AVIATION DEMAND FORECASTS

Facility planning requires a definition of demand that may be expected to occur during the useful life of the facility's crucial components. For ODO, this involves projecting aviation demand for a 20-year timeframe. In this report, forecasts of registered aircraft, based aircraft, based aircraft fleet mix, annual airport operations, and forecasts of airport peaking characteristics are projected.

The forecasts generated may be used for a multitude of purposes, including facility needs assessments and environmental evaluations. The forecasts will be submitted to TxDOT/FAA for review and approval to ensure accuracy and reasonable projections of aviation activity. The intent of the projections is to enable the airport to make facility improvements to meet demand in the most efficient and cost-effective manner possible.

It should be noted that aviation activity can be affected by numerous outside influences on a local, regional, and national level. As a result, forecasts of aviation demand should be used only for advisory purposes. It is recommended that planning strategies remain flexible enough to accommodate any unforeseen facility needs.

FORECASTING APPROACH

Typically, the most accurate and reliable forecasting approach is derived from multiple analytical forecasting techniques. Analytical forecasting methodologies typically consist of regression analysis, trend analysis and extrapolation, market share or ratio analysis, and smoothing. Through the use of multiple forecasting techniques based upon each aviation demand indicator, an envelope of aviation demand projections can be generated.

Regression analysis can be described as a forecasting technique that correlates certain aviation demand variables (such as passenger enplanements or operations) with economic measures. When using regression analysis, the technique should be limited to relatively simple models containing independent variables for which reliable forecasts are available (such as population or income forecasts).

Trend analysis and extrapolation is a forecasting technique that records historical activity (such as airport operations) and projects this pattern into the future. Oftentimes, this technique can be beneficial when local conditions of the study area are differentiated from the region or other airports.

Market share or ratio analysis can be described as a forecasting technique that assumes the existence of a top-down relationship between national, regional, and local forecasts. The local forecasts are presented as a market share of regional forecasts, and regional forecasts are presented as a market share of national forecasts. Typically, historical market shares are calculated and used as a base to project future market shares.

Smoothing is a statistical forecasting technique that can be applied to historical data, giving greater weight to the most recent trends and conditions. Generally, this technique is most effective when generating short-term forecasts.

NATIONAL GENERAL AVIATION TRENDS

The current edition of the FAA *Aerospace Forecasts, Fiscal Years 2021-2041* forecasts the fleet mix and hours flown for single engine piston aircraft, multi-engine piston aircraft, turboprops, business jets, piston and turbine helicopters, light sport, experimental, and others (gliders and balloons). The FAA forecasts "active aircraft," not total aircraft. An active aircraft is one that is flown at least one hour during the year. From 2010 through 2013, the FAA undertook an effort to have all aircraft owners re-register their aircraft. This effort resulted in a 10.5 percent decrease in the number of active general aviation aircraft, mostly in the piston category.

The COVID-19 pandemic has been the biggest factor affecting aviation since March 2020. The effect of the pandemic on the aviation industry has been most devastating to the commercial airline operators, who are still working to recover from staggering losses and add capacity back into networks. However, other segments of the aviation industry, including general aviation such as charters, air taxi, and fractionals, were not impacted quite so much as the airlines. In fact, they appear to have maintained pre-pandemic levels and, in many cases, showed increases in activity. Long-term, the strengths and capabilities developed over the past decade will become evident again. There is confidence that U.S. airlines have finally transformed from a capital intensive, highly cyclical industry to an industry that can generate solid returns on capital and sustained profits.

The long-term outlook for general aviation is promising, as growth at the high-end offsets continuing retirements at the traditional low end of the segment. The active general aviation fleet is forecast to remain relatively stable between 2021 and 2041. While steady growth in both GDP and corporate profits results in continued growth of the turbine and rotorcraft fleets, the largest segment of the fleet – fixed-wing piston aircraft – continues to shrink over the forecast period. **Table 11** details the primary general aviation demand indicators as forecast by the FAA.

TABLE 11 | FAA General Aviation Forecast

Demand Indicator	2021	2041	CAGR
General Aviation (GA) Fleet			
Total Fixed Wing Piston	139,065	116,905	-0.86%
Total Fixed Wing Turbine	25,790	35,780	1.65%
Total Helicopters	10,215	13,390	1.36%
Total Other (experimental, light sport, etc.)	30,800	42,715	1.65%
Total GA Fleet	***205,870***	***208,790***	***0.07%***
General Aviation Operations			
Local	12,743,768	14,392,959	0.61%
Itinerant	13,199,029	15,737,728	0.88%
Total GA Operations	***25,942,797***	***30,130,687***	***0.75%***
CAGR: compound annual growth rate (2021-2041)			

Source: FAA Aerospace Forecast - Fiscal Years 2021-2041

In 2021, the FAA estimated there were 139,065 piston-powered, fixed-wing aircraft in the national fleet. The total number of piston-powered aircraft in the fleet is forecast to decline by -0.9 percent from 2021-2041, resulting in 116,905 by 2041. This reflects a decline of -0.9 percent annually for single engine pistons and -0.4 percent for multi-engine pistons.

Total turbine aircraft are forecast to grow at an annual growth rate of 1.7 percent through 2041. The FAA estimates there were 25,790 turbine-powered aircraft in the national fleet in 2021, and there will be 35,780 by 2041. This includes annual growth rates of 0.6 percent for turboprops, 2.3 percent for business jets, and 1.4 percent for turbine helicopters. **Exhibit 15** presents the historical and forecast U.S. active general aviation aircraft.

The FAA also forecasts total operations based upon activity at control towers across the U.S. Operations are categorized as air carrier, air taxi/commuter, general aviation, and military. While the fleet size remains relatively level, the number of general aviation operations at towered airports is projected to increase from 25.9 million in 2021 to 30.1 million in 2041, with an average increase of 0.8 percent per year as growth in turbine, rotorcraft, and experimental hours offset a decline in fixed-wing piston hours. This includes annual growth rates of 0.6 percent for local general aviation operations and 0.9 percent for itinerant general aviation operations.

GENERAL AVIATION AIRCRAFT SHIPMENTS AND REVENUE

The 2007-2009 economic recession had a negative impact on general aviation aircraft production, and the industry was slow to recover. Aircraft manufacturing declined for three straight years from 2008 through 2010. Since this time, aircraft manufacturing has stabilized and returned to growth. According to General Aviation Manufactures Association (GAMA), there is an expected rebound in aircraft demand once the impact of the COVID pandemic has passed and belief that innovations in electric propulsion and supersonic technologies will increase the sector's global reach. Despite the industry's fourth quarter rebound, the pandemic took its toll on 2020 shipments and billings. The least affected segment, piston airplanes (including both single engine and multi-engine aircraft), saw deliveries drop just 0.9 percent year over year to 1,312 units, but turboprop shipments declined 15.6 percent to 443 and business jet deliveries fell 20.4 percent to 644 aircraft. **Table 12** presents currently available historical data related to general aviation aircraft shipments.

Worldwide shipments of general aviation airplanes declined in the year 2020 with a total of 2,399 units delivered around the globe, compared to 2,658 units in 2019, but still surpassed the 2,325 units in 2017. Worldwide general aviation billings were the highest in 2014. In 2020, there was a decline in new aircraft shipments with a total of $20,029 billion compared to the previous year of $23,515 billion. North America continues to be the largest market for general aviation aircraft and leads the way in the manufacturing of piston, turboprop, and jet aircraft. The Asia-Pacific region is the second largest market for piston-powered, while Europe is the second leading in turboprop and business jets.

TABLE 12 | Annual General Aviation Airplane Shipments Manufactured Worldwide and Factory Net Billings

Year	Total	SEP	MEP	TP	J	Net Billings ($millions)
1994	1,132	544	77	233	278	3,749
1995	1,251	605	61	285	300	4,294
1996	1,437	731	70	320	316	4,936
1997	1,840	1043	80	279	438	7,170
1998	2,457	1508	98	336	515	8,604
1999	2,808	1689	112	340	667	11,560
2000	3,147	1,877	103	415	752	13,496
2001	2,998	1,645	147	422	784	13,868
2002	2,677	1,591	130	280	676	11,778
2003	2,686	1,825	71	272	518	9,998
2004	2,962	1,999	52	319	592	12,093
2005	3,590	2,326	139	375	750	15,156
2006	4,054	2,513	242	412	887	18,815
2007	4,277	2,417	258	465	1,137	21,837
2008	3,974	1,943	176	538	1,317	24,846
2009	2,283	893	70	446	874	19,474
2010	2,024	781	108	368	767	19,715
2011	2,120	761	137	526	696	19,042
2012	2,164	817	91	584	672	18,895
2013	2,353	908	122	645	678	23,450
2014	2,454	986	143	603	722	24,499
2015	2,331	946	110	557	718	24,129
2016	2,268	890	129	582	667	21,092
2017	2,324	936	149	563	676	20,197
2018	2,441	952	185	601	703	20,515
2019	2,658	1,111	213	525	809	23,515
2020	2,399	1,155	157	443	644	20,029

SEP - Single-Engine Piston; MEP - Multi-Engine Piston; TP - Turboprop; J - Turbofan/Turbojet

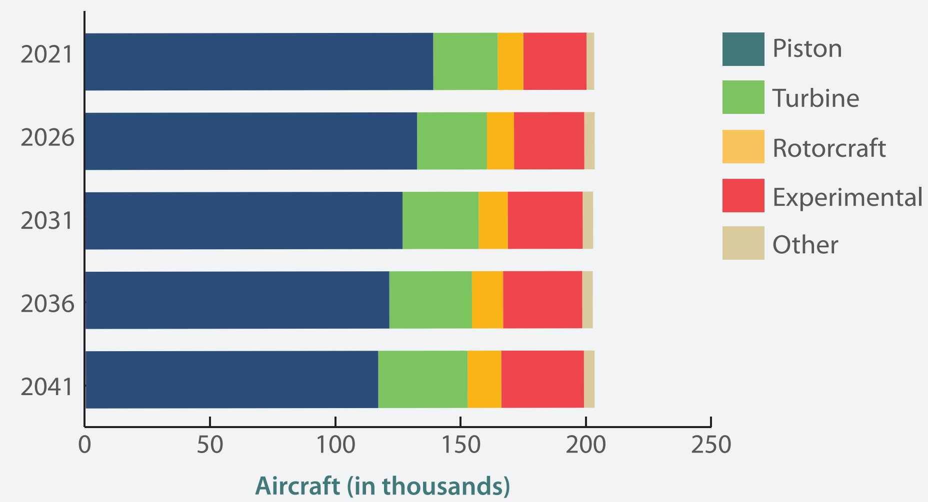
Source: General Aviation Manufacturers Association, 2020 Annual Report

Business Jets | Business jet deliveries decreased from 809 units in 2019 to 644 units in 2020, the second largest drop since the 2008-2009 economic recession. The North American market accounted for 66 percent of business jet deliveries, which is a 1.1 percent decrease in market share compared to 2019.

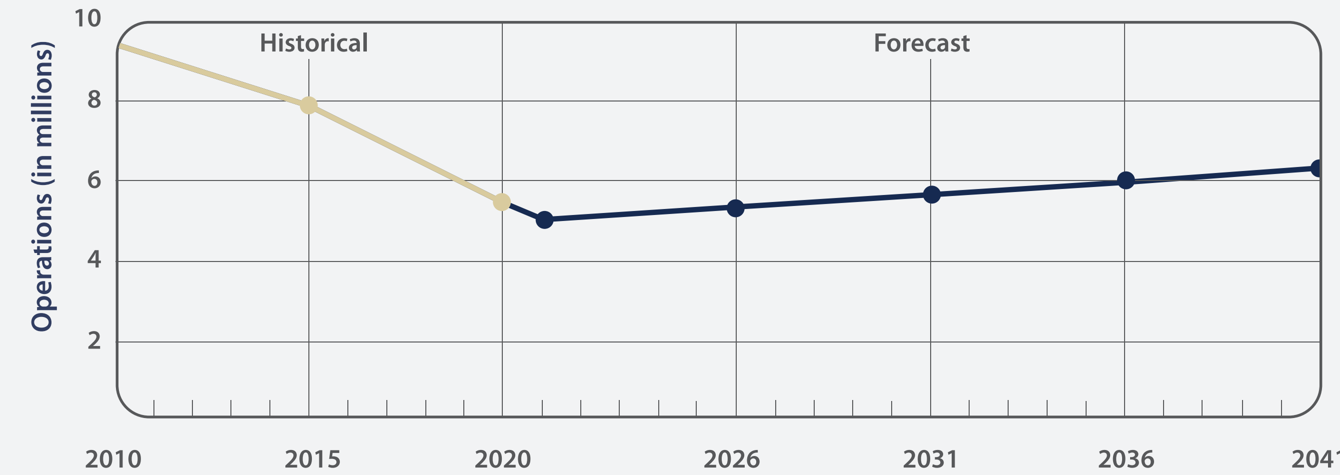
Turboprops | Turboprop shipments were down from 525 in 2019 to 443 in 2020. North America's market share of turboprop aircraft, however, increased by 4.6 percent in the last year. The European market also increased, while Latin America, Middle East Africana, and Asia-Pacific markets decreased their market share.

Pistons | In 2020, piston airplane shipments fell to 1,312 units compared to 1,324 units in the prior year. North America's market share of piston aircraft deliveries dropped 1.5 percent from the year 2019. The Asia-Pacific market experienced a positive rate in market share during the past year, while Europe, Latin-America, and Middle East saw a decline.

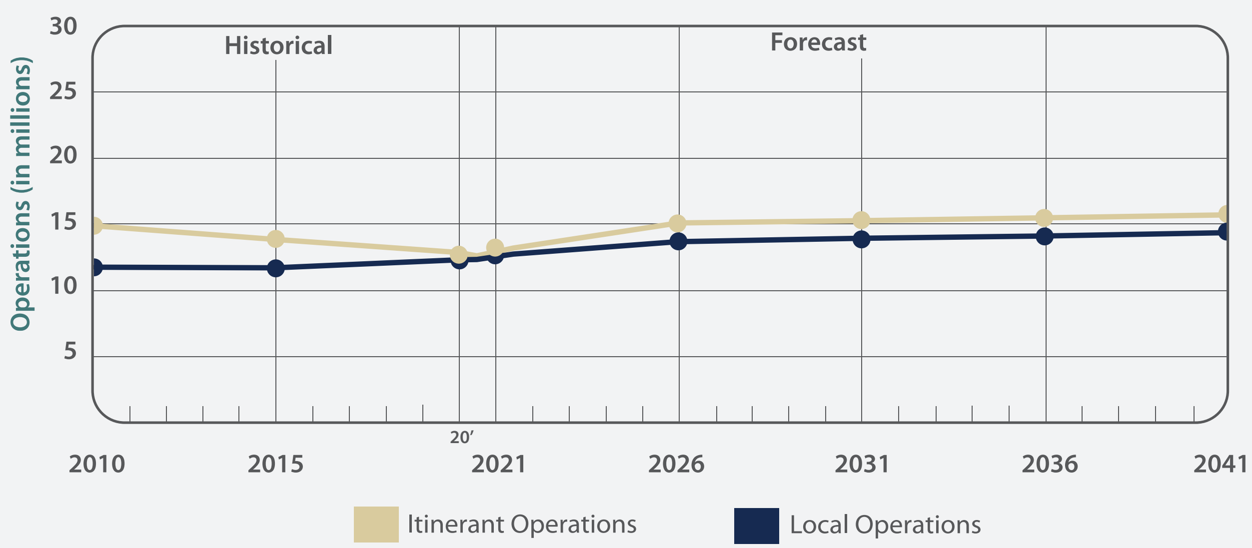
U.S. Active General Aviation Aircraft



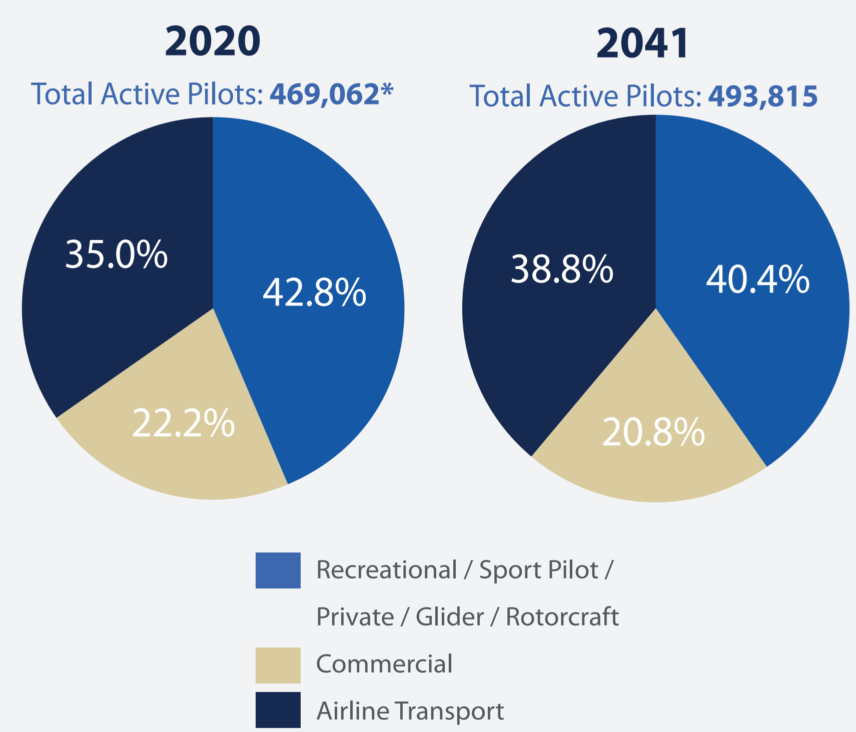
U.S. Air Taxi Operations



U.S. General Aviation Operations



Active Pilots By Certificate



Excludes Student Pilot Certificates

Source: FAA Aerospace Forecasts FY2021-2041

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U.S. Pilot Population

As detailed in **Exhibit 15**, there were 469,062 active pilots certificated by the FAA at the end of 2020. All pilot categories, except for private, rotorcraft- and recreational-only certificates, continued to increase. Except for student pilots and airline transport pilots (ATP), the number of active general aviation pilots is projected to decrease about 2,654 (down 0.04 percent annually) between 2020 and 2041. The ATP category is forecast to increase by 27,407 (up 0.7 percent annually). Sport pilots are predicted to increase by 2.7 percent annually over the forecast period, while both private and commercial pilot certificates are projected to decrease at an average annual rate of 0.4 and 0.1 percent, respectively, until 2041. The FAA has currently suspended the student pilot forecast.

RISKS TO THE FORECASTS

While the FAA is confident that its forecasts for aviation demand and activity can be reached, this is dependent on several factors, including the strength of the global economy, security (including the threat of international terrorism), and oil prices. Higher oil prices could lead to further shifts in consumer spending away from aviation, dampening a recovery in air transport demand. The COVID-19 pandemic has also presented a new risk without clear historical precedent. The long-term impact of COVID-19 on the aviation industry will not be understood until the full spread or intensity of the human consequences, as well as the breadth and depth of possible economic fallout, is known.

AIRPORT SERVICE AREA FORECASTS

Before aviation demand can be determined for an airport, it is necessary to first identify the airport's role. As stated in the previous section, ODO is classified in the NPIAS as a Regional GA airport, meaning its primary role is to support interstate and some long-distance flying, as well as to serve general aviation needs in the service area. These needs include a diverse range of private general aviation flying activities and include all segments of the aviation industry except commercial air carriers. GA represents the largest component of the national aviation system and includes activities, such as pilot training, recreational flying, and the use of turboprop and jet aircraft for business and corporate use.

ODO was also included in the 2010 *Texas Airport System Plan* (TASP). At a state level, the TASP classifies ODO as a Business/Corporate (BC) facility, which is an airport that provides community access by business jets. The TASP further classifies ODO into a "regional" functional category, meaning it supports higher performance aircraft as compared to other nearby GA facilities.

The next step in defining an airport's demand is to identify its service area. The service area is a generalized geographical area where a potential market for airport services, including based aircraft, exists. Several factors help determine the airport service area, including transportation networks, access to other GA airports, quality of aviation facilities, and distance and travel time between users and facilities.

The service area for a Regional GA airport like ODO typically extends up to a 30-nm radius around the airport but can stretch beyond this. The proximity and level of GA services are largely the defining factors when describing the GA service area. There are four airports located within 30 nm of ODO, three of which are included in the NPIAS. These are: Midland International Air and Space Port (MAF) located 10 miles east of ODO, Midland Airpark Airport (MDD) located 16 miles east/northeast, and Andrews County Airport (E11) located 26 miles north/northwest. The non-NPIAS airport located within the vicinity of ODO is the privately owned Skywest Inc. Airport located 16 miles east/southeast.

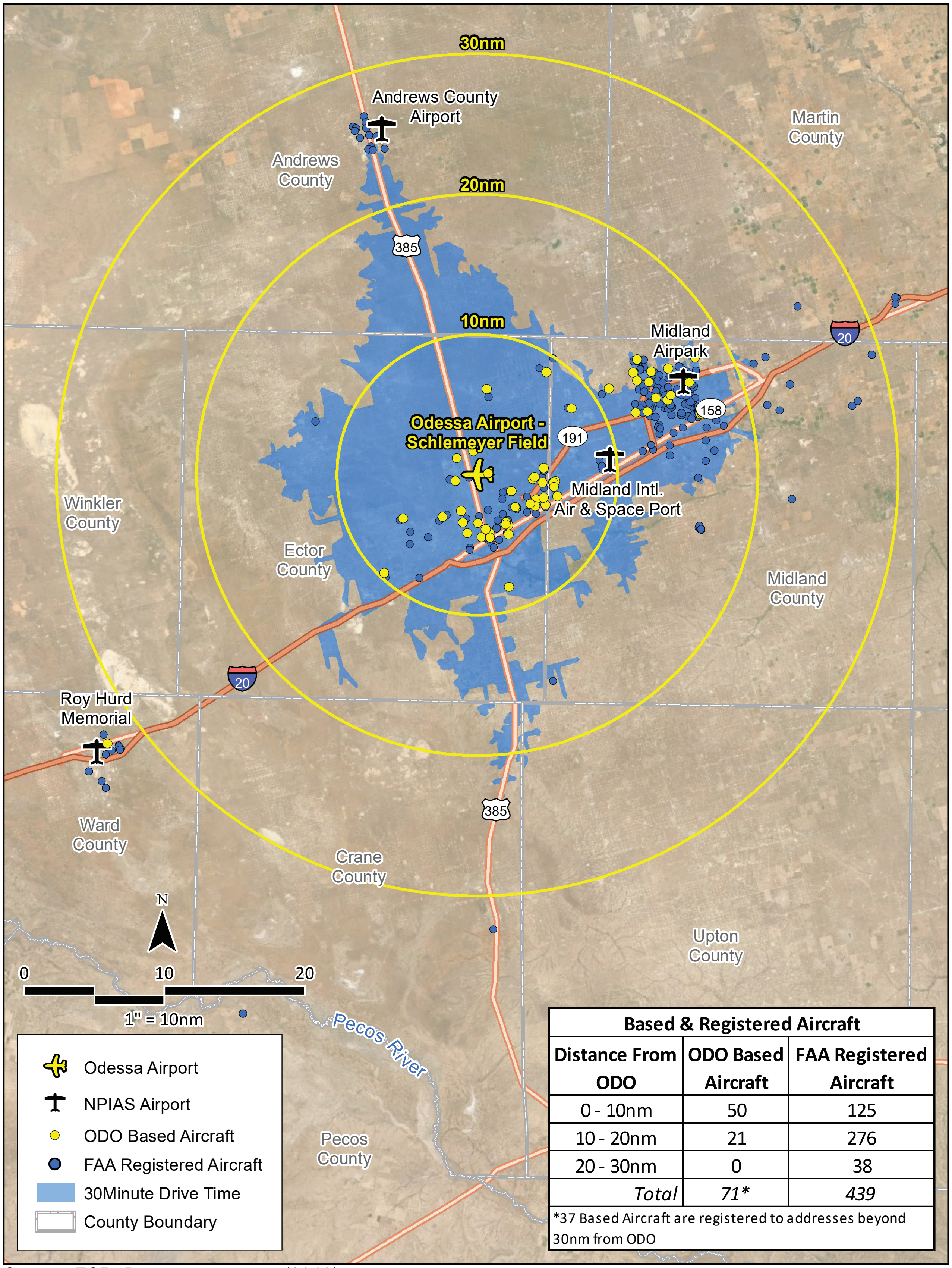
There are two primary demand components that must be addressed in order to define the ODO GA service area. The first is the airport's ability to attract based aircraft. Convenience is generally the determining factor in an aircraft owner's decision to base at a particular airport, with proximity to their residence or business being the key incentive. **Exhibit 16** depicts a 30-minute drive time isochrone from ODO, which encompasses a significant portion of Ector County and extends north into Andrews County and east into Midland County. The exhibit also illustrates based and registered aircraft in the region. As can be seen, there are 71 based aircraft within 30 nm of ODO, with the airport's other based aircraft registered to addresses beyond the 30 nm radius.

The second demand segment to consider is itinerant aircraft operations. In most instances, pilots will choose to utilize airports nearer their intended destination; however, this is also contingent on the airport's capabilities to accommodate the aircraft operator. As a result, airports offering quality services and facilities are more likely to attract itinerant operators in the region.

ODO offers an appealing alternative to pilots in the Midland-Odessa area who want to avoid congestion at MAF, as well as convenient access to Interstate 20. The airport is also highly competitive when compared to other GA facilities in the region, with three runways capable of accommodating business jets, instrument approaches, and a full-service FBO. In addition to ODO's available facilities, the city is the largest in the county and offers a number of hotels and restaurants for visitors. Therefore, the airport's primary service area is defined as the Odessa MSA, which is comprised of Ector County.

REGISTERED AIRCRAFT FORECAST

Historical registered aircraft counts for Ector County from 2002 to 2022 are presented in **Table 13**. Aircraft registrations have fluctuated from a low of 98 aircraft to a peak of 198. Over the last 20 years, registrations in the county have declined from 186 registrations in 2002 to 98 in 2021. The declining trend is likely, at least partly, a result of the FAA's changed aircraft registration requirements that were issued in 2010. The FAA terminated the registration of all aircraft registered before October 1, 2010, over a three-year period, and required re-registration to retain U.S. civil aircraft status. As a result, previously registered aircraft that may have been sold, scrapped/destroyed, or registered to multiple addresses were dropped from the database.



Based & Registered Aircraft

Distance From ODO	ODO Based Aircraft	FAA Registered Aircraft
0 - 10nm	50	125
10 - 20nm	21	276
20 - 30nm	0	38
Total	*71**	*439*

*37 Based Aircraft are registered to addresses beyond 30nm from ODO

Source: ESRI Basemap Imagery (2019),
FAA Registered Aircraft Database

TABLE 13 | Ector County, TX Registered Aircraft

Year	Single Engine Piston	Multi-Engine Piston	Turboprop	Jet	Helicopter	UAV	Other	Total
2002	141	9	9	2	2	0	23	186
2003	129	5	14	2	1	0	22	173
2004	131	7	13	2	1	0	21	175
2005	131	7	17	1	1	0	20	177
2006	141	12	4	0	2	0	19	178
2007	151	13	7	1	3	0	17	192
2008	150	15	10	2	3	0	17	197
2009	146	18	10	1	2	0	15	192
2010	149	17	9	2	3	0	15	195
2011	148	17	10	3	4	0	16	198
2012	137	18	15	2	5	0	12	189
2013	117	18	13	3	4	0	7	162
2014	123	15	15	5	3	0	6	167
2015	120	13	10	5	2	1	4	155
2016	113	12	11	5	3	1	2	147
2017	106	12	9	4	2	1	1	135
2018	88	12	9	5	2	0	1	117
2019	76	11	8	8	3	0	1	107
2020	71	12	7	8	4	0	2	104
2021	71	8	6	6	4	0	3	98
2022*	74	8	6	6	3	0	2	99

UAV – Unmanned Aerial Vehicle
*Fleet mix reported through 05/11/2022

Source: FAA Registered Aircraft

As detailed in the table, most of the aircraft registered in Ector County are single engine piston aircraft, with 74 of the 99 registered aircraft falling into this category and accounting for 75 percent of the fleet mix. The next largest category is multi-engine piston aircraft, which comprise eight percent of the county's registered aircraft, followed by turboprops and jets at six percent each.

New registered aircraft forecasts have been prepared for Ector County, which will ultimately be used to determine projections for based aircraft at ODO over the next 20 years. Several regression forecasts were considered as well, including single- and multi-variable regressions examining registered aircraft's correlation with the service area population, employment, income, and gross regional product, and with U.S. active general aviation aircraft. None of the regressions produced a strong correlation (r^2 value over 0.9); therefore, the regression forecasts were not considered further.

Table 14 details several projections of registered aircraft for the service area, with a goal of presenting a planning envelope that shows a range of projections based on historic trends. The first set of forecasts is based on market share, which considers the relationship between registered aircraft located in Ector County and active aircraft within the United States. The next set of projections is based on a ratio of the number of aircraft per 1,000 county residents. **Exhibit 17** graphically depicts each of the projections.

TABLE 14 | Registered Aircraft Forecast - Ector County, TX

Year	Service Area Registrations[1]	U.S. Active Aircraft[2]	Market Share of U.S. Aircraft	Service Area Population[3]	Aircraft per 1,000 Residents
2002	186	211,244	0.0880%	122,199	1.52
2003	173	209,606	0.0825%	122,739	1.41
2004	175	219,319	0.0798%	124,163	1.41
2005	177	224,257	0.0789%	125,378	1.41
2006	178	221,942	0.0802%	127,476	1.40
2007	192	231,606	0.0829%	130,459	1.47
2008	197	228,664	0.0862%	133,064	1.48
2009	192	223,876	0.0858%	136,930	1.40
2010	195	223,370	0.0873%	137,075	1.42
2011	198	220,453	0.0898%	139,642	1.42
2012	189	209,034	0.0904%	144,495	1.31
2013	162	199,927	0.0810%	149,656	1.08
2014	167	204,408	0.0817%	154,588	1.08
2015	155	210,031	0.0738%	159,903	0.97
2016	147	211,794	0.0694%	157,858	0.93
2017	135	211,757	0.0638%	156,951	0.86
2018	117	211,749	0.0553%	161,960	0.72
2019	107	210,981	0.0507%	166,223	0.64
2020	104	204,980	0.0507%	167,765	0.62
2021	98	205,870	0.0476%	169,665	0.58
2022	99	206,590	0.0479%	171,601	0.58
Constant Market Share of U.S. Active Aircraft - Low Range (CAGR 0.11%)					
2027	99	207,030	0.0479%	181,240	0.55
2032	99	207,140	0.0479%	190,847	0.52
2042	100	208,911	0.0479%	209,421	0.48
Increasing Market Share of U.S. Active Aircraft - Return to Historic High (CAGR 3.34%)					
2027	121	207,030	0.0583%	181,240	0.67
2032	143	207,140	0.0690%	190,847	0.75
2042	189	208,937	0.0904%	209,421	0.90
INCREASING MARKET SHARE OF U.S. ACTIVE AIRCRAFT - MID RANGE (CAGR 1.96%) - SELECTED FORECAST					
2027	110	207,030	0.0530%	181,240	0.61
2032	121	207,140	0.0584%	190,847	0.63
2042	145	208,937	0.0692%	209,421	0.69
Constant Ratio Projection per 1,000 County Residents - Low Range (CAGR 1.06%)					
2027	105	207,030	0.0505%	181,240	0.58
2032	110	207,140	0.0532%	190,847	0.58
2042	121	208,937	0.0579%	209,421	0.58
Increasing Ratio Projection per 1,000 County Residents - 10-Year Average (CAGR 2.76%)					
2027	115	207,030	0.0555%	181,240	0.63
2032	132	207,140	0.0637%	190,847	0.69
2042	169	208,937	0.0808%	209,421	0.81
CAGR: Compound Annual Growth Rate					

Source: FAA Aircraft Registration Database; FAA Aerospace Forecasts- Fiscal Years 2021-2041; Woods and Poole (2021).

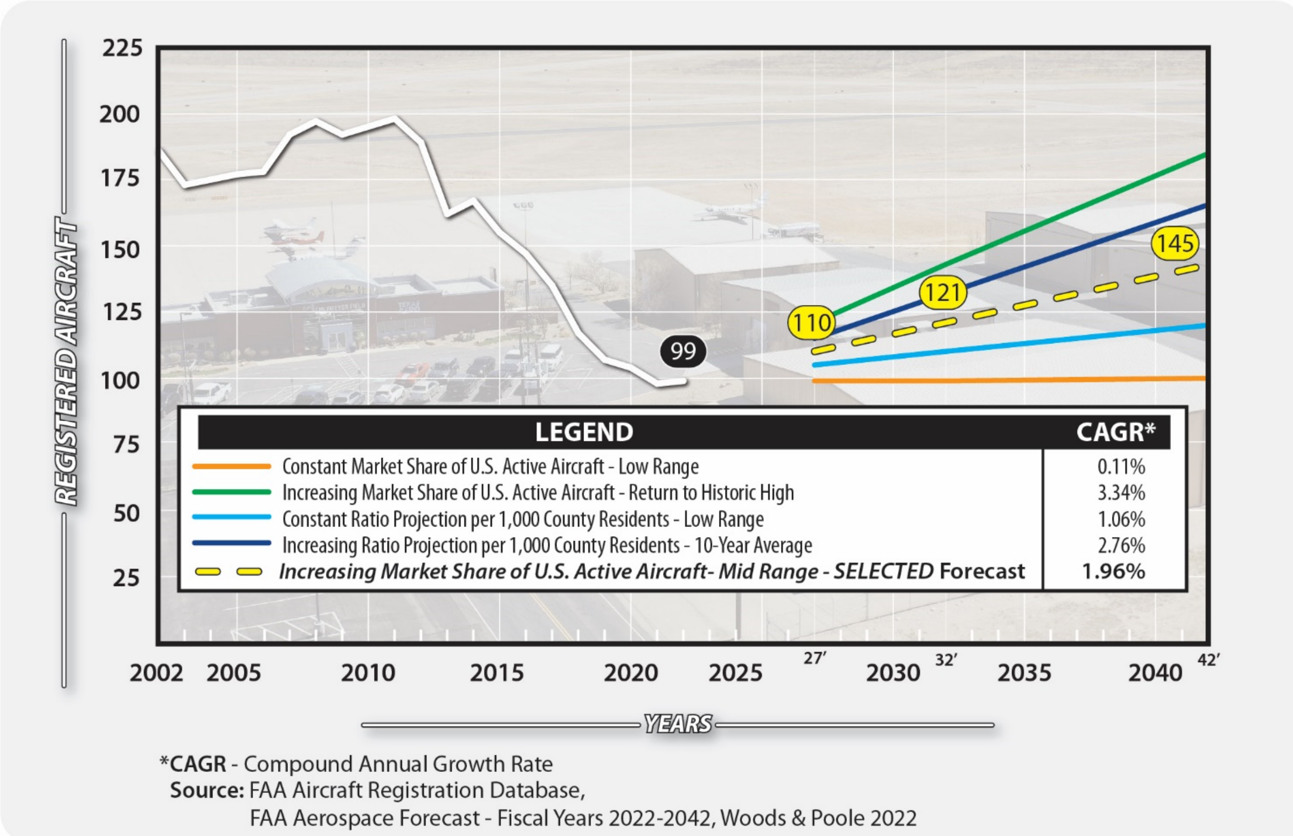


Exhibit 17 – Ector County Registered Aircraft Projections

Market Share Projections

- **Constant Market Share** – The low range market share forecast maintains the 2022 market share of county residents (0.0479%) at a constant throughout the planning period. The result is virtually no growth in registrations over the 20-year planning period, with 100 aircraft registrations in the county by 2042, reflective of a 0.11 percent compound annual growth rate (CAGR).

- **Increasing Market Share** – Two increasing market share forecasts were also considered. The first evaluated a scenario based on the county's historic high market share, which was 0.0904 percent in 2012. A return to this produces much more growth, with 189 aircraft projected by the end of the planning period (3.34 percent CAGR). A mid-range market share forecast was also considered, with a less aggressive growth rate of 1.96 percent, which produced a forecast of 145 registered aircraft in the county by 2042.

Ratio Projections

- **Constant Ratio** – In 2022, there were 0.58 registered aircraft per 1,000 county residents. Carrying this ratio forward through the plan years results in a CAGR of 1.06 percent, or 121 aircraft by 2042.

- **Increasing Ratio** – Over the last 10 years, the county's registered aircraft to population ratio has fluctuated between 0.58 and 1.08, or an average of 0.81 aircraft per 1,000 people. Applying this average to the planning period results in a more aggressive growth scenario, with 169 registered aircraft by 2042. This equates to a CAGR of 2.76 percent.

Selected Forecast

The registered aircraft projections result in a range between 100 and 189 registered aircraft in Ector County by 2042, with the constant market share representing the low end and the increasing market share – return to historic high representing the high end of the range. Each of the forecasts has been evaluated for reasonableness. Both the constant market share and constant ratio forecasts show very slow growth in county-registered aircraft, and both are deemed unlikely based on the county's historic levels of registered aircraft. The historic high market share and 10-year average ratio projections resulted in much more aggressive growth, but both likely overstate the growth potential in county-registered aircraft. Therefore, the most reasonable forecast is the mid-range increasing market share projection, and this projection will be carried forward as the selected forecast for service area registered aircraft. It shows an increase from 99 registered aircraft in 2022 to 110 in 2027, 121 in 2032, and 145 in 2042, reflecting a 1.96 percent CAGR.

BASED AIRCRAFT FORECAST

Nationally, based aircraft records have been historically inconsistent. Airports were not required to report their based aircraft totals to the FAA until recently, and any data that was provided was not validated. Now, however, based aircraft counts are included on a registry that the FAA updates and maintains with validated information. According to the FAA's database, ODO has 88 based aircraft, a count which was last validated on May 20, 2021. However, records maintained and confirmed by FBO staff show 108 based aircraft at the airport as of April 2022, which will serve as the base year count for forecasting purposes.

Like the registered aircraft forecasts, two types of projections have been made for based aircraft at ODO – market share and ratio projections. The market share is based on the airport's percentage of based aircraft as compared to registered aircraft in the service area, while the ratio projection is based on the number of based aircraft per 1,000 county residents. The FAA TAF forecast is also included for comparison purposes. An additional forecast based on the TAF growth rate has also been included. The results of these analyses are detailed in **Table 15** and depicted graphically in **Exhibit 18**.

TABLE 15 | Based Aircraft Forecasts

Year	ODO Based Aircraft	Ector County Registrations	Market Share	Ector County Population	Aircraft Per 1,000 Residents
2022	108	98	110.2%	171,601	0.63
Constant Market Share – Low Range (CAGR 1.96%)					
2027	121	110	110.2%	181,240	0.67
2032	133	121	110.2%	190,847	0.70
2042	159	145	110.2%	209,421	0.76
Increasing Market Share (CAGR 2.40%)					
2027	124	110	112.7%	181,240	0.68
2032	139	121	115.1%	190,847	0.73
2042	173	145	120.0%	209,421	0.83
Decreasing Market Share (CAGR 0.93%)					
2027	115	110	105.2%	181,240	0.64
2032	121	121	100.1%	190,847	0.63
2042	130	145	90.0%	209,421	0.62
Constant Ratio per 1,000 Residents (CAGR 1.00%)					
2027	114	110	104.0%	181,240	0.63
2032	120	121	99.3%	190,847	0.63
2042	132	145	91.2%	209,421	0.63
Increasing Ratio per 1,000 Residents (CAGR 1.89%)					
2027	120	110	108.9%	181,240	0.66
2032	132	121	108.8%	190,847	0.69
2042	157	145	108.7%	209,421	0.75
FAA TAF (CAGR 1.46%)					
2027	137	110	124.9%	181,240	0.76
2032	147	121	121.5%	190,847	0.77
2042	167	145	115.6%	209,421	0.80
FAA TAF GROWTH RATE (CAGR 1.46%) – SELECTED FORECAST					
2027	116	110	105.6%	181,240	0.64
2032	125	121	103.2%	190,847	0.65
2042	144	145	99.5%	209,421	0.69

Sources: Airport records; FAA TAF; Woods & Poole CEDDS 2021

Market Share Projections

- **Constant Market Share** – In 2022, the airport had 108 based aircraft, which equates to 110.2 percent of the market share of registered aircraft in Ector County. Carrying this percentage throughout the plan years results in a steady increase in based aircraft, with 159 based aircraft projected by the end of the planning period and equating to a 1.96 percent CAGR.

- **Increasing Market Share** – An increasing market share forecast was also evaluated and considered a scenario where ODO held 120.0 percent market share of the service area. This resulted in a more dramatic increase in based aircraft to 173, or 2.40 percent CAGR, by the end of the planning period.

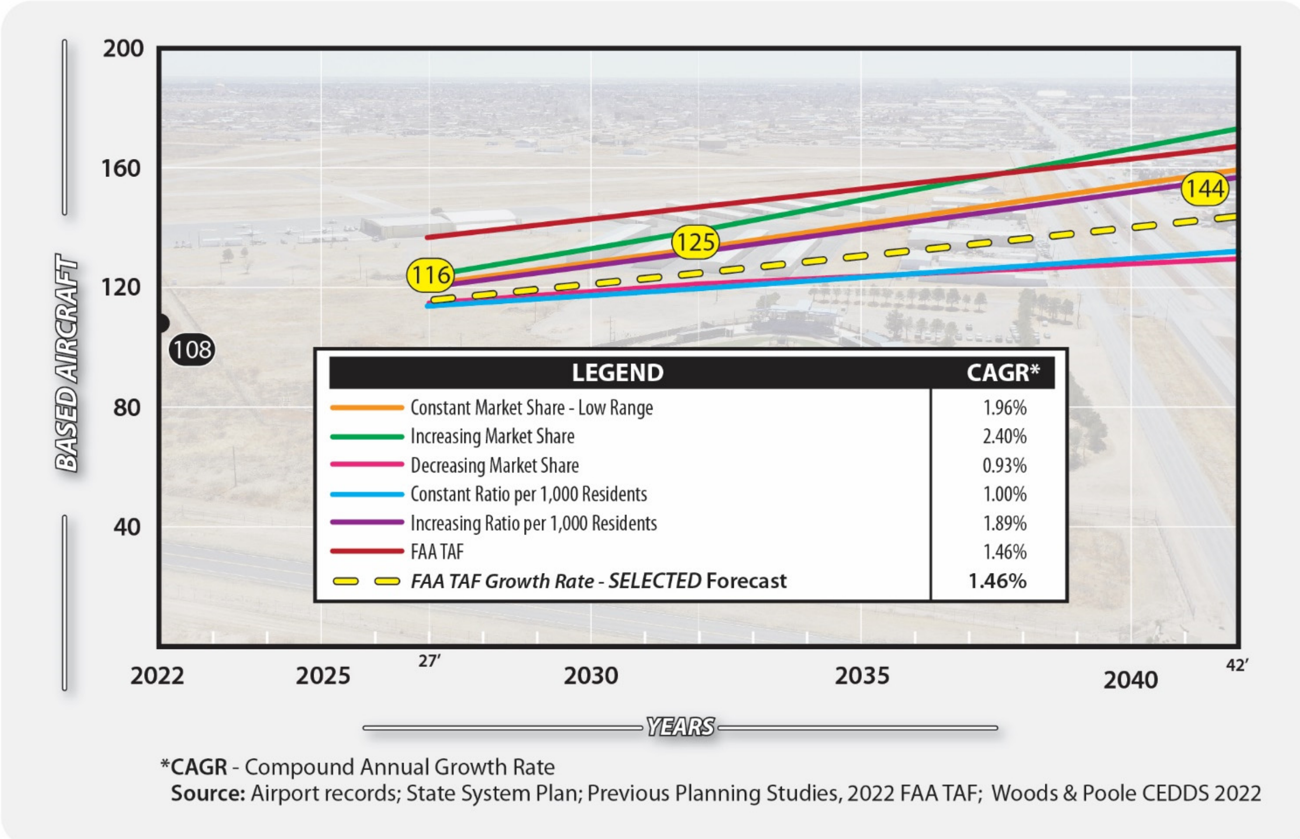


Exhibit 18 – Based Aircraft Projections

- **Decreasing Market Share** – While ODO currently holds greater than 100 percent of the market share, it is not unreasonable to consider a scenario in which that number drops. A decreasing market share forecast was evaluated, based on a gradual decrease to 90.0 percent market share. With an increase in countywide registrations anticipated, a decrease in market share still results in growth, albeit slower, with 130 based aircraft forecast by 2042.

Ratio Projections

- **Constant Ratio** – In 2022, the ratio of based aircraft per 1,000 county residents stood at 0.63. Maintaining this at a constant through 2042 resulted in a growth rate of 1.00 percent, or 132 based aircraft.

- **Increasing Ratio** – An increasing ratio scenario was also evaluated that considered a ratio of 0.75 based aircraft per 1,000 residents in 2042. Applying this figure to the end of the planning period results in 157 based aircraft at the airport by 2042, at a CAGR of 1.89 percent.

TAF Projection

- **TAF** – As a point of comparison, the FAA TAF projections for based aircraft at ODO have also been included. The TAF shows growth in based aircraft at a rate of 1.46 percent, with 167 based aircraft projected by the end of the planning period.

- **TAF Growth Rate** – As stated, the TAF projection resulted in a CAGR of 1.46 percent. An additional forecast was prepared that applied this growth rate to the existing based aircraft count of 108, which resulted in 144 based aircraft by 2042.

Selected Forecast

The forecasts produced a planning envelope ranging from 130 to 173 based aircraft at the airport by 2042. Discussions with airport personnel indicate that at least one tenant who currently maintains multiple aircraft at ODO has immediate plans to add more aircraft. This, combined with the anticipated increase in population and county registered aircraft, justifies a growth scenario with steady increases in based aircraft. Therefore, the TAF growth rate forecast has been selected as the preferred projection. With a CAGR of 1.46 percent, this forecast shows an increase of 36 based aircraft by the end of the planning period, for a total of 144 aircraft based at ODO by 2042.

Based Aircraft Fleet Mix

The type of aircraft based at an airport is another important consideration when planning for the future. Currently, the fleet mix at ODO consists of 86 single engine piston aircraft, seven multi-engine, six turboprops, eight jets, and one aircraft classified as 'other.' Given that the total number of based aircraft at the airport is projected to increase over the planning period, it is necessary to project how the fleet mix will change over this time. A forecast of the evolving fleet mix will ensure that adequate facilities are planned to accommodate these aircraft in the future.

The fleet mix projection for ODO was determined by comparing the airport's existing fleet mix to national general aviation fleet mix trends. The forecast for the active U.S. GA fleet shows increasing trends in turbine and jet aircraft, with piston aircraft declining over the next 20 years. Multi-engine piston aircraft are anticipated to ultimately be phased out altogether. Growth is expected in experimental and light sport aircraft as well. The GAMA has high optimism that innovations in electric propulsion and supersonic technologies will increase in the sector's global reach, which will result in the growth of experimental and light sport aircraft.

Table 16 details the fleet mix projection prepared for ODO. While these forecasts take into account national trends, the fleet mix at ODO is anticipated to continue to consist primarily of piston aircraft over the planning period, with the addition of more turboprops, jets, and helicopters over the next 20 years.

TABLE 16 | Based Aircraft Fleet Mix

	EXISTING		FORECAST					
Aircraft Type	**2022**	**%**	**2027**	**%**	**2032**	**%**	**2042**	**%**
Single Engine Piston	86	80%	92	79%	99	79%	109	76%
Multi-Engine Piston	7	6%	5	4%	3	2%	1	1%
Turboprop	6	6%	8	7%	9	7%	12	8%
Jet	8	7%	9	8%	11	9%	15	10%
Helicopter	0	0%	1	1%	2	2%	4	3%
Other	1	1%	1	1%	1	1%	3	2%
Totals	**108**	**100%**	**116**	**100%**	**125**	**100%**	**144**	**100%**

Source: Airport records; Coffman Associates analysis

GENERAL AVIATION OPERATIONS

General aviation operations are classified as either local or itinerant. A local operation is a takeoff or landing performed by an aircraft that operates within sight of the airport, or which executes simulated approaches or touch-and-go operations at the airport. Generally, local operations are characterized by training operations or operations that remain in local airspace that originate and conclude at the same airport. Itinerant operations are those performed by aircraft with a specific origin or destination away from the airport. Typically, itinerant operations increase with business and commercial use, since business aircraft are not generally used for large scale training activities.

As a non-towered airport, operational estimates for ODO are derived from several sources, including the FAA TAF and the FAA Form 5010, *Airport Master Record*. The TAF reflects 79,460 total operations in 2022, while the *Airport Master Record* shows 78,000 total operations. An additional calculation to estimate annual operations was also conducted using Equation 15 in FAA's "Model for Estimating General Aviation Operations at Non-towered Airports Using Towered and Non-Towered Airport Data." This equation factors in regional population and based aircraft data to develop a baseline operations count. When this data was input, the result was 36,344 annual operations. While this count is lower than the estimates provided in Form 5010 or the TAF, it is likely a more accurate reflection of annual operations at ODO, according to the airport sponsor and county officials. Therefore, it has been selected for use as the base year operational count from which itinerant and local GA operational forecasts will be developed.

Itinerant GA Operations Forecast

The *Airport Master Record* reports that approximately 33 percent of the airport's total activity is in the form of itinerant operations. This percentage was applied to the estimated annual operational total of 36,344, yielding 12,115 annual itinerant operations in the base year.

Several forecasts for itinerant GA operations have been prepared, as presented in **Table 17** and on **Exhibit 19**. Like the previous projections, market share and ratio comparisons have been made. For the market share evaluations, ODO's annual itinerant operations have been compared to total U.S. itinerant general aviation operations. The ratio projections are based on total operations per based aircraft, or OPBA. The FAA TAF forecast for itinerant operations has also been included for comparison purposes.

TABLE 17 | General Aviation Itinerant Operations

Year	ODO Itinerant Operations	U.S. ATCT GA Itinerant Operations	ODO Share %	ODO Based Aircraft	OPBA
2022	12,115	14,060,610	0.0862%	108	112
Constant Market Share (CAGR 0.62%)					
2027	13,100	15,177,147	0.0862%	116	113
2032	13,200	15,372,725	0.0862%	125	106
2042	13,700	15,876,766	0.0862%	144	95
INCREASING MARKET SHARE – MID RANGE (CAGR 1.37%)					
2027	13,600	15,177,147	0.0896%	116	117
2032	14,300	15,372,725	0.0931%	125	115
2042	15,900	15,876,766	0.1000%	144	110
Increasing Market Share – High Range (CAGR 2.08%) – *SELECTED FORECAST*					
2027	14,200	15,177,147	0.0934%	116	122
2032	15,500	15,372,725	0.1006%	125	124
2042	18,300	15,876,766	0.1150%	144	127
Constant OPBA Ratio (CAGR 1.46%)					
2027	13,000	15,177,147	0.0857%	116	112
2032	14,000	15,372,725	0.0911%	125	112
2042	16,200	15,876,766	0.1020%	144	112
FAA TAF Forecast (CAGR 4.94%)					
2027	27,741	15,177,147	0.1828%	116	239
2032	29,039	15,372,725	0.1889%	125	233
2042	31,807	15,876,766	0.2003%	144	220

Sources: FAA Airport Master Record 5010; FAA Aerospace Forecast 2021-2041; FAA TAF

Market Share Projections

In 2022, with 12,115 itinerant operations, the airport held 0.0862 percent of the market share of national itinerant GA operations. The first forecast carries this market share forward as a constant through the planning period, resulting in 13,700 operations by 2042 and a CAGR of 0.62 percent. Two increasing market share forecasts were also evaluated. The first of these considered an increase to 0.1000 percent of the market share by 2042, which resulted in 15,900 itinerant operations by the end of the planning period and represents the mid-range market share projection. A more aggressive growth scenario was also evaluated, based on an increase to 0.1150 percent market share. This produced a CAGR of 2.08 percent, or 18,300 itinerant GA operations by the end of the planning period.

Operations Per Based Aircraft Projection

Another forecasting methodology utilized considers the number of itinerant operations occurring at ODO compared to the number of based aircraft at the airport. In 2022, there were 112 itinerant operations per based aircraft. When this figure is carried through the planning period, the result is a 1.46 percent increase in itinerant GA operations, with 16,200 itinerant operations by 2042.

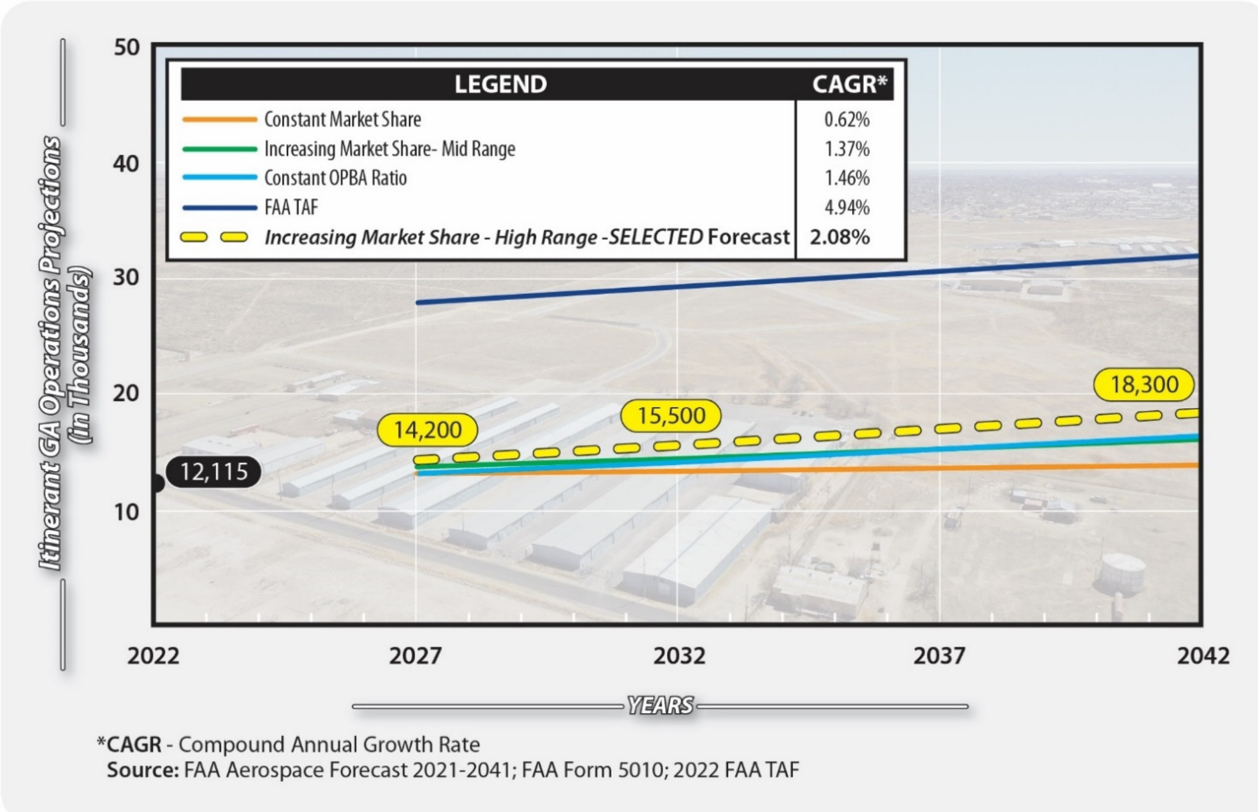


Exhibit 19 – Itinerant GA Operations Projections

Selected Forecast

Including the TAF projections, the forecasts prepared resulted in a range between 13,700 and 31,807 annual itinerant GA operations at ODO. The high-range increasing market share forecast, reflective of a 2.08 percent CAGR, has been selected as the most reasonable projection. While this growth rate is higher than what is predicted nationally for itinerant operations over the next 20 years, this projection is justified by the current level of itinerant activity at the airport, as well as what is occurring around the region. Odessa is one of the fastest growing cities in Texas, with significant contributions to the state's economy from the energy sector. It is reasonable to assume that itinerant GA operations will increase pursuant with population and industrial/economic growth in West Texas. Additionally, it is not unreasonable to assume some level of itinerant activity from flights bound for MAF that elect to utilize ODO instead.

Local GA Operations Forecast

Like the forecasts prepared for itinerant GA operations, projections for local GA operations have been made. These forecasts are detailed in **Table 18** and on **Exhibit 20**. Local GA operations account for approximately 67 percent of total operations. As mentioned previously, a local operation is one that stays within the airport's traffic pattern, such as training operations or touch-and-goes. In 2022, there were an estimated 24,229 local GA operations at the airport, which translated to a market share of 0.1848 percent and 224 operations per based aircraft.

TABLE 18 | General Aviation Local Operations

Year	ODO Local Operations	U.S. ATCT GA Local Operations	ODO Share %	ODO Based Aircraft	Local Ops per Based Aircraft
2022	24,229	13,111,431	0.1848%	108	224
Constant Market Share (CAGR 0.51%)					
2027	25,300	13,679,977	0.1848%	116	218
2032	25,700	13,927,030	0.1848%	125	206
2042	26,800	14,480,805	0.1848%	144	186
INCREASING MARKET SHARE – MID RANGE (1.49%) – SELECTED FORECAST					
2027	26,700	13,679,977	0.1948%	116	230
2032	28,500	13,927,030	0.2049%	125	228
2042	32,600	14,480,805	0.2250%	144	226
Increasing Market Share – High Range (CAGR 2.03%)					
2027	27,500	13,679,977	0.2011%	116	237
2032	30,300	13,927,030	0.2174%	125	243
2042	36,200	14,480,805	0.2500%	144	251
Constant OPBA Ratio (CAGR 1.46%)					
2027	26,000	13,679,977	0.1901%	116	224
2032	28,000	13,927,030	0.2010%	125	224
2042	32,400	14,480,805	0.2237%	144	224
FAA TAF Forecast (CAGR 4.96%)					
2027	55,484	13,679,977	0.4056%	116	478
2032	58,124	13,927,030	0.4173%	125	466
2042	63,770	14,480,805	0.4404%	144	442

Sources: FAA Aerospace Forecast 2021-2041; FAA TAF

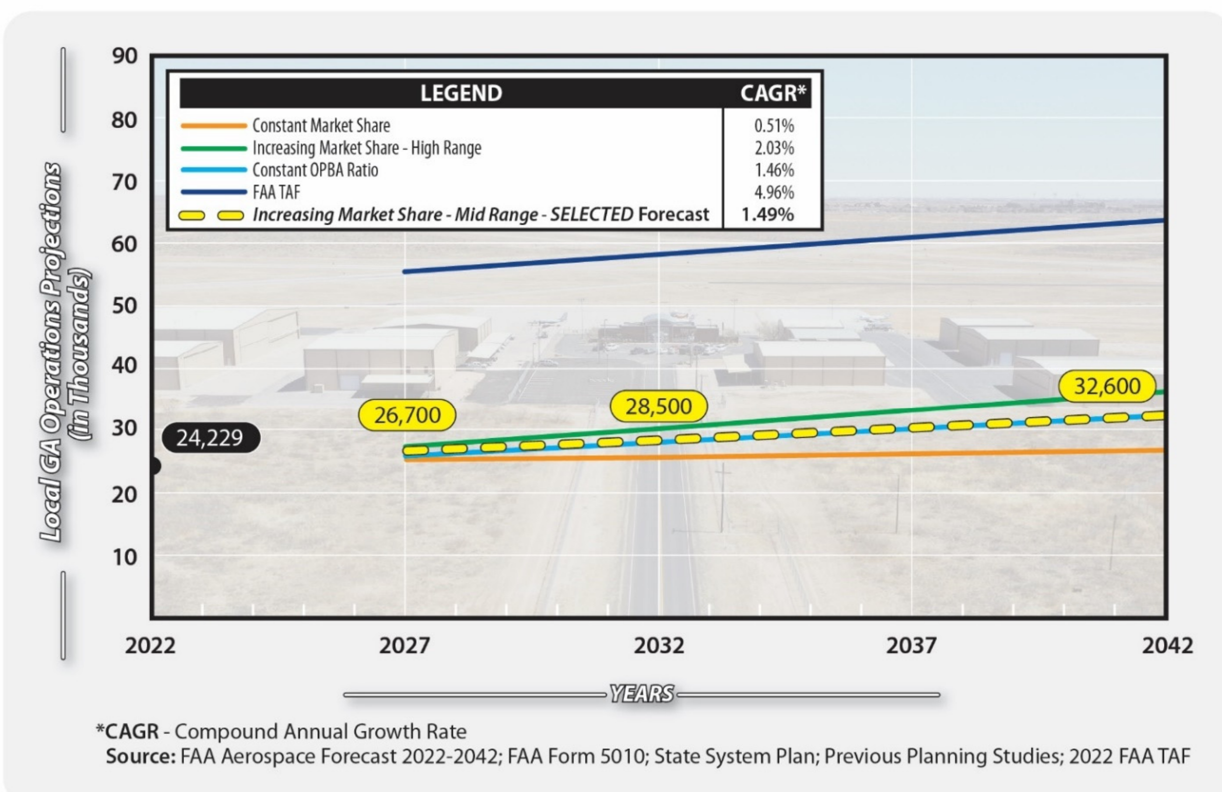


Exhibit 20 – Local GA Operations Projections

Market Share Projections

In the first forecast, the constant market share of 0.1848 percent was carried through the plan years. This resulted in 26,800 operations by 2042, for a CAGR of 0.51 percent, which represents the low range of the projections. The next two forecasts evaluated increasing market share scenarios, with the mid-range projection considering an increase to 0.2250 percent of the market share. This resulted in a 1.49 percent CAGR, or 32,600 local operations by 2042. A second increasing market share forecast considered a more aggressive growth scenario, with the airport holding 0.2500 percent of the market share. This produced a total of 36,200 local operations by the end of the planning period, reflective of a 2.03 percent CAGR.

Operations Per Based Aircraft Projection

With 108 based aircraft in 2022, the OPBA for local operations stands at 224. Maintaining this figure as a constant through the next 20 years results in a CAGR of 1.46 percent, which equates to 32,400 local GA operations by 2042.

Selected Forecast

The FAA TAF estimates local operations to reach 63,770 by 2042. The planning envelope that results from the forecasts above ranges from 26,800 to 63,770 local operations by the end of the planning period. Like the itinerant forecasts, the most reasonable forecast lies between the two extremes. In this case, the mid-range increasing market share is the selected projection, resulting in 32,600 local GA operations by 2042—an increase of nearly 8,400 local operations over the next 20 years. Nationally, local GA operations are anticipated to grow at about 0.50 percent. While the selected forecast predicts a stronger growth rate for ODO, the projection is reasonable due to local and regional trends in this type of operation, particularly for airports that support flight training operations, such as ODO.

AIR TAXI OPERATIONS FORECAST

The air taxi category can be classified as a subset of the itinerant operations category and includes aircraft involved in on-demand passenger charter, fractional ownership aircraft operations, small parcel transport, and air ambulance activity. While not typically a significant percentage of total airport operations, air taxi operations can be conducted via more sophisticated aircraft, ranging from multi-engine piston aircraft up to large business jet aircraft. As a result, it is important to factor these types of operations at airports that experience substantial amounts of air taxi operations.

Neither the FAA TAF nor the Form 5010 *Airport Master Record* report any air taxi operations at ODO. However, according to AirportIQ, a data center that collects detailed aviation activity at nontowered airports, ODO does experience air taxi operations. While the 2022 dataset is incomplete, a total number of air taxi operations for the base year was extrapolated and resulted in 664 air taxi operations. The FAA national air taxi forecast projects a 1.1 percent CAGR increase in air taxi operations between 2021 and 2041. The primary reasons for this increase are the technological advancements of the electric vertical take-off and landing aircraft (eVTOL) and the continued national growth in the business jet segment of the air taxi category. The facilities and FBO services available at ODO are accommodating to operators of business jets. Therefore, it is reasonable to expect the business jet component of air taxi activity to increase moderately over time at ODO.

Like the previous operations forecasts, several market share projections were developed that considered different growth scenarios. With 664 annual air taxi operations in 2022, ODO held 0.0132 percent of total national air taxi operations. Carrying this percentage forward throughout the planning period resulted in a CAGR of 1.18 percent, or 840 air taxi operations by 2041. Two increasing market share forecasts were calculated based on mid- and high range scenarios. The mid-range growth scenario produced a projection of 1,240 air taxi operations by 2042, at a CAGR of 3.17 percent. The high range scenario considered a more aggressive growth rate of 4.46 percent, which resulted in 1,590 annual air taxi operations at ODO by the end of the planning period.

A fourth projection was developed based on the 20-year growth rate in air taxi operations that has been forecast by the FAA. Between 2022 and 2042, this type of activity is anticipated to grow at a CAGR of 1.18 percent. Applying this growth rate to the base year air taxi operations at ODO results in an increase to 840 operations by the end of the planning period.

Table 19 details each of the forecasts completed for air taxi operations throughout the long-term planning horizon. Some level of growth in annual air taxi operations is anticipated at ODO over the next 20 years, in line with national trends and local/regional economic activity. As such, the mid-range market share projection has been selected as the most reasonable forecast for air taxi operational growth at ODO. At a CAGR of 3.17 percent, this forecast shows steady growth over the planning period, with 1,240 air taxi operations projected by 2042.

TABLE 19 | Other Air Taxi Operations

Year	ODO Air Taxi Operations	U.S. Air Taxi Operations	ODO Market Share
2022	664	5,014,824	0.0132%
Constant Market Share (CAGR 1.18%)			
2027	670	5,041,488	0.0132%
2032	760	5,707,729	0.0132%
2042	840	6,358,549	0.0132%
INCREASING MARKET SHARE – MID-RANGE (CAGR 3.17%) - SELECTED FORECAST			
2027	750	5,041,488	0.0143%
2032	930	5,707,729	0.0154%
2042	1,240	6,358,549	0.0175%
Increasing Market Share - High Range (CAGR 4.46%)			
2027	820	5,041,488	0.0162%
2032	1,090	5,707,729	0.0191%
2042	1,590	6,358,549	0.0250%
U.S. 20-Year Forecast Growth Rate (CAGR 1.18%)			
2027	700	5,041,488	0.0139%
2032	750	5,707,729	0.0131%
2042	840	6,358,549	0.0132%

Sources: FAA Form 5010; FAA Aerospace Forecast 2021-2041

MILITARY OPERATIONS FORECAST

It is not uncommon for military aircraft to utilize civilian airports for training or other purposes. However, forecasting military operations is challenging due to their national security nature and the fact that missions can change daily, making it difficult to project future operations based on historical data. Thus, it is not unusual for the FAA to flatline military operations projections. In the case of ODO, the FAA does not reflect any military activity at the airport, as reflected in the 2022 TAF, nor is any projected in the future. For this study, military operations at ODO are projected to remain at zero through the planning period.

ANNUAL INSTRUMENT APPROACHES

An annual instrument approach (AIA) is defined by the FAA as "an approach to an airport with intent to land by an aircraft in accordance with IFR flight plan, when visibility is less than three miles and/or when the ceiling is at or below the minimum approach altitude." An aircraft must follow one of the published instrument approach procedures at an airport in order to qualify as an instrument approach. Practice or training approaches do not count as AIAs, nor do instrument approaches that occur in visual conditions.

In low visibility conditions or poor weather conditions, pilots can only complete flight training operations under instrument flight rules (IFR). Local operations are not typically performed during IFR conditions. As a result, an estimate of the total number AIAs can be made based on a percentage of itinerant operations regardless of poor weather conditions. An estimate of 2.5 percent of total itinerant (general aviation, air taxi, and military) operations is utilized to forecast AIAs at ODO, as presented in **Table 20**.

TABLE 20 | Annual Instrument Approaches

Year	Annual Instrument Approaches	Itinerant Operations	Ratio
2022	300	12,115	2.50%
2027	360	14,200	2.50%
2032	390	15,500	2.50%
2042	460	18,300	2.50%

Source: FAA Form 5010; Coffman Associates analysis

PEAK PERIOD FORECASTS

Forecasts of peak activity at an airport are important in determining facility requirements for the future. The peaking periods used to develop the capacity analysis and facility requirements are as follows: peak month, design day, busy day, and design hour. **Peak month** refers to the calendar month in which traffic activity is highest. The **design day** is the average day in the peak month, while the **busy day** is reflective of the busiest day of a typical week during the peak month. Finally, **design hour** refers to the peak hour within the design day.

Because ODO is not equipped with an airport traffic control tower, precise operational data is not available for establishing true peaking characteristics. For this reason, estimated peaking characteristics have been developed based on knowledge of other general aviation airports with control towers. For this study, the peak month was estimated at ten percent of the annual operations, which resulted in 3,701 operations during the peak month of the base year. By the end of the planning period, 52,100 operations are projected to occur during the peak month. The design day is estimated by dividing the peak month by the average number of days in a month, and the busy day is calculated at 1.25 times the design day. The design hour is estimated at 15 percent of the design day. Peak period forecasts are presented in **Table 21**.

TABLE 21 | Peak Period Forecasts

	YEAR			
	2022	2027	2032	2042
Annual	37,008	41,700	44,900	52,100
Peak Month	3,701	4,170	4,490	5,210
Design Day	119	135	145	168
Design Hour	18	20	22	25
Busy Day	149	167	178	203

Sources: FAA TAF, Coffman Associates analysis

FORECAST COMPARISON TO THE TERMINAL AREA FORECAST

A summary of the selected forecasts is presented on **Exhibit 21**. The FAA reviews the forecasts presented in this aviation planning study for comparison to the *Terminal Area Forecast*. The forecasts are considered consistent with the TAF if they meet the following criteria:

- Forecasts differ by less than 10 percent in the 5-year forecast period and 15 percent in the 10-year forecast period, or
- Forecasts do not affect the timing or scale of an airport project, or
- Forecasts do not affect the role of the airport as defined in the current version of FAA Order 5090.3, *Field Formulation of the National Plan of Integrated Airport Systems*.

If the forecasts exceed these parameters, they may be sent to FAA headquarters in Washington, D.C. for further review. **Table 22** presents the direct comparison of the planning forecasts prepared in this study with the TAF published in March 2022. The selected operations forecast is outside of the FAA TAF tolerance for both the 5- and 10-year forecast periods due to the discrepancy between the FAA's forecast operations (79,460) and the baseline operations forecast used in this report, which was derived from the FAA's Equation 15. In terms of based aircraft, the 5- and 10-year forecasts are outside the TAF tolerance, at 16.60 percent and 16.18 percent difference, respectively. This discrepancy is likely a result of the TAF count of based aircraft in 2022 being greater than what is actually reported by the airport. Because the planning study forecasts are built on this base year total, it is reasonable that a greater difference will result in the forecast years.

TABLE 22 | Forecast Comparison to the *Terminal Area Forecast*

	Base Year	FORECAST			CAGR
	2022	2027	2032	2042	2022-2042
Total Operations					
Selected Forecast	37,008	41,700	44,900	52,100	1.7%
2022 FAA TAF	79,460	83,225	87,163	95,577	0.9%
% Difference	72.90%	66.48%	64.00%	58.88%	
Based Aircraft					
Selected Forecast	108	116	125	144	1.4%
2022 FAA TAF	125	137	147	167	15.6%
% Difference	14.59%	16.60%	16.18%	14.79%	

CAGR - Compound annual growth rate

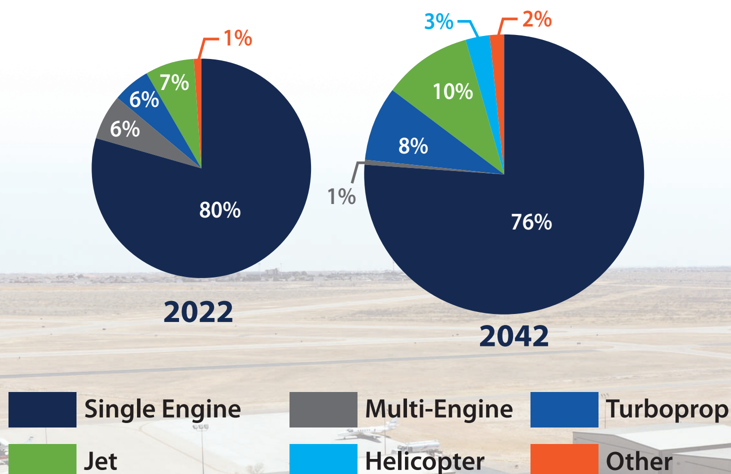
Source: Coffman Associates analysis

CRITICAL AIRCRAFT

The critical aircraft is defined as an aircraft conducting at least 500 itinerant operations at an airport or the most regularly scheduled aircraft in commercial service. When planning for future airport facilities, it is important to consider the demands of aircraft operating at the airport currently or anticipated to operate in the future. Caution must be exercised to ensure that short-term development does not preclude the long-term needs of the airport. Thus, a balance must be struck between the facility needs of aircraft currently operating at an airport versus those projected to operate.

	BASE YEAR	2027	2032	2042
BASED AIRCRAFT				
Single Engine	86	92	99	109
Multi-Engine	7	5	3	1
Turboprop	6	8	9	12
Jet	8	9	11	15
Helicopter	0	1	2	4
Other	1	1	2	2
TOTAL BASED AIRCRAFT	**108**	**116**	**125**	**144**
ANNUAL OPERATIONS				
Itinerant				
Air Carrier	0	0	0	0
Other Air Taxi	664	750	930	1,240
General Aviation	12,115	14,200	15,500	18,300
Military	0	0	0	0
Total Itinerant*	***12,779***	***15,000***	***16,400***	***19,500***
Local				
General Aviation	24,229	26,700	28,500	32,600
Military	0	0	0	0
Total Local*	***24,229***	***26,700***	***28,500***	***32,600***
Total Annual Operations	**37,008**	**41,700**	**44,900**	**52,100**
ANNUAL INSTRUMENT APPROACHES (AIA)	**300**	**360**	**390**	**460**
PEAKING				
Total Annual Operations	37,008	41,700	44,900	52,100
Peak Month	3,701	4,170	4,490	5,210
Design Day	119	135	145	168
Design Hour	18	20	22	25
Busy Day	149	167	178	203

BASED AIRCRAFT



*Figures have been rounded

AIRCRAFT CLASSIFICATION

The selection of appropriate FAA design standards for the development and location of airport facilities is based primarily upon the characteristics of the aircraft which are currently using, or are expected to use, an airport. The critical aircraft is used to define the design parameters for an airport. The critical aircraft may be a single aircraft type or, more commonly, is a composite aircraft representing a collection of aircraft with similar characteristics. The critical aircraft is defined by three parameters: Aircraft Approach Category (AAC), Airplane Design Group (ADG), and Taxiway Design Group (TDG). FAA AC 150/5300-13B, *Airport Design*, describes the following airplane classification systems, the parameters of which are presented on **Exhibit 22**.

Aircraft Approach Category (AAC) | A grouping of aircraft based on a reference landing speed (V_{REF}), if specified, or if V_{REF} is not specified, 1.3 times stall speed (V_{SO}) at the maximum certificated landing weight. V_{REF}, V_{SO}, and the maximum certificated landing weight are those values as established for the aircraft by the certification authority of the country of registry.

The AAC generally refers to the approach speed of an aircraft in landing configuration. The higher the approach speed, the more restrictive the applicable design standards. The AAC, depicted by a letter A through E, is the aircraft approach category and relates to aircraft approach speed (operational characteristic). The AAC generally applies to runways and runway-related facilities, such as runway width, runway safety area (RSA), runway object free area (ROFA), runway protection zone (RPZ), and separation standards.

Aircraft in AAC A and B are further distinguished between those weighing more or less than 12,500 pounds. Those under 12,500 pounds are classified as “small” or (s). The applicable design standards for the airport are different based on the “small” classification.

Airplane Design Group (ADG) | The ADG, depicted by a Roman numeral I through VI, is a classification of aircraft which relates to aircraft wingspan or tail height (physical characteristic). When the aircraft wingspan and tail height fall in different groups, the higher group is used. The ADG influences design standards for taxiway safety area (TSA), taxiway object free area (TOFA), apron wingtip clearance, and various separation distances.

Taxiway Design Group (TDG) | A classification of airplanes based on outer-to-outer Main Gear Width (MGW) and Cockpit to Main Gear (CMG) distance. The TDG relates to the undercarriage dimensions of the design aircraft. The taxiway design elements determined by the application of the TDG include the taxiway width, taxiway edge safety margin, taxiway shoulder width, taxiway fillet dimensions, and, in some cases, the separation distance between parallel taxiways/taxilanes. Other taxiway elements, such as the TSA, TOFA, taxiway/taxilane separation to parallel taxiway/taxilanes or fixed or movable objects, and taxiway/taxilane wingtip clearances, are determined solely based on the wingspan (ADG) of the design aircraft utilizing those surfaces. It is appropriate for taxiways to be planned and built to different TDG standards based on expected use.

Exhibit 23 presents the aircraft classification of the most common aircraft in operation today.

AIRCRAFT APPROACH CATEGORY (AAC)

Category	Approach Speed
A	less than 91 knots
B	91 knots or more but less than 121 knots
C	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
E	166 knots or more

AIRPLANE DESIGN GROUP (ADG)

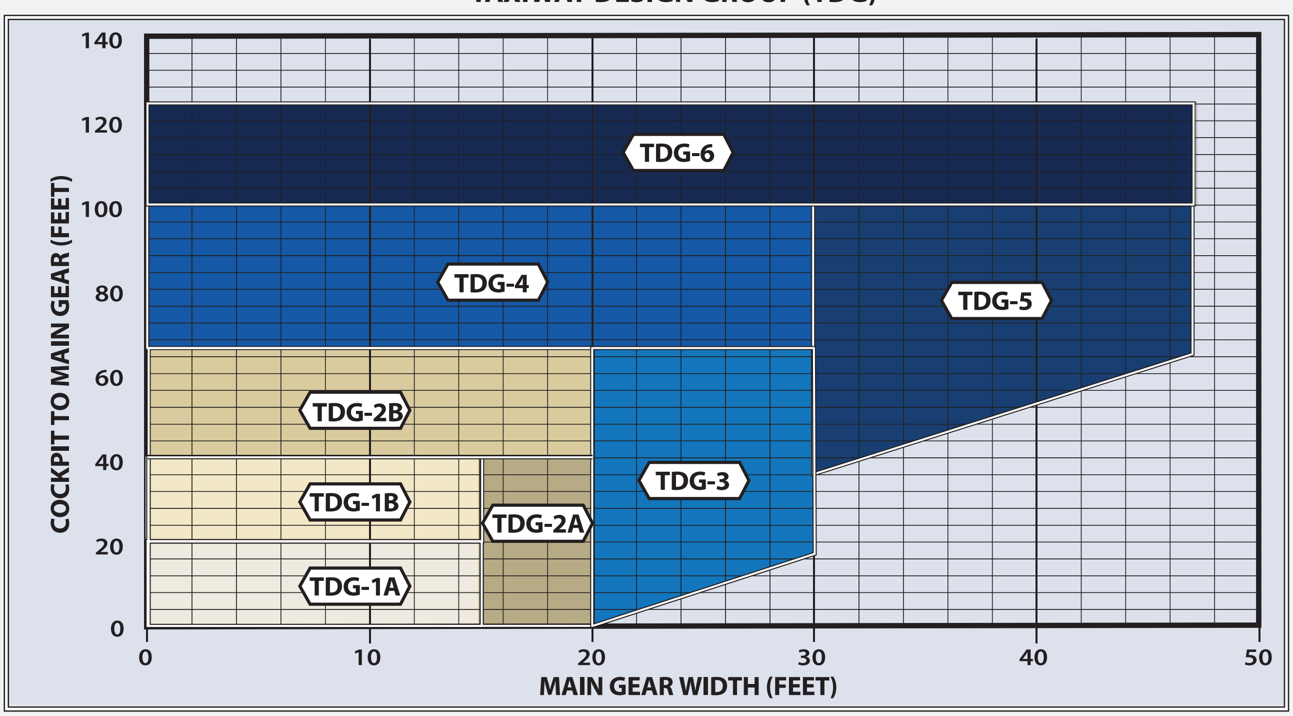
Group #	Tail Height (ft)	Wingspan (ft)
I	<20	<49
II	20≤30	49≤79
III	30≤45	79≤118
IV	45≤60	118≤171
V	60≤66	171≤214
VI	66≤80	214≤262

VISIBILITY MINIMUMS

RVR* (ft)	Flight Visibility Category (statute miles)
VIS	3-mile or greater visibility minimums
5,000	Not lower than 1-mile
4,000	Lower than 1-mile but not lower than ¾-mile
2,400	Lower than ¾-mile but not lower than ½-mile
1,600	Lower than ½-mile but not lower than ¼-mile
1,200	Lower than ¼-mile

***RVR:** Runway Visual Range

TAXIWAY DESIGN GROUP (TDG)



Source: FAA AC 150/5300-13B, Airport Design

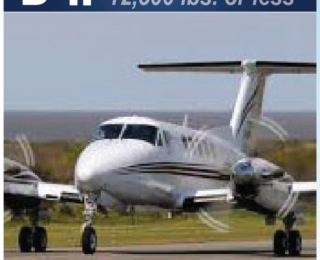
A-I

Aircraft	TDG
Beech Baron 55	1A
Beech Bonanza	**1A**
Cessna 150, 172	1A
Eclipse 500	1A
Piper Archer, Seneca	1A

B-I

Aircraft	TDG
Beech Baron 58	**1A**
Beech King Air 90	1A
Cessna 421	1A
Cessna Citation CJ1 (525)	1A
Cessna Citation 1 (500)	2
Piper Cheyenne III	2

B-II *12,500 lbs. or less*



Aircraft	TDG
Cessna 441 Conquest	1A
Beech Super King Air 200	**2**
Cessna Citation CJ2 (525A)	2

B-II *over 12,500 lbs.*

Aircraft	TDG
Falcon 10, 20, 50	1B
Hawker 800, 800XP, 850XP, 4000	1B
Cessna Citation CJ4 (525C)	**1B**
Beech Super King Air 350	2
Beech 1900	2
Falcon 900, 2000	2
Cessna Citation CJ3 (525B), Bravo (550), V (560)	2

A/B-III

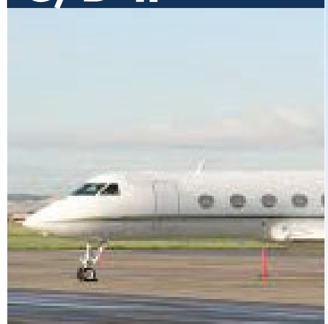
Aircraft	TDG
Bombardier Dash 7 (A-III)	3
Bombardier Dash 8	3
Bombardier Global 5000, 6000, 7000, 8000	**2**
Falcon 6X, 7X, 8X	2
ATR 72	2

Note: Aircraft pictured is identified in bold type.

C/D-I

Aircraft	TDG
Lear 25, 31, 45, 55, **60**	**1B**
Israeli Westwind	1B
Learjet 35, 36 (D-I)	1B
Piaggio Avanti II	2

C/D-II



Aircraft	TDG
Cessna Citation VII, X+	1B
Lear 70, 75	1B
Gulfstream II	1B
CRJ-200	1B
Gulfstream III	2
ERJ-135, 140, 145	2
CRJ-700	2
Gulfstream IV, 350, 450 (D-II)	2

C/D-III *less than 150,000 lbs.*

Aircraft	TDG
Gulfstream V	2
CRJ-900, 1000	2
Boeing 737-700, BBJ	3
ERJ-170, 175, 190, 195	3
Gulfstream G500, 550, 600, **650 (D-III)**	**2**
MD-81, 82, 87 (D-III)	4

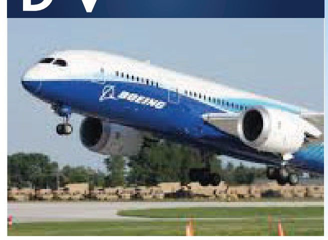
C/D-III *over 150,000 lbs.*

Aircraft	TDG
Airbus A319-100, 200	3
Boeing 737 -800, 900, BBJ2 (D-III)	**3**
MD-83, 88 (D-III)	4

C/D-IV

Aircraft	TDG
Airbus A300-100, 200, 600	5
Boeing 757-200	4
Boeing 767-300, **400**	**5**
MD-11	6

D-V



Aircraft	TDG
Airbus A330-200, 300	5
Boeing 787-8, 9	**5**
Airbus A340-500, 600	6
Boeing 747-100 - 400	5
Boeing 777-300	6

AIRPORT AND RUNWAY CLASSIFICATION

Airport and runway classifications, along with the aircraft classifications defined previously, are used to determine the appropriate FAA design standards to which the airfield facilities are to be designed and built.

Airport Reference Code (ARC) | An airport designation that signifies the airport's highest Runway Design Code (RDC) minus the third (visibility) component of the RDC. The ARC is used for planning and design only and does not limit the aircraft that may be able to operate safely on the airport.

Runway Design Code (RDC) | A code signifying the design standards to which the runway is to be built. The RDC is based upon planned development and has no operational component. The AAC, ADG, and runway visual range (RVR) are combined to form the RDC of a particular runway. The RDC provides the information needed to determine certain design standards that apply. The first component, depicted by a letter, is the AAC and relates to aircraft approach speed (operational characteristics). The second component, depicted by a Roman numeral, is the ADG and relates to either the aircraft wingspan or tail height (physical characteristics), whichever is most restrictive. The third component relates to the visibility minimums expressed by RVR values in feet of 1,200 (⅛-mile); 1,600 (¼-mile); 2,400 (½-mile); 4,000 (¾-mile); and 5,000 (1-mile). The RVR values approximate standard visibility minimums for instrument approaches to the runways. The third component should read "VIS" for runways designed for visual approach use only.

Approach Reference Code (APRC) | A code signifying the current operational capabilities of a runway and associated parallel taxiway with regard to landing operations. Like the RDC, the APRC is composed of the same three components: the AAC, ADG, and RVR. The APRC describes the current operational capabilities of a runway under particular meteorological conditions where no special operating procedures are necessary, as opposed to the RDC, which is based upon planned development with no operational component.

The APRC for a runway is established based upon the minimum runway-to-taxiway centerline separation. Each of the runways at ODO has a partial-parallel taxiway. Taxiway G is located 400 feet from the Runway 11-29 centerline. Both runway ends have a non-precision approach with ¾-mile visibility minimums. Based on these conditions, the APRC for Runway 11-29 is D/IV/4000 and D/V/4000. Runway 2-20 also has a partial-parallel taxiway (Taxiway D) that has a runway/taxiway separation distance of 300 feet. Runway 20 has a non-precision approach with 1-mile visibility minimums. Based on these conditions, the APRC for Runway 2-20 is B/III/4000 and D/II/4000. Taxiway G also serves as a partial-parallel taxiway on the west side of Runway 16-34, with a separation of 300 feet. There are no published instrument approaches to this runway; thus, the APRC is B/III/4000 and D/II/4000.

Departure Reference Code (DPRC) | A code signifying the current operational capabilities of a runway and associated parallel taxiway with regard to take-off operations. The DPRC represents those aircraft that can take off from a runway while any aircraft are present on adjacent taxiways, under particular meteorological conditions with no special operating conditions. The DPRC is similar to the APRC but is composed of two components: AAC and ADG. A runway may have more than one DPRC depending on the parallel taxiway separation distance.

The current runway/taxiway centerline separation between Taxiway G and Runway 11-29 of 400 feet results in a DPRC of D/IV and D/V. For Runways 2-20 and 16-34, the 300-foot separation between them and their associated partial-parallel taxiways results in a DPRC of B/III and D/II for each runway.

AIRPORT CRITICAL AIRCRAFT

As stated previously, it is critical to have an accurate understanding of the types of aircraft that operate at the airport currently and are expected to use the airport in the future. Aircraft type can have a significant impact on airport design criteria and the type of facilities necessary to accommodate the aircraft that are utilizing the airport most frequently.

The most recent annual data was obtained from the FAA's Traffic Flow Management System Counts (TFMSC), a database maintained by the FAA to monitor the type of aircraft and frequency of usage at airports. Typically, information is added to the database when pilots file flight plans and/or when flights are detected by the National Airspace System (NAS) on radar. The TFMSC includes data for general aviation, commercial service (air carrier and air taxi), and military aircraft. Although the program can identify the aircraft operating under IFR-filed flight plans and/or on radar, it does not account for all aircraft operating without a flight plan due to limited radar coverage. Thus, it is likely the airport experiences additional operations that are not recorded in the TFMSC. Despite this likelihood for incomplete operational data, the TFMSC is a valuable resource for identifying the primary aircraft users and type of aircraft operating at the airport on a regular basis. Additionally, the TFMSC does provide an accurate reflection of IFR activity. Operators of high-performance aircraft, such as turboprops and jets, tend to file flight plans at a high rate. **Exhibit 24** details the TFMSC operational mix at ODO since 2012.

Existing and Ultimate Critical Aircraft

A TFMSC report was prepared to identify the primary aircraft types operating at ODO. The data is limited as the TFMSC reports just 3,962 operations in 2021, the last full year of available data, which is only a small percentage of the total operations occurring at the airport. Most of the operations (49 percent) reported in the TFMSC are by aircraft in B-II, which includes representative aircraft such as the Citation V/Sovereign and the King Air 200/300/350 series. Aircraft in B-I are the next most frequent operators, according to the data, with 1,300 operations in 2021, followed by aircraft in C-II with 284 operations. AAC B aircraft have exceeded 500 annual operations at ODO since 2012. Therefore, for the purposes of this study, AAC B aircraft will be considered the critical AAC. Reported operations within ADG II are also well above the operational threshold; therefore, the representative critical ADG is II. Based on historic information provided in the TFMSC, it is reasonable to identify B-II as the primary runway's existing critical aircraft, with the King Air 200/300/350 serving as the representative aircraft.

In terms of the ultimate critical aircraft, it is important to consider the growth potential that exists at ODO now and over the next 20 years, as well as that of the city and region. The City of Odessa and the surrounding area have experienced significant growth, and this trend is expected to continue. Nationally, trends are moving towards larger and faster jets, and ODO already accommodates operations by AAC C/D aircraft. Airfield design standards for AAC C and D aircraft are grouped together within FAA's Airport Design

ARC	Aircraft	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
A-I	A36 Bonanza	0	0	0	6	0	2	2	0	2	0
	Cirrus Vision Jet	0	0	0	0	0	0	4	4	20	52
	Eclipse 400/500	6	2	4	20	16	12	24	10	28	16
	Epic Dynasty	2	8	18	8	6	6	2	0	6	4
	Kodiak Quest	4	0	2	2	2	2	0	2	14	2
	Lancair Evolution/Legacy	2	0	0	0	8	4	0	0	0	2
	Piper Malibu/Meridian	56	20	92	42	36	56	216	192	110	110
	Socata TBM 7/850/900	42	30	18	26	38	22	28	34	44	50
	Total	**112**	**60**	**134**	**104**	**106**	**104**	**276**	**242**	**224**	**236**
A-II	Cessna Caravan	4	2	2	4	0	0	4	6	2	20
	De Havilland Twin Otter	0	0	0	2	0	0	0	2	0	0
	Pilatus PC-12	332	274	230	180	264	176	162	148	92	110
	Total	**336**	**276**	**232**	**186**	**264**	**176**	**166**	**156**	**94**	**130**
A-III	De Havilland Dash 7	0	0	0	0	0	0	0	0	2	0
	Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**	**0**
B-I	Aero Commander 680	0	0	0	0	0	0	2	0	0	0
	Beech 99 Airliner	0	0	0	0	2	0	0	0	0	0
	Beechjet 400	18	10	26	10	12	14	14	20	12	18
	Cessna 425 Corsair	4	10	16	6	2	22	18	24	4	8
	Citation CJ1	8	26	134	96	64	68	62	86	52	90
	Citation I/SP	24	18	30	56	32	10	46	36	26	18
	Citation M2	0	0	0	0	0	0	20	78	42	78
	Citation Mustang	90	152	12	6	10	26	26	10	28	48
	Falcon 10	0	0	0	2	0	24	34	16	4	8
	Hawker 1000	0	0	0	0	0	0	14	0	0	0
	Honda Jet	0	0	0	0	2	0	2	10	6	18
	King Air 90/100	180	716	574	690	936	1,036	1,936	1,842	1,172	942
	L-29 Delfin	0	0	0	0	0	2	0	0	0	0
	Mitsubishi MU-2	8	52	38	4	10	22	8	2	4	0
	Phenom 100	10	2	6	22	20	26	66	26	20	42
	Piaggio Avanti	2	2	54	72	18	66	68	78	16	16
	Piper Cheyenne	64	34	46	16	8	32	24	16	18	6
	Premier 1	6	8	2	14	16	10	14	28	12	8
	T-27 Tucano	0	0	0	2	0	2	0	0	0	0
	Total	**414**	**1,030**	**938**	**996**	**1,132**	**1,360**	**2,354**	**2,272**	**1,416**	**1,300**
B-II	Aero Commander 690	16	20	18	0	6	10	14	6	2	8
	Air Tractor	0	0	0	2	0	0	0	0	0	0
	Cessna Conquest	14	22	36	10	34	2	32	42	12	14
	Challenger 300	20	4	12	14	8	12	12	50	12	54
	Citation CJ2/CJ3/CJ4	18	24	22	62	30	30	198	228	114	118
	Citation II/SP/Latitude	82	202	276	308	194	234	354	530	408	466
	Citation V/Sovereign	306	378	402	548	550	472	470	506	274	332
	Citation X	4	8	14	6	2	8	6	20	14	0
	Citation XLS	46	8	40	42	52	38	54	46	42	62
	Dornier 328	0	0	0	0	20	0	0	0	0	6
	Embraer EMB-110/120	0	0	0	2	2	0	0	0	0	0
	Falcon 20/50	10	2	4	112	140	162	174	316	156	148
	Falcon 2000	0	6	10	6	0	4	14	12	24	18
	Falcon 900	2	0	0	0	0	2	6	10	2	14
	Hawker 4000	0	2	0	0	0	0	0	0	0	0
	King Air 200/300/350	242	308	336	494	656	696	584	712	478	496
	King Air F90	16	14	46	130	114	142	134	132	40	10
	Phenom 300	130	174	130	142	108	180	118	130	76	132
	Pilatus PC-24	0	0	0	0	0	0	0	0	0	6
	Swearingen merlin	8	4	10	34	44	4	10	8	4	38
	Total	**914**	**1,176**	**1,356**	**1,912**	**1,960**	**1,996**	**2,180**	**2,748**	**1,658**	**1,922**
B-III	Bombardier Global Express	0	0	0	0	0	0	0	0	0	2
	Total	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
C-I	Learjet 20 Series	0	4	2	0	0	0	0	0	0	0
	Learjet 31	16	0	8	0	2	4	2	2	2	6
	Learjet 40 Series	30	24	50	34	40	158	210	140	30	30
	Learjet 50 Series	10	6	26	96	36	40	50	38	4	4
	Learjet 60 Series	6	2	10	4	2	10	42	14	18	34
	Westwind II	2	0	0	8	6	6	2	6	2	2
	Total	**64**	**36**	**96**	**142**	**86**	**218**	**306**	**200**	**56**	**76**
C-II	Challenger 600/604	0	2	8	4	12	12	10	16	4	2
	Citation III/VI	2	6	42	36	110	120	124	90	68	24
	Embraer 500/450 Legacy	0	0	0	0	0	4	2	2	10	6
	Embraer ERJ-135/140/145	0	0	0	0	2	0	0	0	2	0
	Gulfstream 100/150	0	0	4	6	4	14	108	16	68	94
	Gulfstream 280	0	0	0	0	6	8	8	14	72	118
	Gulfstream G-III	0	0	0	0	2	2	0	0	0	0
	Hawker 800 (Formerly Bae-125-800)	4	12	12	12	6	16	10	24	30	22
	Learjet 70 Series	0	0	0	0	2	0	8	14	14	18
	Total	**6**	**20**	**66**	**58**	**144**	**176**	**270**	**176**	**268**	**284**
C-III	Boeing 737 (200 thru 700 series)	0	0	2	0	0	0	0	0	0	0
	Total	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
C-IV	C-130 Hercules	0	0	0	0	2	0	0	0	0	0
	Total	**0**	**0**	**0**	**0**	**2**	**0**	**0**	**0**	**0**	**0**
D-I	F-22 Raptor	0	0	0	2	0	0	0	0	0	0
	Learjet 35/36	8	18	20	12	12	22	18	34	14	10
	T-38 Talon	2	0	0	0	0	0	0	0	0	0
	Total	**10**	**18**	**20**	**14**	**12**	**22**	**18**	**34**	**14**	**10**
D-II	Gulfstream 200	2	2	10	2	0	10	6	0	0	2
	Gulfstream 450	0	0	6	2	2	8	2	8	0	0
	Total	**2**	**2**	**16**	**4**	**2**	**18**	**8**	**8**	**0**	**2**
D-III	Gulfstream 500/600	0	2	0	0	2	4	4	4	0	0
	Total	**0**	**2**	**0**	**0**	**2**	**4**	**4**	**4**	**0**	**0**

Exhibit 24
HISTORICAL TURBOPROP AND JET OPERATIONS

ARC CODE SUMMARY

ARC CODE	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
A-I	112	60	134	104	106	104	276	242	224	236
A-II	336	276	232	186	264	176	166	156	94	130
A-III	0	0	0	0	0	0	0	0	2	0
B-I	414	1,030	938	996	1,132	1,360	2,354	2,272	1,416	1,300
B-II	914	1,176	1,356	1,912	1,960	1,996	2,180	2,748	1,658	1,922
B-III	0	0	0	0	0	0	0	0	0	2
C-I	64	36	96	142	86	218	306	200	56	76
C-II	6	20	66	58	144	176	270	176	268	284
C-III	0	0	2	0	0	0	0	0	0	0
C-IV	0	0	0	0	2	0	0	0	0	0
D-I	10	18	20	14	12	22	18	34	14	10
D-II	2	2	16	4	2	18	8	8	0	2
D-III	0	2	0	0	2	4	4	4	0	0
Total	1,858	2,620	2,860	3,416	3,710	4,074	5,582	5,840	3,732	3,962

APPROACH CATEGORY

AC	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
A	448	336	366	290	370	280	442	398	320	366
B	1,328	2,206	2,294	2,908	3,092	3,356	4,534	5,020	3,074	3,224
C	70	56	164	200	232	394	576	376	324	360
D	12	22	36	18	16	44	30	46	14	12
Total	1,858	2,620	2,860	3,416	3,710	4,074	5,582	5,840	3,732	3,962

DESIGN GROUP

DG	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
I	600	1,144	1,188	1,256	1,336	1,704	2,954	2,748	1,710	1,622
II	1,258	1,474	1,670	2,160	2,370	2,366	2,624	3,088	2,020	2,338
III	0	2	2	0	2	4	4	4	2	2
IV	0	0	0	0	2	0	0	0	0	0
Total	1,858	2,620	2,860	3,416	3,710	4,074	5,582	5,840	3,732	3,962

Source: TFMSC 2012-2021 - Data normalized annually

standards, and the TFMSC reports 372 combined operations by AAC C/D aircraft in 2021. Operations by these aircraft have been trending up over the last 10 years, and in 2018 they exceeded the 500 operations threshold. While ADG II aircraft have been the most frequent operators at ODO over the last 10 years, it is not unreasonable to anticipate larger airplanes in design group III to operate in the future, especially if pavement strengths are increased on the runways (to be discussed in the next section). Additionally, the NPIAS classifies ODO as a Regional Airport, and the TASP classifies it as a Business/Corporate airport. These designations are given to airports which have a high level of business jet/turbojet activity, and which should be planned and designed to accommodate growth in these segments. For these reasons, the ultimate critical aircraft is set within ARC C-III, represented by a Gulfstream V.

As mentioned in the Inventory section, for primary runways that provide less than 95 percent wind coverage for specific crosswind components, a crosswind runway may be justified. Based on wind data sourced from the on-airport ASOS, the primary runway at ODO provides for less than 95 percent crosswind coverage in the 10.5 and 13 knot conditions, which will be further explained and expanded upon later in the Runway Orientation portion of the Facility Requirements section. As such, a crosswind or secondary runway designed to B-II standards is justified. Therefore, the existing and ultimate critical aircraft for the crosswind runway at ODO is within ARC B-II and represented by the King Air 200/300/350.

Existing and Ultimate Airfield Design

Each runway at an airport is assigned an RDC. The RDC relates to specific FAA design standards that should be planned in relation to each runway, regardless of whether or not the airport currently meets the appropriate design standards (to be discussed in the next section).

Runway 11-29 has historically been considered the airport's primary runway. It measures 6,200 feet long by 100 feet wide with an APRC and DPRC capable of accommodating up to ARC D-V aircraft. Both runway ends provide a GPS LPV approach with visibility minimums down to ¾-mile. The existing ARC for ODO is B-II, and the resulting RDC for Runway 11-29 is B-II-4000 and the existing TDG is 2A. Based on the ultimate critical aircraft (C-III), planning for the primary runway should reflect RDC C-III-2400 design standards, which accounts for the potential for the airport to pursue visibility minimums down to ½-mile.

ODO also has two other runways, Runway 2-20 and Runway 16-34, both of which are designed to B-II standards. As mentioned, the FAA will support a crosswind runway if the primary runway provides less than 95 percent wind coverage; however, they will not support two crosswind runways, or a crosswind and a secondary runway, unless operational demand warrants it. This is not the case at ODO, as evidenced by the lack of federal funding support for maintaining Runway 2-20. However, based on current wind data, Runway 2-20 provides better crosswind coverage than Runway 16-34. The alternatives analysis will consider the pros/cons of maintaining the current three-runway system or decommissioning one runway. This study will also evaluate whether Runway 11-29 should remain as the primary runway or if Runway 2-20 or Runway 16-34 should be designated the primary. Whichever runway is maintained as the crosswind should be designed to B-II-5000 standards in the existing and ultimate condition. Another option is for Ector County to self-fund the maintenance of an 'additional' runway (the third runway not considered 'primary' or 'crosswind'), like what occurs now with Runway 2-20. If the decision is made to maintain all three runways, the 'additional' runway should be designed to meet B-II standards now and in the future.

All taxiways are at least 35 feet wide, meeting TDG 2A standards. These taxiways should continue to be designed to TDG 2A standards.

Table 23 summarizes the airport and runway classification currently and in the future for each of the runways. The next section, Facility Requirements, will outline the airside and landside elements necessary to meeting the aviation needs that have been determined in this forecasting effort.

TABLE 23 | Airport and Runway Classifications

	EXISTING	ULTIMATE
Airport Reference Code (ARC)	B-II	C-III
PRIMARY RUNWAY		
Airport Design Aircraft	King Air 200/300/350	Gulfstream V
Runway Design Code (RDC)	B-II-4000	C-III-2400
Approach Reference Code (APRC)	D/IV/4000 D/V/4000	D/IV/2400 D/V/2400
Departure Reference Code (DPRC)	D/IV D/V	D/IV D/V
Taxiway Design Group (TDG)	2A	2A
CROSSWIND RUNWAY		
Airport Design Aircraft	King Air 200/300/350	Same
Runway Design Code (RDC)	B-II-5000	Same
Approach Reference Code (APRC)	B/III/4000 D/II/4000	Same
Departure Reference Code (DPRC)	B/III D/II	Same
Taxiway Design Group (TDG)	2A	Same
ADDITIONAL (NON-AIP ELIGIBLE) RUNWAY[1]		
Airport Design Aircraft	King Air 200/300/350	Same
Runway Design Code (RDC)	B-II-VIS	Same
Approach Reference Code (APRC)	B/III/4000 D/II/4000	Same
Departure Reference Code (DPRC)	B/III D/II	Same
Taxiway Design Group (TDG)	2A	Same
[1] These standards apply only if the County elects to self-fund maintenance of a third runway		

Source: FAA AC 150/5300-13B; Coffman Associates analysis