

Chapter 10

Cultural and Historical Resources

10-1

This chapter summarizes information that was included in the *Draft ESPR* for cultural and historical resources and provides responses to scoping elements identified in the MEPA Certificate related to the National Park Service's soundscape goals and plans for Minute Man National Historical Park; a status of the interagency workgroup that was formed to review impacts on the Minute Man National Historical Park; an identification and discussion of historic properties in Minute Man National Historical Park; Massport's commitment to TDM measures; a review of noise effects on Minute Man National Historical Park resources; noise effects on the Wheeler-Merriam House in Concord; environmental effects on conservation and recreational resources including the Concord River, which is a designated Wild and Scenic River; and a report on how Massport will work with the Massachusetts Department of Food and Agriculture to protect Massport-owned agricultural land from conversion to non-agricultural use and the role of the four towns in that process.

Summary of the *Draft ESPR*

The *Draft ESPR* summarized conditions in the year 2000 and evaluated the environmental effects of the 2005 and 2015 scenarios on cultural and historical resources. The following describes the key elements of the cultural and historical resources that were described in the *Draft ESPR*:

- There are no State Register properties within the 65 dB Day-Night Sound Level (DNL) noise contour, an exposure level that the Federal Aviation Administration (FAA) identifies as a guideline for determining potential land use incompatibilities. Two State Register properties, the Simonds Tavern and the Wheeler-Merriam House, are located between the 65 and 55 dB DNL noise contours. Minute Man National Historical Park is discussed separately below.
- The Massachusetts Historical Commission (MHC) Inventory files (historical and archaeological resources that have not been formally designated) contain no buildings within the year 2000 65 dB DNL noise contour.
- None of the Minute Man National Historical Park is located in the Year 2000 65 dB DNL noise contour. Approximately nine acres of the park are within the 55 dB DNL noise contour.

The analysis focused on traffic, noise and air quality effects of Hanscom Field. The key findings with regard to the year 2005 and 2015 Moderate Growth and High Growth scenarios are summarized below.

- In the 2005 Moderate Growth Scenario, noise exposure is projected to increase on the order of ½ to 1½ dB above levels occurring in 2000. However, no State Register historical buildings are expected to experience DNL levels above 65 dB.
- Under the 2005 High Growth Scenario, DNL noise exposure levels at State Register historical properties are expected to increase about 1 dB more than in the Moderate Growth scenario, or approximately 1½ to 2½ decibels above 2000 levels.
- In 2015, the Moderate Growth Scenario would result in exposure levels approximately 1 to 2 dB higher than in 2000.
- The 2015 High Growth Scenario results in the greatest change in DNL, generally on the order of 2 to 4 dB above 2000 levels. However, even with these increases, the only historical property on the State Register to exceed 65 dB DNL would be the Wheeler-Merriam House, which would experience levels of approximately 66 dB.
- In 2005, Hanscom Field would represent five percent of the a.m. peak hour traffic on Route 2A and eight to thirteen percent of the p.m. peak hour traffic on Route 2A. In 2015, Hanscom Field would represent approximately seven percent of the a.m. peak hour traffic on Route 2A and ten to fifteen percent of the p.m. peak hour traffic on Route 2A.
- No adverse air quality effects to historical, architectural or archaeological resources are projected for the four forecasted 2005 and 2015 growth scenarios.
- No adverse effects to agricultural and conservation lands are projected for the four forecasted 2005 and 2015 growth scenarios.

Minute Man National Historical Park

The largest State Register resource in the vicinity of Hanscom Field is Minute Man National Historical Park, which is operated by the National Park Service. The Minute Man National Historical Park itself and a number of individual historic properties within the park are historic resources of national significance that are designated National Historic Landmarks.

Soundscape Goals and Plans for the Minute Man National Historical Park

Massport and its consultant team met with the National Park Service on March 24, 2003 to review the status of the National Park Service's goals and plans for the Minute Man National Historical Park.

The headquarters for the National Park Service is initiating a nation-wide approach to identifying desired noise criteria in national parks, dependent on the different activities and land uses that exist within each park. A generic model *Soundscape Management Plan* is now being drafted, and, when finalized, will be made available to Park Managers to use in developing their own *Soundscape Management Plans*, each tailored to the unique activities and environmental needs of their individual park units.

While this national program is in its infancy and noise level criteria for different park uses are not likely to be identified and finalized for another two to three years, the National Park Service, in a Report to Congress, has identified Minute Man National Historical Park as one of more than 100 park units whose Managers are concerned with noise impacts. The Park Manager of Minute Man National Historical Park continues to be concerned with increases in operations at Hanscom Field due to the potential disruption of interpretative

programs at Minute Man National Historical Park sites. Particularly those programs at sites under or close to flight paths have a tendency to be periodically disrupted. This *Final ESRP* reports on noise levels at a number of newly-analyzed noise-sensitive sites within the Park boundaries, which have been added to provide greater insight as to how aircraft noise can be expected to change under each of the study alternatives.

The National Park Service is in the process of determining the scope of a soundscape plan for the Minute Man National Historical Park. Nationally, the National Park Service has explored the issue of aircraft overflights in the 1994 *Report on Effects of Aircraft Overflights on the National Park System*, which recommended the continuation of the federal interagency working group that is described in the next section.

As discussed in the *Draft ESRP*, the 1989 General Management Plan (GMP) for Minute Man National Historical Park has largely been implemented. In recent years, new parking areas have been developed at each of the major individual sites within park boundaries. This feature accommodates visitors better and has eliminated large concentrations of traffic at any one site. The support and assistance of the Massachusetts Highway Department has contributed to the appearance of the paved sections of Battle Road today. Road "furnishings" such as appropriate, limited signage, landscaping and rebuilt stonewalls now grace Lexington Road and Route 2A. The width of these public ways has been limited to two lanes, to preserve the approximate dimensions of the historic Battle Road and enhance the visual experience of the park.

Little, if any, expansion of park boundaries or buildings is planned at Minute Man National Historical Park, and park authorities predict that annual visitations will stabilize at current levels of about one million. Individual programs at various sites within the park are advertised to attract audiences, but general promotion to encourage large increases in total attendance are not part of the current management plan. As indicated by the National Park Service at the March 24, 2003 meeting, work in the Minute Man National Historical Park is primarily focused on resource preservation, rehabilitation of historic structures (e.g., North Bridge and the monument) and landscapes. This work will address cyclical and deferred maintenance needs. The only major capital improvement project is the planned Hanscom Drive pedestrian underpass, which will connect two sections of the Battle Road Trail.

Interagency Working Group

Massport and its consultant team met with the National Park Service on March 24, 2003. At that meeting, the National Park Service provided an update on the federal interagency working group that was formed to review impacts on Minute Man National Historical Park. The group was established by the U.S. Department of Transportation, the U.S. Department of the Interior and the Advisory Council on Historic Preservation. A local Regional Working Group includes participation by the Federal Aviation Administration (FAA), Federal Highway Administration and the National Park Service. The Volpe Transportation Systems Center facilitates meetings of the Regional Working Group.

As described in its January 2001 Memorandum of Understanding, the interagency working group was established *"to promote the long-term protection of resources of the Minute Man National Historical Park and other historic sites in the vicinity of Hanscom Field."* FAA has indicated that the group has met several times over the last two years *"to better understand each other's missions and to become better informed of each other's interests in historic preservation, roadway and airport planning, and the operation of Hanscom Field, with the goal of better protecting Minute Man National Historical Park and other area historical resources."* Massport is not a member of the group, but was invited to discuss the *Draft ESRP* during the public review process for that document.

The National Park Service stated that the group has not been actively meeting for the last 18 months and that the Washington D.C. arm has been relatively inactive since September 11, 2001. The group meets locally on an as needed basis to maintain relationships. It is anticipated that the group will begin to meet more frequently in the future to look harder at transportation issues. If its members feel that it is appropriate, Massport would participate in this group.

Historic Resources in the Minute Man National Historical Park

As described in the *Draft ESPR*, Minute Man National Historical Park consists of three discontinuous units known as Battle Road, Wayside, and North Bridge. The park encompasses approximately 967 acres along Route 2A in Concord, Lexington, Lincoln, off Lexington Road in Concord and off Monument Street in Concord. A portion of the park as established by the Congress in 1959, comprising 50 acres in Concord, is within Massport land. No new actions were included in these 50 acres for the future scenarios that were analyzed in the *Draft ESPR*. There are no buildings or structures on this wooded parcel. Included in the Minute Man National Historical Park boundaries are numerous historic buildings, structures, sites, and landscapes. Many of the key historic resources and areas within the park are located on Figures 10-1 and 10-2 and are summarized in Table 10-1.

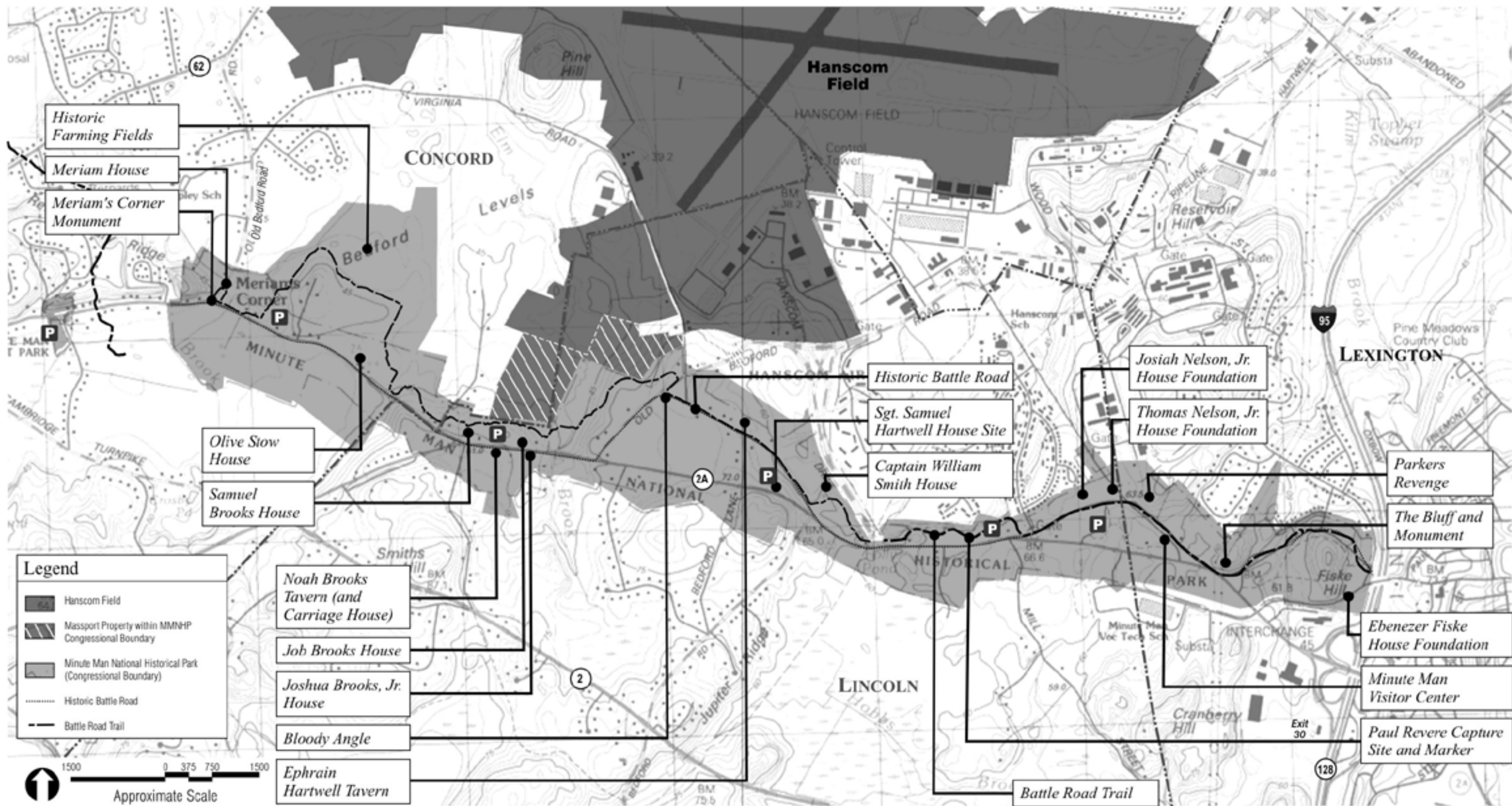
A comprehensive inventory of all resources in Minute Man National Historical Park recently completed by National Park Service identified a total of 105 resources that contribute to the historic significance of the park, as well as 24 resources that do not contribute, primarily due to their recent age. The complete National Park Service inventory for the park is included in Appendix F of this *Final ESPR*.

The *Draft ESPR* (see Table 10-2, *Draft ESPR*) listed historic resources that were included in the Massachusetts Historical Commission Inventory of the Historic Assets of the Commonwealth, but were not in the State Register. Six of the resources included in that table are contributing resources in Minute Man National Historical Park and thus are in the State Register. These resources are listed in Table 10-1 in this *Final ESPR*.

Commitment to Transportation Demand Management

The assessment of potential traffic effects in the *Draft ESPR* included a review of traffic volumes and an assessment of potential physical modification to roadways adjacent to historical resources. In 2002, Hanscom Field-related peak-hour traffic accounted for only three to four percent of traffic volumes on Route 2A. Hanscom Field-related peak-hour traffic would account for five to 13 percent of Route 2A and seven to 15 percent of Route 2A traffic in 2015.

While Massport's contribution to the Route 2A traffic is relatively minor (three to four percent during peak hours), the National Park Service is concerned with overall increases in traffic on Route 2A that may increase vehicular-related noise and safety issues for the one million annual visitors to the Minute Man National Historical Park. The *Draft ESPR* identified potential intersection modifications to address level of service changes associated with Hanscom Field-related traffic and regional traffic. Massport has discussed this issue further with the National Park Service and, in accordance with the MEPA Certificate will concentrate on TDM measures rather than capacity enhancements on roadways next to the Minute Man National Historical Park. These TDM measures are discussed further in Chapter 12 - Mitigation.



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Base Map: MA USGS Maps;
MA GIS website, 1996

2000 Hanscom Field Final ESPR
Bedford, Concord, Lexington and Lincoln, Massachusetts

MMNHP
Battle Road Unit

Figure 10-1



MMNHP North Bridge and Wayside Units

Figure 10-2

Table 10-1 Minute Man National Historical Park Key Resources

Name	Town	MHC No.	Street Address	Style - Date	State Register Status
Battle Road Unit					
Battle Road	Concord, Lexington, Lincoln	NA	Along and off Massachusetts Ave., Route 2A, and Lexington Rd.	18th-20th centuries	Contributing
Battle Road Trail	Concord, Lexington, Lincoln	NA	Along and off Massachusetts Ave., Route 2A, and Lexington Rd.	1996-2001	Non-Contributing
Bloody Angle	Concord	NA	Off Lexington Rd.	1775	NA
Historic Farming Fields	Concord	NA	Off Route 2A	18th-20th centuries	Contributing
Meriam's Corner Monument	Concord	NA	Old Bedford Rd.	1885	Contributing
Meriam House	Concord	CON.350	34 Old Bedford Rd.	ca. 1705, ca. 1725	Contributing
Olive Stow House	Concord	CON.357	965 Lexington Rd.	Colonial-ca. 1760	Contributing
The Bluff and Monument	Lexington	NA	Old Massachusetts Ave. and Wood St.	1885	Contributing
Ebenezer Fiske House Foundation	Lexington	NA	Old Massachusetts Ave. and Wood St.	ca. 1729-late 19th century	Contributing
Minute Man Visitors Center	Lexington	NA	Massachusetts Ave.	Modern-1976	Non-Contributing
Parkers Revenge	Lexington	NA	Off Massachusetts Ave.	-----	Contributing
Job Brooks House	Concord	NA	North Great Rd.	Colonial-1740	Contributing
Joshua Brooks, Jr. House	Lincoln	LIN.65	37 North Great Rd.	Federal-1780	Contributing
Noah Brooks Tavern (and Carriage House)	Lincoln	LIN.64	33 North Great Rd.	Federal-ca. 1798	Contributing
Samuel Brooks House	Concord	CON.358	1175 Lexington Rd.	ca. 1692-1728	Contributing
Ephraim Hartwell Tavern	Lincoln	LIN.66	Virginia Rd.	Colonial-1733	Contributing
Sgt. Samuel Hartwell House Site	Lincoln	LIN.69	Virginia Rd.	1693-1716; burned 1968; shelter 1986	Contributing
Josiah Nelson, Jr. House Foundation	Lincoln	NA	Nelson Rd.	ca. 1775	Contributing
Thomas Nelson, Jr. House Foundation	Lincoln	LN HA-6	Nelson Rd.	1700-1750	Contributing
Paul Revere Capture Site and Marker	Lincoln	NA	Massachusetts Ave.	pre 1902	Contributing
Captain William Smith House	Lincoln	LIN.70	Virginia Rd.	Colonial - ca. 1750	Contributing

Table 10-1 Minute Man National Historical Park Key Resources (cont.)

Name	Town	MHC No.	Street Address	Style - Date	State Register Status
North Bridge Unit					
Major John Buttrick House	Concord	CON.343	231Liberty St.	ca. 1715; 19th century alterations	Contributing
The Minuteman (Statue)	Concord	CON.941	Liberty St.	1875	Contributing
North Bridge	Concord	CON.940	Monument St.	1956	Contributing
North Bridge Comfort Station	Concord	NA	Monument St.	No Style-1984	Non-Contributing
Old Manse	Concord	CON.347	269 Monument St.	Colonial-1769-1770	Contributing
Wayside Unit					
The Wayside (Samuel Whitney House)	Concord	CON.171	455 Lexington Rd.	Colonial/ Victorian Eclectic-1716-17; altered mid-1840s; 1860/70	Contributing

Note: NA - Not Applicable

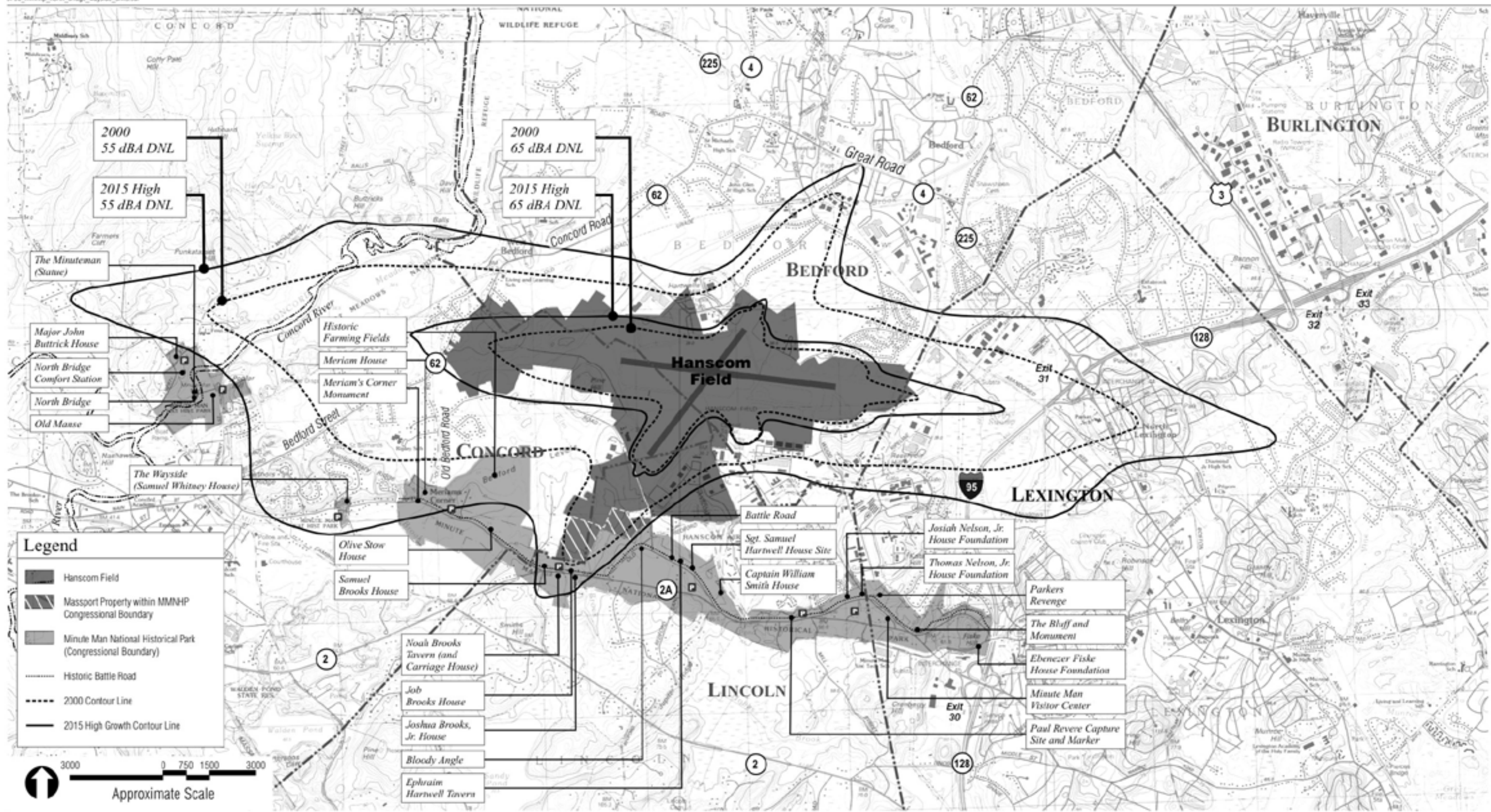
Environmental Effects in the Minute Man National Historical Park

The *Draft ESPR* assessed year 2000 conditions and potential effects on historical resources in the Minute Man National Historical Park that could result from the 2005 and 2015 scenarios. Analyses for other historic resources in the vicinity of Hanscom Field are also contained in the *Draft ESPR*. As indicated in the *Draft ESPR*, any future proposed project at Hanscom Field will undergo a project-specific environmental review process in the event that MEPA thresholds are met.

The analysis focused on traffic, noise and air quality effects of Hanscom Field. The analysis concluded that all current and predicted year 2005 and 2015 maximum air pollutant concentrations are safely in compliance with health-based air quality standards. Therefore, no adverse air quality effects to historic resources including Minute Man National Historical Park are anticipated now or in the future from activities at Hanscom Field. Massport's commitment to TDM is intended to address traffic congestion.

The discussion of potential environmental effects on resources in the Minute Man National Historical Park, therefore, focuses on noise exposure. For the *Final ESPR*, noise analyses were completed for additional locations in Minute Man National Historical Park, bringing the total number of individual noise sensitive sites to 25, plus the linear Battle Road and Battle Road Trail. The boundaries of the Minute Man National Historical Park are shown in Figure 10-3 as they relate to the 55 and 65 dB DNL noise contours for the year 2000 and for the 2015 High Growth Scenario, the latter having the highest noise levels of the future scenarios.

As demonstrated in the *Draft ESPR*, current noise exposure levels created by aircraft overflying Minute Man National Historical Park are all less than 60 dBA DNL. As indicated in their comment letter (see Appendix A), the FAA considers 70 dBA DNL an appropriate measure of noise impact for National Parks. No lands or individual historic properties of the Minute Man National Historical Park are located within the 65 dB DNL contour for year 2000 conditions or for the 2005 and 2015 scenarios.



The *Draft ESPR* and this *Final ESPR* also report on aircraft noise down to 55 dB DNL. Exposure levels above 55 dB DNL occur in Minute Man National Historical Park for current year 2000 and predicted years 2005 and 2015 in park areas to the south and west of Hanscom Field that are near runway ends and aligned with air traffic patterns. Approximately nine acres of park land are in the 55 dB DNL contour in year 2000. Forecast scenarios suggest that approximately 260 acres would be exposed to the 55 dB DNL under the 2015 High Growth Scenario.

Times above various threshold sound levels (TA) at individual resources (see Tables 7-6 and 7-7) in Minute Man National Historical Park are currently less than eight minutes per day at a threshold level of 65 dBA, and less than 65 minutes per day at 55 dBA at all sites except one location. The Historic Farming Fields experience TA 65 of 12 minutes, and TA 55 levels of 75 minutes, daily under the Year 2000 conditions; these are anticipated to increase in each future scenario, with a maximum of 22 minutes at TA 65 and 120 minutes at TA 55 per day in the 2015 High Growth Scenario. All these sites will have increases from one to nine minutes and TA 55 from 13 to 79 minutes in the 2005 Moderate Growth Scenario and TA 65 will range from one to 11 minutes and TA 55 from one to 87 minutes under the 2005 High Growth Scenario. The 2015 Moderate Growth Scenario shows TA 65 between one and 11 minutes and TA 55 between 15 and 88 minutes at all sites but the Historic Farming Fields. The 2015 High Growth levels are expected to range from one to 14 minutes at TA 65 and from 19 to 95 minutes at TA 55.

Additional information on these locations and noise analyses is discussed in Chapter 7 - Noise. These resources are also shown on Figure 10-3 and listed in Table 10-2 below, which indicates the noise sensitive sites that are within the 55 dB DNL contour under the 2015 High Growth scenario.

None of the Historic Battle Road is located within the 65 or 60 dB DNL contour for year 2000 or any of the future scenarios. None of the Historic Battle Road is in the 55 dB DNL contour in year 2000. Forecast scenarios suggest that none of the Historic Battle Road would be exposed to 55 dB DNL under the 2005 Moderate Growth Scenario and approximately two-thirds of a mile would be exposed to 55 dB DNL under the 2015 High Growth Scenario. It should be noted that a visitor to the Battle Road portion of the park is also affected by the background noise of road traffic from Route 128/I-95 and Route 2A throughout most of the day and that Hanscom Field-related traffic contributes only a small percentage of this traffic.

Wheeler-Merriam House

The noise analysis in the *Draft ESPR* identified the Wheeler-Merriam house as the historic resource with the highest DNL exposure level for year 2000 and for the 2005 and 2015 scenarios. The Wheeler-Merriam House is a rental residence at 477 Virginia Road, Concord that is owned by New England Tech Center Associates, a commercial business whose offices are headquartered in the former barn across the street. The Year 2000 DNL value for this site is 63 dB. This location is the only historic property that would fall within the 65 dBA DNL contour for any future scenarios and only in the 2015 High Growth Scenario. The year 2000 DNL exposure level is expected to increase one to two decibels for the 2005 scenarios and two to three decibels for the 2015 scenarios. The TA65 at this location increases from 33 minutes a day in 2000 to 40-46 minutes a day in 2005 and 49-60 minutes a day in 2015. The TA55 at this location increases from 113 minutes a day in 2000 to 131-145 minutes a day in 2005 and 157-182 minutes a day in 2015. Potential mitigation measures for this property are discussed below.]

Table 10-2 Minute Man National Historical Park Key Resources Noise Effects

Name	Town	Street Address	DNL *
Battle Road Unit			
Battle Road	Concord, Lexington, Lincoln	Along and off Massachusetts Ave., Route 2A, and Lexington Rd.	Partially Inside 55 dB DNL in the 2015 High Growth
Battle Road Trail	Concord, Lexington, Lincoln	Along and off Massachusetts Ave., Route 2A, and Lexington Rd.	Partially inside 55 dB DNL contour for Year 2000 and all future scenarios
Bloody Angle	Concord	Off Lexington Rd.	Outside 55 dB DNL contour for all future scenarios
Historic Farming Fields	Concord	Off Route 2A	Inside 55 dB DNL contour for all future scenarios
Meriam's Corner Monument	Concord	Old Bedford Rd.	Outside 55 dB DNL contour for 2005 and 2015 Moderate Growth scenarios Inside 55 dB DNL contour for 2005 and 2015 High Growth scenarios
Meriam House	Concord	34 Old Bedford Rd.	Outside 55 dB DNL contour for 2005 Moderate Growth Scenario Inside 55 dB DNL contour for 2005 High and 2015 Moderate and High Growth scenarios
Olive Stow House	Concord	965 Lexington Rd.	Outside 55 dB DNL contour for all future scenarios
The Bluff and Monument	Lexington	Old Massachusetts Ave. and Wood St.	Outside 55 dB DNL contour for all future scenarios
Ebenezer Fiske House Foundation	Lexington	Old Massachusetts Ave. and Wood St.	Outside 55 dB DNL contour for all future scenarios
Minute Man Visitors Center	Lexington	Massachusetts Ave.	Outside 55 dB DNL contour for all future scenarios
Parkers Revenge	Lexington	Off Massachusetts Ave.	Outside 55 dB DNL contour for all future scenarios
Job Brooks House	Concord	North Great Rd.	Inside 55 dB DNL contour for all future scenarios
Joshua Brooks, Jr. House	Lincoln	37 North Great Rd.	Inside 55 dB DNL contour for all future scenarios
Noah Brooks Tavern (and Carriage House)	Lincoln	33 North Great Rd.	Inside 55 dB DNL contour for all future scenarios
Samuel Brooks House	Concord	1175 Lexington Rd.	Outside 55 dB DNL contour for 2005 and 2015 Moderate Growth scenarios Inside 55 dB DNL contour for 2005 and 2015 High Growth scenarios
Ephraim Hartwell Tavern	Lincoln	Virginia Rd.	Outside 55 dB DNL contour for all future scenarios
Sgt. Samuel Hartwell House Site	Lincoln	Virginia Rd.	Outside 55 dB DNL contour for all future scenarios
Josiah Nelson, Jr. House Foundation	Lincoln	Nelson Rd.	Outside 55 dB DNL contour for all future scenarios
Thomas Nelson, Jr. House Foundation	Lincoln	Nelson Rd.	Outside 55 dB DNL contour for all future scenarios
Paul Revere Capture Site and Marker	Lincoln	Massachusetts Ave.	Outside 55 dB DNL contour for all future scenarios
Captain William Smith House	Lincoln	Virginia Rd.	Outside 55 dB DNL contour for all future scenarios

Table 10-2 Minute Man National Historical Park Key Resources Noise Effects (cont.)

Name	Town	Street Address	DNL *
North Bridge Unit			
Major John Buttrick House	Concord	231Liberty St.	Outside 55 dB DNL contour for all future scenarios
The Minuteman (Statue)	Concord	Liberty St.	Outside 55 dB DNL contour for all future scenarios
North Bridge	Concord	Monument St.	Outside 55 dB DNL contour for all future scenarios
North Bridge Comfort Station	Concord	Monument St.	Outside 55 dB DNL contour for all future scenarios
Old Manse	Concord	269 Monument St.	Outside 55 dB DNL contour for all future scenarios
Wayside Unit			
The Wayside (Samuel Whitney House)	Concord	455 Lexington Rd.	Outside 55 dB DNL contour for 2005 Moderate Growth Scenario Inside 55 dB DNL contour for 2005 High and 2015 Moderate and High Growth scenarios

Note:

* Inside or outside 55 dB DNL contour for future scenarios. All historical architectural resources listed in this table are outside the Year 2000 55 dB and 65 dB DNL contours.

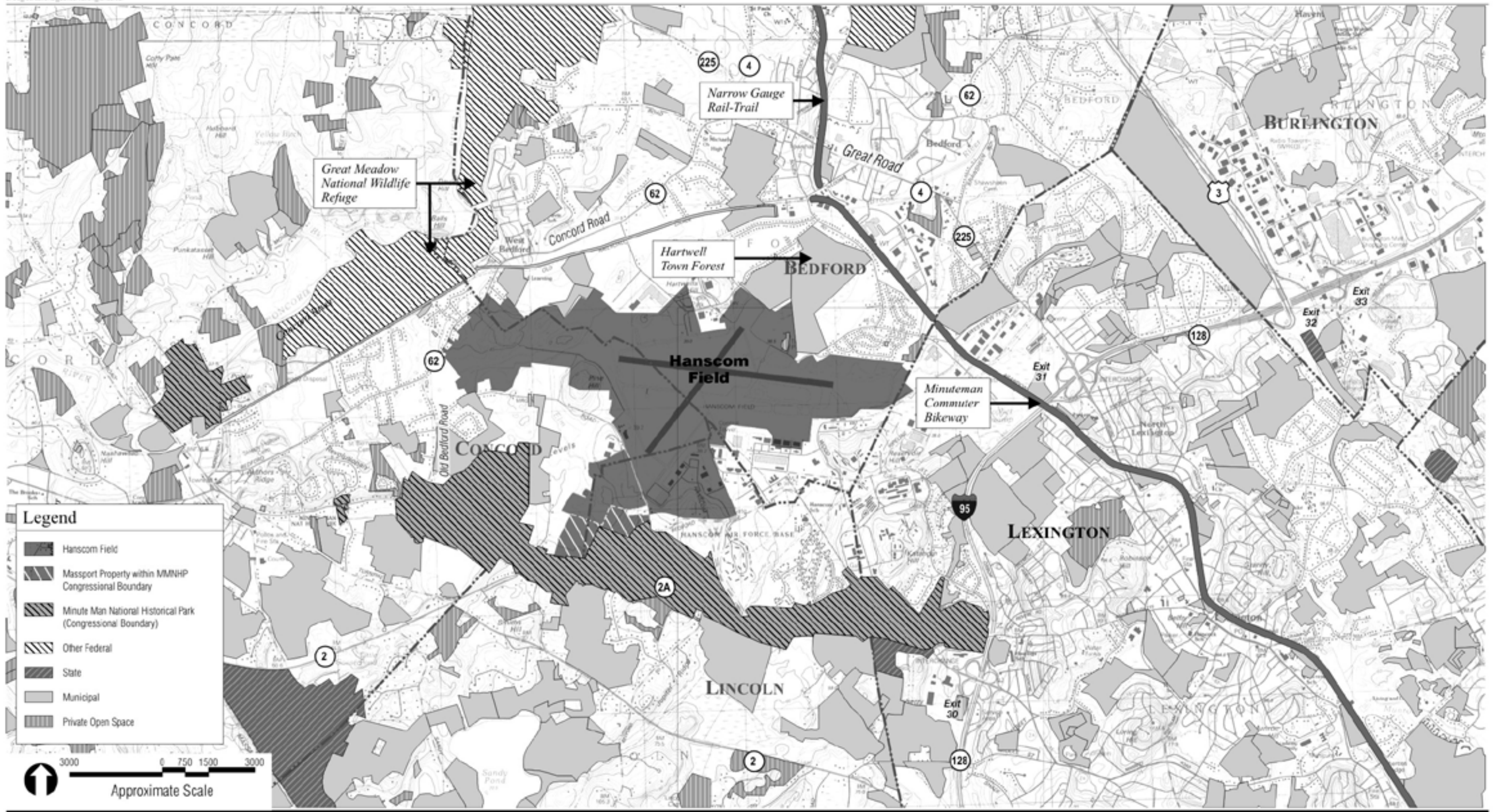
Recreational and Conservation Lands

Areas of recreation and conservation property near Hanscom Field and their current and potential use were described in the *Draft ESPR*. These properties, which are illustrated on Figure 10-4, include the Great Meadows National Wildlife Refuge, an area of national significance, as well as areas of state and local importance. The *Draft ESPR* provided a description of existing conditions and potential environmental effects of Hanscom Field on the recreational and cultural resources. This section provides information about four resources that were not discussed in Chapter 10 - Cultural and Historical Resources of the *Draft ESPR* - the Battle Road Trail, the Minuteman Commuter Bikeway, and the Narrow Gauge Rail-Trail - and presents additional information for the Concord River and the Hartwell Town Forest.

Battle Road Trail

The Battle Road Trail is an interpretive, multi-use trail that provides cycling, walking, and wheelchair access to the Minute Man National Historical Park's historical and natural resource areas. The route of the Battle Road Trail is shown on Figure 10-2. The stone-dust trail extends five and one-half miles from Fiske Hill in Lexington, through Lincoln, to Meriam's Corner in Concord. The trail contains restored 25-foot wide portions of the historic Battle Road from April 19, 1775 linked together by 7-foot wide sections of trail that traverse landscapes that evoke the past. Other portions of the historic Battle Road follow the route of today's Route 2A.

None of the of the five and one-half mile Battle Road Trail is located within the 65 or 60 dBA DNL contour for year 2000 conditions or for the 2005 and 2015 scenarios. Approximately one-tenth of a mile of the Battle Road Trail is located within the 55 dBA DNL contour in 2000. Forecast scenarios suggest that from one-quarter of a mile in the Moderate Growth Scenario to approximately one and one-half miles in the 2015 High Growth Scenario would be located within the 55 dBA DNL contour. It should be noted that a visitor to the Battle Road portion of the park is also affected by the background noise of road traffic from Route 128/I-95 and Route 2A throughout most of the day and that Hanscom Field-related traffic contributes to only a small percentage of this traffic.



Minuteman Commuter Bikeway

The Minuteman Commuter Bikeway is a ten and one-half mile paved bikeway that connects Bedford at the Bedford Depot Park with Lexington, Arlington and Cambridge, terminating at the MBTA Alewife Red Line station where connections can be made to the Red Line Linear Bikepath through Cambridge and Somerville. The bikeway was constructed by the Massachusetts Highway Department and is maintained by the four towns of Arlington, Bedford, Cambridge and Lexington. The bikeway opened in 1993 and was extended from East Lexington to Alewife Station in 1998. The bikeway is 12-feet wide and is open year-round from 5:00 a.m. to 9:00 p.m.

None of the ten and one-half mile Minuteman Commuter Bikeway is located within the 65 or 60 dBA DNL contour for year 2000 conditions and less than one and one-quarter miles of the Minuteman Commuter Bikeway is located within the 55 dBA DNL contour in 2000. Forecast scenarios suggest that from one and one-third of a mile in the 2005 Moderate Growth Scenario to approximately one and three-quarter miles under the 2015 High Growth Scenario would be located within the 55 dBA DNL contour. It should be noted that users in some sections of the Minuteman Commuter bikeway are also affected by the background noise of road traffic from Route 128/I-95 and other roadways that cross or parallel the bikeway and that Hanscom Field-related traffic contributes only a small percentage of this traffic.

Narrow Gauge Rail-Trail

The Narrow-Gauge Rail-Trail is a three mile trail that runs from a point near the Bedford Depot at Loomis Street to the Billerica town line. The trail is paved asphalt between Loomis Street and the Great Road and is a stone-dust trail in the other section.

None of the Narrow-Gauge Rail-Trail is located within the 65 dBA DNL contour for year 2000 conditions or for the 2005 and 2015 scenarios. None of the Narrow-Gauge Rail-Trail is located within the 55 dBA DNL contour in 2000. Forecast scenarios suggest that none in the Moderate Growth Scenario and less than one-tenth of a mile of the trail under the 2015 High Growth Scenario would be located within the 55 dBA DNL contour.

Concord River

Chapter 9 - Wetlands/Wildlife/Water Quality of the *Draft ESPR* discussed the Concord River, which is a designated Wild and Scenic River. The Concord River, located northwest of Hanscom Field, is a component of the Sudbury-Assabet-Concord (SuAsCo) Wild and Scenic River System, and flows roughly southwest to northeast. As illustrated in Figure 10-3, the segment of the Concord River nearest to Hanscom Field is approximately one-half mile northwest from Hanscom Field, and slightly more than one mile from the nearest Hanscom Field runway (11-29).

None of the Concord River is located within the 65 dBA DNL contour for year 2000 conditions or for the 2005 and 2015 scenarios. Approximately three-quarters of a mile of the Concord River is located within the 55 dBA DNL contour in 2000. Forecast scenarios suggest that from one mile in the 2005 Moderate Growth Scenario to two and one-third miles in the 2015 High Growth Scenario would be located within the 55 dBA DNL contour.

Hartwell Town Forest/Jordan Conservation Area

The Hartwell Town Forest/Jordan Conservation Area in Bedford is a 118-acre conservation area that is used on a seasonal basis for camping purposes. It also has an extensive trail network that connects to the U.S. Air

Force Family Campground at Hanscom Field. The Hartwell Town Forest/Jordan Conservation Area is located at the end of Runway 23, off airport property.

Approximately five acres of the Hartwell Town Forest/Jordan Conservation Area are located within the 65 dBA DNL contour in 2000. Forecast scenarios suggest that from seven acres in the Moderate Growth Scenario to 11 acres in the 2015 High Growth Scenario would be located within the 65 dBA DNL contour. Approximately 77 acres of the Hartwell Town Forest/Jordan Conservation Area are located within the 55 dBA DNL contour in 2000. Forecast scenarios suggest that from 86 acres in the Moderate Growth Scenario to 107 acres in the 2015 High Growth Scenario would be located within the 55 dBA DNL contour.

The VMP described obstructions and identified the Hartwell Forest/Jordan Conservation Area as an area that will require additional analysis to determine potential solutions and actions that could be taken. It is anticipated that any such proposal will involve close coordination with the FAA and the Town of Bedford and would be reported in the 2005 ESPR.

Agricultural Resources

The *Draft ESPR* reviewed the year 2000 status of agricultural resources within Hanscom Field. As described in the *Draft ESPR*, Hanscom Field contains soils identified on mapping prepared by the U.S. Natural Resources Conservation Service as having varying levels of agricultural potential. Limited agricultural activity currently occurs at Hanscom Field. Mowing of runway infield areas is performed to maintain low grassland vegetation for safe sight distances for aircraft operation and to provide grassland habitat for protected avian species. Agricultural operations within an airport setting must be restricted for reasons of safety for both aircraft operations and for farm workers located in proximity to operating aircraft. There is existing agricultural activity in outlying areas. Neither the 2005 nor the 2015 scenarios include any proposal that would impact agricultural resources.

During the development of the *Draft ESPR*, Massport met with representatives of the Massachusetts Department of Food and Agriculture (MDFA) to discuss envisioned uses of existing and potential agricultural soils at Hanscom Field. Massport will work with MDFA to determine appropriate measures to protect Massport-owned agricultural lands from conversion to non-agricultural uses. Massport will inform the towns about actions related to agricultural lands as part of its briefings at HFAC meetings.

Potential Environmentally Beneficial Measures

The *Draft ESPR* described possible environmentally beneficial measures to reduce the effects of Hanscom Field on historical and cultural resources at Minute Man National Historical Park and other resources that are described in this section in the 2005 and 2015 Moderate and High Growth scenarios. The development and implementation of these improvements would occur in the future in response to actual conditions and impacts. More discussion of potential strategies is presented in Chapter 12.

The mitigation approach for noise exposure levels at the Wheeler-Merriam House under the 2015 scenarios includes the overall noise reduction strategies described in Chapter 7 - Noise of this *Final ESPR*. In addition, Massport will investigate appropriate mitigation in the event that the 2015 High Growth Scenario sound levels are reached.

Potential traffic measures to reduce the effects of traffic volumes on Route 2A include TDM and operational improvements that do not require physical changes to the roadways, such as police details and traffic management approaches (e.g., turn restrictions at intersections). Possible noise measures are reported in Chapter 12 - Mitigation.

The federal interagency working group that was formed to review impacts on Minute Man National Historical Park may provide specific recommendations in the future that should be considered. At the present time, however, this group is not actively meeting. Future noise recommendations may also be derived from the National Park Service soundscape plan for Minute Man National Historical Park when it is developed. Currently, however, the National Park Service has not established a schedule for the completion of such a plan.