



MASTER PLAN UPDATE

Tweed-New Haven Airport Authority

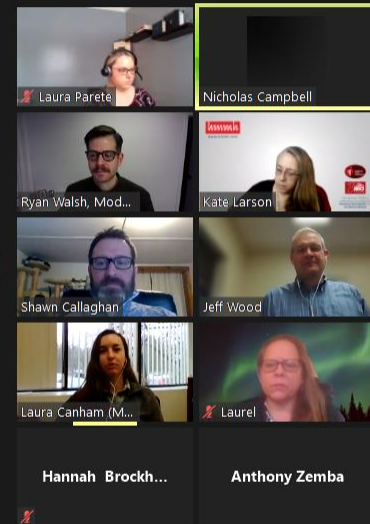


Public Meeting Mar. 10, 2021



Zoom Meeting Functions

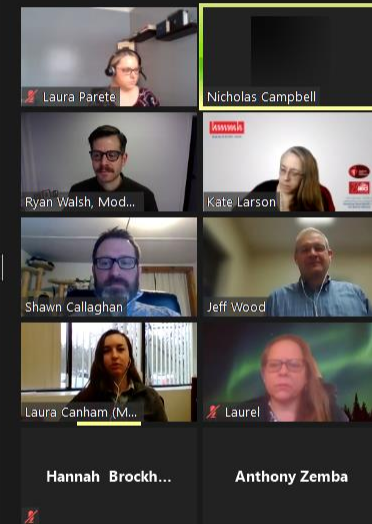
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Zoom Meeting Functions

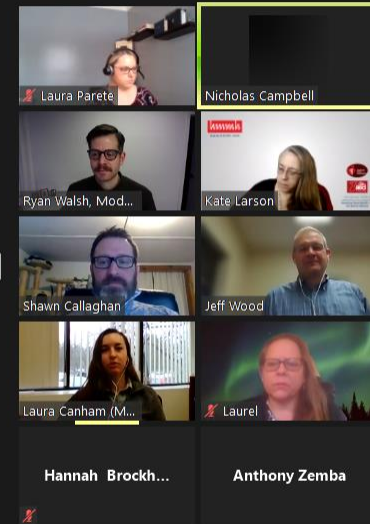
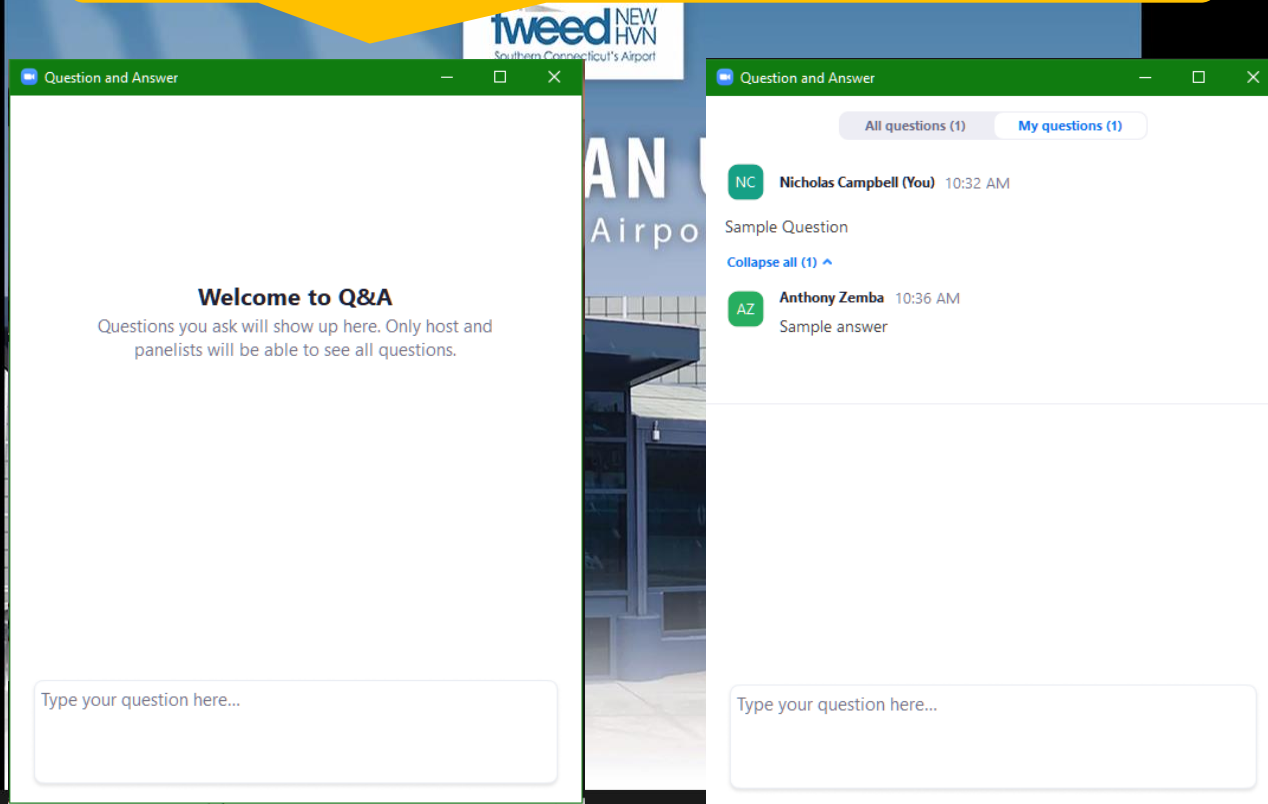
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Zoom Meeting Functions

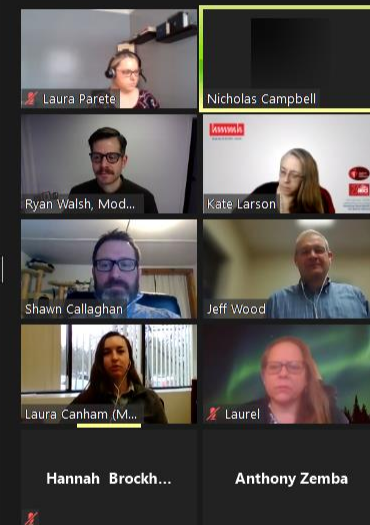
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The Q&A Windows will display like this when the Q&A button is clicked



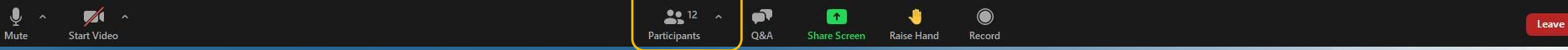
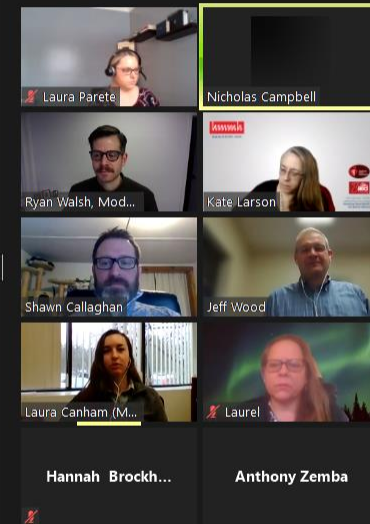
Zoom Meeting Functions

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Zoom Meeting Functions

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Introductions

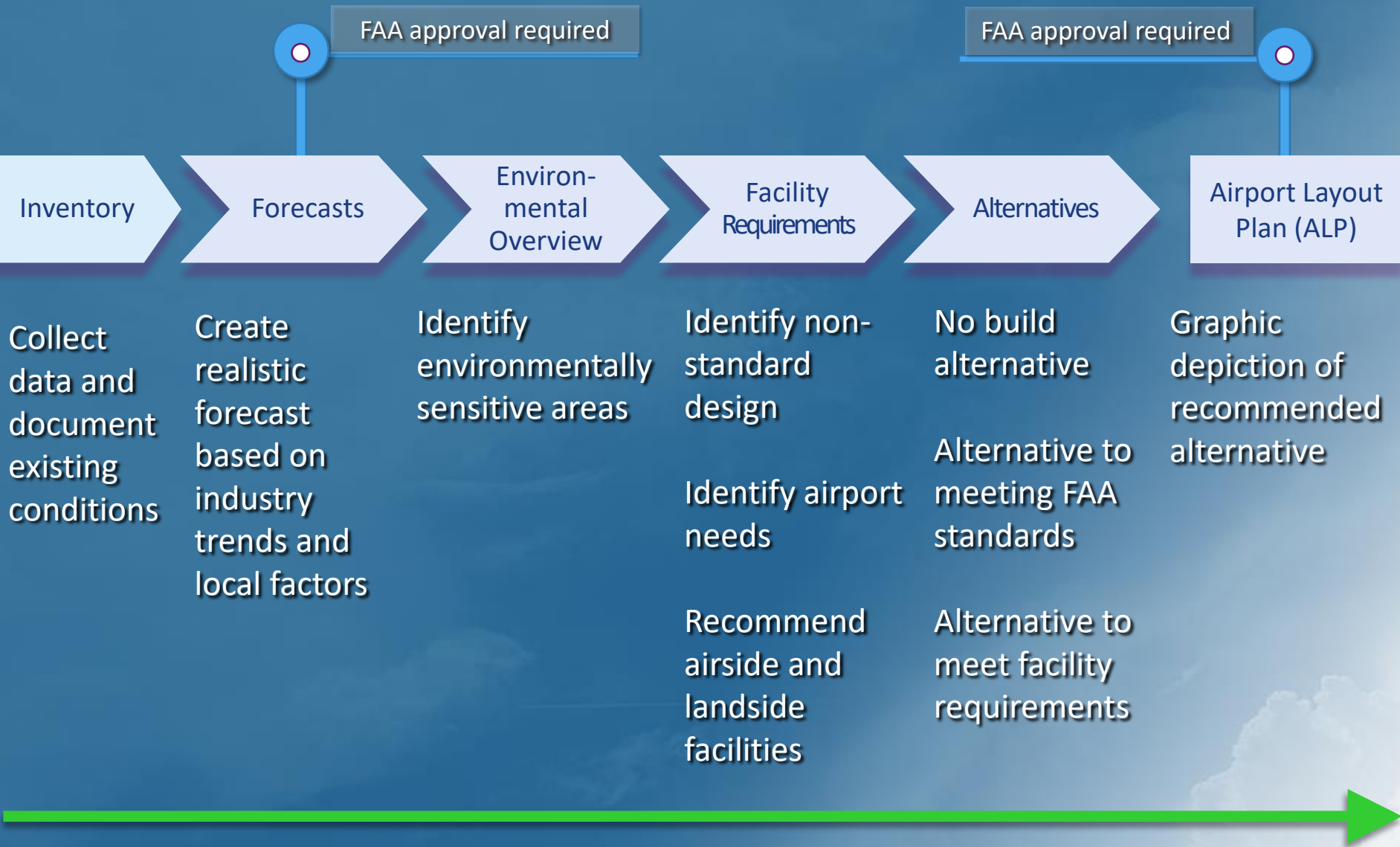
- Sean Scanlon, Executive Director
- Jeremy Nielson, Airport Manager
- Ryan Walsh, Moderator
- Consulting Team:
 - McFarland Johnson
 - FHI Studio
 - ASM Americas
 - Harris Miller Miller & Hanson, Inc.
 - Woolpert
- Attendees

Agenda

- Introductions
- Master plan process
- Key issues and goals
- Summary of alternatives
- Recommended alternative for Airport Layout Plan
- Terminal Area Plan
- Noise
- Next steps
- Conclusion/questions



Master Plan Process



Public Outreach

Key Issues and Goals



- (1) Runway 2-20 length
- (2) Terminal area improvements
- (3) Future of Runway 14-32
- Opportunities for economic sustainability
- Phasing and implementation plan
- Public engagement throughout
- Planning flexibility for future aviation

Combined Runway Alternatives

DECLARED DISTANCES		
	RUNWAY 2	RUNWAY 20
TORA	6,800'	6,800'
TODA	6,800'	6,800'
ASDA	6,400'	6,000'
LDA	6,000'	5,664'

Runway Alternative No EMAS



DECLARED DISTANCES		
	RUNWAY 2	RUNWAY 20
TORA	6,635'	6,635'
TODA	6,635'	6,635'
ASDA	6,235'	6,635'
LDA	6,000'	6,299'

Runway Alternative With EMAS



LEGEND	
	PROPOSED PAVEMENT
	TO BE REMOVED
	AIRPORT PROPERTY LINE
	AIRPORT EASEMENT
	WETLAND BOUNDARY

Airfield Alternative Preferred

Item/Facility	Runway Alternative with Engineered Materials Arresting System
Meets FAA Standards	Yes
Meets Facility Requirements	Yes
Flexibility	Yes
Environmental	Low impacts No direct impact to Tuttle Creek
Construction Costs (Comparative)	High
Operational Costs (Comparative)	High

Recommended Runway Length Balance

- Constrained recommendation of 6,635' balances:



Safety



Community



Environmental



Fiscal



Regulatory



Operational

Terminal Alternatives

Terminal Alternative 2



- ✓ Existing parking
- ✓ Low environmental impacts
- ✗ Roadway access
- ✗ Constructability
- ✗ Low flexibility
- ✗ Incompatible land use
- ✗ Crossing active runway

Terminal Alternative 3



- ✓ Existing parking
- ✓ Low environmental impacts
- = Improved flexibility
- = Improved constructability
- ✗ Roadway access
- ✗ Incompatible land use
- ✗ Crossing active runway

Terminal Alternative 4

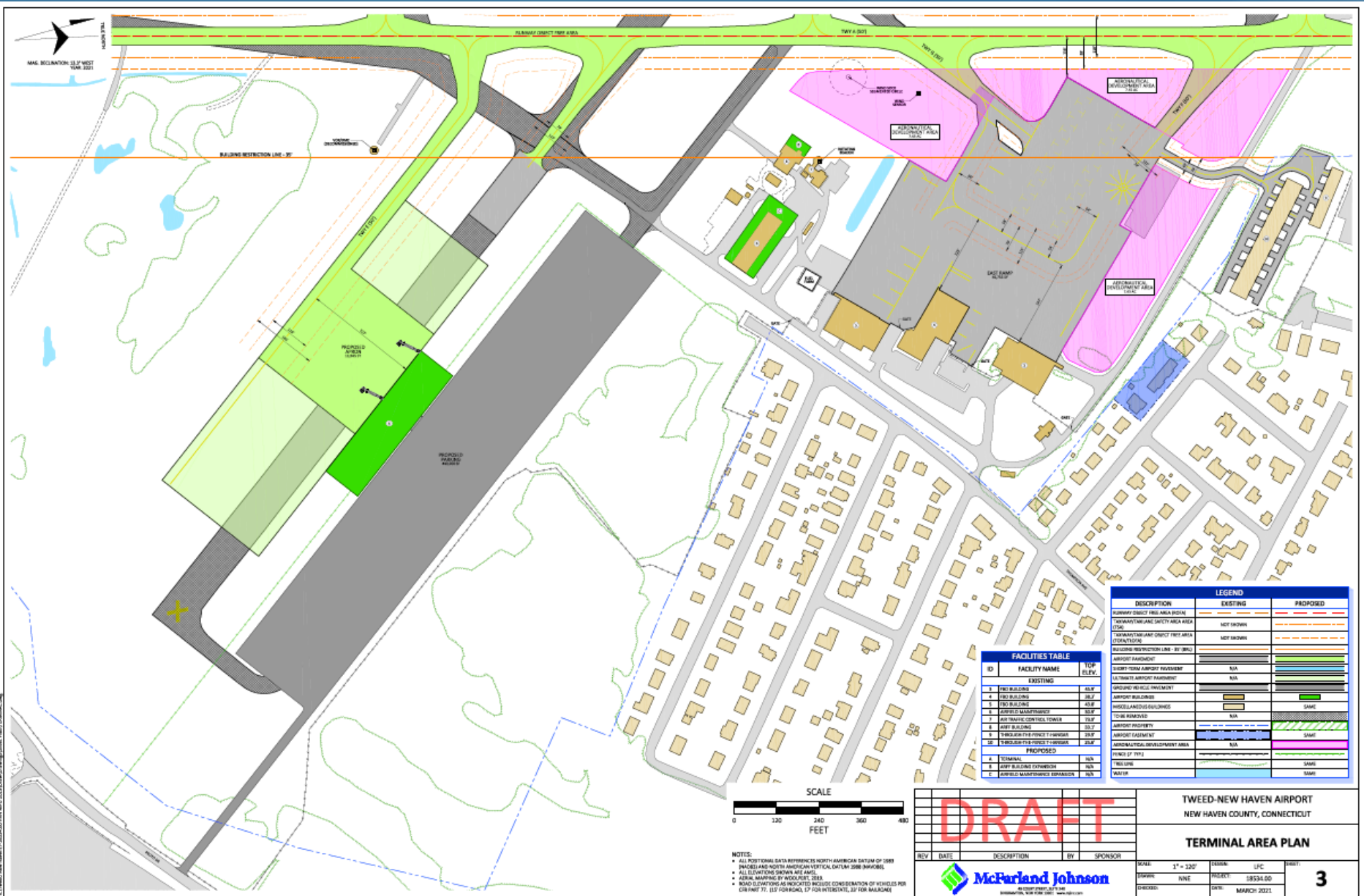


- ✓ Infrastructure flexibility
- ✓ Roadway access
- ✓ Compatible land use
- ✓ Shorter taxi route
- ✓ No runway crossings
- ✓ Closer to fire station
- ✓ Revenue generation
- ✓ Constructability
- ✓ Wetland mitigation opportunities
- ✗ Cost
- ✗ Environmental impacts

Terminal Alternative Preferred

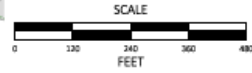
Item/Facility	Terminal Alt. 4 – East Side Terminal
Meets FAA Standards	Yes
Meets Facility Requirements	Yes
Flexibility	High
Community Impacts	Low – new access
Environmental	High
Costs	Higher

Terminal Area Plan



FACILITIES TABLE		
ID	FACILITY NAME	TOP ELEV.
3	TWO BUILDINGS	48.0'
4	TRUCK BUILDING	36.0'
5	TRUCK BUILDING	43.0'
6	AIRFIELD MAINSTAYS	33.0'
7	AIR TRAVEL CONTROL TOWER	75.0'
8	AIRFIELD BUILDING	33.0'
9	TRUCK BUILDING	33.0'
10	TRUCK BUILDING	33.0'
PROPOSED		
A	TERMINAL	N/A
B	AIRFIELD BUILDING EXTENSION	N/A
C	AIRFIELD MAINSTAYS EXPANSION	N/A

DESCRIPTION	LEGEND	
	EXISTING	PROPOSED
AIRWAY OBSTACLE FREE AREA (FOA)		
TERRAIN/STAIRCASE SAFETY AREA (SSA)		
TERRAIN/STAIRCASE OBSTACLE FREE AREA (OFA)		
OBSTACLE RESTRICTION LINE - 30' SWL		
AIRPORT FARMHOUSE		
AIRPORT FARMHOUSE	N/A	
ULTIMATE AIRPORT FARMHOUSE	N/A	
SPURRING WALLS (SWM)		
CONCRETE BUILDINGS		
MISCELLANEOUS BUILDINGS		
TOWERS REMOVED	N/A	
AIRPORT PROPERTY		
AIRPORT FARMHOUSE		
CONCRETE DEVELOPMENT AREA	N/A	
PLANT (P) TREE		
TREE LINE		
WALKER		



NOTES:
 * ALL POSITIONAL DATA REFERENCES NORTH AMERICAN DATUM OF 1983
 * ALL ELEVATIONS DATUM MEAN SEA LEVEL
 * AERIAL MAPPING BY AERIAL PHOTO, 2018
 * ROAD ELEVATIONS AS NOTICED BEYOND CONSTRUCTION OF VEHICLES PER CIR PART 37. (57 FOR ROAD, 17 FOR INTERSTATE, 37 FOR AIRFIELD)

DRAFT

REV	DATE	DESCRIPTION	BY	SPONSOR

McFarland Johnson

TWEED-NEW HAVEN AIRPORT
 NEW HAVEN COUNTY, CONNECTICUT

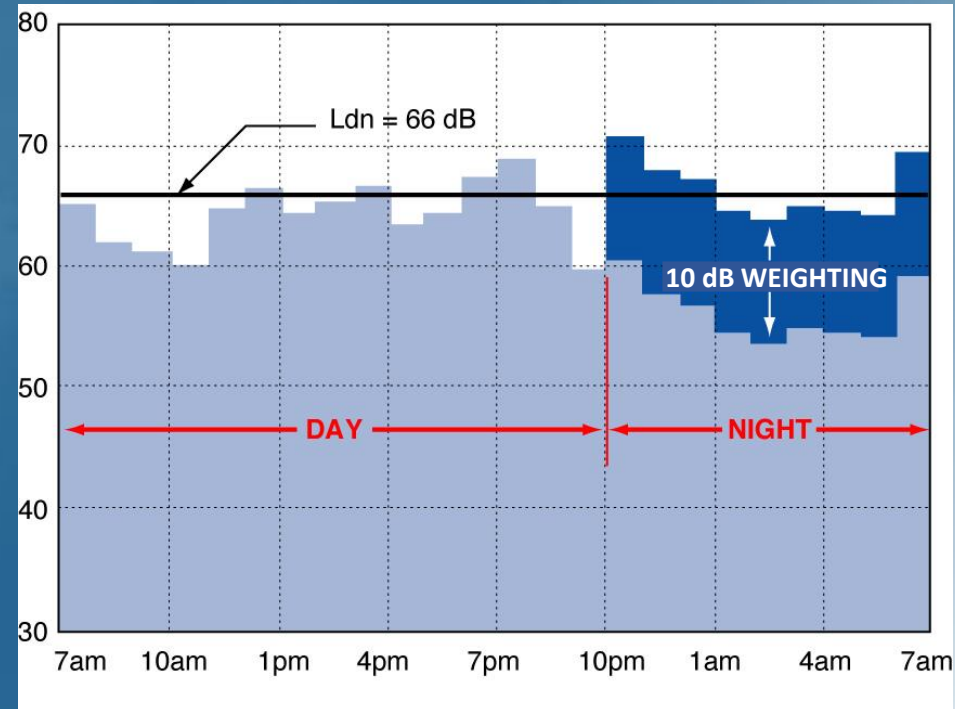
TERMINAL AREA PLAN

SCALE: 1" = 120'
 DESIGN: LFC
 PROJECT: 18534.00
 DATE: MARCH 2021

3

Cumulative Exposure: Day Night Average

- DNL – day night average
- Describes 24-hour exposure
- Noise from 10 pm to 7 am is factored up by 10 dB
 - Equal to 10-fold multiplier
- FAA requires annual average DNL for land use compatibility assessment



Aircraft Noise Modeling

- We must use FAA-approved model
 - FAA's Aviation Environmental Design Tool (AEDT)
- Required noise modeling inputs
 - Airport layout
 - Annual average meteorological data
 - Terrain
 - Aircraft operations by day/night for existing conditions and forecast 2040
 - Runway utilization rates by aircraft categories
 - Flight track geometry and use by aircraft categories



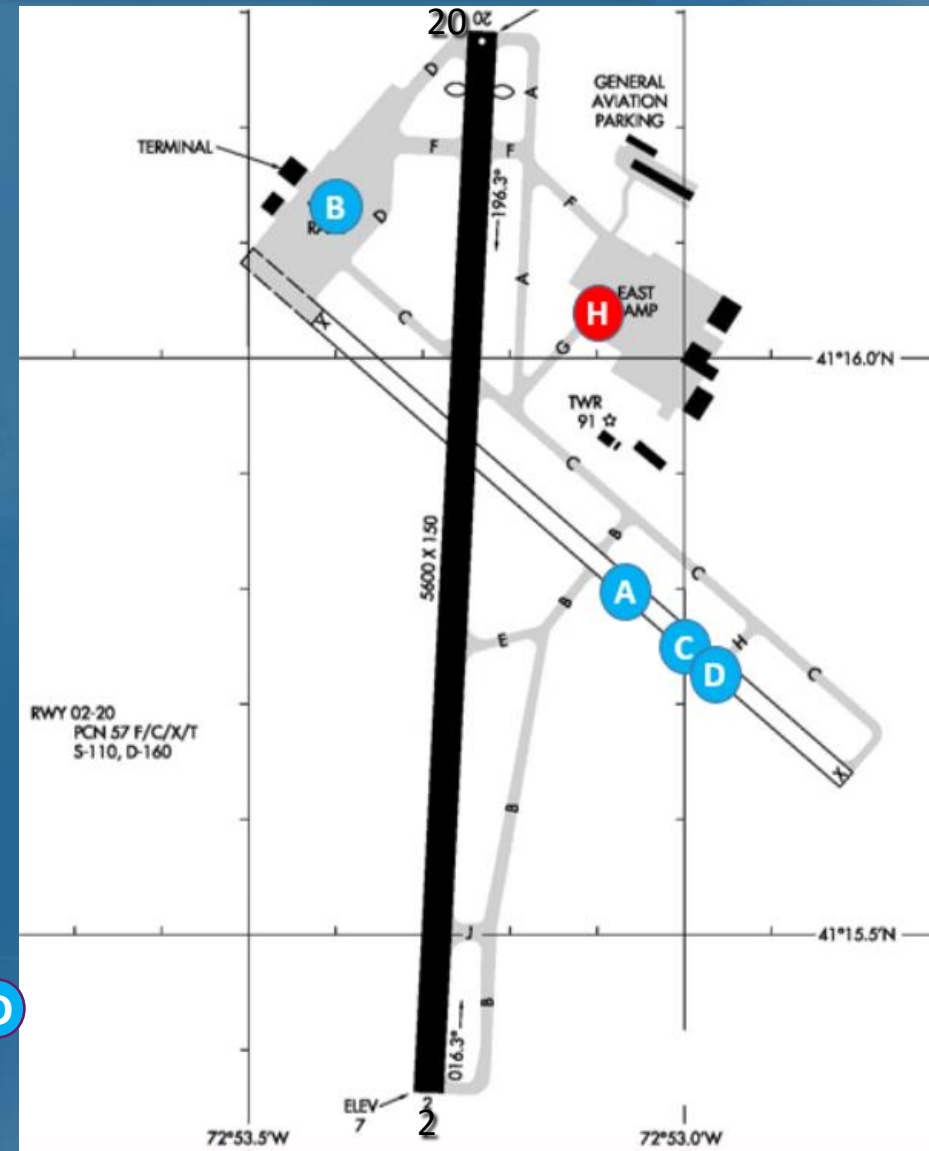
U.S. Department
of Transportation
Federal Aviation
Administration

**Aviation Environmental
Design Tool (AEDT)**

Version 3c

Airport Layout Plan Noise Model Inputs

- One runway
 - Runway 2/20
 - Extended 699' south and 336' north for Approved Forecast 2040
- Modeled helpad location **H**
- Modeled engine runup locations
 - Piston-engine aircraft **A**
 - Jets idling at terminal
 - Existing jet bridge location **B**
 - Future jet bridge locations **C** **D**



Modeled Aircraft Operations

Annual Operations						
Scenario	Air Carrier Size Jet	Small Jet	Turboprop	Piston	Helicopter	Total Operations
Existing Conditions	2,908	5,064	1,863	15,227	157	25,219
Approved Forecast 2040	3,944	5,322	1,959	16,240	166	27,631
Annual Average Day Operations						
Scenario	Air Carrier Size Jet	Small Jet	Turboprop	Piston	Helicopter	Total Operations
Existing Conditions	8.0	13.9	5.1	41.7	0.4	69.1
Approved Forecast 2040	10.8	14.6	5.4	44.5	0.5	75.7

Scenario	Day	Night
Existing Conditions	94.0%	6.0%
Approved Forecast 2040	93.7%	6.3%



Modeled Runway Use

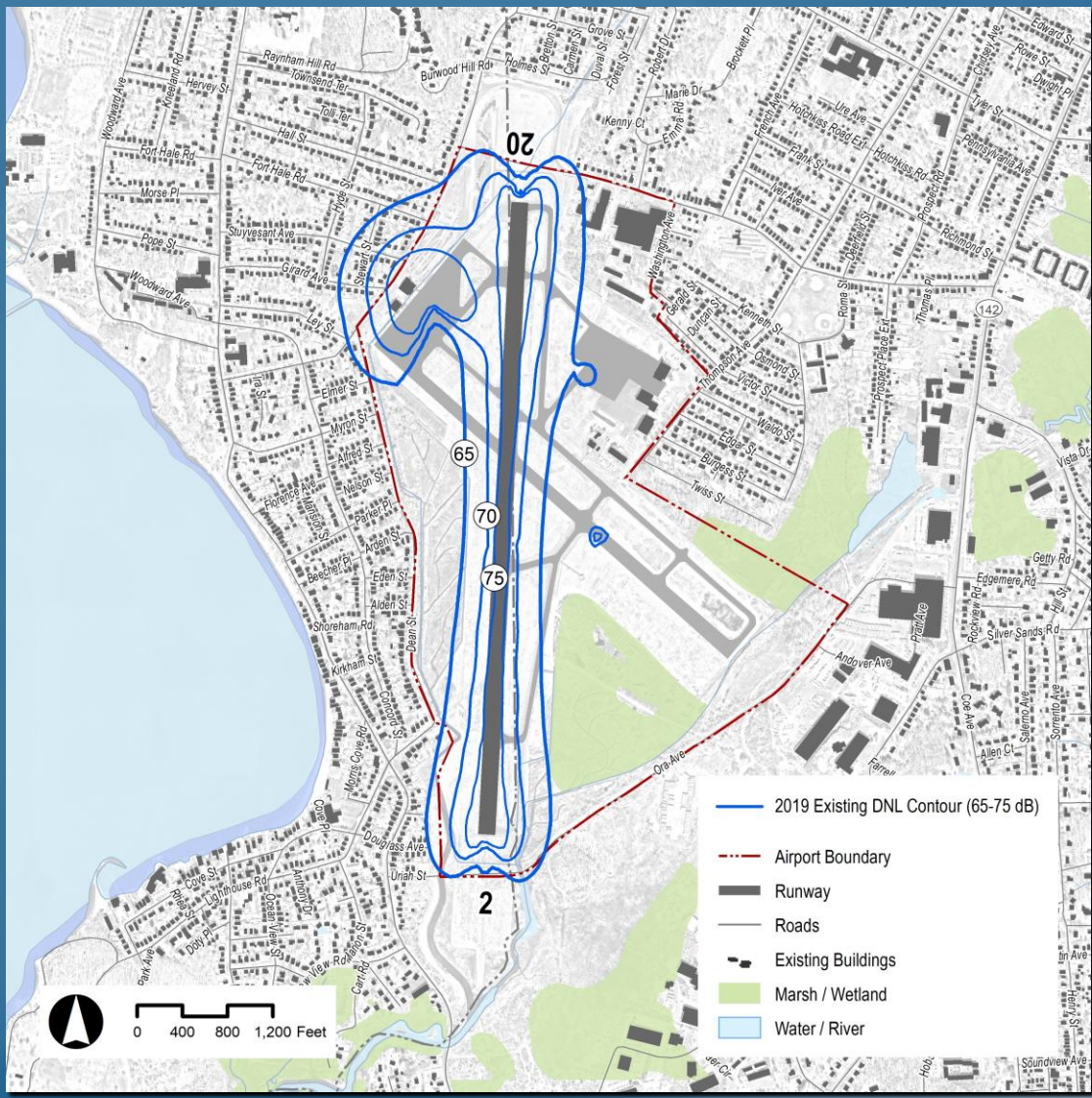


Jet Aircraft

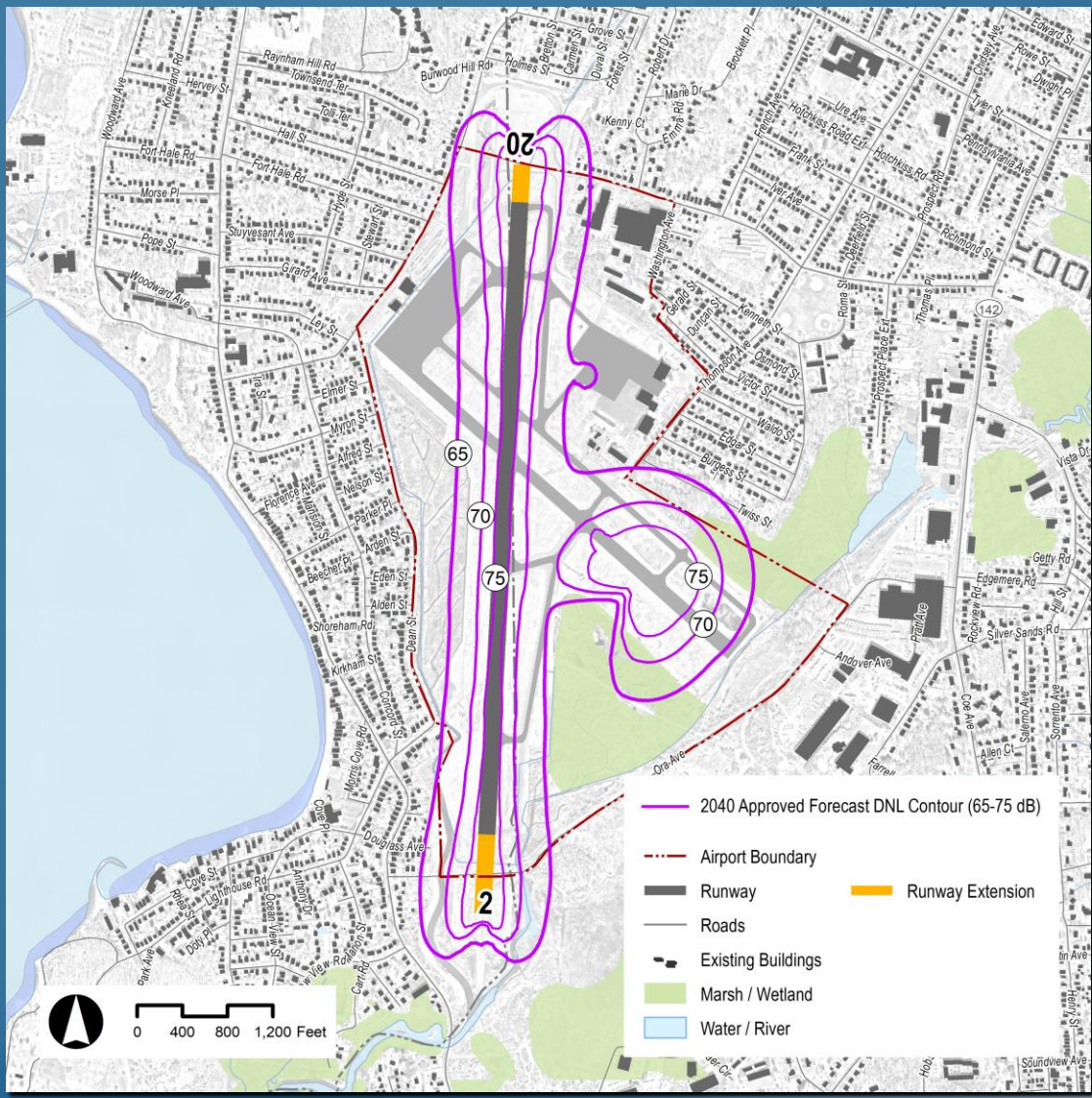


Non-Jet Aircraft

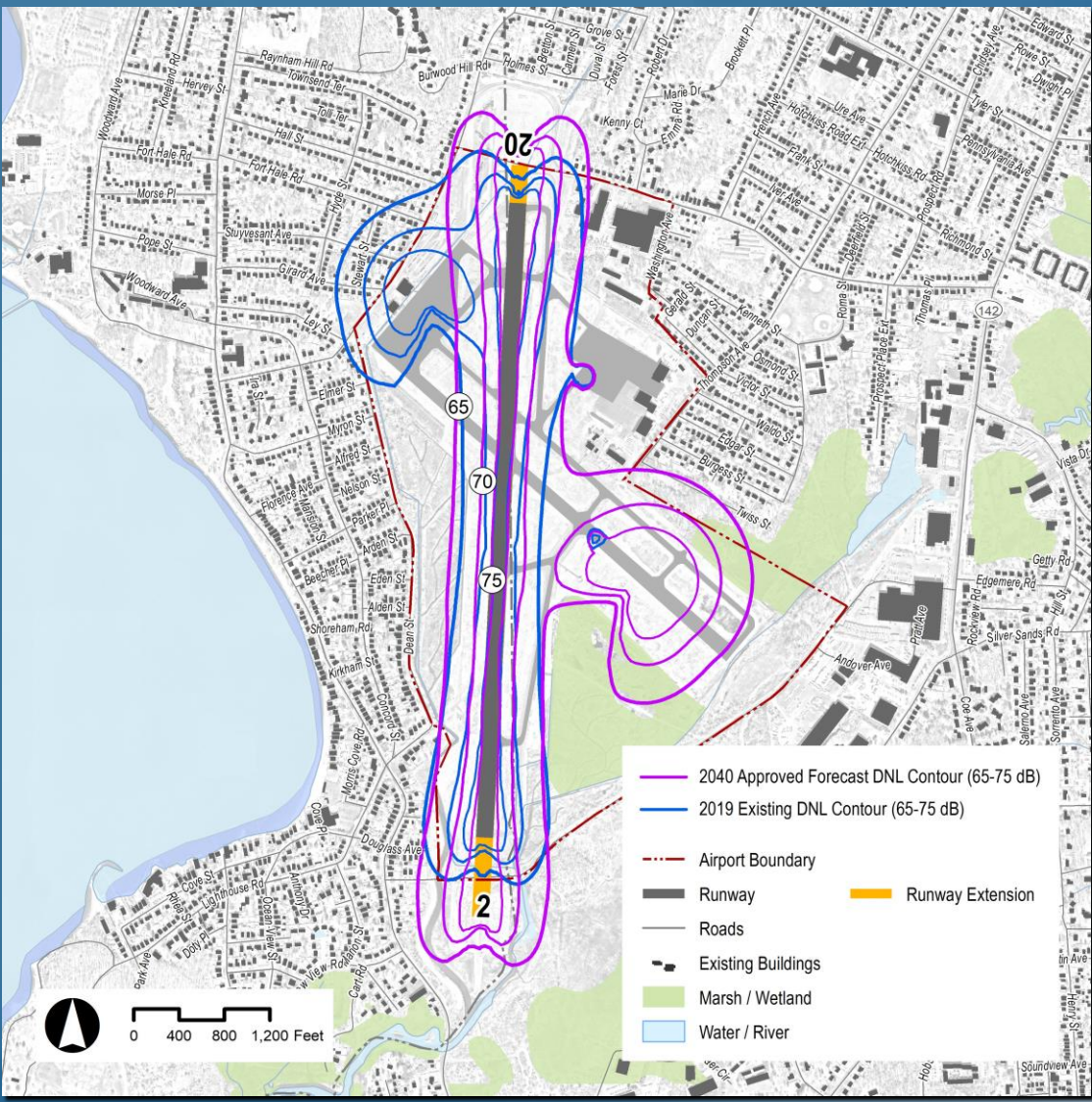
Noise Exposure – Existing Conditions



Noise Exposure – Approved Forecast 2040



Comparison of Existing & Forecast DNL



Next Steps

- Airport Layout Plan – FAA Approval
 - Projects must be shown on the ALP for funding eligibility
 - Approval of the ALP is conditioned upon National Environmental Policy Act (NEPA) completion
 - Design and construction is subject to funding availability
- Financial and implementation plan
- Master plan completion

After the Master Plan

- National Environmental Policy Act (NEPA) process
 - Project purpose and need is the foundation of NEPA documents
 - FAA will carefully review the purpose and need
- Continued public involvement
- Final design and permitting
- Begin implementation

Conclusion / Questions / Comments

- Master Plan Website:
TweedMasterPlan.com
- Email:
HVNMastePlan@mjinc.com

