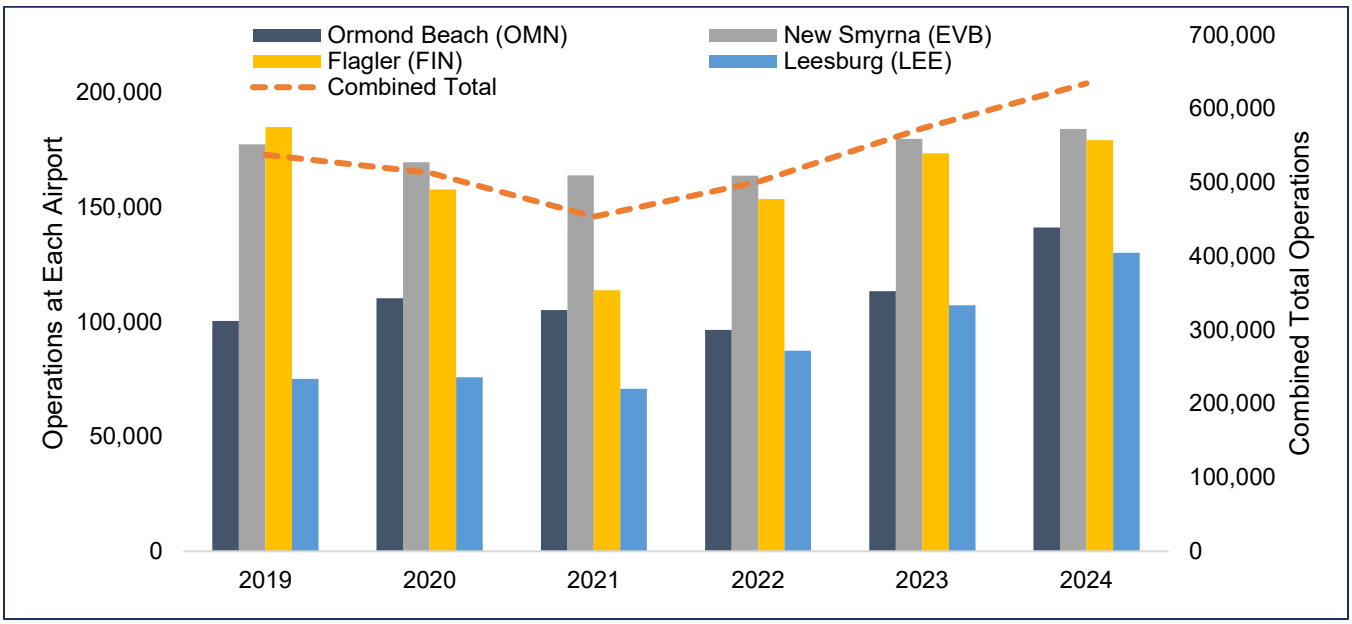
GA activity at the four airports recovered well from the COVID-19 downturn and, by 2024, significantly exceeded pre-pandemic levels in most cases. LEE experienced the strongest growth in operations, which increased from 75,081 in 2019 to 130,090 in 2024 or a CAGR of 11.62 percent. The combined total activity for all four airports rose from 537,703 in 2019 to 634,384 in 2024 or a CAGR of 3.36 percent. It is noted that the decline in activity at FIN in 2021 was mostly associated with extended runway closures for a runway rehabilitation project.

TABLE 3-9 HISTORICAL ACTIVITY AT NEARBY TOWERED AIRPORTS

Year	Ormond Beach (OMN)	New Smyrna (EVB)	Flagler (FIN)	Leesburg (LEE)	Combined Total
2019	100,346	177,385	184,891	75,081	537,703
2020	110,222	169,559	157,737	75,773	513,291
2021	105,170	163,906	113,764	70,795	453,635
2022	96,488	163,738	153,524	87,349	501,099
2023	113,332	179,731	173,413	107,223	573,699
2024	141,087	184,047	179,160	130,090	634,384
Compound Annual Growth Rate					
2019–2024	7.05%	0.74%	-0.63%	11.62%	3.36%

Source: Federal Aviation Administration Air Traffic Activity System, accessed April 2025.

FIGURE 3-3 HISTORICAL ACTIVITY AT NEARBY TOWERED AIRPORTS



Source: Federal Aviation Administration Air Traffic Activity System, accessed April 2025.

3.5 Forecast of Aircraft Operations

Multiple methods were used to project future aviation activity for the DED operations forecasts. Total operations were projected using a combination of forecasting methods that were based on the trends presented in this chapter, while operations by aircraft type were derived from historical ratios and anticipated fleet trends. Itinerant and local operations were forecast based on historical activity patterns and adjusted using expected demand drivers. Instrument operations were projected using historical data and national trends in IFR flight growth. The following operations forecasts are presented in this section.

- Operations Forecasting Methods (Total Operations)
- Forecast of Itinerant and Local Operations
- Forecast of Operations by Aircraft Type
- Forecast of Instrument Operations

3.5.1 Operations Forecasting Methods (Total Operations)

Nine aircraft operations forecasting methods were explored for DED. These forecasting methods apply specific growth rates to project operations during the 20-year planning period. The growth rates that were applied to each of the forecasting methods were derived from the various trends presented in this chapter and include national, local, and airport-specific trends. A description of each forecast is provided below.

- **O1) FAA Terminal Area Forecast (TAF)** – Applied the 2024 TAF growth rate for total operations (CAGR of 1.92 percent).
- **O2) 2014 Master Plan Growth Rate** – Applied the 2014 Master Plan growth rate for total operations (CAGR of 1.67 percent).
- **O3) FAA Aerospace Forecast** – Applied the FAA Aerospace Forecast Fiscal Years 2024 to 2024 growth rate for Total Active General Aviation and Air Taxi Hours Flown (CAGR of 0.78 percent). As discussed later in this chapter, this forecasting scenario must be compared to the preferred operations forecast determined herein to ensure it is consistent with the guidance in the FAA Memorandum.
- **O4) Historical Virtower Trend** – Calculated growth rate based on a linear trend of Virtower operations from 2021 to 2024 (CAGR of 5.47 percent).
- **O5) Historical FAA Flight Plan Trend** – Calculated growth rate based on a linear trend of TFMSC flight plan operations from 2015 to 2024 (CAGR of 1.21%).
- **O6) Volusia County Population Growth Rate** – Applied the growth rate for the population of Volusia County from 2020 to 2024 shown in **Table 3-8** (CAGR of 1.33 percent).
- **O7) Florida Aviation System Plan 2043 Update (FASP 2043 Update) Growth Rate** – Applied the FASP 2043 Update growth rate for DED operations from 2023 to 2043 (CAGR of 0.95 percent).

- **O8) Historical Growth at Nearby GA Airports** – Applied the growth rate for the historical growth in combined operations at the four nearby GA airports (those with ATCTs) from 2019 to 2024 shown in **Table 3-9** (CAGR of 3.36 percent).
- **O9) Combined Average** – Represents the average of operations under forecasting methods O1 through O8 (CAGR of 2.32 percent).

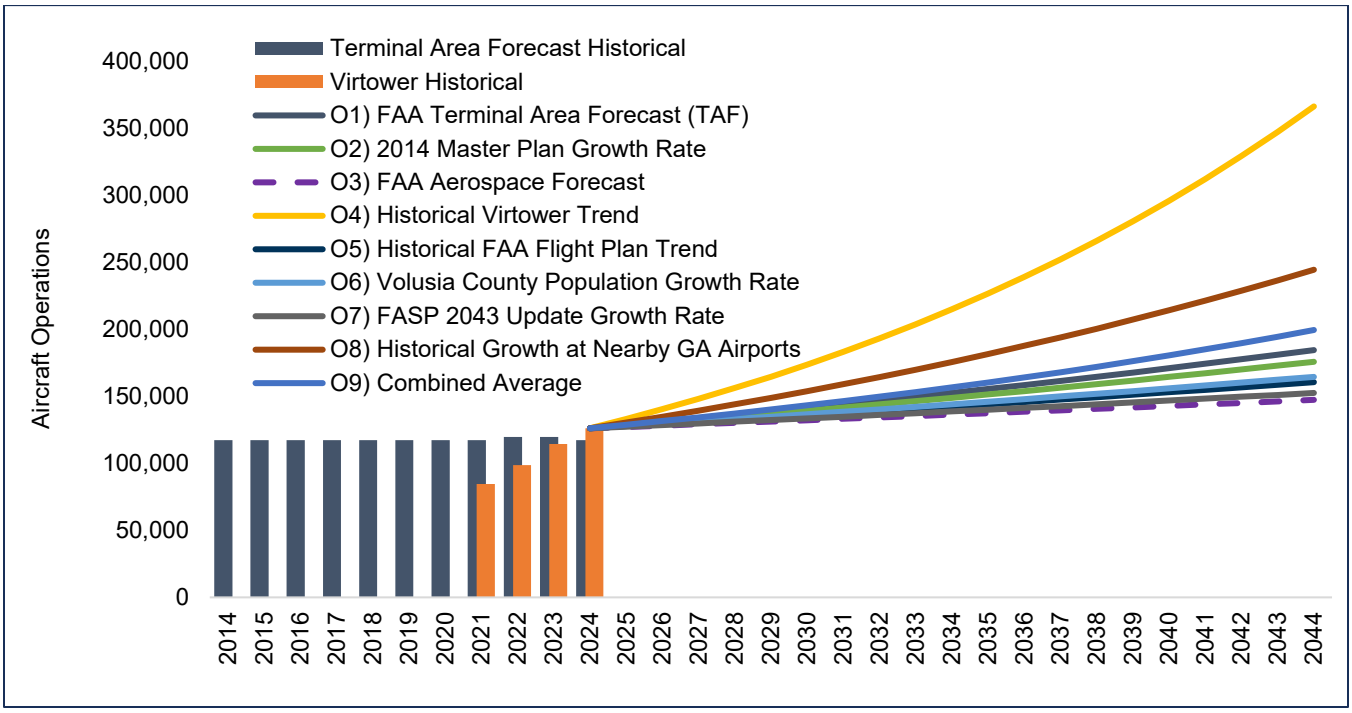
Table 3-10 and **Figure 3-4** present nine operations forecasting methods (O1 through O9). The growth trends in the table show that most individual forecasts project modest growth in DED operations between 2024 and 2044, with CAGRs ranging from 0.78 percent to 1.92 percent, except for the Historical Virtower Trend (O4) and Historical Growth at Nearby GA Airports (O8), which are notably higher due to unique historical factors that are unlikely to be sustained over the long-term. The Combined Average forecast (O9) smooths out these discrepancies and has a resulting CAGR of 2.32 percent, which balances optimistic and conservative projections. It avoids over-reliance on any single method, incorporates diverse influencing factors that have been presented in this chapter (e.g., population, historical operations, regional trends, and national trends), and offers a middle-ground approach for the long-term planning of the Airport. **Therefore, the Combined Average forecast (O9) was selected as the preferred operations forecast for this planning effort, increasing operations from 126,220 in 2024 to 199,574 by 2044 with a CAGR of 2.32 percent.**

TABLE 3-10 AIRCRAFT OPERATIONS FORECASTING METHODS

Year	Forecast Year	O1) FAA TAF	O2) 2014 Master Plan Growth Rate	O3) FAA Aerospace Forecast	O4) Historical Virtower Trend	O5) Historical FAA Flight Plan Trend	O6) Volusia County Population Growth Rate	O7) FASP 2043 Update Growth Rate	O8) Growth at Nearby GA Airports	O9) Combined Average
2024	0	126,220	126,220	126,220	126,220	126,220	126,220	126,220	126,220	126,220
2025	1	128,641	128,329	127,204	133,129	127,751	127,905	127,423	130,464	128,856
2026	2	131,108	130,474	128,197	140,416	129,300	129,613	128,637	134,850	131,574
2027	3	133,622	132,655	129,197	148,102	130,868	131,343	129,863	139,384	134,379
2028	4	136,185	134,872	130,204	156,208	132,455	133,096	131,100	144,071	137,274
2029	5	138,797	137,126	131,220	164,758	134,061	134,873	132,350	148,915	140,262
2030	6	141,459	139,418	132,243	173,777	135,687	136,674	133,611	153,922	143,349
2031	7	144,172	141,748	133,275	183,289	137,333	138,498	134,884	159,097	146,537
2032	8	146,937	144,117	134,314	193,321	138,998	140,347	136,169	164,446	149,831
2033	9	149,755	146,525	135,362	203,903	140,684	142,221	137,467	169,975	153,236
2034	10	152,627	148,974	136,418	215,064	142,390	144,119	138,777	175,690	156,757
2035	11	155,554	151,464	137,482	226,835	144,117	146,043	140,099	181,597	160,399
2036	12	158,538	153,995	138,554	239,251	145,864	147,993	141,434	187,703	164,167
2037	13	161,578	156,569	139,635	252,347	147,633	149,969	142,782	194,014	168,066
2038	14	164,677	159,185	140,724	266,160	149,424	151,971	144,142	200,537	172,103
2039	15	167,835	161,846	141,821	280,728	151,236	153,999	145,516	207,280	176,283
2040	16	171,054	164,551	142,928	296,094	153,070	156,055	146,903	214,249	180,613
2041	17	174,335	167,301	144,042	312,301	154,926	158,139	148,303	221,453	185,100
2042	18	177,678	170,097	145,166	329,396	156,805	160,250	149,716	228,899	189,751
2043	19	181,086	172,940	146,298	347,425	158,707	162,389	151,142	236,595	194,573
2044	20	184,559	175,830	147,439	366,442	160,631	164,557	152,583	244,550	199,574
Compound Annual Growth Rate										
2024–2044	N/A	1.92%	1.67%	0.78%	5.47%	1.21%	1.33%	0.95%	3.36%	2.32%

Notes: FAA – Federal Aviation Administration, TAF – Terminal Area Forecast, FASP – Florida Aviation System Plan, GA – General Aviation.
Source: AVCON, INC., May 2025.

FIGURE 3-4 AIRCRAFT OPERATIONS FORECASTING METHODS



Notes: FAA – Federal Aviation Administration, FASP – Florida Aviation System Plan, GA – General Aviation.
Source: AVCON, INC., May 2025.

3.5.2 Forecast of Itinerant and Local Operations

Table 3-11 presents the forecast of itinerant and local operations obtained from the 2024 TAF and shows that the share of 2024 operations was 70 percent itinerant and 30 percent local. The 2014 Master Plan had the same itinerant to local share in the 2011 baseline year of the forecasting effort and projected that there would be an even 50/50 split by the end of the 20-year planning period, which was also the rationale for the forecast of itinerant and local operations presented herein. It is anticipated that the growth in based aircraft and flight training activity over time will bring the itinerant to local split closer together. The stronger growth in local operations reflects increased demand for pilot training, which follows a trend supported by national aviation workforce shortages and regional flight school expansions.

TABLE 3-11 FORECAST OF ITINERANT AND LOCAL OPERATIONS

Year	Forecast Year	Itinerant (IT) Operations					Local (LOC) Operations			Total Operations	% IT	% LOC
		Air Carrier	Air Taxi	General Aviation	Military	Total	Civil	Military	Total			
2024	0	0	400	88,040	48	88,488	37,732	0	37,732	126,220	70.00%	30.00%
2025	1	0	400	88,601	49	89,050	39,806	0	39,806	128,856	69.00%	31.00%
2026	2	0	400	89,164	50	89,615	41,960	0	41,960	131,574	68.00%	32.00%
2027	3	0	400	89,732	51	90,183	44,196	0	44,196	134,379	67.00%	33.00%
2028	4	0	400	90,302	52	90,755	46,519	0	46,519	137,274	66.00%	34.00%
2029	5	0	400	90,876	53	91,329	48,933	0	48,933	140,262	65.00%	35.00%
2030	6	0	400	91,452	55	91,907	51,442	0	51,442	143,349	64.00%	36.00%
2031	7	0	400	92,031	56	92,487	54,050	0	54,050	146,537	63.00%	37.00%
2032	8	0	400	92,612	57	93,069	56,762	0	56,762	149,831	62.00%	38.00%
2033	9	0	400	93,195	58	93,653	59,583	0	59,583	153,236	61.00%	39.00%
2034	10	0	400	93,779	60	94,238	62,519	0	62,519	156,757	60.00%	40.00%
2035	11	0	400	94,363	61	94,824	65,575	0	65,575	160,399	59.00%	41.00%
2036	12	0	400	94,948	62	95,411	68,756	0	68,756	164,167	58.00%	42.00%
2037	13	0	400	95,533	64	95,997	72,069	0	72,069	168,066	57.00%	43.00%
2038	14	0	400	96,117	65	96,582	75,520	0	75,520	172,103	56.00%	44.00%
2039	15	0	400	96,699	67	97,166	79,117	0	79,117	176,283	55.00%	45.00%
2040	16	0	400	97,278	69	97,747	82,866	0	82,866	180,613	54.00%	46.00%
2041	17	0	400	97,854	70	98,324	86,776	0	86,776	185,100	53.00%	47.00%
2042	18	0	400	98,425	72	98,897	90,854	0	90,854	189,751	52.00%	48.00%
2043	19	0	400	98,990	74	99,464	95,108	0	95,108	194,573	51.00%	49.00%
2044	20	0	400	99,549	76	100,025	99,549	0	99,549	199,574	50.00%	50.00%
Compound Annual Growth Rate												
2024–2044	N/A	N/A	0.00%	0.62%	2.32%	0.61%	4.97%	N/A	4.97%	2.32%	-1.67%	2.59%

Note: Numbers may not add due to rounding.

Source: AVCON, INC., May 2025.

3.5.3 Forecast of Operations by Aircraft Type

Airfield design standards are determined based on the most demanding aircraft that regularly operate at an airport. At DED, it has historically been jets. As mentioned earlier, the number of jet operations at DED has historically exceeded 500 annual operations, and although they declined in 2024, the forecast of operations by aircraft type presented herein illustrates that they will continue to increase and support the FAA's definition of "critical aircraft" by the year 2029 (if not sooner). **Table 3-12** presents the forecasts of operations by aircraft type, which was conducted as follows:

- **Single-Engine Pistons** – The forecast of single-engine piston operations consisted of the remainder of total operations after the forecasts below were calculated.
- **Multi-Engine Pistons** – As shown in the table, multi-engine piston operations consisted of 5.19 percent of total operations at DED in 2024. The forecast increases the share of multi-engine piston operations by a CAGR of 0.17 percent through 2044, which represents the projected growth rate for that aircraft type from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.
- **Turboprops** – The forecast increases the share of turboprop operations by a CAGR of 1.09 percent through 2044, which represents the projected growth rate for that aircraft type from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.
- **Jets** – The forecast increases the share of jet operations by a CAGR of 2.55 percent through 2044, which represents the projected growth rate for that aircraft type from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.
- **Helicopters** – The forecast increases the share of helicopter operations by a CAGR of 2.09 percent through 2044, which represents the projected growth rate for that aircraft type from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.
- **Military Aircraft** – The forecast maintains the share of military aircraft operations at 0.04 percent of total operations through 2044.
- **Other Aircraft** – These primarily include light sport and experimental aircraft. The forecast increases the share of other aircraft operations by a CAGR of 3.50 percent through 2044, which represents the projected growth rate for light sport aircraft from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.

TABLE 3-12 FORECAST OF OPERATIONS BY AIRCRAFT TYPE

Year	Forecast Year	Total		Single-Engine		Multi-Engine		Turboprop		Jet		Helicopter		Military		Other	
		Ops	% of Total	Ops	% of Total	Ops	% of Total	Ops	% of Total	Ops	% of Total	Ops	% of Total	Ops	% of Total	Ops	% of Total
2024	0	126,220	100.00%	108,177	85.71%	6,547	5.19%	5,985	4.74%	413	0.33%	1,965	1.56%	48	0.04%	3,085	2.44%
2025	1	128,856	100.00%	110,196	85.52%	6,695	5.20%	6,177	4.79%	432	0.34%	2,048	1.59%	49	0.04%	3,260	2.53%
2026	2	131,574	100.00%	112,269	85.33%	6,847	5.20%	6,375	4.85%	453	0.34%	2,135	1.62%	50	0.04%	3,445	2.62%
2027	3	134,379	100.00%	114,400	85.13%	7,005	5.21%	6,582	4.90%	474	0.35%	2,226	1.66%	51	0.04%	3,641	2.71%
2028	4	137,274	100.00%	116,589	84.93%	7,168	5.22%	6,797	4.95%	497	0.36%	2,321	1.69%	52	0.04%	3,850	2.80%
2029	5	140,262	100.00%	118,839	84.73%	7,336	5.23%	7,021	5.01%	520	0.37%	2,421	1.73%	53	0.04%	4,071	2.90%
2030	6	143,349	100.00%	121,153	84.52%	7,510	5.24%	7,254	5.06%	545	0.38%	2,526	1.76%	55	0.04%	4,306	3.00%
2031	7	146,537	100.00%	123,532	84.30%	7,689	5.25%	7,496	5.12%	572	0.39%	2,637	1.80%	56	0.04%	4,556	3.11%
2032	8	149,831	100.00%	125,979	84.08%	7,875	5.26%	7,748	5.17%	600	0.40%	2,752	1.84%	57	0.04%	4,821	3.22%
2033	9	153,236	100.00%	128,495	83.85%	8,067	5.26%	8,010	5.23%	629	0.41%	2,873	1.88%	58	0.04%	5,103	3.33%
2034	10	156,757	100.00%	131,084	83.62%	8,266	5.27%	8,283	5.28%	660	0.42%	3,001	1.91%	60	0.04%	5,403	3.45%
2035	11	160,399	100.00%	133,749	83.38%	8,472	5.28%	8,568	5.34%	692	0.43%	3,135	1.95%	61	0.04%	5,722	3.57%
2036	12	164,167	100.00%	136,491	83.14%	8,686	5.29%	8,865	5.40%	726	0.44%	3,275	2.00%	62	0.04%	6,061	3.69%
2037	13	168,066	100.00%	139,313	82.89%	8,907	5.30%	9,174	5.46%	763	0.45%	3,423	2.04%	64	0.04%	6,422	3.82%
2038	14	172,103	100.00%	142,218	82.64%	9,136	5.31%	9,497	5.52%	801	0.47%	3,579	2.08%	65	0.04%	6,807	3.95%
2039	15	176,283	100.00%	145,210	82.37%	9,373	5.32%	9,833	5.58%	841	0.48%	3,742	2.12%	67	0.04%	7,216	4.09%
2040	16	180,613	100.00%	148,291	82.10%	9,619	5.33%	10,185	5.64%	884	0.49%	3,914	2.17%	69	0.04%	7,652	4.24%
2041	17	185,100	100.00%	151,464	81.83%	9,875	5.33%	10,551	5.70%	929	0.50%	4,095	2.21%	70	0.04%	8,116	4.38%
2042	18	189,751	100.00%	154,732	81.54%	10,139	5.34%	10,934	5.76%	977	0.51%	4,286	2.26%	72	0.04%	8,611	4.54%
2043	19	194,573	100.00%	158,099	81.25%	10,414	5.35%	11,334	5.83%	1,027	0.53%	4,486	2.31%	74	0.04%	9,138	4.70%
2044	20	199,574	100.00%	161,567	80.96%	10,700	5.36%	11,752	5.89%	1,080	0.54%	4,698	2.35%	76	0.04%	9,701	4.86%
Compound Annual Growth Rate																	
2024–2044		2.32%	0.00%	2.03%	-0.28%	2.49%	0.17%	3.43%	1.09%	4.92%	2.55%	4.45%	2.09%	2.32%	0.00%	5.90%	3.50%

Notes: Ops – Aircraft Operations. Source: AVCON, INC., May 2025.

3.5.4 Forecast of Instrument Operations

According to the FAA report, *Forecasting Aviation Activity by Airport*, instrument operations consist of "arrivals, departures, and overflights conducted by an FAA approach control facility for aircraft with an Instrument Flight Rule (IFR) flight plan or special Visual Flight Rule (VFR) procedures." At DED, instrument operations generally consist of approaches and departures by aircraft filing flight plans with the FAA (i.e., TFMSC operations). In 2024 these included a total of 2,341 operations or 1.85 percent of total operations (refer to **Table 3-13**). For this forecasting effort, it was assumed that the percentage share of TFMSC instrument operations at DED would increase by a CAGR of 1.87 percent in accordance with the FAA Aerospace Forecast Fiscal Years 2024 to 2044's projected growth rate for Total IFR Aircraft Handled at FAA En Route Traffic Control Centers from 2024 to 2044. Instrument operations are forecast to grow to 5,358 by 2044 and increase the percentage share of total operations to 2.68 percent.

TABLE 3-13 FORECAST OF INSTRUMENT OPERATIONS

Year	Forecast Year	Total Operations	TFMSC Operations	% of Total
2024	0	126,220	2,341	1.85%
2025	1	128,856	2,434	1.89%
2026	2	131,574	2,532	1.92%
2027	3	134,379	2,634	1.96%
2028	4	137,274	2,741	2.00%
2029	5	140,262	2,853	2.03%
2030	6	143,349	2,971	2.07%
2031	7	146,537	3,093	2.11%
2032	8	149,831	3,222	2.15%
2033	9	153,236	3,357	2.19%
2034	10	156,757	3,498	2.23%
2035	11	160,399	3,646	2.27%
2036	12	164,167	3,801	2.32%
2037	13	168,066	3,964	2.36%
2038	14	172,103	4,135	2.40%
2039	15	176,283	4,314	2.45%
2040	16	180,613	4,503	2.49%
2041	17	185,100	4,701	2.54%
2042	18	189,751	4,909	2.59%
2043	19	194,573	5,128	2.64%
2044	20	199,574	5,358	2.68%
Compound Annual Growth Rate				
2024-2044	N/A	2.32%	4.23%	1.87%

Source: AVCON, INC., May 2025.

3.6 Forecast of Based Aircraft

Multiple methods were used to project future based aircraft levels for DED. Total based aircraft were projected using a combination of forecasting methods that were based on the trends presented in this chapter, while based aircraft by type (single-engine, multi-engine, jet, and helicopter) were derived from historical ratios and anticipated fleet trends. The following based aircraft forecasts are presented in this section.

- Based Aircraft Forecasting Methods (Total Based Aircraft)
- Forecast of Based Aircraft by Type

3.6.1 Based Aircraft Forecasting Methods

Eight forecasting methods were explored for DED that apply specific growth rates to project-based aircraft during the 20-year planning period. The growth rates that were applied to each of the forecasting methods were from the various trends presented in this chapter and include national, local, and airport-specific trends. A description of each forecast is provided below.

- **B1) FAA Terminal Area Forecast (TAF)** – Applied the 2024 TAF growth rate for total based aircraft (CAGR of 0.94 percent).
- **B2) 2014 Master Plan Growth Rate** – Applied the 2014 Master Plan growth rate for total based aircraft (CAGR of 1.19 percent).
- **B3) FAA Aerospace Forecast** – Applied the FAA Aerospace Forecast Fiscal Years 2024 to 2044 growth rate for Total Active General Aviation and Air Taxi Aircraft (CAGR of 0.43 percent). As discussed later in this chapter, this forecasting scenario must be compared to the preferred based aircraft forecast determined herein to ensure it is consistent with the guidance in the FAA Memorandum.
- **B4) 2024 Operations Per Based Aircraft (OPBA) Ratio** – Applied the 2024 OPBA for DED of 650.62 to the preferred operations forecast (CAGR of 2.32 percent).
- **B5) Based Aircraft Waiting List** – Assumes that new hangars will be constructed within the next 10 years (by 2034) to fulfill 75 percent of the 78 based aircraft (and their respective owners) currently on waiting list. This equates to 58.5 additional based aircraft by 2034. Seventy-five percent of the based aircraft on waiting list was selected because some of the aircraft on the list are existing DED tenants that park on apron tiedown positions. Another reason is that the waiting list likely includes aircraft that are on waiting lists at several nearby airports. From 2035 to 2044, the forecast increases based aircraft by the TAF CAGR of 0.94 percent. Note that this forecast was “smoothed” over the course of the planning period to illustrate a more natural growth trend as opposed to random fluctuations in the first and last 10 years of the planning period (CAGR of 1.80 percent).

- **B6) Volusia County Population Growth Rate** – Applied the growth rate for the population of Volusia County from 2020 to 2024 shown in **Table 3-8** (CAGR of 1.33 percent).
- **B7) Florida Aviation System Plan 2043 Update (FASP 2043 Update) Growth Rate** – Applied the FASP 2043 Update growth rate for DED based aircraft from 2023 to 2043 (CAGR of 1.33 percent).
- **B8) Combined Average** – Represents the average of operations forecasting methods B1 through B7 (CAGR of 1.35 percent).

Table 3-14 and **Figure 3-5** present eight based aircraft forecasting methods (B1 through B8). The growth trends in the table show that most individual forecasts project modest growth in DED operations between 2024 and 2044, with CAGRs ranging from 0.42 percent to 1.36 percent, except for the OPBA Ratio (B4) and Based Aircraft Waiting List (B5). While the Combined Average forecast (B8) smooths out some of the higher growth based aircraft forecasts, it was previously noted that most airports in Florida have significant deficiencies in hangar storage space and very long waiting lists as evidenced in the Hangar Demand Initiative for the FASP 2043 Update. New hangars were recently constructed which resulted in an increase in based aircraft levels at DED and new hangars were under construction at the time of this writing which will soon result in new based aircraft at the Airport. Consequently, there is an "if you build it, they will come" mentality when it comes to attracting new based aircraft at DED and many other Florida airports. Growth in based aircraft is not expected to be linear but will increase as new hangars are constructed. **Therefore, to be able to plan for the potential to satisfy the based aircraft waiting list and still have some growth thereafter, the Based Aircraft Waiting List forecast (B5) was selected as the preferred based aircraft forecast for this planning effort, increasing based aircraft from 194 in 2024 to 277 by 2044 with a CAGR of 1.80 percent**.

3.6.2 Forecast of Based Aircraft by Type

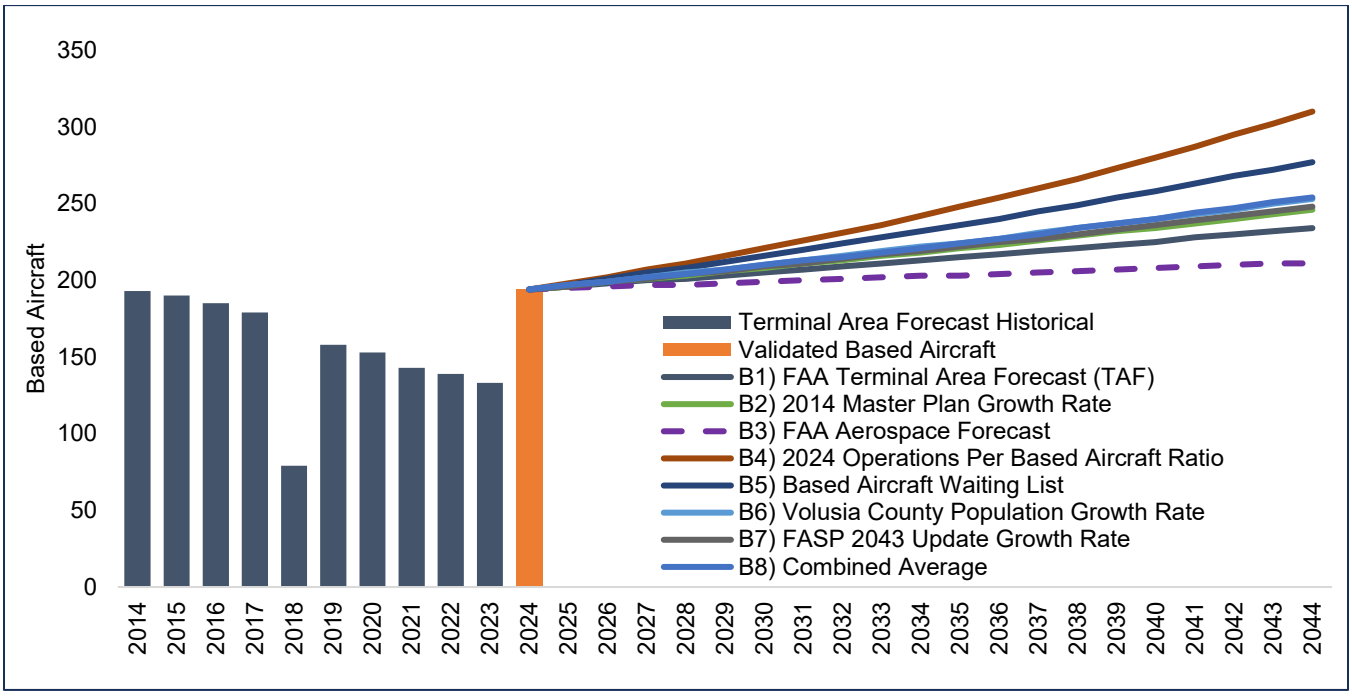
The forecast of based aircraft by type was conducted similar to the forecast of operations by aircraft type in that growth rates from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 were employed to project future growth.

TABLE 3-14 BASED AIRCRAFT FORECASTING METHODS

Year	Forecast Year	B1) FAA TAF	B2) 2014 MP	B3) FAA Aerospace	B4) 2024 OPBA Ratio	B5) Based AC Waiting List	B6) Volusia Co. Population	B7) FASP 2043 Update	B8) Combined Average
2024	0	194	194	194	194	194	194	194	194
2025	1	196	196	195	198	197	197	196	196
2026	2	198	199	196	202	201	199	199	199
2027	3	200	201	197	207	205	202	201	202
2028	4	201	203	197	211	208	205	204	204
2029	5	203	206	198	216	212	207	206	207
2030	6	205	208	199	220	216	210	209	210
2031	7	207	211	200	225	220	213	211	213
2032	8	209	213	201	230	224	216	214	215
2033	9	211	216	202	236	228	219	217	218
2034	10	213	218	203	241	232	222	219	221
2035	11	215	221	203	247	236	224	222	224
2036	12	217	223	204	252	240	227	225	227
2037	13	219	226	205	258	245	231	227	230
2038	14	221	229	206	265	249	234	230	234
2039	15	223	232	207	271	254	237	233	237
2040	16	225	234	208	278	258	240	236	240
2041	17	228	237	209	284	263	243	239	244
2042	18	230	240	210	292	268	246	242	247
2043	19	232	243	211	299	272	250	245	251
2044	20	234	246	211	307	277	253	248	254
Compound Annual Growth Rate									
2024–2034	N/A	0.94%	1.19%	0.43%	2.19%	1.80%	1.33%	1.23%	1.31%
2034–2044	N/A	0.94%	1.19%	0.43%	2.44%	1.80%	1.33%	1.23%	1.39%
2024–2044	N/A	0.94%	1.19%	0.43%	2.32%	1.80%	1.33%	1.23%	1.35%

Notes: AC – Aircraft, Co. – County, FASP – Florida Aviation System Plan, FAA – Federal Aviation Administration, OPBA – Operations per Based Aircraft, MP – Master Plan, TAF – Terminal Area Forecast. Source: AVCON, INC., May 2025.

FIGURE 3-5 BASED AIRCRAFT FORECASTING METHODS



Source: AVCON, INC., May 2025.

Table 3-15 presents the forecasts of operations by aircraft type, which was conducted as follows:

- **Single-Engine Pistons** – The forecast of based single-engine pistons consisted of the remainder of total based aircraft after the forecasts below were calculated.
- **Multi-Engine Pistons** – As shown in the table, based multi-engine pistons consisted of 6.70 percent of total based aircraft at DED in 2024. The forecast increases the share of multi-engine pistons by a CAGR of 0.17 percent through 2044, which represents the projected growth rate for that aircraft type from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.
- **Turboprops** – The forecast increases the share of based turboprops by a CAGR of 1.09 percent through 2044, which represents the projected growth rate for that aircraft type from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.
- **Jets** – The forecast increases the share of based jets by a CAGR of 2.55 percent through 2044, which represents the projected growth rate for that aircraft type from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.
- **Helicopters** – The forecast increases the share of based helicopters by a CAGR of 2.09 percent through 2044, which represents the projected growth rate for that aircraft type from the FAA Aerospace Forecast Fiscal Years 2024 to 2044 for Active General Aviation and Air Taxi Hours Flown.

TABLE 3-15 FORECAST OF BASED AIRCRAFT BY TYPE

Year	Forecast Year	Total		Single-Engine		Multi-Engine		Turboprop		Jet		Helicopter	
		Based Aircraft	% of Total	Based Aircraft	% of Total	Based Aircraft	% of Total	Based Aircraft	% of Total	Based Aircraft	% of Total	Based Aircraft	% of Total
2024	0	194	100.00%	160	82.47%	13	6.70%	13	6.70%	3	1.55%	5	2.58%
2025	1	197	100.00%	163	82.30%	13	6.71%	13	6.77%	3	1.59%	5	2.63%
2026	2	201	100.00%	165	82.12%	14	6.72%	14	6.85%	3	1.63%	5	2.69%
2027	3	205	100.00%	168	81.93%	14	6.73%	14	6.92%	3	1.67%	6	2.74%
2028	4	208	100.00%	170	81.75%	14	6.75%	15	7.00%	4	1.71%	6	2.80%
2029	5	212	100.00%	173	81.56%	14	6.76%	15	7.07%	4	1.75%	6	2.86%
2030	6	216	100.00%	176	81.37%	15	6.77%	15	7.15%	4	1.80%	6	2.92%
2031	7	220	100.00%	178	81.17%	15	6.78%	16	7.23%	4	1.84%	7	2.98%
2032	8	224	100.00%	181	80.97%	15	6.79%	16	7.31%	4	1.89%	7	3.04%
2033	9	228	100.00%	184	80.77%	15	6.80%	17	7.39%	4	1.94%	7	3.10%
2034	10	232	100.00%	187	80.56%	16	6.81%	17	7.47%	5	1.99%	7	3.17%
2035	11	236	100.00%	190	80.35%	16	6.82%	18	7.55%	5	2.04%	8	3.24%
2036	12	240	100.00%	193	80.14%	16	6.84%	18	7.63%	5	2.09%	8	3.30%
2037	13	245	100.00%	196	79.92%	17	6.85%	19	7.71%	5	2.14%	8	3.37%
2038	14	249	100.00%	199	79.70%	17	6.86%	19	7.80%	5	2.20%	9	3.44%
2039	15	254	100.00%	202	79.48%	17	6.87%	20	7.88%	6	2.26%	9	3.51%
2040	16	258	100.00%	205	79.25%	18	6.88%	21	7.97%	6	2.31%	9	3.59%
2041	17	263	100.00%	208	79.02%	18	6.89%	21	8.06%	6	2.37%	10	3.66%
2042	18	268	100.00%	211	78.78%	18	6.90%	22	8.14%	7	2.43%	10	3.74%
2043	19	272	100.00%	214	78.54%	19	6.91%	22	8.23%	7	2.49%	10	3.82%
2044	20	277	100.00%	217	78.30%	19	6.93%	23	8.32%	7	2.56%	11	3.90%
Compound Annual Growth Rate													
2024–2034		1.80%	0.00%	1.56%	-0.23%	1.97%	0.17%	2.91%	1.09%	4.40%	2.55%	3.93%	2.09%
2034–2044		1.80%	0.00%	1.51%	-0.28%	1.97%	0.17%	2.91%	1.09%	4.40%	2.55%	3.93%	2.09%
2024–2044		1.80%	0.00%	1.54%	-0.26%	1.97%	0.17%	2.91%	1.09%	4.40%	2.55%	3.93%	2.09%

Source: AVCON, INC., May 2025.

3.7 Forecast of Peak Activity

Due to the availability of the Virtower dataset, it was possible to review historical activity to determine actual peak month and peak day values for DED. As shown in **Table 3-16**, the peak month for total activity at DED during the one-year period between October 2023 and September 2024 was March with 13,125 operations or 10.40 percent of total annual activity. The table also shows the maximum, minimum, and average of the peak calculations for month, day, and hour from the Virtower dataset. While the maximum peak month (10.40 percent of total annual activity) was used to determine the Average Peak Month (APM) forecast in **Table 3-17**, the average calculations were used to determine the Average Day Peak Month (ADPM) (0.45 percent of total annual activity) and Average Day Peak Hour (ADPH) (0.06 percent of total annual activity). The average peak values for day and hour are more representative of what the Airport experiences during peak periods throughout the year, with the itinerant and local peak hours determined based on their representative share shown in **Table 3-11**. According to *FAA Values for FAA Investment and Regulatory Decisions, A Guide* (updated November 2024), GA aircraft average 1.9 passengers per flight, which includes everything from small pistons to large corporate jets. That value was applied to determine the forecast of ADPH itinerant passengers during the planning period.

TABLE 3-16 PEAK ACTIVITY ANALYSIS

Month	Month		Day		Hour	
	Operations	% of Total	Operations	% of Total	Operations	% of Total
October 2023	11,096	8.79%	509	0.40%	68	0.05%
November 2023	9,068	7.18%	626	0.50%	81	0.06%
December 2023	9,197	7.29%	561	0.44%	90	0.07%
January 2024	11,044	8.75%	602	0.48%	73	0.06%
February 2024	11,351	8.99%	568	0.45%	70	0.06%
March 2024	13,125	10.40%	684	0.54%	84	0.07%
April 2024	12,519	9.92%	678	0.54%	85	0.07%
May 2024	12,967	10.27%	576	0.46%	61	0.05%
June 2024	9,615	7.62%	554	0.44%	77	0.06%
July 2024	10,486	8.31%	522	0.41%	64	0.05%
August 2024	8,120	6.43%	461	0.37%	63	0.05%
September 2024	7,632	6.05%	448	0.35%	59	0.05%
Total Operations	126,220					
Maximum	13,125	10.40%	684	0.54%	90	0.07%
Minimum	7,632	6.05%	448	0.35%	59	0.05%
Average	10,518	8.33%	566	0.45%	73	0.06%

Source: Virtower, LLC, December 2024 (airport-provided data).

TABLE 3-17 PEAK ACTIVITY FORECASTS

Year	Forecast Year	Total Operations	Average Peak Month (APM)	Average Day Peak Month (ADPM)	Average Day Peak Hour (ADPH)	Itinerant Peak Hour	Local Peak Hour	Peak Hour Passengers (Itinerant Only)
2024	0	126,220	13,125	566	73	51	22	97
2025	1	128,856	13,399	578	74	51	23	98
2026	2	131,574	13,682	590	76	52	24	98
2027	3	134,379	13,973	602	78	52	26	99
2028	4	137,274	14,274	615	79	52	27	99
2029	5	140,262	14,585	629	81	53	28	100
2030	6	143,349	14,906	643	83	53	30	101
2031	7	146,537	15,238	657	85	53	31	101
2032	8	149,831	15,580	672	87	54	33	102
2033	9	153,236	15,934	687	89	54	35	103
2034	10	156,757	16,300	703	91	54	36	103
2035	11	160,399	16,679	719	93	55	38	104
2036	12	164,167	17,071	736	95	55	40	105
2037	13	168,066	17,476	753	97	55	42	105
2038	14	172,103	17,896	771	99	56	44	106
2039	15	176,283	18,331	790	102	56	46	106
2040	16	180,613	18,781	810	104	56	48	107
2041	17	185,100	19,248	830	107	57	50	108
2042	18	189,751	19,731	851	110	57	53	108
2043	19	194,573	20,233	872	112	57	55	109
2044	20	199,574	20,753	895	115	58	58	110
Compound Annual Growth Rate								
2024–2044	N/A	2.32%	2.32%	2.32%	2.32%	0.61%	4.96%	0.61%

Source: AVCON, INC., May 2025.

3.8 Forecast of Critical Aircraft

The FAA Memorandum is specific that a forecast must be produced that illustrates critical aircraft that is "highly likely" or "expected" to regularly operate at an airport. "Notwithstanding what is forecast, operational levels can go up or down, and the critical aircraft often changes over time. Accordingly, for a forecast to be useful, it must remain credible during the unknown reality ahead. Because airport forecasts are a key input into public deliberations and both airport sponsor and FAA infrastructure decisions, the FAA's review and approval is conducted with appropriate rigor and objectivity to serve the public interest." As part of this forecasting effort, historical activity was reviewed from the Virtower dataset and the TFMSC database. The historical data showed that DED currently experiences 500 or more annual operations by aircraft with an AAC of B (determined based on the approach speed of the critical aircraft) and an ADG of II (determined based on the wingspan of the critical aircraft) or a composite RDC of B-II (determined based on a composite of the AAC and ADG). This is lower than the RDC of C-II that was shown for Runway 12-30 on the 2014 ALP for DED. The following forecasts and conclusions are presented in this section as it pertains to the identification of critical aircraft for both Runways 12-30 and 5-23:

- Forecast of Operations by Aircraft Approach Category (AAC)
- Forecast of Operations by Airplane Design Group (ADG)
- Forecast of Operations by Taxiway Design Group (TDG)
- Identification of Critical Aircraft

3.8.1 Forecast of Operations by Aircraft Approach Category

As previously mentioned, the AAC is "a grouping of aircraft based on a reference landing speed (VREF), if specified, or if VREF is not specified, 1.3 times stall speed (VSO) at the maximum certificated landing weight." It represents the approach speed of the critical aircraft and is used to determine geometrical requirements for runway width and other surfaces surrounding the runway, which are identified in the next chapter of this study. The forecast of operations by AAC was conducted by using the 2024 ratio of total operations to AAC operations and carrying it forward through 2034 (i.e., forecast year 10). To preserve the highly likely or expected ultimate designation of Runway 12-30 as an AAC C runway, the forecast increases the share of AAC C operations by a fraction of a percent. Operations by other aircraft were slightly reduced after 2034 to make up for the growth in AAC C operations. As shown in **Table 3-18**, the resulting forecast increases AAC C and higher operations over the threshold of 500 annual operations beginning in 2042 after the initial 10-year forecast window. The "other" column in the table represents growth in operations by helicopters and other unclassified aircraft. The "AAC C+" column includes all operations by aircraft with an AAC of C and higher.

TABLE 3-18 FORECAST OF OPERATIONS BY AIRCRAFT APPROACH CATEGORY

Year	Forecast Year	Total Operations	AAC A	AAC B	AAC C	AAC D	Other	AAC C+
2024	0	126,220	121,096	906	115	21	4,082	136
2025	1	128,856	123,625	925	117	21	4,167	139
2026	2	131,574	126,233	944	120	22	4,255	142
2027	3	134,379	128,924	965	122	22	4,346	145
2028	4	137,274	131,701	985	125	23	4,439	148
2029	5	140,262	134,568	1,007	128	23	4,536	151
2030	6	143,349	137,529	1,029	131	24	4,636	154
2031	7	146,537	140,588	1,052	134	24	4,739	158
2032	8	149,831	143,749	1,075	137	25	4,846	161
2033	9	153,236	147,016	1,100	140	25	4,956	165
2034	10	156,757	150,394	1,125	143	26	5,070	169
2035	11	160,399	153,887	1,151	401	27	4,933	428
2036	12	164,167	157,502	1,178	410	27	5,048	438
2037	13	168,066	161,243	1,206	420	28	5,168	448
2038	14	172,103	165,116	1,235	430	29	5,292	459
2039	15	176,283	169,126	1,265	441	29	5,421	470
2040	16	180,613	173,281	1,296	452	30	5,554	482
2041	17	185,100	177,586	1,329	463	31	5,692	494
2042	18	189,751	182,048	1,362	474	32	5,835	506
2043	19	194,573	186,674	1,397	486	32	5,983	519
2044	20	199,574	191,472	1,433	499	33	6,137	532
Compound Annual Growth Rate								
2024–2034	N/A	2.19%	2.19%	2.19%	2.19%	2.19%	2.19%	2.19%
2024–2044	N/A	2.32%	2.32%	2.32%	7.61%	2.32%	2.06%	7.06%

Notes: AAC – Aircraft Approach Category.

Source: AVCON, INC., May 2025.

3.8.2 Forecast of Operations by Airplane Design Group

As previously mentioned, the ADG is "A classification of aircraft based on wingspan and tail height. When the aircraft wingspan and tail height fall in different groups, the larger group applies." It is used to determine various airfield geometrical requirements for runways and taxiways which are identified in the next chapter of this study. The forecast of operations by ADG was conducted by using the 2024 ratio of total operations to ADG operations and carrying it forward through the 20-year planning period. As shown in **Table 3-19**, the resulting forecast shows ADG II aircraft being the most demanding aircraft type that is likely to conduct regular operations at DED between 2024 and 2044. The "other" column in the table represents growth in operations by helicopters and other unclassified aircraft.

3.8.3 Forecast Operations by Taxiway Design Group

As previously mentioned, the TDG is "A classification of airplanes based on outer-to-outer Main Gear Width (MGW) and Cockpit to Main Gear Distance (CMG) distance." It is used to determine various airfield geometrical requirements for taxiways which are identified in the next chapter of this study. The forecast of operations by TDG was conducted by using the 2024 ratio of TFMSC operations to TDG operations and carrying it forward through the 20-year planning period. As previously mentioned, the FAA's TFMSC database records all historical flight plan activity data, which primarily includes operations that pilots file with the FAA when they intend to fly during IFR conditions or within controlled airspace. As shown in **Table 3-20**, the forecast shows TDG 2A and higher operations exceeding 500 during the planning period; however, based on the fact that the records in TFMSC only reflect a very small sample of total annual operations at DED (1.85 percent), it is highly likely that the Airport currently experiences greater than 500 annual operations by aircraft with TDGs 2A and higher. The "other" column in the table represents growth in operations by helicopters and other unclassified aircraft. The "TDG 2A+" column includes all TFMSC operations by aircraft with a TDG of 2A and higher.

TABLE 3-19 FORECAST OPERATIONS B Y AIRPLANE DESIGN GROUP

Year	Forecast Year	Total Operations	ADG I	ADG II	ADG III	Other
2024	0	126,220	113,669	8,449	20	4,082
2025	1	128,856	116,043	8,625	20	4,167
2026	2	131,574	118,491	8,807	21	4,255
2027	3	134,379	121,017	8,995	21	4,346
2028	4	137,274	123,624	9,189	22	4,439
2029	5	140,262	126,315	9,389	22	4,536
2030	6	143,349	129,094	9,596	23	4,636
2031	7	146,537	131,966	9,809	23	4,739
2032	8	149,831	134,932	10,030	24	4,846
2033	9	153,236	137,999	10,257	24	4,956
2034	10	156,757	141,170	10,493	25	5,070
2035	11	160,399	144,449	10,737	25	5,187
2036	12	164,167	147,842	10,989	26	5,309
2037	13	168,066	151,354	11,250	27	5,435
2038	14	172,103	154,989	11,520	27	5,566
2039	15	176,283	158,754	11,800	28	5,701
2040	16	180,613	162,653	12,090	29	5,841
2041	17	185,100	166,694	12,390	29	5,986
2042	18	189,751	170,882	12,702	30	6,137
2043	19	194,573	175,225	13,024	31	6,293
2044	20	199,574	179,729	13,359	32	6,454
Compound Annual Growth Rate						
2024–2034	N/A	2.19%	2.19%	2.19%	2.19%	2.19%
2024–2044	N/A	2.32%	2.32%	2.32%	2.32%	2.32%

Notes: ADG – Airplane Design Group.
Source: AVCON, INC., May 2025.

TABLE 3-20 FORECAST OF OPERATIONS BY TAXIWAY DESIGN GROUP

Year	Forecast Year	TFMSC Operations	TDG 1A	TDG 1B	TDG 2A	TDG 2B	TDG 3	Other	TDG 2A+
2024	0	2,341	1,645	171	289	11	1	224	301
2025	1	2,434	1,711	178	301	11	1	233	313
2026	2	2,532	1,779	185	313	12	1	242	326
2027	3	2,634	1,851	192	325	12	1	252	339
2028	4	2,741	1,926	200	338	13	1	262	352
2029	5	2,853	2,005	208	352	13	1	273	367
2030	6	2,971	2,087	217	367	14	1	284	382
2031	7	3,093	2,174	226	382	15	1	296	398
2032	8	3,222	2,264	235	398	15	1	308	414
2033	9	3,357	2,359	245	414	16	1	321	432
2034	10	3,498	2,458	256	432	16	1	335	450
2035	11	3,646	2,562	266	450	17	2	349	469
2036	12	3,801	2,671	278	469	18	2	364	489
2037	13	3,964	2,785	290	489	19	2	379	510
2038	14	4,135	2,906	302	510	19	2	396	532
2039	15	4,314	3,032	315	533	20	2	413	555
2040	16	4,503	3,164	329	556	21	2	431	579
2041	17	4,701	3,303	343	580	22	2	450	604
2042	18	4,909	3,449	359	606	23	2	470	631
2043	19	5,128	3,603	375	633	24	2	491	659
2044	20	5,358	3,765	391	661	25	2	513	689
Compound Annual Growth Rate									
2024–2034	N/A	4.10%	4.10%	4.10%	4.10%	4.10%	4.10%	4.10%	4.10%
2024–2044	N/A	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%	4.23%

Notes: TFMSC – Traffic Flow Management System Counts, TDG – Taxiway Design Group.
Source: AVCON, INC. May 2025.

3.8.4 Identification of Critical Aircraft

The 2014 Master Plan identified the critical aircraft for Runway 12-30 as the Bombardier Challenger CL-600 which has an AAC of C, ADG of II, and TDG of 1B, or overall RDC of C-II. Runway 5-23 was not assigned a critical aircraft in the 2014 Master Plan, although it was assigned an RDC of B-II in the 2014 ALP. As mentioned earlier, notwithstanding what is forecast, operational levels can go up or down, and the critical aircraft often changes over time. The FAA Memorandum is rather cautionary and indicates that the existing critical aircraft, particularly for the 10-year forecast period, must be supported by credible information and realistic forecasts. Based on the historical activity data that was reviewed for DED in conjunction with the forecasts of AAC, ADG,

and TDG presented in this section, it was determined that the existing critical aircraft for both Runways 12-30 and 5-23 for the 10-year forecast period should have the following composition:

- Aircraft Approach Category (AAC) **B**
- Airplane Design Group (ADG) **II**
- Taxiway Design Group (TDG) **2A**

By evaluating the information in the historical Virtower dataset and comparing it to the AAC, ADG, and TDG composition above, the most appropriate existing critical aircraft for both runways was determined to be a Cessna Citation V (refer to aircraft characteristics in **Table 3-21** and **Figure 3-6**). It is a medium-sized corporate jet that commonly operates at DED and matches all three design characteristics above.

Based on the forecast of 500 'AAC C' and higher annual aircraft operations by 2044, the ultimate critical aircraft for Runway 12-30 is expected to have an AAC of C, ADG of II, and TDG of 2A. There are only a handful of corporate jets that match those criteria including older Gulfstream II and III aircraft that ceased production in the 1980s and some Dassault Falcon models. The Dassault Falcon 2000EX is a super-midsized corporate jet that is still being produced and occasionally operates at DED. Therefore, the Dassault Falcon 2000 was determined to be the ultimate critical aircraft for Runway 12-30 (refer to aircraft characteristics in **Table 3-22** and **Figure 3-7**). It is expected that the critical aircraft for Runway 5-23 will remain the B-II Cessna Citation V.

TABLE 3-21 EXISTING CRITICAL AIRCRAFT (ALL RUNWAYS) AND FUTURE RUNWAY 5-23 CRITICAL AIRCRAFT

Item	Specification
Critical Aircraft	Cessna Citation V
Aircraft Type	Medium-Sized Corporate Jet
Aircraft Approach Category / Approach Speed	AAC B / 103 Knots
Airplane Design Group / Wingspan	ADG II / 54.1 Feet
Runway Design Code (RDC)	RDC B-II
Tail Height	15.0 Feet
Main Gear Width	20.1 Feet
Cockpit to Main Gear	19.9 Feet
Taxiway Design Group (TDG)	TDG 2A
Max Takeoff Weight (MTOW)	16,300 Pounds
Max Landing Weight (MLW)	15,200 Pounds

Source: Federal Aviation Administration Aircraft Characteristics Database.

FIGURE 3-6 CESSNA CITATION V

Source: https://www.aircharterserviceusa.com/aircraft-guide/private/cessnaaircraftcompany-usa/cessnacitationvultra

TABLE 3-22 ULTIMATE CRITICAL AIRCRAFT (RUNWAY 12-30 ONLY)

Item	Specification
Critical Aircraft	Dassault Falcon 2000EX
Aircraft Type	Super-Midsized Corporate Jet
Aircraft Approach Category/Approach Speed	AAC C / 130 Knots
Airplane Design Group/Wingspan	ADG II / 63.4 Feet
Runway Design Code (RDC)	RDC C-II
Tail Height	23.2 Feet
Main Gear Width	24.3 Feet
Cockpit to Main Gear	25.0 Feet
Taxiway Design Group (TDG)	TDG 2A
Max Takeoff Weight (MTOW)	42,400 Pounds
Max Landing Weight (MLW)	39,300 Pounds

Source: Federal Aviation Administration Aircraft Characteristics Database.

FIGURE 3-7 DASSAULT FALCON 2000EX

Source: https://www.aircharterserviceusa.com/aircraft-guide/private/dassault-france/dassaultfalcon2000ex

3.9 Forecast Summary

According to the FAA Memorandum, forecasts for non-towered airports are considered to be consistent with the FAA Aerospace Forecasts if they are within 10 percent of the FAA Aerospace Forecasts at five years and 15 percent at 10 years. FAA approval of the baseline scenario forecast for planning purposes is limited to the 10-year outlook period, which is the primary timeframe for infrastructure decision-making. At 10+ years, uncertainty commonly exceeds the utility of forecasts to inform smart infrastructure decisions; therefore, the FAA will note that the period of the planning forecast beyond 10 years is “accepted for planning purposes” rather than approved. As shown in **Table 3-23**, the FAA Aerospace Forecasts for operations (Operations Forecasting Method O3 herein) and based aircraft (Based Aircraft Forecasting Method B3 herein) were compared to the preferred forecasts for DED. Both the preferred operations and based aircraft forecasts for DED remain consistent with the FAA Aerospace Forecasts within the five- and 10-year periods as presented in **Table 3-24**. Total operations are forecast to increase from 126,220 in 2024 to 199,574 by 2044 with a CAGR of 2.32 percent compared to the CAGR of the FAA Aerospace Forecast of 0.78 percent during the same period. Total based aircraft are forecast to increase from 194 in 2024 to 277 by 2044 with a CAGR of 1.80 percent compared to the CAGR of the FAA Aerospace Forecast of 0.43 percent during the same period.

TABLE 3-23 FORECAST SUMMARY

Category	Forecast Levels					Compound Annual Growth Rates			
	Base 2024	Base +1 2025	Base +5 2029	Base +10 2034	Base +20 2044	Base +1 2025	Base +5 2029	Base +10 2034	Base +20 2044
Aircraft Operations									
Itinerant Operations									
General Aviation	88,040	88,601	90,876	93,779	99,549	0.64%	0.64%	0.63%	0.62%
Air Taxi	400	400	400	400	400	0.00%	0.00%	0.00%	0.00%
Military	48	49	53	60	76	2.08%	2.00%	2.26%	2.32%
Total Itinerant	88,488	89,050	91,329	94,238	100,025	0.64%	0.63%	0.63%	0.61%
Local Operations									
General Aviation	37,732	39,806	48,933	62,519	99,549	5.50%	5.34%	5.18%	4.97%
Total Operations	**126,220**	**128,856**	**140,262**	**156,757**	**199,574**	**2.09%**	**2.13%**	**2.19%**	**2.32%**
Peak Hour Operations	73	74	81	91	115	1.37%	2.10%	2.23%	2.30%
Instrument Operations	2,341	2,434	2,853	3,498	5,358	3.97%	4.04%	4.10%	4.23%
Based Aircraft									
Single-Engine	160	163	173	187	217	1.88%	1.57%	1.57%	1.54%
Multi-Engine	13	13	14	16	19	0.00%	1.49%	2.10%	1.92%
Turboprop	13	13	15	17	23	0.00%	2.90%	2.72%	2.89%
Jet	3	3	4	5	7	0.00%	5.92%	5.24%	4.33%
Helicopter	5	5	6	7	11	0.00%	3.71%	3.42%	4.02%
Total Based Aircraft	**194**	**197**	**212**	**232**	**277**	**1.55%**	**1.79%**	**1.80%**	**1.80%**

Source: AVCON, INC., May 2025.

TABLE 3-24 DELAND AIRPORT FORECAST COMPARISON TO THE AEROSPACE FORECAST

Category	Year	DeLand Forecast		FAA Aerospace Forecast		Percent Difference DeLand to FAA Aerospace
		Forecast Value	CAGR	Forecast Value	CAGR	
Aircraft Operations						
Base Year	2024	126,220	---	126,220	---	0.00%
Base +5	2029	140,262	2.13%	131,220	0.78%	6.89%
Base +10	2034	156,757	2.19%	136,418	0.78%	14.91%
Based Aircraft						
Base Year	2024	194	---	194	---	0.00%
Base +5	2029	212	1.79%	198	0.41%	7.07%
Base +10	2034	232	1.80%	203	0.45%	14.29%

Notes: CAGR – Compound Annual Growth Rate, FAA – Federal Aviation Administration.
Source: AVCON, INC., May 2025.

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