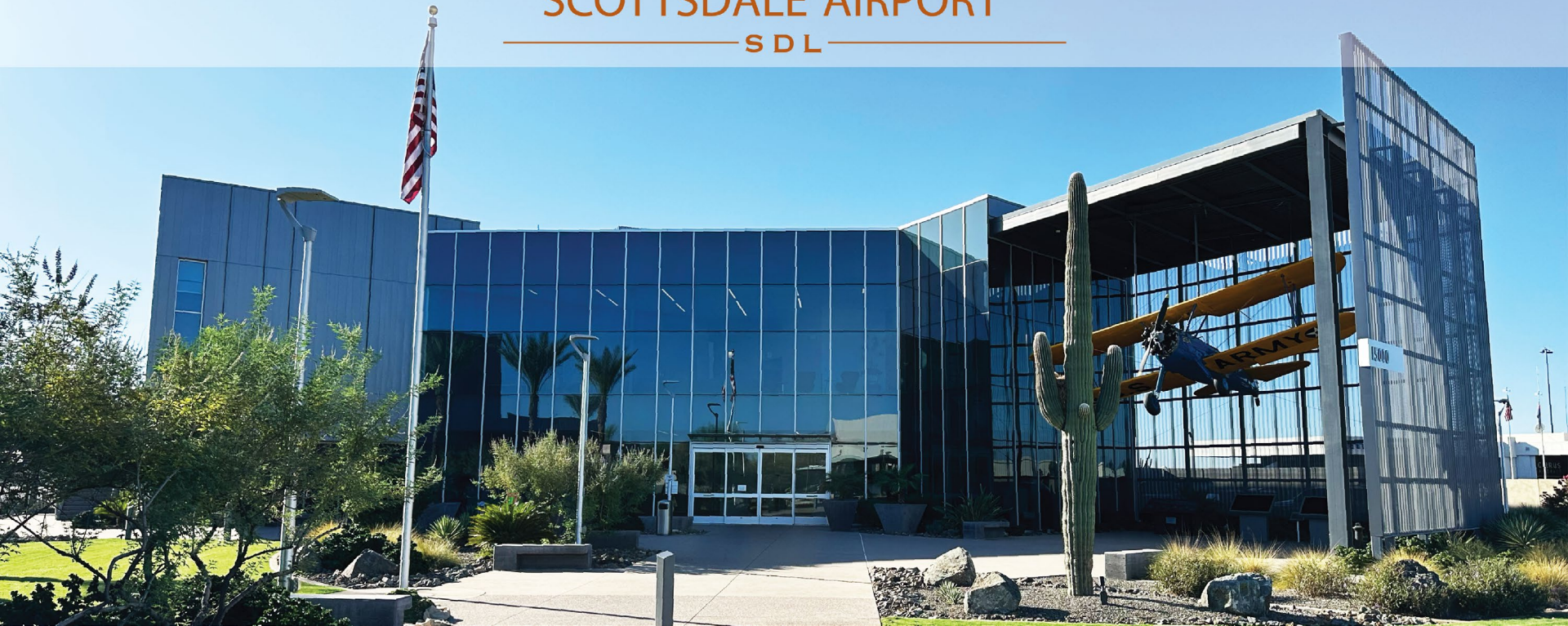
Airport Master Plan

SCOTTSDALE AIRPORT

SDL



AGENDA

Planning Advisory Committee (PAC)
Meeting #3 – November 13, 2025

1. Welcome/Introductions
2. Review Master Plan Process
3. Critical Aircraft Review
4. Airfield Considerations
5. Landside Considerations
6. Next Steps

PROJECT TEAM

Coffman Associates Airport Consultants

Prime Consultant: Responsible for all aspects of the master plan. Airport planning, environmental analysis, sustainability planning, land use planning, capital improvement plan, airport layout plan.

MTZ Martinez Geospatial

FAA-required Airports Geographic Information System (AGIS) survey. Aeronautical surveys, data collection, and aerial photography.

Compass Rose Communications

Public involvement, public information workshops, project website contributions, and press releases.

Quest Energy Group

Assessment of airport owned and operated facilities and the FBO facilities. Identify opportunities to improve energy efficiency.

Kimley-Horn and Associates, Inc.

Economic Benefit Analysis.

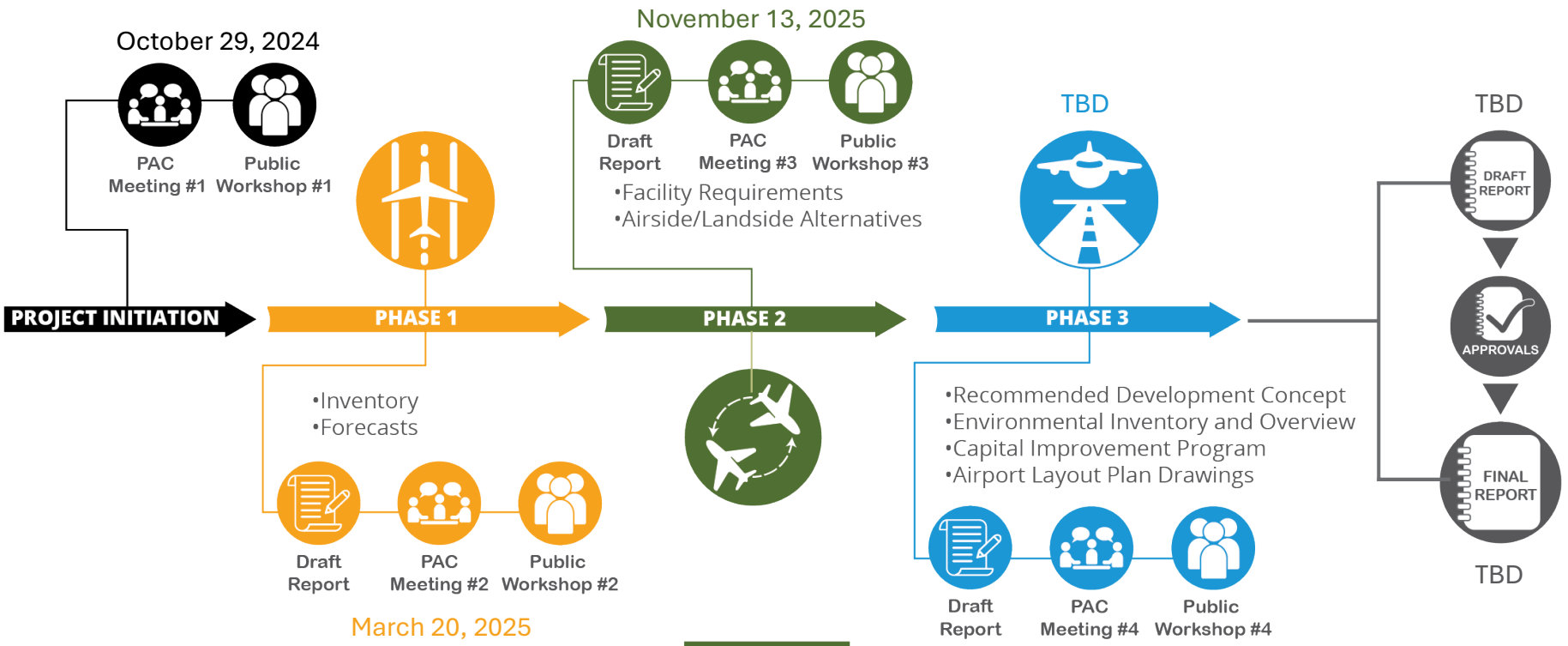
SWCA Environmental Consultants

Cultural resource literature review.

Mead & Hunt

Project cost estimates.

MASTER PLAN PROCESS



- Airport Advisory Commission Update: April 16, 2025

Figure 1-1: Economic Impact

SCOTTSDALE AIRPORT
SDL

Chapter 2

Forecasts and Critical Aircraft Review

Exhibit 2K: Forecast Summary

	BASE	FORECAST			CAGR
	2024	2029	2034	2044	2024-2044
ANNUAL OPERATIONS					
Air Taxi/Charter Operations (Itinerant)					
Air Taxi	66,178	80,903	98,906	147,818	4.10%
Total Air Taxi/Charter Operations	*66,178*	*80,903*	*98,906*	*147,818*	*4.10%*
General Aviation Operations					
Itinerant	64,608	70,812	77,019	89,636	1.65%
Local	35,478	39,267	43,460	53,238	2.05%
Total General Aviation Operations	*100,086*	*110,079*	*120,479*	*142,874*	*1.80%*
Military Operations					
Itinerant	320	365	365	365	0.66%
Local	4	2	2	2	-3.41%
Total Military Operations	*324*	*367*	*367*	*367*	*0.63%*
Total Itinerant Operations	*131,106*	*152,080*	*176,290*	*237,819*	*3.02%*
Total Local Operations	*35,482*	*39,269*	*43,462*	*53,240*	*2.05%*
TOTAL ANNUAL OPERATIONS	**166,588**	**191,349**	**219,752**	**291,059**	**2.83%**
ENPLANEMENTS					
Charter Enplanements	43,765	92,243	140,072	236,870	8.81%

Exhibit 2L: Aircraft Classification Parameters

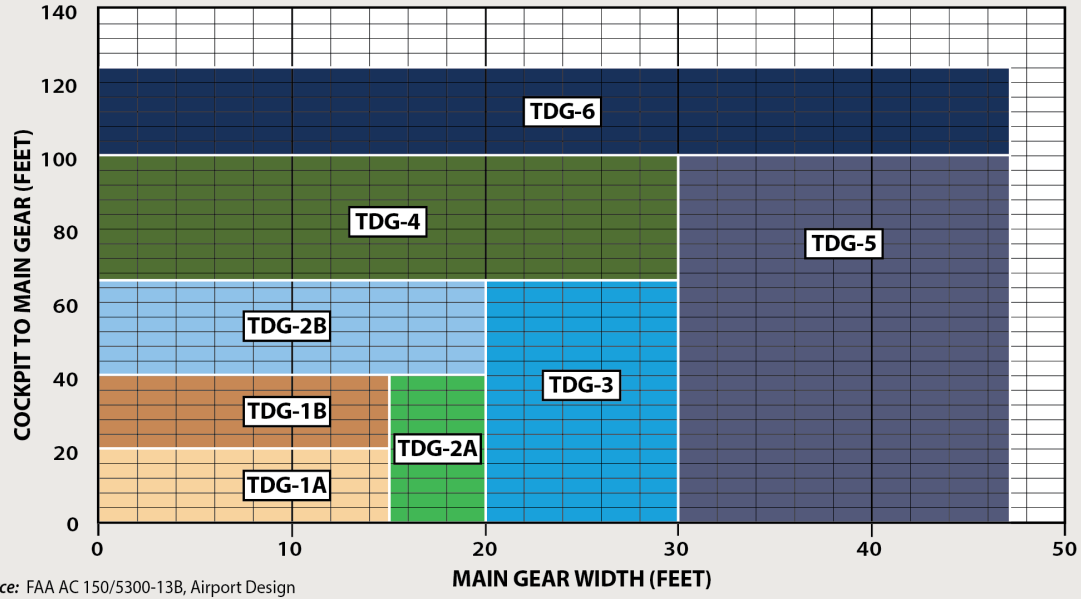
AIRCRAFT APPROACH CATEGORY (AAC)	
Category	**Approach Speed**
A	less than 91 knots
B	91 knots or more but less than 121 knots
C	121 knots or more but less than 141 knots
D	141 knots or more but less than 166 knots
E	166 knots or more

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)

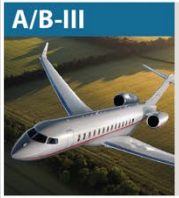


Source: FAA AC 150/5300-13B, Airport Design

- D-III-2B: Current operational critical aircraft because there are more than 500 annual operations. (Gulfstream V)
- D-II-2B: Current FAA approved critical aircraft. (Gulfstream IV)

Exhibit 2M: Aircraft Reference Codes

A-I	Aircraft	TDG
	• Beech Bonanza	1A
	• **Cessna 150**, 172	**1A**
	• Piper Comanche, Seneca	1A
B-I		
	• Eclipse 500	1A
	• Beech Baron 55/58	1A
	• **Beech King Air 100**	**1A**
	• Cessna 421	2A
	• Cessna Citation M2 (525)	1A
	• Cessna Citation 1(500)	1A
	• Embraer Phenom 100	1A
A/B-II *12,500 lbs. or less*		
	• Beech Super King Air 200	2A
	• Beech King Air 90	1A
	• **Cessna 441 Conquest**	**1A**
	• Cessna Citation CJ2	2A
	• Pilatus PC-12	2

B-II *over 12,500 lbs.*	Aircraft	TDG
	• Beech Super King Air 350	2A
	• Cessna Citation CJ3(525B)	2A
	• **Cessna Citation CJ4 (525C)**	**1B**
	• Cessna Citation Latitude	1B
	• Embraer Phenom 300	1B
	• Falcon 20	1B
	• Pilatus PC-24	2A
A/B-III		
	• Bombardier Dash 8	3
	• **Bombardier Global 7500**	**2B**
	• Falcon 7X, 8X	2A
C/D-I		
	• **Lear** 35, 40, **45**, 55, 60XR	**1B**
	• F-16	1A

C/D-II	Aircraft	TDG
	• Challenger 600/604	1B
	• Cessna Citation III, VI,VII, X	1B
	• Embraer Legacy 135/140	2B
	• **Gulfstream IV** (D-II)	**2A**
	• Gulfstream G280	1B
	• Lear 70, 75	1B
	• Falcon 50, 900, 2000	2A
	• Hawker 800XP, 4000	1B
C/D-III *less than 150,000 lbs.*		
	• Gulfstream V	2B
	• Gulfstream 550, 600, 650	**2B**
	• **Global 5000**, 6000	2B
C/D-III *over 150,000 lbs.*		
	• Airbus A319, A320, A321	3
	• **Boeing 737-800**, 900	3
	• MD-83, 88	4

C/D-IV	Aircraft	TDG
	• Airbus A300	5
	• Boeing 757-200	4
	• **Boeing 767**-300, 400	**5**
	• MD-11	6
C/D-V		
	• Airbus A330-200, 300	5
	• Airbus A340-500, 600	6
	• Boeing 747-100 - 400	5
	• Boeing 777-300	6
	• **Boeing 787-8**, 9	**5**
E-I		
	• F-15	1B

Note: Aircraft pictured is identified in bold type.

FAA Approved Critical Aircraft D-II-2B

Operational Critical Aircraft D-III-2B

Aircraft Don't Operate at SDL

Note: New aircraft like the G700 and Falcon 10X have not been categorized by FAA yet but they have wingspans between 79' and 118' (ADG III) and have a MTOW greater than 100,000 lbs.

Critical Aircraft Review/Applicable Design Standards

- Current operational data confirms SDL is a D-III-2B airport. (3,600+ operations)
- Forecasts indicate it will remain a D-III-2B airport over the next 20-years.
- FAA approved D-II-2B as the critical aircraft because extensive previous analysis showed that it is not practicable to achieve full D-III design standards primarily because of the current runway/taxiway separation.

- Three Modification of Standards for airport design are approved at SDL to ensure an acceptable level of safety.
  - Runway to Taxiway Separation Distance
  - Runway Object Free Area Dimensions
  - Runway to Aircraft Parking Area

U.S. Department of Transportation
Federal Aviation Administration

Federal Aviation Administration
Phoenix Airports Field Office

3800 N Central Ave
Suite 1025
Phoenix, AZ 85012

August 28, 2025

Rick Wielebski
Aviation Director
15000 N. Airport Dr
Suite 100
Scottsdale, AZ 85260

Dear Mr. Wielebski,

Scottsdale Airport (SDL)

Aviation Activity Forecast Approval

The Federal Aviation Administration (FAA) has reviewed and approved the aviation forecast for the Scottsdale Airport (SDL) dated April 2, 2025 for use in the ongoing airport master plan study. Additionally, the FAA approves the use of D-II for both the existing and future critical aircraft. We found the forecast to be generally consistent with the 2024 TAF. It uses current data and is supported by generally accepted forecasting methodologies.

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 master plan update or shown on the ALP. FAA approval of the 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 changes materially.

Sincerely,

KYLER T ERHARD

Digitally signed by KYLER T ERHARD
Date: 2025.08.28 10:18:31 -07'00'

Airfield Considerations

1. Runway-to-Taxiway Separation
Currently, both parallel taxiways are 250 feet from the runway, centerline to centerline. Optimally, this distance would be 400 feet; however, this is not practicable. An FAA-approved Modification of Standards (MOS) that is in place indicates the existing condition provides an acceptable level of safety.

2. Runway Hold Line Location
The hold lines on the connecting taxiways are set at 152 feet from the runway centerline. The optimal location would be 250 feet from the runway centerline. Operationally, airport traffic control tower (ATCT) personnel consider the existing hold line location to be the safety critical demarcation line.

3. Runway Safety Area (RSA) Dimensions
Due to constraints beyond the runway pavement ends, declared distances are in place to provide an RSA that fully meets FAA design standards.

4. Runway Object Free Area (ROFA) Dimensions
Due to constraints to the width and length of a standard ROFA, an FAA-approved Modification of Standards (MOS) is in place that indicates the existing modified ROFA dimensions provide an acceptable level of safety.

5. Declared Distances
Declared distances are in place to meet various runway safety design standards and maximize available runway length to accommodate existing operations.

6. Taxiway/Taxilane Separation and Aircraft Parking Apron

If two wide-wingspan aircraft pass by one another on Taxiway A and the main aircraft parking apron edge taxilane, there is a risk of the wingtips colliding. Several alternatives are considered to mitigate or remove this risk.

7. Taxiway Geometry

Several existing and future connecting taxiways are planned to be redesigned due to recent updates to the FAA's airport design guidance.

8. Runway Visual Aids

The existing two-light precision approach path indicator (PAPI-2L) system that serves each runway end should be upgraded to a four-light (PAPI-4L) system, as recommended in FAA guidance.

9. Runway Pavement Weight-Bearing Capacity

The runway weight-bearing capacity should be designed to accommodate the heaviest aircraft type that operates more than 500 times annually at the airport. The current weight-bearing capacity is up to 75,000 pounds for dual-wheel landing gear aircraft. The airport experiences more than 500 annual operations by business jets that exceed this weight; therefore, the weight-bearing capacity should be increased to accommodate the existing operations.

10. Next Generation of Business Jets

Several new models of business jets exceed the 100,000-pound limit for operation at the airport. There is no design standard safety reason to prohibit these business jets from operating at the airport. It is recommended that the airport consider allowing slightly heavier aircraft or aircraft up to 114,999-pounds to operate, in response to evolving business aviation needs. The primary concern is the potential for increased wear on runway pavement, which may shorten its useful life. However, this impact can be effectively managed through the airport's ongoing program of monitoring and routine maintenance.

Table 3H | Runway Design Standards

TABLE 3H | Runway Design Standards

AIRPORT DATA	Runway 3-21 Design Standard/Actual	
Airport Critical Aircraft	D-II-2B	
Runway Design Code	D-II-5000	
Visibility Minimums	1-mile	
RUNWAY DESIGN		
Runway Width	100	
Runway Shoulder Width	20/12	
Blast Pad Length/Width (if provided)	150 x 120	
RUNWAY PROTECTION		
Runway Safety Area (RSA)		
Width	500/400[1]	
Length Beyond Departure End	1,000	
Length Prior to Threshold	600	
Runway Object Free Area (ROFA)		
Width	800/630[2]	
Length Beyond Departure End	1,000/470 Runway 3[2]	1,000/500 Runway 21[2]
Length Prior to Threshold	600	
Runway Obstacle Free Zone (OFZ)		
Width	400	
Length Beyond End	200	
Approach Runway Protection Zone (RPZ)	**Runway 3**	**Runway 21**
Length	1,700	1,700
Inner Width	500	500
Outer Width	1,010	1,010
Departure Runway Protection Zone (RPZ)	**Runway 3**	**Runway 21**
Length	1,700	1,700
Inner Width	500	500
Outer Width	1,010	1,010
RUNWAY SEPARATION		
Runway Centerline to:		
Holding Position	250/ (152)	
Parallel Taxiway	300/ (250[2])	

Note: All dimensions are in feet. Values in () are actuals.
[1]When the standard RSA width of 500 feet is not practical, an RSA width of 400 feet is permissible.
[2]Actual dimensions are based on FAA-approved Modification of Standards.

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

FAA Acceptable 400' Width for D-II

FAA Approved MOS

FAA Approved MOS

TABLE 3J | Design Standard Differences

Design Element	Runway Design Standards		Currently Available
	D-III-5000[1]	D-II-5000[2]	D-II-5000
Runway to Taxiway Separation	400'	300'	250'[3]
Holding Position	266'	250'	152'
Runway Safety Area Width	500'	400'	400'
Blast Pad Length & Width	200' x 140'	150' x 120'	150' x 120'

[1]Operational critical aircraft
[2]FAA-approved critical aircraft (August 28, 2025)
[3]FAA Modification of Standards (approved on January 3, 2019)

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

TABLE 4A | Runway/Taxiway Separation Standards

Design Element	Runway Design Standard		Currently Available
	D-III-5000[1]	D-II-5000[2]	D-II-5000
Runway to Taxiway Separation	400'	300'	250'[3]

[1]Operational critical aircraft
[2]FAA approved critical aircraft (8/28/2025)
[3]FAA modification of standard approved on 1/3/2019

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

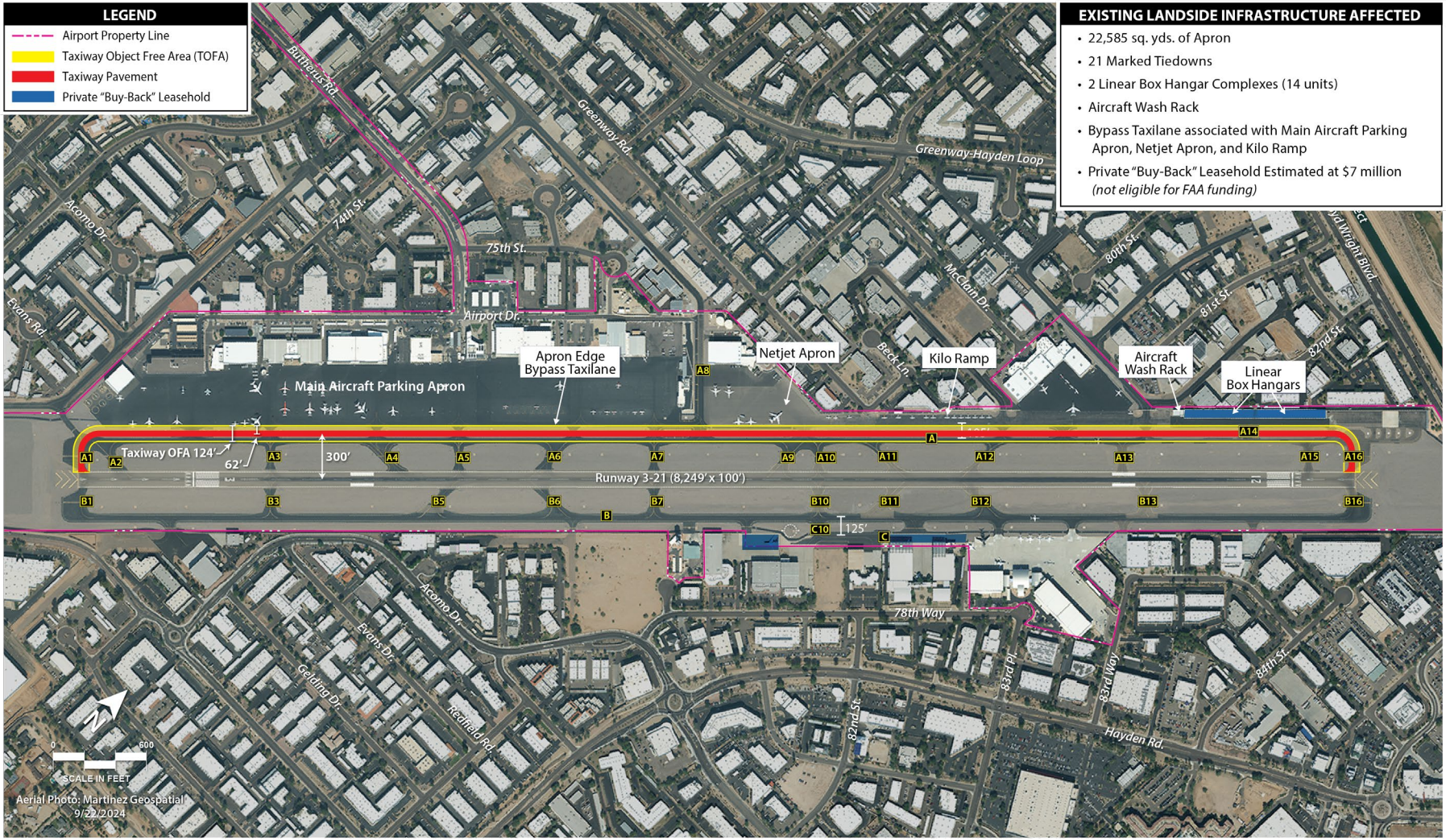
Ex 4C: Runway/Taxiway Separation Alternative 1- Shift Taxiway A to 300- Separation

LEGEND

- Airport Property Line
- Taxiway Object Free Area (TOFA)
- Taxiway Pavement
- Private "Buy-Back" Leasehold

EXISTING LANDSIDE INFRASTRUCTURE AFFECTED

- 22,585 sq. yds. of Apron
- 21 Marked Tiedowns
- 2 Linear Box Hangar Complexes (14 units)
- Aircraft Wash Rack
- Bypass Taxilane associated with Main Aircraft Parking Apron, Netjet Apron, and Kilo Ramp
- Private "Buy-Back" Leasehold Estimated at $7 million *(not eligible for FAA funding)*



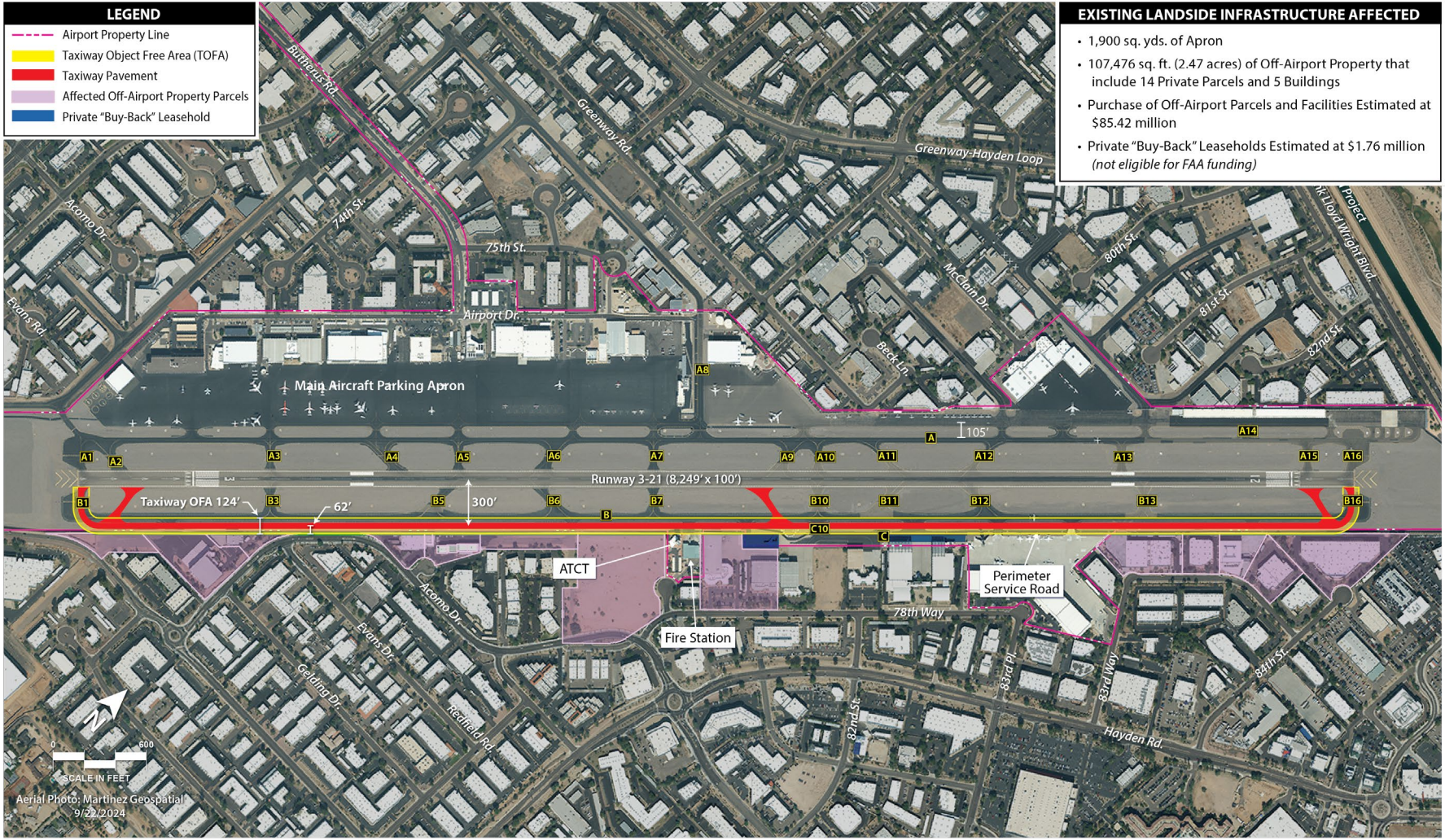
Ex 4D: Runway/Taxiway Separation Alternative 2- Shift Taxiway B to 300- Separation

LEGEND

- Airport Property Line
- Taxiway Object Free Area (TOFA)
- Taxiway Pavement
- Affected Off-Airport Property Parcels
- Private "Buy-Back" Leasehold

EXISTING LANDSIDE INFRASTRUCTURE AFFECTED

- 1,900 sq. yds. of Apron
- 107,476 sq. ft. (2.47 acres) of Off-Airport Property that include 14 Private Parcels and 5 Buildings
- Purchase of Off-Airport Parcels and Facilities Estimated at $85.42 million
- Private "Buy-Back" Leaseholds Estimated at $1.76 million *(not eligible for FAA funding)*



Ex 4E: Runway/Taxiway Separation Alternative 3- Shift Runway 50’ and Taxiway B

AIRPORT MASTER PLAN

SCOTTSDALE AIRPORT
SDL

EXISTING LANDSIDE INFRASTRUCTURE AFFECTED

- 7,895 sq. yds. of Apron
- Airport Traffic Control Tower
- Fire Station
- 413,452 sq. ft. (9.49 acres) of Off-Airport Property that include 21 Private Parcels and 16 Buildings
- Purchase of Off-Airport Parcels and Facilities Estimated at $125.1 million
- Private “Buy-Back” Leaseholds Estimated at $4.61 million *(not eligible for FAA funding)*

Ex 4F: Runway/Taxiway Separation Alternative 4- Shift Runway 50' and Taxiway A

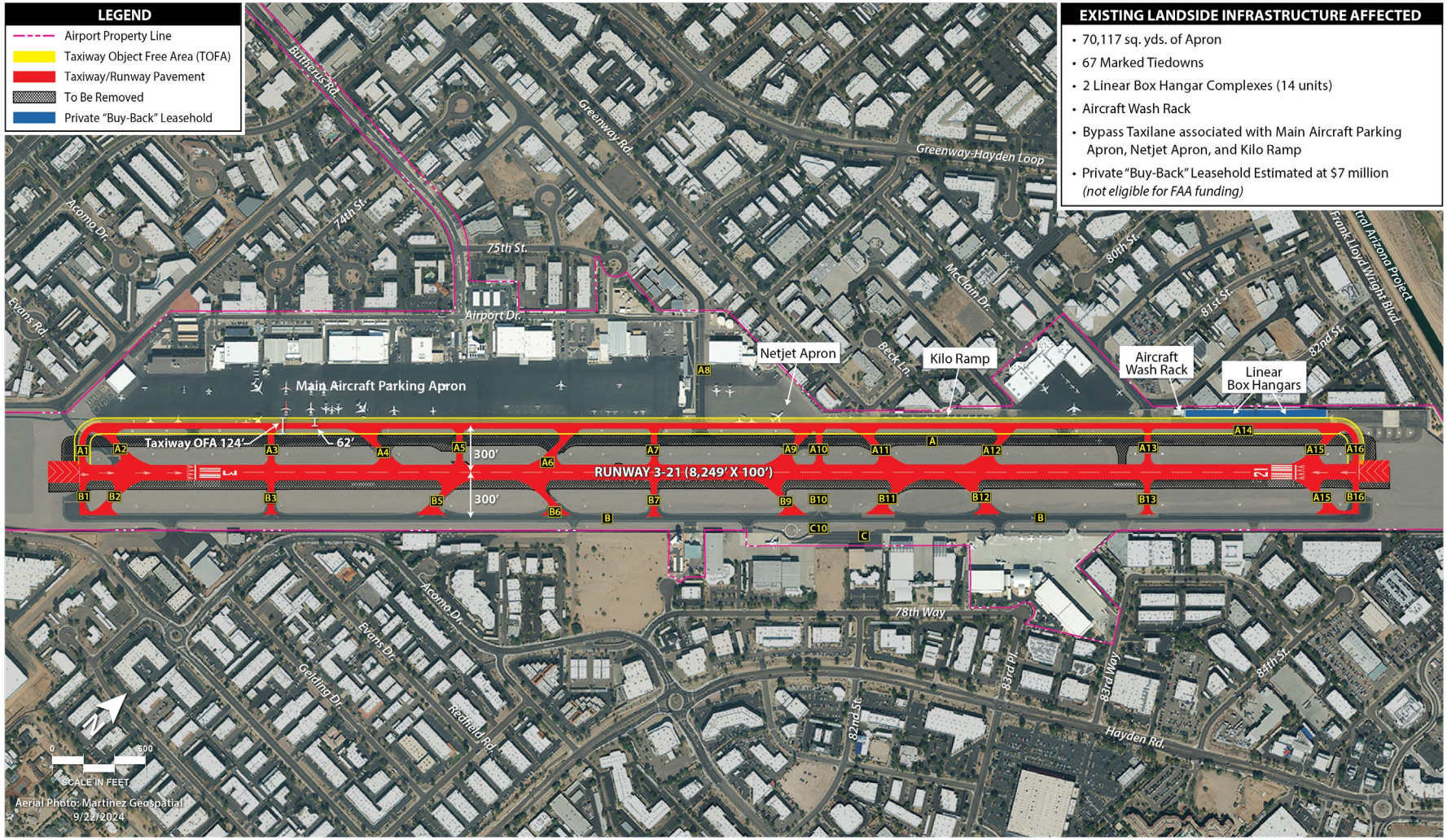


Table 4B | Runway/Taxiway Alternatives Impacts

	Alt 1 Exhibit 4C	Alt 2 Exhibit 4D	Alt 3 Exhibit 4E	Alt 4 Exhibit 4F
Description	Shift Twy A to 300'	Shift Twy B to 300'	Shift Rwy and Twy B	Shift Rwy and Twy A
Apron Area Impacted (s.y.)	22,585	1,900	7,895	70,117
Tie-Downs Removed	21	NA	NA	67
Hangar/Buildings Removed	14 box hangars	5 buildings	16 buildings	14 box hangars
Private Land Acquisition Cost	NA	2.47 acres/14 private parcels /$85.42 million	9.49 acres/21 private parcels /$125.1 million	NA
Leasehold Buy-Back Cost[1]	$7 million	$1.76 million	$4.61 million	$7 million
Other Impacts	Wash rack, taxilane, terminal apron, NetJets apron, Kilo apron	Service road	ATCT, ARFF, service road	Wash rack, taxilane, terminal apron, NetJets apron, Kilo apron

[1]Not eligible for FAA funding.

Runway Hold Line Location

- Current hold line separation distance is 152’ from the runway centerline.
- D-II/III-5000: Standard hold line distance is 250’ from the runway centerline.

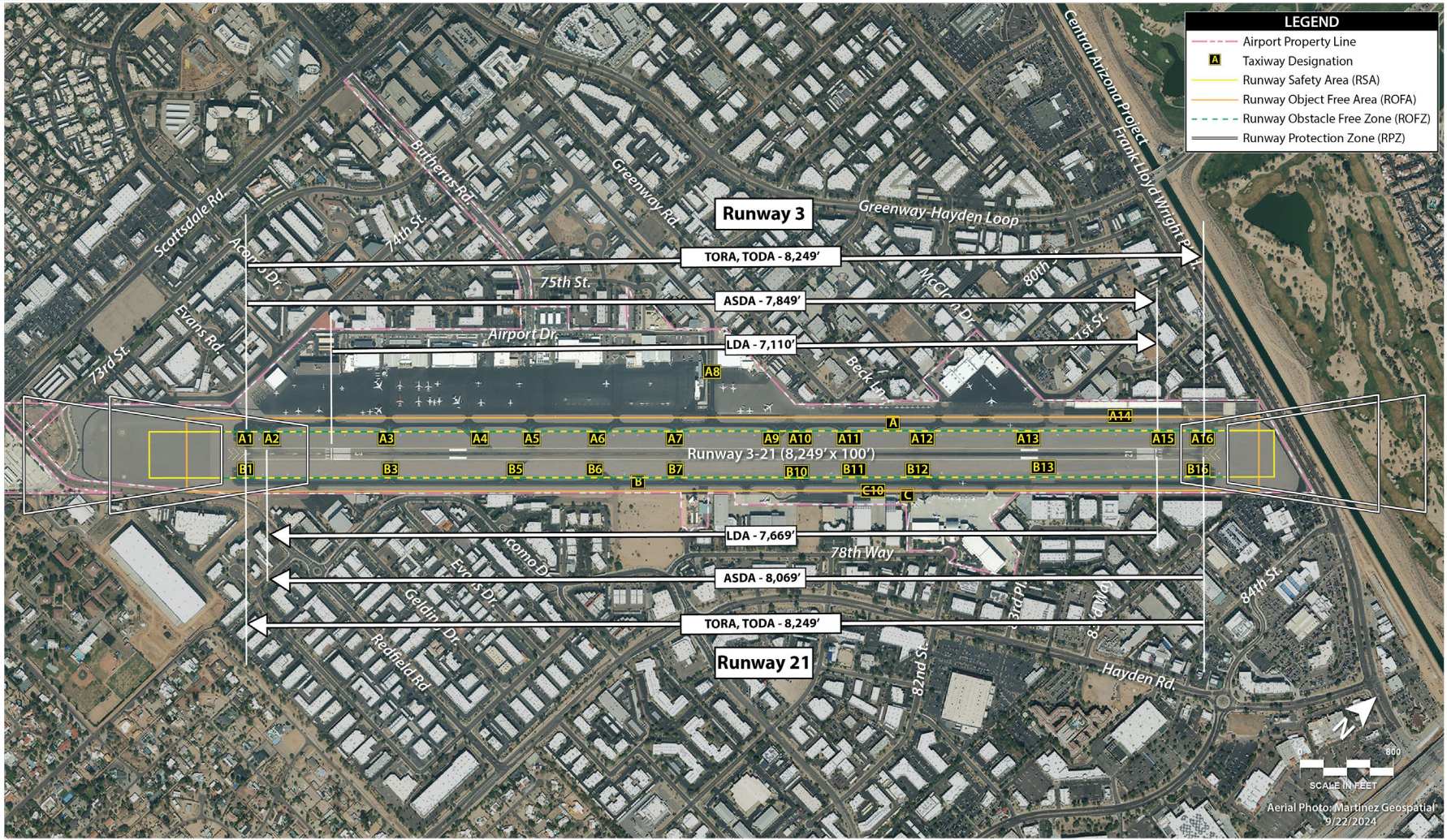
A Safety Risk Management Document (SRMD) was completed in 2013, to examine the feasibility of relocating the hold lines to either 200’ or 250’. The panel included representatives from the airport, FAA Office of Runway Safety, FAA Airport District Office, FAA Flight Standards, FAA Western Quality Control Group, and others.

This group of airport and airspace professionals concluded that a hold line location change could not be introduced to the National Airspace System (NAS) with an acceptable level of risk.

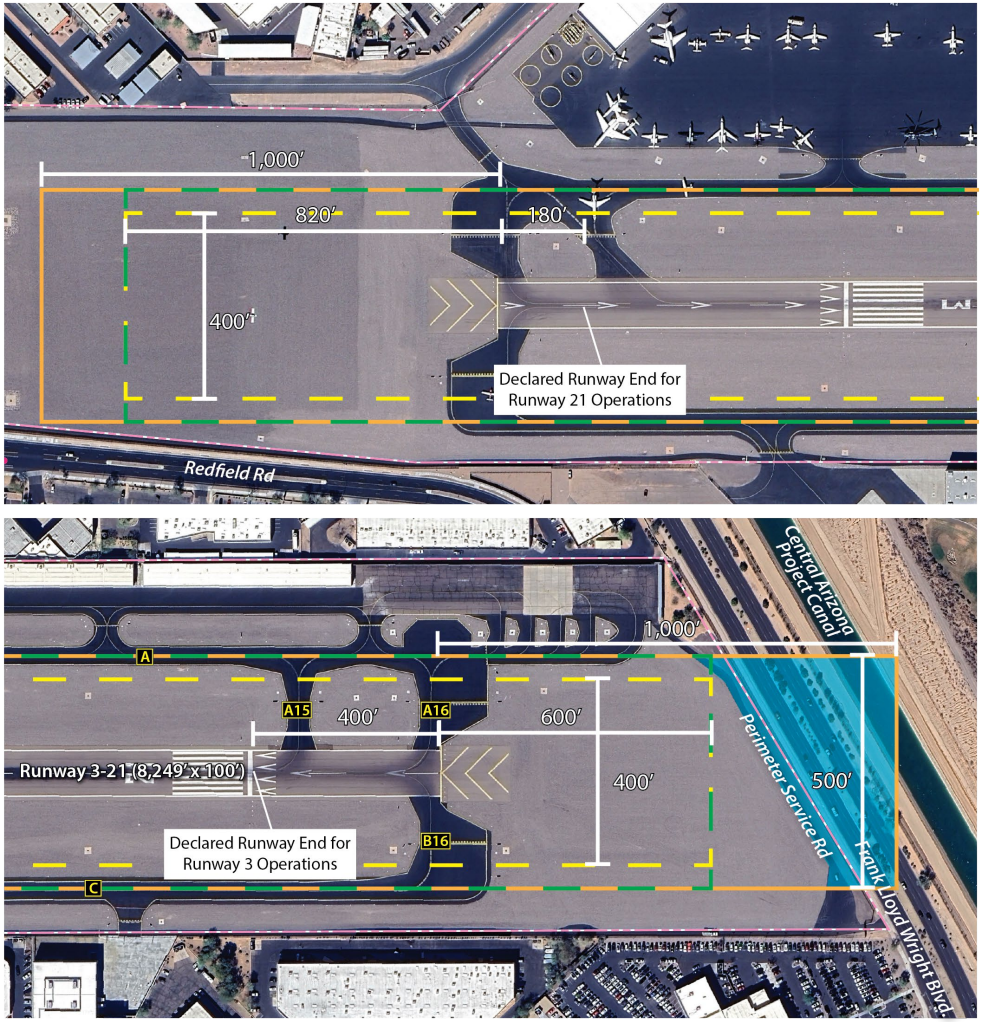
The SRMD identified 9 risk hazards, 2 of which were considered high-risk and could not be mitigated. Therefore, the hold lines remained at 152’ from the runway centerline.

- It is recommended that the hold lines remain at 152’ until such a time that a new SRMD can be undertaken.
- The current hold lines define the runway environment for ATCT personnel at SDL. While the RSA typically defines the runway environment, operationally at SDL that limit is defined by the hold line location.

Ex 3D: Existing Runway Safety Surfaces and Declared Distances



Ex 3E: Runway Safety Area Detail



LEGEND

- Airport Property Line
- A — Taxiway Designation
- Current 400' Wide RSA with Declared Distances
- RSA Based on Runway Pavement End
- RSA Based on Declared Distances
- RSA Penetrations Without Declared Distances and MOS

KEY

RSA - Runway Safety Area

0 300

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Aerial Photo: Martinez Geospatial
9/22/2024

- RSA meets the design standard because of the use of declared distances to provide 1,000' of RSA beyond the declared ends of the runway and by application of the permissible 400' wide RSA for D-II.

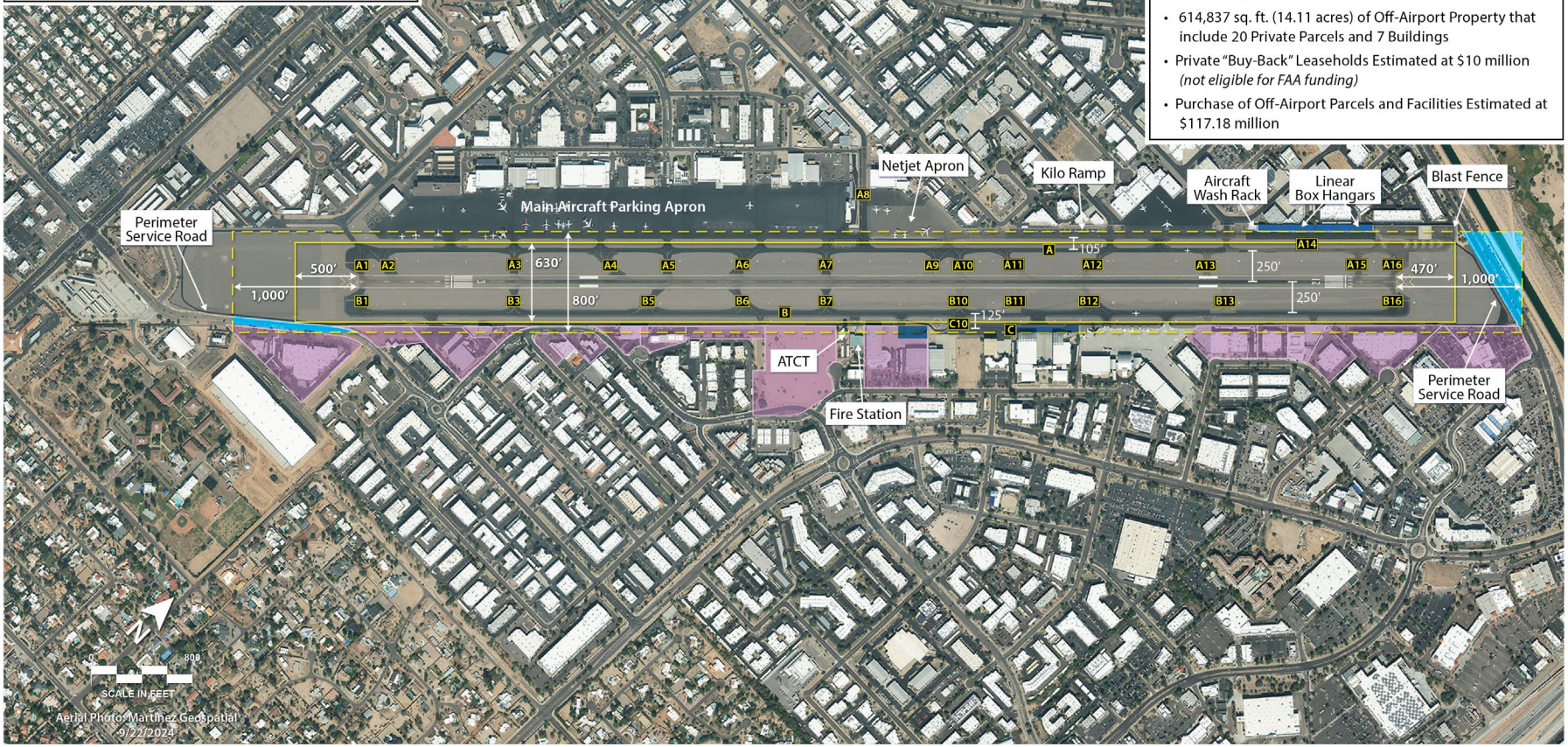
Ex 4G: ROFA Alternatives Modification of Standards

LEGEND

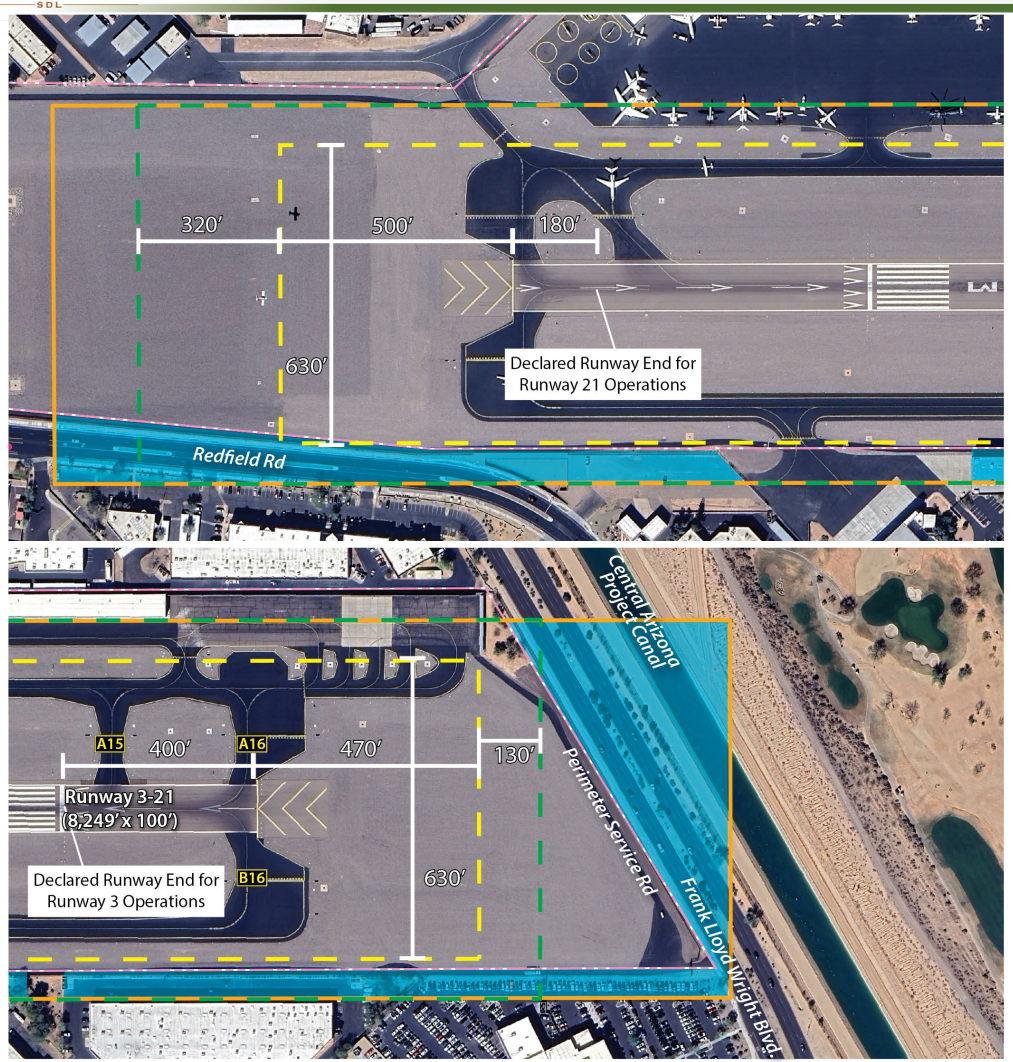
- Airport Property Line
- Runway Object Free Area (D-II Standard)
- Proposed Modification to Standard - Runway Object Free Area
- Affected Off-Airport Property Parcels
- Public Roadways and CAP Canal Obstructions
- Private "Buy-Back" Leasehold

EXISTING LANDSIDE INFRASTRUCTURE AFFECTED

- 65,395 sq. yds. of Apron
- 21 Marked Tiedowns
- 2 Linear Box Hangar Complexes (14 units)
- Aircraft Wash Rack
- Airport Traffic Control Tower
- Fire Station
- 614,837 sq. ft. (14.11 acres) of Off-Airport Property that include 20 Private Parcels and 7 Buildings
- Private "Buy-Back" Leaseholds Estimated at $10 million *(not eligible for FAA funding)*
- Purchase of Off-Airport Parcels and Facilities Estimated at $117.18 million



Ex 3F: Runway Object Free Area Detail



LEGEND

- Airport Property Line
- A — Taxiway Designation
- Current ROFA - FAA Applied Modification to Standards
- ROFA Based on Runway Pavement Ends
- ROFA Based on Declared Distances
- ROFA Penetrations Without Declared Distances and MOS

0 300

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Aerial Photo: Martinez Geospatial 9/22/2024

KEY

ROFA - Runway Object Free Area

The ROFA provides an acceptable level of safety as defined in an FAA approved modification of standards. The ROFA dimensions are:

- 630' wide (800' is standard)
- 470' beyond Rwy3 (1,000' is standard)
- 500' beyond Rwy 21 (1,000' is standard)

TABLE 4D | Taxiway/Taxilane Separation Standards

Standards	ADG II	ADG III
Taxiway A to Apron Edge Taxilane	101.5	144.5
Taxiway Object Free Area (TOFA)	124	171
Taxilane Object Free Area (TLOFA)	110	158
Taxilane to Fixed/Movable Object	55	79
Existing Condition		
Taxiway A to Apron Edge Taxilane	105	NA
Apron Edge TLOFA	110	NA
Apron Edge Taxilane Centerline to Fixed/Movable Object	55	NA
Apron Edge to Aircraft Parking	72.5	NA
ADG III Standard		
Taxiway A to Apron Edge Taxilane Centerline	NA	144.5
Apron Edge TLOFA	NA	158
Apron Edge Taxilane Centerline to Fixed/Movable Object	NA	79
Apron Edge to Aircraft Parking	NA	136
ADG III Standard Modified[1]		
Taxiway A to Apron Edge Taxilane Centerline	NA	131.5
Apron Edge TLOFA	NA	145
Apron Edge Taxilane Centerline to Fixed/Movable Object	NA	72.5
Apron Edge to Aircraft Parking	NA	116.5

[1]See Appendix J, FAA AC 150/5300-13B, Airport Design. Modification based on 105-foot wingspan.

Table 4C | Airplane Design Groups

	Includes Wingspans Between:	Example Aircraft	Wingspan (feet)
ADG II	49'<79'	Cessna Citation V/Ultra/Encore	54.1
		Citation Sovereign	63.1
		Citation Latitude	72.3
		Citation X	63.6
		Challenger 350	68.9
		Embraer 145	65.8
		Falcon 900	63.4
ADG III	79'<118'	Gulfstream 500	87.1
		Gulfstream 550	93.5
		Gulfstream 600	95.0
		Gulfstream 650	99.6
		Gulfstream 700/800	103.0
		Global 5000/6000	94.0
		Global 7500	104.3
		Global 8000	104.0
		Falcon 8X	86.4
		Falcon 10X	110.4

ADG: Airplane Design Group

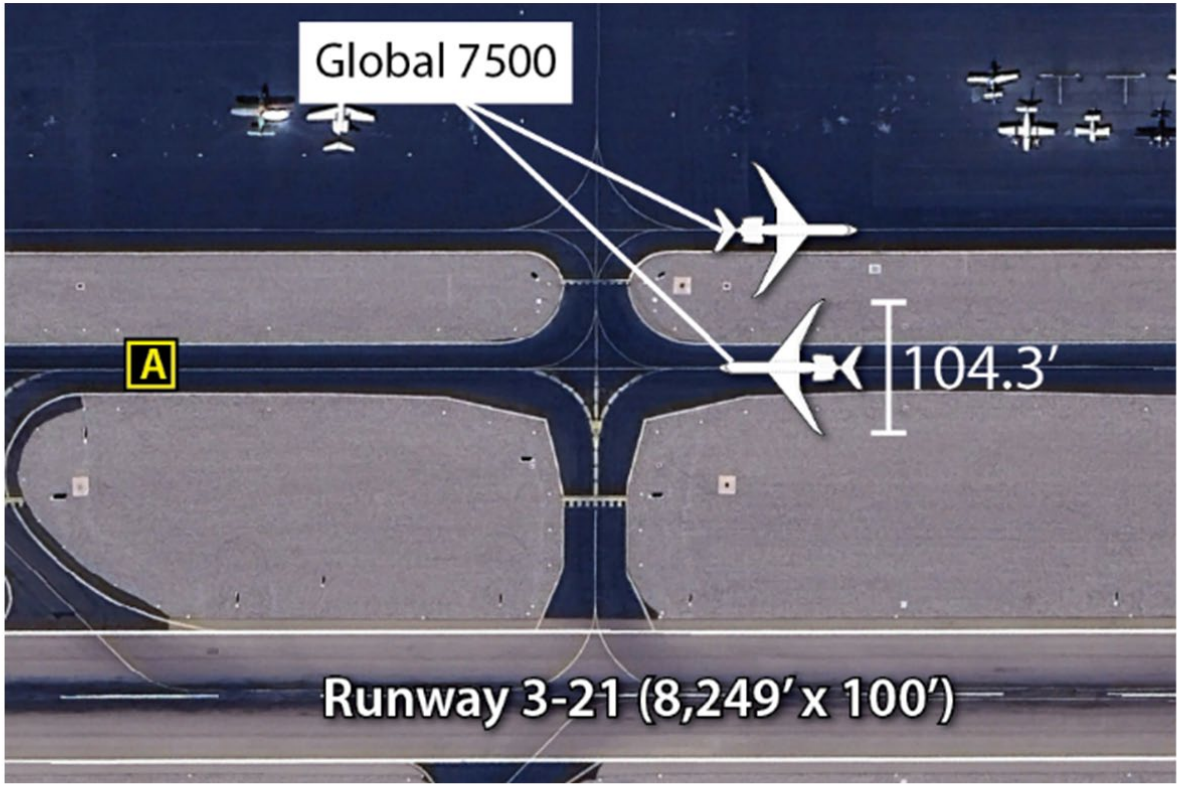
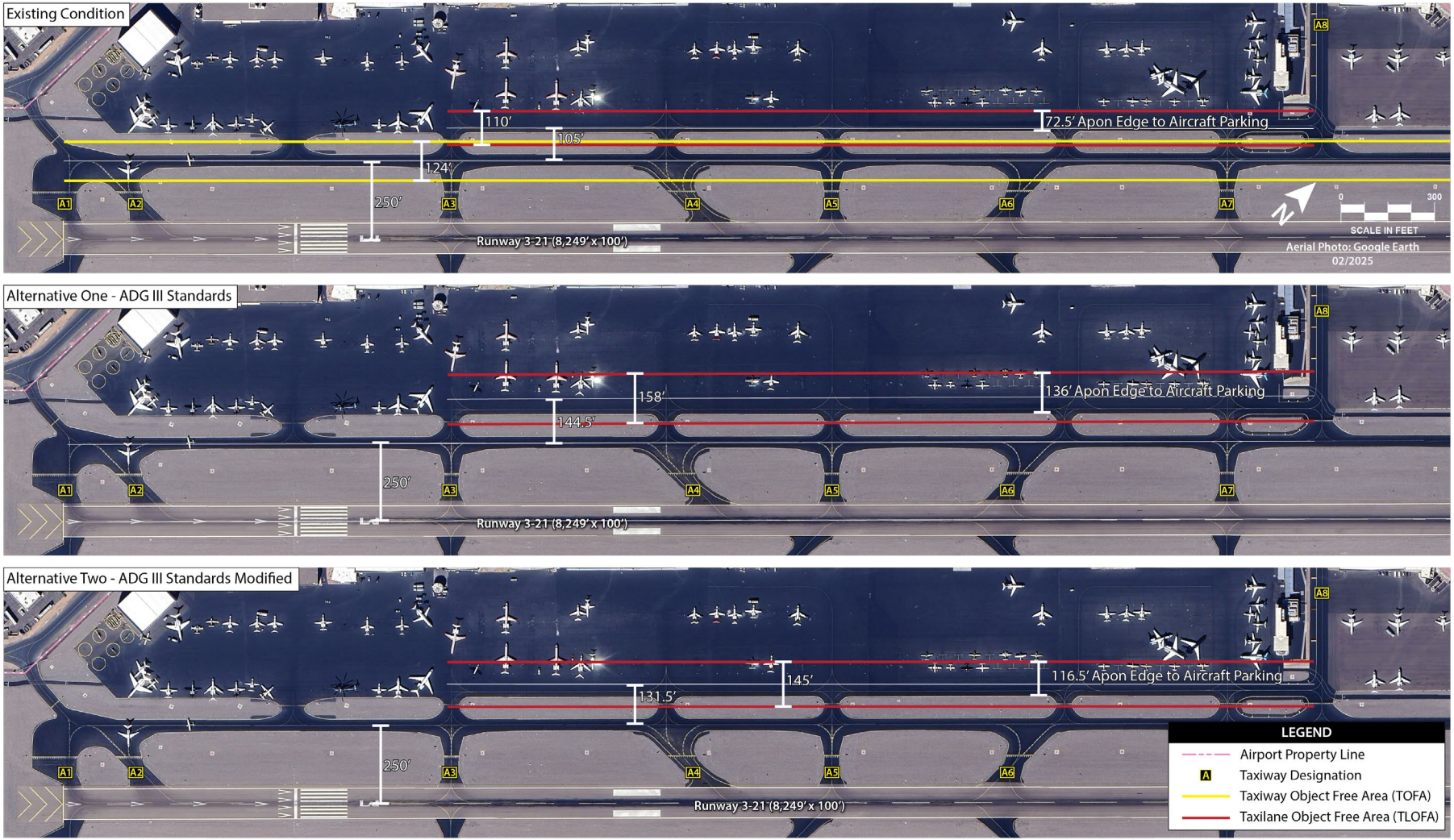


Figure 4-1: Taxiway A and Apron Edge Taxilane in Simultaneous Use by Two Global 7500 Aircraft

Ex 4H: Apron Edge Taxilane Alternatives



Ex 4H: Apron Edge Taxilane Alternatives

Taxiway A and the apron edge taxilane are 105’ apart, centerline to centerline. This exceeds the ADG II standard of 101.5’ but is less than the ADG III standard of 144.5’. The taxiway wingtip safety margin for ADG II is 22.5’ and for ADG III is 26.5’.

1. Meet ADG III Separation Standards (144.5’ separation): Loss of 63.5 feet of parking apron depth above what is available now.
2. Modify ADG III Separation Standards (131.5’ separation): Loss of 44 feet of parking apron depth above what is available now.
3. Remove Apron Edge Taxilane: Gain of 72.5 feet of parking apron depth.
4. Letter of Agreement with ATCT: Prohibit greater than 100’ wide wingspans on the apron edge taxilane.

TABLE 3T | Aircraft Parking Apron

Factor	Current Need	Short Term	Intermediate Term	Long Term
Busy Day Operations	531	567	586	623
Percentage of Itinerant Operations	79%	79%	80%	82%
Busy Day Itinerant Operations	418	451	470	509
Multiplier (% on ground at once)	35%	35%	35%	35%
Total Itinerant Aircraft Positions	146	158	165	178
Piston Aircraft Positions	29	32	33	36
Turbine Aircraft Positions	117	126	132	143
Total Itinerant Apron Area (sy):	**210,600**	**227,100**	**236,900**	**256,600**

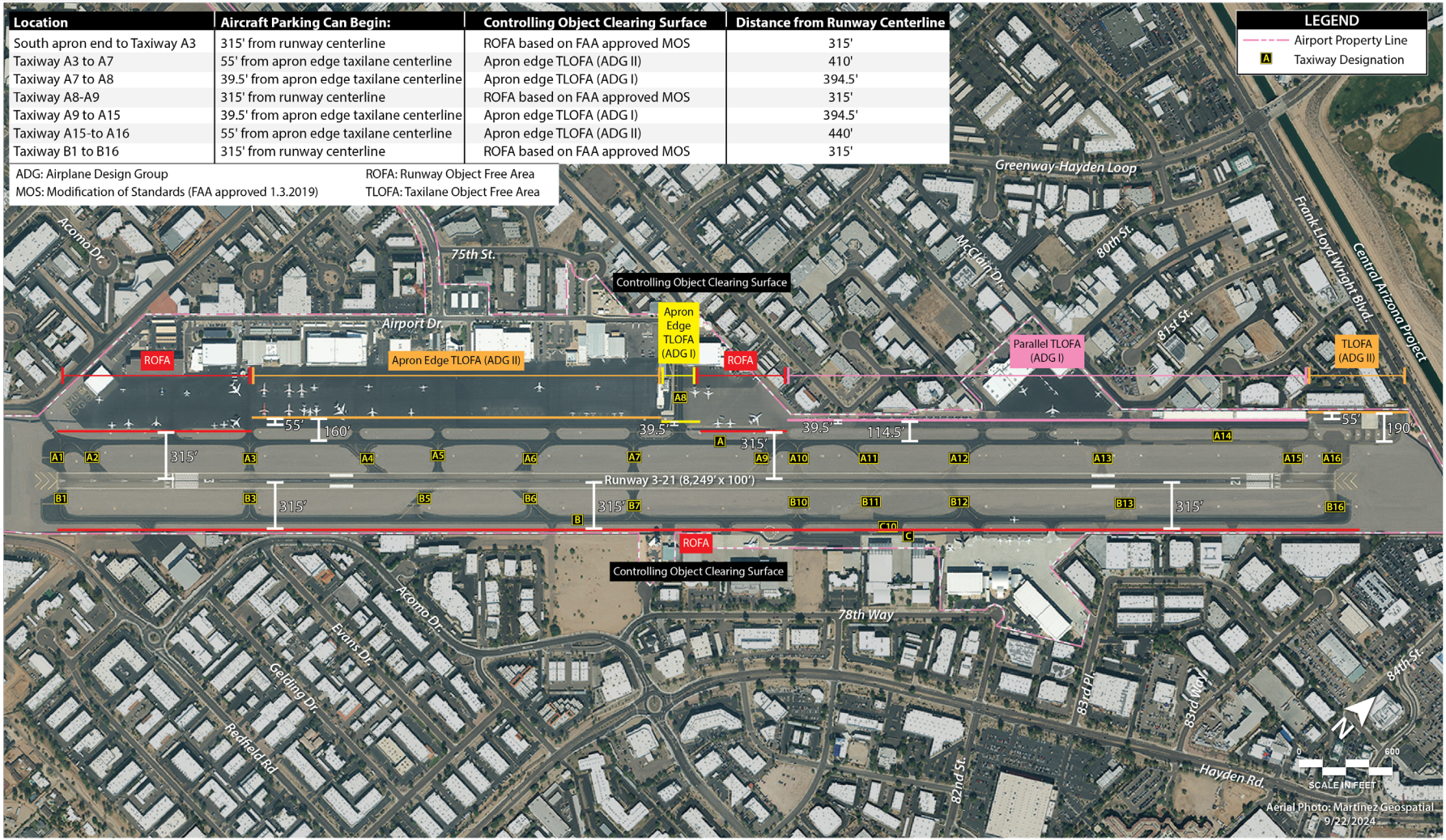
sy = square yards
Note: 800 sy per small plane; 1,600 sy per large plane

Estimated public apron space available: 189,000 s.y.
Total apron needed over the next 30-years: 67,600 s.y.

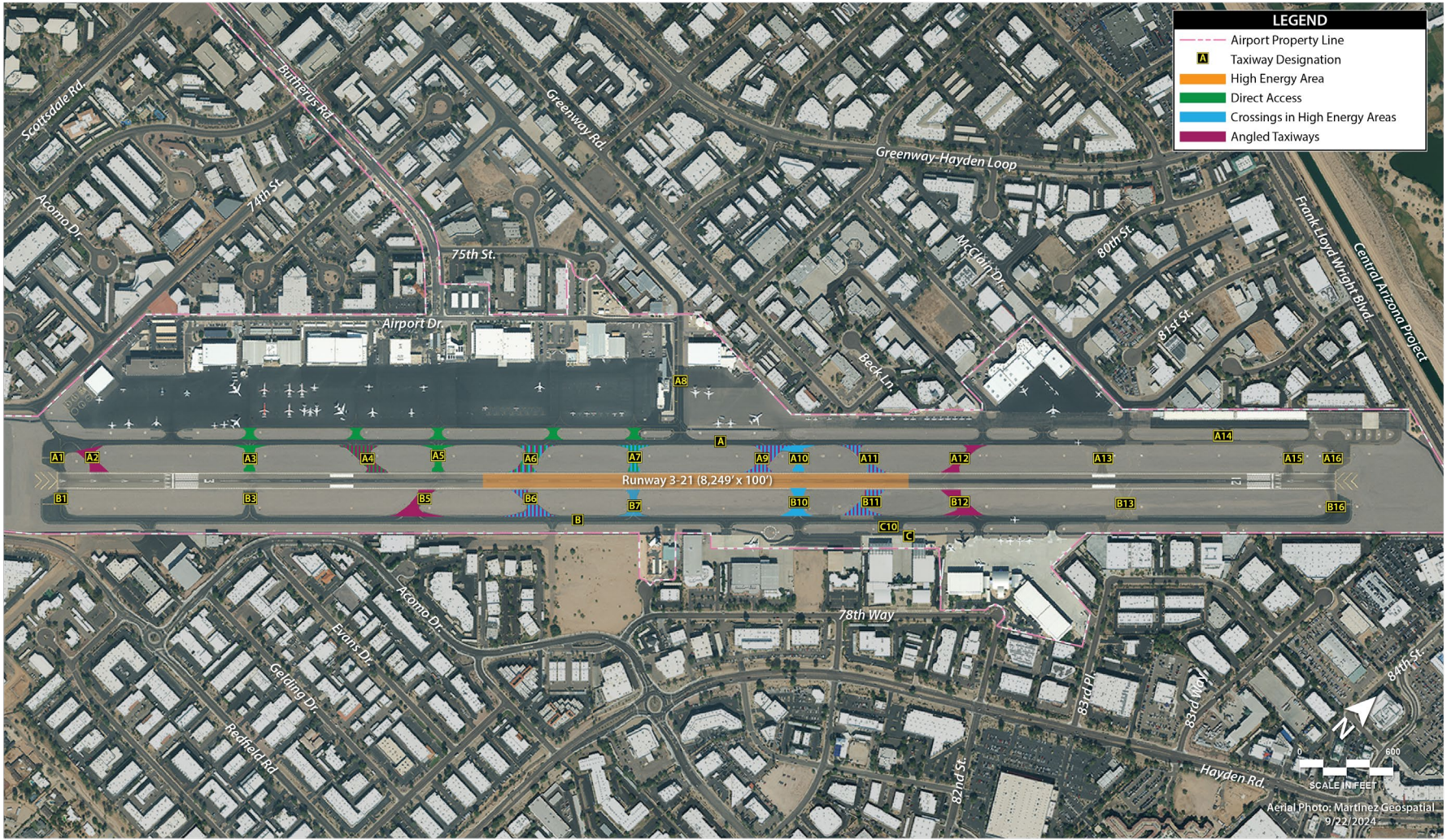
Ex 3G: Aircraft Parking Areas

Location	Aircraft Parking Can Begin:	Controlling Object Clearing Surface	Distance from Runway Centerline
South apron end to Taxiway A3	315' from runway centerline	ROFA based on FAA approved MOS	315'
Taxiway A3 to A7	55' from apron edge taxilane centerline	Apron edge TLOFA (ADG II)	410'
Taxiway A7 to A8	39.5' from apron edge taxilane centerline	Apron edge TLOFA (ADG I)	394.5'
Taxiway A8-A9	315' from runway centerline	ROFA based on FAA approved MOS	315'
Taxiway A9 to A15	39.5' from apron edge taxilane centerline	Apron edge TLOFA (ADG I)	394.5'
Taxiway A15-to A16	55' from apron edge taxilane centerline	Apron edge TLOFA (ADG II)	440'
Taxiway B1 to B16	315' from runway centerline	ROFA based on FAA approved MOS	315'

ADG: Airplane Design Group
MOS: Modification of Standards (FAA approved 1.3.2019)
ROFA: Runway Object Free Area
TLOFA: Taxilane Object Free Area



Ex 3H: Taxiway Design Considerations



Ex 4J: Taxiway Alternatives

1. Reconfigure Angled Taxiway A2 to 90-Degree Bypass Taxiway
2. Construct 90-Degree Bypass Taxiway (B2)
3, 4, 5. Relocate Apron Access Taxilanes to Eliminate Direct Access
6. Reconfigure Taxiway A7 to Eliminate Direct Access
7. Remove Taxiway A10 to Eliminate Middle Third Runway Crossing
8. Construct Bypass Taxiway B15

Note: Angled Taxiways A6, A9, A11, A12, B5, B6, B11, and B12 are maintained for airfield capacity improvement purposes.

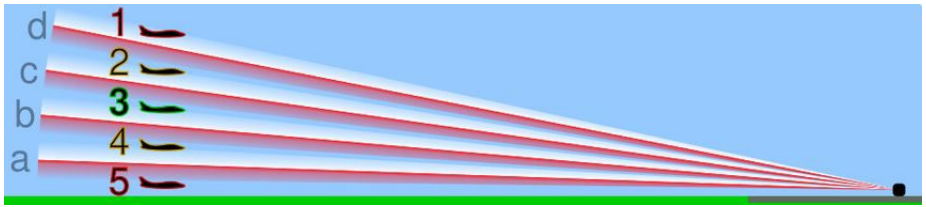
Runway Visual Aids

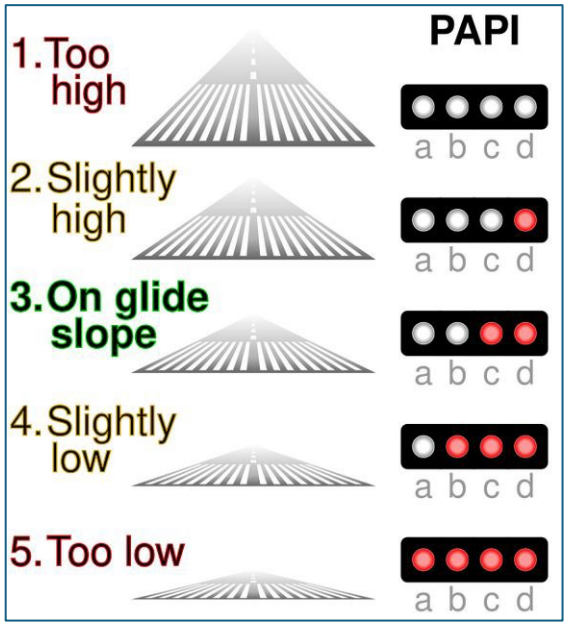
Airports with a significant level of business jet activity should have certain visual approach aids.

Precision approach path indicator lights (PAPI) and runway end identification lights (REILS).

Both ends of the runway are equipped with REILS. Both ends of the runway are equipped with 2-box PAPIs. Airports with high levels of business jet activity should have a 4-light PAPI system.

It is recommended that the PAPI-2L system be upgraded to the PAPI-4L system. Adequate space between the runway and taxiway is available.





Airplane Design Groups

ADG	Includes Wingspans Between:	Example Aircraft	Wingspan (feet)	MTOW
ADG II	49' < 79'	Cessna Citation V/Ultra/Encore	54.1	16,300
		Citation Sovereign	63.1	30,300
		Citation Latitude	72.3	30,800
		Citation X	63.6	36,100
		Challenger 350	68.9	40,600
		Embraer 145	65.8	53,100
		Falcon 900	63.4	49,000
ADG III	79' < 118'	Gulfstream 500	87.1	90,500
		Gulfstream 550	93.5	73,200
		Gulfstream 600	95.0	76,800
		Gulfstream 650	99.6	90,500
		Gulfstream 700	103.0	107,600
		Gulfstream 800	103.0	105,600
		Global 5000	94.0	78,600
		Global 6000	94.0	99,600
		Global 7500	104.3	106,250
		Global 8000	104.0	104,800
		Falcon 8X	86.4	73,000

ADG: Airplane Design Group; MTOW: Maximum Takeoff Weight

Table 4E | Runway Weight Bearing Capacity

Current weight bearing capacity:

- 45,000 lbs. single-wheel landing gear (S)
- 75,000 lbs. dual wheel landing gear (D)

The weight bearing capacity is not a limit or maximum. It is an indicator that repeated use by aircraft exceeding this weight may reduce the useful life of the pavement. It is the responsibility of the airport to preserve the useful life of federal capital investment such as runway rehabilitation projects.

- At SDL, aircraft up to 100,000 lbs. MTOW can operate when they file the prior permission required (PPR) documentation.
- Aircraft with a MTOW above 100,000 lbs. are currently prohibited.
- In 2024, there were approximately 1,700 operations by aircraft that have a MTOW greater than 75,000 pounds.

The airport is experiencing increasing levels of activity by aircraft with greater than 75,000 lbs. MTOW. It is recommended that the runway have at least a 100,000 lb. weight bearing capacity to accommodate the current mix of aircraft operating at the airport.

Table 4E | Next Generation Business Jet Details

TABLE 4E | Next Generation Business Jet Details			
Aircraft	**Length**	**Wingspan**	**MTOW**
Gulfstream 700	109'10"	103'	107,600 lbs.
Gulfstream 800	99'9"	103'	105,600 lbs.
Global 7500	109'7"	110'4"	115,000 lbs.
Global 8000	102'	104'	104,800 lbs.
MTOW: Maximum takeoff weight			

- These next generation business jets are currently prohibited from operating at SDL because they are over 100,000 lbs. MTOW.
- Heavier business jets may reduce the useful life of the pavement.
- Those business jets under 100,000 lbs. have wingspans less than 100’ but the newer business jets have wingspans greater than 100’.
- Analysis of separation distances on the airfield indicates that an additional 4’ of wingspan of these next generation business jets would have no impact on the design standards. An acceptable level of safety would be maintained.

Ex 3J: Airside Facility Summary

		EXISTING	FUTURE
AIRPORT DATA			
	Critical Aircraft	D-II-2B	Maintain
	Runway Design Code	D-II-5000	Maintain
	Visibility Minimums	1-Mile	Maintain
RUNWAY 3-21			
	Length x Width	8,249' x 100'	Maintain
	Pavement Weight Bearing Capacity	45,000 lbs. (S) / 75,000 lbs. (D)	Consider increase ★
	Shoulders	10'	Maintain
	Declared Distances	Yes	Review declared distances to maximize length ★
	Hold Lines	152' from runway centerline	Evaluate hold line separation ★
	RSA	400' feet wide/1,000' beyond ends	Maintain
	ROFA	630' wide/470' behind Rwy 21/500' behind Rwy 3	Maintain MOS ★
	OFZ	400' wide/200' beyond ends/Meets Standard	Maintain
	RPZ	Some incompatible land uses	Remove incompatible land uses if feasible
TAXIWAYS/APRONS			
	Width	40'-50'	Maintain existing width
	Taxiway Geometry	High energy crossings, direct access, angled taxiways	Evaluate each taxiway and plan to reconstruct to current recommendations, including fillet design
	Runway/Taxiway Separation	250'	Maintain MOS ★
	Holding Aprons	Four hold aprons	Maintain
	Aircraft Parking Areas	Terminal, NetJets, Signature East + West	Maximize aircraft parking apron
	Taxilanes	Parallel taxilanes/Apron edge taxilanes	Evaluate separation distance ★
NAVIGATION AND APPROACH AIDS			
	Control Tower	ATCT constructed in 1989	FAA to consider replacement
	Weather Equipment	ASOS	Maintain
	Windsocks	Two (one lighted)	Add windcone to south end of airfield
	Visual Approach Aids	PAPI-2L	Upgrade to PAPI-4L
		REILs	Maintain
	Instrument Approach Procedures	Circling and RNP	Consider SRMP for straight-in GPS Approach ★
LIGHTING, MARKING, AND SIGNAGE			
	Universal Beacon	Rotating Beacon	Maintain
	Runway Edge Lighting	MIRL	Maintain
	Taxiway Edge Lighting	MITL	Maintain
	Runway Markings	Non-precision markings	Maintain
	Hold Bar Location	152' from Runway centerline	Maintain
	Signage	Lighted airfield signs	Maintain
	Distance Remaining Signs	Distance remaining signs	Maintain

KEY

ASOS - Automated Surface Observation System
ATCT - Airport Traffic Control Tower
ATIS - Automated Terminal Information System
D - Dual Wheel Landing Strut
GPS - Global Positioning System
MIRL - Medium Intensity Runway Lighting
MITL - Medium Intensity Raxiway Lighting
PAPI - Precision Approach Path Indicator
REIL - Runway End Identification Lighting
RDC - Runway Design Code
MOS - FAA Approved Modification of Standards
S - Single Wheel Landing Strut
SRMP - Safety Risk Management Panel
OFZ - Runway Obstacle Free Zone
RPZ - Runway Protection Zone

Ex 3K: Landside Facility Summary

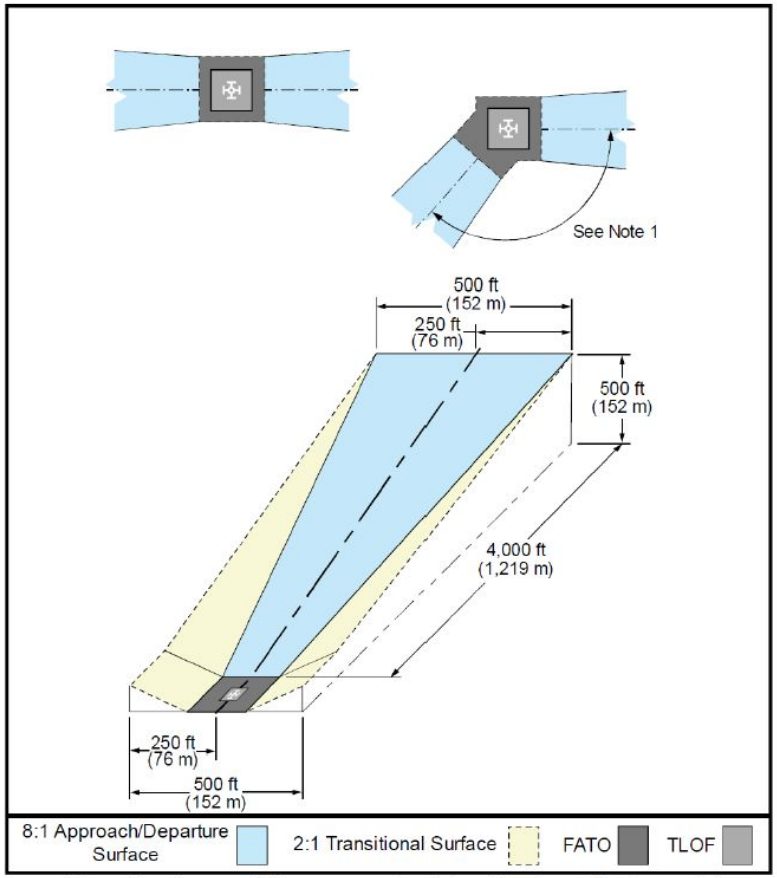
	CURRENTLY AVAILABLE	20-YEAR PROJECTED NEED	DIFFERENCE
Aircraft Hangar Needs	Approx. 500,000 s.f	Approx 894,000 s.f.	394,000 s.f.
Aircraft Parking Apron Needs	189,000 s.y.	256,600 s.y.	67,600 s.y.
Terminal Service Needs	17,000 s.f.	21,500 s.f.	4,500 s.f.
Public Auto Parking	More needed currently	Consider parking structure/Construct parking with each new hangar	
Fuel Storage Capacity			
Jet A	178,000 gal.	Based on FBO Needs	
AvGas 100LL	58,100 gal.		
Perimeter Fencing	Chain-link fencing with barbed wire, various walls	Maintain full perimeter fencing and walls	
Maintenance Facilities	Airport Operations Center	Maintain	
Wash Racks	One public	Maintain	
ARFF Facility	On-airport	Maintain	

Ex 4K: Potential Property Acquisition

Figure 4-2: Potential Locations for New Hangars

Figure 4-3: Potential Surface or Structured Vehicle Parking

Figure 4-4 | Vertiport Design Standards



Note 1: The preferred approach/departure surface is based on the predominant wind direction. Where a reciprocal approach/departure surface is not possible in the opposite direction, use a minimum 135-degree angle between the two surfaces.

Figure 4-4: Vertiport Design Considerations

- Vertiport/Heliports are generally installed to enhance safety for arrivals and departures.
- Require reserved landing areas and airspace.
- Can be limiting to helicopter operations because of the need to arrive/depart from a single location then hover taxi to their destination apron/hangar.
- Most helicopter operators prefer to fly to and from an apron area near their hangar/terminal facility.
- There is no FAA trigger for the installation of a vertiport/heliport.
- Generally, when warranted, they should be in proximity to a common destination, like a terminal or hangar.
- A vertiport/heliport is not required at this stage. The need and/or design for one should be monitored on an on-going basis.

WE WANT TO HEAR FROM YOU!

Direct any questions or comments after this meeting to Coffman Associates team members

Patrick Taylor: ptaylor@coffmanassociates.com
or visit the project website to submit comments online.

https://scottsdale.airportstudy.net

NEXT STEPS

Development Concept, Capital Improvement Program