JEROME COUNTY Idaho

Jerome County Airport (JER)

Airport Master Plan Update – Technical Advisory Committee Kick Off

February 2, 2021

J-U-B ENGINEERS, INC.

THE LANGDON GROUP a J-U-B Company

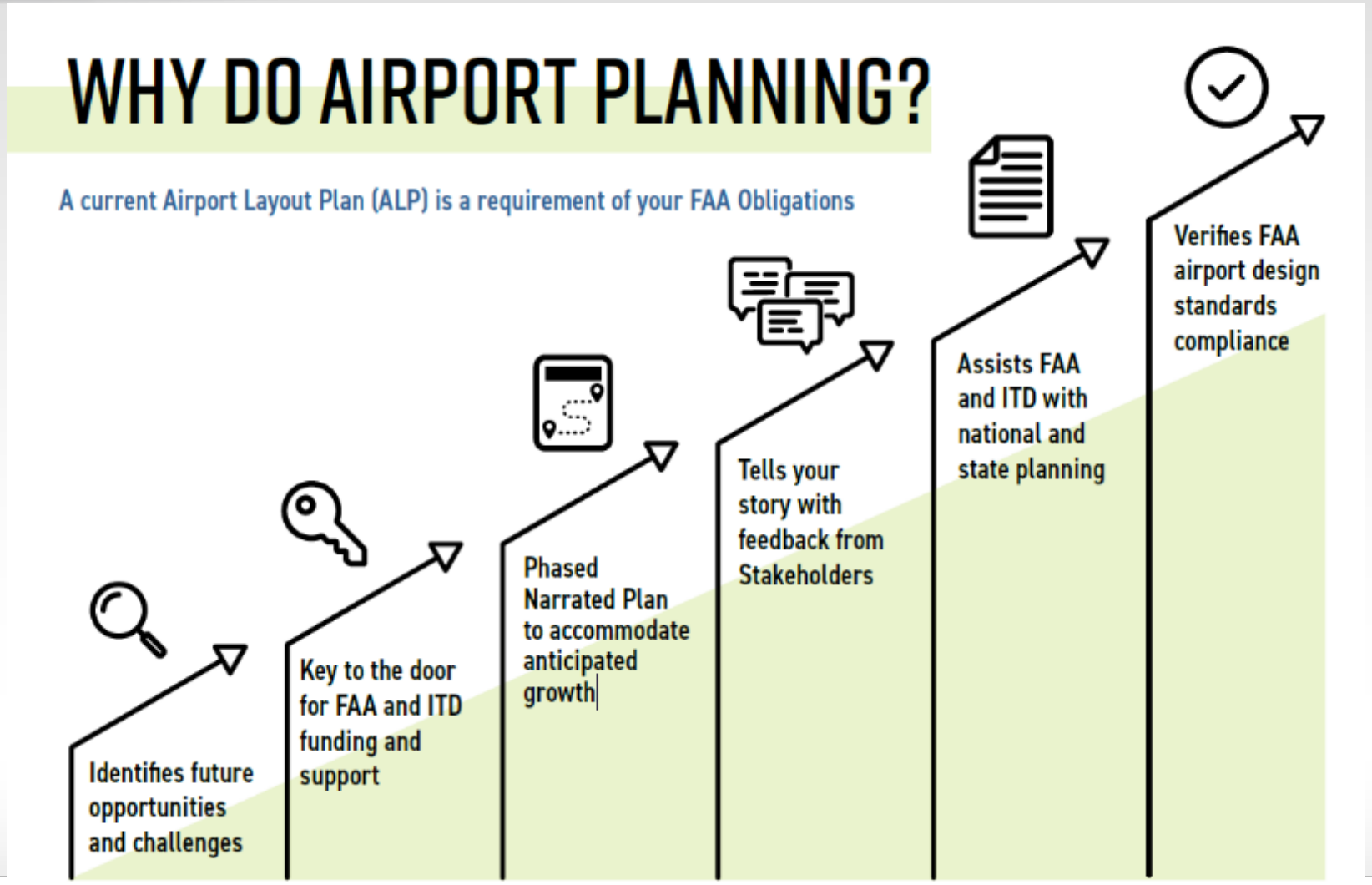
GATEWAY MAPPING INC. a J-U-B Company

OTHER J-U-B COMPANIES

AGENDA

- Introduction to the Planning Study
- Stakeholder and User Responses
- Findings of the Jerome Airport Inventory Study
- The Jerome Airport Aviation Forecast
- Runway Length Analysis
- Planning for Needs and Alternatives
- Next Steps

WHY DO AIRPORT PLANNING?



WHAT DO WE GET FROM THIS PROCESS?

Working Paper 1

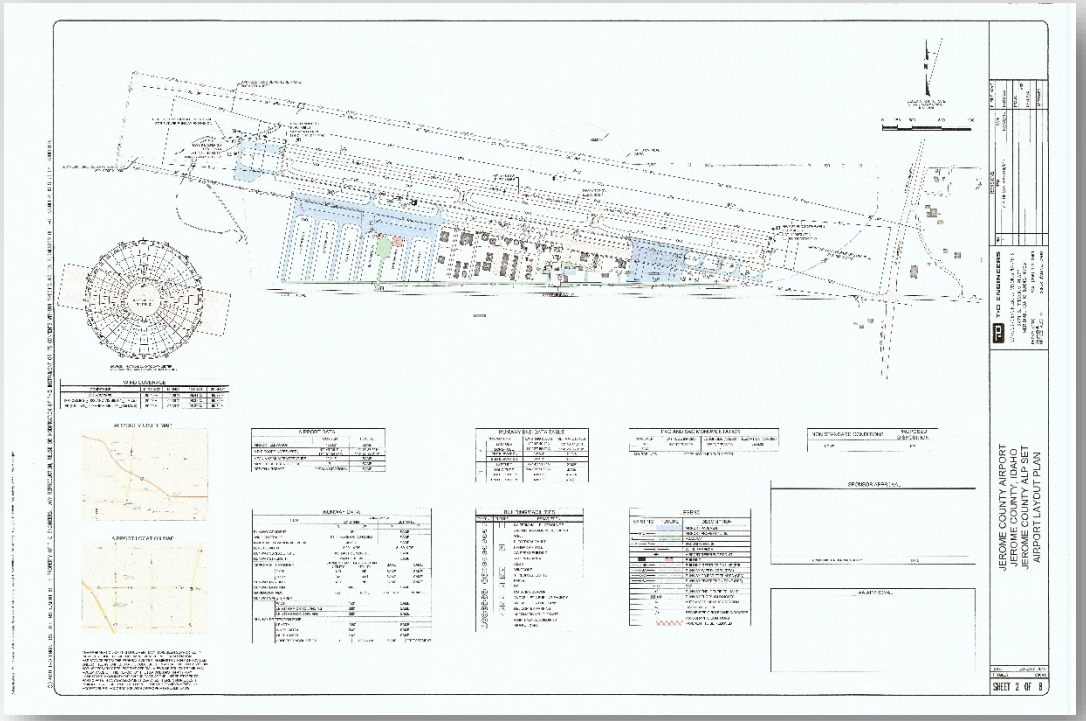
- Study Initiation
- Public Involvement/ Stakeholder Coordination
- Aviation Inventory and Existing Conditions
- Environmental
- Aviation Forecasts

Working Paper 2

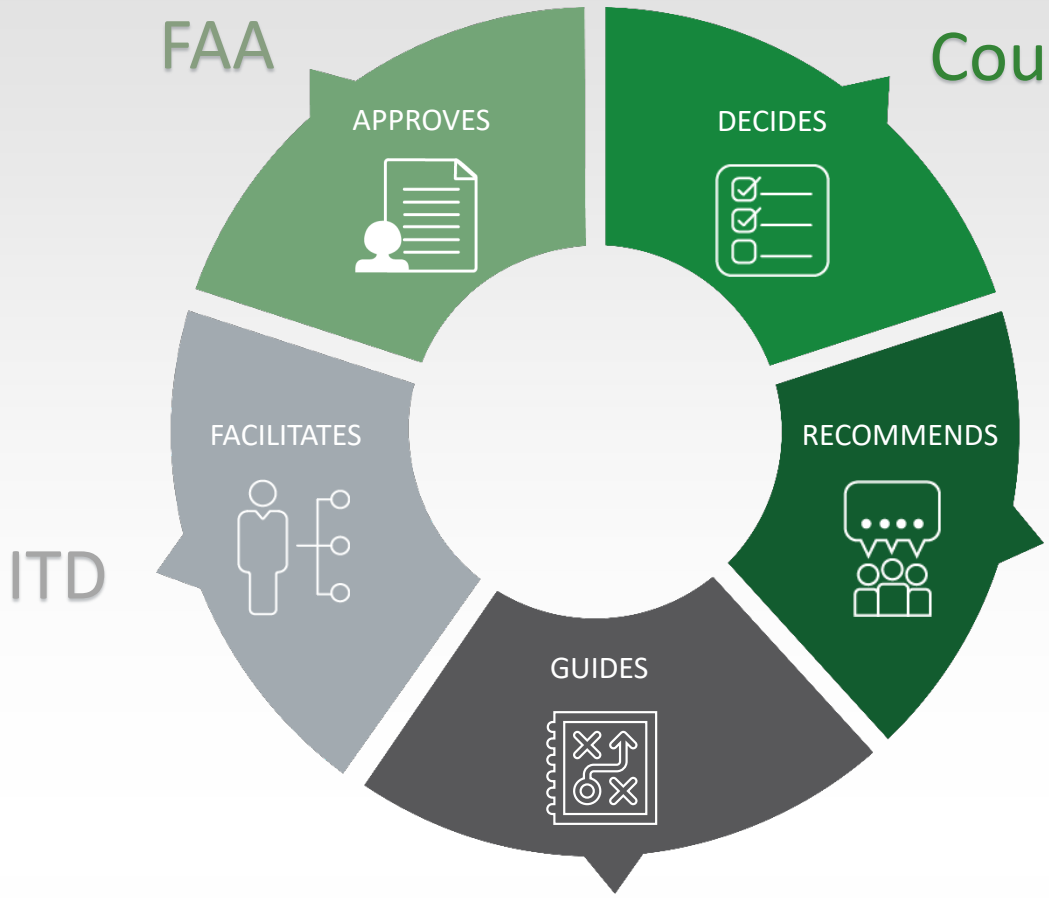
- Facility Requirements
- Alternatives and Development Evaluation

Final Product

- Facilities Implementation Plan and Financial Feasibility Analysis
- Updated Airport Master Plan Narrative
- Updated Airport Layout Plans



WHO DOES WHAT?



FAA

County Commission

ITD

Airport Staff & TAC

J-U-B Engineers

ROLE OF THE TECHNICAL ADVISORY COMMITTEE (TAC)

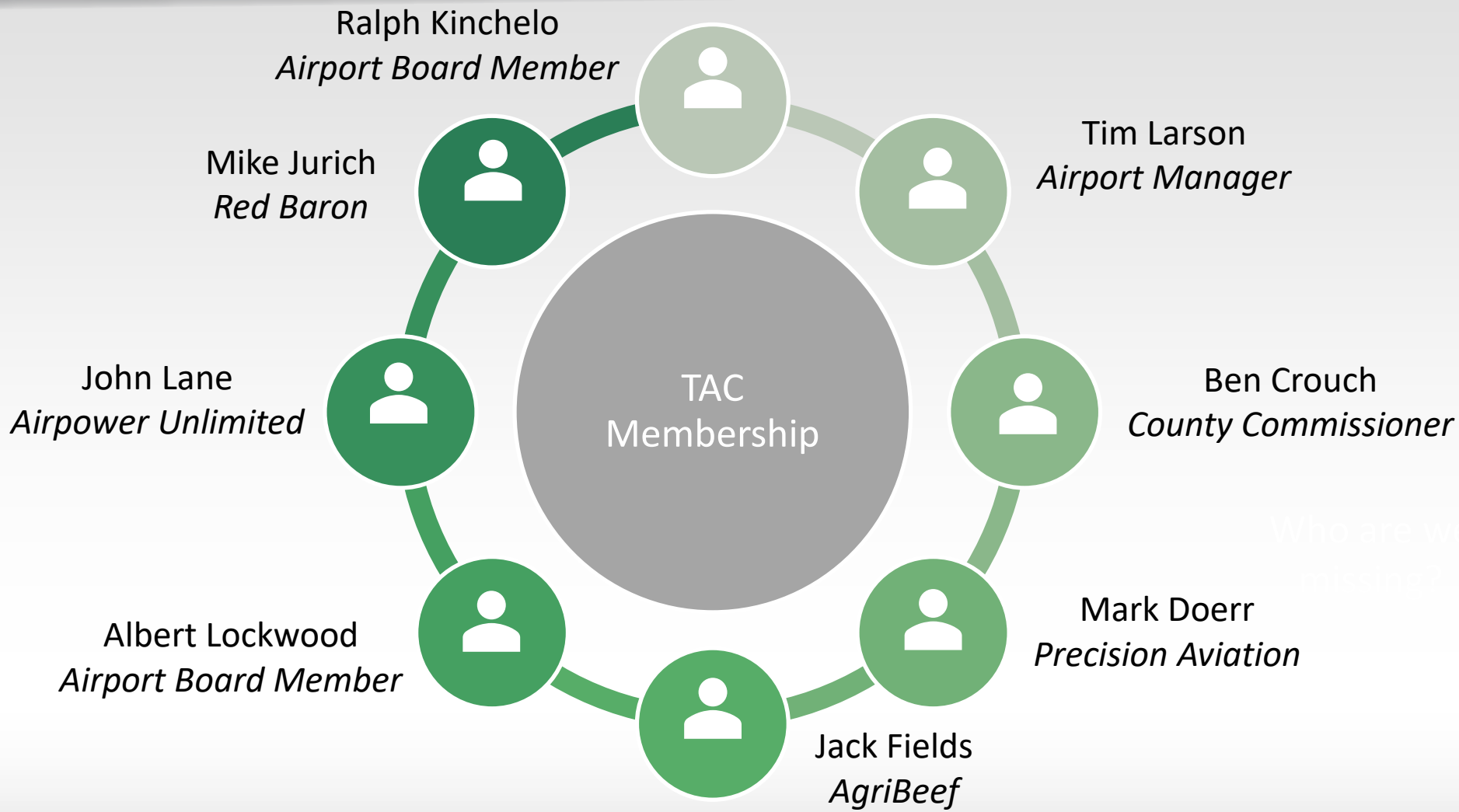
What is it?

- Advisory board to the County Commission
- Liaisons between the community and County

What do members do?

- Exchanges different ideas and perspectives
- Takes community benefits into consideration
- Works together to provide recommendations that meets the needs and interests of all parties

TAC MEMBERS

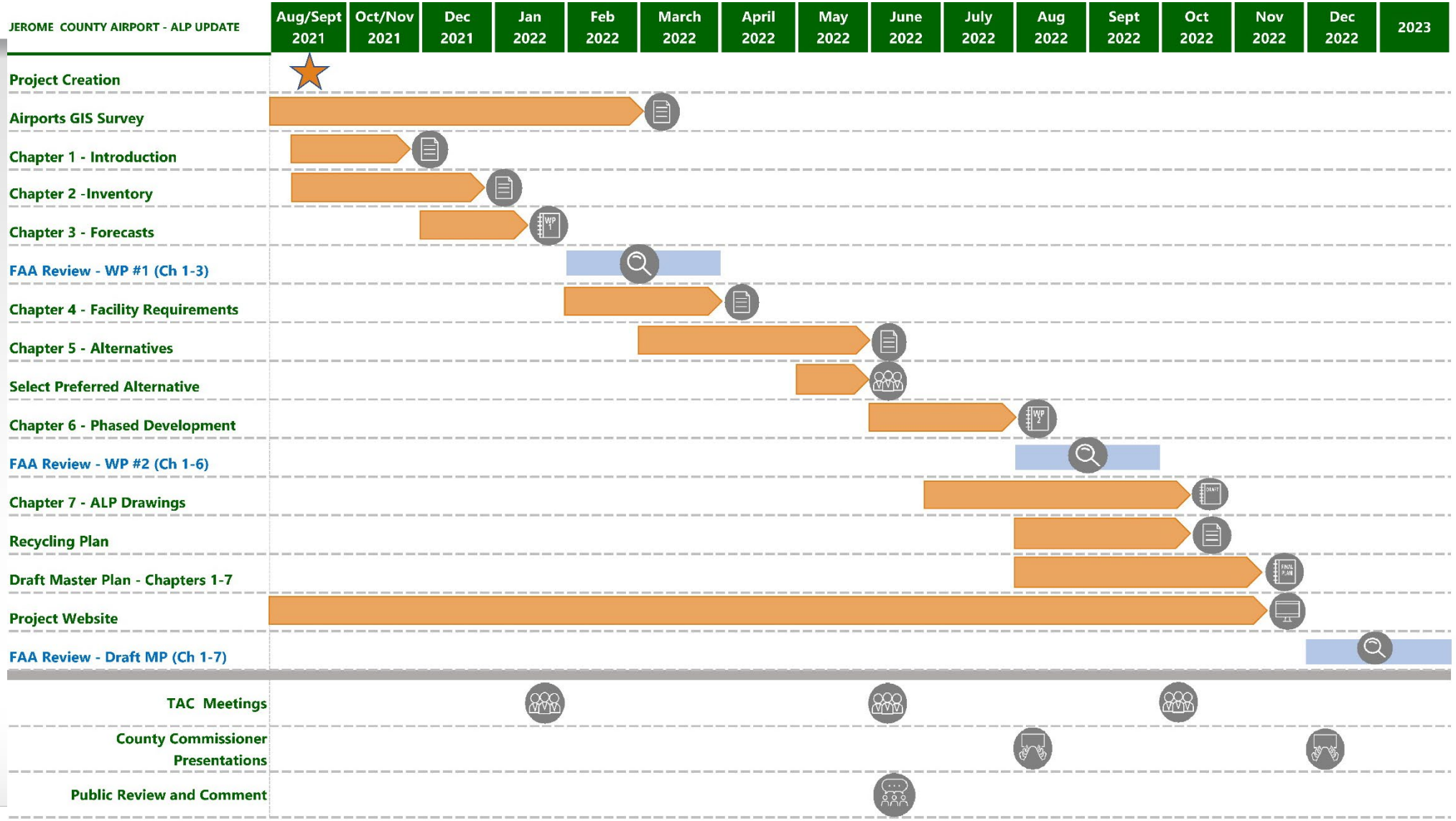

Ralph Kinchelo
Airport Board Member
Tim Larson
Airport Manager
Mike Jurich
Red Baron
John Lane
Airpower Unlimited
TAC Membership
Ben Crouch
County Commissioner
Albert Lockwood
Airport Board Member
Mark Doerr
Precision Aviation
Jack Fields
AgriBeef

1 INTRODUCTION

Chapter One Introduction

- Project Progress
- Issues and Hot Topics
- Public Outreach
- Stakeholder Feedback

PROJECT SCHEDULE



PLAN FOR KEY ISSUES

PUBLIC INVOLVEMENT OVERVIEW

The Langdon Group

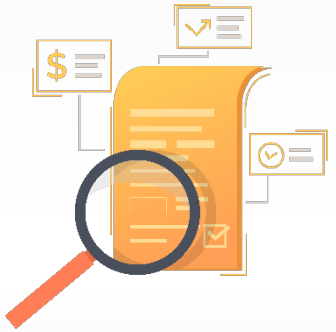
- Specializes in public education and outreach
- Focused on process, not outcome

Involvement

- TAC
- Stakeholder interviews
- Open Houses (2)
- Presentations to County Commission

Materials

- Meeting Materials and Logistics
- Public Involvement Post-Project Report



PROJECT WEBSITE

https://jermasterplan.jub.com

STAKEHOLDER PARTICIPANTS

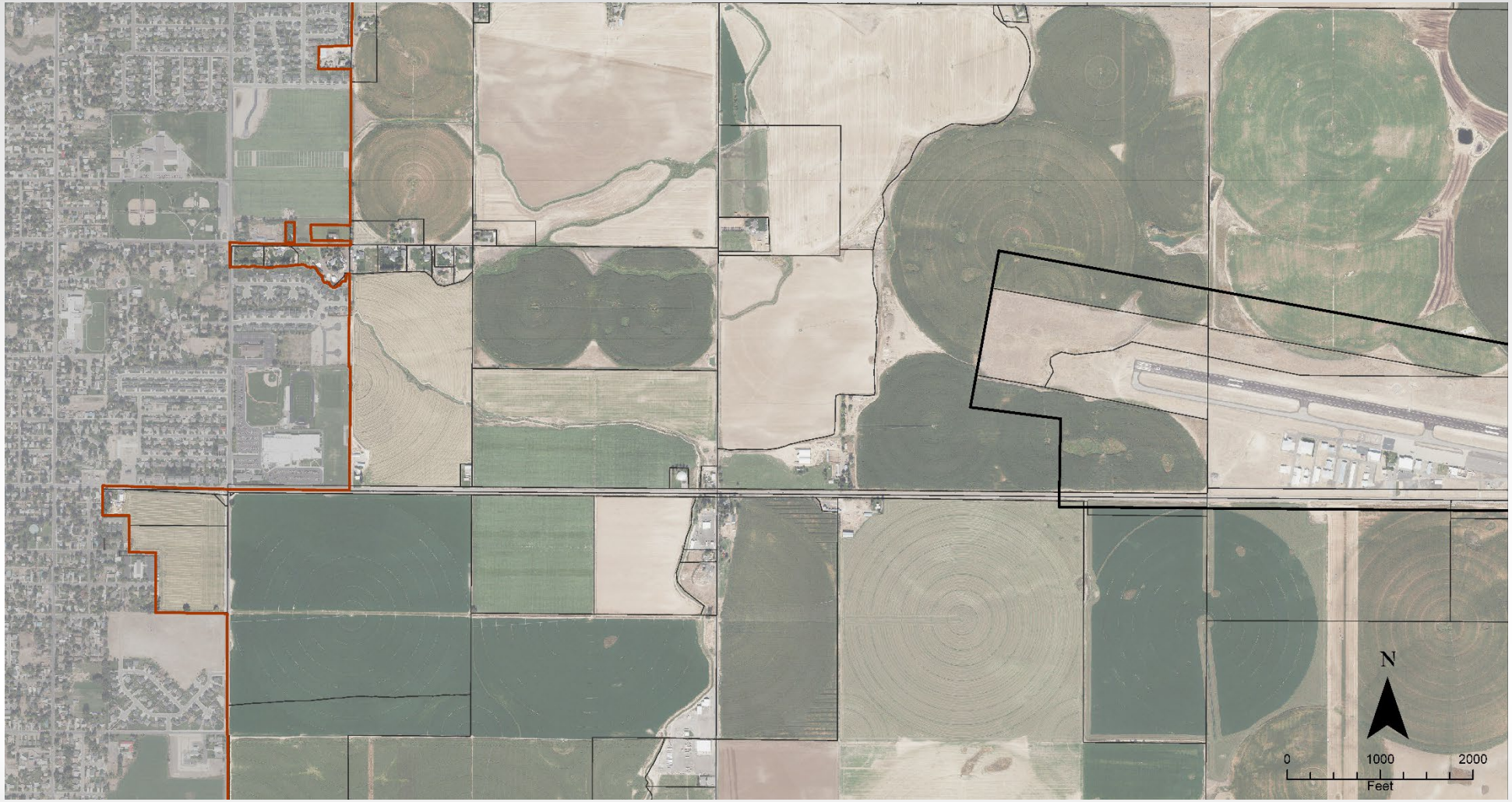
1. Larry Hall, Jerome 20/20 Economic Development
2. Dave Davis, Jerome City Mayor
3. Mike Williams, Jerome City Administrator
4. Tyson Carpenter, Jerome City Engineer
5. Ida Clark, Jerome City Planning and Zoning Manager
6. Scott Jackson, Airport Tenant and Pilot
7. Jay Thieler, AgriBeef
8. Dan Forsyth, White Clover Dairy
9. Melissa Barry, South Idaho Recreation and Tourism
10. Erich Gleckler, Bureau of Land Management – Twin Falls

STAKEHOLDER ASSESSMENT THEMES

Runway

- Needed for larger aircraft and/or jets include Sun Valley Allen Group overflow
- Many subdivisions planned in the direction of the airport that should be considered with a new runway's RPZ. Concern exists that airport growth and city growth boundaries will converge.
- High School and Horizon elementary appear to be in the direct path
- Purchasing property should not be necessary, existing airport property is sufficient
- AgriBeef is building a 273,000 square foot facility near airport with 400 employees and is banking on a longer runway. They have a Learjet 75 in Boise that they will fly into Jerome 1-2 times each week in the summer. The also have investors with a King Air and a jet that would fly into Jerome with a longer runway.
- Concern by property owners north and northeast that they will need to reconfigure irrigation if expanded runway impacts their property.

AIRPORT VICINITY



STAKEHOLDER ASSESSMENT THEMES

Promotion

- Build awareness in region about the benefits of using this airport including proximity to Twin Falls and the interstate
- New, professional sign is needed
- In process
- Market FBO for events to bring attention
- Improve entry

STAKEHOLDER ASSESSMENT THEMES

Facilities

- Addition of FBO has helped with needed improvements
- City water and sewer is getting closer as city grows and could serve the airport if there is interest
- Hangar space west of Scott Jackson available for taxi way and hangar growth with fill dirt in place
- Consider road-side/air-side development opportunities on highway including shipping
- Improve road system at east end with new entrance
- Pave roads to decrease runway FOD

2 INVENTORY

Chapter Two Inventory

- Role
- Airfield and Pavements
- Airspace, Land use
- Activity

ADDITIONAL INVENTORY

- Role in System
  - Local general aviation airport in the National Plan of Integrated Airport Systems (NPIAS)
  - $9,947,831 in federal funds from 2001 to 2021
- Activity
  - 39 based aircraft
  - 13,367 aircraft operations (observed in 2021)
- Airside
  - Beacon and Local Weather available
  - 5,000’ x 75’ Runway 9/27
  - 20 tie-downs
- Airspace and Approaches
  - RNAV (GPS) Approaches for Non-Precision Instrument procedures
  - Runway 9: 1-mile visibility minimum
  - Runway 27: 1¼ -mile visibility minimum

INVENTORY

Airside

Landside

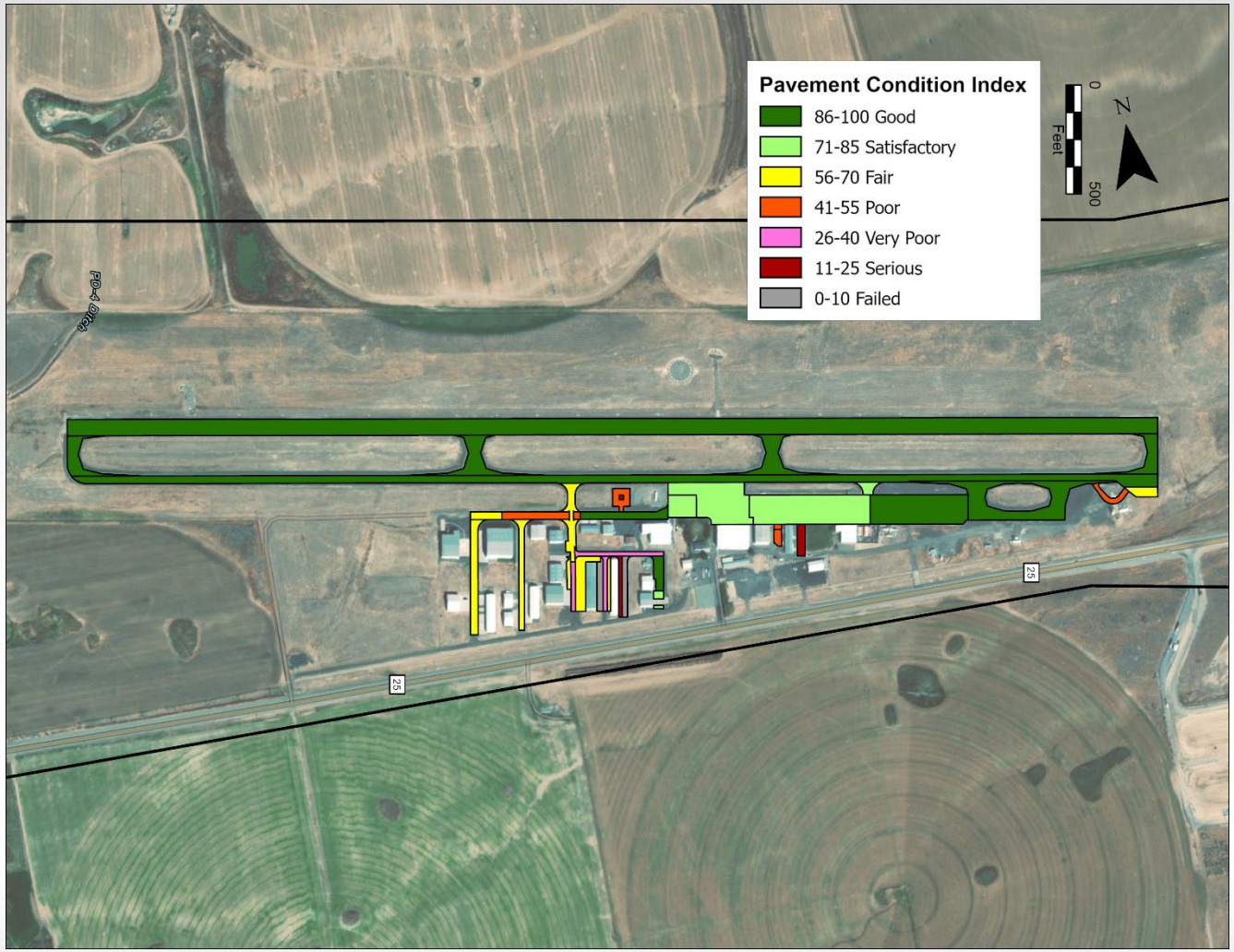
DESIGN STANDARDS

Standard/Specification	Standard	Existing
Runway Design Code (Runway 9/27)	B-II-5000	B-II-5000
Critical Aircraft	Cessna Citation V (B-II, NP, Large)	Cessna Citation V (B-II, NP, Large)
Runway Length/Width	5,000 x 75 Feet	5,000 x 75 Feet
Runway Safety Area Width/Beyond End	150’/300’	150’/300’
Runway Object Free Area Width/Beyond End	500’/300’	500’/300’
Runway Obstacle Free Zone Width/Beyond End	400’/200’	400’/200’
Runway Protection Zones	500’x700’x1,000’ (9 and 27 Ends)	500’x700’x1,000’ (9 and 27 Ends)
Runway to Aircraft Holdline	200’	200’
Runway to Parallel Taxiway	240’	240’
Runway to Aircraft Parking	>250’	316’
Taxiway Design Group	2	2
Taxiway Width	35’	35’
Taxiway Shoulder Width	15’	15’
Taxiway Safety Area Width	79’	79’
Taxiway/Taxilane Object Free Area Width	131’/115’	131’/115’

PAVEMENT CONDITION

2020 Pavement Inventory

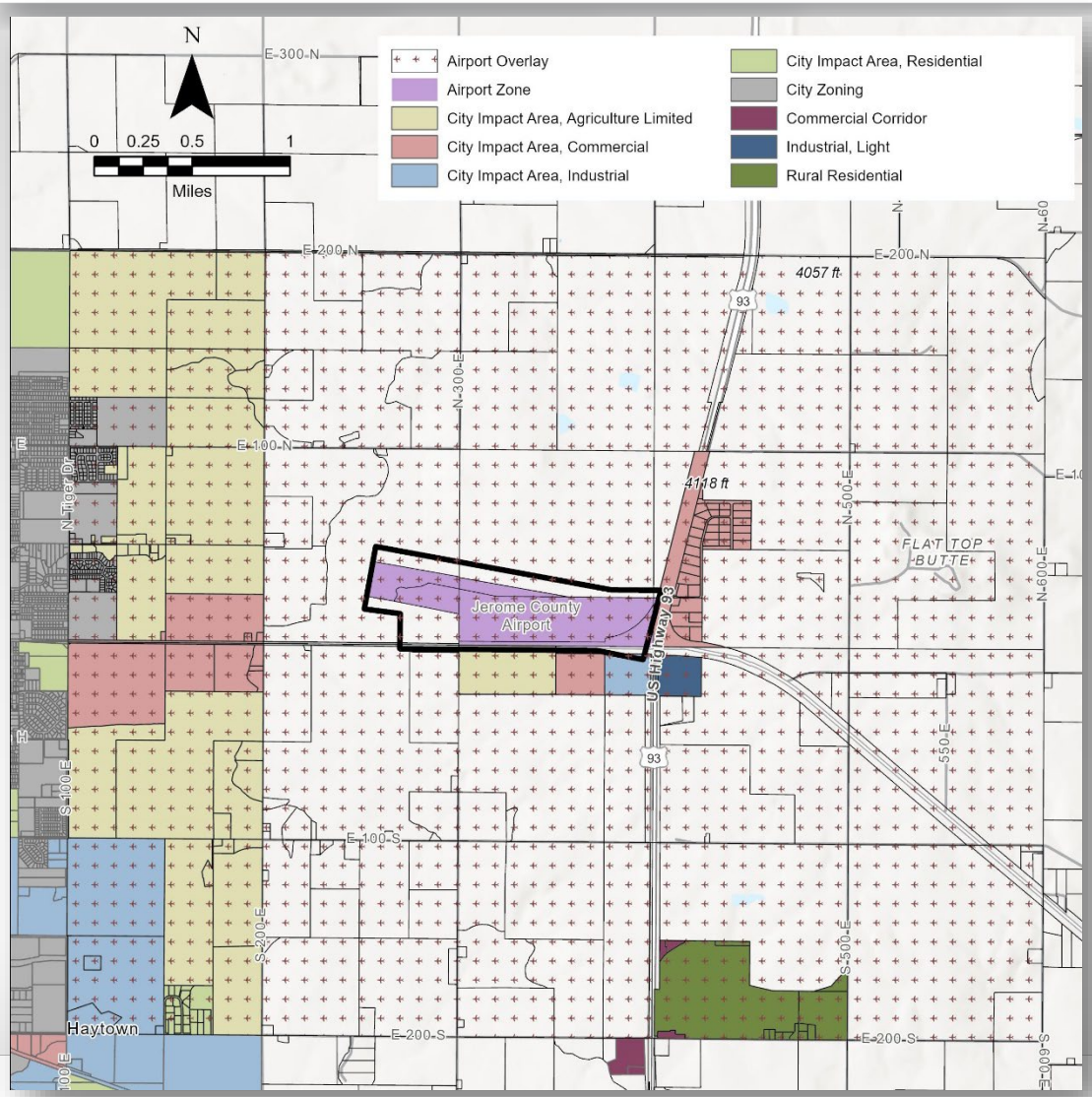
- Runway and taxiway pavement in good condition
- Overall PCI of 75
- Stay on course with Idaho Dept. of Transportation pavement treatment schedule
- Taxilane and helicopter apron rehabilitation and surface treatment projects planned in next couple of years



ADDITIONAL INVENTORY

- Fueling system
  - 12,000-Gallon Jet A Fuel Storage
  - 20,000-Gallon AvGas Fuel Storage
- FBO
  - Precision Aviation
  - 8,545 square foot maintenance hangar
  - 12,000 square foot corporate hangar
- Hangars
  - 6 T-hangars, 13 box, 5 conventional for a total of 24 hangars
- Terminal Building / Pilot's Lounge
  - 1,580 square feet
- Other businesses
  - Jerome Flying Service, Airpower Unlimited

ZONING AND LAND USE



ENVIRONMENTAL FINDINGS

Analysis	Status	Impact
Air Quality	☑ Complete	
Climate	☑ Complete	
Biological Resources	☑ Complete	Monarch Butterfly is the only noted ESA-listed candidate species with the potential to exist at the Airport.
Water Resources, Wetlands, Surface Waters, Groundwater, Scenic Rivers	☑ Complete	
Coastal Resources	☑ Complete	
Natural Resources and Energy Supply	☑ Complete	
Historical, Architectural, Archeological and Cultural Resources	☐ Pending Cultural Resource Survey	
Farmlands	☑ Complete	Airport expansion to north or west would impact farmland and require coordination with USDA/NRCS.
Land Use	☑ Complete	
Noise and Compatible Land Use	☑ Complete	
Visual Effects	☑ Complete	
Socioeconomics, Environmental Justice, Children's Environmental Health, Safety Risks	☑ Complete	
Hazmat, Solid Waste & Pollution Prevention	☑ Complete	Any projects impacting existing underground storage tanks would require coordination with IDEQ.

CRITICAL AIRCRAFT

The critical aircraft is the most demanding aircraft type, or grouping of aircraft with similar design or performance characteristics, to complete a minimum of 500 annual operations.

Existing
Cessna Citation V

Additional Future

Cessna Citation XLS+

Cessna Citation Ultra

DESIGN CRITERIA

Aircraft Approach Category (AAC)	
Category	**Approach Speed**
A	Less than 91 knots
B	91 to 121 knots
C	121 to 141 knots
D	141 to 166 knots
E	More than 166 knots

Airplane Design Group (ADG)		
Group Number	**Tail Height (ft)**	**Wingspan (ft)**
I	Less than 20	Less than 49
II	20 to 30	49 to 79
III	30 to 45	79 to 118
IV	45 to 60	118 to 171
V	60 to 66	171 to 214
VI	66 to 80	214 to 262

The critical aircraft ultimately determines the dimensional requirements of an airport. Jerome County Airport has a B-II Airport Reference Code (ARC).

Cessna Citation V Characteristics			
Characteristic	**Aircraft Performance**	**FAA Design Code**	**Aircraft Classification**
Approach Speed	107 Knots	AAC	B
Wingspan	52 Feet	ADG	II
Tail Height	15 Feet		
Max Takeoff Weight (MTOW)	16,300 Pounds	AAC/ADG	B-II
Main Gear Width (MGW)	18 Feet	TDG	2
Cockpit to Main Gear (CMG)	20 Feet		

DISCUSSION & QUESTIONS

3 FORECASTS OF AVIATION DEMAND

Chapter Three Forecasts of Aviation Demand

- Economic Influences and Socioeconomics
- Based Aircraft Projections and Forecast
- Aircraft Operations and Forecast

FACTORS FOR FORECASTING

Influencing Factors on Forecasting

- FAA and State of Idaho Aviation System Plans and Forecasts
- Service Area (Jerome and Twin Falls Counties) Growth Trends
  - Socioeconomic
  - Increased Business Interests
- Based Aircraft and Annual Operations

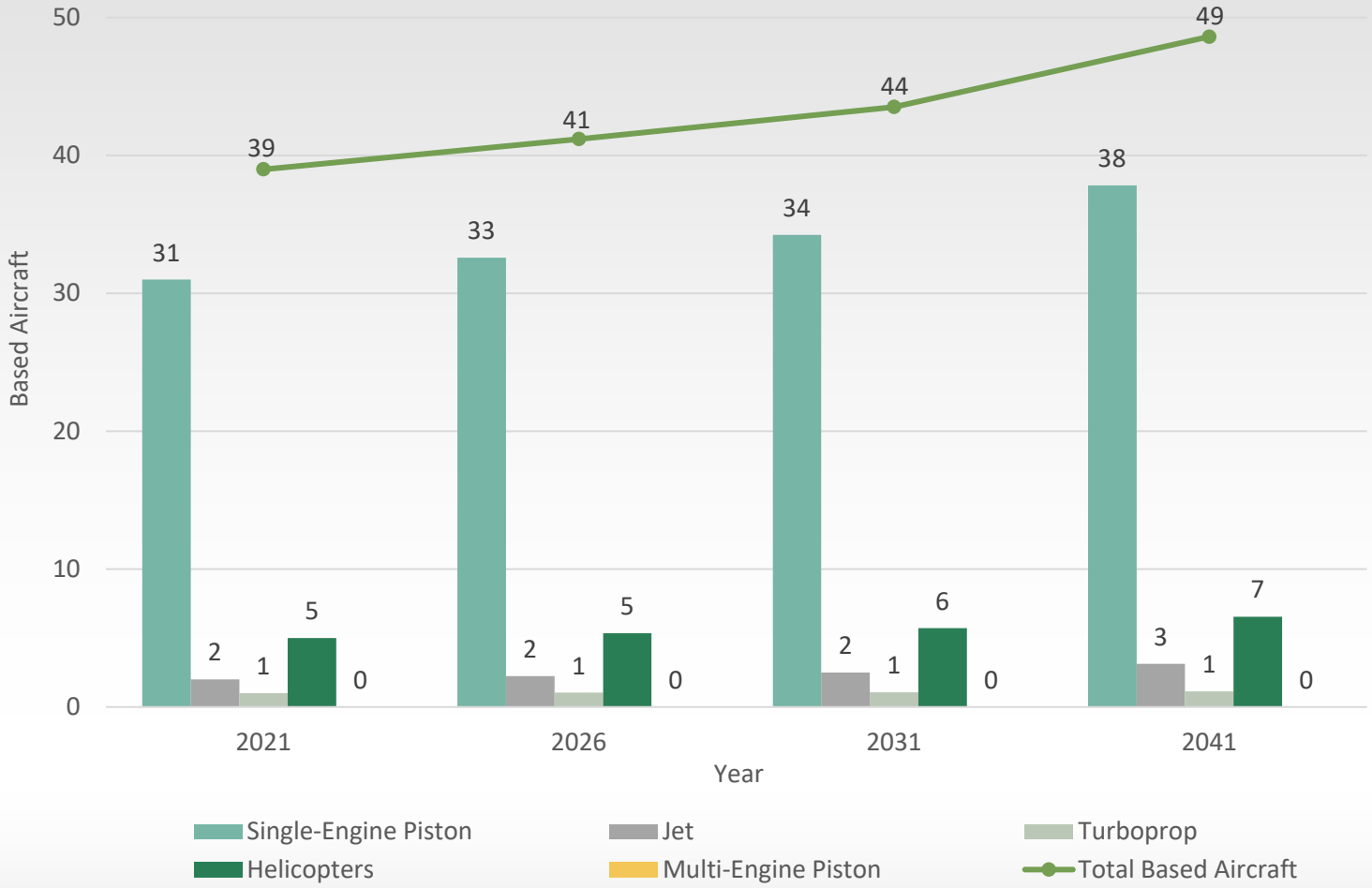
Based Aircraft and Operations Projections and Forecasting

- FAA Single-Engine Piston, Multi-Engine Piston, Jet, Turboprop, and Helicopter Trends
- FAA Fuel Sales, Pilot Hours Flown, and Fleet Mix
- Type of Aircraft Forecasts calculated using data from FAA Terminal Area Forecast (TAF) and FAA Traffic Flow Management System Counts (TFMSC)

BASED AIRCRAFT FORECAST

Current Based Aircraft: 39

Projected Based Aircraft: 49



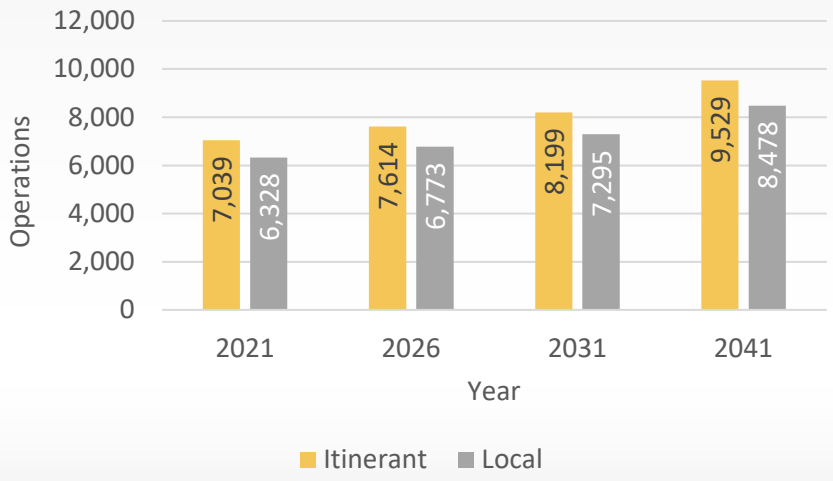
OPERATIONS FORECAST

2021 Annual Operations: **13,367**

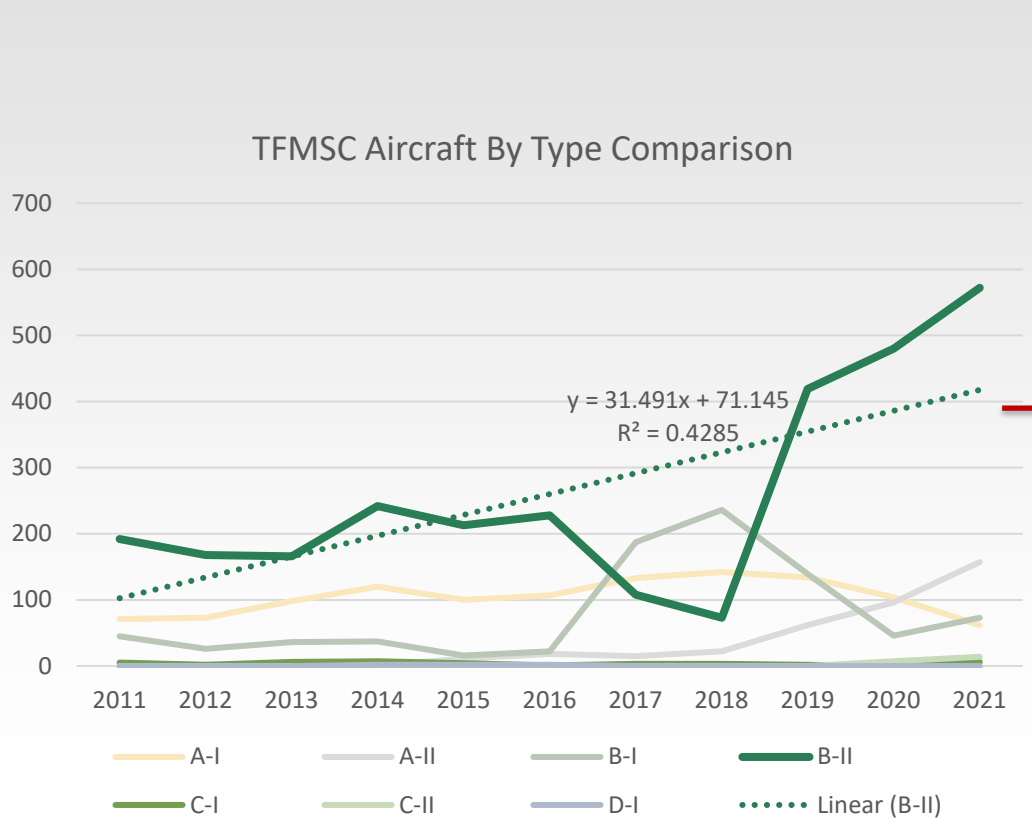
- Itinerant: 7,039
- Local: 6,328

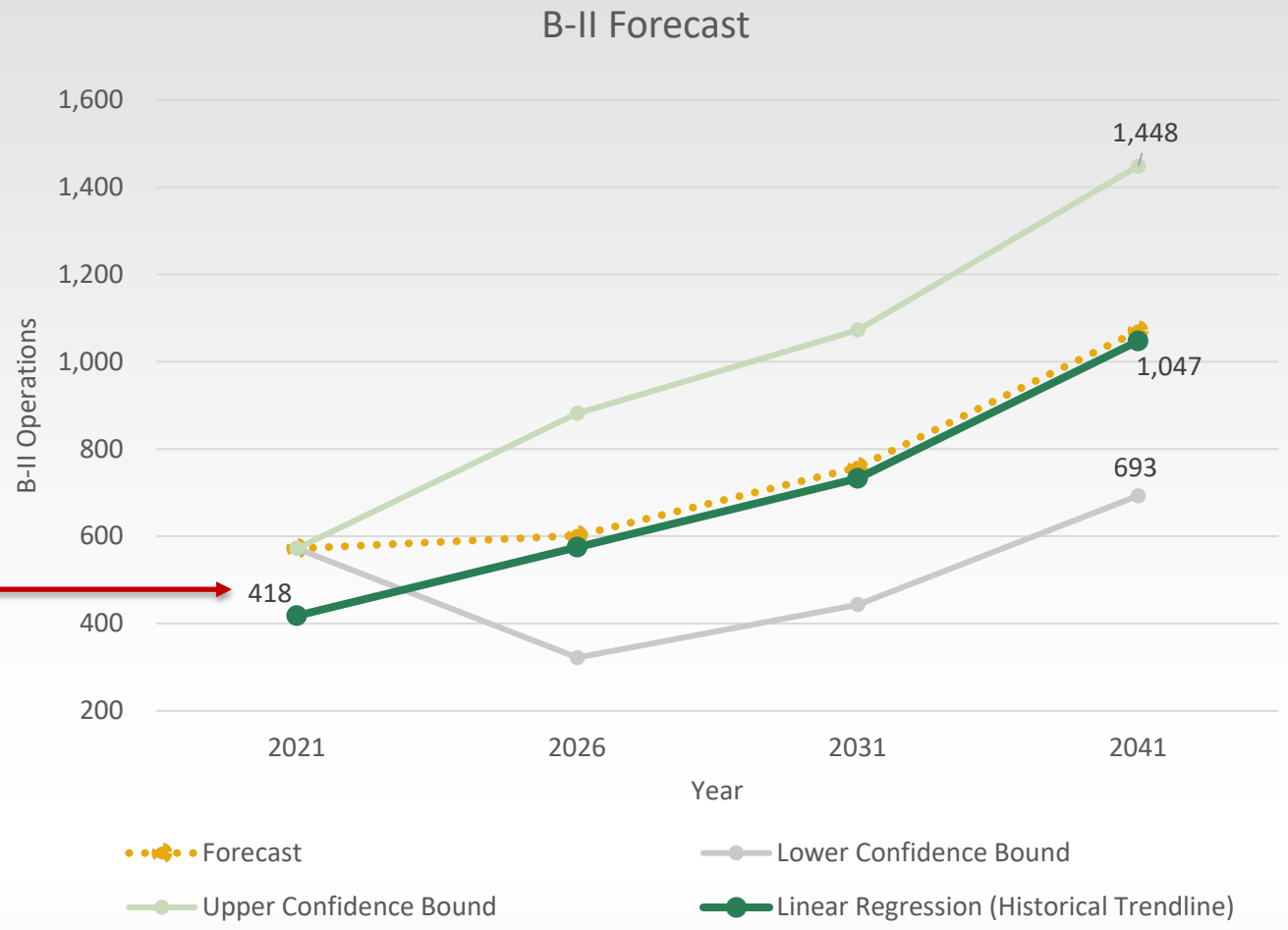
Projected Operations: **18,007**

- Itinerant: 9,529
- Local: 8,478



AIRPORT REFERENCE CODE



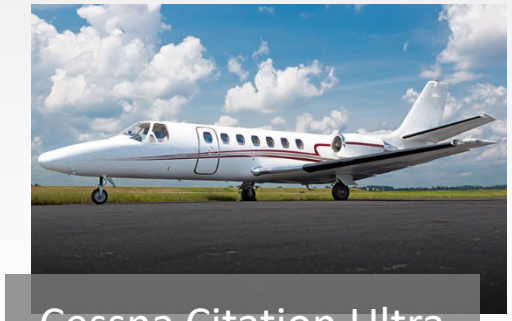


SUMMARY OF FORECAST

	Consultant	FAA
Existing Based Aircraft Count	39	30
Projected 20-Year Based Aircraft Count	49	30
2021 Annual Operations	13,367	26,225
Projected 20-Year Operations Count	18,007	34,568

	2021	2026	2031
Projected B-II Operations	572	602	758
Short-term Airport Design Codes	ADG B-II / TDG-2: Cessna Citation V, XLS+, Ultra		
Ultimate Airport Design Codes	ADG B-II / TDG-2: Cessna Citation V, XLS+, Ultra		

Cessna Citation V



Cessna Citation Ultra

Cessna Citation XLS+

Critical Aircraft

The most demanding aircraft or group of aircraft (in terms of size and/or speed) that contributes to over 500 operations annually

ADDITIONAL FACTORS TO CONSIDER

Advance Air Mobility

- A vertiport is not recommended at this location
- UAV operations maybe recommended
  - Benefit the community with aerial agricultural applications
  - Unmanned firefighting applications to supplement USFS effort
  - What would you need to be successful?

Definitions

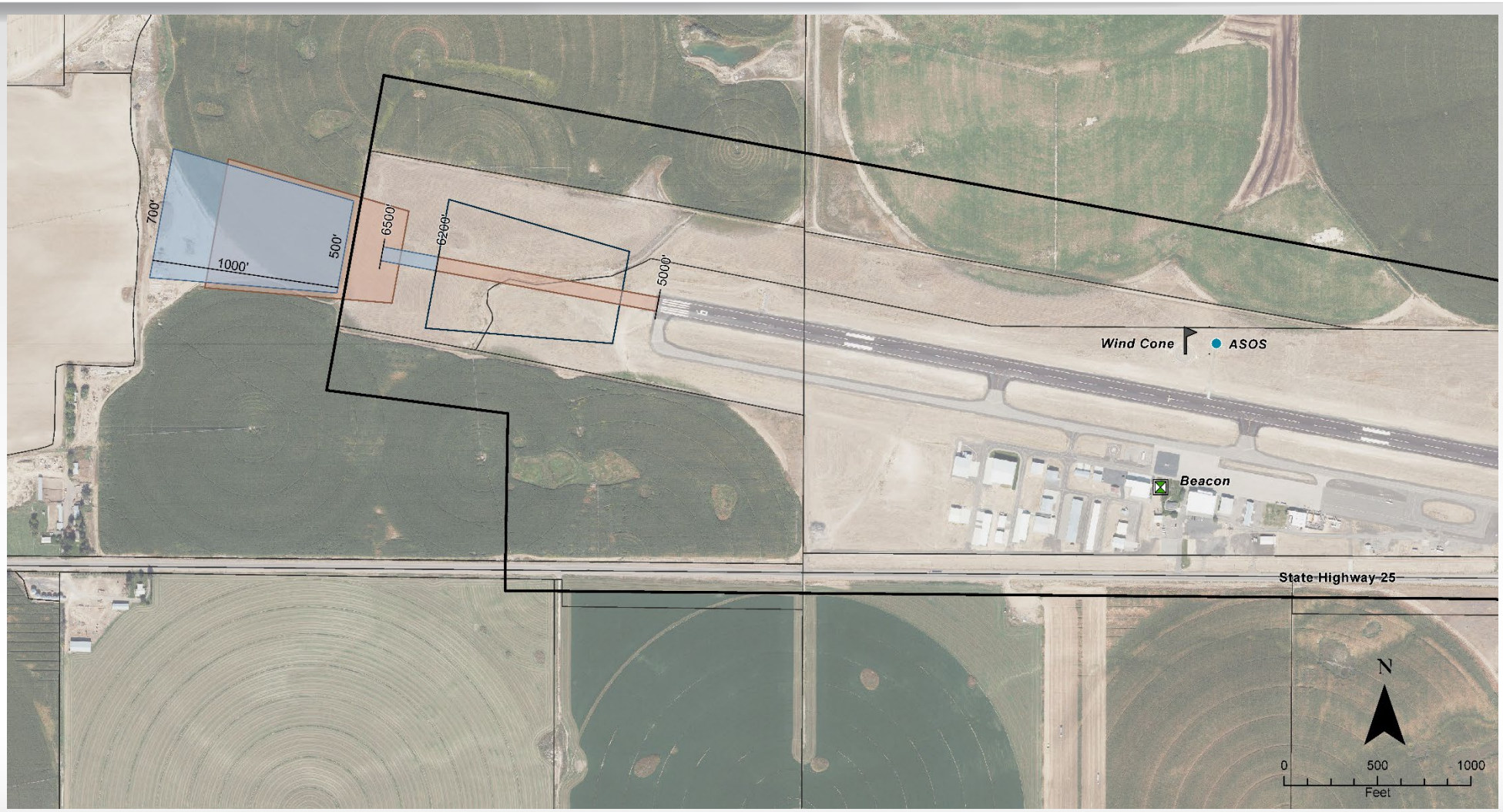
- **Vertiport:** Areas designed specifically for Urban Air Mobility and Advanced Air Mobility aircraft to take off and land
- **UAV:** Unmanned Aerial Vehicle

AIRCRAFT RUNWAY REQUIREMENTS

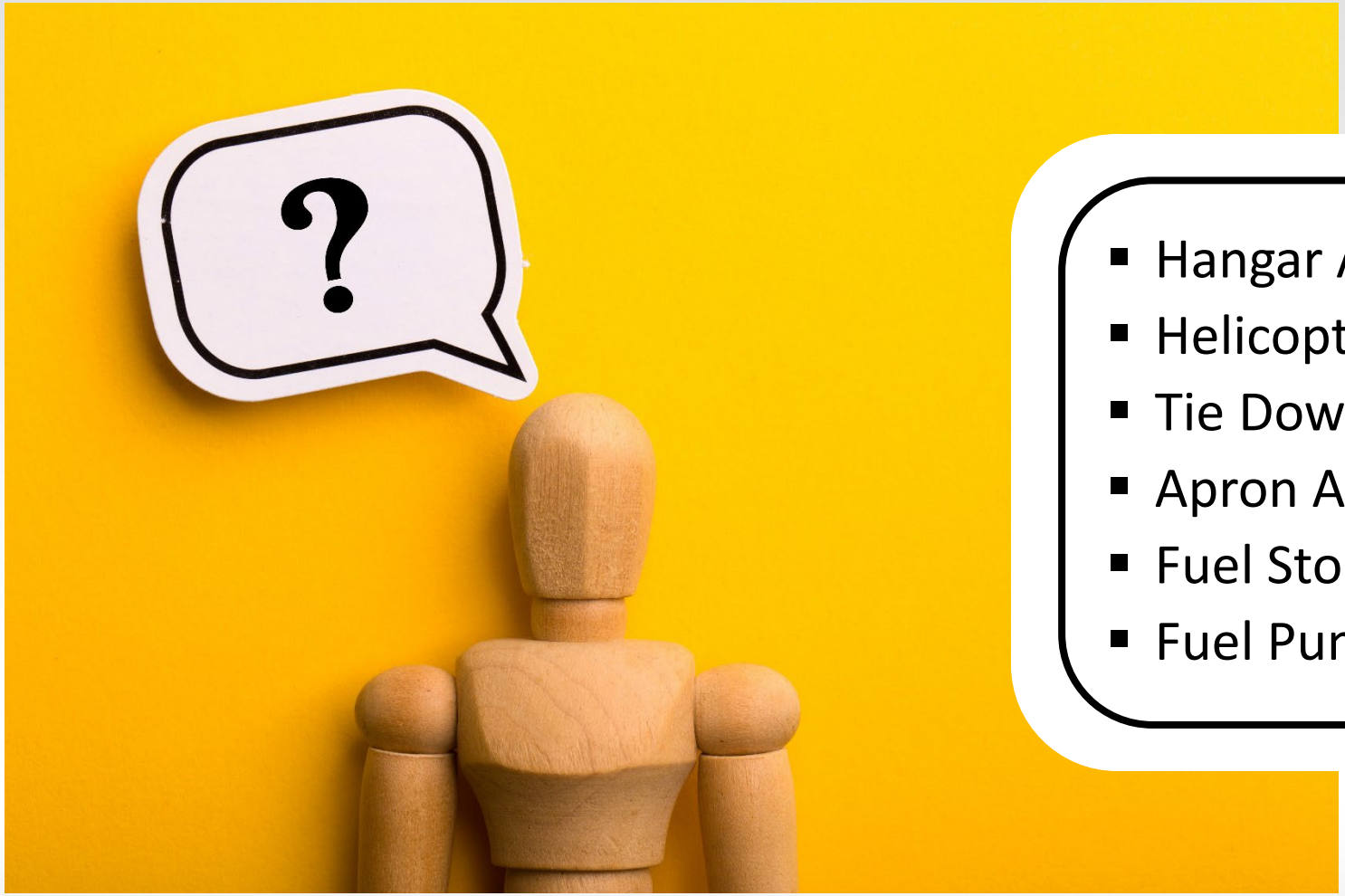
	Feet		General ARCs
For 95 % aircraft fleet less than 12,500 lbs fewer than 10 seats:	5,200		A/B-I and II
For 100 % aircraft fleet less than 12,500 lbs fewer than 10 seats:	5,600		A/B-II
For 100 % aircraft fleet less than 12,500 lbs more than 10 seats:	Same as above		B-II
For 75 % aircraft fleet greater than 12,500 lbs but less than 60,000 lbs:	6,200	Citation V Ultra, Citation XL Encore, Citation CJ4, Dessault Falcon 50	B/C-II
For 100 % aircraft fleet greater than 12,500 lbs but less than 60,000 lbs:	8,200	Citation X, Challenger 600, Hawker 800, Learjet 60	B/C-II

Airfield Parameters	Elevation: 4053' MSL										
	Temperature: 90.1 F										
	-1.84% Runway 27										
Runway Parameters	Take-off length required at MTOW		% Useful Load for takeoff on a 5,001' Runway		Landing Length Requirements						
					C.F.R Part 25 (Unfactored)		C.F.R. Part 135 (60% factored)		C.F.R Part 91k (80% factored)		
Runway Condition	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	Dry	Wet	
Citation V Ultra	5,012	6,642	99.9%	86.4%	5,693	8,639	9,488	14,398	7,116	10,799	Note: Max landing weight, and MTOW both 16,300#
Citation XLS +	6,066	6,267	91.2%	88.7%	5,153	7,997	8,588	13,328	6,441	9,996	Note: Max landing weight 18,512#, MTOW 20,200#
Learjet 75	6,198	6,835	90.2%	O/C	3,632	4,773	6,053	7,955	4,540	5,966	Note: Max landing weight, and MTOW both 21,500#
O/C: Off the chart											

RUNWAY LENGTHS



WHAT NEEDS TO CHANGE OR EXPAND?



- Hangar Area
- Helicopter Parking
- Tie Downs
- Apron Area
- Fuel Storage
- Fuel Pump Location

NEXT STEPS

Working Paper No. 1
to FAA for review and forecast approval

Facility Requirements and Alternatives Analysis

Public Involvement, Story Map & Feedback

Working Paper No. 2 Presentations

-TAC Meeting

-County Commission

THANK YOU

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