# Stakeholder Advisory Panel

## 2040 Long-Term Comprehensive Plan (LTP) Update
## Flying Cloud Airport (FCM)

October 6, 2022

# Welcome Remarks

**Chad Leqve**

Metropolitan Airports Commission (MAC)
Vice President of Management and Operations

# Agenda

- Introductions
- Airport Manager Update
- Goals, Objectives, and Project Schedule
- Recap Previous LTP Engagements
- Aircraft Noise Primer
- Aviation Activity Forecast Review
- Facility Requirements
- Next Steps / Schedule

Meeting Agenda and Presentation are available at:
metroairports.org/fcm-long-term-plan-documents-and-links

# Introductions

# Introductions

*Name, who you represent on the Panel, and*
*what was one notable takeaway from today's tour?*

*If you did not attend the tour, what is something you find notable about Flying Cloud Airport?*

| | |
|---|---|
| Airport Tenants | Local Communities |
| Regional Businesses | Tourism Associations |

# Planning Team

**Eric Gilles**

MAC Airport Planner

**Project Manager**

**Dana Nelson**

MAC Director, Stakeholder Engagement

**Blaine Peterson**

MAC Airport Manager, FCM and LVN

**Joe Harris**

MAC Director, Reliever Airports

**Andrew Blaisdell**

Senior Project Manager, HNTB

**Consultant Project Manager**

**Greg Albjerg**

Vice President, Senior Aviation Consultant, HNTB

**Technical Advisor**

Frequent Flyer at FCM

# Stakeholder Advisory Panel (SAP) Role

- Represent a broad range of stakeholder groups, including airport tenants, public partners, local community leaders and city planners, regional businesses and tourism associations
- Review information about the planning process
- Share feedback and aspirations as the voice of key stakeholders

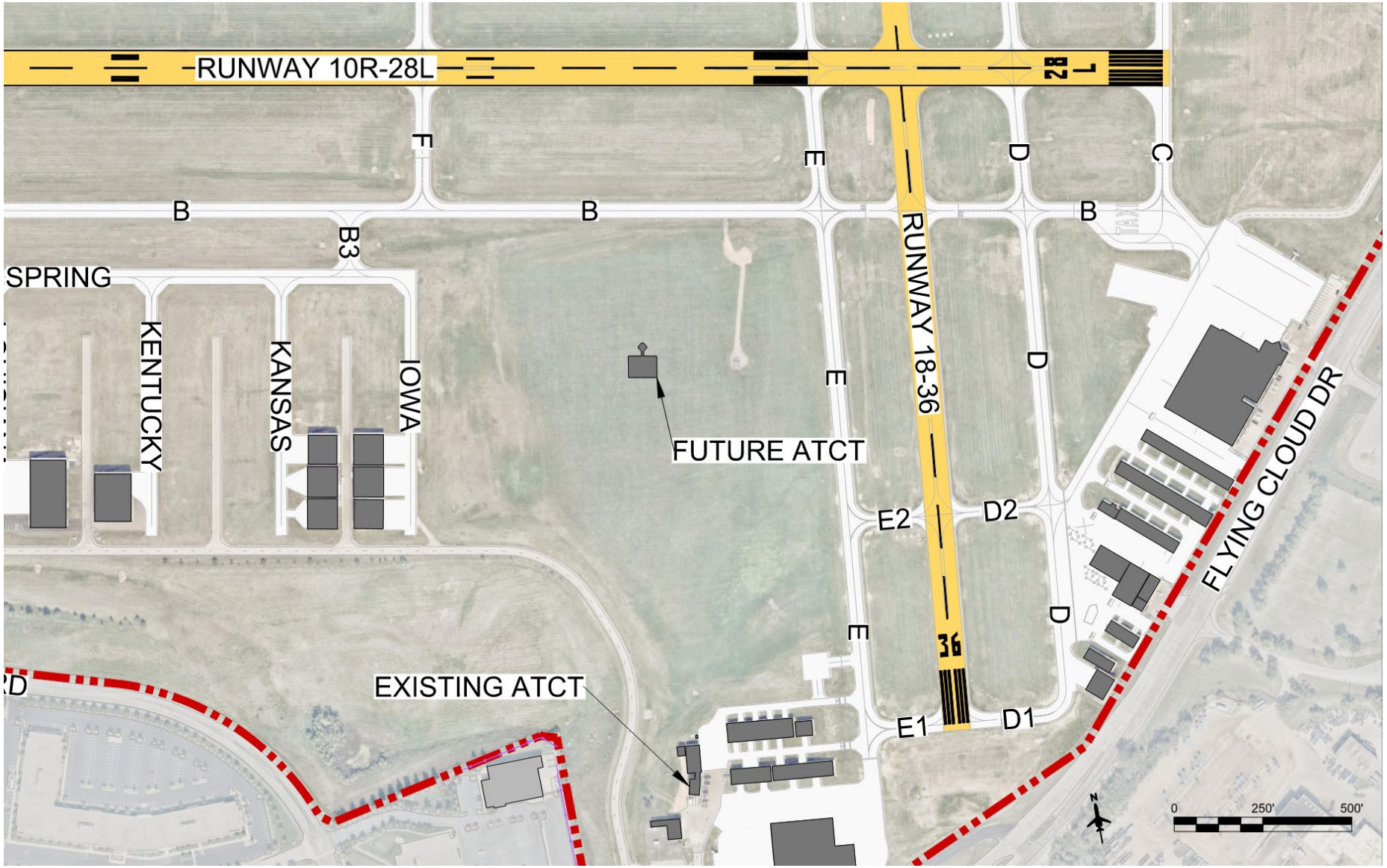
- Meet four (4) times during the LTP process:
  - Kickoff – April 20, 2022 ✓
  - Facility Requirements – October 2022
  - Concept Development and Review – Early 2023
  - Final Recommended Plan – End of 2023

# Airport Manager Update

# Airport Manager Update

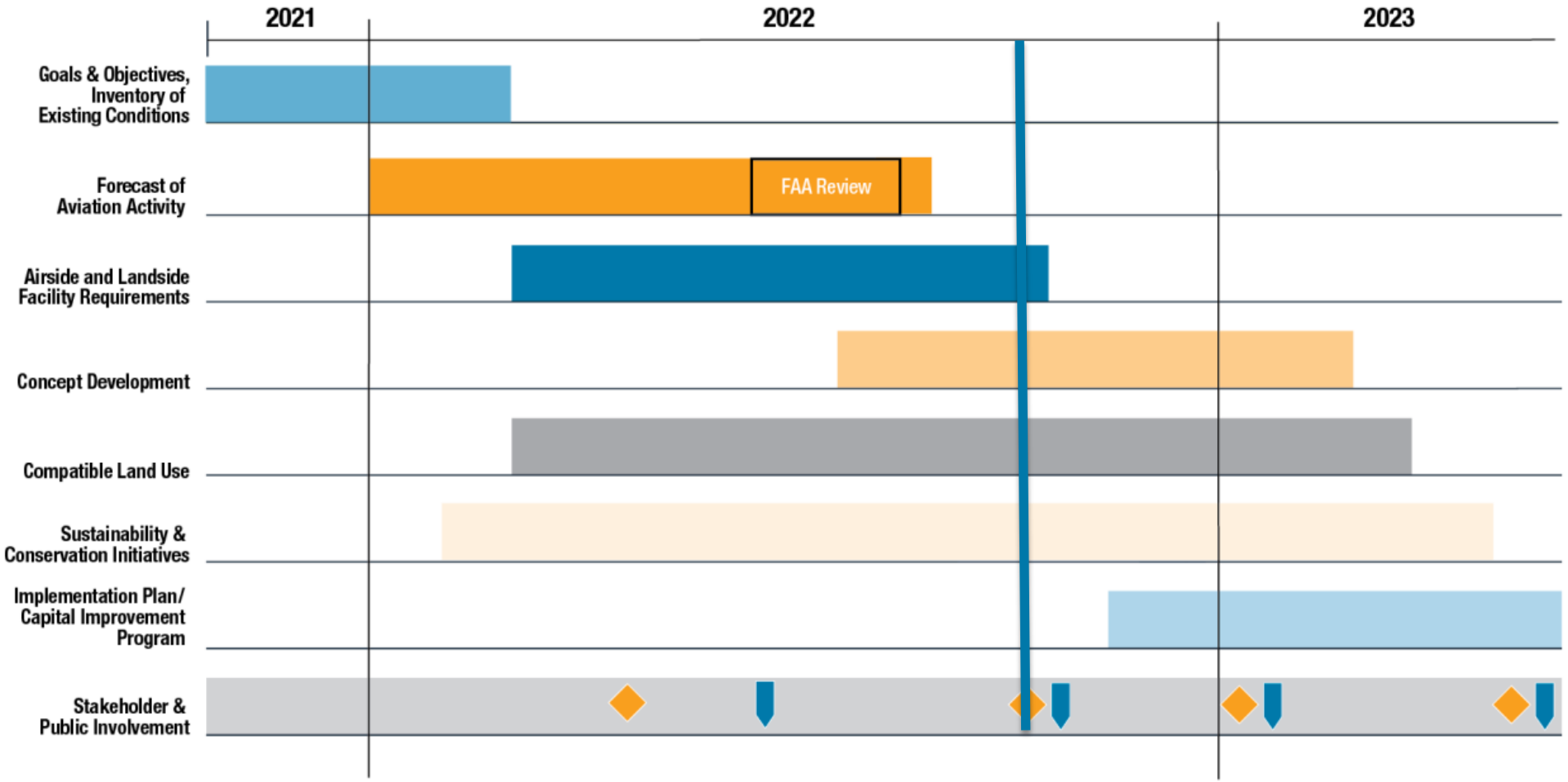
- Air Traffic Control Tower (ATCT) Relocation
  - FAA has completed a study in March 2022 to determine a preferred site for the relocated ATCT
  - Additional studies, permitting, and design required before relocation
  - Relocation increases airfield safety
    - Better sight lines for aircraft on approach to parallel runways allows controllers to identify if an aircraft is lined up on the wrong runway
    - Full visibility of all taxiways
  - Relocation allows for continued development on the south side of the airfield
    - Additional development currently capped as additional hangar construction would block controllers sight lines to the west end of the airfield

# ATCT Relocation



# Goals, Objectives, and Project Schedule

# Schedule




Stakeholder Advisory Panel (SAP) Meeting  Public Open House

Updated: July 2022 - Timeline is subject to change.

# Goals and Objectives

1. Enhance airport safety
2. Preserve and, if possible, improve operational capabilities for the current aircraft using the airport
3. Promote financial stability of the MAC Reliever Airport system by exploring revenue opportunities for aeronautical and non-aeronautical development

# Recap Previous LTP Engagements

# Stakeholder Advisory Panel (SAP) #1 Recap

SAP Meeting #1 held virtually April 20, 2022

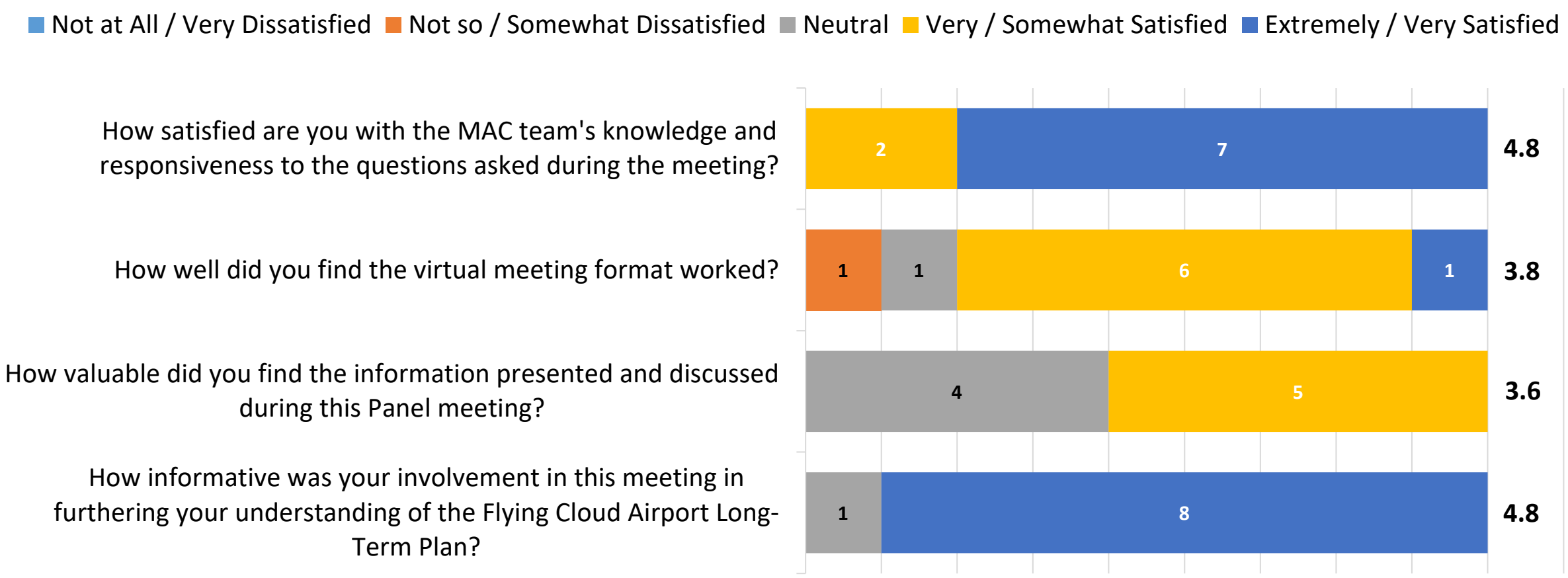
- Introductions
- SAP Role
- LTP Process
- General Aviation Overview
- LTP Project Updates
  - Existing Conditions and
  - Aviation Forecast Methodology
- Feedback / Survey

# Poll Results

## In five words or less, what would you like to get from your participation on the SAP?

- Input and education to/from stakeholders
- Airport long term needs and plans
- Learning perspectives from a broad range of FCM stakeholders both inside and outside the airport boundary
- Learn more of the initiatives and opportunities for FCM.
- Understand impact on our Community.
- The future plan for FCM.
- Provide information of daily activity
- Represent interests of GA private pilots

# SAP Meeting #1 Survey Results

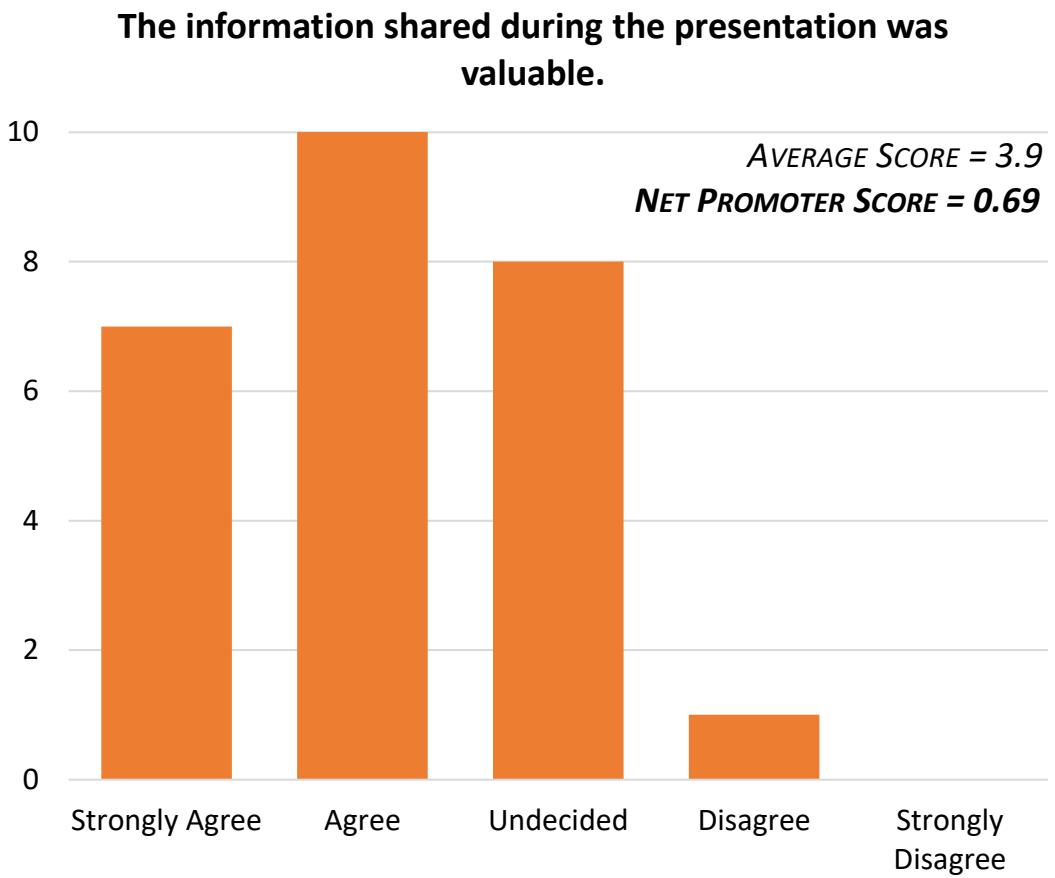


# Discover Flying Cloud #1 Recap

Held at Flying Cloud Airport June 8, 2022

- Welcome Remarks by MAC Commission Chair, Rick King
- Introductions
- Stakeholder Engagement Program
- LTP Process
- LTP Project Updates
  - Existing Conditions and
  - Aviation Forecast Methodology
- Next Steps
- Feedback / Survey

# Discover Flying Cloud #1 Recap



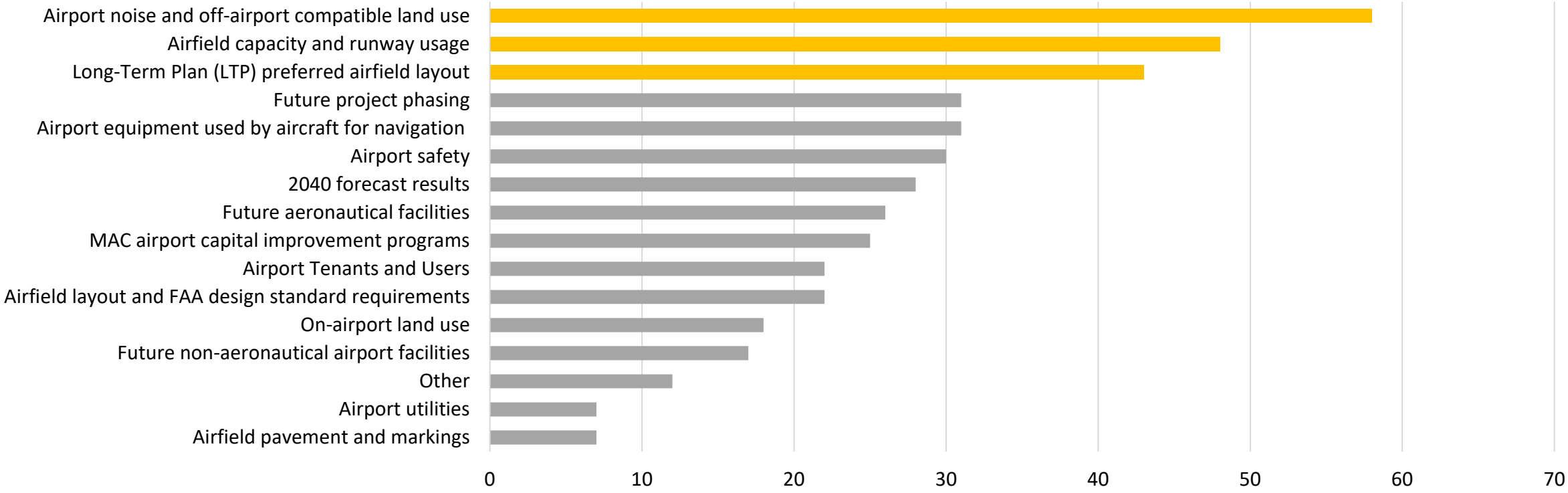
# Discover Flying Cloud #1 Recap

What we heard

- Potential development at the ball fields needs to be carefully considered to identify solutions acceptable for all parties
- Additional amenities at FCM are desired: restaurant, trails, museum
- Noise remains a community concern

# Discover Flying Cloud #1 Recap

**What are you most interested in hearing about at future Discover Flying Cloud Airport Open House and Presentation events?**



# Aircraft Noise Primer

# Aircraft Noise Roles & Responsibilities

## U.S. Congress

- Creates laws that govern aviation in the U.S.

## Federal Aviation Administration

- Regulates airports and aviation activities, including pilots and aircraft manufacturers
- Operates Air Traffic Control, directing aircraft on the ground and in the air

## FCM Airport Operators

- Transport people, goods and services
- Contribute to the local economy (i.e. providing jobs, spending at local businesses, providing a gateway to the city)
- Serve the community (i.e. transport passengers with medical or humanitarian needs, pet rescue flights, organ transplant flights, support during emergencies, community outreach events)

## Metropolitan Airports Commission

- Owns and operates MSP, FCM and 5 other reliever airports
- Provides safe facilities for businesses and individuals to operate aircraft
- Maintains Noise Abatement Plans
- Conducts pilot outreach

# Metropolitan Airports Commission

- Public corporation created in 1943
- Legislated purpose:
  - Promote efficient, safe, economical air commerce
  - Develop the full potentialities of the metropolitan area as an aviation center
  - Minimize the environmental impact from air transportation and the public's exposure to noise and safety hazards around airports
- Can own airports within 35 miles of downtown Minneapolis and St. Paul
- Funded by rents and fees paid by airport users, not by general tax dollars

# MAC Noise Abatement Efforts

- MAC maintains a Noise Abatement Plan for FCM
  - Preferential Runway Use
  - Southbound turns after departure
  - Noise Abatement departure and approach procedures

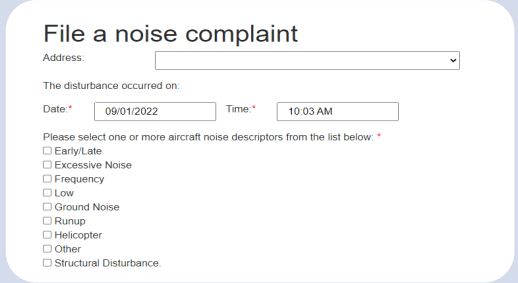
# MAC Noise Abatement Efforts

- MAC maintains a Noise Abatement Plan for FCM
  - Maintenance Runups
  - Helicopter training
  - Voluntary nighttime restrictions

# MAC Noise Abatement Efforts


Flight Tracker


Quarterly Reports




Complaint Reporting

Collaboration

# MAC Noise Abatement Efforts

| | |
|---|---|
| Complaint Investigation | • Monthly Letters to Operators<br>• Runup Investigation |
| Flying Cloud Airport Advisory Commission | • Quarterly briefings |
| Pilot Outreach | • FAA Pilot Briefings<br>• Aircraft Operator Discussions |
| Continued input on proposed land development | • Joint Airport Zoning Board<br>• Private land development |

# Aircraft Noise Analysis in the LTP

## What will the Long-Term Plan do

- Document Existing noise exposure using annual average noise metrics
- Document future noise exposure based on the best forecast available

## What won't the Long-Term Plan do

- Thoroughly review environmental impacts
- Change aircraft flight procedures
- Establish a residential noise mitigation program

# SAP Question #1:

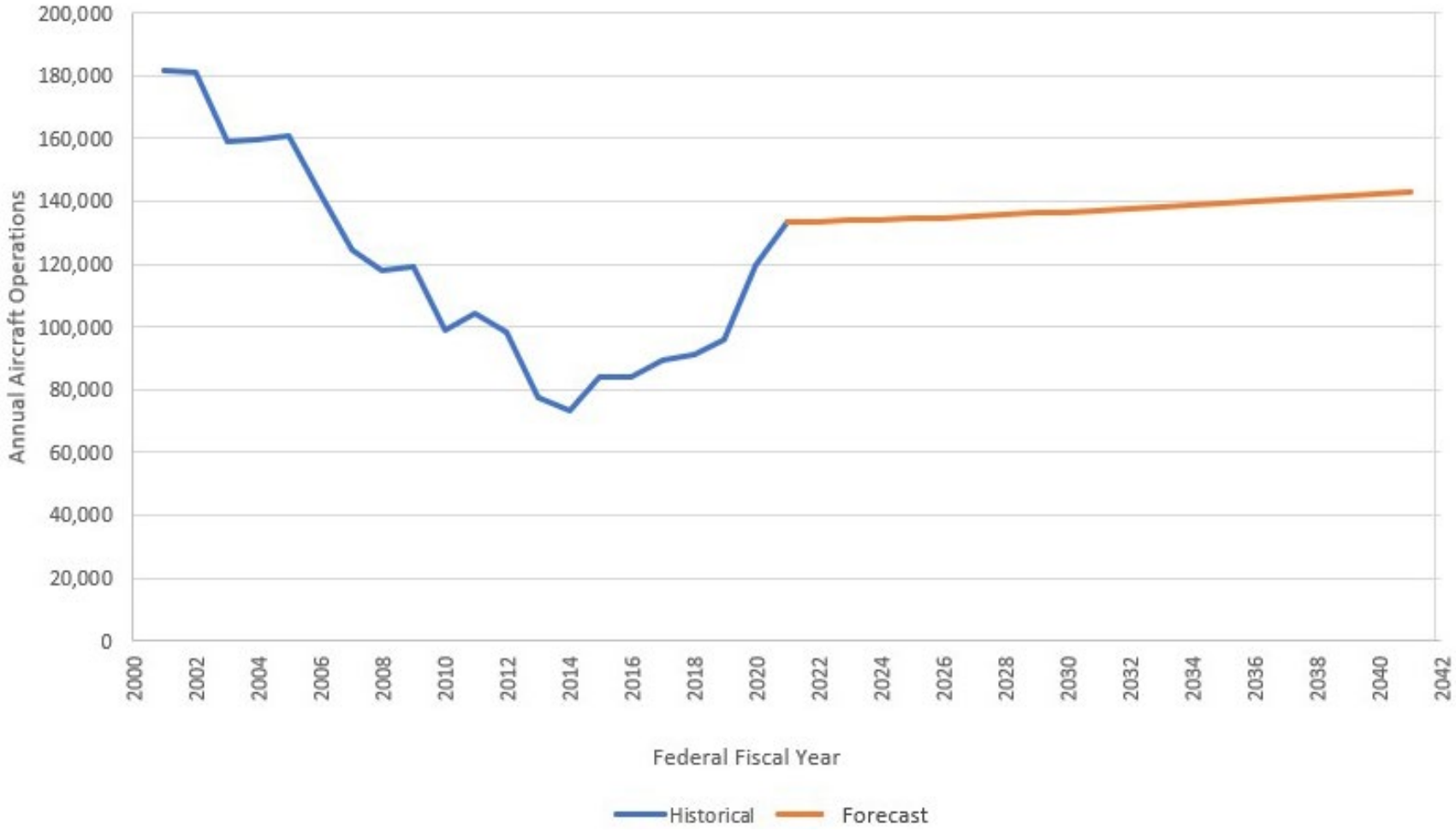
*What thoughts or ideas do you have about how we can communicate aircraft noise to the public?*

# Aviation Activity Forecast Review

# Forecast Overview

- The purpose of a forecast is to establish a framework to discuss future demand, in the context of capacity, efficiency, and safety
- Forecast Components
  - Annual Aircraft Operations
  - Fleet Mix
  - Based Aircraft
- A revised forecast was submitted to FAA on September 15th and approval is expected soon

# Aviation Forecast Review




Source: HNTB (forecast); 2021 FAA Terminal Area Forecast, published in 2022 (historical)

# Facility Requirements

# Runway Design Standards

- The FAA defines a Runway Design Code for every runway that is in the National Airspace System

- Runway Design Code is made up of three components
  - Airplane Design Group (ADG): Grouping based on wingspan and tail height
  - Aircraft Approach Category (AAC): Grouping based on approach speed while landing
  - Approach visibility minimums for a specific runway's critical aircraft

| CATEGORY | WINGSPAN | TAIL HEIGHT |
|---|---|---|
| ADG I | Less than 49’ | Less than 20’ |
| ADG II | 49’ but less than 79’ | 20’ but less than 30’ |
| ADG III | 79’ but less than 118’ | 30’ but less than 45’ |
| ADG IV | 118’ but less than 171’ | 45’ but less than 60’ |
| ADG V | 171’ but less than 214’ | 60’ but less than 66’ |
| ADG VI | 214’ but less than 262’ | 66’ but less than 80’ |

| AAC | VREF / Approach Speed |
|---|---|
| A | Approach speed less than 91 knots |
| B | Approach speed 91 knots or more, but less than 121 knots |
| C | Approach speed 121 knots or more, but less than 141 knots |
| D | Approach speed 141 knots or more, but less than 166 knots |
| E | Approach speed of more than 166 knots |

# Critical Aircraft

- FAA defines “Critical Aircraft” as the most demanding aircraft with greater than 500 annual operations at an airport

- The critical aircraft sets dimensional requirements of the airport, such as separation between runways and taxiways and the size of certain areas protecting the safety of aircraft operations and passengers

- Accurate critical aircraft determination helps ensure proper development of airport facilities

# Critical Aircraft

- FCM was designed to B-II standards but has seen an increase in operations by C-II aircraft at the Airport

- The most demanding C-II aircraft with greater than 500 annual operations at FCM is the Challenger 350

- The previous critical aircraft was identified as the Citation III

| | | Federal Fiscal Year | | | | |
|---|---|---|---|---|---|---|
| AAC | ADG | 2017 | 2018 | 2019 | 2020 | 2021 |
| B | II | 10,138 | 10,729 | 11,462 | 8,564 | 10,305 |
| C | II | 1,035 | 1,407 | 1,643 | 1,171 | 1,753 |

Operations by C-II aircraft accounted for approximately 2% of total operations at FCM in 2021

# Critical Aircraft

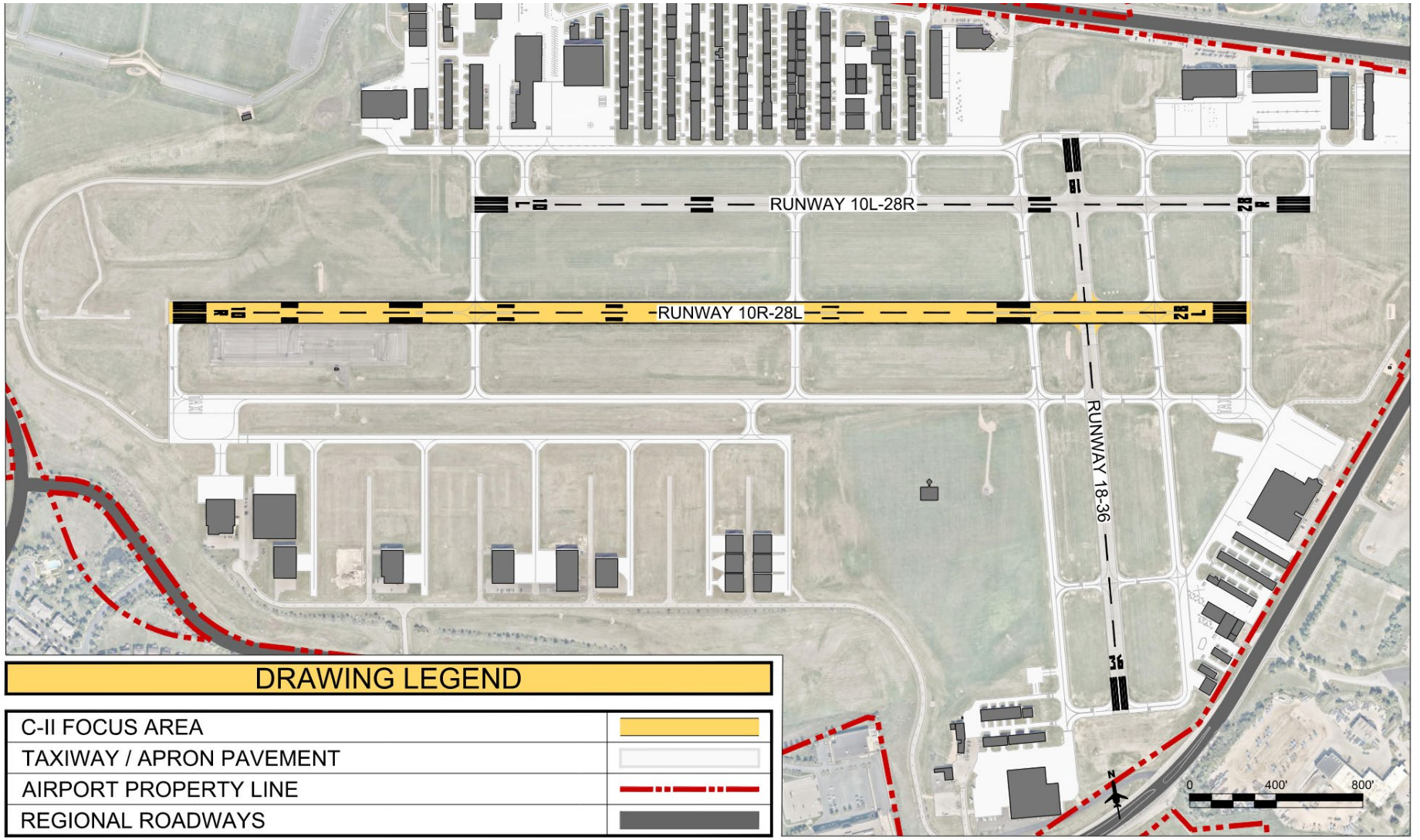
## Citation III

Category: B-II
Wingspan: 53.5’
Tail Height: 17.25’
Max. Takeoff Weight: 22,000 lbs

## Challenger 350

Category: C-II
Wingspan: 69’
Tail Height: 20’
Max. Takeoff Weight: 40,600 lbs

# Critical Aircraft Area of Impact



# Facility Requirements

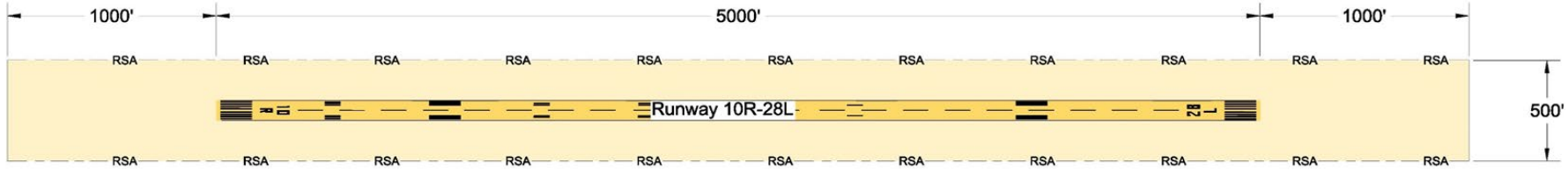
- Facility Requirements evaluate existing and future needs of an airport, and monitors airport compliance of standards set forth by federal (FAA) and local (MnDOT) guidance
- Benchmark facility requirements against LTP Goals and Objectives
  - **LTP Goal #1:** Enhance Airport Safety
    - Aims to address airfield safety by **adopting current federal and local airport safety regulations**
  - **LTP Goal #2:** Preserving, and if possible, improving the operational capabilities for the current aircraft using the airport
    - Aims to address preserving or improving operational capability by **accounting for existing and future based aircraft and operations**
  - **LTP Goal #3:** Promote financial stability of the MAC Reliever Airport system by exploring revenue opportunities for aeronautical and non-aeronautical development
    - Aims to address promoting financial stability of the MAC reliever airport system by **implementing realistic project strategies to address existing needs and conform to existing financial structure**

# Facility Requirement Considerations

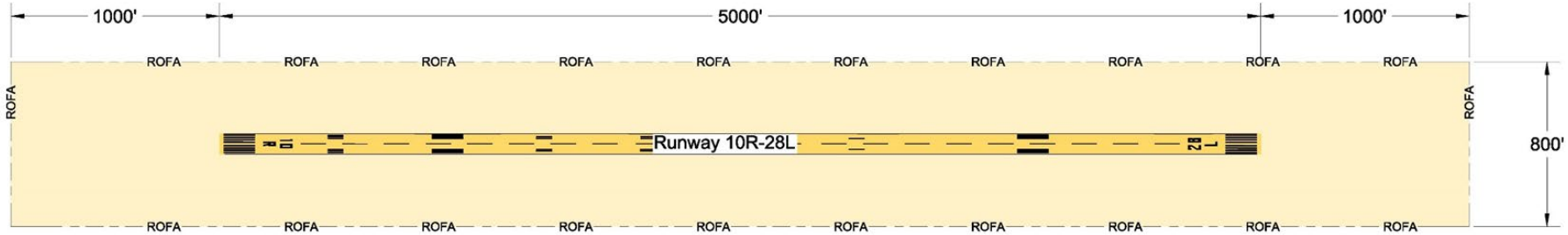
- Facility Requirements (Today)
  - Critical Aircraft Impacts (Existing AAC B to AAC C)
- Other Facility Requirements Evaluated in the LTP (Covered During SAP #3)
  - Airfield Capacity
  - Navigational Aid (NAVAID) Critical Areas
  - Runway-to-Taxiway Separation
  - Taxiway Dimensional Criteria
  - Airfield Markings
  - Aircraft Parking Areas/Aprons
  - Potential Hangar Development Areas

# Facility Requirements

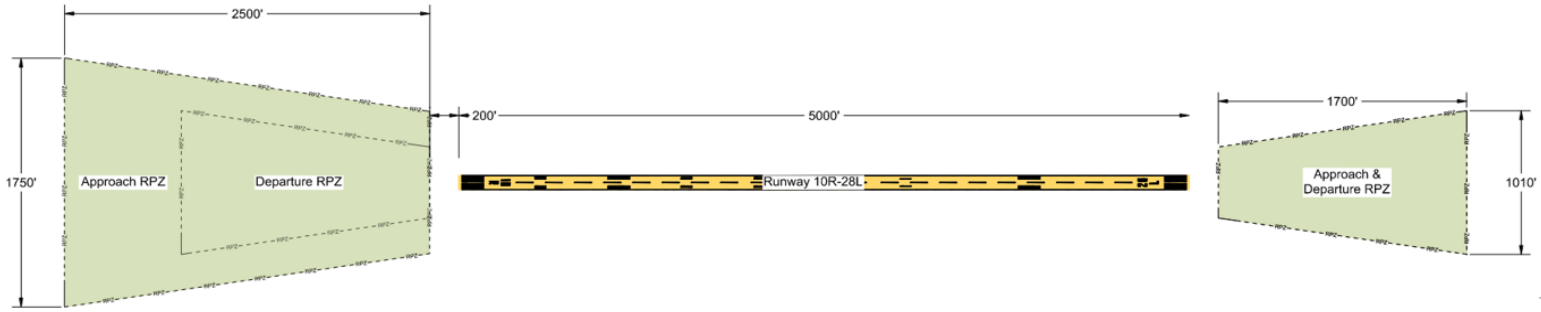
- **Runway Safety Area (RSA):** The area surrounding the runway consisting of a prepared surface suitable for reducing the risk of damage to an aircraft in the event of an undershoot, overshoot, or excursion from the runway.



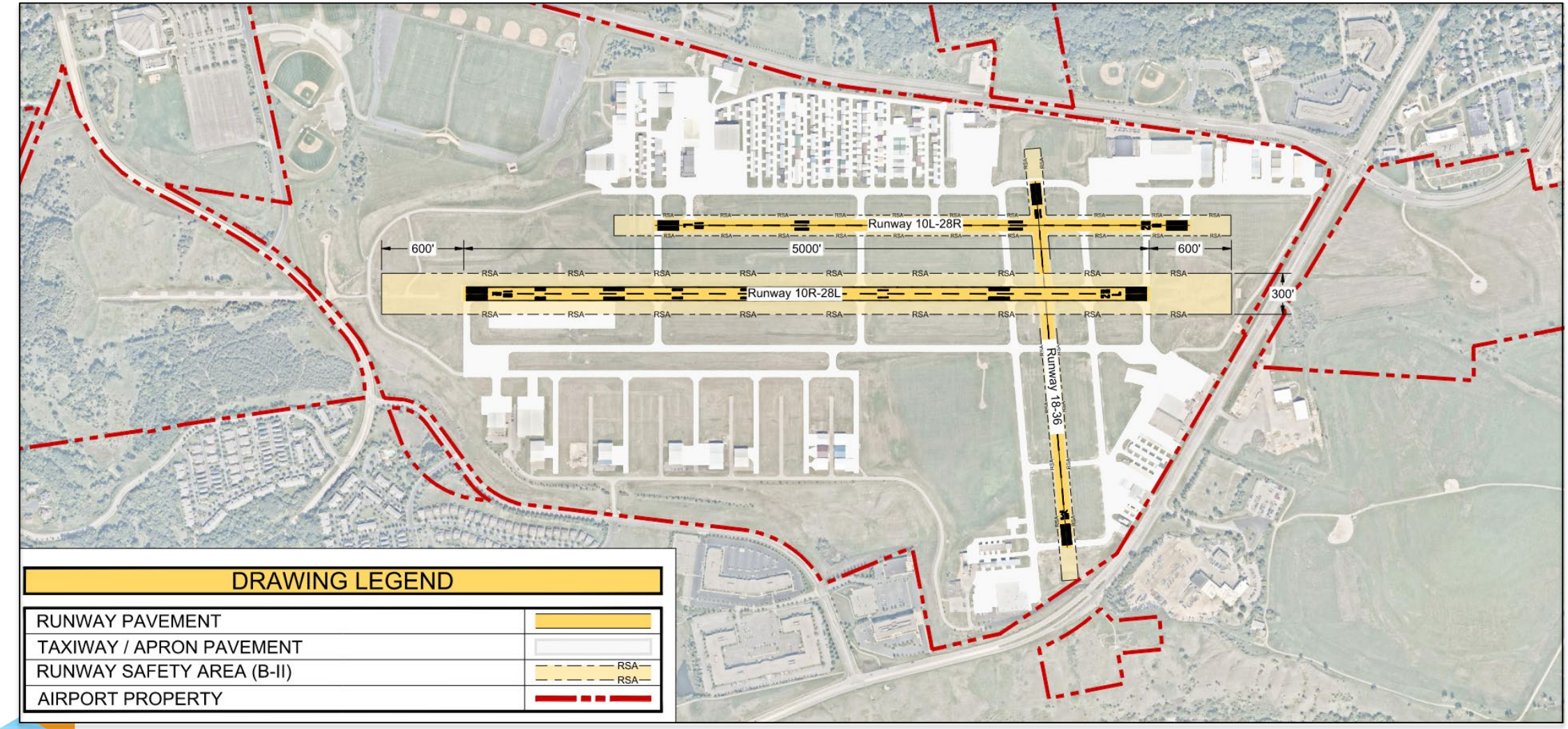

- **Runway Object Free Area (ROFA):** The area centered on the surface of the runway provided to enhance the safety of aircraft by remaining clear of objects, except for objects that are fixed-by-function in the OFA for air navigation or aircraft ground maneuvering purposes.




- **Runway Protection Zone (RPZ):** The 2-dimensional trapezoidal area which is intended for land-use compatibility control. The function of the RPZ is to protect people and property on the ground due to undershoots and overshoots of aircraft arriving and departing the runway.



# Facility Requirements – Runway Safety Area: B-II



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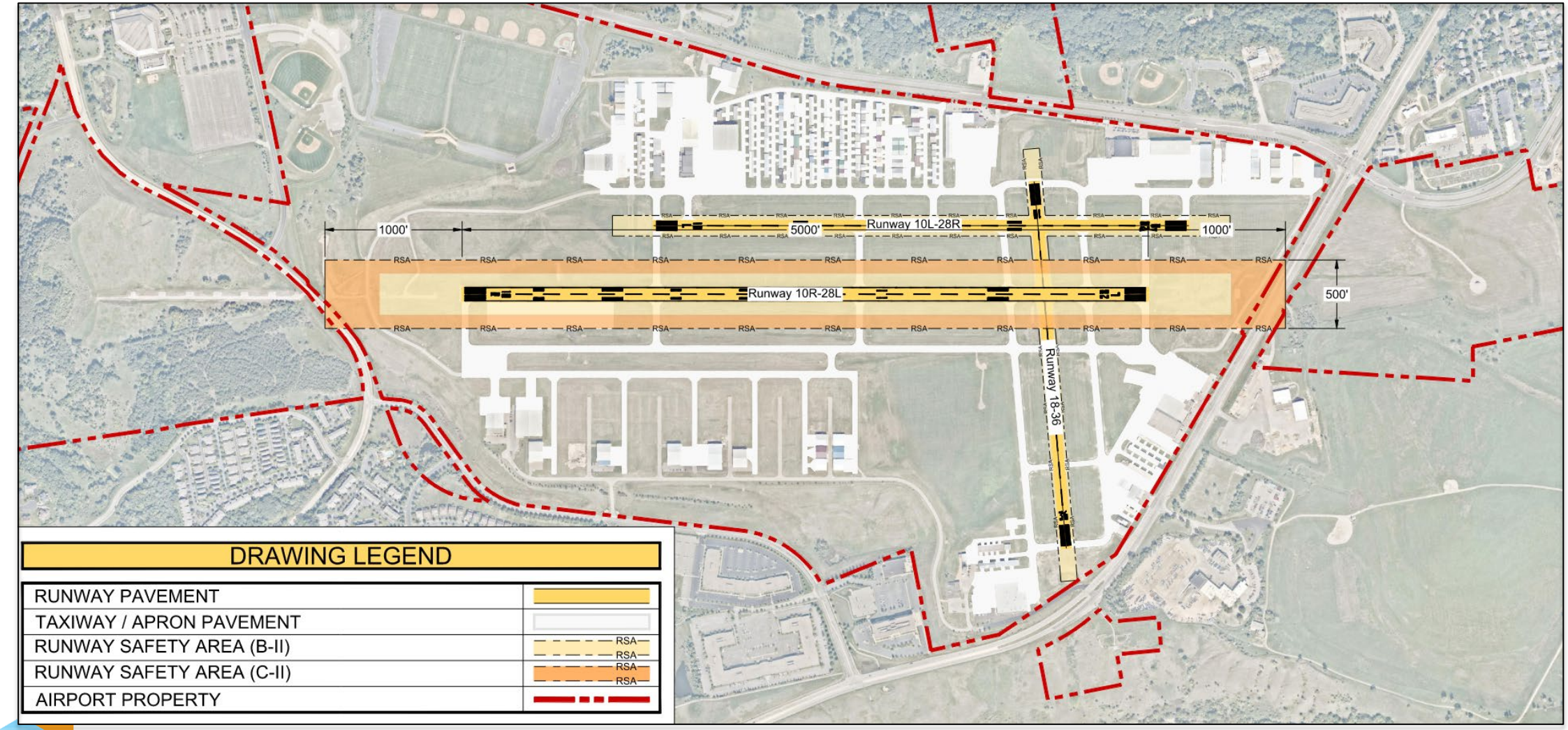
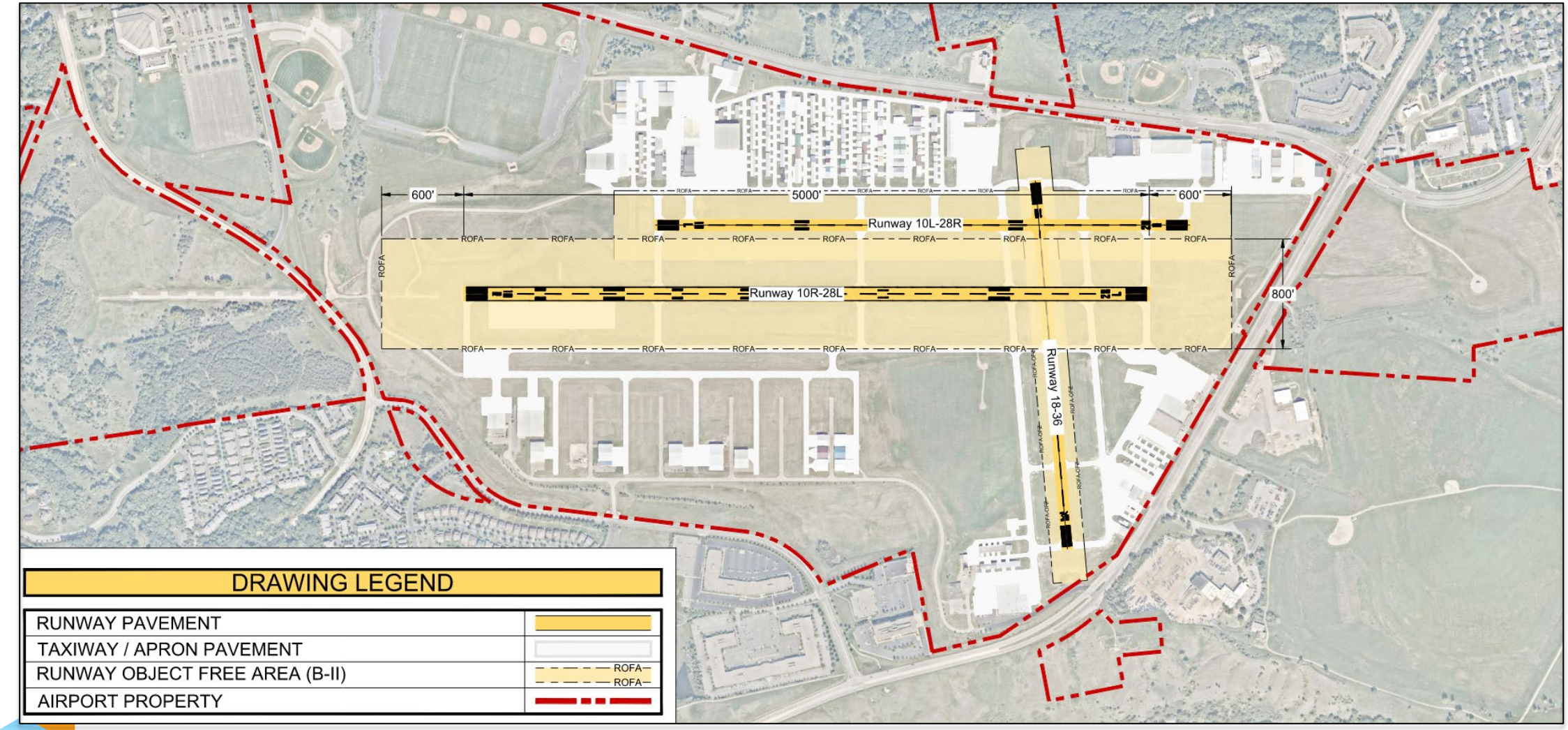


# Facility Requirements – Runway Object Free Area: B-II



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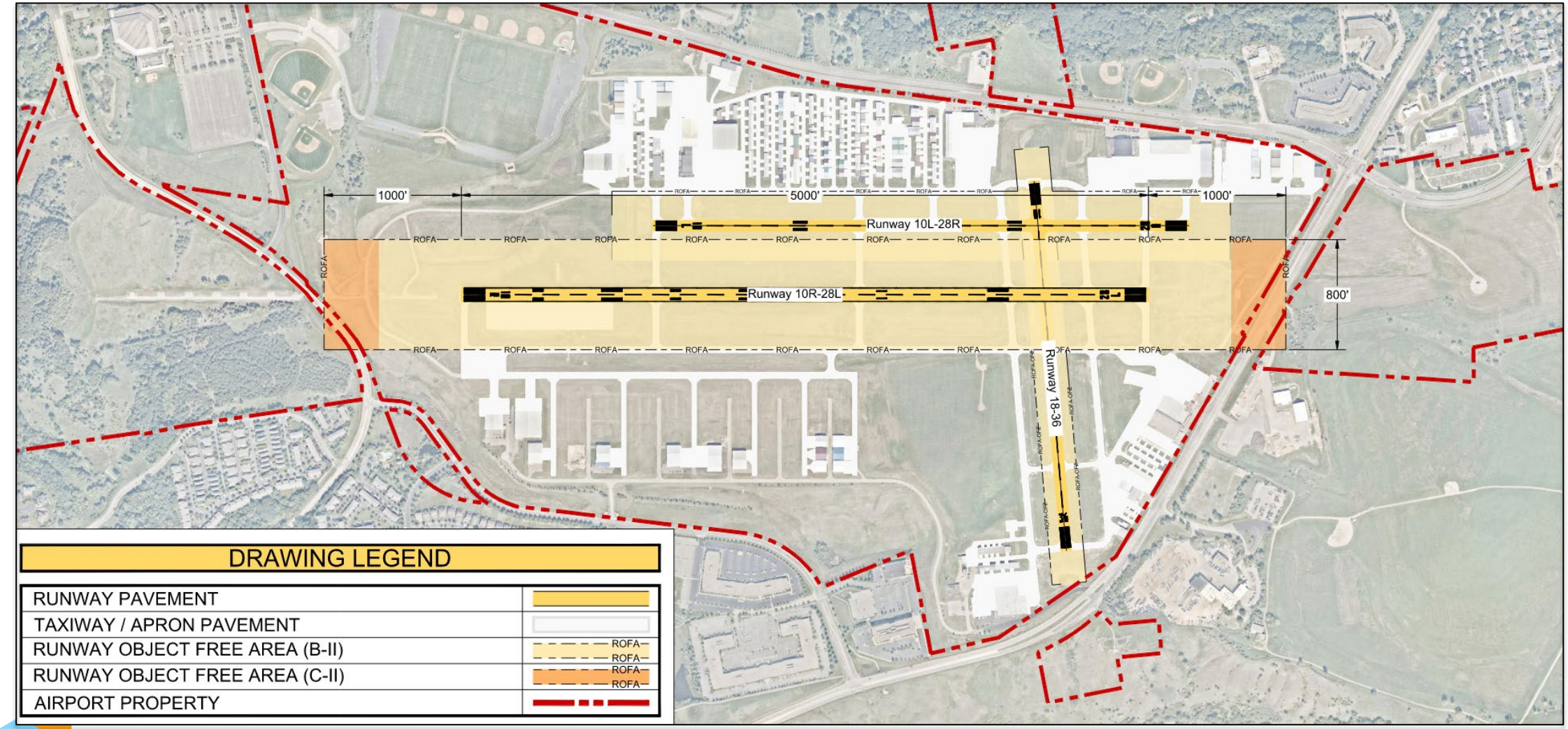
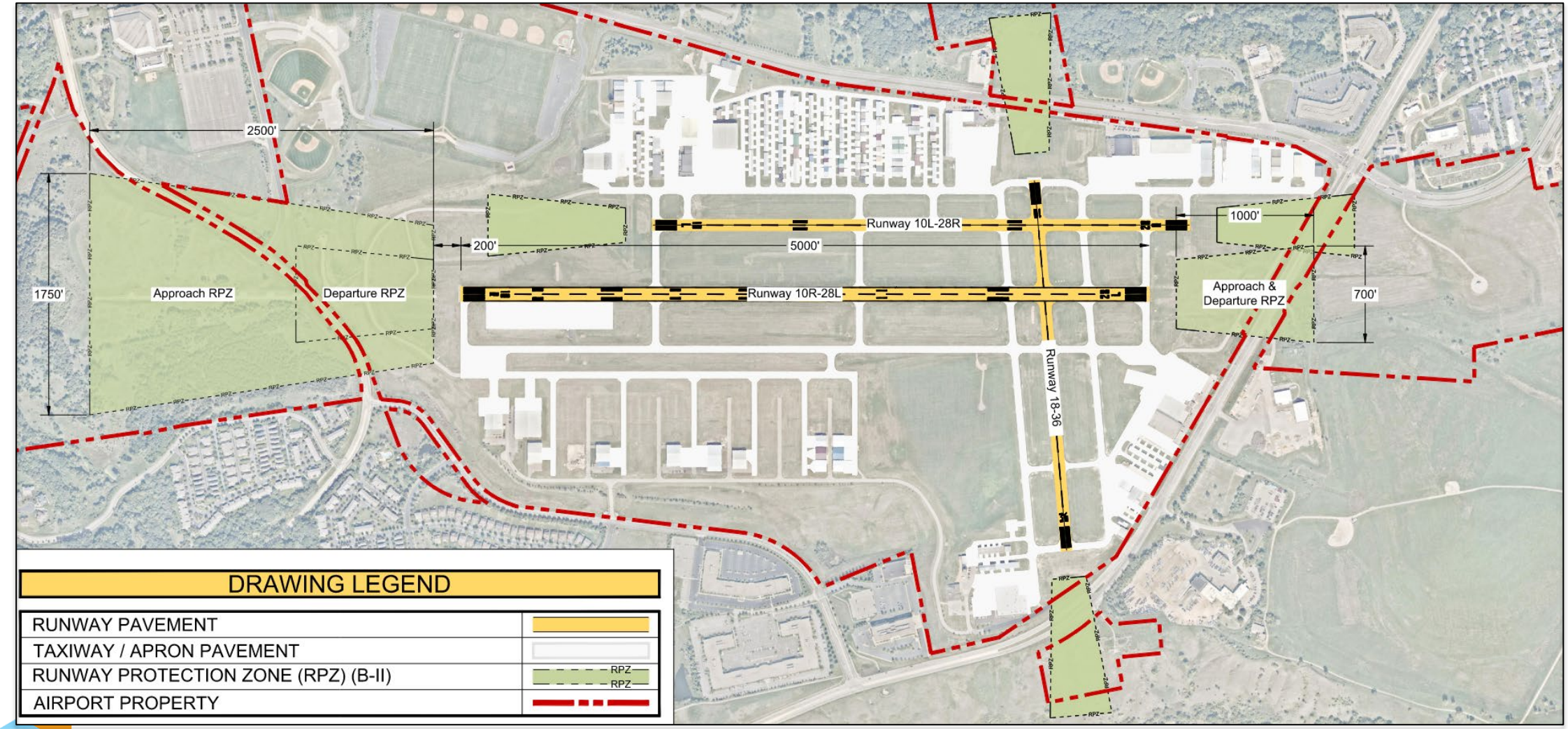


# Facility Requirements – Runway Protection Zone: B-II



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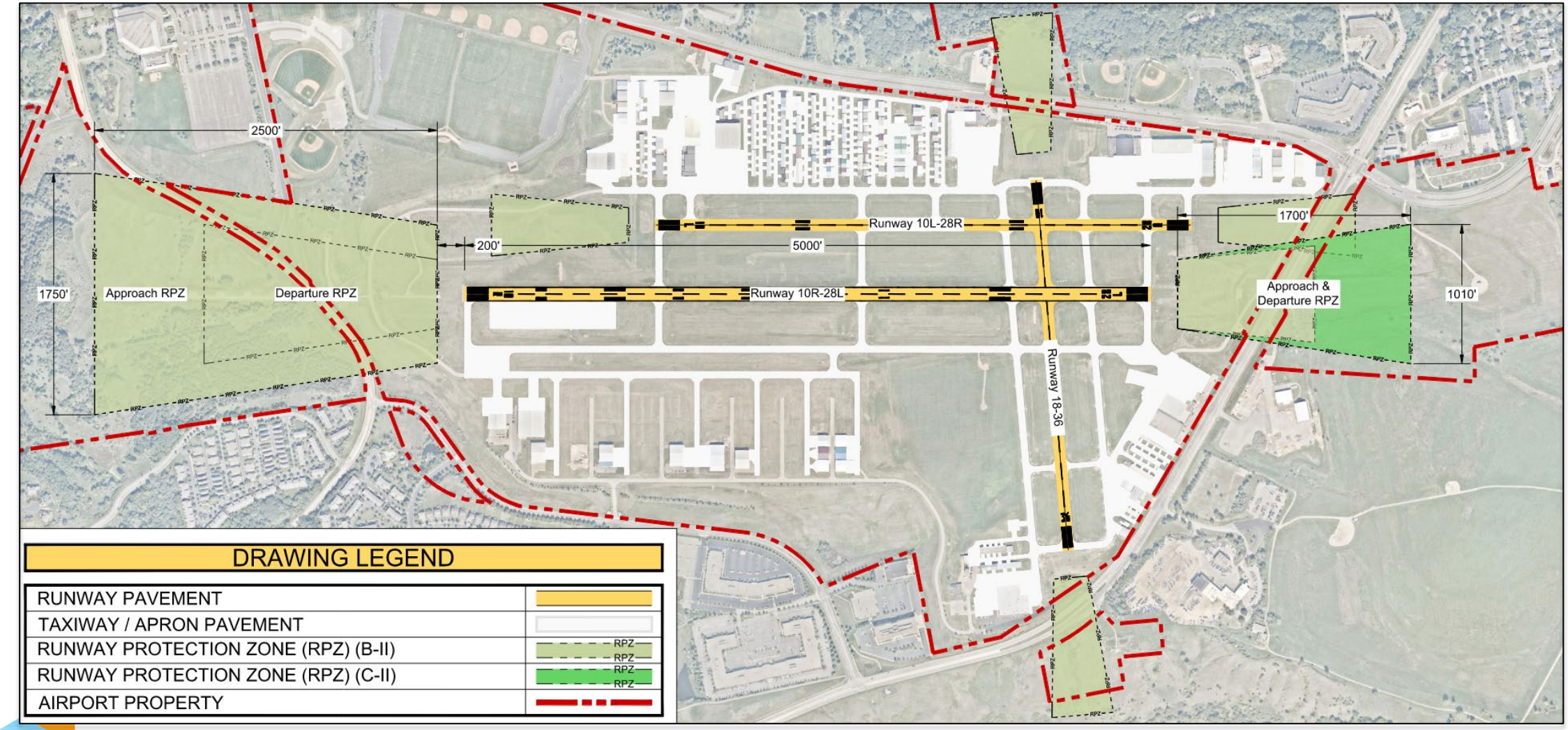
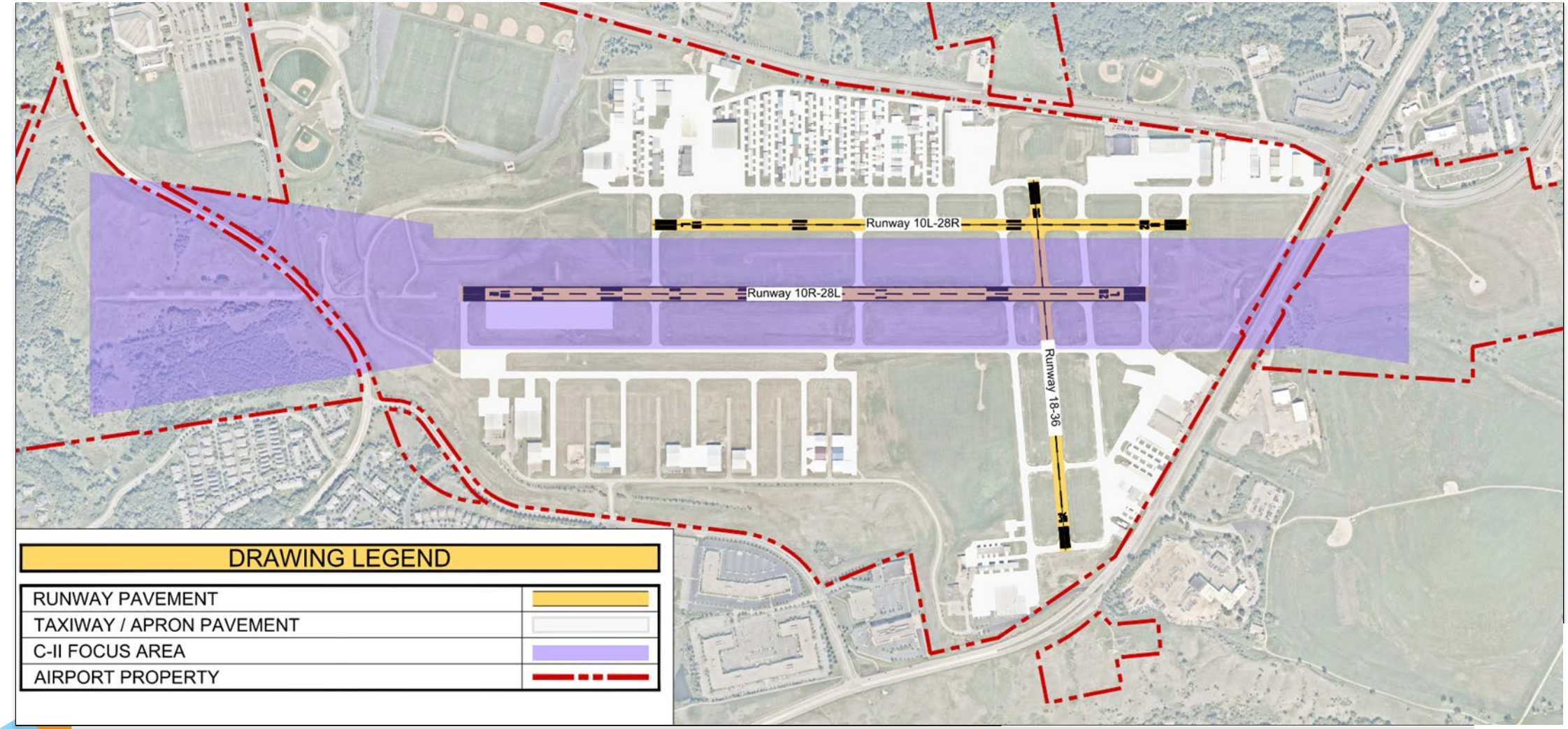


# Critical Aircraft Focus Area



# Other Facility Requirement Considerations

- Other requirements that will be covered during the next SAP meeting:
  - Airfield Capacity
  - Navigational Aid (NAVAID) Critical Areas
  - Runway-to-Taxiway Separation
  - Taxiway Dimensional Criteria
  - Airfield Markings
  - Aircraft Parking Areas/Aprons
  - Potential Hangar Development Areas

# SAP Question #2:

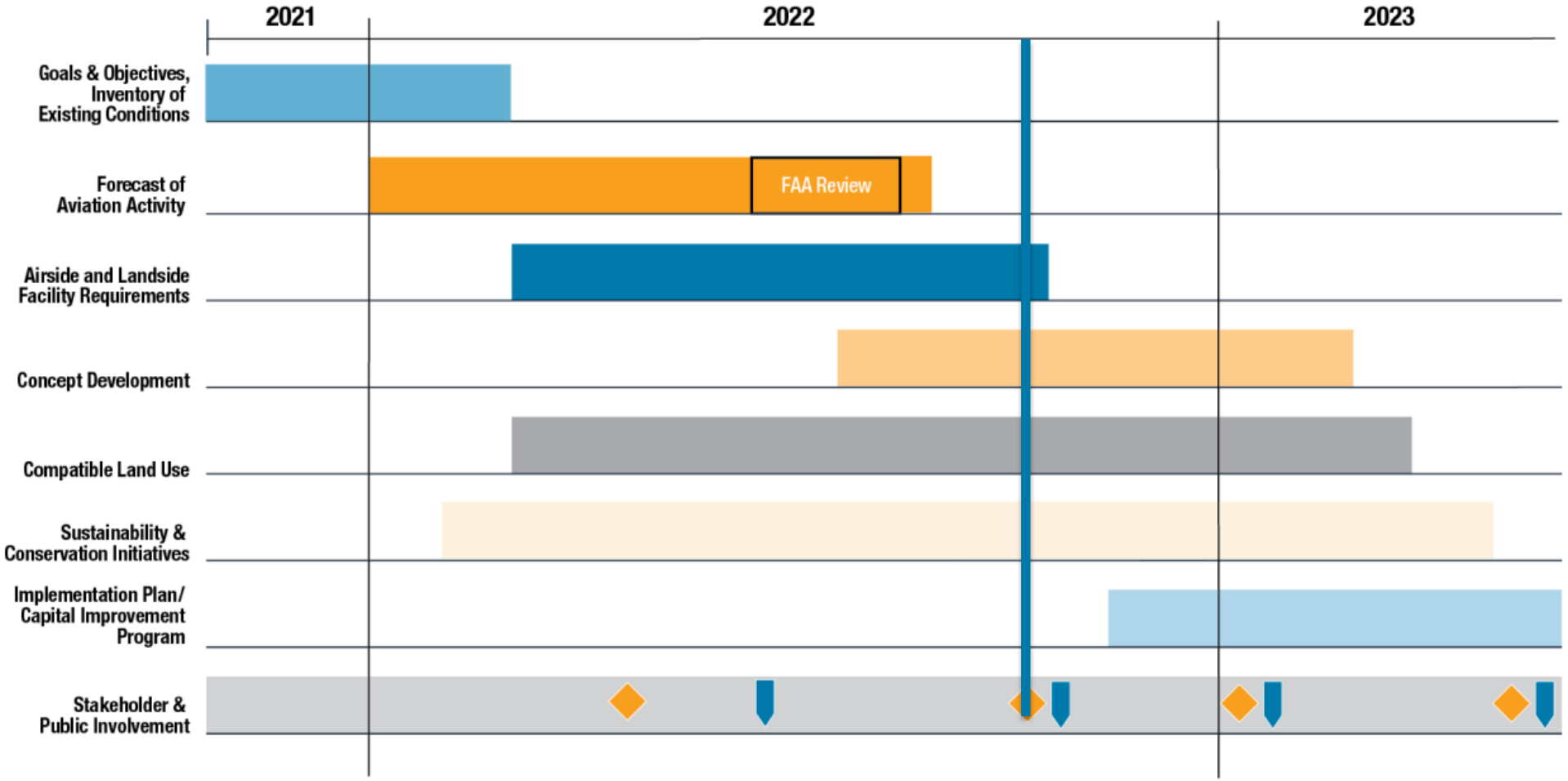
*Anything surprising or something you were expecting to hear today, but didn't?*

# Next Steps/Schedule

# Next Steps

- Discover Flying Cloud Meeting # 2 (October 25th, 2022)
- Begin Draft Alternative Concept Development
- Consider Areas for Potential Hangar Development
- Additional SAP meetings
  - Alternatives review
  - Preferred alternative

# Schedule


2021
2022
2023
Goals & Objectives, Inventory of Existing Conditions
Forecast of Aviation Activity
FAA Review
Airside and Landside Facility Requirements
Concept Development
Compatible Land Use
Sustainability & Conservation Initiatives
Implementation Plan/ Capital Improvement Program
Stakeholder & Public Involvement
Stakeholder Advisory Panel (SAP) Meeting
Public Open House
Updated: July 2022 - Timeline is subject to change.

# Thank you for participating!

2040 Long-Term Plan (LTP) Update
Flying Cloud Airport (FCM)

Please complete the post-event survey

October 6, 2022