



PAC/TAC Combined Meeting #2

# **Ellison Onizuka Kona International Airport (KOA) Master Plan Update**

September 11, 2025

Project  
Website



**KOA**

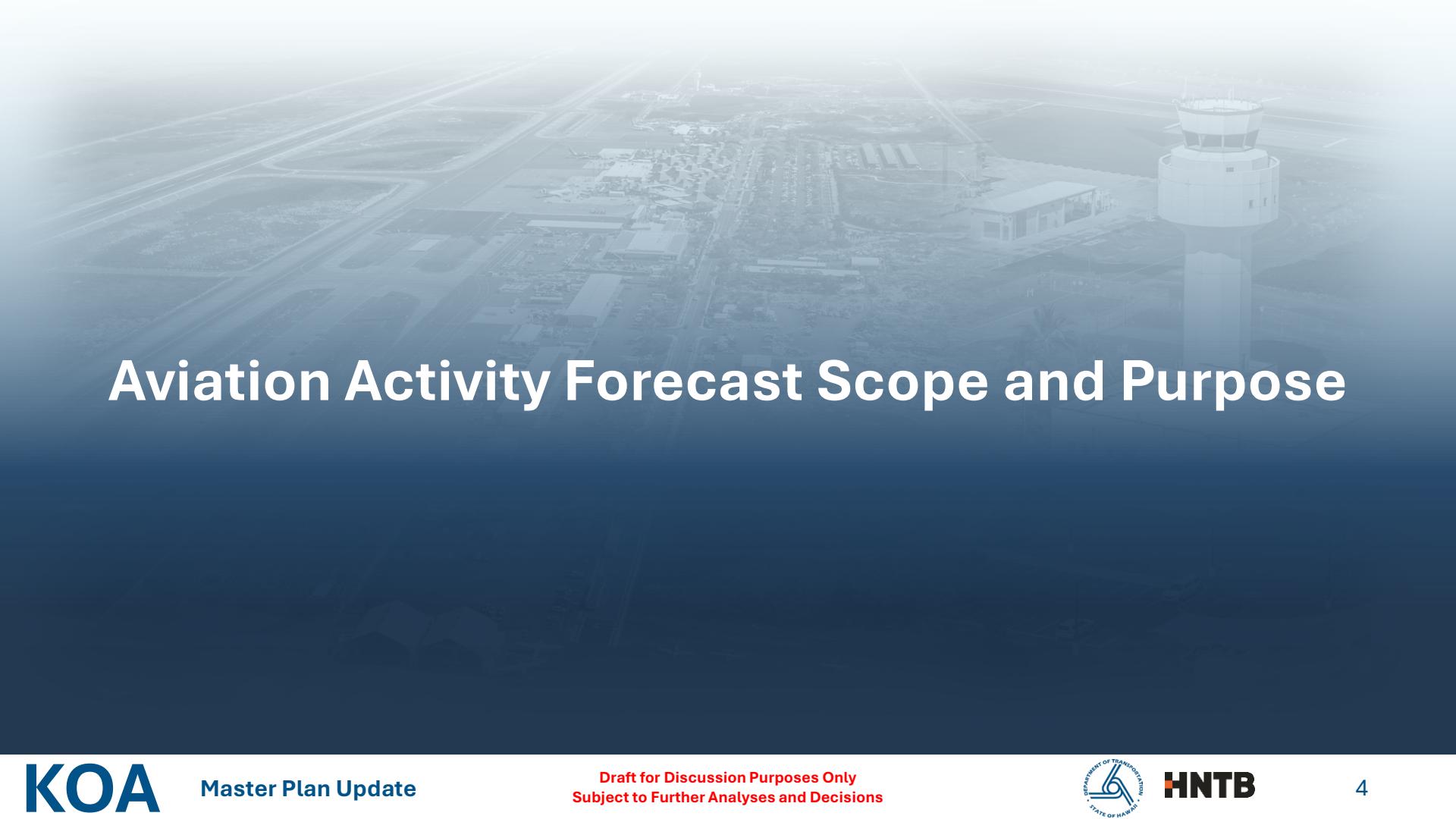
Draft for Discussion Purposes Only  
Subject to Further Analyses and Decisions



# Agenda

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- **Welcome and Introductions**
- **Aviation Activity Forecast Scope and Purpose**
- **Historical Airport Activity**
- **Economic Trends**
- **Forecast Approach and Results**
  - Enplanements
  - Operations
  - Based Aircraft
- **Peak Activity Projections**
- **Next Steps**



# Aviation Activity Forecast Scope and Purpose

# Aviation Activity Forecast Scope and Purpose

## SCOPE:

- Passenger Enplanements
- Air Cargo Tonnage
- Fleet Mix
- Aircraft Operations
- Based Aircraft
- Peak Activity Projections

## PURPOSE:

- Identify future airfield, terminal, and landside facility requirements as part of the KOA Master Plan Update
- Submit forecast to the Federal Aviation Administration (FAA) for approval
  - As part of the Master Plan Update, the forecast is a critical component that requires formal approval by the FAA

# FY 2024 Terminal Area Forecast Summary for KOA

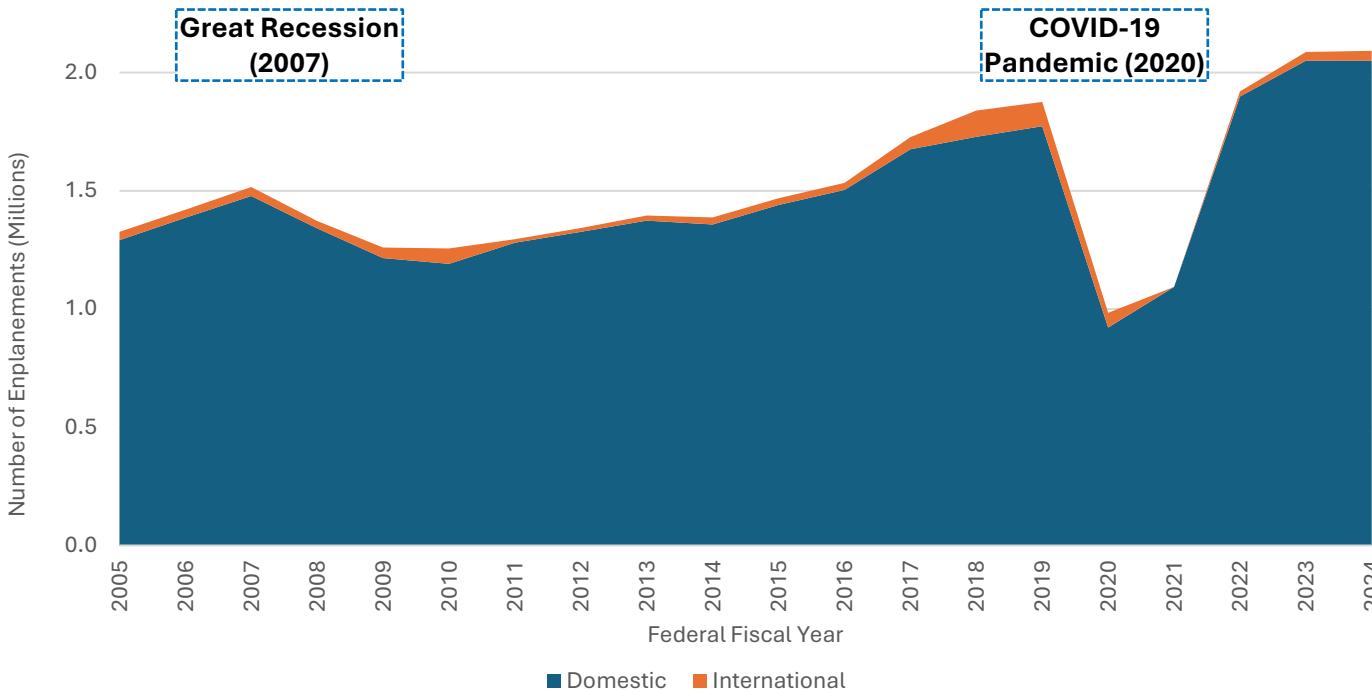
Fiscal Year	Enplanements			Aircraft Operations								Based Aircraft	
	Air Carrier	Commuter	Total	Air Carrier	Air Taxi & Commuter	GA	Military	Total	Civil	Military	Total	Total Ops	Total Tacon Ops
REGION:AIWP STATE:HI OCID:KOA CITY:KAILUA/KONA AIRPORT:ELLISON ONIZUKA KONA INTL AT KEAHOLE	2,072,232	14,643	2,086,875	35,297	10,468	16,878	2,115	64,758	43,651	2,461	46,112	110,870	0
2023	2,026,342	11,235	2,037,577	34,958	7,825	17,677	2,459	62,919	48,061	3,498	51,559	114,478	0
2024*	1,944,674	9,225	1,953,899	33,259	6,383	17,730	2,459	59,831	48,301	3,498	51,799	111,630	0
2025*	2,010,045	9,451	2,019,496	34,365	6,459	17,784	2,459	61,067	48,543	3,498	52,041	113,108	0
2026*	2,072,017	9,667	2,081,684	35,395	6,534	17,837	2,459	62,225	48,786	3,498	52,284	114,509	0
2027*	2,130,800	9,880	2,140,680	36,366	6,608	17,891	2,459	63,324	49,030	3,498	52,528	115,852	0
2028*	2,185,141	10,088	2,195,229	37,263	6,682	17,945	2,459	64,349	49,275	3,498	52,773	117,122	0
2029*	2,235,624	10,287	2,245,911	38,090	6,755	17,999	2,459	65,303	49,521	3,498	53,019	118,322	0
2030*	2,279,130	10,469	2,289,599	38,794	6,827	18,054	2,459	66,134	49,769	3,498	53,267	119,401	0
2031*	2,321,059	10,642	2,331,701	39,465	6,898	18,108	2,459	66,930	50,018	3,498	53,516	120,446	0
2032*	2,365,603	10,827	2,376,430	40,191	6,971	18,163	2,459	67,784	50,268	3,498	53,766	121,550	0
2034*	2,413,761	11,032	2,424,793	40,995	7,047	18,218	2,459	68,719	50,519	3,498	54,017	122,736	0
2035*	2,459,665	11,223	2,470,888	41,753	7,122	18,272	2,459	69,606	50,772	3,498	54,270	123,876	0
2036*	2,510,877	11,437	2,522,314	42,618	7,200	18,328	2,459	70,605	51,026	3,498	54,524	125,129	0
2037*	2,564,888	11,667	2,576,555	43,545	7,280	18,383	2,459	71,667	51,281	3,498	54,779	126,446	0
2038*	2,616,737	11,887	2,628,624	44,429	7,359	18,438	2,459	72,685	51,538	3,498	55,036	127,721	0
2039*	2,668,641	12,105	2,680,746	45,313	7,438	18,494	2,459	73,704	51,795	3,498	55,293	128,997	0
2040*	2,725,047	12,344	2,737,391	46,290	7,520	18,550	2,459	74,819	52,054	3,498	55,552	130,371	0
2041*	2,775,912	12,558	2,788,470	47,155	7,600	18,606	2,459	75,820	52,315	3,498	55,813	131,633	0
2042*	2,829,875	12,783	2,842,658	48,076	7,682	18,662	2,459	76,879	52,576	3,498	56,074	132,953	0
2043*	2,887,434	13,025	2,900,459	49,069	7,766	18,718	2,459	78,012	52,839	3,498	56,337	134,349	0
2044*	2,943,969	13,261	2,957,230	50,039	7,850	18,775	2,459	79,123	53,104	3,498	56,602	135,725	0
2045*	3,001,510	13,501	3,015,011	51,031	7,935	18,831	2,459	80,256	53,369	3,498	56,867	137,123	0

- KOA's most recent TAF was issued in January 2025
- FAA's *Forecast Review and Approval Instructions* (Aug 2024) states that forecasts are considered consistent with the TAF if they differ by <10% in the 5-year forecast period and <15% in the 10-year forecast period



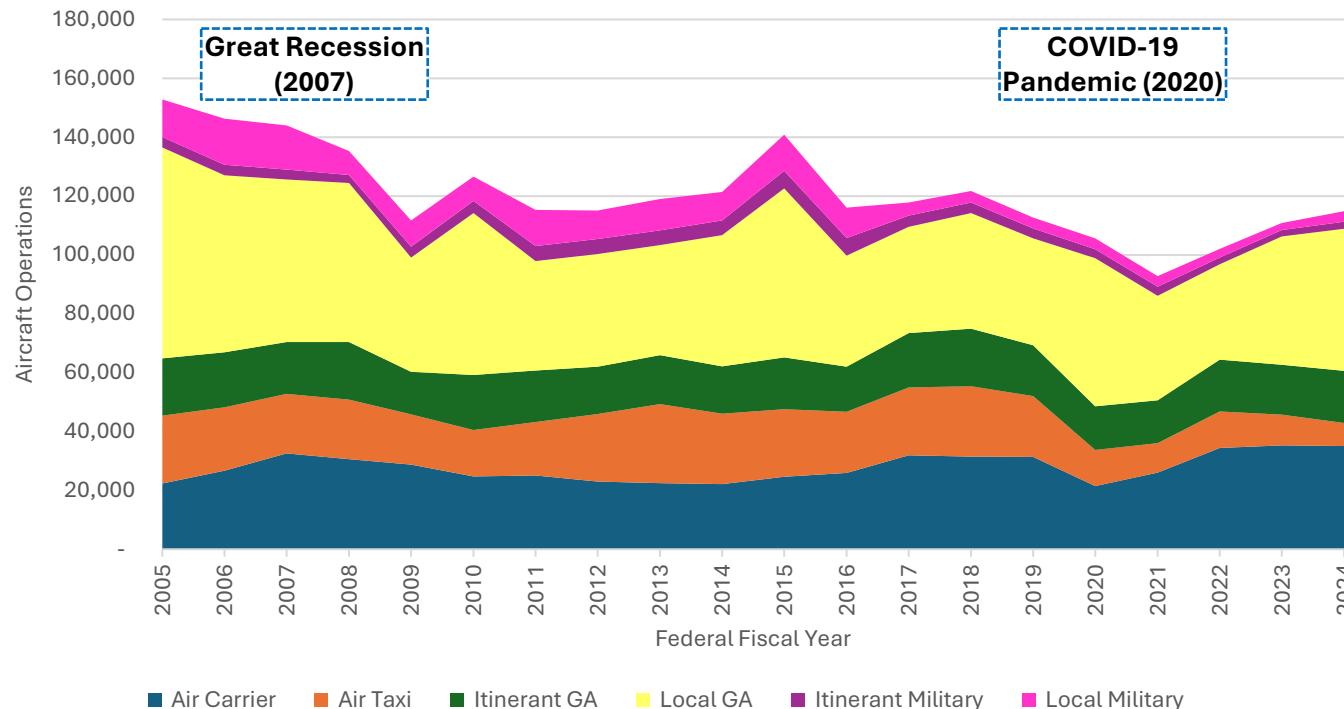
# Historical Airport Activity

# Historical Passenger Enplanements



- Passenger enplanements have largely rebounded to pre-pandemic levels
- Int'l service to Japan has been limited in the post-pandemic period *(in part due to the weak yen-USD exchange rate)*

# Historical Aircraft Operations



- Air carrier operations closely followed passenger enplanement trends
- Significant presence of high-performance jet aircraft → continual strength in GA operations
- Decline in air taxi activity in the post-pandemic period due to more limited-service focus by carrier

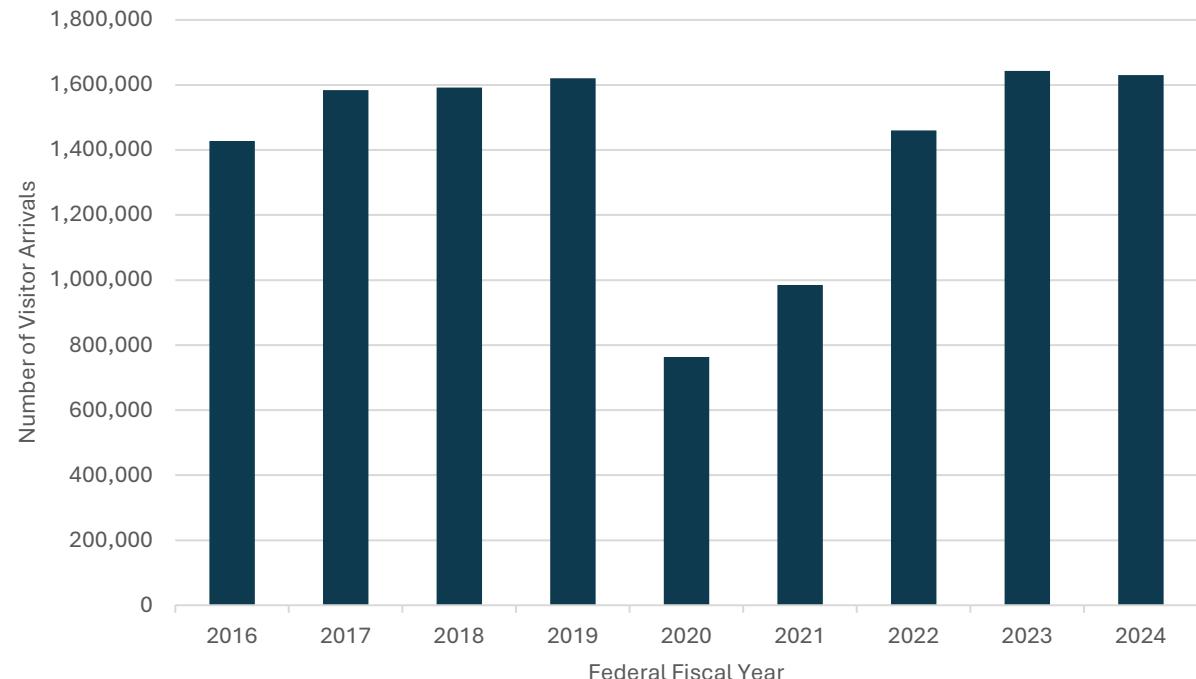
A grayscale aerial photograph of an airport. In the foreground, a large terminal building with multiple wings and a glass facade is visible. To the right of the terminal is a tall, cylindrical control tower. The background shows a complex network of runways, taxiways, and other airport infrastructure. The image has a slight gradient, darker at the bottom and lighter at the top.

# Economic Trends

# Summary of Economic Trends

- Passenger demand is determined by the strength of the economy and the cost and availability of air service
- Development of a Forecast requires a clear understanding of the local, regional, and national economic forecasts and trends:
  - Hawaii County (*may indicate local originating traveler base*)
  - State of Hawaii (*may indicate local originating traveler base*)
  - U.S. Mainland (*may indicate propensity to travel to tourist destinations*)
  - State of California (*may indicate traveler base from a significant origin market*)

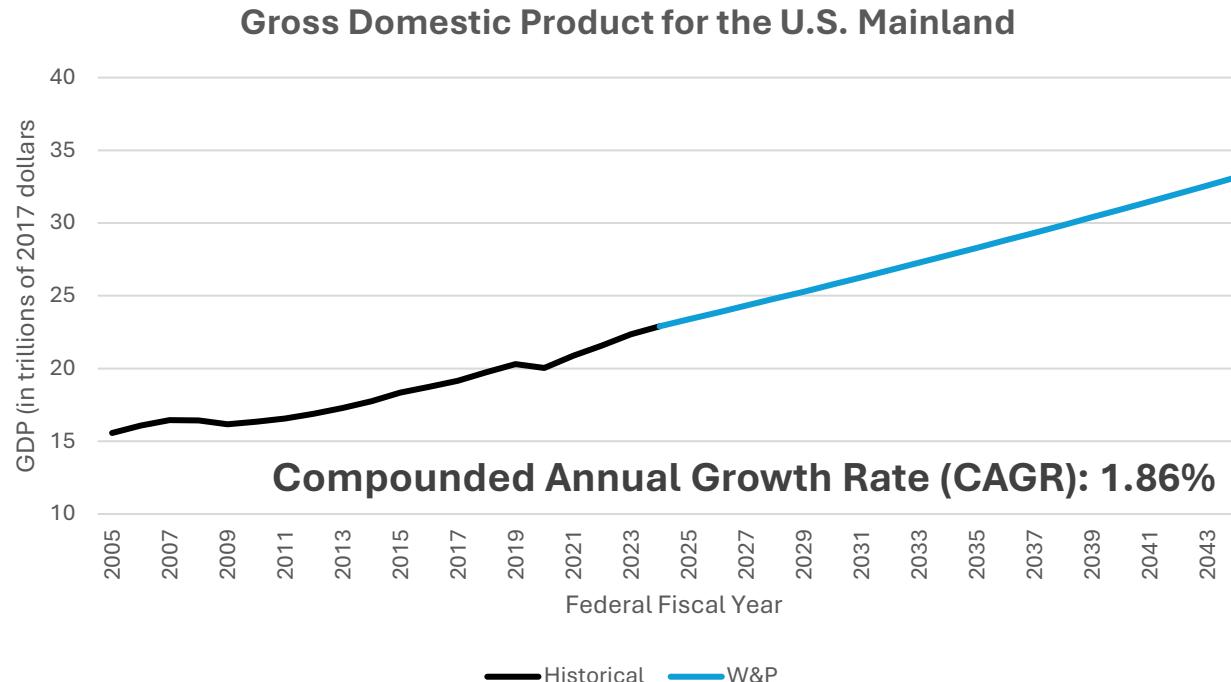
# Visitor Arrivals to the Island of Hawaii



Origination	% of Travelers
U.S. West Region	41
U.S. East Region	24
Neighboring Islands	27
International (Primarily Canada and Japan)	8

- Tourism has remained as the primary economic driver for Hawaii's economy across all islands
- Visitor traffic to the Island of Hawaii has steadily increased back to pre-pandemic levels by 2023

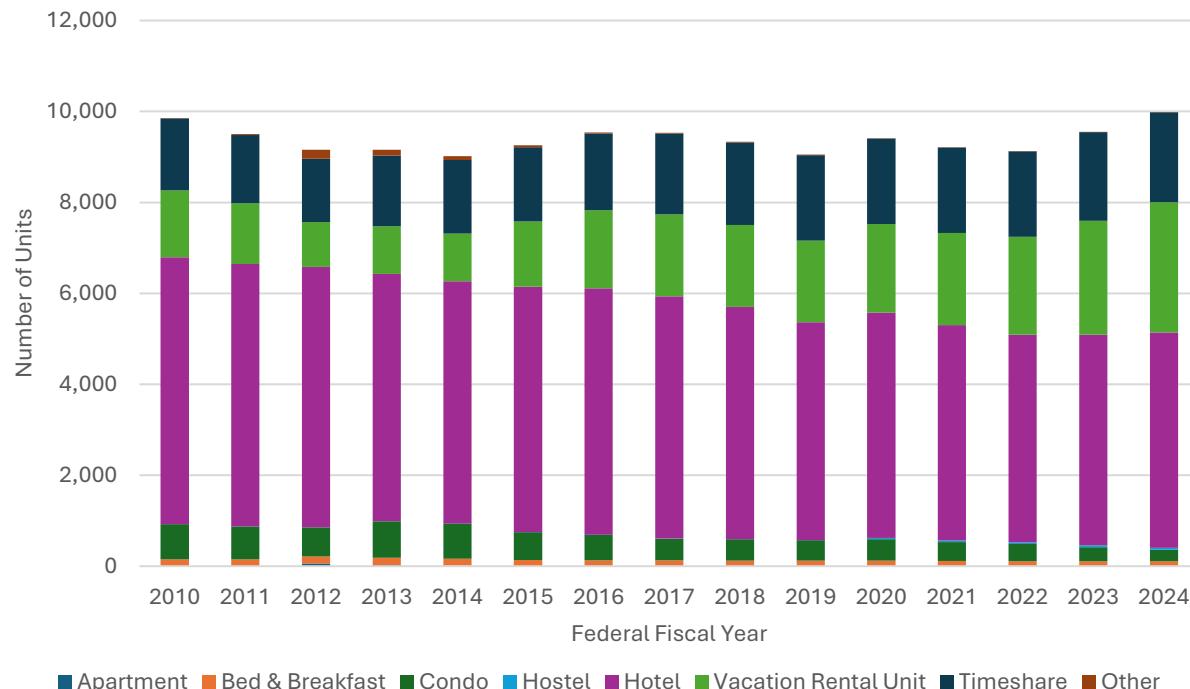
# U.S. Mainland Economy Outlook



- A strong Gross Domestic Product (GDP) often signifies a thriving economy, which can greater influence travel and tourism
- **W&P projects U.S. Mainland GDP to grow at a 1.86% annual rate between 2024 and 2044**

The Complete Economic and Demographic Data Source (CEDDS) forecasts published by Woods and Poole (W&P) were utilized in this study.

# Accommodation Inventory in Kohala and Kona Regions

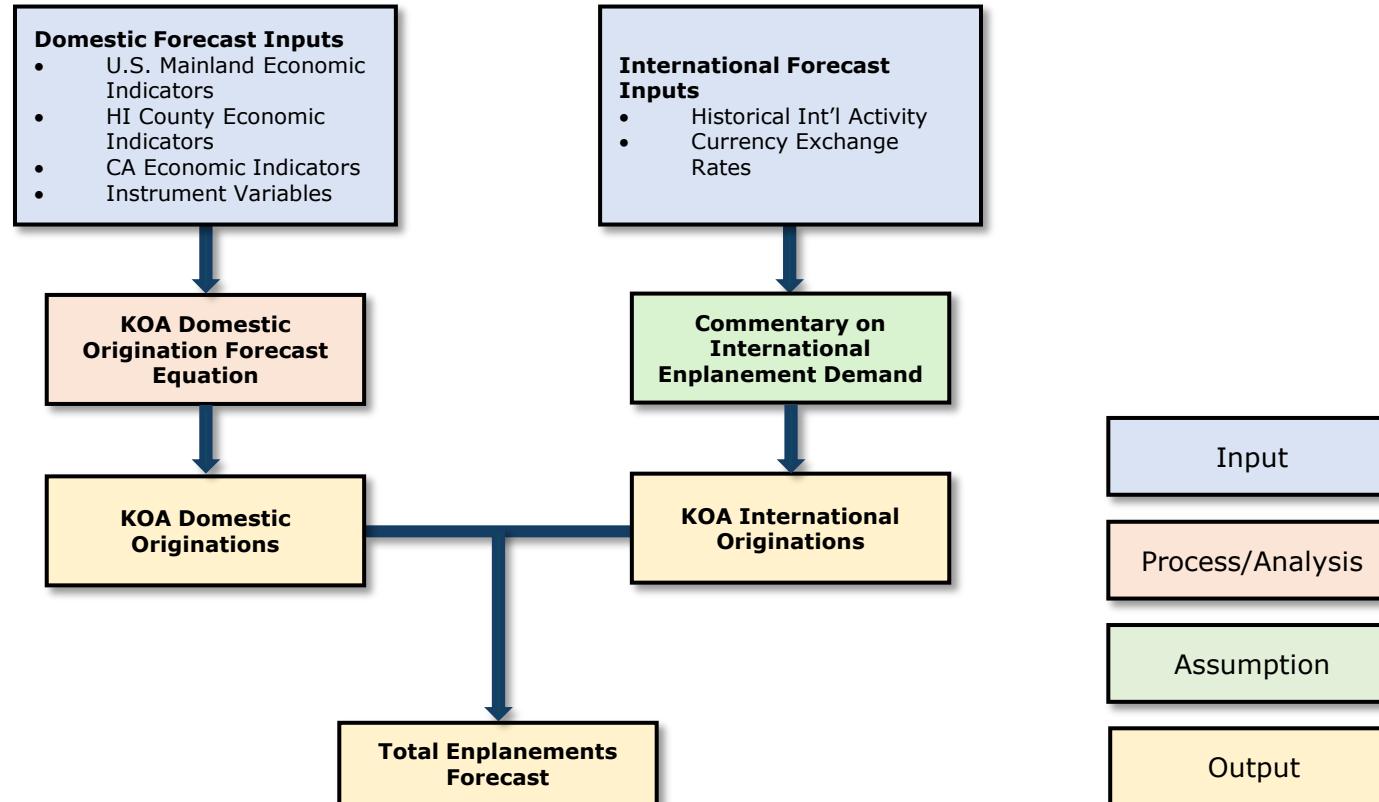


- Steady increase in accommodation inventory during the post-pandemic period:
  - 9,130 units (2022) → 9,986 units (2024)
- Several hotels are currently under construction or renovation and are expected to increase inventory

A grayscale aerial photograph of an airport. In the foreground, a large terminal building with multiple wings and a central entrance is visible. To the right of the terminal is a tall, cylindrical control tower. The background shows a complex network of runways, taxiways, and other airport infrastructure. The image is partially obscured by a dark blue rectangular overlay at the bottom.

# Forecast Approach and Results

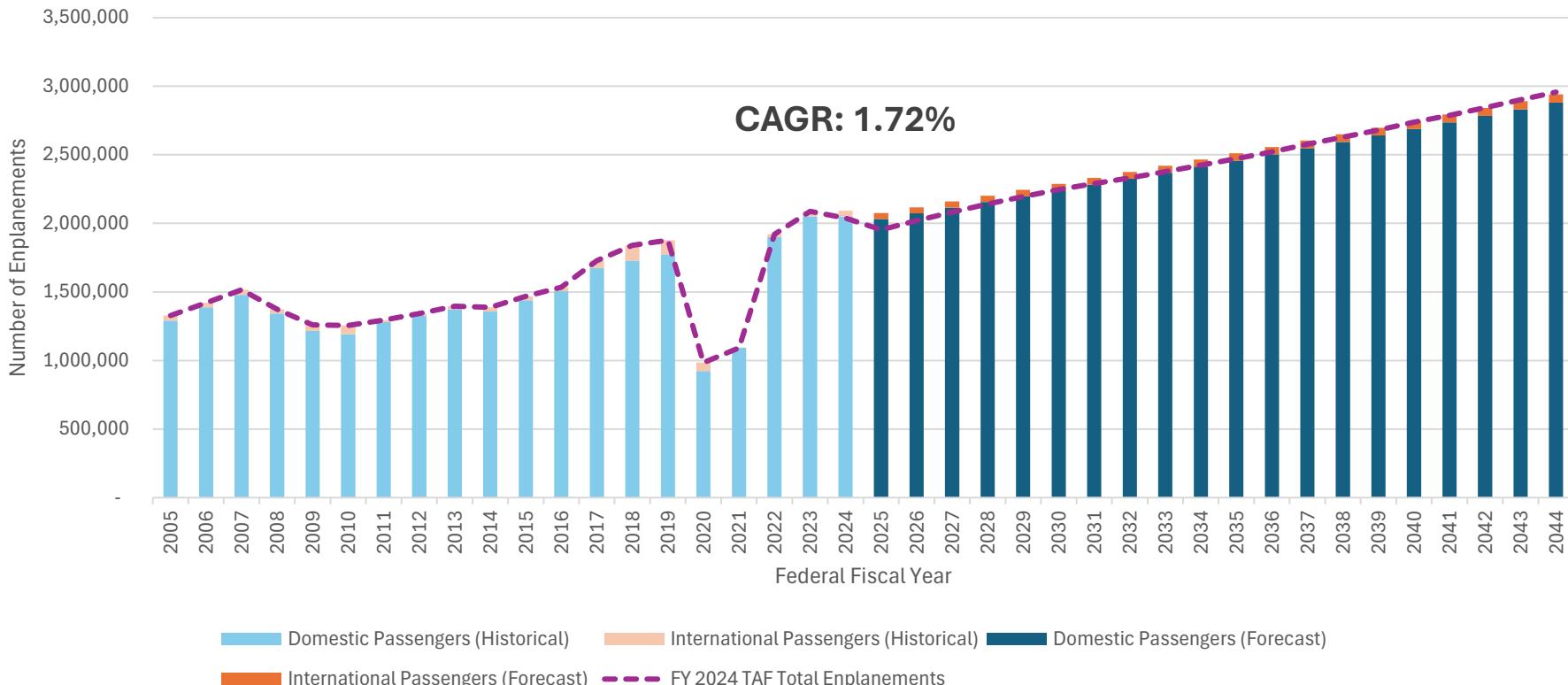
# Passenger Enplanement Forecast Approach



# International Passenger Originations Forecast

- International enplanement activity at KOA has historically centered around service between Canada and Japan to the Island of Hawaii
- Sporadic nature of historical air service results do not lend themselves to regression-based forecasting → **international passenger forecast relies on market-specific analyses:**
  - Canadian demand to KOA has been demonstrated over longer than a 10-year duration with **a strong return** after the COVID-19 pandemic (even with less favorable exchange rates)
  - Japanese demand to KOA has **softened** likely due to the weak Japanese Yen – U.S. Dollars exchange rate

# Forecast of KOA Scheduled Passengers



# Forecast Summary – Passenger Enplanements

Passenger Enplanements	Baseline 2024	2029	2034	2039	2044	CAGR
Domestic	2,050,654	2,197,381	2,413,634	2,641,102	2,880,142	1.71%
International	41,379	46,955	51,576	56,436	61,544	2.00%
<b>Total Enplanements</b>	<b>2,092,033</b>	<b>2,244,336</b>	<b>2,465,210</b>	<b>2,697,538</b>	<b>2,941,686</b>	<b>1.72%</b>

## FAA FY 2024 TAF Enplanements

Total Enplanements	2,037,577	2,195,229	2,424,793	2,680,746	2,957,230	1.88%
Total Variance	2.7%	2.2%	1.7%	0.6%	-0.5%	

- KOA's most recent TAF was issued in January 2025
- FAA's *Forecast Review and Approval Instructions* (Aug 2024) states that forecasts are considered consistent with the TAF if they differ by <10% in the 5-year forecast period and <15% in the 10-year forecast period

# Aircraft Operations Forecast Approach

## Passenger Air Carrier:

1. Forecast Scheduled Seats = 
$$\frac{\text{Enplanements}}{\text{Airline Load Factor}}$$
2. Commercial Departures = 
$$\frac{\text{Forecast Scheduled Seats}}{\text{Seats per Departure}}$$
3. Total Passenger Air Carrier Operations = Commercial Departures x 2

## Air Cargo:

1. Determine average cargo payload factor by analyzing 2022-2024 post-pandemic T-100 all-cargo airline data for KOA
2. All-cargo operations = 
$$\frac{\text{Forecast Air Cargo Tonnage}}{\text{Average Payload Factor}} \times 0.932^*$$

*\*Assumes 93.2% of air cargo demand will be transported by all-cargo carriers (remaining demand transported as belly-cargo)*

# Aircraft Operations Forecast Approach

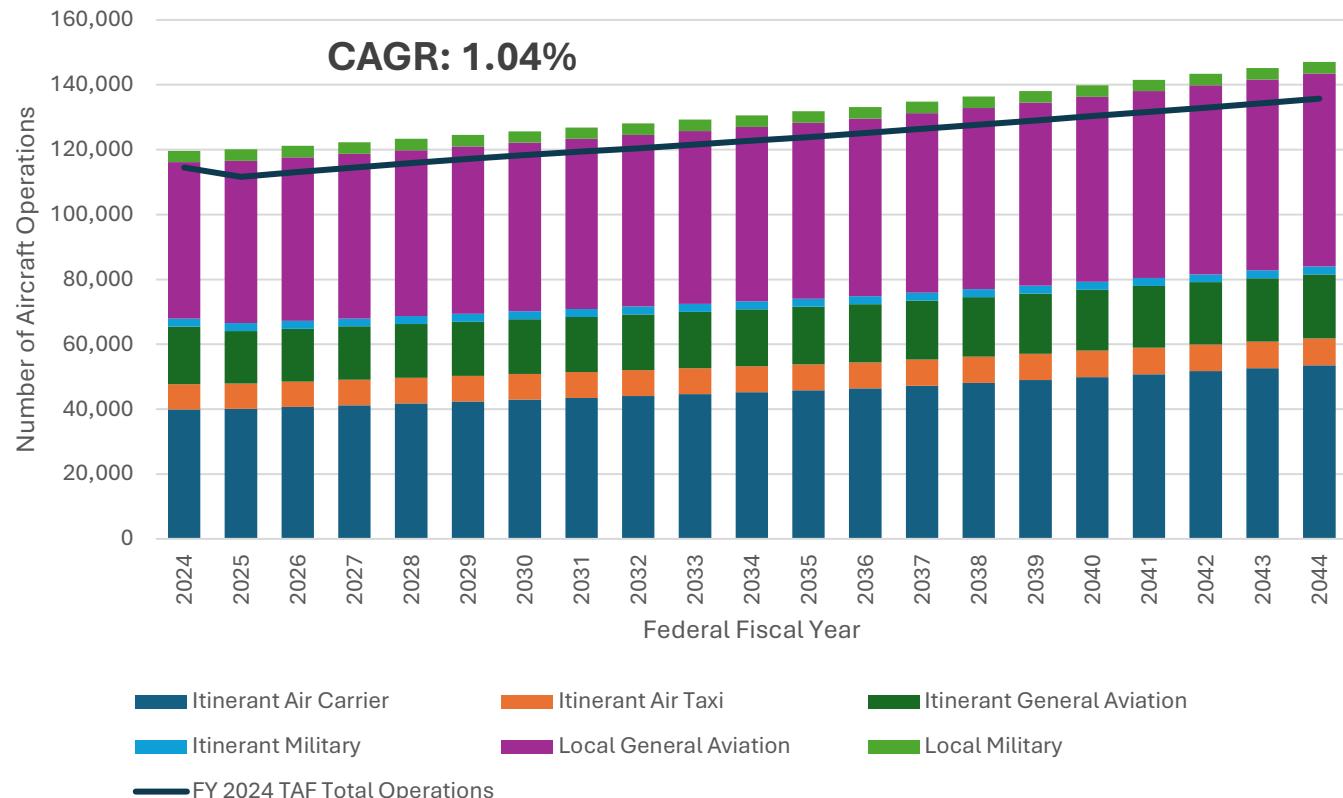
## Air Taxi:

1. Identify historical air taxi operations at KOA
2. Apply growth rates (CAGR: 0.26%) to project air taxi operations  
*(consistent with the FAA's TAF CAGR for air taxi operations)*

## General Aviation (GA):

1. Segment historical GA operations by aircraft class
2. Apply growth rates to each type of aircraft class
  - Jet: 3.20%; Turbine: 2.50%; Piston: -0.70%; Helicopter: 2.00%
3. Reassemble into the respective categories (itinerant and local GA operations) for comparison with the TAF

# Forecast of KOA Aircraft Operations



- Total aircraft operations projected to increase from 119,663 operations (2024) to 147,048 operations (2044)
- Passenger aircraft operations are projected to grow more quickly, followed by GA and air taxi operations
- Military operations are projected to remain roughly constant

# Forecast Summary – Aircraft Operations

Operations	Baseline 2024	2029	2034	2039	2044	CAGR
Air Carrier (Including Air Cargo)	39,875	42,343	45,211	48,992	53,545	1.48%
Air Taxi	7,808	7,911	8,015	8,121	8,228	0.26%
General Aviation	65,991	68,266	71,337	74,988	79,286	0.92%
Military	5,989	5,989	5,989	5,989	5,989	0.00%
<b>Total Operations</b>	<b>119,663</b>	<b>124,509</b>	<b>130,552</b>	<b>138,090</b>	<b>147,048</b>	<b>1.04%</b>

## FAA FY 2024 TAF Aircraft Operations

<b>Total Operations</b>	<b>114,478</b>	<b>117,122</b>	<b>122,736</b>	<b>128,997</b>	<b>135,725</b>	<b>0.85%</b>
Total Variance	4.5%	6.3%	6.4%	7.0%	8.3%	

- KOA's most recent TAF was issued in January 2025
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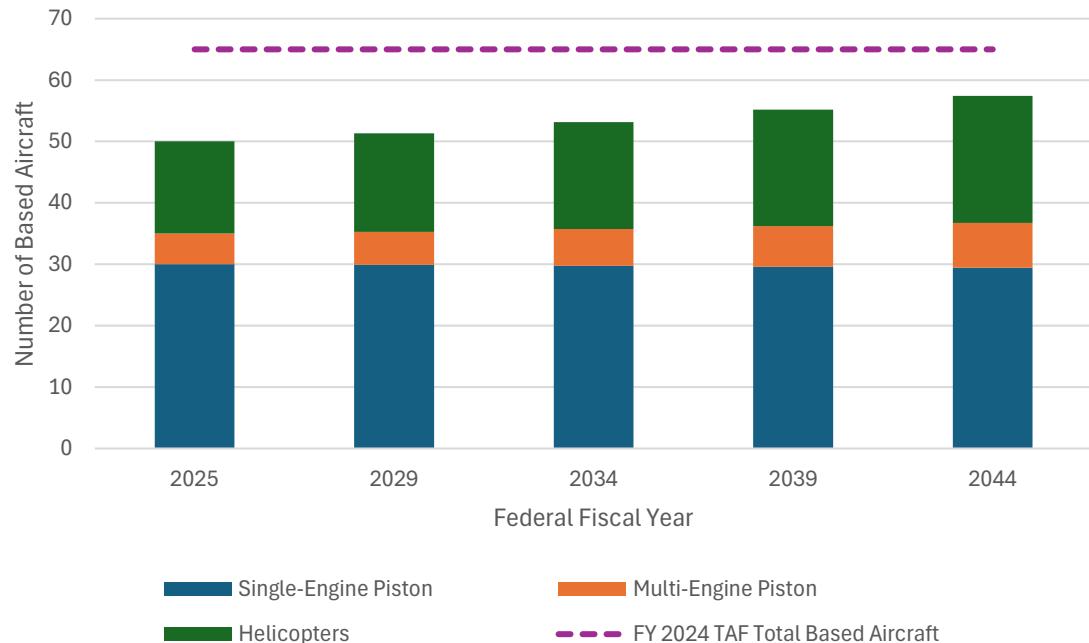
# Based Aircraft Forecast Approach

1. Categorize existing based aircraft inventory
2. Project number of based aircraft by applying the following growth rates for future GA aircraft deliveries (as outlined in the *FAA Aerospace Forecast Fiscal Years 2025-2045* report):
  - Single-engine piston aircraft are projected to decline with an average annual growth rate of -0.1%
  - Multi-engine piston aircraft are projected to grow at an average annual growth rate of 2.0%
  - Helicopters are projected to grow at an average annual growth rate of 1.7%

## Existing Based Aircraft Inventory by Category (FY 2025)

Single-Engine Piston	Multi-Engine Piston	Helicopter	Total Based Aircraft
30	5	15	<b>50</b>

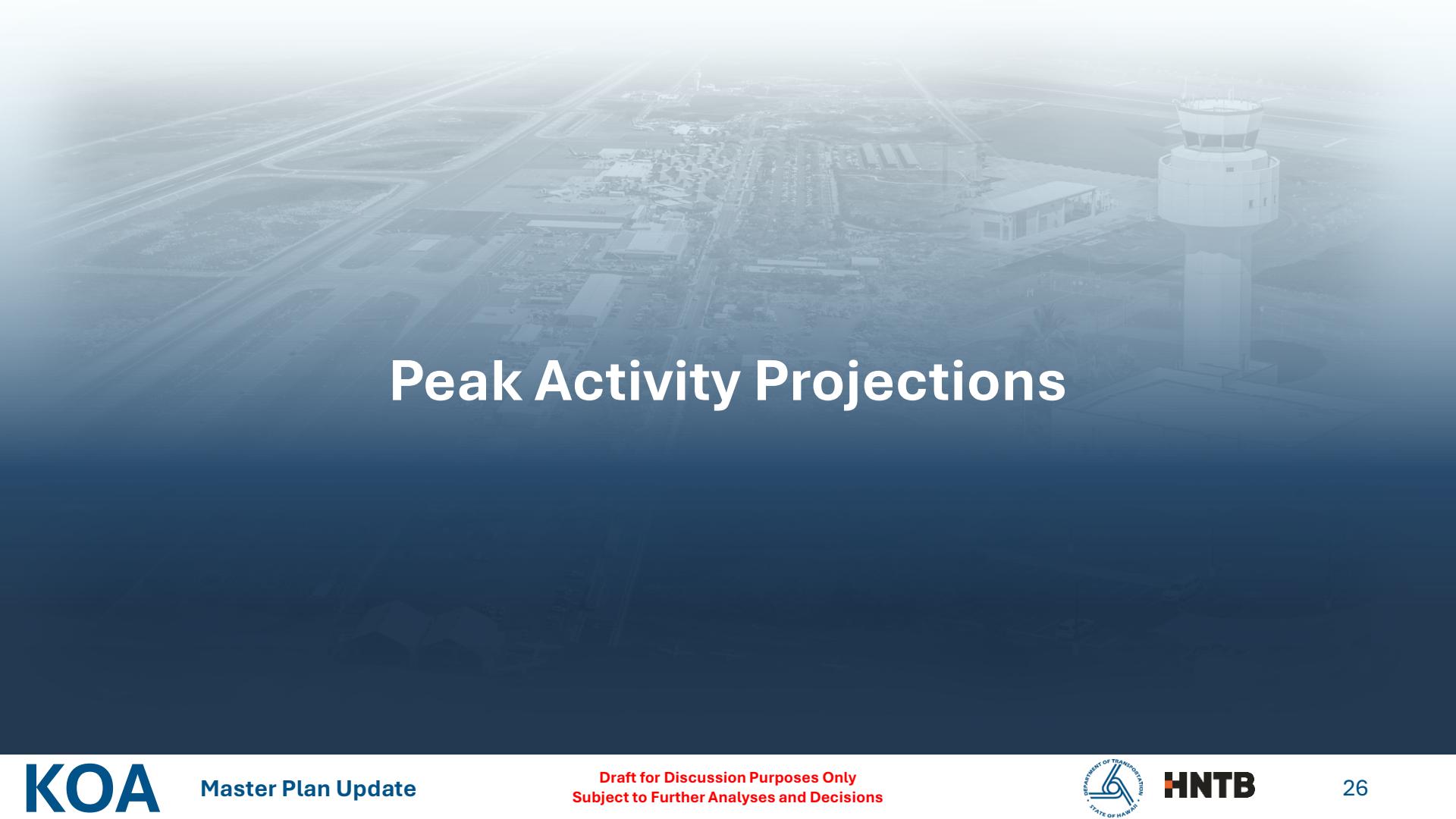
# Forecast of KOA Based Aircraft



Federal Fiscal Year	KOA Forecast	TAF	Variance
2025*	50	65	-23.0%
2029	51	65	-21.0%
2034	53	65	-18.0%
2039	55	65	-15.0%
2044	57	65	-12.0%

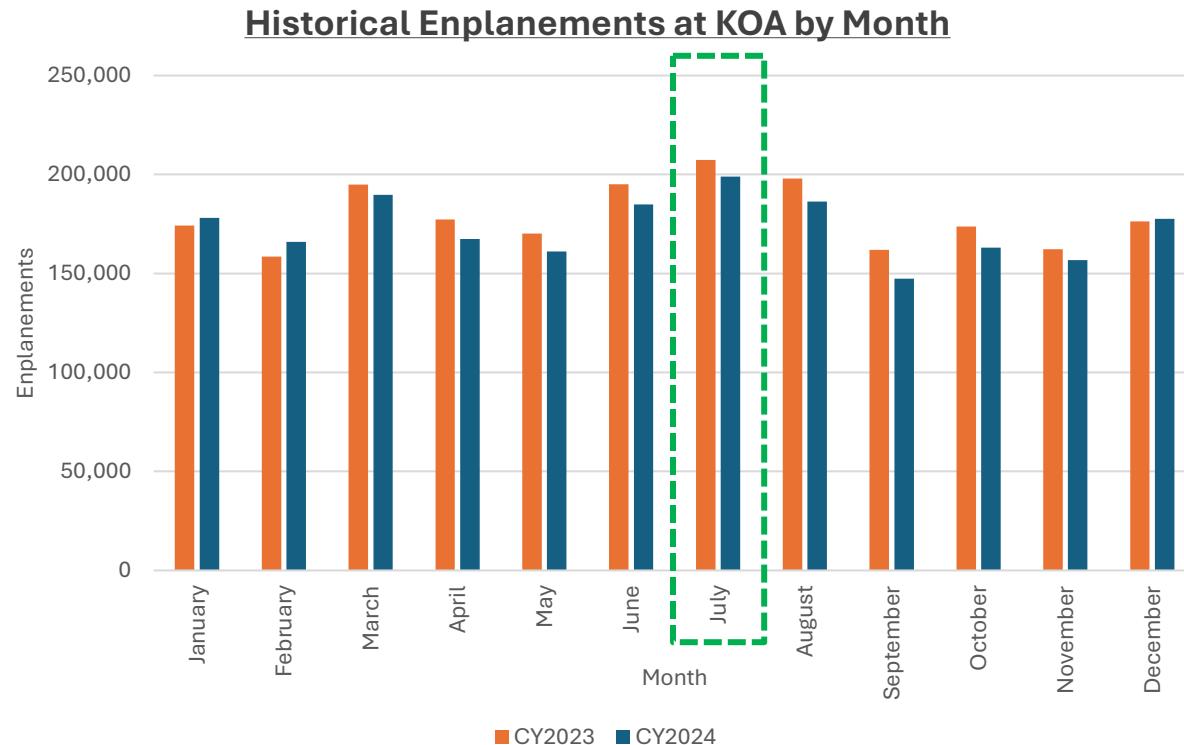
\*Based on KOA's aircraft registration as of 8/18/2025

- **TAF:** Substantial increase in based aircraft for FY 2024 from 35 to 65
- **KOA Forecast:** Gradual growth approach based on FAA's forecast of GA aircraft deliveries

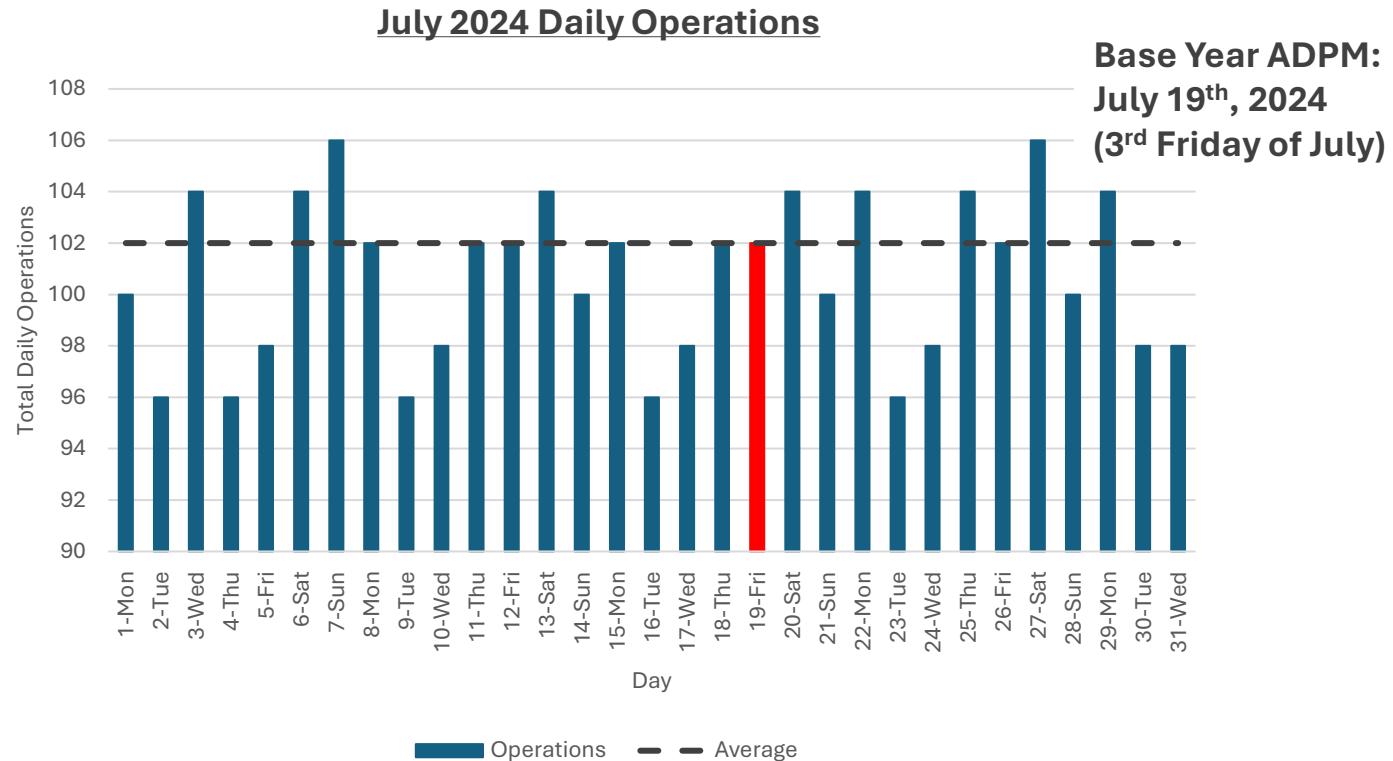
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# Peak Activity Projections

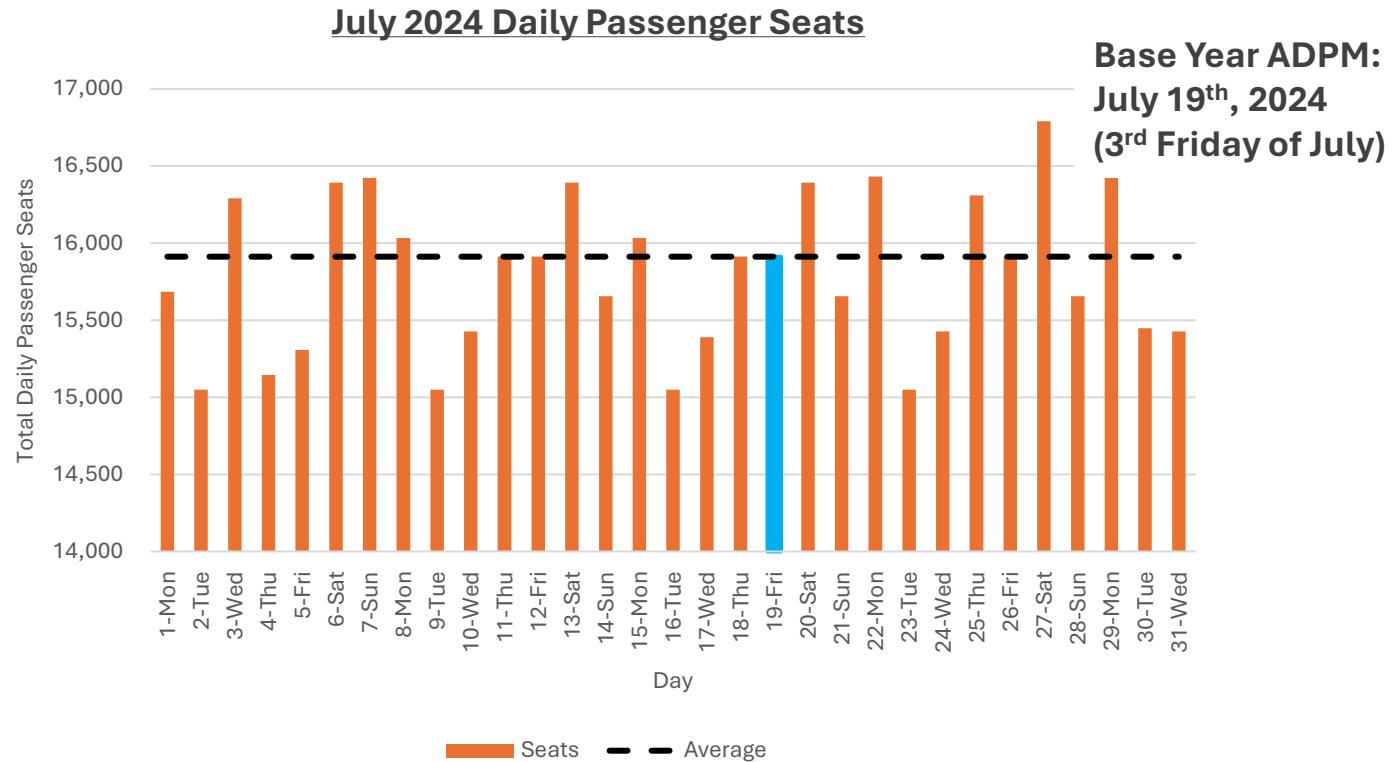
# Identify the Peak Month



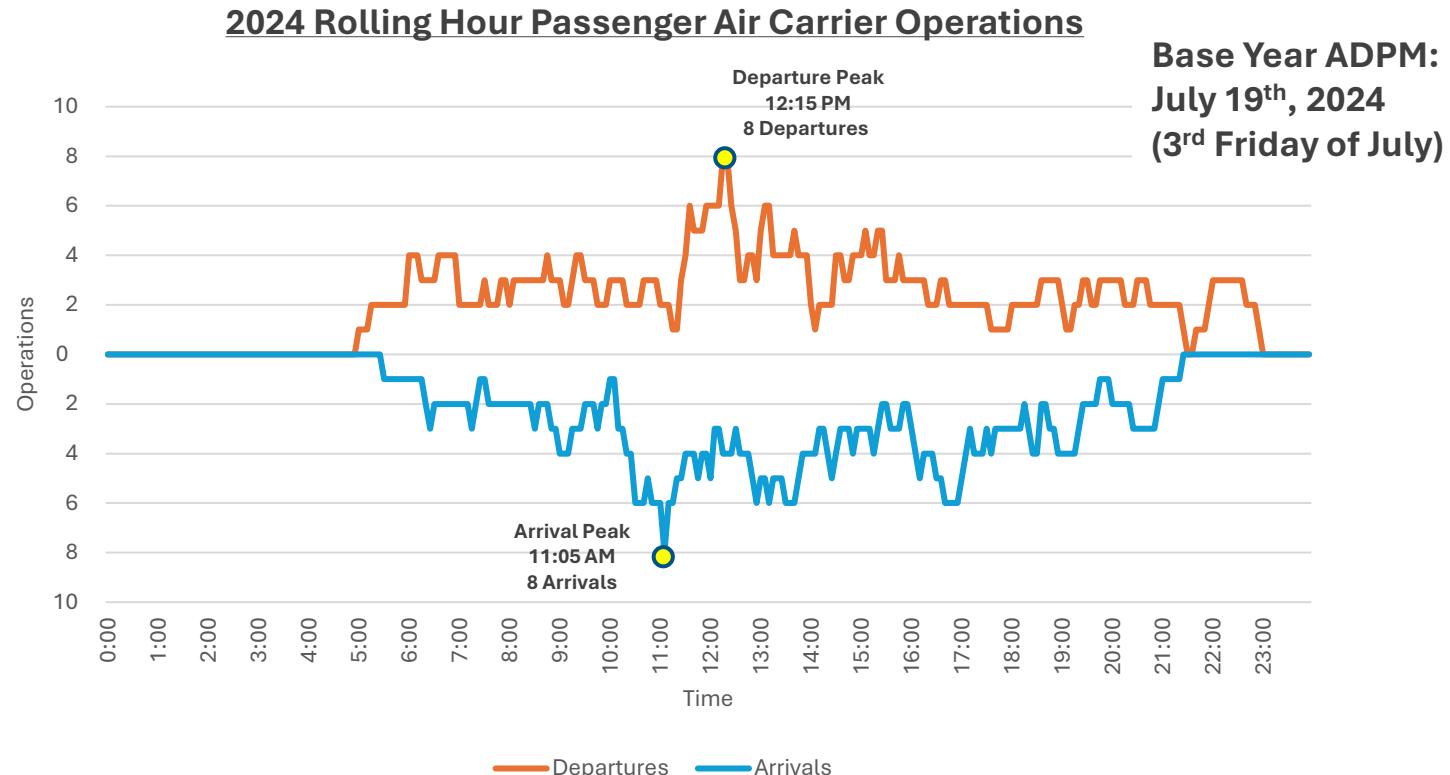
# Identify the Average Day in the Peak Month



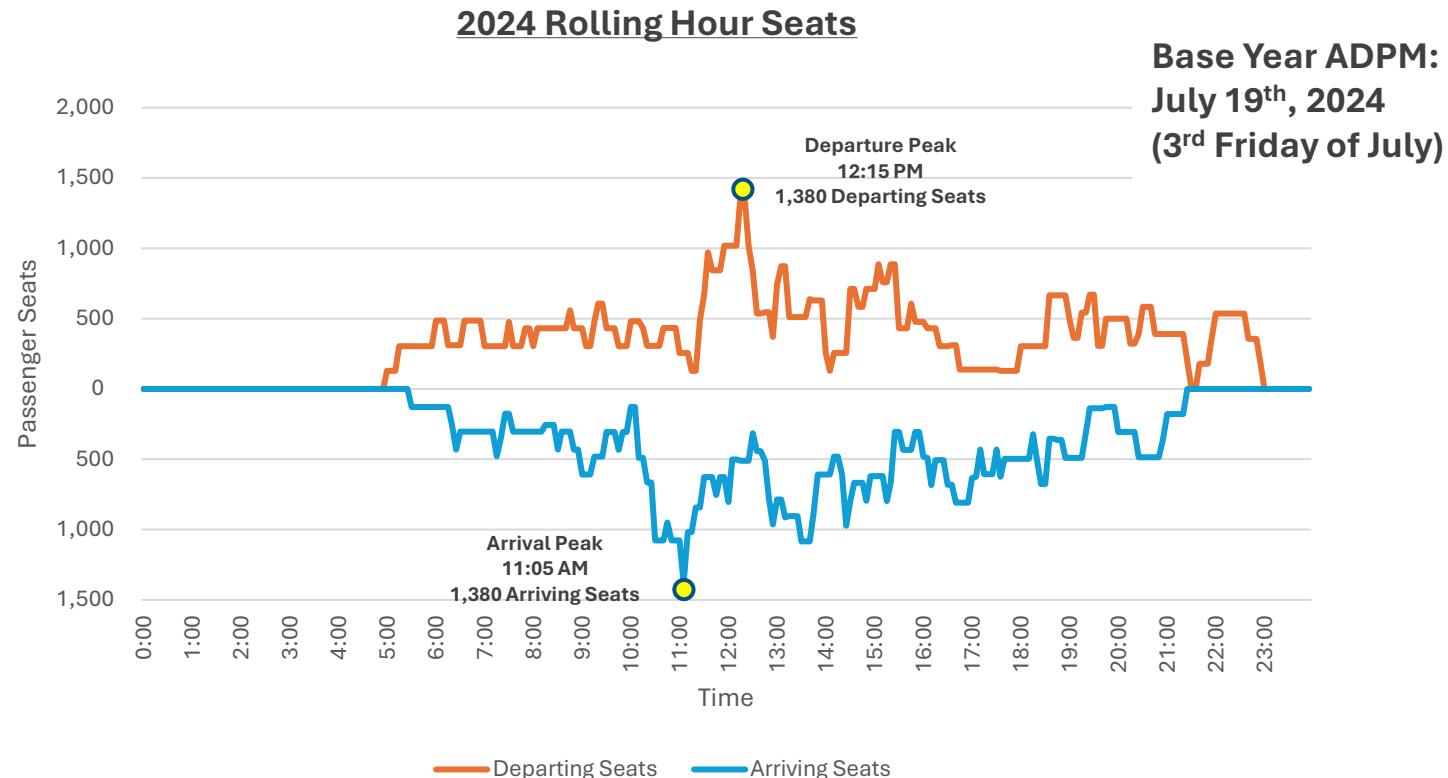
# Identify the Average Day in the Peak Month



# Identify the Peak Hour for the ADPM



# Identify the Peak Hour for the ADPM

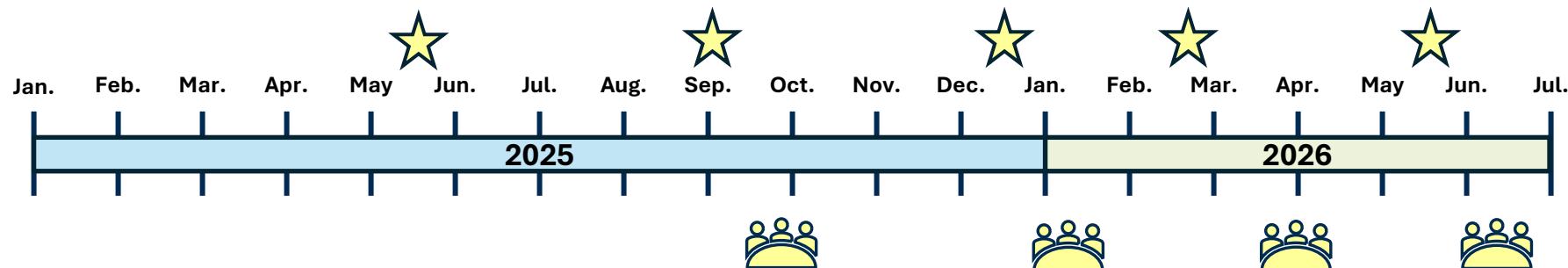


A grayscale aerial photograph of an airport. In the foreground, a large terminal building with multiple wings and a central entrance is visible. To the right of the terminal is a tall, cylindrical control tower. The background shows a complex network of runways, taxiways, and other airport infrastructure. The sky is clear and blue.

# Next Steps

# Project Schedule

- Public Advisory Committee (PAC) and Technical Advisory Committee (TAC) Combined Meetings (3 Remaining)
- Public Open Houses (4)
  - Open House #1 scheduled for September 25 (Thursday) from 6:00 to 7:30 PM at the West Hawaii Civic Center (74-5044 Ane Keohokalole Hwy, Kailua-Kona, HI 96740)



Project  
Website

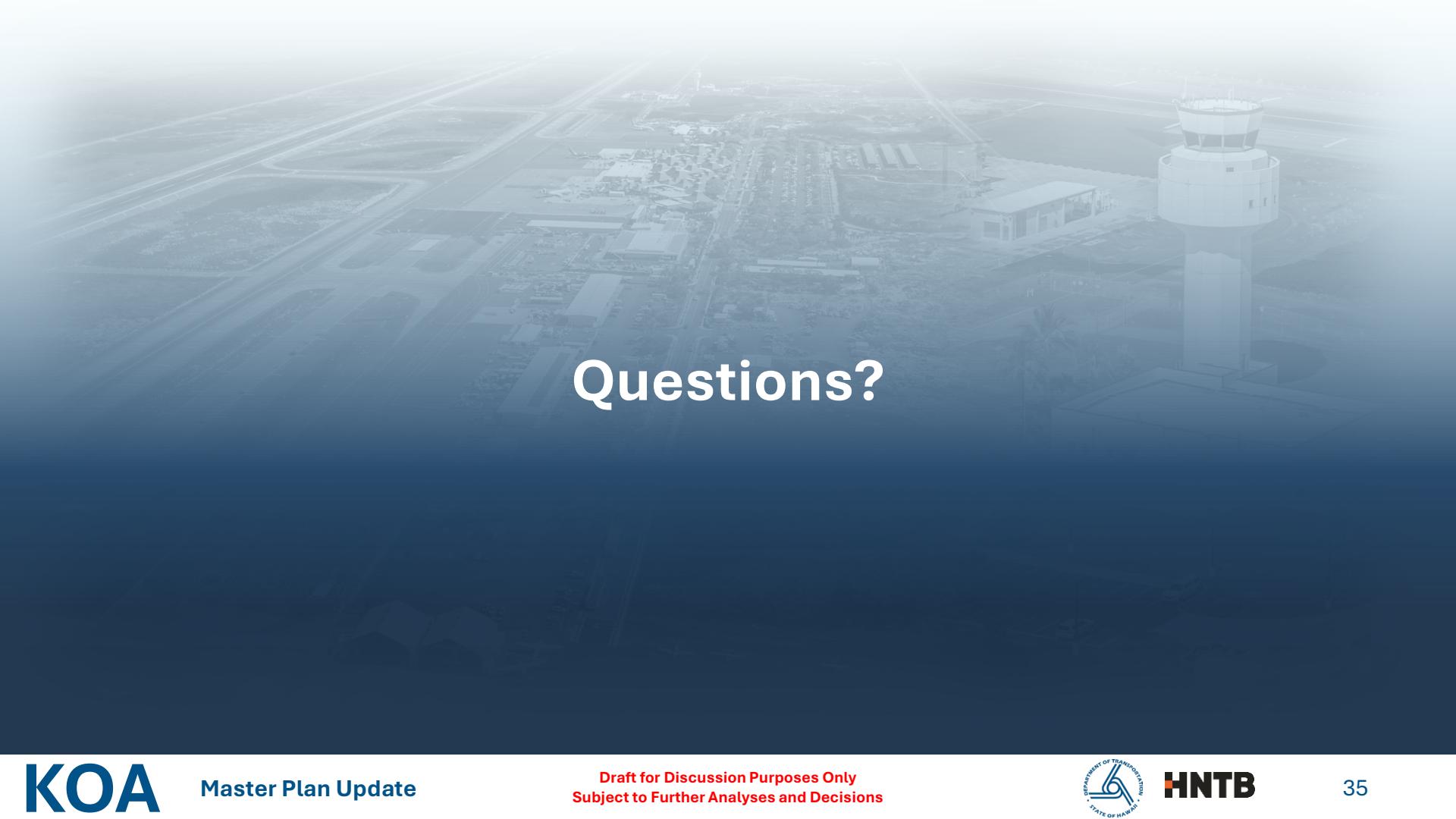


# Next Steps

- Open House #1 scheduled for September 25 (Thursday)
  - 6:00 – 7:30 PM
  - West Hawaii Civic Center (74-5044 Ane Keohokalole Hwy, Kailua-Kona, HI 96740)
- Submit updated aviation activity forecast for FAA's review
- Proceed with development of the facility requirements
- **PAC/TAC Combined Meeting #3:**
  - Review draft facility requirements

Project  
Website





# Questions?