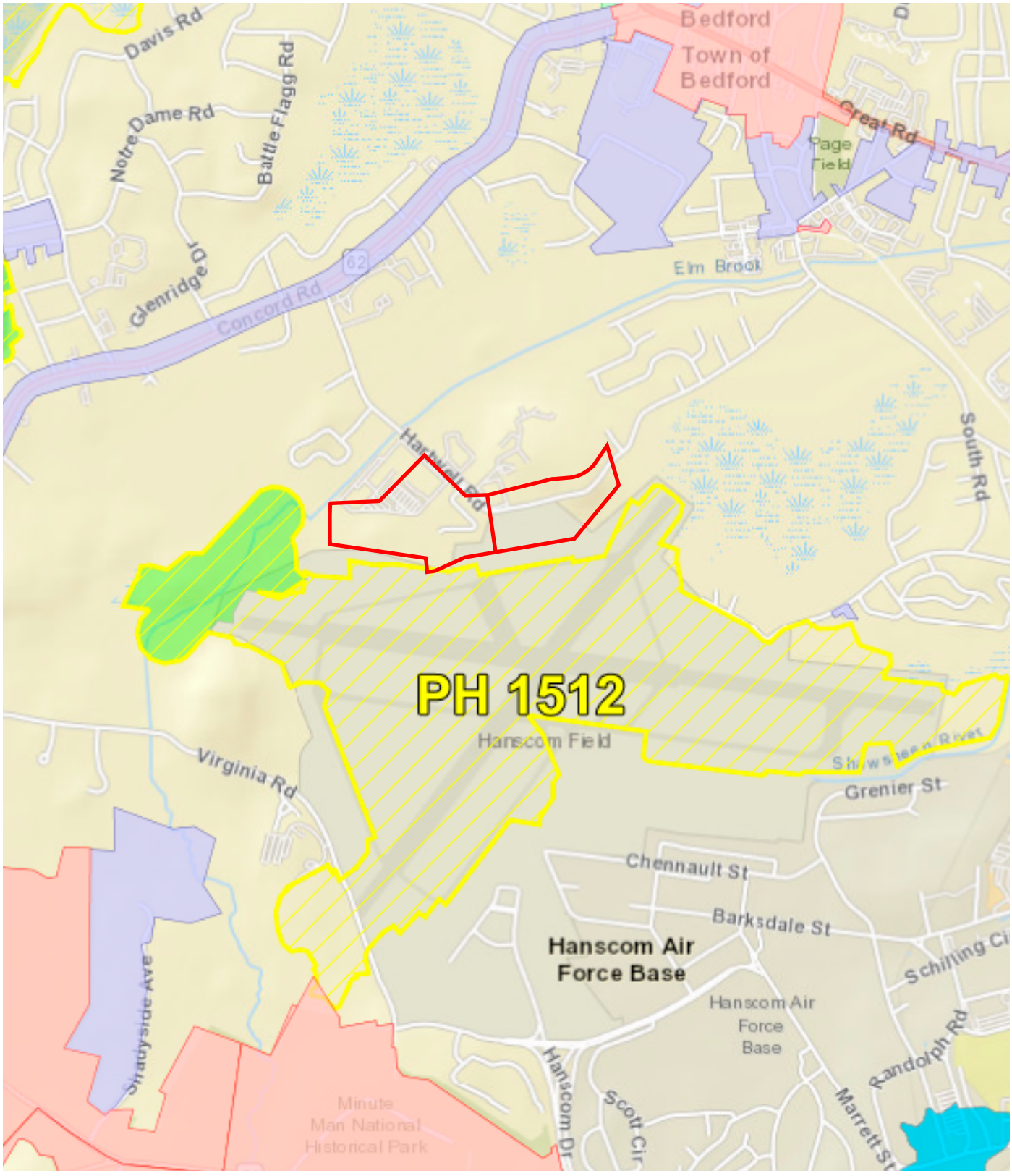


Source: MassGIS

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

vhb

Figure 1.4

Environmental Constraints

Source: VHB

Figure 1.5
Proposed Conditons 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	*Included in Hangar Total*	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 taxilane 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 taxilane 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

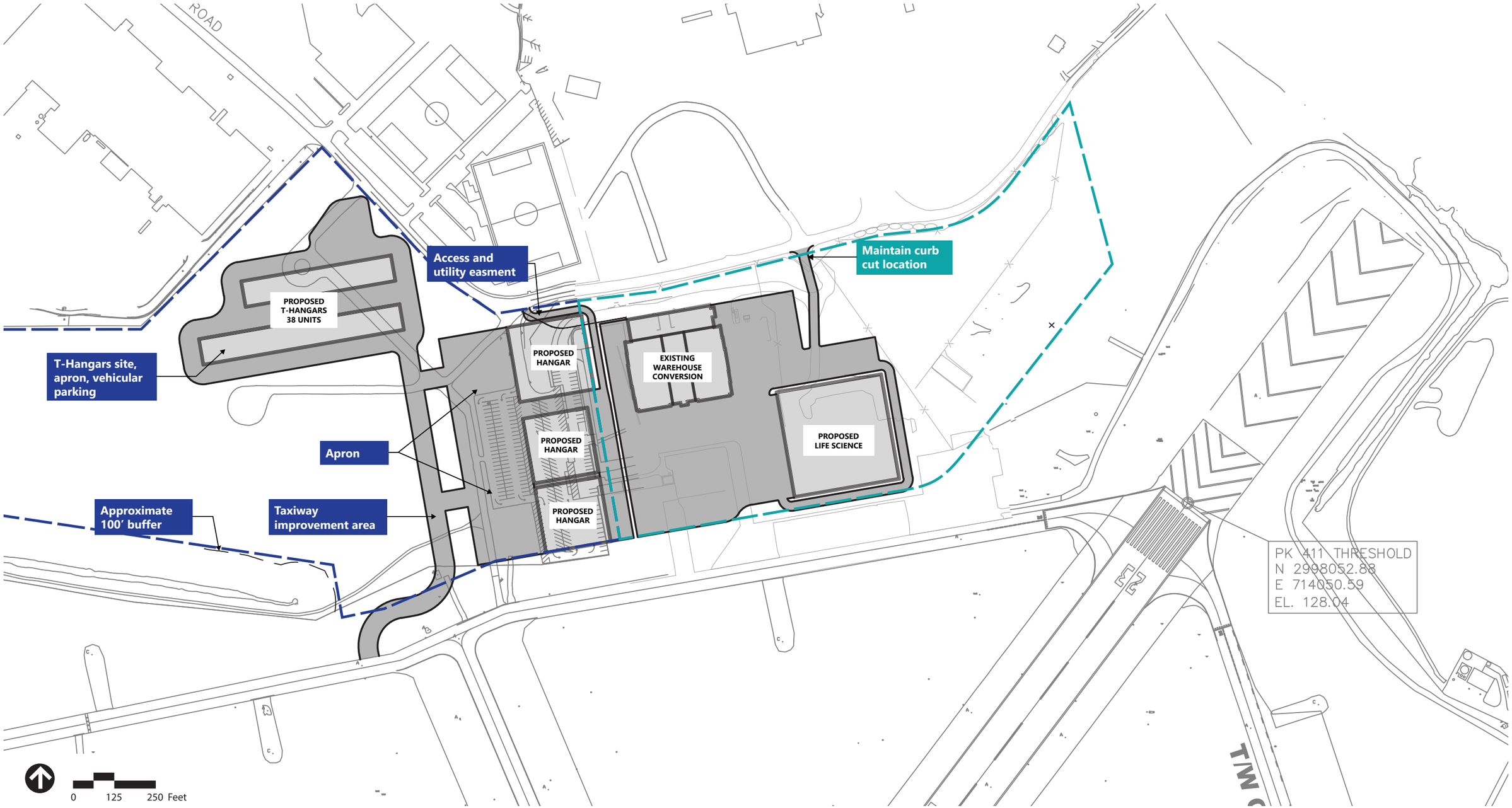
Project Goal	No-Build	Build Alternative	Preferred
1. Adequate Hangar Space	0	✓	✓✓✓
2. Compatible Aviation Use	✓	✓	✓✓✓
3. Cohesive Development	0	0	✓✓✓
4. Economic Viability	0	✓✓	✓✓✓

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 RMAT Climate Resilience Design Standards Tool to determine potential climate-related risks to the surrounding communities. Refer to Appendix C for a copy of the RMAT 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 and 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 7.55ºF increase in average annual temperature by 2070 under a high emissions pathway, and a 4.7ºF 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 17.1ºF to between 21.7ºF and 28.5ºF, 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 90ºF 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 4.6ºF and 7.3ºF 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 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. 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 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, 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.boccadoro@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

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 jbelanger@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, 1st 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, 2nd 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
Pocassett 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:

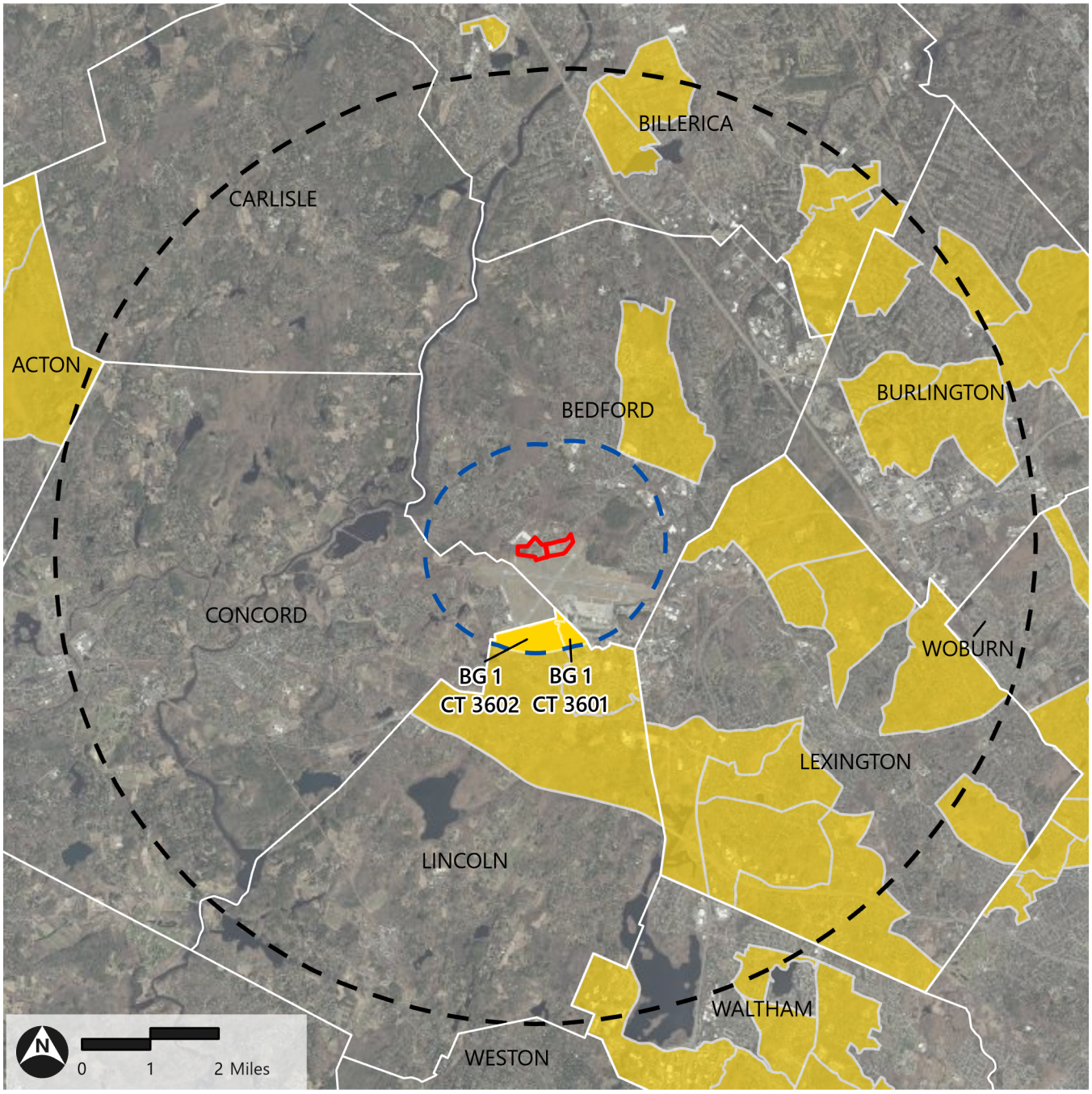
- **Document language translations;**
- **An evening-time remote meeting and/or in-person at a location near public transportation to discuss the Project; and**
- **Oral language interpretation services at public meetings.**

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

Source: EEA GIS 2020 Environmental Justice, Orthos Imagery Spring 2021, MassGIS

EJScreen Report (Version 2.1)

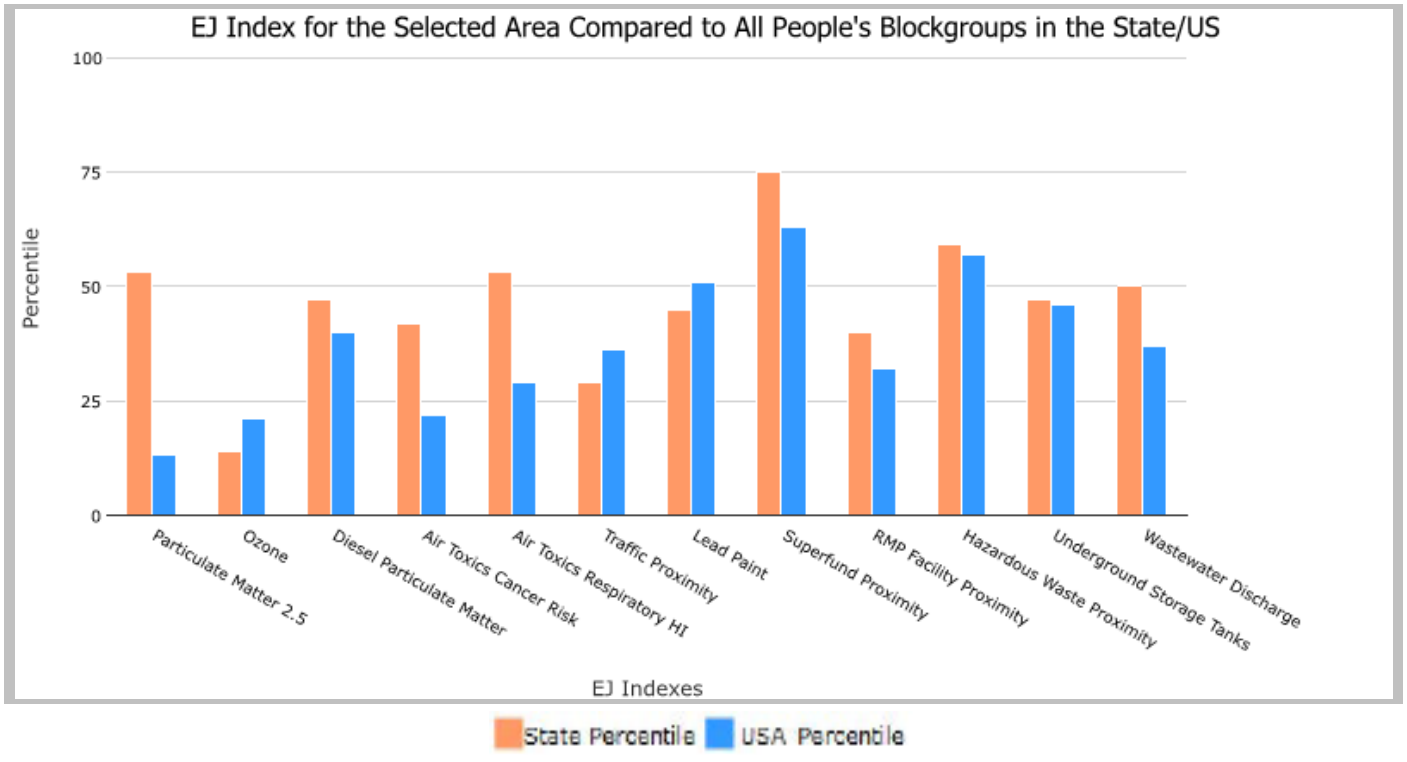
1 mile Ring around the Area, MASSACHUSETTS, EPA Region 1

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	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.

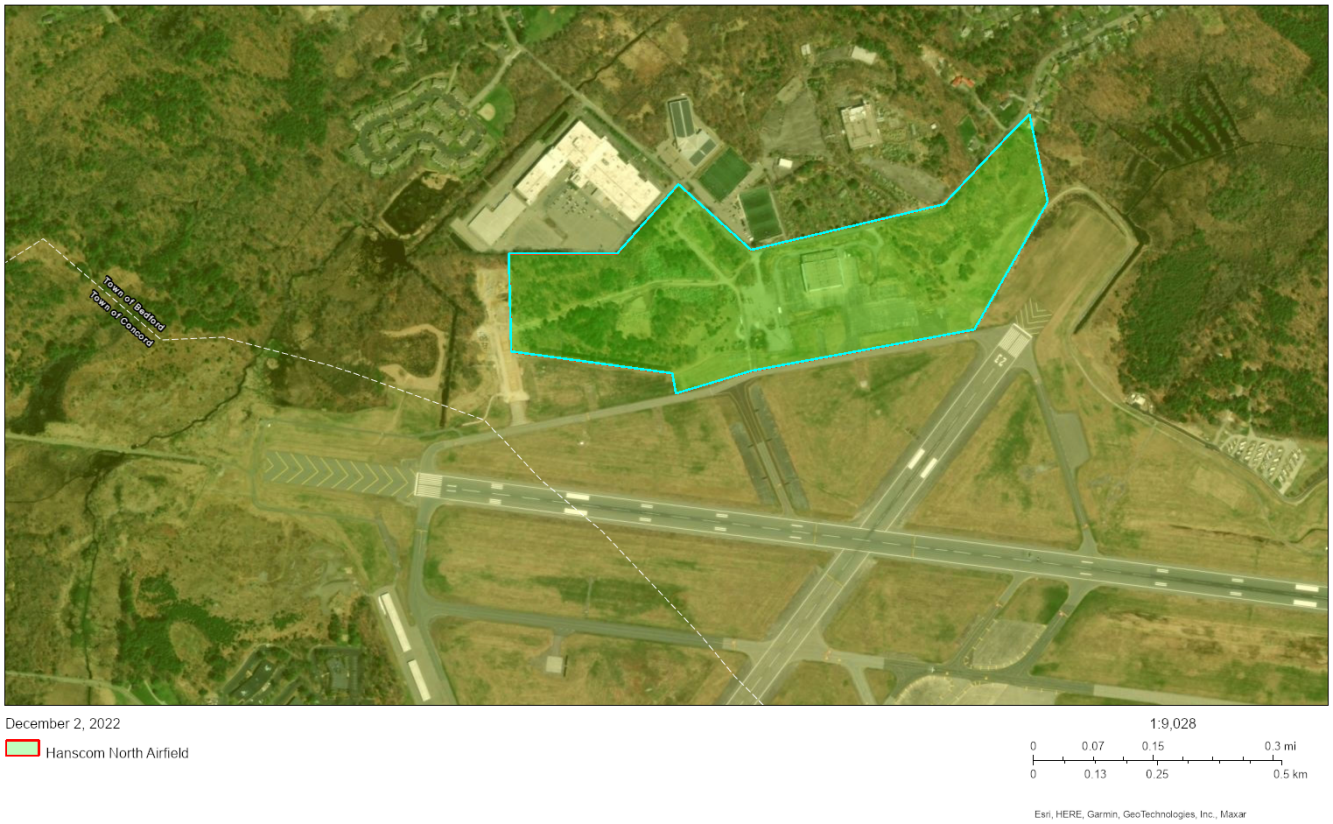
EJScreen Report (Version 2.1)

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.)



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 (µg/m^3)	6.86	6.79	52	8.67	11
Ozone (ppb)	38.2	39.5	10	42.5	22
Diesel Particulate Matter* (µg/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 particular 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

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	hmiller@crwa.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 Benefits	Scores
Project Score	Moderate
Exposure	**Scores**
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 Summary

Number of Assets: 2

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 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 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 PDF

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