

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
LINCOLN LABORATORY
VEHICLE MAINTENANCE AND INTEGRATION FACILITY



DRAFT
ENVIRONMENTAL ASSESSMENT



MIT Lincoln Laboratory



**Massachusetts
Institute of
Technology**



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PRIVACY ADVISORY

This Draft Environmental Assessment (EA) has been provided for public comment in accordance with the National Environmental Policy Act (NEPA) and the Department of Defense (DoD) NEPA Implementing Procedures, which provides an opportunity for public input on United States Department of the Air Force (DAF) decision-making, allows the public to offer input on alternative ways for DAF to accomplish what it is proposing, and solicits comments on DAF's analysis of environmental effects. The DoD NEPA Implementing Procedures replaced the DAF NEPA regulations codified at 32 Code of Federal Regulations Part 989, effective July 1, 2025. The DAF rescinded its regulations because the Council on Environmental Quality's NEPA regulations, which the DAF's were meant to supplement, were rescinded in February 2025.

Public input allows DAF to make better-informed decisions. Letters or other written or verbal comments provided may be published in this EA. Providing personal information is voluntary. Private addresses will be compiled to develop a stakeholders inventory. However, only the names of the individuals making comments and specific comments will be disclosed. Personal information, home addresses, telephone numbers, and email addresses will not be published in this EA.

508 COMPLIANCE STATEMENT

This EA has been certified in accordance with the July 2025 DoD NEPA Implementing Procedures to not exceed the 75-page limit not including the citations or appendices. A "page" means 500 words and does include maps, diagrams, graphs, tables, and other means of graphically displaying quantitative or geospatial information.

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Acronyms and Abbreviations

66 ABG	66 th Air Base Group
ACAM	Air Conformity Applicability Model
AFB	Air Force Base
AFCRL	Air Force Cambridge Research Laboratories
AFI	Air Force Instruction
AFRL	Air Force Research Laboratory
AICUZ	Air Installations Compatible Use Zones
BMP	best management practice
C&D	Construction and Demolition
CAA	Clean Air Act
CFR	Code of Federal Regulations
CH ₄	methane
CMR	Code of Massachusetts Regulations
CNEL	community noise equivalent level
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	carbon dioxide equivalent
CSL-MIF	Compound Semiconductor Laboratory – Microsystem Integration Facility
DAF	Department of the Air Force
dB	decibel(s)
DBH	diameter breast height
DNL	day-night average sound level
DoD	Department of Defense
EA	Environmental Assessment
EHS	Environmental Health and Safety
EISA	Energy Independence and Security Act
EPF	Engineering and Prototyping Facility
ERP	Environmental Restoration Program
FAA	Federal Aviation Administration
FFRDC	Federally Funded Research and Development Center
FMP	Facilities Modernization Plan

FONSI	Finding of No Significant Impact
GCR	General Conformity Regulations
GHG	greenhouse gas
HVAC	heating, ventilation, and air conditioning
INRMP	Integrated Natural Resources Management Plan
IPaC	Information for Planning and Consultation
JAC	Joint Advisory Committee
MassDEP	Massachusetts Department of Environmental Protection
MassGIS	Massachusetts Bureau of Geographic Information
Massport	Massachusetts Port Authority
MHC	Massachusetts Historical Commission
MILCON	Military Construction
MIT	Massachusetts Institute of Technology
MIT LL	Massachusetts Institute of Technology Lincoln Laboratory
MSL	mean sea level
N ₂ O	nitrous oxide
NAAQS	National Ambient Air Quality Standard(s)
NEPA	National Environmental Policy Act
NHESP	Natural Heritage and Endangered Species
NHPA	National Historic Preservation Act
NO ₂	nitrogen dioxide
NO _x	nitrogen oxides
NPDES	National Pollutant Discharge Elimination System
O ₃	ozone
OSHA	Occupational Safety and Health Administration
PA	programmatic agreement
PAL	Public Archaeology Laboratory
Pb	lead
PCBs	polychlorinated biphenyls
PM	particulate matter
PM _{2.5}	particulate matter equal to or less than 2.5 microns in aerodynamic diameter
PM ₁₀	particulate matter equal to or less than 10 microns in aerodynamic diameter

ppm	part(s) per million
SLUCM	standard land use coding manual
SO ₂	sulfur dioxide
SOI	Secretary of the Interior
TMDL	total maximum daily load
tpy	tons per year
UFC	Unified Facilities Criteria
USC	United States Code
USDA	United States Department of Agriculture
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service
VOC	volatile organic compound

1 PURPOSE OF AND NEED FOR ACTION

1.1 INTRODUCTION

The Massachusetts Institute of Technology (MIT) is a Massachusetts non-profit educational organization. MIT Lincoln Laboratory (MIT LL), which is part of MIT, is a federally funded research and development center (FFRDC) operated and managed by MIT for the U.S. Department of Defense (DoD). MIT LL's mission is to apply advanced technology to problems of national security that involve research and development activities, with a focus on long-term technology development.

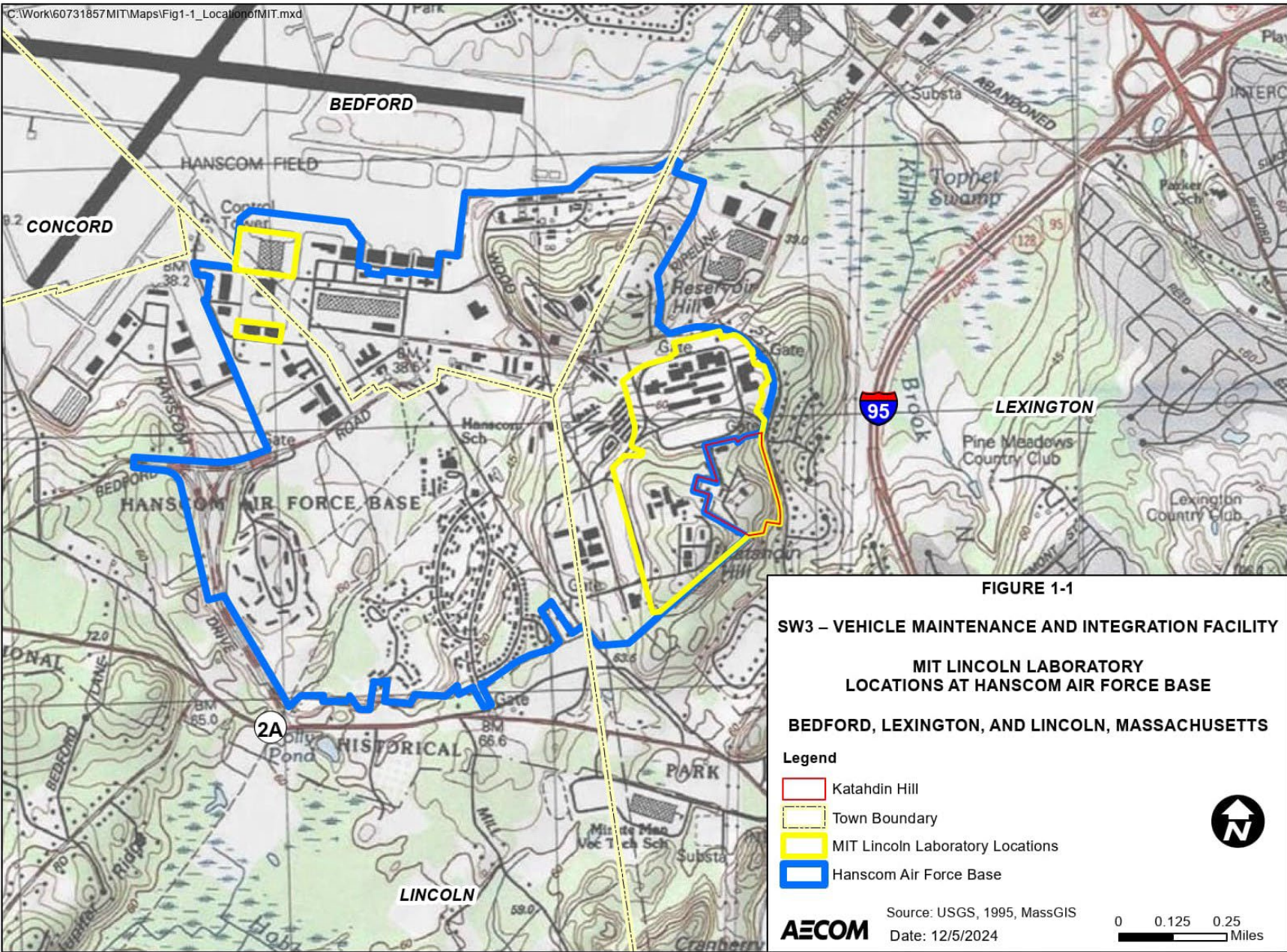
Research at MIT LL is aligned within key mission areas that have a specific focus; however, the mission-oriented work supports cross-divisional, multidisciplinary collaborations. The research includes projects in air and missile defense, space surveillance technology, tactical systems, biological-chemical defense, homeland protection, and communications, cyber, and information technology. The areas that constitute the core of the work performed at MIT LL are sensors, information extraction (signal processing and embedded computing), communications, and integrated sensing and decision support, all of which are supported by a broad research base in advanced electronics. MIT LL takes projects from the initial concept stage, through simulation and analysis, to design and rapid prototyping, and finally to field demonstration.

The majority of MIT LL facilities are on federal property, occupying approximately 80 acres in Lexington, Massachusetts, within the eastern perimeter of Hanscom Air Force Base (AFB) (**Figure 1-1**). An additional 20 of the acres utilized are MIT property in Lexington, commonly referred to as the "Katahdin Hill" area, contiguous with the base. MIT LL also utilizes a hangar and three buildings on the western side of Hanscom AFB in Bedford and Lincoln, Massachusetts, proximate to the aprons associated with the runways at Laurence G. Hanscom Field Airport (Hanscom Field).

MIT LL has historically operated on Hanscom AFB and while there are several operational and security reasons supporting continued operation at this location, the law is clear that MIT LL's moving off base is not legally permissible as any such move would require new construction. In the 2024 Further Consolidated Appropriations Act, Public Law 118-47, the recurring provision is Section 8026(c), which states in part:

Notwithstanding any other provision of law, none of the funds available to the department from any source during the current fiscal year may be used by a defense FFRDC, through a fee or other payment mechanism, for construction of new buildings not located on a military installation

In 2014, in its Comprehensive Review of MIT LL, the DoD indicated that facilities modernization needed to be a priority and a Facilities Modernization Plan (FMP) was developed. This emphasis on facilities was reiterated in the DoD 2019 Comprehensive Review. Per the action from the DoD Joint Advisory Committee (JAC) meeting of 16 August 2022, in order to execute the FMP, the Department of the Air Force (DAF) proposed to enter into a lease agreement (Master Lease) with MIT to facilitate current FFRDC operations and establish the conditions needed for long-term modernization of the MIT LL facility complex. The lease approach was approved at the DoD JAC meeting on 29 June 2023, as well as FMP version 7.1.



The Master Lease and MIT Contract Modification, which were signed on 24 April 2024, allow MIT LL to fund and execute FMP Type 3 building projects—i.e., construction projects not funded through military construction (MILCON). At the time of the lease through a separate deed, existing buildings on federal land, owned by DAF, were conveyed to MIT. Additionally, new buildings constructed on the leased land will also be owned by MIT. However, since the leased land is still on property owned by DAF, laws and regulations applicable to DAF apply to projects such as the Proposed Action on the leased land. The Master Lease area is a total of about 64.27 acres of land divided into five parcels, three of which are within the MIT LL campus (**Figure 1-2**), and includes 22 existing buildings with a total of approximately 1.18 million gross square feet, and various utility lines conveyed to MIT.

Through the FMP and as approved by the JAC, MIT LL has established a sequencing plan in order to sequentially demolish existing buildings and thereby provide sites to develop new buildings. The leased land also includes parcels of open land available for development, which either have never been built on or have already had existing buildings demolished.

The FMP building development has already started, with two FMP Type 2 projects—i.e., projects funded through MILCON—underway or in design, the Compound Semiconductor Laboratory – Microsystem Integration Facility (CSL-MIF) and Engineering and Prototyping Facility (EPF), respectively. The Master Lease area does not include these MILCON project sites; although, when construction is completed, the lease area and building conveyance will be adjusted accordingly, as the parties have agreed, which will require a deed and lease modification to add the sites and buildings. Construction for the CSL-MIF and EPF is slated to finish in 2026/2027 and 2028, respectively.

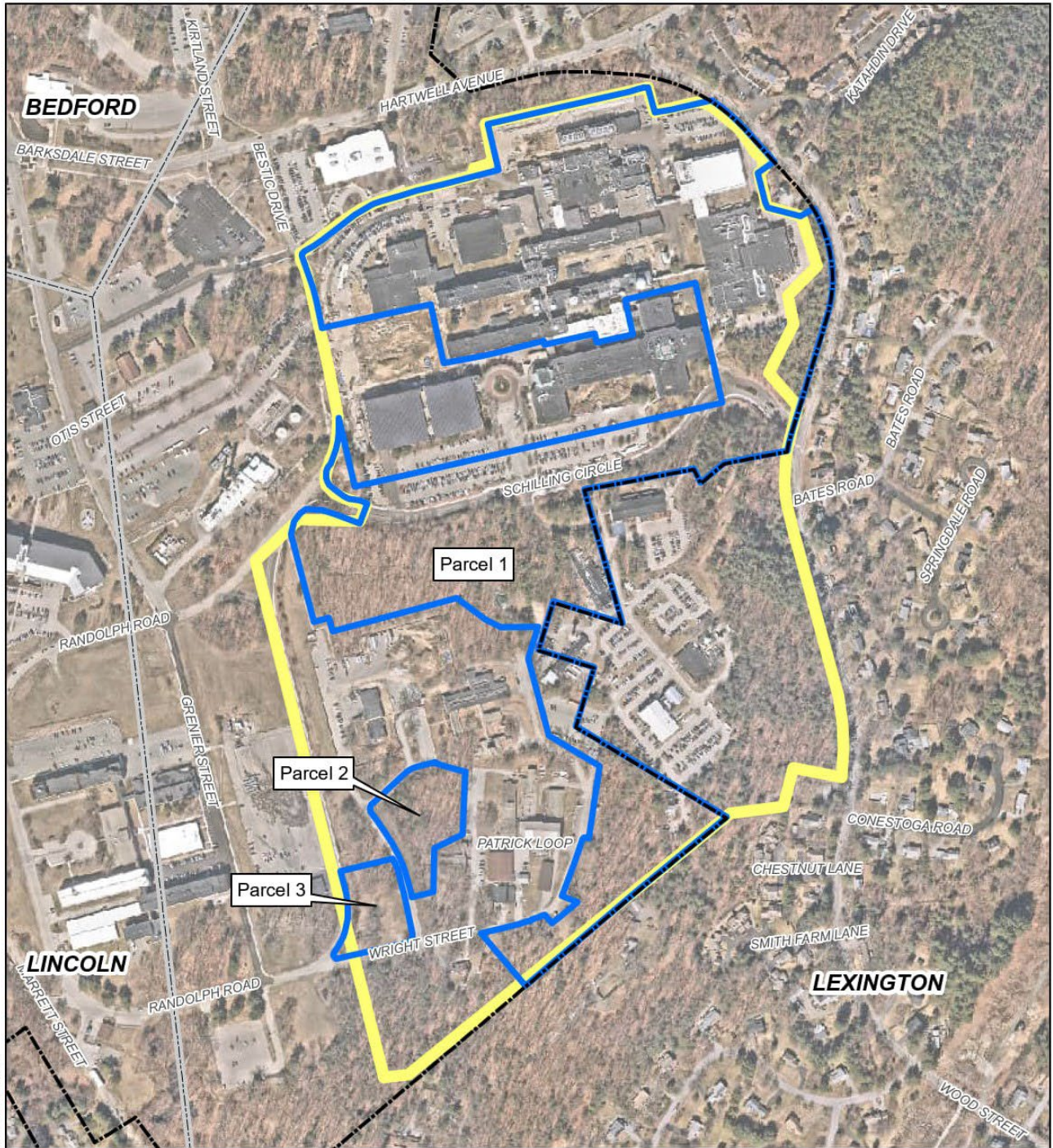
A Master Plan has been developed to identify future needs for MIT LL in order to outline the future requirements for both existing and new facilities. This plan includes new replacement buildings that have been designated and will be funded as Type 3 projects, one of which includes a proposed vehicle maintenance and integration facility.

This Environmental Assessment (EA) is a planning tool that is used to guide DAF with implementation of the Proposed Action in a manner consistent with informed decision making and in accordance with the National Environmental Policy Act (NEPA), 42 United States Code (USC) 4321-4347, and the DoD NEPA Implementing Procedures.

The EA evaluates whether the Proposed Action would result in significant impacts on the human environment. If no significant impacts are determined, DAF would sign a Finding of No Significant Impact (FONSI). If significant impacts are identified, DAF could do one of three things: (1) Determine if there are any applicable mitigations to reduce impacts to below the level of significance, (2) Undertake the preparation of an environmental impact statement addressing the Proposed Action, or (3) Abandon the Proposed Action. The level and extent of detail and analysis in the EA is commensurate with the importance of the environmental issues involved and with the information needs of both the decision-makers and the public.

1.2 PURPOSE OF ACTION

The space MIT LL originally used for vehicle garaging and maintenance, and research and experimental equipment storage and integration was commandeered for an autonomous systems program. In 2018, the facility was then relocated to available space in another building, where it has been temporarily housed until a more permanent location can be established.



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Legend

-  Master Lease Parcels
-  MIT Lincoln Laboratory Campus
-  Hanscom Air Force Base
-  Town Boundary

AECOM

Date: 12/5/2024



0 125 250 500 Feet

FIGURE 1-2

**SW3 – VEHICLE MAINTENANCE AND INTEGRATION FACILITY
MIT LINCOLN LABORATORY MASTER LEASE PARCELS 1, 2, AND 3
LEXINGTON, MASSACHUSETTS**

The proposed EPF will require the demolition of a number of existing DAF buildings, one of which is operated by MIT LL, the current location of the vehicle facility. The EPF construction schedule anticipates that the current building will be demolished in either 2025 or 2026, which will leave the MIT LL campus without a designated space to garage and maintain vehicles and integrate research and experimental equipment. MIT LL utilizes its own operations and maintenance team that takes care of all leased property snow plowing and groundskeeping, and needs a dedicated facility for MIT LL vehicles and equipment. The current facility location is also too small and limits the capacity of MIT LL to store and integrate research and experimental equipment onto vehicles.

The Purpose of Action is for MIT LL to secure a permanent location for garaging and maintaining vehicles, as well as allowing the storing and integrating of research and experimental equipment into or onto vehicles, functions which currently have no permanent location on the MIT LL campus.

1.3 NEED FOR ACTION

MIT LL requires vehicle storage and maintenance space for two purposes: to support vehicles used for laboratory operations and to support vehicles used in funded research programs. The Need for Action is to consolidate vehicle garaging and maintenance, and research and experimental equipment storage and integration operations into one permanent location, allowing MIT LL to meet the associated demands of its FFRDC mission and priorities.

1.4 INTERAGENCY / INTERGOVERNMENTAL COORDINATION AND CONSULTATIONS

The role of a federal agency in the NEPA process depends upon the agency's expertise and relationship to the proposed action. If an agency carries out a federal action, they are responsible for complying with the requirements set forth in NEPA. While MIT LL is a FFRDC, it is not a federal agency. As the Proposed Action would be implemented on Hanscom AFB, for the purposes of NEPA analysis and review, DAF is the lead agency for the Proposed Action.

NEPA Section 107(a)(3) states that, "The lead agency may, with respect to a proposed agency action, designate any Federal, State, Tribal, or local agency that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal to serve as a cooperating agency." However, DAF has not requested the cooperation of any other agency. Therefore, no federal, state, tribal, or local agencies are participating as cooperating agencies on this EA.

Hanscom AFB and MIT LL consulted the Massachusetts Historical Commission (MHC), which serves as the State Historic Preservation Officer, Minute Man National Historical Park, Hanscom Field, Mashpee Wampanoag Tribe, Wampanoag Tribe of Gay Head (Aquinnah), and the four surrounding towns. Consultation letters were sent to the consulted agencies, tribes, and appropriate town officials on 30 August 2024 and 10 February 2025. Appendix B includes a copy of the consultation with MHC.

1.5 PUBLIC PARTICIPATION

Copies of the Draft Vehicle Maintenance and Integration Facility EA and FONSI have been made available for agencies and public review and can be downloaded at the following internet link:

<https://www.hanscom.af.mil/About-Us/Fact-Sheets/Display/Article/379486/civil-engineering/>

Thirty days have been allowed for the agencies and the public to comment on the Draft EA/FONSI. The public comment period will end on 3 November 2025.

A public notice was published in the *Lexington Minuteman* and the *Concord Journal* on 2 October 2025. The public comment notification is included in Appendix D.

2 ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.1 PROPOSED ACTION ALTERNATIVE

The Proposed Action Alternative would involve MIT LL's constructing and operating a vehicle maintenance and integration facility for the MIT LL facilities and campus on Hanscom AFB at the intersection of Wright Street and Scott Drive, in the eastern portion of Master Lease Parcel 3. The proposed facility is referred to as SW3, with 'SW' referencing its proposed location on the southwest portion of the MIT LL campus, and would support garaging and maintaining vehicles, integrating research and experimental equipment into or onto vehicles, and related storage, research, and administrative functions.

The proposed SW3 would consist of a 2-story, flat-roof building, with a footprint of approximately 18,000 square feet and approximately 32,000 square feet of usable floor space. The total area needed for the building footprint, required setbacks, and parking areas would be between approximately 42,000 and 46,000 square feet.

The first floor of the building would accommodate six truck bays at the front, one of which would be a maintenance bay with a permanent vehicle lift, and a large storage area at the back for various equipment and other vehicles. The remaining first floor and the second floor of the building would contain laboratory and/or support space as needed for MIT LL research and integration programs at the facility. The support space would also include a small office area with breakrooms, bathrooms, and an electrical and mechanical room. There would also be a small amount of aboveground fuel storage at the facility for refueling lawn mowers, snow blowers, and hand-held landscaping equipment.

The proposed SW3 facility would house a variety of operation, maintenance, and groundskeeping vehicles and equipment. Based on the current, typical inventory, but changing over time, the vehicles and major equipment would include but not be limited to:

- 2 Large International plows/sanders;
- 1 Large Ford F650 plow/sander;
- 5 Ford F Series 4wd pickup truck plow/sanders;
- 2 Large Class 8 front-end loaders;
- 4 Bobcat-skid steer loaders;
- 1 16-foot snow pusher box for large front-end loaders;
- 2 Toro 72-inch ride-on mowers;
- 2 Toro 50-inch walk-behind mowers;
- Trailer mounted leaf vacuum and dump truck collector box;
- 1 International truck tractor for towing various trailers;
- 1 38-foot tilt bed tractor to transport aerial lifts, bobcats, etc.;
- 1 18-foot utility tractor to transport mowers, snow blowers, etc.;
- 1 80-foot Grove aerial man lift;
- 3 large shuttle buses – staged inside during severe winter storms; and
- 1 electric vehicle lift.

A new, 300-kilowatt emergency generator would be installed to provide emergency mechanical or electrical power for the proposed facility. The generator would be used solely to provide power during disruptions or outages of the primary energy supply, such as power outages or natural disasters. A new 1,650-gallon aboveground, fuel storage tank would provide capacity to fuel the generator for up to 72

hours (3 days). The facility may require a separate, small portable scientific generator unrelated to building systems, to replicate vehicle field conditions for the integration of research and experimental equipment.

Heating, ventilation, and air conditioning (HVAC) would be provided by ground-source, geothermal heat pumps. Based on the expected HVAC system design, dependent on the results of a geothermal well test, the system would include ground-source heat pumps, ground-source water loop headers, condenser water pumps, chilled/hot water pumps, dedicated outdoor air system units, and a fan-coil unit.

It is anticipated that utility infrastructure needed for SW3 would be installed from November 2025 through April 2026, and facility construction would extend from March 2026 through September 2027. Operation of SW3 is expected to begin in late November 2027. If there is a gap between demolition of the existing, temporary facility and the availability of SW3 for occupancy, during the intervening period vehicles would be stored temporarily outside and on the lower level of the MIT LL Parking Garage.

2.2 NO ACTION ALTERNATIVE

Under the No Action Alternative, MIT LL would not construct and operate a new vehicle maintenance and integration facility, and the existing facility would remain at its current temporary location. If the proposed vehicle maintenance and integration facility were not constructed under this No Action Alternative, either another temporary location to garage and maintain vehicles and integrate research and experimental equipment would be required prior to demolition of the current facility in 2025 or 2026, or construction of the EPF would be delayed.

The No Action Alternative is the baseline for the rest of the analysis and helps determine the extent to which the Proposed Action would impact the environment. While the No Action Alternative fulfills neither the purpose nor need for the Proposed Action, the consequences of the No Action Alternative are evaluated in this EA in accordance with the DoD NEPA Implementing Procedures.

2.3 ALTERNATIVE 1 (WRIGHT STREET)

Alternative 1 (Wright Street) – MIT LL would construct and operate a vehicle maintenance and integration facility along Wright Street, at the southern end of Master Lease Parcel 1, and along and within the Hanscom AFB installation boundary.

2.4 ALTERNATIVE 2 (SCOTT DRIVE)

Alternative 2 (Scott Drive) – MIT LL would construct and operate a vehicle maintenance and integration facility along Scott Drive, along the western side of Master Lease Parcel 2.

2.5 ALTERNATIVES ELIMINATED

The following selection standards are based on the purpose and need for the Proposed Action and were used to determine reasonable alternatives:

- Standard 1. **On Base:** Site is on Hanscom AFB as MIT LL's moving off base is not legally permissible, as discussed in Section 1.1.
- Standard 2. **Site Area:** Minimum 40,000-square foot site area based on preliminary approximate building footprint of 18,000-square feet, required setbacks, and parking requirements.
- Standard 3. **Standoff Distance:** Site area and configuration offers sufficient space and flexibility to meet the minimum standoff distance requirements established by the Unified Facilities

Criteria (UFC) 4-010-01, *DoD Minimum Antiterrorism Standard for Buildings*, Section 3-2.1, Minimum Standoff.

- Standard 4. **Timeframe:** Availability of site, including obtaining legal clearances, demolishing existing facilities, and clearing any other remaining obstructions, on a timeline that would enable completion of SW3 construction and commissioning before the current facility is demolished for EPF construction in 2025 or 2026.
- Standard 5. **Site Access:** Site provides ease of access to MIT LL vehicles and equipment that would require maintenance and integration, and deployment of snow plowing and groundskeeping equipment throughout the MIT LL campus.

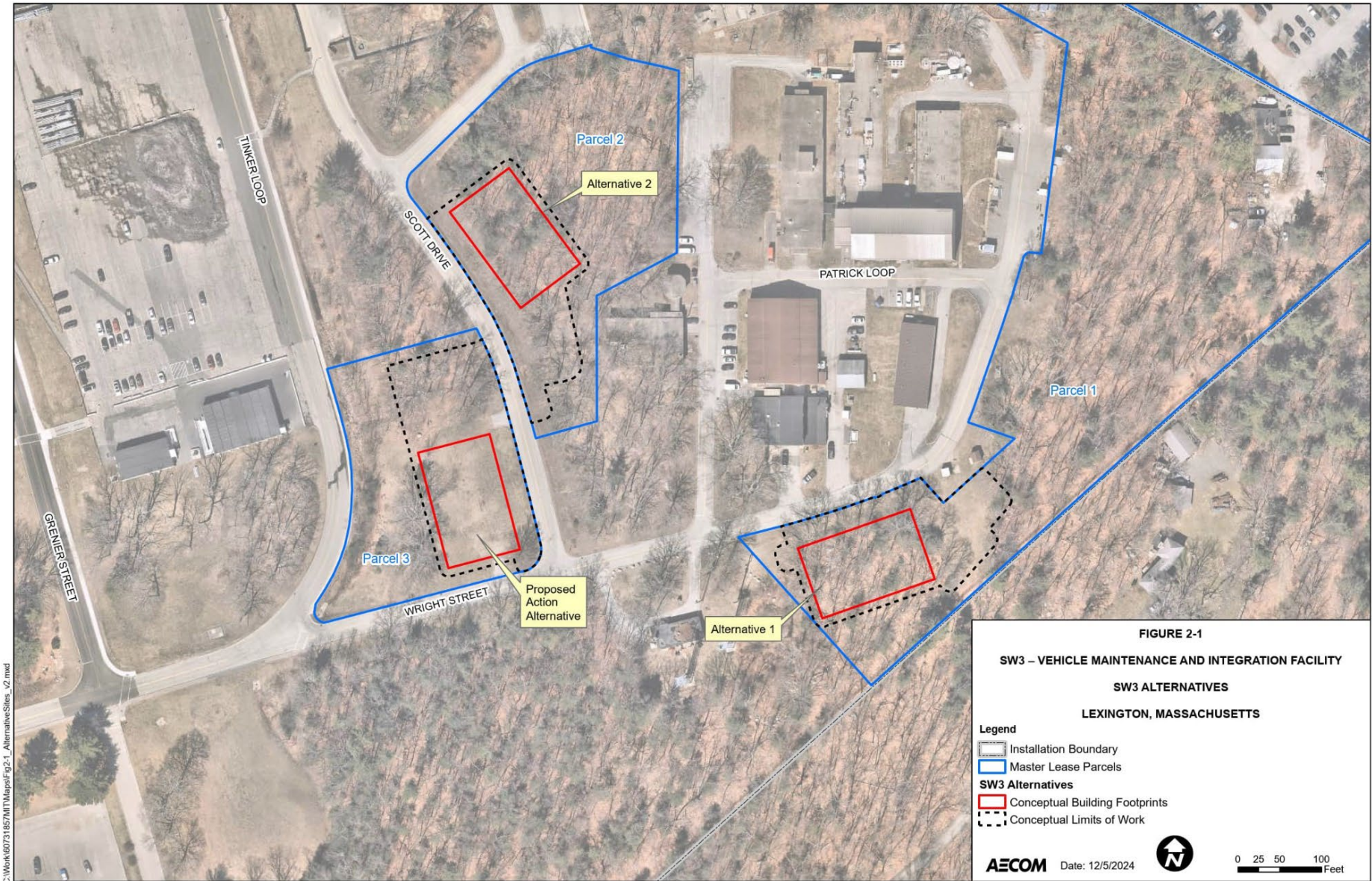
Alternatives were evaluated considering the selection standards as applied to the MIT LL FFRDC mission and priorities.

The three alternative locations within the MIT LL Master Lease parcels met all five selection standards, and therefore are retained for consideration and are evaluated further in this EA. **Figure 2-1** shows the conceptual building footprints and the conceptual limits of work of the three SW3 alternatives. For the purposes of this EA, each alternative site is defined by the respective conceptual limits of work presented on the figure. The limits of work and total disturbed footprints for project construction for each of the alternatives are estimated to encompass between approximately 42,000 and 46,000 square feet.

For a potential site to be considered a reasonable alternative for constructing and operating the SW3 vehicle maintenance and integration facility, it needed to meet all five of the selection standards identified above. Any site or class of sites that did not meet all of the selection standards were eliminated from consideration and are not evaluated further in this EA. In an initial screening of location alternatives, the following three classes of alternatives were considered:

- Off-base alternatives;
- Alternatives outside Master Lease parcels; and
- Alternatives within Master Lease parcels.

For the last class, the Proposed Action Alternative (Wright Street and Scott Drive), Alternative 1 (Wright Street), and Alternative 2 (Scott Drive) were identified as potential options. As shown in **Table 2-1**, off-base alternatives and alternatives not within the Master Lease parcels were evaluated but did not meet all five selection standards. These two classes of alternatives therefore were eliminated from further analysis. Summary explanations as to why these classes of alternatives were eliminated are provided below.



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Table 2-1. Evaluation of Alternative Facility Locations

Selection Standard	Off Base	Outside Master Lease Parcel	Within Master Lease Parcel		
			Proposed Action Alternative	Alternative 1	Alternative 2
On Base	-	+	+	+	+
Site Area	0	0	+	+	+
Standoff Distance	NA	0	+	+	+
Timeframe	-	-	+	+	+
Site Access	-	+	+	+	+

Notes:

+ indicates standard met.

0 indicates unknown as specific sites had not been designated.

- indicates standard not met.

NA indicates selection standard is not applicable.

2.5.1 Off-Base Alternatives

The off-base alternatives class did not meet the following selection standards and therefore was eliminated from consideration:

- Standard 1. **On Base:** As discussed in Section 1.1, in addition to several operational and security reasons for operating on Hanscom AFB, MIT LL’s using DoD funds for construction of new buildings not located on a military installation is not legally permissible.
- Standard 4. **Timeframe:** It was judged improbable, if not impossible, that MIT LL could identify and purchase an off-base parcel, obtain legal clearances, demolish existing facilities, and clear any other remaining obstructions on a timeline that would enable completion of facility construction and commissioning before the current facility is demolished for EPF construction in 2025 or 2026.
- Standard 5. **Site Access:** Locating the vehicle maintenance and integration facility off base would undermine ready access to MIT LL vehicles and equipment that would require maintenance and integration, and would slow deployment of snow plowing and groundskeeping equipment throughout the MIT LL campus. An off-base location would reduce the effectiveness of the facility and its personnel to garage and maintain vehicles and equipment, and integrate research and experimental equipment into or onto vehicles.

2.5.2 Alternatives Outside Master Lease Parcels

The outside Master Lease parcels class did not meet the following selection standard and therefore was eliminated from consideration:

- Standard 4. **Timeframe:** The Master Lease enables MIT to expeditiously address critical facility modernization needs by clarifying the respective legal rights and obligations of DAF and MIT, and establishing the conditions needed for long-term modernization of the MIT LL facility complex, thereby facilitating the construction of new replacement, purpose-built facilities within the Master Lease area. It was judged improbable, if not impossible, that MIT LL could construct and commission a new vehicle maintenance and integration

facility on Hanscom AFB, outside the Master Lease parcels before the current facility is demolished for EPF construction in 2025 or 2026.

2.6 PERMITS, LICENSES, AND OTHER AUTHORIZATIONS

Environmental permitting requirements for all work on Hanscom AFB are coordinated through the Civil Engineering (CE) - Environmental Department, the office overseeing environmental issues at Hanscom AFB. A Base Civil Engineering Work Clearance Request (AF Form 103), known as a “dig permit,” is necessary for any work that may disrupt vehicular traffic flow, base utility services, protection provided by fire or intrusion alarm systems, or routine activities of the installation. Any and all required permits and/or approvals would be applied for by and issued in the name of MIT as the legal entity.

Additionally, the Proposed Action may require the permits (or modification of existing permits), licenses, or other authorizations listed in **Table 2-2**.

Table 2-2. Permits, Licenses, and Other Authorizations

Authorization	Requirements
United States Environmental Protection Agency (USEPA) Municipal Separate Storm Sewer Systems Permit	<p>Stormwater drainage from the MIT LL campus and proposed SW3 alternative locations enters into the Hanscom AFB drainage network. Thus, the design of drainage for the proposed facility would comply with the Clean Water Act and Hanscom AFB’s stormwater management policy. USEPA's 2016 National Pollutant Discharge Elimination System (NPDES) Municipal Separate Storm Sewer Systems permit (the MS4 Permit) requires municipalities to implement a revised Stormwater Management Program (SWMP).</p> <p>Hanscom AFB currently has coverage under the 2016 NPDES permit in force through administrative continuation, as a Non-Traditional MS4 (Permit ID # MAR042029). Hanscom AFB is regulated as a Non-Traditional MS4 because it comprises a property owned and operated by the United States (Federal Facilities) within the Commonwealth of Massachusetts. The 2019 Hanscom AFB Construction Site Stormwater Runoff Control Program (BB&E, Inc., 2019) was developed to meet the MS4 requirements in Massachusetts, with the purpose of minimizing or eliminating erosion and maintaining sediment on site so that it is not discharged to a water of the United States.</p>
USEPA Construction General Permit for Stormwater Discharges from Construction Activities	<p>The 2022 Construction General Permit authorizes stormwater discharges from construction activities that result in a total land disturbance of one acre or more, where those discharges enter surface waters or an MS4 leading to a surface water. Permit coverage is required beginning at the commencement of construction activities comprising “earth-disturbing activities, such as the clearing, grading, and excavation of land, and other construction-related activities (e.g., grubbing; stockpiling of fill material; placement of raw materials at the site) that could lead to the generation of pollutants.”</p>
Massachusetts Water Resources Authority (MWRA) Sewer Use Discharge Permit	<p>MIT LL has a Sewer Use Discharge Permit issued jointly by the MWRA and the town of Lexington, since MIT LL discharges wastewater to the MWRA sewerage system via the town of Lexington sewerage system. The permit includes self-monitoring, discharge limitations, mandated sampling locations, analysis, reporting/notification, and other requirements (Permit # 17100088). MIT LL would need to amend its MWRA Discharge Permit to include the new location from which wastewater would be generated and modify the sampling plan accordingly.</p>

Authorization	Requirements
Massachusetts Department of Environmental Protection (MassDEP) – Air Plan Approvals	MIT LL currently has an Air Plan Approval from the MassDEP that establishes monthly and annual facility-wide emission limitations for nitrogen oxides (NO _x), carbon monoxide (CO), volatile organic compounds (VOCs), particulate matter (PM) and sulfur dioxide (SO ₂). Depending on the heating and cooling options employed for the proposed facility, and the addition of a new emergency generator, it may be necessary to modify/amend the existing Air Plan Approval.
Compliance Certification for New Generator	The addition of a new emergency generator must comply with 310 Code of Massachusetts Regulations (CMR) 7.05, 7.06, 7.10, and 7.26 (40-42). Operators of new emergency or non-emergency engines certify to the MassDEP that they are complying with the applicable state and federal environmental protection requirements within 60 days of installing an emergency generator with a rated output of 37 kilowatts or greater. For a diesel compression ignition engine, the emergency engine must also meet the requirements of 40 CFR Part 63 National Emission Standards for Hazardous Air Pollutants, Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines, and 40 CFR Part 60 New Source Performance Standards, Subpart IIII for Stationary Compression Ignition Internal Combustion Engines.
Federal Aviation Administration (FAA) Navigable Airspace Notice of Proposed Construction	Required due to proximity to Hanscom Field, which is located adjacent to Hanscom AFB. The base does not have a flying mission. However, FAA Standards do apply to the airfield, which is owned by the Commonwealth of Massachusetts and administered by the Massachusetts Port Authority (Massport) (Hanscom AFB, 2017). MIT would submit a Form 7460-1 Notice of proposed construction to FAA to obtain an obstruction review under Federal Aviation Regulations (FAR) Part 77, seeking issuance of a Determination of No Hazard to Air Navigation or No Hazard with Conditions, under 49 USC Section 445718 and 14 CFR Part 77.
Construction and Demolition Debris Diversion Plan	Hanscom AFB is required to report the quantity of waste landfilled and the quantity of waste recycled to the 66 th Air Base Group (66 ABG) /Civil Engineering Project Manager on a quarterly basis. Most construction and demolition (C&D) debris must be recycled in accordance with Massachusetts waste bans, and Hanscom AFB tracks the recycling of C&D debris. At least three weeks prior to the start of construction, construction contractors are required to submit C&D Debris Diversion Plans to the Contracting Office. These plans describe how the contractors will recycle (or dispose of) scrap metal, concrete, wood, green waste, garbage, etc., and comply with Massachusetts Waste Ban regulations.
Construction/Demolition Notification	In accordance with 310 CMR 7.09, MassDEP requires notification 10 working days prior to initiation of construction or demolition of an industrial, commercial, or institutional building or residential building with 20 or more dwelling units. This notification requirement, to be completed on Form BWP AQ 06, is designed to protect public health and the environment by ensuring that the release of dust or other potentially hazardous air pollutants to the ambient air would be minimized. Similarly, an Asbestos Notification Form (ANF-001) must be submitted to MassDEP 10 working days prior to demolition that would remove or disturb Asbestos-Containing Material.
Hazardous Materials	MIT LL anticipates the use of hazardous materials typical of vehicle repair and maintenance garages and, as the proposed vehicle maintenance and integration facility would be located on Hanscom AFB, would comply with Hansom Fire Department permitting requirements for storage and use.

Authorization	Requirements
Hazardous Wastes	MIT LL anticipates the generation of hazardous wastes during facility operations. MIT LL is registered as a Large Quantity Generator of hazardous waste under MAD001424985. This prohibits any on-site disposal, and limits on-site storage of hazardous waste to no more than 90 days in a properly managed Central Accumulation Area prior to off-site disposal by licensed firms.

The construction portions of the Master Lease and the Hanscom AFB Base Support Agreement incorporated into MIT’s FFRDC Prime Contract with the Air Force Life Cycle Management Center address environmental aspects and impacts that contractors often influence at the MIT LL campus. Contractors are required to familiarize themselves with environmental regulatory requirements, and provide evidence of compliance prior to initiating construction.

2.7 COMPARISON OF ENVIRONMENTAL CONSEQUENCES AND MITIGATIONS BY ALTERNATIVE

This section compares the potential environmental impacts associated with the Proposed Action Alternative and alternatives carried forward for detailed analysis in this EA. **Table 2-3** identifies the technical resource areas subjected to environmental review, and briefly describes the potential effects of the Proposed Action Alternative, Alternatives 1 and 2, and the No Action Alternative.

Table 2-3. Comparison of Environmental Consequences and Mitigations by Alternative

Resource Area	No Action Vehicle maintenance and integration facility remains at its current location	Proposed Action Alternative Construct and operate SW3 at intersection of Wright Street and Scott Drive	Alternative 1 Construct and operate SW3 along Wright Street	Alternative 2 Construct and operate SW3 along Scott Drive
Topography, Geology, and Soils	No short- or long-term, direct, or indirect impacts.	<p>Environmental Consequences: No significant short-term and long-term, direct, and indirect impacts.</p> <p>Mitigation: Stormwater best management practices (BMPs) included in design; adherence to measures specified in erosion, sedimentation, and pollution prevention plan; and adherence to USEPA NPDES Construction General Permit.</p>		
Land Use	No short- or long-term, direct, or indirect impacts.	<p>Environmental Consequences: No significant short- and long-term, direct, and indirect impacts.</p> <p>Mitigation: Construction contractor developed and implemented mitigation plans; and measures to control dust.</p>		
Water Resources	No change to short- or long-term, direct, or indirect impacts.	<p>Environmental Consequences: No significant short-term and no long-term, direct, or indirect impacts on surface water. No short- or long-term, direct, or indirect impacts on wetlands and floodplains. No significant short- and long-term, direct, and indirect impacts on groundwater.</p> <p>Mitigation: BMPs to mitigate adverse effects to the receiving waters; consistency with the Shawsheen River total maximum daily loads (TMDLs); compliance with the stormwater runoff requirements of Section 438 of the Energy Independence and Security Act; and stormwater structural BMPs to reduce runoff in accordance with Hanscom AFB’s drainage requirements.</p>		

Resource Area	No Action Vehicle maintenance and integration facility remains at its current location	Proposed Action Alternative Construct and operate SW3 at intersection of Wright Street and Scott Drive	Alternative 1 Construct and operate SW3 along Wright Street	Alternative 2 Construct and operate SW3 along Scott Drive
Biological Resources	No change to short- or long-term, direct, or indirect impacts to vegetation, wildlife, or threatened or endangered species.	Environmental Consequences:		
		No significant short-term and no long-term, direct, or indirect impacts to vegetation and wildlife. No short- or long-term, direct, or indirect impacts to threatened or endangered species.	No significant short-term and no long-term, direct, or indirect impacts to vegetation and wildlife. No short- or long-term, direct, or indirect impacts to threatened or endangered species.	
		Mitigation: Adjustments to facility configuration evaluated during design to minimize impacts to forested areas and individual trees; tree removal and replacement conducted in accordance with the Hanscom AFB Tree Ordinance; and tree removal will be prohibited from 15 th April to 30 th September to avoid the summer occupancy and pup seasons of protected bat species.		
Cultural Resources	No short- or long-term, direct, or indirect impacts.	Environmental Consequences:		
		No significant short- and long-term direct, and indirect impacts on historic resources. No significant short- and long-term, direct, and indirect impacts on archeological resources.	No significant short- and long-term direct, and indirect impacts on historic resources. No short- and long-term, direct, or indirect impacts on archeological resources.	No significant short- and long-term direct, and indirect impacts on historic resources. No significant short- and long-term, direct, and indirect impacts on archeological resources.
		Mitigation: Facility designed to be responsive to the character of the AFCRL Historic District, and plans for the facility submitted to MHC for review.		
Air Quality	No short- or long-term, direct, or indirect impacts.	Environmental Consequences: No significant short- and long-term, direct, and indirect impacts.		

Resource Area	No Action Vehicle maintenance and integration facility remains at its current location	Proposed Action Alternative Construct and operate SW3 at intersection of Wright Street and Scott Drive	Alternative 1 Construct and operate SW3 along Wright Street	Alternative 2 Construct and operate SW3 along Scott Drive
		Mitigation: Standard BMPs implemented to mitigate potential impacts during construction phase of the SW3 facility; construction equipment would meet Tier 2, Tier 3, or newer USEPA emissions standards; and equipment and vehicle idling limited to minimize impacts.		
Noise	No short- or long-term, direct, or indirect impacts.	<p>Environmental Consequences: No significant short- and long-term, direct, and indirect impact.</p> <p>Mitigation: mufflers used on construction equipment and vehicles; and noise levels generated by facility operation maintained at a level consistent with current Occupational Safety and Health Administration (OSHA) regulations.</p>		
Solid Waste, and Hazardous Materials and Wastes	No change in short- or long-term, direct, or indirect impacts.	<p>Environmental Consequences: No significant short- and long-term, direct, and indirect impacts.</p> <p>Mitigation: Diversion of reusable or recycled materials in construction.</p>		
Safety and Occupational Health	No change in short- or long-term, direct, or indirect impacts.	<p>Environmental Consequences: No significant short- and long-term, direct, and indirect impacts.</p> <p>Mitigation: Construction workers trained to identify and avoid safety hazards; temporary chain link fence installed around the perimeter of the construction area; only authorized personnel with appropriate personal protective equipment allowed to enter construction zones; and facility operation to comply with MIT LL Environmental Health and Safety (EHS) policy.</p>		
Socioeconomics	No change in short- or long-term, direct, or indirect impacts.	<p>Environmental Consequences: No significant short-term and no long-term, direct, or indirect socioeconomic impacts.</p> <p>Mitigation: No mitigation warranted.</p>		

3 AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

3.1 INTRODUCTION

The EA was scoped to identify relevant environmental parameters to be analyzed in depth. The purpose of this process is to de-emphasize insignificant issues and focus the scope of the environmental analysis on significant issues. Based on the preliminary evaluation of potential environmental consequences, it was determined that the following potential environmental effects will be evaluated in detail for the Proposed Action Alternative (Wright Street and Scott Drive), Alternative 1 (Wright Street), and Alternative 2 (Scott Drive), as well as for the No Action Alternative.

- **Topography, Geology, and Soils** – Due to need for substantial grading at the Alternative 1 (Wright Street) and Alternative 2 (Scott Drive) sites that would require disturbance of soil and result in changes to topography on the two sites.
- **Land Use** – Due to change in land use from open space at each of the action alternative sites, and the expectation that the proposed building would penetrate the imaginary surface extending at a slope of 100 to 1 for a horizontal distance of 20,000 feet from the nearest runway at Hanscom Field.
- **Water Resources** – Due to a total area of disturbance greater than 5,000 square feet at each of the action alternative sites, exceeding the applicability threshold of Section 438, Storm water runoff requirements for Federal development projects, of the Energy Independence and Security Act (EISA), 42 USC Section 17094.

The Proposed Action Alternative, and Alternatives 1 and 2 could also disturb an area greater than 1 acre (43,560 square feet), which would result in the need to obtain a National Pollutant Discharge Elimination System (NPDES) Construction General Permit.

- **Biological Resources** - Due to the potential need for tree removal at the Proposed Action Alternative site, removal of trees at the Alternative 1 and Alternative 2 sites, and potential effects on federally and state protected species.
- **Cultural Resources** – Due to the requirement for all federal undertakings to comply with Section 106 of the National Historic Preservation Act (NHPA) to assess effects on historic properties, 54 USC Section 306108, and all three action alternative sites being fully or partially within, or proximate to the Air Force Cambridge Research Laboratories (AFCRL) Historic District.
- **Noise** – Due to short-term noise generated during construction of the Proposed Action Alternative, and Alternatives 1 and 2, and long-term noise generated during operation from garaging and maintaining vehicles and integrating equipment into or onto vehicles, and occasional operation of an emergency generator. Although noise generating activities would occur primarily during normal daytime working hours, disturbance to the off-base residential area to the east of Alternative 1 (Wright Street) could result.
- **Air Quality** – Due to the construction of the proposed building, operation of vehicles and equipment during operation at each action alternative site, and occasional operation of an emergency generator.
- **Solid Wastes, and Hazardous Materials and Wastes** – Due to the potential for generating solid waste, and hazardous materials and wastes during construction and operation.

- **Safety and Occupational Health** – Due to the potential risks to worker safety and health during construction and maintenance.
- **Socioeconomics** – Due to the potential short-term effect on the economy during construction.

3.1.1 Resources Not Carried Forward for Detailed Analysis

The Proposed Action Alternative (Wright Street and Scott Drive), Alternative 1 (Wright Street), and Alternative 2 (Scott Drive) were determined to be unlikely to have an appreciable effect, either positive or negative, on infrastructure or transportation. Thus, no further discussion of these resources is warranted as explained in **Table 3-1**.

Table 3-1. Resources Not Carried Forward for Detailed Analysis

Resource	Rationale
Infrastructure	The proposed vehicle maintenance and integration facility would connect to existing utility infrastructure located at or near the Proposed Action Alternative, and Alternatives 1 and 2 sites. Required utilities have ample capacity to support the operation of the proposed facility. Additionally, the facility would not interfere or create conflicts with existing utilities and would not interfere with other facilities in the area. Therefore, the Proposed Action would have no short-term or long-term, direct, or indirect impacts on infrastructure at MIT LL or Hanscom AFB.
Transportation	Short-term increases in construction-related traffic traveling to and from proposed locations would vary during construction of the Proposed Action, but would remain within the capacity of local public roads, as well as roads on the MIT LL campus and Hanscom AFB. Increases in construction related traffic would be similar to those occurring during other construction and development projects of similar scale that occur with relative frequency at the base. If required during construction, permits for oversized loads would be coordinated with the Massachusetts Department of Transportation and/or other applicable federal, state, and local agencies. Operation of the vehicle maintenance and integration facility would not increase employment at MIT LL or Hanscom AFB and, thus, would not generate additional traffic on local public or base roads. For these reasons, the Proposed Action would have no significant short-term, direct, and indirect impacts and no long-term, direct, or indirect impacts on transportation.

3.2 TOPOGRAPHY, GEOLOGY, AND SOILS

3.2.1 Affected Environment

The topography around Hanscom AFB is characterized by gentle, low lying, easterly slopes. Most of the base has an average elevation of 125 to 130 feet above mean sea level (MSL). The MIT LL campus is located at a somewhat higher elevation, generally ranging from 185 to 225 feet above MSL. Several low hills are also located in or adjacent to Hanscom AFB, including Katahdin Hill (300 feet above MSL), upon which the former Upper Air Force Research Laboratory (AFRL) and adjacent MIT property are located. All three alternative locations for the proposed vehicle maintenance and integration facility are located within the area encompassed by the former Upper AFRL.

The primary bedrock formations underlying Hanscom AFB are Siluro-Ordovician intrusive igneous rocks. Andover granite is the most common bedrock underlying the base. Assabet quartz diorite and Shawsheen gneiss are also present in the northeast portion of the base (Hanscom AFB, 2010). Bedrock is exposed at a few locations within the base (Hanscom AFB, 2010). In general, depth to bedrock on or

immediately adjacent to the MIT LL campus ranges from as little as 7 feet (in the west) to as much as 67 feet (in the south and southwest). Surficial geology and geomorphology on the base reflect the presence of several large glaciers during the Pleistocene era, when much of the land area currently occupied by Hanscom AFB was covered by Glacial Lake Concord. As the glaciers retreated, eroded bedrock and mixed rock particles were deposited as till, drumlins, kames, and kame terraces (Hanscom AFB, 2010).

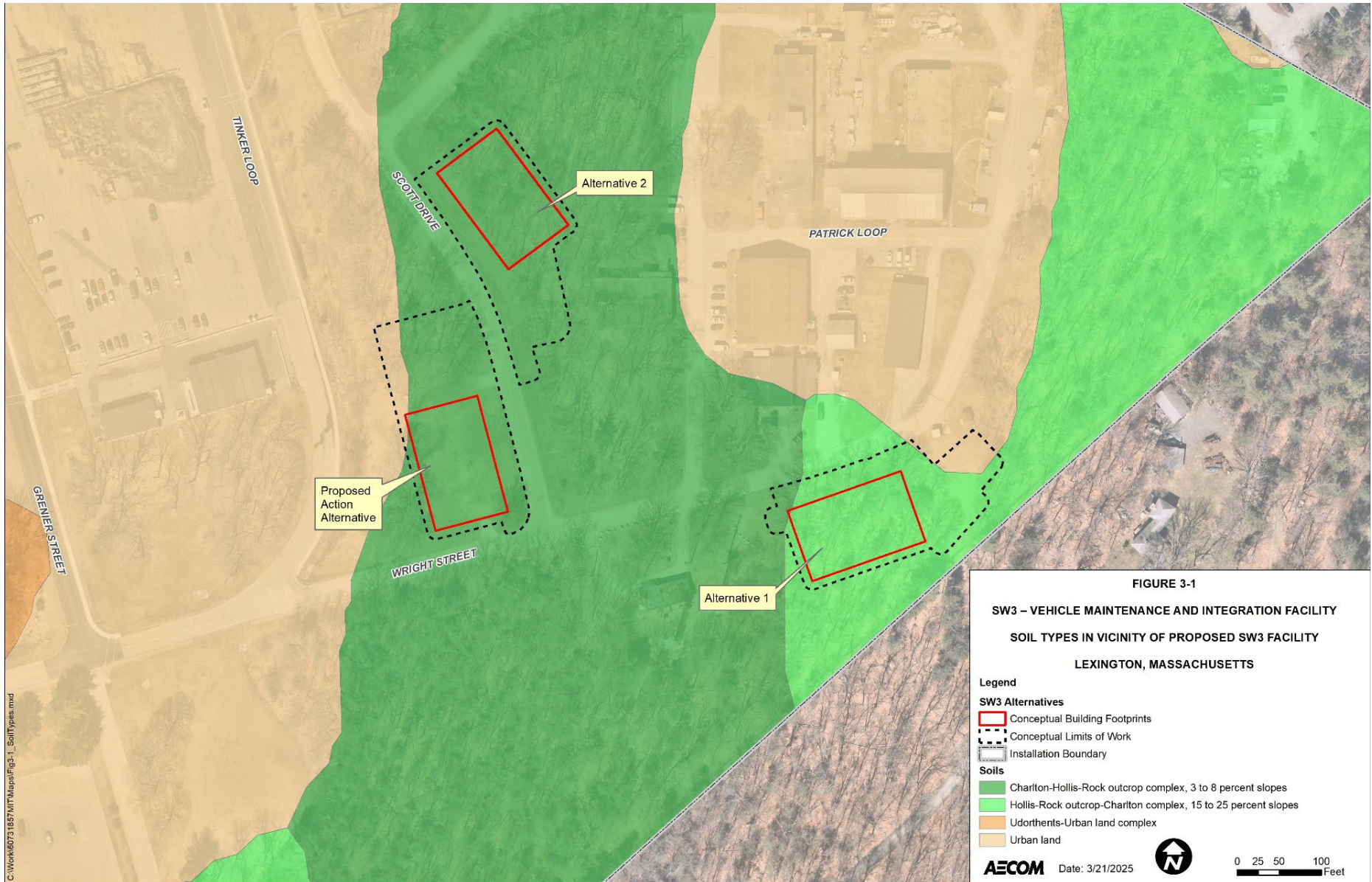
Soils at Hanscom AFB were generally formed in glacial till/outwash, or ground moraines, with the eastern side (higher elevations) of the base primarily formed in glacial till and the western and northern sides formed in glacial outwash (Hanscom AFB, 2010). Due to earthmoving activities since construction of the base in the early 1940s, most of the soils have been modified and are now urban land or udorthents (Hanscom AFB, 2010). Areas on base that still maintain the original soil are primarily comprised of sandy loam or loamy sand (Hanscom AFB, 2010).

In general, most of the soils at Hanscom AFB, especially in the areas with low degree of relief, fall into Hydrologic Soil Group C, indicating moderately high runoff potential when soils are thoroughly wetted. However, areas with high degree of relief fall into group A and B, soils with low to moderately low runoff potential when thoroughly wetted (United States Department of Agriculture (USDA), 2007).

The online USDA Natural Resources Conservation Service Web Soil Survey was consulted for soils located at the three alternative locations (USDA, 2024). The current, temporary vehicle maintenance and integration facility is located on Urban Land soil (map unit symbol 602) (Hanscom AFB, 2010, 2023; USDA, 2024). According to the Hanscom AFB Integrated Natural Resources Management Plan (INRMP), Urban Land soil is defined as soils altered or obscured by buildings, industrial areas, paved parking lots, sidewalks, roads, railroad yards, etc. covering at least 75 percent of the surface area (Hanscom AFB, 2010, 2023). These soils also have a primary parent material of excavated and filled land, and are classified as “Not Prime Farmland” (USDA, 2024).

As shown on **Figure 3-1**, the Proposed Action Alternative and Alternative 2 sites are comprised almost entirely of Charlton-Hollis-Rock outcrop complex with 3 to 8 percent slopes (103B), while the Alternative 1 site is comprised of a Hollis-Rock outcrop-Charlton complex with 15 to 25 percent slopes (104D). A soil complex consists of areas of two or more soils, so intricately mixed or so small in size that they cannot be shown separately on a soil map (USDA, 2024). The 103B soil complex at the Proposed Action Alternative and Alternative 2 sites is predominantly comprised of Charlton soils at 50 percent composition. Hollis soils and Rock Outcrop make up another 25 percent and 15 percent, respectively. The 104D complex at the Alternative 1 site is predominantly comprised of Hollis soils at 35 percent composition. Rock Outcrop and Charlton soils make up another 30 percent and 20 percent, respectively.

According to the Middlesex County map unit description in the Custom Soil Resource Report (USDA, 2024), Charlton soils are defined as having parent material that is primarily friable loamy eolian deposits over friable loamy basal till derived from granite and gneiss. Charlton soils have a typical profile of fine sandy loam at 0 to 5 inches, sandy loam at 5 to 22 inches, and gravely sandy loam at 22 to 65 inches. These soils are typically found on drumlins and ground moraines, with a drainage class of “well drained,” and a 9 percent surface area cover comprised of cobbles, stones, or boulders. (USDA, 2024).



Hollis soils are defined as having parent material that is friable, shallow loamy basal till over granite and gneiss. Hollis soils have a typical profile of fine sandy loam at 0 to 2 inches, sandy loam at 2 to 14 inches, and unweathered bedrock at 14 to 18 inches. These soils are typically found on hills and ridges, with a drainage class of “well drained,” and a 9 percent surface area cover comprised of cobbles, stones, or boulders (USDA, 2024). The Hanscom AFB INRMP describes these soil classes as soil mixed with rock outcrops, containing steep slopes, stony and extremely stony surfaces (Hanscom AFB, 2010).

Small sections of the northwestern corners of the Proposed Action Alternative and Alternative 1 sites are within the boundaries of Urban Land soil (map unit symbol 602).

3.2.2 Environmental Consequences

3.2.2.1 Proposed Action Alternative, and Alternatives 1 and 2

Under any of the three alternatives, short- and long-term impacts typically associated with construction would occur. Soils at the site would be excavated and relocated in order to install the foundation for the SW3 building, and covered by pavement or other impervious structures or surfaces. During construction, soils within the limits of work potentially would be at greater risk of erosion as they would be continuously disturbed, and there would be no vegetation to help hold soils in place and absorb stormwater runoff. Equipment and vehicle movement, and foot traffic at the site would cause soil compaction, which can lead to increased stormwater runoff, poor vegetation regrowth, and greater levels of erosion. Soils at the site would also be at risk of pollution from fuel spills or waste generated from construction activities and facility operations.

As construction of the SW3 facility would disturb greater than 5,000 square feet of land, the construction contractor would be required to prepare an erosion, sedimentation, and pollution prevention plan compliant with Standard 8 of the *Massachusetts Stormwater Handbook* (MassDEP, 2008) and the requirements in the Hanscom AFB Construction Site Stormwater Runoff Control Program (BB&E, Inc., 2019). Adherence to measures specified in the erosion, sedimentation, and pollution prevention plan would minimize erosion of exposed soils and sedimentation of receiving water bodies.

Construction would recharacterize on-site soils on the Proposed Action Alternative and Alternative 2 sites from Charlton-Hollis-Rock Outcrop complex to Urban Land soil, and would recharacterize soils on the Alternative 1 site from Hollis-Rock Outcrop-Charlton complex to Urban Land soil. Conversion of approximately 1 acre of the respective soil types to Urban Land soil would represent substantially less than a 1 percent loss within the county and, therefore, is not considered to be significant.

As the Alternative 1 site is partially on a hillside, and the Alternative 2 site is situated above and the SW3 facility would front on Scott Drive, soil grading and installation of stormwater management controls would be required to construct the proposed facility and would result in a long-term change in topography. At the Alternative 1 site, potentially construction of retaining walls also would be required, resulting in further long-term change in topography. Soil grading at any of the sites would not result in significant long-term impacts to topography, as grading would be limited to that necessary to meet facility construction needs, elevational changes in specific areas within the site would also be minimal, and soil would be stabilized to prevent any potential movement, erosion, or sedimentation. Excavation is not anticipated to reach the depth of bedrock, which reaches up to 67 feet in the south and southwest of MIT LL campus (Hanscom AFB, 2010), but some rock removal is anticipated, including a number of large boulders.

The Proposed Action would result in no significant short- and long-term, direct, and indirect impacts to topography, geology, and soils on Hanscom AFB and the MIT LL campus. Implementation would have no

significant impacts on topography, geology and soils, as adherence to measures specified in the erosion, sedimentation, and pollution prevention plan would minimize construction-related impacts, and the long-term conversion of on-site soils to Urban Land soil would represent substantially less than a 1 percent loss within the county.

3.2.2.2 No Action Alternative

Under the No Action Alternative, there would be no alteration to the topography, geology, or soils at any of the proposed alternative locations. Day-to-day activities at the existing, temporary facility include vehicle and equipment operation, garaging and maintaining vehicles, integrating research and experimental equipment into or onto vehicles, and related storage, research, and administrative functions, and currently have a no impact on the topography, geology, or soils. Were these activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. No substantial new construction would be required and there would be no change to the topography, geology, or soils.

The No Action Alternative would not result in any short- or long-term, direct, or indirect impacts to topography, geology, and soils on Hanscom AFB. Implementation of this alternative would have no significant impacts to topography, geology, and soils.

3.2.2.3 Mitigation

SW3 design would include stormwater BMPs, such as subsurface infiltration systems or retention basins to reduce runoff during storms and retain or infiltrate water on site (or nearby) in accordance with Hanscom AFB's drainage requirements. Construction of the facility would require adherence to measures specified in the required erosion, sedimentation, and pollution prevention plan. These measures could include the use of temporary drainage swales, temporary diversion dikes, sediment traps, and/or compost filter socks or silt fence. Construction would proceed in accordance with the requirements identified in the USEPA NPDES Construction General Permit for discharges from construction activities in order to mitigate construction-related impacts.

Coordination with nearby laboratories would be conducted prior to demolition or construction activities that have the potential to cause vibration, such as rock-drilling and/or blasting, to minimize impacts to MIT LL operations that could be impacted.

3.3 LAND USE

3.3.1 Affected Environment

Hanscom AFB is located approximately 18 miles northwest of Boston, Massachusetts, just outside the Route 128/I-95 circumferential expressway. The base is located just west of a major light industrial and office park corridor, which leads to the Hanscom AFB Hartwell Avenue gate, closest to MIT LL.

Hanscom AFB occupies approximately 846 acres of federally owned land within the towns of Bedford, Lexington, and Lincoln, all of which are primarily suburban residential communities with commercial centers. The closest residential areas to the MIT LL campus are located approximately 500 to 650 feet to the east along Wood Street.

Hanscom Field, owned and operated by the Massachusetts Port Authority (Massport), is located adjacent to Hanscom AFB. There are two runways at the airport, approximately 5,000 and 7,000 feet long. While DAF no longer owns Hanscom Field, the military does use it for occasional flight operations. According to Massport (2024), 1.5 percent of the flights are military.

The Minute Man National Historical Park, operated by the National Park Service, is adjacent to the southern perimeter of Hanscom AFB and south of the MIT LL campus, and spans the towns of Lexington, Lincoln, and Concord along the Route 2A corridor. The park, encompassing 967 acres, was created by an act of Congress in 1959 to preserve and interpret the events, ideas, significant historic sites, structures, properties, and landscapes associated with the start of the American Revolution at Lexington's Battle Green and Concord's North Bridge, and along the Battle Road of 19 April 1775. Great Meadows National Wildlife Refuge, encompassing approximately 3,800 acres, is located approximately three miles northwest of the MIT LL campus.

Of the approximately 846 acres of land Hanscom AFB occupies, 713 acres are developed or altered (Hanscom AFB, 2023). These developed or altered areas support 413 administrative and research facilities/buildings, 731 private housing units, sidewalks, and roads. Five percent of the developed or altered acreage is composed of grasslands planted in small patches or strips adjacent to developed areas (Hanscom AFB, 2023). The 133 undeveloped acres at the base comprise forested areas and wetland areas, most of which are fragmented into patches of less than five acres.

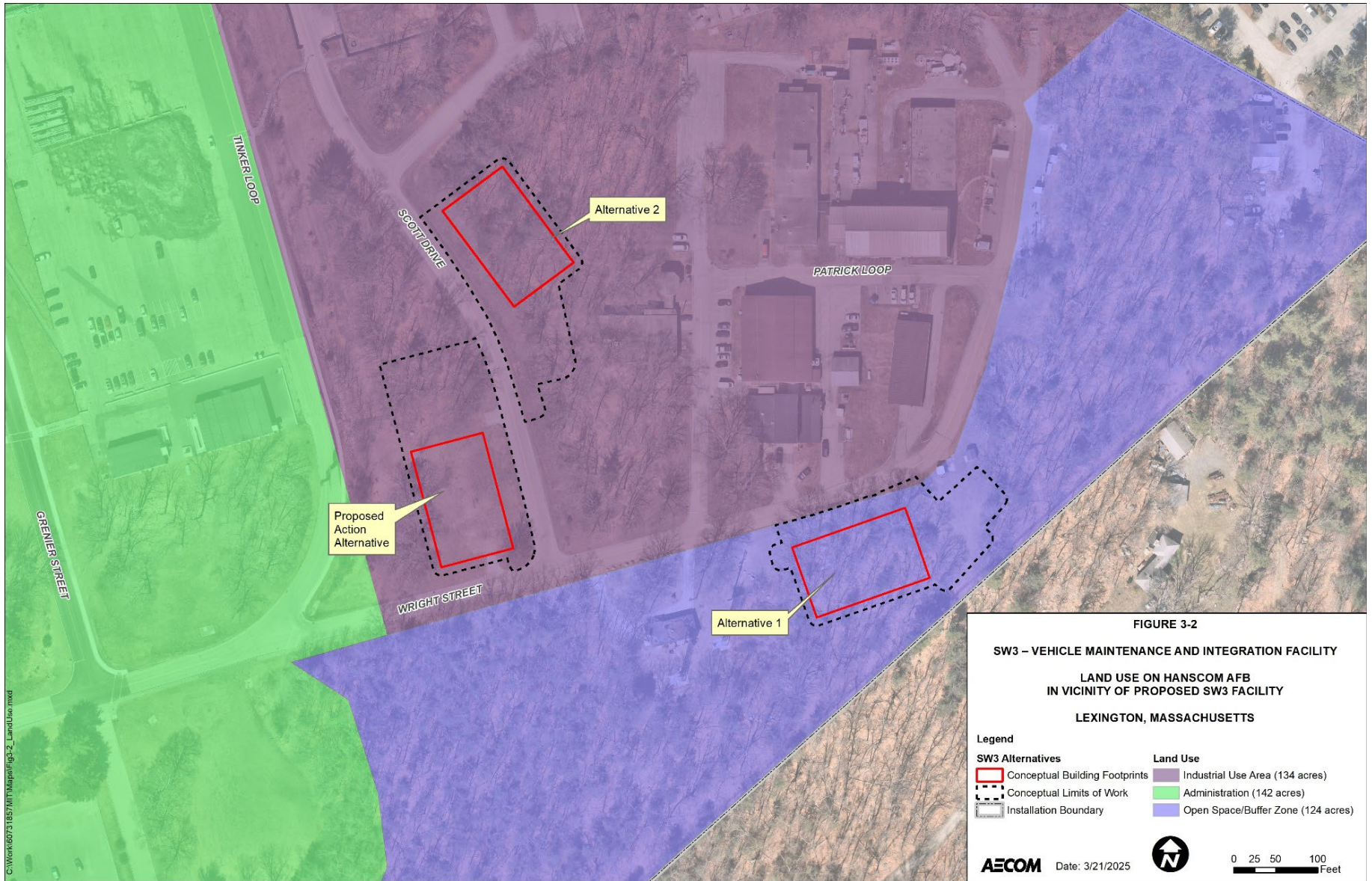
MIT LL occupies approximately 100 acres. Most of the facilities MIT LL uses are on approximately 80 acres of federal property on the eastern perimeter of Hanscom AFB, while 20 of the acres utilized are MIT property. The MIT LL campus, as well as the Katahdin Hill facilities, is located within the town boundary of Lexington. The majority of the former AFRL campus is located in Lexington with a small portion located with the town boundary of Lincoln. The buildings of the Upper AFRL were used for laboratory, office, and research and assembly uses through 2011, at which time the AFRL activities ended and AFRL activities and personnel were relocated (Public Archaeology Laboratory (PAL), 2012). The buildings were then used by DAF tenants for offices and Civil Air Patrol.

The land use classification of the current, temporary location of the vehicle maintenance and integration facility is Industrial Use Area.

The Proposed Action Alternative site is located in the eastern portion of Master Lease Parcel 3 and is within the boundaries of the former Upper AFRL located on Katahdin Hill. Parcel 3 is currently open field and forested, and its land use classification is Industrial Use Area (**Figure 3-2**). The southern portion of Parcel 3 was previously occupied by a building that initially was used as a speech research laboratory following its construction in 1955, and more recently as a law center and computer laboratory. The building was demolished in mid-2008 (PAL, 2014).

The Alternative 1 site is located at the southern end of the Master Lease Parcel 1, and along and within the Hanscom AFB installation boundary. While Parcel 1 is composed of a mixture of different land use areas, the southern section where the Alternative 1 site is located is classified as Open Space/Buffer Zone (**Figure 3-2**). The site consists of a portion of a moderately-sized, forest fragment and an open field, and is partially located on a hill at the western portion of the proposed limit of work. The proposed location for Alternative 1 has not been previously developed and no buildings have occupied the site. The site is located adjacent to two small sheds, not within a Master Lease parcel, that house water pumps that are owned by Hanscom AFB.

The Alternative 2 site is located along the western side of Master Lease Parcel 2 and is within the boundaries of the former Upper AFRL located on Katahdin Hill. Parcel 2 is forested. The land is classified as an Industrial Use Area (**Figure 3-2**), although Parcel 2 is densely wooded and has not been previously developed. No buildings have occupied the site.



3.3.2 Environmental Consequences

3.3.2.1 Proposed Action Alternative, and Alternatives 1 and 2

Under the **Proposed Action Alternative**, no significant short-term impacts associated with construction are anticipated to include disruption of adjacent land uses due to elevated noise levels, increased dust, tree removal, and interference with roadway access near the site. Implementing the Proposed Action at the Proposed Action Alternative site would result in a change of land use from open field and forested to vehicle maintenance and integration. The vehicle maintenance and integration facility would be consistent with the current Industrial Use Area land use designation and no change in land use classification would be warranted.

Under **Alternative 1**, potential, not significant short-term impacts associated with construction are anticipated to include disruption of adjacent land uses due to elevated noise levels, increased dust, tree removal, boulder removal, land grading, and interference with roadway access near the site. Implementing the Proposed Action at the Alternative 1 site would result in a change of land use from forested and open field to vehicle maintenance and integration. The vehicle maintenance and integration facility would not be consistent with the current Open Space/Buffer Zone land use designation and a change in the land use classification would be warranted.

Under **Alternative 2**, potential, not significant short-term impacts associated with construction are anticipated to include disruption of adjacent land uses due to elevated noise levels, increased dust, tree removal, boulder removal, and interference with roadway access near the site. Implementing the Proposed Action at the Alternative 2 site would result in a change of land use from forested to vehicle maintenance and integration. The vehicle maintenance and integration facility would be consistent with the current Industrial Use Area land use designation and no change in the land use classification would be warranted.

The proposed SW3 building at any of the three alternative sites would penetrate the established imaginary surface—extending at a slope of 100 to 1 for a horizontal distance of 20,000 feet from the nearest runway at Hanscom Field—that determines the maximum height of structures nearby to airport runways. As a result, notification of the proposed construction would be provided to the FAA.

The Proposed Action would result in no significant short- and long-term, direct, and indirect impacts to land use on the MIT LL campus and Hanscom AFB. Implementation would have no significant impacts on land use, as the anticipated short-term disruptions would be typical of construction projects on Hanscom AFB and the MIT LL campus, and operation of the vehicle maintenance and integration facility would not constrain or encroach on proximate land uses. As needed to offset adverse noise, dust, and roadway access impacts, routine mitigation measures would be employed.

3.3.2.2 No Action Alternative

Under the No Action Alternative, there would be no change in land use or alteration of land use classifications for the current, temporary facility location or any of the proposed alternative locations. Day-to-day activities at the facility currently have no impact on the land use of the surrounding area. Were these activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. No substantial new construction would be required. Depending on the land use classification of the existing structure, a change in the designated land use may be required.

The No Action Alternative would not result in any short- or long-term, direct, or indirect impacts to land use on Hanscom AFB or the MIT LL campus. Implementation of this alternative would have no significant impacts on land use.

3.3.2.3 *Mitigation*

Impacts associated with construction activity would be mitigated to the extent feasible to comply with federal, state, and local regulations. Mitigation plans would be developed and implemented by the construction contractor to redirect traffic impeded by temporary road access restrictions, and operate construction equipment in a reasonable and considerate manner to reduce noise levels at nearby land uses. During construction activities, dust would be controlled on site by using water to wet down disturbed areas, covering trucks and stockpiled materials with tarps, and re-vegetating disturbed land as soon as possible to minimize impacts to nearby facilities.

Notification of SW3 construction would be provided to FAA, as the proposed building would penetrate the imaginary surface that determines the maximum height of structures nearby to airport runways.

3.4 WATER RESOURCES

3.4.1 **Affected Environment**

The characteristics of surface water and groundwater, as well as associated wetlands and floodplains, on Hanscom AFB and at MIT LL are discussed in this section, which generally describes the conditions within and surrounding Hanscom AFB and the Master Lease parcels.

3.4.1.1 *Surface Water*

Most of Hanscom AFB and the Master Lease parcels are located in the Shawsheen River Watershed, a tributary of the Merrimack River Basin (Massachusetts Bureau of Geographic Information (MassGIS), 2000). The southern part of the base and a small part of the southern extent of Parcel 1, inclusive of part of the Alternative 1 site, are within the Charles River Basin, which discharges to Boston Harbor.

Prior to construction of the base, the headwaters of the Shawsheen River (a south to north flowing river) originated from a small pond on Hanscom AFB that drained northeast through wetlands (Hanscom AFB, 2010). The pond has since been filled, and the headwaters now originate from a swampy area in the southwest portion of the base just north of Folly Pond and North Great Road (MassDEP, 2003). Two unnamed tributaries flow from the swampy area to a culvert at Marrett Street and Old Bedford Road, where the river enters closed conduits (MassDEP, 2003). The river resurfaces to the northeast of the taxiways on Hanscom AFB. The stormwater network conveys surface runoff around Hanscom AFB property to the Shawsheen River and Kiln Brook, one of the river's tributaries (Hanscom AFB, 2010). MIT LL drains to Kiln Brook, and thus contributes to the headwaters of the Shawsheen River (MassDEP, 2003).

Surface runoff in the area varies seasonally, with low flow in the winter months and heavy flow in the spring due to snowmelt and an increase in rain. While surface runoff does contribute to the Shawsheen River Watershed, flows in the watershed also rely heavily upon groundwater flow moving through the base. This groundwater flow results from the array of small wetlands areas and the underground aquifer, which supplies enough discharge so the flow of the river does not stop (Hanscom AFB, 2010).

No surface waters exist within or in the immediate vicinity of the proposed SW3 alternative locations. Surface runoff ultimately drains primarily to the Shawsheen River, with roughly a quarter of the Alternative 1 site draining to the Charles River (MassGIS, 2000).

3.4.1.2 *Groundwater*

The groundwater table within the vicinity of wetlands and areas of lower elevation is known to be particularly high on base, with depth to groundwater ranging from three to seven feet (Hanscom AFB,

2003). The depth to the water table throughout the base generally ranges from 3 to approximately 23 feet (Hanscom AFB, 2003, MIT LL, 1988).

Groundwater on the base, which is not used for drinking water, in many locations contains naturally occurring dissolved manganese and iron, which exceed the respective drinking water standards (Hanscom AFB, 2003). Additionally, groundwater in some areas has been contaminated due to past activities on base; therefore, the Environmental Restoration Program (ERP) monitors and treats several sites for groundwater contamination (Hanscom AFB, 2003). See Section 3.9.1.3 for additional detail on the ERP.

According to the Custom Soil Resource Report (USDA, 2024), the predominant soils of all three of the proposed alternative locations are well drained and have a depth to water table of more than 80 inches.

3.4.1.3 Wetlands

Prior to construction of the base in the early 1940s, there were numerous wetlands on the land area currently occupied by the base due to the low elevation of the area (MassDEP, 2003). Many of the wetland areas were filled during construction of the base (MassDEP, 2003). A 1997 base-wide wetlands survey (updated in 2007) identified and delineated 35 wetlands on Hanscom AFB (Hanscom AFB, 2010). According to the 2010 INRMP (Hanscom AFB, 2010), wetlands, ranging from wet meadow to mature forested swamp, occupy approximately 43 acres (5 percent) of the base.

A small number of wetlands are located outside the perimeter of the alternative sites. The closest wetlands to the alternatives are two freshwater forested/shrub wetlands located approximately 800 feet southwest of the Proposed Action Alternative site (MassGIS, 2020). These wetlands contribute groundwater discharge to the Charles River Watershed.

A small swale was observed within the northwest portion of Master Lease Parcel 3 but outside the Proposed Action Alternative conceptual limits of work. The swale is not shown in any Hanscom AFB GeoDatabase feature classes, present in the MassDEP wetland database, noted in the most recent Hanscom AFB INRMP, or depicted on the INRMP wetland maps. Cattails (*Typha* spp.), a hydrophytic vegetation, was noted in the swale. However, the swale is a constructed BMP for stormwater management and, even if a wetland, it is isolated with no significant nexus to another wetland or body of water classified as a Waters of the United States. As such, is not regulated under the Clean Water Act and, hence, not subject to the Massachusetts Wetlands Protection Act.

3.4.1.4 Floodplains

The National Flood Insurance Rate Map indicates a portion of the Shawsheen River's 500-year floodplain is located southeast of the alternative sites, originating just downhill of the Katahdin Woods (MassGIS, 2023). No floodplains are present within the boundaries of the Master Lease parcels or alternative sites.

3.4.2 Environmental Consequences

3.4.2.1 Proposed Action Alternative, and Alternatives 1 and 2

There are no surface water features, wetland resources, or floodplains present within or near to the three alternative project sites. Therefore, it is not anticipated that construction activities would directly affect these resources. However, as the project would require surface disturbance and there would be periods when bare soil is exposed at the construction sites, the potential exists for the ground to erode and soil to be carried into the stormwater system. During construction, all activities would be conducted in accordance with BMPs to prevent adverse effects to the receiving waters of the Shawsheen River and Charles River watersheds into which the stormwater system discharges. Management plans such as an

erosion and sedimentation plan and a stormwater pollution prevention plan would be implemented by the construction contractor, and would mitigate and prevent eroded soils, sediment, and pollutants' flowing into water resources through stormwater runoff.

To preserve or restore predevelopment hydrology, federal agencies are required to comply with Section 438, Storm water runoff requirements for Federal development projects, of EISA. According to United States Environmental Protection Agency (USEPA) guidance (USEPA, 2009), Section 438 requirements apply to any project involving a federal facility that disturbs 5,000 square feet or more of ground area. The requirements of Section 438 would apply to the construction of the SW3 facility, as the total disturbed footprint for project construction is estimated to encompass between approximately 42,000 and 46,000 square feet.

As required by EISA Section 438, the project would, "use site planning, design, construction, and maintenance strategies for the property to maintain or restore, to the maximum extent technically feasible, the predevelopment hydrology of the property with regard to the temperature, rate, volume, and duration of flow." The USEPA guidance (USEPA, 2009) recommends that the federal facility use and/or use to the maximum extent technically feasible all known, available and reasonable methods of stormwater retention. This can be achieved through the use of the green infrastructure/low impact development infrastructure tools which include, but are not limited to, practices and tools described in the technical guidance document (USEPA, 2009).

As construction may result in the disturbance of 1 acre (43,560 square feet) or more at any of the alternative sites, MIT LL potentially would obtain permit coverage and comply with the NPDES Construction General Permit. If total land disturbance exceeds the threshold, consistent with the permit requirements, the construction contractor would be required to submit with project design packages a Notice of Intent and a Stormwater Pollution Prevention Plan for project-specific coverage under the Construction General Permit.

The Proposed Action would have no significant short-term and no long-term, direct, or indirect impacts on surface water, and no short-term or long-term, direct, or indirect impacts on wetlands and floodplains. Implementation of the Proposed Action would have no significant impacts on surface water, wetlands, and floodplains due to the absence of surface water features, wetland resources, and floodplains, the implementation of BMPs, and adherence to EISA Section 438 requirements and USEPA stormwater permit requirements.

Construction of the SW3 facility would have the potential to intersect the groundwater table due to seasonally high groundwater levels throughout the base. Therefore, dewatering may be necessary, and the construction contractor would be required to include provisions for dewatering. The Proposed Action would not require new or additional withdrawals of groundwater, nor would it result in new or additional discharges to groundwater. The SW3 building foundations would have the potential to minimally impede the flow of groundwater; however, any such effects would be highly localized. Groundwater underlying the proposed project site would be expected to continue to flow in the same direction and at the same rate as under current conditions.

The Proposed Action would have no significant short-term and long-term, direct, and indirect impacts on groundwater underlying Hanscom AFB. Implementation of the Proposed Action would have no significant impact on groundwater, as no new or additional withdrawals of or discharges to groundwater would be required.

3.4.2.2 No Action Alternative

Under the No Action Alternative, there would be no change in the extent of impervious surface on Hanscom AFB and no change in impact to water resources in the area. The current, temporary vehicle maintenance and integration facility is located over 1,000 feet from the nearest wetland and body of surface water and is not within a FEMA flood zone. Existing impacts to water resources at the existing temporary facility include increased runoff from impervious building and roadway surfaces. Day-to-day activities and operations at the facility have a not significant impact on water resources, typical of areas throughout Hanscom AFB and the MIT LL campus, and do not appreciably affect the extent or value of wetlands, groundwater, hydrology, or surface waters on base. Were these activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. No substantial new construction would be required and there would be no alterations to water resources.

The No Action Alternative would not result in any change to short-term or long-term, direct, or indirect impacts to surface water, groundwater, wetlands, or floodplains on Hanscom AFB or the MIT LL campus. Implementation of this alternative would have no significant impacts on water resources.

3.4.2.3 Mitigation

SW3 design and construction activities would implement BMPs to mitigate adverse effects to the receiving waters into which the Hanscom AFB stormwater network discharges. The Proposed Action would be consistent with the Shawsheen River TMDLs, comply with the stormwater runoff requirements of Section 438 of the Energy Independence and Security Act of 2007 for federal project sites that exceed 5,000 square feet, and implement stormwater structural BMPs to reduce runoff during wet weather events and retain or infiltrate water on site (or nearby) in accordance with Hanscom AFB's drainage requirements.

3.5 BIOLOGICAL RESOURCES

3.5.1 Affected Environment

3.5.1.1 Vegetation

Due to earthmoving activities since construction of the base in the early 1940s, most of the native vegetation on base has been modified. Undisturbed remnant grasslands comprise less than 5 percent of the base (LEC Environmental Consultants, Inc., 1999, as cited in Hanscom AFB, 2023) and occur adjacent to developed areas (Hanscom AFB, 2010). Areas of forested uplands comprise a mix of hardwood/softwood forests and American beech (*Fagus grandifolia*) stands (Hanscom AFB, 2023).

Developed areas of the base are planted with grasses—dominated by rye (*Lolium* spp.), fescue (*Festuca* spp.), and bluegrass (*Poa* spp.)—shrubs, and trees for aesthetics and erosion control. Erosion is minimized on base as part of the maintenance program. Plant selection, fertilization, and terracing techniques are used to ensure successful plantings and minimize soil exposure.

Invasive plants at Hanscom AFB include Tartarian honeysuckle (*Lonicera tartarica*), European buckthorn (*Rhamnus frangula*), multiflora rose (*Rosa multiflora*), garlic mustard (*Alliaria officinalis*), purple loosestrife (*Lythrum salicaria*), Oriental bittersweet (*Celastrus orbiculatus*), Japanese knotweed (*Polygonum cuspidatum*), and common reed (*Phragmites australis*) (Hanscom AFB, 2010). Most of these species are interspersed throughout the upland and wetland systems. These invasive plants are not currently managed at a large scale on base.

The Proposed Action Alternative site is located on an open grassy field that also partially crosses into a moderate-sized, hillside forested fragment to the north and west. Aside from the forested areas within the Proposed Action Alternative conceptual limits of work, the proposed location was previously disturbed, and no pristine, unique, or valuable vegetation is present. The Alternative 1 site is primarily located within a larger forested hillside area known as the Katahdin Woods. The site was not previously developed and is a heavily vegetated area that consists of a mixture of smaller shrubs, woodland herbs, and larger deciduous and evergreen trees. Similar to the Alternative 1 site, the Alternative 2 site is located within a moderately-sized forested mature woodlot fragment that consists of a mixture of smaller shrubs, woodland herbs, and deciduous and evergreen trees of various sizes.

3.5.1.2 *Wildlife*

Hanscom AFB is classified by the Massachusetts Division of Fisheries and Wildlife as a Category II installation (pursuant to Air Force Manual 32-7003, *Environmental Conservation*), defined as installations that “are unsuitable for conserving and managing fish and wildlife because of mission restrictions or resource limitations, or they are of limited size and do not have unimproved grounds” (Hanscom AFB, 2010). Hanscom AFB fits this categorization due to the lack of continuous habitat, and the lack of potential management areas for wildlife habitat (Hanscom AFB, 2010). However, the base is adjacent to the Great Meadows National Wildlife Refuge. Approximately 85 percent of the refuge’s more than 3,800 acres is comprised of valuable freshwater wetlands stretching along 12 miles of the Concord and Sudbury Rivers. The United States Fish and Wildlife Service (USFWS) protects and manages Great Meadows as nesting, resting, and feeding habitat for wildlife, with special emphasis on migratory birds.

Wildlife occurring or potentially occurring on Hanscom AFB and MIT LL include birds, mammals, amphibians, fish, and macroinvertebrates; however, diversity and abundance are limited on base due to habitat fragmentation. Additionally, the base does not support significant populations of larger mammals, whose movement would be restricted by the base’s perimeter fence. Nonetheless, the fragmented nature of the base habitat has created a favorable environment for avian and small mammal species well adapted to humans and development. For mature woodlots such as those present in the center portion of Master Lease Parcel 1 and in Parcel 2, as well as other nearby woodlands such as Parcel 3, the oaks and beeches provide a source of nuts for species such as the eastern gray squirrel (*Sciurus carolinensis*) and wild turkey (*Meleagris gallopavo*). Otherwise, there is no noteworthy habitat for wildlife present within the Master Lease parcels.

Center for Environmental Management of Military Lands (2022) remote camera surveys at Hanscom AFB most frequently captured white-tailed deer (*Odocoileus virginianus*) with fawns, eastern grey squirrel, raccoon (*Procyon lotor*), and eastern chipmunk (*Tamias striatus*). Fisher (*Martes pennanti*) and flying squirrel (*Glaucomys* sp.) were recorded for the first time at the base in 2022 (Center for Environmental Management of Military Lands, 2022).

3.5.1.3 *Threatened and Endangered Species*

According to MassGIS data (2021b), portions of Hanscom AFB, located near Hanscom Field to the northwest, are identified as being within Priority Habitat of Rare Species. However, no Estimated Habitat of Rare Wildlife or Priority Habitat of Rare Species are located on Hanscom AFB proximate to the alternative sites (MassGIS, 2021a, 2021b).

The Eastern longhorn elderberry beetle (*Desmocerus palliatus*) and the spotted turtle (*Clemmys guttata*) were both previously listed as a state species of special concern but were removed from the protection list in 2006 and are no longer state protected species. Hanscom AFB still takes specific measures to protect the beetle habitat by preserving areas where elderberry bushes (*Sambucus* spp.), the primary food source,

occur. Both species utilize wetlands, and both continue to be inherently protected as part of base wetland protection efforts (Hanscom AFB, 2010).

There are two state-listed species known to inhabit the grasslands adjacent to the runways on Massport's Hanscom Field: grasshopper sparrow (*Ammodramus savannarum*), listed as threatened, and upland sandpiper (*Bartramia longicauda*), listed as endangered (Hanscom AFB, 2010; Massachusetts Natural Heritage and Endangered Species Program (NHESP), 2020b). Habitat for both species is predominantly grassland fields (Hanscom AFB, 2010).

The blue-spotted salamander (*Ambystoma laterale*) is listed by the NHESP (2020a, 2020b) as threatened in Bristol and Plymouth Counties and as special concern throughout the rest of the state, including Middlesex County. Environmental DNA samples taken in wetlands on Hanscom AFB confirmed the presence of blue-spotted salamanders (Hanscom AFB, 2022).

The list of federally protected species in the vicinity of Hanscom AFB was reviewed using the USFWS Information for Planning and Consultation (IPaC) tool (USFWS, 2024) to identify threatened, endangered, proposed, and candidate species that may occur in areas that may be affected by the Proposed Action. According to the list generated from the IPaC tool, there are no federally listed species known to occur within Hanscom AFB or in the vicinity of the alternative locations, with the exception of the northern long-eared bat (*Myotis septentrionalis*). The tricolored bat (*Perimyotis subflavus*) is proposed for official listing as endangered and the monarch butterfly (*Danaus plexippus*) is a candidate species. While no longer listed as threatened or endangered, the bald eagle remains protected under the Bald and Golden Eagle Protection Act (16 USC 668-668d). However, no bald eagles are known to nest on Hanscom AFB. The IPaC tool also states that there are no critical habitats at the base or at any of the potential project sites.

The northern long-eared bat, which has the potential to be located throughout Massachusetts, was listed as threatened under the Endangered Species Act on 1 April 2015. However, with the ongoing spread of deadly white-nose syndrome increasing the risk of extinction, the USFWS reclassified the northern long-eared bat as endangered in November 2022, effective as of 30 January 2023. Northern long-eared bats spend winters hibernating in caves and mines with constant temperatures, high humidity, and no air currents. Suitable summer habitat consists of forest and woodland habitat, and also may include adjacent edges of agricultural fields, old fields, and pastures (USFWS, 2014).

On September 13, 2022 the USFWS announced a proposal to list the tricolored bat as endangered under the Endangered Species Act. Similar to the northern long-eared bat, the increase in the ongoing spread of deadly white-nose syndrome has caused estimated declines of more than 90 percent in affected tricolored bat colonies across the majority of the species range and is increasing the risk of extinction. Although the species has only been proposed as endangered, recent updates to Endangered Species Act development projects tools and guidance have expanded conservation support to include the tricolored bat. During the winter, tricolored bats are often found in caves and abandoned mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts where they exhibit shorter torpor bouts and forage during warm nights. During the spring, summer, and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves of live or recently dead deciduous hardwood trees, but may also be found in Spanish moss, pine trees, and occasionally human structures.

The forested and wooded areas throughout the alternative locations could potentially provide summer habitat for northern long-eared bats and tricolored bats. However, a bat acoustic survey conducted on Hanscom AFB was unable to confirm the presence of northern long-eared bat on the property, although it

did confirm the presence of tricolored bat¹ (Schwab, 2018). On 29 September 2023, Hanscom AFB extended through March 2024 its original determination, dated 2 October 2018, that proposed undertakings within the boundaries of the base will have “no effect” on the federally listed northern long-eared bat. During the active season in calendar year 2023, the base conducted updated bat surveys, which also failed to indicate presence of northern long-eared bat on the installation but confirmed the presence of tricolored bat. On 21 March 2024, Hanscom AFB subsequently extended its no effect determination effective for a period of 5 years and valid for undertakings completed on or prior to 31 March 2029 unless subsequently rescinded based on newly acquired science or information.

On 17 December 2020, the USFWS (2020) announced that listing the monarch butterfly as endangered or threatened under the Endangered Species Act is warranted but precluded by the Service’s work on higher-priority actions to amend the Lists of Endangered and Threatened Wildlife and Plants. With this decision, the monarch butterfly was listed as a candidate species under the act and its status will be reviewed annually until a listing decision is made. Although candidate species receive no statutory protection under the Endangered Species Act, the USFWS encourages cooperative conservation efforts for these species. Monarch habitat is varied—encompassing fields, roadside areas, open areas, wet areas, and urban gardens—and, as such, potential habitat for the species occurs on and within the immediate vicinity of Hanscom AFB, the Master Lease parcels, and the alternative locations.

Table 3-2 lists federal and state threatened and endangered species, candidate species, and species of special concern confirmed or potentially occurring at Hanscom AFB. There are no known plant species listed as threatened or endangered, plant candidate species, or plant species of special concern at the base, although a comprehensive inventory of all species has not been undertaken (Hanscom AFB, 2023).

3.5.2 Environmental Consequences

3.5.2.1 Proposed Action Alternative, and Alternatives 1 and 2

Under any of the three alternatives, vegetation disturbance and removal, and wildlife disturbance associated with the construction of the vehicle maintenance and integration facility, as well as operation and maintenance of the facility would be limited to approximately 1 acre. No protected plants or animals are known to be present.

A small, previously developed, open, grassy field and small portions of two forested areas in the western and northern parts of the **Proposed Action Alternative site**, and the wildlife habitat they comprise, would be removed in order to construct the proposed SW3 facility. Although the limits of work shown in **Figure 2-1** are conceptual, due to constraints imposed by the size and configuration of the Proposed Action Alternative site, potential adjustments to the facility configuration likely would do little to minimize impacts to the forested areas. Construction would require only limited tree removal.

At the **Alternative 1 site**, a forested, hillside area and an open, grassy field, and the wildlife habitat they comprise, would be removed to construct the proposed SW3 facility. At the **Alternative 2 site**, a forested area and the wildlife habitat it comprises would be removed. During design, potential adjustments to the facility configuration would be evaluated to minimize impacts to the forested area. Construction would require both initial tree removal and surface grading.

¹ Schwab, 2018 identified tricolored bat (*Perimyotis subflavus*) as canyon bat (*Perimyotini*).

Table 3-2. Protected Fauna

Common Name:	Scientific Name:	Listing Category:	Status on Base:
Mammals			
Little brown bat	<i>Myotis lucifugus</i>	SE & UR	Confirmed
Northern long-eared bat	<i>Myotis septentrionalis</i>	FE	Potential
Birds			
Eastern meadowlark	<i>Sturnella magna</i>	SSC	Potential
Grasshopper sparrow	<i>Ammodramus savannarum</i>	ST	Confirmed
Sedge wren	<i>Cistothorus platensis</i>	SE	Potential
Upland sandpiper	<i>Bartramia longicauda</i>	SE	Potential
Reptiles			
Blanding’s turtle	<i>Emydoidea blandingii</i>	ST & UR	Potential
Eastern Box turtle	<i>Terrapene carolina</i>	SSC	Potential
Wood turtle	<i>Glyptemys insculpta</i>	SSC & UR	Potential
Amphibians			
Blue-Spotted salamander	<i>Ambystoma laterale</i>	SSC	Confirmed
Fish			
Bridle shiner	<i>Notropis bifrenatus</i>	SSC	Potential
Insects			
Monarch Butterfly	<i>Danaus plexippus</i>	FC	Potential

Notes: FE = Federally Endangered, FT = Federally Threatened, FC = Federal Candidate, SE = State Endangered, ST = State Threatened, SSC = Massachusetts State Species of Special Concern, UR = Under review for federal listing.

Source: Hanscom AFB, 2023.

The removal of trees would be conducted and removed trees would be replaced in accordance with the Hanscom AFB Tree Ordinance. Time of year restrictions may be imposed on tree cutting (in coordination with the base), such that trees would be cut in the late fall or winter, prior to the spring nesting/breeding period for birds, to ensure that no nests or eggs are destroyed, in accordance with the Migratory Bird Treaty Act.

The forested and wooded areas throughout Hanscom AFB and the alternative sites could potentially provide summer habitat for northern long-eared bats and tricolored bats. MIT LL and Hanscom AFB consulted with the USFWS on June 16, 2025 and reached a conclusion that the Proposed Action may affect, but is not likely to adversely affect the northern long-eared bat and the tricolored bat based on prohibiting tree removal between 15th April and 30th September² (Appendix A).

Operation and maintenance of the facility would not cause significant risks and disturbances to wildlife due to vehicle operation, and noise from vehicle and equipment operation. These disturbances would have no significant impact to wildlife as species present on base typically are well adapted to humans and

² In Inland Massachusetts, 15 April to 30 September is the summer occupancy timeframe, when bats are present in their summer home range and/or roosting in colonies, and 1 June to 15 August is the pup season, during late pregnancy and when most young are born until they can fly and forage independently (USFWS, 2024, Appendix L).

development. Vehicle and equipment operation and resulting noise levels would be comparable to that of other active facilities throughout Hanscom AFB and the MIT LL campus.

It is not anticipated that construction or facility operation would impact biological resources at off-base locations such as the Minute Man National Historical Park, Great Meadows National Wildlife Refuge, or nearby residential properties due to the distance/separation of each from the Proposed Action Alternative site. Although an off-base residence is located within approximately 200 feet of the Alternative 1 site, the only impacts to biological resources on the residential property likely would be limited to indirect effects of human activity and noise disturbing wildlife.

The Proposed Action would not result in significant short-term, direct, and indirect impacts to vegetation and wildlife due to the clearing of trees during construction, and with mitigation no long-term, direct, or indirect impacts to vegetation and wildlife are anticipated. The action would not result in any short-term or long-term, direct, or indirect impacts to threatened or endangered species on Hanscom AFB or the MIT LL campus. Implementation would have no significant impacts on biological resources, as the vehicle maintenance and integration facility would be installed in an active area on base, on a small, previously developed, open, grassy field and small portions of abutting forested land under the Proposed Action Alternative; a forested, hillside area and an open, grassy field under Alternative 1; or a forested woodlot fragment under Alternative 2.

3.5.2.2 No Action Alternative

Under the No Action Alternative, no vegetation or habitats would be altered or at risk of impacts. There would be no change in risks to threatened or endangered species. The current, temporary vehicle maintenance and integration facility is adjacent to a mature woodlot to the east and is within a paved industrial complex on the MIT LL campus. Existing impacts to biological resources at the existing, temporary facility include risks to wildlife due to vehicle operation, and wildlife disturbances due to noise from vehicle and equipment operation. Day-to-day activities at the facility have an insignificant impact on biological resources, typical of areas throughout Hanscom AFB and the MIT LL campus, and do not appreciably affect biological resources on base. Were these activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. No substantial new construction would be required and there would be no change in risks to biological resources.

The No Action Alternative would not result in any change to short- or long-term, direct, or indirect impacts to vegetation, wildlife, or threatened or endangered species on Hanscom AFB or the MIT LL campus. Implementation of this alternative would have no significant impacts on biological resources.

3.5.2.3 Mitigation

During design, potential adjustments to the SW3 facility configuration would be evaluated to minimize impacts to forested areas and individual trees. Tree removal and replacement of removed trees would be conducted in accordance with the Hanscom AFB Tree Ordinance. The ordinance requires approval by the Hanscom AFB Tree Warden for removal of healthy trees over 18 inches diameter breast height (DBH), specifies replacement trees can be no smaller than 3 inches DBH, and requires tree replacement in accordance with a schedule based on the DBHs of the trees removed.

Time of year restrictions may be imposed on tree cutting (in coordination with the base), such that trees would be cut in the late fall or winter, prior to the spring nesting/breeding period for birds, to ensure that, in accordance with the Migratory Bird Treaty Act, no nests or eggs are destroyed. MIT LL, Hanscom AFB, and the USFWS will be consulted prior to any tree removal activity to determine appropriate mitigation, protection, and restoration measures to be taken. MIT LL and Hanscom AFB consulted with

the USFWS on June 16, 2025 and reached a conclusion that the Proposed Action may affect, but is not likely adversely affect the northern long-eared bat and the tricolored bat based on prohibiting tree removal between 15th April and 30th September (Appendix A).

3.6 CULTURAL RESOURCES

3.6.1 Affected Environment

The Hanscom AFB region contains areas of prominent prehistoric and historic importance. There are hundreds of properties listed in the records of the MHC for the four surrounding towns alone. Hanscom AFB is located to the north of Minute Man National Historical Park, a National Park Service administered property encompassing significant properties associated with the start of the American Revolution. In addition, there are other significant places, located within Hanscom AFB, that served as naturally fortified positions from which the militia fired on the British.

Four prehistoric archaeological sites are recorded adjacent to the base, and several small prehistoric sites (temporary camps, chipping stations, and lithic workshops) have been reported in the vicinity of the base. The 1997 Phase I Archaeological Survey concluded there are no areas of the main base at Hanscom AFB that contain prehistoric resources (Parsons Engineering Science, Inc., 1998).

3.6.1.1 Historic Resources

In 2003, PAL completed a historic inventory survey and National Register of Historic Places eligibility evaluation of properties on Hanscom AFB. The survey identified 17 separate areas and 1 building to research at Hanscom AFB and its off-base facilities. Fourteen of the 17 areas were identified at the base.

PAL recommended 2 of the 14 areas identified at Hanscom AFB as eligible for listing in the National Register. The AFRL Phillips Labs and AFRL Katahdin Hill are significant for their association with the base's research and development mission during the Cold War and possess integrity. These properties were each listed as separate historic districts within Hanscom AFB.

The AFRL Phillips Labs complex at Hanscom AFB is highly significant for its association with Cold War defense research and development. The AFRL Phillips Labs campus is eligible for listing in the National Register under Criterion A for its association with Cold War-era research and development of air defense systems and associated programs, especially geophysical. The area retains its campus-like layout, although approximately half of its connected wings have been altered with concrete sheathing and new windows. Despite these alterations, the Phillips Labs complex largely retains integrity of location, design, setting, materials, feeling, and association.

The AFRL Katahdin Hill area at Hanscom Air Force Base was also deemed highly significant for its association with Cold War defense research and development. Resources within the AFRL Katahdin Hill grew organically, in an unplanned manner in response to specific programs conducted at laboratories of Hanscom AFB. Several of the buildings may contain surviving resources associated with specific defense related technological research. Most of the buildings within the AFRL Katahdin Hill retain their architectural integrity with few visible alterations that include mainly replacement windows. The AFRL Katahdin Hill area was recommended as eligible for the National Register under Criterion A at the national level, as adapted by the Air Force to meet the needs of Cold War Studies (PAL, 2003). Under Criterion A, the AFRL Katahdin Hill area was deemed significant for its association with Cold War-era research and development of air defense systems and associated programs associated with electronics and geophysics research.

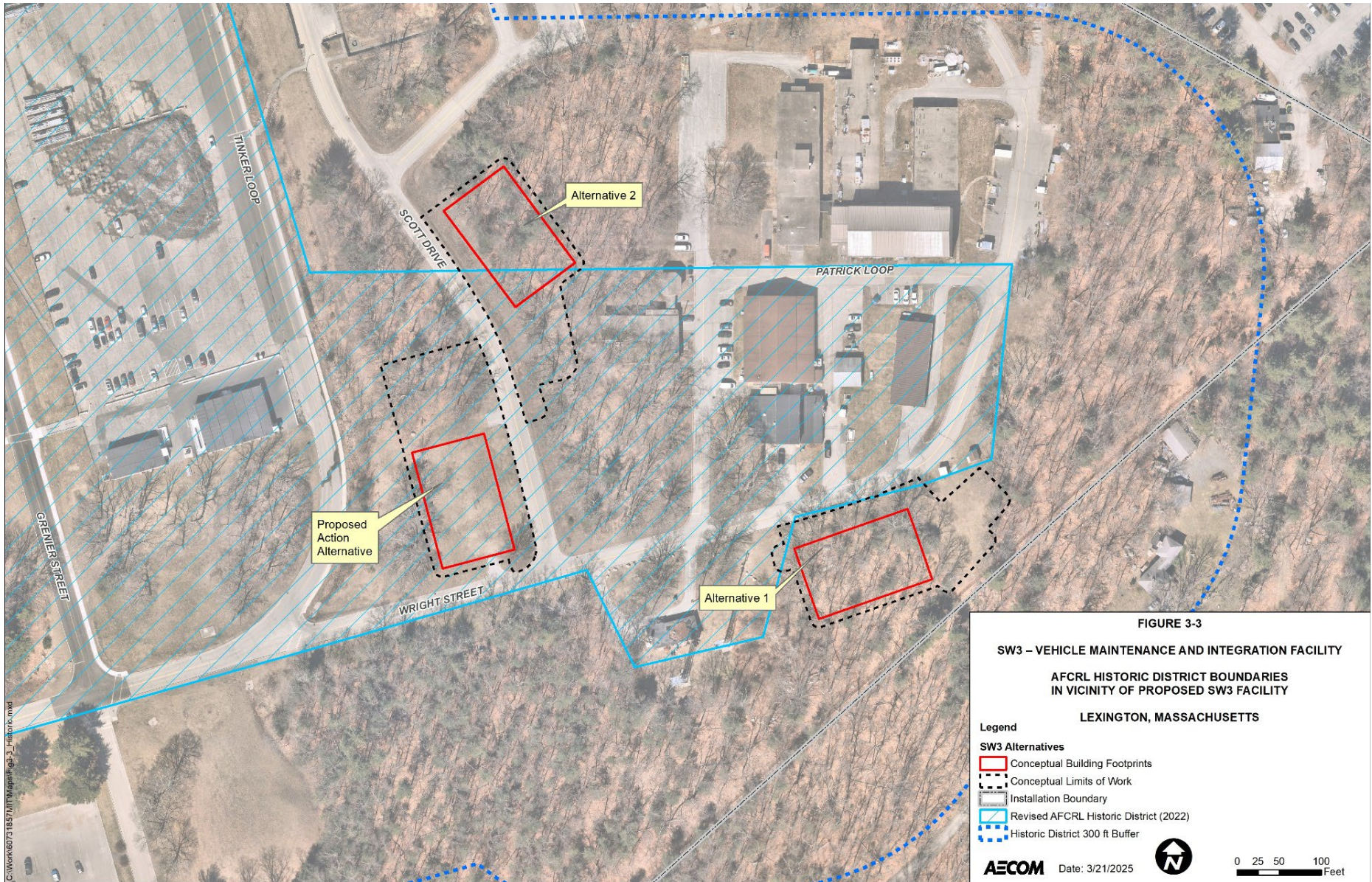
In 2012 Hanscom AFB obtained approval from the MHC to combine the two districts, AFRL Katahdin Hill and AFRL Phillips Labs, into a single historic district. The new historic district, AFCRL, used the same boundaries as the original two historic districts for nearly a decade before Hanscom AFB proposed shrinking the boundary in 2020. Hanscom AFB proposed removing the northern portion of the Katahdin Hill area from the district, thereby decreasing the overall size of the new AFCRL. The MHC concurred with Hanscom AFB's request to shrink the district boundaries but requested that a formal document be submitted in a separate correspondence. On 18 February 2025, an amendment to the programmatic agreement (PA) was executed between the MHC and Hanscom AFB that formally revised the boundaries of the district. The southeastern corner of the new updated AFCRL historic district boundary is shown in **Figure 3-3**.

As shown in **Figure 3-3**, the Proposed Action Alternative and Alternative 2 sites are located either completely within or partially within the revised AFCRL Historic District, respectively. The Alternative 1 site is located outside of the revised AFCRL Historic District but is immediately adjacent. There are also 12 buildings within the AFCRL boundaries that are regarded as contributing to the National Register of Historic Places-eligible Historic District, including a building located immediately adjacent to the proposed Alternative 2.

3.6.1.2 Archaeological Resources

A reconnaissance survey for cultural and archaeological resources was conducted of the entire base in 1992 (King et al., 1992). In 1998, Parsons Engineering Science, Inc. conducted a Phase I archaeological survey of 34 previously identified areas that were considered to have moderate to high potential for archaeological resources on Hanscom AFB. No cultural materials were discovered in these areas. The Massachusetts State Historic Preservation Officer, i.e., MHC, in its 22 June 1998 letter regarding this survey report, wrote "The report indicated that no significant historical or archaeological resources were encountered in the archaeological survey of the 34 areas previously determined to have moderate to high potential to contain archaeological resources." MHC concurred with this finding stating, "no further archaeological research is warranted for these surveyed areas" (MHC, 1998).

In 2007, a *Report of a Specialized Intensive (Locational) Survey Lexington Battle Road Hanscom AFB Middlesex County, Massachusetts* (Donohue, 2007) was published. The survey was designed to locate battlefield debris associated with the Battle of 19 April 1775. As a result of the survey, multiple artifacts believed to be associated with the battle were recovered. Documentary research also revealed that features associated with the eighteenth-century Thomas Nelson Sr. Farm Site (19-MD-347/LEX-HA-6) may also be present within the Main Base. This report was sent to the MHC in May 2007. The specialized intensive (locational) archaeological survey revealed that the Battle of 19 April 1775 extended beyond the confines of the Minute Man National Historical Park boundaries.



3.6.2 Environmental Consequences

Under Section 306102 of the NHPA, and in accordance with Department of the Air Force Manual (DAFMAN) 32-7003, the Air Force is required to identify, evaluate, and nominate historic properties that may exist on Air Force installations for listing in the National Register of Historic Places. Under Section 306108 of the NHPA, and in accordance with DAFMAN 32-7003, Hanscom AFB is responsible for determining any effect that proposed projects may have on National Register-eligible or listed historic and archeological resources. Compliance with the NHPA and the DAFMAN 32-7003 requires consultation with the State Historic Preservation Officer and Tribes to support these efforts. In this instance, a PA, adopted in 2014, exists between Hanscom AFB and MHC. This PA outlines processes for common activities in and around the AFCRL Historic District, including the construction of a new building. Application of stipulations outlined in the PA are discussed for each alternative.

3.6.2.1 Proposed Action Alternative

The Proposed Action Alternative site was previously disturbed, and there are no buildings of historical significance located on or adjacent to the proposed location. Therefore, no physical impacts to any historically significant buildings on Hanscom AFB or the MIT LL campus would result from the construction of the proposed SW3 building at this site. However, the site for the Proposed Action Alternative is located within the AFCRL Historic District, and therefore the design of the proposed new building would be subject to the terms outlined in the 2014 PA. The PA states that any new construction within or adjacent to the AFCRL Historic District is to be designed to be responsive to the character of the district, meeting the Secretary of the Interior (SOI) Standards and the DoD Guidelines, and that plans for such buildings are to be submitted to MHC for review.

Due to the building's small footprint and confined setting, it is also not anticipated that project activities or the building itself at the Proposed Action Alternative site would impact previously identified historic architectural resources at off-base locations.

On 10 February 2025, Hanscom AFB submitted a letter to MHC informing the commission of the Proposed Action, and DAF's determination that there will be *No Adverse Effect* to historic properties from the proposed undertaking at any of the three alternative locations. MHC concurred with DAF's determination on 27 February 2025 (Appendix B).

Hanscom AFB sent consultation letters to the Mashpee Wampanoag Tribe and Wampanoag Tribe of Gay Head (Aquinnah) on 30 August 2024 and 10 February 2025. Hanscom AFB has not received any responses.

The Proposed Action Alternative site is a previously disturbed site. Therefore, in concert with the PA and provided that all work is contained within the intended site, implementation of this alternative would not pose a concern with respect to archeological resources.

The Proposed Action Alternative would have no significant short- and long-term, direct, and indirect impacts on historic resources and archeological resources. Implementation of this alternative would have no significant impacts on cultural resources.

3.6.2.2 Alternative 1

The Alternative 1 site is an open grassy field located between two large woodlot fragments, and there are no buildings of historical significance located on the proposed site. However, the site for Alternative 1 is located immediately adjacent to the AFCRL Historic District and two buildings that contribute to the district are located across the street, to the north, of the site and are within visual range. Despite the

nearby historic resources, no physical impacts to any historically significant buildings are anticipated as a result of the construction of the proposed SW3 building at this site.

Due to the location of the Alternative 1 site immediately adjacent to the AFCRL Historic District, there is the potential for visual impacts on the district. Therefore, the design of the proposed new building would be subject to the terms outlined in the 2014 PA. The PA states that any new construction within or adjacent to the AFCRL Historic District is to be designed to be responsive to the character of the district, meeting the SOI Standards and the DoD Guidelines, and that plans for such buildings are to be submitted to MHC for review.

Due to the building's small footprint and confined setting, it is also not anticipated that project activities or the building itself at the Alternative 1 site would impact previously identified historic architectural resources at off-base locations.

On 10 February 2025, Hanscom AFB submitted a letter to MHC informing the commission of the Proposed Action, and DAF's determination that there will be *No Adverse Effect* to historic properties from the proposed undertaking. MHC concurred with DAF's determination on 27 February 2025 (Appendix B).

Hanscom AFB sent consultation letters to the Mashpee Wampanoag Tribe and Wampanoag Tribe of Gay Head (Aquinnah) on 30 August 2024 and 10 February 2025. Hanscom AFB has not received any responses.

Parts of the forested woodlots that the Alternative 1 site extends into are previously disturbed area. Therefore, in concert with the PA and provided that all work is contained within the intended site, implementation of this alternative would not pose a concern with respect to archeological resources in this location.

Alternative 1 would have no significant short- and long-term direct, and indirect impacts on historic resources, and no short- or long-term, direct, or indirect impacts on archeological resources. Implementation of this alternative would have no significant impacts on cultural resources.

3.6.2.3 *Alternative 2*

The Alternative 2 site is a fragmented forested woodlot, which is partially located within the AFCRL Historic District. In addition, the proposed site sits adjacent to a building that is a contributing resource to the district. Despite its close proximity, no physical impacts to any historic architectural resources are anticipated as a result of the construction of the SW3 building at this site. Due to the location of the Alternative 2 site partially within the AFCRL Historic District, there is the potential for impacts on the district. Therefore, the design of the proposed new building would be subject to the terms outlined in the 2014 PA. The PA states that any new construction within or adjacent to the AFCRL Historic District is to be designed to be responsive to the character of the district, meeting the SOI Standards and the DoD Guidelines, and that plans for such buildings are to be submitted to MHC for review.

Due to the building's small footprint and location on the interior of the base, it is also not anticipated that project activities or the building itself at the Alternative 2 site would impact previously identified historic architectural resources at off-base locations.

On 10 February 2025, Hanscom AFB submitted a letter to MHC informing the commission of the Proposed Action, and DAF's determination that there will be *No Adverse Effect* to historic properties

from the proposed undertaking. MHC concurred with DAF's determination on 27 February 2025 (Appendix B).

Hanscom AFB sent consultation letters to the Mashpee Wampanoag Tribe and Wampanoag Tribe of Gay Head (Aquinnah) on 30 August 2024 and 10 February 2025. Hanscom AFB has not received any responses.

Alternative 2 would have no significant short- and long-term direct, and indirect impacts on historic resources and archeological resources. Implementation of this alternative would have no significant impacts on cultural resources.

3.6.2.4 No Action Alternative

Under the No Action Alternative, the SW3 would not be constructed, and no alterations would be made to any historically significant buildings or locations and there would be no risk of damage to archeologically significant resources. The existing, temporary facility is located outside of the designated AFCRL Historic District and day-to-day activities at the facility have no impact on the cultural resources of Hanscom AFB or the MIT LL campus. As the possible relocation of the functions of the existing facility to another temporary location likely would comprise retrofitting those functions to an existing, compatible structure, no substantial new construction would be required and there would be no alterations to cultural resources in the vicinity.

The No Action Alternative would not result in any short- or long-term, direct, or indirect impacts to cultural resources on Hanscom AFB. Implementation of this alternative would have no significant impacts on cultural resources.

3.6.2.5 Mitigation

In accordance with the terms outlined in the 2014 PA between Hanscom AFB and MHC, the SW3 facility would be designed to be responsive to the character of the AFCRL Historic District, meeting the SOI Standards and the DoD Guidelines, while also incorporating features that convey the modern, state-of-the-art research role to be conducted at the integration bay within its walls. The design is likely to incorporate architectural features that enhance its location, just to the south of the planned EPF. The plans for the facility would be submitted to MHC for review.

3.7 AIR QUALITY

3.7.1 Affected Environment

Air quality in any given location is defined by the concentration of various pollutants in the atmosphere. Air quality is determined by the type and number of pollutants emitted into the atmosphere, the size and topography of the air basin, and the prevailing meteorological conditions. The significance of a pollutant's concentration is determined by comparing it to federal and/or state ambient air quality standards. The federal Clean Air Act (CAA), 42 USC Sections 7401–7671q, provides that emission sources must comply with the air quality standards and regulations that have been established by federal and state regulatory agencies. These standards and regulations focus on (1) the maximum allowable ambient pollutant concentrations, and (2) the maximum allowable emissions from individual sources.

3.7.1.1 Criteria Pollutants and National Ambient Air Quality Standards

The USEPA sets National Ambient Air Quality Standards (NAAQS) for six criteria pollutants, as required by the CAA (summarized in **Table 3-3**): ozone (O₃); nitrogen dioxide (NO₂); particulate matter (PM) equal to or less than 10 microns in aerodynamic diameter (PM₁₀) and particulate matter equal to or less

than 2.5 microns in aerodynamic diameter (PM_{2.5}); carbon monoxide (CO); sulfur dioxide (SO₂); and lead (Pb). O₃ is a secondary pollutant formed in the atmosphere by photochemical reactions of previously emitted pollutants, or precursors. The O₃ precursors are oxides of nitrogen (NO_x) and volatile organic compounds (VOCs). States may either adopt the NAAQS or establish their own more stringent standards. The Commonwealth of Massachusetts has adopted the NAAQS to regulate air pollution levels.

Table 3-3. Summary of USEPA NAAQS for Criteria Pollutants

Criteria Pollutant	Primary/ Secondary	Standard		Form
		Averaging Time	Level	
Carbon Monoxide	Primary	8-hour	9 parts per million (ppm)	Not to be exceeded more than once per year
		1-hour	35 ppm	
Lead	Primary and Secondary	Averaged over a rolling 3-month period	0.15 µg/m ³	Not to be exceeded
Nitrogen Dioxide	Primary	1-hour	100 parts per billion (ppb)	98 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Primary and Secondary	Annual	53 ppb	Annual Mean
Sulfur Dioxide	Primary	1-hour	75 ppb	99 th percentile of 1-hour daily maximum concentrations, averaged over 3 years
	Secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year
Particulate Matter (PM _{2.5})	Primary	Annual	12 µg/m ³	Annual mean, averaged over 3 years
	Secondary	Annual	15 µg/m ³	Annual mean, averaged over 3 years
	Primary and secondary	24-hour	35 µg/m ³	98 th percentile, averaged over 3 years
Particulate Matter (PM ₁₀)	Primary and Secondary	24-hour	150 µg/m ³	Not to be exceeded more than once per year on average over 3 years
Ozone	Primary and Secondary	8-hour	0.070 ppm	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years

Source: USEPA, 2020

Areas that meet the NAAQS for a criteria pollutant are designated as being “in attainment” while areas where criteria pollutant levels exceed the NAAQS are designated as “nonattainment.” A maintenance area is a former nonattainment area that has recently been re-designated as an attainment area. However, during the maintenance period, most of the CAA rules for a nonattainment area are still applicable to a maintenance area. In general, an attainment area is considered to have a good ambient air quality condition.

The CAA requires states to develop a general plan to attain and maintain the NAAQS in all areas of the country and a specific plan to attain the standards for each area designated nonattainment for a NAAQS. These plans, known as State Implementation Plans, are developed by state and local air quality management agencies and submitted to USEPA for approval.

3.7.1.2 *Clean Air Act Conformity*

40 CFR Part 93, Subpart B, commonly referred to as the General Conformity Regulations (GCR), requires federal actions occurring in nonattainment or maintenance areas to conform to any State Implementation Plan approved or promulgated under Section 110 of the CAA. Hanscom AFB is located predominantly within the town of Bedford, Middlesex County, Massachusetts, with portions extending into the adjoining towns of Lincoln and Lexington. A portion of the town of Concord previously extended into Hanscom AFB, but that area now is within Hanscom Field. In addition, Hanscom is located in the Northeast Ozone Transport Area.

The project is located in Middlesex County, Massachusetts, which is in attainment for all six criteria air pollutants, meeting the 1997 8-hour attainment standard for ozone, 0.08 parts per million (ppm), by the 2009 attainment deadline (MassDEP, 2023). In 2009, USEPA lowered the 8-hour ozone standard to 0.075 ppm and in April 2012 designated Middlesex County as Unclassifiable/Attainment for the 2009 standard. In 2015, USEPA again lowered the 8-hour ozone standards, to 0.070 ppm, and in December 2017 designated all of Massachusetts as Unclassifiable/Attainment for the 2015 standard.

DAF has developed an automated screening tool known as the Air Conformity Applicability Model (ACAM) to perform a simplified GCR applicability analysis for DAF proposed projects in nonattainment or maintenance areas, and a NEPA air analysis in attainment areas. ACAM is used in conjunction with DAF guideline documents to identify proposed actions and alternatives that would likely result in no or minimal emission increases and those that may require further air quality analysis and undergo a GCR determination.

While the GCR *de minimis* thresholds are intended to be used to perform an applicability analysis, they can also be used as a general indicator for NEPA air quality assessments. General Conformity De Minimis Thresholds, in the Air Force Air Quality Environmental Impact Analysis Process (EIAP) Guide –Volume II - Advanced Assessments (Air Force Civil Engineer Center, 2020), are the maximum net change an action can acceptably emit in nonattainment and maintenance areas. These threshold values would also be a conservative indicator whether an action's emissions within an attainment area would result in significant impact. In this case, 50 tons per year (tpy) of VOC, 100 tpy of NO_x, or 250 tpy for each of the other criteria pollutants would be indicators of potential significant air quality impacts resulting from the Proposed Action.

3.7.1.3 *Stationary and Mobile Source Emissions*

New major stationary sources are subject to Prevention of Significant Deterioration and/or New Source Review programs to ensure these sources are constructed without significant deterioration of the air in the area. USEPA oversees programs for stationary source operating permits (CAA Title V) and for new or modified major stationary source construction and operation. Mobile sources, such as aircraft, vehicles, or nonroad equipment, are regulated under the CAA Title II through enforcing emissions standards on sources manufactured.

Hanscom AFB maintains a Title V Operating Permit, as the base is considered a major stationary source due to its potential to emit NO_x emissions exceeding 50 tons per year; however, MIT LL facilities are not directly included within this permit. Most of MIT LL's existing facilities receive their heating from the Hanscom AFB Central Heat Plant, which is regulated as part of Hanscom AFB's Title V permit. MIT LL does not currently have a Title V permit, as it does not exceed the thresholds for being considered a major stationary source. Instead, MIT LL currently has a Non-Major Comprehensive Air Quality Plan Approval (Transmittal No. X262821, Application No. NE-14-009, issued 3 June 2015) that consolidated earlier plan approvals, applicable permits-by-rule, and an Environmental Results Program compliance certification.

The primary sources of emissions at MIT LL include diesel fuel combustion for standby electrical power and natural gas combustion for heating water.

MIT LL’s Non-Major Comprehensive Air Plan Approval authorizes it to operate a 2,000-kilowatt diesel generator (referred to as Unit No. 1) for emergency power. The Air Plan Approval also establishes maximum allowable facility-wide emission limitations for NO_x, CO, VOC, PM, and SO₂ in tons per month and in tons per rolling 12-month period. The permit also covers nine natural gas fired small boilers, two furnaces, and four water heaters, as well as operational processes. Annual reporting of NO_x, CO, VOC, PM, and SO₂ emissions to MassDEP is required. Annual emissions for stationary sources at MIT LL compared to annual emissions at Hanscom AFB and within Middlesex County (including mobile sources) are included in **Table 3-4**.

Table 3-4. Annual Criteria Pollutant Emissions at MIT LL, Hanscom AFB, and Middlesex County

Air Pollutant	Emissions from Stationary Sources			Emissions from Mobile Sources
	MIT LL (tons/year in 2023) ¹	Hanscom AFB (tons/year in 2023) ²	Middlesex County (tons/year in 2020) ³	Middlesex County (tons/year in 2020) ³
Carbon Monoxide (CO)	0.86	26.28	15,510	94,228
Lead (Pb)	-	-	0.071	-
Nitrogen Oxides (NO _x)	2.62	30.37	4,216	7,705
Sulfur Dioxide (SO ₂)	0.11	2.45	110	45
Particulate Matter (PM _{2.5})	0.16 for PM	2.53	3,528	1,023
Particulate Matter (PM ₁₀)		2.61	8,627	3,303
Volatile Organic Compounds (VOCs)	2.10	3.23	-	-

Sources: ¹MIT LL, 2024; ²Air Program Information Management System, 2023; ³USEPA, 2020

3.7.1.4 Greenhouse Gases

There are several state and federal programs regulating greenhouse gas (GHG) emissions. GHGs include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and hydrofluorocarbons. On a national level, the USEPA Mandatory Reporting of Greenhouse Gases Rule (40 CFR Part 98) includes GHG emissions reporting requirements for large emissions sources. Massachusetts General Laws Chapter 21N, has GHG reporting and compliance requirements outlined in 310 CMR 7.71, Reporting of Greenhouse Gas Emissions. Facilities regulated under Title V of the CAA must report GHG emissions in accordance with both regulations. Therefore, Hanscom AFB reports GHG emissions, converted into one value known as a carbon dioxide equivalent (CO₂e), using approved factors to weigh each pollutant. The 2023 CO₂e emissions for stationary and mobile sources at the base, as reported to USEPA and MassDEP, were approximately 34,120 metric tons per year (Air Program Information Management System, 2023).

3.7.2 Environmental Consequences

3.7.2.1 Proposed Action Alternative, and Alternatives 1 and 2

No significant short-term localized air quality impacts may occur under any of the three action alternatives, as construction could generate fugitive dust (particulate matter), particularly during site clearing, grubbing, excavation, and grading. Standard BMPs, such as watering to control dust plumes, covering trucks and stockpiled materials with tarps, and revegetating disturbed land as soon as possible, would be implemented to minimize impacts. Additionally, all construction vehicles and some equipment

would produce engine emissions for other criteria pollutants, which could temporarily affect air quality. However, construction-related emissions are, by definition, temporary and would cease after the SW3 facility was complete. It is anticipated that utility infrastructure needed for SW3 would be installed from November 2025 through April 2026, and facility construction would extend from March 2026 through September 2027. Operation of SW3 is expected to begin in late November 2027.

After the completion of construction, backup power would be provided to SW3, which could represent a new source of, or an increase in, air emissions, potentially adversely impacting air quality. The proposed SW3 facility would have a 300-kilowatt emergency generator that would meet USEPA Tier 4 emission standards. The emergency generator would be used as a backup source of power, and thus would be operated only in emergency situations and during occasional maintenance. Under 310 CMR 7.26 (42), fuel type is limited to ultra-low sulfur diesel or natural gas and hours of operation are limited annually to 100 hours for maintenance and testing, and 50 hours for non-emergency use, which are included in the 100 hour total for maintenance and testing. Table 2-2 notes the potential need to modify/amend the existing MIT LL Air Plan Approval, and details compliance certification requirements for new generators.

HVAC would be provided by ground-source, geothermal heat pumps. The release of hydrogen sulfide gas, a byproduct of geothermal energy production, and particulate matter could impact air quality, although these potential impacts would be effectively mitigated.

The CAA requires that actions of federal agencies or federally supported activities should not: 1) cause or contribute to any new air quality standard violation; 2) increase the frequency or severity of any existing standard violation; or 3) delay the timely attainment of any standard or any required interim emission reductions or other milestones. Under Section 176(c) of the CAA, a project is in “conformity” if it corresponds to the State Implementation Plan’s purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving the expeditious attainment of the standards. USEPA published final rules on general conformity (40 CFR Parts 51 and 93 in the Federal Register on 30 November 1993, and revised on 24 March 2010) that apply to federal actions in areas in non-attainment for any of the criteria pollutants. A formal conformity determination is required when the annual net total of direct and indirect emissions from a federal action occurring in a non-attainment area equals or exceeds the applicable *de minimis* levels.

The project is located in Middlesex County, Massachusetts, which is in attainment for all six criteria air pollutants, just recently meeting attainment standards for ozone. On 12 March 2008, a new 8-hour ozone standard became effective and the previous, 1997 8-hour ozone standard was revoked on 13 February 2017. Middlesex County achieved attainment for ozone when the 1997 ozone standard was revoked. However, because the area is still considered a maintenance area for ozone, the emissions of VOC and NOx must be accounted for as they are precursors for the formation of ozone.

The DAF ACAM was used for predicting emissions during both construction and operational periods. Alternatives 1 and 2 would include the same construction and operation activities as the Proposed Action Alternative—the only difference being the respective facility locations. As the three alternatives, therefore, would generate the same emissions, ACAM was run once and a single ACAM report, which is representative of the three alternatives, was generated for the Proposed Action Alternative. For the ACAM analysis, it was estimated that the standby generator would operate an average of 144 hours per year.

The results of the ACAM analysis are provided in **Table 3-5** and show that for all proposed construction and operation activities, emissions of all NAAQS would be well below the respective thresholds, at *de minimis* levels, indicating that a formal conformity determination is not required. Therefore, although some increases in air pollutant emissions are expected during construction and operation, they would not

be significant. The summary report of ACAM-predicted emissions for the Proposed Action is provided in Appendix C of this EA. The GHGs resulting from construction and operational activities associated with the Proposed Action were estimated using the same DAF ACAM used for criteria pollutants.

Table 3-5. Conformity Analysis Summary

Pollutant	Action Emissions (ton/year)	General Conformity	
		Threshold (ton/year)	Exceedance (Yes or No)
2025			
VOC	0.132	50	No
NO _x	1.140	100	No
CO	1.407		
SO _x	0.002		
PM ₁₀	2.815		
PM _{2.5}	0.047		
Pb	0.000		
NH ₃	0.002		
2026			
VOC	0.420	50	No
NO _x	0.786	100	No
CO	1.157		
SO _x	0.002		
PM ₁₀	0.036		
PM _{2.5}	0.032		
Pb	0.000		
NH ₃	0.003		
2027 – Steady State¹			
VOC	0.009	50	No
NO _x	0.121	100	No
CO	0.099		
SO _x	0.003		
PM ₁₀	0.011		
PM _{2.5}	0.011		
Pb	0.000		
NH ₃	0.000		

1. Steady state indicates no net gain/loss, emission stabilized, and the action is fully implemented.

The Proposed Action would result in no significant short- and long-term, direct, and indirect impacts to air quality. Implementation of this alternative would have no significant impacts on air quality, as the results of the ACAM analysis show that for all proposed construction and operation activities, emissions of all NAAQS would be well below the respective thresholds, at *de minimis* levels.

3.7.2.2 No Action Alternative

Under the No Action Alternative, there would be no change in impacts to air quality on Hanscom AFB. Existing impacts to air quality at the existing, temporary facility include emissions from vehicle and equipment operation. Day-to-day activities at the facility have a not significant impact on air quality,

typical of facilities throughout Hanscom AFB and the MIT LL campus. Were these activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. No substantial new construction would be required and there would be no change to air quality in the area.

The No Action Alternative would not result in any change in short- or long-term, direct, or indirect impacts to air quality. Total air emissions from Hanscom AFB are expected to remain at levels similar to those generated under current operations. Implementation of this alternative would have no significant impacts on air quality.

3.7.2.3 Mitigation

Standard BMPs, such as watering to control dust plumes, covering trucks and stockpiled materials with tarps, and revegetating disturbed land as soon as possible, would be implemented to mitigate potential impacts during construction of the SW3 facility. It is anticipated that any construction equipment with an engine greater than 50 horsepower would meet Tier 2, Tier 3, or newer (depending on the engine model year) USEPA emissions standards (including standards for hydrocarbons, NO_x, CO, and PM) for nonroad diesel engines and equipment. Additionally, equipment and vehicle idling would be limited to minimize impacts.

The proposed emergency generator installed for the SW3 facility would meet MassDEP air permitting requirements. The potential air quality impacts of geothermal energy production would be effectively addressed, as applicable, through the use of advanced filtration systems, closed-loop systems, and careful monitoring and management of the HVAC system.

3.8 NOISE

3.8.1 Affected Environment

The primary source of noise in the vicinity of Hanscom AFB and MIT LL results from normal base operation and military and civilian aircraft usage at Hanscom Field. Based on annual Federal Aviation Administration (FAA) tower counts, the Massport (2024) Hanscom Field 2023 Annual Noise Report observes that overall flight operations of civilian and military aircraft have decreased at Hanscom Field since 1985. Even though military flights currently comprise just 1.5 percent of the flights from Hanscom Field (Massport, 2024), military flights tend to be noisier aircraft, as military aircraft are exempt from the noise abatement measures applicable to civilian aircraft. In 2023, military aircraft generated 24 percent of Hanscom's total noise energy despite representing only 1.5 percent of the aircraft activity (Massport, 2024). Military activity has consistently represented less than 2 percent of the activity during the past four decades, while its contribution to the noise energy has ranged from 1.8 percent to 47 percent.

Ground-based vehicle operations at Hanscom AFB consist mainly of privately-owned vehicles and government vehicles. Government-owned vehicles include on-road maintenance and utility vehicles and off-road equipment such as sweeper vacuums, cranes, lawn mowers, and forklifts (Hanscom AFB, 2003). Noise generated independent of aircraft flight at Hanscom AFB, such as maintenance and shop operations, ground traffic, and construction, is comparable to the noise generated in the surrounding communities.

The purpose of the Air Installations Compatible Use Zones (AICUZ) program is to achieve compatibility between air installations and neighboring communities by protecting the health, safety, and welfare of civilians and military personnel by encouraging land use which is compatible with aircraft operations. DoD Instruction 4165.57, Air Installations Compatible Use Zones, Table 2 provides land use

compatibility recommendations based on standard land use coding manual (SLUCM) codes and the A-weighted day-night average sound level (DNL) or community noise equivalent level (CNEL) noise areas on and around air installations. The table recommends all SLUCM categories are compatible with A-weighted DNL/CNEL levels less than 65 decibels (dB).

At Hanscom AFB, where no flying mission exists and the airfield is owned and operated by Massport, AICUZ do not apply (Hanscom AFB, 2017). In place of AICUZ, FAA standards apply.

Figure 3-4 shows 2017 DNL noise contours, which generally reflect proximity to the runways. The area of highest decibel readings (85 dB and higher) is located in the immediate vicinity of the runways. Extended areas of higher-level noise occur along the aircraft approach and departure corridors. The DNL 65 dB contour is entirely within Hanscom Field property. **Figure 3-4** also illustrates approximate noise levels within the MIT LL campus and the Master Lease parcels to be less than 55 dB, which means that the alternative locations for the SW3 facility would comply with noise standards for the FAA and those that have been set by the United States Department of Housing and Urban Development (2024).

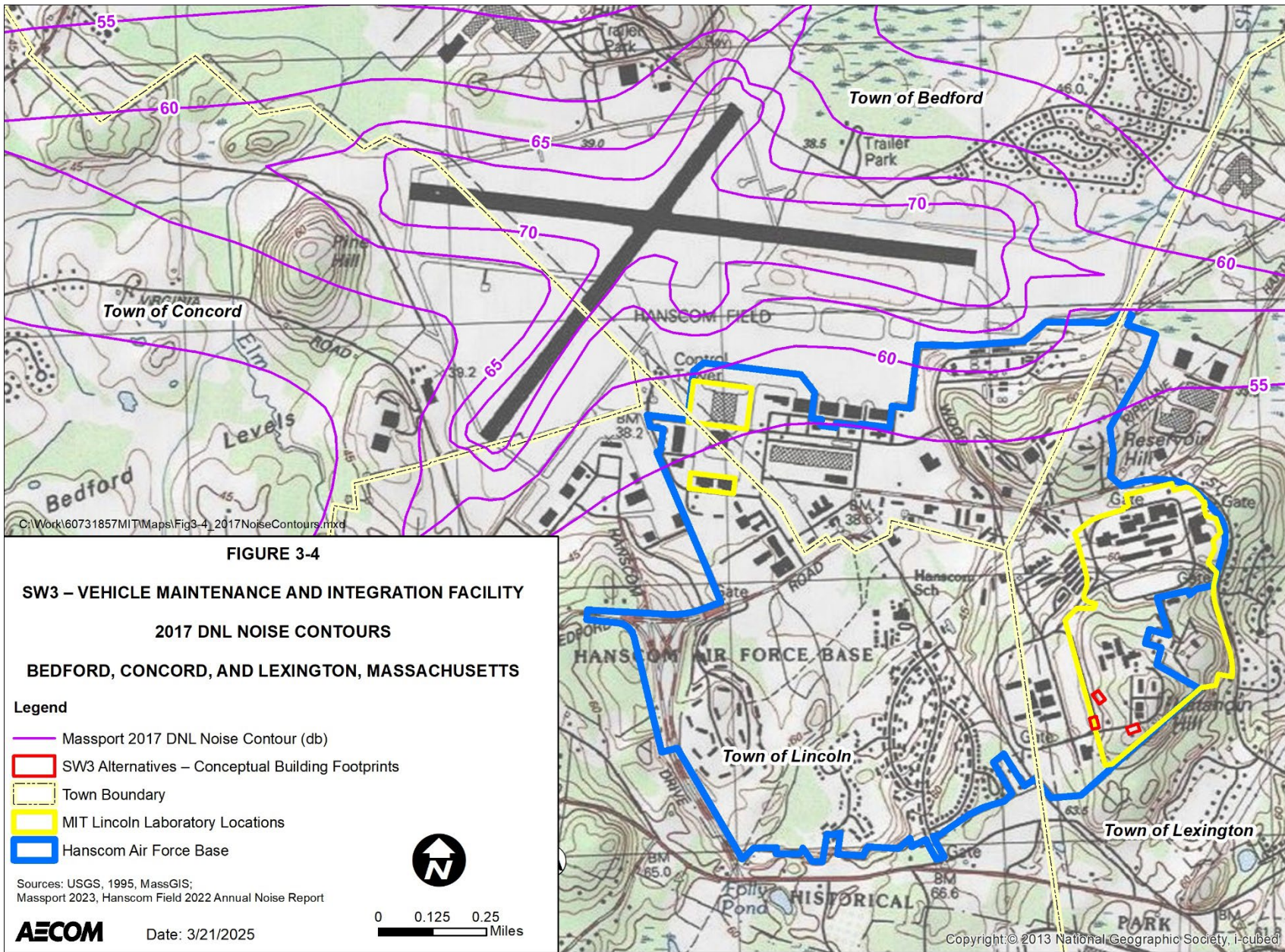
3.8.2 Environmental Consequences

3.8.2.1 Proposed Action Alternative, and Alternatives 1 and 2

Noise generated during construction of SW3 under any of the three alternatives would vary in volume, duration, and intensity but would be similar to that generated by other construction and development activities occurring on Hanscom AFB and the MIT LL campus with relative frequency. The highest construction noise levels are expected to occur during the first phases of construction, when the site is cleared and the foundation is excavated. Although the proposed facility would garage and maintain several larger vehicles, and various equipment that generate noise would be operated, the contribution of noise to the surrounding area is expected to be consistent with the characteristics of existing noise generated in the surrounding, developed environment. Construction and operation activities and resulting elevated noise levels would occur primarily during normal daytime working hours.

At the Proposed Action Alternative and Alternative 2 sites, construction and operation noise would not have the potential to disturb noise sensitive receptors, as no such receptors are located nearby. However, off-base residences are located immediately downhill to the southeast of the Alternative 1 site, with the closest residence being approximately 200 feet from the site, and their occupants could be sensitive to elevated noise levels during both construction and operation.

The Proposed Action would result in no significant change in short-term and long-term, direct, and indirect impacts on noise at and in the vicinity of the selected site. Implementation of this alternative would have no significant impacts on noise as construction and operation related, elevated noise levels would occur primarily during normal daytime working hours, and are expected to be consistent with the characteristics of existing noise generated in the surrounding, developed environment.



3.8.2.2 *No Action Alternative*

Under the No Action Alternative, there would be no change in impact to noise. Current impacts to noise levels at the existing, temporary facility result from vehicle and equipment operation. Day-to-day activities at the facility have not significant impact on noise levels, typical of facilities throughout Hanscom AFB and the MIT LL campus. Were these activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. No substantial new construction would be required and there would be no change to noise levels in the area.

The No Action Alternative would not result in any change in short- or long-term, direct, or indirect impacts to noise on Hanscom AFB or the MIT LL campus. Noise levels in the area are expected to remain at levels similar to those generated under current operations. Implementation of this alternative would have no significant impacts on noise.

3.8.2.3 *Mitigation*

Although no significant, short-term adverse noise impacts are anticipated, mufflers would be used on construction equipment and vehicles to minimize noise impacts during construction activities. Noise levels generated by SW3 facility operation would be maintained at a level consistent with current OSHA regulations as specified in CFR Title 29, Part 1910. Thus, no long-term noise impacts are anticipated to result from operation of the replacement facilities or SW3 facility.

3.9 SOLID WASTES, AND HAZARDOUS MATERIALS AND WASTES

3.9.1 Affected Environment

This section describes the use/location of hazardous materials, solid waste management practices, the environmental remediation program, and the storage of fuels on Hanscom AFB and/or MIT LL.

3.9.1.1 Hazardous Materials and Waste

MIT LL Facilities Services Department Hazardous Materials Group coordinates disposal of all MIT LL facility hazardous wastes. The Hanscom AFB Hazardous Waste program does not oversee the MIT LL Hazardous Waste program. The MIT LL 244 Wood Street, Lexington facility is registered with MassDEP and USEPA as a Large Quantity Generator of Resource Conservation and Recovery Act-regulated hazardous waste with USEPA ID # MAD001424985.

The Proposed Action Alternative site is situated on an open grassy field within Master Lease Parcel 3 that was previously occupied by a building that initially was used as a speech research laboratory following its construction in 1955, and more recently as a law center and computer laboratory. The building was demolished in mid-2008 (PAL, 2014). The Alternatives 1 and 2 sites have not been previously developed or disturbed, and there has not been any previous associated land use with these sites. There are no known historic sources of pollution from structures or activities that occurred at any of the alternative locations.

3.9.1.2 Solid Waste

Hanscom AFB is required by 310 CMR 19.000 to recycle certain items, including paper, cardboard, glass, plastic, aluminum, and metal. The base operates a solid waste transfer facility that consolidates recyclables. Hanscom AFB follows Air Force projected solid waste diversion goals of 50 percent for non-construction and demolition (-C&D) debris and 60 percent for C&D debris (Hanscom AFB, 2019). Hanscom AFB maintains a composting facility and program to reduce the cost of waste disposal and maintain an environmentally sustainable source of grounds maintenance materials. Civil Engineering Grounds Maintenance crews routinely clear compostable yard waste (i.e., leaves, fallen branches/felled

trees, weeds, and other organic materials) from the grounds of the installation. Food waste is generated at sources including the commissary, Hanscom AFB restaurants, and the Sodexo Kitchen at MIT LL A-Cafeteria, and is hauled by an Hanscom AFB contractor to a composting operation at a farm in central Massachusetts.

Under permit with the MassDEP, the Hanscom AFB solid waste transfer station is limited to a maximum of 50 tons per day of C&D debris waste. There are no permit limits on other solids wastes that the transfer station can process. During major construction and renovation projects, C&D debris is disposed of by the performing contractor who reports quantities to Hanscom AFB but which are not processed through the transfer station, and therefore do not count toward the 50 tons per day permit limit (Hanscom AFB, 2020).

The MIT LL Facility Services Department oversees the MIT LL waste management program, with the exception of trash hauled from South Lab and the compostable food waste from the A-Cafeteria kitchen, which are overseen by the Hanscom AFB solid waste management program. Review of recent haul reports indicates approximately 35 to 45 tons of solid waste (without recyclables) are removed monthly from MIT LL. Recyclables removed from MIT LL during calendar year 2018 included (Hanscom AFB, 2019):

- Mixed paper (83 tons);
- Cardboard (85 tons);
- Plastic, glass, and cans (primarily food and beverage containers) (10.2 tons);
- Scrap metal (not including high value metals) (approximately 9.0 tons);
- Wooden pallets (9 tons);
- Sand and compostable materials (approximately 9 loads at 30 cubic yards per load); and
- Food waste for composting (22.1 tons)

Compostable yard waste is the only waste currently generated at all three of the alternative locations.

3.9.1.3 Environmental Restoration Program

Hanscom AFB has historically used, generated, and disposed of numerous hazardous substances, including fuel, aromatic solvents, polychlorinated biphenyls (PCBs), and chlorinated solvents. In 1984, environmental studies identified 13 sites, related to past practices at Hanscom AFB, warranting further investigation and potential cleanup through the Installation Restoration Program, now known as the ERP. Subsequent discoveries increased the number of sites to 22. Each site was evaluated using the DAF Hazard Assessment Rating Methodology, which evaluates potential receptors, waste characteristics, and migration pathways in order to determine the relative potential of uncontrolled hazardous waste disposal facilities to cause health or environmental damage. Scores ranged from 86 (high hazard potential) to 6 (small hazard potential). Of the 22 identified potentially contaminated sites, 14 sites require no further action and are considered closed and the remaining 8 sites are still active and are either regulated by the USEPA under the Comprehensive Environmental Response, Compensation, and Liability Act or by the Commonwealth of Massachusetts (Hanscom AFB, 2017). Four of the active sites are on Hanscom AFB, whereas the other four active sites are located on Hanscom Field and thus on Massport property.

No active ERP sites are located within the Master Lease parcels or in the vicinity of the SW3 alternatives.

3.9.1.4 Stored Fuels

MIT LL operates a Spill Prevention, Control, and Countermeasure Plan to prevent discharges of oil and prevent oil from reaching navigable waters and adjoining shorelines, and a hazardous waste contingency

plan that details how MIT LL response personnel are to respond to and recover from a spill or release of a regulated hazardous material or hazardous waste.

Gasoline, diesel fuel, waste oil, kerosene, propane, #6 fuel oil, and #2 fuel oil are stored in permitted underground storage tanks and aboveground storage tanks on Hanscom AFB (Hanscom AFB, 2003). The only bulk aboveground storage tanks on base are used to store #6 fuel at the Central Heating Plant, located just west of the MIT LL campus (Hanscom AFB, 2003). The primary fuel stored on MIT LL is #2 fuel oil, used to supply the campus' emergency and non-emergency generators.

There are currently no generators or stored fuels located within any of the three alternative locations.

3.9.1.5 Per- and Polyfluoroalkyl Substances (PFAS)

Per- and polyfluoroalkyl substances (PFAS) are a large, complex group of synthetic chemicals that have been used in consumer products around the world since the 1940s. People are most likely exposed to these chemicals by consuming PFAS-contaminated water or food, using products made with PFAS, or breathing air containing PFAS. Because PFAS break down slowly, if at all, people and animals are repeatedly exposed to them, and blood levels of some PFAS can build up over time.

A remedial investigation of known PFAS release sites on Hanscom AFB is ongoing. The area to which this EA applies was not impacted by any known releases of products that may contain PFAS. No PFAS release sites are present, no soil or groundwater data have been collected, and there is no evidence suggesting the presence of PFAS compounds within the alternative Proposed Action sites or their vicinity.

3.9.2 Environmental Consequences

3.9.2.1 Proposed Action Alternative, and Alternatives 1 and 2

Under the Proposed Action, short-term impacts typically associated with construction would occur under each of the three alternatives, such as an increase in construction material debris and potential spills.

The SW3 facility would be equipped with a 300-kilowatt emergency generator with an associated 1,650-gallon aboveground, fuel storage tank. Operation of the emergency generator would result in periodic generation of waste oil/lubricants; however, substantial quantities are not anticipated.

Hazardous materials would be utilized in the operations of the vehicle maintenance and integration facility. These materials would be subject to MIT LL's Environmental and Occupational Safety programs and Hanscom AFB Fire Department approvals. Hazardous wastes generated by operations at any of the proposed sites would be managed under the Large Quantity Generator of Resource Conservation and Recovery Act-regulated hazardous waste program.

Operation of SW3 is not expected to result in an increase in the volume of solid or hazardous waste generated by MIT LL, as the vehicle maintenance and equipment integration activities simply would be relocated from the current, temporary facility to the new, permanent facility. Solid or hazardous waste generated at the new facility would be recycled or collected and disposed of off base, consistent with current practices and policies. The Proposed Action would not result in a long-term increase in solid waste, or hazardous materials and waste generation at Hanscom AFB or MIT LL.

Construction and operation of the proposed SW3 facility would result in no significant short- and long-term, direct, and indirect impacts on solid wastes, or hazardous materials and wastes on Hanscom AFB. Implementation of any of the three alternatives would have no significant impacts on solid wastes, or hazardous materials and wastes on Hanscom AFB, as the anticipated short-term increase in construction

material debris would be typical of construction projects on the base, and operation of the new facility is not expected to increase the volume of solid waste generated by MIT LL.

3.9.2.2 No Action Alternative

Under the No Action Alternative, there would be no change in impact to solid wastes, and hazardous materials and wastes on base or at the alternative locations. Ongoing operations at Hanscom AFB and MIT LL would continue to generate solid wastes and require the storage of fuels. Current operations do not have, and the No Action Alternative would not have, any impacts on remediation of prior contamination at Hanscom AFB or other hazardous materials and wastes. Remediation would continue as part of the base's ERP. Day-to-day activities at the facility have a not significant impact on solid wastes, and hazardous materials and wastes, typical of waste generation at other facilities throughout Hanscom AFB and MIT LL. Were these activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. Short-term impacts typically associated with construction would occur, such as an increase in construction material debris and potential spills.

The No Action Alternative would not result in any change in short- or long-term, direct, or indirect impacts on solid wastes, or hazardous materials and wastes on Hanscom AFB or the MIT LL campus. Implementation of this alternative would have no significant impacts on solid wastes, and hazardous materials and wastes.

3.9.2.3 Mitigation

While construction would result in a short-term increase in solid waste, the diversion of reusable or recycled materials in facility construction would lessen the impact associated with new construction. Operation of SW3 is not expected to result in an increase in the volume of solid waste generated by MIT LL, as the vehicle maintenance and equipment integration activities simply would be relocated from the current, temporary facility to the new, permanent facility.

3.10 SAFETY AND OCCUPATIONAL HEALTH

3.10.1 Affected Environment

The MIT LL EHS Office is responsible for oversight of EHS issues and works with the MIT LL technical and administrative staff community to provide technical advice and assistance in maintaining compliance and implementing best practices. The EHS Office provides critical support in a wide range of areas from environmental sustainability and occupational safety to chemical, radiation, and biological controls. To help facilitate this process, MIT LL has implemented the MIT EHS Management System to reinforce the commitment to protecting the health and safety of its employees, visitors, and subcontractors, as well as to protecting the environment. The EHS Management System is a structured, organizational approach to environment, health and safety management, designed to drive continual EHS performance improvement. The EHS Management System establishes a set of management tools, principles, processes, and procedures that enable MIT LL to reduce its EHS impact while simultaneously supporting the laboratory's research and development program goals.

The EHS Policy states, in part, MIT LL is committed to excellence in environmental, health, and safety stewardship locally and globally. Further, the policy states MIT LL's commitment to:

- Minimize adverse environmental, health, and safety impacts of its facilities, activities and operations to protect human health and the environment;
- Achieve and maintain compliance with federal, state, and local environmental, health, and safety regulations and good practices;

- Achieve a high standard of accountability for environmental, health, and safety stewardship;
- Provide educational opportunities to reinforce the values exemplified in this policy; and
- Measure and continuously improve environmental, health, and safety performance.

A primary tenet of MIT LL policy is to ensure the activities conducted, and products and services provided and used, are safe for MIT LL employees, other users, and the general public. This policy also limits the risk of damage to systems or their support equipment and requires a programmed mix of proven policies, practices, and techniques applicable to unique operations.

The MIT LL EHS Office provides environmental and safety support services to the MIT LL community in an array of related areas. Functioning under the Laboratory Safety & Mission Assurance Office (which reports to the MIT Lincoln Laboratory Director's Office), the EHS Office works in collaboration with the MIT campus EHS Office to meet MIT LL's occupational safety and health program needs and requirements, including compliance with federal (OSHA), state, local, and DAF regulations. Program areas of focus include general industrial safety (electrical safety, mechanical safety, fire safety, life safety, working at heights, etc.) chemical safety/industrial hygiene, ionizing and non-ionizing radiation safety, biosafety, emergency preparedness, and workplace ergonomics.

All new MIT LL employees and resident subcontractors must attend an initial Safety Orientation class. All individuals who engage in or oversee activities (work with potentially hazardous materials, equipment, or processes) that are regulated because of potential risks to EHS must receive training appropriate to the regulated activity. MIT LL policy requires that operational instruction of personnel include safety instruction. Instruction on the potential hazards inherent in any operation must be made part of the operations instruction program. Responsibility for ensuring personnel training resides with Group Supervisors. All MIT LL personnel performing critical tasks or controlling critical processes or potentially hazardous operations during manufacturing test, checkout, servicing, and flight training operations are trained and certified as applicable.

MIT LL provides information and training to employees on the hazards associated in their workplace and notifies employees when new hazards are introduced into their work area. Training includes methods and observations that may be used to detect the presence or release of a hazardous material in the work area (i.e., visual appearance, monitoring, and odor). Employees are informed of the location of chemical hazards in their work area, the physical and health hazards of the materials, routes of exposure and exposure limits, and the location and availability of the written hazard communication program, including the required lists of hazardous materials and safety data sheets. Employees are made aware of the requirements of the OSHA Hazard Communication Standard (29 CFR 1910.1200) and/or the OSHA Laboratory Standard (29 CFR 1910.1450) as required. Employees are given an explanation to the approach for identifying hazardous materials (when shippers or other containers are subdivided, etc.), a general review of the information contained on a safety data sheet and how to interpret the information, and a general overview of how to read labels and review a safety data sheet to obtain the appropriate hazard information. MIT LL personnel are trained in the methods for safe handling and use of hazardous materials.

Safety is an integral part of every group, division, and department within the MIT LL organization. Routine group meetings, combined with written safety notices and information from the MIT LL EHS Office, constitute the primary communication path to and from all personnel. MIT LL personnel are responsible for complying with the EHS requirements, as well as federal, state, local and DAF regulations, and are required to perform assigned tasks in a manner that ensures safety for themselves and

their fellow workers. In addition, equipment and hardware systems are outfitted with interlocks, machine guards, and other protective safety devices.

Spaces with toxic gases or high hazard chemicals are controlled-access spaces. Access control may utilize ID-badge proximity readers, electronic keypad, cipher-lock, or key-lock to control access. Spaces with acutely toxic gases and other highly hazardous materials are locked at all times. Other chemical areas may be unlocked whenever the area is occupied.

Construction projects managed by MIT LL are required to comply with MIT EHS Policy and OSHA regulations at 29 CFR Part 1926.

3.10.2 Environmental Consequences

3.10.2.1 Proposed Action Alternative, and Alternatives 1 and 2

Under the Proposed Action, construction activities under any of the three alternatives would comply with all applicable federal, state, local, and DAF regulatory safety standards. It is expected that the construction workers would be trained to identify and avoid safety hazards, such as those common to working around and with heavy equipment and electrically powered hand tools. A temporary snow fence, or chain link fence, if required by Hanscom AFB, would be installed around the perimeter of the construction area, and only authorized personnel with appropriate personal protective equipment would be allowed to enter the construction zone. The design of the proposed SW3 facility, as applicable, is anticipated to incorporate elements that account for employee health and safety.

Construction and operation of the proposed SW3 facility would result in no significant short- and long-term, direct, and indirect impacts on safety and occupational health on Hanscom AFB and MIT LL. Implementation of this alternative would have no significant impacts on safety and occupational health, as construction activities would comply with all applicable regulatory safety standards, and the design of the proposed facility incorporate employee health and safety elements.

3.10.2.2 No Action Alternative

Under the No Action Alternative, there would be no change in the current status of safety or occupational health of any military or DoD civilian personnel, developer personnel, contractors, or the general public. Operations of the existing, temporary facility would continue in a building that is not optimized for the purposes and needs of garaging and maintaining vehicles, integrating research and experimental equipment into or onto vehicles, and related storage, research, and administrative functions. Day-to-day activities at the facility have a not significant impact on safety and occupational health, typical of other facilities throughout Hanscom AFB and MIT LL. Were these activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. No substantial new construction would be required and there would be no change to safety and occupational health.

The No Action Alternative would not result in any change in short- or long-term, direct, or indirect impacts to safety and occupational health on Hanscom AFB. Implementation of this alternative would have no significant impacts on safety and occupational health.

3.10.2.3 Mitigation

It is expected that construction workers would be trained to identify and avoid safety hazards, such as those common to working around/with heavy equipment and electrically-powered hand tools. A temporary chain link fence would be installed around the perimeter of the construction area, and only authorized personnel with appropriate personal protective equipment would be allowed to enter the

construction zones. Operation of the SW3 facility would comply with MIT LL EHS policy to ensure that the activities conducted are safe for MIT LL employees, other users, and the general public.

3.11 SOCIOECONOMICS

3.11.1 Affected Environment

The workforce at Hanscom AFB includes active-duty military, military reservists, DoD civilians, non-DoD civilians, and contractors. According to Hanscom AFB (2020), the base daytime workforce population was 6,065 personnel, consisting of 887 active-duty military, 300 Massachusetts National Guard employees, 2,697 government civilian employees, and 2,181 on-site contractors. The MIT LL population has fluctuated within a range of between 3,500 and 4,500 employees over the past several years.

Table 3-6 presents the 2010 and 2020 total populations for the towns of Bedford, Lexington, Concord, and Lincoln, Middlesex County, and Massachusetts. Between 2012 and 2022, the populations of all four towns increased at a rate roughly similar to that of the populations of the county and state. The rates of increase for the towns of Bedford, Lexington, and Lincoln were higher than that of the county and state; the rate for the town of Concord was lower. The median household incomes (**Table 3-7**) for the four towns increased at rates between approximately 37 and 71 percent, compared to increases of 49 percent in Middlesex County and 50 percent in Massachusetts.

Table 3-6. Total Population, 2012 and 2022

	2012	2022	% Change
Town of Bedford	13,407	14,273	6.46
Town of Concord	18,081	18,265	1.02
Town of Lexington	31,527	34,221	8.55
Town of Lincoln	6,442	6,928	7.54
Middlesex County	1,537,215	1,617,105	5.20
Massachusetts	6,646,144	6,981,974	5.05

Source: United States Census Bureau, 2024, Table B01001 Sex by Age.

Table 3-7. Median Household Income, 2012 and 2022

	2012	2022	% Change
Town of Bedford	\$131,663	\$199,115	51.23
Town of Concord	\$191,925	\$262,537	36.79
Town of Lexington	\$191,350	\$281,187	46.95
Town of Lincoln	\$156,549	\$267,914	71.14
Middlesex County	\$109,773	\$163,550	48.99
Massachusetts	\$89,273	\$133,823	49.90

Sources: United States Census Bureau, 2024, Table S1901 Income in the Past 12 Months (In 2012 Inflation Adjusted Dollars); (In 2022 Inflation Adjusted Dollars).

3.11.2 Environmental Consequences

3.11.2.1 Proposed Action Alternative, and Alternatives 1 and 2

Under the Proposed Action, construction activities would generate a not significant benefit for the construction industry, as there would be a corresponding short-term increase in the demand for skilled workers and construction materials. Although a short-term increase in revenue generated in the surrounding area may occur due to construction employees utilizing local business for supplies and personal use, construction of the SW3 facility is not expected to significantly impact the socioeconomic conditions at Hanscom AFB, MIT LL, or in the surrounding communities. As SW3 would replace the existing, temporary facility, its operation and maintenance would not create any new jobs. Similarly, the Proposed Action would not have any impact on the population or housing of Hanscom AFB or the surrounding communities.

Access to the construction site and to the SW3 facility during operation would be restricted to credentialed professionals. No disproportionate environmental health or safety risks to children would occur. The proposed project is consistent with the objectives of Executive Order 13045, *Protection of Children from Environmental Health Risks and Safety Risks*.

Construction and operation of the proposed SW3 facility would result in no significant short-term, direct, and indirect socioeconomic impacts, and no long-term, direct, or indirect socioeconomic impacts. Implementation of this alternative would have no significant impacts to socioeconomics, as construction activities would generate a not significant benefit for the construction industry and increase in revenue for surrounding communities, and would not result in disproportionate impacts to children.

3.11.2.2 No Action Alternative

Under the No Action Alternative, there would be no construction activity. Therefore, there would be no project related increases in vehicle traffic or operation of construction equipment in the area. There would also be no impacts to the current state of environmental media, such as air or water quality, at the current vehicle maintenance and integration facility or any of the alternative locations and there would be no increase in other environmental factors such as noise or light pollution. This alternative would not change the current economic opportunities or the quality of life within the surrounding areas.

Were vehicle maintenance and integration activities to be relocated to a new, temporary location, the relocation likely would comprise retrofitting an existing, compatible structure. No substantial new construction would be required and there would be no significant changes to environmental media, economic opportunities, and the quality of life in the area.

The No Action Alternative would not result in any change in short- or long-term, direct, or indirect impacts to socioeconomics. Implementation of this alternative would have no significant impacts on socioeconomics.

3.11.2.3 Mitigation

The Proposed Action would be largely beneficial and would not adversely impact socioeconomic conditions. Therefore, no mitigation is warranted.

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- USWS. 2024. Range-wide Indiana Bat and Northern Long-eared Bat Survey Guidelines. USFWS Region 3, Bloomington, MN.

APPENDIX A: AGENCY CONSULTATION



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:

06/16/2025 13:57:01 UTC

Project Code: 2025-0109427

Project Name: MITLL SW3 - Vehicle Maintenance and Integration Facility

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Updated 4/12/2023 - Please review this letter each time you request an Official Species List, we will continue to update it with additional information and links to websites may change.

About Official Species Lists

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Federal and non-Federal project proponents have responsibilities under the Act to consider effects on listed species.

The enclosed species list identifies threatened, endangered, proposed, and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested by returning to an existing project's page in IPaC.

Endangered Species Act Project Review

Please visit the “**New England Field Office Endangered Species Project Review and Consultation**” website for step-by-step instructions on how to consider effects on listed

species and prepare and submit a project review package if necessary:

<https://www.fws.gov/office/new-england-ecological-services/endangered-species-project-review>

NOTE Please do not use the **Consultation Package Builder** tool in IPaC except in specific situations following coordination with our office. Please follow the project review guidance on our website instead and reference your **Project Code** in all correspondence.

Northern Long-eared Bat - (Updated 4/12/2023) The Service published a final rule to reclassify the northern long-eared bat (NLEB) as endangered on November 30, 2022. The final rule went into effect on March 31, 2023. You may utilize the **Northern Long-eared Bat Rangewide Determination Key** available in IPaC. More information about this Determination Key and the Interim Consultation Framework are available on the northern long-eared bat species page:

<https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis>

For projects that previously utilized the 4(d) Determination Key, the change in the species' status may trigger the need to re-initiate consultation for any actions that are not completed and for which the Federal action agency retains discretion once the new listing determination becomes effective. If your project was not completed by March 31, 2023, and may result in incidental take of NLEB, please reach out to our office at newengland@fws.gov to see if reinitiation is necessary.

Additional Info About Section 7 of the Act

Under section 7(a)(2) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to determine whether projects may affect threatened and endangered species and/or designated critical habitat. If a Federal agency, or its non-Federal representative, determines that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Federal agency also may need to consider proposed species and proposed critical habitat in the consultation. 50 CFR 402.14(c)(1) specifies the information required for consultation under the Act regardless of the format of the evaluation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<https://www.fws.gov/service/section-7-consultations>

In addition to consultation requirements under Section 7(a)(2) of the ESA, please note that under sections 7(a)(1) of the Act and its implementing regulations (50 CFR 402 et seq.), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species. Please contact NEFO if you would like more information.

Candidate species that appear on the enclosed species list have no current protections under the ESA. The species' occurrence on an official species list does not convey a requirement to

consider impacts to this species as you would a proposed, threatened, or endangered species. The ESA does not provide for interagency consultations on candidate species under section 7, however, the Service recommends that all project proponents incorporate measures into projects to benefit candidate species and their habitats wherever possible.

Migratory Birds

In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see:

<https://www.fws.gov/program/migratory-bird-permit>

<https://www.fws.gov/library/collections/bald-and-golden-eagle-management>

Please feel free to contact us at **newengland@fws.gov** with your **Project Code** in the subject line if you need more information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat.

Attachment(s): Official Species List

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
(603) 223-2541

PROJECT SUMMARY

Project Code: 2025-0109427

Project Name: MITLL SW3 - Vehicle Maintenance and Integration Facility

Project Type: Military Development

Project Description: Construct secure a permanent location for garaging and maintaining vehicles, as well as allowing the storing and integrating of research and experimental equipment into or onto vehicles, functions which currently have no permanent location on the MIT LL campus. The proposed SW3 would consist of a 2-story, flat-roof building, with a footprint of approximately 18,000 square feet and approximately 32,000 square feet of usable floor space. The total area needed for the building footprint, required setbacks, and parking areas would be between approximately 42,000 and 46,000 square feet.

Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.45436225,-71.26880869131382,14z>



Counties: Middlesex County, Massachusetts

ENDANGERED SPECIES ACT SPECIES

There is a total of 3 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Endangered
Tricolored Bat <i>Perimyotis subflavus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> There is proposed critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/9743	Proposed Threatened

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Air Force
Name: Scott Sheehan
Address: 120 Grenier Street, B1810
City: Hanscom AFB
State: MA
Zip: 01731
Email: scott.sheehan.1@us.af.mil
Phone: 7812256144



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104

In Reply Refer To:

06/16/2025 14:25:37 UTC

Project code: 2025-0109427

Project Name: MITLL SW3 - Vehicle Maintenance and Integration Facility

Federal Nexus: yes

Federal Action Agency (if applicable): Air Force

Subject: Federal agency coordination under the Endangered Species Act, Section 7 for 'MITLL SW3 - Vehicle Maintenance and Integration Facility'

Dear Scott Sheehan:

This letter records your determination using the Information for Planning and Consultation (IPaC) system provided to the U.S. Fish and Wildlife Service (Service) on June 16, 2025, for 'MITLL SW3 - Vehicle Maintenance and Integration Facility' (here forward, Project). This project has been assigned Project Code 2025-0109427 and all future correspondence should clearly reference this number. **Please carefully review this letter. Your Endangered Species Act (Act) requirements may not be complete.**

Ensuring Accurate Determinations When Using IPaC

The Service developed the IPaC system and associated species' determination keys in accordance with the Endangered Species Act of 1973 (ESA; 87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) and based on a standing analysis. All information submitted by the Project proponent into IPaC must accurately represent the full scope and details of the Project.

Failure to accurately represent or implement the Project as detailed in IPaC or the Northern Long-eared Bat and Tricolored Bat Range-wide Determination Key (DKey), invalidates this letter. ***Answers to certain questions in the DKey commit the project proponent to implementation of conservation measures that must be followed for the ESA determination to remain valid. Note that conservation measures for northern long-eared bat and tricolored bat may differ. If both bat species are present in the action area and the key suggests more conservative measures for one of the species for your Project, the Project may need to apply the most conservative measures in order to avoid adverse effects. If unsure which conservation measures should be applied, please contact the appropriate Ecological Services Field Office.***

Determination for the Northern Long-Eared Bat and Tricolored Bat

Based on your IPaC submission and a standing analysis completed by the Service, you determined the proposed Project will have the following effect determinations:

Species	Listing Status	Determination
Northern Long-eared Bat (<i>Myotis septentrionalis</i>)	Endangered	NLAA
Tricolored Bat (<i>Perimyotis subflavus</i>)	Proposed	NLAA
	Endangered	

Federal agencies must consult with U.S. Fish and Wildlife Service under section 7(a)(2) of the Endangered Species Act (ESA) when an action *may affect* a listed species. Tricolored bat is proposed for listing as endangered under the ESA, but not yet listed. For actions that may affect a proposed species, agencies cannot consult, but they can *confer* under the authority of section 7(a)(4) of the ESA. Such conferences can follow the procedures for a consultation and be adopted as such if and when the proposed species is listed. Should the tricolored bat be listed, agencies must review projects that are not yet complete, or projects with ongoing effects within the tricolored bat range that previously received a NE or NLAA determination from the key to confirm that the determination is still accurate.

Unless the Service advises you within 15 days of the date of this letter that your IPaC-assisted determination was incorrect, this letter verifies that consultation on the Action is complete for northern long-eared bat and/or tricolored bat and no further action is necessary unless either of the following occurs:

- new information reveals effects of the action that may affect the northern long-eared bat or tricolored bat in a manner or to an extent not previously considered; or,
- the identified action is subsequently modified in a manner that causes an effect to the northern long-eared bat or tricolored bat that was not considered when completing the determination key.

15-Day Review Period

As indicated above, the Service will notify you within 15 calendar days if we determine that this proposed Action does not meet the criteria for a “may affect, not likely to adversely affect” (NLAA) determination for the northern long-eared bat and/or tricolored bat. If we do not notify you within that timeframe, you may proceed with the Action under the terms of the NLAA concurrence provided here. This verification period allows the identified Ecological Services Field Office to apply local knowledge to evaluation of the Action, as we may identify a small subset of actions having impacts that we did not anticipate when developing the key. In such cases, the identified Ecological Services Field Office may request additional information to verify the effects determination reached through the Northern Long-eared Bat and Tricolored Bat DKey.

Other Species and Critical Habitat that May be Present in the Action Area

The IPaC-assisted determination key for the northern long-eared bat and tricolored bat does not apply to the following ESA-protected species and/or critical habitat that also may occur in your Action area:

- Monarch Butterfly *Danaus plexippus* Proposed Threatened

You may coordinate with our Office to determine whether the Action may affect the species and/or critical habitat listed above. Note that reinitiation of consultation would be necessary if a new species is listed or critical habitat designated that may be affected by the identified action before it is complete.

If you have any questions regarding this letter or need further assistance, please contact the New England Ecological Services Field Office and reference Project Code 2025-0109427 associated with this Project.

Action Description

You provided to IPaC the following name and description for the subject Action.

1. Name

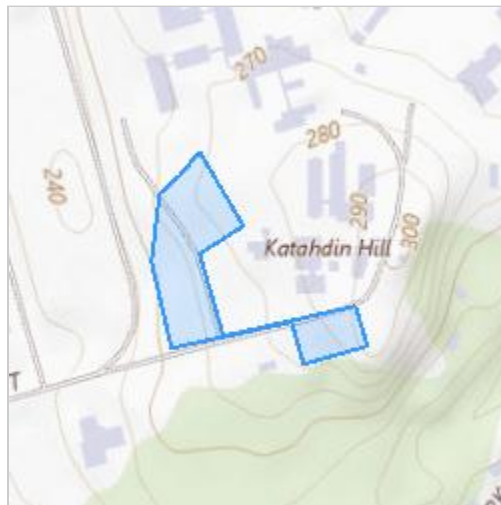
MITLL SW3 - Vehicle Maintenance and Integration Facility

2. Description

The following description was provided for the project 'MITLL SW3 - Vehicle Maintenance and Integration Facility':

Construct secure a permanent location for garaging and maintaining vehicles, as well as allowing the storing and integrating of research and experimental equipment into or onto vehicles, functions which currently have no permanent location on the MIT LL campus. The proposed SW3 would consist of a 2-story, flat-roof building, with a footprint of approximately 18,000 square feet and approximately 32,000 square feet of usable floor space. The total area needed for the building footprint, required setbacks, and parking areas would be between approximately 42,000 and 46,000 square feet. The are identified in the map is a combination of 3 alternatives. Only one alternative will be selected which is limited to approximately 1.3 acres for the total site.

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@42.45436225,-71.26880869131382,14z>



DETERMINATION KEY RESULT

Based on the answers provided, the proposed Action is consistent with a determination of “may affect, but not likely to adversely affect” for a least one species covered by this determination key.

QUALIFICATION INTERVIEW

1. Does the proposed project include, or is it reasonably certain to cause, intentional take of listed bats or any other listed species?

Note: Intentional take is defined as take that is the intended result of a project. Intentional take could refer to research, direct species management, surveys, and/or studies that include intentional handling/encountering, harassment, collection, or capturing of any individual of a federally listed threatened, endangered or proposed species?

No

2. Is the action area wholly within Zone 2 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

3. Does the action area intersect Zone 1 of the year-round active area for northern long-eared bat and/or tricolored bat?

Automatically answered

No

4. Does any component of the action involve leasing, construction or operation of wind turbines? Answer 'yes' if the activities considered are conducted with the intention of gathering survey information to inform the leasing, construction, or operation of wind turbines.

Note: For federal actions, answer ‘yes’ if the construction or operation of wind power facilities is either (1) part of the federal action or (2) would not occur but for a federal agency action (federal permit, funding, etc.).

No

5. Is the proposed action authorized, permitted, licensed, funded, or being carried out by a Federal agency in whole or in part?

Yes

6. Is the Federal Highway Administration (FHWA), Federal Railroad Administration (FRA), or Federal Transit Administration (FTA) funding or authorizing the proposed action, in whole or in part?

No

7. Are you an employee of the federal action agency or have you been officially designated in writing by the agency as its designated non-federal representative for the purposes of Endangered Species Act Section 7 informal consultation per 50 CFR § 402.08?

Note: This key may be used for federal actions and for non-federal actions to facilitate section 7 consultation and to help determine whether an incidental take permit may be needed, respectively. This question is for information purposes only.

Yes

8. Is the lead federal action agency the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC)? Is the Environmental Protection Agency (EPA) or Federal Communications Commission (FCC) funding or authorizing the proposed action, in whole or in part?

No

9. Is the lead federal action agency the Federal Energy Regulatory Commission (FERC)?

No

10. [Semantic] Is the action area located within 0.5 miles of a known bat hibernaculum? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

11. Does the action area contain any winter roosts or caves (or associated sinkholes, fissures, or other karst features), mines, rocky outcroppings, or tunnels that could provide habitat for hibernating bats?

No

12. Does the action area contain (1) talus or (2) anthropogenic or naturally formed rock shelters or crevices in rocky outcrops, rock faces or cliffs?

No

13. Will the action cause effects to a bridge?

Note: Covered bridges should be considered as bridges in this question.

No

14. Will the action result in effects to a culvert or tunnel at any time of year?

No

15. Are trees present within 1000 feet of the action area?

Note: If there are trees within the action area that are of a sufficient size to be potential roosts for bats answer "Yes". If unsure, additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

16. Does the action include the intentional exclusion of bats from a building or structure?

Note: Exclusion is conducted to deny bats' entry or reentry into a building. To be effective and to avoid harming bats, it should be done according to established standards. If your action includes bat exclusion and you are unsure whether northern long-eared bats or tricolored bats are present, answer "Yes." Answer "No" if there are no signs of bat use in the building/structure. If unsure, contact your local Ecological Services Field Office to help assess whether northern long-eared bats or tricolored bats may be present. Contact a Nuisance Wildlife Control Operator (NWCO) for help in how to exclude bats from a structure safely without causing harm to the bats (to find a NWCO certified in bat standards, search the Internet using the search term "National Wildlife Control Operators Association bats"). Also see the White-Nose Syndrome Response Team's guide for bat control in structures.

No

17. Does the action involve removal, modification, or maintenance of a human-made structure (barn, house, or other building) **known or suspected to contain roosting bats?**

No

18. Will the action cause construction of one or more new roads open to the public?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

19. Will the action include or cause any construction or other activity that is reasonably certain to increase average night-time traffic permanently or temporarily on one or more existing roads? **Note:** For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.). .

No

20. Will the action include or cause any construction or other activity that is reasonably certain to increase the number of travel lanes on an existing thoroughfare?

For federal actions, answer 'yes' when the construction or operation of these facilities is either (1) part of the federal action or (2) would not occur but for an action taken by a federal agency (federal permit, funding, etc.).

No

21. Will the proposed Action involve the creation of a new water-borne contaminant source (e.g., leachate pond, pits containing chemicals that are not NSF/ANSI 60 compliant)?

Note: For information regarding NSF/ANSI 60 please visit <https://www.nsf.org/knowledge-library/nsf-ansi-standard-60-drinking-water-treatment-chemicals-health-effects>

No

30. Will the proposed action occur exclusively in an already established and currently maintained utility right-of-way?

No

31. Does the action include emergency cutting or trimming of hazard trees in order to remove an imminent threat to human safety or property? See hazard tree note at the bottom of the key for text that will be added to response letters

Note: A "hazard tree" is a tree that is an immediate threat to lives, public health and safety, or improved property.

No

32. Does the project intersect with the 0- 9.9% forest density category?

Automatically answered

No

33. Does the project intersect with the 10.0- 19.9% forest density category map?

Automatically answered

No

34. Does the project intersect with the 20.0- 29.9% forest density category map?

Automatically answered

Yes

35. Does the project intersect with the 30.0- 100% forest density category map?

Automatically answered

No

36. Will the action cause trees to be cut, knocked down, or otherwise brought down across an area greater than 40 acres in total extent?

No

37. Will the proposed action result in the use of prescribed fire?

Note: If the prescribed fire action includes other activities than application of fire (e.g., tree cutting, fire line preparation) please consider impacts from those activities within the previous representative questions in the key. This set of questions only considers impacts from flame and smoke.

No

38. Does the action area intersect the northern long-eared bat species list area?

Automatically answered

Yes

39. [Semantic] Is the action area located within 0.5 miles of radius of an entrance/opening to any known NLEB hibernacula? Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

40. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

41. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats?

Automatically answered

No

42. [Semantic] Is the action area located within 150 feet of a documented northern long-eared bat roost site?

Note: The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency. Have you contacted the appropriate agency to determine if your action is within 150 feet of any documented northern long-eared bat roosts?

Note: A document with links to Natural Heritage Inventory databases and other state-specific sources of information on the locations of northern long-eared bat roosts is available [here](#). Location information for northern long-eared bat roosts is generally kept in state natural heritage inventory databases – the availability of this data varies by state. Many states provide online access to their data, either directly by providing maps or by providing the opportunity to make a data request. In some cases, to protect those resources, access to the information may be limited.

Automatically answered

No

43. Is suitable summer habitat for the northern long-eared bat present within 1000 feet of project activities?

If unsure, answer "Yes."

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

44. Are any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming suitable for northern long-eared bat roosting (i.e., live trees and/or snags ≥ 3 inches dbh that have exfoliating bark, cracks, crevices, and/or cavities)?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

45. Will any tree cutting/trimming or other knocking or bringing down of trees occur during the **Summer Occupancy season** for northern long-eared bats in the action area? **Note:** Bat activity periods for your state can be found in Appendix L of the Service's Range-wide Indiana Bat and Northern long-eared Bat Survey [Guidelines](#).

No

46. Does the action area intersect the tricolored bat species list area?

Automatically answered

Yes

47. [Semantic] Is the action area located within 0.5 miles of radius of an entrance/opening to any known tricolored bat hibernacula? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

48. [Semantic] Is the action area located within 0.25 miles of a culvert that is known to be occupied by northern long-eared or tricolored bats? **Note:** The map queried for this question contains proprietary information and cannot be displayed. If you need additional information, please contact your State wildlife agency.

Automatically answered

No

49. Has a presence/probable absence bat survey targeting the [tricolored bat and following the Service's Range-wide Indiana Bat and Northern Long-Eared Bat Survey Guidelines](#) been conducted within the project area?

No

50. Is suitable summer habitat for the tricolored bat present within 1000 feet of project activities?
(If unsure, answer ""Yes."")

Note: If there are trees within the action area that may provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pines) answer ""Yes."" For a complete definition of suitable summer habitat for the tricolored bat, please see Appendix A in the [Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines](#).

Yes

51. Do any of the trees proposed for cutting or other means of knocking down, bringing down, topping, or trimming provide potential roosts for tricolored bats (e.g., clusters of leaves in live and dead deciduous trees, Spanish moss (*Tillandsia usneoides*), clusters of dead pine needles of large live pine trees)?

Note: Additional information defining suitable summer habitat for the northern long-eared bat and tricolored bat can be found in Appendix A of the USFWS' Range-wide Indiana Bat and Northern long-eared bat Survey Guidelines at: <https://www.fws.gov/media/range-wide-indiana-bat-and-northern-long-eared-bat-survey-guidelines>.

Yes

52. Will any tree cutting/trimming or other knocking or bringing down of trees be conducted during the Pup Season for tricolored bat?

Note: Bat activity periods for your state can be found in Appendix L of the [Service's Range-wide Indiana Bat and Northern long-eared Bat Survey Guidelines](#).

No

53. Do you have any documents that you want to include with this submission?

No

PROJECT QUESTIONNAIRE

Enter the extent of the action area (in acres) from which trees will be removed - round up to the nearest tenth of an acre. For this question, include the entire area where tree removal will take place, even if some live or dead trees will be left standing.

0.6

IPAC USER CONTACT INFORMATION

Agency: Air Force
Name: Scott Sheehan
Address: 120 Grenier Street, B1810
City: Hanscom AFB
State: MA
Zip: 01731
Email: scott.sheehan.1@us.af.mil
Phone: 7812256144

APPENDIX B: CULTURAL RESOURCES



DEPARTMENT OF THE AIR FORCE
HEADQUARTERS 66TH AIR BASE GROUP
HANSCOM AIR FORCE BASE MASSACHUSETTS

RECEIVED

FEB 12 2025

MASS. HIST. COMM

RC.52118

February 10, 2025

Mr. Scott E. Sheehan
66 ABG/CEIE
120 Grenier Street
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Ms. Brona Simon, Executive Director
Massachusetts Historical Commission
220 Morrissey Boulevard
Boston, MA 02125-3314

CONCURRENCE *Brona Simon*
2/27/25
BRONA SIMON
STATE HISTORIC
PRESERVATION OFFICER
MASSACHUSETTS
HISTORICAL COMMISSION

Dear Ms. Simon:

The Department of the Air Force (DAF) is proposing an undertaking at Hanscom Air Force Base (AFB) in Lexington, Bedford, and Lincoln, MA that has the potential to affect historic properties. The proposed undertaking would include the construction and operation of a vehicle maintenance and integration facility for the Massachusetts Institute of Technology Lincoln Laboratory (MIT LL) facilities and campus on Hanscom AFB. A location map is provided in attachment 1.

The proposed facility, referred to as SW3, would be constructed at one of three alternative locations on the southwest portion of the MIT LL campus, and would support garaging and maintaining vehicles, integrating research and experimental equipment into or onto vehicles, and related storage, research, and administrative functions. The purpose of this Proposed Action is to provide a permanent facility for garaging and maintaining vehicles and integrating research and experimental equipment into or onto vehicles, functions which currently have no permanent location on the MIT LL campus. This action is related to a Facilities Modernization Plan (FMP) that was created as a result of 2014 and 2019 Comprehensive Reviews of MIT LL, where it was indicated that facilities modernization needs to be prioritized. To execute the FMP, the DAF and MIT entered into a lease agreement (Master Lease), which was approved on June 29, 2023. A map showing the lease area is provided in attachment 2.

The proposed SW3 would consist of a 2-story, flat-roof building, of approximately 28,000 gross square feet of usable floor space. The total area needed for the approximately 15,000-square foot building footprint, required setbacks, and parking areas would be about 40,000 square feet. The first floor of the building would accommodate 6 truck bays at the front, one of which would be a maintenance bay with a permanent vehicle lift, and a large storage area for various equipment and other vehicles. The second floor of the building would contain laboratory and support space as needed for MIT LL research and integration programs at the facility. The support space would also include a small office area with breakrooms, bathrooms,

and an electrical and mechanical room. There would also be a small amount of fuel storage at the facility for refueling lawn mowers, snow blowers, and hand-held landscaping equipment.

The need for the new building arises from the scheduled demolition of the current, temporary facility planned for 2025-2026 to accommodate construction of the MIT LL Engineering and Prototyping Facility (EPF). This demolition will leave the MIT LL campus without a designated space to garage and maintain vehicles and integrate research and experimental equipment. The undertaking includes all work required to construct and operate SW3. Descriptions of the three locations are presented below and a map of the proposed locations is provided in attachment 3.

- Proposed Action Alternative (Wright Street and Scott Drive) – MIT LL would construct and operate a vehicle maintenance and integration facility at the intersection of Wright Street and Scott Drive, in the eastern portion of Master Lease Parcel 3. At this proposed location, the site is fully within the bounds of the Air Force Cambridge Research Laboratory (AFCRL) Historic District.
- Alternative 1 (Wright Street) – MIT LL would construct and operate a vehicle maintenance and integration facility along Wright Street, at the southern end of Master Lease Parcel 1, and along the AFCRL Historic District. At this proposed location, the site is fully outside of, but immediately adjacent to, the bounds of the AFCRL Historic District..
- Alternative 2 (Scott Drive) – MIT LL would construct and operate a vehicle maintenance and integration facility along Scott Drive, along the western side of Master Lease Parcel 2. At this proposed location, the site is partially within the bounds of the AFCRL Historic District. This site does overlap with a marked area of archaeological sensitivity.

Based on the locations of the three alternative sites, the AFCRL Historic District is the only historic architectural resource with the potential for effects. A map showing the proposed alternative sites in relation to the AFCRL Historic District boundary is provided in attachment 4.

None of the three alternatives proposed will have a physical impact to any existing building or structure within or contributing to the AFCRL Historic District. Therefore, the 2014 Programmatic Agreement (PA) prescribes the terms for the proposed action. The PA states that any new construction within or adjacent to the AFCRL Historic District is to be designed to be responsive to the character of the district, meeting the Secretary of the Interior Standards and the DoD Guidelines, and that plans for such buildings are to be submitted to MHC for review. These provisions will be met during the formal design preparation and review.

The proposed action alternative lies near, but not within, an area previously identified as potentially archaeologically sensitive. In 1998, Parson Engineering Science, Inc. conducted a Phase I archaeological survey of 34 previously identified areas that were considered to have moderate to high potential for archaeological resources on Hanscom AFB, inclusive of the primary and secondary APEs. No cultural materials were discovered in these areas. The MA State Historic Preservation Officer, i.e., the Massachusetts Historical Commission (MHC), in its

June 22, 1998 letter regarding this survey report, wrote "The report indicated that no significant historical or archaeological resources were encountered in the archaeological survey of the 34 area previously determined to have moderate to high potential to contain archaeological resources. MHC concurred with this finding stating "no further archaeological research is warranted for these surveyed areas" (MHC 1998). As we do in all ground disturbing projects, we will incorporate the provisions for inadvertent discovery of archaeological resources into the project requirements.

The DAF is also preparing an Environmental Assessment (EA) under the National Environmental Policy Act to evaluate potential environmental impacts associated with the undertaking, with an expected completion date of April 2025.

In accordance with Section 106 of the NHPA (54 United States Code 306018) and its implementing regulations at 36 CFR Part 800, the DAF has determined that for this undertaking all activities are covered by the 2014 Programmatic Agreement and there will be *No Adverse Effect* to historic properties. We seek your concurrence with our finding or your comments within 30 days from receipt of this letter. Please feel free to contact me via e-mail at scott.sheehan.1@us.af.mil or at (781) 225-6144 with any questions or if you need additional information. Thank you for your consideration and I look forward to hearing from you.

Sincerely



SCOTT E. SHEEHAN, GS-12, DAF
Hanscom AFB Cultural Resources Manager

4 Attachments:

1. Location Map
2. Lease Area Map
3. SW3 Alternatives Map
4. SW3 Alternatives and AFCRL Historic District

APPENDIX C: CONFORMITY ANALYSIS

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

1. General Information: The Air Force's Air Conformity Applicability Model (ACAM) was used to perform a net change in emissions analysis to assess the potential air quality impact/s associated with the action. The analysis was performed in accordance with the Air Force Manual 32-7002, *Environmental Compliance and Pollution Prevention*; the *Environmental Impact Analysis Process* (EIAP, 32 CFR 989); the *General Conformity Rule* (GCR, 40 CFR 93 Subpart B); and the *USAF Air Quality Environmental Impact Analysis Process (EIAP) Guide*. This report provides a summary of the ACAM analysis.

Report generated with ACAM version: 5.0.24a

a. Action Location:

Base: HANSCOM AFB
State: Massachusetts
County(s): Middlesex
Regulatory Area(s): Boston-Lawrence-Worcester (E. MA), MA

b. Action Title: Propose Action Alternative

c. Project Number/s (if applicable):

d. Projected Action Start Date: 7 / 2025

e. Action Description:

Proposed Action: The Proposed Action Alternative would involve MIT LL's constructing and operating a vehicle maintenance and integration facility for the MIT LL facilities and campus on Hanscom AFB at the intersection of Wright Street and Scott Drive, in the eastern portion of Master Lease Parcel 3. The proposed facility is referred to as SW3, with 'SW' referencing its proposed location on the southwest portion of the MIT LL campus, and would support garaging and maintaining vehicles, integrating research and experimental equipment into or onto vehicles, and related storage, research, and administrative functions.

No Action Alternative: Under the No Action Alternative, MIT LL would not construct and operate a new vehicle maintenance and integration facility, and the existing facility would remain at its current temporary location. If the proposed vehicle maintenance and integration facility were not constructed under this No Action Alternative, either another temporary location to garage and maintain vehicles and integrate research and experimental equipment would be required prior to demolition of the current facility in 2025 or 2026, or construction of the EPF would be delayed.

Alternative 1 (Wright Street): MIT LL would construct and operate a vehicle maintenance and integration facility along Wright Street, at the southern end of Master Lease Parcel 1, and along and within the Hanscom AFB installation boundary.

Alternative 2 (Scott Drive): MIT LL would construct and operate a vehicle maintenance and integration facility along Scott Drive, along the western side of Master Lease Parcel 2.

f. Point of Contact:

Name: Brian Minichino
Title: Senior Environmental Scientist
Organization: AECOM
Email: brian.minichino@aecom.com
Phone Number: 7037271131

2. Analysis: Total reasonably foreseeable net change in direct and indirect emissions associated with the action were estimated through ACAM on a calendar-year basis for the "worst-case" (highest annual emissions) and "steady

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

state" (no net gain/loss in emission stabilized and the action is fully implemented) emissions. General Conformity under the Clean Air Act, Section 1.76 has been evaluated for the action described above according to the requirements of 40 CFR 93, Subpart B.

All emissions estimates were derived from various sources using the methods, algorithms, and emission factors from the most current *Air Emissions Guide for Air Force Stationary Sources*, *Air Emissions Guide for Air Force Mobile Sources*, and/or *Air Emissions Guide for Air Force Transitory Sources*. For greater details of this analysis, refer to the Detail ACAM Report.

applicable
 not applicable

Conformity Analysis Summary:

2025

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Boston-Lawrence-Worcester (E. MA), MA			
VOC	0.132	50	No
NOx	1.140	100	No
CO	1.407		
SOx	0.002		
PM 10	2.815		
PM 2.5	0.047		
Pb	0.000		
NH3	0.002		

2026

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Boston-Lawrence-Worcester (E. MA), MA			
VOC	0.420	50	No
NOx	0.786	100	No
CO	1.157		
SOx	0.002		
PM 10	0.036		
PM 2.5	0.032		
Pb	0.000		
NH3	0.003		

2027 - (Steady State)

Pollutant	Action Emissions (ton/yr)	GENERAL CONFORMITY	
		Threshold (ton/yr)	Exceedance (Yes or No)
Boston-Lawrence-Worcester (E. MA), MA			
VOC	0.009	50	No
NOx	0.121	100	No
CO	0.099		
SOx	0.003		
PM 10	0.011		
PM 2.5	0.011		
Pb	0.000		
NH3	0.000		

AIR CONFORMITY APPLICABILITY MODEL REPORT RECORD OF CONFORMITY ANALYSIS (ROCA)

The Criteria Pollutants (or their precursors) with a General Conformity threshold listed in the table above are pollutants within one or more designated nonattainment or maintenance area/s for the associated National Ambient Air Quality Standard (NAAQS). These pollutants are driving this GCR Applicability Analysis. Pollutants exceeding the GCR thresholds must be further evaluated potentially through a GCR Determination.

The pollutants without a General Conformity threshold are pollutants only within areas designated attainment for the associated NAAQS. These pollutants have an insignificance indicator for VOC, NO_x, CO, SO_x, PM 10, PM 2.5, and NH₃ of 250 ton/yr (Prevention of Significant Deterioration major source threshold) and 25 ton/yr for Pb (GCR de minimis value). Pollutants below their insignificance indicators are at rates so insignificant that they will not cause or contribute to an exceedance of one or more NAAQs. These indicators do not define a significant impact; however, they do provide a threshold to identify actions that are insignificant. Refer to the *Level II, Air Quality Quantitative Assessment Insignificance Indicators* for further details.

None of the annual net change in estimated emissions associated with this action are above the GCR threshold values established at 40 CFR 93.153 (b); therefore, the proposed Action has an insignificant impact on Air Quality and a General Conformity Determination is not applicable.

Brian Minichino

Brian Minichino, Senior Environmental Scientist

Mar 26 2025

Date

Appendix D – Public Comment Notification



NOTICE OF AVAILABILITY DRAFT ENVIRONMENTAL ASSESSMENT

Vehicle Maintenance and Integration Facility at Hanscom
Air Force Base

A draft Environmental Assessment and Finding of No Significant Impact (EA/FONSI) dated September 2025 have been prepared in accordance with the National Environmental Policy Act (NEPA) and the Department of Defense NEPA Implementing Procedures. The EA evaluates potential environmental impacts associated with constructing and operating a vehicle maintenance and integration facility for the Massachusetts Institute of Technology Lincoln Laboratory (MIT LL) facilities and campus on Hanscom Air Force Base (AFB). The purpose is to secure a permanent location for garaging and maintaining vehicles, as well as allowing the storing and integrating research and experimental equipment into or onto vehicles, functions which currently have no permanent location on the MIT LL campus.

The draft EA and FONSI are available for review online at the following website:

<https://www.hanscom.af.mil/About-Us/Fact-Sheets/Display/Article/379486/civil-engineering/>

For further information, contact the Environmental Office at Hanscom AFB at 781-225-6209.

Written comments will be received through 3 November 2025 and may be either emailed to Jim Maravelias at james.maravelias.1@us.af.mil or mailed to: 66 ABG/CEIE; 120 Grenier Street; Hanscom AFB, MA 01731-1910.

Appendix E – List of Preparers

LIST OF PREPARERS

MANAGEMENT

Petras, James. B.S. Biology. AECOM. As a Project Manager with expertise in preparing environmental assessments and impact reports for federal, municipal, and commercial entities, provided oversight for preparation of all sections of the EA.

QA/QC

Maier, John. B.A. Biology. AECOM. As a quality manager with expertise in quality management systems and in preparing environmental assessments and impact reports, performed a technical review of the EA.

TASK LEADER

Frankenthaler, Victor. M.S. Geography. B.S. Environmental Planning. AECOM. As a senior environmental planner with expertise in natural and ecological resource evaluations, environmental restoration and impact mitigation programs, and environmental and social impact assessments, led the multi-disciplinary team preparing the EA.

CONTRIBUTING AUTHORS

Meuse, James. M.S. Environmental Engineering. AECOM. As a specialist in geographic information systems, mapping, and database management, prepared maps and graphics to support the EA.

Pluskota, Kaitlin. M.S. Historic Preservation. AECOM. As an Architectural Historian with expertise in the NHPA, specifically regarding New England and military architecture, provided input on the cultural resources section of the EA.

Rickwood, Jonathan. M.S. Environmental Science and Policy. AECOM. As a technical specialist in establishing baseline conditions, conducting impact assessments, and completing environmental permitting, authored substantial portions of the EA.