

ENVIRONMENTAL NOTIFICATION FORM

L.G. HANSCOM FIELD

North Airfield Development

Bedford, Massachusetts



SUBMITTED TO

Executive Office of Energy
and Environmental Affairs,
MEPA Office

SUBMITTED BY

Runway Realty Ventures, LLC
North Airfield Ventures, LLC

PREPARED BY



January 2023

January 17, 2023

Rebecca Tepper, Secretary
Executive Office of Energy and Environmental Affairs
Attn: MEPA Office
100 Cambridge Street, Suite 900
Boston, MA 02114

Re: **Environmental Notification Form**
L.G. Hanscom Field North Airfield Development
Bedford, MA

Dear Secretary Tepper:

North Airfield Ventures, LLC and Runway Realty Ventures, LLC (the "Proponent") are pleased to submit the attached Environmental Notification Form (ENF) for the L.G. Hanscom Field North Airfield Development (the "Project"). The Proponent intends to build, operate, and maintain a master development of corporate hangars at Hanscom Field ("Hanscom," or the "Airport"), which will support current aviation activity and accommodate future demand.

The enclosed ENF describes the proposed development of the 47-acre site and its potential impacts. The Project will provide approximately 495,000 square feet (SF) of hangar space in the form of 27 purpose-built hangars for aircraft parking and storage. Renovation of the existing Navy Hangar building will comprise 87,000 SF of this total, resulting in approximately 408,000 SF of new building area. The Project will be designed and constructed as an innovative example of sustainable development, with clean and efficient energy at its core. The Project will facilitate progress toward a carbon neutral aviation industry by incorporating infrastructure to support electric vehicles and equipment, electric aircraft, and sustainable aviation fuels – contributing in measurable ways to Massport's Net Zero goal by 2031. As an integral aspect of the development, the long dormant Navy Hangar building will be modernized and restored, while maintaining the character of this historic structure.

With regard to aircraft activity, the Project would result in environmental benefits associated with reduced air emissions by reducing overall aircraft trips. Currently, aircraft fly in and out empty to pick up and drop off aircraft operators who cannot secure aircraft storage space at Hanscom, as well as employees of Massachusetts-based companies located in close proximity to the Airport. This practice results in extra flights (referred to as "ferry flights") that would otherwise not be required with aircraft stored at Hanscom. By providing aircraft parking and storage on-airport, the Project will relieve pressure from Logan in accordance with Massport's long-term planning objective aimed at using regional airports to satisfy the current and future demand for general aviation services. Note that Hanscom Field is the Federal Aviation Administration's designated general aviation reliever for Logan Airport.

We respectfully request that you publish notice of availability of the ENF for public review in the January 25, 2023 edition of *The Environmental Monitor*, so that public comments are due by February

14, 2023 and a Certificate is issued on February 24, 2023. Inquiries should be directed to Ken Schwartz at 617-607-2156 or via email at kschwartz@vhb.com.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael Argiros". The signature is stylized and cursive.

Michael Argiros

cc: Jeffrey Leerink/SVB Securities
S. Williams, B. Washburn/Massport

L.G. Hanscom Field

North Airfield Development

Bedford, MA

SUBMITTED TO **The Executive Office of Energy and Environmental Affairs
MEPA Office**

100 Cambridge Street, Suite 900
Boston, MA 02114

PROPONENT **Runway Realty Ventures, LLC
North Airfield Ventures, LLC**

700 Boston Providence Highway
Norwood, MA 02062

PREPARED BY



101 Walnut Street
Watertown, MA 02471

In association with:

Foley Hoag LLP
Signature Flight Support
UDA Architects
Kinton Aviation
Lord Environmental, Inc.

January 17, 2023

Table of Contents

Environmental Notification Form

1. Project Description	1-1
1.1 Purpose and Need.....	1-1
1.2 Existing Conditions.....	1-2
1.3 Planning History	1-3
1.4 Project Description	1-4
1.5 Anticipated Project Schedule and Phasing.....	1-5
1.6 Summary of Project Benefits.....	1-6
1.7 Anticipated Permits and Approvals.....	1-6
1.8 Summary of Agency and Community Outreach.....	1-7
2. Alternatives Analysis	2-1
2.1 Project Alternatives	2-1
2.2 Comparison of Environmental Impacts.....	2-4
2.3 Evaluation of Project Alternatives and Project Goals.....	2-6
3. Environmental Justice	3-1
3.1 MEPA Compliance	3-1
3.2 Identification of Environmental Justice Populations.....	3-2
3.3 Assessment of Existing Public Health Conditions	3-4
3.4 Analysis of Potential Project Impacts to EJ Populations.....	3-7
3.5 Enhanced Public Involvement Plan	3-8
4. Climate Action and Sustainability	4-1
4.1 Project Approach to Sustainability.....	4-1
4.2 Climate Change Adaptation and Resiliency	4-1

Appendices

- A ENF Distribution List
- B Environmental Justice Supporting Documentation
- C Climate Resilience – RMAF Report

List of Tables

Table 1-1	Summary of Previous Planning Efforts.....	1-4
Table 1-2	Proposed Development Program	1-5
Table 1-3	List of Anticipated Regulatory Permits and Approvals.....	1-7
Table 2-1	Comparison of Alternative Programs	2-1
Table 2-2	Comparison of Net New Environmental Impacts of the Build Alternatives	2-4
Table 2-3	Evaluation of Project Alternatives Against Project Goals.....	2-6

List of Figures

Figure 1.1	Site Location Map
Figure 1.2	Land Transfer Plan
Figure 1.3	Existing Conditions Plan
Figure 1.4	Environmental Constraints
Figure 1.5	Proposed Conditions Site Plan
Figure 2.1	Build Alternative
Figure 3.1	Environmental Justice Populations (1- and 5-mile radius)

Commonwealth of Massachusetts
Executive Office of Energy and Environmental Affairs
Massachusetts Environmental Policy Act (MEPA) Office

Environmental Notification Form

For Office Use Only

EEA#: _____

MEPA Analyst: _____

The information requested on this form must be completed in order to submit a document electronically for review under the Massachusetts Environmental Policy Act, 301 CMR 11.00.

Project Name: L.G. Hanscom Field North Airfield Development		
Street Address: 154 Hartwell Road, Bedford, MA 01730		
Municipality: Bedford, MA	Watershed: Shawsheen	
Universal Transverse Mercator Coordinates: 19 N E311585 N4705066	Latitude: 42.47503	Longitude: -71.29213
Estimated commencement date: January 2024	Estimated completion date: July 2026	
Project Type: Airport	Status of project design: Conceptual	
Proponent: Runway Realty Ventures, LLC North Airfield Ventures, LLC		
Street Address: 700 Boston Providence Highway / P.O. Box 262		
Municipality: Norwood	State: MA	Zip Code: 02062
Name of Contact Person: Ken Schwartz		
Firm/Agency: VHB	Street Address: 101 Walnut Street	
Municipality: Watertown	State: MA	Zip Code: 02471
Phone: 617-607-2156	Fax: -	E-mail: kschwartz@vhb.com

Does this project meet or exceed a mandatory EIR threshold (see 301 CMR 11.03)?
 Yes **No**

If this is an Expanded Environmental Notification Form (ENF) (see 301 CMR 11.05(7)) or a Notice of Project Change (NPC), are you requesting:

a Single EIR? (see 301 CMR 11.06(8))	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Rollover EIR? (see 301 CMR 11.06(13))	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Special Review Procedure? (see 301CMR 11.09)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Waiver of mandatory EIR? (see 301 CMR 11.11)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
a Phase I Waiver? (see 301 CMR 11.11)	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

(Note: Greenhouse Gas Emissions analysis must be included in the Expanded ENF.)

Which MEPA review threshold(s) does the project meet or exceed (see 301 CMR 11.03)?

301 CMR 11.03(1)(a)(2) - Creation of ten or more acres of impervious area.

Which State Agency Permits will the project require?

**Office of the State Fire Marshal – Aboveground Storage Tank Permit
Office of Public Safety and Inspections – Building Permit**

Identify any financial assistance or land transfer from an Agency of the Commonwealth, including the Agency name and the amount of funding or land area in acres:

The Project involves a Land Transfer between the Proponent and the Massachusetts Port Authority (“Massport”). As shown on Figure 1-2, the Land Transfer areas are limited to three areas within the Project Site:

- 1. An approximately 28.1-acre Massport Ground Lease area;**
- 2. Two parcels totaling approximately 5.2 acres of land being transferred to the Proponent from Massport; and**
- 3. An approximately 2.6-acre area of land being transferred to Massport from the Proponent.**

The Project will also be seeking State Historic Tax Credits as a potential source of financial assistance.

Summary of Project Size & Environmental Impacts	Existing	Change	Total
LAND			
Total site acreage	49.4		
New acres of land altered		23.2	
Acres of impervious area	15.1	23.9	39.0
Square feet of new bordering vegetated wetlands alteration		-0-	
Square feet of new other wetland alteration		-0-	
Acres of new non-water dependent use of tidelands or waterways		-0-	
STRUCTURES			
Gross square footage	87,110	408,360	495,470
Number of housing units	-0-	-0-	-0-
Maximum height (feet)	52	-0-	52
TRANSPORTATION			
Vehicle trips per day	-0-	194	194
Parking spaces	65	175	240
WASTEWATER			
Water Use (Gallons per day)	-0-	13,500	13,500
Water withdrawal (GPD)	-0-	-0-	-0-
Wastewater generation/treatment (GPD)	-0-	12,150	12,150
Length of water mains (miles)	-0-	-0-	-0-
Length of sewer mains (miles)	-0-	-0-	-0-
<p>Has this project been filed with MEPA before? <input type="checkbox"/> Yes (EEA # _____) <input checked="" type="checkbox"/> No</p>			

Has any project on this site been filed with MEPA before?

Yes (EEA # 5484/8696) No

The Project Site was evaluated as part of the 2012 Hanscom Field Environmental Status and Planning Report (ESPR), published in the January 8, 2014 Environmental Monitor. The ESPR inventories Hanscom's facilities and infrastructure, summarizes Massport's tenant audit program, identifies airport activity levels, describes ground transportation, explains Massport's Environmental Management system, and provides information on Hanscom's planned role in the future regional transportation system and its projected five-year improvement program. It also examines noise and air quality levels under existing conditions and a future scenario, and assesses impacts to cultural, historic, conservation, and recreational resources. The 2012 ESPR considered the full Project Site and assumed that Massport would acquire the Navy Parcel and develop the North Airfield of Hanscom Field, with plans to relocate portions of perimeter road. The 2017 ESPR contemplated redevelopment of the North Airfield area only, leaving the Navy Parcel to be developed separately by others.

GENERAL PROJECT INFORMATION – all proponents must fill out this section

PROJECT DESCRIPTION:

Describe the existing conditions and land uses on the project site:

L.G. Hanscom Field (“Hanscom,” or “the Airport”) is New England’s premier general aviation airport serving the flying needs of the region’s high technology corporations, research and development firms, and educational institutions. The variety of current aviation activities at Hanscom include private corporate aviation, recreational flying, pilot training, air charter, cargo, commuter service, air ambulance, and military flights.

The proposed development site encompasses two parcels totaling approximately 47 acres (the “Project Site”), including:

1. Approximately 28.1 acres of land on the North Airfield area of Hanscom (owned by Massport)
2. Approximately 18.7 acres of land surrounding the existing Navy Hangar facility (owned by the Proponent). Site access is provided off Hartwell Road.

Portions of the North Airfield site were previously developed as a parking lot and trailer park, while the remainder of the site is wooded. It is bounded by the Navy Parcel to the east, Hartwell Road to the north, Massport land and its box hangar development (under construction) to the west, and the operational area of Hanscom Field to the south. The Navy Parcel is home to a historic aircraft hangar built in 1959 for the purposes of aircraft research and development, with dedicated hangar, shop, laboratory, and office spaces. For additional detail, please see the attached narrative.

Describe the proposed project and its programmatic and physical elements:

The proposed 47-acre development on the North Airfield and existing Navy Parcel of Hanscom Field (“the Project”) will provide approximately 495,470 square feet of hangar space in the form of 27 purpose-built hangars for aircraft parking and storage on-airport. Renovation of the existing Navy Hangar building will comprise 87,110 sf of this total, resulting in 408,360 sf of new building area. For additional detail, please see the attached narrative.

NOTE: The project description should summarize both the project’s direct and indirect impacts (including construction period impacts) in terms of their magnitude, geographic extent, duration and frequency, and reversibility, as applicable. It should also discuss the infrastructure requirements of the project and the capacity of the municipal and/or regional infrastructure to sustain these requirements into the future.

Describe the on-site project alternatives (and alternative off-site locations, if applicable), considered by the proponent, including at least one feasible alternative that is allowed under current zoning, and the reasons(s) that they were not selected as the preferred alternative:

The attached narrative includes a comparison and evaluation of three site alternatives: No-Build Alternative, Build Alternative, and Preferred Alternative. For details, please see the attached narrative.

NOTE: *The purpose of the alternatives analysis is to consider what effect changing the parameters and/or siting of a project, or components thereof, will have on the environment, keeping in mind that*

the objective of the MEPA review process is to avoid or minimize damage to the environment to the greatest extent feasible. Examples of alternative projects include alternative site locations, alternative site uses, and alternative site configurations.

Summarize the mitigation measures proposed to offset the impacts of the preferred alternative:

The Project would result in an environmental benefit associated with reduced aircraft air emissions by reducing overall aircraft trips. Currently, aircraft fly in and out empty to pick up and drop off aircraft operators who cannot secure aircraft storage space at Hanscom, as well as employees of Massachusetts-based companies located in close proximity to the Airport. This practice results in extra flights (referred to as “ferry flights”) that would otherwise not be required with aircraft stored at Hanscom. By providing aircraft parking and storage on-airport, the Project will relieve pressure from Logan in accordance with Massport’s long-term planning objective aimed at using regional airports to satisfy the current and future demand for general aviation services. Hanscom Field is the Federal Aviation Administration’s designated general aviation reliever for Logan Airport.

The Project is designed to maximize aviation use on the North Airfield and Navy Parcel while minimizing visual impacts on adjacent sites and the surrounding community. As shown in Figure 1-5, hangar development has been set back from Hartwell Road. A continuous row of hangars has been placed parallel to the road to minimize visual impacts and buffer noise generated by aircraft ground movements. Access will be provided by utilizing an existing curb cut along Hartwell Road, which will help to minimize impacts to existing roadside vegetation, maintain the rural character of the roadway, and minimize local vehicular traffic impacts.

The proposed Project will be designed as an innovative example of sustainable design and operations. Hangar buildings will meet LEED Gold specifications, including considerations of energy efficiency, limitations on equipment idling, recycling of construction waste, and commissioning of equipment. Priority will be given to construction materials with low environmental impact, without compromising occupant health and safety or structural integrity. The development will also aim to incorporate enhanced electrical infrastructure for electric vehicle charging and future electrification initiatives. Additionally, the Proponent will explore the feasibility of constructing a roof-mounted PV solar panel system on each hangar roof. Based on a conceptual study to determine the power-generating potential of these solar PV systems, the proposed structures are estimated to provide a total of approximately 4.6 megawatts (MW). The Proponent will concurrently evaluate the potential of including battery storage capacity with these solar PV systems to maximize the energy reliability and resiliency of the Project site. Renewable energy plus storage, in combination with highly energy efficient buildings and electrified transport, will create a pathway for achieving net zero energy.

To mitigate against higher temperatures in the future and the increased likelihood of heatwave events, several features have been incorporated into the proposed development. Hangar roofs will be constructed from materials with a higher albedo (e.g., white roofs), allowing sunlight to be reflected instead of absorbed, which reduces the urban heat island effect. Similarly, the Proponent will design pavements, where possible, to absorb less heat by increased albedo (greater reflectivity), especially in areas not utilized by aircraft.

The Project site will be designed to meet all applicable stormwater requirements and maximize the infiltration of stormwater. Despite the increase in impervious surface, stormwater utilities will be designed to accommodate future precipitation events. The site will also be designed to encourage positive drainage away from the hangar buildings, which will each include floor drains within the structure. Green infrastructure will be incorporated where possible to encourage groundwater recharge, especially on the land side of the development. On the airfield, however, creation of standing water and/or wildlife habitat is unsafe due to potential impacts on aircraft operations. The Proponent will also evaluate the feasibility of pervious pavement for landside activities, such as parking areas.

If the project is proposed to be constructed in phases, please describe each phase:

Construction phasing will begin with sitework and utilities, followed by the construction of the exterior portions of the hangar structures. Interior finishes and customization will follow. The order in which the hangars are built will be strategically planned to mitigate impacts to tenants and the surrounding community. Additionally, the Project team is exploring the feasibility of using the airfield to accommodate construction vehicle traffic. The Land Transfer enables the completion of an internal circulation road, which can potentially be used to deliver materials to the Project Site. The Project team will work closely with tenants and Massport as construction is planned and proceeds throughout the site.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN:

Is the project within or adjacent to an Area of Critical Environmental Concern?

- Yes (Specify _____)
 No

If yes, does the ACEC have an approved Resource Management Plan? ___ Yes ___ No;
If yes, describe how the project complies with this plan.

Will there be stormwater runoff or discharge to the designated ACEC? ___ Yes ___ No;
If yes, describe and assess the potential impacts of such stormwater runoff/discharge to the designated ACEC.

RARE SPECIES:

Does the project site include Estimated and/or Priority Habitat of State-Listed Rare Species? (see http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/priority_habitat/priority_habitat_home.htm)

- Yes (Specify _____) No

The majority of the Airport (primarily the infield) is mapped as priority habitat for grassland sparrows (Priority Habitat 1512). However, Hanscom Field has a Wildlife Management Plan to prevent wildlife interaction with aircraft. The Priority Habitat boundary lies just outside the development area, with the exception of minor ramp connections to the taxiway.

HISTORICAL /ARCHAEOLOGICAL RESOURCES:

Does the project site include any structure, site or district listed in the State Register of Historic Place or the inventory of Historic and Archaeological Assets of the Commonwealth?

- Yes (Specify: 154 Hartwell Road (BED.555), determined eligible by the US Navy 2016) No

If yes, does the project involve any demolition or destruction of any listed or inventoried historic or archaeological resources? Yes (Specify _____) No

WATER RESOURCES:

Is there an Outstanding Resource Water (ORW) on or within a half-mile radius of the project site? ___ Yes **X** No;
if yes, identify the ORW and its location. _____

(NOTE: Outstanding Resource Waters include Class A public water supplies, their tributaries, and bordering wetlands; active and inactive reservoirs approved by MassDEP; certain waters within Areas of Critical Environmental Concern, and certified vernal pools. Outstanding resource waters are listed in the Surface Water Quality Standards, 314 CMR 4.00.)

Are there any impaired water bodies on or within a half-mile radius of the project site? **X** Yes ___ No; if yes, identify the water body and pollutant(s) causing the impairment:

Elm Brook – Escherichia Coli (E. Coli), Fecal Coliform, Sedimentation.

Is the project within a medium or high stress basin, as established by the Massachusetts Water Resources Commission? **X** Yes ___ No

STORMWATER MANAGEMENT:

Generally describe the project's stormwater impacts and measures that the project will take to comply with the standards found in MassDEP's Stormwater Management Regulations:

The Project will create approximately 24 acres of new impervious area. The stormwater management system will be designed to comply with the requirements of the MA Stormwater Standards, including replicating pre-construction recharge volumes and runoff rates, as well as treating for water quality prior to discharge. The proposed stormwater management system will consist of a combination of Best Management Practices designed in accordance with the Stormwater Standards. To comply with design requirements, the Project will consider a combination of above- and below-grade detention/infiltration systems, bioretention areas, structural systems, and pervious pavement where feasible.

MASSACHUSETTS CONTINGENCY PLAN

Has the project site been, or is it currently being, regulated under M.G.L.c.21E or the Massachusetts Contingency Plan? **Yes X** No ___ ; if yes, please describe the current status of the site (including Release Tracking Number (RTN), cleanup phase, and Response Action Outcome classification):

Permanent Solution with No Conditions MADEP RTN #3-0035926 issued for 154 Hartwell (the undeveloped property on the adjacent Hillside).

Is there an Activity and Use Limitation (AUL) on any portion of the project site? **Yes X** No ___ ; if yes, describe which portion of the site and how the project will be consistent with the AUL:

AUL recorded on the deed for the Naval Weapons Industrial Reserve Plant property ("Site 3"). EPA #MA 6170023570. AUL restricts groundwater use. Subsurface activities without LSP oversight.

Are you aware of any Reportable Conditions at the property that have not yet been assigned an RTN? Yes ___ **No X** ; if yes, please describe: _____

SOLID AND HAZARDOUS WASTE:

If the project will generate solid waste during demolition or construction, describe alternatives considered for re-use, recycling, and disposal of, e.g., asphalt, brick, concrete, gypsum, metal, wood:

The Proponent will implement a waste management plan to divert Project-related construction waste material from landfills through recycling and salvaging where practicable. Existing pavement (if applicable) will either be processed on-site for re-use as structural fill or shipped off-site to an asphalt recycling facility.

Should excess soil be generated during construction that requires off-site disposal, analytical testing of the soil will be required so that it can be properly disposed of at an off-site facility. Materials will be handled according to all applicable federal, state and municipal environmental laws and regulations. In the event that subsurface contamination exceeding MCP reporting thresholds is encountered, MassDEP will be notified and the contamination managed in accordance with the Massachusetts Contingency Plan ("MCP").

(NOTE: Asphalt pavement, brick, concrete and metal are banned from disposal at Massachusetts landfills and waste combustion facilities and wood is banned from disposal at Massachusetts landfills. See 310 CMR 19.017 for the complete list of banned materials.)

Will your project disturb asbestos containing materials? Yes ___ **No X** ; if yes, please consult state asbestos requirements at <http://mass.gov/MassDEP/air/asbhom01.htm>

Describe anti-idling and other measures to limit emissions from construction equipment:

The Commonwealth of Massachusetts anti-idling law will be enforced during the construction phase of the Project with the installation of on-site anti-idling signage. The Project will comply with the requirements of the Clean Construction Equipment Initiative, where reasonable and feasible, which is aimed at reducing air emissions from diesel-powered construction equipment.

DESIGNATED WILD AND SCENIC RIVER:

Is this project site located wholly or partially within a defined river corridor of a federally designated Wild and Scenic River or a state designated Scenic River? Yes ___ **No** **X** ;
if yes, specify name of river and designation:

If yes, does the project have the potential to impact any of the “outstandingly remarkable” resources of a federally Wild and Scenic River or the stated purpose of a state designated Scenic River? Yes ___ No ___ ; if yes, specify name of river and designation: _____;
if yes, will the project will result in any impacts to any of the designated “outstandingly remarkable” resources of the Wild and Scenic River or the stated purposes of a Scenic River.
Yes ___ No ___ ;
if yes, describe the potential impacts to one or more of the “outstandingly remarkable” resources or stated purposes and mitigation measures proposed.

ATTACHMENTS:

1. List of all attachments to this document.

Chapter 1, Project Description
Chapter 2, Alternatives Analysis
Chapter 3, Environmental Justice
Chapter 4, Climate Action and Sustainability
Appendix A – ENF Distribution List
Appendix B – Environmental Justice Supporting Documentation
Appendix C – Climate Resilience Supporting Documentation
2. U.S.G.S. map (good quality color copy, 8-½ x 11 inches or larger, at a scale of 1:24,000) indicating the project location and boundaries. **Refer to Figure 1-1.**
3. Plan, at an appropriate scale, of existing conditions on the project site and its immediate environs, showing all known structures, roadways and parking lots, railroad rights-of-way, wetlands and water bodies, wooded areas, farmland, steep slopes, public open spaces, and major utilities. **Refer to Figure 1-3.**
4. Plan, at an appropriate scale, depicting environmental constraints on or adjacent to the project site such as Priority and/or Estimated Habitat of state-listed rare species, Areas of Critical Environmental Concern, Chapter 91 jurisdictional areas, Article 97 lands, wetland resource area delineations, water supply protection areas, and historic resources and/or districts. **Refer to Figure 1-4.**
5. Plan, at an appropriate scale, of proposed conditions upon completion of project (if construction of the project is proposed to be phased, there should be a site plan showing conditions upon the completion of each phase). **Refer to Figure 1-5.**
6. List of all agencies and persons to whom the proponent circulated the ENF, in accordance with 301 CMR 11.16(2). **Refer to Appendix A.**
7. List of municipal and federal permits and reviews required by the project, as applicable.
8. Printout of output report from RMAAT Climate Resilience Design Standards Tool, available [here](#). **Refer to Appendix C.**
9. Printout from the EEA [EJ Maps Viewer](#) showing the project location relative to Environmental Justice (EJ) Populations located in whole or in part within a 1-mile and 5-mile radius of the project site. **Refer to Figure 3-1.**

LAND SECTION – all proponents must fill out this section

I. Thresholds / Permits

A. Does the project meet or exceed any review thresholds related to **land** (see 301 CMR 11.03(1))
X **Yes** ___ **No**; if yes, specify each threshold:

301 CMR 11.03(1)(a)(2) - Creation of ten or more acres of impervious area.

II. Impacts and Permits

A. Describe, in acres, the current and proposed character of the project site, as follows:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Footprint of buildings	<u>1.4</u>	<u>9.5</u>	<u>10.9</u>
Internal roadways	<u>1.1</u>	<u>3.0</u>	<u>4.1</u>
Parking and other paved areas	<u>9.0</u>	<u>10.8</u>	<u>19.8</u>
Other altered areas	<u>5.0</u>	<u>2.0</u>	<u>7.0</u>
Undeveloped areas	<u>36.0</u>	<u>(-25.3)</u>	<u>10.7</u>
Total: Project Site Acreage	<u>52.5</u>	<u>0.0</u>	<u>52.5</u>

- Has any part of the project site been in active agricultural use in the last five years?
___ Yes X **No**; if yes, how many acres of land in agricultural use (with prime state or locally important agricultural soils) will be converted to nonagricultural use?
 - Is any part of the project site currently or proposed to be in active forestry use?
___ Yes X **No**; if yes, please describe current and proposed forestry activities and indicate whether any part of the site is the subject of a forest management plan approved by the Department of Conservation and Recreation:
- D. Does any part of the project involve conversion of land held for natural resources purposes in accordance with Article 97 of the Amendments to the Constitution of the Commonwealth to any purpose not in accordance with Article 97? ___ Yes X **No**; if yes, describe:
- E. Is any part of the project site currently subject to a conservation restriction, preservation restriction, agricultural preservation restriction or watershed preservation restriction? ___ Yes X **No**; if yes, does the project involve the release or modification of such restriction? ___ Yes ___ No; if yes, describe:
- F. Does the project require approval of a new urban redevelopment project or a fundamental change in an existing urban redevelopment project under M.G.L.c.121A? ___ Yes X **No**; if yes, describe:
- G. Does the project require approval of a new urban renewal plan or a major modification of an existing urban renewal plan under M.G.L.c.121B? ___ Yes X **No**; if yes, describe:

III. Consistency

Identify the current municipal comprehensive land use plan

Title: L.G. Hanscom Airport – Airport Layout Plan

Date: January 25, 2022

Describe the project's consistency with that plan with regard to: **See below.**

- 1) economic development _____
- 2) adequacy of infrastructure _____
- 3) open space impacts _____
- 4) compatibility with adjacent land uses _____

The 2022 Airport Layout Plan (ALP) for Hanscom Field designates the proposed development area as "Future Aviation Compatible Use."

Identify the current Regional Policy Plan of the applicable Regional Planning Agency (RPA)

RPA: Metropolitan Area Planning Commission

Title: MetroFuture

Date: May 2008

Describe the project's consistency with that plan with regard to: See below.

- 1) economic development _____
- 2) adequacy of infrastructure _____
- 3) open space impacts _____

MetroFuture is organized around five key elements, including Sustainable Growth patterns, Housing Choices, Community Vitality, and Prosperity. MetroFuture's vision for the Metropolitan Core includes:

- Job growth built around medical and educational institutions, and other major industries;
- Improved schools, safety, and parks that attract families and retirees; and
- Build on role as the "hub" of the regional transportation network.

The Project will develop facilities to meet regional demand for general aviation aircraft and storage, thereby supporting the regional transportation network. The Project is expected to reduce the current practice of flying-in and flying-out to pick up aircraft operators who cannot secure hangar space at Hanscom, and employees of Massachusetts based companies located in close proximity to the airport. As a result, the Project will be supporting Massachusetts businesses and reducing fuel costs. Since the proposed development is adjacent to an active airfield, there are limited opportunities for community open space. However, the Project continues to evaluate the possibility of incorporating a Living History Museum into the development, that would include public access for this educational opportunity.

RARE SPECIES SECTION

I. Thresholds / Permits

- A. Will the project meet or exceed any review thresholds related to **rare species or habitat** (see 301 CMR 11.03(2))? ___ Yes **X** No; if yes, specify, in quantitative terms:

(NOTE: If you are uncertain, it is recommended that you consult with the Natural Heritage and Endangered Species Program (NHESP) prior to submitting the ENF.)

- B. Does the project require any state permits related to **rare species or habitat**? ___ Yes **X** No
- C. Does the project site fall within mapped rare species habitat (Priority or Estimated Habitat?) in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes **X** No.
- D. If you answered "No" to all questions A, B and C, proceed to the **Wetlands, Waterways, and Tidelands Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Rare Species section below.

II. Impacts and Permits

- A. Does the project site fall within Priority or Estimated Habitat in the current Massachusetts Natural Heritage Atlas (attach relevant page)? ___ Yes ___ No. If yes,
1. Have you consulted with the Division of Fisheries and Wildlife Natural Heritage and Endangered Species Program (NHESP)? ___ Yes ___ No; if yes, have you received a determination as to whether the project will result in the "take" of a rare species? ___ Yes ___ No; if yes, attach the letter of determination to this submission.
 2. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate rare species impacts
 3. Which rare species are known to occur within the Priority or Estimated Habitat?
 4. Has the site been surveyed for rare species in accordance with the Massachusetts Endangered Species Act? ___ Yes ___ No
 4. If your project is within Estimated Habitat, have you filed a Notice of Intent or received an Order of Conditions for this project? ___ Yes ___ No; if yes, did you send a copy of the Notice of Intent to the Natural Heritage and Endangered Species Program, in accordance with the Wetlands Protection Act regulations? ___ Yes ___ No
- B. Will the project "take" an endangered, threatened, and/or species of special concern in accordance with M.G.L. c.131A (see also 321 CMR 10.04)? ___ Yes ___ No; if yes, provide a summary of proposed measures to minimize and mitigate impacts to significant habitat:

WETLANDS, WATERWAYS, AND TIDELANDS SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wetlands, waterways, and tidelands** (see 301 CMR 11.03(3))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits (or a local Order of Conditions) related to **wetlands, waterways, or tidelands**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Water Supply Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wetlands, Waterways, and Tidelands Section below.

II. Wetlands Impacts and Permits

Does the project require a new or amended Order of Conditions under the Wetlands Protection Act (M.G.L. c.131A)? ___ Yes ___ No;

If yes, has a Notice of Intent been filed? ___ Yes ___ No;

If yes, list the date and MassDEP file number: _____;

If yes, has a local Order of Conditions been issued? ___ Yes ___ No;

Was the Order of Conditions appealed? ___ Yes ___ No.

Will the project require a Variance from the Wetlands regulations? ___ Yes ___ No.

B. Describe any proposed permanent or temporary impacts to wetland resource areas located on the project site:

C. Estimate the extent and type of impact that the project will have on wetland resources, and indicate whether the impacts are temporary or permanent:

<u>Coastal Wetlands</u>	<u>Area (square feet) or Length (linear feet)</u>	<u>Temporary or Permanent Impact?</u>
Land Under the Ocean	_____	_____
Designated Port Areas	_____	_____
Coastal Beaches	_____	_____
Coastal Dunes	_____	_____
Barrier Beaches	_____	_____
Coastal Banks	_____	_____
Rocky Intertidal Shores	_____	_____
Salt Marshes	_____	_____
Land Under Salt Ponds	_____	_____
Land Containing Shellfish	_____	_____
Fish Runs	_____	_____
Land Subject to Coastal Storm Flowage	_____	_____
 <u>Inland Wetlands</u>		
Bank (If)	_____	_____
Bordering Vegetated Wetlands	_____	_____
Isolated Vegetated Wetlands	_____	_____
Land under Water	_____	_____
Isolated Land Subject to Flooding	_____	_____
Bordering Land Subject to Flooding	_____	_____
Riverfront Area	_____	_____

D. Is any part of the project:

1. proposed as a **limited project**? ___ Yes ___ No; if yes, what is the area (in sf)? ____
2. the construction or alteration of a **dam**? ___ Yes ___ No; if yes, describe:
3. fill or structure in a **velocity zone** or **regulatory floodway**? ___ Yes ___ No
4. dredging or disposal of dredged material? ___ Yes ___ No; if yes, describe the volume of dredged material and the proposed disposal site:
5. a discharge to an **Outstanding Resource Water (ORW)** or an **Area of Critical Environmental Concern (ACEC)**? ___ Yes ___ No
6. subject to a wetlands restriction order? ___ Yes ___ No; if yes, identify the area (in sf):
7. located in buffer zones? ___ Yes ___ No; if yes, how much (in sf)

E. Will the project:

1. be subject to a local wetlands ordinance or bylaw? ___ Yes ___ No
2. alter any federally-protected wetlands not regulated under state law? ___ Yes ___ No; if yes, what is the area (sf)?

III. Waterways and Tidelands Impacts and Permits

A. Does the project site contain waterways or tidelands (including filled former tidelands) that are subject to the Waterways Act, M.G.L.c.91? ___ Yes ___ No; if yes, is there a current Chapter 91 License or Permit affecting the project site? ___ Yes ___ No; if yes, list the date and license or permit number and provide a copy of the historic map used to determine extent of filled tidelands:

Does the project require a new or modified license or permit under M.G.L.c.91? ___ Yes ___ No; if yes, how many acres of the project site subject to M.G.L.c.91 will be for non-water-dependent use? Current ___ Change ___ Total ___
If yes, how many square feet of solid fill or pile-supported structures (in sf)?

C. For non-water-dependent use projects, indicate the following:

Area of filled tidelands on the site: _____

Area of filled tidelands covered by buildings: _____

For portions of site on filled tidelands, list ground floor uses and area of each use:

_____ Does the project include new non-water-dependent uses located over flowed tidelands?

Yes ___ No ___

Height of building on filled tidelands _____

Also show the following on a site plan: Mean High Water, Mean Low Water, Water-dependent Use Zone, location of uses within buildings on tidelands, and interior and exterior areas and facilities dedicated for public use, and historic high and historic low water marks.

D. Is the project located on landlocked tidelands? ___ Yes ___ No; if yes, describe the project's impact on the public's right to access, use and enjoy jurisdictional tidelands and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

E. Is the project located in an area where low groundwater levels have been identified by a municipality or by a state or federal agency as a threat to building foundations? ___ Yes ___ No; if yes, describe the project's impact on groundwater levels and describe measures the project will implement to avoid, minimize or mitigate any adverse impact:

F. Is the project non-water-dependent **and** located on landlocked tidelands **or** waterways or tidelands subject to the Waterways Act **and** subject to a mandatory EIR? ___ Yes ___ No;

(NOTE: If yes, then the project will be subject to Public Benefit Review and Determination.)

G. Does the project include dredging? ___ Yes ___ No; if yes, answer the following questions:

What type of dredging? Improvement ___ Maintenance ___ Both ___

What is the proposed dredge volume, in cubic yards (cys) _____

What is the proposed dredge footprint ___ length (ft) ___ width (ft) ___ depth (ft);

Will dredging impact the following resource areas?

Intertidal Yes___ No___; if yes, ___ sq ft

Outstanding Resource Waters Yes___ No___; if yes, ___ sq ft

Other resource area (i.e. shellfish beds, eel grass beds) Yes___ No___; if yes ___ sq ft

If yes to any of the above, have you evaluated appropriate and practicable steps to: 1) avoidance; 2) if avoidance is not possible, minimization; 3) if either avoidance or minimize is not possible, mitigation?

If no to any of the above, what information or documentation was used to support this determination?

Provide a comprehensive analysis of practicable alternatives for improvement dredging in accordance with 314 CMR 9.07(1)(b). Physical and chemical data of the sediment shall be included in the comprehensive analysis.

Sediment Characterization

Existing gradation analysis results? ___ Yes ___ No: if yes, provide results.

Existing chemical results for parameters listed in 314 CMR 9.07(2)(b)6? ___ Yes ___ No; if yes, provide results.

Do you have sufficient information to evaluate feasibility of the following management options for dredged sediment? If yes, check the appropriate option.

Beach Nourishment ___

Unconfined Ocean Disposal ___

Confined Disposal:

Confined Aquatic Disposal (CAD) ___

Confined Disposal Facility (CDF) ___

Landfill Reuse in accordance with COMM-97-001 ___

Shoreline Placement ___

Upland Material Reuse ___

In-State landfill disposal ___

Out-of-state landfill disposal ___

(NOTE: This information is required for a 401 Water Quality Certification.)

IV. Consistency:

A. Does the project have effects on the coastal resources or uses, and/or is the project located within the Coastal Zone? ___ Yes ___ No; if yes, describe these effects and the projects consistency with the policies of the Office of Coastal Zone Management:

B. Is the project located within an area subject to a Municipal Harbor Plan? ___ Yes ___ No; if yes, identify the Municipal Harbor Plan and describe the project's consistency with that plan:

WATER SUPPLY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **water supply** (see 301 CMR 11.03(4))? ___ Yes X No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **water supply**? ___ Yes X No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Wastewater Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Water Supply Section below.

II. Impacts and Permits

A. Describe, in gallons per day (gpd), the volume and source of water use for existing and proposed activities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Municipal or regional water supply	_____	_____	_____
Withdrawal from groundwater	_____	_____	_____
Withdrawal from surface water	_____	_____	_____
Interbasin transfer	_____	_____	_____

(NOTE: Interbasin Transfer approval will be required if the basin and community where the proposed water supply source is located is different from the basin and community where the wastewater from the source will be discharged.)

B. If the source is a municipal or regional supply, has the municipality or region indicated that there is adequate capacity in the system to accommodate the project? ___ Yes ___ No

C. If the project involves a new or expanded withdrawal from a groundwater or surface water source, has a pumping test been conducted? ___ Yes ___ No; if yes, attach a map of the drilling sites and a summary of the alternatives considered and the results. _____

D. What is the currently permitted withdrawal at the proposed water supply source (in gallons per day)? _____ Will the project require an increase in that withdrawal? ___ Yes ___ No; if yes, then how much of an increase (gpd)? _____

E. Does the project site currently contain a water supply well, a drinking water treatment facility, water main, or other water supply facility, or will the project involve construction of a new facility? ___ Yes ___ No. If yes, describe existing and proposed water supply facilities at the project site:

	<u>Permitted Flow</u>	<u>Existing Avg Daily Flow</u>	<u>Project Flow</u>	<u>Total</u>
Capacity of water supply well(s) (gpd)	_____	_____	_____	_____
Capacity of water treatment plant (gpd)	_____	_____	_____	_____

F. If the project involves a new interbasin transfer of water, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or proposed?

G. Does the project involve:

1. new water service by the Massachusetts Water Resources Authority or other agency of the Commonwealth to a municipality or water district? ___ Yes ___ No

a Watershed Protection Act variance? ___ Yes ___ No; if yes, how many acres of alteration?

3. a non-bridged stream crossing 1,000 or less feet upstream of a public surface drinking

water supply for purpose of forest harvesting activities? ___ Yes ___ No

III. Consistency

Describe the project's consistency with water conservation plans or other plans to enhance water resources, quality, facilities and services:

WASTEWATER SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **wastewater** (see 301 CMR 11.03(5))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **wastewater**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Transportation -- Traffic Generation Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Wastewater Section below.

II. Impacts and Permits

A. Describe the volume (in gallons per day) and type of disposal of wastewater generation for existing and proposed activities at the project site (calculate according to 310 CMR 15.00 for septic systems or 314 CMR 7.00 for sewer systems):

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Discharge of sanitary wastewater	_____	_____	_____
Discharge of industrial wastewater	_____	_____	_____
TOTAL	_____	_____	_____

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Discharge to groundwater	_____	_____	_____
Discharge to outstanding resource water	_____	_____	_____
Discharge to surface water	_____	_____	_____
Discharge to municipal or regional wastewater facility	_____	_____	_____
TOTAL	_____	_____	_____

B. Is the existing collection system at or near its capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

C. Is the existing wastewater disposal facility at or near its permitted capacity? ___ Yes ___ No; if yes, then describe the measures to be undertaken to accommodate the project's wastewater flows:

D. Does the project site currently contain a wastewater treatment facility, sewer main, or other wastewater disposal facility, or will the project involve construction of a new facility? ___ Yes ___ No; if yes, describe as follows:

	<u>Permitted</u>	<u>Existing Avg Daily Flow</u>	<u>Project Flow</u>	<u>Total</u>
Wastewater treatment plant capacity (in gallons per day)	_____	_____	_____	_____

E. If the project requires an interbasin transfer of wastewater, which basins are involved, what is the direction of the transfer, and is the interbasin transfer existing or new?

(NOTE: Interbasin Transfer approval may be needed if the basin and community where wastewater will be discharged is different from the basin and community where the source of water supply is located.)

F. Does the project involve new sewer service by the Massachusetts Water Resources Authority (MWRA) or other Agency of the Commonwealth to a municipality or sewer district? ___ Yes ___ No

G. Is there an existing facility, or is a new facility proposed at the project site for the storage, treatment, processing, combustion or disposal of sewage sludge, sludge ash, grit, screenings, wastewater reuse (gray water) or other sewage residual materials? ___ Yes ___ No; if yes, what is the capacity (tons per day):

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Treatment	_____	_____	_____
Processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

H. Describe the water conservation measures to be undertaken by the project, and other wastewater mitigation, such as infiltration and inflow removal.

III. Consistency

Describe measures that the proponent will take to comply with applicable state, regional, and local plans and policies related to wastewater management:

If the project requires a sewer extension permit, is that extension included in a comprehensive wastewater management plan? ___ Yes ___ No; if yes, indicate the EEA number for the plan and whether the project site is within a sewer service area recommended or approved in that plan:

TRANSPORTATION SECTION (TRAFFIC GENERATION)

I. Thresholds / Permit

A. Will the project meet or exceed any review thresholds related to **traffic generation** (see 301 CMR 11.03(6))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **state-controlled roadways**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Roadways and Other Transportation Facilities Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Traffic Generation Section below.

II. Traffic Impacts and Permits

A. Describe existing and proposed vehicular traffic generated by activities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Number of parking spaces	_____	_____	_____
Number of vehicle trips per day	_____	_____	_____
ITE Land Use Code(s):	_____	_____	_____

B. What is the estimated average daily traffic on roadways serving the site?

	<u>Roadway</u>	<u>Existing</u>	<u>Change</u>	<u>Total</u>
1.	_____	_____	_____	_____
2.	_____	_____	_____	_____
3.	_____	_____	_____	_____

C. If applicable, describe proposed mitigation measures on state-controlled roadways that the project proponent will implement:

D. How will the project implement and/or promote the use of transit, pedestrian and bicycle facilities and services to provide access to and from the project site?

Is there a Transportation Management Association (TMA) that provides transportation demand management (TDM) services in the area of the project site? ___ Yes ___ No; if yes, describe if and how will the project will participate in the TMA:

Will the project use (or occur in the immediate vicinity of) water, rail, or air transportation facilities? ___ Yes ___ No; if yes, generally describe:

If the project will penetrate approach airspace of a nearby airport, has the proponent filed a Massachusetts Aeronautics Commission Airspace Review Form (780 CMR 111.7) and a Notice of Proposed Construction or Alteration with the Federal Aviation Administration (FAA) (CFR Title 14 Part 77.13, forms 7460-1 and 7460-2)?

III. Consistency

Describe measures that the proponent will take to comply with municipal, regional, state, and federal plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services:

TRANSPORTATION SECTION (ROADWAYS AND OTHER TRANSPORTATION FACILITIES)

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **roadways or other transportation facilities** (see 301 CMR 11.03(6))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **roadways or other transportation facilities**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Energy Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Roadways Section below.

II. Transportation Facility Impacts

A. Describe existing and proposed transportation facilities in the immediate vicinity of the project site:

B. Will the project involve any

- 1. Alteration of bank or terrain (in linear feet)? _____
- 2. Cutting of living public shade trees (number)? _____
- 3. Elimination of stone wall (in linear feet)? _____

III. Consistency -- Describe the project's consistency with other federal, state, regional, and local plans and policies related to traffic, transit, pedestrian and bicycle transportation facilities and services, including consistency with the applicable regional transportation plan and the Transportation Improvements Plan (TIP), the State Bicycle Plan, and the State Pedestrian Plan:

ENERGY SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **energy** (see 301 CMR 11.03(7))?
___ Yes **X** **No**; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **energy**? ___ Yes **X** **No**; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Air Quality Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Energy Section below.

II. Impacts and Permits

A. Describe existing and proposed energy generation and transmission facilities at the project site:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Capacity of electric generating facility (megawatts)	_____	_____	_____
Length of fuel line (in miles)	_____	_____	_____
Length of transmission lines (in miles)	_____	_____	_____
Capacity of transmission lines (in kilovolts)	_____	_____	_____

B. If the project involves construction or expansion of an electric generating facility, what are:

1. the facility's current and proposed fuel source(s)?
2. the facility's current and proposed cooling source(s)?

C. If the project involves construction of an electrical transmission line, will it be located on a new, unused, or abandoned right of way? ___Yes ___No; if yes, please describe:

D. Describe the project's other impacts on energy facilities and services:

III. Consistency

Describe the project's consistency with state, municipal, regional, and federal plans and policies for enhancing energy facilities and services:

AIR QUALITY SECTION

I. Thresholds

A. Will the project meet or exceed any review thresholds related to **air quality** (see 301 CMR 11.03(8))? ___ Yes **X** No; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **air quality**? ___ Yes **X** No; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Solid and Hazardous Waste Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Air Quality Section below.

II. Impacts and Permits

A. Does the project involve construction or modification of a major stationary source (see 310 CMR 7.00, Appendix A)? ___ Yes ___ No; if yes, describe existing and proposed emissions (in tons per day) of:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Particulate matter	_____	_____	_____
Carbon monoxide	_____	_____	_____
Sulfur dioxide	_____	_____	_____
Volatile organic compounds	_____	_____	_____
Oxides of nitrogen	_____	_____	_____
Lead	_____	_____	_____
Any hazardous air pollutant	_____	_____	_____
Carbon dioxide	_____	_____	_____

B. Describe the project's other impacts on air resources and air quality, including noise impacts:

III. Consistency

A. Describe the project's consistency with the State Implementation Plan:

B. Describe measures that the proponent will take to comply with other federal, state, regional, and local plans and policies related to air resources and air quality:

SOLID AND HAZARDOUS WASTE SECTION

I. Thresholds / Permits

A. Will the project meet or exceed any review thresholds related to **solid or hazardous waste** (see 301 CMR 11.03(9))? ___ Yes **No**; if yes, specify, in quantitative terms:

B. Does the project require any state permits related to **solid and hazardous waste**? ___ Yes **No**; if yes, specify which permit:

C. If you answered "No" to both questions A and B, proceed to the **Historical and Archaeological Resources Section**. If you answered "Yes" to either question A or question B, fill out the remainder of the Solid and Hazardous Waste Section below.

II. Impacts and Permits

A. Is there any current or proposed facility at the project site for the storage, treatment, processing, combustion or disposal of solid waste? ___ Yes ___ No; if yes, what is the volume (in tons per day) of the capacity:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Treatment, processing	_____	_____	_____
Combustion	_____	_____	_____
Disposal	_____	_____	_____

B. Is there any current or proposed facility at the project site for the storage, recycling, treatment or disposal of hazardous waste? ___ Yes ___ No; if yes, what is the volume (in tons or gallons per day) of the capacity:

	<u>Existing</u>	<u>Change</u>	<u>Total</u>
Storage	_____	_____	_____
Recycling	_____	_____	_____
Treatment	_____	_____	_____
Disposal	_____	_____	_____

C. If the project will generate solid waste (for example, during demolition or construction), describe alternatives considered for re-use, recycling, and disposal:

D. If the project involves demolition, do any buildings to be demolished contain asbestos?
___ Yes ___ No

E. Describe the project's other solid and hazardous waste impacts (including indirect impacts):

III. Consistency

Describe measures that the proponent will take to comply with the State Solid Waste Master Plan:

HISTORICAL AND ARCHAEOLOGICAL RESOURCES SECTION

I. Thresholds / Impacts

A. Have you consulted with the Massachusetts Historical Commission? **Yes** ___ No; if yes, attach correspondence. For project sites involving lands under water, have you consulted with the Massachusetts Board of Underwater Archaeological Resources? ___ Yes **No**; if yes, attach correspondence

B. Is any part of the project site a historic structure, or a structure within a historic district, in either case listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? **Yes** ___ No; if yes, does the project involve the demolition of all or any exterior part of such historic structure? ___ Yes **No**; if yes, please describe:

C. Is any part of the project site an archaeological site listed in the State Register of Historic Places or the Inventory of Historic and Archaeological Assets of the Commonwealth? ___ Yes **No**; if yes, does the project involve the destruction of all or any part of such archaeological site? ___ Yes ___ No; if yes, please describe:

D. If you answered "No" to all parts of both questions A, B and C, proceed to the **Attachments and Certifications** Sections. If you answered "Yes" to any part of either question A or question B, fill out the remainder of the Historical and Archaeological Resources Section below.

II. Impacts

Describe and assess the project's impacts, direct and indirect, on listed or inventoried historical and archaeological resources:

The Project is proposing alterations to both the subject structure and the site. The areas immediately surrounding the structure will be paved with bituminous concrete to accommodate active aviation activities and access to the building. The exterior masonry and steel siding will be cleaned and repaired as needed, the windows will be removed and replaced with historically appropriate sash, and the hangar doors will be retained. Character-defining features are being retained or replaced in-kind on the interior. All work is being conducted in accordance with the Secretary of the Interior's Standards for Rehabilitation (Standards).

III. Consistency

Describe measures that the proponent will take to comply with federal, state, regional, and local plans and policies related to preserving historical and archaeological resources:

The subject structure, known as the [Raytheon] Flight Test Facility, was determined eligible for listing in the National Register and is pursuing state and federal historic rehabilitation tax credits, and therefore must meet the Standards for all exterior and interior rehabilitation work. Please note, the [Raytheon] Flight Test Facility has been formally entered into the Massachusetts Cultural Resource Information System (MACRIS) but has not yet been added to MACRIS Maps, which is their public online mapping application.

Tenant fit-out guidelines were developed to assist the Flight Test Facility's tenants in developing an appropriate interior plan and fit-out program for their spaces. To ensure that the interior renovations meet the Standards, tenants are required to submit renovation proposals and plans to the owner as early as possible in the planning process. Work will be undertaken by the building

owner and tenants. If work is proposed that is not consistent with these Guidelines, plans must be submitted for review and approval by the Massachusetts Historical Commission and National Park Service.

CLIMATE CHANGE ADAPTATION AND RESILIENCY SECTION

This section of the Environmental Notification Form (ENF) solicits information and disclosures related to climate change adaptation and resiliency, in accordance with the MEPA Interim Protocol on Climate Change Adaptation and Resiliency (the “MEPA Interim Protocol”), effective October 1, 2021. The Interim Protocol builds on the analysis and recommendations of the 2018 Massachusetts Integrated State Hazard Mitigation and Climate Adaptation Plan (SHMCAP), and incorporates the efforts of the Resilient Massachusetts Action Team (RMAT), the inter-agency steering committee responsible for implementation, monitoring, and maintenance of the SHMCAP, including the “Climate Resilience Design Standards and Guidelines” project. The RMAT team recently released the RMAT Climate Resilience Design Standards Tool, which is available [here](#).

The MEPA Interim Protocol is intended to gather project-level data in a standardized manner that will both inform the MEPA review process and assist the RMAT team in evaluating the accuracy and effectiveness of the RMAT Climate Resilience Design Standards Tool. Once this testing process is completed, the MEPA Office anticipates developing a formal Climate Change Adaptation and Resiliency Policy through a public stakeholder process. Questions about the RMAT Climate Resilience Design Standards Tool can be directed to rmat@mass.gov.

All Proponents must complete the following section, referencing as appropriate the results of the output report generated by the RMAT Climate Resilience Design Standards Tool and attached to the ENF. In completing this section, Proponents are encouraged, but not required at this time, to utilize the recommended design standards and associated Tier 1/2/3 methodologies outlined in the RMAT Climate Resilience Design Standards Tool to analyze the project design. However, Proponents are requested to respond to a respond to a [user feedback survey](#) on the RMAT website or to provide feedback to rmat@mass.gov, which will be used by the RMAT team to further refine the tool. Proponents are also encouraged to consult general guidance and best practices as described in the [RMAT Climate Resilience Design Guidelines](#).

Climate Change Adaptation and Resiliency Strategies

Has the project taken measures to adapt to climate change for all of the climate parameters analyzed in the RMAT Climate Resilience Design Standards Tool (sea level rise/storm surge, extreme precipitation (urban or riverine flooding), extreme heat)? **Yes** **No**

Note: Climate adaptation and resiliency strategies include actions that seek to reduce vulnerability to anticipated climate risks and improve resiliency for future climate conditions. Examples of climate adaptation and resiliency strategies include flood barriers, increased stormwater infiltration, living shorelines, elevated infrastructure, increased tree canopy, etc. Projects should address any planning priorities identified by the affected municipality through the Municipal Vulnerability Preparedness (MVP) program or other planning efforts, and should consider a flexible adaptive pathways approach, an adaptation best practice that encourages design strategies that adapt over time to respond to changing climate conditions. General guidance and best practices for designing for climate risk are described in the [RMAT Climate Resilience Design Guidelines](#).

A. If no, explain why.

B. If yes, describe the measures the project will take, including identifying the planning horizon and climate data used in designing project components. If applicable, specify the return period and design storm used (e.g., 100-year, 24-hour storm).

According to the RMAT output report created for the Project site (Appendix C), the Project is at high risk for extreme heat and urban flooding due to extreme precipitation. To mitigate

against higher temperatures in the future and the increased likelihood of heatwave events, several features have been incorporated into the proposed development. Hangar roofs will be constructed from materials with a higher albedo (e.g., white roofs), allowing sunlight to be reflected instead of absorbed, which reduces the urban heat island effect. Similarly, the Proponent will design pavements, where possible, to absorb less heat by increased albedo (greater reflectivity), especially in areas not utilized by aircraft. To protect the Project site from regional brownouts, the Proponent is exploring the feasibility of incorporating solar PV systems into the development, which could be paired with battery storage for added resilience and off-grid functionality.

To protect the Project from urban flooding due to extreme precipitation, the design team will analyze the site for the 25-year storm event, as suggested by the RMAT output report. The RMAT output report projects a total precipitation depth for a 24-design storm of 8.4 inches. This information will be used to determine the appropriate design flood elevation (DFE) for the proposed development. If elevation above the DFE is not feasible, floodproofing critical areas below the DFE will be pursued in accordance with Massport's Floodproofing Design Guide. In general, buildings will be sited above peak flood elevation.

Despite the increase in impervious surface, stormwater utilities will be designed to accommodate future precipitation events. The Project site will be designed to meet all applicable stormwater requirements and maximize the infiltration of stormwater through a combination of above- and below-grade detention/infiltration systems, bioretention areas, structural systems. The site will also be designed to encourage positive drainage away from the hangar buildings, which will each include floor drains within the structure. Green infrastructure will be incorporated where possible to encourage groundwater recharge, especially on the land side of the development. On the airfield, however, creation of standing water and/or wildlife habitat is unsafe due to potential impacts on aircraft operations. The Proponent will also evaluate the feasibility of pervious pavement for landside activities, such as parking areas.

For additional detail, please see the attached narrative.

C. Is the project contributing to regional adaptation strategies? ___ Yes X No; If yes, describe.

II. Has the Proponent considered alternative locations for the project in light of climate change risks? ___ Yes X No

A. If no, explain why.

The Project is being developed as part of, or directly adjacent to, an existing airport.

B. If yes, describe alternatives considered.

III. Is the project located in Land Subject to Coastal Storm Flowage (LSCSF) or Bordering Land Subject to Flooding (BLSF) as defined in the Wetlands Protection Act? ____ Yes **X** No

If yes, describe how/whether proposed changes to the site's topography (including the addition of fill) will result in changes to floodwater flow paths and/or velocities that could impact adjacent properties or the functioning of the floodplain. General guidance on providing this analysis can be found in the CZM/MassDEP Coastal Wetlands Manual, available [here](#).

ENVIRONMENTAL JUSTICE SECTION

I. Identifying Characteristics of EJ Populations

If an Environmental Justice (EJ) population has been identified as located in whole or in part within 5 miles of the project site, describe the characteristics of each EJ populations as identified in the EJ Maps Viewer (i.e., the census block group identification number and EJ characteristics of "Minority," "Minority and Income," etc.). Provide a breakdown of those EJ populations within 1 mile of the project site, and those within 5 miles of the site.

The Project is located within a listed EJ community, Block Group 6, Census Tract 3593.03, which meets the EJ criteria based on minority population. For more information on EJ applicability of this block group and other characteristics, refer to Section 3.2.2.1. There are no other EJ block groups located within the DGA. See Figure 3-1.

Within a 5-mile radius of the Project Site (see Figure 3-1), the following EJ populations were identified:

Minority criteria

- Block Group 1, Census Tract 3162.02
- Block Group 3, Census Tract 3162.02
- Block Group 1, Census Tract 3163
- Block Group 2, Census Tract 3163
- Block Group 5, Census Tract 3164
- Block Group 4, Census Tract 3321
- Block Group 1, Census Tract 3322
- Block Group 2, Census Tract 3322
- Block Group 1, Census Tract 3322.01
- Block Group 2, Census Tract 3323
- Block Group 1, Census Tract 3324.02
- Block Group 2, Census Tract 3324.02
- Block Group 4, Census Tract 3581
- Block Group 1, Census Tract 3583
- Block Group 2, Census Tract 3583
- Block Group 3, Census Tract 3583
- Block Group 4, Census Tract 3583
- Block Group 3, Census Tract 3584
- Block Group 4, Census Tract 3584
- Block Group 1, Census Tract 3585
- Block Group 2, Census Tract 3585
- Block Group 3, Census Tract 3585
- Block Group 1, Census Tract 3586
- Block Group 2, Census Tract 3586
- Block Group 3, Census Tract 3586
- Block Group 4, Census Tract 3586

- Block Group 5, Census Tract 3586
- Block Group 6, Census Tract 3586
- Block Group 1, Census Tract 3587
- Block Group 2, Census Tract 3587
- Block Group 6, Census Tract 3593.03
- Block Group 5, Census Tract 3603
- Block Group 3, Census Tract 3612
- Block Group 2, Census Tract 3631.05
- Block Group 2, Census Tract 3681.01
- Block Group 3, Census Tract 3682

Identify all languages identified in the “Languages Spoken in Massachusetts” tab of the EJ Maps Viewer as spoken by 5 percent or more of the EJ population who also identify as not speaking English “very well.” The languages should be identified for each census tract located in whole or in part within 1 mile and 5 miles of the project site, regardless of whether such census tract contains any designated EJ populations.

There are no languages spoken by 5 percent or more of the EJ population who also identify as not speaking English “very well” present within 1 or 5 miles of the Project.

If the list of languages identified under Section I.B. has been modified with approval of the EEA EJ Director, provide a list of approved languages that the project will use to provide public involvement opportunities during the course of MEPA review. If the list has been expanded by the Proponent (without input from the EEA EJ Director), provide a list of the additional languages that will be used to provide public involvement opportunities during the course of MEPA review as required by Part II of the MEPA Public Involvement Protocol for Environmental Justice Populations (“MEPA EJ Public Involvement Protocol”). If the project is exempt from Part II of the protocol, please specify.

Potential Effects on EJ Populations

If an EJ population has been identified using the EJ Maps Viewer within 1 mile of the project site, describe the likely effects of the project (both adverse and beneficial) on the identified EJ population(s).

The Project is not likely to create negative impacts or have disproportionate adverse effects on EJ populations and Project activities are not expected to exacerbate any existing environmental or health burdens as identified by the DPH EJ Tool. Refer to Section 3.2.4 for the current analysis of potential Project impacts, including Project benefits, which will be further refined in the DEIR.

If an EJ population has been identified using the EJ Maps Viewer within 5 miles of the project site, will the project: (i) meet or exceed MEPA review thresholds under 301 CMR 11.03(8)(a)-(b) ___ Yes **X** No; or (ii) generate 150 or more new average daily trips (adt) of

diesel vehicle traffic, excluding public transit trips, over a duration of 1 year or more. ___ Yes
X No

The Project would not meet or exceed MEPA review thresholds under 301 CMR 11.03(8)(a)-(b) nor would it generate 150 or more new average daily trips of diesel vehicle traffic.

If you answered “Yes” to either question in Section II.B., describe the likely effects of the project (both adverse and beneficial) on the identified EJ population(s).

III. Public Involvement Activities

Provide a description of activities conducted prior to filing to promote public involvement by EJ populations, in accordance with Part II of the MEPA EJ Public Involvement Protocol. In particular:

If advance notification was provided under Part II.A., attach a copy of the Environmental Justice Screening Form and provide list of CBOs/tribes contacted (with dates). Copies of email correspondence can be attached in lieu of a separate list.

State how CBOs and tribes were informed of ways to request a community meeting, and if any meeting was requested. If public meetings were held, describe any issues of concern that were raised at such meetings, and any steps taken (including modifications to the project design) to address such concerns.

If the project is exempt from Part II of the protocol, please specify.

The Project published and distributed an EJ Screening Form on November 30, 2022 in compliance with outreach and public involvement protocol at the time. This EJ Screening Form (Appendix B) and outreach efforts are detailed in Chapter 3, Environmental Justice.

Provide below (or attach) a distribution list (if different from the list in Section III.A. above) of CBOs and tribes, or other individuals or entities the Proponent intends to maintain for the notice of the MEPA Site Visit and circulation of other materials and notices during the course of MEPA review.

Refer to Appendix B, EJ Supporting Documents for a distribution list of CBOs, tribes, and other contacts identified by MEPA for notification.

Describe (or submit as a separate document) the Proponent’s plan to maintain the same level of community engagement throughout the MEPA review process, as conducted prior to filing.

The Proponent has drafted an outreach plan for engagement throughout the MEPA review process. For planned community engagement and outreach efforts, refer to Chapter 3, Environmental Justice. Please note the anticipated difficulties with fulfilling the EJ Outreach Efforts due to EJ applicability and Air Force Base security as noted throughout Chapter 3.

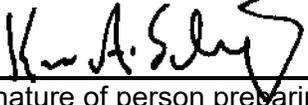
CERTIFICATIONS:

1. The Public Notice of Environmental Review has been/will be published in the following newspapers in accordance with 301 CMR 11.15(1):

(Name) Bedford Citizen (Date) January 25, 2023

2. This form has been circulated to Agencies and Persons in accordance with 301 CMR 11.16(2).

Signatures:

1/17/2023		1/17/2023	
Date	Signature of Responsible Officer or Proponent	Date	Signature of person preparing ENF (if different from above)

<u>Michael Argiros</u>	<u>Ken Schwartz</u>
Name	Name

<u>Runway Realty Ventures, LLC</u>	<u>VHB</u>
<u>North Airfield Ventures, LLC</u>	<u>Firm/Agency</u>
Firm/Agency	Firm/Agency

<u>700 Boston Providence Highway</u>	<u>101 Walnut Street</u>
Street	Street

<u>Norwood, MA 02062</u>	<u>Watertown, MA 02471</u>
Municipality/State/Zip	Municipality/State/Zip

<u>617-327-8100</u>	<u>617-607-2156</u>
Phone	Phone

1

Project Description

This chapter presents the project purpose and need, and describes the existing and proposed site conditions. It provides a planning history of the site, summarizes project benefits, and provides a list of anticipated permits and approvals. The chapter concludes with a summary of outreach activities conducted to date, to both public agencies and the surrounding community.

1.1 Purpose and Need

L.G. Hanscom Field (“Hanscom,” or the “Airport”) is New England’s premier general aviation (GA) airport serving the flying needs of the region’s high technology corporations, research and development firms, and educational institutions. Owned and operated by the Massachusetts Port Authority (“Massport”), Hanscom is the second busiest airport in New England. As a reliever to Logan International Airport (“Logan”), Hanscom provides airside relief by annually serving approximately 125,000 general aviation operations. Hanscom handles over six times more general aviation operations than Logan and supports niche commercial service. The variety of current aviation activities at Hanscom include private corporate aviation, recreational flying, pilot training, air charter, cargo, commuter service, air ambulance, and military flights.

Careful study of existing Hanscom Field general aviation amenities has shown that there is a strong demand for individual hangar space. Hanscom currently accommodates three fixed based operators (FBOs) that provide aeronautical support services including fueling, aircraft storage and maintenance, and some passenger services: Signature Flight Support, Jet Aviation of America, and Atlantic Aviation (previously Rectrix Aerodrome Centers). All three FBOs have reported to Massport that they are currently operating over capacity and have been forced to place customers seeking hangar space for their aircraft on waiting lists. In addition, Massport also has existing customers that desire permanent hangar space that they are currently unable to accommodate.

The Proponent intends to develop facilities to meet this demand, as well as provide space for complementary aviation businesses that will provide additional support for the individual and corporate aviation operators anticipated as core tenants of the development (the “Project”).

Currently, aircraft fly in and out empty to pick up and drop off aircraft operators who cannot secure aircraft storage space at Hanscom, as well as employees of Massachusetts-based

companies located in close proximity to the Airport. This practice results in extra flights (referred to as “ferry flights”) that would otherwise not be required with aircraft stored at Hanscom. By providing aircraft parking and storage on-airport, the Project will relieve pressure from Logan in accordance with Massport’s long-term planning objective aimed at using regional airports to satisfy the current and future demand for general aviation services. The development will also result in an environmental benefit associated with reduced aircraft air emissions by reducing overall aircraft trips.

1.2 Existing Conditions

Hanscom is located in the four towns of Bedford, Concord, Lincoln, and Lexington, Massachusetts and encompasses approximately 1,300 acres. Located approximately 20 miles northwest of Boston, Hanscom has convenient access to Interstate 95/Route 128. The Airport has two runways (7,011 and 5,107 feet), three first-class FBOs, general aviation hangars, T-hangars, a terminal building, aircraft tie-down ramps, a U.S. Customs and Border Protection facility, a Massport Fire Rescue Index B aircraft rescue and firefighting (ARFF) facility, a Boston MedFlight facility, and Massachusetts State Police. General aviation operations currently represent 99 percent of the activity at Hanscom, including business-related activity, charters, light cargo, flight training, and recreational flying. Transient military aircraft conduct less than one percent of operations.

The proposed development site encompasses two parcels totaling approximately 47 acres (the “Project Site”), including:

1. Approximately 28.1 acres of land on the North Airfield area of Hanscom (owned by Massport); and
2. Approximately 18.7 acres of land surrounding the existing Navy Hangar facility (owned by the Proponent). Site access is provided off Hartwell Road.

Portions of the North Airfield site were previously developed as a U.S. Air Force (USAF) parking lot and trailer park, while the remainder of the site is wooded. It is bounded by the Navy Parcel to the east, Hartwell Road to the north, Massport land and its box hangar development (under construction) to the west, and the operational area of Hanscom Field to the south. The Navy Parcel is home to a historic aircraft hangar built in 1959 for the purposes of aircraft research and development, with dedicated hangar, shop, laboratory, and office spaces. The Navy Hangar building, also referred to as the Flight Test Facility, was most recently operated by the Raytheon Corporate Flight Department but has not been in use since 2000. The irregularly shaped parcel is below the grade of the adjacent Hartwell Road and is paved with asphalt and concrete, which is currently used for temporary parking and storage. Unpaved areas are generally maintained as grass. Together, the North Airfield parcel and Navy parcel total approximately 47 acres of proposed development. The Project Site is bordered by the Werfen laboratory facility to the west and the Edge Sports Center to the north. **Figure 1-3** provides a visual representation of the existing conditions of the site.

1.2.1 Land Transfer

The Project involves a Land Transfer between the Proponent and Massport. As shown on **Figure 1-2**, the Land Transfer areas are limited to three areas within the Project Site:

1. An approximately 28.1-acre Massport Ground Lease area;
2. Two parcels totaling approximately 5.2 acres of land being transferred to the Proponent from Massport to provide adequate building Floor Area Ratio and access to the west side of the Navy Hangar; and,
3. An approximately 2.6-acre area of land being transferred to Massport from the Proponent to provide a Taxiway Object Free Area (TOFA) and perimeter access road in accordance with Federal Aviation Administration (FAA) requirements.

1.3 Planning History

The North Airfield was previously leased to the USAF for supplemental housing but was returned to Massport control in 2011. The Navy Parcel, which was previously owned by the federal government, was operated by Raytheon until 2000.

To guide planning at the Airport, Massport prepares the L.G. Hanscom Field Environmental Status and Planning Report (ESPR) in 5-year increments for review under the Massachusetts Environmental Policy Act (MEPA). The ESPRs evaluate the cumulative effect of operations at Hanscom and provide data and analyses on noise, ground transportation, air quality, and water quality. The document provides a retrospective analysis of the environmental effects of Hanscom operations and includes analyses of the cumulative effects of potential planned future projects. Previous ESPRs have identified development opportunities and included planning scenarios for the North Airfield and Navy Parcel. In the 2012 ESPR, both parcels were included, under the assumption that Massport would acquire the Navy Parcel.

The 2017 ESPR contemplated redevelopment of the North Airfield area only, leaving the Navy Parcel to be developed separately by others, potentially as a non-aviation use. The 2017 program for the North Airfield area (2025 scenario) was evaluated by Massport under the National Environmental Policy Act (NEPA) in 2018 as an Environmental Assessment (EA). Nevertheless, the 2017 ESPR program was not pursued as a feasible solution for the site. In 2019, the Navy Parcel was purchased by the Proponent from the federal government in a public auction. In August 2021, Massport issued an RFP for development of the North Airfield by a private entity, which was awarded to the Proponent.

Table 1-1 summarizes previous planning, as described above.

Table 1-1 Summary of Previous Planning Efforts

Planning Scenario	Inclusion of Navy Parcel	Total Proposed Program (sf) ¹	Reason(s) for Unsuitability
2012 ESPR	Yes	315,000 ²	<ul style="list-style-type: none"> › Ramp space insufficient › Hangar occupation by one large FBO instead of corporate tenants › Economically infeasible due to high cost of infrastructure and corresponding low density of development
2017 ESPR	No	165,000+ ³	<ul style="list-style-type: none"> › Shared taxiway between small aircraft and corporate jets is not feasible › Economically infeasible due to high cost of infrastructure and corresponding low density of development

1. The 'Total Proposed Program' would have been completed incrementally under each scenario (i.e., not all at once).
2. In addition to the existing Navy Hangar structure.
3. Development after 2035 is not disclosed, with the note that "In 2035, additional hangars could be constructed adjacent to the wetlands, just west of the proposed 2025 development."

1.4 Project Description

The proposed 47-acre development on the North Airfield and existing Navy Parcel of Hanscom Field ("the Project") will provide approximately 495,470 square feet (sf) of hangar space in the form of 27 purpose-built hangars for aircraft parking and storage on-airport. Renovation of the existing Navy Hangar building will comprise 87,110 sf of this total, resulting in 408,360 sf of new building area.

As a complement to existing FBO and maintenance, repair, and overhaul (MRO) facilities currently at the Airport, the Project provides standalone hangar and aviation support space for aircraft operators allowing for increased privacy and greater control for their flight department. The Project is intended to accommodate the high demand for these amenities which exceeds existing facility capacity at Hanscom. By efficiently accommodating existing Hanscom users, there will be an expected reduction in overall airfield operations compared to no action.

The Project is designed to maximize aviation use on the North Airfield and Navy Parcel while minimizing visual impacts on adjacent sites and the surrounding community. As shown in **Figure 1-5**, hangar development has been set back from Hartwell Road. A continuous row of hangars has been placed parallel to the road to minimize visual impacts and buffer noise generated by aircraft ground movements. Access will be provided by utilizing an existing curb cut along Hartwell Road, which will help to minimize impacts to existing roadside vegetation, maintain the rural character of the roadway, and reduce local vehicular traffic impacts. All vertical construction will be sited to avoid conflicts with FAA requirements for both taxiway and runway clearances.

Each hangar will be capable of storing aircraft currently in production or in the process of getting FAA certification. These hangar designs will provide door widths in excess of 105 feet and door heights of 28 feet. Adjacent aviation support, shop, and passenger amenity areas customized for each tenant’s flight department will also be included in the design of each individual hangar. To accommodate future aviation technologies, including electric vehicles and vertical takeoff and landing aircraft, charging infrastructure will be incorporated into the design and construction of each hangar for electric vehicle (EV) readiness.

Table 1-2 Proposed Development Program

	North Airfield	Navy Parcel	Total ¹
Total site acreage (<i>existing</i>)	28.1	18.7	49.4
New acres of land altered (<i>change</i>)	19.1	5.9	23.2
Acres of impervious area	24.1	14.1	39.0
Total gross square feet (sf)	319,900	175,570	495,470
<i>Aviation Support (sf)</i>	40,000	11,460 new 39,270 existing	90,730
<i>Hangar (sf)</i>	279,900	77,000 new 47,840 existing	404,740
Hangars	21	6	27
Max. Height (ft)	45	52	-

1. The total site acreage, new acres of altered land, and acres of impervious area include the three land swap areas, two of which will be developed as part of the Navy Parcel and one which will be transferred to Massport ownership.

1.5 Anticipated Project Schedule and Phasing

The Project schedule anticipates all facilities to be completed and occupied by 2026. The Project schedule assumes 18 months for design and permitting, including environmental review, building and site plan review, and FAA 7460 filing. Construction phasing will begin with sitework and utilities, followed by the construction of the exterior portions of the hangar structures. Interior finishes and customization will follow. The order in which the hangars are built will be strategically planned to mitigate impacts to tenants and the surrounding community. Additionally, the Project team is exploring the feasibility of using the airfield to accommodate construction vehicle traffic. The Land Transfer enables the completion of an internal circulation road, which can potentially be used to deliver materials to the Project Site. The Project team will work closely with tenants and Massport as construction is planned and proceeds throughout the site.

1.6 Summary of Project Benefits

The Proponent intends to build, operate, and maintain a master development of corporate hangars at Hanscom Field that will support current aviation activity and accommodate demand. In addition to meeting the purpose and need of the Project as described in *Section 1.1 Purpose and Need*, the Project will aim to accomplish the following:

- › Design each hangar to meet LEED Gold specifications and align with the goals of Massport’s Net Zero Roadmap and Sustainability and Resiliency Design Guidelines.
- › Pursue a high target for energy efficiency and strive for net zero energy throughout the design, construction, and operational phases of the project.
- › Provide adequate electricity infrastructure to support future aviation technologies, fleet electrification, and other climate and innovation strategies.
- › Incorporate solar photovoltaic (PV) systems into the site to help meet electrical demand.
- › Prioritize construction materials with low environmental impact, without compromising occupant health and safety or structural integrity.
- › Provide meeting spaces for public use and offer supervised tours, allowing the community to feel connected to the facility and witness the benefit it will provide to the region.
- › Leverage the Aviation Management degree program at Bridgewater State University to introduce minority high school students to career options in the aviation industry.
- › Incorporate a “living history” museum into the proposed development.

1.7 Anticipated Permits and Approvals

Table 1-3 lists the permits and approvals from local, state, and federal governmental agencies that are anticipated to be required for the Project.

Table 1-3 List of Anticipated Regulatory Permits and Approvals

Agency/Department	Permit/Approval/Action
Federal	
Federal Aviation Administration (FAA)	NEPA Review Notice of Proposed Construction or Alteration
Environmental Protection Agency (EPA)	NPDES Construction General Permit
Commonwealth of Massachusetts	
Executive Office of Energy and Environmental Affairs (EEA)	MEPA Review
Massachusetts Port Authority (Massport)	Land Transfer Airport Access Agreement Massport Tenant Alteration Application (TAA)
Massachusetts Historical Commission (MHC)	Review to be completed under MEPA
Office of the State Fire Marshal	Aboveground Storage Tank Permit
Office of Public Safety and Inspections	Building Permit (<i>North Airfield Parcel</i>) ¹
Town of Bedford	
Bedford Selectboard	Special Permit for Liquid Petroleum Storage in an Aquifer Protection Overlay District ²
Bedford Zoning Board of Appeals	Special Permit for Earth Removal ^{2,3}
Bedford Conservation Commission	Order of Conditions ^{2, 4}
Bedford Dept. of Public Works	Water Service Connection ²
Bedford Dept. of Public Works	Sanitary Sewer Service Connection ²
Bedford Building Department	Building Permit (<i>Navy Parcel</i>) ¹

1. Electrical permit for both the North Airfield and Navy Parcel is acquired through the local municipality.

2. Applies only to the Navy Parcel.

3. In Excess of 1,000 yd³

4. No work anticipated within 100' of BVW. Order of Conditions to be obtained if work encroaches into 100' buffer zone.

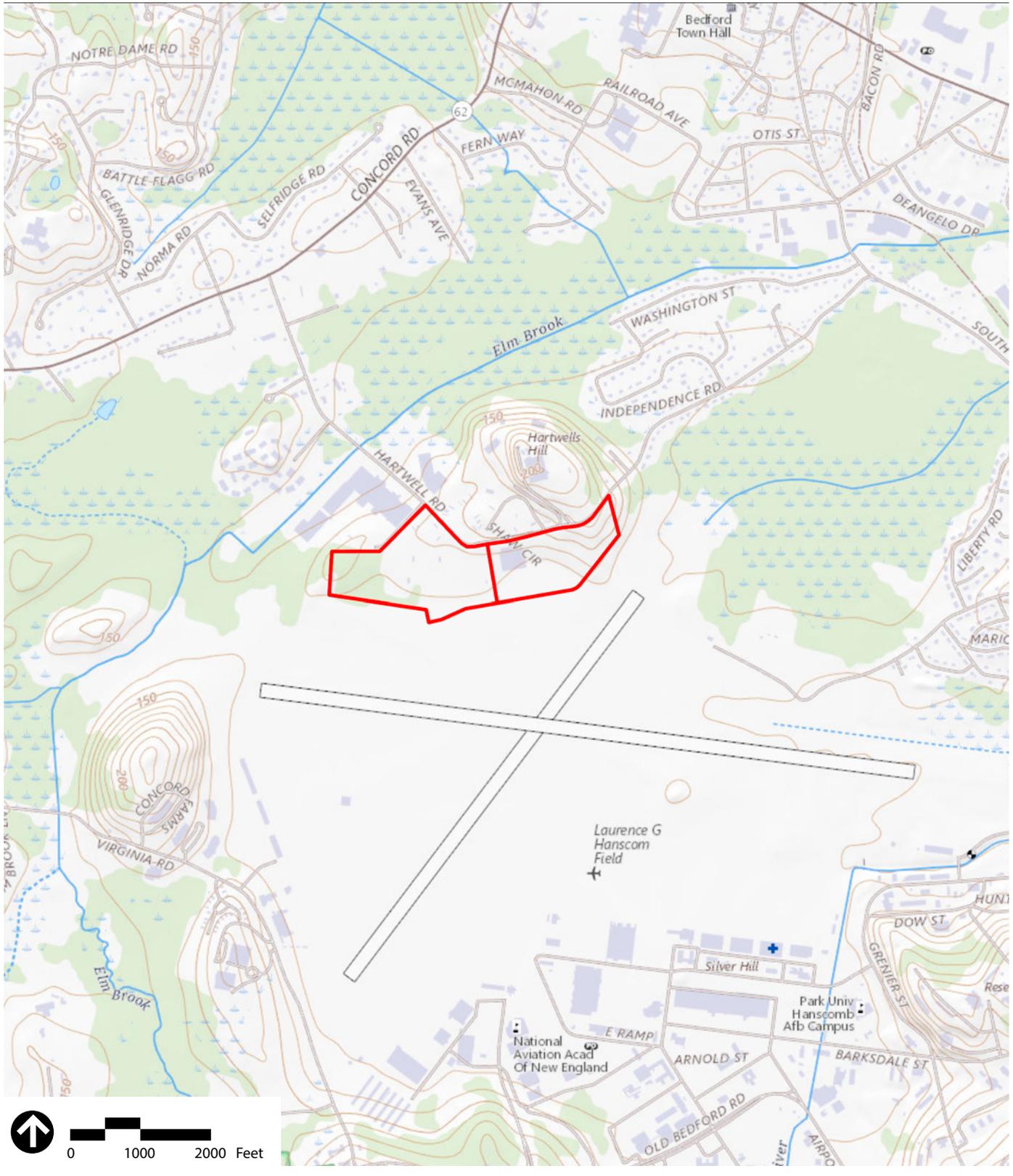
1.8 Summary of Agency and Community Outreach

The Project Team (with Massport participation) held a pre-filing meeting with the MEPA Office on November 29, 2022, to discuss the Project's approach to environmental compliance and community involvement under MEPA. Additionally, in accordance with the new MEPA Environmental Justice Protocols for Public Involvement, the Proponent completed the 45-day-Advance Notice to Community Based Organizations (CBOs) with an EJ Screening Form describing the Project. Advance Notification was delivered to the CBOs on November 30, 2022. Translation of additional document materials is available upon request.

As an airport project, the Project also requires close coordination with the FAA. The FAA has previously reviewed development plans for the Hanscom North Airfield and is aware of the

intent of this Project. The Proponent will engage the FAA during the federal environmental review process under NEPA, the analysis of which will be closely tied to MEPA.

Further, the Proponent and Massport held an informational meeting with Town of Bedford representatives on December 12, 2022 to present an overview of the proposed development and initiate conversations prior to the filing of the ENF. Additionally, the Hanscom Field Advisory Commission (HFAC) serves as a liaison between Massport and the towns surrounding Hanscom Field. The Project was presented at the June 22, 2021 meeting of HFAC, and updates have been provided at each subsequent monthly HFAC meeting.

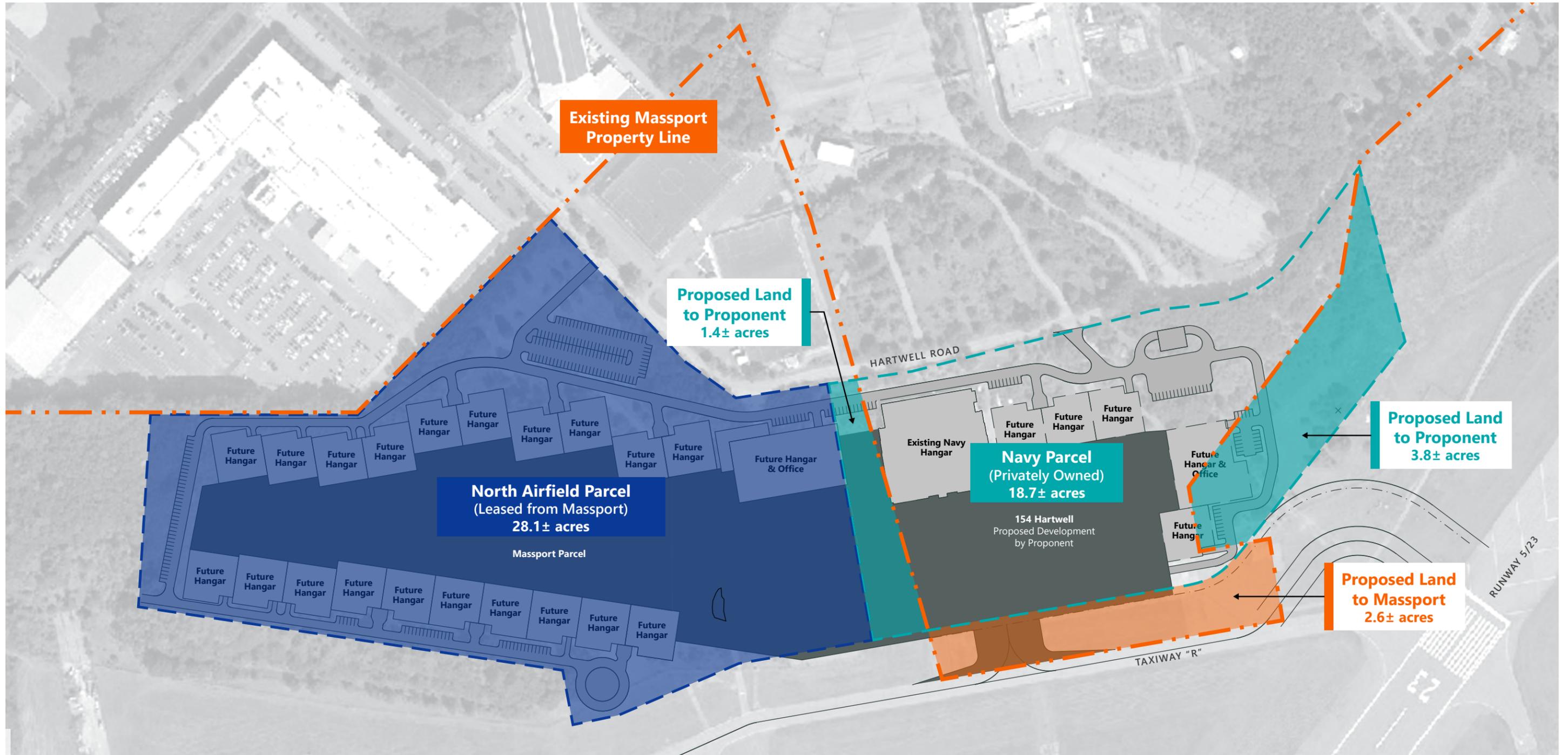


Source: USGS

 Project Site



Figure 1.1
Site Location Map



Source: VHB



Figure 1.2
Land Transfer Plan

**Hanscom North Airfield
Bedford, Massachusetts**



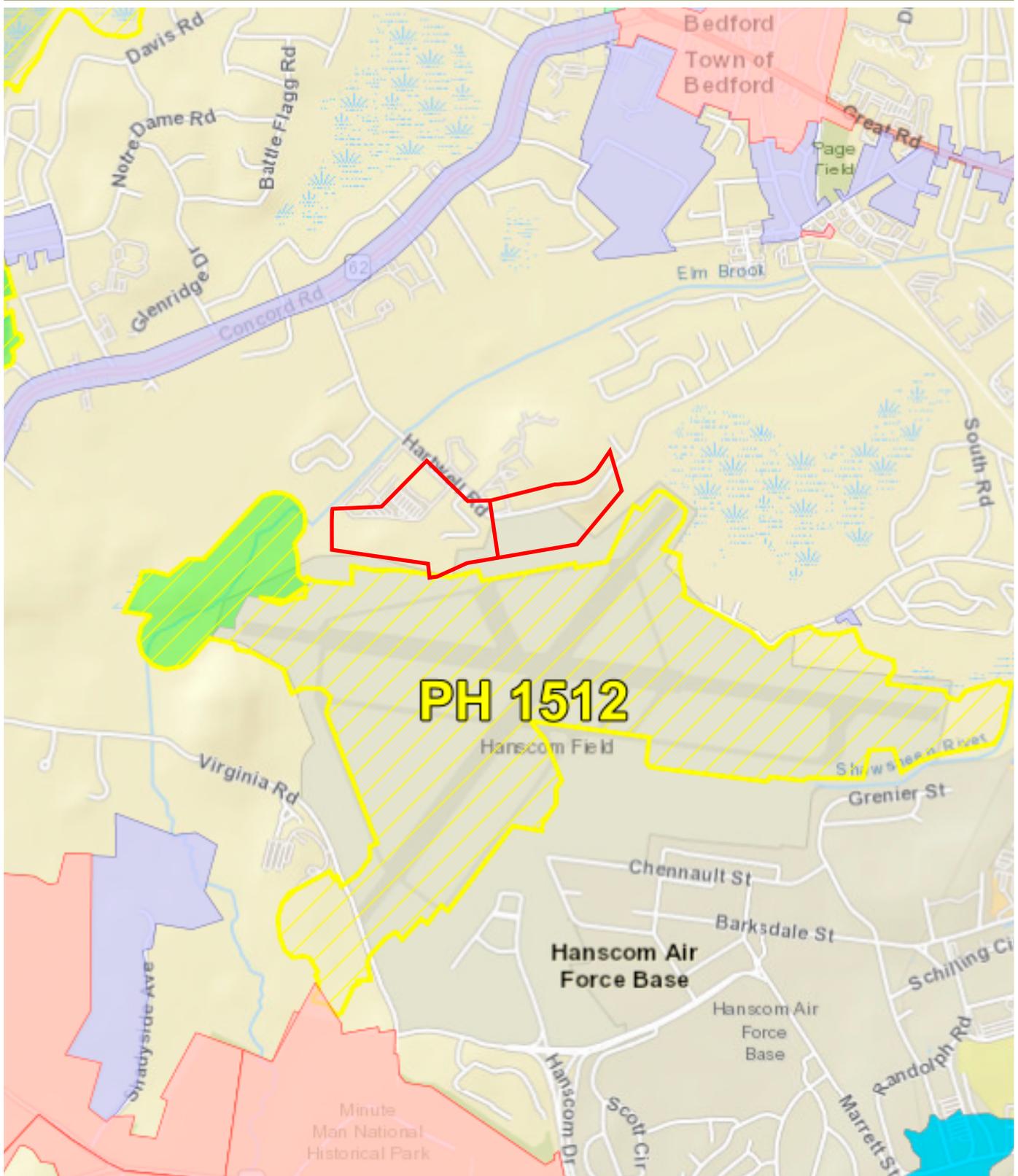
Source: MassGIS

 Project Site



Figure 1.3
Existing Conditions Plan

**Hanscom North Airfield
Bedford, Massachusetts**



Source: MassGIS

 Project Site

NHESP Priority Habitats of Rare Species



NHESP Estimated Habitats of Rare Wildlife



MassHistoric Commission Inventory (Areas)

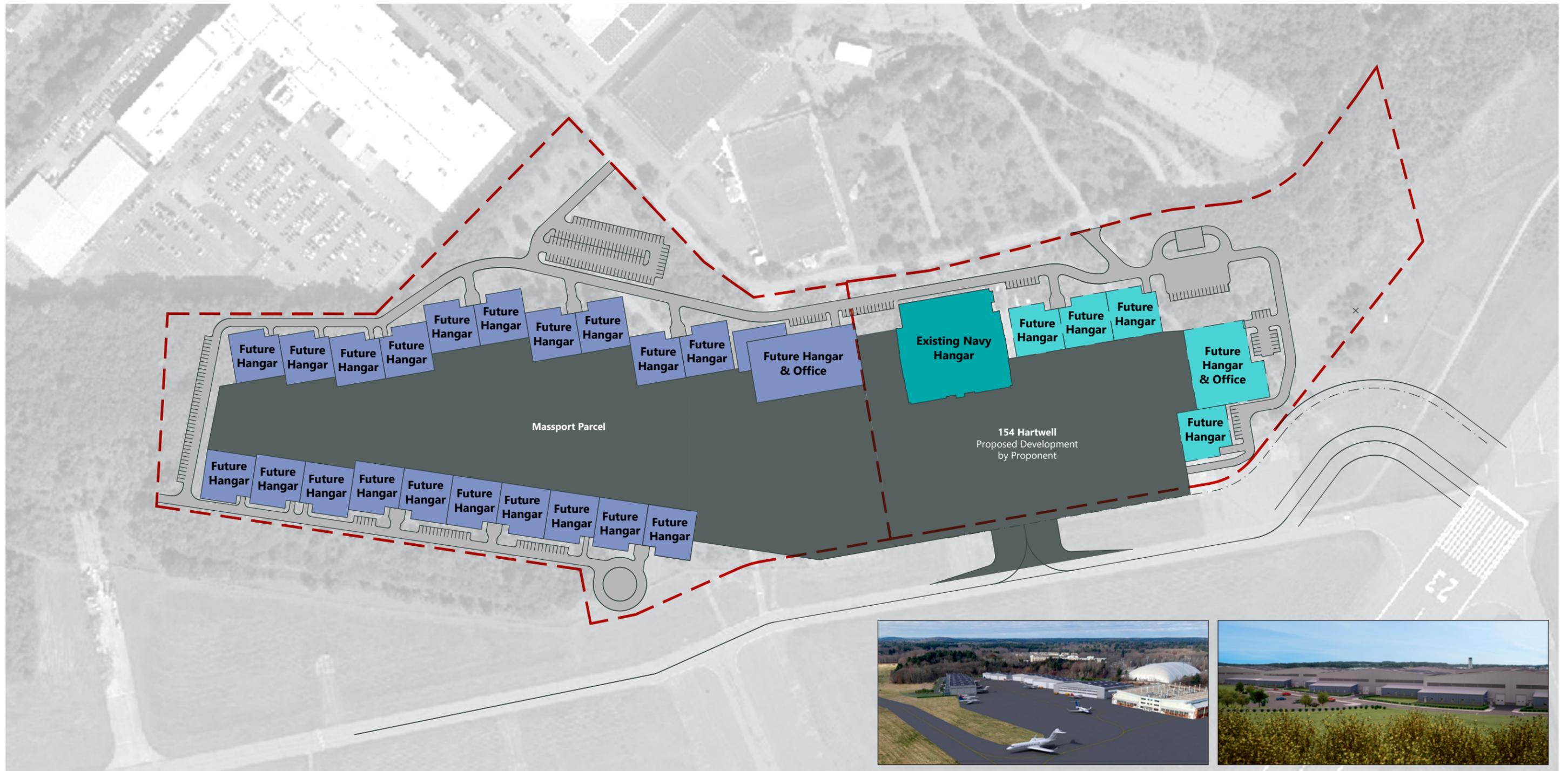
-  National Register of Historic Places
-  Preservation Restriction
-  Massachusetts Historic Landmark
-  Local Historic District
-  NRHP and LHD
-  Inventoried Property

Outstanding Resource Waters



Figure 1.4

Environmental Constraints



Source: VHB



Figure 1.5
Proposed Conditions Site Plan

**Hanscom North Airfield
Bedford, Massachusetts**

2

Alternatives Analysis

This chapter provides description and analysis of potential development alternatives for the Project site. It describes each alternative, calculates and compares environmental impacts, and evaluates the alternatives against the goals of the Project.

2.1 Project Alternatives

This ENF compares the impacts of the following alternatives:

- › No-Build Alternative;
- › Build Alternative; and
- › Preferred Alternative.

A comparison of each alternative is provided in **Table 2-1** below.

Table 2-1 Comparison of Alternative Programs

	No-Build Alternative	Build Alternative	Preferred Alternative
Site Area (acres)	49.4	48.1	49.4
Gross Floor Area (sf)	87,110	294,627	495,470
Hangar (sf)	47,480	215,927	404,740
Office/Aviation Support (sf)	39,270	<i>Included in Hangar Total</i>	90,730
Laboratory (sf)	0	78,700	0
Hangars	1	42	27
Max. Height (feet)	52	42	52

sf = square feet

2.1.1 No-Build Alternative

The 28-acre North Airfield area of Hanscom includes property located north of Runway 11-29 and west of Runway 5-23. As shown on **Figure 1-3**, the area is comprised of urban tree canopy, grass and shrubs, and pavement with no existing structures on site. Massport had previously leased a large portion of this area to the U.S. Air Force (USAF), but this area has reverted to Massport control. The land was occupied by a trailer park, which provided supplemental housing for the Air Force Base. In 2008, the USAF decided to close the trailer park. In 2009, all

structures were removed and by 2010, the USAF had removed all utility poles and ensured that the site was environmentally acceptable for return to Massport in 2011.

The 18-acre Navy Parcel is adjacent to the North Airfield. It was purchased from the federal government in a public auction by the Proponent. This site was previously owned by the U.S. Navy and operated by Raytheon until 2000. It includes a hangar and apron, and has direct access to the airfield. The hangar is a designated historic structure (eligible for listing in the National Register) that was built in 1959 for the purposes of aircraft research and development, with dedicated hangar, shop, laboratory, and office spaces. This building is not currently in use.

Under the No-Build condition, the North Airfield area would remain in its current state, and the Navy Hangar would remain vacant, as the building is not suitable to house any use in its current condition (**Figure 1-3**). The Navy Parcel pavement could be used for surface vehicle parking and storage.

2.1.2 Build Alternative

As described in Section 1.3 of Chapter 1, *Project Description*, the North Airfield and Navy Parcel have undergone considerable planning over the past decade. For the purpose of this ENF, this alternative contemplates the 2017 ESPR program (2025 scenario) for the North Airfield that was evaluated under the National Environmental Policy Act (NEPA) in 2018 as an Environmental Assessment (EA). The 2017 ESPR program for the North Airfield assumed that Massport would lead the development of the North Airfield (by others), while the Navy Parcel would be developed separately under private ownership, potentially for a non-aviation use. For this ENF, the Build Alternative represents a reduced build of the North Airfield for hangar space and a non-aviation use of the Navy Parcel.

2.1.2.1 North Airfield (Massport-Owned, Developed by Others)

The Build Alternative for the North Airfield that was described in Massport's 2018 EA would include new general aviation (GA) and corporate hangar space with aircraft parking, utilizing existing impervious surface where possible. As shown on **Figure 2-1**, new GA and corporate hangar facilities would be sited along Taxiway R and Hartwell Road on two seven-acre sections of the North Airfield, to the west of the Navy Hangar building. Together, the two seven-acre sections could accommodate up to 165,000 square feet (sf) of new hangar space and associated administrative/support space.

The first development area would accommodate up to three T-Hangar buildings comprising approximately 55,000 sf of hangar space. A designated apron area and parking lot of approximately 20-spaces accessible from Hartwell Road would also be constructed. The second development area would consist of approximately 110,000 sf of corporate hangar space. Total square footage of the second development area is anticipated to be split between one 40,000 sf hangar and two 30,000 sf hangars. The hangars would include additional administrative and support space. A portion of the new construction would be in a paved area that was formerly used for parking. An additional 100,000 sf of associated apron space as well as vehicle parking would also be constructed. The area would have landside access via the existing roadway and access control gates at Hartwell Road. To provide access

to the airfield, a new taxiway would be constructed as part of the project, totaling approximately one acre of disturbance.

The Build Alternative of the North Airfield as described in the EA is infeasible for both economical and operational reasons. Economically, the high cost of infrastructure (i.e., utilities) and corresponding low density of development does not produce an adequate return on investment to support the development program. Operationally, the shared taxiway between small aircraft and corporate jets is impractical.

2.1.2.2 Navy Parcel (Privately Owned and Developed)

This alternative contemplates private non-aviation development on the Navy Parcel. In accordance with permitted uses under Zone Industrial A (IA) in the Town of Bedford, the Project could be developed as laboratory space for purposes of light manufacturing, information technology, or life and materials science and engineering. As shown in **Figure 2-1**, the development would include two buildings, one of which would be the existing Navy Hangar building, which would be restored and renovated. The second (new) building would be sited to the southeast of the existing Navy Hangar, and would be built to accommodate approximately 78,700 sf of laboratory space. The new building would have a maximum height of 42 ft, with a 100 ft front yard setback and 50 ft side and rear yard setback.

A non-aviation use on the Navy Parcel does not meet the demand for additional GA and corporate hangar space in the region. The use is also inconsistent with Massport's mission for Hanscom. Non-aviation use of the Navy Parcel would also require FAA approval, since the site has direct access to the airfield.

2.1.3 Preferred Alternative

The Preferred Alternative (the Project) will provide approximately 495,470 square feet of hangar space in the form of 27 purpose-built hangars for aircraft parking and storage. Renovation of the existing Navy Hangar building will comprise 87,110 sf of this total, resulting in 408,360 sf of new building area. Careful study of the existing Hanscom Field general aviation amenities has shown that there is a strong demand for individual hangar space to increase privacy, reduce fuel costs, and eliminate unnecessary aircraft movements. The Project is expected to reduce the current practice of flying-in and flying-out to pick up aircraft owners who cannot secure hangar space at Hanscom.

The proposed development will advance sustainability at Hanscom by designing each hangar to be highly energy efficient, planning for future electrification of equipment and aircraft, incorporating renewable energy, and prioritizing low impact materials. Community impacts will be minimized through strategic site planning that minimizes visual and noise impacts.

2.2 Comparison of Environmental Impacts

The net new environmental impacts associated with the project alternatives are presented in **Table 2-2** below.

Table 2-2 Comparison of Net New Environmental Impacts of the Build Alternatives

	Build Alternative	Preferred Alternative
Land		
New Land Alteration	7.2 acres	23.2 acres
New Impervious Area	5.4 acres	23.9 acres
Wetlands		
Wetlands Alteration	-0-	-0-
Buffer Area Alteration	-0-	-0-
Transportation		
New Daily Vehicle Trips	1,916	194
New Parking	515 ¹	175
Water and Wastewater		
Water Use	16,300 gpd ²	13,500 gpd
Wastewater Generation	14,800 gpd	12,150 gpd

1. Additional parking above maximum allowed under Bedford Zoning Bylaw may be permitted by Special Permit, if deemed necessary.
2. gpd = gallons per day

2.2.1 Land and Stormwater Management

Under both the Build Alternative and the Preferred Alternative, land impacts associated with the Navy Parcel will remain generally consistent with existing conditions. Some area to the northeast along Hartwell Road that is currently wooded will be impacted by development; however, the parcel as a whole is primarily developed and impervious under existing conditions. For the North Airfield parcel owned by Massport, the land is primarily vegetated under existing conditions with the exception of some paved driveways and paved parking lots for residential trailers. The Build Alternative as proposed would consist of a smaller building and aircraft ramp program over the Preferred Alternative, resulting in an overall decreased need for land area and impervious surface.

Under either development option, stormwater management will be required due to an increase in impervious surfaces in the constructed condition. The onsite stormwater management system would be required to meet the MassDEP’s Stormwater Management Standards for new construction, which in turn require mitigation of stormwater runoff rates, groundwater recharge volumes, and water quality treatment. Meeting these standards will require a comprehensive management system designed to capture, convey, detain, and treat stormwater runoff through a series of pipe networks and best management practices. Given site topography, stormwater management and treatment is anticipated to occur in multiple locations and to consist of a combination of surface swales, pipe and manhole infrastructure, subsurface detention/infiltration systems, and water quality units. Where feasible, disconnection of impervious surfaces and incorporation of vegetated treatment options will be considered to reduce the need for piped systems while still providing the required treatment. All stormwater infrastructure located beneath aircraft operational areas will be designed to accommodate the enhanced structural requirements associated with aircraft wheel loads.

2.2.2 Wetlands

Neither the Build Alternative nor the Preferred Alternative would propose alteration to onsite wetland resource areas. Under the Preferred Alternative, taxiway access to the proposed hangars and ramp would be provided via shared connections east of the adjacent bordering vegetated wetland. Under the Build Alternative, a similar setup would be anticipated, where the corporate hangars and adjacent t-hangars would share taxiway access to Taxiway 'R'.

2.2.3 Traffic Generation

The rate at which any development generates traffic is dependent upon a number of factors such as size, location, and concentration of surrounding developments. The number of vehicle-trips to be generated by the Build Alternative and the Preferred Alternative were estimated based on trip generation rates published by the Institute of Transportation Engineers (ITE). For the Preferred alternative, ITE land use code (LUC) 022 (General Aviation Airport) was determined to be the most appropriate land use code. The trip generation data for LUC 022 uses the number of employees as the independent variable. Based on anticipated staffing information provided by the Proponent, a total of 13 employees were assumed to be on site for typical operations. For the Build Alternative, a combination of LUC 022 and LUC 760 (Research & Development Center) was used. Based on information provided in **Table 2-1**, the Build Alternative will include three hangars and 165,810 sf of laboratory space. Due to the reduced number of hangars, the number of employees used in the ITE calculations was assumed to be four. As shown in **Table 2-2**, the Preferred Alternative is expected to generate 194 weekday daily trips (occurring over a 24-hour period and not concentrated during peak times). This is significantly lower than the Build Alternative, which would be expected to generate 1,916 weekday daily trips.

2.2.4 Parking

Parking requirements for aircraft hangars are not regulated by local bylaws and typically depend on the specific tenants and their operational requirements. As such, the parking shown may be subject to adjustment as tenants are identified. It is also important to note that due to the nature of corporate aviation operations, parked vehicles often stay on site for multiple days and parking utilization rates vary by day. Therefore, parking demand is not an accurate depiction of daily vehicle traffic.

For planning purposes, parking has been shown based on assumed need for the Preferred Alternative. For the Build Alternative, anticipated parking is a combination of assumed need for the hangars, combined with locally regulated maximum parking counts for laboratory, office, and warehouse uses. Additional parking may be approved by Special Permit by the Town of Bedford Planning Board. Refer to **Table 2-2** for anticipated parking under the Build and Preferred Alternatives.

2.2.5 Water and Wastewater

Water consumption and wastewater generation rates have been estimated for both the Build Alternative and Preferred Alternative programs. While the overall building area would be

larger in the Preferred Alternative, corporate hangars have a relatively small water consumption requirement when compared to typical life science facilities on a unit basis. As a result, the Build Alternative would be anticipated to consume approximately 20 percent more water and generate approximately 20 percent more wastewater than the Preferred Alternative. Under the Build Alternative, industrial wastewater from the research laboratory would require pretreatment prior to discharging to the sanitary wastewater system.

Under either alternative, water would be supplied by the Town of Bedford via new connections to the Hartwell Road infrastructure. Similarly, wastewater would be discharged to the Town of Bedford sewer system within Hartwell Road. Given the lower topography of the site compared to Hartwell Road, a private sanitary sewer pump station and force main is anticipated to be required for any sanitary wastewater discharge.

2.3 Evaluation of Project Alternatives and Project Goals

The following goals were created to guide Site development:

1. **Goal 1** – Provide adequate hangar space to meet current and future demand.
2. **Goal 2** – Develop the area as a compatible aviation use consistent with Massport’s mission for Hanscom Field.
3. **Goal 3** – Maximize the potential of both parcels as one cohesive development.
4. **Goal 4** – Ensure economic viability of the Project.

The four alternatives were compared and are evaluated in **Table 2-3** below against each project goal.

Table 2-3 Evaluation of Project Alternatives Against Project Goals

Project Goal	No-Build	Build Alternative	Preferred
1. Adequate Hangar Space	0	✓	✓✓✓
2. Compatible Aviation Use	✓	✓	✓✓✓
3. Cohesive Development	0	0	✓✓✓
4. Economic Viability	0	✓✓	✓✓✓

0 = Does not meet Project Goal

✓ = Somewhat meets Project Goal

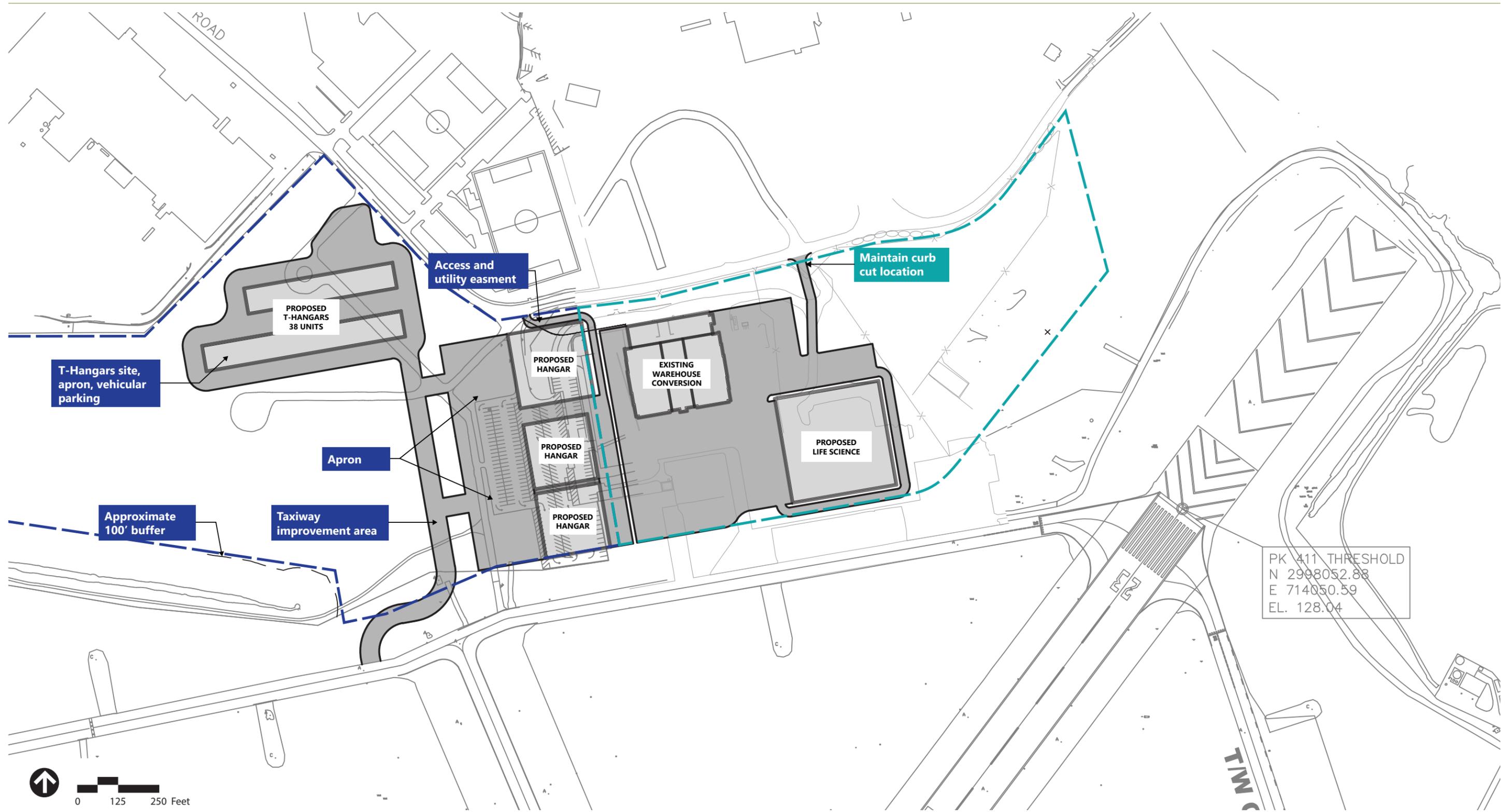
✓✓ = Significantly meets Project Goal

✓✓✓ = Fully meets Project Goal

As noted in Section 1.1 of Chapter 1, *Project Description*, there is a strong demand for individual hangar space at Hanscom. All three Fixed Base Operators (FBOs) at the Airport have reported to Massport that they are currently operating over capacity and have been forced to place customers seeking hangar space for their aircraft on waiting lists. In addition, Massport also has existing customers that desire permanent hangar space that they are currently unable to accommodate.

The Build Alternative of the North Airfield as described is infeasible for both economical and operational reasons. Economically, the high cost of infrastructure (i.e., utilities) and corresponding low density of development does not produce an adequate return on investment to support the development program. Operationally, the shared taxiway between small aircraft and corporate jets is impractical. A non-aviation use on the Navy Parcel does not meet the demand for additional GA and corporate hangar space in the region. The use is also inconsistent with Massport's mission for Hanscom. Non-aviation use of the Navy Parcel would also require FAA approval, since the site has direct access to the airfield.

The No Build Alternative does not meet any of the Project Goals, with the exception of 'Compatible Aviation Use.' The Preferred Alternative fully meets the goals of the Project, and therefore has been chosen to advance to development.



Source: VHB

- North Airfield Parcel
- Navy Parcel



Figure 2.1
BUILD ALTERNATIVE

**Hanscom North Airfield
Bedford, Massachusetts**

3

Environmental Justice

This chapter identifies environmental justice (EJ) populations located within one mile of the Project site, analyzes potential impacts, and details community outreach prior to and following submittal of the ENF. Supporting documentation pertaining to EJ populations is included in Appendix B.

3.1 MEPA Compliance

In compliance with Chapter 8 of the Acts of 2021, *An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy*, which became effective on June 24, 2021, and with EEA's 2021 Environmental Justice Policy (together, the "EJ Policy"), this ENF must identify whether any EJ populations are located within one mile of the Project Site and, if so, if such populations are reasonably likely to be affected negatively by the Project.

EEA defines EJ as "the equal protection and meaningful involvement of all people and communities" regarding environmental issues, including the equitable allocation of benefits and burdens. The EJ Policy builds upon Executive Order 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, which "directs federal agencies to identify and address the disproportionately high and adverse human health or environmental effects of their actions on minority and low-income populations, to the greatest extent practicable and permitted by law."

In accordance with the EJ Policy, the Proponent utilized the EJ Populations in Massachusetts mapping tool (EJ Maps Viewer) to identify the presence of EJ populations as an initial screening tool for identifying potential EJ populations under the EJ Policy. The data within the EJ Maps Viewer derives from the 2020 U.S. Census (for EJ block groups) and 2011-2015 American Community Survey 5-Year Estimates (for English isolation criteria).

EJ Populations in Massachusetts are defined as a neighborhood that meets one or more of the following criteria:

1. The annual median household income is not more than 65 percent of the statewide annual median household income;
2. Minorities comprise 40 percent or more of the population;
3. 25 percent or more of households lack English language proficiency;
4. Minorities comprise 25 percent or more of the population and the annual median household income of the municipality in which the neighborhood is located does not exceed 150 percent of the statewide annual median household income; or
5. Additionally, the Secretary can designate a geographic portion of a neighborhood as an EJ population.

3.2 Identification of Environmental Justice Populations

This section describes the characteristics of the EJ populations within one and five miles of the Project Site, as identified by the EJ Map Viewer.

It is important to note that with the EJ Maps Viewer update on November 12, 2022, associated EJ data layer and block groups were updated. Before this update, two Lincoln EJ block groups existed within 1-mile of the Project Site (see Appendix B). With the updates, the two Lincoln EJ Block groups have been replaced with one Bedford block group (see **Figure 3-1**) that fully encloses the airfield with no other residential land use (Block Group 6, Census Tract 3593.03) or property outside of the airfield and associated facilities. The data in the updated EJ layer indicates that the population of EJ Block Group 6, Census Tract 3593.03 is 103 people, with 0 households. The data suggests that the 103 people identified are entirely on the Hanscom Air Force Base. However, there is no Air Force Base housing or other housing fully within the block group boundaries as noted in the EJ Maps Viewer, and as conveyed by the head of Air Force Base Engineering.

Coordination with the head of Air Force Base Engineering indicated that buildings 1520 and 1521, previously residential buildings that currently fall within Block Group 6, Census Tract 3593.03, were converted to office use 40 years ago. The Air Force Base FamCamp (i.e., military campground) falls within the block group to the north, and allows for maximum stays of 30 days unless there is no one on the waiting list at the end of the 30 days. Thus, there are no permanent residents that would be captured by ACS census data. Building 1527 is the only active dormitory partially within the block group; it is bisected by the boundary line of the block group. The dormitory has a maximum capacity of 66 enlisted and unaccompanied personnel. With the exception of this dormitory, Air Force Base Housing is located south of this block group (in Block Group 5, Census Tract 3603).

The 2021 EJ Policy defines a “neighborhood” as a census block group that does “not include people who live in college dormitories or people under formally authorized, supervised care or custody.” While not specifically identified in the 2021 EJ Policy or subsequent MEPA EJ Protocols, military, or Air Force Base housing, falls under federal formally authorized custody. Therefore, Air Force Base dormitory housing does not meet the EJ Policy definition of “neighborhood” and is not subject the 2021 EJ Policy and MEPA EJ Protocols. Notably, any area within the secure perimeter of the Hanscom Air Force Base requires security clearance to enter, which would impact the required EJ outreach regardless of meeting the “neighborhood” definition.

Thus, the Proponent does not believe the Project is subject to the 2021 EJ Policy and subsequent MEPA EJ Protocols. Nonetheless, the Proponent has conducted the required analysis and outreach as part of this ENF.

3.2.1 Project Location

In accordance with the MEPA EJ Protocol, the Proponent consulted the EJ Map Viewer to identify EJ populations within a 1-mile radius of the Project Site, also known as the designated geographic area (DGA). The Project Site is located at 154 Hartwell Road, Bedford,

MA 01730. **Figure 3-1** identifies EJ populations within the DGA (the 1-mile radius), as well as within the 5-mile radius of the Project Site for completeness and as required for ENF filings.

3.2.2 Characteristics of Environmental Justice Populations

3.2.2.1 Within the DGA (1-Mile Radius)

The Project is located within a listed EJ community, Block Group 6, Census Tract 3593.03, which meets the EJ criteria based on minority population. There are no other EJ block groups located within the DGA.

In this census tract, minority populations make up 62.1 percent of the total population. The median household income in this block group is \$216,346. The income is over 250 percent the median household income for Massachusetts. There are no households with language isolation.

According to the “Languages Spoken in Massachusetts” tab of the EJ Maps Viewer, no languages spoken by 5 percent or more of the EJ population who identify as not speaking English “very well” were identified within 1 mile of the Project Site.

3.2.2.2 Within the 5-Mile Radius

Within a 5-mile radius of the Project Site, the following EJ populations were identified:

Minority

- › Block Group 1, Census Tract 3162.02
- › Block Group 3, Census Tract 3162.02
- › Block Group 1, Census Tract 3163
- › Block Group 2, Census Tract 3163
- › Block Group 5, Census Tract 3164
- › Block Group 4, Census Tract 3321
- › Block Group 1, Census Tract 3322
- › Block Group 2, Census Tract 3322
- › Block Group 1, Census Tract 3322.01
- › Block Group 2, Census Tract 3323
- › Block Group 1, Census Tract 3324.02
- › Block Group 2, Census Tract 3324.02
- › Block Group 4, Census Tract 3581
- › Block Group 1, Census Tract 3583
- › Block Group 2, Census Tract 3583
- › Block Group 3, Census Tract 3583
- › Block Group 4, Census Tract 3583
- › Block Group 3, Census Tract 3584

- › Block Group 4, Census Tract 3584
- › Block Group 1, Census Tract 3585
- › Block Group 2, Census Tract 3585
- › Block Group 3, Census Tract 3585
- › Block Group 1, Census Tract 3586
- › Block Group 2, Census Tract 3586
- › Block Group 3, Census Tract 3586
- › Block Group 4, Census Tract 3586
- › Block Group 5, Census Tract 3586
- › Block Group 6, Census Tract 3586
- › Block Group 1, Census Tract 3587
- › Block Group 2, Census Tract 3587
- › Block Group 6, Census Tract 3593.03
- › Block Group 5, Census Tract 3603
- › Block Group 3, Census Tract 3612
- › Block Group 2, Census Tract 3631.05
- › Block Group 2, Census Tract 3681.01
- › Block Group 3, Census Tract 3682

According to the “Languages Spoken in Massachusetts” tab of the EJ Maps Viewer, no languages spoken by 5 percent or more of the EJ population who identify as not speaking English “very well” were identified within 5 miles of the Project Site.

3.3 Assessment of Existing Public Health Conditions

Under Section 58 of Chapter 8 of the Acts of 2021: An Act Creating a Next-Generation Roadmap for Massachusetts Climate Policy, and consistent with 301 CMR 11.06(7)(b) and 11.07(6)(n), each project to which the new EIR requirement applies under Part I must submit an EIR that contains “statements about the results of an assessment of any existing unfair or inequitable environmental burden and related public health consequences impacting the environmental justice population from any prior or current private, industrial, commercial, state, or municipal operation or project that has damaged the environment.”

This section addresses Vulnerable Health Criteria, Potential Sources of Pollution, and Climate Change Vulnerability to help assess whether an existing unfair or inequitable environmental burden related to public health consequences has been placed upon the EJ communities, as compared to the general population, within one mile of the Project Site. As demonstrated below, the EJ block group within 1 mile of the Project Site does not exhibit vulnerable health criteria. The Town of Bedford as a whole is assessed as having Elevated Blood Lead, Heart Attacks, Pediatric Asthma ED Visits, and Low Birth Weight rates that are below 110 percent of the statewide median levels.

3.3.1.1 Department of Public Health Vulnerable Health Criteria

The Massachusetts Department of Public Health (DPH) EJ Tool identified potential sources of pollution that may have impacted, or may currently impact, the health of EJ populations within one mile of the Project Site. The DPH EJ Tool indicates that no census tracts within a 1-mile radius meet the Vulnerable Health EJ criteria for elevated blood lead or low birth weight.

The DPH EJ Tool indicates that the Town of Bedford does not meet the Vulnerable Health EJ criteria for heart attack, elevated blood lead, low birth weight, or pediatric asthma. The Town of Lincoln, which falls within the 1-mile radius but does not contain any EJ block groups within the 1-mile radius, does not meet the Vulnerable Health EJ criteria for heart attack, elevated blood lead, low birth weight, or pediatric asthma. The Town of Concord, which falls within 1-mile of the Project Site but does not contain any EJ block groups within the 1-mile radius, and does not meet the Vulnerable Health EJ criteria for heart attack, elevated blood lead, low birth weight, or pediatric asthma.

3.3.1.2 Department of Public Health Potential Sources of Pollution

The MA DPH EJ Tool was also utilized to identify facilities classified by MEPA as potential pollution sources within 1 mile. The facilities in proximity to the Site are as follows:

Within one mile of the Project Site:

- › Major Air and Waste Facilities – 1
 - Large Quantity Generators: Taylor and Lloyd, Inc.
- › MassDEP Tier Classified 21E Sites – 5
 - Draper Laboratory – Hanscom Test Facility (RTN: 3-0026407)
 - Raytheon Missile Systems (RTN: 3-0000588)
 - Naval Weapons Indresplant (RTN: 3-0002611)
 - STF (RTN: 3-0036057)
 - Hanscom Air Force Base (RTN: 3-0000223)
- › Tier II Facilities – 8
 - Jet Aviation
 - L. G. Hanscom Field
 - Liberty Mutual Corporate Hangar
 - Instrumentation Laboratory
 - MIT Lincoln Laboratory
 - North Start Facilities, LLC
 - Rectrix Aerodrome Center Bed
 - Signature Flight Support Bed
- › MassDEP Sites with Activity and Use Limitations (AUL) – 3
 - Hangar 1724 (RTN: 3-0013269)
 - Executive Flyers Aviation (RTN: 3-0000226)

- Building Maintenance Shop (RTN: 3-0011652)
- › MassDEP Groundwater Discharge Permits – 0
- › MassDEP Public Water Suppliers – 0
- › Wastewater Treatment Plants – 0
- › Underground Storage Tanks – 8
 - Liberty Mutual Insurance
 - Taylor and Lloyd, Inc.
 - Two of Massport Hanscom Field
 - ATCT E/G
 - Building 1722 Hanscom Aero Club
 - Gillette Co. Flight Operations
 - Bedford Charter Service
- › EPA Facilities – 2
 - Superfund Site Boundaries: Naval Weapons Industrial Reserve Plant (MA6170023570) and Hanscom Field/Hanscom Air Force Base (MA8570024424)

3.3.1.3 U.S. EPA EJ Screen

The Project team also consulted the U.S. Environmental Protection Agency's (EPA) "EJ Screen,"¹ which provides a percentile ranking by census block group, compared against statewide averages, for 12 environmental indicators.² The Buffer Report generated by this tool (see Appendix B) indicates the following for the area within one mile of the approximate center of the Project Site:

1. 52nd percentile for PM2.5
2. 10th percentile for Ozone
3. 40th percentile for NATA Diesel PM
4. 57th percentile for NATA Cancer Risk (cancer risk from inhalation of air toxics)
5. 79th percentile for NATA Respiratory HI (air toxics respiratory hazard index)
6. 21st percentile for Traffic Proximity (count of vehicles per day at major roads divided by the distance)
7. 38th percentile for Lead Paint Indicator (percent of housing built before 1960)
8. 98th percentile for Superfund Proximity (count of National Priorities List/Superfund sites divided by the distance)
9. 31st percentile for RMP Proximity (count of facilities with Risk Management Plans divided by the distance)

1 United States Environmental Protection Agency. 2022. EJScreen. <https://ejscreen.epa.gov/mapper/>

2 EJScreen was developed by EPA to highlight places that may be candidates for further review, analysis, or outreach to support the agency's environmental justice work. The EPA notes that the environmental indicators are only screening-level proxies for actual exposures or health risks, and that screening-level results do not, by themselves, determine the existence or absence of environmental justice concerns in a given location; do not provide a risk assessment; and have other significant limitations. EJScreen is not designed to take into account quantifiable cumulative or synergistic effects. <https://www.epa.gov/ejscreen/purposes-and-uses-ejscreen>.

10. 77th percentile for Hazardous Waste Proximity (count of transfer, storage, and disposal facilities (TSDf) divided by the distance)
11. 47th percentile for Underground Storage Tanks (USTs)
12. 69th percentile for Wastewater Discharge Indicator (toxicity-weighted concentration/meter)

The Buffer Report generated by this tool (see Appendix B) indicates that the following was shown to be at or above the 80th percentile of the statewide average for EJ populations within one mile of the Project Site (the "Project Buffer Area"):

- › **Superfund Proximity** – Percentile data are based on the count of proposed or listed National Priority List (NPL), also known as Superfund, sites within 5 kilometers (or the nearest one beyond 5 kilometers). The value is calculated by dividing the count of sites by the distance in kilometers. This indicator is within the 98th percentile and has a value of 1.3 count/kilometer. This is greater than the state average at 0.18 count/kilometer and the national average at 0.13 count/kilometer. This is due to the proximity to two Superfund sites, as listed in Section 1.2.3.2.

It is also important to note that Massachusetts has stronger environmental regulations compared to the entire United States.

3.3.1.4 Resilience Massachusetts Action Team

The Proponent has completed the required RMA Climate Resilience Design Standards Tool to determine potential climate-related risks to the surrounding communities. Refer to Appendix C for a copy of the RMA Tool report.

The report demonstrates that the Project Site is at high risk for the following climate vulnerabilities:

- › Extreme Precipitation – Urban Flooding
- › Extreme Heat

3.4 Analysis of Potential Project Impacts to EJ Populations

In compliance with Section I of the Interim Protocol for Analysis of Project Impacts on Environmental Justice Populations (the "Interim Project Impacts Protocol"), the Project is applicable to an EIR as it is "for any project that is likely to cause damage to the environment and is located within a distance of one mile of an EJ population." This section preliminarily identifies if the Project is anticipated to cause unfair or inequitable harm to vulnerable communities.

The Project is not likely to create negative impacts or have disproportionate adverse effects on EJ populations because:

- › The primary impact of the Project is related to alteration of land and the creation of impervious surface. New impervious area will be mitigated through incorporation of

stormwater management facilities designed to meet or exceed state and local requirements. Portions of the site are already altered through pavement.

- › Traffic related to fueling and aircraft maintenance will be confined to the airfield and will have minimal impact on the surrounding roadway network.
- › The proposed Hangar buildings have been set back from Hartwell Road and a continuous row of hangars has been placed parallel to the road with the intended effect of minimizing visual impacts and buffering noise generated by aircraft ground movements.
- › The existing Hartwell Road topography and plantings will be respected to the greatest extent possible to minimize the visual obtrusiveness of the development to the public.
- › The proposed development will reduce the current practice of flying-in and flying-out to pick up not only aircraft operators who cannot secure hangar space at Hanscom but also employees of Massachusetts-based companies in close proximity to Hanscom.
- › The Project will incorporate climate impact reduction measures, including enhanced electrical infrastructure for electrical vehicles and solar power, and offer sustainable aviation fuels (SAF) to end users. The proposed Hangar buildings will be certified LEED Gold or better and will strive for the highest levels of energy efficiency.

Project activities are not expected to exacerbate any existing environmental or health burdens as identified by the DPH EJ Tool.

Anticipated Project benefits include:

- › Expected decrease in total aircraft movements coming in and out of Hanscom; thus, improving noise and air quality conditions;
- › Incorporating a “living history” museum into the proposed development; and
- › Designing and implementing a program through the Aviation Management degree at Bridgewater State University to introduce minority high school students to career options in the aviation industry.

3.5 Enhanced Public Involvement Plan

This section describes the public and EJ outreach prior to filing the ENF and planned outreach following the submittal of the ENF throughout the MEPA review process.

3.5.1 Outreach Prior to the ENF

Per the requirements stated under Section II of the Public Involvement Protocol, “Measures to Enhance Public Involvement Prior to Filing ENF,” the Proponent has made a meaningful effort to engage with the community through expanded outreach. The Project Team held a pre-filing meeting with the MEPA Office on November 29, 2022, to discuss the applicability of the MEPA EJ Protocols and EJ approach for the Project.

In accordance with the new MEPA Environmental Justice Protocols for Public Involvement, the Proponent completed the 45-day-Advance Notice to Community Based Organizations (CBOs), with an EJ Screening Form describing the Project. Advance Notification was delivered to the CBOs on November 30, 2022. This EJ Screening Form is included in Appendix B.

Translation of this document was not required based on the EJ populations (refer to Sections 3.2.2.1 and 3.2.2.2 above); however, it was made available upon request.

As recommended in the MEPA EJ Protocols to ensure positive outreach, the following measures were taken prior to filing this ENF:

- › Distributed the MEPA EJ Screening Form on November 30, 2022 to the EJ Reference List, which includes CBOs and tribal organizations;
- › Conducting ongoing outreach, to the best of the Proponent’s ability due to security clearance, with the community to ensure an understanding of additional languages spoken that may not be included in the MassGIS map.

3.5.2 Planned Community Outreach and Engagement

Per requirements for Expanded Public Participation, the Proponent will continue to meet with stakeholders and community groups throughout the MEPA review process in an effort to ensure an inclusive process and to effectively reach EJ populations. It is important to note that outreach to the EJ block group within the DGA cannot be conducted because of the difficulty identifying the residences of the individuals identified by the ACS census data (the EJ Maps Viewer shows no listed households) and the location of the block group within a secure perimeter. Thus, the Proponent will conduct outreach to the extent practical and feasible.

The Proponent will continue additional outreach measures, with a goal of reaching and engaging EJ populations proximate to the Project. These measures will include, but will not be limited to the following:

- › Engage with local community groups as needed through the MEPA review process;
- › Distribute electronic copies of the ENF (and physical copies if requested) to local advocacy groups;
- › Invite state, tribal, and local community groups to a virtual site consultation;
- › Provide advanced notification of the ENF consultation session to local advocacy groups; and
- › Make the ENF and future documents available at the Bedford Free Public Library.

The Proponent will continue to examine potential impacts, participate in public meetings, and engage with the Town of Bedford and the EJ block group to the extent practical and feasible, as the Project advances through the MEPA process, including providing translation and interpretation as requested. The Proponent has a strong track record of community engagement and inclusion and will continue these efforts as part of the public involvement process for the Project.



Source: 2020 MA EJ Block Groups November 2022 update

2020 MA EJ Block Groups

- Minority
- Income
- Minority and Income
- Income and English Isolation
- Minority, Income, and English Isolation



Figure 3.1
Environmental Justice Populations

**Hanscom North Airfield
Bedford, Massachusetts**

4

Climate Action and Sustainability

This chapter identifies future climate conditions related to extreme heat and flooding and identifies the measures that the Project will incorporate to improve resiliency to those future conditions. It also provides an overview of the Project’s approach to sustainable development and climate change mitigation.

4.1 Project Approach to Sustainability

Massport has set a goal to reach net zero greenhouse gas emissions Authority-wide by 2031, nearly two decades prior to many other climate commitments focused on 2050. In accordance with this goal, as well as Massport’s Sustainability and Resiliency Design Guidelines, the proposed Project will be designed as an innovative example of sustainable design and operations. Hangar buildings will meet LEED Gold specifications, including considerations of energy efficiency, limitations on equipment idling, recycling of construction waste, and commissioning of equipment. Priority will be given to construction materials with low environmental impact, without compromising occupant health and safety or structural integrity. The development will also aim to incorporate enhanced electrical infrastructure for electric vehicle charging and future electrification initiatives. Additionally, the Proponent will explore the feasibility of constructing a roof-mounted PV solar panel system on each hangar roof. Based on a conceptual study to determine the power-generating potential of these solar PV systems, the proposed structures are estimated to provide a total of approximately 4.6 megawatts (MW). The Proponent will concurrently evaluate the potential of including battery storage capacity with these solar PV systems to maximize the energy reliability and resiliency of the Project site. Renewable energy plus storage, in combination with highly energy efficient buildings and electrified transport, will create a pathway for achieving net zero energy.

4.2 Climate Change Adaptation and Resiliency

4.2.1 Future Climate Conditions

This section presents the current projections for changes in temperature and precipitation anticipated through the end of the century. Appendix C includes the Resilient Massachusetts Action Team (RMAT) output report created for the Project site, which indicates that the target planning horizon (i.e., the future date to which a project should be designed) for the Project should be 2070.

4.2.1.1 Extreme Temperatures

The average, maximum, and minimum temperatures in Massachusetts are likely to increase significantly over the next century. The Project site at Hanscom Field is anticipated to experience a 7.55°F increase in average annual temperature by 2070 under a high emissions pathway, and a 4.7°F increase under a medium emissions pathway. Winter temperatures are projected to increase at a greater rate than spring, summer, or fall. The average minimum winter temperature in the Commonwealth is estimated to increase from 17.1°F to between 21.7°F and 28.5°F, which is an increase of 66 percent. The number of days below freezing is projected to decrease by 19-40 days by 2050, and 24-62 days by 2090.

While winter temperatures are expected to increase at a greater rate, significant increases in annual maximum temperatures are also anticipated. By 2070, the number of days above 90°F at Hanscom Field are projected to increase by up to 44 days per year under a high emissions pathway, and up to 21 days per year under a medium emissions pathway. The annual maximum temperature at the Project site is expected to rise between 4.6°F and 7.3°F by 2070.

Extreme heat events can be particularly significant in highly developed areas, where buildings, roads, and other infrastructure replace open land and vegetation. In the case of the proposed development, the increase of pavement will mean that surfaces that were once permeable and moist are now impermeable and dry. Dark-colored asphalt and roofs also absorb more of the sun's energy, forming "islands" of higher temperatures that are often referred to as "heat islands." From an infrastructure standpoint, extreme heat increases the risk of regional brownouts and increases the susceptibility of electrical equipment to overheating and malfunction. It also increases employee exposure to heat-related illnesses. Extreme heat generally does not impact buildings, but can impact pavement and deform asphalt under heavy loads. During the winter, extreme cold temperatures can damage buildings through freezing pipes and freeze/thaw cycles. Heavy snowfall and ice storms can also cause power interruption.

4.2.1.2 Urban Flooding

Annual total precipitation for Hanscom Field is projected to increase by 3.31 to 4.34 inches by 2070. Because this additional precipitation will likely take the form of more intense periods of precipitation coupled with more frequent drought episodes, it is likely to result in more stormwater runoff and higher surface water levels. As storms occur more often and produce more precipitation, areas that lie in FEMA-designated floodplains will flood more frequently, and land that is not typically affected by flooding may become inundated. The Project site is specifically at risk of urban flooding, which is caused by increased water runoff due to urban development and drainage systems that are not capable of conveying high flows.

Flooding can cause extensive damage to utilities and disrupt critical services, such as liquid fuel delivery. Economic losses due to flooding include damages to buildings and business interruption. Vegetated ground cover, as opposed to impervious surface, has been shown to significantly reduce stormwater runoff.

4.2.2 Project Resilience Measures

According to the RMA output report created for the Project site (Appendix C), the Project is at high risk for extreme heat and urban flooding due to extreme precipitation. This section describes how the Project will incorporate resilience to increased heat and flooding at the site and building levels.

Since 2014, Massport has incorporated floodproofing design guidelines into its capital planning processes to make its infrastructure and operations more resilient to these anticipated flooding threats. The Proponent will follow these guidelines during the development of the Project. As Project design and analyses advance, the Proponent, in conjunction with Massport, will integrate consideration of climate change adaptation and resiliency where possible within FAA design guidelines.

4.2.2.1 Resiliency Measures for Extreme Heat

To mitigate against higher temperatures in the future and the increased likelihood of heatwave events, several features have been incorporated into the proposed development. Hangar roofs will be constructed from materials with a higher albedo (e.g., white roofs), allowing sunlight to be reflected instead of absorbed, which reduces the urban heat island effect. Similarly, the Proponent will design pavements, where possible, to absorb less heat by increased albedo (greater reflectivity), especially in areas not utilized by aircraft. To protect the Project site from regional brownouts, the Proponent is exploring the feasibility of incorporating solar PV systems into the development, which could be paired with battery storage for added resilience and off-grid functionality.

4.2.2.2 Resiliency Measures for Urban Flooding

To protect the Project from urban flooding due to extreme precipitation, the design team will analyze the site for the 25-year storm event, as suggested by the RMA output report. The RMA output report projects a total precipitation depth for a 24-design storm of 8.4 inches. This information will be used to determine the appropriate design flood elevation (DFE) for the proposed development. If elevation above the DFE is not feasible, floodproofing critical areas below the DFE will be pursued in accordance with Massport's Floodproofing Design Guide. In general, buildings will be sited above peak flood elevation.

Despite the increase in impervious surface, stormwater utilities will be designed to accommodate future precipitation events. The Project site will be designed to meet all applicable stormwater requirements and maximize the infiltration of stormwater through a combination of above- and below-grade detention/infiltration systems, bioretention areas, and structural systems. The site will also be designed to encourage positive drainage away from the hangar buildings, which will each include floor drains within the structure. Green infrastructure will be incorporated where possible to encourage groundwater recharge, especially on the land side of the development. On the airfield, however, creation of standing water and/or wildlife habitat is unsafe due to potential impacts on aircraft operations. The Proponent will also evaluate the feasibility of pervious pavement for landside activities, such as parking areas.

Appendix A

ENF Distribution List

ENF Distribution List

Below is a list of state and municipal agencies from whom the Proponent will seek permits or approvals and other parties as specified in 301 CMR 11.16. These are the parties to whom the ENF is required to be circulated.

State and Regional Agencies and Officials

Secretary Rebecca Tepper Executive Office of Energy and Environmental Affairs Attn: MEPA Office 100 Cambridge Street, Suite 900 Boston, MA 02114 mepa@mass.gov Tori.kim@state.ma.us	Massachusetts Department of Transportation Public/Private Development Unit Attn: J. Lionel Lucien 10 Park Plaza Suite #4150 Boston, MA 02116 MassDOTPPDU@dot.state.ma.us lionel.lucien@dot.state.ma.us
Department of Environmental Protection Attn: Commissioner's Office One Winter Street Boston, MA 02108 helena.boccardo@mass.gov	DEP/Northeast Regional Office Attn: MEPA Coordinator 205B Lowell Street Wilmington, MA 01887 john.d.viola@mass.gov
Massachusetts Historical Commission Attn: Brona Simon The MA Archives Building 220 Morrissey Boulevard Boston, MA 02125 brona.simon@state.ma.us	Massachusetts DOT District #4 Attn: MEPA Coordinator 519 Appleton Street Arlington, MA 02476 timothy.paris@dot.state.ma.us
MEPA Office Attn: EEA EJ Director 100 Cambridge Street, Suite 900 Boston, MA 02144 MEPA-EJ@mass.gov	Massachusetts Port Authority Attn: Brad Washburn One Harborside Drive, Suite 200S East Boston, MA 02128 bwashburn@massport.com
Metropolitan Area Planning Council Attn: Executive Director 60 Temple Place Boston, MA 02111 mpillsbury@mapc.org afelix@mapc.org	Massachusetts Water Resource Authority Attn: MEPA Coordinator 100 First Avenue Charlestown Navy Yard Boston, MA 02129 katherine.ronan@mwra.com

Town of Bedford Agencies and Officials

Planning Board Attn: Tony Fields Town Hall 10 Mudge Way Bedford, MA 01730	Select Board Attn: Chair Town Hall 10 Mudge Way Bedford, MA 01730
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afields@bedford.ma.gov	emitchell@bedford.ma.gov
Health Department Attn: Heidi Porter 12 Mudge Way Bedford, MA 01730 hporter@bedford.ma.gov	Conservation Commission Attn: Jeffrey Summers Town Hall 10 Mudge Way Bedford, MA 01730 Conservation@Bedfordma.gov

Town of Lexington Agencies and Officials

Planning Department Attn: Sheila Page Town Office Building, Ground Floor 1625 Massachusetts Avenue Lexington, MA 02420 spage@lexingtonma.gov	Select Board Attn: Chair Town Office Building, 2nd Floor 1625 Massachusetts Avenue Lexington, MA 02420 sprizio@lexingtonma.gov
Lexington Public Health Department Attn: Joanne Belanger Town Office Building 1625 Massachusetts Ave Lexington, MA 02420 jbелanger@lexingtonma.gov	Conservation Commission Attn: Karen Mullins Ground Level, Town Office Building 1625 Massachusetts Ave Lexington, MA 02420 kmullins@lexingtonma.gov

Town of Concord Agencies and Officials

Planning Division Attn: Marcia Rasmussen 141 Keyes Road, 1 st Floor Concord, MA 01742 mrasmussen@concordma.gov	Select Board Attn: Chair 22 Monument Square / P.O. Box 535 Concord, MA 01742 mjohnson@concordma.gov
Health Department Attn: Melanie Dineen 141 Keyes Road, 2 nd Floor Concord, MA 01742 mdineen@concordma.gov	Natural Resources Commission Attn: Delia Kaye 141 Keyes Road Concord, MA 01742 dkaye@concordma.gov

Town of Lincoln Agencies and Officials

Planning Department Attn: Paula Vaughn-MacKenzie 16 Lincoln Road Lincoln, MA 01773 vaughnp@lincolntown.org	Select Board Attn: Chair 16 Lincoln Road Lincoln, MA 01773 elderp@lincolntown.org
Board of Health Attn: Elaine Carroll 16 Lincoln Road Lincoln, MA 01773 carrolle@lincolntown.org	Conservation Commission Attn: Michele Grzenda 16 Lincoln Road Lincoln, MA 01773 GrzendaM@lincolntown.org

Community Based Organizations

Environment Massachusetts	Mass Rivers Alliance
Clean Water Action	The Trust for Public Land
Sierra Club MA	Browning the Greenspace
Neighbor to Neighbor	Environmental League of MA
Appalachian Mountain Club	Community Action Works
Mass Audubon	Ocean River Institute
Mass Land Trust Coalition	Unitarian Universalist Mass Action Network
Conservation Law Foundation	Hanscom Field Advisory Commission
Charles River Watershed Association	

Tribal Organizations

Chappaquiddick Tribe of the Wampanoag Nation	Chappaquiddick Tribe of the Wampanoag Nation, Whale Clan
Nipmuc Nation (Hassanamisco Nipmucs)	Massachusetts Tribe at Ponkapoag
North American Indian Center of Boston	Herring Pond Wampanoag Tribe
Pocasset Wampanoag Tribe	Wampanoag Tribe of Gay Head (Aquinnah)
Chaubunagungamaug Nipmuck Indian Council	Massachusetts Commission on Indian Affairs (MCIA)
Mashpee Wampanoag Tribe	

Appendix B

Environmental Justice Supporting Documentation

Environmental Justice Screening Form

Project Name	L.G. Hanscom Field North Airfield Development
Anticipated Date of MEPA Filing	January 16, 2023
Proponent Name	North Airfield Ventures, LLC Runway Realty Ventures, LLC
Contact Information (e.g., consultant)	Ken Schwartz, VHB kschwartz@vhb.com
Public website for project or other physical location where project materials can be obtained (if available)	N/A
Municipality and Zip Code for Project (if known)	Bedford, MA 01730
Project Type* (list all that apply)	Airport (Hangar)
Is the project site within a mapped 100-year FEMA flood plain? Y/N/unknown	No
Estimated GHG emissions of conditioned spaces (click here for GHG Estimation tool)	1,237 tons per year

Project Description

1. Provide a brief project description, including overall size of the project site and square footage of proposed buildings and structures if known.

The proposed 49-acre development on the North Airfield and existing Navy Parcel of L.G. Hanscom Field (the Project) will provide approximately 495,470 square feet of hangar space in the form of 27 purpose-built hangars for aircraft parking and storage on-airport. The existing Navy Hangar building on the site, which will be refurbished and renovated, comprises 87,110 square feet of this total, resulting in 408,360 square feet of new development.

As a complement to the existing fixed-base operator (FBO) and maintenance, repair, and overhaul (MRO) facilities currently at L.G. Hanscom Field (airport code: BED), the Project provides standalone hangar and aviation support space to meet the current and future demand for corporate hangar space at Hanscom Field. Currently, there is a waitlist for hangar space resulting in ferry flights for existing Hanscom Field users. The Project is expected to reduce the current practice of flying-in and flying-out to pick up aircraft owners who cannot secure hangar space at Hanscom, and employees of Massachusetts based companies in close proximity to the airport. By doing so, the Project will relieve pressure from Logan Airport in accordance with long-term planning efforts for Massport's general aviation services.

2. List anticipated MEPA review thresholds (301 CMR 11.03) (if known)

The Project exceeds the following Environmental Notification Form review threshold:
 --301 CMR 11.03(1)(a)(2) - Creation of ten or more acres of impervious area.

3. List all anticipated state, local and federal permits needed for the project (if known)

- Federal Aviation Administration – Building and Crane Permits
- U.S. Environmental Protection Agency – National Pollutant Discharge Elimination System (NPDES) Permit
- Town of Bedford – Wetland Order of Conditions (Potentially required if work is proposed within 100 feet of wetlands)
- Town of Bedford – Zoning Board of Appeals, Special Permits (Potentially required)
- Town of Bedford – Water Connection
- Town of Bedford – Sanitary Sewer Connection
- Town of Bedford – Building Permit

Note: No state permits are anticipated for this Project at this time. The state agency action is State Land Transfer between the Proponent and the Massachusetts Port Authority (Massport).

4. Identify EJ populations and characteristics (Minority, Income, English Isolation) within 5 miles of project site (can attach map identifying 5-mile radius from [EJ Maps Viewer](#) in lieu of narrative)

Within 1 mile (See Figure 1):

Bedford

- Block Group 6, Census Tract 3593.03 (Minority)

EJ populations within the 1-mile radius (designated geographic area [DGA]) and the 5-mile radius can be found in Figure 1.

5. Identify any municipality or census tract meeting the definition of “vulnerable health EJ criteria” in the [DPH EJ Tool](#) located in whole or in part within a 1 mile radius of the project site

The Massachusetts Department of Public Health (DPH) EJ Tool indicates that no census tracts within a 1-mile radius meet the Vulnerable Health EJ criteria for elevated blood lead or low birth weight.

The DPH EJ Tool indicates that the Town of Bedford does not meet the Vulnerable Health EJ criteria for heart attack, elevated blood lead, low birth weight, or pediatric asthma. The Town of Lincoln, which falls within the 1-mile radius but does not contain any EJ block groups within the 1-mile radius, does not meet the Vulnerable Health EJ criteria for heart attack, elevated blood lead, low birth weight, or pediatric asthma. The Town of Concord, which falls within 1-mile of the Project Site but does not contain any EJ block groups within the 1-mile radius, and does not meet the Vulnerable Health EJ criteria for heart attack, elevated blood lead, low birth weight, or pediatric asthma.

6. Identify potential short-term and long-term environmental and public health impacts that may affect EJ Populations and any anticipated mitigation

The Project is not likely to create negative impacts or have disproportionate adverse effects on EJ populations because:

- The primary impact of the Project is related to alteration of land and the creation of impervious surface (in addition to the portions of the site that are already paved or have otherwise been altered). New impervious area will be mitigated through incorporation of stormwater management facilities designed to meet or exceed state and local requirements. While not part of this Project specifically, the reconstruction of Runway 5-23 in Summer 2023 will remove excess pavement and reduce existing impervious cover at the Airport.
- Traffic related to fueling and aircraft maintenance will be primarily confined to the airfield and will have minimal impact on the surrounding roadway network.
- The proposed Hangar buildings have been set back from Hartwell Road and a continuous row of hangars has been placed parallel to the road with the intended effect of minimizing visual impacts and buffering noise generated by aircraft ground movements.
- The existing Hartwell Road topography and plantings will be respected to the greatest extent possible to minimize the visual obtrusiveness of the development to the public.
- The proposed development will reduce unnecessary ferry flights (i.e., flights that require moving an aircraft from one place to another) for existing users of Hanscom who do not currently have a place to store their aircraft on-airport.
- The Project will incorporate climate impact reduction measures, including enhanced electrical infrastructure for electrical vehicles and solar power, and offer sustainable aviation fuels (SAF) to end users. The proposed Hangar buildings will be certified LEED Gold or better and will strive for the highest levels of energy efficiency.

Project activities are not expected to exacerbate any existing environmental or health burdens as identified by the DPH EJ Tool.

7. Identify project benefits, including “Environmental Benefits” as defined in 301 CMR 11.02, that may improve environmental conditions or public health of the EJ population

Anticipated Project benefits include:

- Expected decrease in total aircraft movements coming in and out of BED; thus, improving noise and air quality conditions;
- Incorporating a “living history” museum into the proposed development; and
- Designing and implementing a program through the Aviation Management degree at Bridgewater State University to introduce minority high school students to career options in the aviation industry.

8. Describe how the community can request a meeting to discuss the project, and how the community can request oral language interpretation services at the meeting. Specify how to request other accommodations, including meetings after business hours and at locations near public transportation.

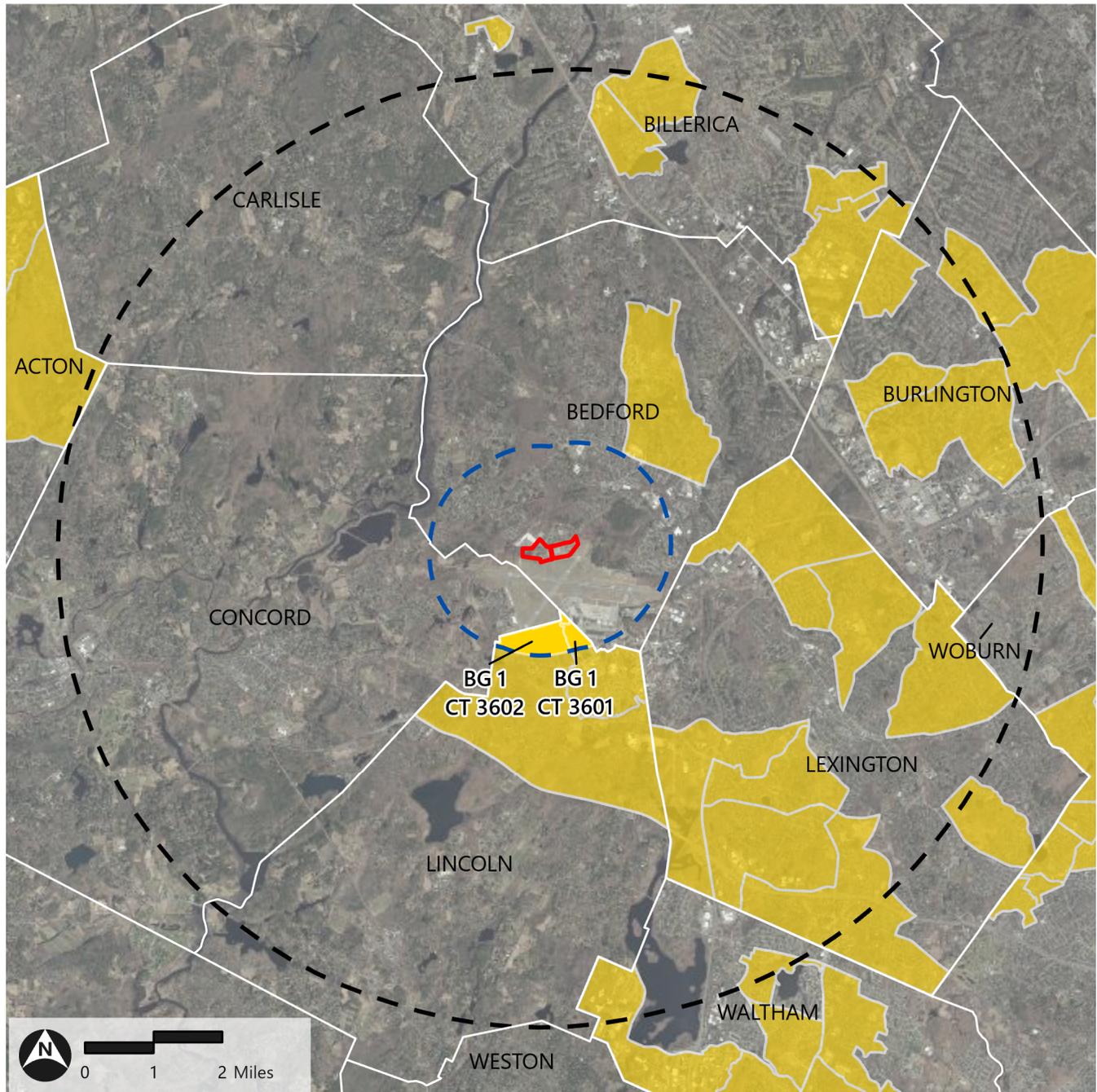
Community members can request:

- Document language translations;
- An evening-time remote meeting and/or in-person at a location near public transportation to discuss the Project; and
- Oral language interpretation services at public meetings.

Please contact Ken Schwartz by phone (617) 607-2156 or email kschwartz@vhb.com to make a request.

NOTE: This figure has been updated based on the November 12, 2022 EJ Maps Viewer update. This version is presented for reference only.

Figure 1: Environmental Justice Populations within 1 and 5 Miles of the Project Area
North Airfield at Hanscom Field | Bedford, MA



-  Project Area
-  1-Mile Radius
-  5-Mile Radius
-  Municipal Boundary
- MA 2020 Environmental Justice Block Groups**
-  Minority

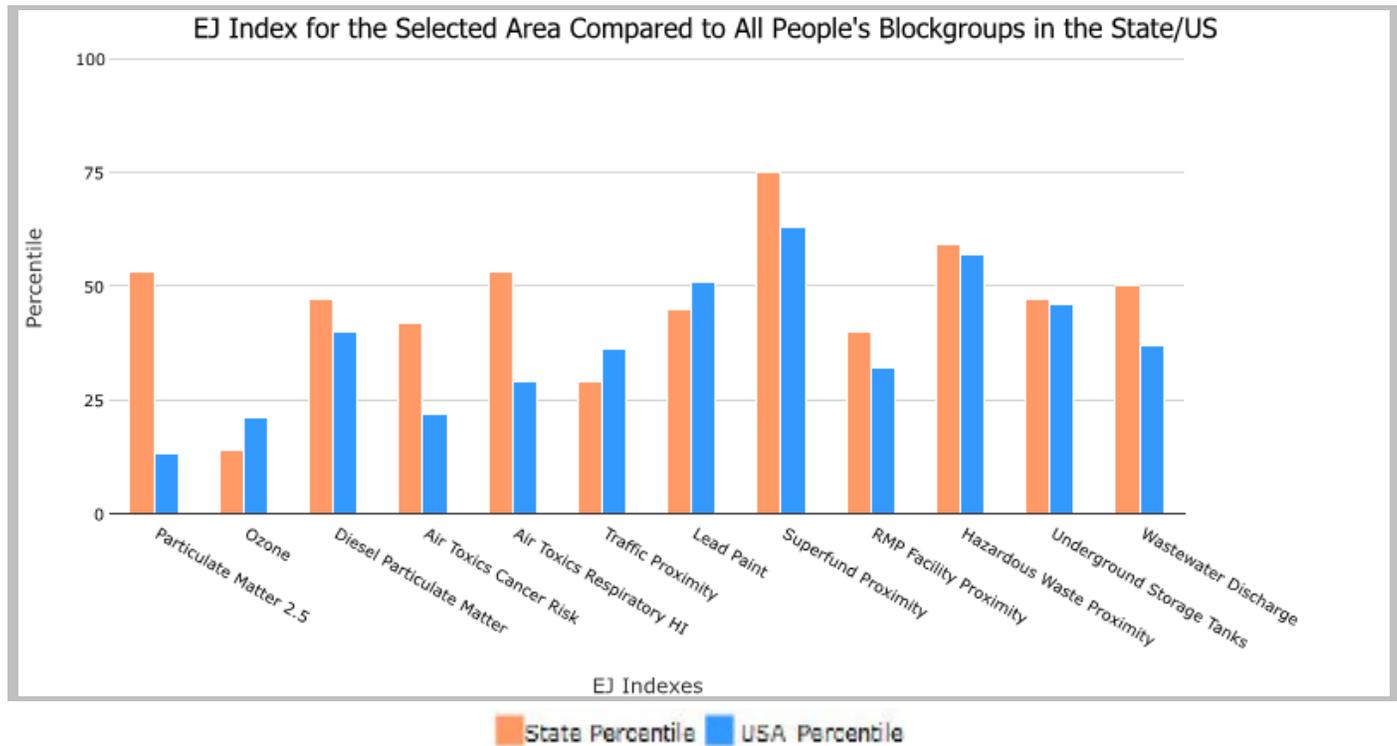
1 mile Ring around the Area, MASSACHUSETTS, EPA Region 1

Approximate Population: 3,969

Input Area (sq. miles): 4.98

Hanscom North Airfield (The study area contains 2 blockgroup(s) with zero population.)

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	53	13
EJ Index for Ozone	14	21
EJ Index for Diesel Particulate Matter*	47	40
EJ Index for Air Toxics Cancer Risk*	42	22
EJ Index for Air Toxics Respiratory HI*	53	29
EJ Index for Traffic Proximity	29	36
EJ Index for Lead Paint	45	51
EJ Index for Superfund Proximity	75	63
EJ Index for RMP Facility Proximity	40	32
EJ Index for Hazardous Waste Proximity	59	57
EJ Index for Underground Storage Tanks	47	46
EJ Index for Wastewater Discharge	50	37



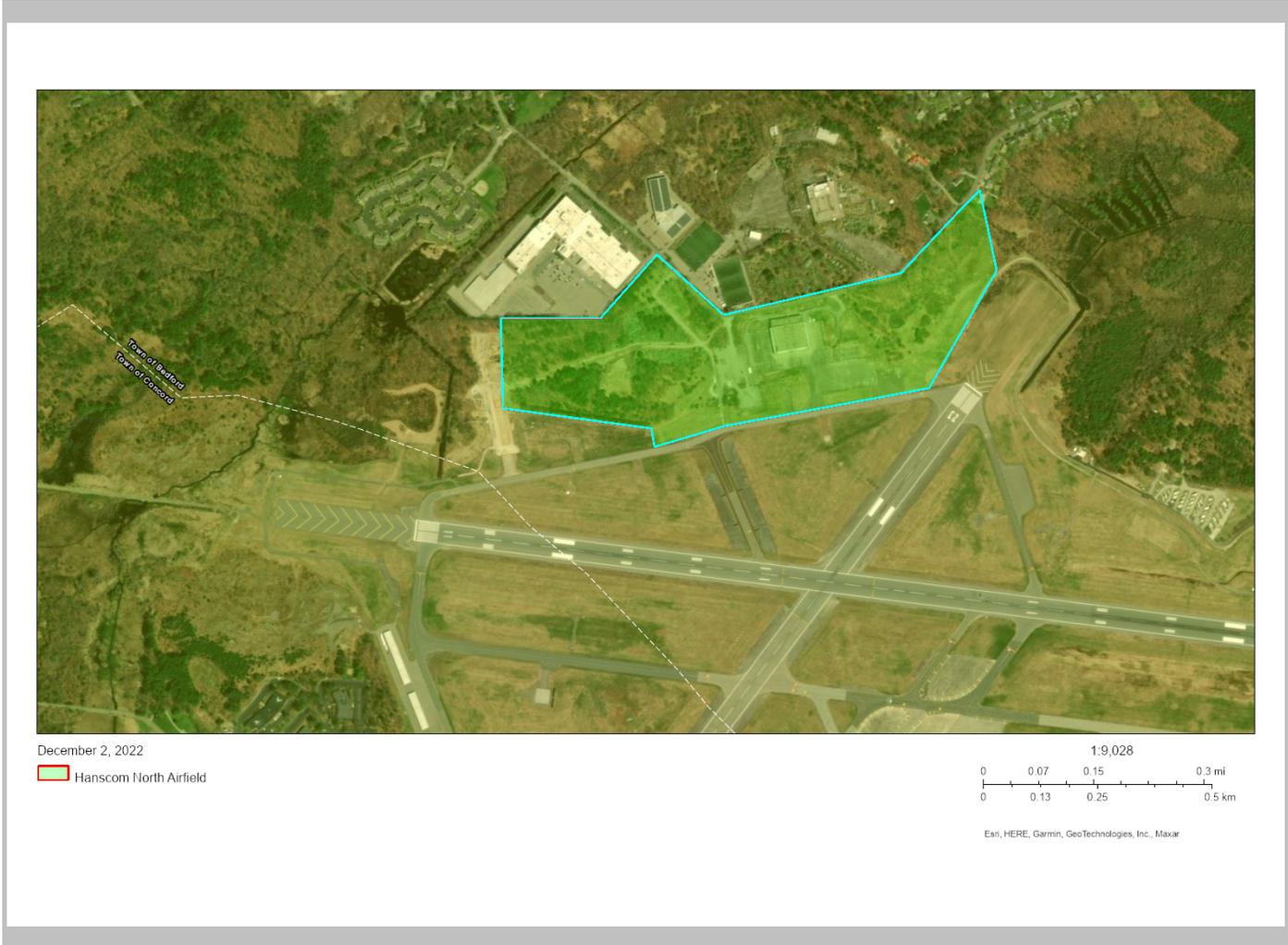
This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

1 mile Ring around the Area, MASSACHUSETTS, EPA Region 1

Approximate Population: 3,969

Input Area (sq. miles): 4.98

Hanscom North Airfield (The study area contains 2 blockgroup(s) with zero population.)



Sites reporting to EPA	
Superfund NPL	2
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	3

EJScreen Report (Version 2.1)

1 mile Ring around the Area, MASSACHUSETTS, EPA Region 1

Approximate Population: 3,969

Input Area (sq. miles): 4.98

Hanscom North Airfield (The study area contains 2 blockgroup(s) with zero population.)

Selected Variables	Value	State Avg.	%ile in State	USA Avg.	%ile in USA
Pollution and Sources					
Particulate Matter 2.5 ($\mu\text{g}/\text{m}^3$)	6.86	6.79	52	8.67	11
Ozone (ppb)	38.2	39.5	10	42.5	22
Diesel Particulate Matter* ($\mu\text{g}/\text{m}^3$)	0.216	0.307	40	0.294	<50th
Air Toxics Cancer Risk* (lifetime risk per million)	21	24	57	28	<50th
Air Toxics Respiratory HI*	0.3	0.3	79	0.36	<50th
Traffic Proximity (daily traffic count/distance to road)	200	2400	21	760	47
Lead Paint (% Pre-1960 Housing)	0.43	0.49	38	0.27	68
Superfund Proximity (site count/km distance)	1.3	0.18	98	0.13	98
RMP Facility Proximity (facility count/km distance)	0.18	0.74	31	0.77	34
Hazardous Waste Proximity (facility count/km distance)	6.1	5.6	77	2.2	90
Underground Storage Tanks (count/km ²)	1.7	3.4	47	3.9	56
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0025	0.21	69	12	57
Socioeconomic Indicators					
Demographic Index	18%	26%	47	35%	28
People of Color	29%	29%	60	40%	49
Low Income	8%	22%	23	30%	13
Unemployment Rate	8%	5%	76	5%	73
Limited English Speaking Households	2%	6%	52	5%	62
Less Than High School Education	7%	9%	54	12%	42
Under Age 5	4%	5%	49	6%	43
Over Age 64	13%	17%	37	16%	38

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: <https://www.epa.gov/haps/air-toxics-data-update>.

For additional information, see: www.epa.gov/environmentaljustice

EJScreen is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJScreen documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJScreen outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

Statewide Environmental Justice Community Based Organizations

First Name	Last Name	Title	Phone	Email	Affiliation
Julia	Blatt	Executive Director	(617) 714-4272	danielledolan@massriversalliance.org juliablatt@massriversalliance.org	Mass Rivers Alliance
Elvis	Mendez	Associate Director	508-505-6748	elvis@n2nma.org	Neighbor to Neighbor
Ben	Hellerstein	MA State Director	617-747-4368	ben@environmentmassachusetts.org	Environment Massachusetts
Claire	B.W. Muller	Movement Building Director	508 308-9261	claire@uumassaction.org	Unitarian Universalist Mass Action Network
Cindy	Luppi	New England Director	617-338-8131 x208	cluppi@cleanwater.org	Clean Water Action
Deb	Pasternak	Director, MA Chapter	617-423-5775	deb.pasternak@sierraclub.org	Sierra Club MA
Heather	Clish	Director of Conservation & Recreation Policy	(617) 523-0655	hclish@outdoors.org	Appalachian Mountain Club
Heidi	Ricci	Director of Policy	Not Provided	hricci@massaudubon.org	Mass Audubon
Kelly	Boling	MA & RI State Director	(617) 367-6200	kelly.boling@tpl.org	The Trust for Public Land
Kerry	Bowie	Board President	Not Provided	kerry@msaadapartners.com	Browning the GreenSpace
Nancy	Goodman	Vice President for Policy	Not Provided	ngoodman@environmentalleague.org	Environmental League of MA
Rob	Moir	Executive Director	Not Provided	rob@oceanriver.org	Ocean River Institute
Robb	Johnson	Executive Director	(978) 443-2233	robb@massland.org	Mass Land Trust Coalition
Staci	Rubin	Senior Attorney	617 350-0990	srubin@clf.org	Conservation Law Foundation
Sylvia	Broude	Executive Director	617 292-4821	sylvia@communityactionworks.org	Community Action Works

Indigenous Organizations					
First Name	Last Name	Title	Phone	Email	Affiliation
Alma	Gordon	President	Not Provided	tribalcouncil@chappaquiddickwampanoag.org	Chappaquiddick Tribe of the Wampanoag Nation
Cheryll	Toney Holley	Chair	774-317-9138	crwritings@aol.com	Nipmuc Nation (Hassanamisco Nipmucs)
John	Peters, Jr.	Executive Director	617-573-1292	john.peters@mass.gov	Massachusetts Commission on Indian Affairs (MCIA)
Kenneth	White	Council Chairman	508-347-7829	acw1213@verizon.net	Chaubunagungamaug Nipmuck Indian Council
Melissa	Ferretti	Chair	(508) 304-5023	melissa@herringpondtribe.org	Herring Pond Wampanoag Tribe
Patricia	D. Rocker	Council Chair	Not Provided	rockerpatriciad@verizon.net	Chappaquiddick Tribe of the Wampanoag Nation, Whale Clan
Raquel	Halsey	Executive Director	(617) 232-0343	rhalsey@naicob.org	North American Indian Center of Boston
Cora	Pierce	Not Provided	Not Provided	Coradot@yahoo.com	Pocassett Wampanoag Tribe
Elizabth	Soloman	Not Provided	Not Provided	Solomon.Elizabeth@gmail.com	Massachusetts Tribe at Ponkapoag

Federally Recognized Tribes						
First	Last	Title	Phone	Email	Affiliation	Notes
Bettina	Washington	Tribal Historic Preservation Officer	508-560-9014	thpo@wampanoagtribe-nsn.gov	Wampanoag Tribe of Gay Head (Aquinnah)	
Stockbridge-Munsee Tribe		Historic Preservation Manager	413-884-6048	THPO@Mohican-nsn.gov	Stockbridge-Munsee Tribe	Only for projects in: Berkshire County, Agawam, Amherst, Athol, Charlemont, Chicopee, Easthampton, Gardner, Greenfield, Hadley, Heath, Hubbardston, Ludlow, Monroe, Northampton, Orange, Palmer, Rowe, Royalston, Southwick, Springfield, Sunderland, Ware, Wendell, West Springfield, Westfield
Brian	Weeden	Chair	774-413-0520	Brian.Weeden@mwtribe-nsn.gov	Mashpee Wampanoag Tribe	

First Name	Last Name	Title	Service Area	Phone Number	Email	Affiliation
Heather	Miller	Not Provided	Lincoln	781-788-007	hmillercrwa.org	Charles River Watershed Assoc.

Appendix C

Climate Resilience – RMAT Report

Climate Resilience Design Standards Tool Project Report

L.G. Hanscom Field North Airfield Development

Date Created: 11/15/2022 4:33:29 PM

Created By: mwrenn

Date Report Generated: 12/9/2022 12:18:09 PM

Tool Version: Version 1.2

Project Contact Information: Brad Dumont (brad@charlesriverrealty.com)

Project Summary

[Link to Project](#)

Estimated Capital Cost: \$112000000.00

End of Useful Life Year: 2064

Project within mapped Environmental Justice neighborhood: No

Ecosystem Service	Scores
Benefits	
Project Score	■ Moderate
Exposure	
Sea Level Rise/Storm Surge	■ Not Exposed
Extreme Precipitation - Urban Flooding	■ High Exposure
Extreme Precipitation - Riverine Flooding	■ Not Exposed
Extreme Heat	■ High Exposure



Asset Preliminary Climate Risk Rating

Number of Assets: 2

Summary

Asset Risk	Sea Level Rise/Storm Surge	Extreme Precipitation - Urban Flooding	Extreme Precipitation - Riverine Flooding	Extreme Heat
Hangar	Low Risk	High Risk	Low Risk	High Risk
Aircraft Ramp	Low Risk	High Risk	Low Risk	High Risk

Climate Resilience Design Standards Summary

	Target Planning Horizon	Intermediate Planning Horizon	Percentile	Return Period	Tier
Sea Level Rise/Storm Surge					
Hangar					
Aircraft Ramp					
Extreme Precipitation					
Hangar	2070			25-yr (4%)	Tier 2
Aircraft Ramp	2050			25-yr (4%)	Tier 2
Extreme Heat					
Hangar	2070		90th		Tier 2
Aircraft Ramp	2050		50th		Tier 2

Scoring Rationale - Project Exposure Score

The purpose of the Exposure Score output is to provide a preliminary assessment of whether the overall project site and subsequent assets are exposed to impacts of natural hazard events and/or future impacts of climate change. For each climate parameter, the Tool will calculate one of the following exposure ratings: Not Exposed, Low Exposure, Moderate Exposure, or High Exposure. The rationale behind the exposure rating is provided below.

Sea Level Rise/Storm Surge

This project received a "Not Exposed" because of the following:

- Not located within the predicted mean high water shoreline by 2030
- No historic coastal flooding at project site
- Not located within the Massachusetts Coast Flood Risk Model (MC-FRM)

Extreme Precipitation - Urban Flooding

This project received a "High Exposure" because of the following:

- Increased impervious area
- Maximum annual daily rainfall exceeds 10 inches within the overall project's useful life
- No historic flooding at project site
- Existing impervious area of the project site is between 10% and 50%

Extreme Precipitation - Riverine Flooding

This project received a "Not Exposed" because of the following:

- No historic riverine flooding at project site
- The project is not within a mapped FEMA floodplain [outside of the Massachusetts Coast Flood Risk Model (MC-FRM)]
- Project is more than 500ft from a waterbody
- Project is not likely susceptible to riverine erosion

Extreme Heat

This project received a "High Exposure" because of the following:

- 30+ days increase in days over 90 deg. F within project's useful life
- Not located within 100 ft of existing water body
- Increased impervious area
- Existing trees are being removed as part of the proposed project
- Existing impervious area of the project site is between 10% and 50%

Scoring Rationale - Asset Preliminary Climate Risk Rating

A Preliminary Climate Risk Rating is determined for each infrastructure and building asset by considering the overall project Exposure Score and responses to Step 4 questions provided by the user in the Tool. Natural Resource assets do not receive a risk rating. The following factors are what influenced the risk ratings for each asset.

Asset - Hangar

Primary asset criticality factors influencing risk ratings for this asset:

- Asset may be inaccessible/inoperable during natural hazard event, but must be accessible/operable within one day after natural hazard event
- Loss/inoperability of the asset would have regional impacts
- Few alternative programs and/or services are available to support the community
- Cost to replace is less than \$10 million
- Impact on natural resources can be mitigated naturally with the inoperability of the asset

Asset - Aircraft Ramp

Primary asset criticality factors influencing risk ratings for this asset:

- Asset may be inaccessible/inoperable during natural hazard event, but must be accessible/operable within one day after natural hazard event
- Loss/inoperability of the asset would have regional impacts
- Inoperability of the asset would be expected to cause a loss of confidence in government agency
- Inoperability is likely to significantly impact other facilities, assets, or buildings and will likely affect their ability to operate
- There are no hazardous materials in the asset

Project Climate Resilience Design Standards Output

Climate Resilience Design Standards and Guidance are recommended for each asset and climate parameter. The Design Standards for each climate parameter include the following: recommended planning horizon (target and/or intermediate), recommended return period (Sea Level Rise/Storm Surge and Precipitation) or percentile (Heat), and a list of applicable design criteria that are likely to be affected by climate change. Some design criteria have numerical values associated with the recommended return period and planning horizon, while others have tiered methodologies with step-by-step instructions on how to estimate design values given the other recommended design standards.

Asset: Hangar

Building/Facility

Sea Level Rise/Storm Surge

Low Risk

Applicable Design Criteria

Projected Tidal Datums: NOT APPLICABLE

Projected Water Surface Elevation: NOT APPLICABLE

Projected Wave Action Water Elevation: NOT APPLICABLE

Projected Wave Heights: NOT APPLICABLE

Projected Duration of Flooding: NOT APPLICABLE

Projected Design Flood Velocity: NOT APPLICABLE

Projected Scour & Erosion: NOT APPLICABLE

Extreme Precipitation

High Risk

Target Planning Horizon: 2070

Return Period: 25-yr (4%)

LIMITATIONS: The recommended Standards for Total Precipitation Depth & Peak Intensity are determined by the user drawn polygon and relationships as defined in the Supporting Documents. The projected Total Precipitation Depth values provided through the Tool are based on the climate projections developed by Cornell University as part of EEA's Massachusetts Climate and Hydrologic Risk Project, GIS-based data as of 10/15/21. For additional information on the methodology of these precipitation outputs, see Supporting Documents.

While Total Precipitation Depth & Peak Intensity for 24-hour Design Storms are useful to inform planning and design, it is recommended to also consider additional longer- and shorter-duration precipitation events and intensities in accordance with best practices. Longer-duration, lower-intensity storms allow time for infiltration and reduce the load on infrastructure over the duration of the storm. Shorter-duration, higher-intensity storms often have higher runoff volumes because the water does not have enough time to infiltrate infrastructure systems (e.g., catch basins) and may overflow or back up during such storms, resulting in flooding. In the Northeast, short-duration high intensity rain events are becoming more frequent, and there is often little early warning for these events, making it difficult to plan operationally. While the Tool does not provide recommended design standards for these scenarios, users should still consider both short- and long-duration precipitation events and how they may impact the asset.

The projected values, standards, and guidance provided within this Tool may be used to inform plans and designs, but they do not provide guarantees for future conditions or resilience. The projected values are not to be considered final or appropriate for construction documents without supporting engineering analyses. The guidance provided within this Tool is intended to be general and users are encouraged to do their own due diligence

Applicable Design Criteria

Tiered Methodology: Tier 2

Projected Total Precipitation Depth & Peak Intensity for 24-hr Design Storms: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period (Design Storm)	Projected 24-hr Total Precipitation Depth (inches)	Step-by-Step Methodology for Peak Intensity
Hangar	2070	25-Year (4%)	8.4	Downloadable Methodology. PDE

Projected Riverine Peak Discharge & Peak Flood Elevation: NOT APPLICABLE

Extreme Heat

High Risk

Target Planning Horizon: 2070
Percentile: 90th Percentile

Applicable Design Criteria

Tiered Methodology: Tier 2

Projected Annual/Summer/Winter Average Temperatures: APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Projected Heat Index: APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Projected Growing Degree Days: NOT APPLICABLE

Projected Days Per Year With Max Temp > 95°F, >90°F, <32°F: APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Projected Number of Heat Waves Per Year & Average Heat Wave Duration: APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Projected Cooling Degree Days & Heating Degree Days (base = 65°F): APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Asset: Aircraft Ramp

Infrastructure

Sea Level Rise/Storm Surge

Low Risk

Applicable Design Criteria

Projected Tidal Datums: NOT APPLICABLE

Projected Water Surface Elevation: NOT APPLICABLE

Projected Wave Action Water Elevation: NOT APPLICABLE

Projected Wave Heights: NOT APPLICABLE

Projected Duration of Flooding: NOT APPLICABLE

Projected Design Flood Velocity: NOT APPLICABLE

Projected Scour & Erosion: NOT APPLICABLE

Extreme Precipitation

High Risk

Target Planning Horizon: 2050
Return Period: 25-yr (4%)

LIMITATIONS: The recommended Standards for Total Precipitation Depth & Peak Intensity are determined by the user drawn polygon and relationships as defined in the Supporting Documents. The projected Total Precipitation Depth values provided through the Tool are based on the climate projections developed by Cornell University as part of EEA's Massachusetts Climate and Hydrologic Risk Project, GIS-based data as of 10/15/21. For additional information on the methodology of these precipitation outputs, see Supporting Documents.

While Total Precipitation Depth & Peak Intensity for 24-hour Design Storms are useful to inform planning and design, it is recommended to also consider additional longer- and shorter-duration precipitation events and intensities in accordance with best practices. Longer-duration, lower-intensity storms allow time for infiltration and reduce the load on infrastructure over the duration of the storm. Shorter-duration, higher-intensity storms often have higher runoff volumes because the water does not have enough time to infiltrate infrastructure systems (e.g., catch basins) and may overflow or back up during such storms, resulting in flooding. In the Northeast, short-duration high intensity rain events are becoming more frequent, and there is often little early warning for these events, making it difficult to plan operationally. While the Tool does not provide recommended design standards for these scenarios, users should still consider both short- and long-duration precipitation events and how they may impact the asset.

The projected values, standards, and guidance provided within this Tool may be used to inform plans and designs, but they do not provide guarantees for future conditions or resilience. The projected values are not to be considered final or appropriate for construction documents without supporting engineering analyses. The guidance provided within this Tool is intended to be general and users are encouraged to do their own due diligence

Applicable Design Criteria

Tiered Methodology: Tier 2

Projected Total Precipitation Depth & Peak Intensity for 24-hr Design Storms: APPLICABLE

Asset Name	Recommended Planning Horizon	Recommended Return Period (Design Storm)	Projected 24-hr Total Precipitation Depth (inches)	Step-by-Step Methodology for Peak Intensity
Aircraft Ramp	2050	25-Year (4%)	7.9	Downloadable Methodology PDF

Projected Riverine Peak Discharge & Peak Flood Elevation: NOT APPLICABLE

Extreme Heat

High Risk

Target Planning Horizon: 2050
Percentile: 50th Percentile

Applicable Design Criteria

Tiered Methodology: Tier 2

Projected Annual/Summer/Winter Average Temperatures: APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Projected Heat Index: APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Projected Growing Degree Days: NOT APPLICABLE

Projected Days Per Year With Max Temp > 95°F, >90°F, <32°F: APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Projected Number of Heat Waves Per Year & Average Heat Wave Duration: APPLICABLE

[Methodology to Estimate Projected Values](#) : Tier 2

Projected Cooling Degree Days & Heating Degree Days (base = 65°F): NOT APPLICABLE

Project Inputs

Core Project Information

Name:	L.G. Hanscom Field North Airfield Development
Given the expected useful life of the project, through what year do you estimate the project to last (i.e. before a major reconstruction/renovation)?	2064
Location of Project:	Bedford
Estimated Capital Cost:	\$112,000,000
Who is the Submitting Entity?	Private Other North Airfield Ventures, LLC; Runway Realty Ventures, LLC Brad Dumont (brad@charlesriverrealty.com)
Is this project being submitted as part of a state grant application?	No
Which grant program?	
What stage are you in your project lifecycle?	Planning
Is climate resiliency a core objective of this project?	Yes
Is this project being submitted as part of the state capital planning process?	No
Is this project being submitted as part of a regulatory review process or permitting?	Yes
Brief Project Description:	The proposed development on the North Airfield and existing Navy Parcel of L.G. Hanscom Field (the Project) will provide approximately 495,470 square feet of new hangar space in the form of 27 purpose-built hangars for aircraft parking and storage. As a complement to the existing fixed-base operator (FBO) and maintenance, repair, and overhaul (MRO) facilities currently at L.G. Hanscom Field (airport code: BED), the Project provides standalone hangar and aviation support space for aircraft operators allowing for increased privacy, reduced fuel costs, and greater control for their flight department. The Project is intended to accommodate the high demand for these amenities at BED.

Project Submission Comments:

Project Ecosystem Service Benefits

Factors Influencing Output

- ✓ Project provides flood protection through nature-based solutions
- ✓ Project protects public water supply
- ✓ Project promotes decarbonization
- ✓ Project filters stormwater using green infrastructure
- ✓ Project protects fisheries, wildlife, and plant habitat

Factors to Improve Output

- ✓ Incorporate nature-based solutions that may reduce storm damage
- ✓ Incorporate green infrastructure or nature-based solutions that recharge groundwater
- ✓ Mitigate atmospheric greenhouse gas concentrations and other toxic air pollutants through nature-based solutions
- ✓ Identify opportunities to prevent pollutants from impacting ecosystems
- ✓ Incorporate education and/or protect cultural resources as part of your project

Is the primary purpose of this project ecological restoration?

No

Project Benefits

Provides flood protection through nature-based solutions	Yes
Reduces storm damage	Maybe
Recharges groundwater	Maybe
Protects public water supply	Yes
Filters stormwater using green infrastructure	Yes
Improves water quality	No
Promotes decarbonization	Yes
Enables carbon sequestration	No
Provides oxygen production	No
Improves air quality	Maybe
Prevents pollution	Maybe
Remediates existing sources of pollution	No
Protects fisheries, wildlife, and plant habitat	Yes
Protects land containing shellfish	No
Provides pollinator habitat	No
Provides recreation	No
Provides cultural resources/education	Maybe

Project Climate Exposure

Is the primary purpose of this project ecological restoration?	No
Does the project site have a history of coastal flooding?	No
Does the project site have a history of flooding during extreme precipitation events (unrelated to water/sewer damages)?	Unsure
Does the project site have a history of riverine flooding?	No
Does the project result in a net increase in impervious area of the site?	Yes
Are existing trees being removed as part of the proposed project?	Yes

Project Assets

Asset: Hangar
Asset Type: Typically Unoccupied
Asset Sub-Type: Parking facility
Construction Type: New Construction
Construction Year: 2024
Useful Life: 40

Identify the length of time the asset can be inaccessible/inoperable without significant consequences.

Building may be inaccessible/inoperable during natural hazard event, but must be accessible/operable within one day after natural hazard event

Identify the geographic area directly affected by permanent loss or significant inoperability of the building/facility.

Impacts would be regional (more than one municipality and/or surrounding region)

Identify the population directly served that would be affected by the permanent loss of use or inoperability of the building/facility.

Less than 100 people

Identify if the building/facility provides services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.

The building/facility does not provide services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.

If the building/facility became inoperable for longer than acceptable in Question 1, how, if at all, would it be expected to impact people's health and safety?

Inoperability of the building/facility would not be expected to result in injuries

If there are hazardous materials in your building/facility, what are the extent of impacts related to spills/releases of these materials?

There are no hazardous materials in the building/facility

If the building/facility became inoperable for longer than acceptable in Question 1, what are the impacts on other facilities, assets, and/or infrastructure?

Minor – Inoperability will not likely affect other facilities, assets, or buildings

If this building/facility was damaged beyond repair, how much would it approximately cost to replace?

Less than \$10 million

Is this a recreational facility which can be vacated during a natural hazard event?

Yes

If the building/facility became inoperable for longer than acceptable in Question 1, what are the public and/or social services impacts?

Few alternative programs and/or services are available to support the community

If the building/facility became inoperable for longer than acceptable in Question 1, what are the environmental impacts related to natural resources?

Impact on natural resources can be mitigated naturally

If the building/facility became inoperable for longer than acceptable in Question 1, what are the impacts to government services (i.e. the building is not able to serve or operate its intended users or function)?

Loss of building may reduce the ability to maintain some government services, while a majority of services will still exist.

If the building/facility became inoperable for longer than acceptable in Question 1, what are the impacts to loss of confidence in government (i.e. the building is not able to serve or operate its intended users or function)?

Loss of confidence in government agency

Asset: Aircraft Ramp

Asset Type: Transportation

Asset Sub-Type: Other Transportation

Construction Type: Major Repair/Retrofit

Construction Year: 2024

Useful Life: 20

Identify the length of time the asset can be inaccessible/inoperable without significant consequences.

Infrastructure may be inaccessible/inoperable during natural hazard event, but must be accessible/operable within one day after natural hazard event.

Identify the geographic area directly affected by permanent loss or significant inoperability of the infrastructure.

Impacts would be regional (more than one municipality and/or surrounding region)

Identify the population directly served that would be affected by the permanent loss or significant inoperability of the infrastructure.

Less than 5,000 people

Identify if the infrastructure provides services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.

The infrastructure does not provide services to populations that reside within Environmental Justice neighborhoods or climate vulnerable populations.

Will the infrastructure reduce the risk of flooding?

No

If the infrastructure became inoperable for longer than acceptable in Question 1, how, if at all, would it be expected to impact people's health and safety?

Inoperability of the infrastructure would not be expected to result in injuries

If there are hazardous materials in your infrastructure, what are the extents of impacts related to spills/releases of these materials?

There are no hazardous materials in the infrastructure

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts on other facilities, assets, and/or infrastructure?

Significant – Inoperability is likely to impact other facilities, assets, or buildings and result in cascading impacts that will likely affect their ability to operate

If the infrastructure was damaged beyond repair, how much would it approximately cost to replace?

Less than \$10 million

Does the infrastructure function as an evacuation route during emergencies? This question only applies to roadway projects.

No

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the environmental impacts related to natural resources?

No impact on surrounding natural resources is expected

If the infrastructure became inoperable for longer than acceptable in Question 1, what are the impacts to government services (i.e. the infrastructure is not able to serve or operate its intended users or function)?

Loss of infrastructure may reduce the ability to maintain some government services, while a majority of services will still exist

What are the impacts to loss of confidence in government resulting from loss of infrastructure functionality (i.e. the infrastructure asset is not able to serve or operate its intended users or function)?

Loss of confidence in government agency

Report Comments

N/A

L.G. HANSCOM FIELD
North Airfield Development

