

Plymouth Municipal Airport

Runway 6 Extension / Technical Master Plan Update



MEPA Scoping Meeting EEA #16691

May 10, 2023

DuBois
& King
inc.

Epsilon
ASSOCIATES INC

Project Team Members



Airport / Plymouth Airport Commission

The Airport
Management and Plymouth
Airport Commission



FAA/ MASSDOT

Federal Aviation
Administration and MASSDOT
Aeronautics provide project
funding and regulatory
guidance



Community & Citizens

Public input during the
environmental review
provides opportunities for
meaningful public
involvement



D&K and Epsilon Associates

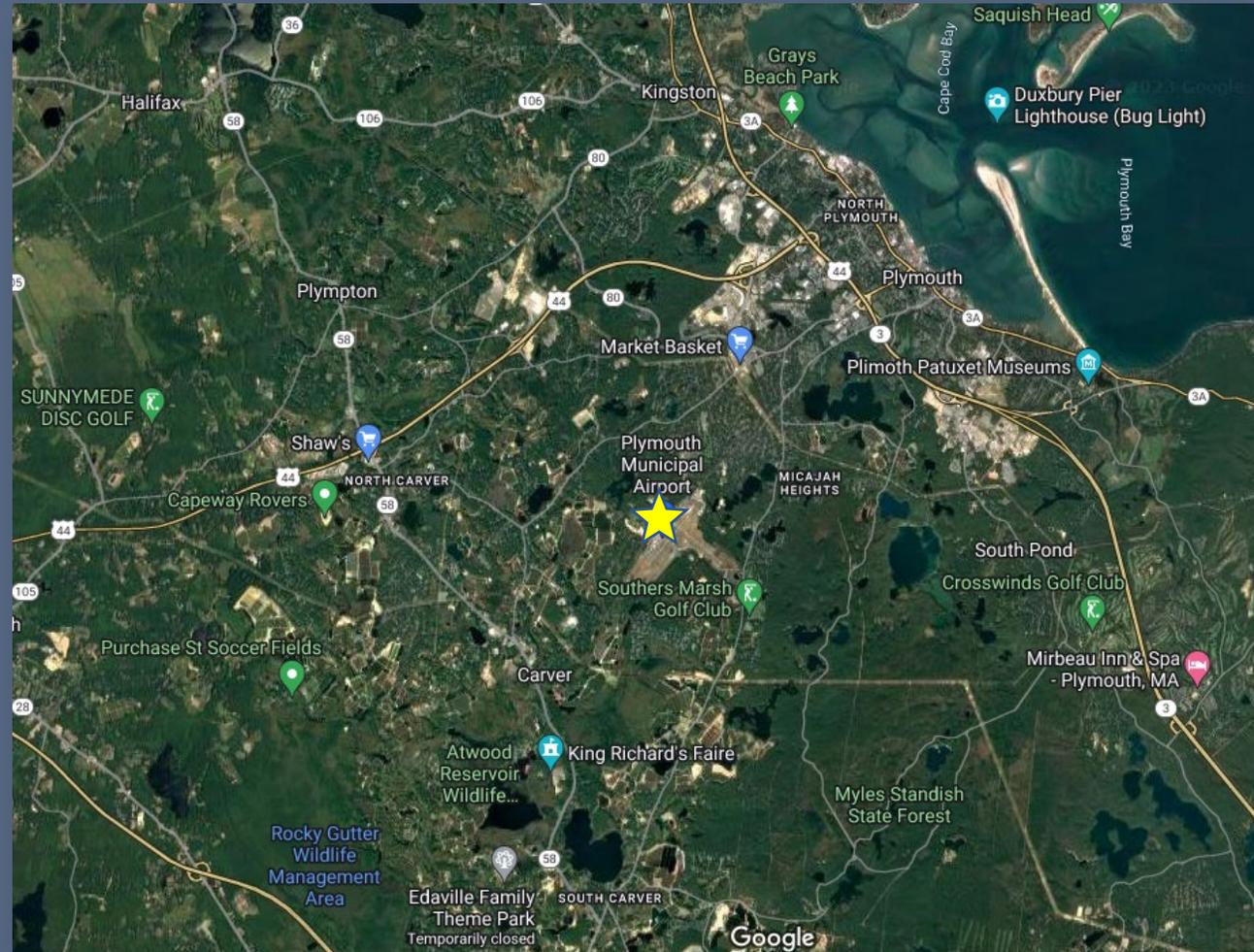
The DuBois and King /Epsilon
team has over 30 years of
experience serving Plymouth
Municipal Airport and its
community.

MEPA Overview

- The Secretary publishes the appropriate pages of the ENF in the next *Environmental Monitor*. *Published in the MEPA monitor on April 26th*
- A 30-Day review period follows, during the first 20 Days of which Agencies, Persons, the MEPA Office (which ordinarily conducts a site visit and public consultation session), and the Secretary review and/or comment on the ENF. *Comment are due to MEPA by May 16th*
- At the close of the review period for an ENF, the Secretary decides whether to require an EIR. If the Secretary does not require an EIR, an Agency may take Agency Action on the Project (*see* 301 CMR 11.05 and 11.06).
- MEPA Monitor: <https://eeaonline.eea.state.ma.us/EEA/MEPA-eMonitor/home>

Regional Setting & History

- Located on approximately 785 acres in the towns of Plymouth and Carver
- The Airport has operated since 1934 and now supports multiple businesses including flight schools, aircraft maintenance, aircraft sales, and corporate flight departments.



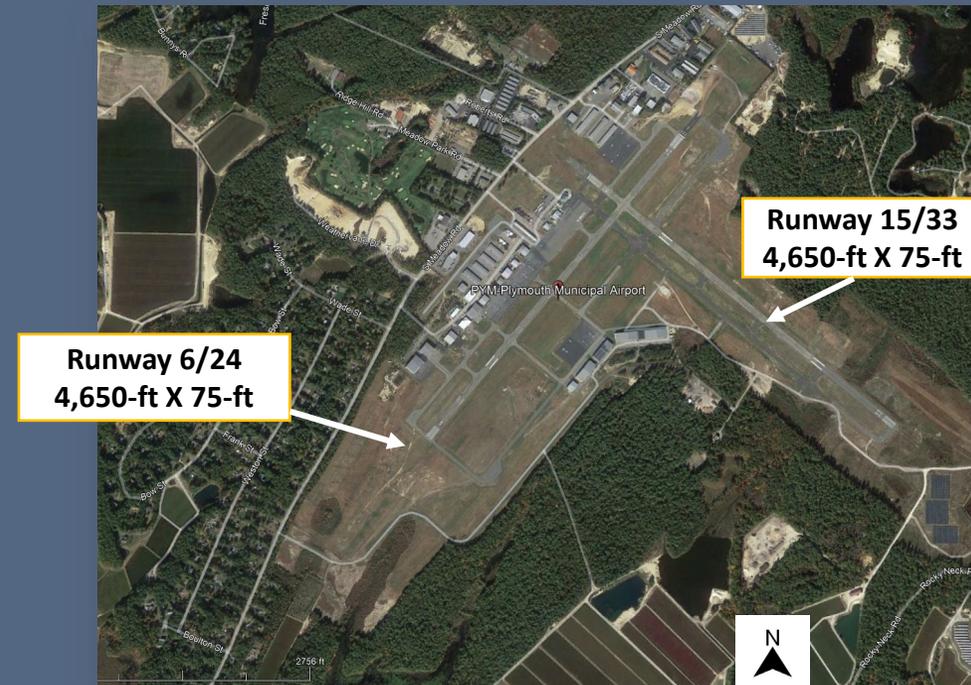
Project Site

246 South Meadow Road
Plymouth, MA

- General aviation, non-towered Airport
- Two runways

Recent projects:

- RW 15/33, TW S extended in 2015
- Stopway added to RW 24 in 2015
- Obstruction removal, grassland habitat mitigation in 2018-19
- TWs D and E extended in 2018, 2022
- New Airport Administration building 2020 – MassDOT Funded



Project Timeline and Milestones

JAN 2022 –
JAN 2023

Background and three
TMPU public meetings,
TMPU and ALP
finalized

MEPA Process Initiated
w/MEPA office,
Pre-ENF Public
Meeting

FEB 2023-
MAR 2023

April 2023-
August 2023

MEPA ENF Filing
MEPA Scoping Field
Visit
Proposed Joint Draft
NEPA EA/MEPA EIR
Development

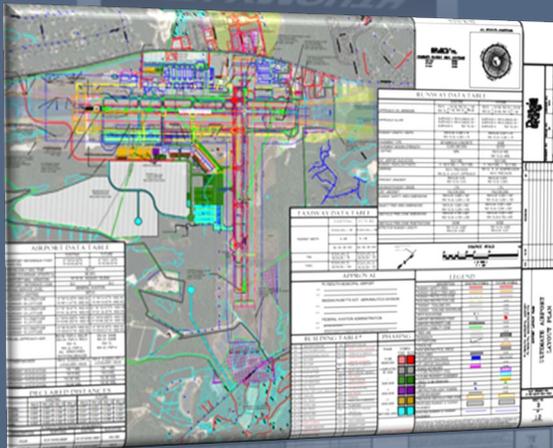
Final NEPA EA/MEPA
EIR Completed &
Submitted to FAA for
FONSI & MEPA

August
2023
Goal

Final Technical Master Plan Update & ALP



- Comprehensive Evaluation of Airport and Needs for 20 years into future – 2040+
- Extensive Public Engagement
- Evaluated four Alternatives for Runway 6
- Airport Layout Plan



- 2022 Ultimate Airport Layout Plan –FAA Approved

Runway Length Analysis

B-II Jet Composite		
Aircraft Type	Operations	% of Composite
Cessna CJ3/4	4	0.8%
Cessna Citation Bravo	4	0.8%
Cessna Citation Encore	7	1.4%
Cessna Citation Excel	68	13.3%
Cessna Citation Sovereign	13	2.5%
Cessna Citation Latitude	69	13.5%
Cessna Citation X	2	0.4%
Embrear Legacy 450	15	2.9%
Embrear Phenom 300	45	8.8%
Dassault Falcon 2000	149	29.0%
Dassault Falcon 900	75	14.6%
Dassault Falcon 50	7	1.4%
Hawker 4000	55	10.7%
Total Operations	513	



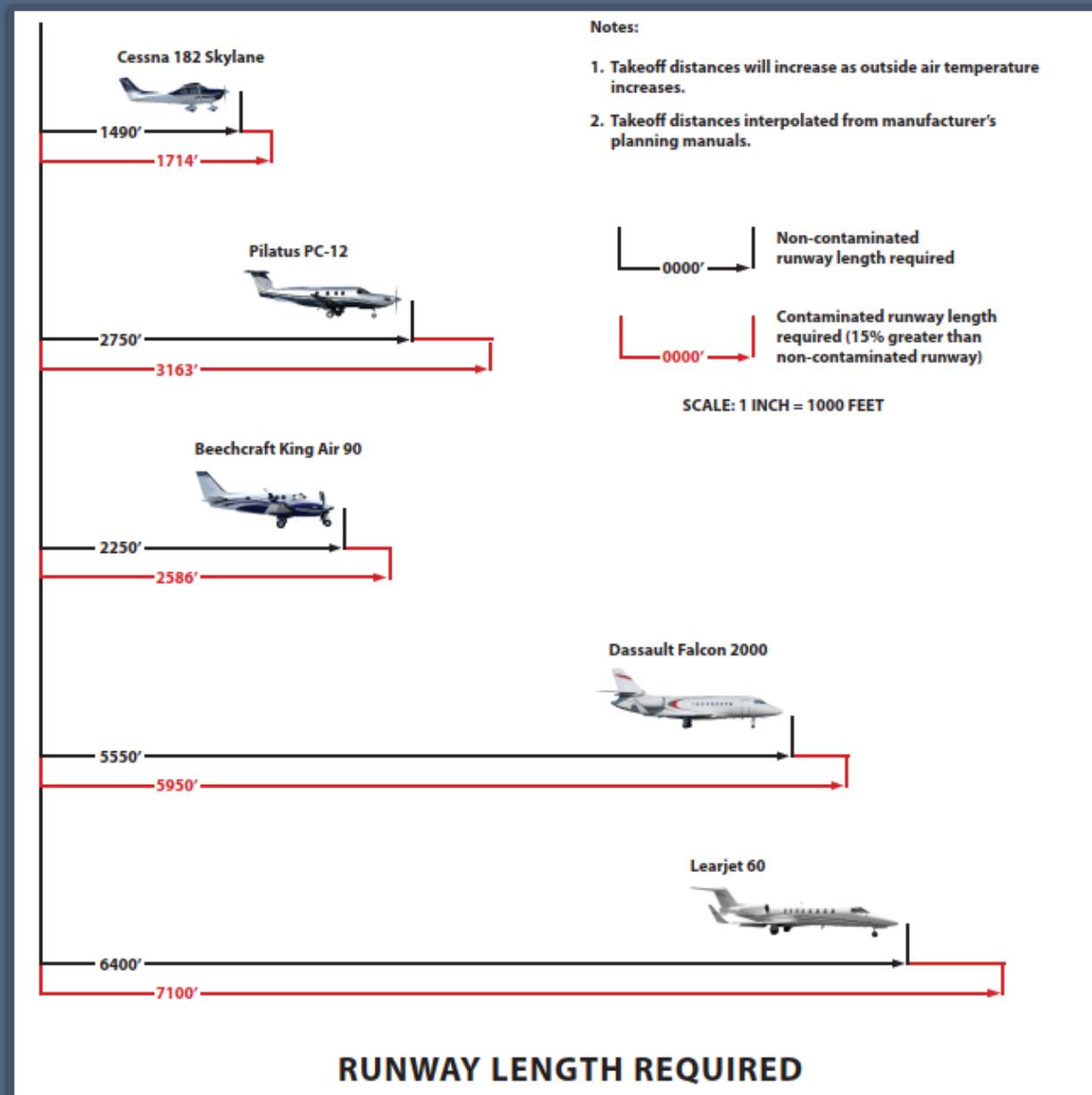
The Falcon 2000 is the most demanding aircraft (critical design) in the composite of aircraft with more than 500 annual operations.

FAA Runway Length Analysis - Unconstrained Runway Length - 5,500-ft.

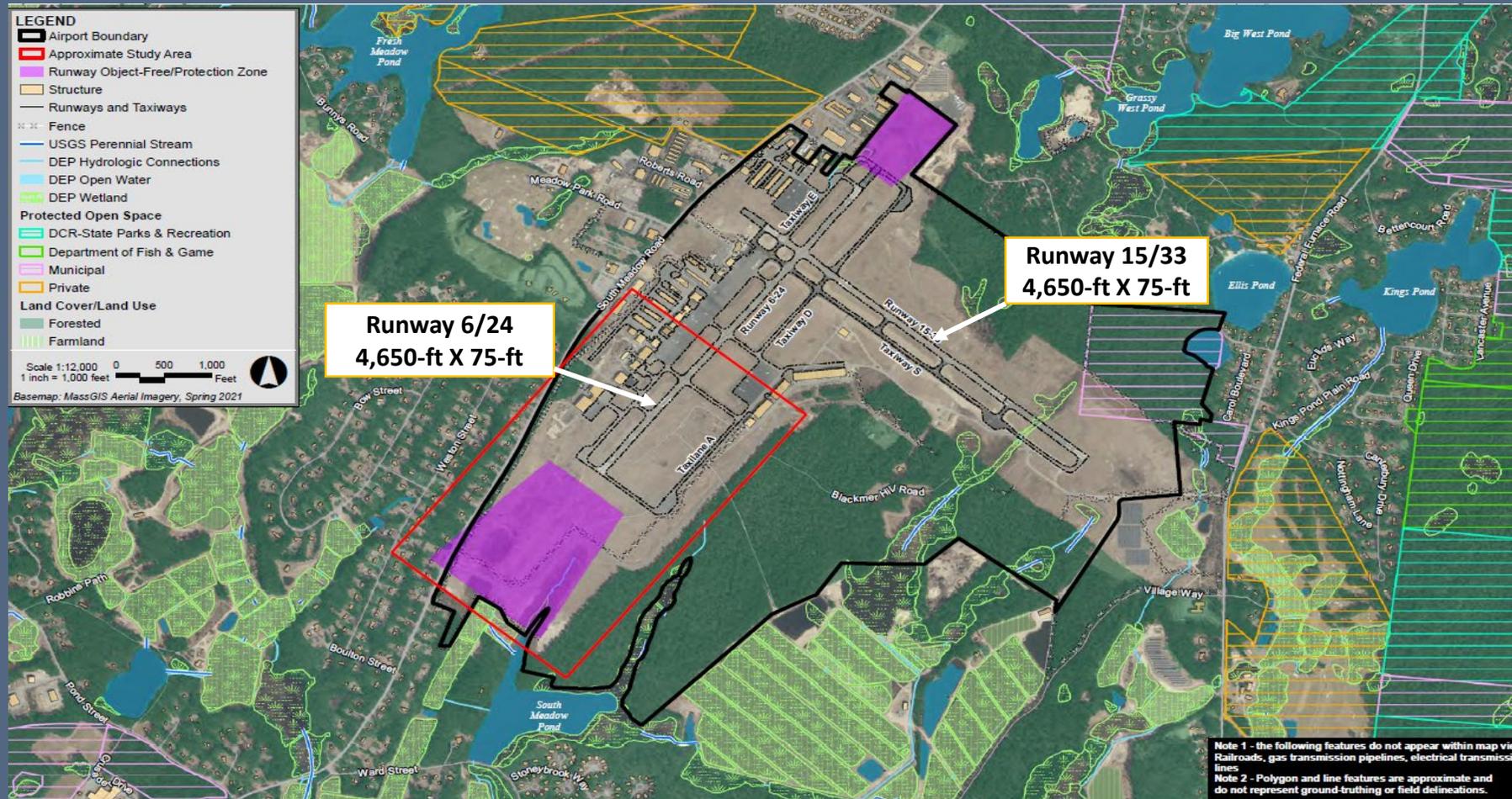
Typical Runway Length Requirements “Critical Aircraft”

Temperature = 30°C - Average Temperature Hottest Month
Flaps = 0
Max Gross Takeoff Weight
Zero Wind
Zero R/W Gradient
Pressure Altitude = Sea Level

Aircraft Planning Manual Vs FAA Runway Length Analysis



Project Site – Existing Conditions



Project Site – Proposed Conditions

Runway 6 extension:

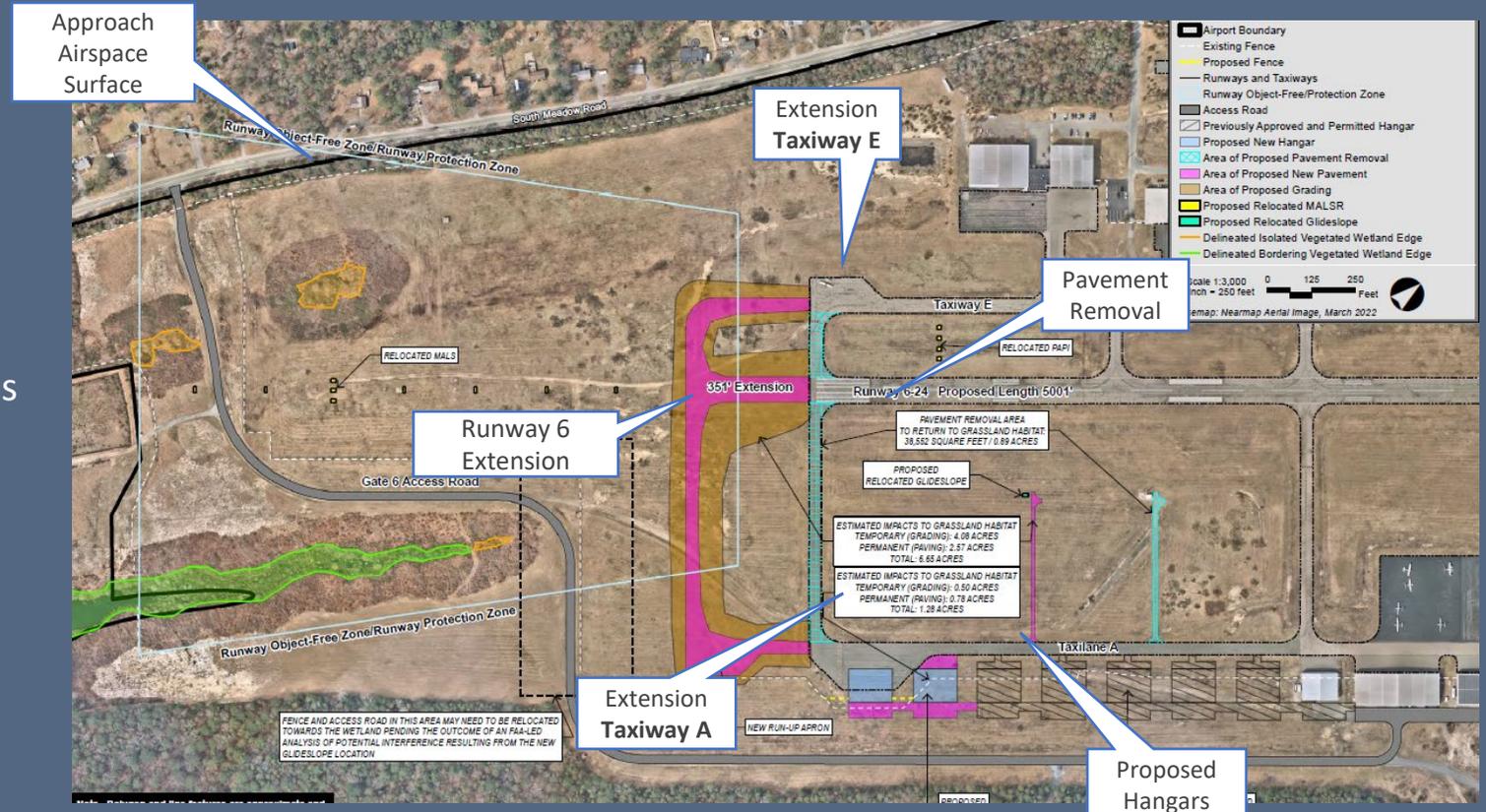
The critical aircraft (Falcon 2000) operates regularly from PYM – but they do so at reduced capacity. Lengthening the runway will enhance safety by increasing capacity for critical aircraft as per the runway length analysis.

Note: the recommended unconstrained runway length for 60% load of the critical aircraft, according to the conducted runway length analysis is 5,500-ft, which this Alternative does not meet.

Proposed: a 351-ft long, 75-ft wide extension on the approach to Runway 6 for a total runway length of 5001-ft

Alternative 3: 550 ft Extension to RW 6 end

Alternative 4: 850 ft Extension to RW 6 end

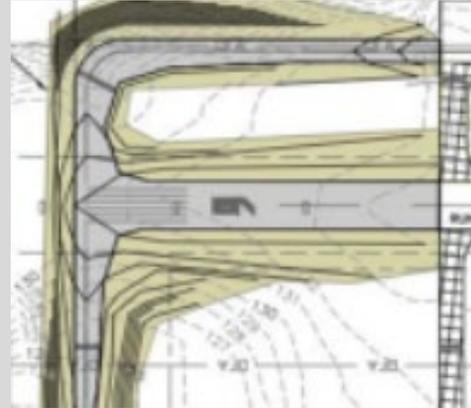


Project Site – Alternatives



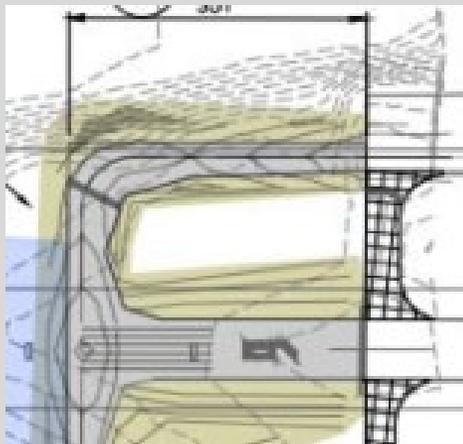
Alternative #1: No Build

- Everything remains the same, no changes are applied
- No Penetrations



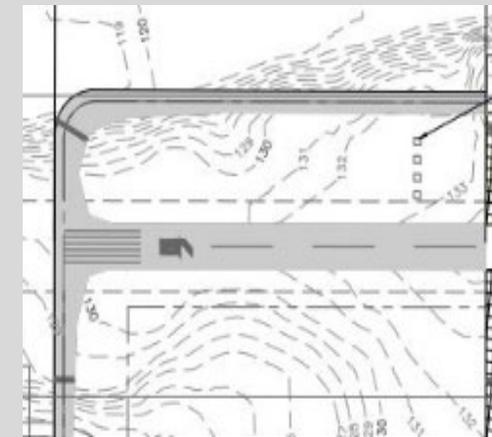
Alternative #3: 550-ft ext

- 5200 Feet
- Taxiway A and E extensions
- Relocation of Glideslope and MALS
- One penetration area



Alternative #2: 351-ft ext

- 5001 Feet
- Taxiway A and E extensions
- Relocation of Glideslope and MALS
- No penetrations



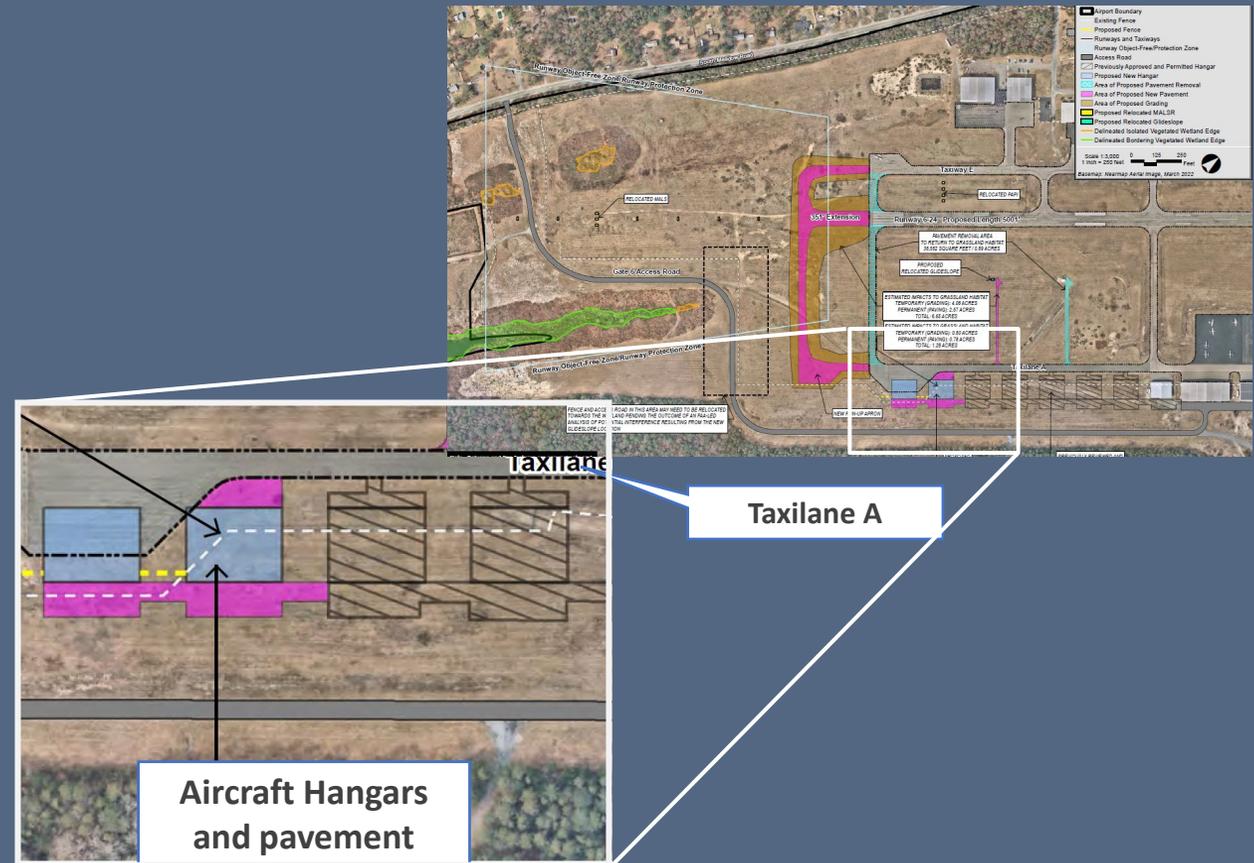
Alternative #4: 850-ft ext

- 5500 Feet
- Taxiway A and E extensions
- Relocation of Glideslope and MALS
- Multiple penetrations

Project Site – Proposed Conditions

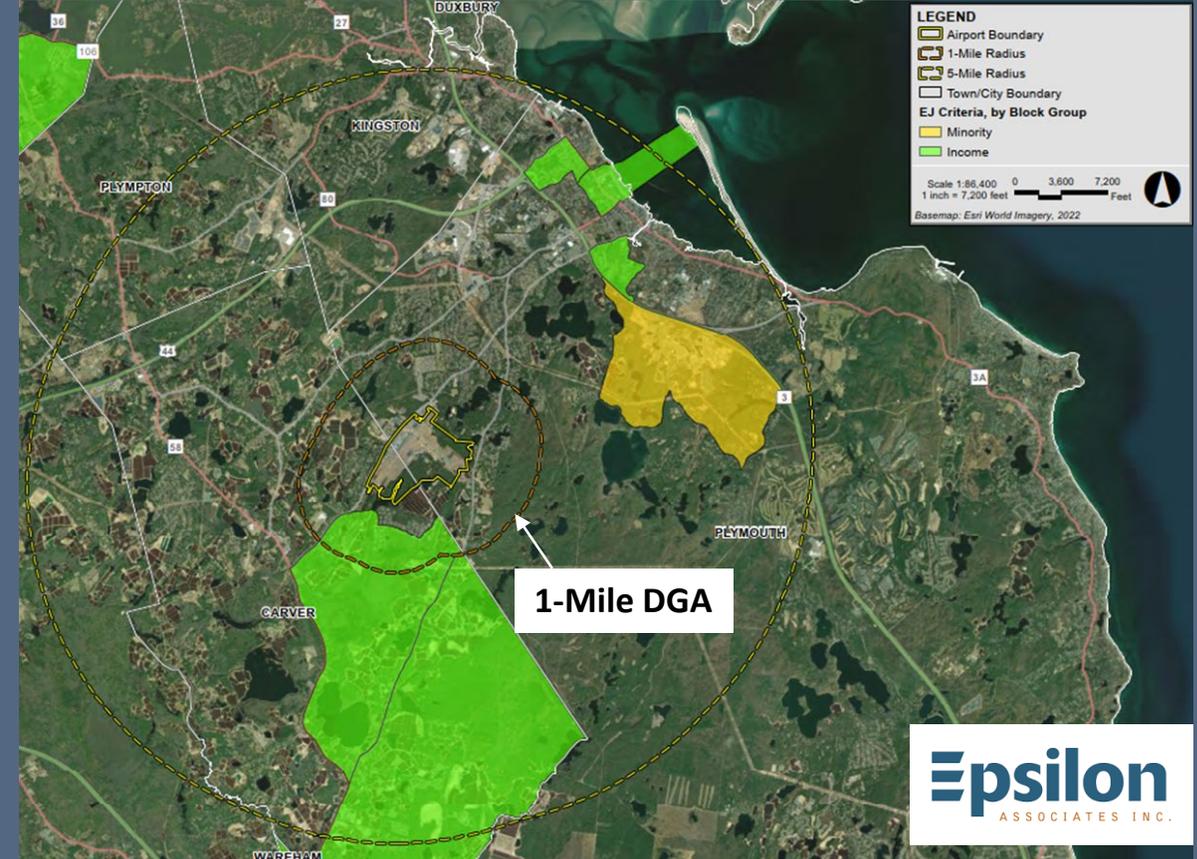
General Aviation Aircraft Hangars:

- The Airport continues to attract new hangar owners and businesses to the airfield. The Airport currently maintains a waitlist for hangar space, and additional hangar space would allow the Airport flexibility in attracting new businesses and meet the facility needs of users.
- **Proposed Project:** construction of two (2) new aircraft hangars approximately 100'x100' (20,000 square feet total) located north of the Gate 6 Access Road and along Taxilane A.
- The proposed hangars will result in 0.78 acres of permanent (from impervious surfaces) impacts, and 0.50



Environmental Justice

- 1 EJ Community within the 1-mile Designated Geographic Area (DGA) for the project located in the Town of Carver
- The annual median household income is not more than 65 per cent of the statewide annual median household income.
- Block Group 3, Census Tract 5442
 - Minority population: 8.7%
 - Median household income: \$44,000
 - This is 52.1% of the MA MHHI
 - Households with language isolation: 7.6%
 - This municipality has a median household income of \$61,374 which is 72.7% of the MA MHHI.



Public Outreach Efforts

- The Airport and DuBois & King held three community meetings for the technical master plan update in 2022.
- A fourth Public Meeting was held in person at the Airport on March 29, 2023 at 7:00 PM.
- This meeting provided additional outreach specifically to inform EJ residents, organizations, and stakeholders. The meeting also served to update the public on the final master plan, and begin MEPA and NEPA environmental processes .
- The meetings were advertised through the Airport website, social media, and the Airport's email and EJ lists for (~200) contacts.



Agenda

- Technical Master Plan Team
- Plymouth Airport Highlights
- Purpose of a Master Plan
- Master Planning Process
- Forecast
- Typical Runway Lengths
- Runway Length Analysis
- Alternatives
- Timeline
- Questions

Impacts

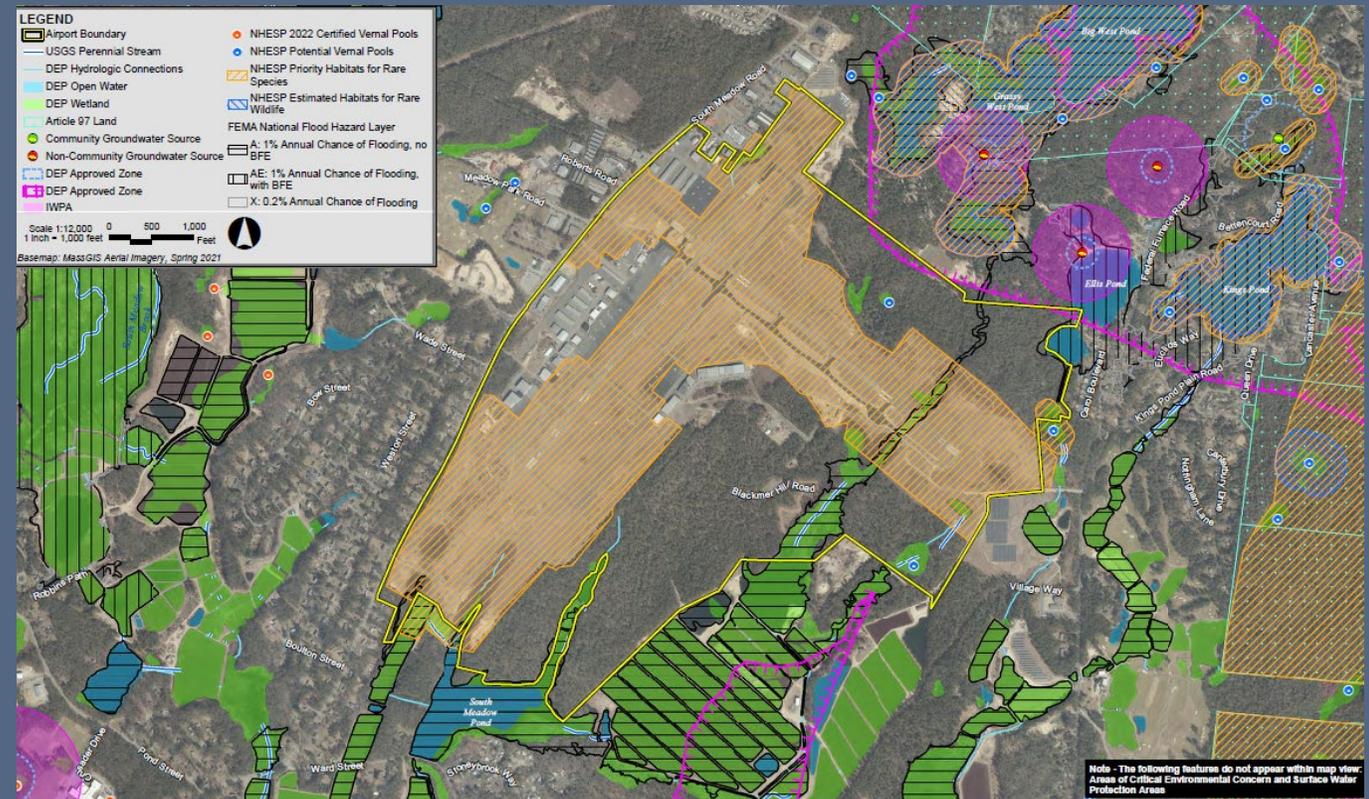
- Approximately 7 acres of temporary and permanent impacts NHESP Habitat (grassland birds) from grading/pavement
- Addition of impervious surfaces estimate (2.46 acres)
- Temporary construction related impacts, stormwater, noise, and land disturbance.
- Potential for wetland resource impacts based on need to move light systems and fence/perimeter road.

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	785		
New acres of land altered		± 7.04	
Acres of impervious area	90.39	± 2.46 net	92.85
Square feet of new bordering vegetated wetlands alteration		0 ¹	
Square feet of new other wetland alteration		0	
Acres of new non-water dependent use of tidelands or waterways		0	
STRUCTURES			
Gross square footage	533,068 sf	±20,000	553,068 sf
Number of housing units	0	0	0
Maximum height (feet)	35 ft	0	35 ft
TRANSPORTATION			
Vehicle trips per day	1,789	4 (2 per hanger/day)	1,791
Parking spaces	333	0	333
WASTEWATER			
Water Use (Gallons per day)	8,500 gpd	0	8,500 gpd
Water withdrawal (GPD)	0	0	0
Wastewater generation/treatment (GPD)	8,500 gpd	0	8,500 gpd
Length of water mains (miles)	3.85 miles	0	3.85 miles
Length of sewer mains (miles)	3.79 miles	0	3.79 miles
Has this project been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No			
Has any project on this site been filed with MEPA before? <input checked="" type="checkbox"/> Yes (EEA #15663, #14511, #14801, 13289, 9689, 9033, 8636, 8093, 4707, 3024, 2817, 2591, 2590, 2437, 911) _____ <input type="checkbox"/> No			

MEPA Thresholds

ENF review thresholds:

- Rare Species – greater than two acres of disturbance of designated priority habitat, as defined in 321 CMR 10.02, that results in a take of a state-listed endangered or threatened species or species of special concern. 301 CMR 11.03 (2)
- Transportation - Expansion of an existing runway at an airport. 301 CMR 11.03 (6) (b) 3



Mitigation & Minimization

Stormwater

Runoff from impervious areas will be treated via stormwater management measures such as groundwater recharge including infiltration basins, infiltration trenches, and/or detention basins. Management of runoff will include both temporary and permanent Best Management Practices (BMPs) so that runoff will be appropriately handled both during and after construction.

Wetland

Impacts associated with the potential relocation and realignment of Gate 6 Access Roadway and fence. Appropriate mitigation measures will be adopted to minimize impacts, such as restorative plantings for temporarily disturbed areas and replication for wetland losses.

Rare Species

The Project will provide mitigation for rare species impacts under the Airport's existing Conservation and Management Permit from NHESP and Grassland Habitat Management Plan. The Airport has maintained a grassland habitat management plan since 2011 and has managed grassland bird habitat as required by existing Conservation and Management Permits



Comments and Contact Info

Comments on the project will be welcome in writing on or before May 16, 2023. Comments can be submitted via email to nicholas.moreno@mass.gov or via the MEPA Public Comments Portal.



A Certificate on the ENF will be issued on May 26, 2023. Deadlines may be extended – please check the Environmental Monitor which reflects all comment period extensions in real-time.

Questions on the meeting may be answered by emailing Nicholas Moreno at nicholas.moreno@mass.gov.



Project Questions: PlymouthMAAirportRW6EA@dubois-king.com
Document Requests: csnowdon@epsilonassociates.com

Project updates and News: <https://pymairport.com/>