

Memorandum

To: Sean Scanlon, Tweed Airport

Date: March 24, 2021

From: Ron Gautreau, FHI Studio

Subject: **Tweed Airport Master Plan Update
Technical Advisory Committee Meeting #4
Summary of March 8, 2021 Meeting**

The fourth, and final, Technical Advisory Committee (TAC) meeting for the Tweed New Haven Airport (HVN) Airport Master Plan Update (AMPU) was conducted from 5:00 PM to 6:00 PM on March 8, 2021. The meeting was held virtually due to COVID-19. The TAC meeting was attended by 10 TAC members along with several members of the project team and HVN staff.

Jeff Wood, with McFarland Johnson (MJ), welcomed the TAC members, and Sean Scanlon, Executive Director of HVN, also provided a brief greeting. Mr. Wood went over the general organization of the virtual meeting and the agenda for the evening that included the master plan process, key issues and goals, recommended alternatives for the Airport Layout Plan (ALP), noise, and next steps. Questions and discussion with TAC members followed the presentation. The presentation is attached.

Mr. Wood presented the status of the master plan process. He then introduced the key issues and goals: 1) Runway 2-20 length, 2) terminal area improvements, and 3) future of Runway 14-32. The recommended runway and taxiway preferred alternative and recommended terminal alternative was presented followed by the recommended general aviation alternative and landside alternatives. An overview of the ALP sheet set was then discussed. Mr. Wood presented the existing and proposed obstruction overview.

Ms. Kate Larson (HMMH) then provided a discussion on noise including the day/night average (DNL) model, aircraft noise modeling, modeled runway use, and existing and proposed DNL noise contours. Mr. Wood presented the next steps, including the National Environmental Policy Act (NEPA) process that will commence after the AMPU has been completed. Lastly, Mr. Wood discussed how comments and questions on the AMPU can be submitted and that the presentation can be viewed on the AMPU website.

TAC members were invited to ask questions or share comments related to the presentation. Only one question was posed by a TAC member.

- A member of the TAC requested to see the slide on traffic and commented that more traffic could be anticipated going through industrial zones in East Haven if the terminal is relocated to the east side. Mr. Wood responded that the existing traffic weaves through residential areas and the proposed terminal location will result in traffic being shifted to roadways serving industrial areas (e.g., Hemmingway Avenue).

Mr. Wood finished by saying that the public meeting is on Wednesday, March 10th and the team looks forward to engaging with the TAC members on future steps.

Attendees:

- Sean Scanlon, HVN
- Jeremy Nielson, HVN/Avports
- Felipe Suriel, HVN/Avports
- Lisa Lesperance, FAA

- Bob Bruno, Connecticut Airport Authority
- Evan Warren, Robinson Aviation
- Charles Skelton, Yale Aviation/CFI
- Don Relihan, Yale University
- Douglas Hausladen, City of New Haven Traffic & Parking
- John Olson, Midwest Air Traffic Control Services
- Johnson Chang-Fong, Technical Representative Avports Engineering
- Andrew King, Avports
- Rasmus Agerskov, Avports
- Don Relihan, Director of Support Services - Yale University
- Eliot Jameson, Tweed-New Haven Airport Authority (TNHAA) Volunteer
- 1-2**-***-**20
- Jeff Wood, MJ
- Laura Canham, MJ
- Steve Bourque, MJ
- Kate Larson, HMMH
- Dominic Scarano, HMMH
- Laurel Stegina, FHI Studio
- Ron Gautreau, FHI Studio



MASTER PLAN UPDATE

Tweed-New Haven Airport Authority



Advisory Committee Meeting Mar. 8, 2021



Logistics

- Meeting recording
- Please mute your microphone
- Sign-in sheet - please send a chat with:
 - Name
 - Affiliation
 - Email address
- Questions will be addressed at the end
 - Send a chat any time during the presentation
 - Open mic Q&A at the Conclusion

Introductions

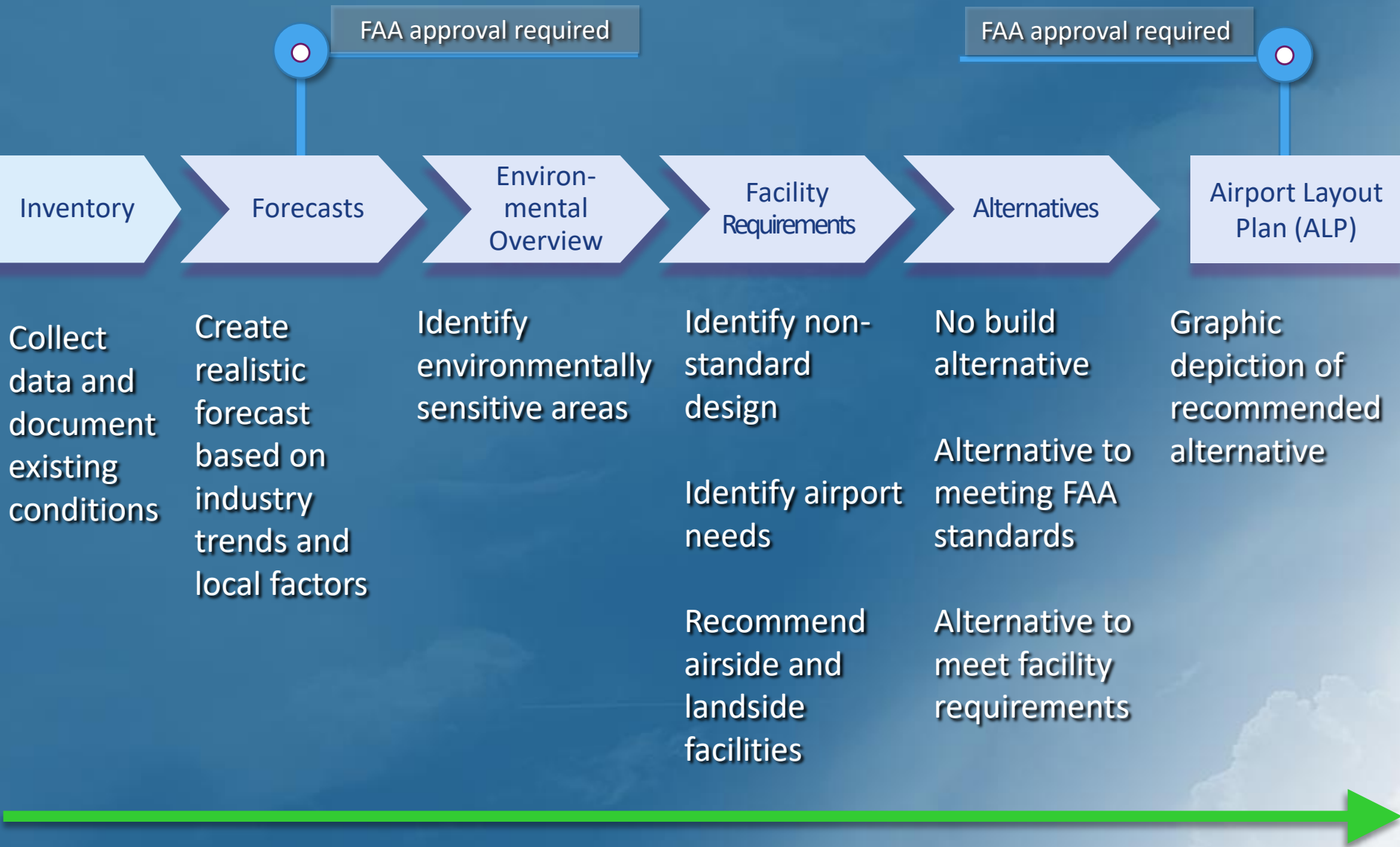
- Sean Scanlon, Executive Director
- Jeremy Nielson, Airport Manager
- Consulting Team:
 - McFarland Johnson
 - FHI Studio
 - ASM Americas
 - Harris Miller Miller & Hanson, Inc.
 - Woolpert
- Attendees

Agenda

- Introductions
- Master plan process
- Key issues and goals
- Recommended alternative for ALP
- 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

Recommended Runway & Taxiway Alts

Runway Alternative With 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'



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

- Meets facility requirements
- Meets FAA design and geometry standards
- Provides best flexibility for existing and future operations
- Balances safety, community, environmental, fiscal, regulatory, and operational

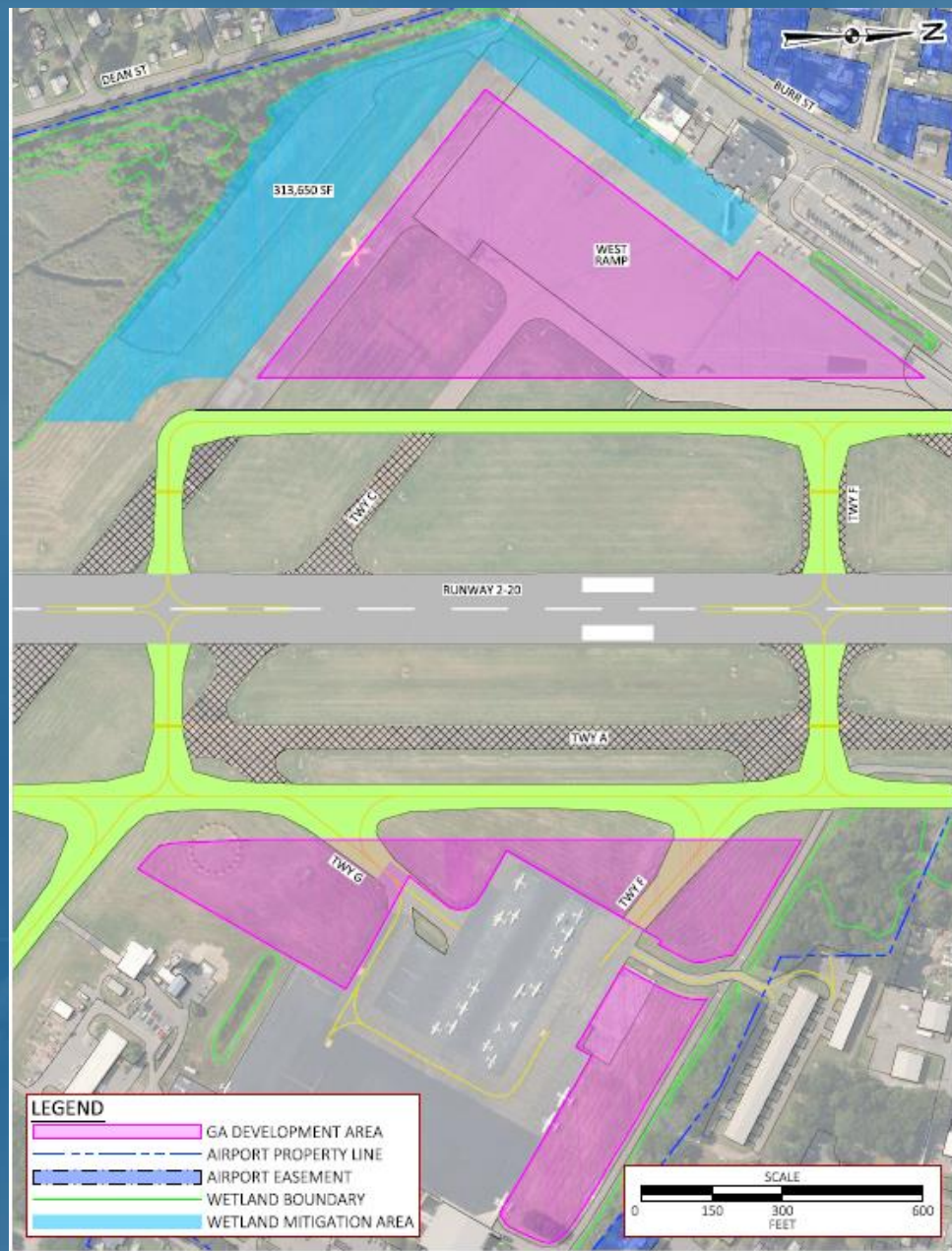
Recommended Terminal Alternative

- Meets FAA design standards
- Meets Facility Requirements
- Provides high flexibility
- Improves roadway access
- Eliminates incompatible land uses
- Reduces runway/safety area crossings



Recommended GA and Landside Alt.

- Aeronautical/general aviation development areas
- Wetland mitigation opportunity
- Expansion of maintenance building
- Expansion of fire station building



ALP Sheet Set

- Existing Airport Layout Plan
- Proposed Airport Layout Plan
- Terminal Area Drawing
- Airport Airspace Drawing
- Inner Portion of the Approach Surface Drawing
- Runway Departure Surfaces Drawings
- Land Use Plan
- Airport Property Map
- Airport Environmental Inventory Map

Future Airport Layout Plan

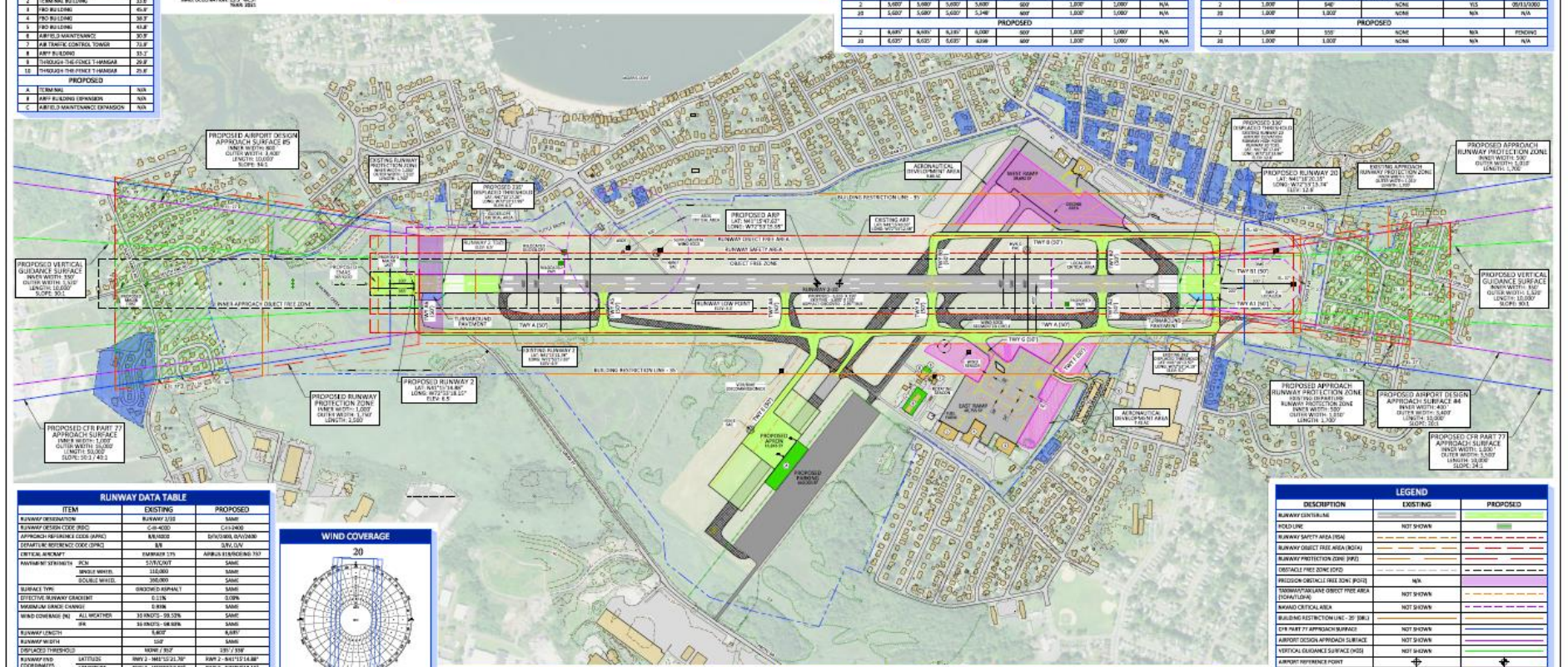
FACILITIES TABLE		
ID	FACILITY NAME	TOP SLVY.
EXISTING		
1	AIRPORT ADMINISTRATION BUILDING	58.4
2	TRAILING BUILDING	33.8
3	FEDERAL BUILDING	44.4
4	POST OFFICE	56.8
5	RAV BUILDING	43.8
6	FAIRFIELD MOUNTAIN	32.5
7	FAIR TRAILER CONTROL TOWER	32.8
8	RAV BUILDING	33.2
9	TRAILOR BUILDING	32.5
10	TRAILOR TRAILER	21.8
PROPOSED		
A	TRAILOR	N/A
B	RAV BUILDING EXPANSION	N/A
C	TRAILOR EXPANSION	N/A



MODIFICATION TO DESIGN STANDARDS				
NO.	STANDARD MODIFIED	FAA STANDARDS	EXISTING CONDITION	PROPOSED ACTION
1	ACFT TAXIWAY WIDTH 30 FT, STANDARDS FOR AIRPORT BLDG SYSTEMS, CHART 1, 4 AND SECTION 13	TAXIWAY DESIGN WIDTH NOT PROHIBITED ON BLDG AT HOLDING POSITION NEAR	TAXIWAY C AND D SECTION BLDG ON THE RIGHT AT HOLDING POSITION NEAR	CONDITIONALLY APPROVED - NO HOLDING POSITION NEAR
2				DATE APPROVED: 01/11/2021 TWP 2: 10/13/2016

DECLARED DISTANCES									
APPROACH	TORA	TDLA	ASDA	LDA	LDA APPROACH	STOP END	ASDA	DATE	
EXISTING									
2	5,007	5,007	5,007	5,007	492	1,525	5,007	N/A	
2	5,007	5,007	5,007	5,007	492	1,525	5,007	N/A	
PROPOSED									
2	5,007	5,007	5,007	5,007	492	1,525	5,007	N/A	
2	5,007	5,007	5,007	4,948	492	1,525	5,007	N/A	

RUNWAY SAFETY AREA DETERMINATION					
RUNWAY ID	STANDARD RSA LENGTH BEYOND	ACTUAL RSA LENGTH BEYOND	VIOLATIONS TO RSA ALONG SIDE OF RUNWAY	RSA DETERMINATION	DATE APPROVED
EXISTING					
2	1,000	840	NONE	YES	08/15/2020
2	1,000	1,007	NONE	N/A	N/A
PROPOSED					
2	1,000	550	NONE	N/A	PENDING
2	1,000	1,007	NONE	N/A	N/A



RUNWAY DATA TABLE		
ITEM	EXISTING	PROPOSED
RUNWAY SURFACE	ASPH/CON	SAME
RUNWAY WIDTH	50 FT	50 FT
RUNWAY LENGTH	5,007 FT	5,007 FT
GRADIENT	0.15%	0.15%
REQUIREMENTS	FAA	FAA



AIRPORT DATA TABLE		
ITEM	EXISTING	PROPOSED
MEAN MAXIMUM TEMPERATURE OF HOTTEST MONTH	68 F	68 F
AIRPORT ELEVATION	232 FT	232 FT
AIRPORT SURFACE POINT	LATITUDE: 41°12'30"N LONGITUDE: 72°57'15"W	LATITUDE: 41°12'30"N LONGITUDE: 72°57'15"W
MEASUREMENT METHOD	ANEMOMETER	ANEMOMETER
WIND DIRECTION	225	225
WIND SPEED	15	15
WIND VELOCITY	15	15

FEDERAL AVIATION ADMINISTRATION
 NEW ENGLAND AIRPORTS DISTRICT OFFICE

CONDITIONALLY APPROVED: (MANAGER, NEW ENGLAND AIX)

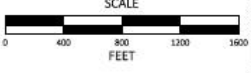
DATE: _____

SUBJECT TO COMMENTS IN LETTER DATED: _____

AIRPACT NUMBER: _____

TWEEED-NEW HAVEN AIRPORT

APPROVED: _____ DATE: _____



DRAFT

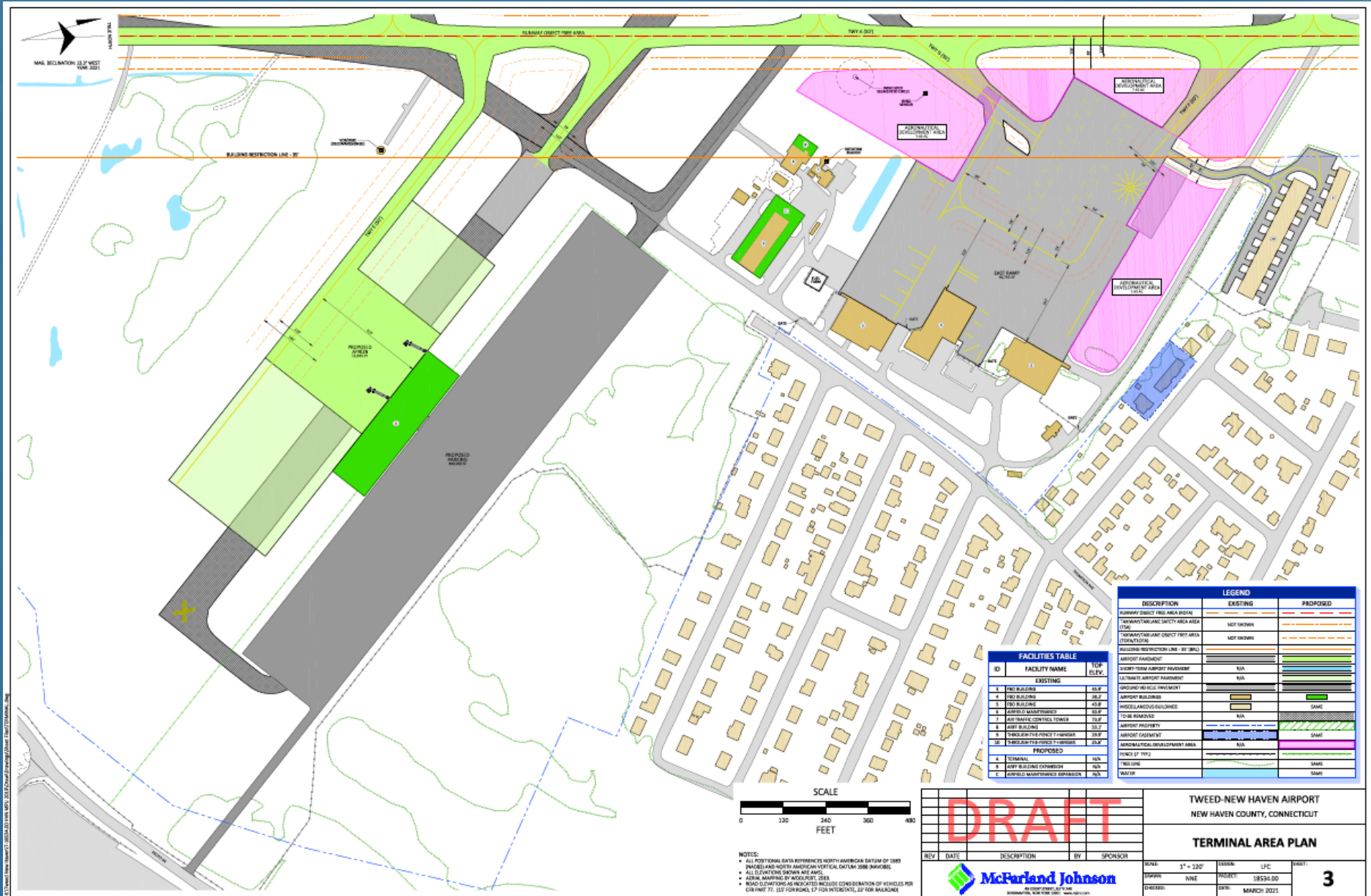
TWEEED-NEW HAVEN AIRPORT
 NEW HAVEN COUNTY, CONNECTICUT

AIRPORT LAYOUT PLAN

REV	DATE	DESCRIPTION	BY	SPONSOR	SCALE	STATUS	LFC	DATE

- NOTES:
- * ALL ADDITIONAL DATA REFERENCE NORTH AMERICAN DATUM OF 1983 (NAD83) UNLESS OTHERWISE NOTED.
 - ** ALL ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED.
 - ** ALL DISTANCES ARE IN FEET UNLESS OTHERWISE NOTED.
 - ** ALL DISTANCES ARE IN FEET UNLESS OTHERWISE NOTED.
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Terminal Area Plan

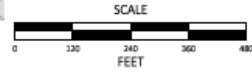


FACILITIES TABLE

ID	FACILITY NAME	TOP ELEV.
1	TRF BUILDING	48.0'
2	TRF BUILDING	36.0'
3	TRF BUILDING	43.0'
4	AIRFIELD MAINTENANCE	33.0'
5	AIR TRAVEL CONTROL TOWER	70.0'
6	AIRFIELD PROPERTY	30.0'
7	TRF BUILDING	33.0'
8	TRF BUILDING	33.0'
PROPOSED		
A	TERMINAL	N/A
B	AIRFIELD BUILDING EXPANSION	N/A
C	AIRFIELD MAINTENANCE EXPANSION	N/A

LEGEND

DESCRIPTION	EXISTING	PROPOSED
AIRWAY OBJECT FREE AREA (FOA)	[Red line]	[Red line]
TERRAIN/STAIRWAY SAFETY AREA (SSA)	[Green line]	[Green line]
TERRAIN/STAIRWAY OBJECT FREE AREA (OFA)	[Blue line]	[Blue line]
OBSTACLE LIMITATION LINE - 50' WIND	[Dashed blue line]	[Dashed blue line]
AIRPORT FARMHOUSING	[Green hatched]	[Green hatched]
SHORT-TERM AIRPORT REDEVELOPMENT	[Red hatched]	[Red hatched]
ULTIMATE AIRPORT FARMHOUSING	[Green hatched]	[Green hatched]
SPREADING WEDGE (SWM) LIMIT	[Blue hatched]	[Blue hatched]
EXISTING BUILDINGS	[Brown fill]	[Brown fill]
MISCELLANEOUS BUILDINGS	[Orange fill]	[Orange fill]
TO BE REMOVED	[Red hatched]	[Red hatched]
AIRPORT PROPERTY	[Green hatched]	[Green hatched]
AIRPORT FARMHOUSING	[Green hatched]	[Green hatched]
CONSTRUCTION/DEVELOPMENT AREA	[Blue hatched]	[Blue hatched]
TRAIL LINE	[Blue line]	[Blue line]
WALKER	[Blue line]	[Blue line]



NOTES:
 * ALL POSITIONAL DATA REFERENCES NORTH AMERICAN DATUM OF 1983 (NAD83) AND NORTH AMERICAN VERTICAL DATUM 1988 (NAVD83).
 * ALL ELEVATIONS SHOWN ARE AMSL.
 * AERIAL MAPPING BY AERIAL PHOTO, 2018.
 * ROAD ELEVATIONS AS INDICATED INCLUDE CONSIDERATION OF VEHICLES PER CIRCUIT 77, 157 FOR ROAD, 17 FOR INTERSTATE, 30 FOR AIRLINES.

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REV	DATE	DESCRIPTION	BY	SPONSOR

TWEED-NEW HAVEN AIRPORT
 NEW HAVEN COUNTY, CONNECTICUT

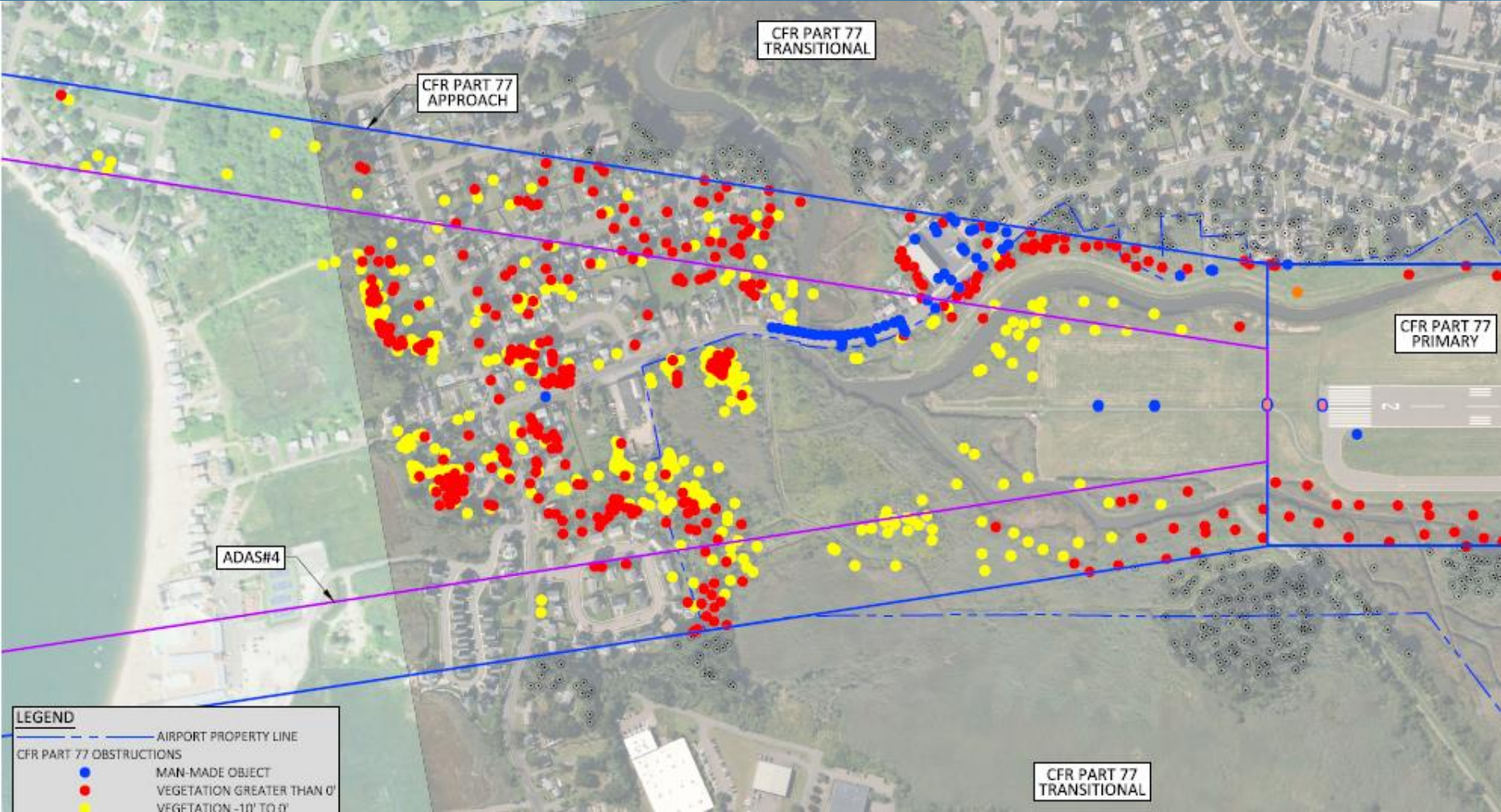
TERMINAL AREA PLAN

McFarland Johnson

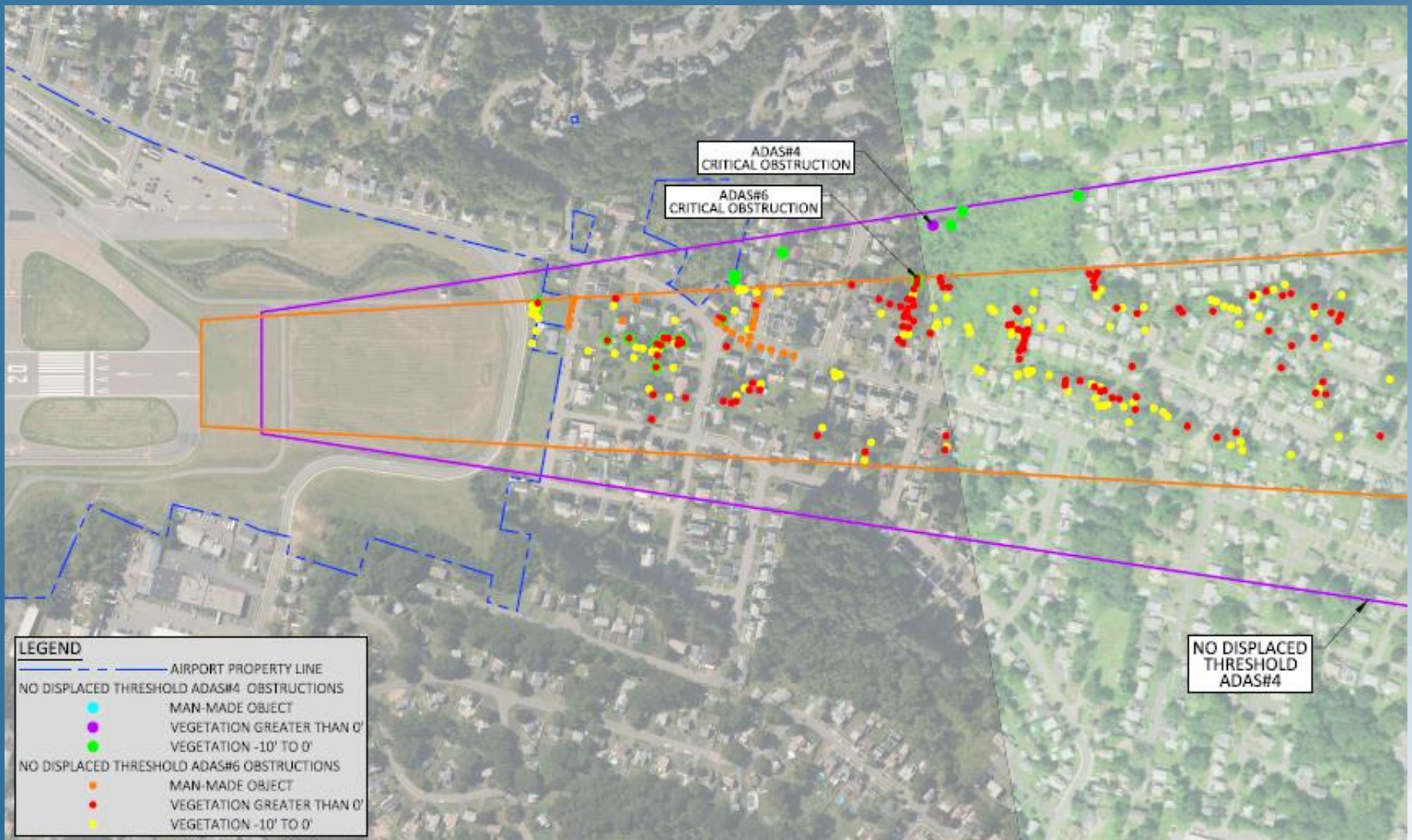
SCALE: 1" = 120'
 DESIGN: LFC
 PROJECT: 18534.00
 DATE: MARCH 2021

3

Obstruction Review – Existing RWY 2

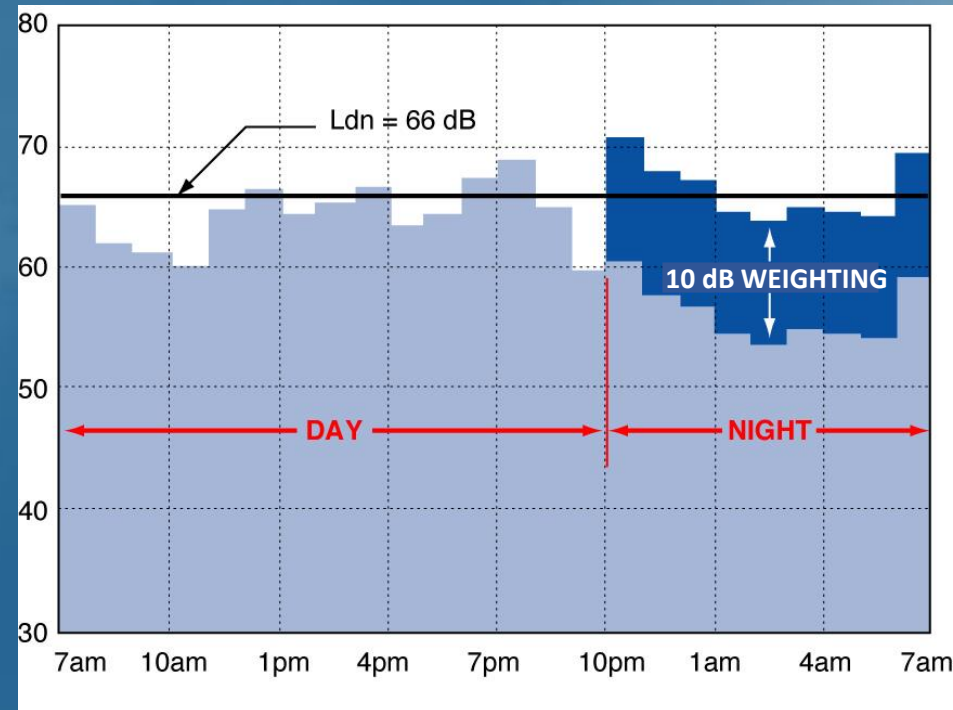


Obstruction Overview – Proposed RWY 20



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



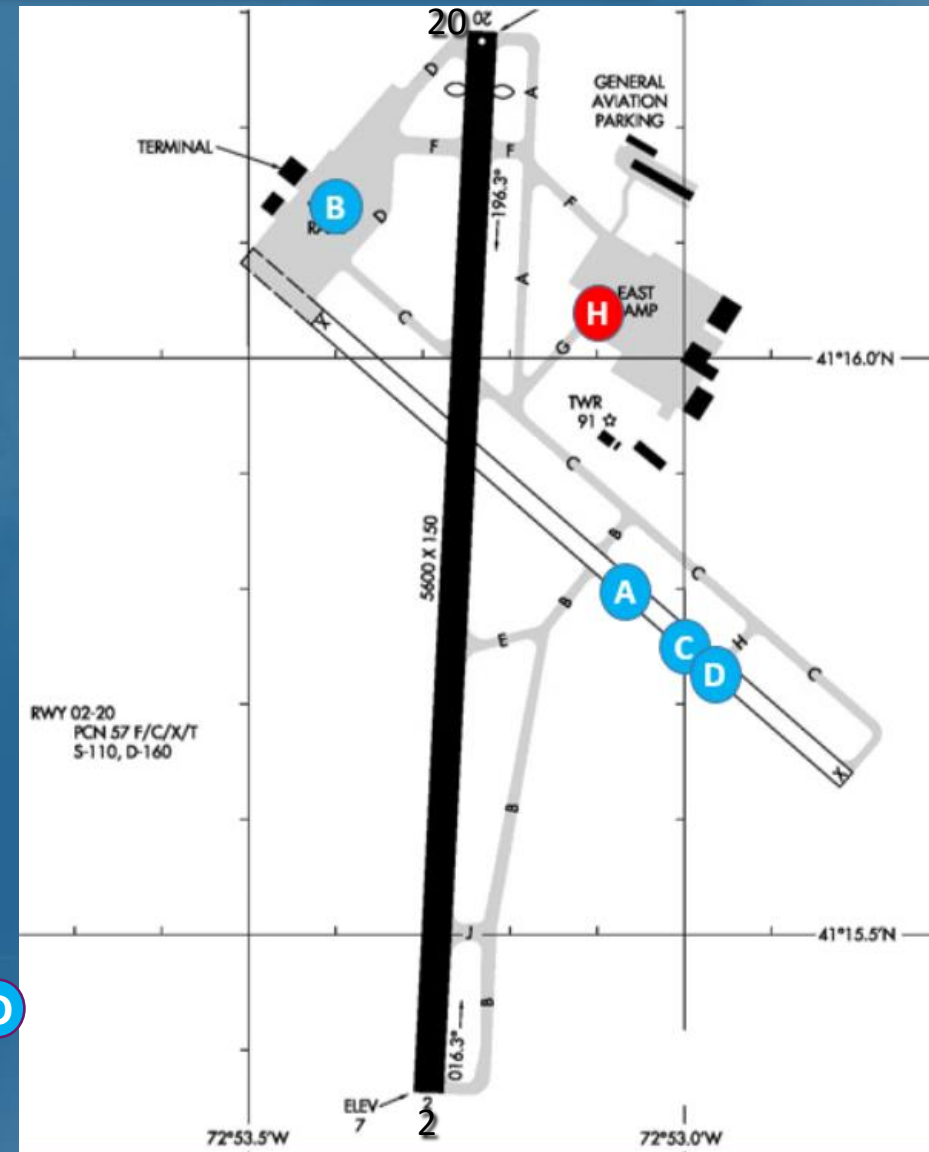
U.S. Department
of Transportation
Federal Aviation
Administration

**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

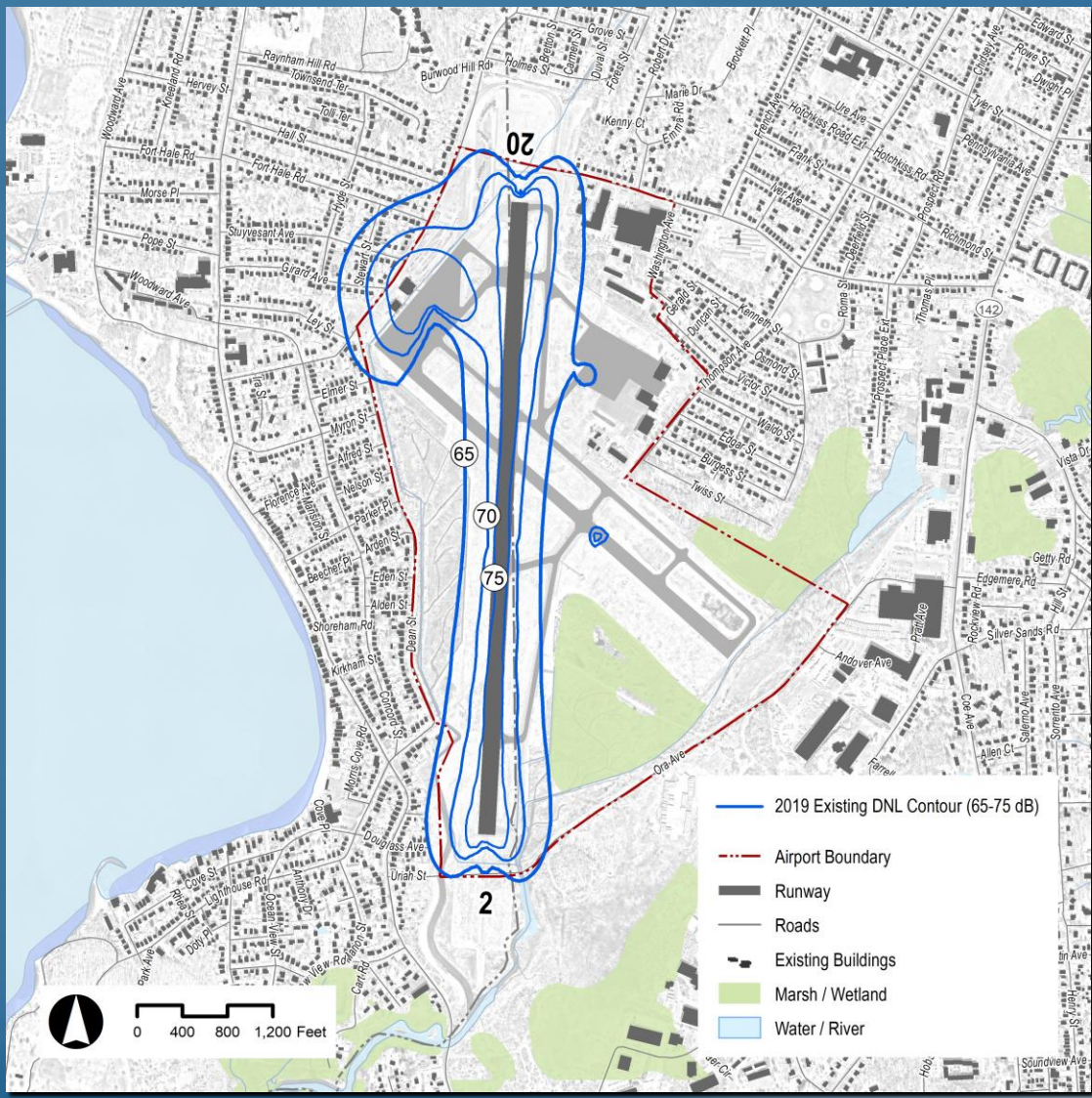


Jet Aircraft

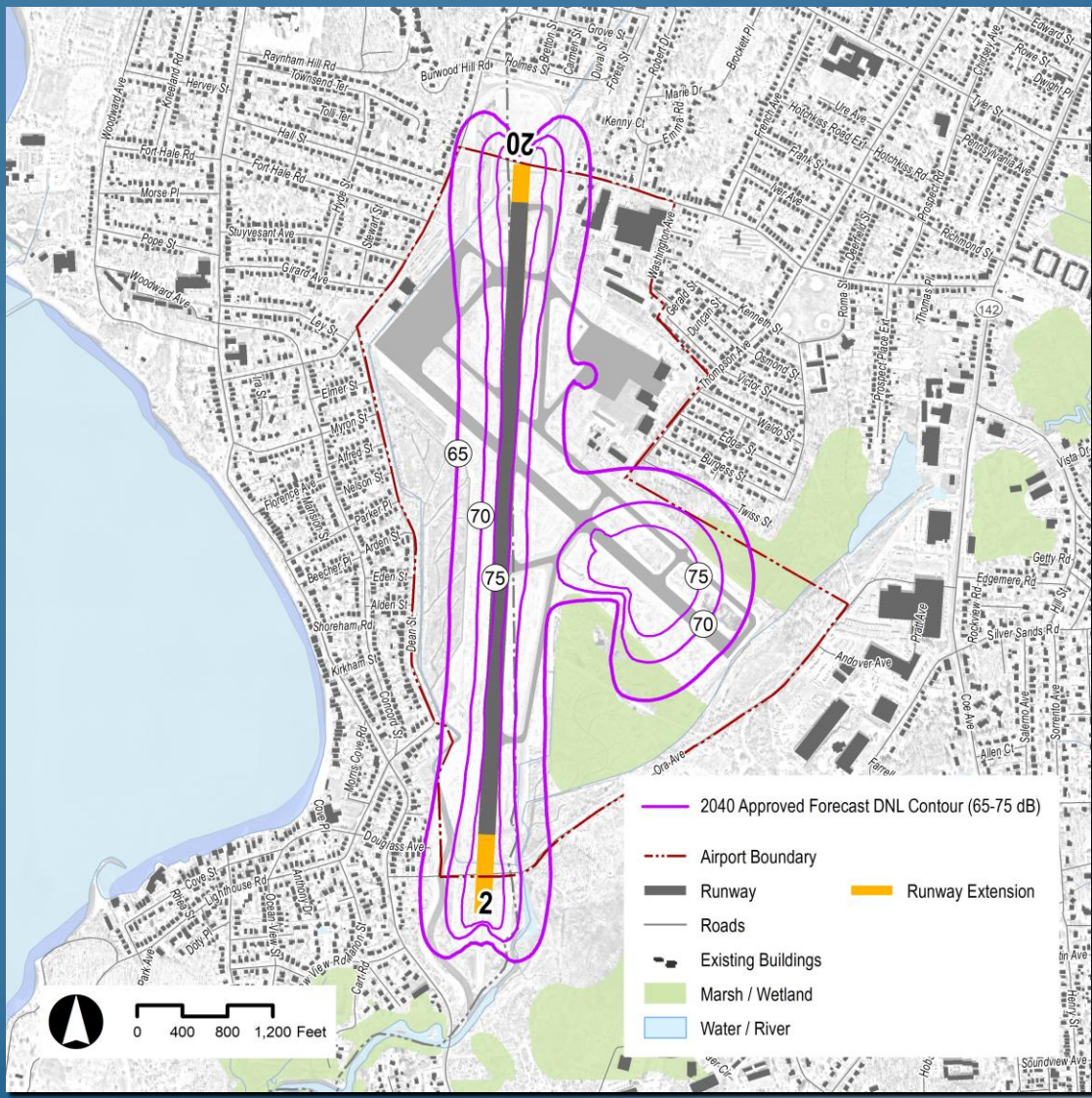


Non-Jet Aircraft

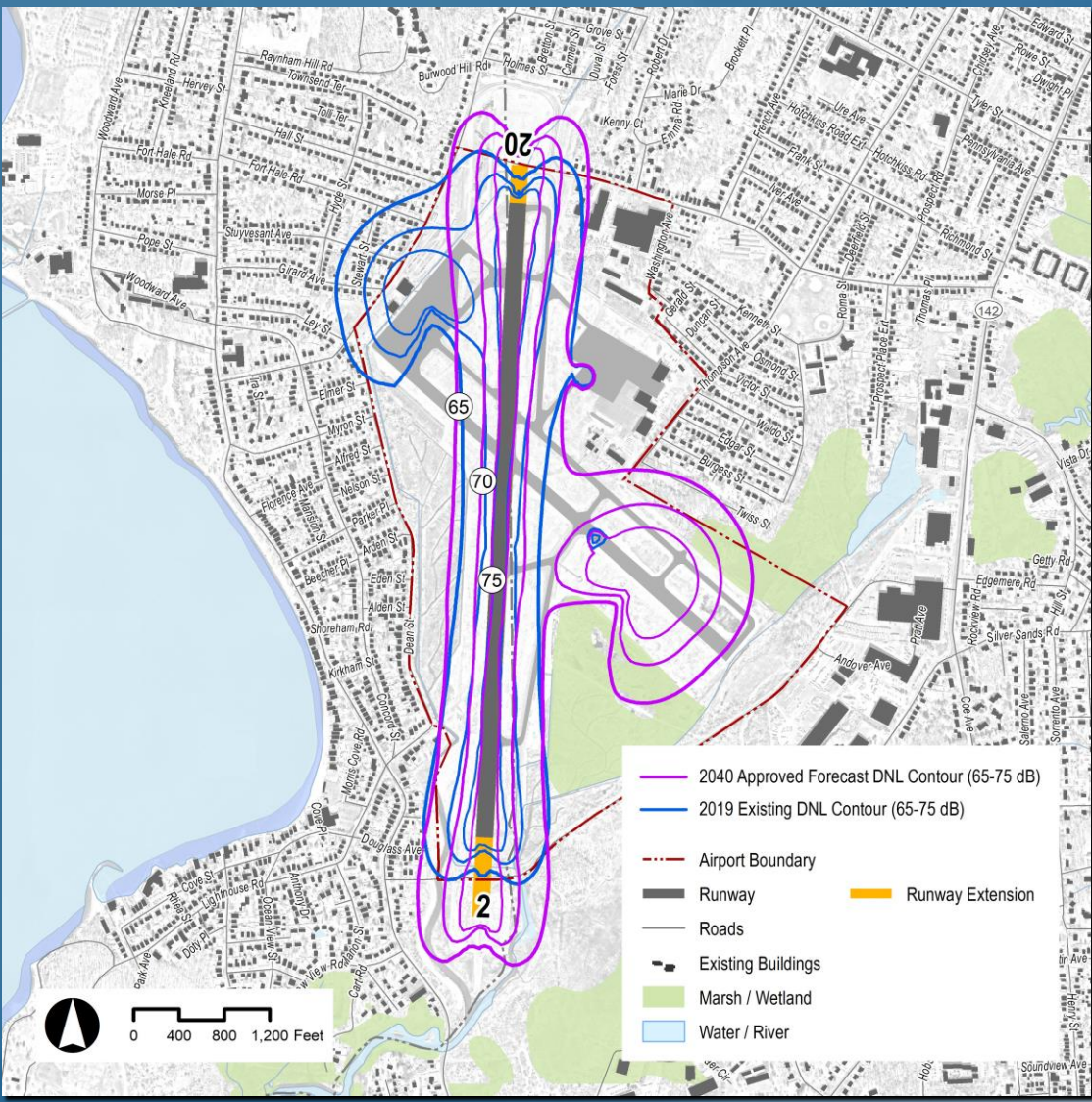
Noise Exposure – Existing Conditions



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:
HVNMasterPlan@mjinc.com

