

Master Plan for the Cleveland Hopkins International Airport

Evaluation of Terminal & Other Airport Facility Alternatives

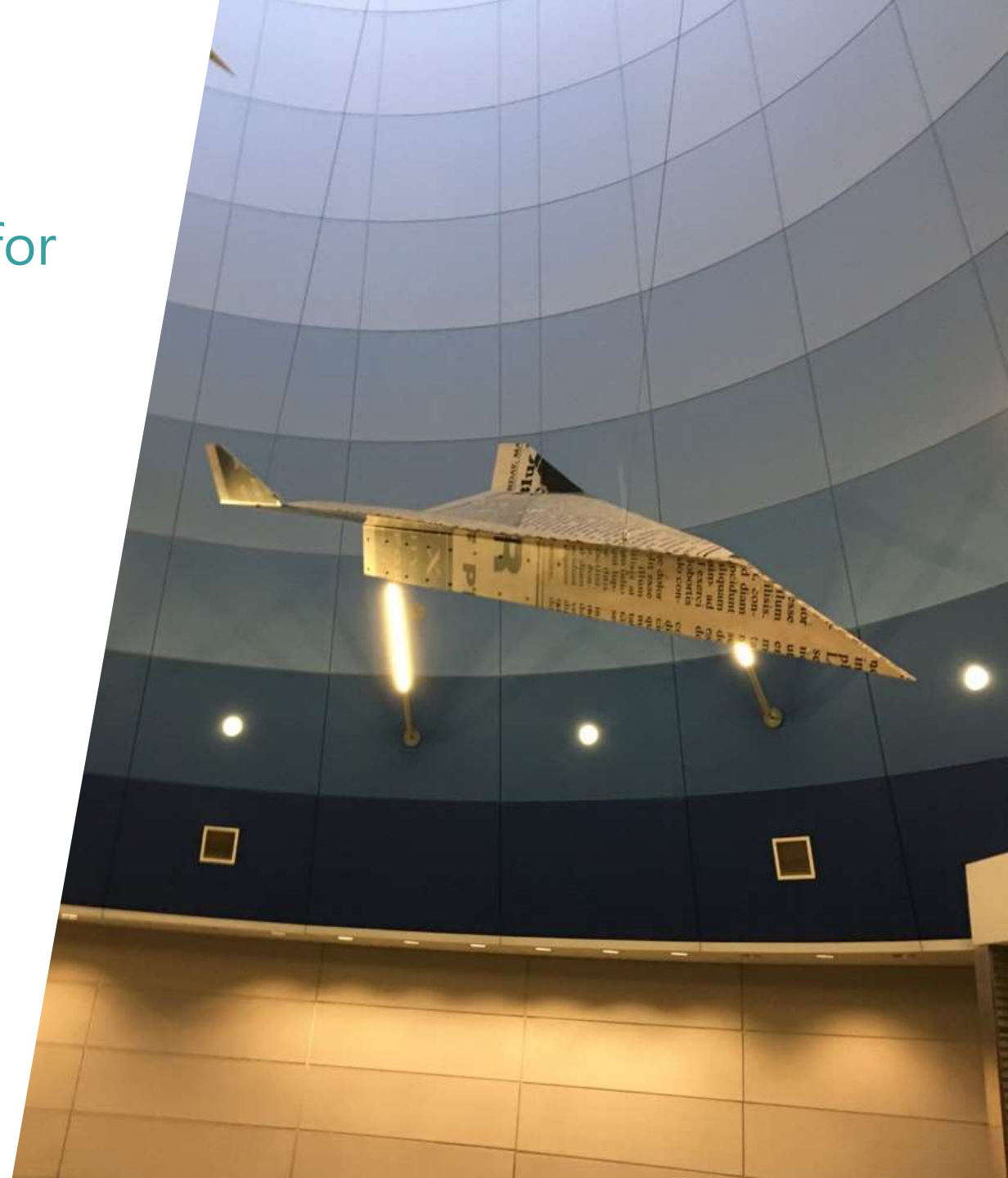
Executive Committee Meeting #3

January 12, 2021



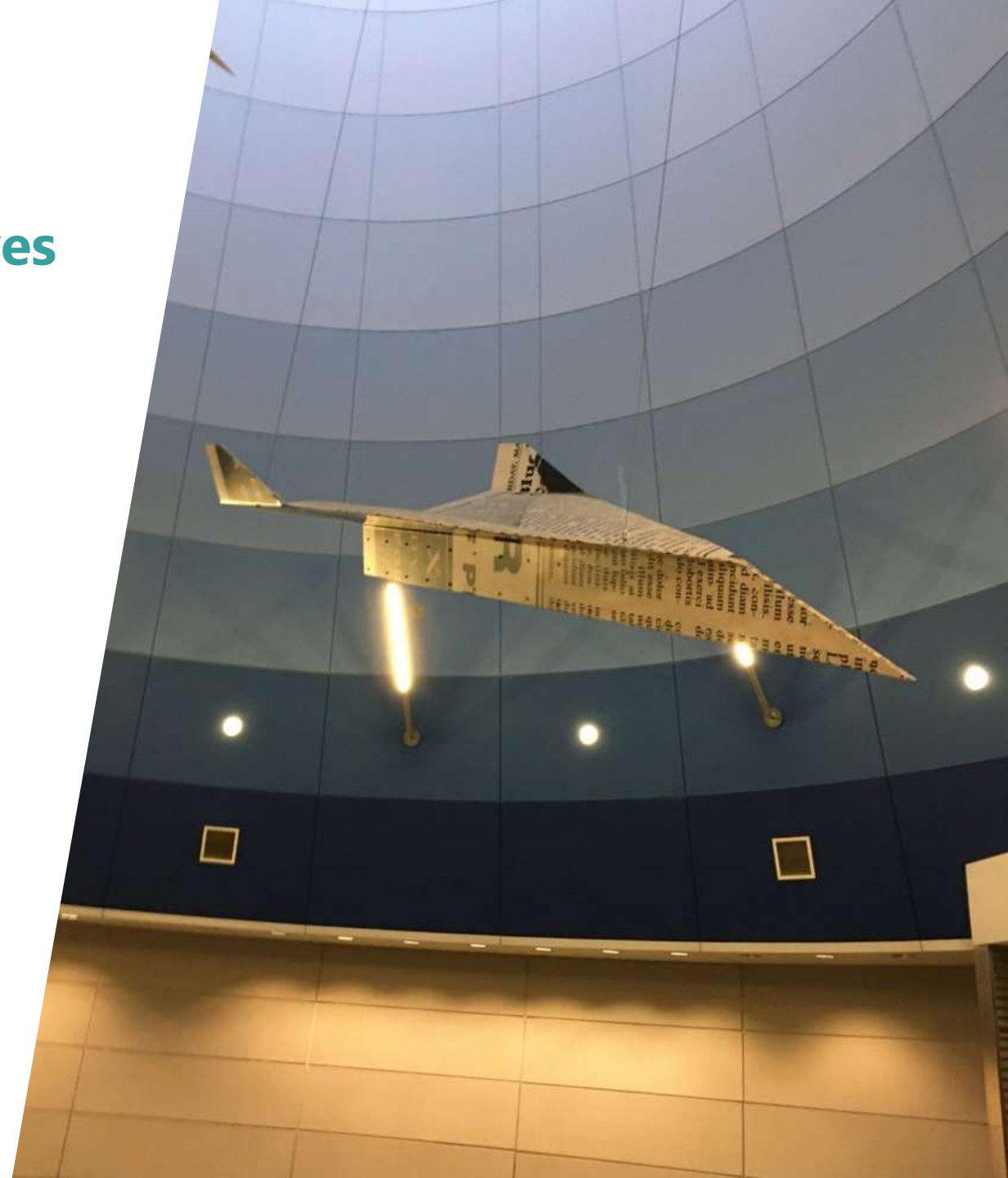
Agenda

- » Identification of Terminal Alternatives for Further Evaluation
- » Reducing Terminal Alternatives to Two and Selecting Preferred Alternative
- » Family 2 Program
- » Financial Analysis
- » Other Airport Facility Alternatives
- » Next Steps

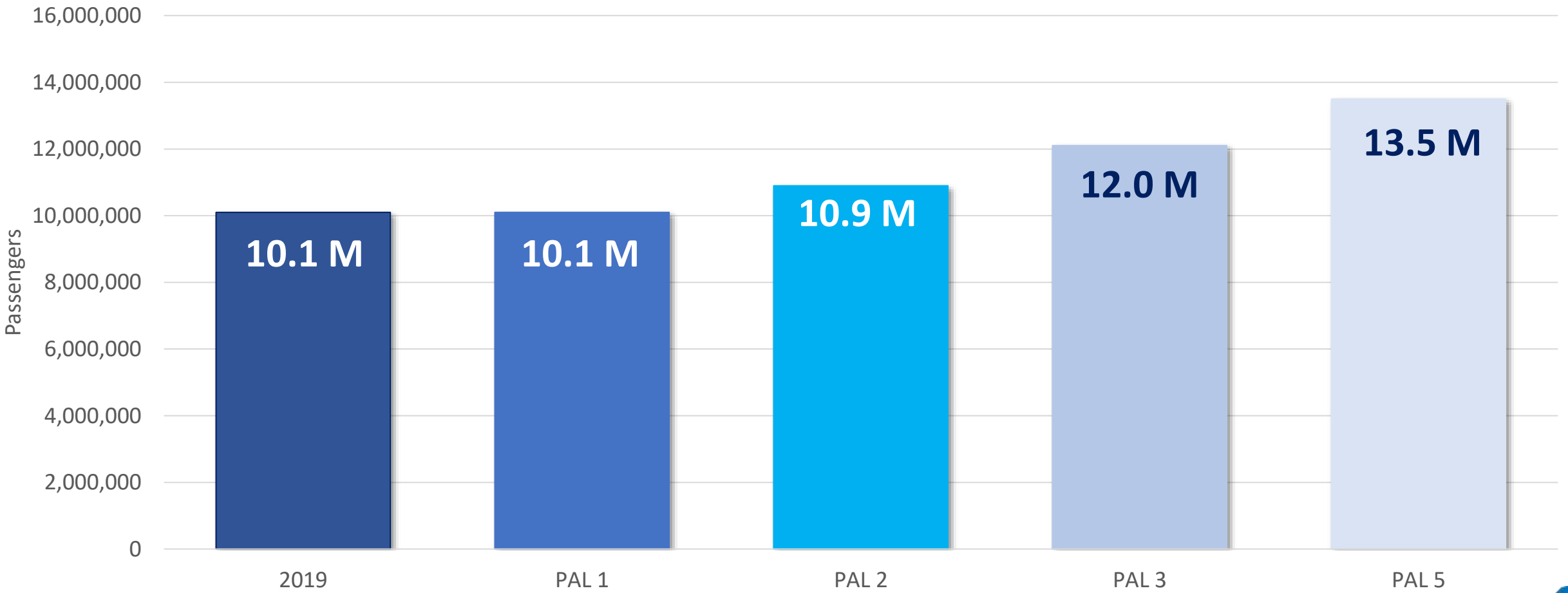


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Total Passengers Planning Activity Levels (PALs)



Critical Elements

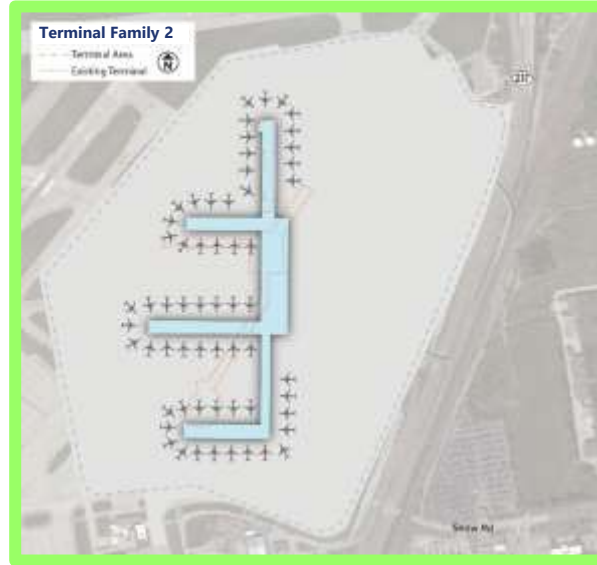
Critical elements to address for space deficiencies in the near and long term

Area	Description	Existing	PAL 1 & 2
Ticketing/ Check-in	Ticketing lobby is too narrow and does not provide adequate depth for the typical airline check-in process with self-service kiosk and queue and bag check-in processes	7,700 sq. ft.	11,200 sq. ft.
Checked Baggage Inspection Systems (CBIS)	Two additional explosive detection system (EDS) devices and up to 14 additional checked baggage resolution area (CBRA) stations are required by the end of the planning period (there are currently three EDS devices and 11 CBRA stations)	11,200 sq. ft.	19,500 sq. ft.
Security Screening Checkpoints	A consolidated centralized Security Screening Checkpoint (SSCP) is preferred and the existing SSCP's are not sized adequately for current and future security lane configurations.	21,200 sq. ft.	43,000 sq. ft.
Holdrooms	Many holdrooms are currently undersized for projected demand.	101,200 sq. ft.	163,500 sq. ft.
Gates	To accommodate future passenger and aircraft operation growth	43	53

Terminal Families Selected for Further Evaluation



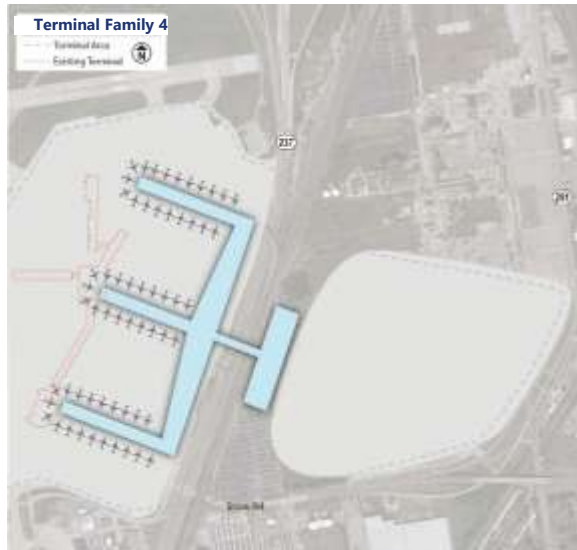
Family 1



Family 2



Family 3



Family 4



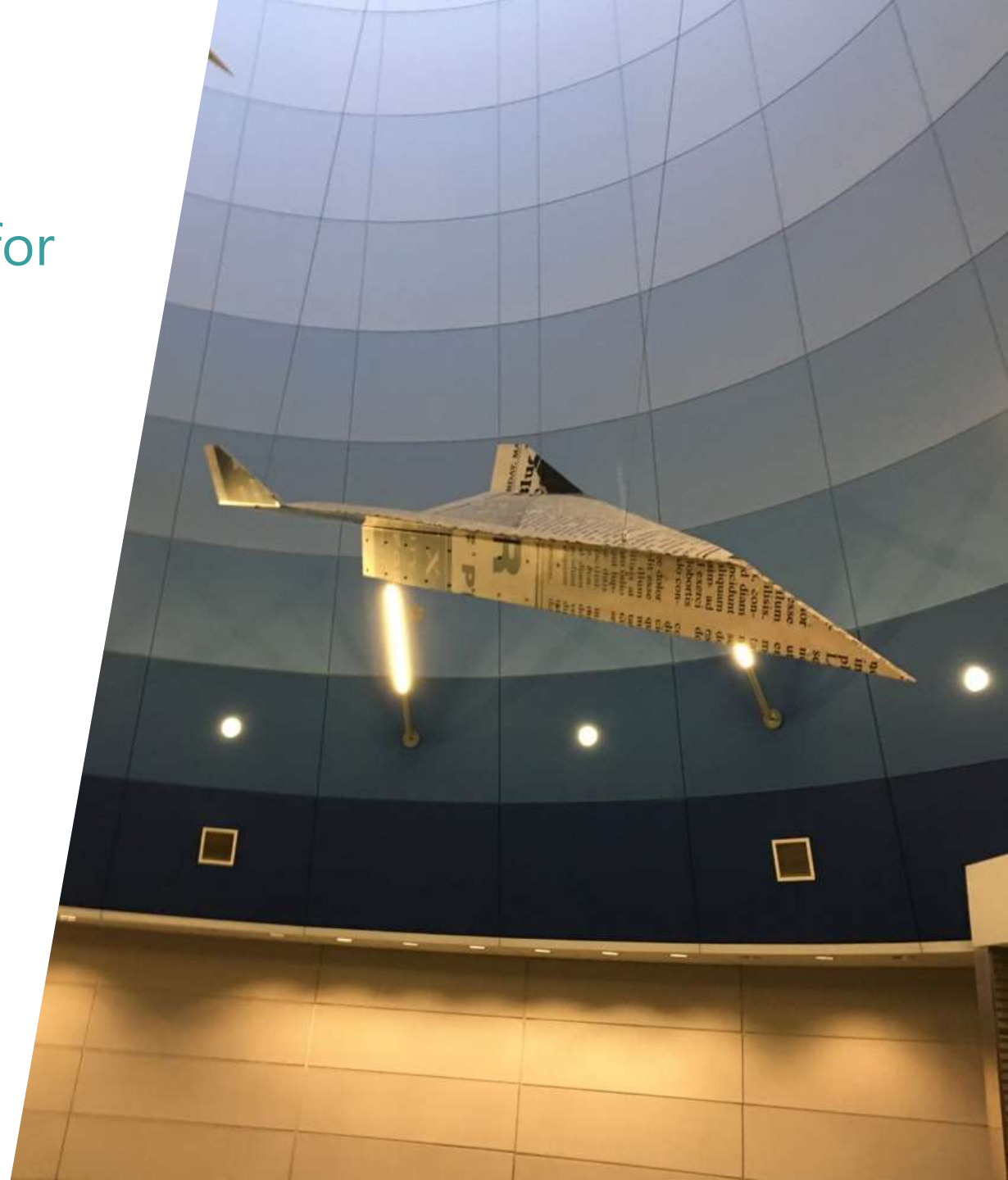
Family 5



Family 6

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Family No. 6 Is No Longer Being Considered Due To:

- » Higher initial PAL 2 cost
- » Complicated construction phasing
- » Two additional level changes would be required to access the satellite concourse by way of a tunnel connection
- » Separate concession core for satellite concourse
- » Concept is not compatible with on-airport or regional access configurations

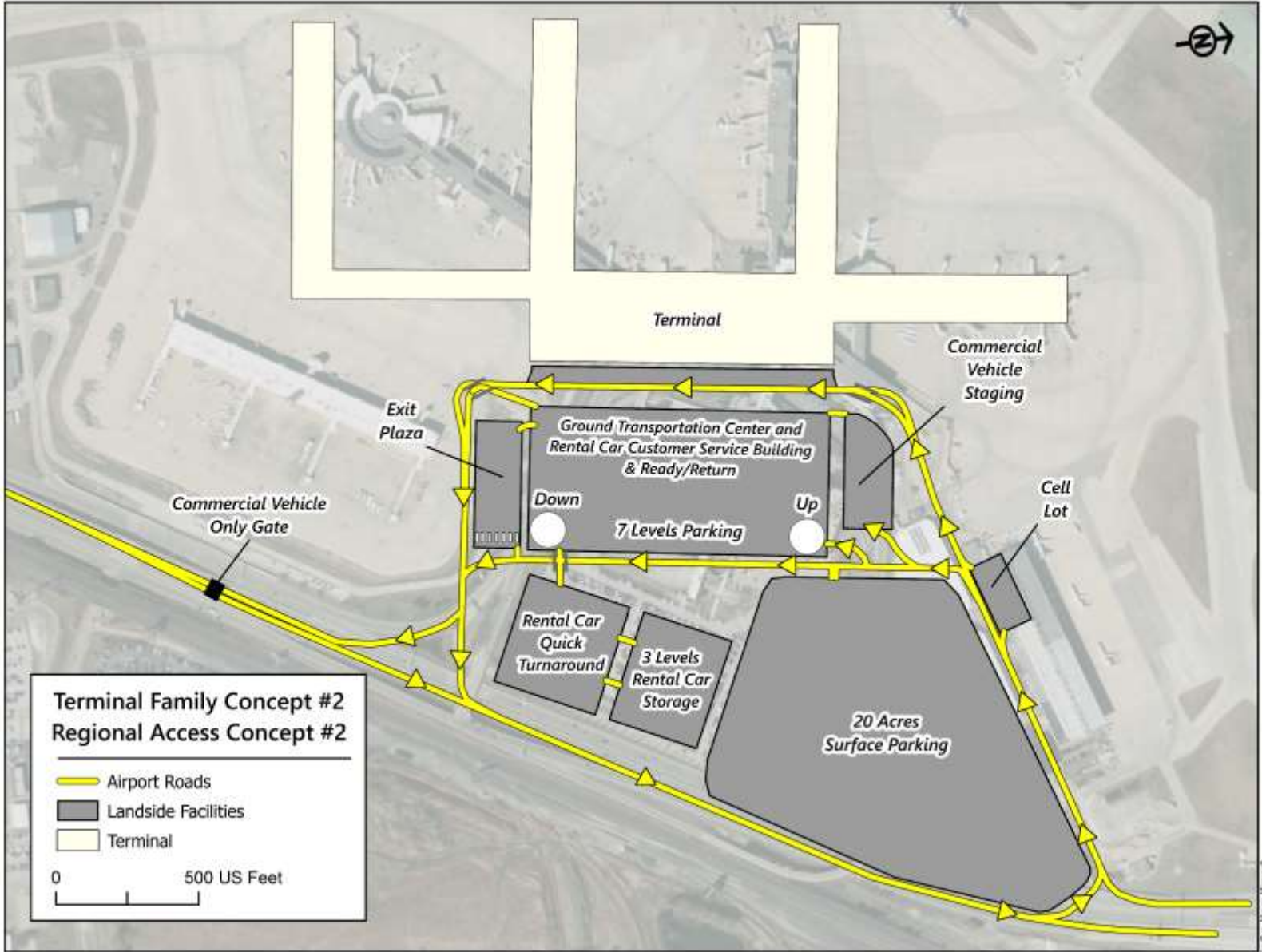
Preferred Family 2 over Family 1

» Conducted detail phasing evaluation of Family 1 and Family 2 through PAL 2

Family 2:

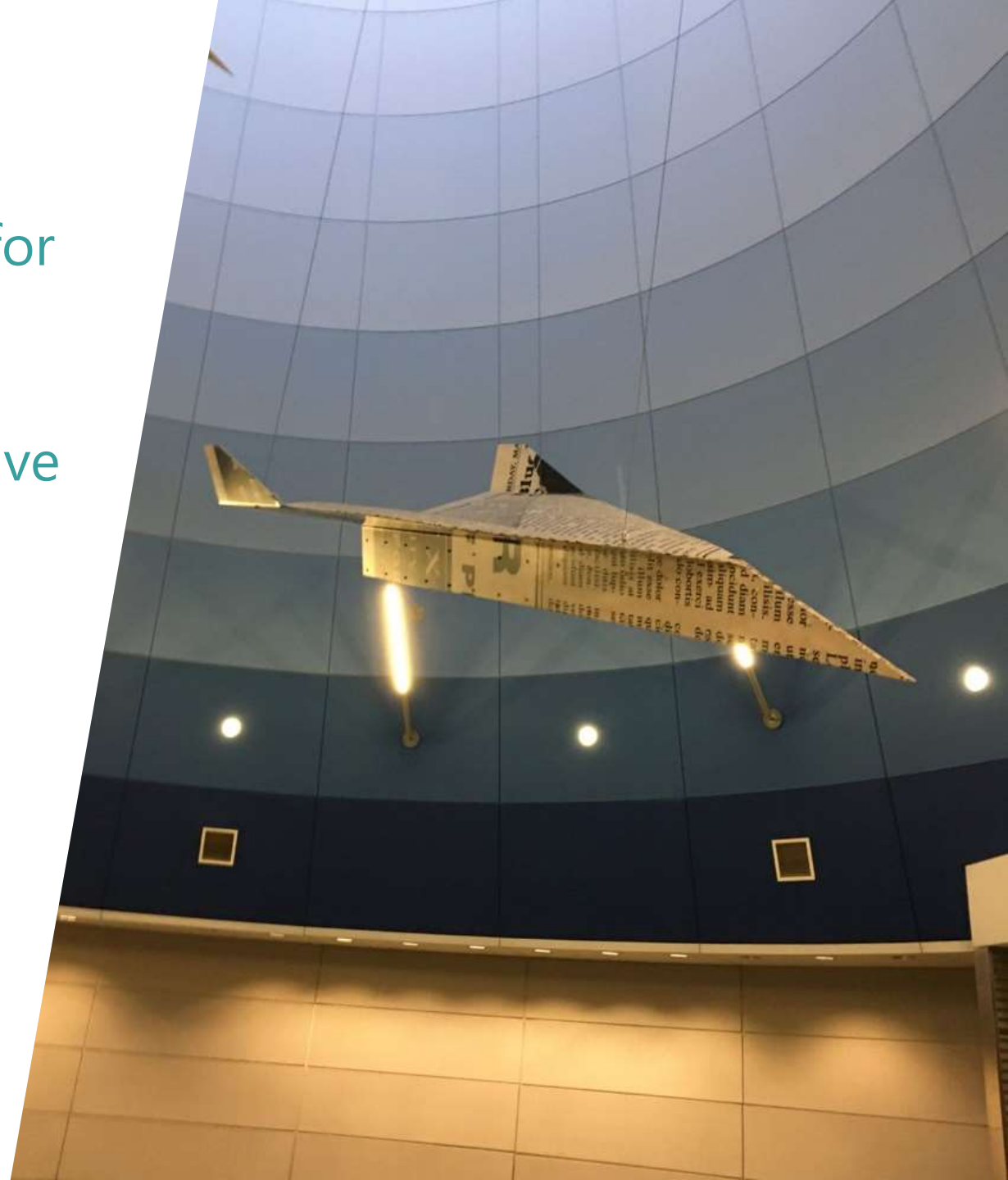
- » Provides superior customer experience & potential for iconic Terminal Building image beyond PAL 2
- » Results in a newer Terminal Building over the long-term
- » Has lower construction cost through PAL 2
- » Can be financed based upon assumptions developed in the financial model
- » Has lower maintenance/replacement costs
- » Provides more opportunities for concessions improvements
- » Provides more opportunities for future Terminal Building expansion
- » Enables a more efficient gate layout
- » Facilitates intuitive wayfinding

Long-Term Plan - Family 2 Layout



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Family 2 - PAL 2 - Level 1



- New Construction
- Demolition
- PAL 5 Development
- Existing Terminal

1: Concourse D + Connector Tunnel Reactivation

6: Concourse C Interior Renovation

2: Demolish Concourse B (Including Old Control Tower)

3: New Concourse B

5: Concourse A Addition

4: Concourse A Interior Renovation

8: Mechanical, Electrical, Plumbing, Concessions, Baggage Claim, Federal Inspection Services Facility (North)

7: Mechanical, Electrical, Plumbing, Checked Baggage Inspection System, Baggage Claim (South)

Family 2 - PAL 2 - Level 2



- New Construction
- Demolition
- PAL 5 Development
- Existing Terminal

1: Concourse D + Connector Tunnel Reactivation

6: Concourse C Interior Renovation

2: Demolish Concourse B (Including Old Control Tower)

3: New Concourse B

13: Concourse A, B and C Connector

9: Ticketing - Mid Terminal

5: Concourse A Addition

Concourse D

Concourse C

Concourse A

Terminal

Concourse B

4: Concourse A Interior Renovation

12: Level 2 Corridor by Federal Inspection Services Renovation

7: Level 2 - Security Screening Checkpoint (South)

8: Level 2 - Mechanical, Electrical, Plumbing, Concessions, Federal Inspection Services Facility (North)

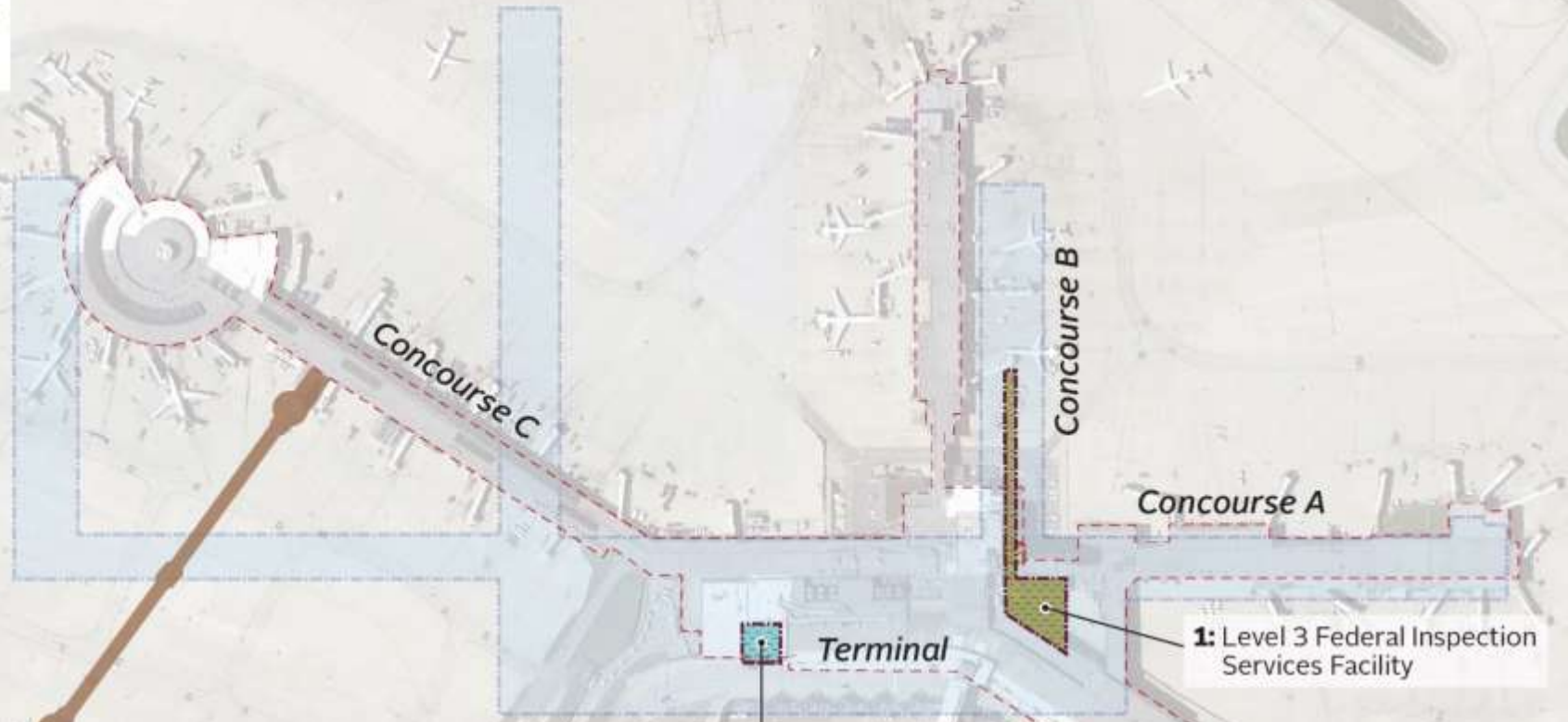
10: Ticketing - by Airline Ticketing Offices

11: Ticketing - North Terminal

Family 2 - PAL 2 - Level 3



- New Construction
- Demolition
- PAL 5 Development
- Existing Terminal



2: Level 3 Airline Ticket Offices

1: Level 3 Federal Inspection Services Facility

PAL 2 - Landside Facilities (Family 2)



--- Existing Terminal

Covered Walkway with Assist

1,500 Surface Parking Spaces

Ground Transportation Center & Taxis

Smart Garage

Rental Car Customer Service Building

Cell Phone Lot

Red Lot

237

Rental Car Quick Turnaround Facility

Rental Car Ready/Return

Up

Blue Lot

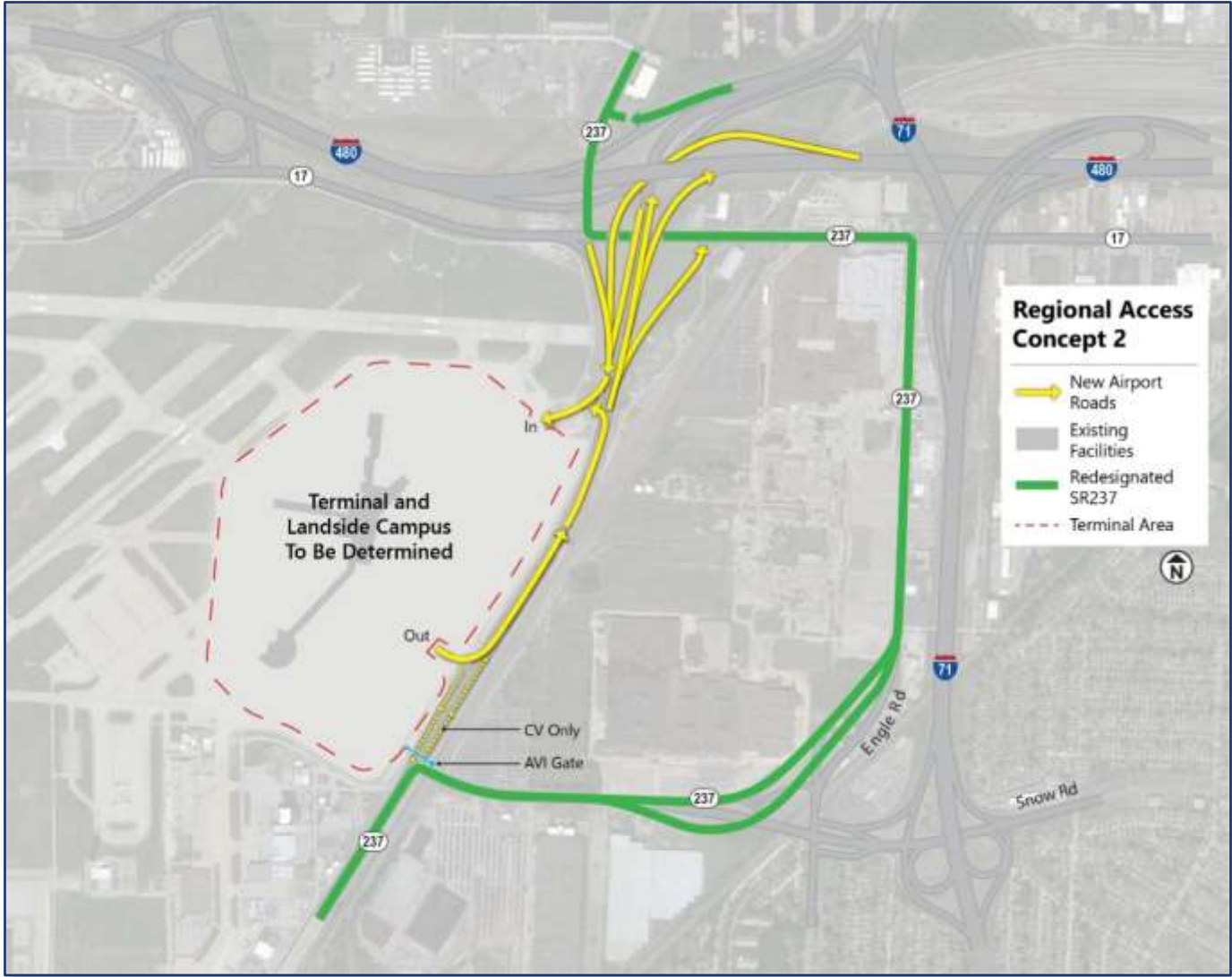
Down



Regional Access Concept #1



Regional Access Concept #2



Regional Access Concept #3

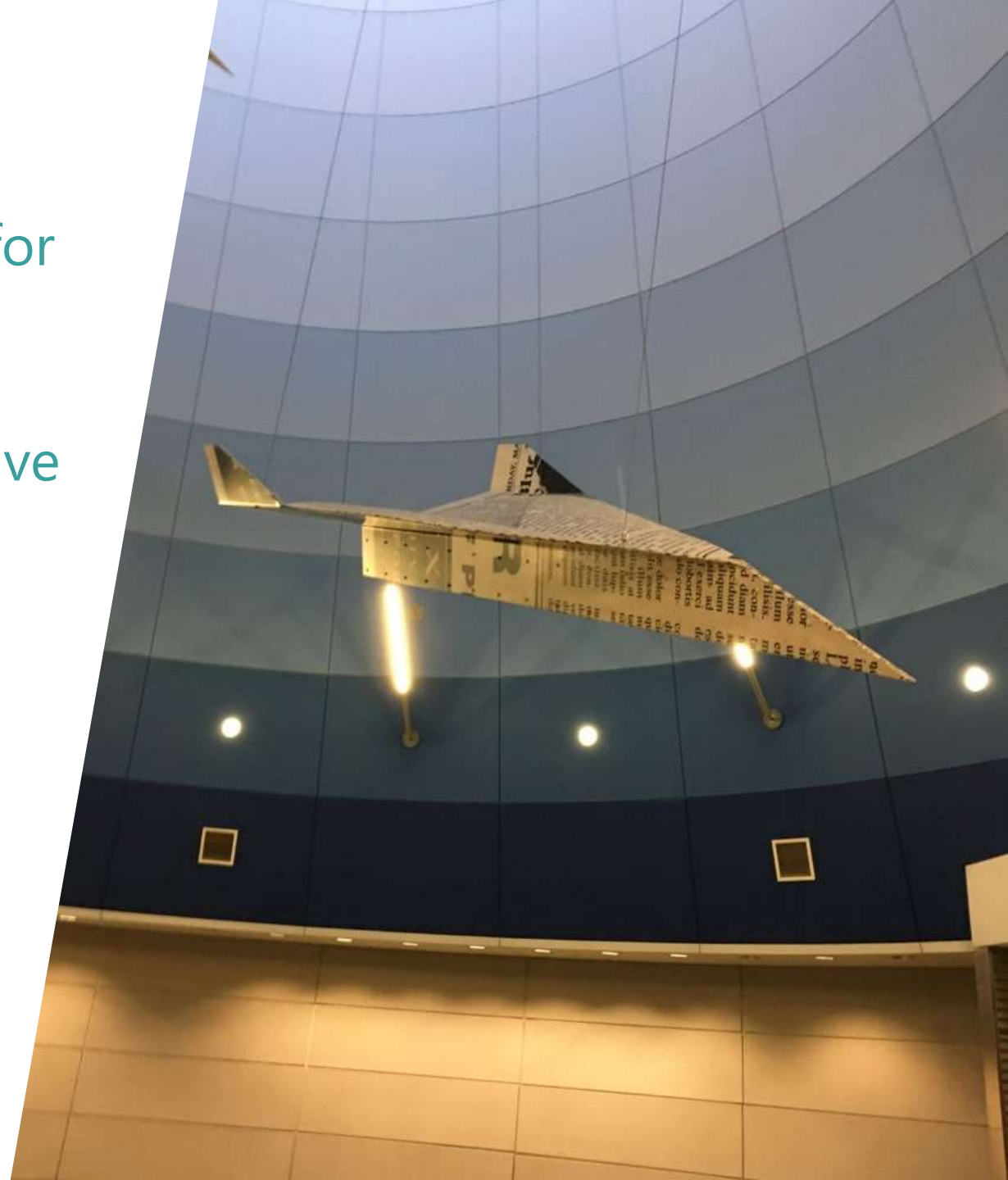


Evaluation of Terminal Campus Options Associated with Regional Access Alternatives

- » Regional Access 2 has the best short- and long-term potential for the Airport
- » Regional Access 1 has limited life after the 20 years of this Master Plan and is the costliest on-airport
- » Regional Access 3 provides a high level of service while being costliest off-airport
- » Preference: Regional Access 2:
 - *Easiest to phase in over time*
 - *Greater flexibility with terminal options*
 - *All at-grade on-airport roadways cost less, provide best customer service*
 - *Facilitates transition to Regional Access 3 if ever implemented*

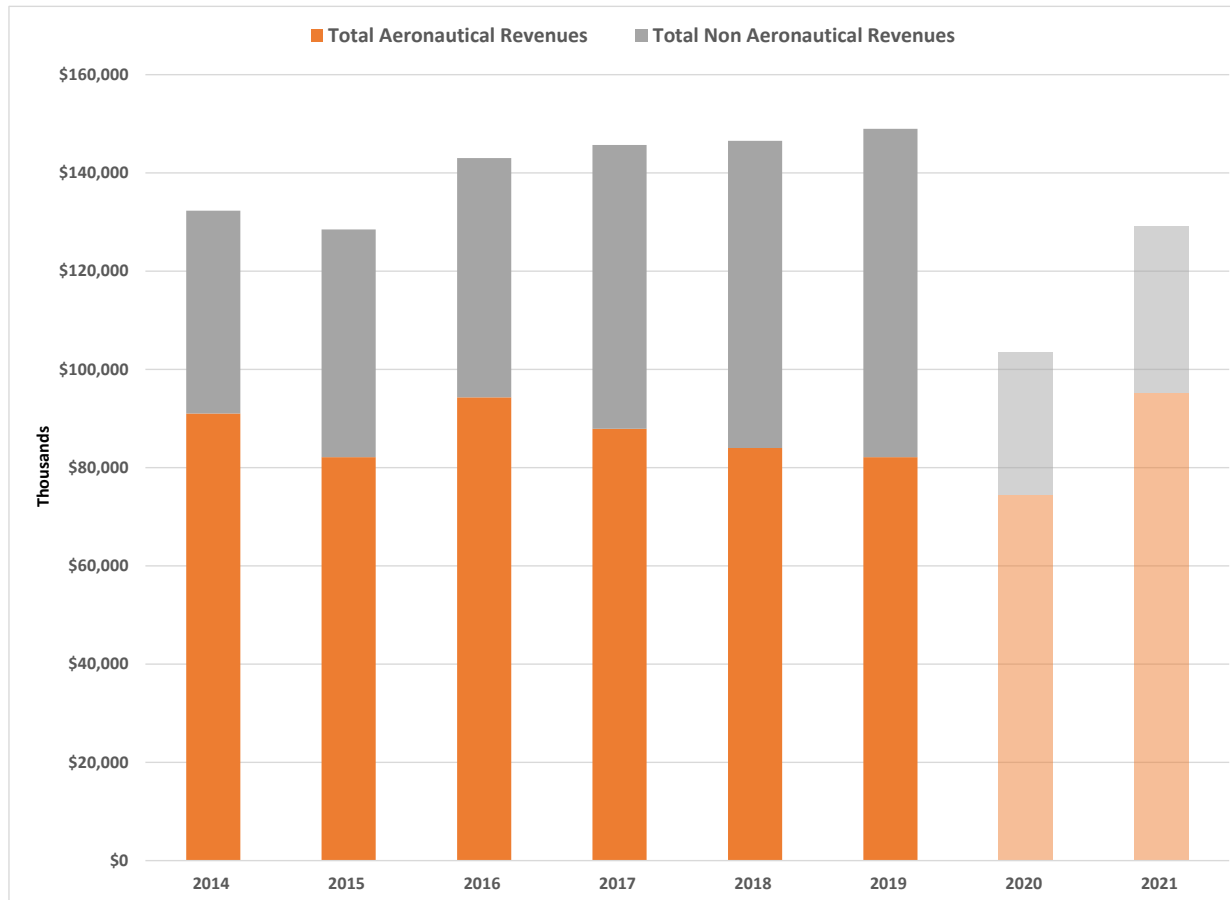
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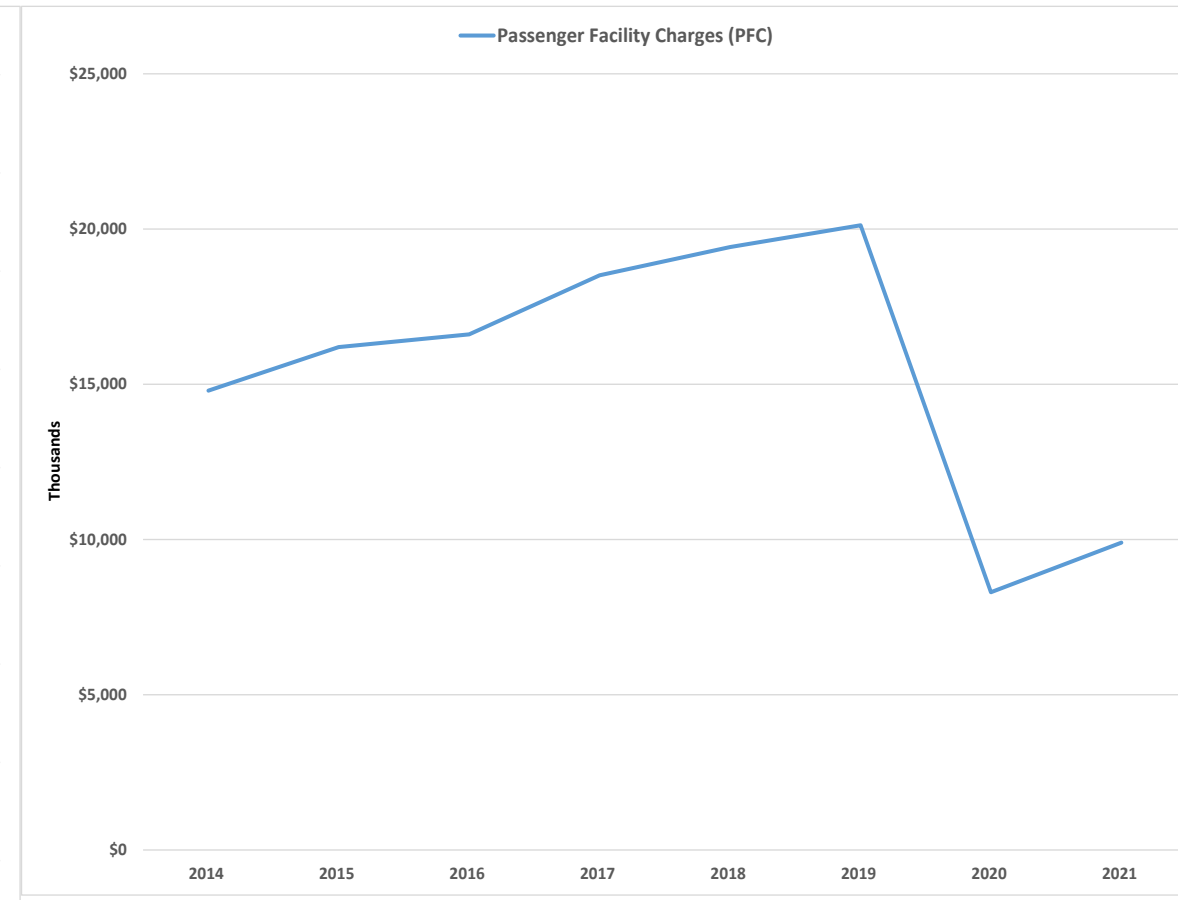


Financial Capacity

- » The COVID-19 Pandemic has impacted CLE finances in the following aspects:
 - Lower aeronautical revenues
 - Much lower non-aeronautical revenues (parking, concessions, car rental, etc.)
 - Passenger Facility Charges (PFCs) much lower than anticipated



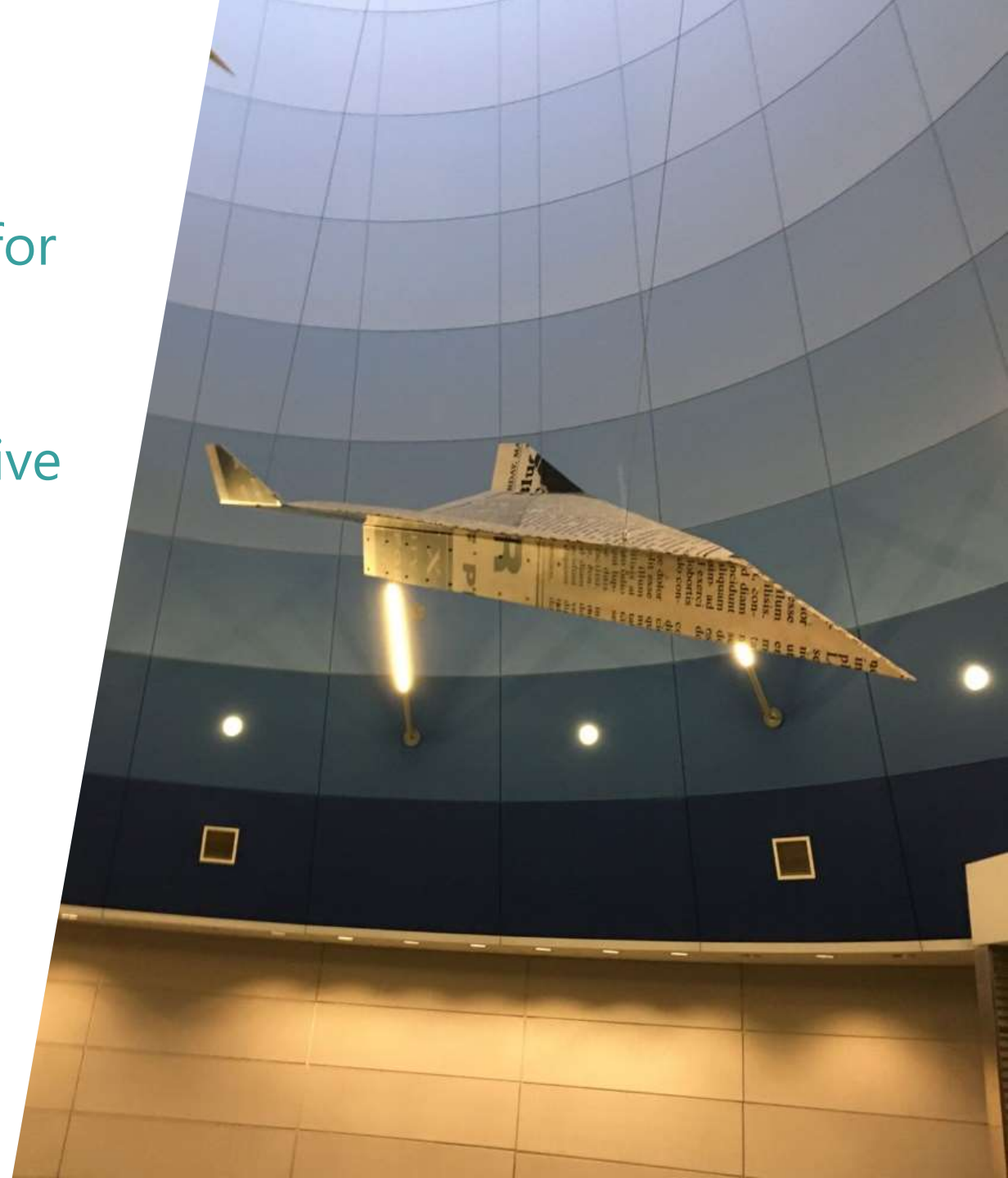
Notes: Preliminary Subject to Change
2020 and 2021 amounts are estimated



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Goals for Alternatives Development Plan

» Goals

- Develop a plan with sufficient flexibility to address tenant needs
- Generate a highest and best use plan with a campus development approach

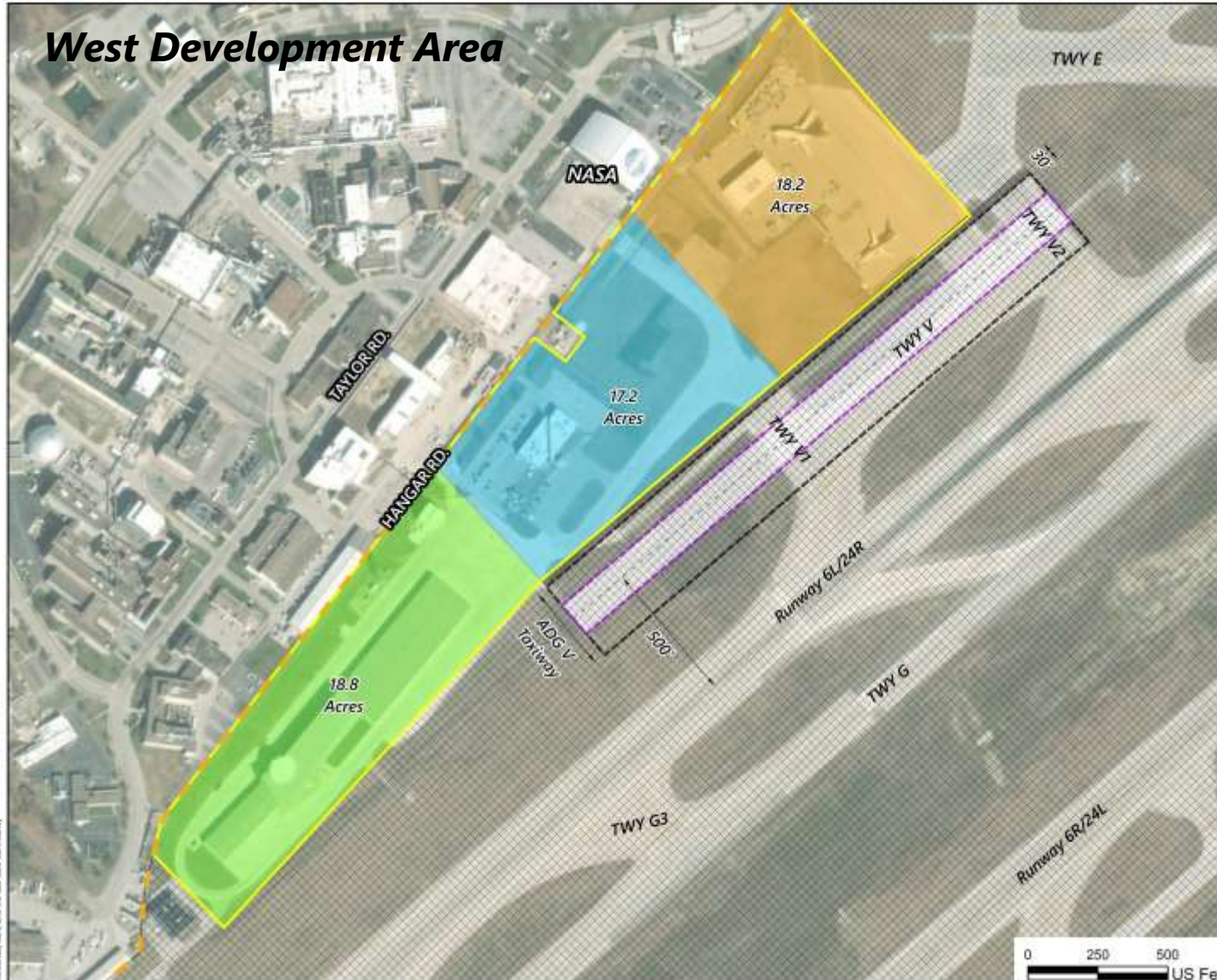
» Meet Objectives

- Accommodate facility space requirements
- Address tenant desires to relocate/expand
- Consider the useful life of aging infrastructure and timing of lease expirations
- Develop an adaptable phasing plan

Alternatives Development Process

- » Sufficient land exists to accommodate facilities development through and beyond master planning period
- » Other Airport Functions
 - Air Cargo (freight, belly)
 - General Aviation (FBO, corporate)
 - Aircraft Maintenance
 - Airport Maintenance
 - Airport Support
- » Evaluate alternatives based upon goals and objectives

Support Facility Alternatives – West / North



West and North Development Alternatives

Legend

- Airport Property Line
- No Development Area
- Development / Redevelopment Area
- Future TOFA
- Future Taxiway / Taxilane
- Future Service Road
- Airport Maintenance
- Cargo
- General Aviation
- Future Landside

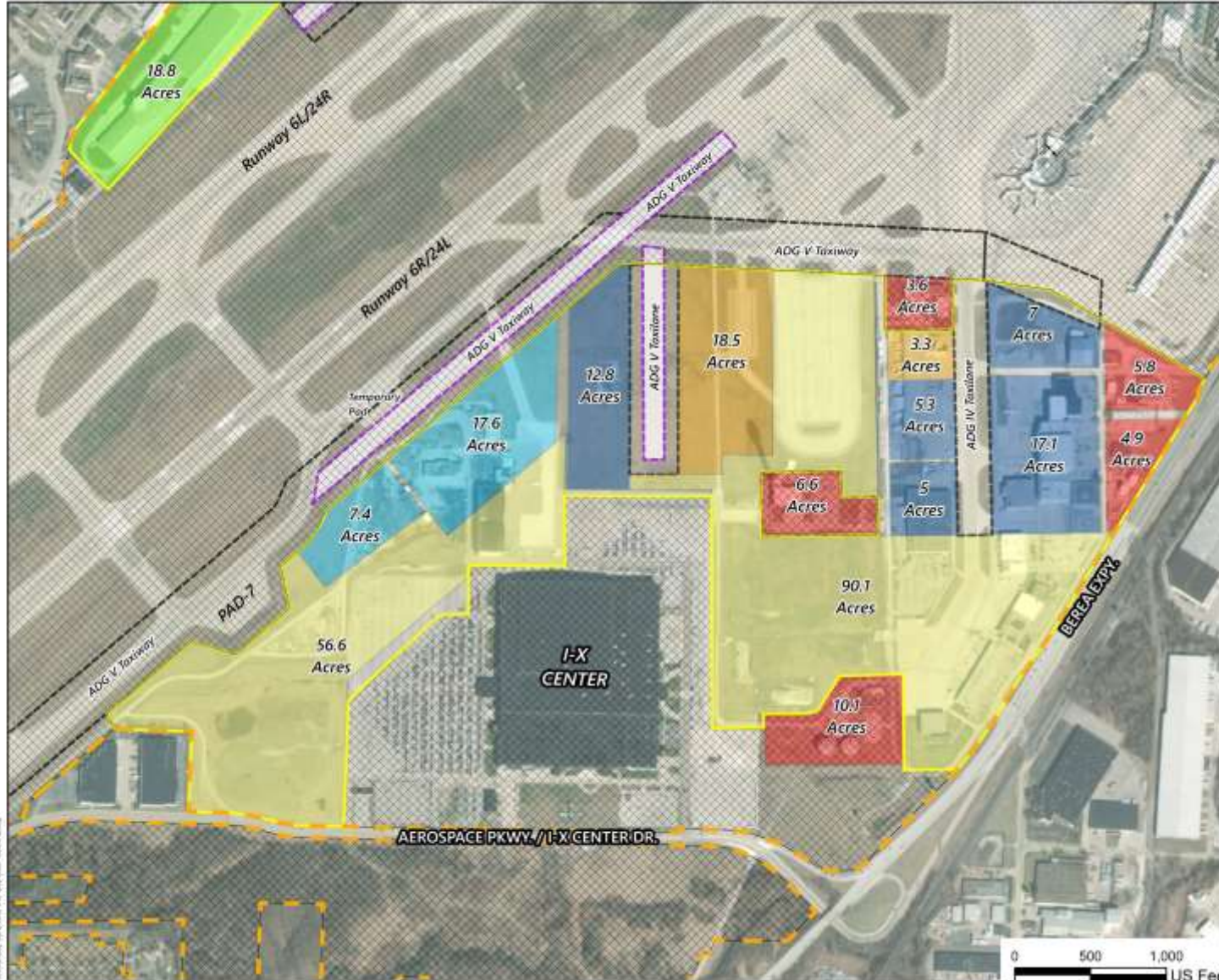


North Development Area

Source: Eric Mann, Golder, Database Compilation, NAD83/NA83 US, USGS, USGS, Aerial/3D, 30", with the US User Community



Support Facility Alternatives – South 1



South Development Area Alternative 1

Legend

- Airport Property Line
- No Development Area
- Development / Redevelopment Area
- Future TOFA
- Future Taxiway / Taxiway
- Aircraft Airline Maintenance and Support
- Airport Maintenance
- Airport Support
- Cargo
- General Aviation
- Opportunity Development Area

Source: Esri, Microsoft, Google, AeroMap, GeoEye, IGN, AerGRID, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Preferred Alternative 3

- » Accommodates facility requirements
- » Best addresses tenant desires to expand facility envelope at more accessible airfield locations
- » Creates a campus concept
- » Recognizes potential for needing to replaced aged infrastructure sooner than later
- » Provides a phasing strategy that relocates key facilities that are those anticipated to need expansion as enabling projects for phasing future development.
- » Provides the unanticipated benefit of enabling future terminal building envelope expansion beyond the master plan time frame.
- » Provides the most direct access to the runway/taxiway system to the I-X Center

Long-Term Growth Development Phasing

- » Campus Development of South Development Area
- » Pave the way for long-term future terminal growth (beyond the planning horizon)
- » **Strategy:** As the opportunity presents itself, move facilities to the West Development area and along Taxiway L to enable the reconfiguration of the South Development Area
- » Opportunities based upon:
 - Accommodating facilities requirements
 - Infrastructure conditions start to deteriorate (age)
 - Tenant desire to relocate / expand
 - Enabling projects for other development

Project Phasing

- » Multiple phasing sequences were developed for each function
- » Sub-alternative phasing options were developed to anticipate “What If” scenarios associated with the timing of tenant development opportunities
- » Scenarios assume the impetus for development could be different and occur sooner or later, necessitating a reordering of project sequencing

Cargo Development - West Area

Legend

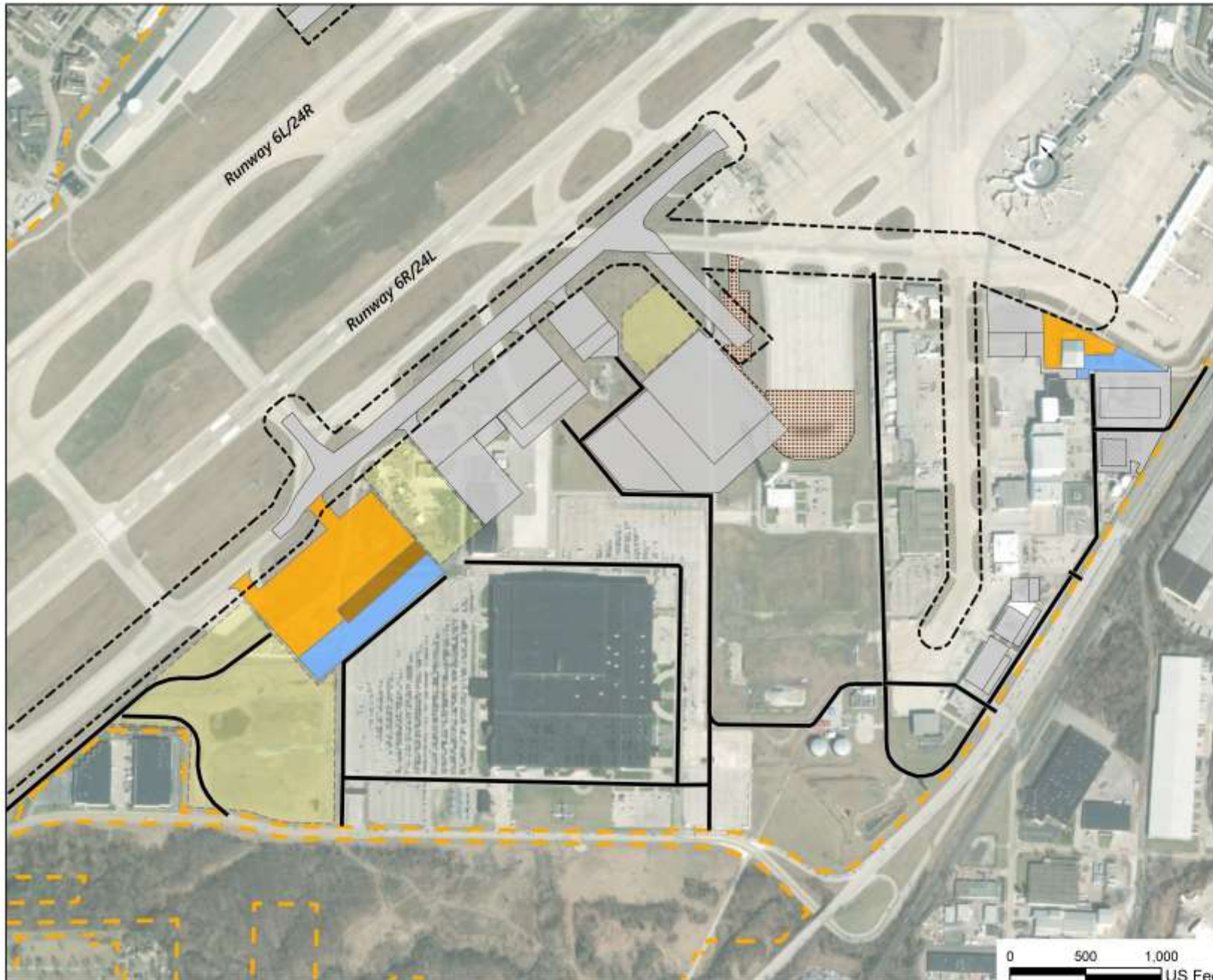
- Airport Property Line
- Roads
- New Cargo Apron
- New Cargo Building
- New Cargo Parking
- Other Projects
- Pavement Revmoved
- TOFA
- Preserved



Cargo Development - South Area

Legend

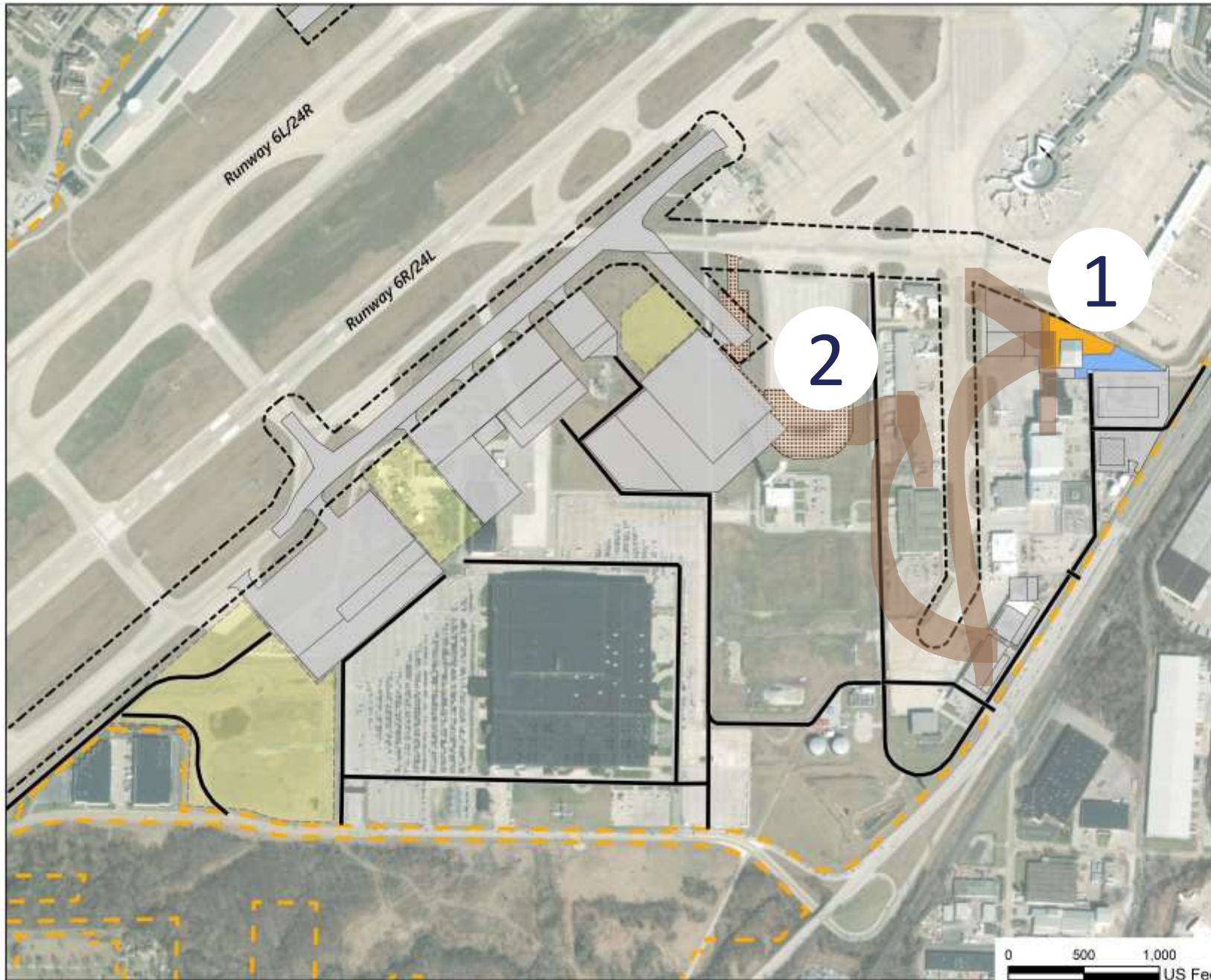
- Airport Property Line
- Roads
- New Cargo Apron
- New Cargo Building
- New Cargo Parking
- Other Projects
- ▨ Pavement Revmored
- ⊞ TOFA
- Preserved



Belly Cargo Development - South Area

Legend

- Airport Property Line
- Roads
- New Apron
- New Parking
- Other Projects
- ▨ Pavement Revmored
- ⊞ TOFA
- Preserved



GA Development - West Area

Legend

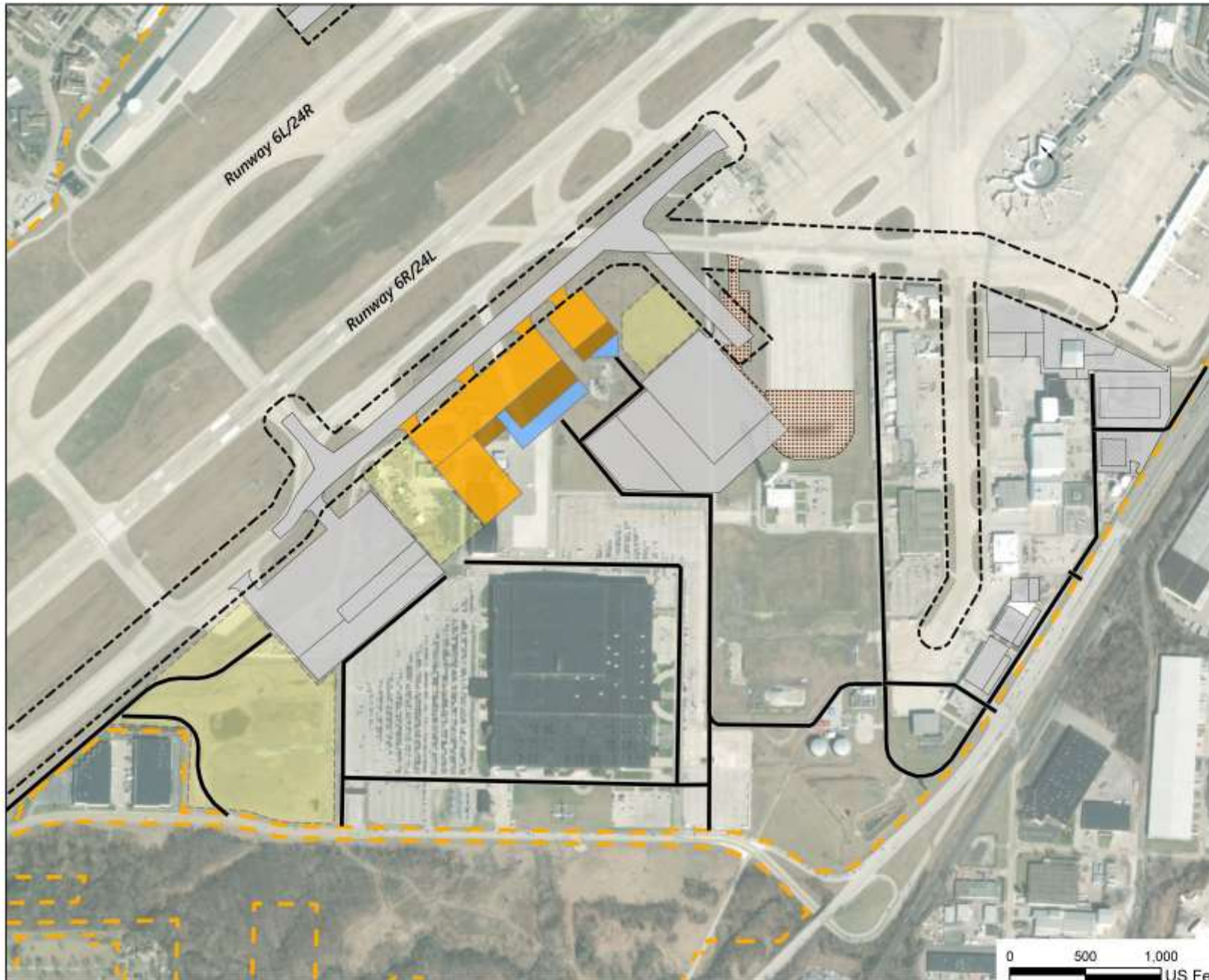
- Airport Property Line
- Roads
- New General Aviation Apron
- New General Aviation Building
- New General Aviation Parking
- Other Projects
- Pavement Revmoved
- TOFA
- Preserved



GA Development - South Area

Legend

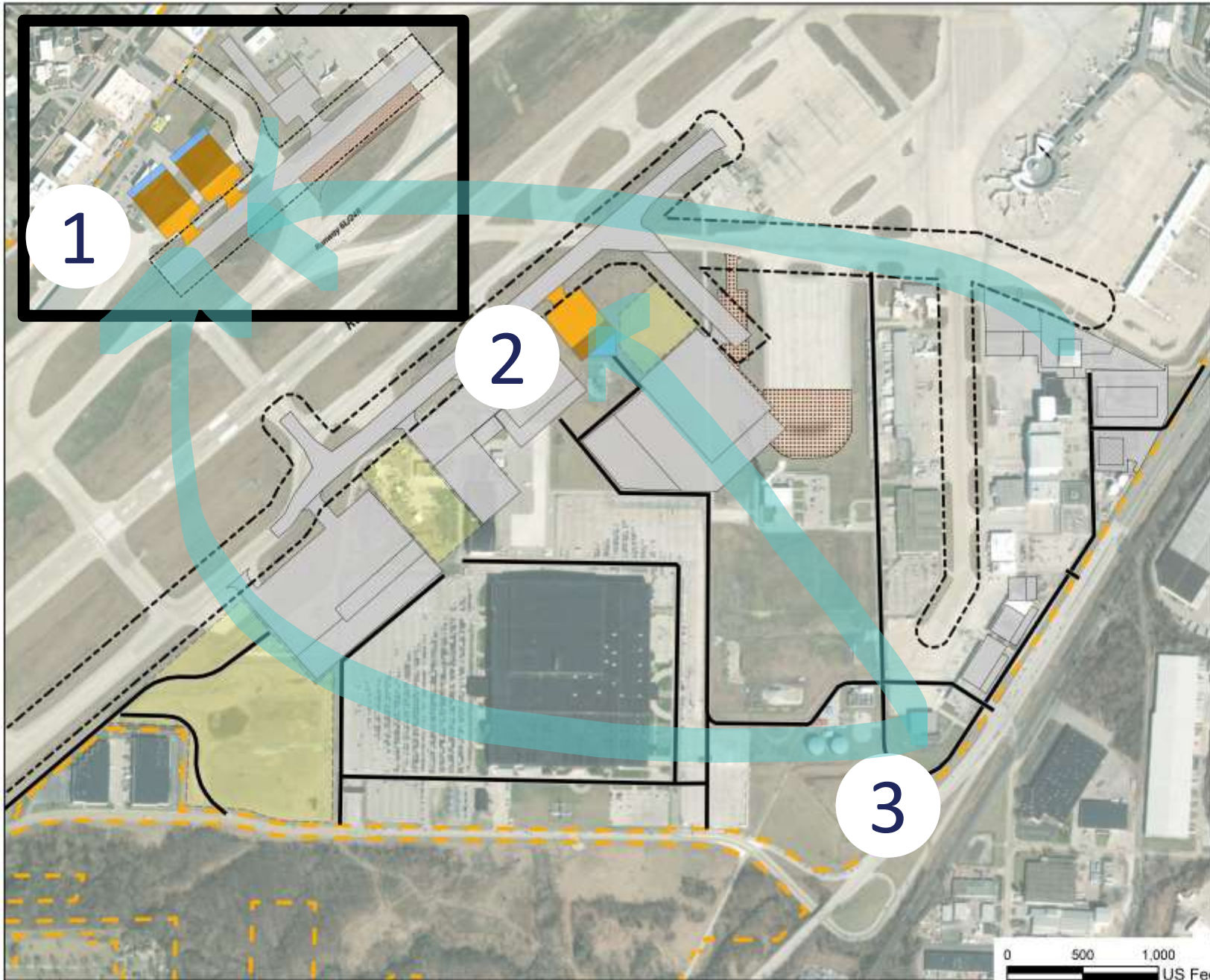
- Airport Property Line
- Roads
- New General Aviation Apron
- New General Aviation Building
- New General Aviation Parking
- Other Projects
- ▨ Pavement Revmored
- ⊞ TOFA
- Preserved



Corporate GA Development

Legend

- - - Airport Property Line
- Roads
- New Corporate GA Apron
- New Corporate GA Building
- New Corporate GA Parking
- Other Projects
- ▨ Pavement Revmoved
- ▭ TOFA
- Preserved



Aircraft/Airline Maintenance & Support Development- South Area



Legend

- Airport Property Line
- Roads
- New Aircraft Maintenance & Support Apron
- New Aircraft Maintenance & Support Building
- New Aircraft Maintenance & Support Parking
- Other Projects
- Pavement Revmored
- TOFA
- Preserved



Airport Support Development - South Area

Legend

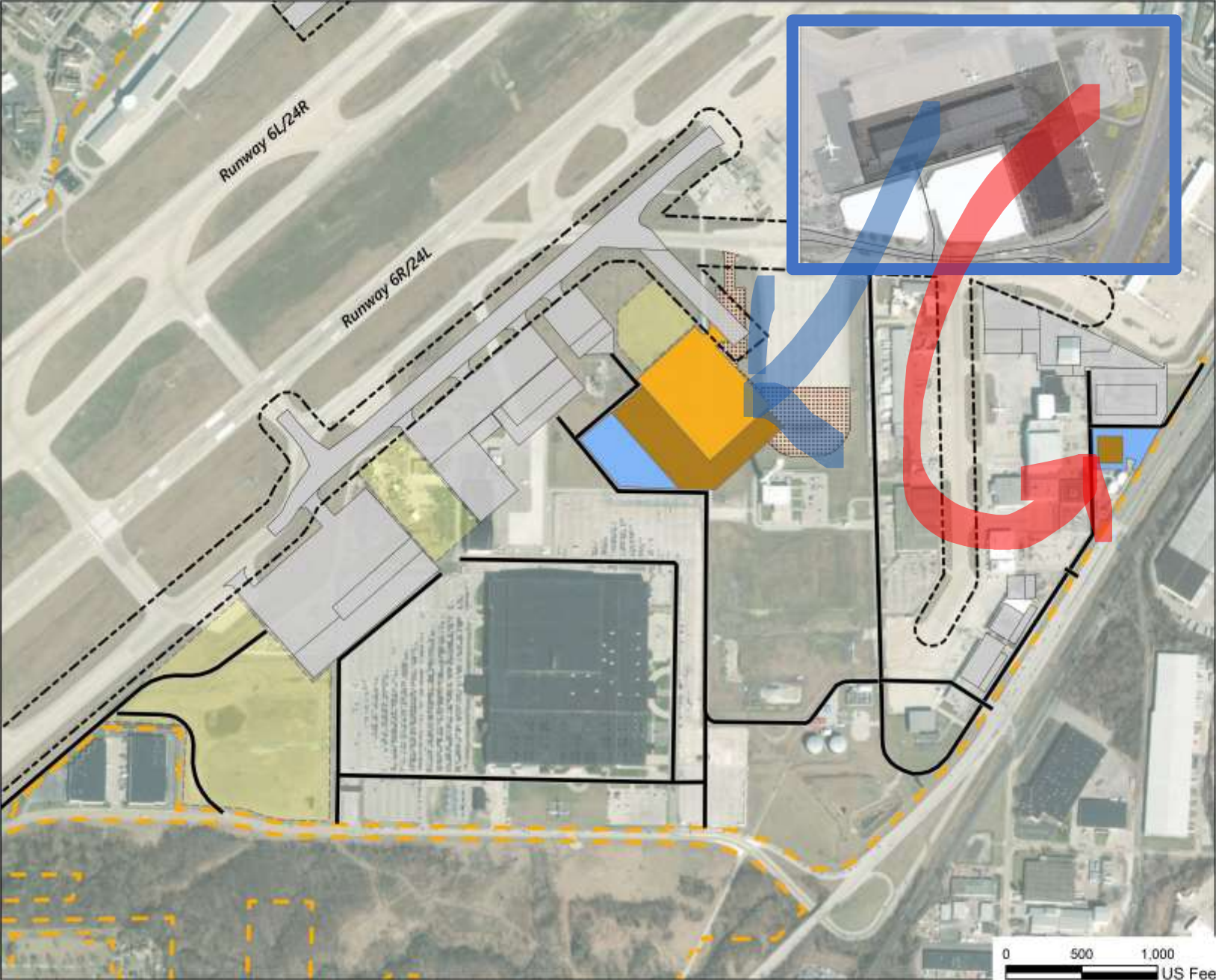
- Airport Property Line
- Roads
- New Airport Support Apron
- New Airport Support Building
- New Airport Support Parking
- Other Projects
- ▨ Pavement Revmoved
- ⬡ TOFA
- Preserved



MRO & Fuel Farm Development- South Area

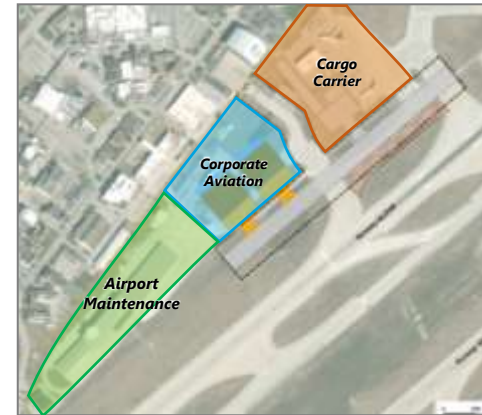
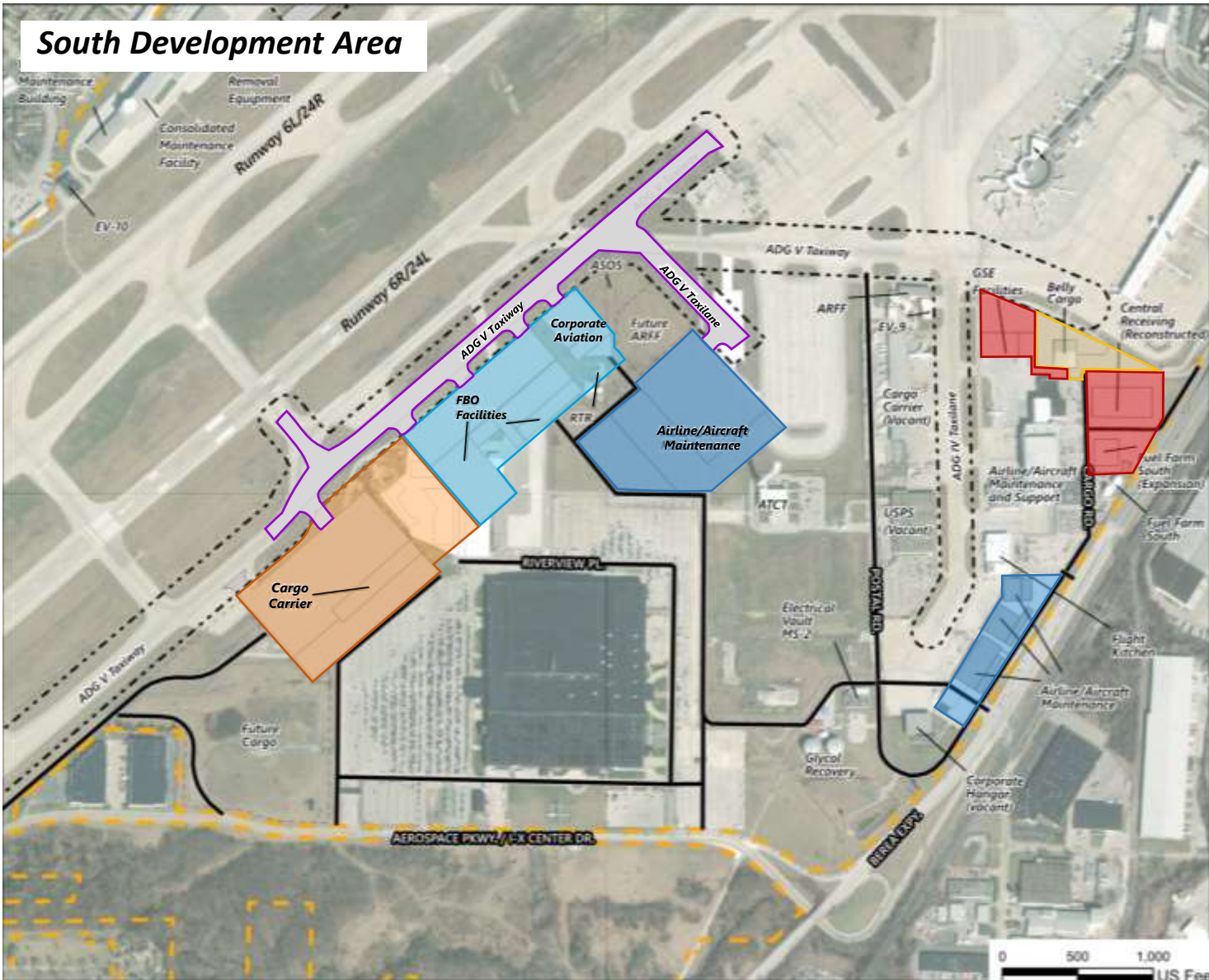
Legend

- - - Airport Property Line
- Roads
- New Apron
- New Building
- New Parking
- Other Projects
- ▨ Pavement Revmored
- ⊠ TOFA
- Preserved



Preferred Alternative – PAL 5

South Development Area



West Development Area

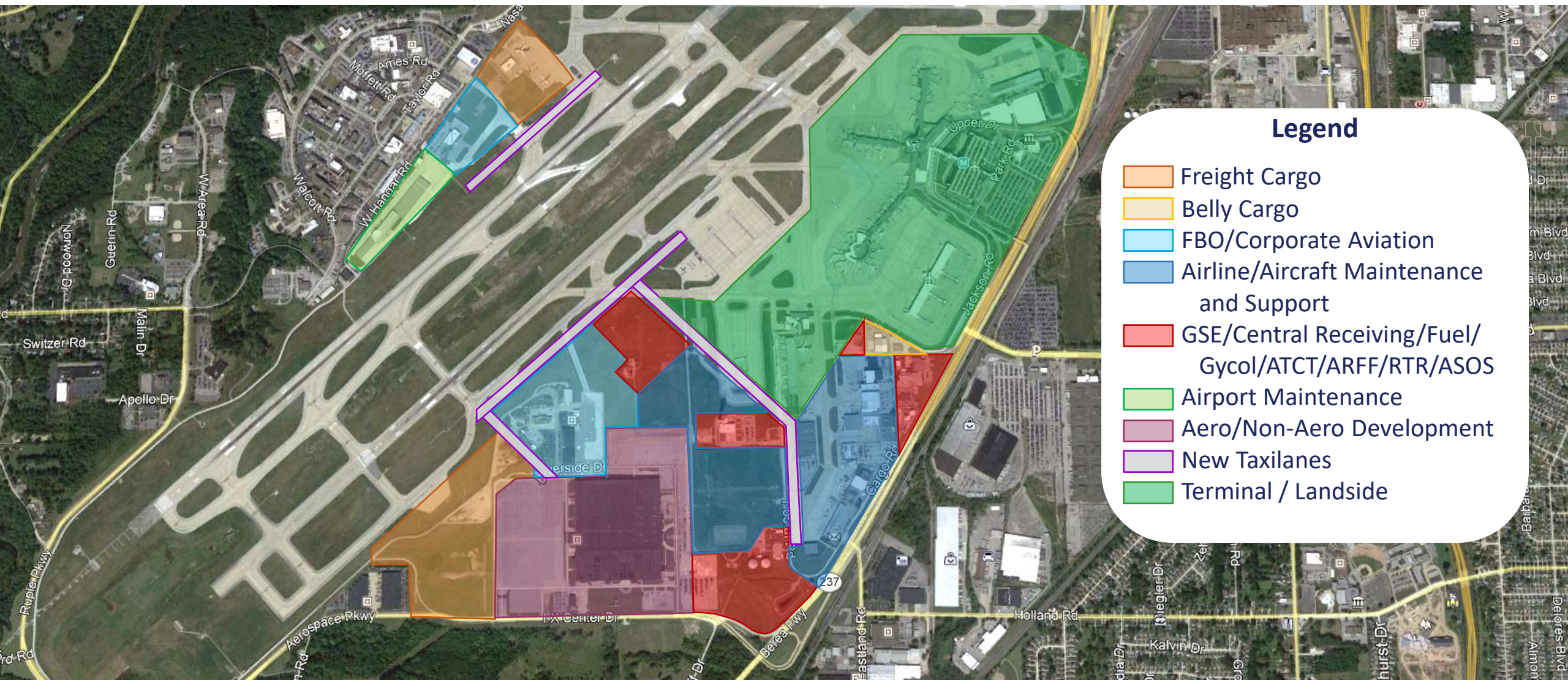


North Development Area

Legend

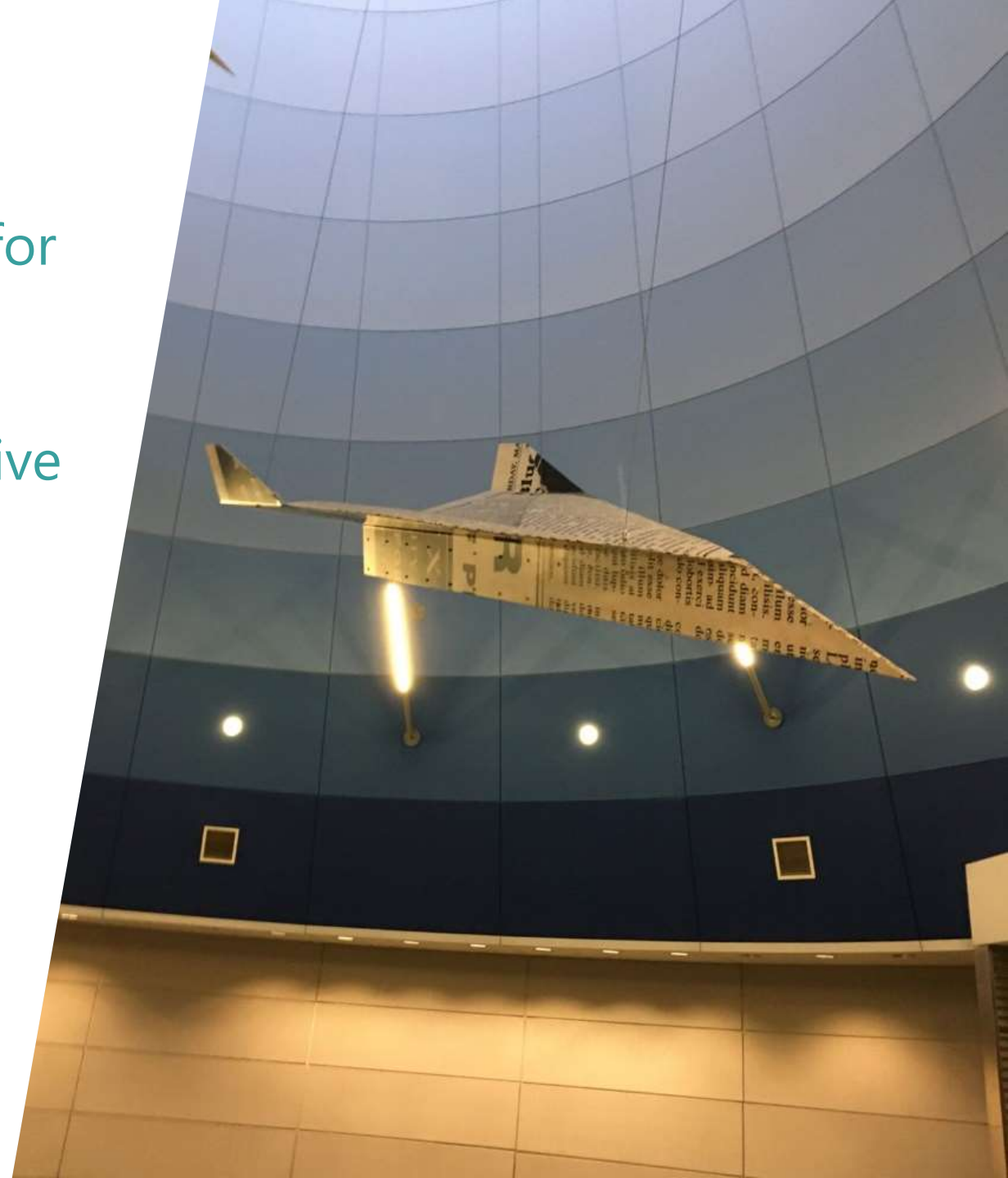
- Freight Cargo
- Belly Cargo
- FBO/Corporate Aviation
- Airline/Aircraft Maintenance and Support
- GSE/Central Receiving/Fuel
- Airport Maintenance
- New Taxilanes
- Terminal / Landside

Long-Term Campus Development – Land Use



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Next Steps

- » Third Set of Executive Committee Meetings
- » Prioritization of 20-Year Master Plan Program Projects
- » Evaluation of Potential Environmental Impacts of Master Plan Program
- » Full 20-Year Implementation/Financial Plan
- » Final Set of Executive Committee Meetings



Q&A

Thank you for your Attendance!