



DETROIT METRO ▪ WILLOW RUN  
WAYNE COUNTY AIRPORT AUTHORITY



# Community Advisory Committee Meeting

Detroit Metropolitan Airport Master Plan Update

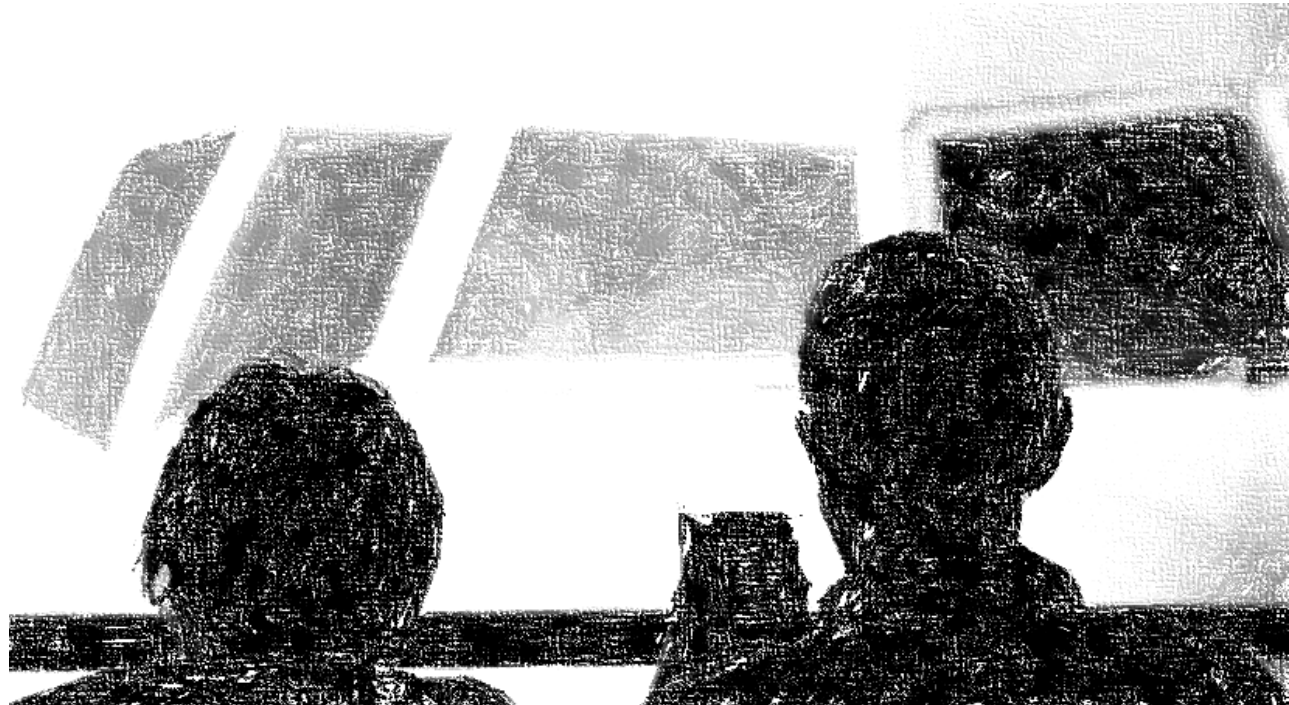
Meeting #4: Preferred Concept Alternatives

November 2, 2016

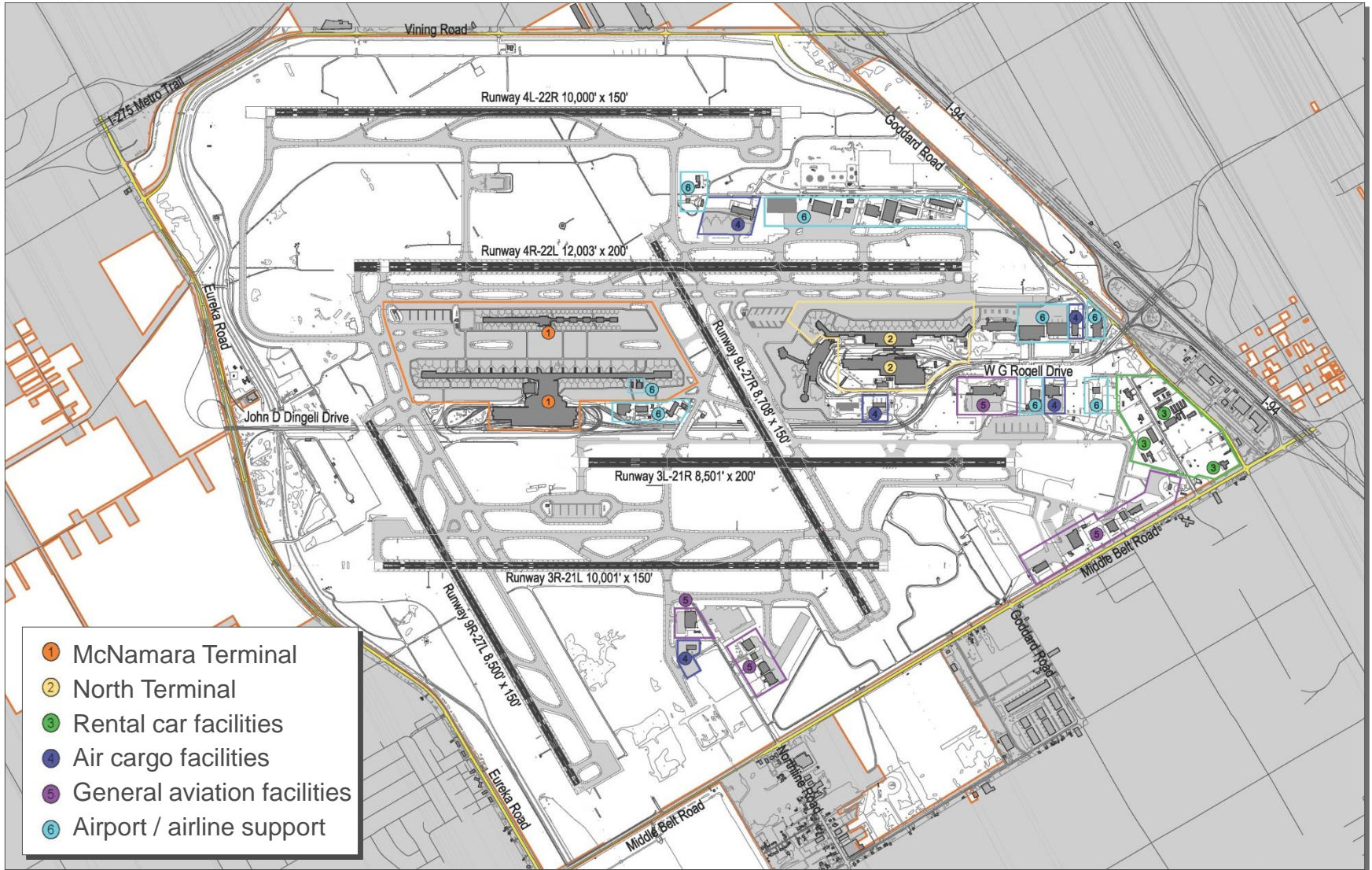
**Leigh** | Fisher

*Today's agenda and discussion topics*

- 1. Project overview and applicable background**
- 2. Preferred concept alternatives**
  - Airfield
  - Passenger terminals
  - Ground transportation facilities
  - Airport maintenance campus
- 3. Closing/summary**

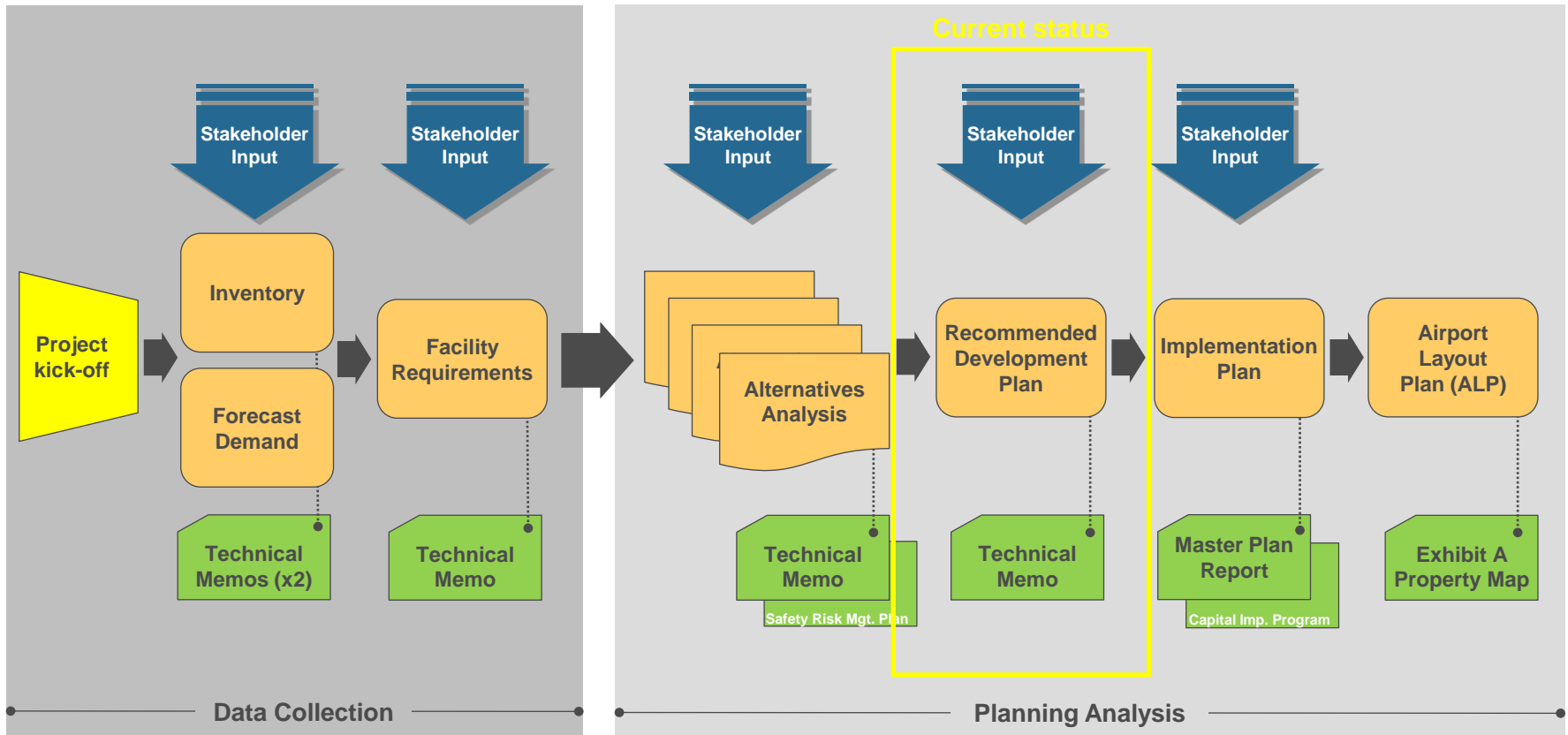


# Detroit Metropolitan Wayne County Airport



# The Master Planning Process

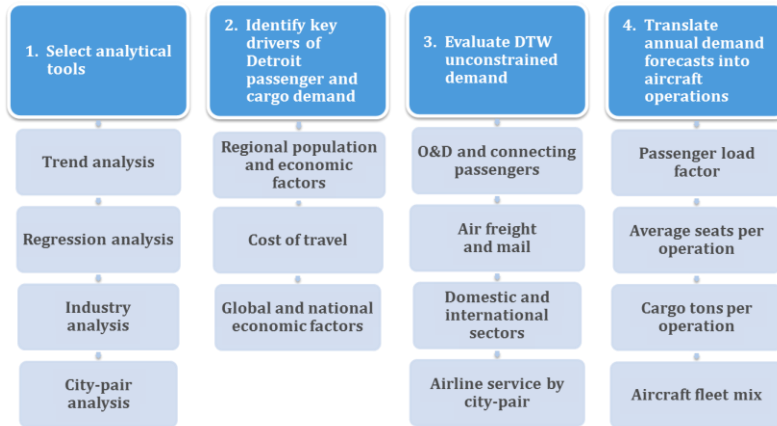
*The master planning process includes a series of technical analyses and summary documents, as well as opportunities for stakeholder and community input*



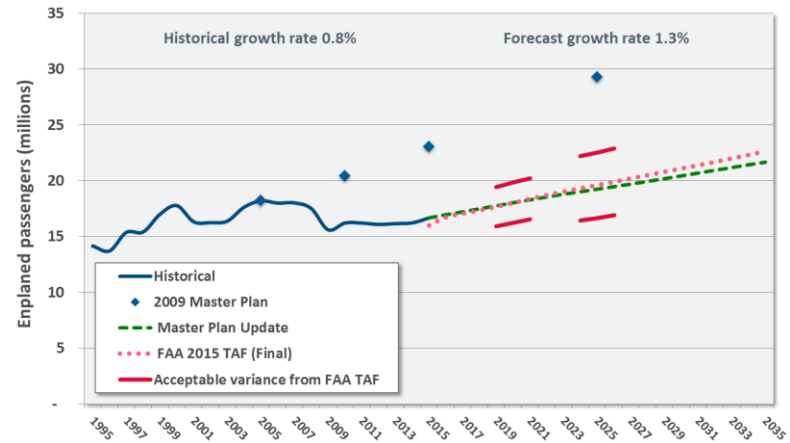
# Forecast Aviation Activity

*Total annual passengers and operations are forecast to increase an average of 1.3% and 0.7% respectively per year between 2015 and 2035*

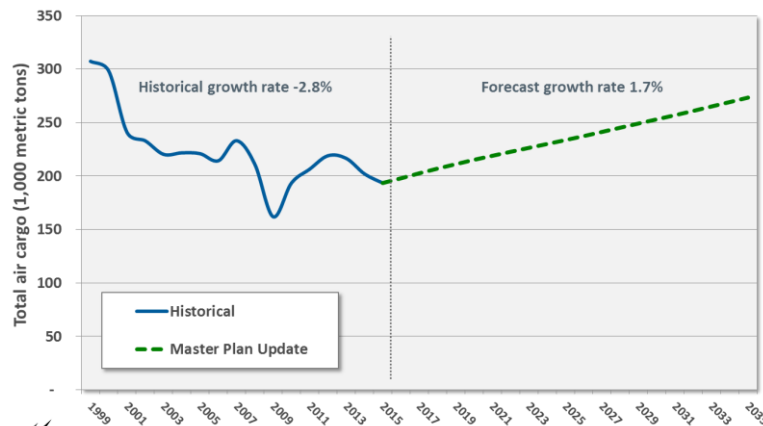
## Forecast Methodology and Approach



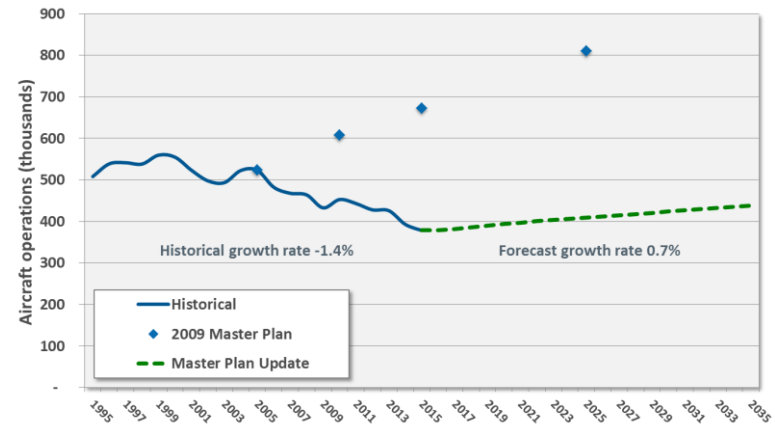
## Forecast Passengers



## Forecast Air Cargo



## Forecast Aircraft Operations



*Preferred Alternative:  
Airfield*

# Airfield Simulation Modeling Video

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## Focus areas in the Master Plan:

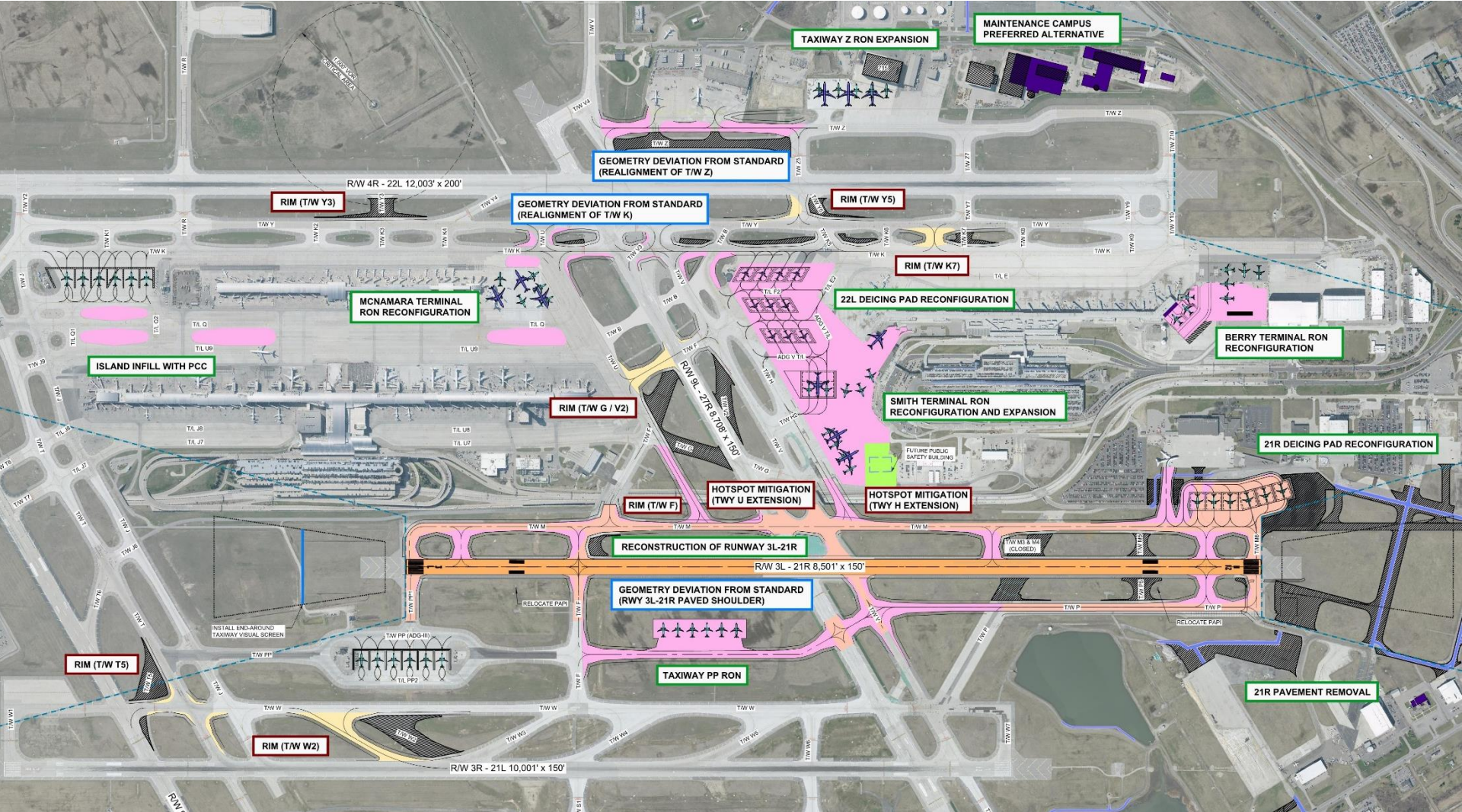
- Enhance an already safe airfield
- Provide efficiency to ensure the Airport is an attractive place for air carriers to operate
- Provide upgrades and infrastructure to meet FAA standards
- Investigate strategies to reduce fuel burn and emissions

## Analyses indicated the following are NOT required in this Master Plan

- New runway
- Runway extensions



# Preferred Airfield Alternative



## Runway 3L-21R

- Reconstruct at 150' wide
- No north extension
- Pursue non-precision instrument approach (1 mile visibility)
- Extend Taxiway P
- Improve departure surface penetrations
- No extension of Taxiway M
- Maintain centerline alignment (35' credit)

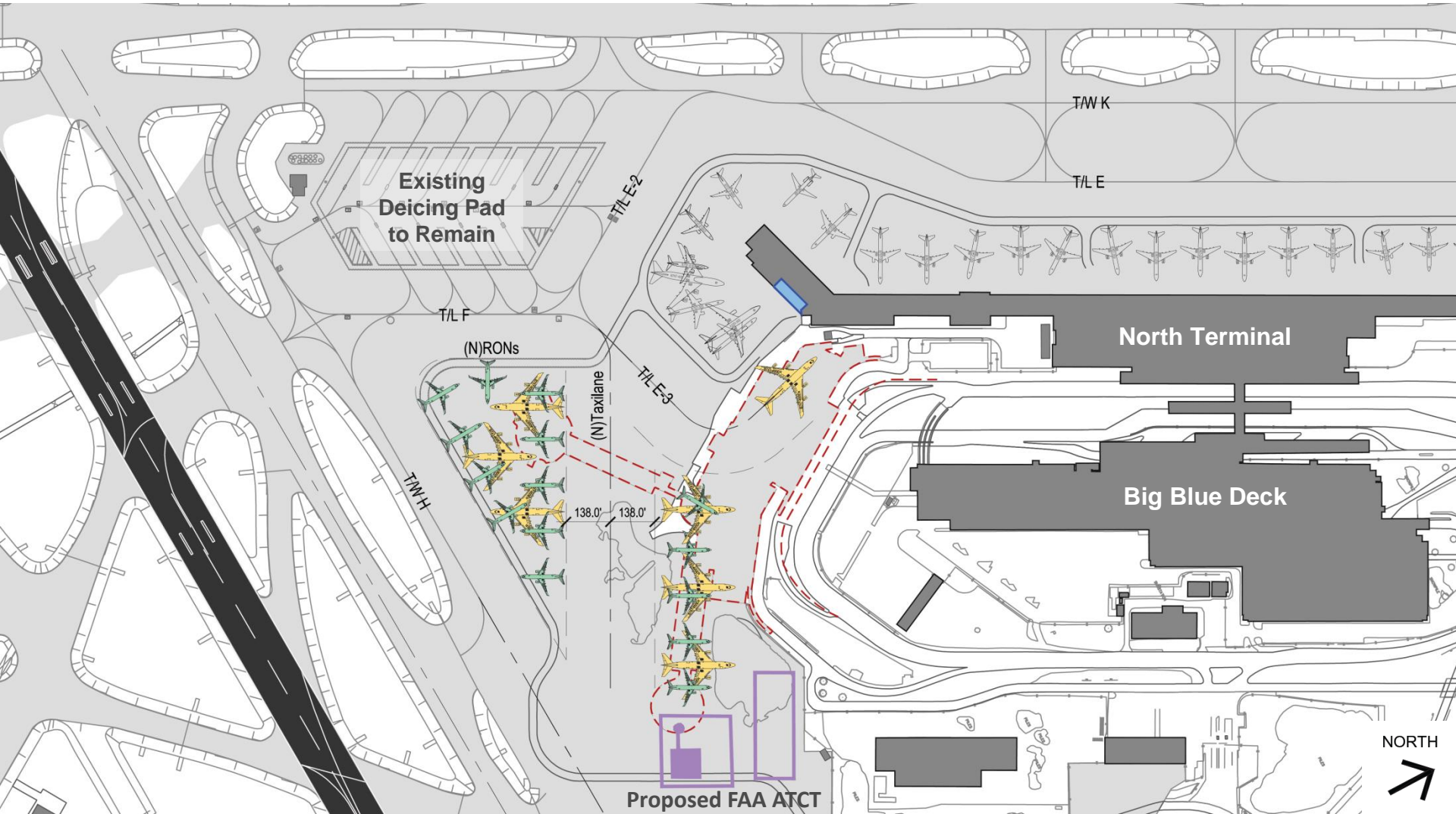
## Deicing Pads

- Centralized deicing is not practical or feasible
- Address standards for new/reconfigured deicing pads
- Add two new wide-body positions (1 Sky Team and 1 OAL)
- Improve Departure Surface Penetrations
- Reconfiguration of 21R and 22L pad
- Long term utilization strategies for deicing

*Preferred Alternatives:  
Passenger Terminals*

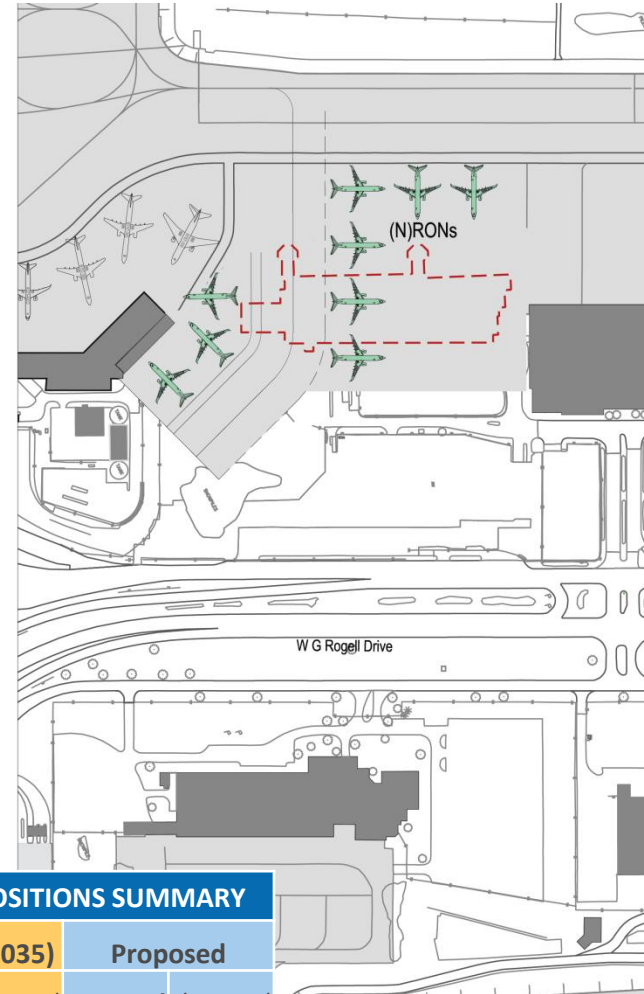
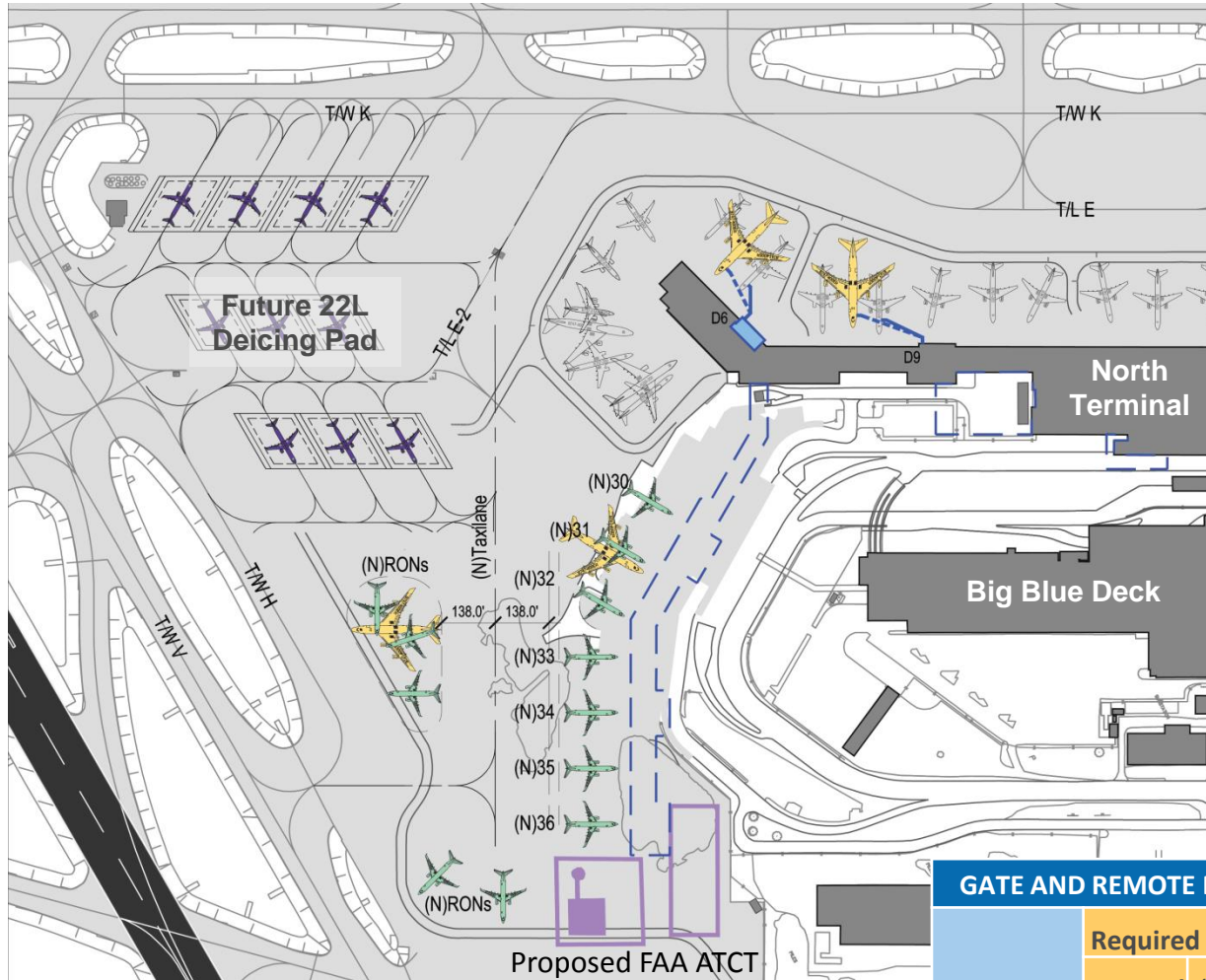
# Proposed Use of the Smith Terminal Site

*Smith site to be used for parking and de-icing in the near- and mid-term*



# Preferred North Terminal Long-term Gate Alternative

*Unexpected demands could necessitate construction of additional gates before 2035*

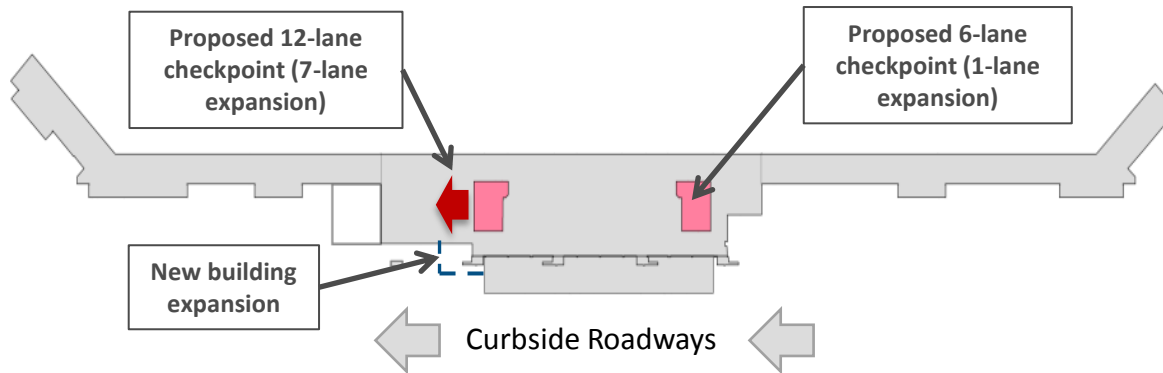


GATE AND REMOTE POSITIONS SUMMARY				
	Required (2035)		Proposed	
	Total	(ADG V)	Total	(ADG V)
Gates	29	(1)	36	(5)
Remotes	16	(0)	11	(1)

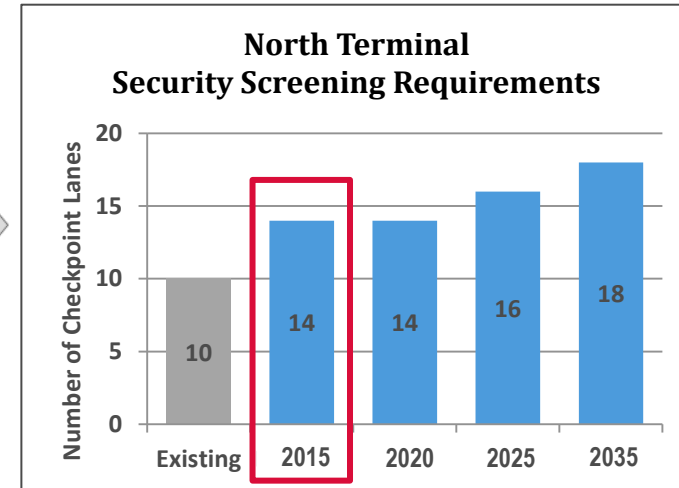
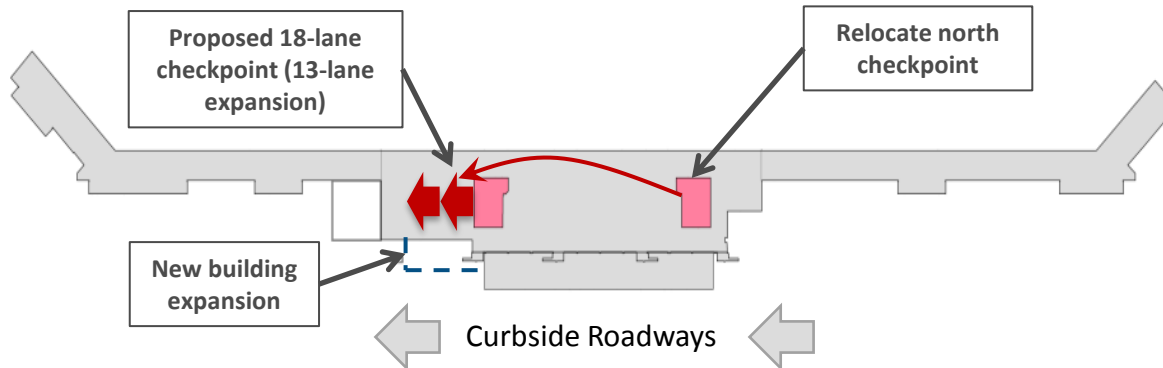


# Preferred North Terminal Security Checkpoint Alternative

## Preferred Near-Term Alternative – Expanded Dual Security Screening Checkpoint



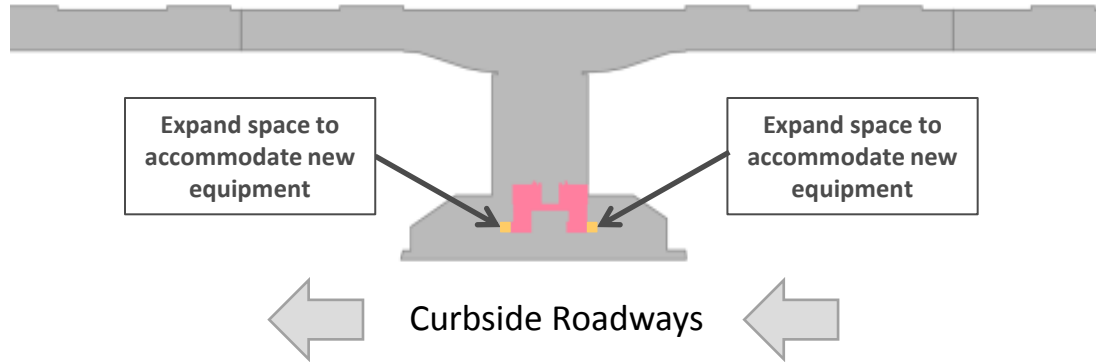
## Preferred Long-term Alternative – Consolidated Security Screening Checkpoint



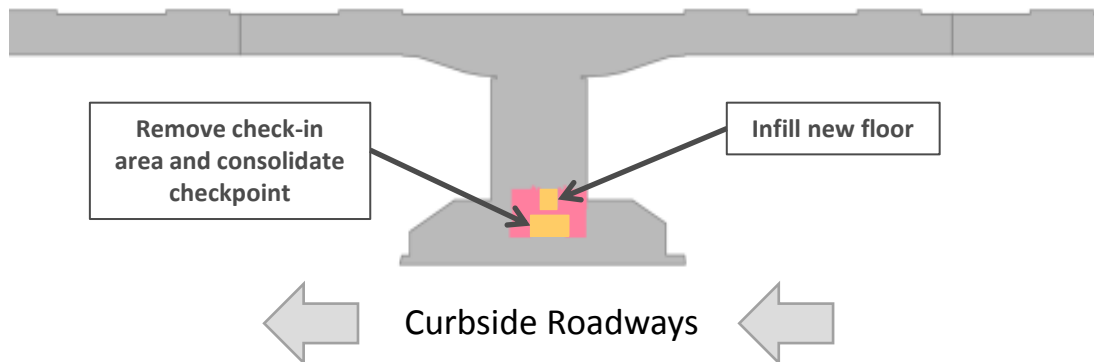
- **Near-term (0-5 years): 2 additional lanes required** at both north and south banks
- **Beyond 2035:** 1) consolidate checkpoint operations and expand south, or 2) expand south end of dual checkpoint option

# Preferred McNamara Security Checkpoint Alternative

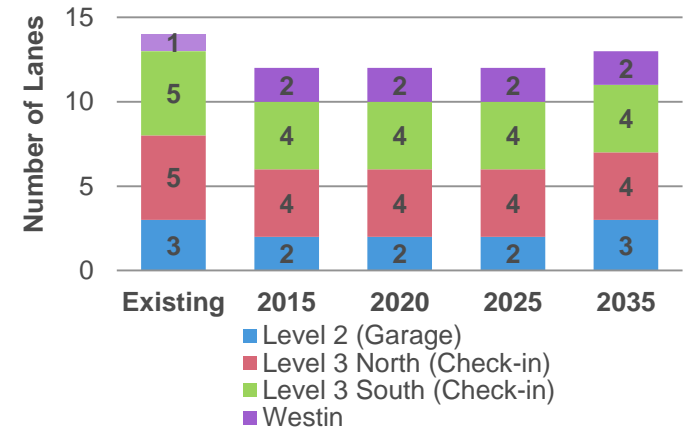
## Preferred Near-Term Alternative (Level 3) – Expanded Dual Security Screening Checkpoint



## Preferred Long-term Alternative (Level 3) – Consolidated Security Screening Checkpoint



McNamara Terminal Security Checkpoint Requirements



- **Near-term (0-5 years): More spaces required** for longer and wider screening equipment, passenger queue, and new TSA Automated Screening Lane (ASL) technology
- **Beyond 2035:** Consolidate checkpoint for more efficient screening operation and future expansion

# Future Screening Technologies

*Future technologies which can impact screening checkpoints being considered*

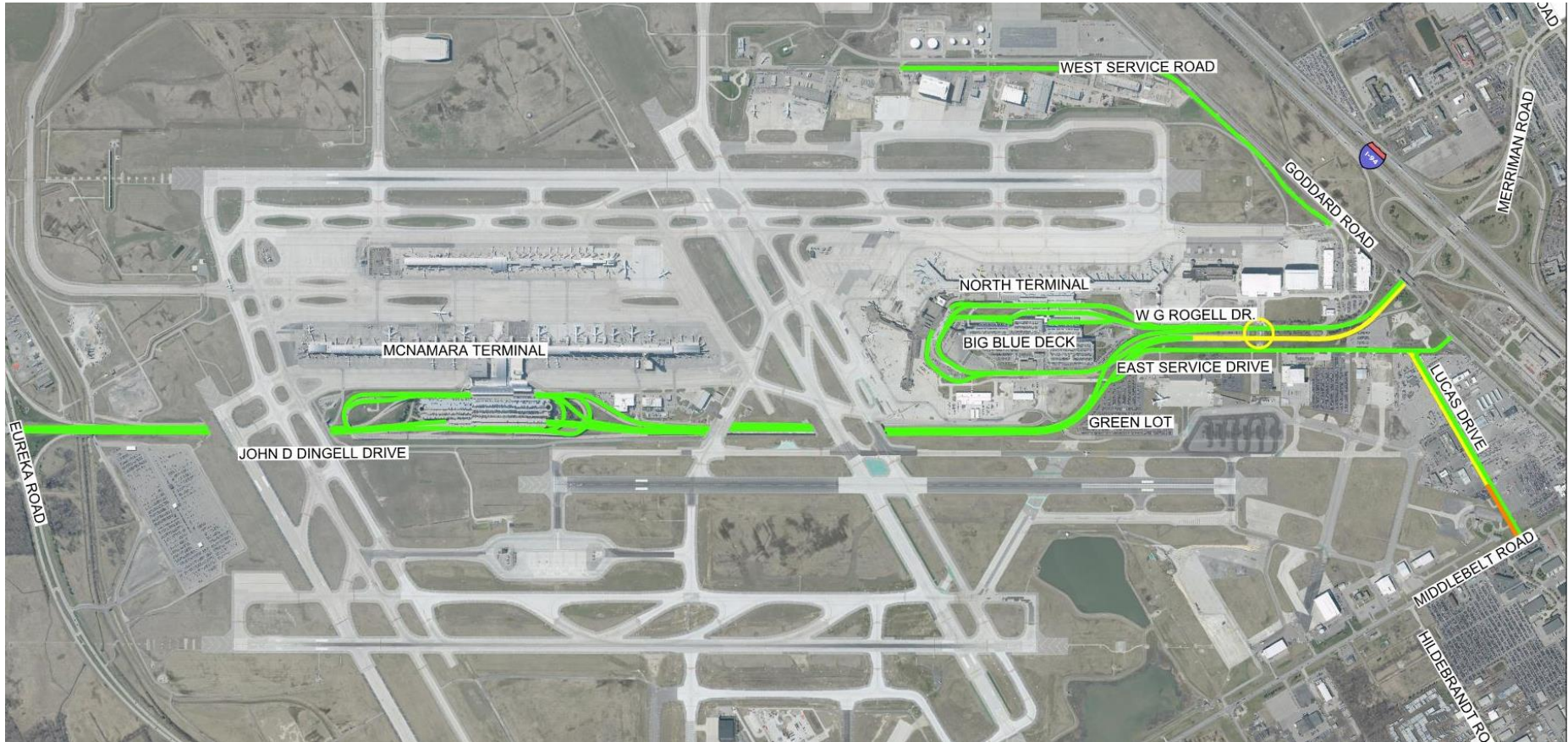
- Secure way to accurately identify passengers
  - Fingerprint
  - Iris
  - Face
  - Heartbeat
- Biometric data accelerates processing
- Automated Screening Lane technology





***Preferred Alternatives:  
Ground Transportation Facilities***

# Roadway Traffic Model Drives Key Decisions

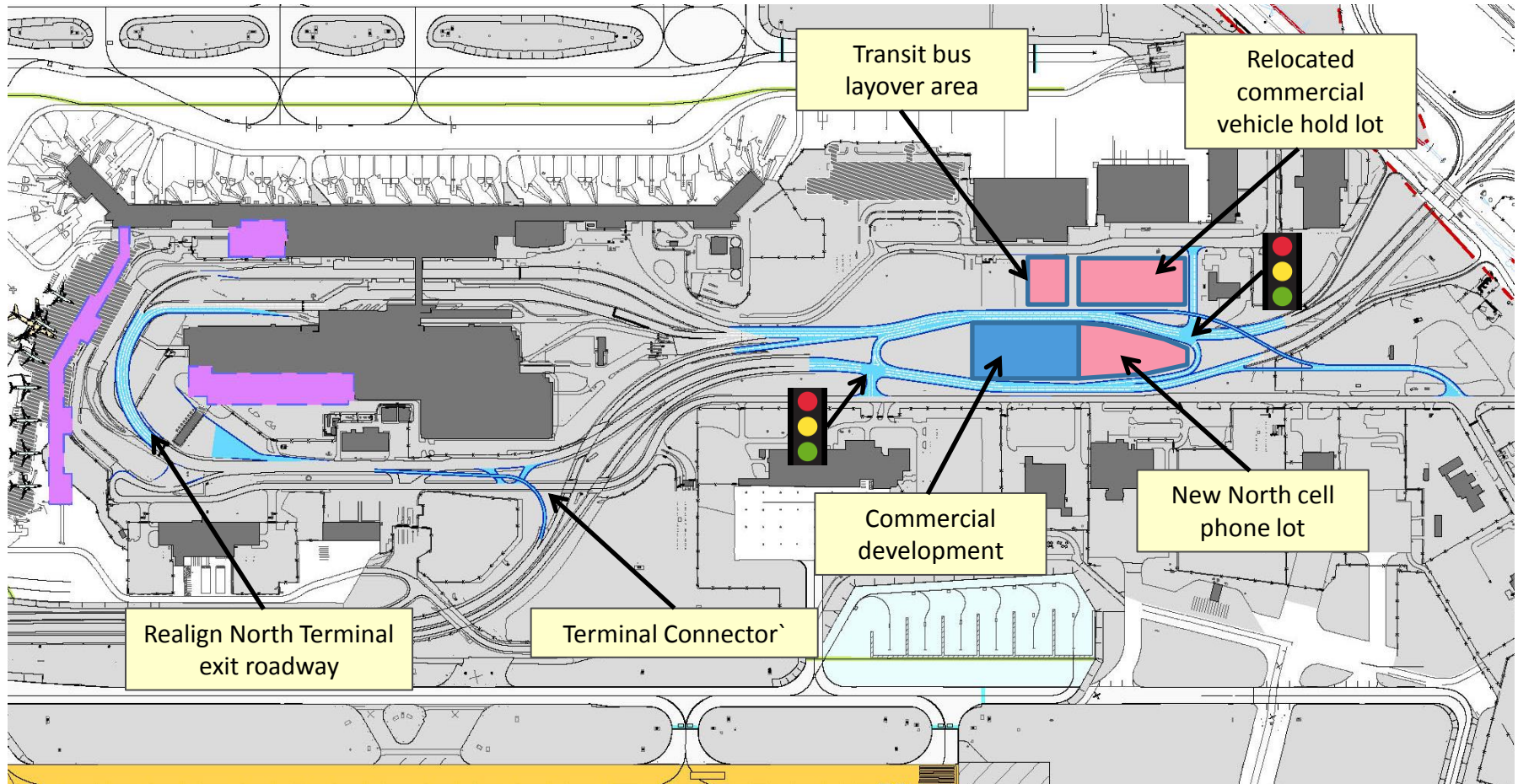


# Roadway Simulation Modeling Video

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# Preferred Rogell Realignment

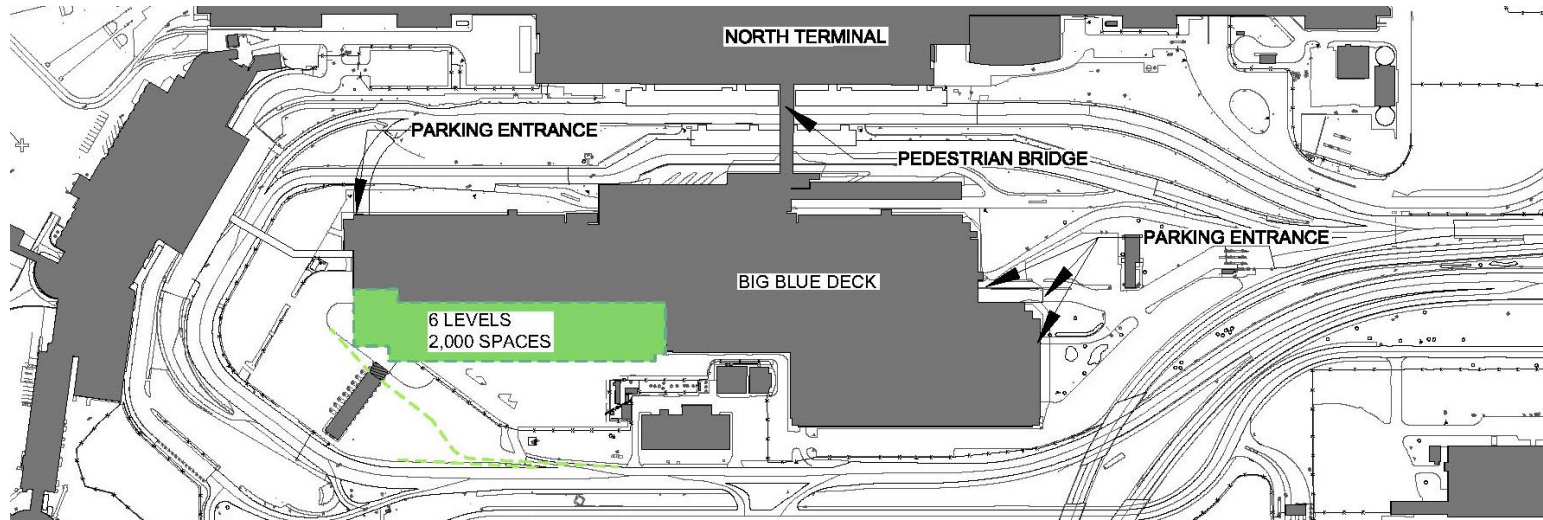
*Rogell Drive realignment will eliminate the Rogell-Burton intersection and replace it with two signals – one in the southbound and one in the northbound direction*



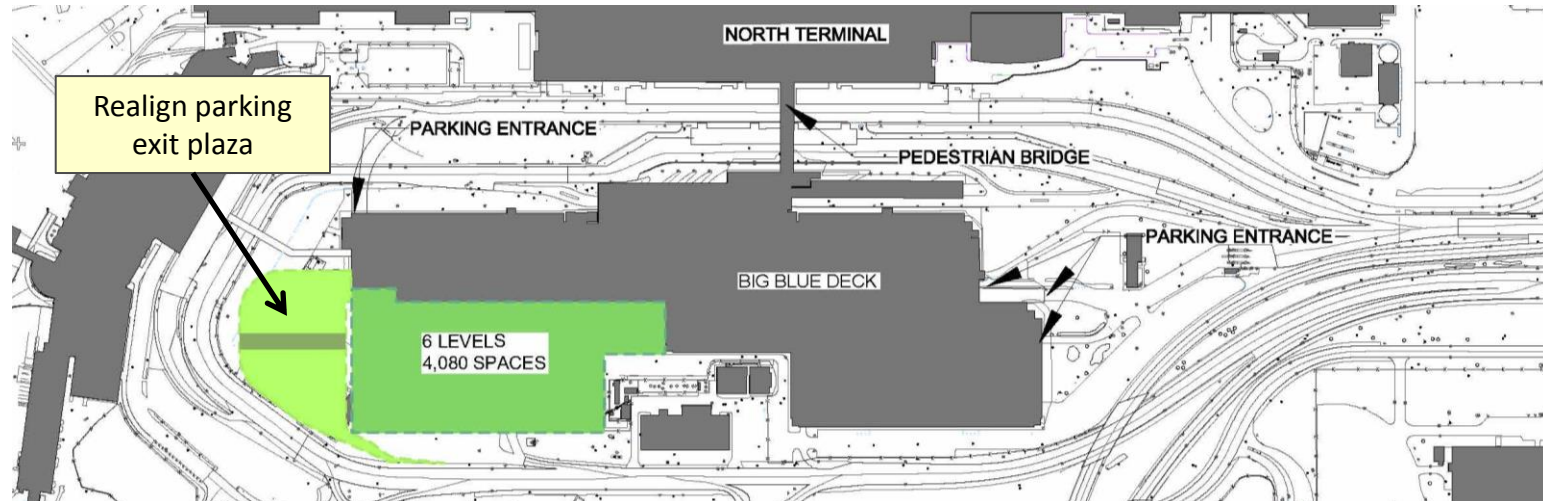
**Rough Order of Magnitude (ROM) Cost Estimate: \$21 M for roadway realignment**

# Preferred Big Blue Deck Expansion

## Initial parking expansion 2,000 spaces

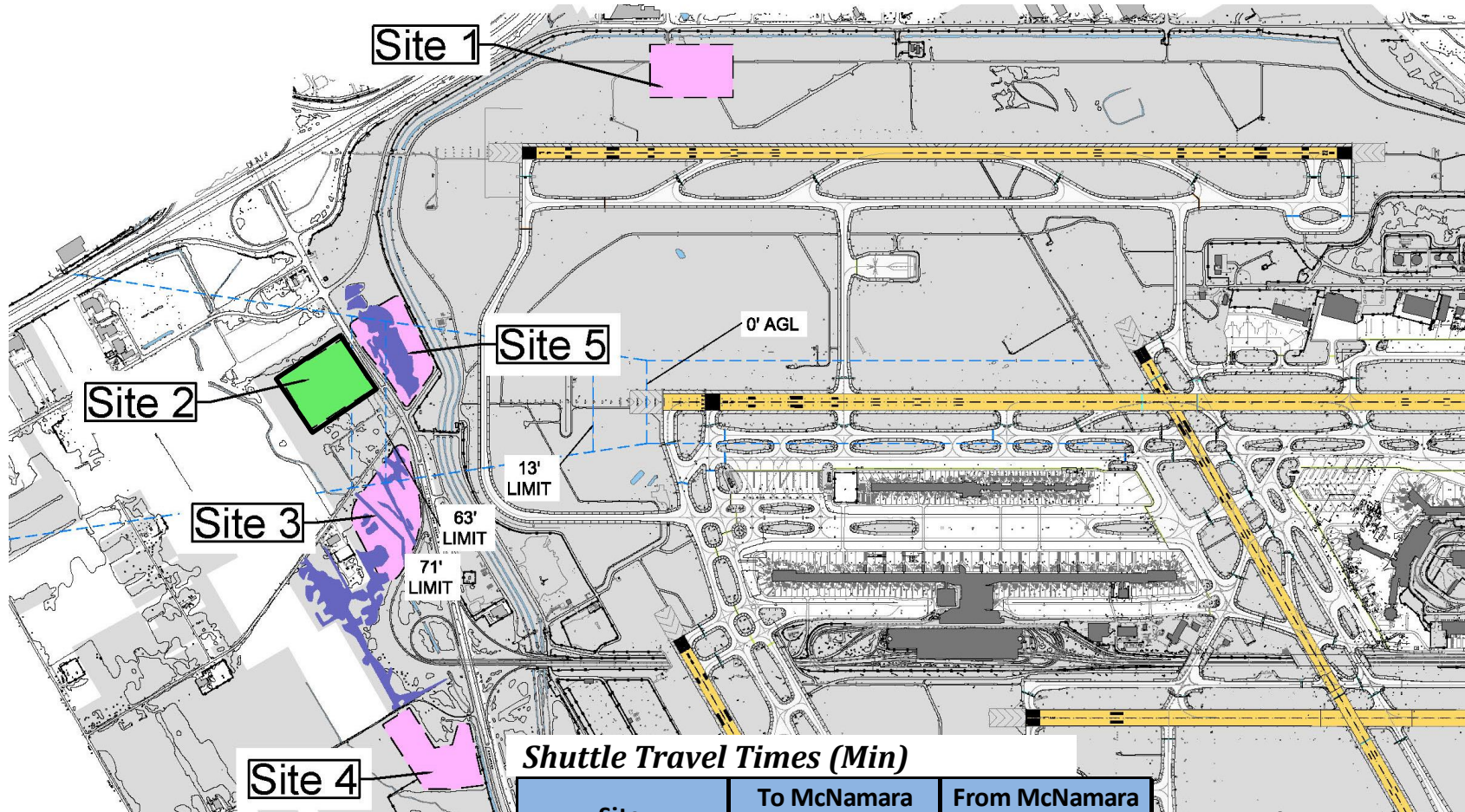


## Ultimate parking expansion 4,100 spaces



**Rough Order of Magnitude (ROM) Cost Estimate: \$134 M for full garage**

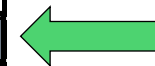
# Preferred Remote/ Long-Term Parking



**Rough Order of Magnitude (ROM) Cost Estimate: \$13 M for 2,000 spaces**

**Shuttle Travel Times (Min)**

Site	To McNamara Terminal	From McNamara Terminal
1	7:00	6:00
2	5:00	4:00
3	5:00	4:00
4	6:00	4:00
5	6:00	4:00



*Preferred Alternatives:  
Support Facilities*

# Airport Maintenance Facility

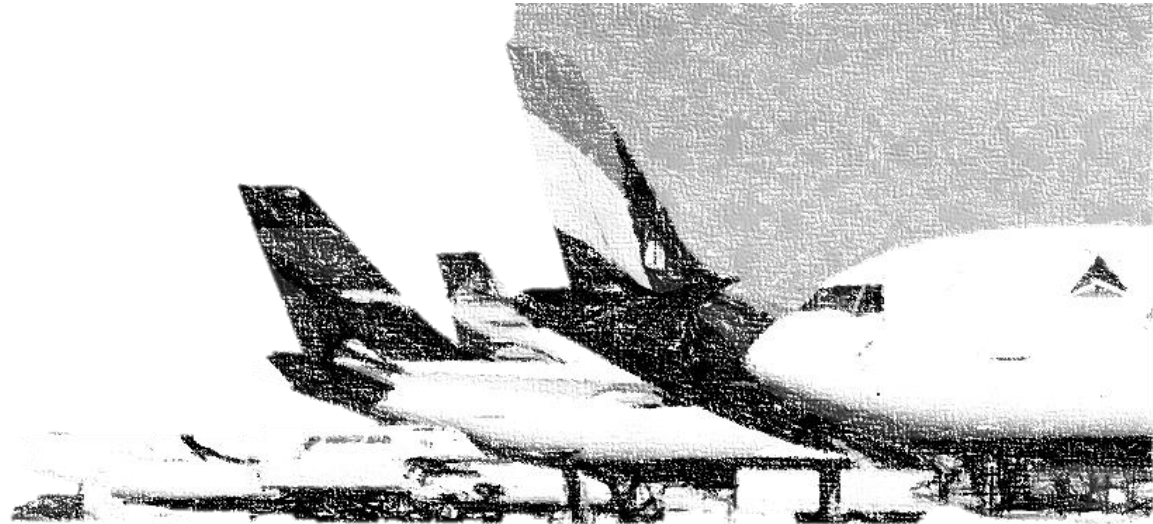
- The Airport's existing Maintenance Campus does not meet current needs
- Preferred solution is to infill and renovate existing facilities



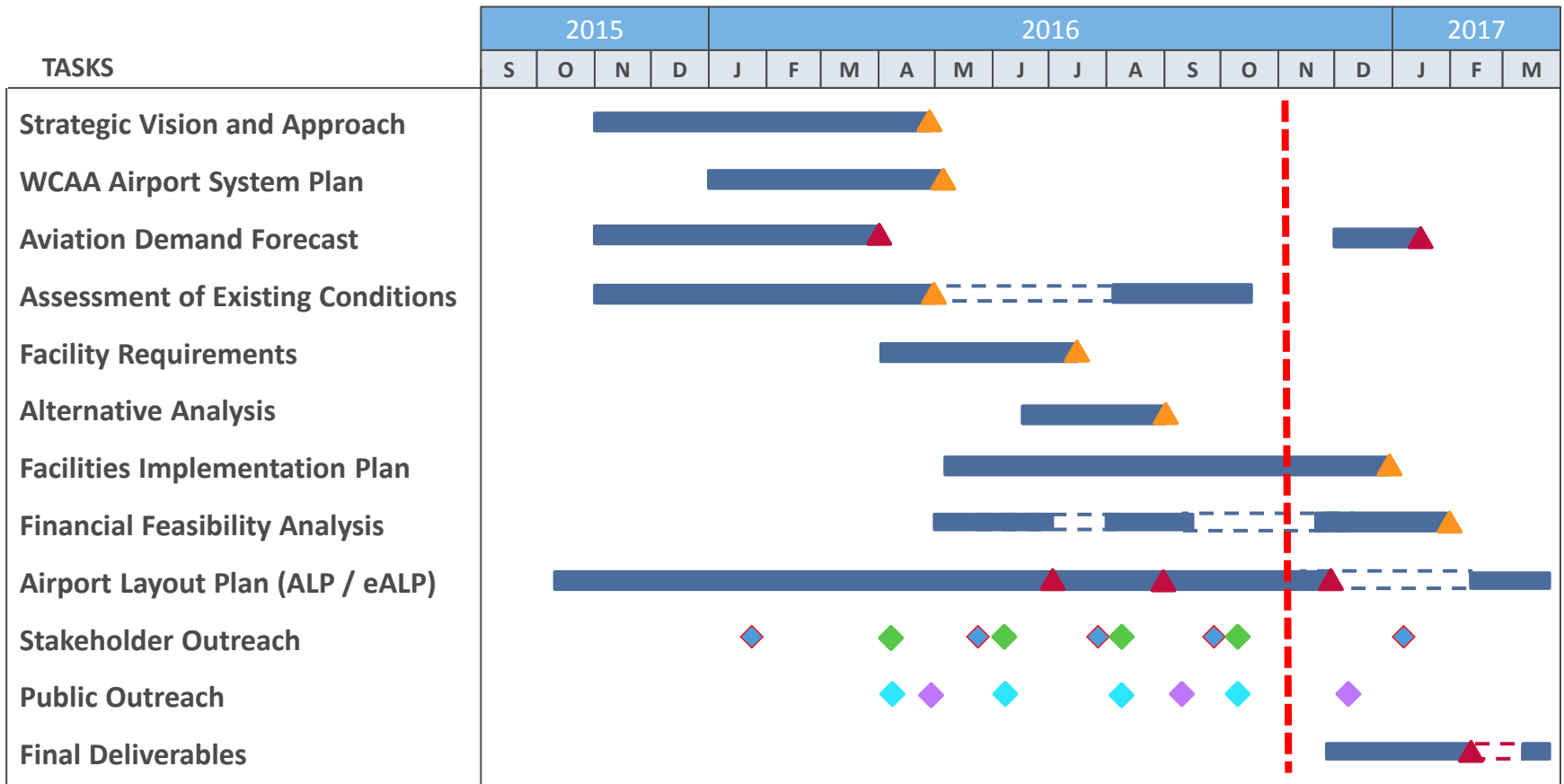


*Closing / Summary*

1. Finalize preferred alternatives into the Recommended Development Plan (RDP)
2. Financial assessments and development of the Capital Improvement Program (CIP)
3. Submit Future ALP for FAA review mid-December
4. Public Information Workshop 12/6/16



# Master Plan Project Schedule



- ◆ Project Steering Committee (PSC) meeting
- ◆ Technical Advisory Committee (TAC) meeting
- ◆ Citizen Advisory Committee (CAC) meeting
- ◆ Public workshop
- ▲ Draft Technical Memorandum
- ▲ FAA review and approval

Note: Not all Scope of Work tasks are depicted; some tasks assumed to occur within the primary tasks shown above.

# Committee Meetings and Topics for Discussion

*Dates are tentative and subject to change*

Target dates	Discussion topics
<b>April 6</b>	<input checked="" type="checkbox"/> Project kick off; Airport Master Plan introduction; project progress and initial findings
<b>June 8</b>	<input checked="" type="checkbox"/> Facilities needed to accommodate future demand; initial alternatives
<b>August 25</b>	<input checked="" type="checkbox"/> Alternatives
<b>November 2</b>	<input checked="" type="checkbox"/> Recommended Development Plan
<b>April 28</b>	<input checked="" type="checkbox"/>
<b>September 8</b>	<input checked="" type="checkbox"/> Public meetings to present master plan findings
<b>December 6</b>	<input checked="" type="checkbox"/>
<b>Subcommittees</b>	<input checked="" type="checkbox"/> Over 20 Airside, Terminal, and Ground Transportation technical subcommittee working meetings completed

# Questions and Closing Remarks

