



TRENTON-MERCER AIRPORT

Trenton-Mercer Airport Terminal Environmental Assessment Public Meeting

January 23, 2019





Agenda

- Introductions
- Purpose of the Meeting
- Review of Previous Outstanding Comments
- Landside and Roadway Alternatives
- ARFF Alternative Locations
- Terminal Design Alternatives and Programming
- Q&A



Notice of Filming of Meeting

This area is being used to record video and audio in connection with the Mercer County public meeting concerning Trenton-Mercer Airport Terminal Environmental Assessment (Project).

By your presence in this area, you acknowledge that you have been informed that you may be recorded as part of the release of the video on the www.TTNTerminal.com website and/or any media now known or hereafter devised, in perpetuity in any location.

Further, by your presence here, you grant your permission for your likeness and voice to be included therein without compensation, credit or other consideration.

If you do not wish to be photographed, recorded, or appear under these conditions, you can engage members of the Project Team prior to the filming beginning at 7:30pm and also leave comments on the www.TTNTerminal.com website, by email to trenton@mjinc.com, or on the comment forms at the meeting.

Thank you for your cooperation.



RPZ and Obstruction Removal EA

- This Public Meeting is for the Trenton-Mercer Airport Terminal Environmental Assessment (Terminal EA)
- The Runway Protection Zone (RPZ) and Obstruction Removal Environmental Assessment (RPZ and Obstruction Removal EA) comment period has closed and the Final EA is being developed
- The Terminal EA and RPZ and Obstruction Removal EA have separate utility and each refers to the other as a Cumulative Impact.



RPZ and Obstruction Removal EA

- Postings regarding the RPZ and Obstruction Removal EA will be made on www.iflyttn.com and www.mercercounty.org as well as the federal register at: www.federalregister.gov or www.faa.gov/airports/

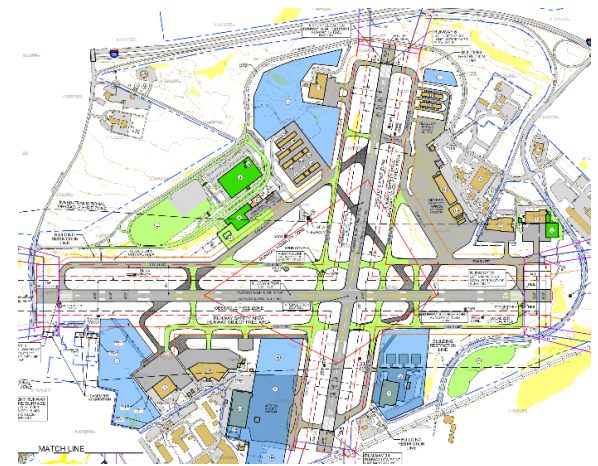






Proposed Taxiway Improvements

- Improvements for Safety and to Mitigate Existing Modifications to Standards
 - FAA AC AC 150/5300-13A - Airport Design, Change 1
 - Parallel Taxiways to Address Runway Line of Sight Deficiencies
 - Remove Complicated Taxiway Intersections to Reduce Pilot Confusion
 - Remove Direct Access Between Aprons and Runways to Mitigate Runway Incursions



**Taxiway Improvements
Are Not for Queuing of
Additional Aircraft**



Increased Operations over Projections

■ Master Plan Projections

	Itinerant				Local			
Year	Air Carrier/ Air Taxi	General Aviation	Mil	Total	Civil	Mil	Total	Total Ops
2015	9,599	37,157	1,516	48,272	29,716	275	29,991	78,263
2020	10,239	39,200	1,516	50,055	30,961	275	31,236	82,191
2025	10,895	40,984	1,516	53,395	32,264	275	32,539	85,934
2035	12,364	46,101	1,516	59,982	35,019	275	35,294	95,275

- Air Carrier/Air Taxi – Airlines, Charter, Corporate
- Itinerant General Aviation – Activity originating or terminating More Than 50 nautical miles (NM) from TTN
- Local Civil/General Aviation – General aviation operations originating or terminating Less Than 50 – Local short trips, flight school, “touch and go”
- Military – National Guard and State Police operations



Increased Operations over Projections

■ 2018 Operations – FAA ATADS

	Itinerant				Local			
Year	Air Carrier/ Air Taxi	General Aviation	Mil	Total	Civil	Mil	Total	Total Ops
2015	9,599	37,157	1,516	48,272	29,716	275	29,991	78,263
2018	9,274 ↓	48,841 ↑	829 ↓	58,944 ↑	44,133 ↑	86 ↓	44,219 ↑	103,163 ↑
2020	10,239	39,200	1,516	50,055	30,961	275	31,236	82,191
2025	10,895	40,984	1,516	53,395	32,264	275	32,539	85,934
2035	12,364	46,101	1,516	59,982	35,019	275	35,294	95,275

Increases in 2018 Operations Above 2020 Projections Due to Itinerant and Local General Aviation (Small Aircraft Only)

Data from https://www.faa.gov/news/media_resources/ATADSguide/



Environmental Assessment

- Environmental Assessment
 - Evaluates Environmental Consequences of Proposed Action
 - Used for projects where **Environmental Impacts Are Not Significant** or can be mitigated to less than significant
 - Prepared in Accordance with National Environmental Policy Act (NEPA) Requirements FAA Implementing Orders (1050.1F and 5050.4B)
- FAA Issues Finding of No Significant Impact (FONSI) or Requires Preparation of Environmental Impact Statement
- FAA Establishes Threshold of Significance



Environmental Assessment

- Purpose and Need
- Alternatives
- Affected Environment
- Environmental Consequences
- List of Preparers
- Technical Appendices
- Public Comments



Proposed Action

- Construct a Replacement 4 Gate Terminal
- Apron Improvements
- Parking Lot Reconfiguration and Investigate Need For a Parking Garage
- Roadway, Circulation, and Ground Access Improvements
- Relocate Airport Rescue and Firefighting Facility



Terminal Alternatives

- Reasons the West quadrant works for the terminal location
 - Landside (Roadway) and airside (apron) infrastructure exists there already and wouldn't have to be duplicated elsewhere
 - Best quadrant for access to and from I-295
- Reasons not to site the terminal in another quadrant
 - The North quadrant has with insufficient space for necessary terminal elements such as parking, roadways, structures, and aprons





Terminal Alternatives

- Reasons not to site the terminal in another quadrant (cont'd)
 - Construction in the North quadrant would displace existing operators
 - The East quadrant is limited in size with insufficient space for necessary terminal elements such as parking, roadways, structures, and aprons
 - The East quadrant is constrained by airspace requirements.
 - The South quadrant is mostly built out and remaining space would be insufficient for terminal needs
 - The South quadrant is recommended for future GA development. Access would have to be through existing leaseholds and limit existing operators



Terminal Planning

- Master Plan Space Planning
 - Formulas/Guidelines for Layouts and Configurations:
 - Baggage Systems and Baggage Claim
 - Security Screening
 - Ticketing
 - Amenities, Concessions, Restrooms

- Airport Passenger Terminal Reference Materials

U.S. Department of Transportation
Federal Aviation Administration
Airport Terminal Planning
Advisory Circular No. 150/5360-13A
7/13/2018

Transportation Security Administration (TSA)
Checkpoint Requirements and Planning Guide
(CRPG)
12/20/2018

Airport Cooperative Research Program (ACRP)
Report 25
Airport Passenger Terminal Planning and Design
Volume 1: Guidebook
2010

Airport Cooperative Research Program (ACRP)
Report 25
Airport Passenger Terminal Planning and Design
Volume 2: Spreadsheet Models and User's Guide
2010



Terminal Programming

- Fitting Out Terminal Options Based on Actual Size Needs
- Growth Areas
 - Mechanical
 - Baggage
 - Security
 - Concessions



Terminal Programming

■ Facility Requirements

Terminal Facility Requirements	Existing	Master Plan	Revised
Annual Enplanements	377,554	476,507	476,507
Peak Design Hour Enplaned	276	490	490
Ticketing			
Counter Positions (#)	6	14	14
Counter (LF)	32	70	70
Counter Area (SF)	500	700	700
Check-in/Queuing Area (SF)	700	2,820	2,450
Airline Office (SF)	2,750	2,415	2,950
Baggage Make Up (SF)	100	4,025	6,900
Airline Operations (SF)	0	2,010	2,010
Hold Rooms			
Gates (#)	4	4	4
Hold Room Waiting	3,420	12,120	11,300
Baggage Claim			
Claim Lobby Frontage (LF)	85	340	340
Claim Lobby Area (SF)	2,895	9,775	8,600
Baggage Drop Off (SF)	2,400	7,820	10,125
Rental Cars			
Agencies (#)	1	5	3/6
Counter Frontage (LF)	18	50	60
Counter Area (SF)	180	400	600
Queuing Area (SF)	80	750	600
Office/Storage (SF)	0	750	720
Concessions			
Food/Gifts (SF)	2,950	7,475	13,500

Terminal Facility Requirements	Existing	Master Plan	Revised
Public Restrooms			
Total (SF)	1,300	3,880	3,900
Public Lobby (Seating)			
Total (SF)	1,550	9,080	8,650
Security			
Screening Lanes (#)	2	3	3
Passenger Screening (SF)	1,720	5,175	6,000
Security Queuing (SF)	630	900	1,200
TSA Office Support (SF)	300	2,000	2,000
Baggage Screening (SF)	600	3,450	9,000
Administration			
Office/Operations (SF)	*4,000	5,550	5,425
L.E.O. (SF)	*960	(incl.)	890
EMS (SF)	0	(incl.)	150
Circulation/Support/Structural Etc. (SF)	6,645	34,000 - 44,000	40,000 - 50,000
Gross Terminal Area (SF)	33,450	115,000 - 125,000	125,000 - 140,000

*Remote location

	VERIFIED
	TENANT SPECIFICATIONS REQUIRED
	FURTHER DESIGN REQUIRED



Terminal Programming

■ Ticketing and Hold Rooms

	VERIFIED
	TENANT SPECIFICATIONS REQUIRED
	FURTHER DESIGN REQUIRED

Terminal Facility Requirements	Existing	Master Plan	Revised
Annual Enplanements	377,554	476,507	476,507
Peak Design Hour Enplaned	276	490	490
Ticketing			
Counter Positions (#)	6	14	14
Counter (LF)	32	70	70
Counter Area (SF)	500	700	700
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Airline Office (SF)	2,750	2,415	2,950
Baggage Make Up (SF)	100	4,025	6,900
Airline Operations (SF)	0	2,010	2,010
Hold Rooms			
Gates (#)	4	4	4
Hold Room Waiting	3,420	12,120	11,300



Terminal Programming

■ Baggage Claim, Rental Cars, and Concessions

	VERIFIED
	TENANT SPECIFICATIONS REQUIRED
	FURTHER DESIGN REQUIRED

Baggage Claim			
Claim Lobby Frontage (LF)	85	340	340
Claim Lobby Area (SF)	2,895	9,775	8,600
Baggage Drop Off (SF)	2,400	7,820	10,125
Rental Cars			
Agencies (#)	1	5	3/6
Counter Frontage (LF)	18	50	60
Counter Area (SF)	180	400	600
Queuing Area (SF)	80	750	600
Office/Storage (SF)	0	750	720
Concessions			
Food/Gifts (SF)	2,950	7,475	13,500



Terminal Programming

Restrooms, Lobby, and Security

	VERIFIED
	TENANT SPECIFICATIONS REQUIRED
	FURTHER DESIGN REQUIRED

Terminal Facility Requirements	Existing	Master Plan	Revised
Public Restrooms			
Total (SF)	1,300	3,880	3,900
Public Lobby (Seating)			
Total (SF)	1,550	9,080	8,650
Security			
Screening Lanes (#)	2	3	3
Passenger Screening (SF)	1,720	5,175	6,000
Security Queuing (SF)	630	900	1,200
TSA Office Support (SF)	300	2,000	2,000
Baggage Screening (SF)	600	3,450	9,000



Terminal Programming

■ Administration and Circulation

	VERIFIED
	TENANT SPECIFICATIONS REQUIRED
	FURTHER DESIGN REQUIRED

Administration			
Office/Operations (SF)	*4,000	5,550	5,425
L.E.O. (SF)	*960	(incl.)	890
EMS (SF)	0	(incl.)	150
Circulation/Support/Structural Etc. (SF)	6,645	34,000 - 44,000	40,000 - 50,000
Gross Terminal Area (SF)	33,450	115,000 - 125,000	125,000 - 140,000

*Remote location



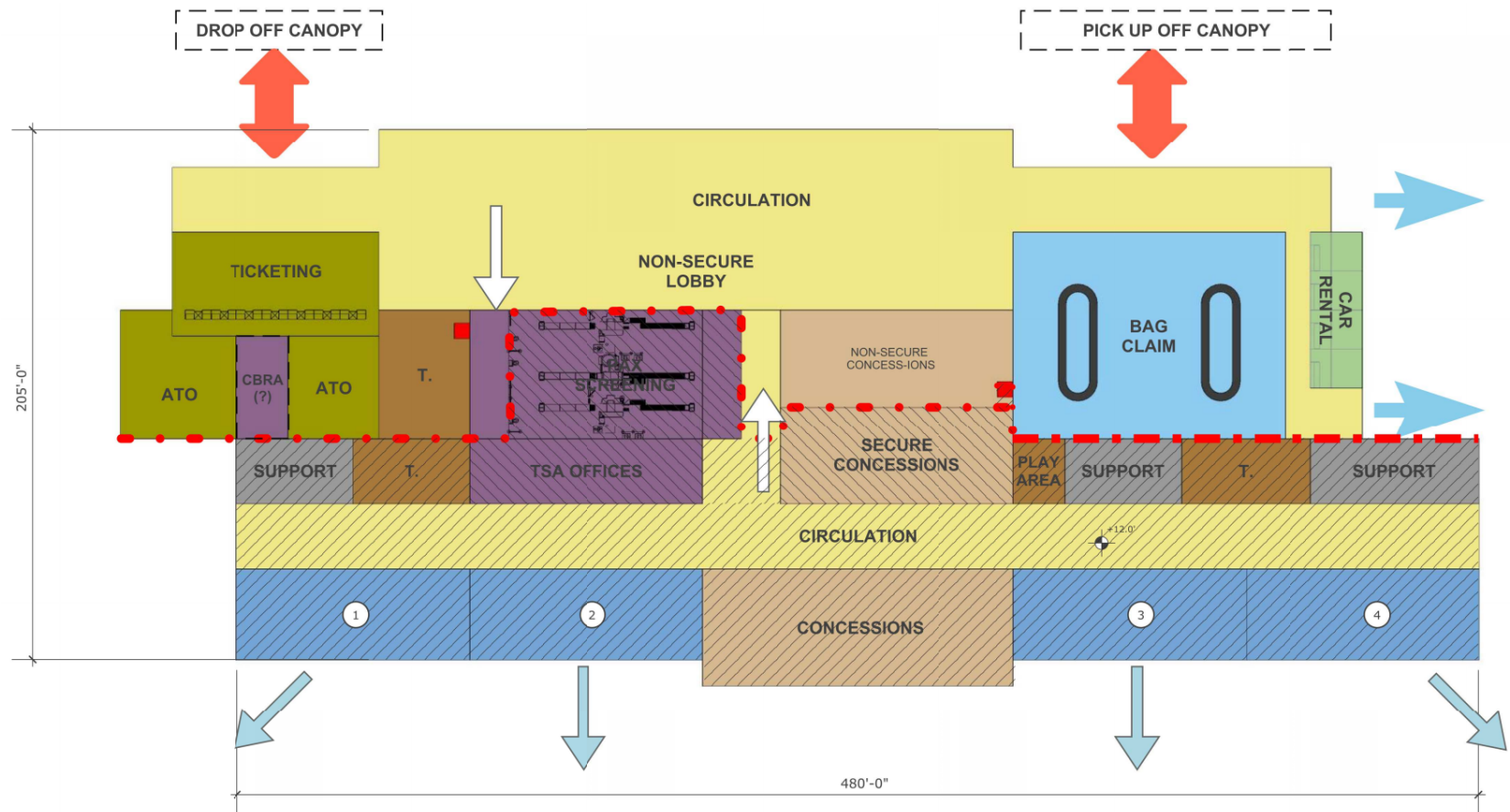
Terminal Alternative 1

- Compact Alternative
 - Reduced Concessions and Circulation Spaces
 - Terminal Impacts to Forest Area/Wetlands





Terminal Alternative 1





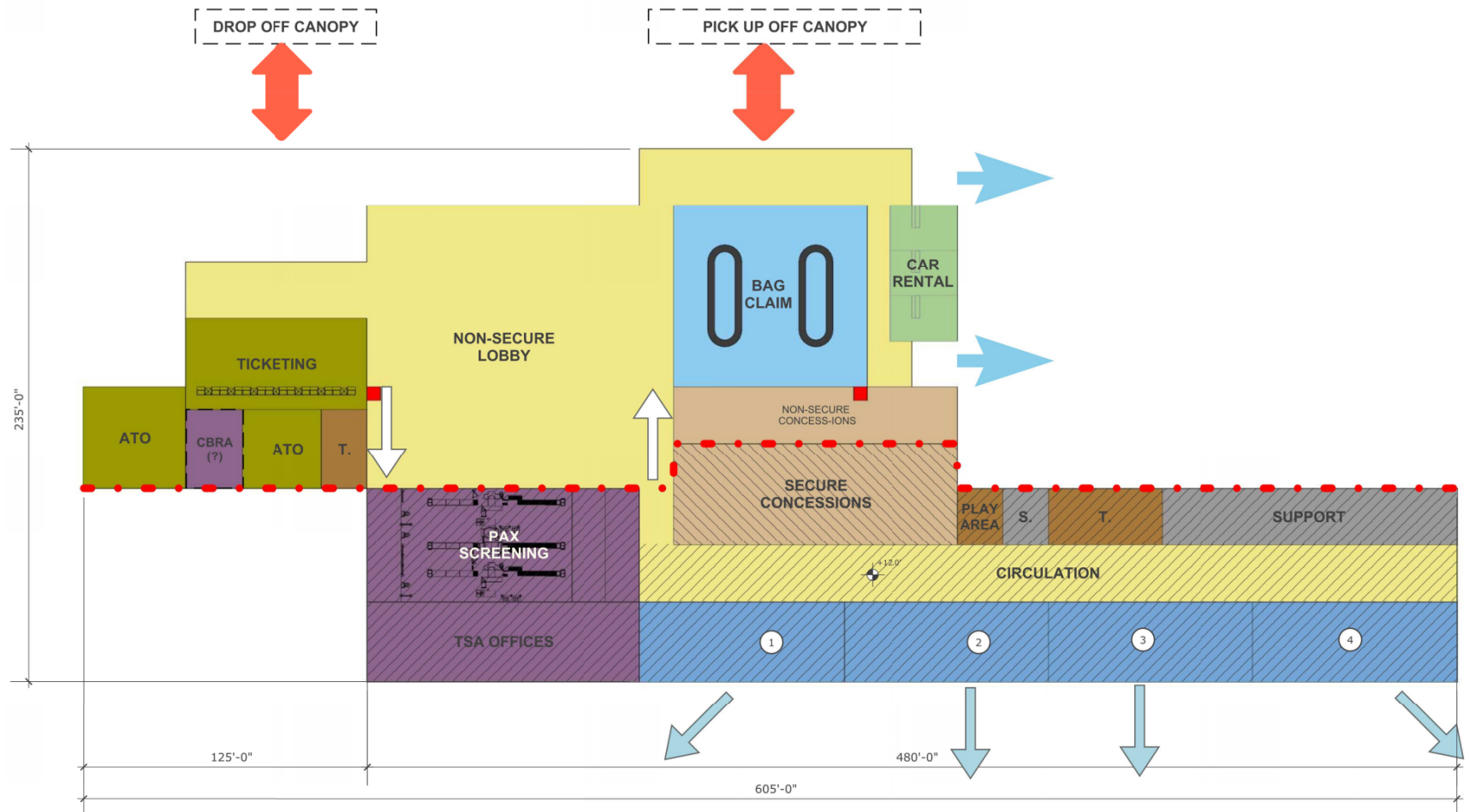
Terminal Alternative 2

- Shifted Alternative
 - Improved flexibility and larger concessions
 - Largest Terminal impact to Forest Area/Wetlands





Terminal Alternative 2





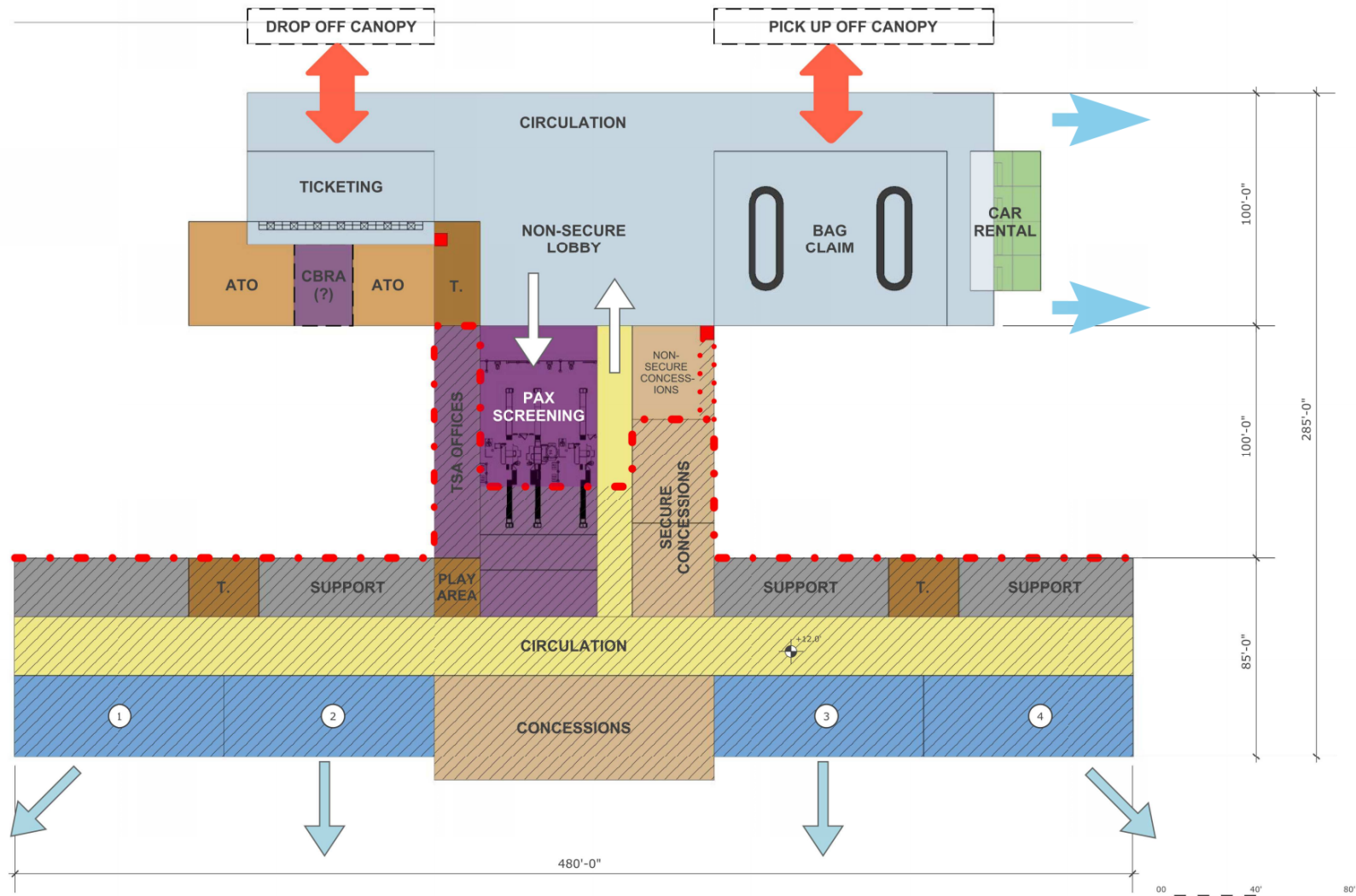
Terminal Alternative 3

- Non-Secure/Secure Spread Facility
 - Flexible with larger concessions
 - Minimal Terminal Impact to Forest Area/Wetlands





Terminal Alternative 3





Terminal Comparisons

■ Similar Facilities

Airport	Enplanements (+20 yrs)	Area (SF)	SF/ENP	Gates
Trenton-Mercer (NJ)	476,507	125,000 – 140,000	0.29	4 (150+ Seats)
Helena Regional (MT)	164,024	98,000	0.59	5 (75+ Seats)
Billings Logan Int'l (MT)	1,046,026	292,000	0.27	8 (75-150+ Seats)
Redmond Mun. (OR)	434,335	140,000	0.32	5 (75-150+ Seats)
Missoula Int'l (MT)	526,966	211,000	0.37	7 (75-150+ Seats)



Landside Alternatives

- Roadway Improvements
 - Bear Tavern Road
 - Sam Weinroth Road
 - Terminal Road
- Terminal Access Road
 - Arrivals – 2 travel lanes and 1 pick up lane
 - Departures – 2 travel lanes and 1 drop off lane
 - Combined Arrivals/Departures – 3 travel lanes and 1 drop off/pick up lane staggered
 - Parking – surface parking lots and parking garage
 - Taxi/Lyft/Uber and Cell Phone Access



Roadway Alternative 1

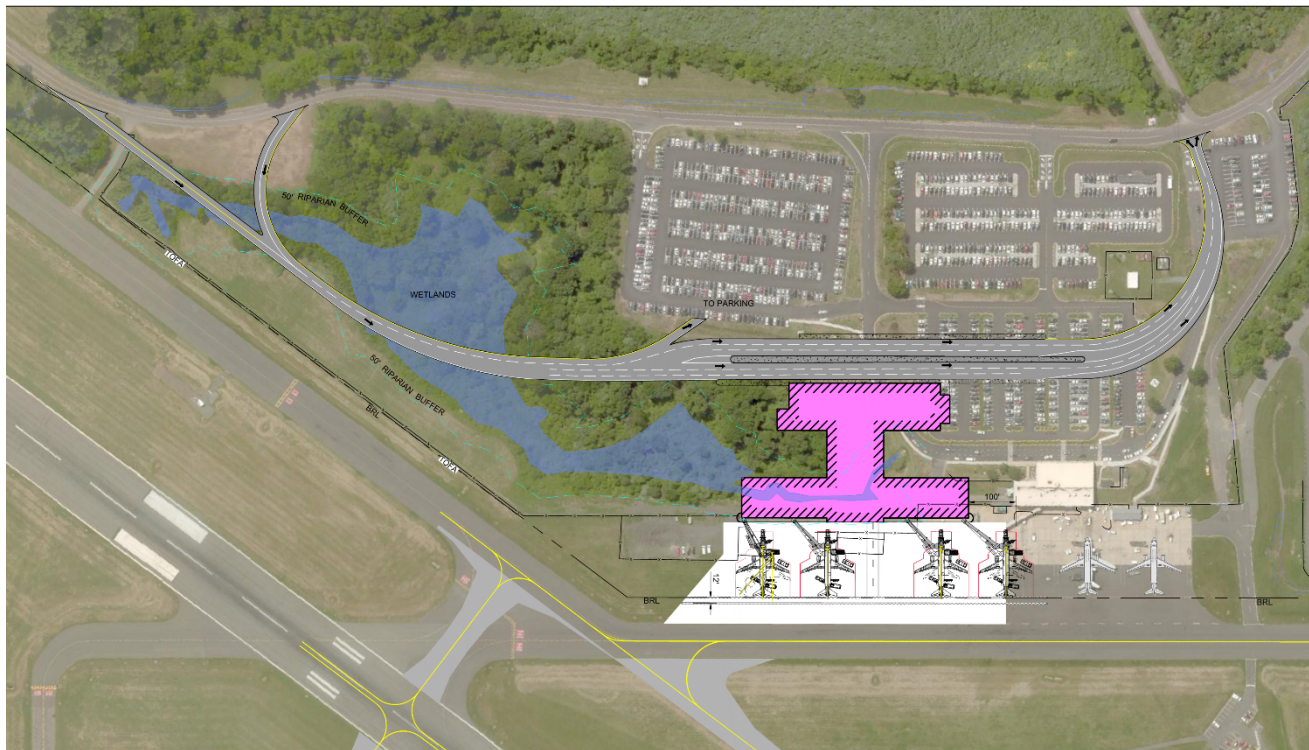
- Minimal Impact Outside Existing Paved Roads/Lots
 - Separate Arrivals/Departures Roadways with Island
 - Minimizes Impact to Forest Area and Wetlands





Roadway Alternative 2

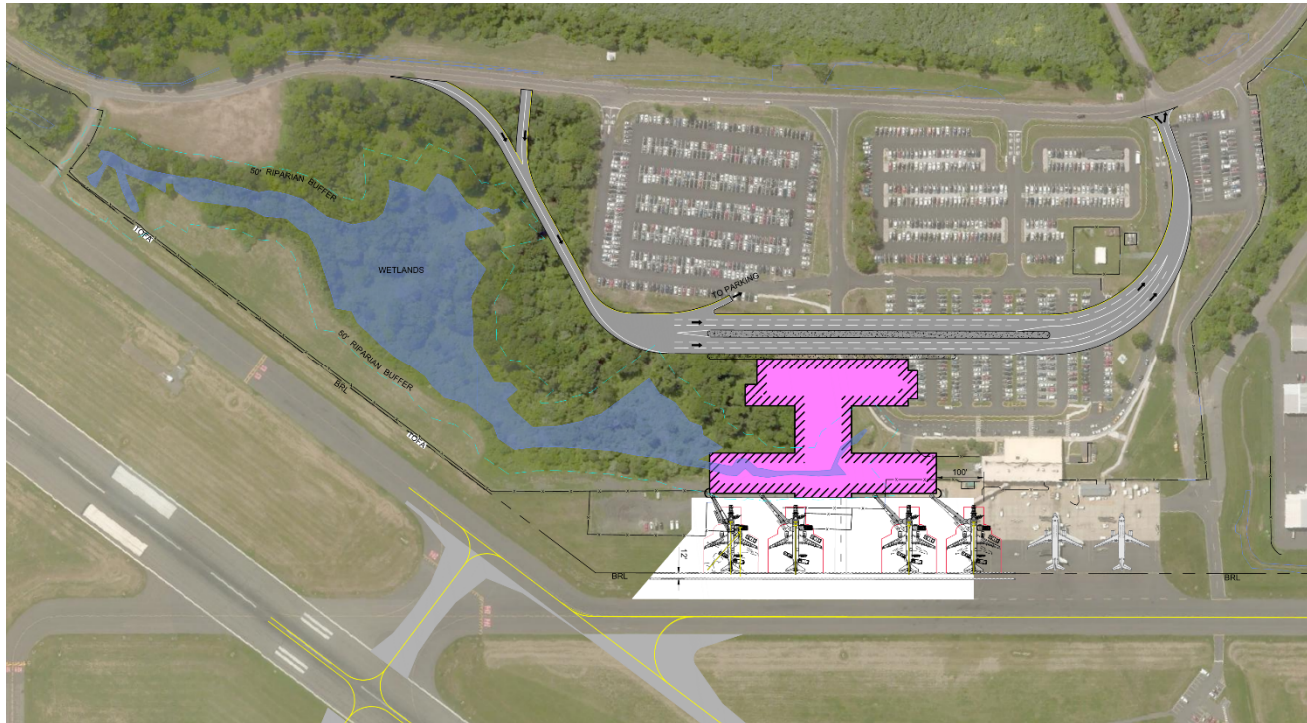
- Long Entrance Parallel to Taxiway A
 - Separate Arrivals/Departures Roadways with Island
 - Large Impacts to Forest Areas and Wetlands





Roadway Alternative 3

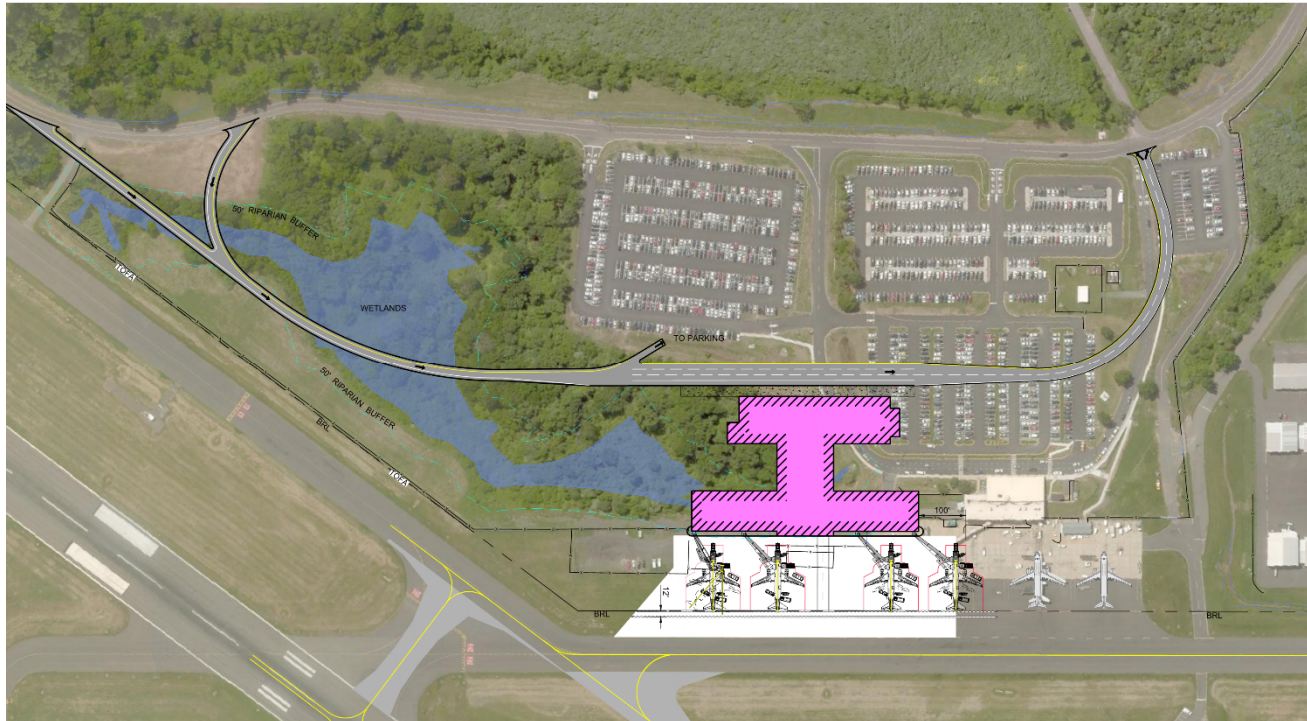
- Minimal Impact to Parking Lot Areas
 - Separate Arrivals/Departures Roadways with Island
 - Moderate Impact to Forest Area and Small Wetlands Impact





Roadway Alternative 4

- Long Entrance Parallel to Taxiway A
 - Combined Arrivals/Departures Roadway Staggered
 - Large Impact to Forest Area and Wetlands





ARFF Alternatives

- Aircraft Rescue and Fire Fighting Facility
 - Fire Station for the Airport
 - Responds to Emergencies around and at the Airport
 - Specialized Equipment for Aircraft and Fuel Fires
- Requirements for Siting of ARFF on Airfield
 - Comply with Part 139 required response time to RW
 - Provide a 10,000 SF structure
 - Provide staging apron in front of building
 - Ground access and parking requirements
 - Minimize environmental impacts
 - Comply with airspace requirements



ARFF Alternatives

- Reasons to site the ARFF facility in the East quadrant
 - Land has previously been developed minimizing environmental impacts
 - East quadrant provides ARFF the ability to respond within the FAA response requirements
 - Existing access from Scotch Road already exists
 - Opens up the terminal area for right-sizing





ARFF Alternatives

- Reasons not to site the ARFF facility in another quadrant
 - North quadrant siting would increase response times (potentially over the required limit)
 - South quadrant access would be through existing leaseholds and challenging
 - Remaining land in the South quadrant is best suited for future GA development
 - West quadrant is best suited for future terminal development
 - Other locations in the West quadrant would increase response times (potentially over the required limit)
 - Remaining land in the West quadrant is mostly wetlands



ARFF Alternatives

■ East Quadrant 1



■ East Quadrant 2





EA and Terminal Design Schedule

- Terminal and Site Investigations – September 2018 to November 2018
- Schematic and Preliminary Design – September 2018 through May 2019
- Environmental Assessment – September 2018 to July 2019
 - Public Scoping Meeting – October 2018
 - Public Meeting – Concept Design – January 2019
 - Public Meeting – Interim Findings – TBD
 - Draft EA Public Review/Public Hearing – TBD



EA Public Outreach

- Project Web Site
www.TTNTerminal.com
- Email: Trenton@mjinc.com
- Planned Public Meetings
 - Scoping Meeting
 - Public Meeting – Concept Design
 - Public Meeting (PA and NJ) – Present Interim Findings
 - Public Hearing – Present Final Draft Report & Public Comment
- Public comments will be received for the duration of the Study and will be included in the Project Record
- Substantive Public Comments Addressed in Final EA



TRENTON-MERCER AIRPORT

Questions?

January 23, 2019



McFarland Johnson