PAC/TAC Combined Meeting #3

Ellison Onizuka Kona International Airport (KOA) Master Plan Update

February 27, 2026

Project Website

KOA

Draft for Discussion Purposes Only
Subject to Further Analyses and Decisions

Agenda

Agenda

- **Aviation Activity Forecast Summary**
  - FAA Approval
  - Critical Aircraft Determination
- **Facility Requirements: Background and Findings**
  - Airfield
  - Second Runway Focus Study
  - Landside
  - Terminal
  - Air Cargo
  - General Aviation
- **Market Assessment Initial Findings**
- **Next Steps**

Aviation Activity Forecast Summary

FAA Approval

- Aviation activity forecast was approved by the FAA on December 1, 2025

Table 1-1: KOA Forecast of Annual Enplanements

	2024 (Base)	2029	2034	2039	2044
Domestic	2,050,654	2,197,381	2,413,634	2,641,102	2,880,142
International	41,379	46,955	51,576	56,436	61,544
Total	**2,092,033**	**2,244,336**	**2,465,210**	**2,697,538**	**2,941,686**

Sources: HDOT Statistics Page, and HNTB analysis.

Table 1-2: KOA Forecast of Annual Operations

	2024 (Base)	2029	2034	2039	2044
Itinerant					
Air Carrier	39,875	42,343	45,211	48,992	53,545
Air Taxi	7,808	7,911	8,015	8,121	8,228
General Aviation	17,758	16,707	17,540	18,548	19,754
Military	2,455	2,455	2,455	2,455	2,455
Local					
General Aviation	48,233	51,560	53,797	56,440	59,532
Military	3,534	3,534	3,534	3,534	3,534
Total	**119,663**	**124,509**	**130,552**	**138,090**	**147,048**

Sources: HDOT Statistics Page, and HNTB analysis.

U.S. Department of Transportation
Federal Aviation Administration

Western-Pacific Region
Airports Division
Honolulu Airports District Office

300 Ala Moana Blvd.
Room 7-128
Honolulu, HI 96850-7128

December 01, 2025

Mr. Edwin H. Sniffen
Director of Transportation, State of Hawaii
869 Punchbowl Street
Honolulu, HI 96813-5097

Dear Director Sniffen:

Federal Aviation Administration (FAA)
Forecast Approval
Ellison Onizuka Kona International Airport at Keahole (KOA)

The Federal Aviation Administration (FAA) approves the aviation activity forecast in the **Ellison Onizuka Kona International Airport at Keahole** (KOA), submitted on November 12, 2025, for use in the Airport Master Plan Update.

We found the forecast to be generally consistent within the FAA TAF tolerance and the FAA Aerospace Forecast: FY2025-2045 which anticipates steady and sustainable fleet increases. The FAA notes the forecast uses current data and supported by generally accepted forecasting methodologies.

The existing critical aircraft for Runway17/35 the Boeing 747-300 which is classified as a D-V aircraft under its Airport Reference Code, per the approved 2012 ALP for KOA. The future critical aircraft is expected to be the D-V, and identified as the Boeing 787-9.

The approval of the forecast does not automatically constitute a commitment on the part of the United States to participate in any development recommended in the KOA Master Plan Update or shown on the ALP. FAA approval of the baseline scenario in this forecast does not constitute justification for future projects. Justification for future projects will be made based on activity levels at the time the project is requested for development in accordance with criteria in FAA Orders 5090.5 and 5100.38. Documentation of actual activity levels meeting planning activity levels will be necessary to justify AIP funding for eligible projects. Further, the approved forecast may be subject to additional analysis if the fundamental rationale of the forecast or the critical aircraft changes materially.

Sincerely,

CARLOS H. SALAS Digitally signed by CARLOS H. SALAS Date: 2025.12.01 14:22:06 -10'00'

Carlos H. Salas
Acting Manager, Honolulu Airports District Office

Critical Design Aircraft

- **Critical Design Aircraft** determination is important as it sets dimensional requirements for airfield infrastructure
  - **Runway Design Standards:** Aircraft Approach Category (AAC) and Airplane Design Group (ADG)
  - **Taxiway Design Standards:** ADG and Taxiway Design Group (TDG)

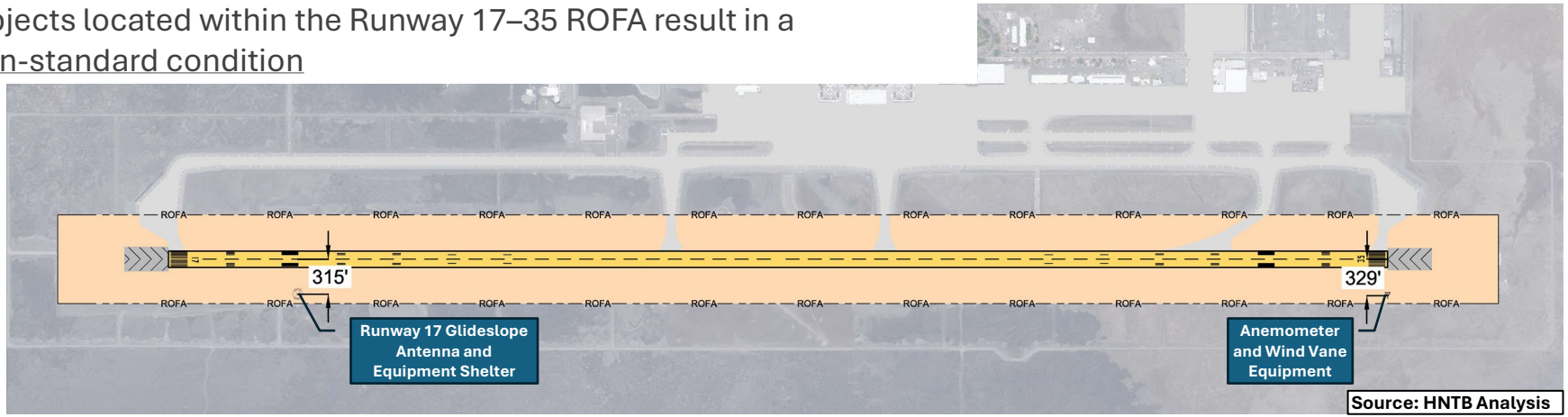
	B777-200 (Existing) [2]	B787-9 (Future)
Aircraft Approach Category (AAC)	C	D
Airplane Design Group (ADG)	V	V
Taxiway Design Group (TDG)	5	5

1. Source: FAA Aircraft Characteristics, February 2026.
2. The B777-200 is the critical design aircraft based on the FFY 2024 traffic level.

Facility Requirements: Airfield

Runway and Taxiway Clearance Standards Gap Analysis

- **Advisory Circular (AC) 150/5300-13B Runway Safety Surfaces**
  - Runway Safety Area (RSA)
  - Runway Object Free Area (ROFA)
  - Obstacle Free Zones (OFZ): Runway, Inner-Approach (Runway 17), and Inner-Transitional (Runway 17)
- **AC 150/5300-13B Taxiway Safety Surfaces**
  - Taxiway Safety Area (TSA)
  - Taxiway Object Free Area (TOFA)
- Objects located within the Runway 17–35 ROFA result in a <u>non-standard condition</u>



Source: HNTB Analysis

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Taxiway Edge Safety Margin (TESM) Gap Analysis

- **Taxiway Edge Safety Margin (TESM)** is the required safety buffer that ensures an aircraft's landing gear remains safely within the taxiway pavement edge

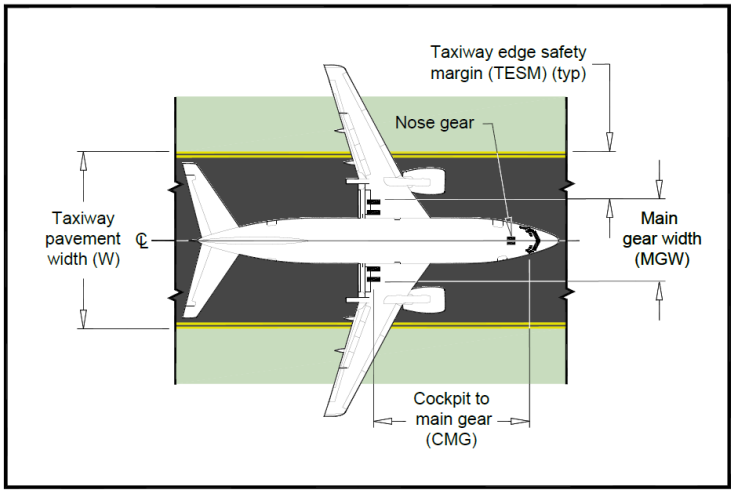
FAA AC 150/5300-13B

Table 4-2. Design Standards Based on Taxiway Design Group (TDG)

Item	TDG							
	1A	1B	2A	2B	3	4	5	6
Taxiway/Taxilane Width [2]	25 ft (7.6 m)	25 ft (7.6 m)	35 ft (10.7 m)	35 ft (10.7 m)	50 ft (15.2 m)	50 ft (15.2 m)	75 ft (22.9 m)	75 ft (22.9 m)
Taxiway Edge Safety Margin [1]	5 ft (1.5 m)	5 ft (1.5 m)	7.5 ft (2.3 m)	7.5 ft (2.3 m)	10 ft (3.0 m)	10 ft (3.0 m)	14 ft (4.3 m)	14 ft (4.3 m)
Taxiway Shoulder Width [3]	10 ft (3.0 m)	10 ft (3.0 m)	15 ft (4.6 m)	15 ft (4.6 m)	20 ft (6.1 m)	20 ft (6.1 m)	30 ft (9.1 m)	30 ft (9.1 m)

Note 1: See Figure 4-4.
Note 2: It is acceptable to reduce taxilane widths for TDG 1A and 1B to 20 feet (6 m).
Note 3: When the most demanding aircraft has four engines and is TDG 6, the standard taxiway shoulder width is 40 feet (12.2 m).

Figure 4-4. Taxiway Edge Safety Margin (TESM) – Straight Segment

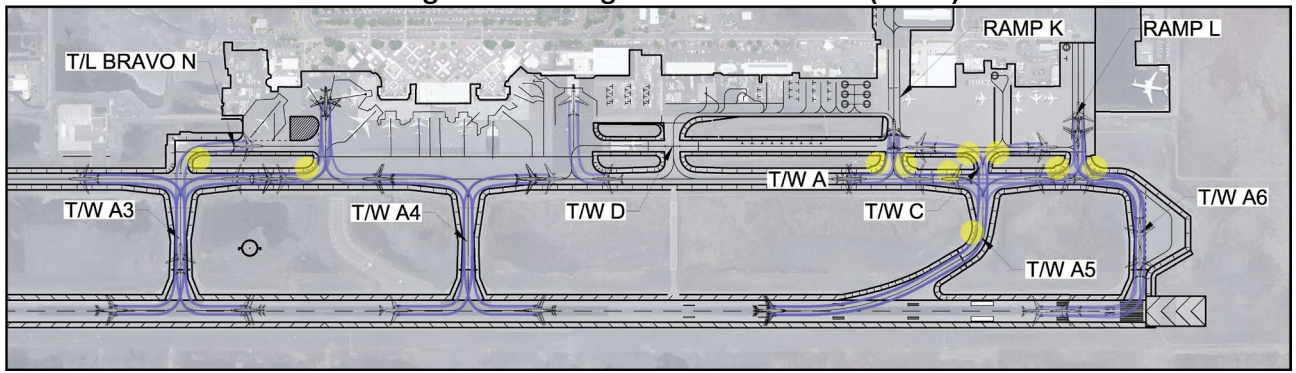


Note 1: See Table 4-2 for pavement width and TESM values.
Note 2: See Appendix A for aircraft characteristic information and the FAA Aircraft Characteristics Database at http://www.faa.gov/airports/engineering/aircraft_char_database/ for CMG and MGW data.

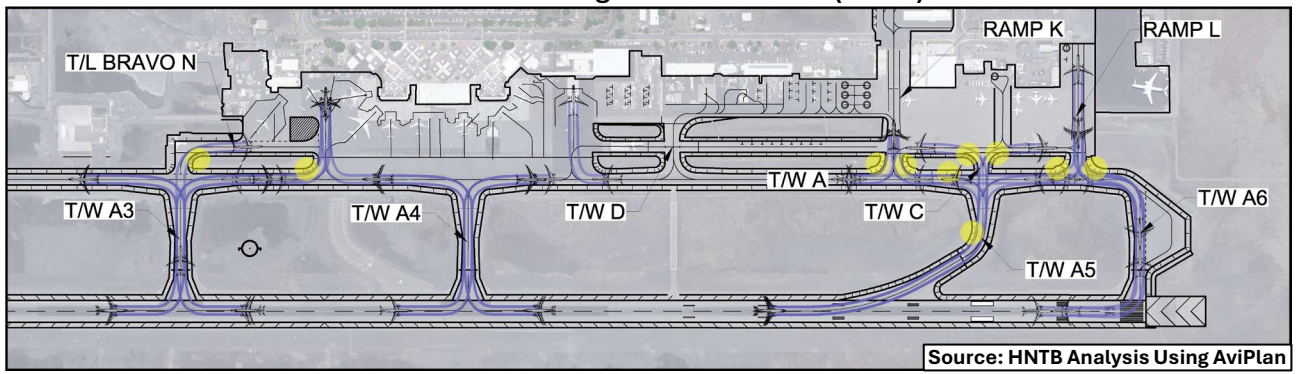
Taxiway Edge Safety Margin (TESM) Deficiencies

- A **TESM deficiency** occurs when the taxiway edge is within the safety buffer while the aircraft is traveling on the taxiway centerline

Existing Critical Design Aircraft: B777-200 (TDG 5)



Future Critical Design Aircraft: B787-9 (TDG 5)



Legend

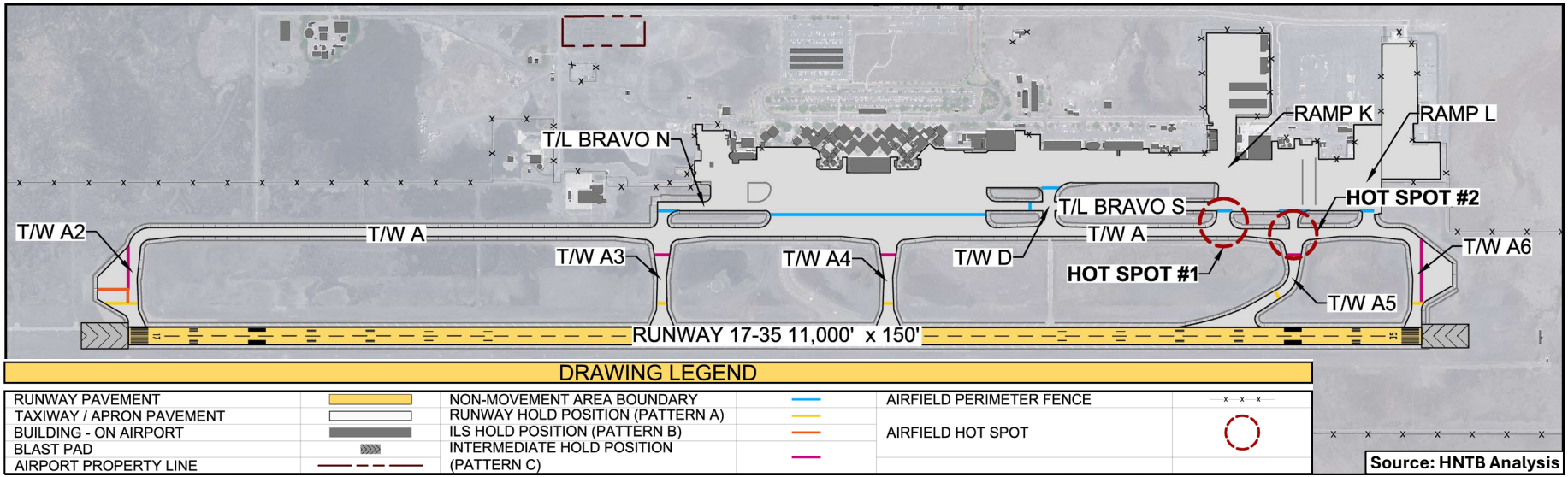
- TDG 5 TESM (14')
- TESM Deficiency

Source: HNTB Analysis Using AviPlan

Airfield Hot Spots

- **Hot Spot** is a location within the airfield movement area with a potential risk of safety incidents and require heightened attention by pilots and drivers

Hot Spots	FAA Published Description
1	Extensive helicopter operations on Taxiway A abeam Ramp K
2	Extensive helicopter operations on Taxiway A south of Taxiway A5

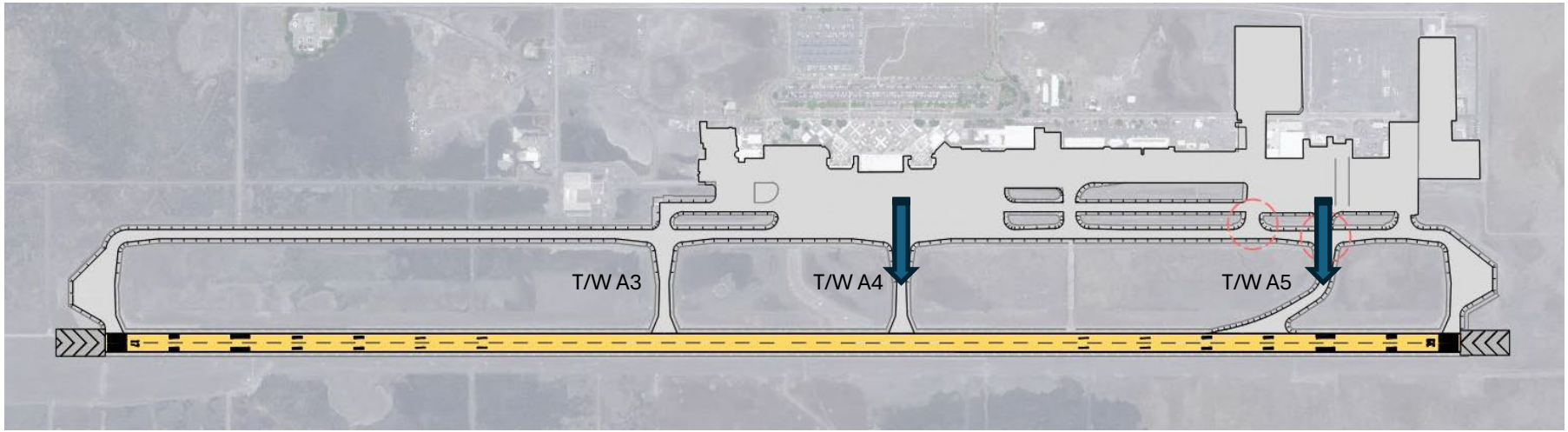


Runway Incursion Mitigation (RIM) Criteria Evaluation

- Non-Standard Airfield Geometry is considered a primary contributing factor for runway incursions

Runway Incursion Mitigation (RIM) Criteria Evaluation

- Direct Access from the Apron to a Runway



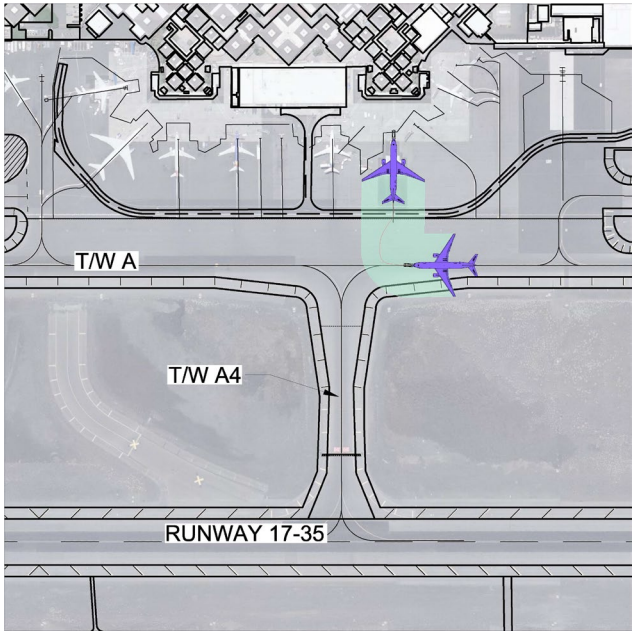
Source: HNTB Analysis

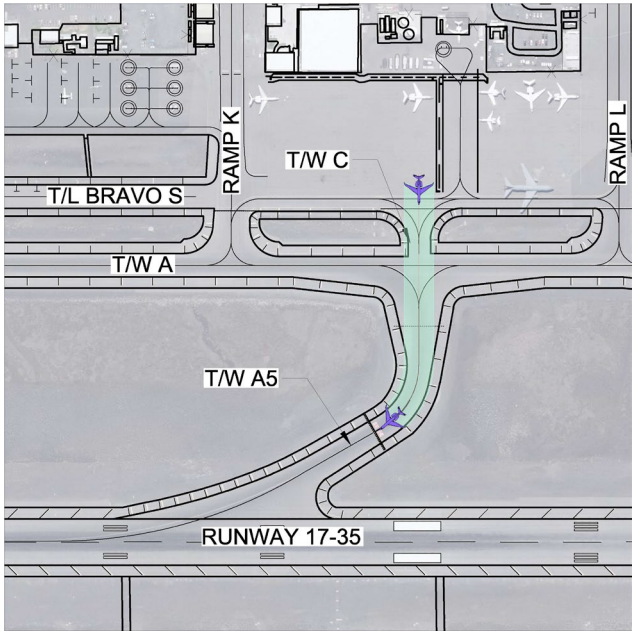
Legend

- Direct Access from Apron to Runway
- Airfield Hot Spot

Runway Incursion Mitigation (RIM) Criteria Evaluation

- Current operational configuration mitigates the direct access issue caused by this geometry





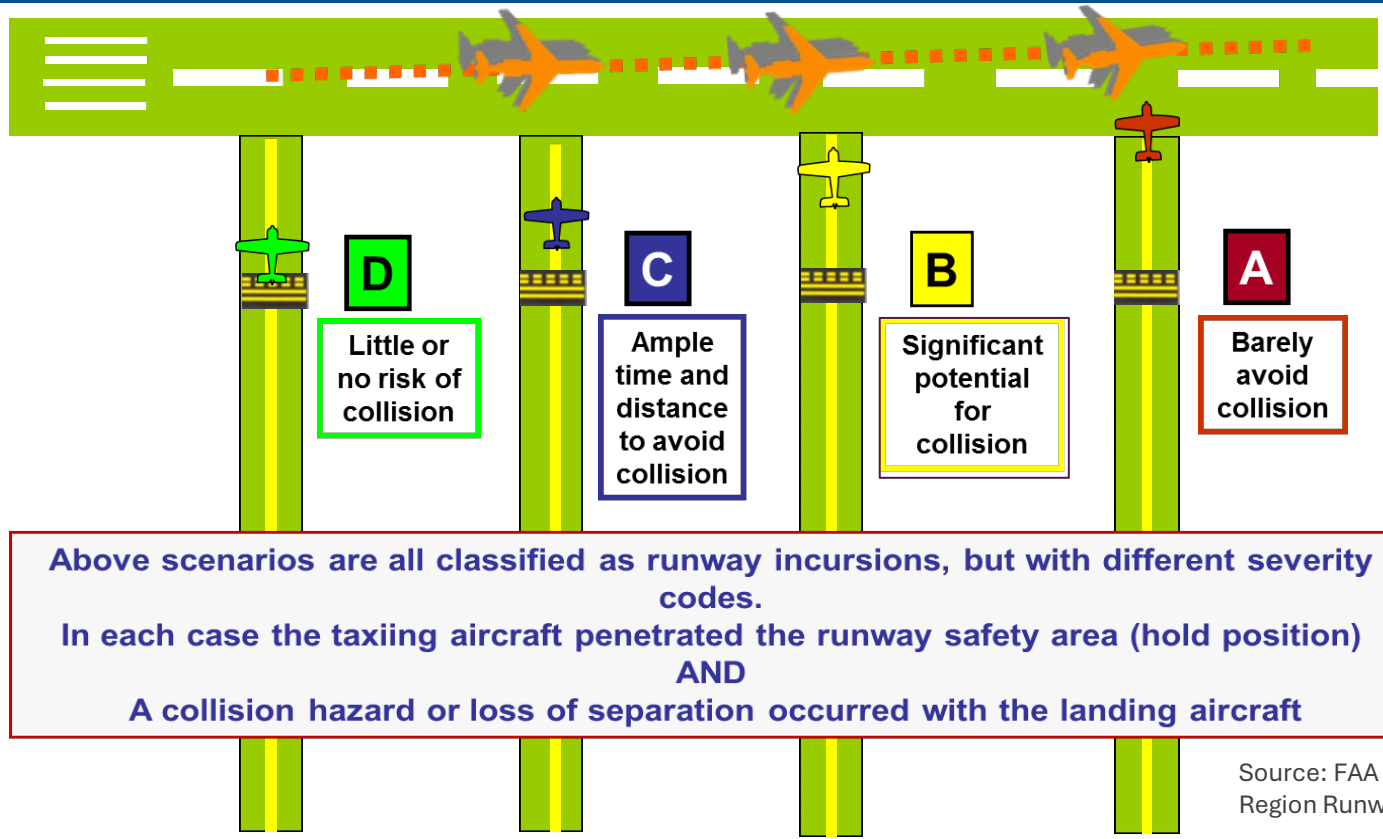
Incursion and Incident Background Data

- Utilized a 10-year history of incursion and incident events
- Data is derived from multiple sources including, but not limited to:
  - FAA Runway Safety Office – Runway Incursions (RWS)
  - FAA Accident and Incident Data Systems (AIDS)
  - NASA Aviation Safety Reporting System (ASRS)
- Event descriptions are used to understand factors contributing to an incursion or incident

Terminology

- **Runway Incursion –** incorrect presence of an aircraft/vehicle/person on the protected area of the runway
- **Runway Excursion –** a veer-off or overrun off the runway
- **Surface Incident –** unauthorized movement within the airfield movement area or operation of an aircraft that affects or could affect the safety of flight
- **Types of Surface Events**
  - **Operational Incident –** events attributed to ATCT action or inaction
  - **Pilot Deviation (PD) –** events caused by the pilot operating an aircraft under its own power
  - **Vehicle or Pedestrian Deviation (V/PD) –** events caused by a vehicle driver, a non-pilot operating an aircraft under its own power, or a pedestrian
  - **Other (OTH) –** all other events that cannot clearly be classified (e.g. a baggage cart is blown onto the runway)

FAA Runway Incursion Severity Classification



Above scenarios are all classified as runway incursions, but with different severity codes.
In each case the taxiing aircraft penetrated the runway safety area (hold position) AND
A collision hazard or loss of separation occurred with the landing aircraft

Source: FAA Western Pacific Region Runway Safety Office

Incursion and Incident Severity Map

Runway Incursions (RWS)

- 22896 (PD), 33392/33393 (PD)

Runway Excursion (RWS)

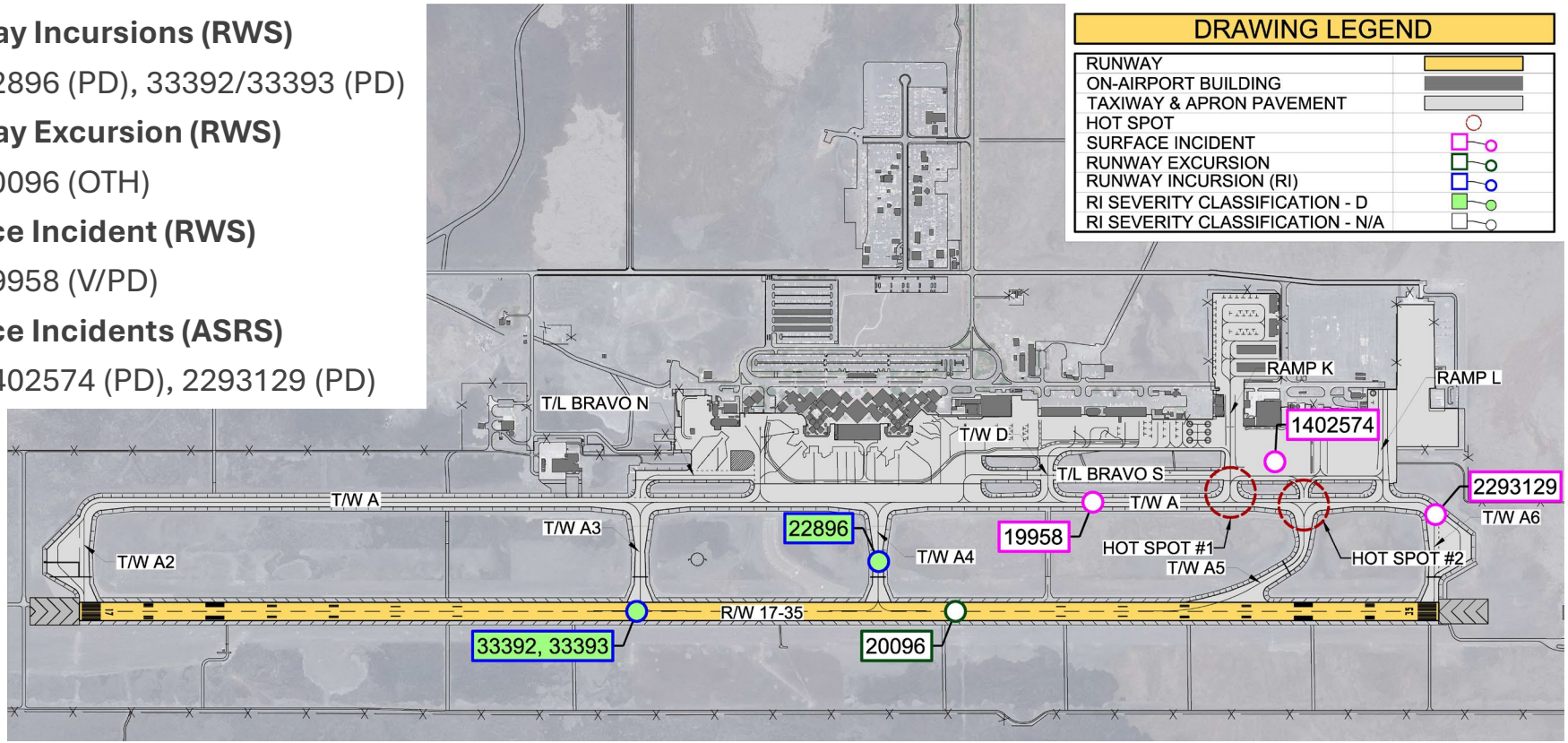
- 20096 (OTH)

Surface Incident (RWS)

- 19958 (V/PD)

Surface Incidents (ASRS)

- 1402574 (PD), 2293129 (PD)



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Second Runway Focus Study

Second Runway Focus Study Background

Recent Relevant Events

- Multiple operational disruptions occurred in 2024 due to cracks discovered on Runway 17-35
- Increased phasing complexity of the Runway 17-35 Rehabilitation project in 2025-2026

Importance of KOA

- Second Port of Entry into the State of Hawaii
- Provides essential services and cargo access to the Island of Hawaii, specifically the Kona and Kohala Coast region

Annual Service Volume (ASV) Background

- **ASV is an estimate of an airport's annual aircraft operational capacity**
- Factors in runway use configurations, weather conditions, number of exit taxiways, and aircraft mix to determine the peak hourly capacities of the airfield
- Uses annual to monthly and daily to hourly traffic demand patterns to estimate the airfield's annual capacity
- This analysis method is outlined in the AC 150/5060-5, *Airport Capacity and Delay*

Annual Service Volume (ASV) Initial Findings

	2024 (Base)	2029 DDFS	2034 DDFS	2044 DDFS
Calculated ASV [1, 2]	176,440	190,954	193,979	199,450
60% ASV (Planning Activity-level Trigger for New Runway) [3]	**105,864**	**114,573**	**116,387**	**119,670**
80% ASV (Development Activity-level Trigger for New Runway) [3]	**141,152**	**152,764**	**155,183**	**159,560**

1. According to FAA Order 5090.5, weighting factors cannot be used for calculating ASV when estimating the activity-level triggers for capacity planning.
2. The "H" factor is the ratio of average daily demand to average peak-hour demand during the peak month and will need to be re-validated once flight track data is received.
3. Note that the ASV metric is an initial threshold indicating that the demand-to-capacity ratio may warrant consideration of a capacity project.

	2024 (Base)	2029 DDFS	2034 DDFS	2044 DDFS
Annual Operations Forecast	119,663	124,509	130,552	147,048
Annual Operations Forecast (Excluding Rotorcraft)	**108,251**	**111,909**	**116,641**	**130,090**

Safety-Enhancing Benefits from a Second Runway

Background

- KOA's existing aircraft operations mix includes a highly diverse fleet of air carrier, small and large general aviation (GA), helicopter, cargo, and military aircraft
- Over 50% of the annual aircraft operations are accounted for by GA traffic
  - Approximately 90% of small GA traffic frequently performs touch-and-go operations at KOA, averaging roughly 80 touch-and-go operations daily

Safety-Enhancing Benefits from a Second Runway

- The complex mix of current activity at KOA results in significant variations in aircraft performance and pilot experience
- All aircraft types, with varying approach speeds, share a single runway, which presents unique airfield management challenges and inherent operational and safety risks

Facility Requirements: Landside

Parking Requirements Assumptions

- Lot A & Lot B inventory sourced from KOA's parking website (koaparkinghawaii.com)
- Lot C inventory sourced from HNTB's landside analysis

Parking Requirements Assumptions

- Analyzed parking data from July 2024 (peak month)
  - Public parking data source: ticket transaction log for Lots A & B
  - Employee parking data source: RFID card swipe log for monthly cardholders
    - Grouped by airline/company (Hawaiian Airlines, Delta, United, TSA, AVIS/Budget, etc.)
- Lot A used for public parking
- Lot B used for public & non-rental car employee parking
- Lot C used for rental car employee parking
- Assumed growth rates based on passenger enplanement forecast:
  - 2024 to 2029: 7% growth
  - 2029 to 2034: 10% growth
  - 2034 to 2044: 19% growth

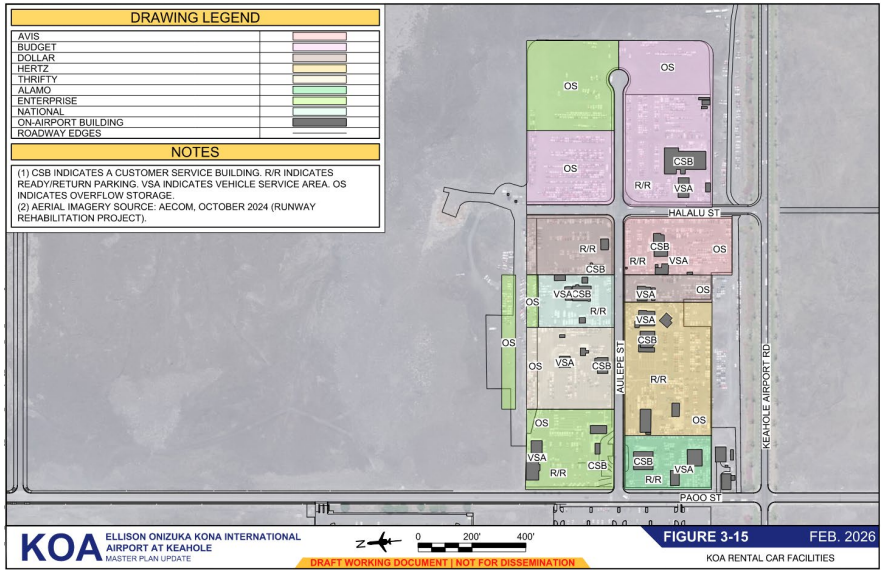
Parking Requirements Findings

Lot	2024 Maximum Occupancy	2024 Occupancy + 10% Buffer	2029 Requirement	2034 Requirement	2044 Requirement
Lot A (Public)	520	572	614	674	804
Lot B (Public)	236	260	278	306	365
Employees (all)	603	663	710	781	929
Total	**1,359**	**1,495**	**1,602**	**1,761**	**2,098**
Surplus (+) / Deficiency (-)	**+304**	**+165**	**+61**	**-98**	**-435**

- Existing inventory: 1,663 spaces
- Ultimate future need for 435 additional spaces, for a total of 2,098 spaces

Rental Car Requirements Assumptions

- Approx. 25.5 acres are developed for rental car operations
- Applied HNTB's forecast growth rates to Ricondo's 2024 Consolidated Rental Car Facility (CONRAC) analysis to develop future requirements



Brand Family	Brand	Approximate Site Area (acres)
Enterprise Holdings	Enterprise	5.5
	National	1.3
	Alamo	1.5
Avis Budget Group	Avis	2.0
	Budget	6.8
The Hertz Corporation	Hertz	3.7
	Dollar	2.4
	Thrifty	2.3
Total		**25.5**

Rental Car Requirements Findings

Facility Component	Existing Inventory (Ricondo)	2024 Requirement	2029 Requirement	2034 Requirement	2044 Requirement
Customer Service Counters	41	30	32	35	42
Ready/Return Spaces	955	720	773	849	1,013
Stacking & Staging Spaces	264	297	319	350	418
Vehicle Storage Spaces	1,865	2,427	2,604	2,860	3,413
Fueling Positions	33	37	40	44	52
Wash Bays	6	6	6	6	7
Maintenance Bays	15	17	18	20	23
Admin. Area (SF)	3,800	4,034	4,327	4,753	5,672
New Entrant (SF)	N/A	51,594	55,350	60,797	72,548
Total Area (acres)	**24.4**	**21.7**	**23.3**	**25.6**	**30.5**
Surplus (+) / Deficiency (-) (acres)	**-**	**+2.7**	**+1.1**	**-1.2**	**-6.1**

- 2044 space requirement exceeds currently developed area (25.5 acres)

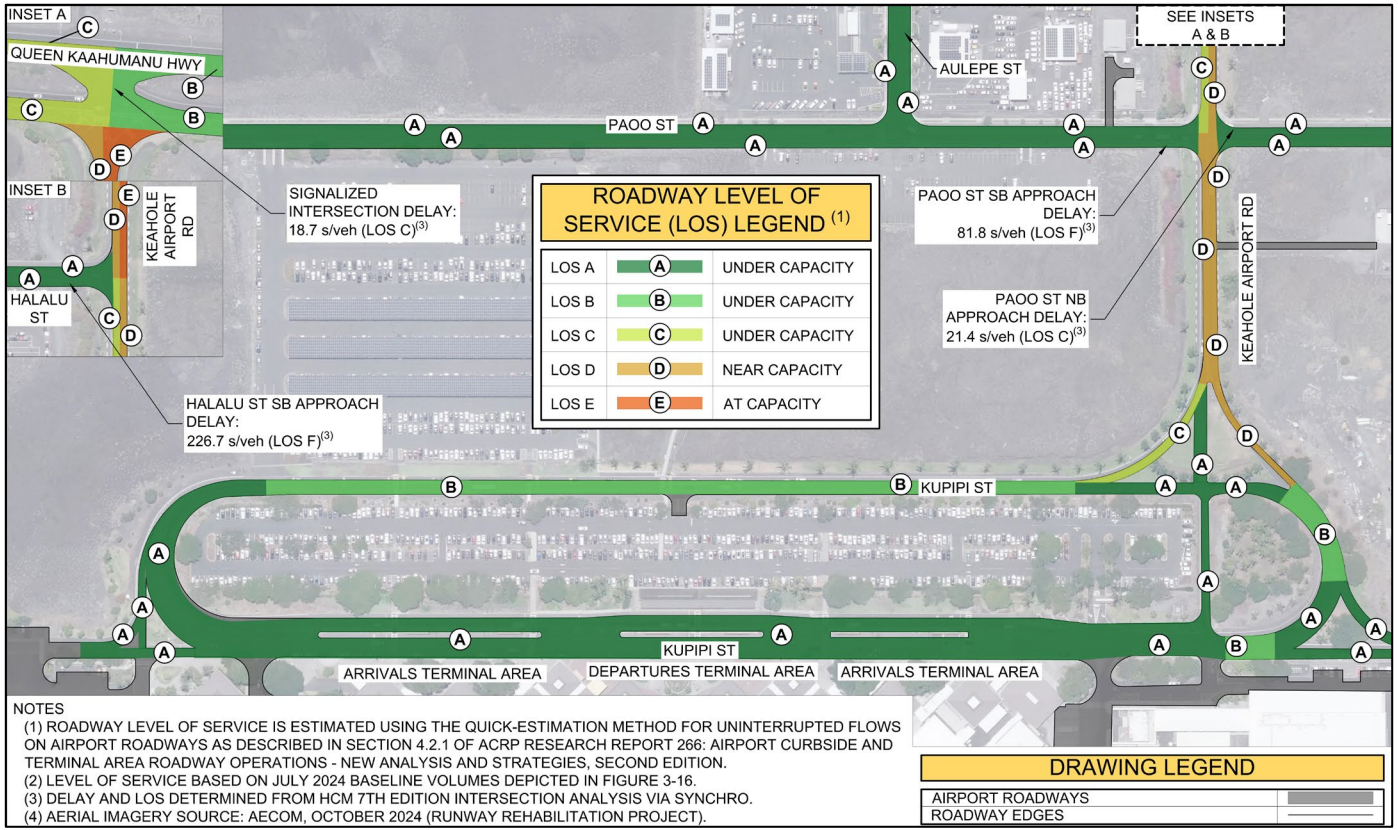
Roadway Requirements Assumptions

- Traffic counts collected November 2025
  - Peak Hour at Airport identified as 12:45-13:45
  - Volumes scaled to July 2024 (baseline year) based on actual enplanements
- Assumed growth rates based on passenger enplanement forecast:
  - 2024 to 2029: 7% growth
  - 2029 to 2034: 10% growth
  - 2034 to 2044: 19% growth
- Roadway level of service (LOS) calculated using the Quick-Estimation Method for Uninterrupted Flows on Airport Roadways from ACRP Report 266
- Intersection delay and LOS analyzed using Synchro
  - Existing signal timing used (observed January 2026)

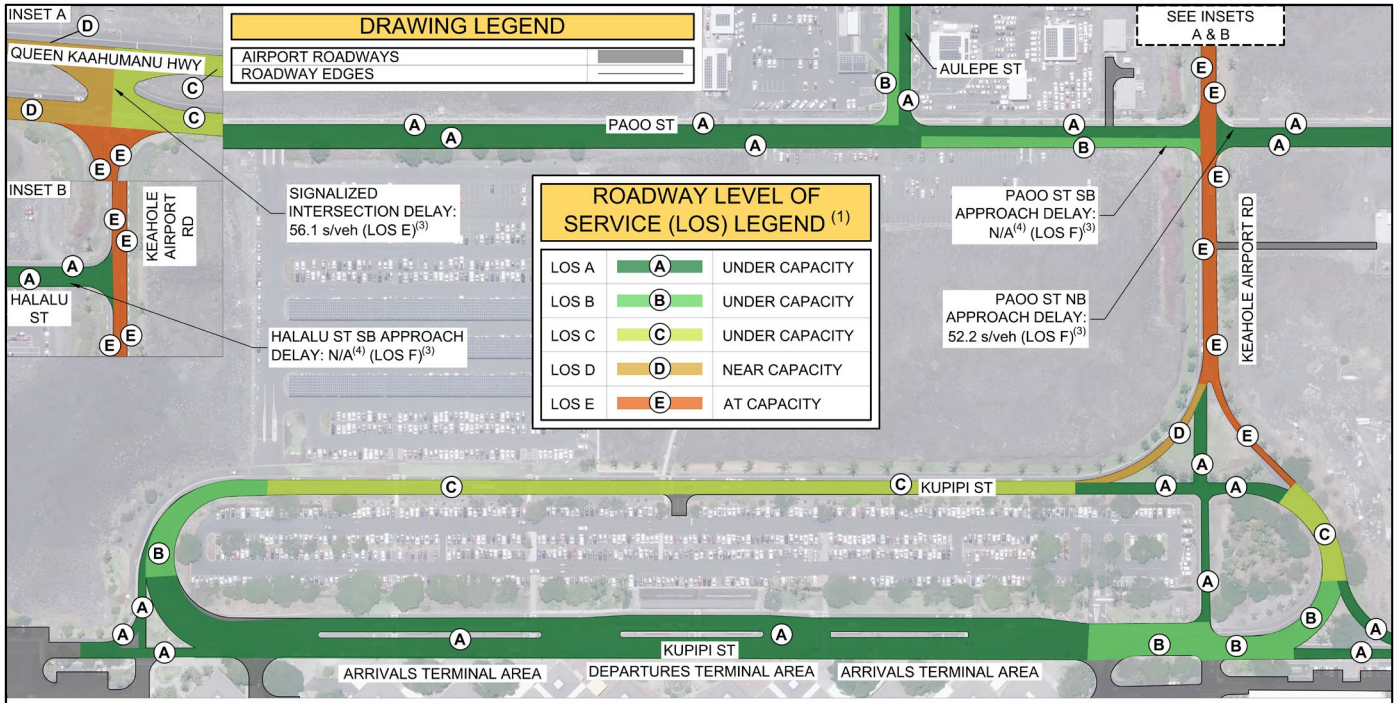
Summary of Roadway Requirements

- Existing roadways perform with Level of Service (LOS) C or better (consistent with planning guidance), except for Keahole Airport Road in the outbound direction away from the airport terminal
- LOS on Keahole Airport Road deteriorates in both directions as projected traffic volumes increase through each planning activity level (PAL)
- Other airport roadways continue to perform with LOS C or better

Calculated Roadway LOS Summary (2024)



Projected Roadway LOS Summary (2044)



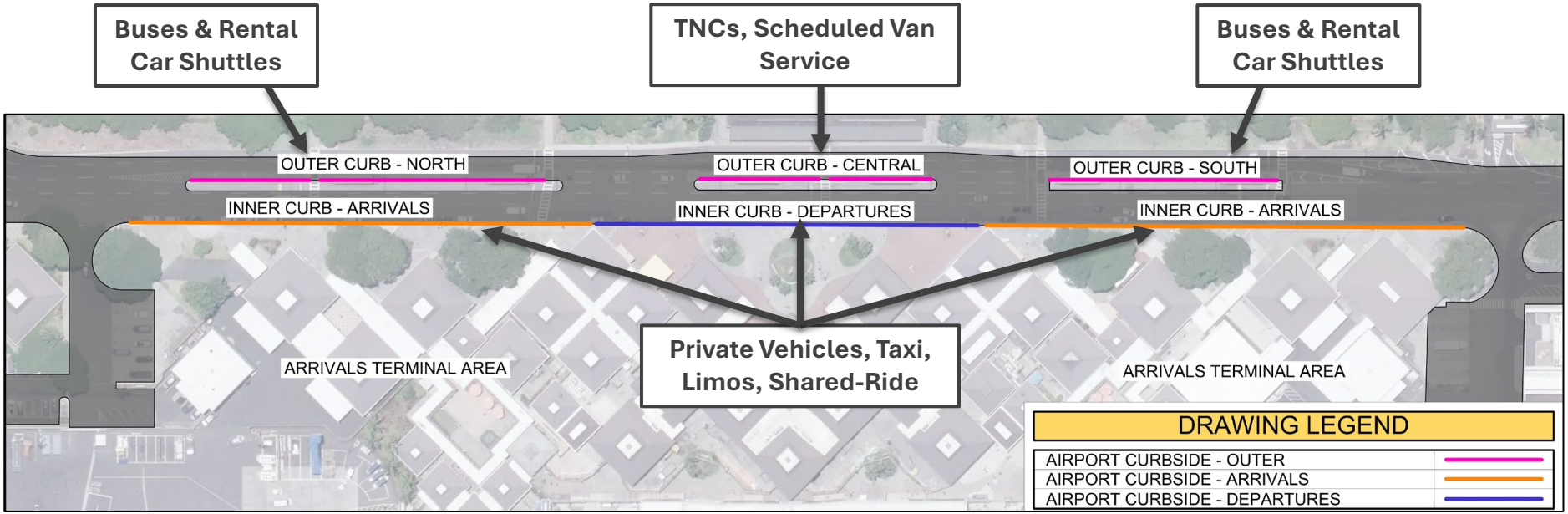
NOTES
(1) ROADWAY LEVEL OF SERVICE IS ESTIMATED USING THE QUICK-ESTIMATION METHOD FOR UNINTERRUPTED FLOWS ON AIRPORT ROADWAYS AS DESCRIBED IN SECTION 4.2.1 OF ACRP RESEARCH REPORT 266: AIRPORT CURBSIDE AND TERMINAL AREA ROADWAY OPERATIONS - NEW ANALYSIS AND STRATEGIES, SECOND EDITION.
(2) LEVEL OF SERVICE BASED ON JULY 2044 ESTIMATED VOLUMES.
(3) DELAY AND LOS DETERMINED FROM HCM 7TH EDITION INTERSECTION ANALYSIS VIA SYNCHRO.
(4) THE APPROACH DELAY IS INDICATED AS N/A BECAUSE IT EXCEEDS THE HCM CALCULATION LIMITS.
(5) AERIAL IMAGERY SOURCE: AECOM, OCTOBER 2024 (RUNWAY REHABILITATION PROJECT).

Curbside Requirements Assumptions

- Curbside Counts collected September 2025
  - Peak Hour at Airport identified as 11:30am-12:30pm
  - Volumes scaled to July 2024 (baseline year) based on actual enplanements
- Assumed growth rates based on passenger enplanement forecast:
  - 2024 to 2029: 7% growth
  - 2029 to 2034: 10% growth
  - 2034 to 2044: 19% growth
- Curbside level of service evaluated using the sufficiency criteria for airport curbside roadways from ACRP Report 266
- Industry standard dwell times used for personal vehicle arrivals pick-ups (3 min) and departures drop-offs (4 min)
  - Actual dwell times at KOA found to be shorter
  - Actual shuttle dwell times used (September 2025 observed avg dwell time of 1 min)

Curbside Requirements Assumptions

- Curbside Inventory and Users



Curbside Requirements (Outer Curb)

- No double parking allowed on outer curb
- ACRP Report 266, Table 5-2
- Existing outer curb lengths are all under capacity through 2044

Table 5-2. Sufficiency criteria for airport curbside roadways.

Criteria	Airport Curbside Sufficiency: Under Capacity			Near Capacity	At Capacity	Over Capacity
When double-parking is prohibited at the curbside						
Maximum demand for curbside standing or parking/effective curbside length[a]	0.70	0.85	1.00	1.20	1.35	>1.35
	Over Designed		Optimum	Sub-Optimum		

Curbside Location	Existing Curbside Length (feet)	2024 Length Requirement (feet) (Sufficiency Ratio)	2029 Length Requirement (feet) (Sufficiency Ratio)	2034 Length Requirement (feet) (Sufficiency Ratio)	2044 Length Requirement (feet) (Sufficiency Ratio)
Outer Curb – North	372	**96** *(0.26)*	**160** *(0.43)*	**160** *(0.43)*	**160** *(0.43)*
Outer Curb – South	243	**96** *(0.4)*	**160** *(0.66)*	**160** *(0.66)*	**160** *(0.66)*
Outer Curb – Central	237	**157** *(0.66)*	**157** *(0.66)*	**157** *(0.66)*	**209** *(0.88)*

Curbside Requirements (Inner Curb)

- Double parking allowed on inner curb
- ACRP Report 266, Table 5-2
- Existing inner curb length for departures will reach near capacity in 2044

Table 5-2. Sufficiency criteria for airport curbside roadways.

Criteria	Airport Curbside Sufficiency: Under Capacity		Near Capacity	At Capacity	Over Capacity
When double- (and triple-) parking is allowed at the curbside					
Maximum demand for curbside standing or parking/effective curbside length[a]	0.90	1.10	1.30	1.70	2.00	>2.00

Over Designed | Optimum | Sub-Optimum

Curbside Location	Existing Curbside Length (feet)	2024 Length Requirement (feet) (Sufficiency Ratio)	2029 Length Requirement (feet) (Sufficiency Ratio)	2034 Length Requirement (feet) (Sufficiency Ratio)	2044 Length Requirement (feet) (Sufficiency Ratio)
Inner Curb – Arrivals	995	**577** *(0.58)*	**602** *(0.61)*	**627** *(0.63)*	**753** *(0.76)*
Inner Curb – Departures	419	**452** *(1.08)*	**452** *(1.08)*	**502** *(1.20)*	**577** *(1.38)*

Facility Requirements: Terminal

Terminal Requirements

- **Terminal Functions**
  - Check-In Lobby
  - Security Screening Checkpoint
  - Holdrooms
  - Concession
  - Restrooms
  - Outbound Baggage Screening
  - Federal Inspection Services
- **Reference / Design Standards**
  - IATA ADRM, TRB ACRP
  - CRPG, PGDS, ATDS

Check-In Lobby Requirements Findings

	Existing	2029 Requirement	2034 Requirement	2044 Requirement
Full-Service Counter Positions	45	30	33	36
Self-Service Kiosk Positions	42	27	30	34
Bag Drop Positions	Included above	18	22	25
Curbside Positions	2	2	2	2
Total Check-In Lobby Area	**14,750 SF**	**12,450 SF**	**14,150 SF**	**15,650 SF**
Surplus (+) / Deficiency (-)	**-**	**+2,300 SF**	**+600 SF**	**-900 SF**

- Assumptions
  - 40% full-service counter, 45% Self-service kiosk, 10% mobile, 5% curbside

Security Screening Checkpoint Requirements Findings

	Existing	2029 Requirement	2034 Requirement	2044 Requirement
Peak Hour Originating PAX	-	754	841	960
PreCheck Lanes	2	1	2	2
Standard Lanes	4	3	3	3
Total Screening Lanes	6	4	5	5
Checkpoint Screening Area	8,600 SF	6,000 SF	7,500 SF	7,500 SF
Checkpoint Queuing Area	3,400 SF	2,400 SF	3,000 SF	3,000 SF
Allowance for Future Technology	-	1,200 SF	1,500 SF	1,500 SF
Total Checkpoint Area	**12,000 SF**	**9,600 SF**	**12,000 SF**	**12,000 SF**
Surplus (+) / Deficiency (-)	**-**	**+2,400 SF**	**-**	**-**

- Assumes 40% PreCheck, 10-min max wait time

Holdroom Requirements Findings

	Existing	2029 Requirement	2034 Requirement	2044 Requirement
Number of ADG III Gates	4	8	8	11
Number of ADG V Gates	6	4	4	4
Seats at ADG III Gates	-	119	119	119
Seats at ADG V Gates	-	189	189	189
ADG III Holdroom Area	-	4,300 SF	4,300 SF	4,300 SF
ADG V Holdroom Area	-	6,100 SF	6,100 SF	6,100 SF
Total Holdroom Area	-	58,800 SF	58,800 SF	71,700 SF
Holdroom Circulation	-	14,700 SF	14,700 SF	17,925 SF
Total Holdroom Area	**25,000 SF**	**73,500 SF**	**73,500 SF**	**89,625 SF**
Surplus (+) / Deficiency (-)	**-**	**-48,500 SF**	**-48,500 SF**	**-64,625 SF**

- Assumes 90% load factor, 70% seated/standing ratio, 640 SF for boarding and service podium area, and 25% holdroom circulation ratio. Assumes 600 SF of agricultural screening at each holdroom, could be consolidated to reduce overall holdroom area required.

Concession Requirements Findings

	Existing	2029 Requirement	2034 Requirement	2044 Requirement
Annual Enplaned PAX	2,092,033	2,465,210	2,697,538	2,941,686
Concession Area per 1,000 Enplaned PAX	-	9 SF / PAX	9 SF / PAX	9 SF / PAX
Concession Area	13,866 SF	22,187 SF	24,278 SF	26,475 SF
Concession Storage Area	-	8,875 SF	9,711 SF	10,590 SF
Total Concession Area	**13,866 SF**	**31,062 SF**	**33,989 SF**	**37,065 SF**
Surplus (+) / Deficiency (-)	**-**	**-17,196 SF**	**-20,132 SF**	**-23,199 SF**

- Assumes 40% concession storage ratio to sales area

Facility Requirements: Air Cargo

Air Cargo Facility Requirement Approach

- ***ACRP Report 143: Guidebook for Air Cargo Facility Planning and Development***
- This analysis considered All-Cargo and Integrated Express Carriers
- 2024 Annual Tonnage data is obtained through T-100
- 2029 to 2044 Annual Tonnage are forecasted data in the approved aviation activity forecast

Table 4-9. Air cargo facility requirements ratio matrix.

	Integrated Express	Pax Belly	Third-Party Providers and All-Cargo Carriers
Building			
Domestic	0.92	0.64	0.81
International gateway	0.37	0.64	0.81
Master plan review ratios*	0.93	0.63	0.57
Ramp			
Domestic	0.19		0.16
International gateway	0.19		0.91
GSE Storage			
General	0.57	0.36	1.11

*Various airport master plans from literature review. Source: CDM Smith.

Source: ACRP Report 143: Guidebook for Air Cargo Facility Planning and Development

Requirement Findings

	2024	2029	2034	2039	2044
Apron + GSE Storage					
Existing Condition (SY) *	18,530				
Requirement (SY) *	48,900	54,400	60,400	67,100	74,500
Surplus (+) / Deficiency (-) (SY) *	**-30,370**	**-35,870**	**-41,870**	**-48,570**	**-55,970**
Building					
Existing Condition (SF) *	55,500				
Total (SF) *	73,350	81,480	90,520	100,560	111,710
Surplus (+) / Deficiency (-) (SF) *	**-17,850**	**-25,980**	**-35,020**	**-45,060**	**-56,210**

* Results are rounded to the nearest hundred.

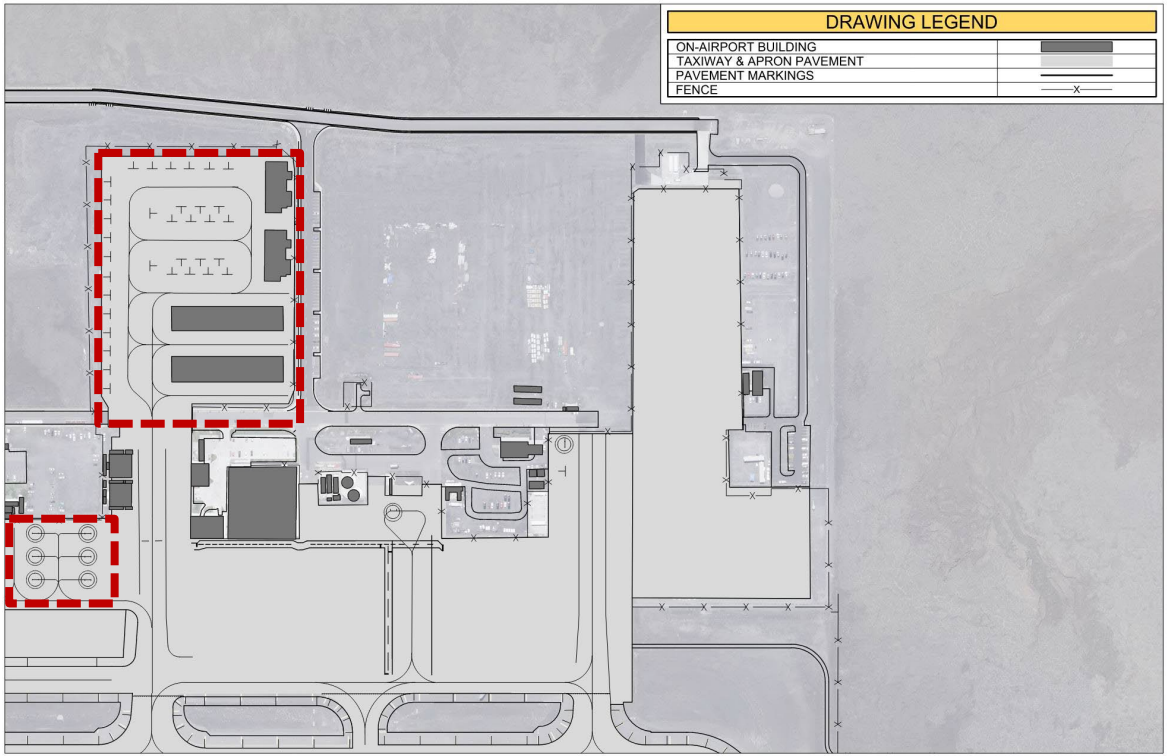
Source: HNTB Analysis

Facility Requirements: General Aviation

Existing Conditions: GA Hangars and Apron Area

Facility Type	Capacity	Area (SF)
T-Hangars	24	43,590
Shade Ports	4	18,420

Apron Parking	Capacity
Tie-downs	34
Helipads	6



General Aviation Hangars Requirement Findings

Based Aircraft Type	2025 (Base)	2029	2034	2044
Single-Engine	30	30	30	29
Multi-Engine	5	5	6	7
Helicopter	15	16	17	21
Total	**50**	**51**	**53**	**57**

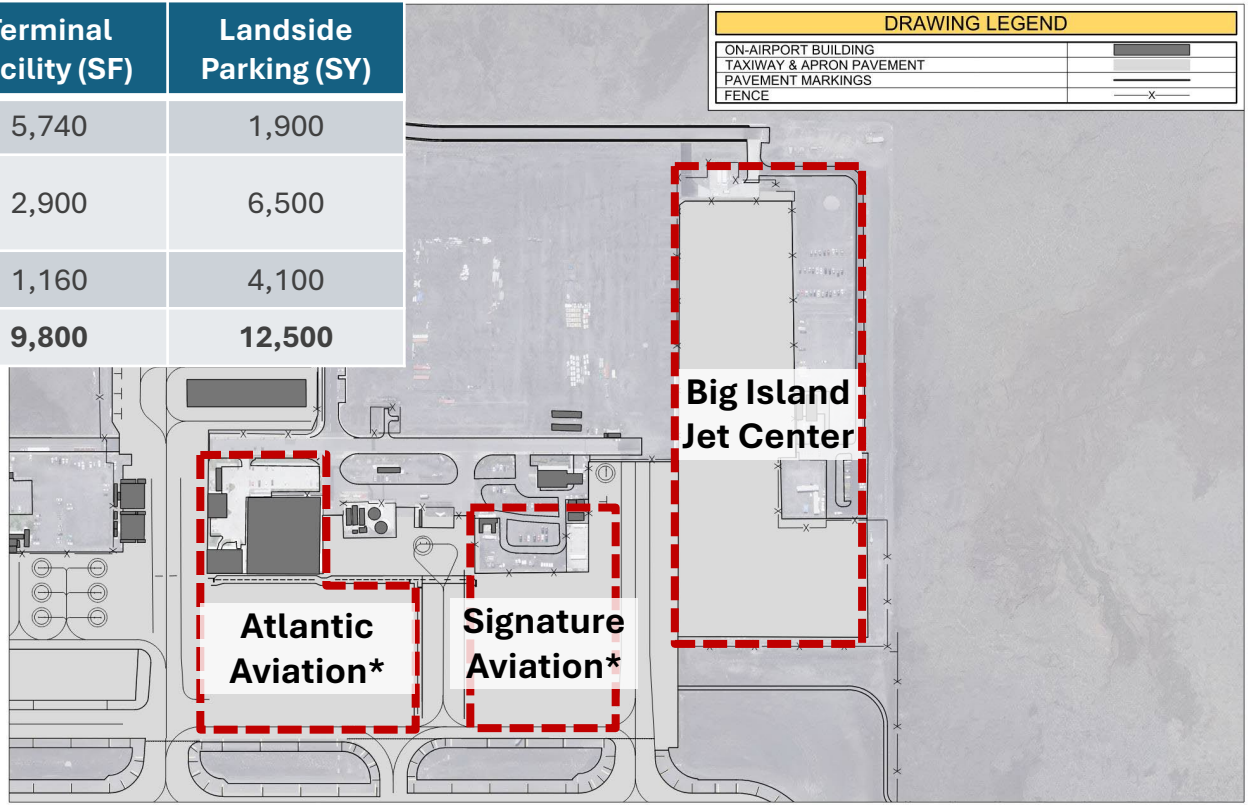
Facility Type	Existing	2025 (Base)	2029	2034	2044
T-Hangars (SF)	43,590	87,210	93,520	95,550	104,970
Shade Ports (SF)	18,420				
Surplus (+) / Deficiency (-) (SF)*	**N/A**	**-25,200**	**-31,510**	**-33,540**	**-42,960**

*Based on the existing inventory, approximately 80% of single- and multi-engine aircraft are stored in enclosed hangars or covered shade ports, with the remaining aircraft occupying existing tie-downs. As of February 2026, there are three applications on the hangar waitlist. Based on this information, it is assumed that 90% of based aircraft would prefer to be stored in enclosed hangars or covered shade ports, reflecting the projected distribution between enclosed and open storage.

Existing Conditions: Fixed Base Operators (FBOs)

Description	Apron & Hangar (SY)	Terminal Facility (SF)	Landside Parking (SY)
Atlantic Aviation	31,960	5,740	1,900
Big Island Jet Center	47,300	2,900	6,500
Signature Aviation	20,200	1,160	4,100
Total	**99,460**	**9,800**	**12,500**

* Note that the apron area located in front of the Atlantic Aviation and Signature Aviation leased areas is not currently leased to the two FBOs but is utilized by both FBOs for aircraft parking.



FBO Facility Requirement Findings

GA Itinerant Ops	2024 (Base)	2029	2034	2044
Total Operations	**16,027**	**16,707**	**17,540**	**19,754**
Peak Month	1,562	1,628	1,710	1,925

Requirement	Apron & Hangar (SY)	Terminal Facility (SF)	Landside Parking (SY)
Existing Condition	99,460	9,800	12,500
2024 (Base) ***Surplus (+) / Deficiency (-)***	128,560 *-29,100*	9,800 -	12,500 -
2029 ***Surplus (+) / Deficiency (-)***	134,100 *-34,640*	10,330 *-530*	14,490 *-1,990*
2034 ***Surplus (+) / Deficiency (-)***	140,700 *-41,240*	10,880 *-1,080*	15,270 *-2,770*
2044 ***Surplus (+) / Deficiency (-)***	158,460 *-59,000*	12,100 *-2,300*	16,950 *-4,450*

Market Assessment Initial Findings

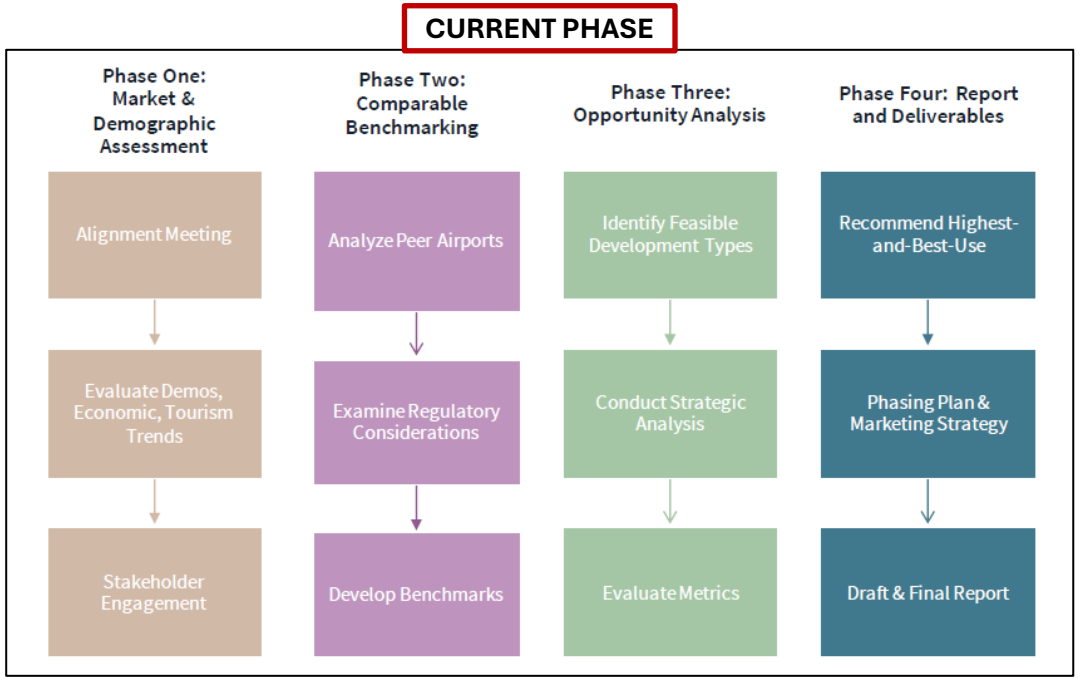
Overview – Scope and Progress Update

PROGRESS UPDATE

- Reviewed existing data and planning documents
- Market analysis in review
  - Demographics
  - Regional economy and employment
  - Tourism and lodging trends
  - Retail/office market trends
- Benchmarking analysis in review

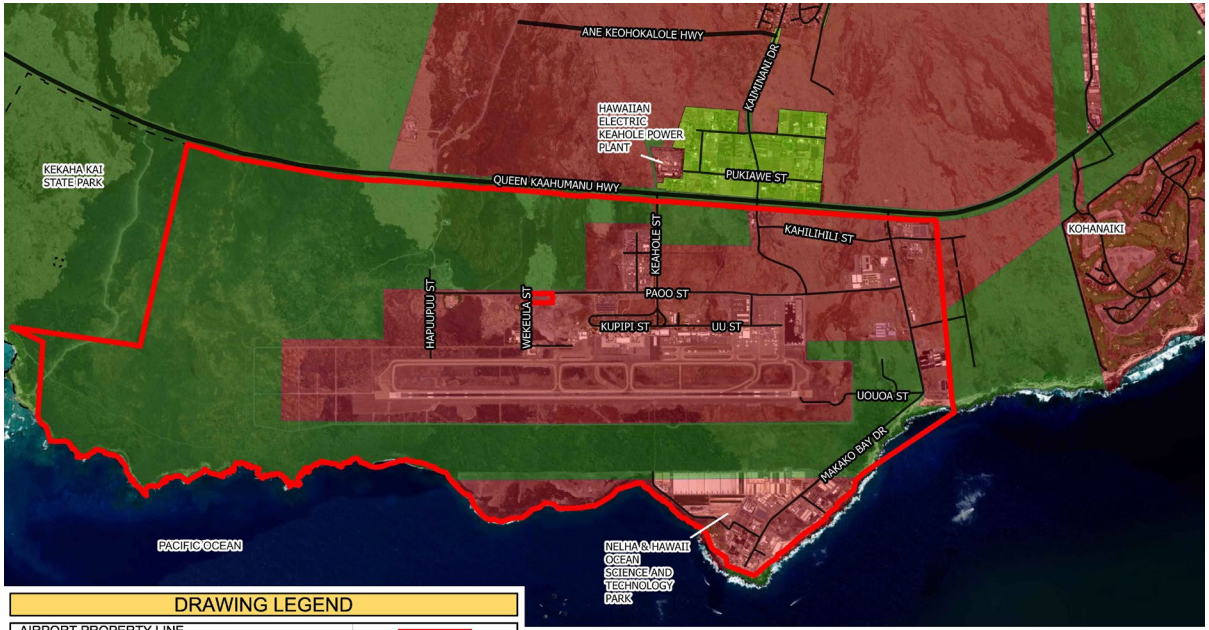
MILESTONES

- **Week of February 9** – JLL site visit to Kona, met Chauncey, stakeholder in-person meetings
- **Week of February 23** – Distribute questionnaire and collect responses



Initial Findings – Key Considerations

- Development Impact and Viability
  - Revenue, economic impact, job creation, community use, etc.
- Current zoning considerations
  - Regulatory approval process
- Water accessibility
- Key challenges from 2010 Master Plan recommendations
- Transportation and access



Initial Findings – Initial Land Use Consideration

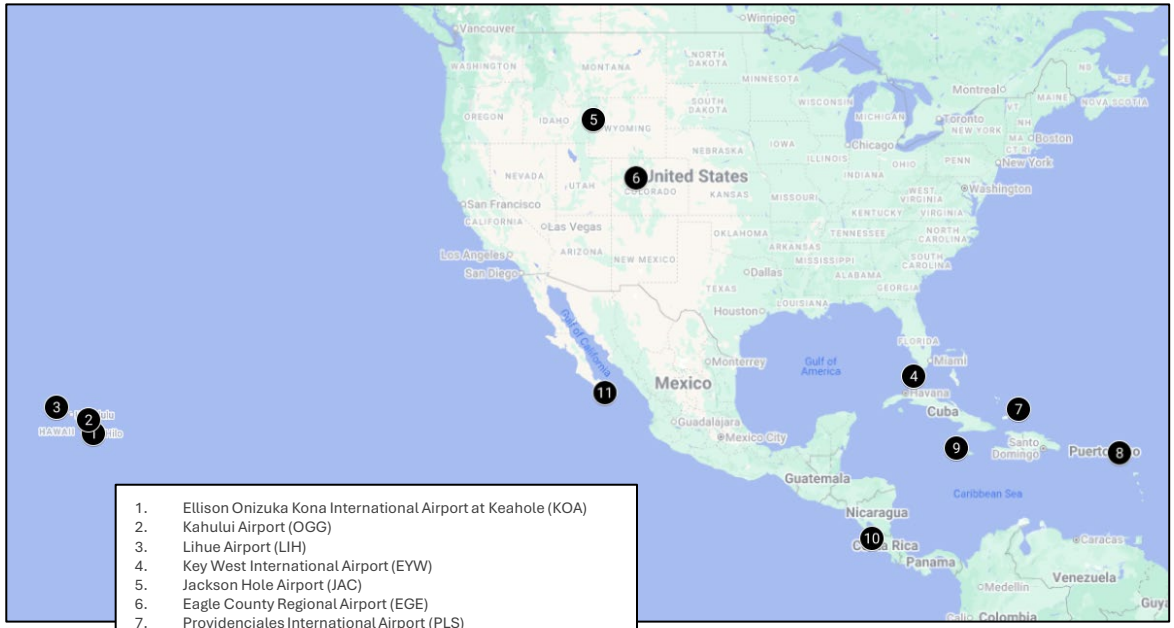
TIMEFRAME	EXAMPLE DEVELOPMENT OPPORTUNITIES
SHORT TERM	• Consolidated Rental Car Facility (CONRAC) • Fire training facility (ARFF and wildfire) • PV solar power • Industrial complex in allowable areas (MG-1a) • Road development (Paoo Street extension - NELHA)
MEDIUM TERM	• Hotel development around Mailbox Road • Battery storage and hydrogen production • Educational/innovation centers • Shopping complex • Workforce housing (regulatory change needed)
LONG TERM	• Hotel development requiring conservation land use changes (near hwy) • Hotel development beach location north of runway • Harbor development • Regional park, sports complex, golf course • Data center with seawater cooling • Student housing

Initial Findings – Comparable Benchmarking

- 11 comparable airports identified
- Categorized land use mix within 1-mile
- Systematic evaluation of development patterns in airport vicinity areas

INITIAL RESULTS

- Land use patterns show dual economic development impact: visitor services and goods movement
- Hospitality/tourism assets most prevalent land us mix including hotels, retail shops, and tourism experience zones
- Commercial/industrial spaces second most prevalent land use mix including storage, distribution centers, logistics, and industrial complexes

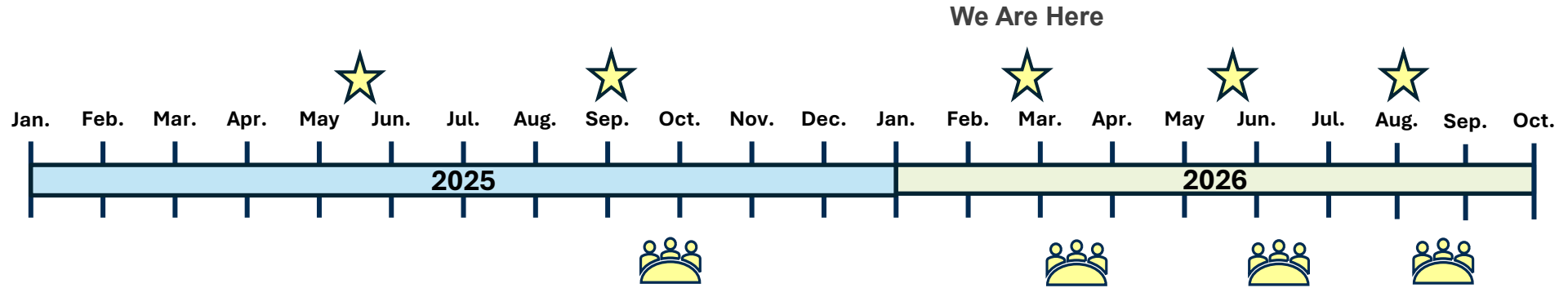


Draft for Discussion Purposes Only
Subject to Further Analyses and Decisions

Next Steps

Project Schedule

- Public Advisory Committee (PAC) and Technical Advisory Committee (TAC) Combined Meetings (Two Remaining)
- Community Informational Meeting #2 scheduled for March 16
  - Two Remaining Community Informational Meetings



PAC/TAC Combined Meetings (Virtual)

Community Informational Meeting (In-Person)

Project Website

Next Steps

- Community Informational Meeting #2 scheduled for March 16 (Monday)
  - 6:00 – 7:30 PM
  - West Hawaii Civic Center (74-5044 Ane Keohokalole Hwy, Kailua-Kona, HI 96740)
- Proceed with development of alternatives
- **PAC/TAC Combined Meeting #4:**
  - Review draft alternatives

Project Website:
https://www.koamasterplanupdate.com/


Questions?