Airport Master Plan Update

Technical Advisory Committee (TAC)

Meeting #2

December 8, 2021

1:00 PM to 2:30 PM

www.ALB-Master-Plan.com

Opening Remarks

MATT CANNON
Director of Development &
Government Affairs

STEVE IACHETTA, AICP
Airport Planner

TAC Meeting Agenda

Opening Remarks

1. Study Update
   - Team Introductions
   - TAC Membership
   - Master Plan Process Review
2. Forecasts of Activity
3. Terminal Requirements & Development
4. Airfield Requirements & Development
5. Next Steps & Open Discussion

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1. Study Update

Jeremy Martelle, CHA

CHA

Introductions – CHA Study Team

JEREMY MARTELLE, CM, ACE, ASC
Study Coordinator

PAUL MCDONNELL, AICP
Project Manager / Lead Planner

CHARLES MORLEY, AIA, LEED AP
Terminal Architect/Planner

CHA

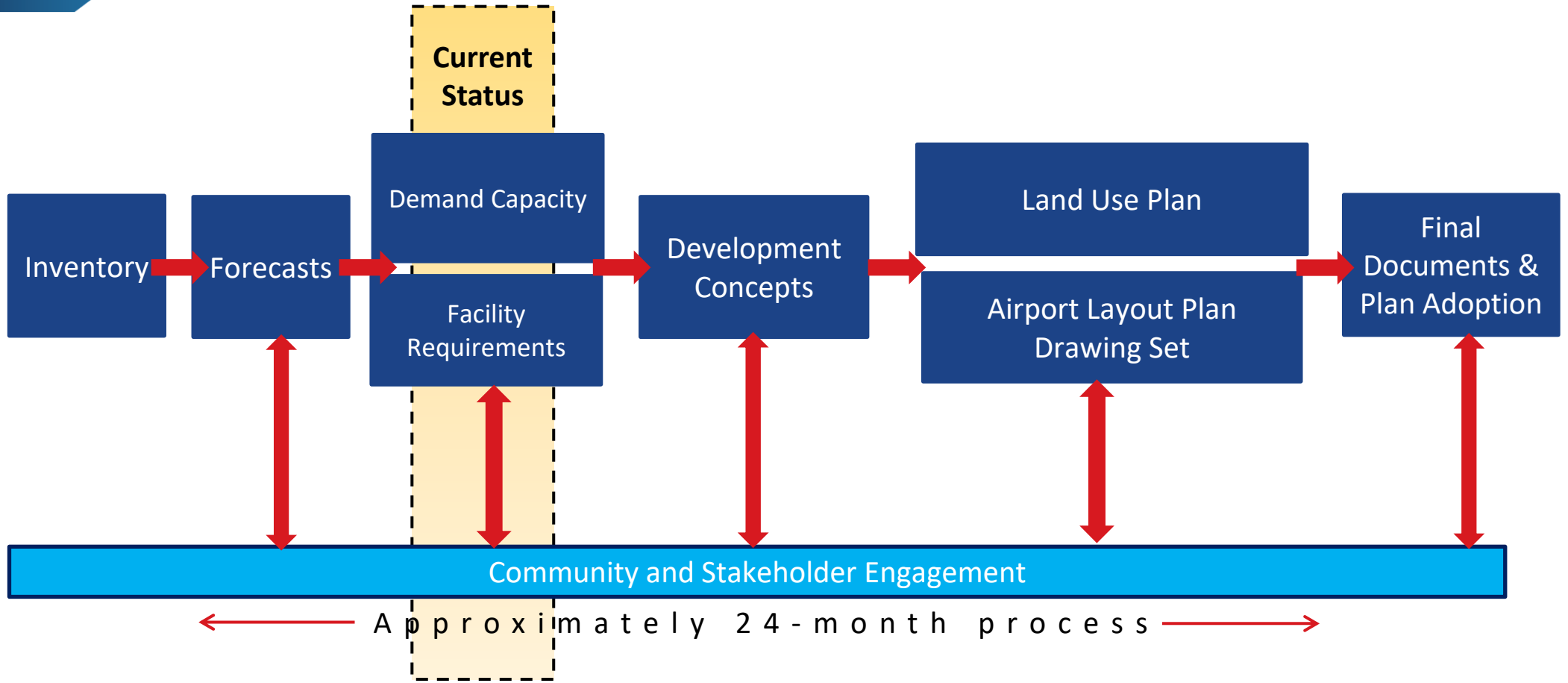
Gensler

JACOBSEN | DANIELS
Planning, Implementation, Operations & Management

Technical Advisory Committee Members

- Albany County Airport Authority
- AvPORTS
  - Airport Operations & Management
- Federal Aviation Administration
- Transportation Security Agency
- Fixed Base Operators
  - Million Air
- Airlines
- Air Cargo
  - FedEx
  - UPS
- Tenants
  - Pilots & Hangar Tenants
  - Flying Clubs
- New York State
  - Department of Transportation
  - Division of Military and Naval Affairs
  - NYS Police - Aviation
- Others, etc.

Master Planning Process/Status



COVID19 Recovery (Enplanements)

Enplanements Compared to 2019

Year	2020	2021
January	107%	24%
February	106%	29%
March	48%	38%
April	3%	50%
May	11%	61%
June	23%	68%
July	22%	79%
August	20%	80%
September	24%	82%
October	26%	84%
November	25%	---
December	25%	---

COVID19 Shutdown

COVID19 Vaccine

What's New With Your Air Travels?

Are You Back Traveling by Air?

What's Different for your Organization?

What are your Expectations Going forward?

What do you want to see at ALB?

Airport Master Plan – Focus Areas

- Smart Airport of the Future
- Improved Traveler Experience (Passenger Terminal)
  - Reimagined Passenger Areas
  - Improved Security Checkpoint
  - Continue High Tech Terminal Improvements
  - COVID Recovery & Long-term Effects
  - Improved Energy Efficiency & Sustainability
- Future Air Cargo Demand & Facilities
- Expanded Corporate Aviation Facilities
- Land Use Planning & Property Development

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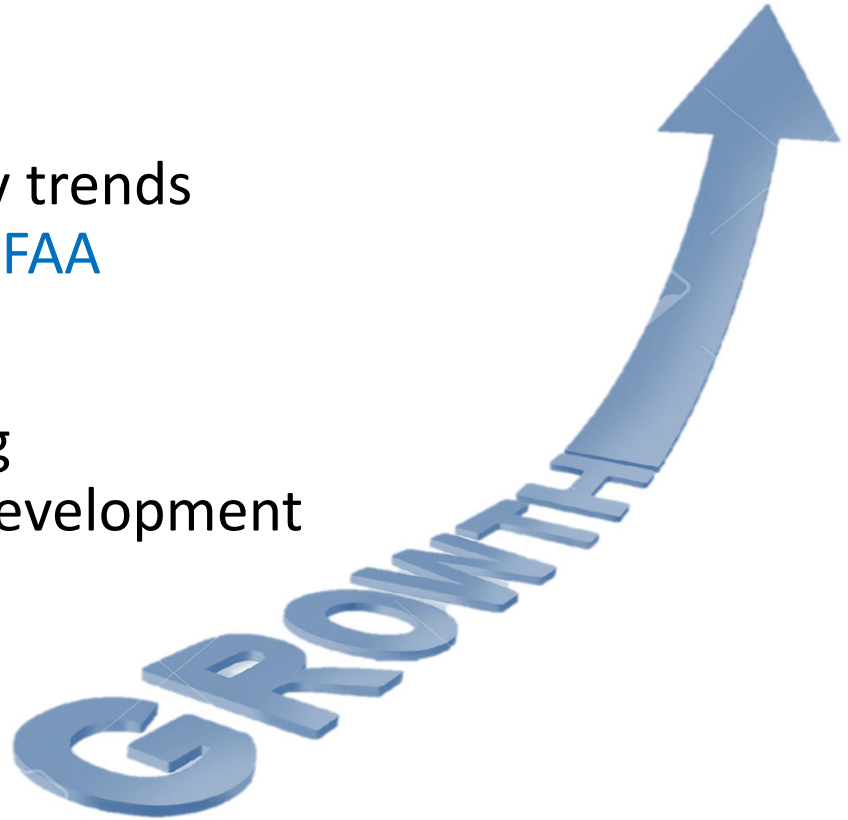
2. Airport Activity Forecasts

Paul McDonnell, CHA

CHA

Activity demand forecasts

- What is a Forecast?
  - 5, 10, and 20-year estimates of aviation activity
  - Incorporates socio-economic conditions and industry trends
  - One of the Master Plan elements “approved” by the FAA
- How is it Used?
  - Influences all phases of facility and financial planning
  - Basis for determining type, size & timing of airport development
  - Used as support for funding requirements



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FAA Terminal Area Forecast (TAF)

FAA TAF (published May 2021)

APO TERMINAL AREA FORECAST DETAIL REPORT
Forecast Issued May 2021

ALB

	Enplanements			AIRCRAFT OPERATIONS: Itinerant Operations					AIRCRAFT OPERATIONS: Local Operations					
Fiscal Year	Air Carrier	Commuter	Total	Air Carrier	Air Taxi & Commuter	GA	Military	Total	Civil	Military	Total	Total Ops	Total Tracon Ops	Based Aircraft
REGION:AEA STATE:NY LOCID:ALB														
CITY:ALBANY AIRPORT:Albany International														
2009	762,478	549,937	1,312,415	25,629	34,077	18,113	2,880	80,699	10,467	2,409	12,876	93,575	124,860	93
2010	684,734	570,749	1,255,483	25,058	31,250	17,449	3,963	77,720	12,203	5,288	17,491	95,211	124,624	83
2011	689,436	528,639	1,218,075	23,421	32,183	16,003	2,871	74,478	7,467	1,721	9,188	83,666	116,559	72
2012	717,373	509,145	1,226,518	23,784	27,723	14,836	2,970	69,313	6,663	1,358	8,021	77,334	111,043	83
2013	684,316	517,465	1,201,781	22,249	25,705	13,811	3,018	64,783	7,592	1,719	9,311	74,094	103,020	95
2014	752,221	448,033	1,200,254	22,244	22,646	13,390	2,295	60,575	9,584	2,182	11,766	72,341	97,446	95
2015	858,942	394,591	1,253,533	21,625	22,066	14,472	2,631	60,794	8,501	1,384	9,885	70,679	97,969	82
2016	1,002,959	367,243	1,370,202	22,647	23,781	14,905	3,236	64,569	6,135	1,810	7,945	72,514	104,796	88
2017	1,023,161	367,138	1,390,299	23,684	23,646	14,599	3,303	65,232	5,282	1,899	7,181	72,413	103,763	97
2018	1,006,132	417,070	1,423,202	23,381	23,594	13,689	3,700	64,364	6,354	2,099	8,453	72,817	100,434	100
2019	1,075,425	416,880	1,492,305	24,541	20,577	13,759	3,698	62,575	8,829	2,531	11,360	73,935	98,200	100
2020*	559,703	227,236	786,939	17,825	11,864	14,668	3,997	48,354	5,189	2,233	7,422	55,776	80,640	103
2021*	417,194	166,334	583,528	16,663	8,434	14,668	3,997	43,762	4,213	2,233	6,446	50,208	74,863	105
2022*	563,267	231,391	794,658	19,523	8,149	14,668	3,997	46,337	5,688	2,233	7,921	54,258	78,071	107
2023*	753,515	309,459	1,062,974	24,097	7,124	14,668	3,997	49,886	7,110	2,233	9,343	59,229	82,179	110
2024*	939,764	385,879	1,325,643	27,642	7,023	14,668	3,997	53,330	8,176	2,233	10,409	63,739	86,300	112
2025*	1,060,714	435,462	1,496,176	29,884	7,407	14,668	3,997	55,956	8,994	2,233	11,227	67,183	89,579	115
2026*	1,128,175	463,113	1,591,288	31,985	7,565	14,668	3,997	58,215	9,031	2,233	11,264	69,479	92,231	118
2027*	1,156,929	474,873	1,631,802	32,944	7,669	14,668	3,997	59,278	9,068	2,233	11,301	70,579	93,543	121
2028*	1,176,365	482,848	1,659,213	33,502	7,761	14,668	3,997	59,928	9,105	2,233	11,338	71,266	94,394	124
2029*	1,196,689	491,190	1,687,879	34,085	7,855	14,668	3,997	60,605	9,142	2,233	11,375	71,980	95,267	127
2030*	1,217,071	499,551	1,716,622	34,670	7,949	14,668	3,997	61,284	9,180	2,233	11,413	72,697	96,135	130
2031*	1,239,311	508,677	1,747,988	35,307	8,047	14,668	3,997	62,019	9,217	2,233	11,450	73,469	97,067	133
2032*	1,262,423	518,162	1,780,585	35,968	8,147	14,668	3,997	62,780	9,255	2,233	11,488	74,268	98,031	136
2033*	1,285,253	527,531	1,812,784	36,622	8,247	14,668	3,997	63,534	9,293	2,233	11,526	75,060	98,989	139
2034*	1,306,679	536,324	1,843,003	37,239	8,346	14,668	3,997	64,250	9,331	2,233	11,564	75,814	99,904	142

- The FAA TAF is a baseline for comparison to Master Plan*
- Considers:
  - Socioeconomic Trend
  - Industry Trends
  - Regional Growth
- Base year is 2019 (pre-COVID)
- Incorporate COVID Recovery

*** For this Master Plan The FAA TAF was used as the recommended Forecast**

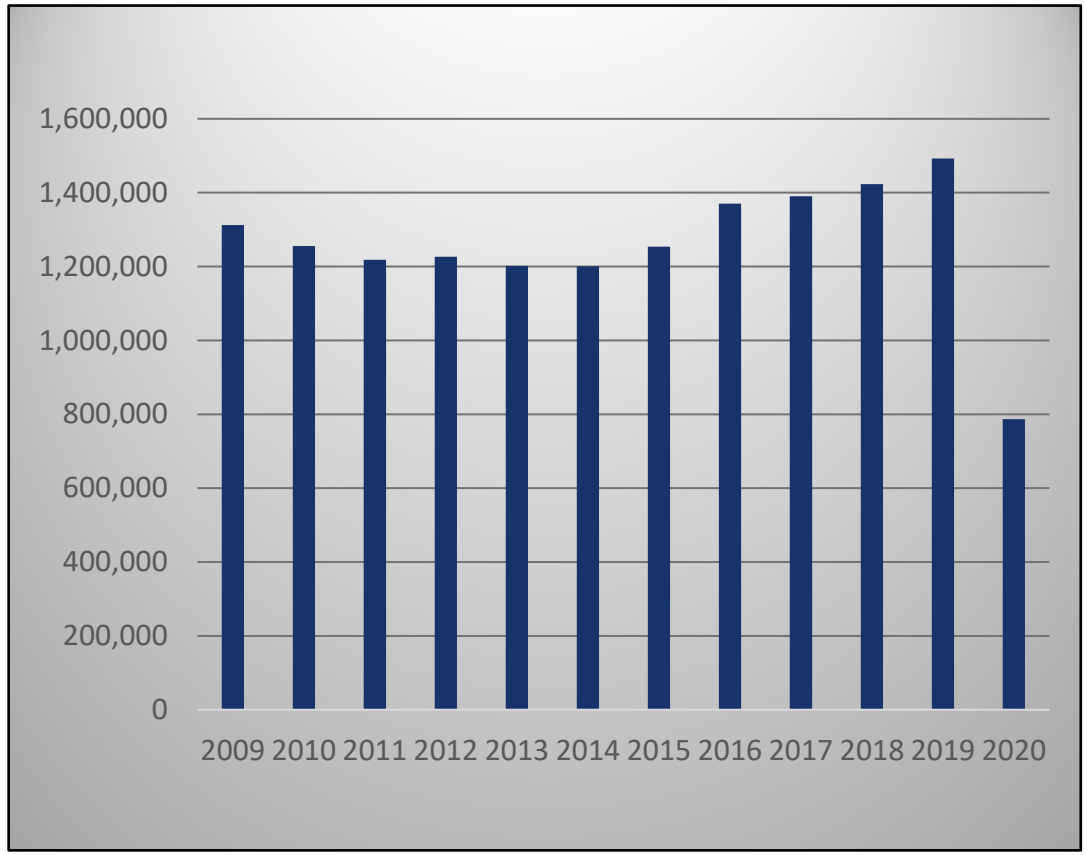
CHA

Existing Commercial Activity Levels

ALB Historical Activity

Year	Enplanements	Operations
2009	1,312,415	59,706
2010	1,255,483	56,308
2011	1,218,075	55,604
2012	1,226,518	51,507
2013	1,201,781	47,954
2014	1,200,254	44,890
2015	1,253,533	43,691
2016	1,370,202	46,428
2017	1,390,299	47,330
2018	1,423,202	46,975
2019	1,492,305	45,118
2020	786,939	29,689

ALB Historical Enplanements



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Aircraft Transitions to Larger Aircraft

2009

Dash 8 – 35 passengers

Boeing 717 – 110 passengers

2021

CRJ 700 – 70 passengers

A320 – 150 passengers

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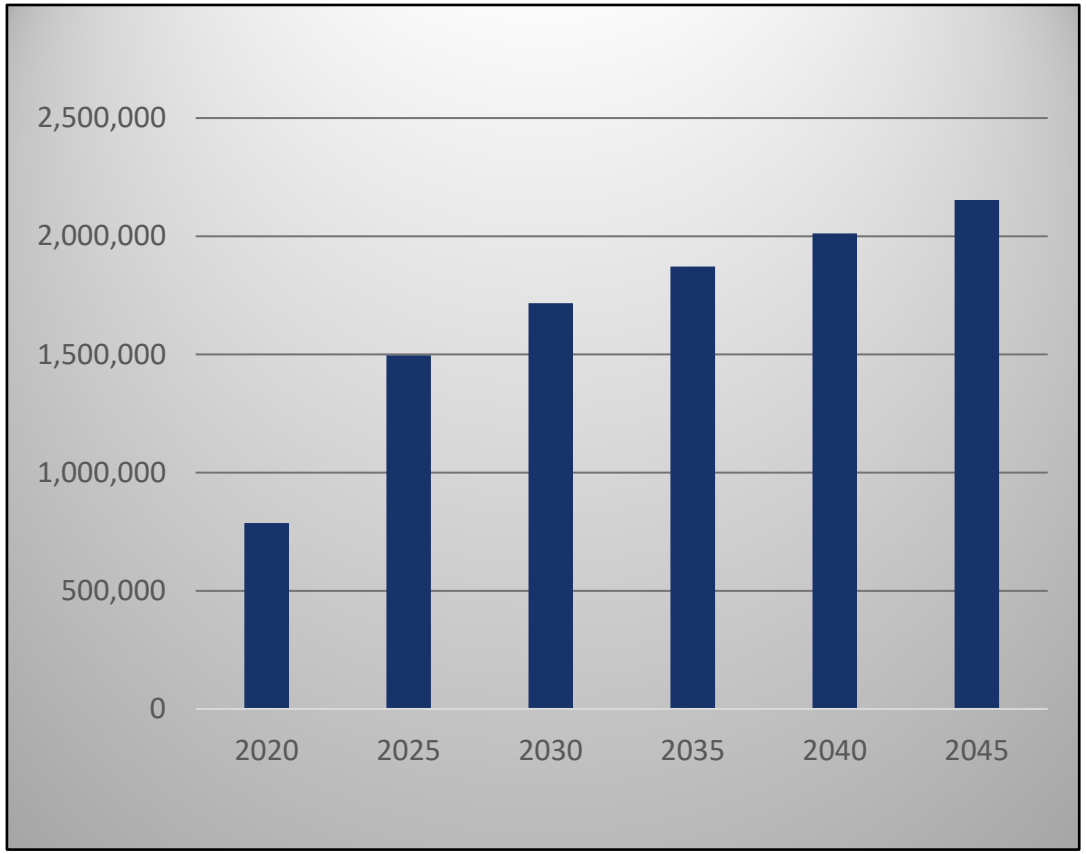
Forecast Airline/Air Cargo Activity

Year	Enplanements	Operations
2019	1,492,305	45,118
2020	786,939	29,689
2025	1,496,176	37,291
2030	1,716,622	42,619
2035	1,871,618	46,269
2040	2,012,294*	49,666
2045	2,153,629	53,115

***33%** Passenger Growth Over 20-year Period



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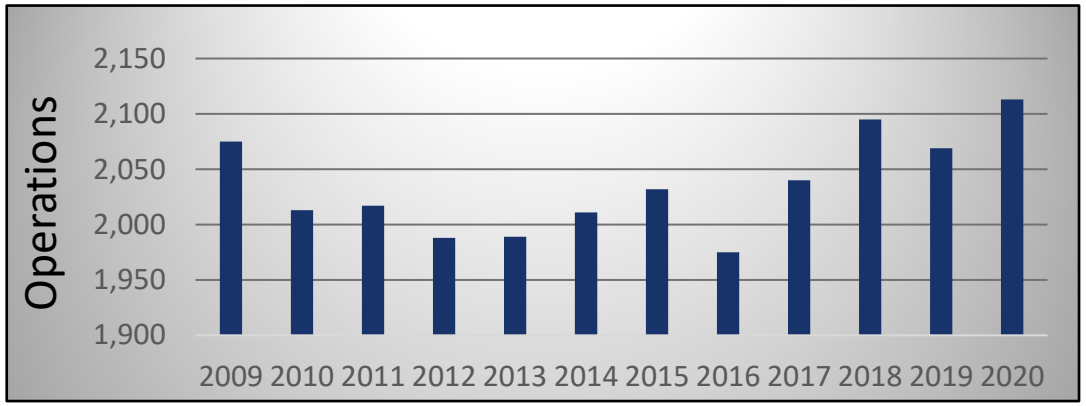
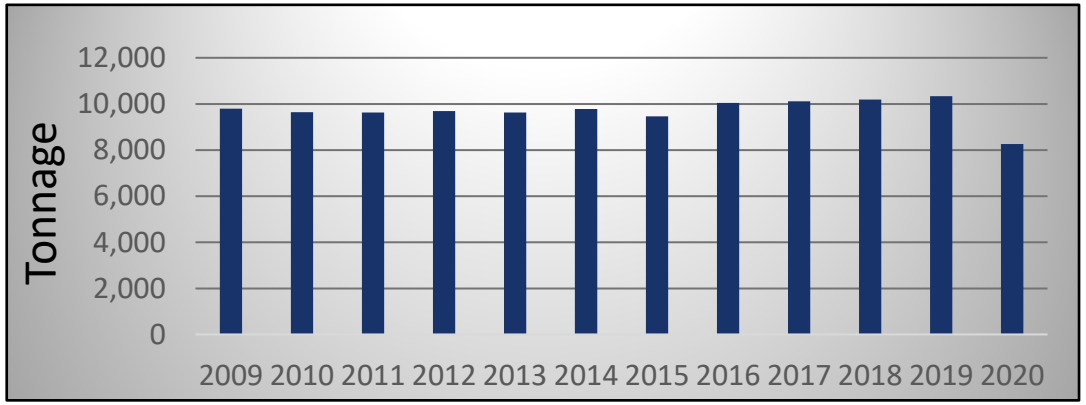
Existing Air Cargo Activity Levels

Year	Operations	Tonnage
2009	2,075	9,796
2010	2,013	9,643
2011	2,017	9,631
2012	1,988	9,695
2013	1,989	9,628
2014	2,011	9,779
2015	2,032	9,462
2016	1,975	10,043
2017	2,040	10,118
2018	2,095	10,191
2019	2,069	10,334
2020*	2,113	8,264

*2020 total is through Nov. for Operations; Sept. for Tonnage





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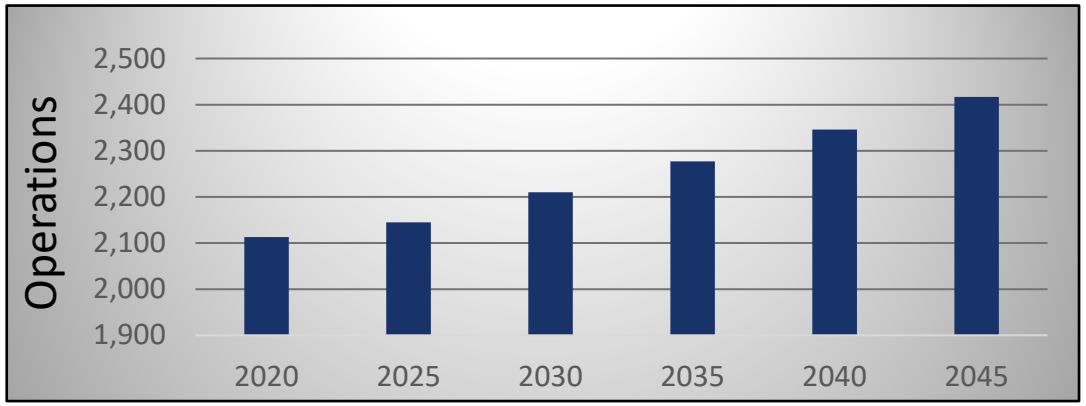
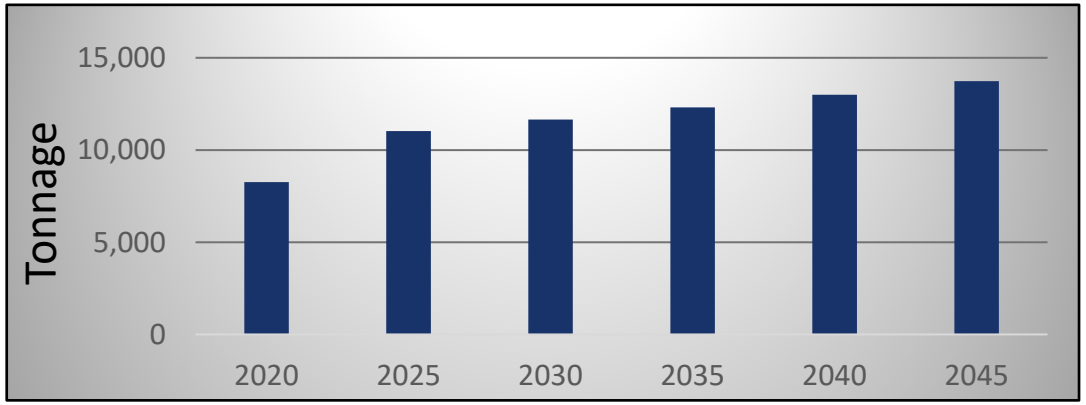
Forecast Air Cargo Activity

Year	Operations	Tonnage
2020*	2,113	8,264
2025	2,145	11,035
2030	2,210	11,656
2035	2,277	12,311
2040	2,346	13,003
2045	2,417	13,734

*2020 total is through Nov. for Operations; Sept. for Tonnage





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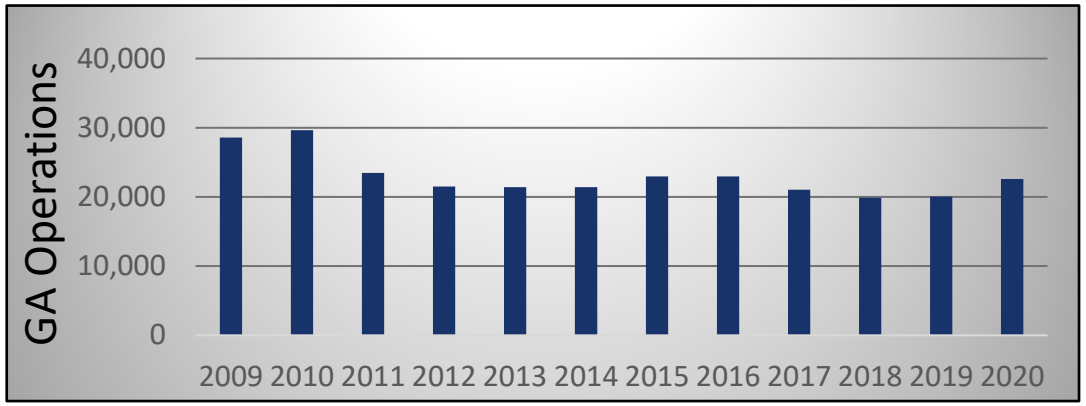
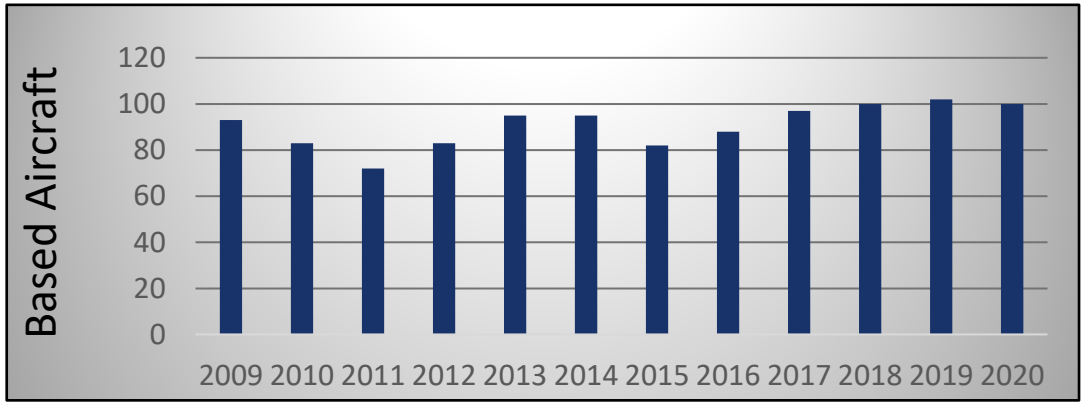
Existing General Aviation Activity Levels

Year	Operations	Based Aircraft
2009	28,580	93
2010	29,652	83
2011	23,470	72
2012	21,499	83
2013	21,403	95
2014	21,403	95
2015	22,974	82
2016	22,973	88
2017	21,040	97
2018	19,881	100
2019	20,043	102
2020	22,588	100





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Example General Aviation Aircraft

Single Engine

Multi Engine / Turboprop

Corporate Jet

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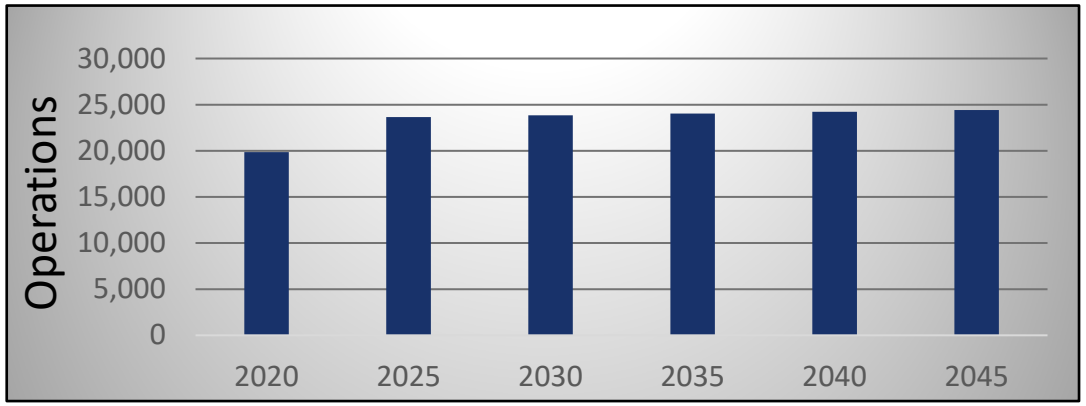
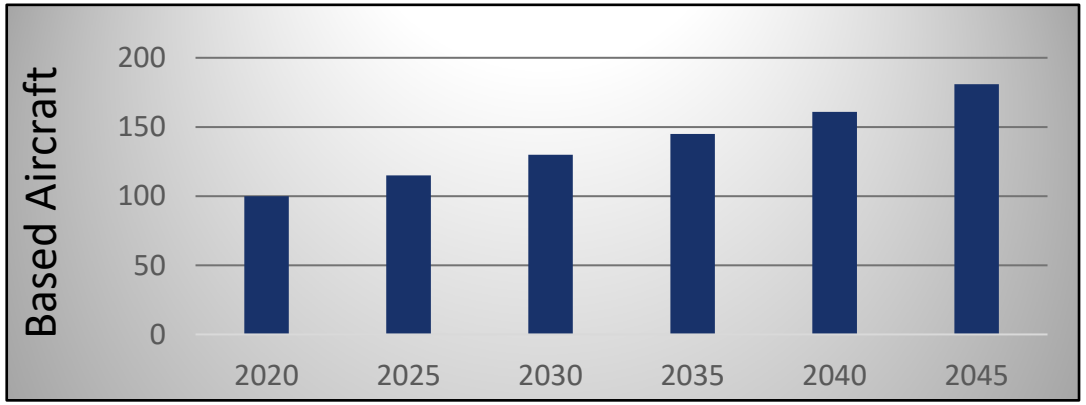
Forecast General Aviation Activity

Year	Operations	Based Aircraft
2020	19,857	100
2025	23,662	115
2030	23,848	130
2035	24,038	145
2040	24,231	161
2045	24,429	181





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Forecast Summary

Year	Enplanements	Operations	Based Aircraft
2020	786,939	55,776	100
2025	1,496,176	67,183	115
2030	1,716,622	72,697	130
2035	1,871,618	76,537	145
2040	2,012,294	80,127	161
2045	2,153,629	83,774	181

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3. Terminal Requirements & Development

Charles Morley, Gensler

Gensler CHA

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Existing Terminal Shortcomings

- Existing Security Checkpoint is Constrained
- Checkpoint Queuing Area backs up During Morning Peaks
- Circulation Areas Inside and Outside Security are Congested
- Size/Seating Available in Concourse B & C During Peak Hours

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Short-Term Terminal Requirements

- Improve & Expand Security Screening
- Innovations in Contactless Technology
- Expand & Improve Concessions
- Expand & Modernize Concourses
- **Improve Overall User Experience**

- **It all starts with Expanding/Enhancing the Central Terminal Hub**

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Planned Terminal Building Improvements

- The **Passenger Terminal** Component of the Study was Advanced in Schedule for the "2021 Upstate Airport Economic Development Competition"
- **Focus**: Improvements in Security, Safety & Passenger Experience
- **Result**: *Create a Public Space Apart from Anything Seen Before – A New Capital Region Landmark*

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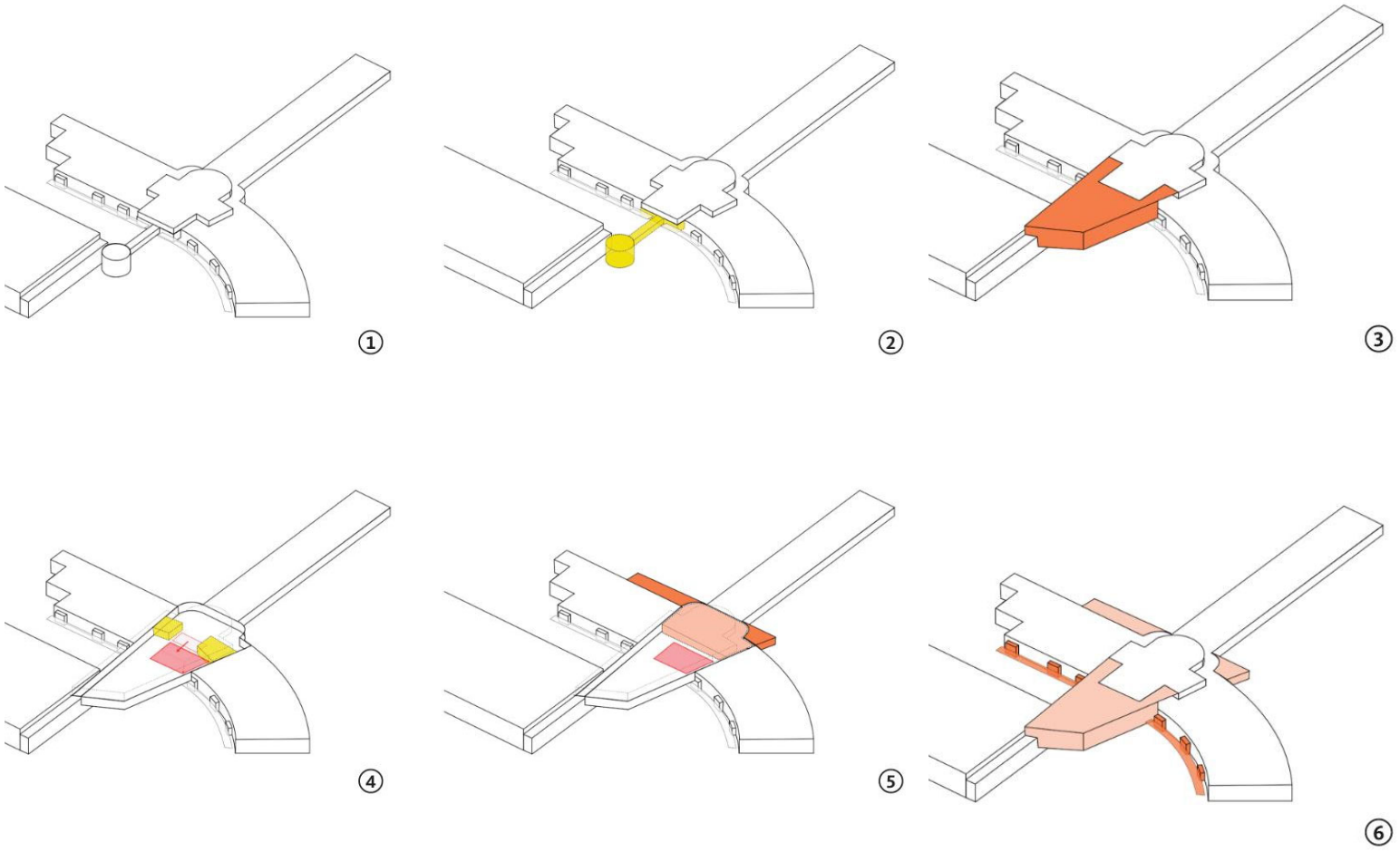
Redeveloping the Central Terminal Hub



1. Existing Terminal Building & Garage
2. Remove existing rotunda & Pedestrian bridge
3. Expand Landside Connector & Develop Landside Green Space
4. Move Security Towards Landside & Right-size Checkpoint
5. Expand & Relocate Airside Marketplace, Create Outdoor Green Space & Observation Seating Area
6. Update Vestibules and Canopies with Transparent Elements to Create Light-filled Curbside

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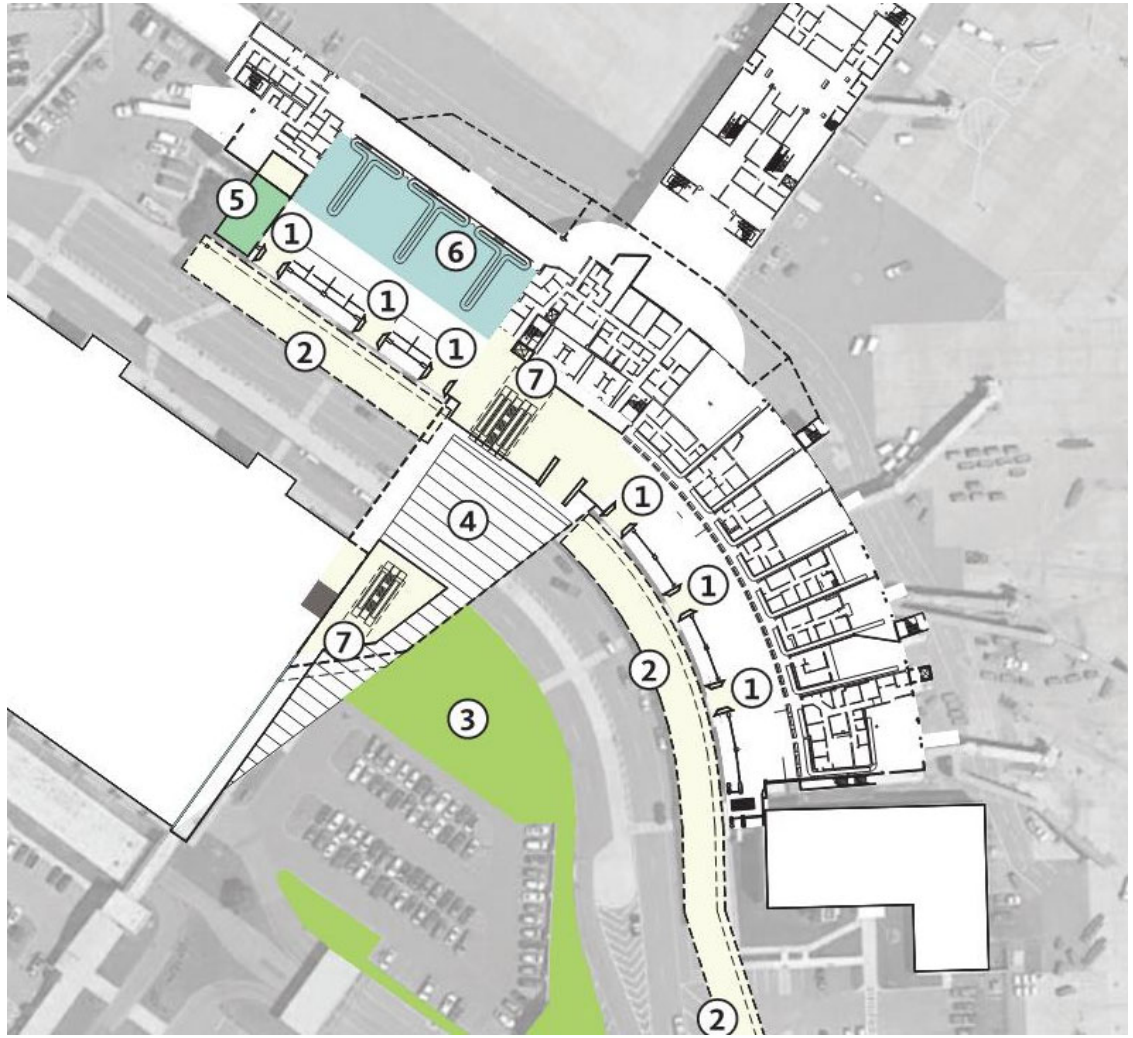
Terminal Improvements – Ground Level

1. Replace Vestibules with Glass Curtain Wall to Optimize Interior/Exterior Views
2. Lightweight, Translucent Canopies
3. Green Planted Park with Sculptures and Feature Elements
4. Consolidated Walkway Safely Connects Parking & Plaza to New Central Lobby Entrance
5. Expanded Service Member's Suite with Connection to Exterior
6. Remove & Replace Existing Ceiling finishes for Installation of Mechanical Services
7. Relocate Vertical Circulation



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Ground Level – Curbside Approach

Ground Level - Central Plaza

Ground Level - Terminal Lobby

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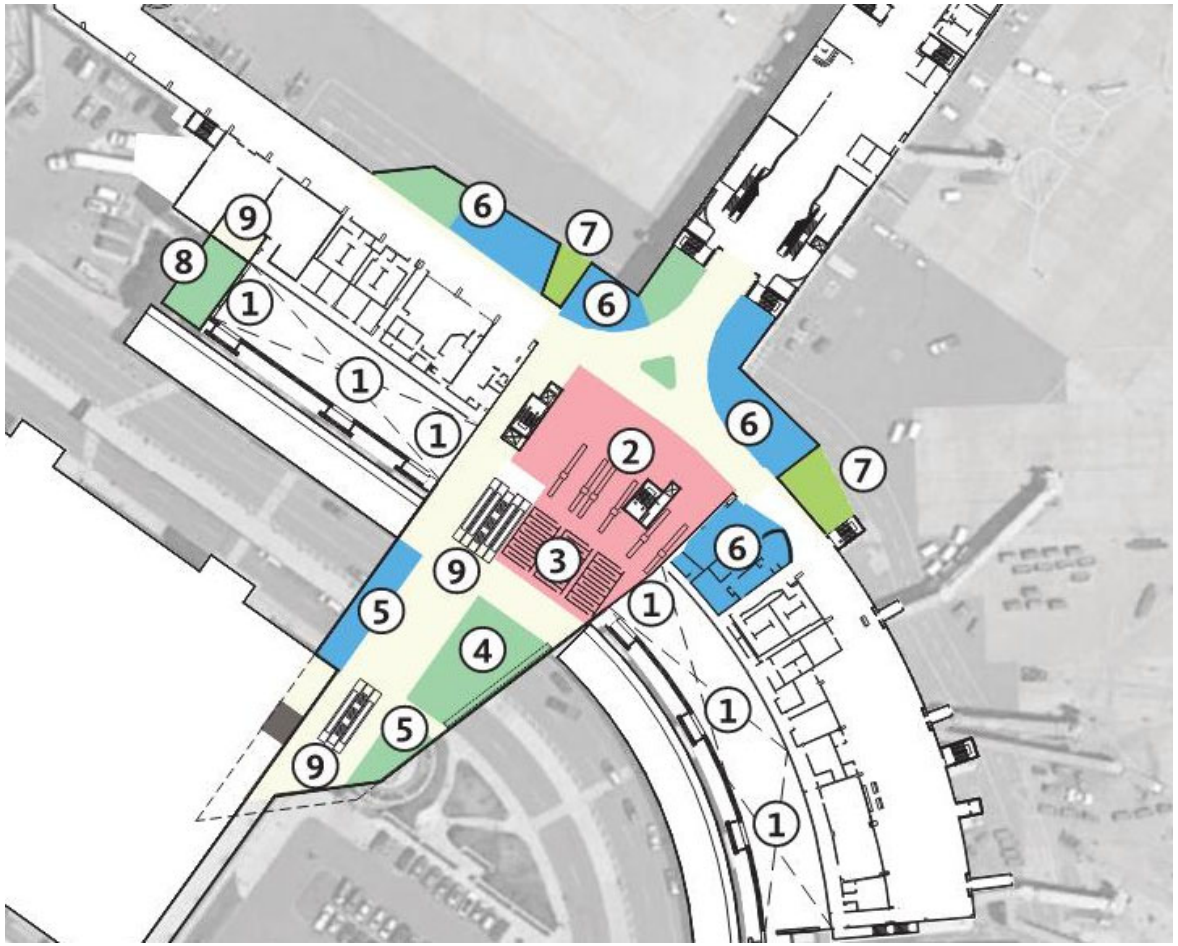
Terminal Improvements – Concourse Level

1. Replace Vestibules with Glass Curtain Wall to Optimize Interior/Exterior Views
2. Expand Checkpoint – Allows for Separating & Branding Lanes (PreCheck / Family, etc.)
3. Expand Security Queue
4. Potential Kiosk & Check-in
5. Landside Concession/Amenity Overlooks Green Park & Community Plaza
6. Expand Concessions, Improve views to Gates, Add Children's Play Area & Calming Options for Travelers & Update Conference Facilities
7. Exterior Planted Area
8. Expanded Public Arts & Writers Workshop
9. Relocate Vertical Circulation



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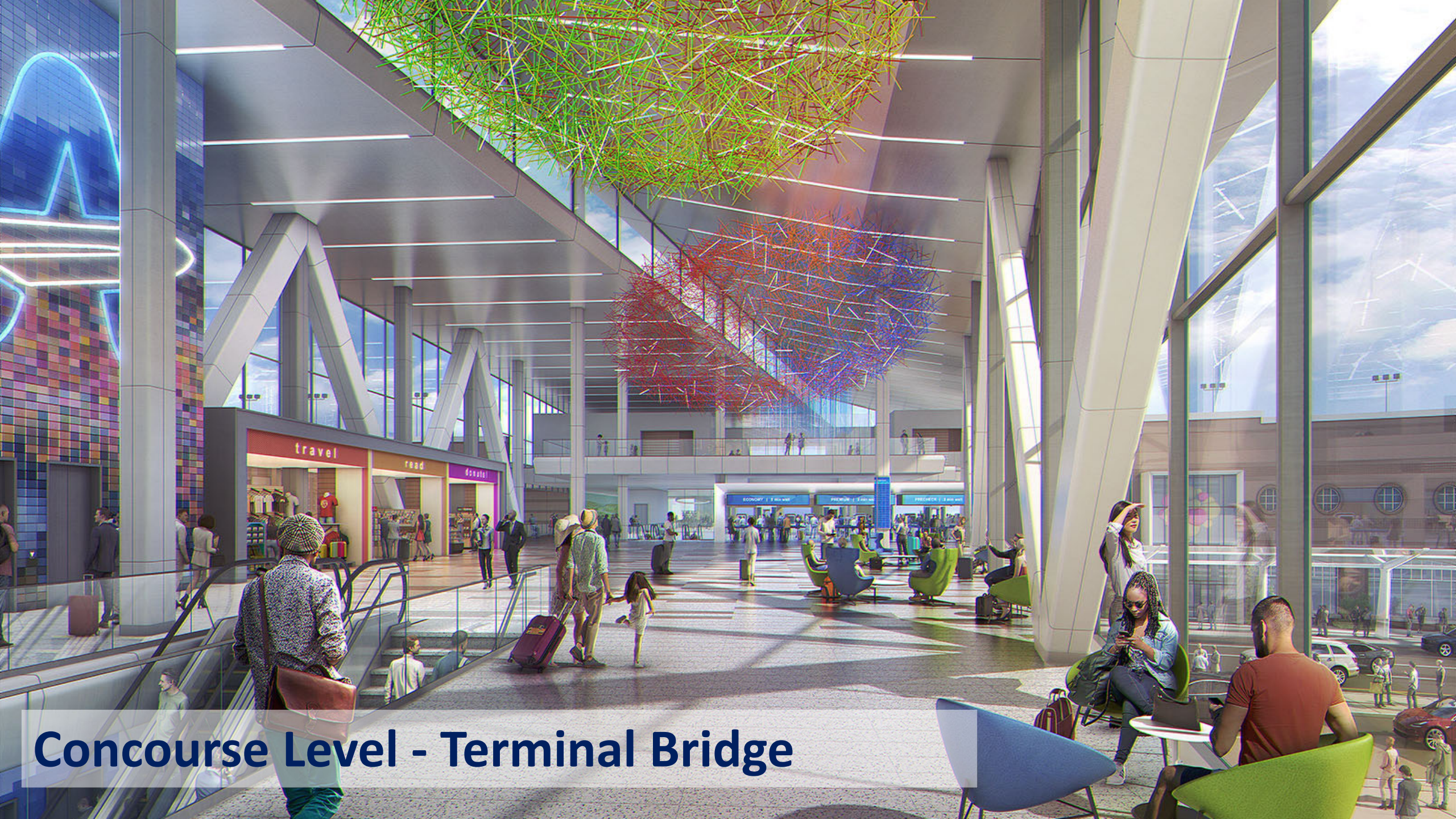
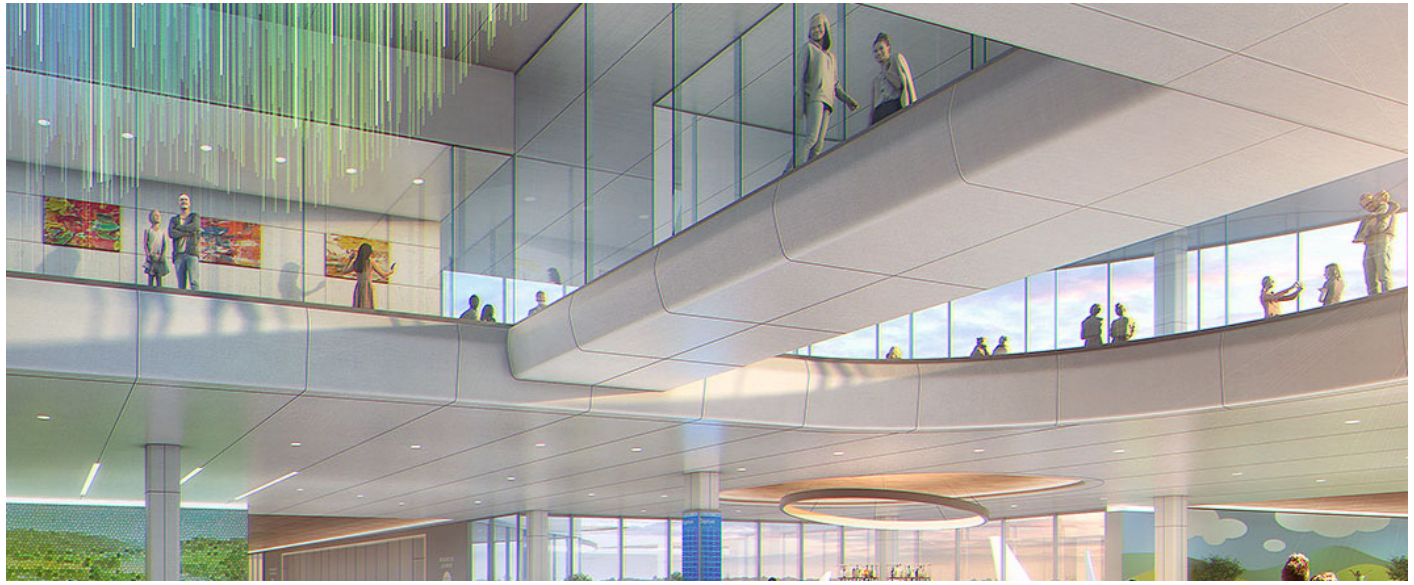


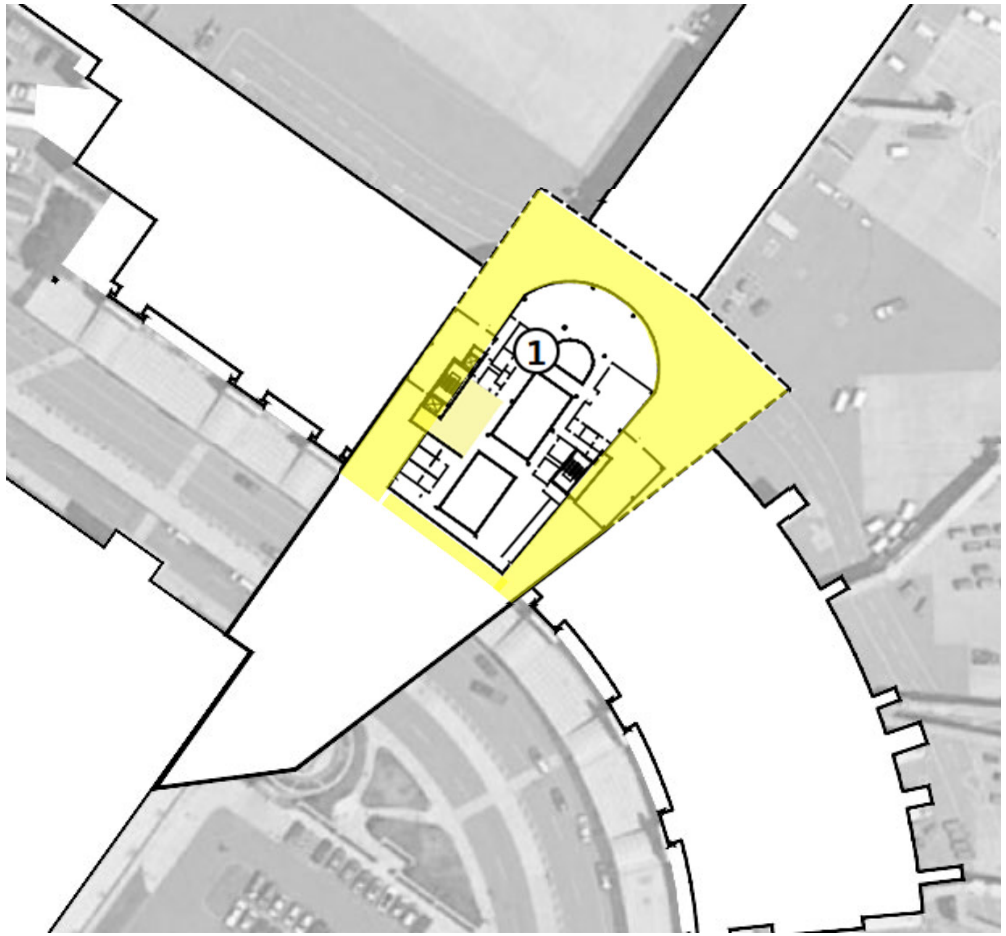
Concourse Level - Terminal Bridge

Concourse Level – Post Security

Terminal Improvements – 3rd / Upper Level

1. Landside Art Gallery & Observation Deck





Airport Master Plan – Focus Areas

- NYS Upstate Airport Economic Development & Revitalization Competition

https://www.youtube.com/watch?v=5oms3tQkAlM

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Potential Long-Term Terminal Needs

- Passenger Parking Capacity Expansion
- Aircraft Gates:
  - Number of Gates
  - Concourse Size/Seating
  - Aircraft Parking Apron
- Curbside Area – Dropoff/Pickup
- Aircraft Remain Overnight (RON) Parking

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4. Airfield Requirements & Development

Paul McDonnell, CHA

CHA

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Airfield Facility Requirements

Airfield Requirement	Adequacy (20 years)	Notes
Airfield Capacity	Surplus	Remains <50% throughout planning period
Number of Runways / Wind Coverage	Two; 99%	Both Runways needed for wind coverage
Runway Length, Strength & Width	Adequate	8,500’ is adequate for Stage Length 3
Taxiway Width	Adequate	75’ width, exceed the 50’ width requirement
Full Parallel Taxiways	Both Runways	Consider eastside taxiway for Runway 1-19
Airfield Lighting	Adequate	High Intensity, Approach, Centerline
Navigation Aids	Adequate	ILS, RNAV, VOR, PAPI, REILS
Hot Spots (Potential Risk Location)	None	
Airspace Obstructions	Trees / Hills	Regular maintenance required

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Airfield Design Standards (change periodically)

- **Current Deficiencies**
  1. Runway-Taxiway Offset <400’
  2. Movement vs Non-Movement Area
  3. Runway & Taxiway Turn Geometry
  4. Acute Angle Taxiway Intersections
  5. Direct Apron-Runway Access
  6. 4 Note Intersections
  7. “Y” Intersections
  8. First 1/3 Runway Crossings
  9. Runway Protection Zone (RPZ) Control
- **Long-Term Recommendations**

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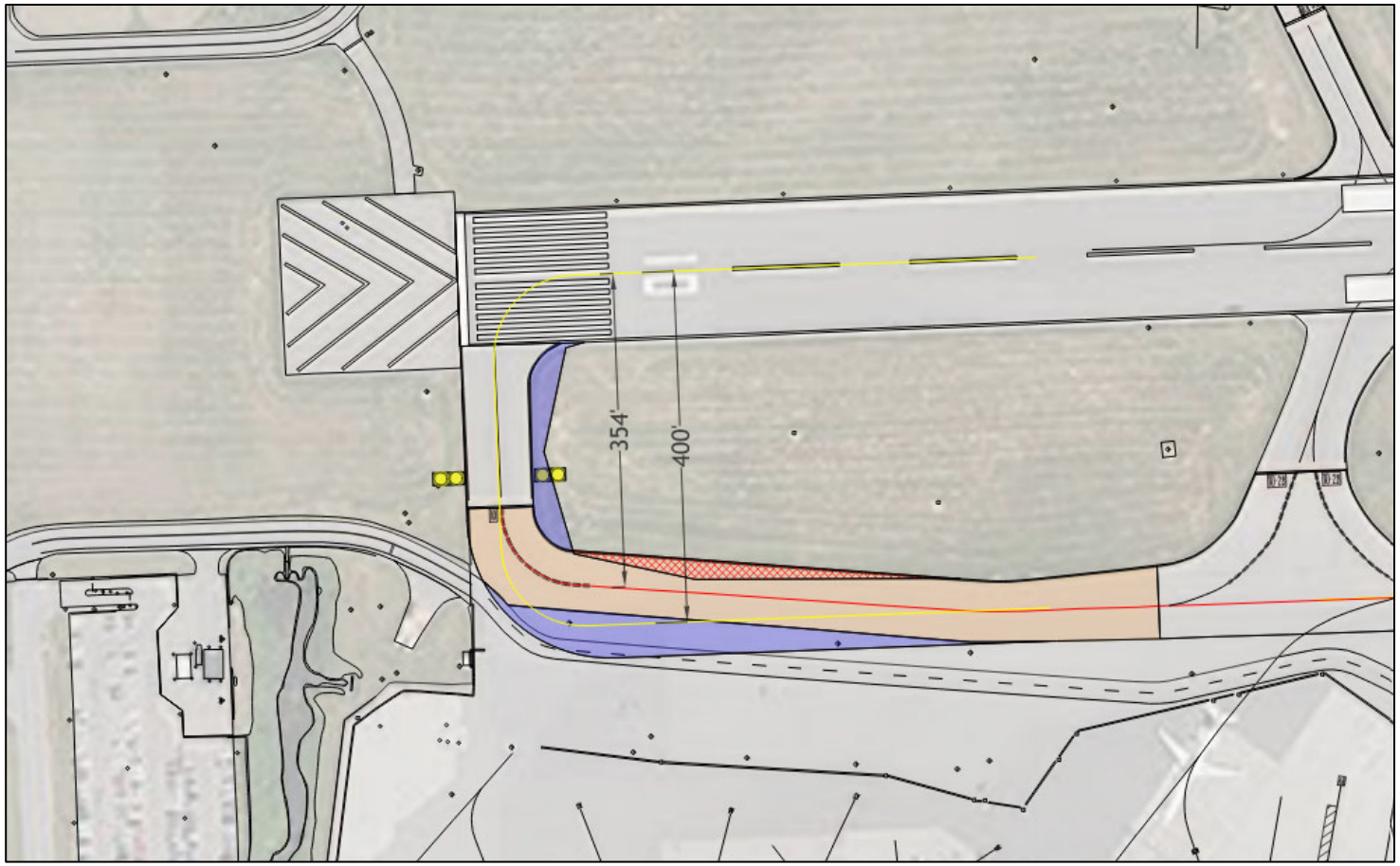
Airfield Development Concept

- Address Taxiway-to-Runway Separation Standards
- Current 354’ Offset is Inadequate
- Realign to 400’ offset
  - Relocating guard lights
  - Realigning service road



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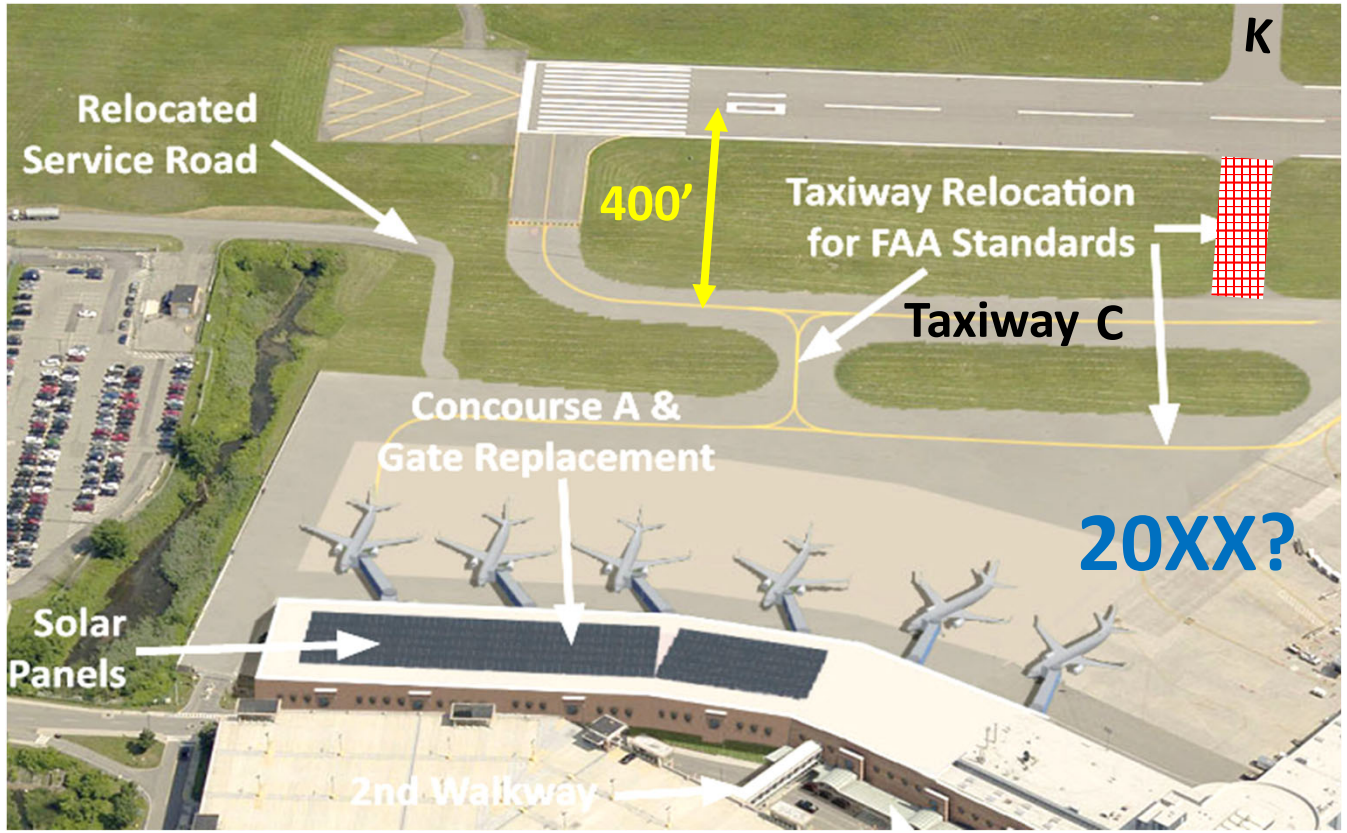
Airfield Development Concept

- Address Airfield Movement vs Non-Movement Areas



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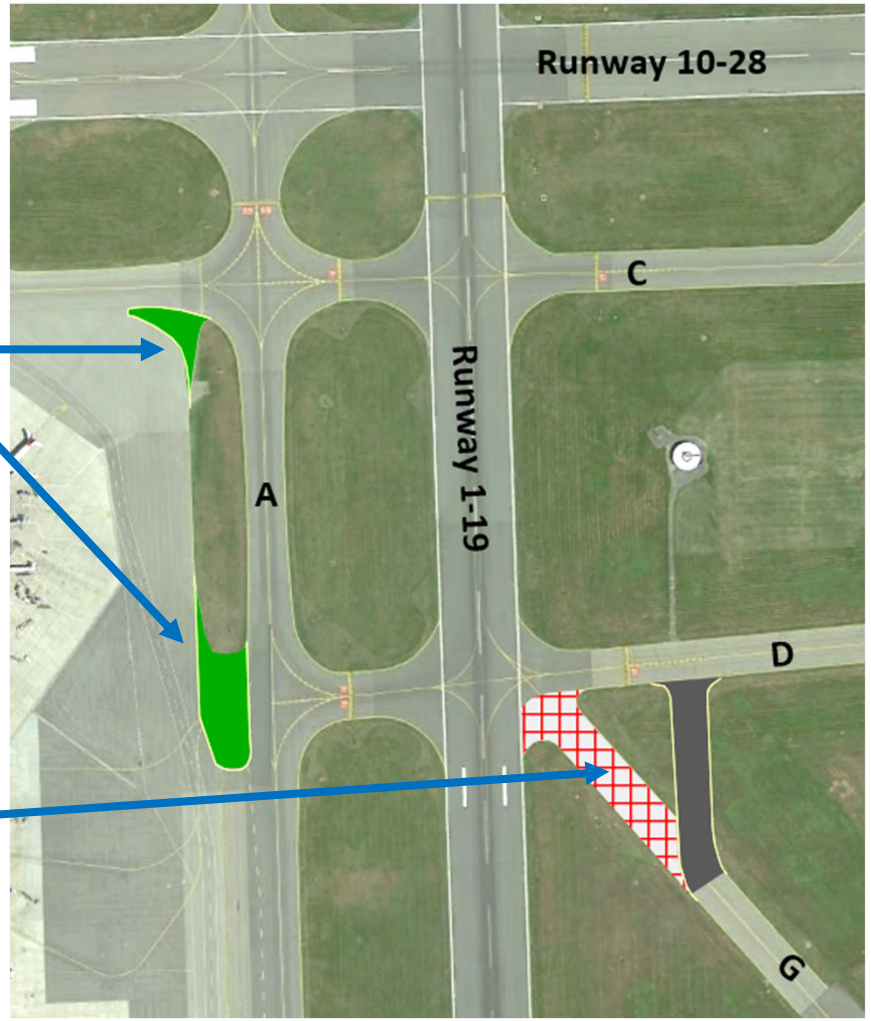
Airfield Development Concept

- Direct Apron-to-Runway Access
  - Expand 'Grass Islands'
- Relocate Taxiway G to Eliminate:
  - 4 Node Intersection
  - "Y" Intersection
  - Acute Angle



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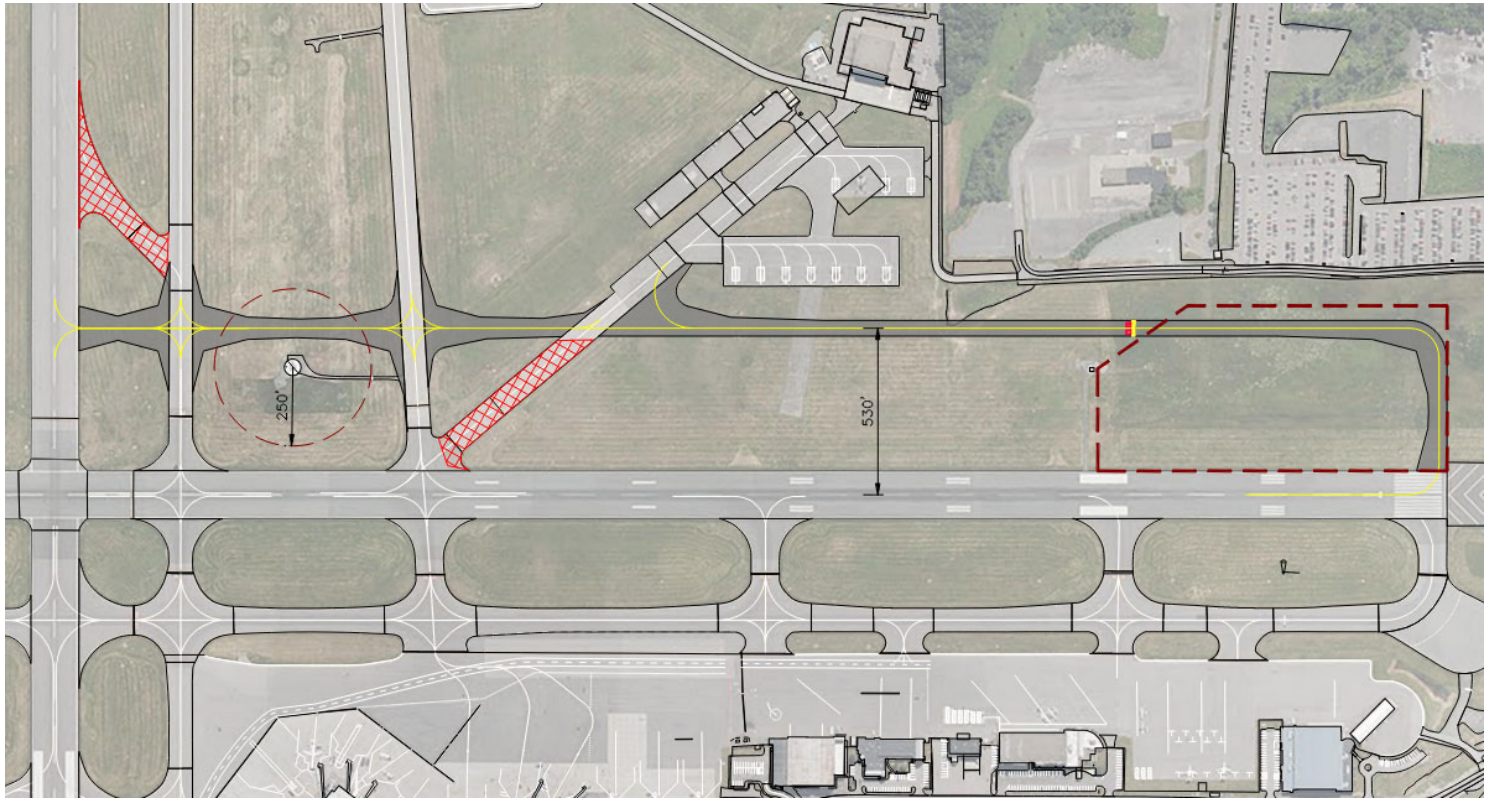
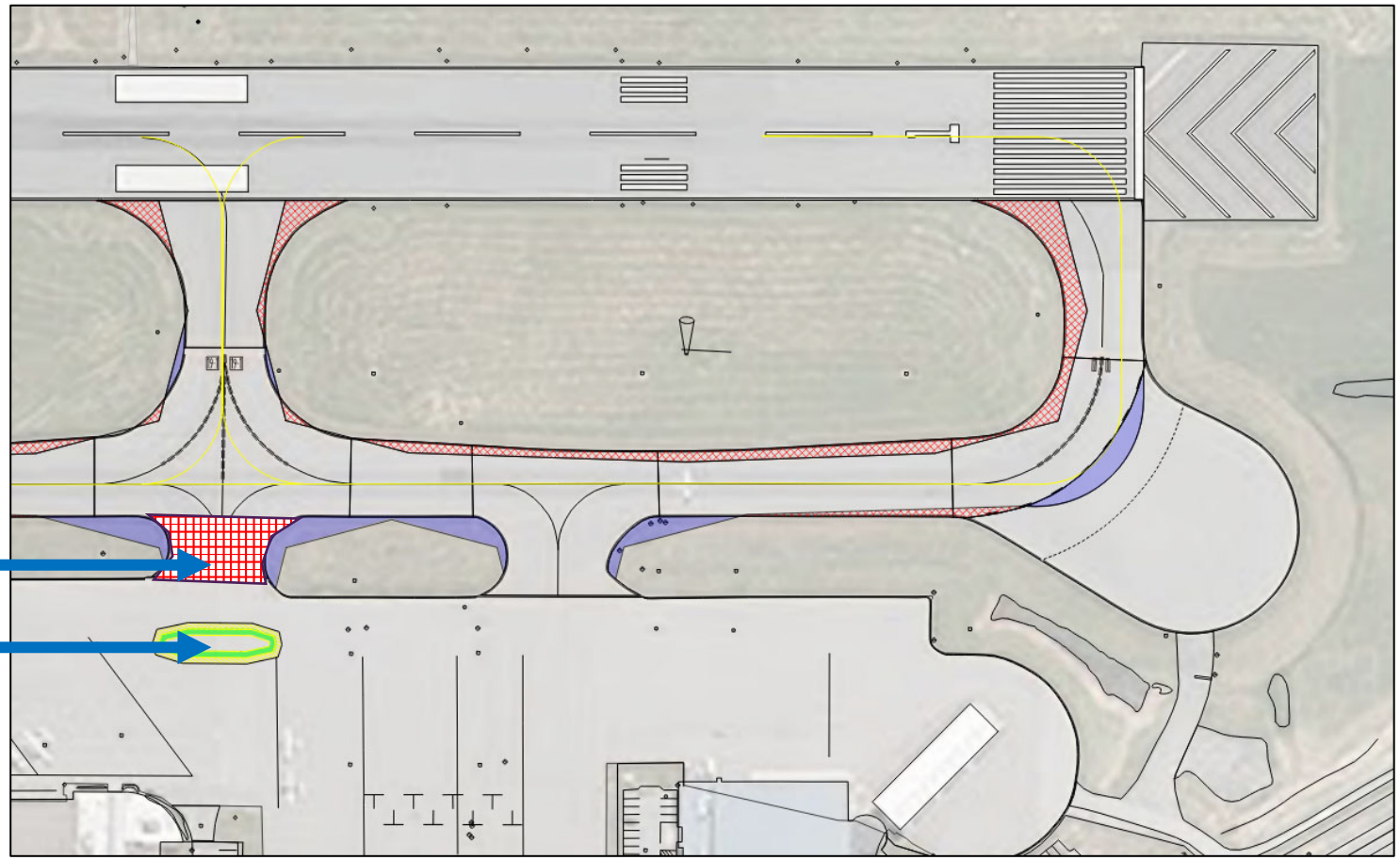
Airfield Development Concept

- Potential Parallel Taxiway
  - 530’ Runway Offset
  - 50’ Width
- Fosters Development in Southeast Quadrant
- Impacts to:
  - VOR Navaid
  - Glide Slope (GS) Critical Area
  - Wetlands/Floodplain



Airfield Geometry (Taxiway Fillets)

- Design Standards Changes
  - Taxiway Turn Fillets
  - Limited Benefit/Need
- Direct Apron-to-Runway Access
  - Eliminate Connector, or
  - Mitigated with ‘Painted’ Islands



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5. Next Steps
Open Discussion

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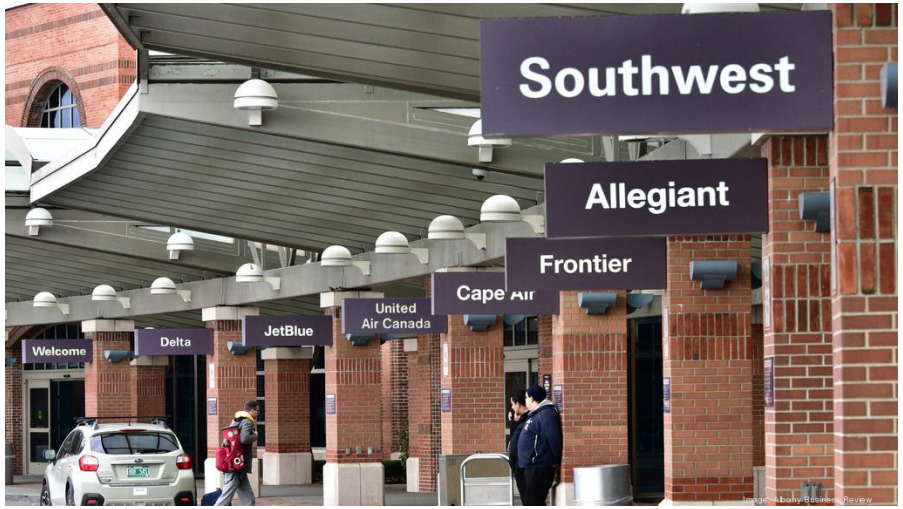
What's Next?

- FAA Forecast Approval
- Working Paper #2 (Winter 2022)
  - Facility Requirements
  - Development Alternatives
- RAC Meeting No. 3 (Spring 2022)
- Public Meeting No. 1 (Spring 2022)



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Open Discussion

Thank You!

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