Sheldon Regional Airport- Sheldon, IA

Airport Master Plan Meeting – September 2, 2026

Agenda

- Introductions
- Progress to Date
- Aviation Activity
- Critical Design Aircraft
- Facility Requirements
  - Airfield
  - Terminal Area
- Next Steps



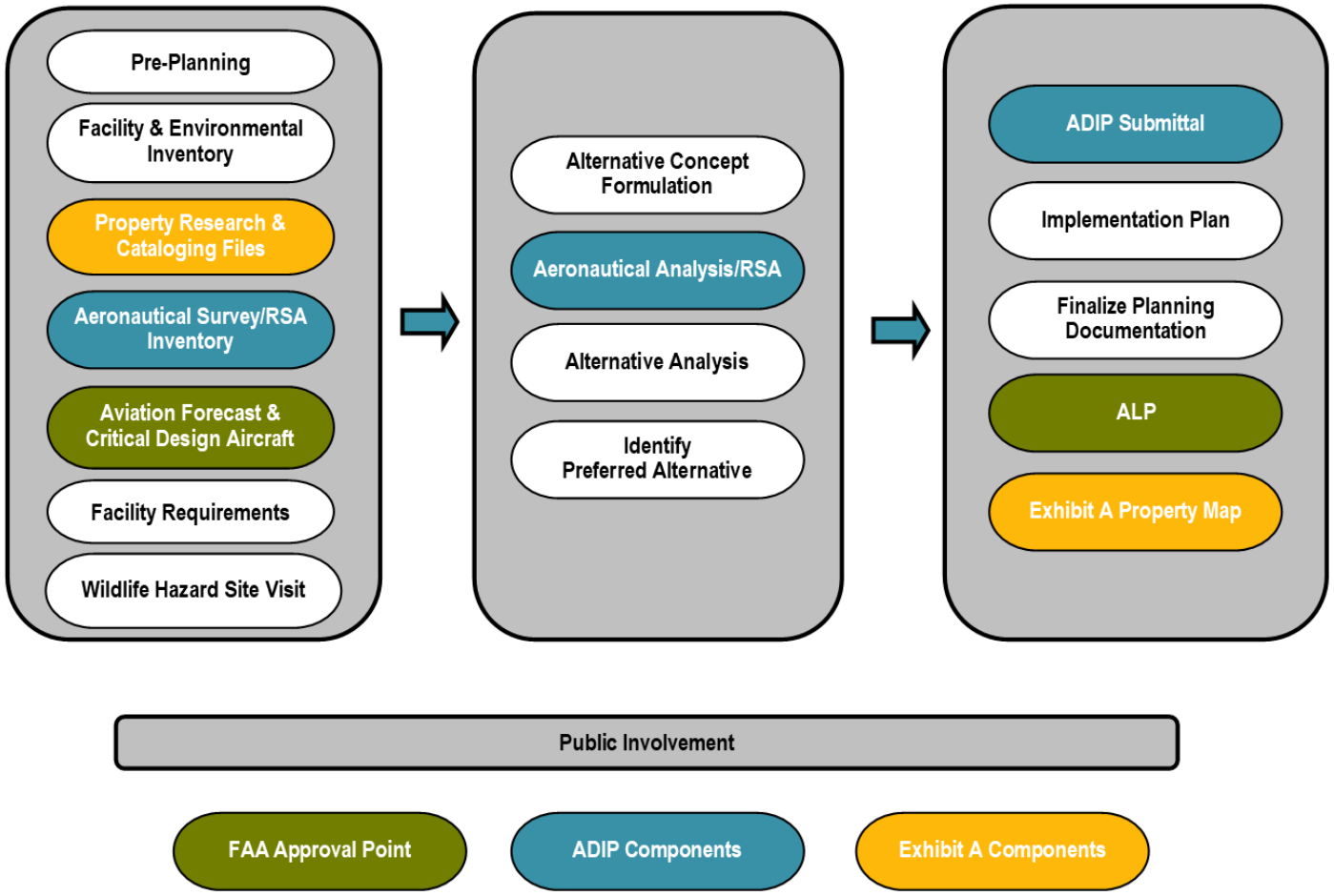


Project Participants

- Project Team
  - Airport Engineer – Jason Eygabroad, BEI
  - Aviation Planner – Andrew Zielike, KLJ
  - Aviation Planner – Kent Penney, KLJ
  - Aviation Planner – Jack Vogt, KLJ
- Sheldon Airport/ City of Sheldon
  - City Commission
  - Airport Commission
- Agencies Involved
  - FAA - Junior Lindsey
  - Iowa DOT Office of Aviation - Shane Wright
- Planning Advisory Committee (PAC)
  - Lyle Vust, Midwest Flying Service
  - Nic Vust, Midwest Flying Service
  - Todd Uhl, City of Sheldon
  - Ken Van Kekerix, Airport Commission
  - Sam Wagner, Airport Commission
  - Tom Eggers, City Commission
  - Tania Herrera Gonzales, Sheldon Chamber and Development Corp.
  - Nancy McDowell, O'Brien County Supervisor
  - Josh Kraayenbrink, KT Tools

Progress to Date

- Chapter 1 Submitted
- Critical Design Aircraft approved
- Agency meeting with City of Sheldon, FAA and Iowa DOT
- RSAD Submitted
- Scheduling Wildlife Hazard Site Visit
- Working through obstacle data



Aviation Activity

- 2,400 Estimated Annual Operations
  - TFMS (884)
  - Based Aircraft (1,296)
  - Military (18)
  - Flight Training (200)

- 21 Validated Based Aircraft
- Constrained scenario was used as benchmark to preserve space for future hangar growth

Forecasted Annual Aircraft Operations

Category	2026	2031	2036	2041	2046	CAGR
Local	700	780	860	950	1050	2.05%
Itinerant	1,700	1,890	2,090	2,300	2,550	2.05%
Total	**2,400**	**2,670**	**2,950**	**3,250**	**3,600**	**2.05%**

Forecast Approval not required by FAA

Forecasted Based Aircraft (Constrained)

Aircraft Type	2026	2031	2036	2041	2046
Piston (Single)	12	13	14	15	16
Piston (Multi)	1	1	1	1	1
Turboprop	5	5	6	6	7
Jet	3	4	4	4	4
Helicopter	0	0	0	0	0
Other	0	0	0	0	0
TOTAL	21	23	25	26	28

Critical Design Aircraft

- Existing and Future – B-II Large
- Data indicates steady increase in C-II operations
  - C-II has been approved for Ultimate Critical Design Aircraft
- Alternatives will be developed to B-II design standards
- ALP will depict B-II standards

Aircraft Approach Category – B

- Represents speed that aircraft approaches runway
- Approach speed 91 knots or more but less than 121 knots

Airplane Design Group– II

- Represents wingspan and height of aircraft
- Wingspan: 20 ft to < 30 ft
- Tail height: 49 ft to < 79 ft

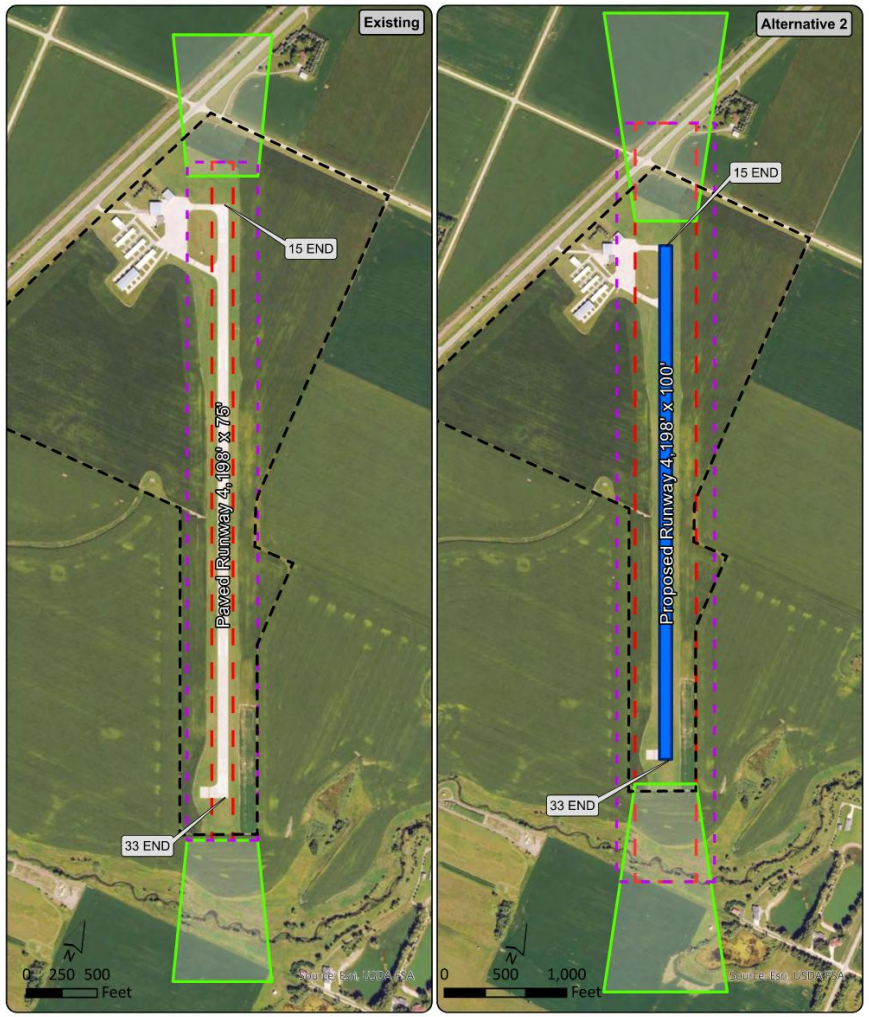
Taxiway Design Group– 1B

- Represents pavement width and turning clearance needed by aircraft (Main Gear Width and Cockpit to Main Gear distance)
- MGW: 0 to ≤ 15 ft
- CMG: > 20 ft to ≤ 40 ft

Weight Class- Large

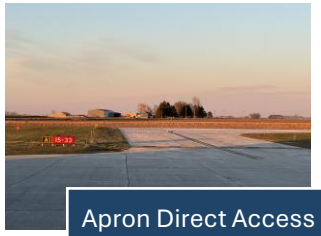
- Greater than 12,500 lbs

C-II Discussion (Ultimate)



- Design/Protective surfaces increase in size with faster aircraft approach speeds
- Meeting these standards is not feasible within the airport's current property and runway alignment
- New planning study will be needed to evaluate full impacts and feasibility
- Primary focus will be to meet B-II standards

Existing Deficiencies



Apron Direct Access



Hangar Taxilane Width and Separation





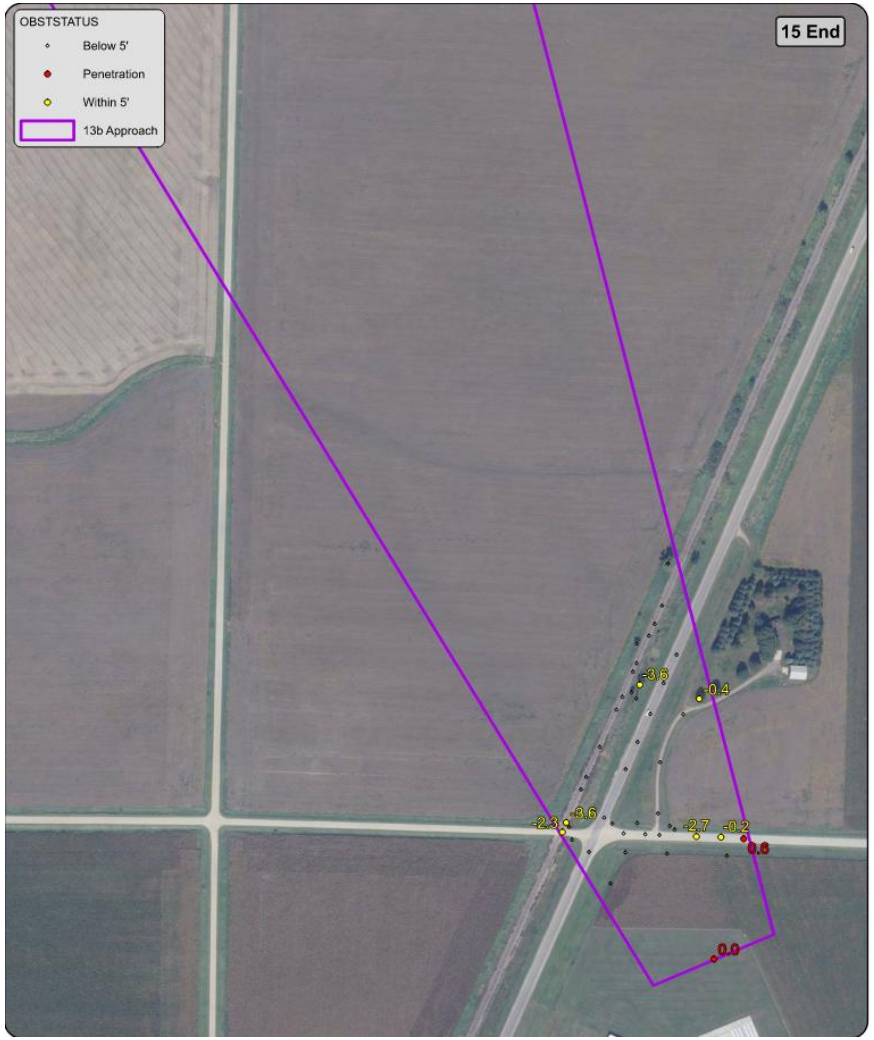
Non-Frangible Objects in ROFA

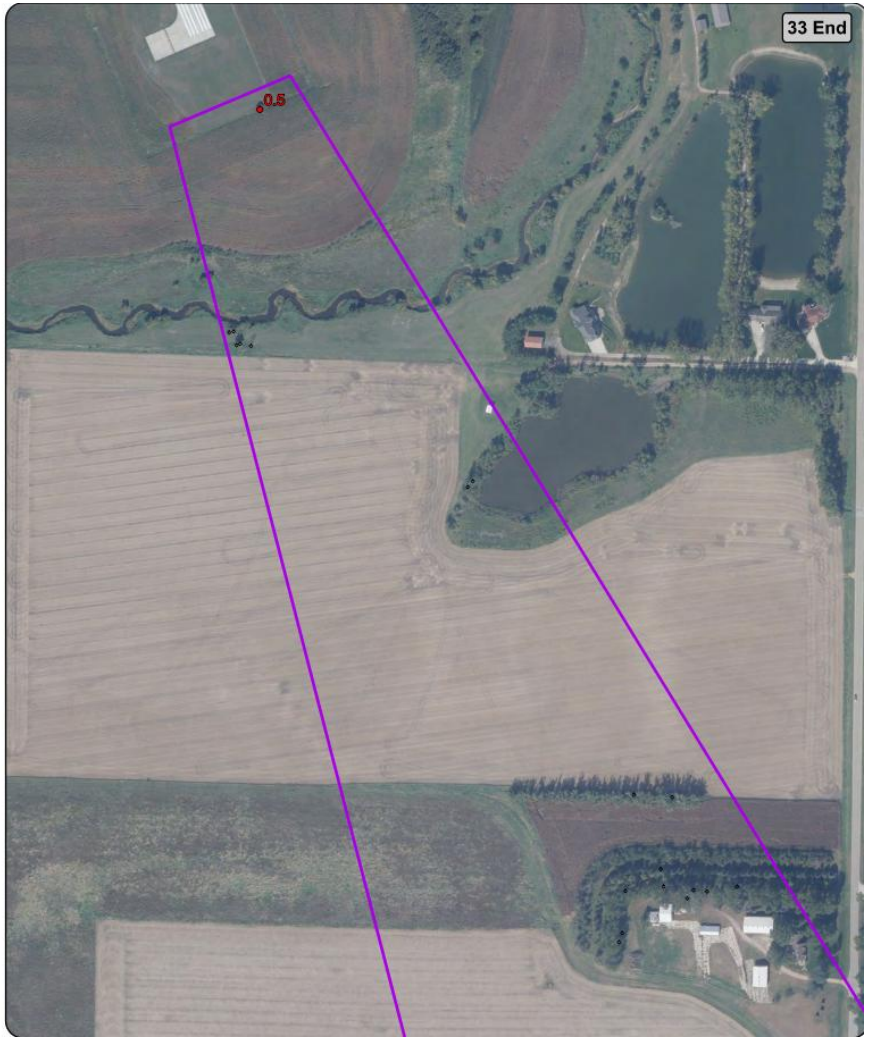


Non-Standard RSA Grades/Off Property/Fence

Obstacles

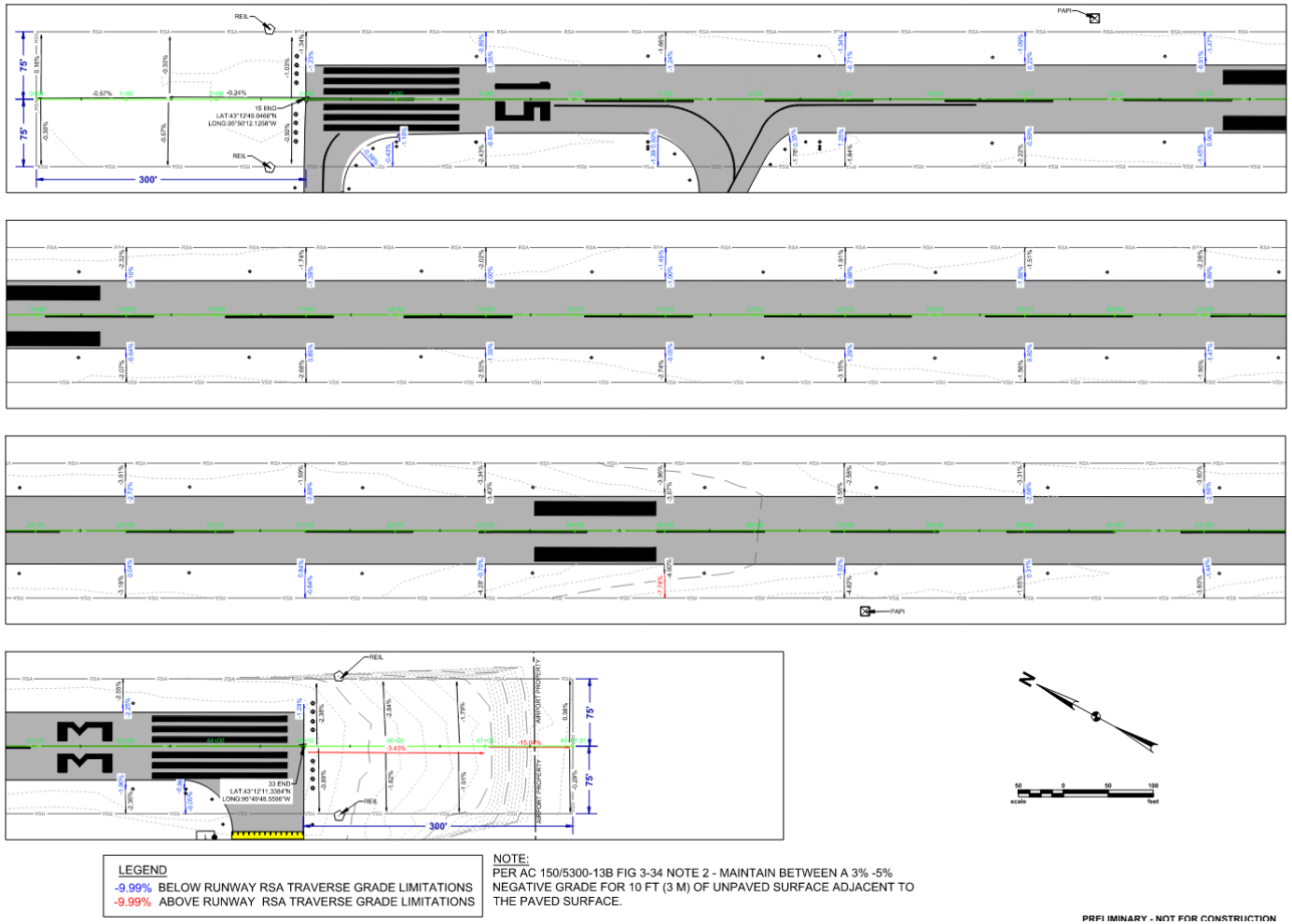
- Airport Design (5300-13B Par 3.6) Approach Surface Obstacles
  - 20:1 slope
- Departure Surface and Part 77 are flatter surfaces





Runway Safety Area

- Non-Standard Grades
  - Sides of RSA
  - 33 end, substantial drop off toward the Floyd River
- Extends Off Property
- Fence in RSA
- Near term project to rebuild the RSA

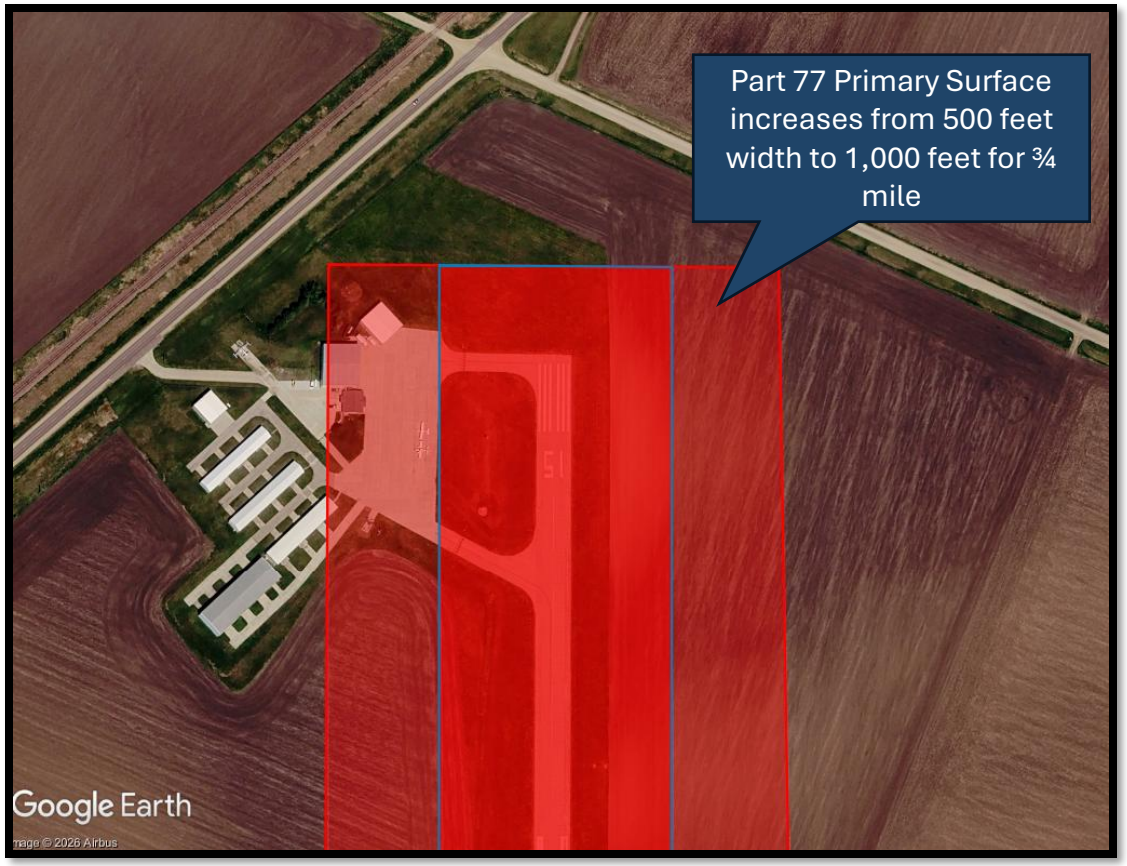


Runway Length

- Current Length: 4,199 feet
- Operator uses DAAP to operate in summer months
- Restricts fuel load by 40-50%
- Grooving can help with stopping distance during wet conditions
- New runway length guidance coming out soon
  - SARLAT 2.0
- Planning focus will be on achievable length

Airport and Runway Data	
Airport Elevation	1,419.2 feet
Mean Daily Maximum Temperature of Hottest Month (July)	82.7°F
Runway Gradient	
Aircraft Classification	**Recommended Runway Length**
Small Airplanes 12,500 Pounds or less	
10 or more passenger seats	4,320 feet
Less than 10 passenger seats at 95 percent of fleet	**3,500 feet**
Large Aircraft more than 12,500 Pounds but less than 60,000 Pounds	
75 percent of fleet at 60 percent useful load	**4,895 feet/ 5,500 feet (Wet)**
75 percent of fleet at 90 percent useful load	6,358 feet/ 7,000 feet (Wet)

Instrument Approach Improvements



Existing – 1 mile visibility, 300-foot ceiling

Weather Condition	Percentage	Days Per Year	Hours Per Year
VMC	89.53%	326.8	7,843
Usable IMC	8.27%	30.2	724
Usability	**97.80%**	**357.0**	**8,567**
Below Weather Minimums	2.20%	8.0	193
Total	**100.00%**	**365.0**	**8,760**

¾ mile visibility, 250/300-foot ceiling

Weather Condition	Percentage	Days Per Year	Hours Per Year
VMC	89.53%	326.8	7,843
Usable IMC	8.61%	31.4	754
Usability	**98.14%**	**358.2**	**8,597**
Below Weather Minimums	1.86%	6.8	163
Total	**100.00%**	**365.0**	**8,760**

- 30 additional usable hours per year if SHL achieved ¾-mile

Terminal Area Deficiencies

- Hangar taxilanes
  - Pavement Width 20’
- Taxilane Object Free Area Penetrations
  - Hangars
  - Fuel System



Name	ADG	TDG	Existing				Standard		
			Width	CL to Object	Object in TLOFA	Lighting	Width	TLOFA	CL to Object
H1	I	1B	20’	29.4’	Yes	-	25’	79’	39.5’
H2	I	1B	20’	35.3’	Yes	-	25’	79’	39.5’
H3	I	1B	20’	36.4’	Yes	-	25’	79’	39.5’
H4	I	1B	20’	36.6	Yes	-	25’	79’	39.5’
TL 1	II	2A	35’		No		35’	110’	55’
TL 2	I	1B	25’		Yes	-	25’	79’	39.5’

Hangar and Aircraft Parking Needs

- ~39,000 SF of hangar space
- Approximately 8,000 SF needed for based aircraft through 2046
  - Box or T-Hangars
- 100-foot by 100-foot box hangar for transient aircraft
- Apron sizing based on ADG-II aircraft maneuvering and staging

Category	*Existing*	Base	PAL 1	PAL 2	PAL 3	PAL 4
Based Aircraft Storage Space (SF)						
Aircraft Storage Space	*39,000*	35,000	39,952	41,399	42,947	47,105
Capacity/Deficiency	**-**	**4,000**	**952**	**2,399**	**3,947**	**8,105**

Other Terminal Area Needs

- Automobile Parking
  - 12 existing parking stalls
  - Additional stalls needed
- Fuel System/Storage
  - TLOFA obstruction
  - Underground currently
  - Any issues?
  - Capacity needs?







Next Steps

- Airfield and Terminal Alternatives
- Wildlife Hazard Site Visit
- Exhibit A Research and Development

- Next Meeting: Alternatives

- **Master Plan Website:** https://inputcentral.com/shl-airportplan

Thank you for participating!

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