
APPENDIX E

Correspondence Related to the Environmental Assessment



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 18, 2020

Mr. William Galvin
Chair of the Massachusetts Historical Commission, State of Massachusetts
Massachusetts Historical Commission
220 Morrissey Blvd
Boston, MA 02125

Reference: Section 106 Consultation Initiation for the Proposed RNAV (GPS) RWL 4L Approach Procedure at Boston Logan International Airport

Dear Mr. Galvin,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA). Therefore, the purpose of this letter is to initiate consultation under Section 106 and the ACHP's implementing regulations.¹ The FAA intends to satisfy Section 106's public involvement requirements in conjunction with the NEPA process.

1. Background Information.

Boston Logan International Airport (the Airport) is a large commercial service airport in Massachusetts, with approximately 340,000 takeoffs and landings in 2019. It is the primary passenger airport for southern New England as well as the region's busiest passenger service airport. Of the twelve runways available at the Airport, Runway 4L is the only runway that typically handles airline arrivals but does not have an Instrument Approach Procedure (IAP) available to assist landings. An IAP is a series of predetermined maneuvers for the orderly transfer of an aircraft under Instrument Flight Rules (IFR) from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. IFR are rules and regulations established by the Federal Aviation Administration to govern flight under conditions in which flight by outside visual reference is not safe. When such conditions are present, these are known as Instrument Meteorological Conditions (IMC). IFR flight depends upon flying by reference to instruments in

¹ <https://www.achp.gov/protecting-historic-properties>,
https://www.faa.gov/about/office_org/headquarters_offices/apl/environ_policy_guidance/guidance/media/section-106-handbook.pdf

the flight deck, and navigation is accomplished by reference to electronic signals.

Currently, while operating in Visual Meteorological Conditions (VMC), aircraft approaching Runway 4L to land are expected to maintain visual separation from other traffic at all times. As these aircraft presently lack vertical and lateral guidance to the runway, pilots must “hand-fly” the aircraft when arriving to Runway 4L, leading to additional cockpit workload during a critical phase of flight. Additionally, the runway is not available during periods of IMC, so operational flexibility is significantly limited during these times. During periods of significant delay, flights can often land much later than originally scheduled, potentially impacting neighbors during late-night hours. Cancellation of flights during periods of significant delay is not uncommon.

The FAA is proposing the implementation of a publicly available (published) RNAV IAP to Runway 4L. The proposed RNAV procedure will provide lateral and vertical guidance, enabling continuous descent to the runway and offering a more predictable, consistent, and stabilized approach path, thus improving safety. The proposed procedure will be used during IMC conditions and during VMC conditions when advised by local air traffic control.

The proposed RNAV (GPS) procedure will provide a stabilized approach with vertical and lateral guidance. This will reduce cockpit workload and allow aircraft to land at RWY 4L in IMC, which will in turn reduce delays at the Airport and upstream through the NAS. The procedure will also allow for greater controller flexibility during VMC conditions. The proposed procedure is designated as an RNAV (GPS) IAP, which requires that an aircraft flying the procedure remain within one nautical mile of the procedure centerline 95% of the total flight time.

The General Study Area (GSA) for the FAA’s NEPA review is delineated for purposes of identifying potential environmental impacts. The GSA, as depicted in **Attachment A**, encompasses an area of approximately 1,173 square miles around BOS across Middlesex, Norfolk, Plymouth, and Suffolk counties. The GSA was constructed to encompass the geographic area where an aircraft flight path could be affected as a result of the proposed procedure.

2. FAA’s Proposed Approach to Defining the Area of Potential Effects

As part of the consultation process required under Section 106, the FAA seeks your input on its proposed approach to identifying the Area of Potential Effects (APE) for the undertaking.

The Section 106 regulations define the APE as “the geographical area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. The Area of Potential Effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.”²

The Proposed Action will not cause any physical effects. However, pursuant to 36 CFR 800.5(a)(2)(v), the FAA will also consider the potential for the undertaking to introduce visual, atmospheric, or audible elements that could diminish the integrity of a historic property's significant historic features. The FAA will

² 36 CFR § 800.16(d), <https://www.achp.gov/sites/default/files/regulations/2017-02/regs-rev04.pdf>

make this assessment by comparing the expected flight tracks of aircraft flying the BOS 4L RNAV procedure to radar tracks of current arrivals at BOS. Based on this comparison, the FAA will determine whether there will be new areas overflown by the Proposed Action, and specifically whether the undertaking has the potential to introduce new visual, atmospheric or audible elements. Any areas that will be introduced to new visual, atmospheric, or audible elements will be considered part of the APE.

The FAA will also consider the potential for the undertaking to have noise effects that could alter the character or use of historic properties. The FAA is in the process of conducting a noise analysis to determine how this undertaking would affect current aircraft noise exposure levels. If the noise analysis indicates there will be any areas that will be subject to a reportable or significant noise increase, as defined in FAA Order 1050.1F, those areas will be considered part of the APE. The FAA invites the SHPO to provide feedback on this approach to determining the APE and assessing impact on historical properties.

3. Identification of Interested Parties

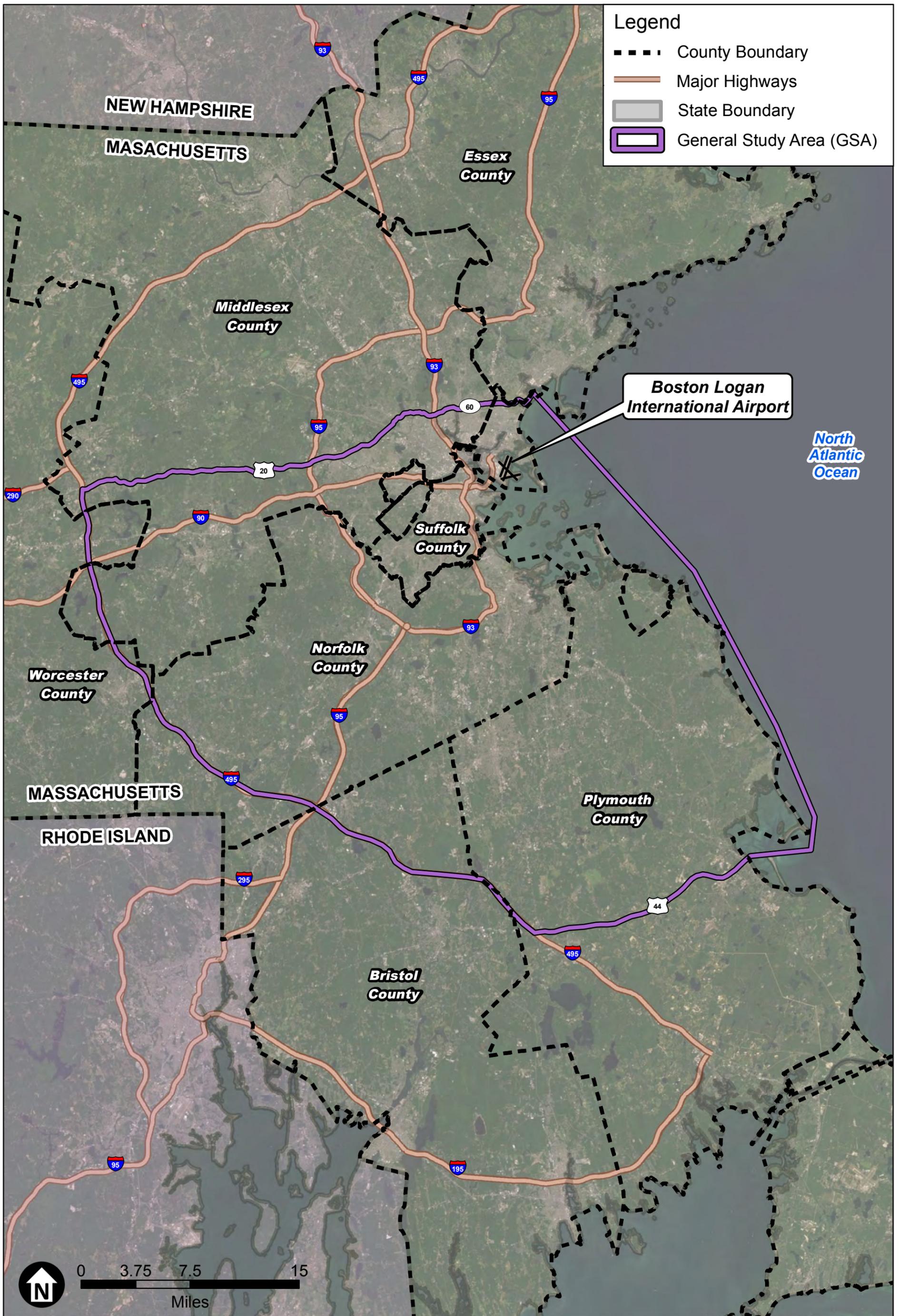
Once the FAA delineates the APE and identifies the resources within that APE, the FAA will invite local governments with jurisdiction over those resources to participate in consultation. Consistent with this effort and to ensure that all interested parties are reached during the outbreak of COVID-19, the FAA requests your assistance to identify other interested parties that should be invited to participate in consultation. An invitation of consultation does not mean that any resources will be necessarily identified as affected or impacted by the proposed procedure.

We look forward to hearing back from you and consulting with you on our approach to comply with Section 106 of the NHPA and in the identification of interested parties. If you have any initial comments or questions on this undertaking, please contact Veronda Johnson at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson

Veronda Johnson
Environmental Protection Specialist
Operations Support Group
Eastern Service Center



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020

Boston Logan RNAV (GPS) RWY 4L EA



Attachment A
BOS EA General Study Area

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A
MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: Proposed RNAV (GPS) RWY 4L Approach Procedure at Boston Logan International Airport

Location / Address: Airspace surrounding Boston Logan International Airport

City / Town: Boston, MA

Project Proponent

Name: Veronda Johnson on behalf of the Federal Aviation Administration

Address: 1701 Columbia Avenue

City/Town/Zip/Telephone: College Park, GA, 30337, 404-305-5598

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name

Type of License or funding (specify)

Project Description (narrative):

This non-ground based project is described in detail in the attached letter.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

No, the project is not ground based and as thus will not require any demolition.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

No, the project is not ground based and as thus will not include any building rehabilitation.

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

No, the project is not ground based and as thus will not require any new construction.

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

This will be determined when the Area of Potential Impact is determined, See Attached Letter

What is the total acreage of the project area?

Woodland	<u> N/A </u>	acres	Productive Resources:		
Wetland	<u> N/A </u>	acres	Agriculture	<u> N/A </u>	acres
Floodplain	<u> N/A </u>	acres	Forestry	<u> N/A </u>	acres
Open space	<u> N/A </u>	acres	Mining/Extraction	<u> N/A </u>	acres
Developed	<u> N/A </u>	acres	Total Project Acreage	<u> N/A </u>	acres

What is the acreage of the proposed new construction? N/A acres

What is the present land use of the project area?

N/A

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

N/A

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: Veronda Johnson Date: June 18, 2020

Name: Veronda Johnson on behalf of the Federal Aviation Administration

Address: 1701 Columbia Avenue

City/Town/Zip: College Park, GA, 30337

Telephone: 404-305-5598

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

July 24, 2020

Veronda Johnson
Environmental Protection Specialist
Operations Support Group
Federal Aviation Administration
Eastern Service Center
1701 Columbia Avenue
College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWL 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on June 24, 2020, for the project referenced above and have the following comments.

The MHC understands that the Federal Aviation Administration is requesting comments on FAA's proposed approach for defining the area of potential effects (APE) of the RNAV RWL 4L Approach Procedures to Logan Airport (BOS). The FAA proposes to compare the expected flight tracks of the aircraft flying the BOS 4L RNAV procedure to radar tracks of current arrivals at BOS. Based on the comparison, the FAA will determine whether there will be new areas overflowed by the Proposed Action, and specifically whether the undertaking has the potential to introduce new visual, atmospheric, or audible elements. Any areas that will be introduced to new visual, atmospheric, or audible (noise levels) elements will be considered part of the APE by FAA.

The MHC does not agree with the proposed approach to defining the area of potential effects (APE). The MHC notes that some areas currently impacted by current arrivals at BOS vary because pilots must "hand-fly" the aircraft when arriving at 4L. Once BOS 4L RNAV procedures are in place, the flight path will not vary as it currently does. The MHC requests that once the FAA has compared the expected flight tracks of the aircraft flying the BOS 4L RNAV procedure to radar tracks of the current arrivals, any areas that will be introduced to new levels of visual, atmospheric, or audible elements should be considered part of the APE by the FAA.

Please submit a map and description of the proposed APE, when available, to the MHC for review and comment (800.4 and 800.16(d)).

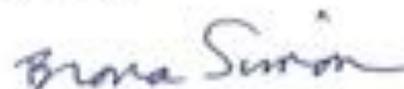
The MHC understands that the FAA is also requesting assistance in identifying interested parties. Please see below a list of potential interested parties:

All Local Historical Commissions of the cities and towns in the APE	
All Regional Planning Commissions in the APE	
AIR INC.	airportimpactreliefinc.org
Eagle Hill Civic Association	eaglehillcivic@gmail.com eaglehillcivic.org
Fair Skies Nation	info@fairskiesnation.com fairskiesnation.com

Please note, this is not an all-inclusive list. Additional interested parties may be identified after the APE is determined.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,



Brona Simon
 State Historic Preservation Officer
 Executive Director
 Massachusetts Historical Commission

FAA to Host Virtual Public Workshops on Draft Environmental Assessment for a Proposed New Approach Procedure to Runway 4-Left at Boston Logan International Airport

Workshop participants will learn about the Draft Environmental Assessment and the proposed procedure and can ask questions of FAA air traffic control and environmental experts.

Residents may view the Draft Environmental Assessment and register to participate in the workshops at FAABostonWorkshops.com beginning Sept. 21, 2020. You do not have to register to participate. The FAA also will livestream the sessions on YouTube and Facebook. Residents who are not online can participate by calling 877-853-5247 or 888-788-0099 as the workshops begin.

Workshop Schedule

October 23, 2020 – 11 a.m. to 12:30 p.m.

October 28, 2020 – 6 to 7:30 p.m.

Residents who are not online can view electronic or paper copies of the Draft Environmental Assessment at certain public libraries in the study area including Dorchester, Mattapan, Roxbury, South Boston, South End, Brookline, Milton and Quincy. Please contact your library to access the document.

The FAA opened a 60-day public comment period on the Draft Environmental Assessment which runs from Sept. 21 to Nov.20, 2020. Residents may comment through the website, by email at FAABostonWorkshops@esassoc.com or through U.S. Mail at: Environmental Science Associates c/o Boston Logan RNAV (GPS) Approach EA, 4200 West Cypress St., Suite 450, Tampa, FL 33607

For more information about FAA's Community Involvement initiatives for Boston visit:

https://www.faa.gov/air_traffic/community_involvement/bos/



SOURCE: FAA. Prepared by: Environmental Science Associates, 2020

Boston Logan RNAV (GPS) RWY 4, EA



Figure 2-0

Route (GPS) RWY 4, Procedure





U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 18, 2020

Mr. William Galvin
Chair of the Massachusetts Historical Commission, State of Massachusetts
Massachusetts Historical Commission
220 Morrissey Blvd
Boston, MA 02125

Reference: Section 106 Consultation Initiation for the Proposed RNAV (GPS) RWL 4L Approach Procedure at Boston Logan International Airport

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the flight deck, and navigation is accomplished by reference to electronic signals.

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² 36 CFR § 800.16(d), <https://www.achp.gov/sites/default/files/regulations/2017-02/regs-rev04.pdf>

make this assessment by comparing the expected flight tracks of aircraft flying the BOS 4L RNAV procedure to radar tracks of current arrivals at BOS. Based on this comparison, the FAA will determine whether there will be new areas overflown by the Proposed Action, and specifically whether the undertaking has the potential to introduce new visual, atmospheric or audible elements. Any areas that will be introduced to new visual, atmospheric, or audible elements will be considered part of the APE.

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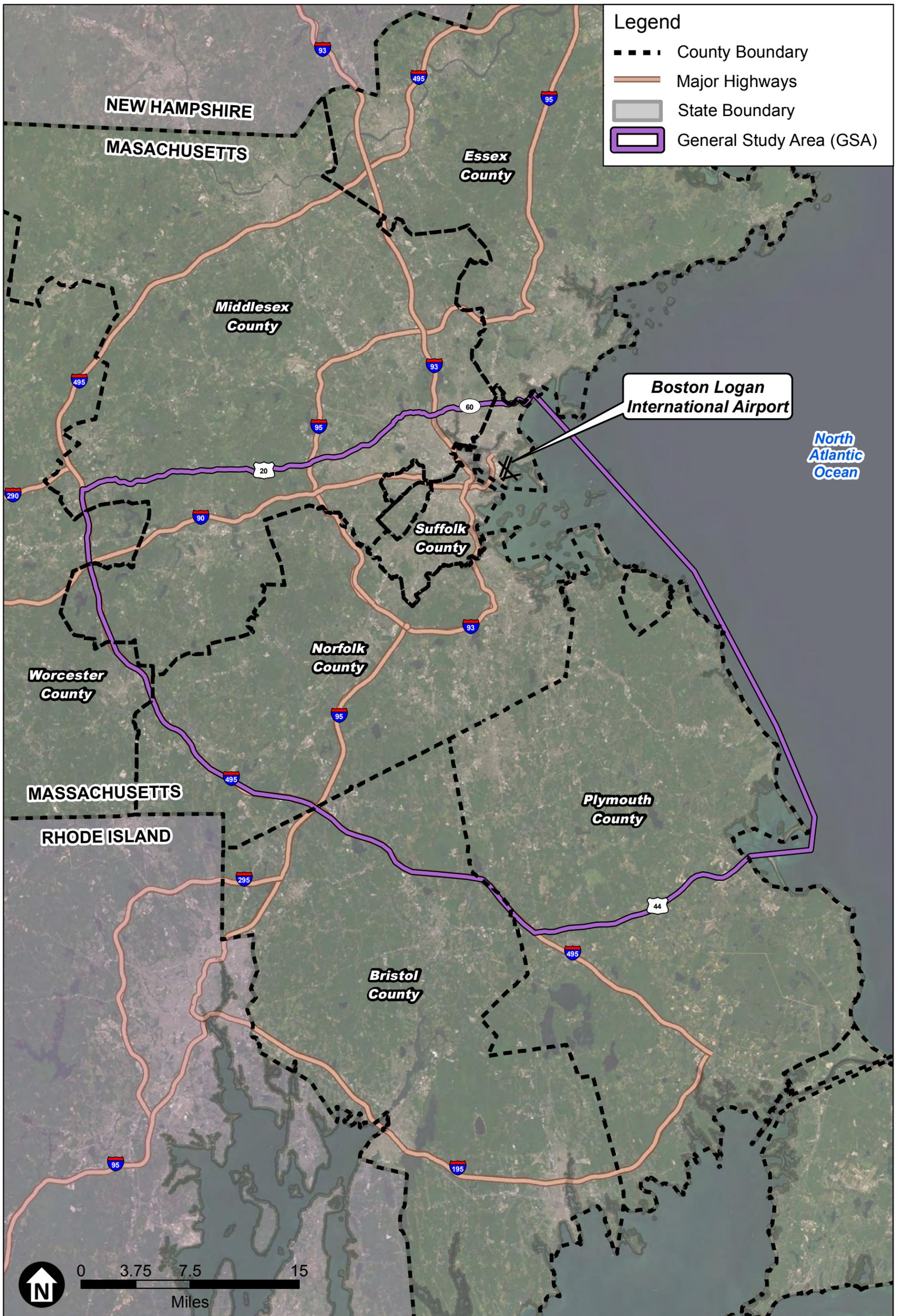
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We look forward to hearing back from you and consulting with you on our approach to comply with Section 106 of the NHPA and in the identification of interested parties. If you have any initial comments or questions on this undertaking, please contact Veronda Johnson at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson

Veronda Johnson
Environmental Protection Specialist
Operations Support Group
Eastern Service Center



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020

Boston Logan RNAV (GPS) RWY 4L EA



Attachment A
BOS EA General Study Area

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A
MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: Proposed RNAV (GPS) RWY 4L Approach Procedure at Boston Logan International Airport

Location / Address: Airspace surrounding Boston Logan International Airport

City / Town: Boston, MA

Project Proponent

Name: Veronda Johnson on behalf of the Federal Aviation Administration

Address: 1701 Columbia Avenue

City/Town/Zip/Telephone: College Park, GA, 30337, 404-305-5598

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name

Type of License or funding (specify)

Project Description (narrative):

This non-ground based project is described in detail in the attached letter.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

No, the project is not ground based and as thus will not require any demolition.

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

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950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

This will be determined when the Area of Potential Impact is determined, See Attached Letter

What is the total acreage of the project area?

Woodland	<u> N/A </u>	acres	Productive Resources:		
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Developed	<u> N/A </u>	acres	Total Project Acreage	<u> N/A </u>	acres

What is the acreage of the proposed new construction? N/A acres

What is the present land use of the project area?

N/A

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

N/A

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: Veronda Johnson Date: June 18, 2020

Name: Veronda Johnson on behalf of the Federal Aviation Administration

Address: 1701 Columbia Avenue

City/Town/Zip: College Park, GA, 30337

Telephone: 404-305-5598

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

July 24, 2020

Veronda Johnson
Environmental Protection Specialist
Operations Support Group
Federal Aviation Administration
Eastern Service Center
1701 Columbia Avenue
College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWL 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on June 24, 2020, for the project referenced above and have the following comments.

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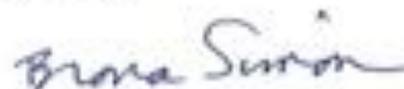
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Eagle Hill Civic Association	eaglehillcivic@gmail.com eaglehillcivic.org
Fair Skies Nation	info@fairskiesnation.com fairskiesnation.com

Please note, this is not an all-inclusive list. Additional interested parties may be identified after the APE is determined.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,



Brona Simon
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

October 29, 2020

Ms. Brona Simon
State Historic Preservation Officer/Executive Director
Massachusetts Historical Commission
220 Morrissey Blvd
Boston, MA 02125

Reference: Section 106 Consultation for the Proposed RNAV (GPS) RWL 4L Approach Procedure at Boston Logan International Airport

Dear Ms. Simon

Thank you for your July 24, 2020 comments on our initial June 24, 2020 consultation letter concerning the proposed approach procedure at Boston Logan International Airport. In response to your comments, we have modified our approach with respect to the review of historic resources in the General Study Area and in our delineation of an Area of Potential Effects (APE). We request your review of the modified approach for defining the APE proposed below. Background information about the undertaking is repeated in this letter to make your review of the updated approach easier.

1. Background Information.

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Boston Logan International Airport (the Airport) is a large commercial service airport in Massachusetts, with approximately 427,000 takeoffs and landings in 2019, which includes domestic, international, and general aviation activity. It is the primary passenger airport for southern New England as well as the region's busiest passenger service airport. Of the twelve runways available at the Airport, Runway 4L is the only runway that typically handles airline arrivals but does not have an Instrument Approach Procedure (IAP) available to assist landings. An IAP is a series of predetermined maneuvers for the orderly transfer of an aircraft under Instrument Flight Rules (IFR) from the beginning of the initial approach to a landing or to a point from which a landing may be made visually. IFR are rules and regulations established by the Federal Aviation Administration to govern flight under conditions in which flight by outside visual reference is not

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Currently, while operating in Visual Meteorological Conditions (VMC), aircraft approaching Runway 4L to land are expected to maintain visual separation from other traffic at all times. As these aircraft presently lack vertical and lateral guidance to the runway, pilots must “hand-fly” the aircraft when arriving to Runway 4L, leading to additional cockpit workload during a critical phase of flight. Additionally, the runway is not available during periods of IMC, so operational flexibility is significantly limited during these times. During periods of significant delay, flights can often land much later than originally scheduled, potentially impacting neighbors during late-night hours. Cancellation of flights during periods of significant delay is not uncommon.

The FAA is proposing the implementation of a publicly available (published) RNAV IAP to Runway 4L. The proposed RNAV procedure will provide lateral and vertical guidance, enabling continuous descent to the runway and offering a more predictable, consistent, and stabilized approach path, thus improving safety. The proposed procedure will be used during IMC conditions and during VMC conditions when advised by local air traffic control.

The proposed RNAV (GPS) procedure will provide a stabilized approach with vertical and lateral guidance. This will reduce cockpit workload and allow aircraft to land at RWY 4L in IMC, which will in turn reduce delays at the Airport and upstream through the NAS. The procedure will also allow for greater controller flexibility during VMC conditions. The proposed procedure is designated as an RNAV (GPS) IAP, which requires that an aircraft flying the procedure remain within one nautical mile of the procedure centerline 95% of the total flight time. As explained in the noise analysis prepared for the FAA’s Draft Environmental Assessment, the FAA only expects the new procedure to be used by approximately 359 operations per year. The Draft Environmental Assessment, which includes the FAA’s noise analysis, is available on the following website: <https://faabostonworkshops.com/>. The FAA is currently accepting comments on the Draft Environmental Assessment through November 20, 2020.

The General Study Area (GSA) for the FAA’s NEPA review is delineated for purposes of identifying potential environmental impacts. The GSA, as depicted in **Attachment A**, encompasses an area of approximately 1,173 square miles around BOS across Middlesex, Norfolk, Plymouth, and Suffolk counties. The GSA was conservatively constructed to encompass the geographic area where an aircraft flight path could be affected as a result of the proposed procedure.

2. FAA’s Proposed Area of Potential Effects

As part of the consultation process required under Section 106, the FAA seeks your input on the proposed APE identified in this document for the undertaking. The Section 106 regulations define the APE as “the geographical area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties if any such properties exist. The Area of Potential Effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects

caused by the undertaking.”¹

The Proposed Action will not cause any physical effects to historic properties. Therefore, the FAA is developing a proposed APE based on consideration of where noise and visual impacts from the undertaking are expected to occur.² Specifically, the FAA considered the potential for noise or visual impacts that could alter the character or use of historic properties and the introduction of visual, atmospheric or audible elements that could diminish the integrity of the property's significant historic features.

An analysis was first conducted to identify areas where any historic property that might be present could be affected by the introduction of visual or audible elements from aircraft overflights. Notably, the FAA has determined the Proposed Action will not cause the introduction of new overflights, as aircraft flying the Proposed Action will all fly over areas that are currently overflowed by arrivals to BOS.

Next, the FAA considered the projected increase in the number or concentration of overflights over particular areas to assess the potential for an incremental change in noise levels and visual impacts to alter the character or use of historic properties. The Proposed Action was used to generate two dimensional blocks covering all areas of potential change in overflights separated by the waypoints of the Proposed Action. These blocks are shown in reference to the Proposed Action in **Attachment B**. These blocks were then compared to an entire year of overflight data within the GSA as well as estimated usage of the Proposed Action and used to generate overflight data for each block for the No Action and Proposed Alternatives. **Attachment C** shows the year of overflight data in reference to the Proposed Action and these blocks. The radar data shows that the airspace around the Airport is already extremely dense with overflights, with over 427,000 annual operations in 2019.

Table 2.1 of the Draft Environmental Assessment summarizes the number of overflights for each block in the No Action and Proposed Action Alternatives. Based primarily on the overall increase in overflights and filtered by the percent increase in overflights and minimum aircraft altitude, the FAA is proposing to select the APE based on the following blocks: BLOCK3, NUNZO2, BLOCK2, BLOCK1, and NUNZO1. In each of these blocks, the percentage increase in overflights was greater than 0.4% and adding more than 100 overflights annually at a minimum altitude of 4,000 feet or less for the Proposed Action within each block.

¹ 36 CFR § 800.16(d), <https://www.achp.gov/sites/default/files/regulations/2017-02/regs-rev04.pdf>

² As part of its review under the National Environmental Policy Act, the FAA conducted a noise modeling analysis to determine how this proposed action would affect current aircraft noise exposure levels in the General Study Area. This analysis indicated that the action would not result in any noise increase that would be “significant” under FAA policy, which defines the threshold of significance as an increase in the Day-Night Average Sound Level (DNL) of 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase. However, FAA policy recognizes that this threshold of significance may not be relevant to certain historic properties where a quiet setting is a generally recognized purpose and attribute. *FAA Order 1050.1F, Environmental Impacts: Policies and Procedures, Exhibit 4-1.*

TABLE 2.1
NUMBER OF OVERFLIGHTS* FOR THE NO ACTION AND PROPOSED ACTION ALTERNATIVES BY
BLOCK

Block Name	Block Minimum Altitudes (ft)	No Action Alternative Overflights	Proposed Action Alternative Overflights**	Percentage Increase in Overflights
BLOCK1	0	83,599	83,958	0.43%
BLOCK2	1,700	81,133	81,492	0.44%
BLOCK3	3,000	66,110	66,469	0.54%
WOONS1	4,000	45,502	45,520	0.04%
NUNZO1	4,000	43,313	43,492	0.41%
NUNZO2	4,000	36,654	36,833	0.49%
WOONS2	4,000	3,609	3,627	0.50%
DOWNWIND2	NA	129,230	129,338	0.08%
CAPE2	NA	66,899	66,953	0.08%
CAPE1	NA	69,766	69,820	0.08%
DOWNWIND1	NA	62,462	62,570	0.17%

Source: RoVolus, ESA, September 2020.
*Overflight data was from the calendar year from November 1, 2018 through October 31, 2019
**The Range of overflights added to each block ranged from 18 to 359 overflights

The proposed APE, which is just over 105 square miles, includes the area of the blocks identified in the overflights analysis and this proposed APE is shown in **Attachment D**.

3. FAA's Initial Identification of Historic Properties and Assessment of Effects

The National Register of Historic Places, the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of previously identified historic properties within the GSA. Approximately 4,202 of these resources are within the proposed APE. As noted above, the Proposed Action would not physically affect or alter any historic properties or other cultural resources. The Proposed Action also would not introduce aircraft overflights to resources that are not already overflown by aircraft. However, the FAA is considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute. Therefore, we are asking your assistance in identifying any historic properties within the proposed APE that might meet these criteria. In our experience, these may include isolated properties where a cultural landscape is part of the property's significance, rural historic districts, outdoor spaces designed for meditation or contemplation and certain traditional cultural properties in continuous use. The FAA looks forward to further consultation with your office to discuss whether the undertaking could affect any such historic properties within the APE.

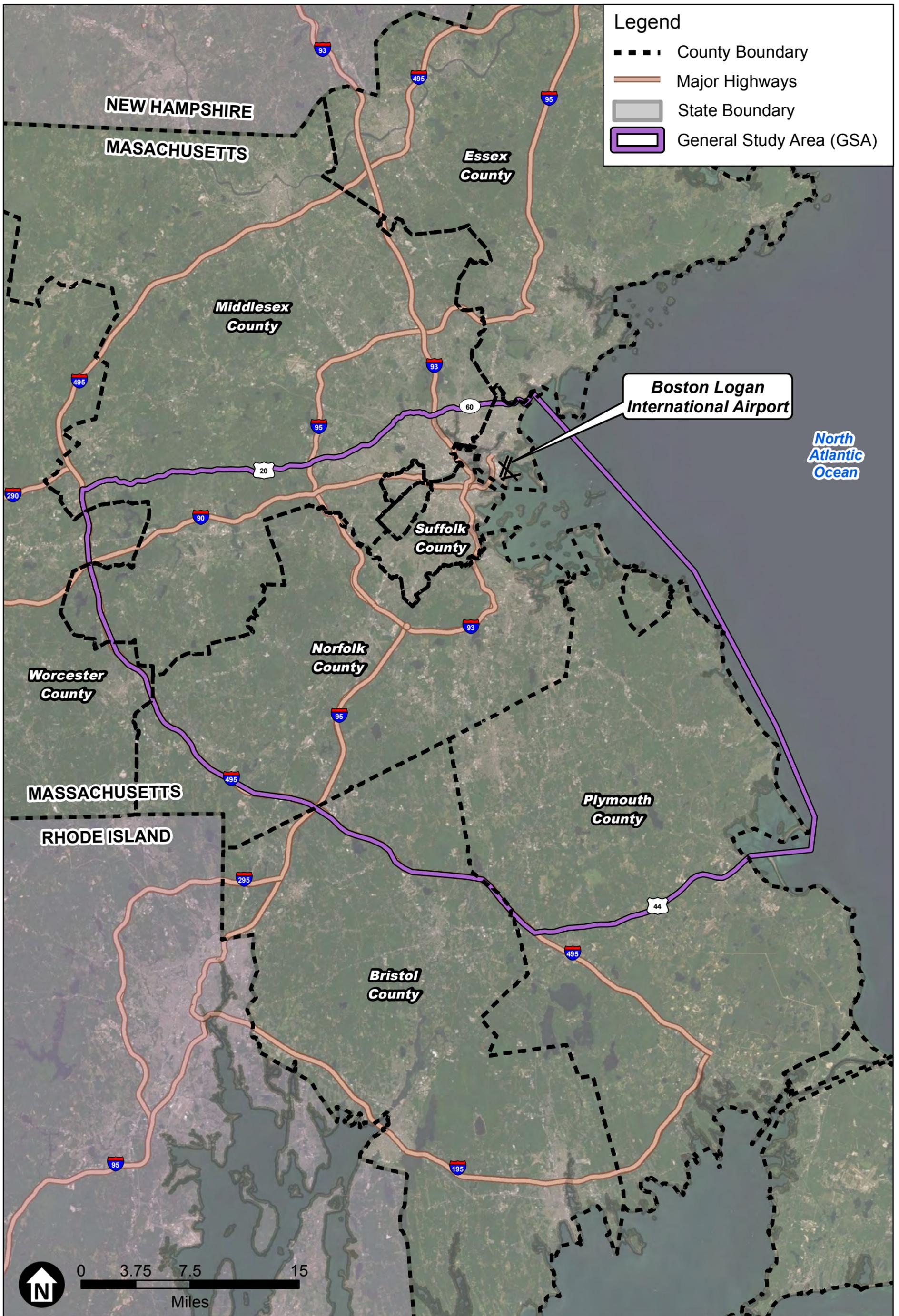
4. Additional Consultation

The FAA has noted the list of historical commissions, regional planning commissions, and other organizations provided in your previous letter. Once the MHC concurs with the proposed APE, the FAA will reach out to each of these organizations.

We look forward to hearing back from you on the FAA's proposed Area of Potential Effects and consulting with you to identify historic resources that could be affected by this undertaking. Following your review, we would appreciate having a conference call to receive your feedback and also to discuss next steps. If you have any additional comments or questions on this undertaking, please contact me at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson
Environmental Protection Specialist
Operations Support Group
Eastern Service Center

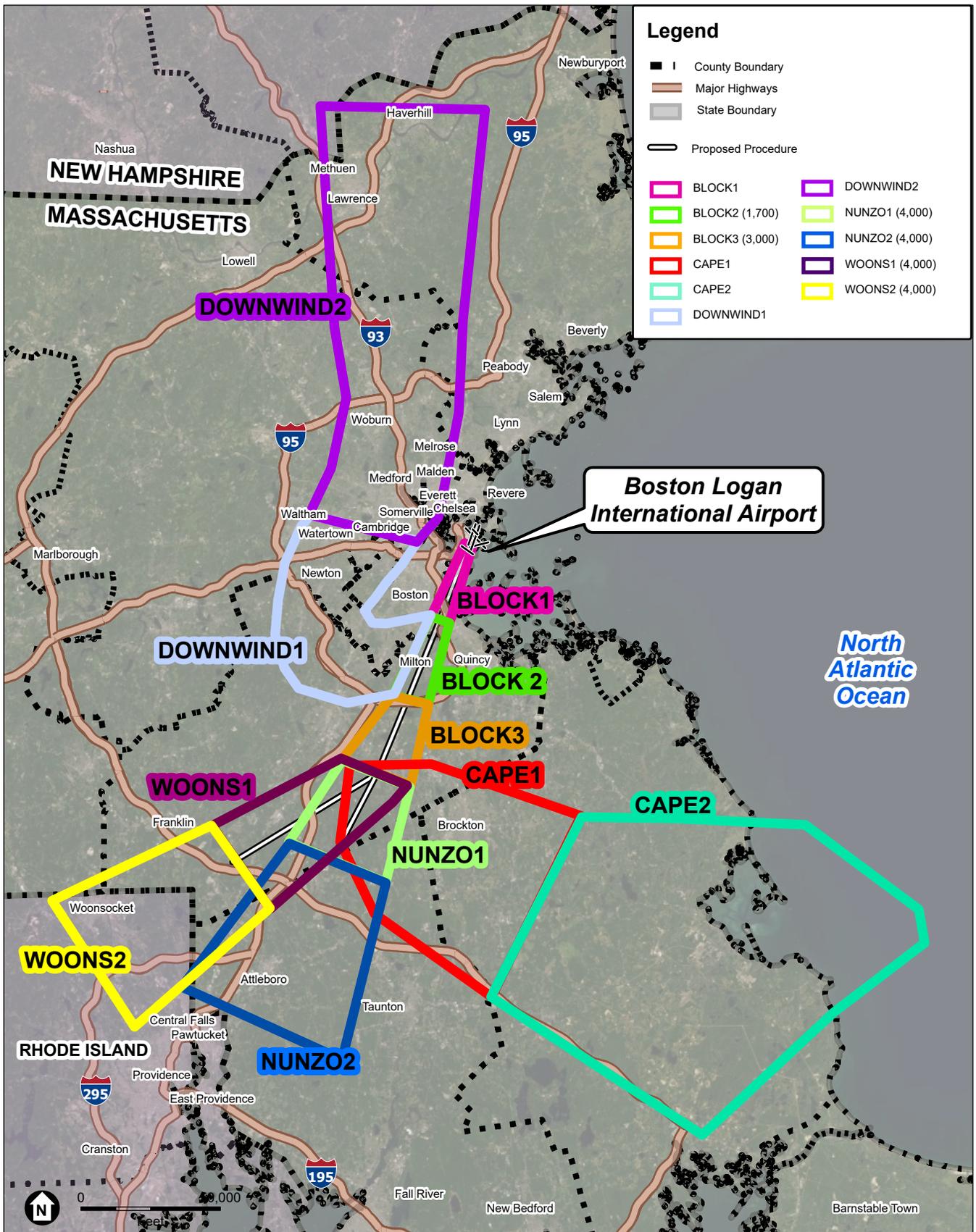


SOURCE: Esri; Prepared by Jacobsen Daniels, 2020

Boston Logan RNAV (GPS) RWY 4L EA



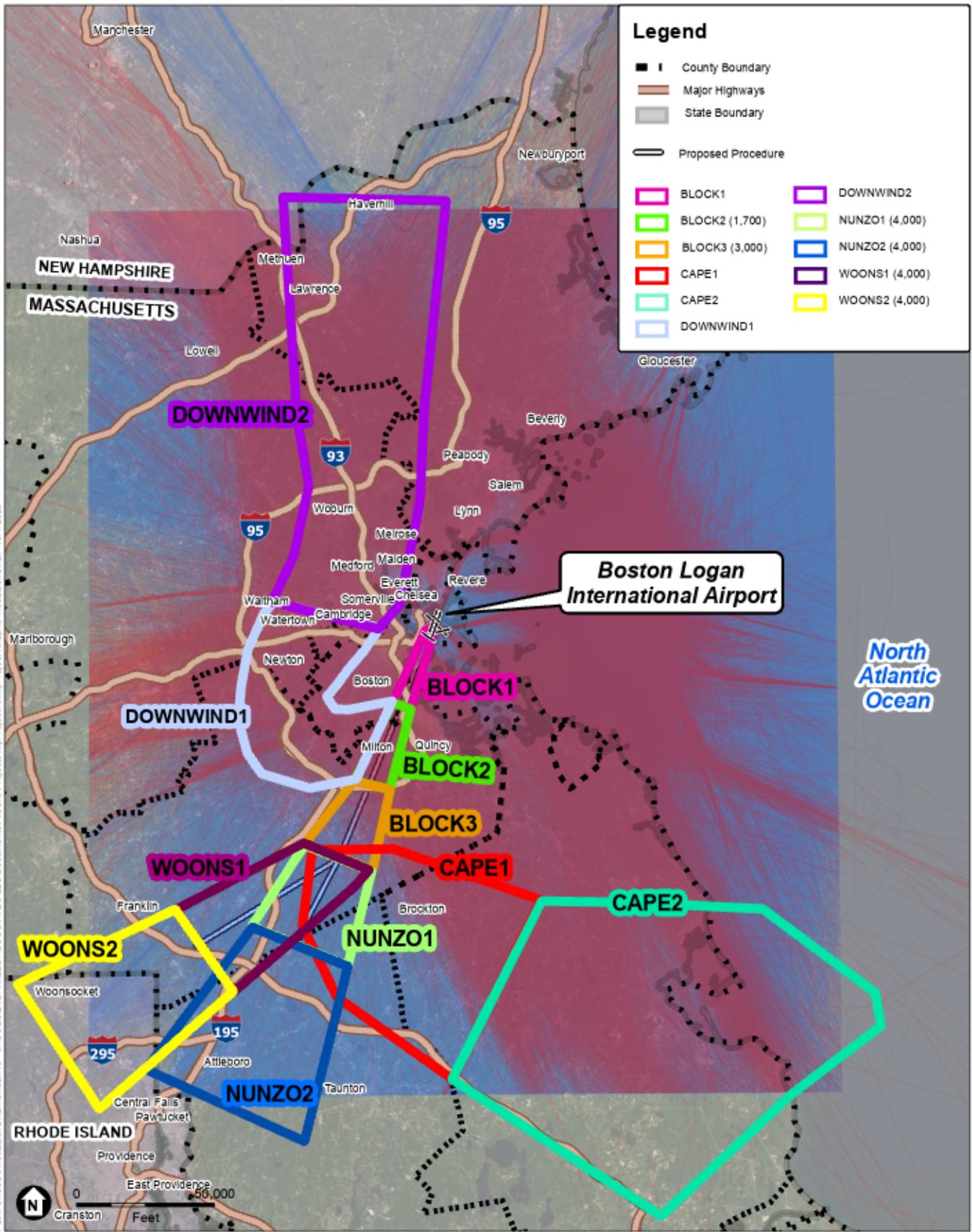
Attachment A
BOS EA General Study Area



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020

Boston Logan RNAV (GPS) RWY 4L EA

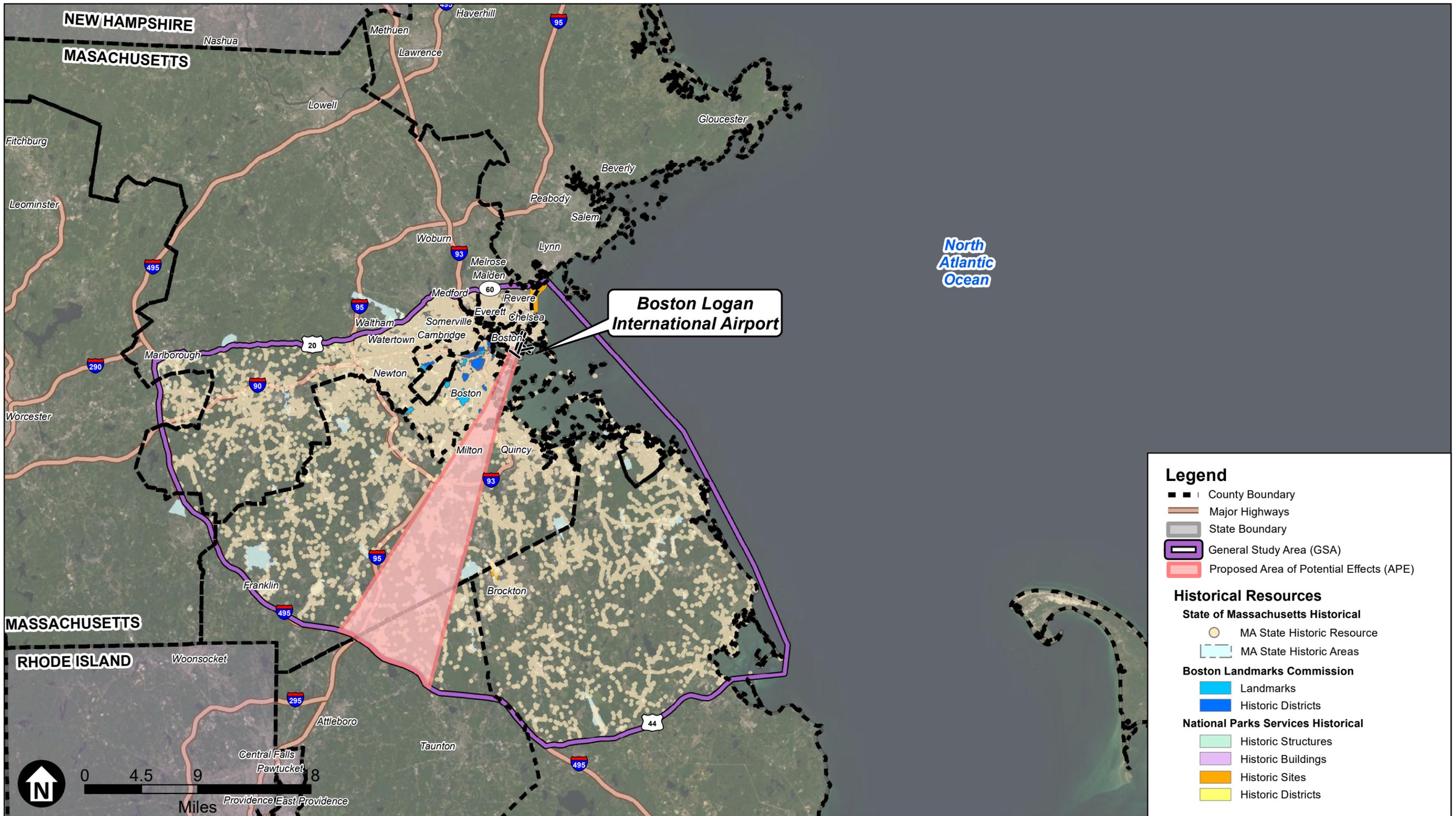




SOURCE: Esri; Prepared by Jacobsen Daniels, 2020

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; Prepared by Jacobsen Daniels, 2020

Boston Logan RNAV (GPS) RWY 4L EA





The Commonwealth of Massachusetts
 William Francis Galvin, Secretary of the Commonwealth
 Massachusetts Historical Commission

December 8, 2020

Yvonda Johnson
 Environmental Protection Specialist
 Operations Support Group
 Federal Aviation Administration
 Eastern Service Center
 1701 Columbia Avenue
 College Park, GA 30337

RE: Logan Airport RNAV (GPS) R01L-4L Approach Procedures, Boston, MA; MHC# BC 6034

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on November 18, 2020, for the project referenced above.

The MHC has no further comments on the FAA's proposed area of potential effects.

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (16 CFR 800). Please do not hesitate to contact Elizabeth Sierra of my staff if you have any questions.

Sincerely,


 Bruce Simon
 State Historic Preservation Officer
 Executive Director
 Massachusetts Historical Commission



William Francis Galvin
 Secretary of the Commonwealth
 Massachusetts Historical Commission
 100 Market Street
 Boston, MA 02125

BOSTON
 MA 021
 30 DEC 20
 191-1-1



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 1701 Columbia Avenue
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AW-6250



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 10, 2021

Ms. Brona Simon
State Historic Preservation Officer/Executive Director
Massachusetts Historical Commission
220 Morrissey Blvd
Boston, MA 02125

Reference: Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA (MHC# RC.68314)

Dear Ms. Simon

Thank you for your December 8, 2020 concurrence with our Area of Potential Effects (APE) for the proposed approach procedure at Boston Logan International Airport (BOS). As described in our earlier correspondence, this procedure is needed to enhance the safety of operations at BOS. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the Federal Aviation Administration (FAA) submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA is also sharing this proposed finding with all other consulting parties.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepburn.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

<i>Town</i>	<i>Number of State & Local Designated Properties</i>
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

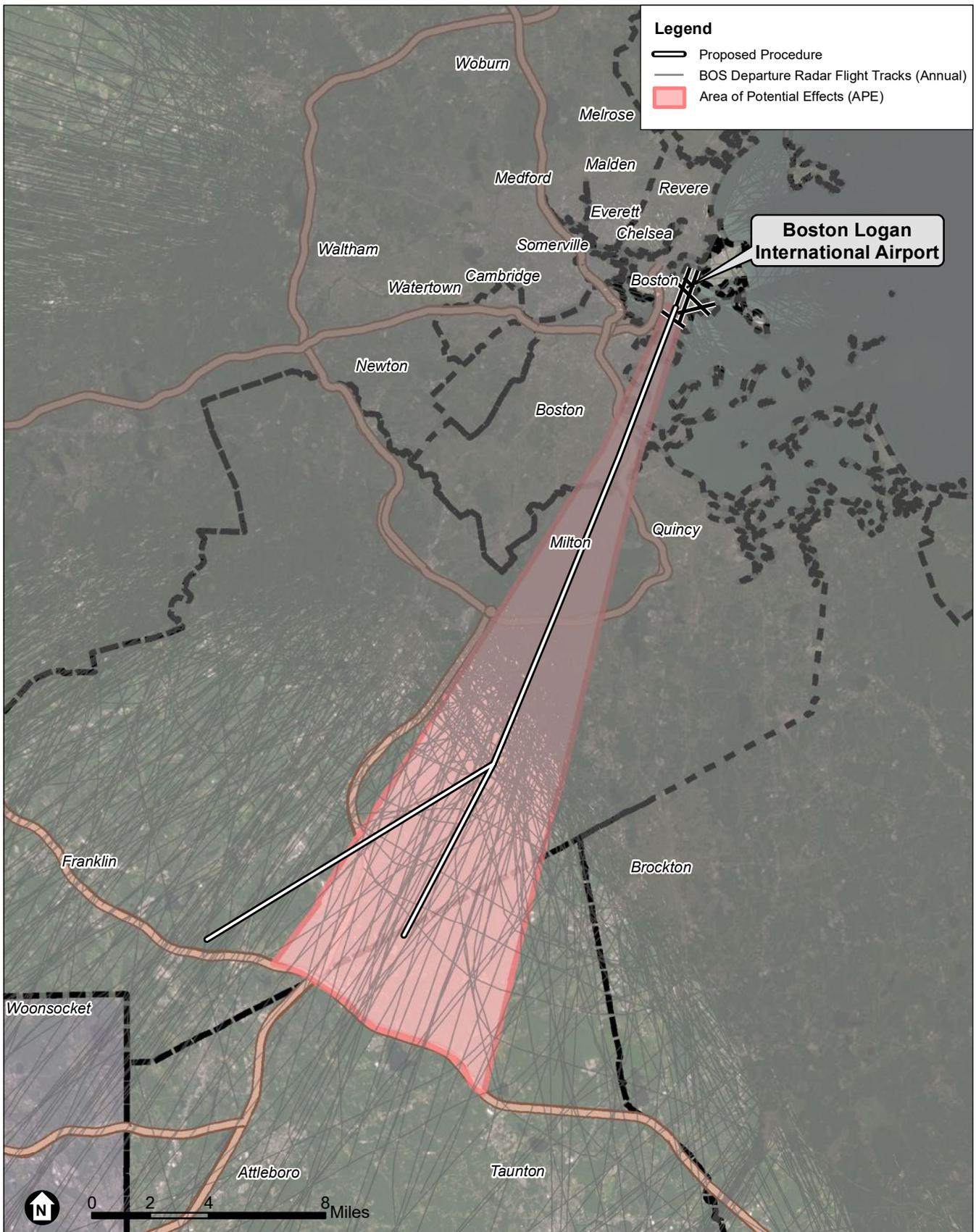
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Action

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of the properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Action. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

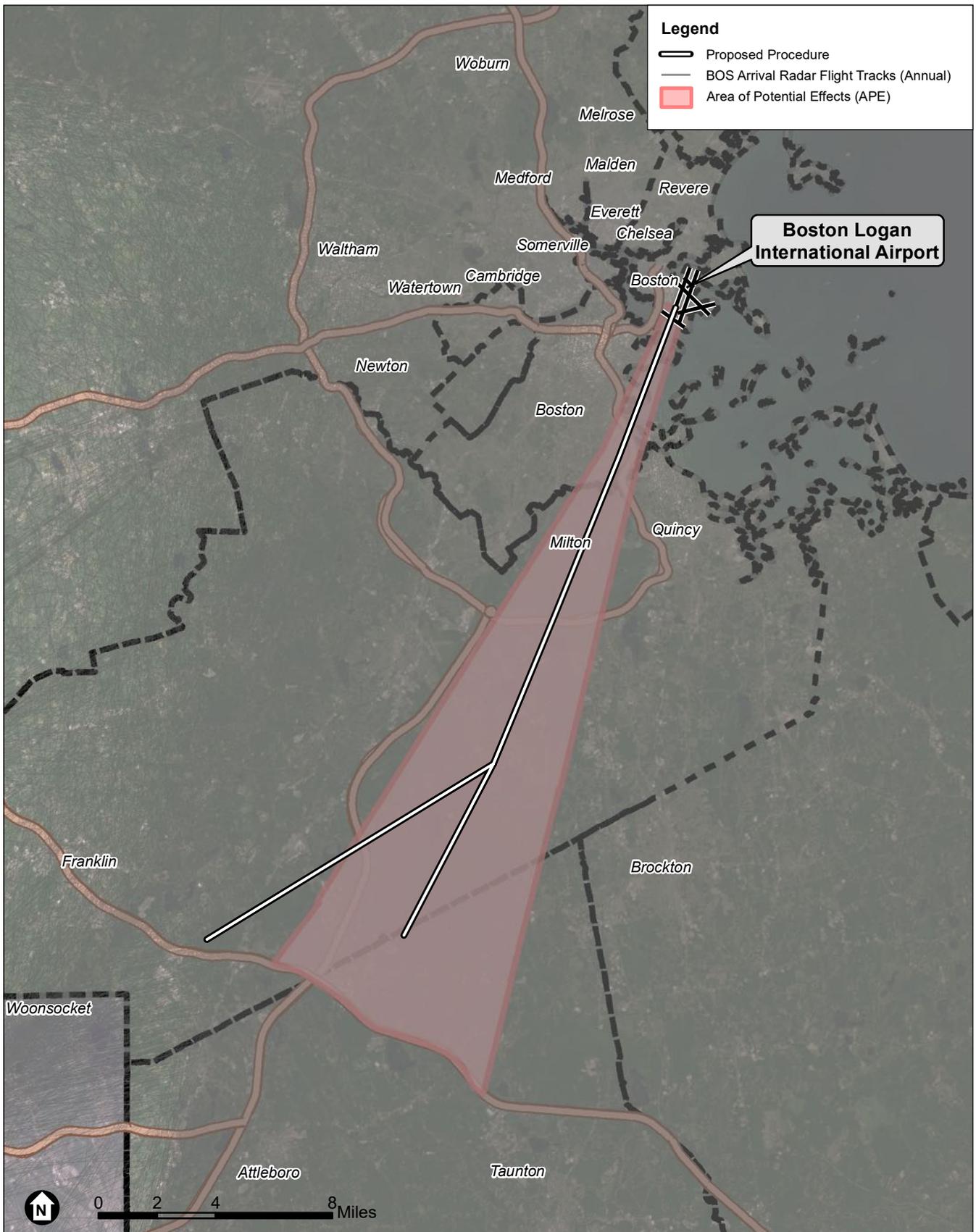
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment B
 Area of Potential Effects and Arrival Radar Flight Tracks

Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.
- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.
- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.
- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.
- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.
- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is proposing a Finding of No Adverse Effect for this undertaking. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

The FAA has noted the list of historical commissions, regional planning commissions, and other organizations provided in your previous letter. The FAA is currently reaching out to these groups as consulting parties. If this determination is modified or updated due to that consultation, a new correspondence will be sent to the MHC.

We look forward to hearing back from you on the FAA’s proposed finding. If you have any questions or concerns, we would be happy to have a conference call to receive your feedback and also to discuss any next steps. If you have any additional comments or questions on this undertaking, please contact me at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Boston Landmarks Commission
1 City Hall Square
Room 709 Environment Dept.
Boston, MA 02201

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
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Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

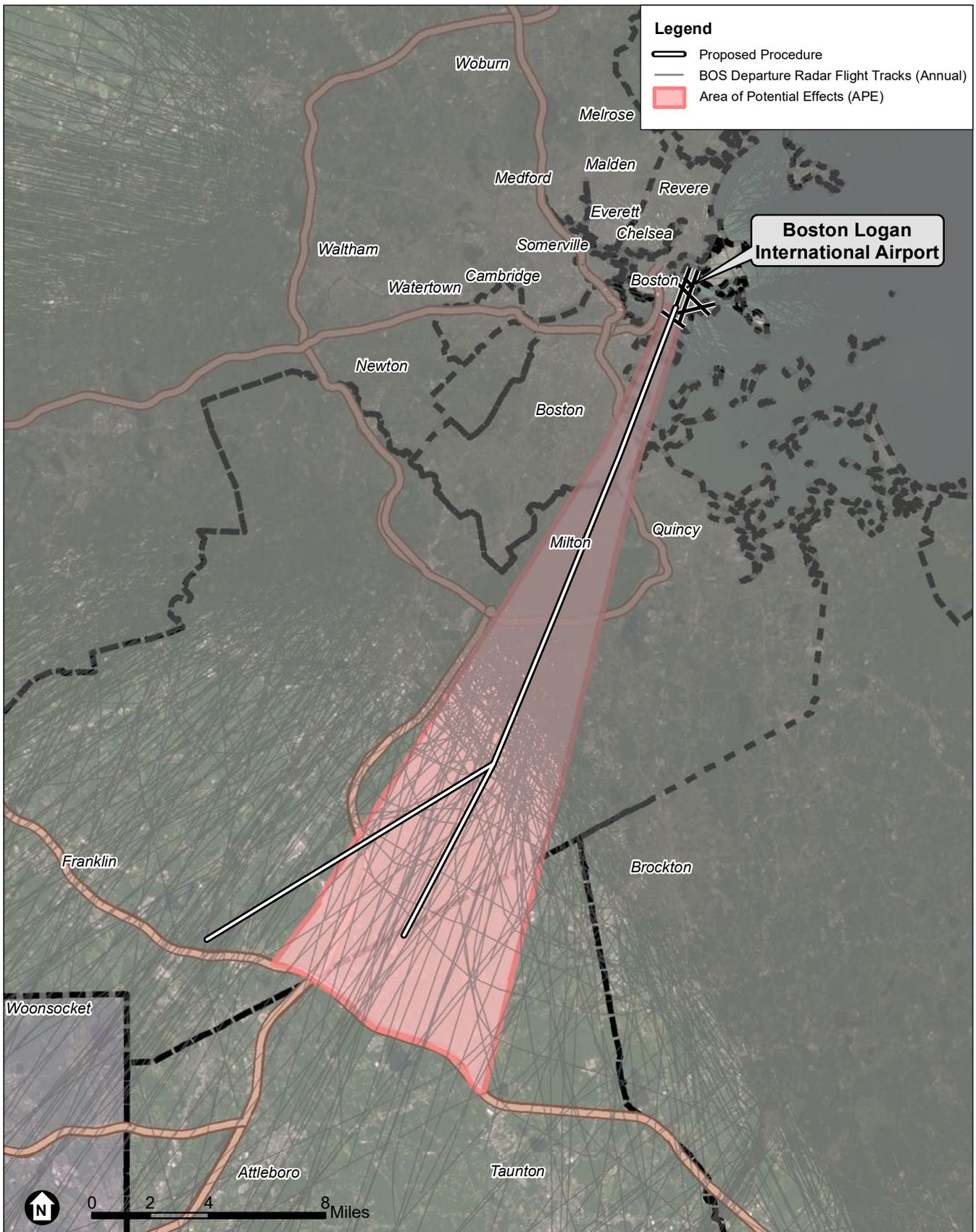
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

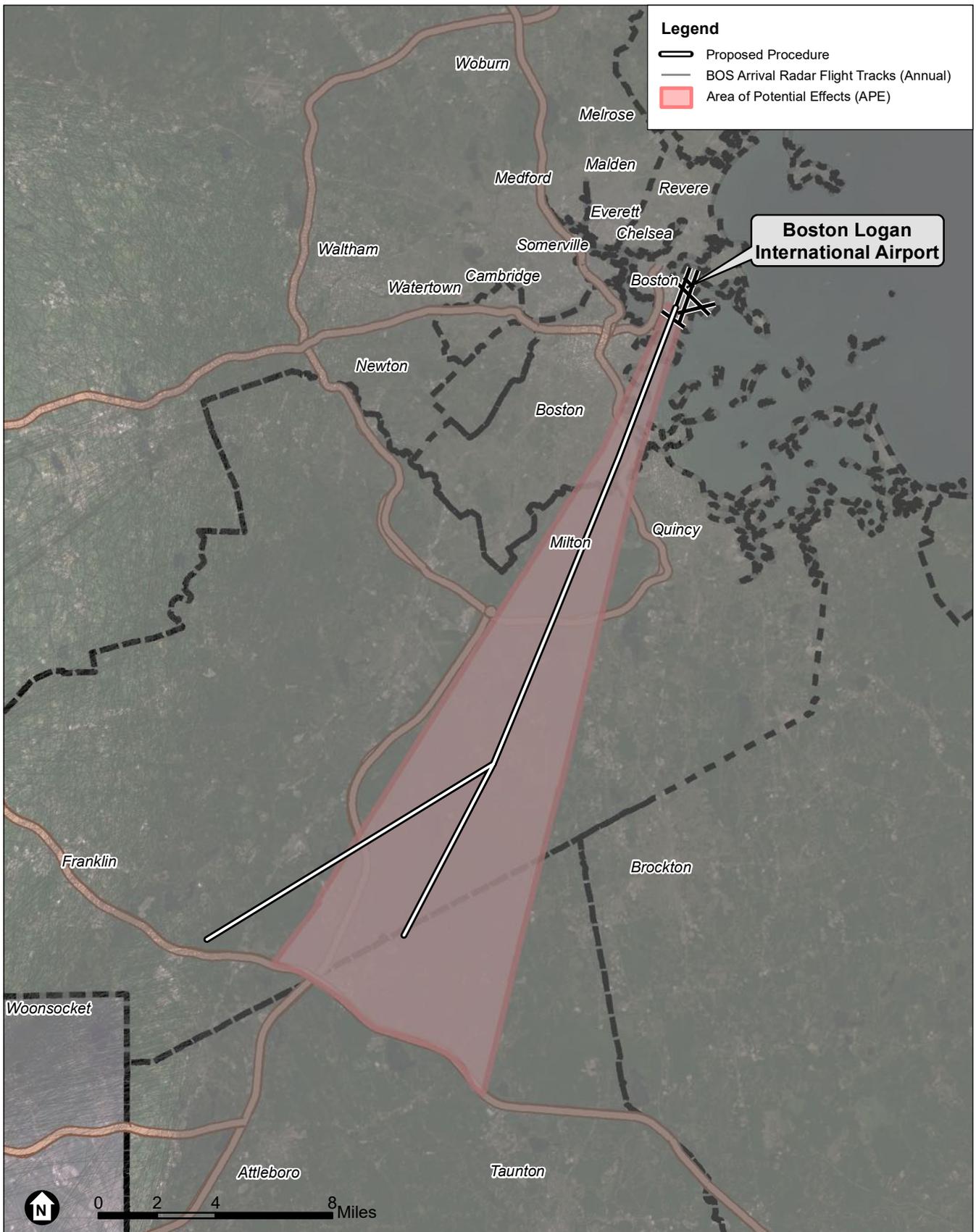
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
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June 9, 2021

Canton Historical Commission
801 Washington Street
Canton, MA 02021

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Table 2: Number of State & Local Designated Properties within the APE

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Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

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DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

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This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

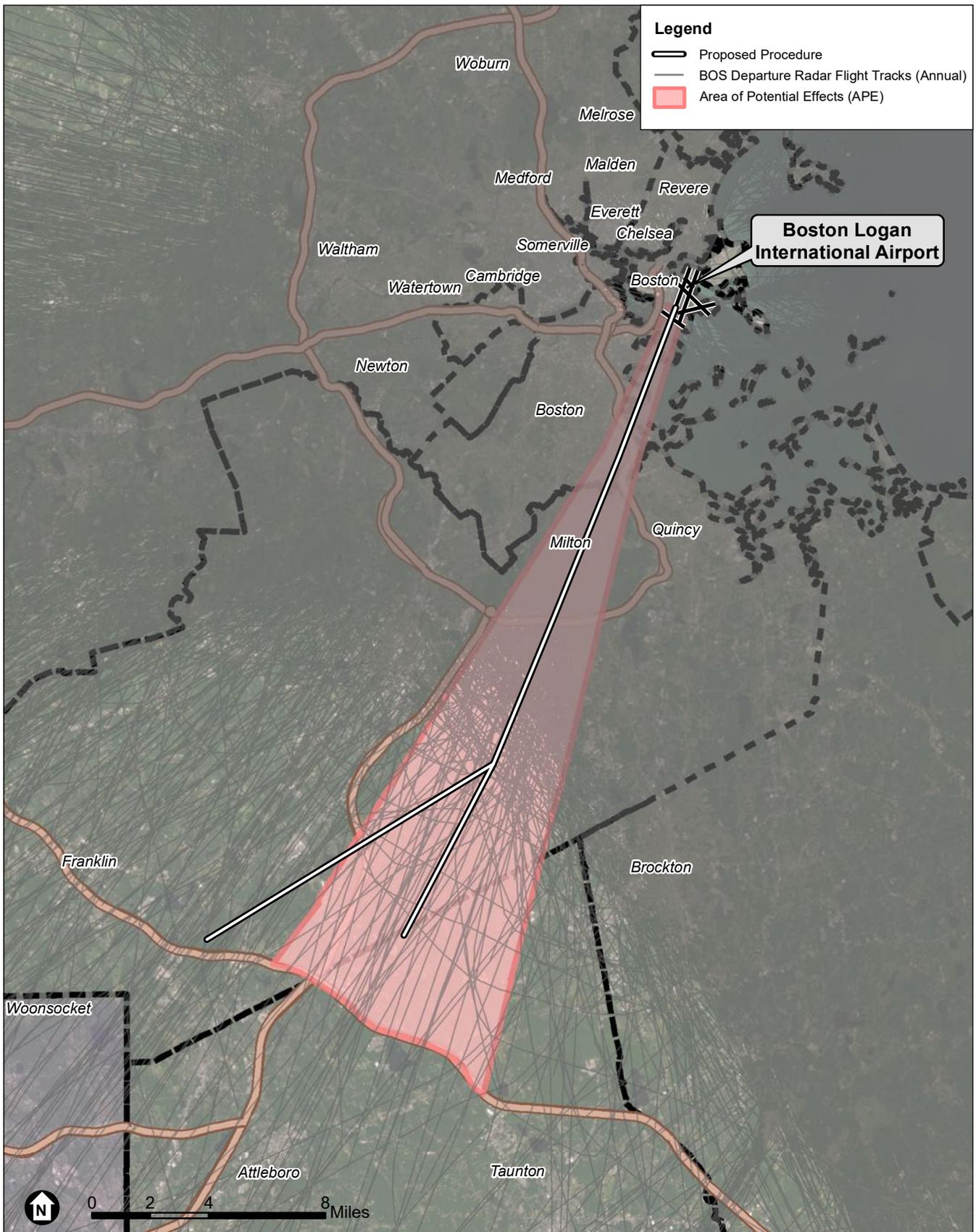
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when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

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In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

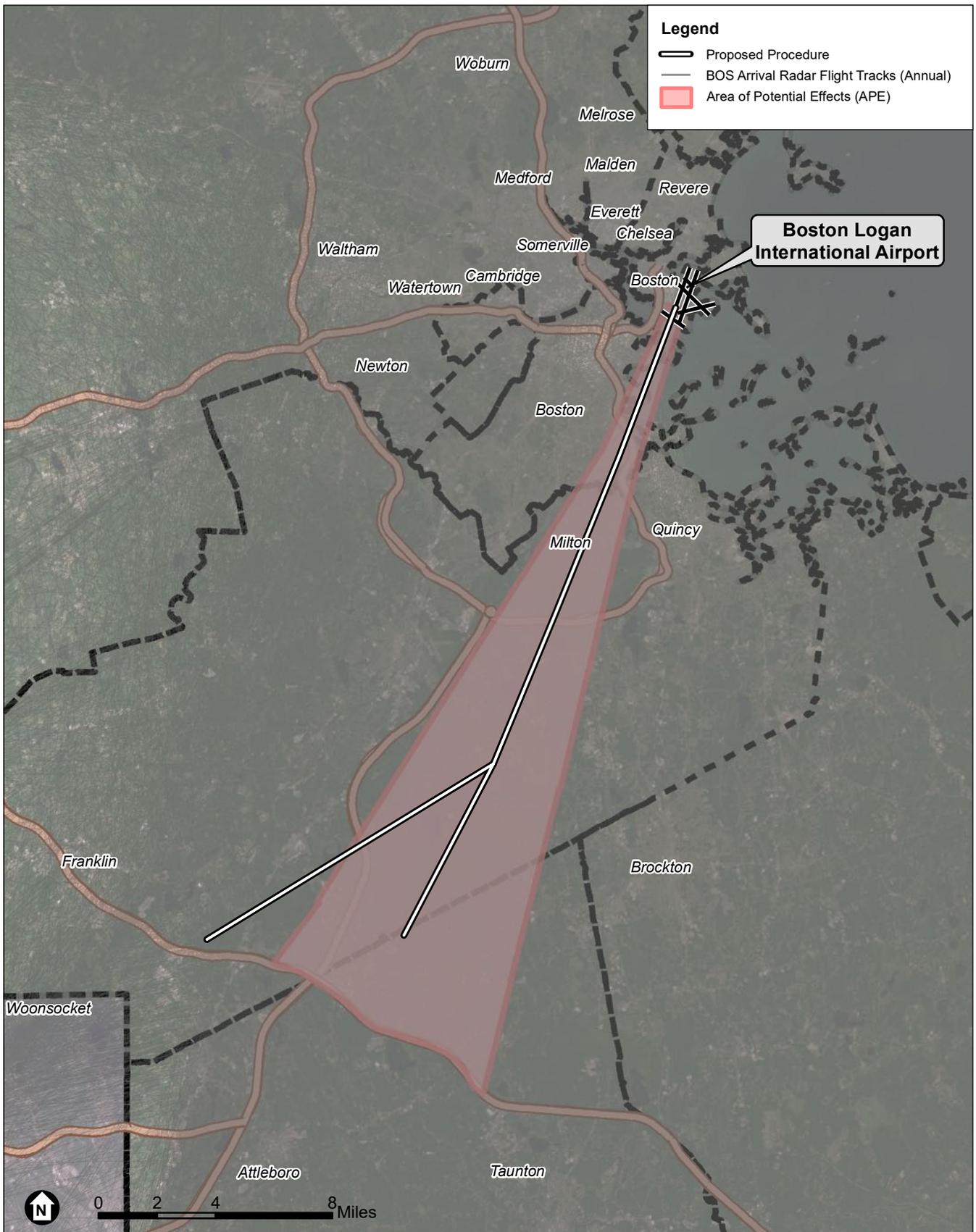
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Easton Historical Commission
136 Elm Street
Easton, MA 02356

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

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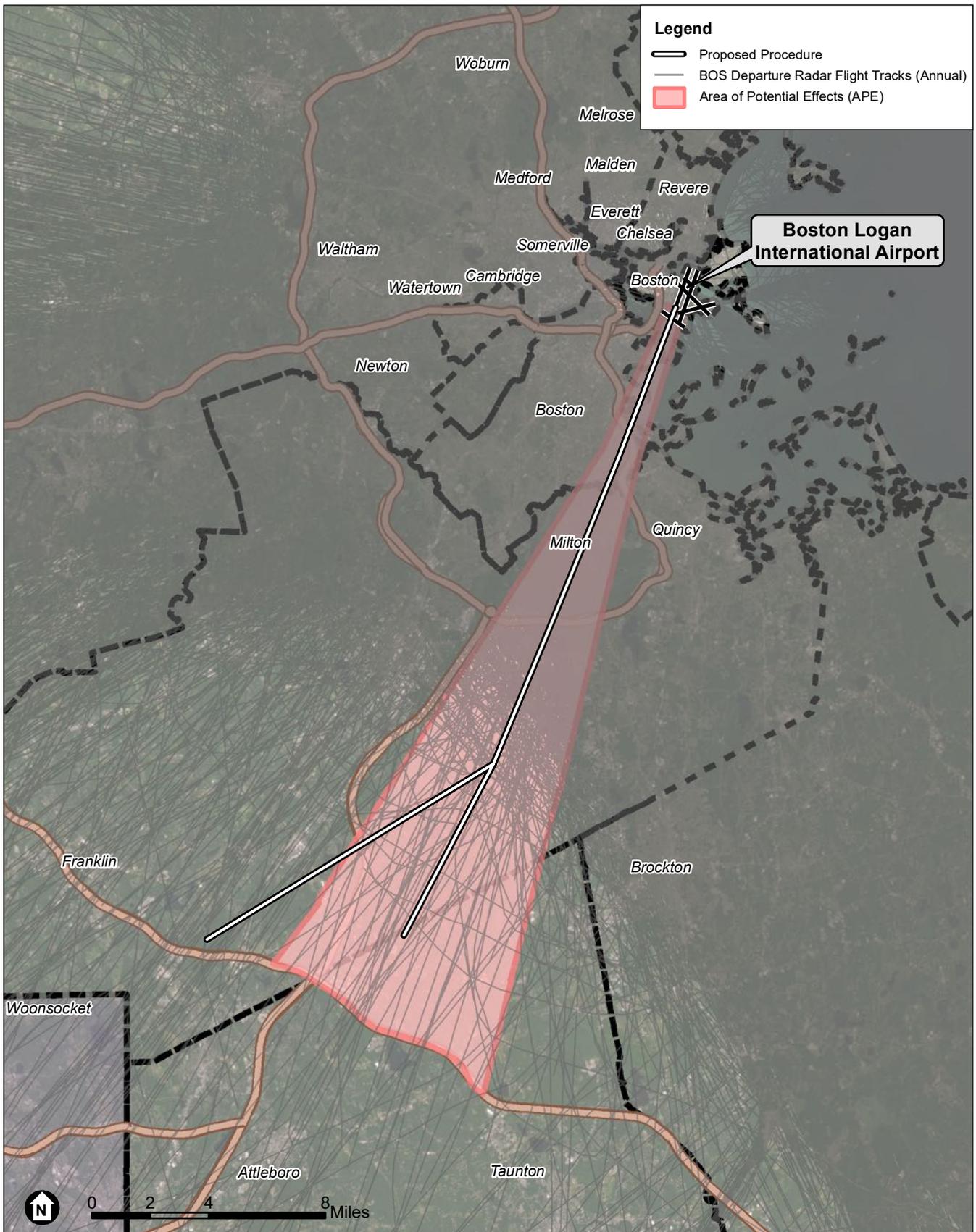
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when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

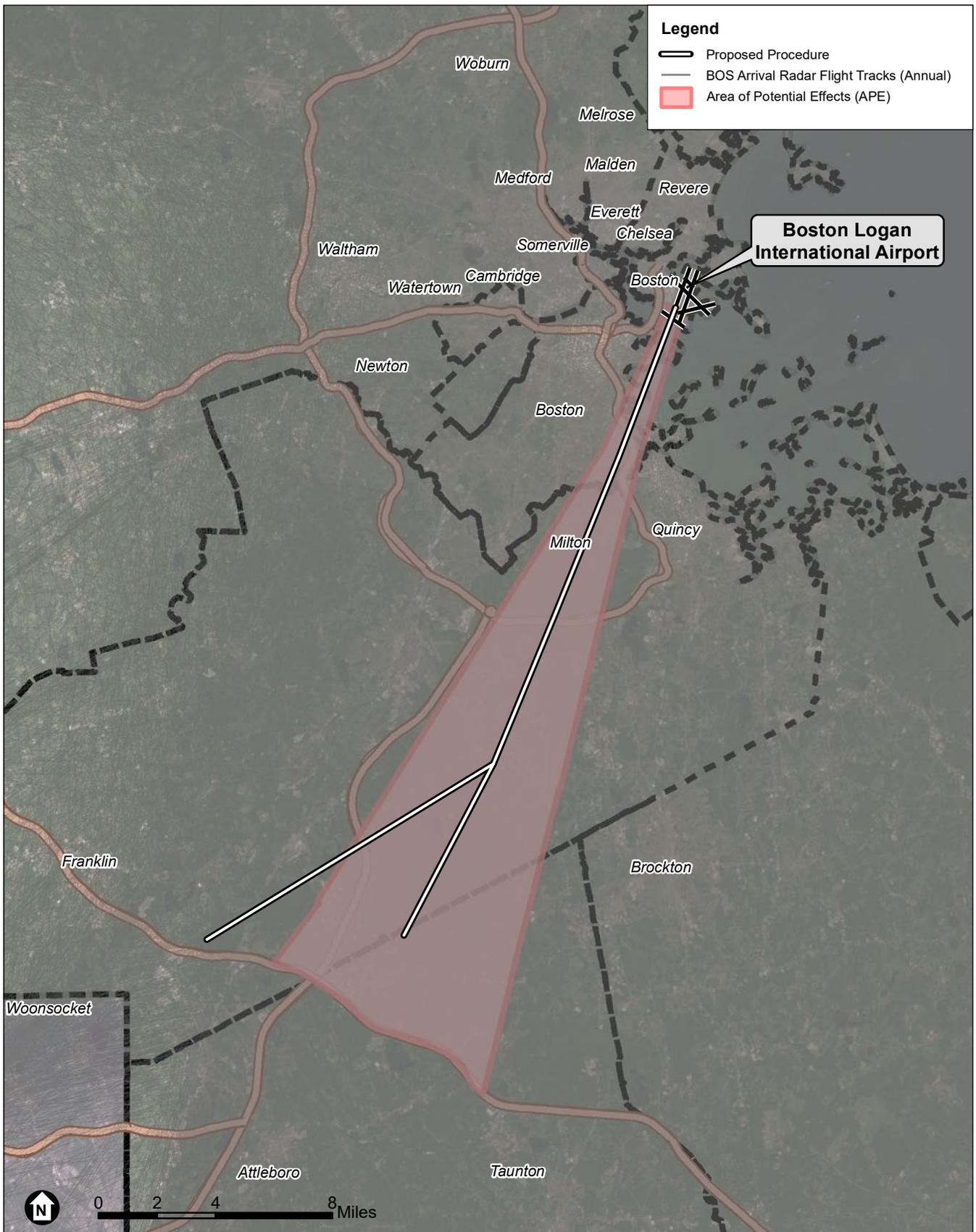
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
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U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Foxborough Historical Commission
40 South Street
Foxborough, MA 02035

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

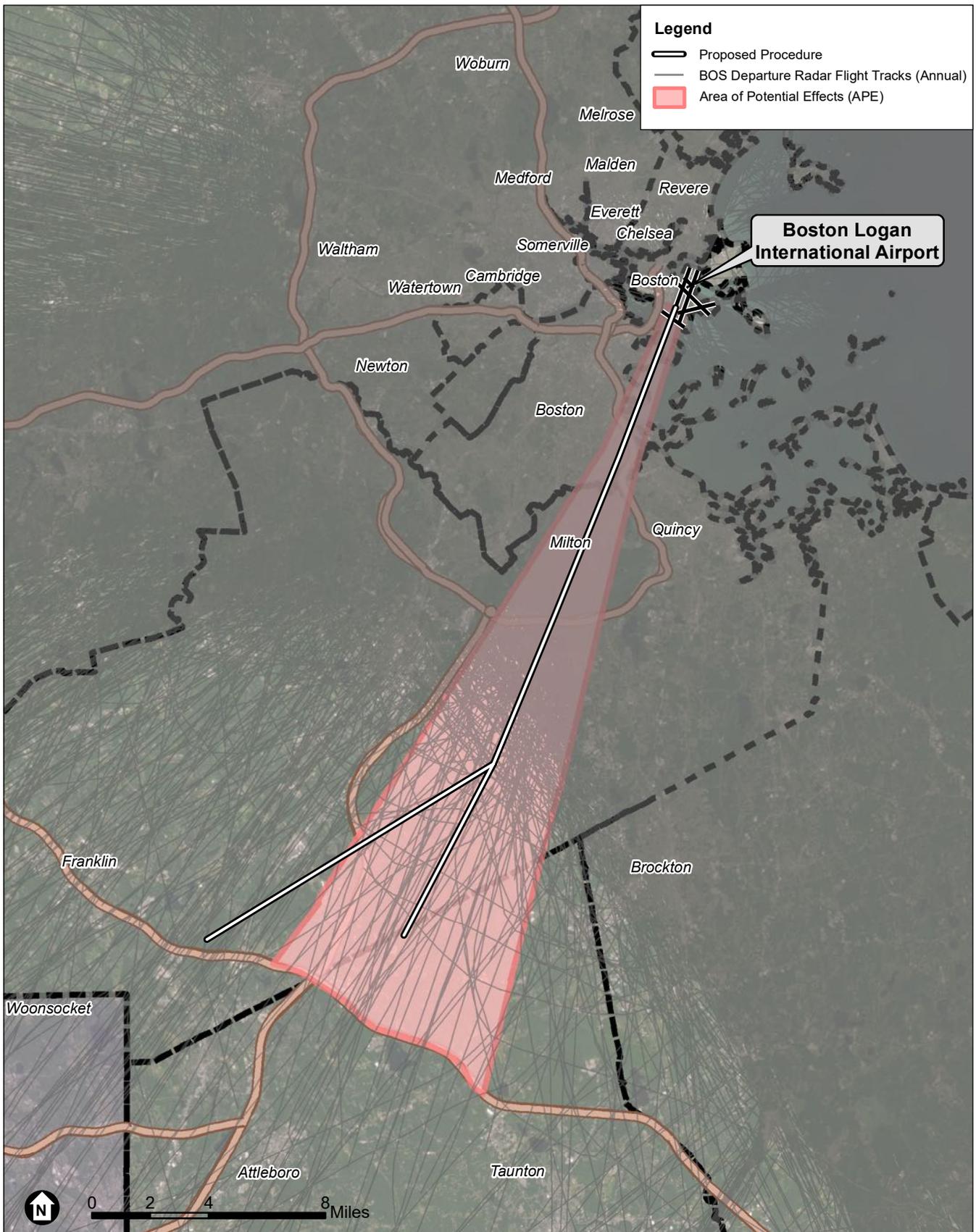
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

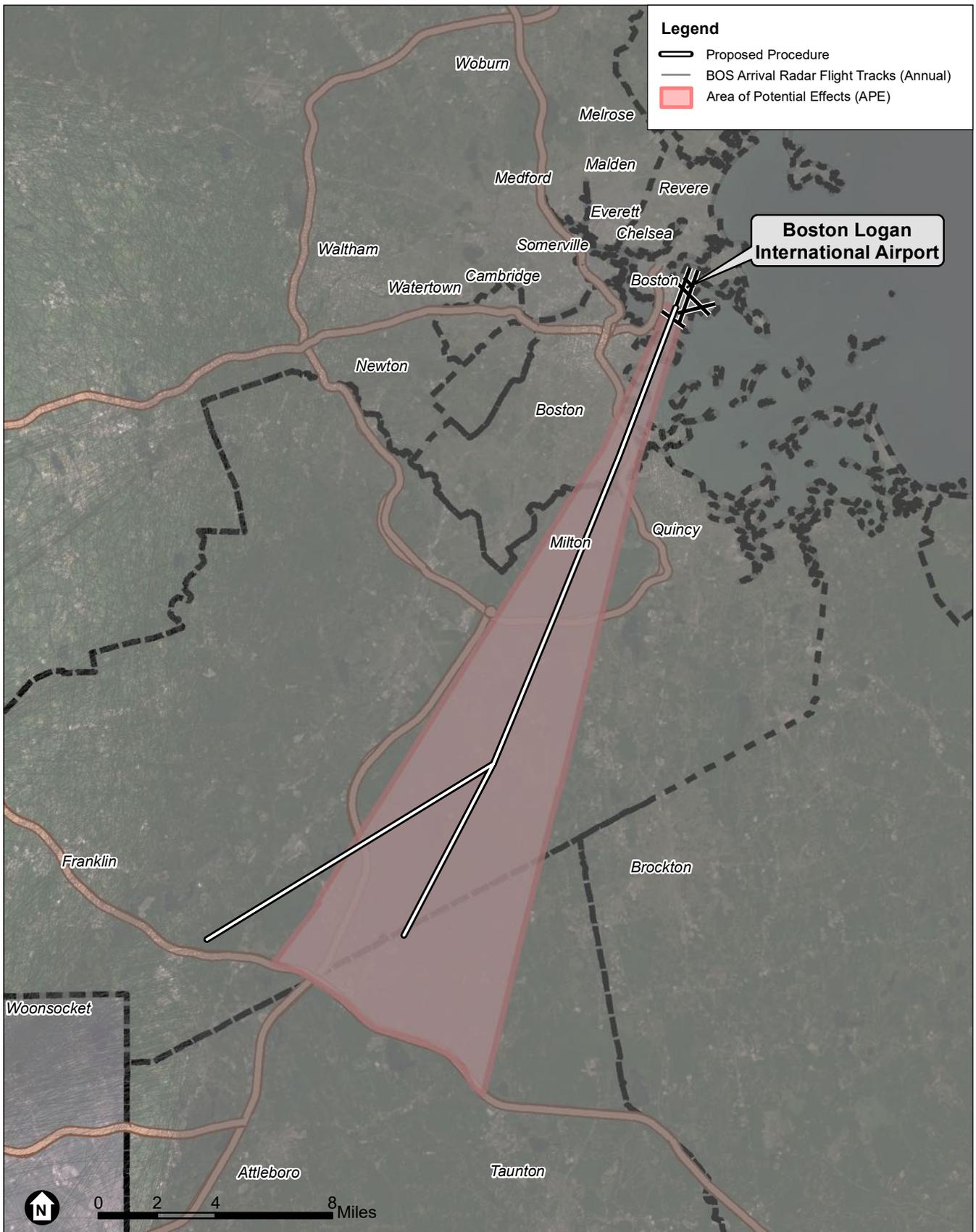
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment B
 Area of Potential Effects and Arrival Radar Flight Tracks

Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
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Operations Support Group AJV-E250
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U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

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College Park, Georgia 30337

June 9, 2021

Mansfield Historical Commission
6 Park Row
Mansfield, MA 02048

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

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Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
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Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
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Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
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Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

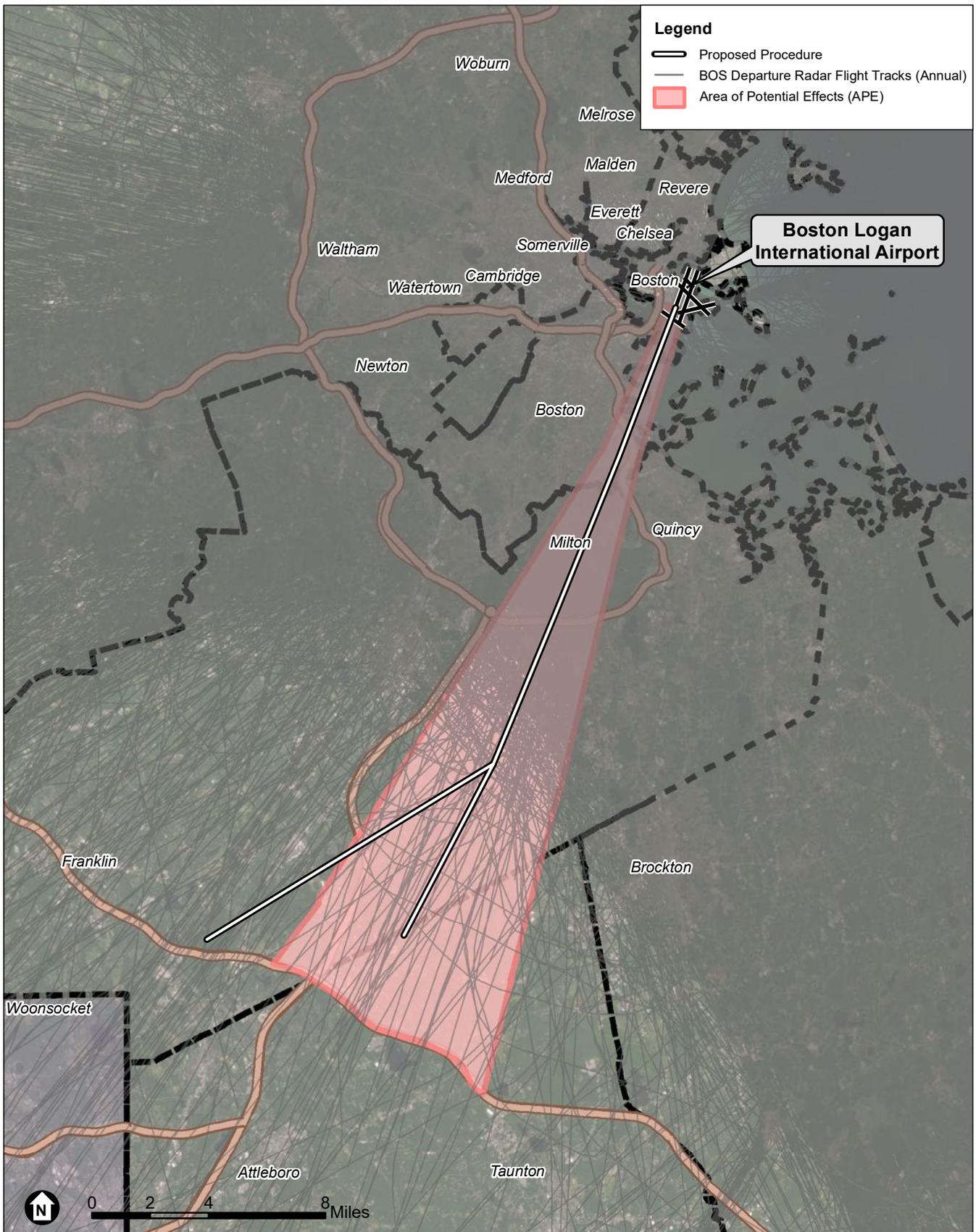
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.

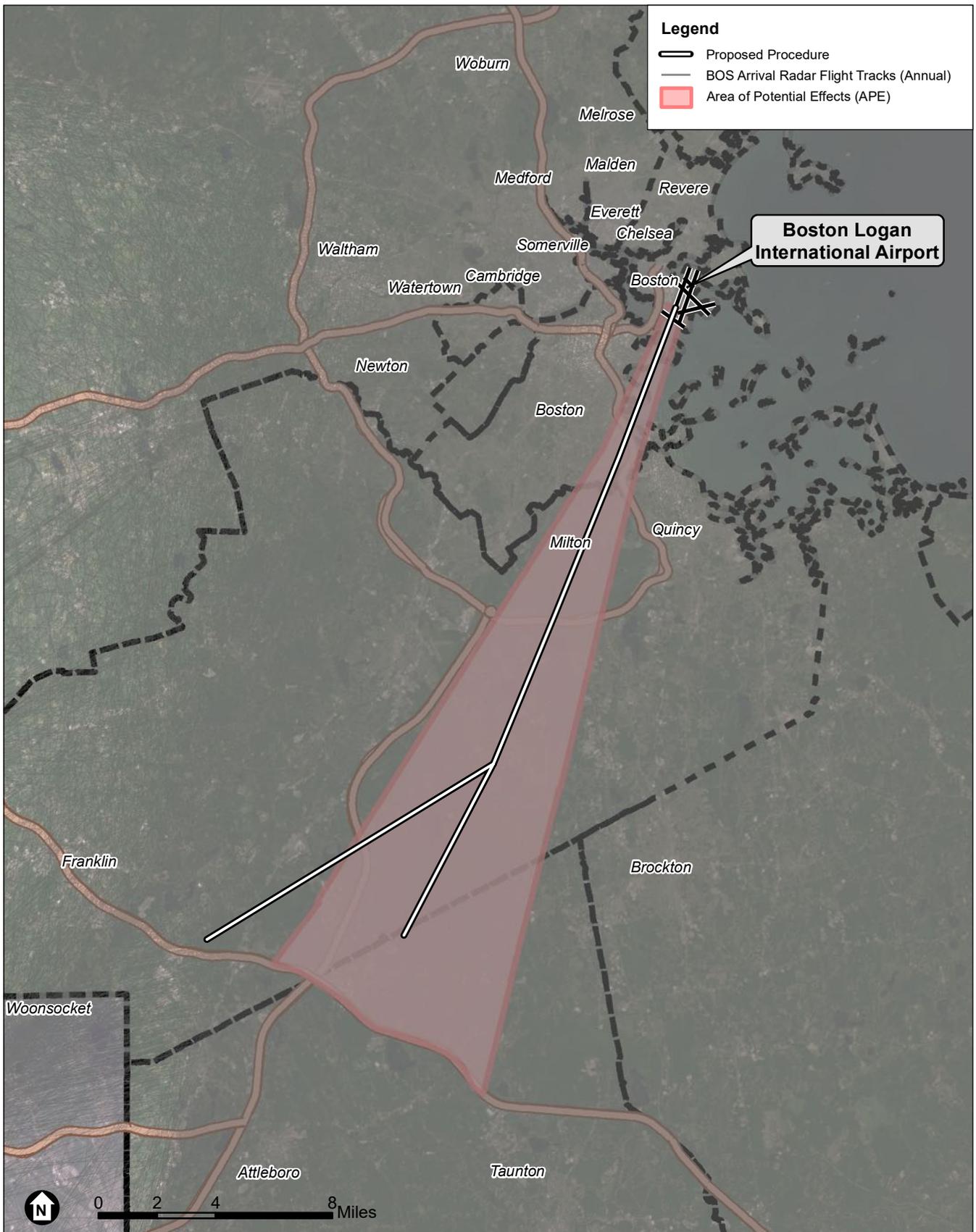


SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment A
 Area of Potential Effects and Departure Radar Flight Tracks



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

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June 9, 2021

Milton Historical Commission
Milton Town Hall
525 Canton Avenue
Milton, MA 02186

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

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Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

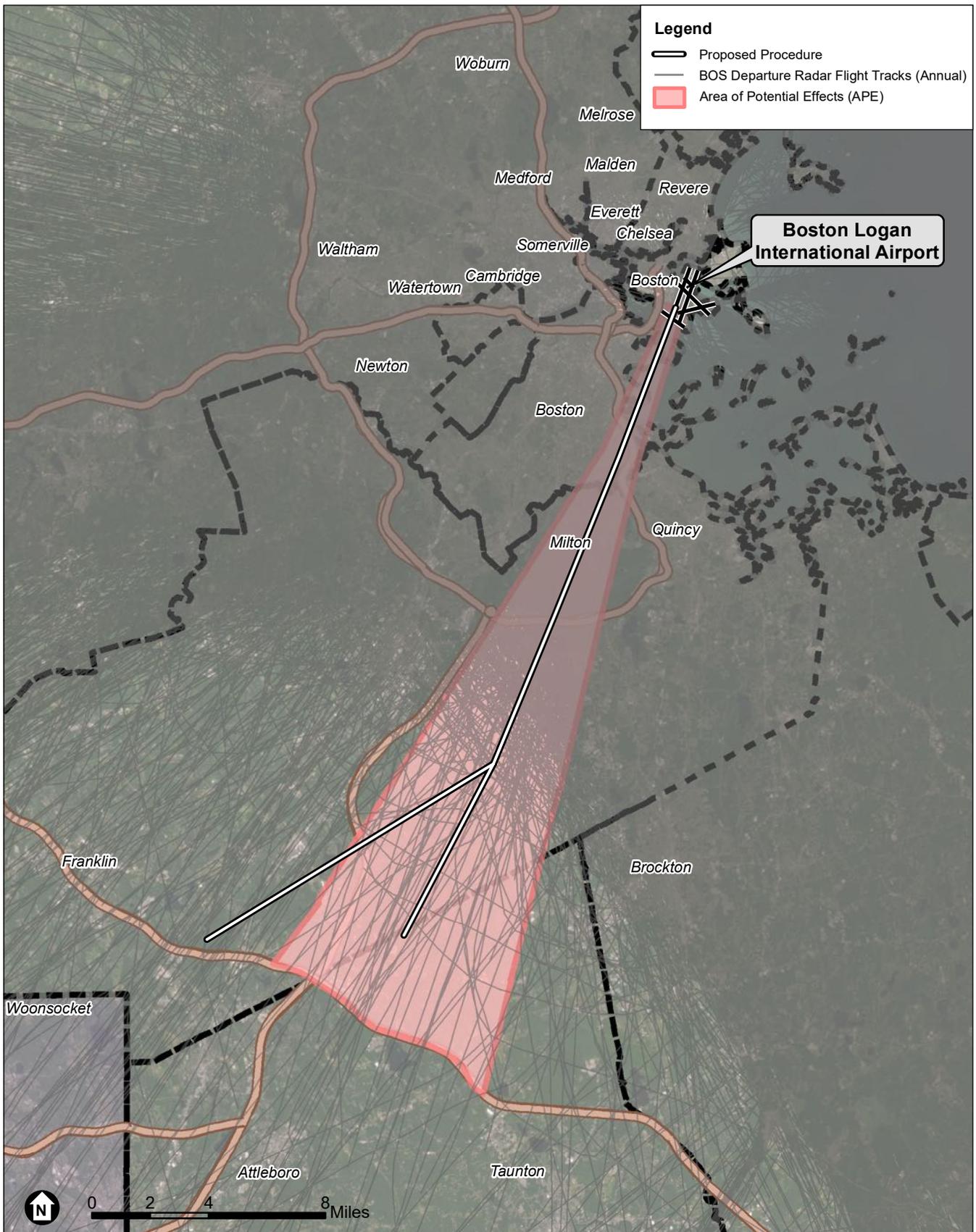
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

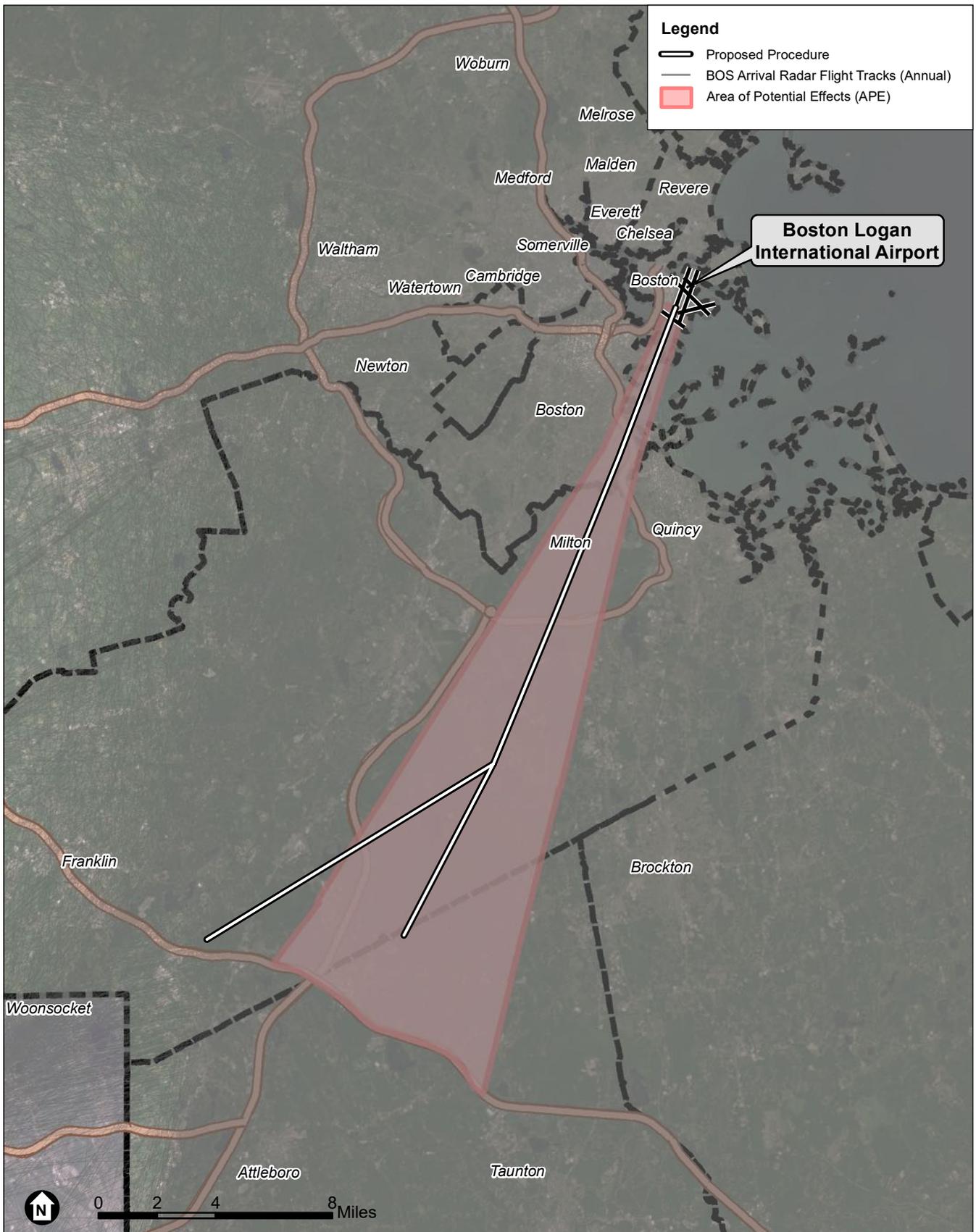
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Norton Historical Commission
70 East Main St.
Norton, MA 02766

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

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- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

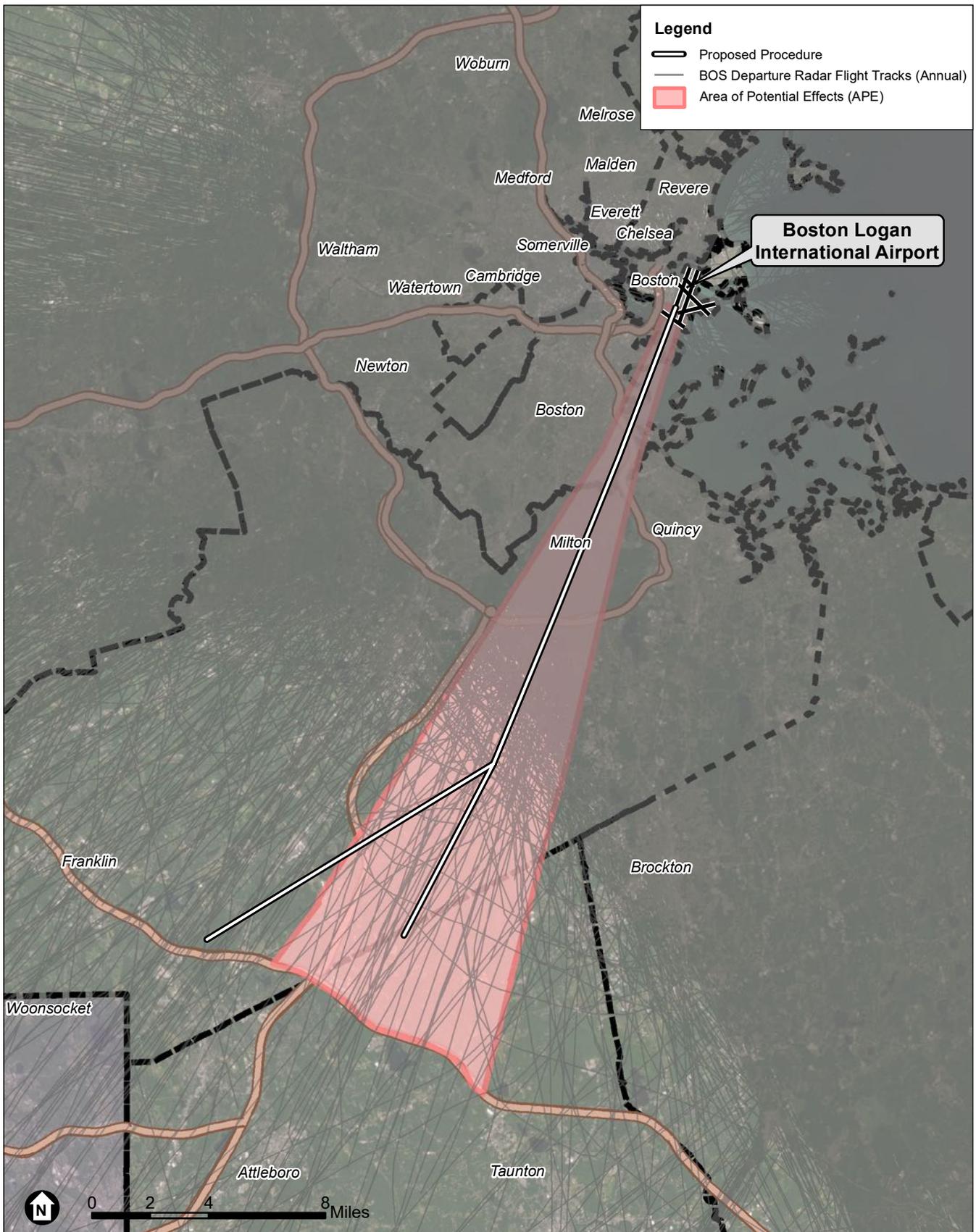
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The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

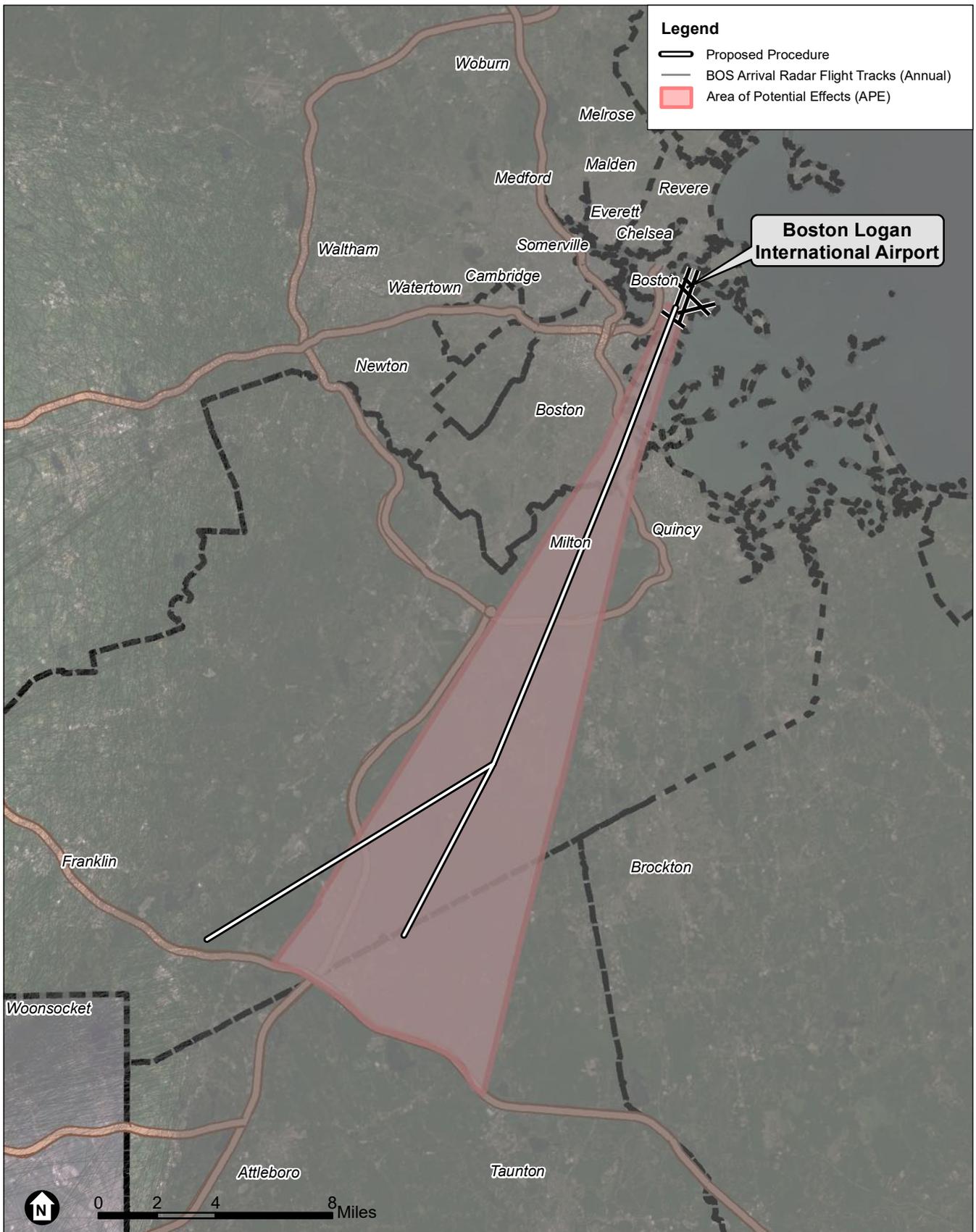
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Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Quincy Historical Commission
1305 Hancock St.
Quincy, MA 02169

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

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Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

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Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

<i>Town</i>	<i>Number of State & Local Designated Properties</i>
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

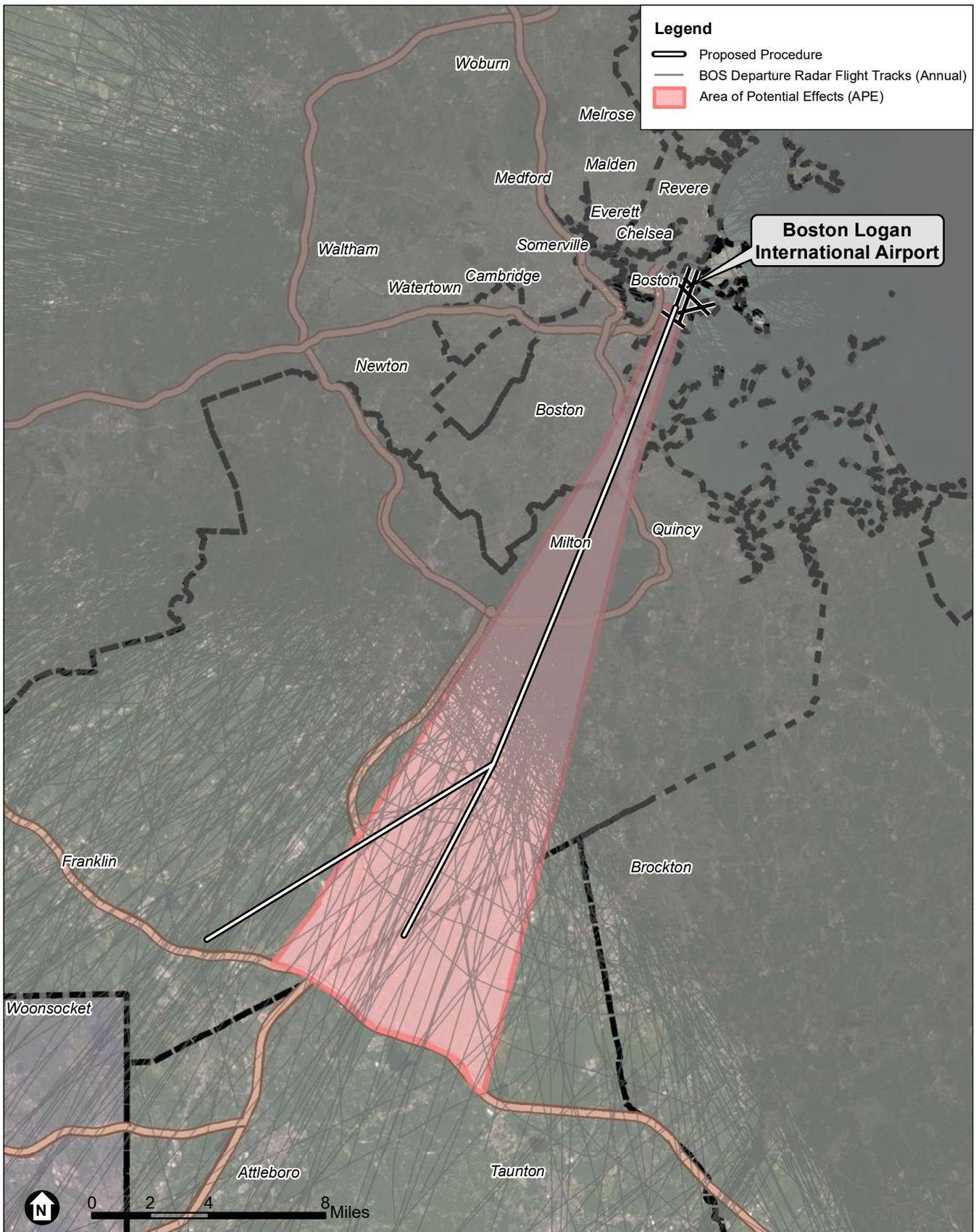
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

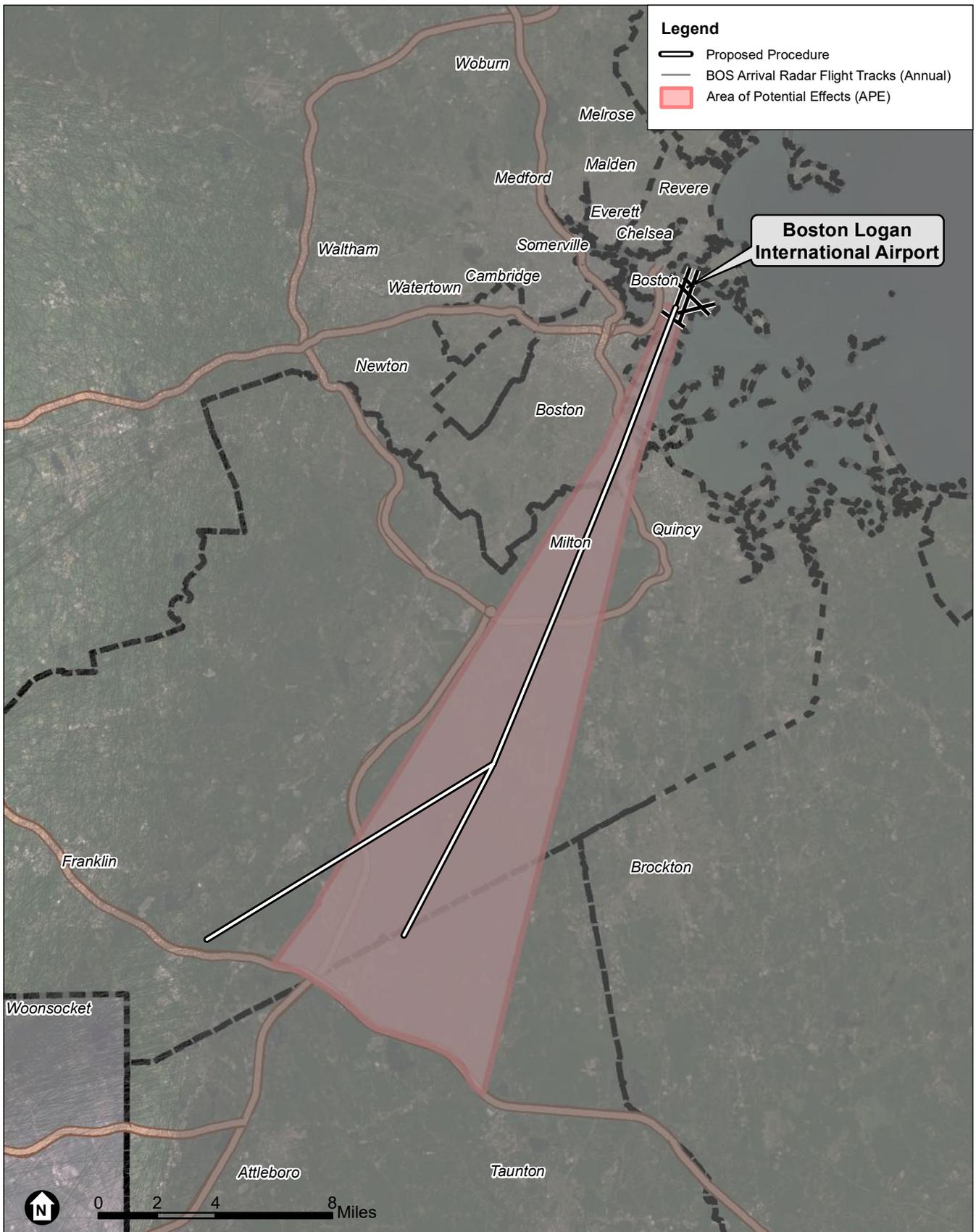
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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June 9, 2021

Town of Randolph Historical Commission
41 South Main Street
Randolph, MA 02368
United States

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Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

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Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
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Table 2: Number of State & Local Designated Properties within the APE

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Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

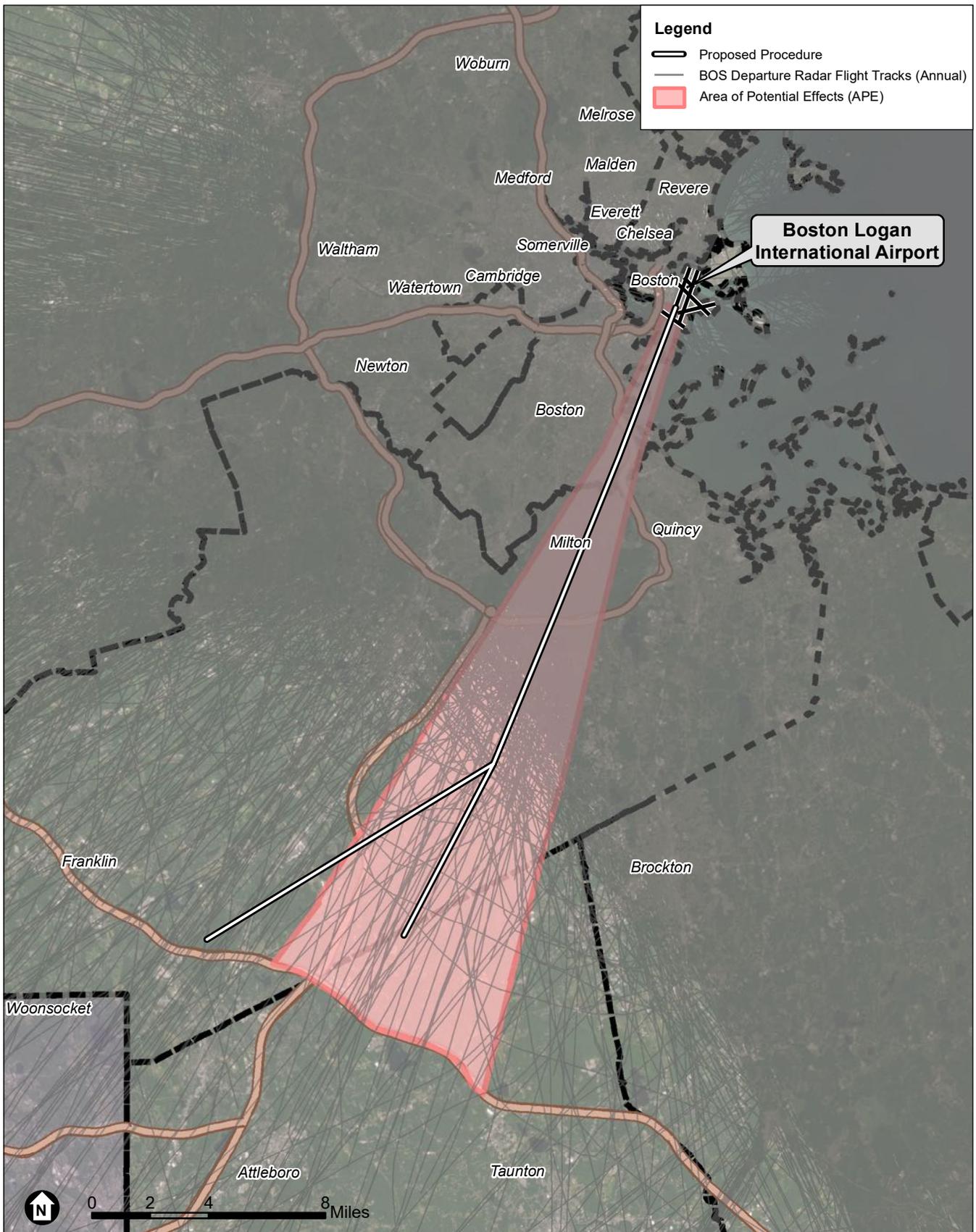
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

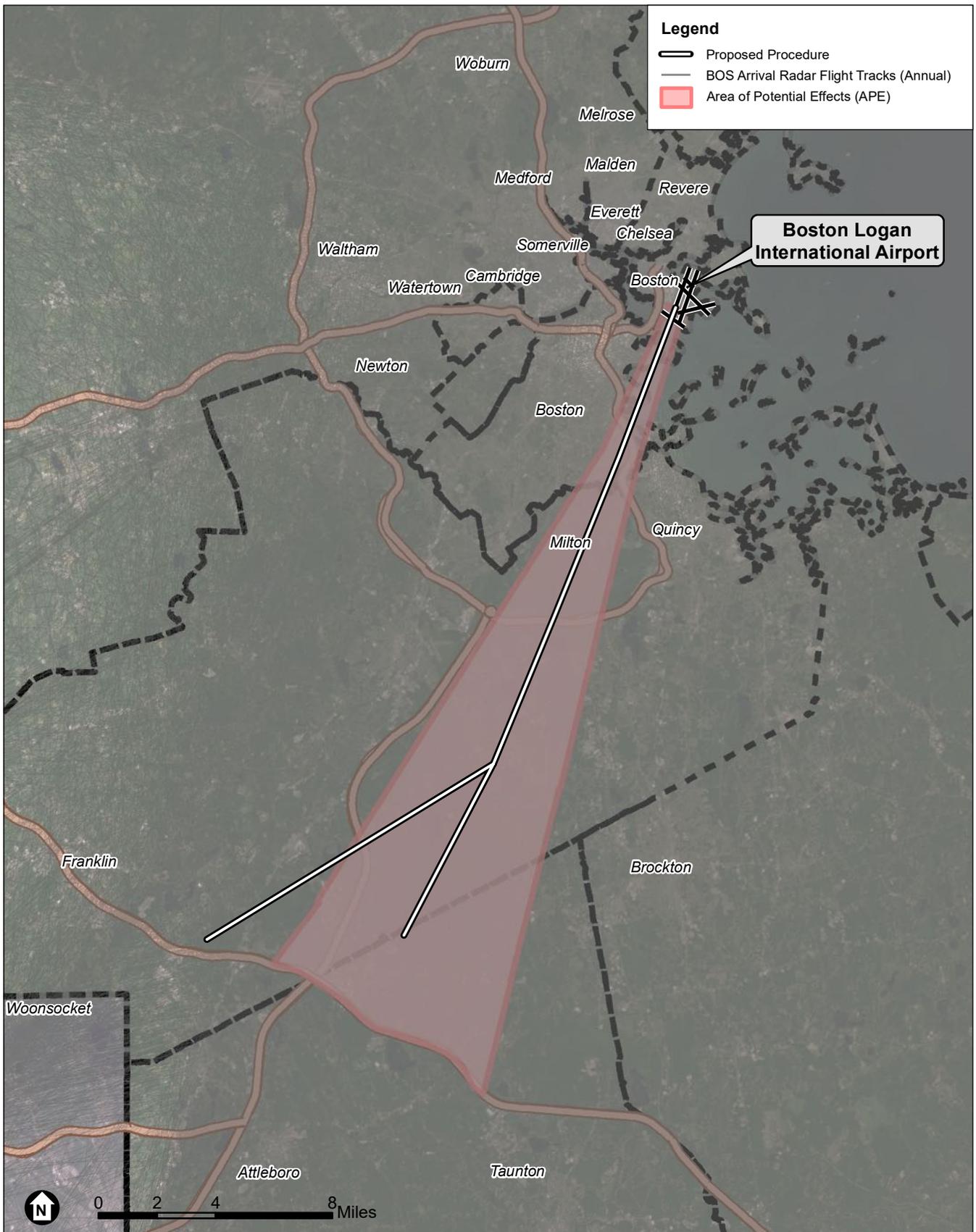
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Town of Sharon Historical Commission
90 South Main Street
Sharon, MA 02067

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
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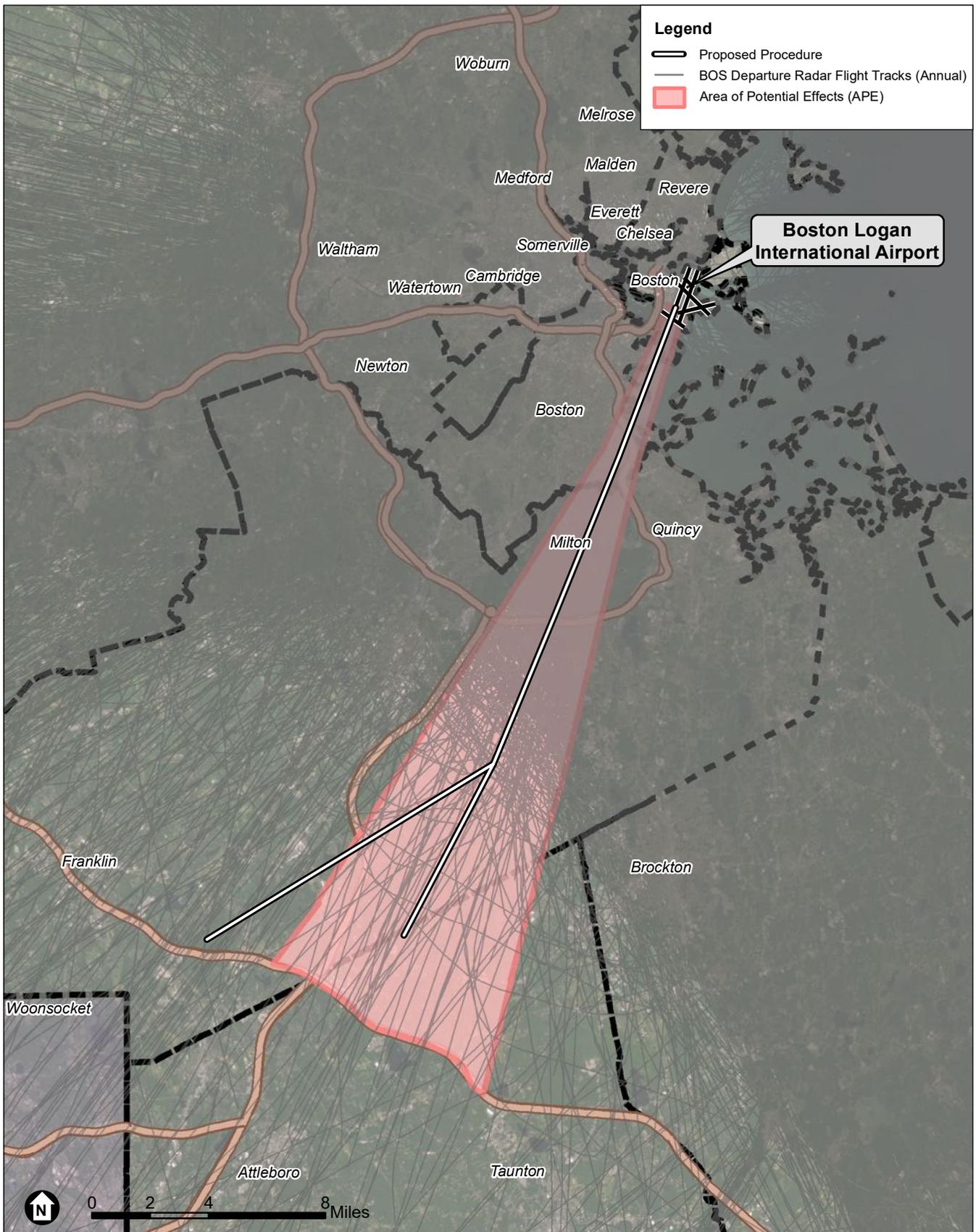
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In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

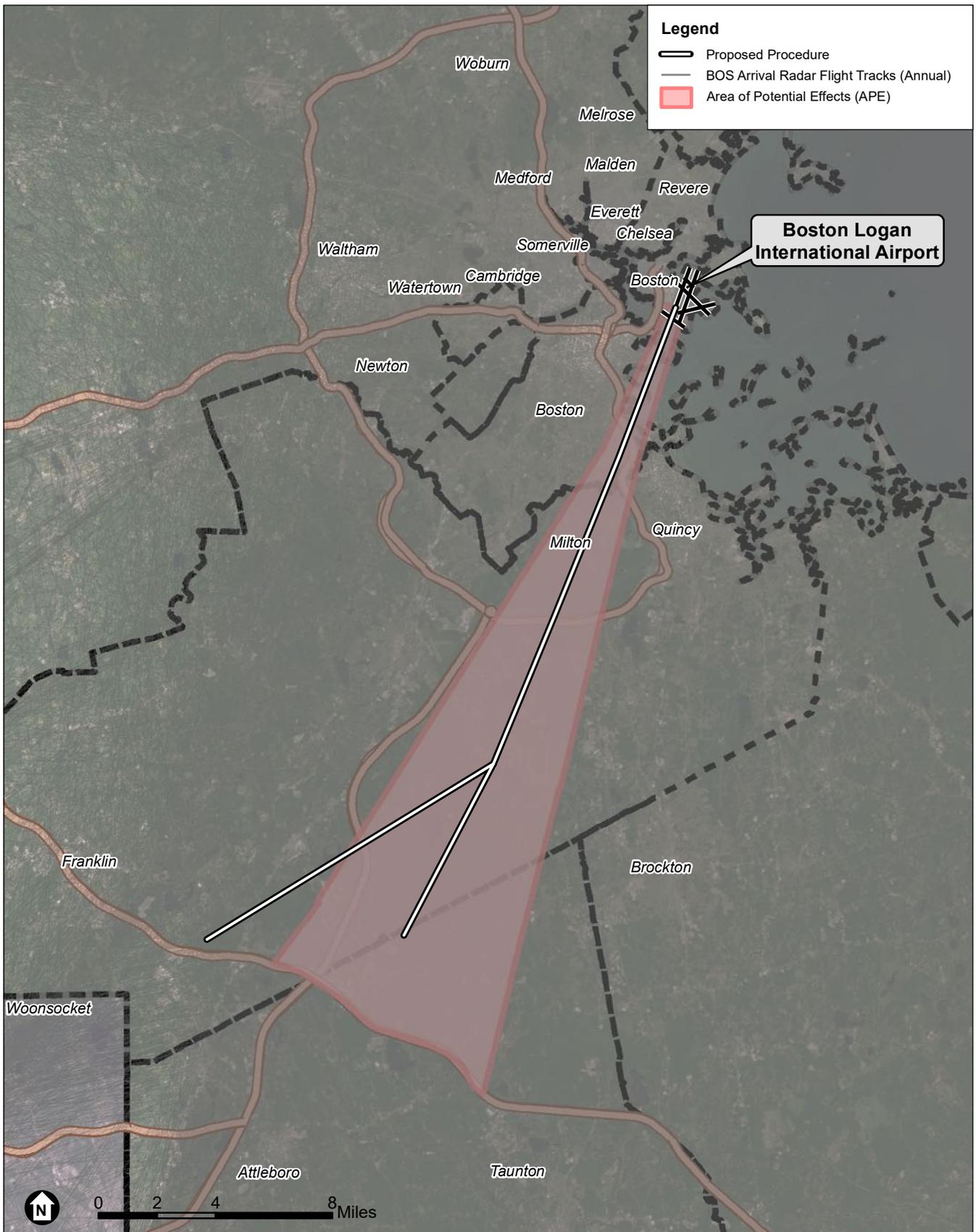
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment B
 Area of Potential Effects and Arrival Radar Flight Tracks

Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
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1701 Columbia Avenue
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U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Town of Stoughton Historical Commission
10 Pearl Street
Stoughton, MA 02072

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

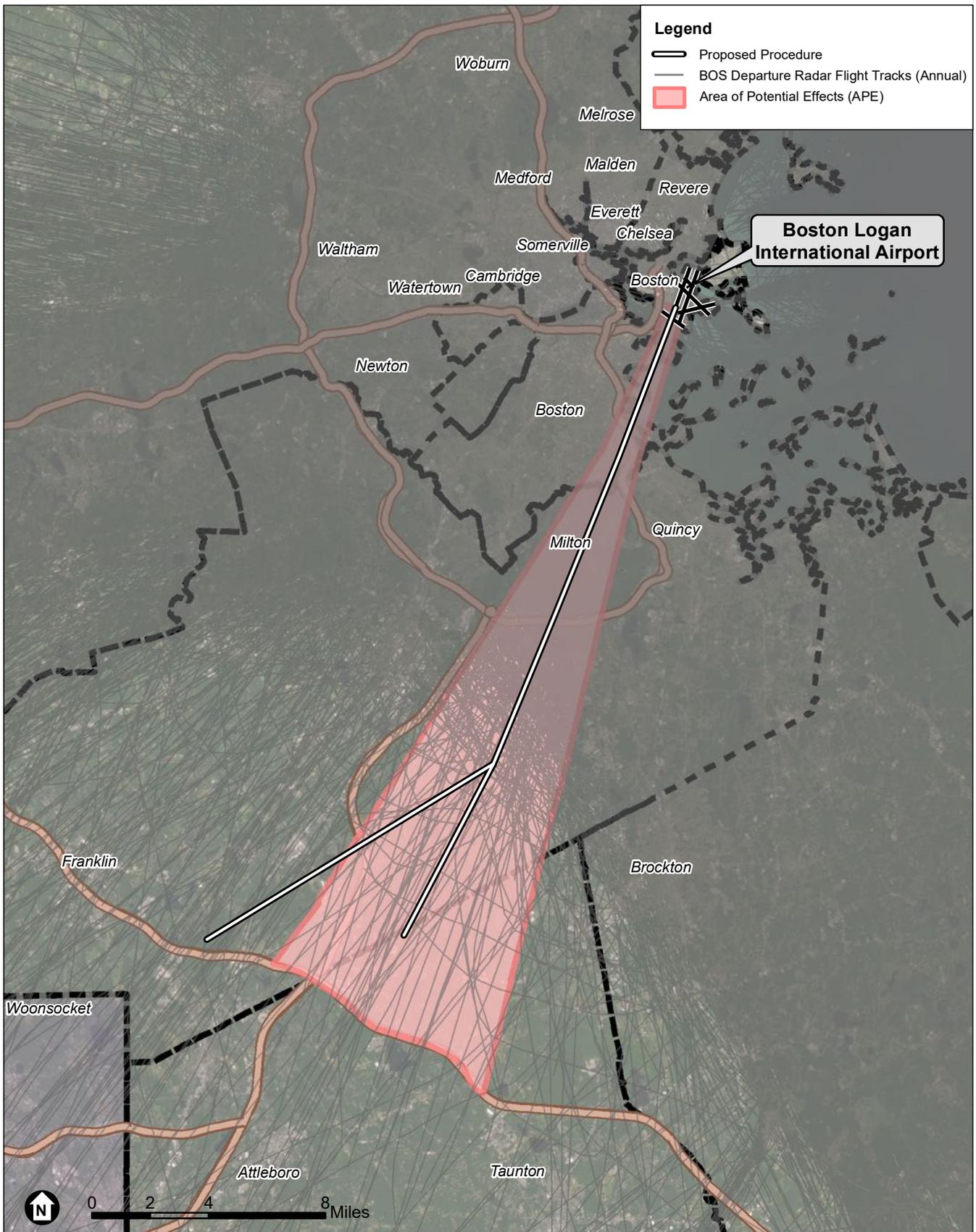
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

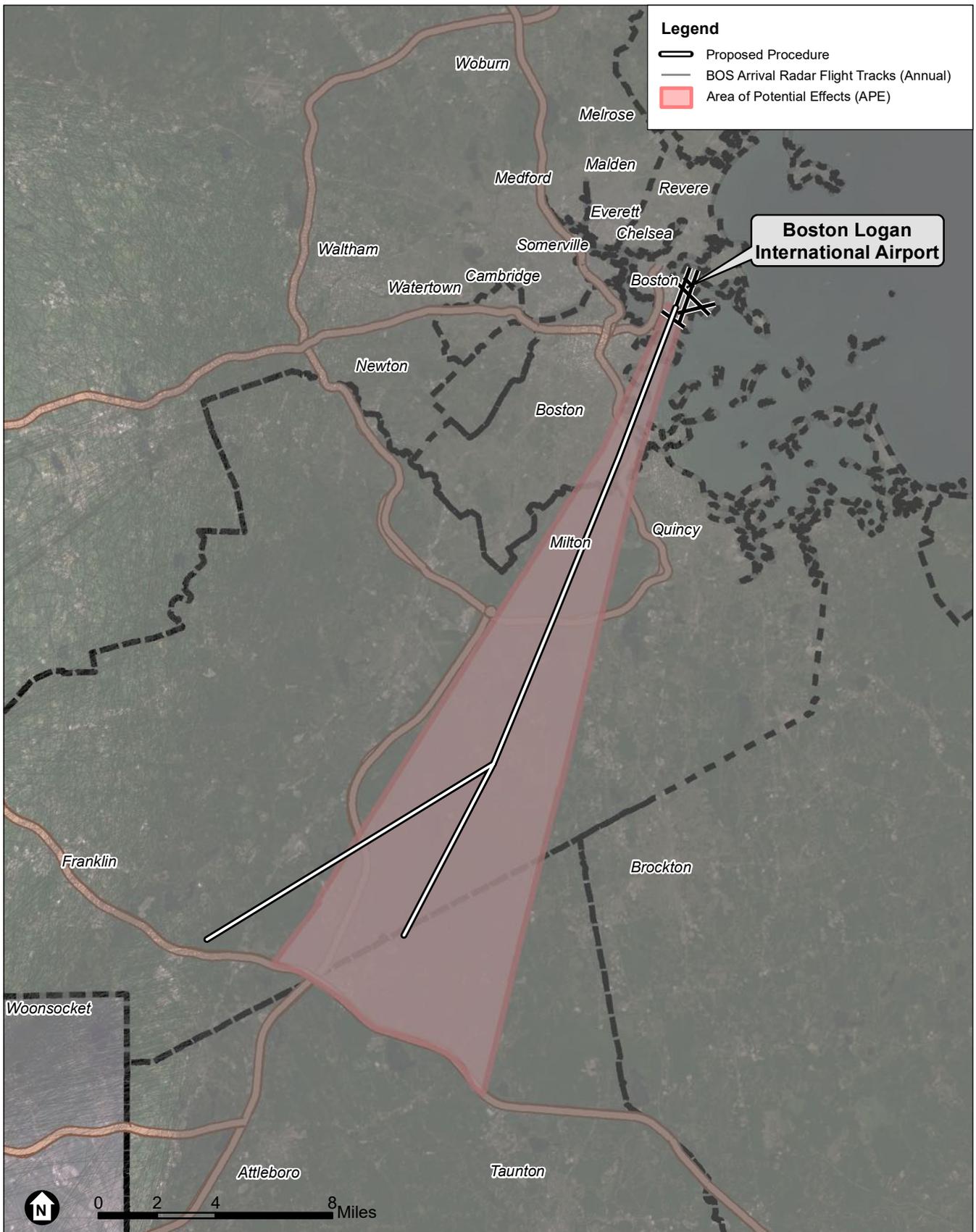
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SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
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U.S. Department
of Transportation
**Federal Aviation
Administration**

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June 9, 2021

Boston Planning & Development Agency
1 City Hall Square
9th Floor
Boston, MA 02201

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

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Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

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Table 1: National Register of Historic Places Properties within the APE

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Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
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Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

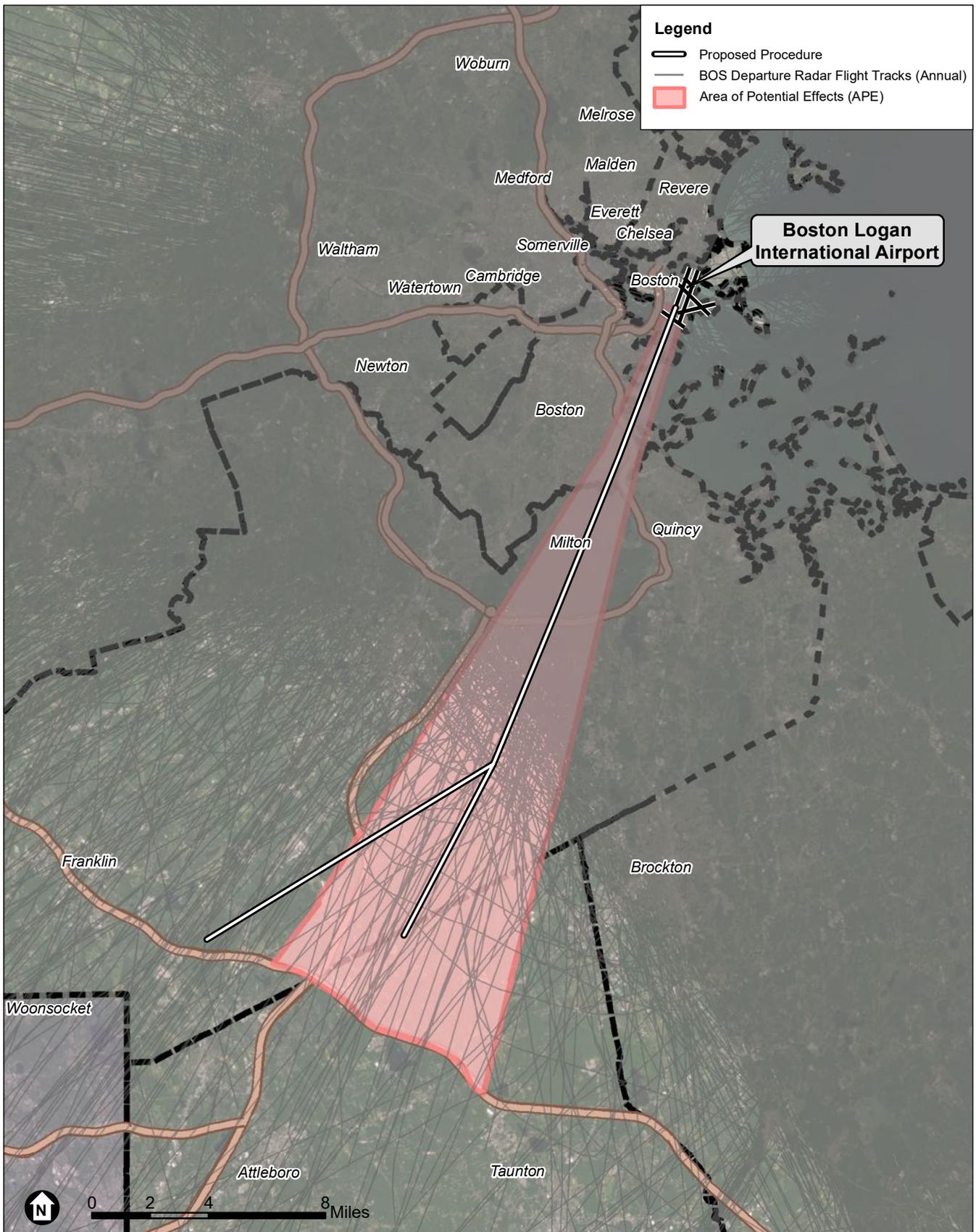
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.

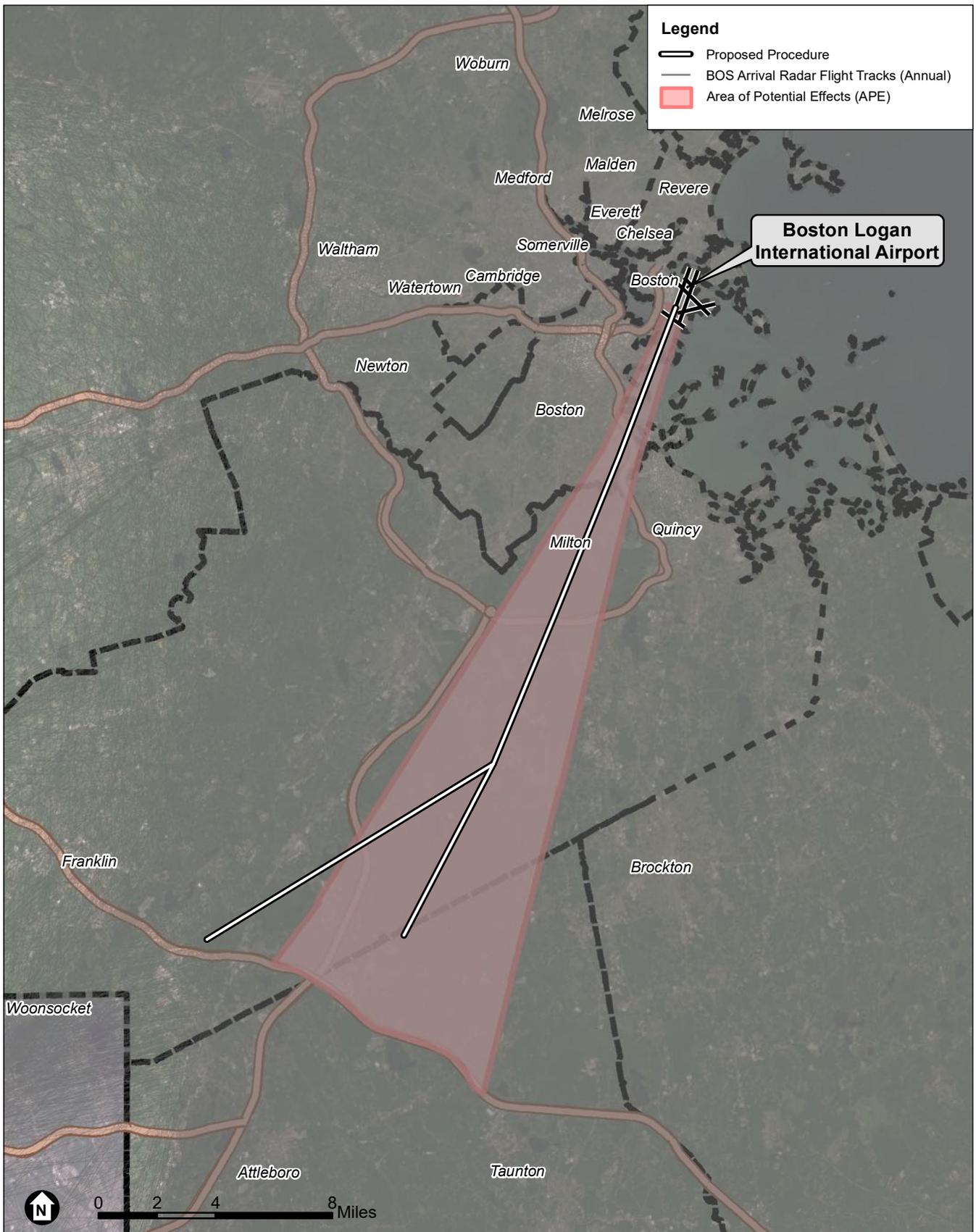


SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment A
 Area of Potential Effects and Departure Radar Flight Tracks



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

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1701 Columbia Avenue
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June 9, 2021

Office of the Planning Board
Memorial Hall
801 Washington Street
2nd Floor
Canton, MA 02021

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

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Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

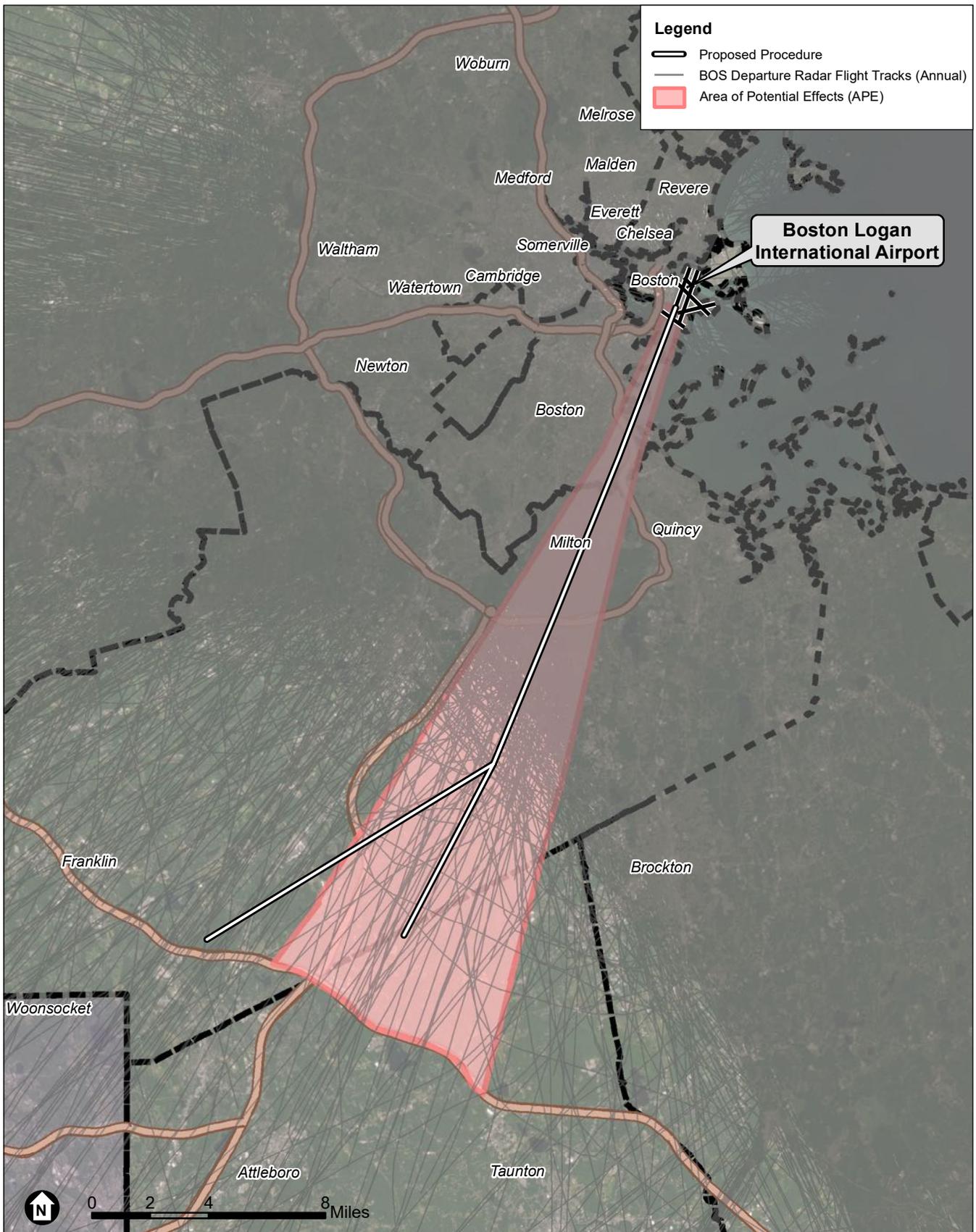
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

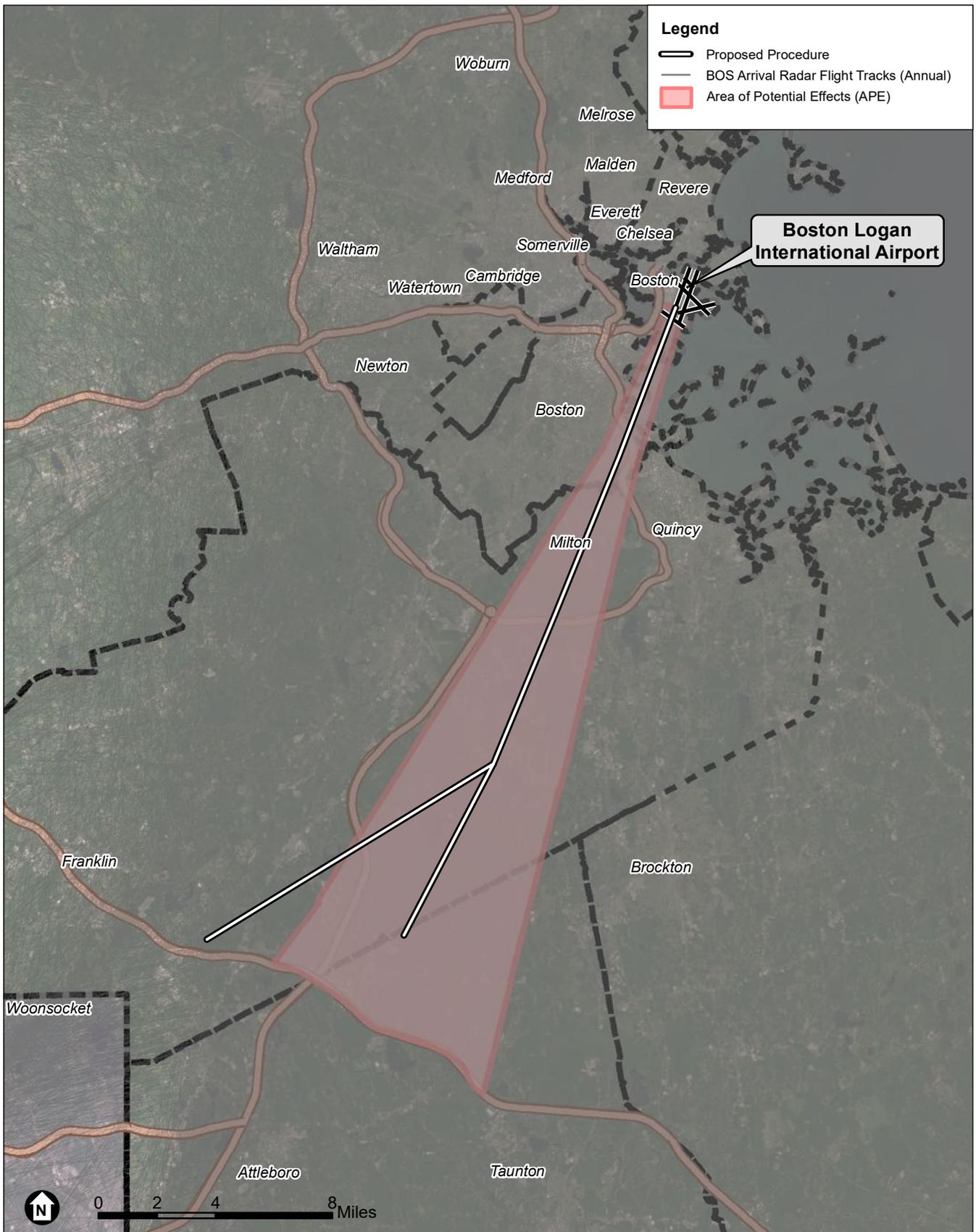
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Planning & Zoning Board
136 Elm Street
North Easton, MA 02356

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knot neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

<i>Town</i>	<i>Number of State & Local Designated Properties</i>
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

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In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

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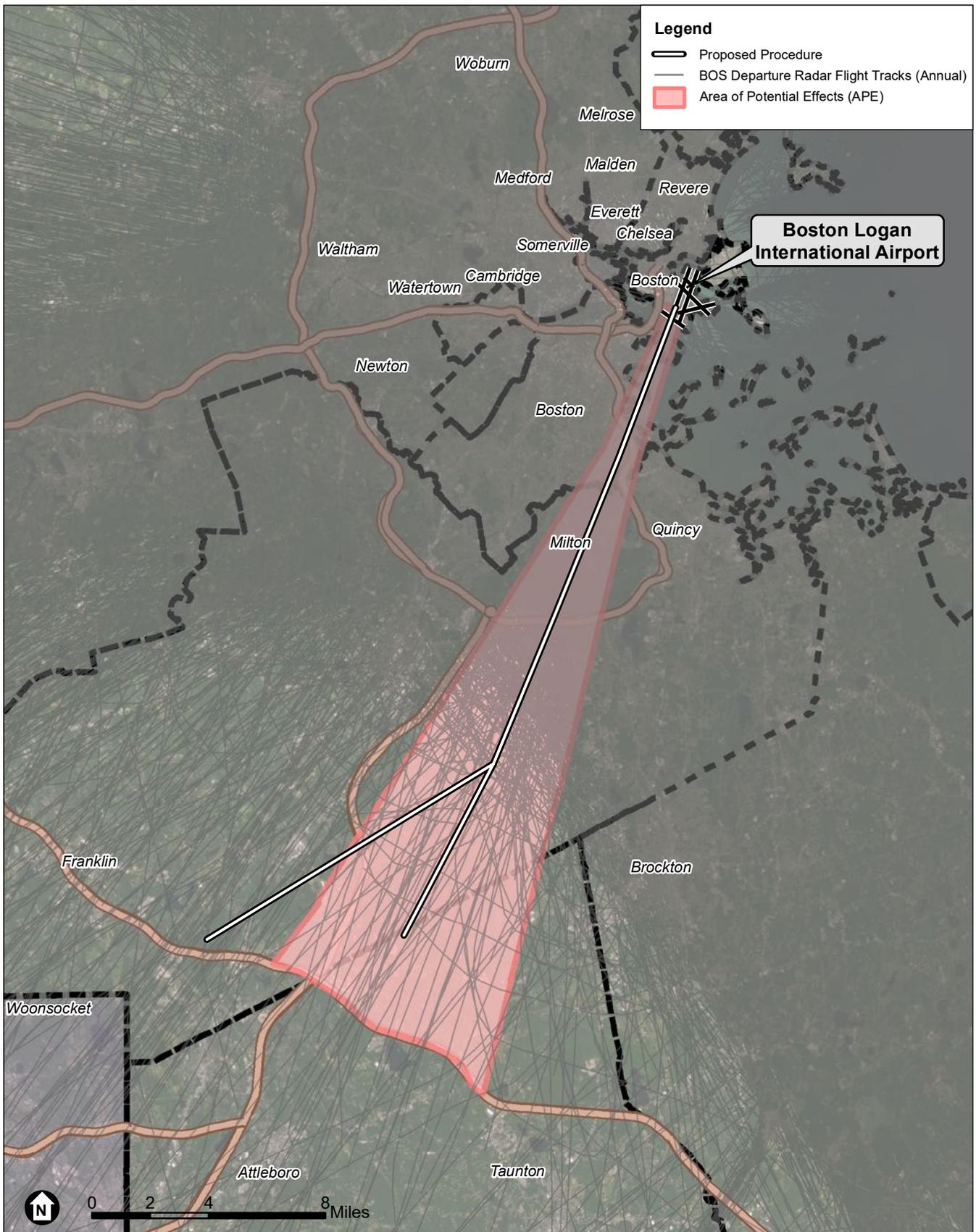
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In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

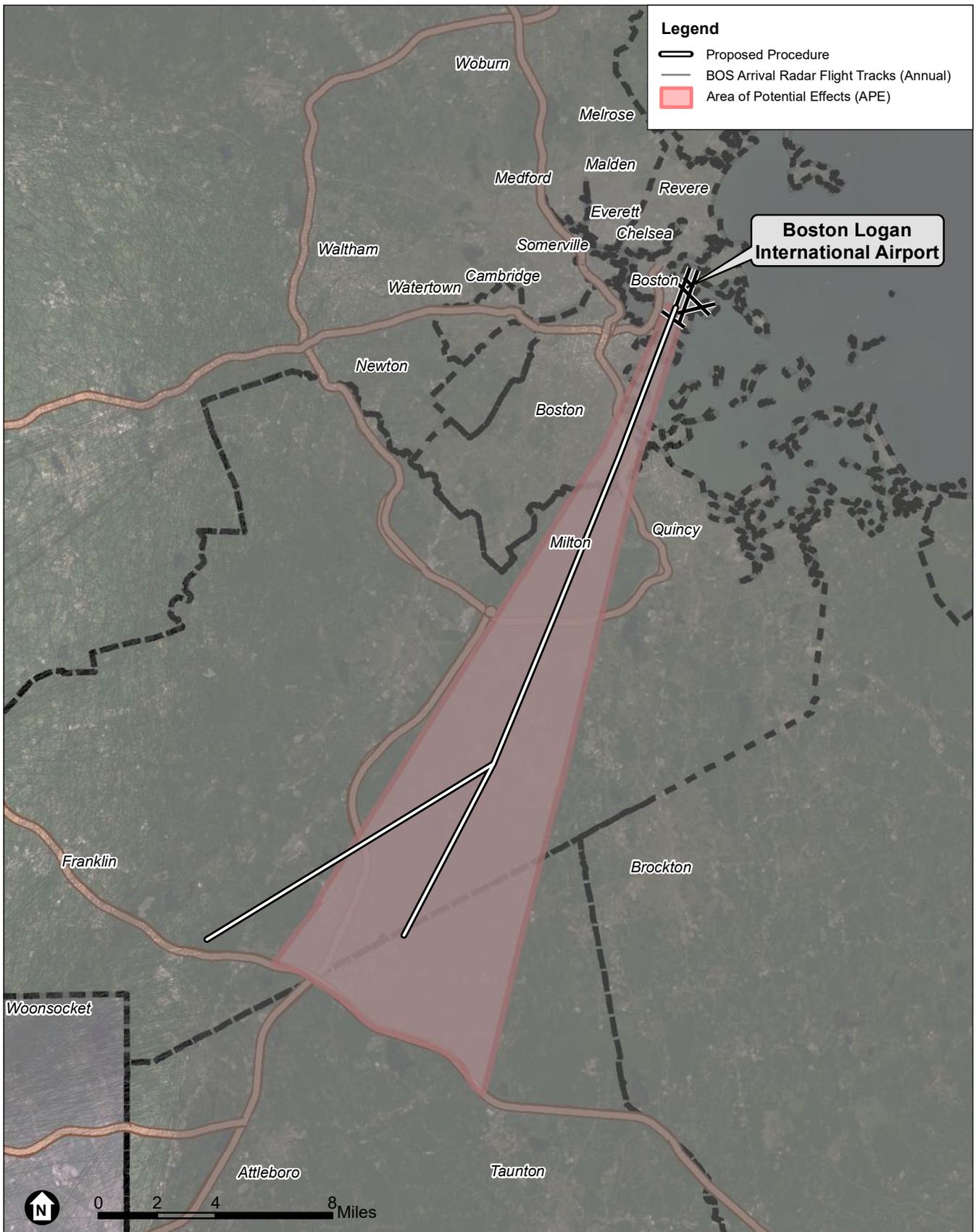
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Boston Logan RNAV (GPS) RWY 4L EA





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Finding of No Adverse Effect Criteria

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- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

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We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Foxborough Planning Board
40 South Street
Foxborough, MA 02035

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

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Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

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Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

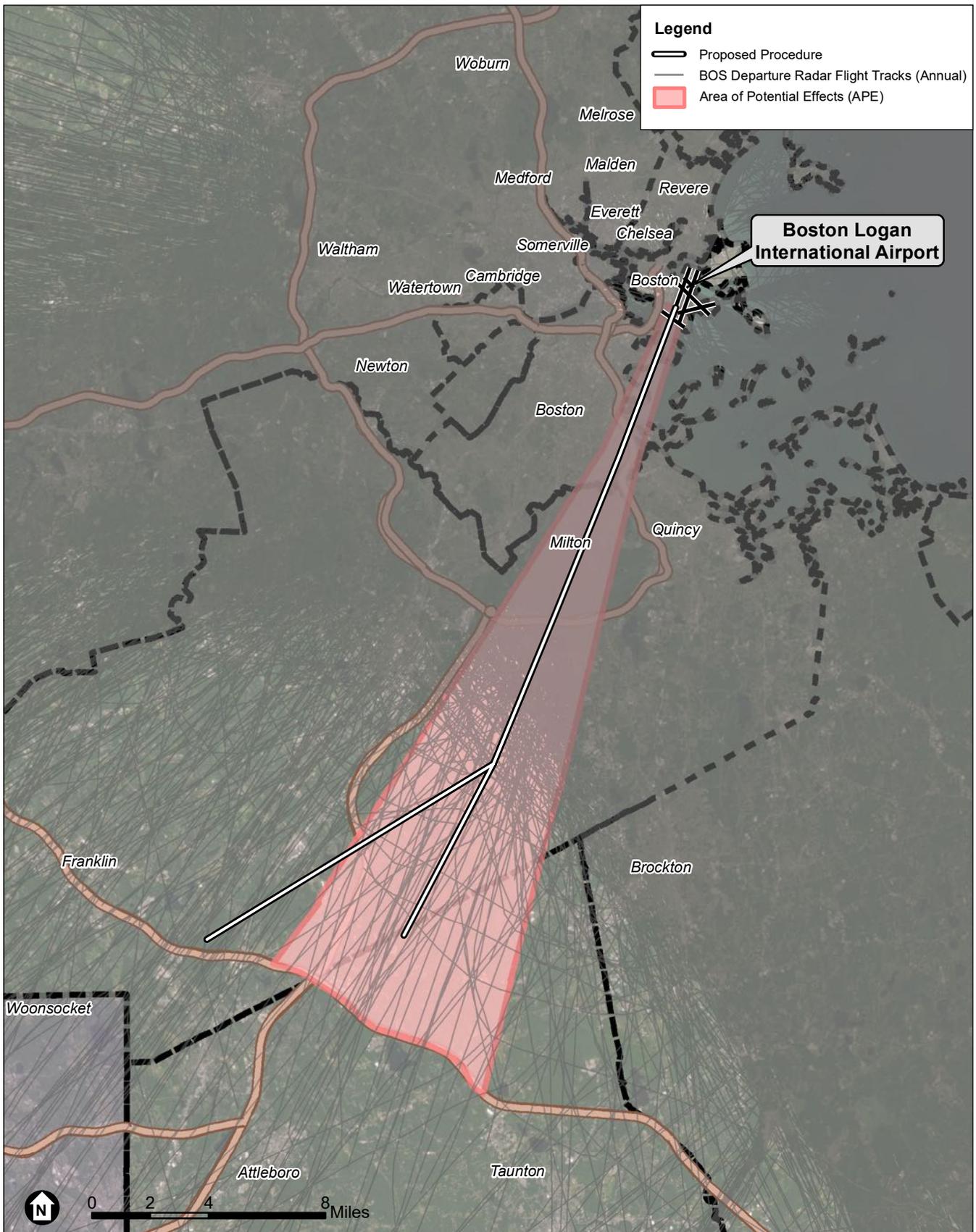
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

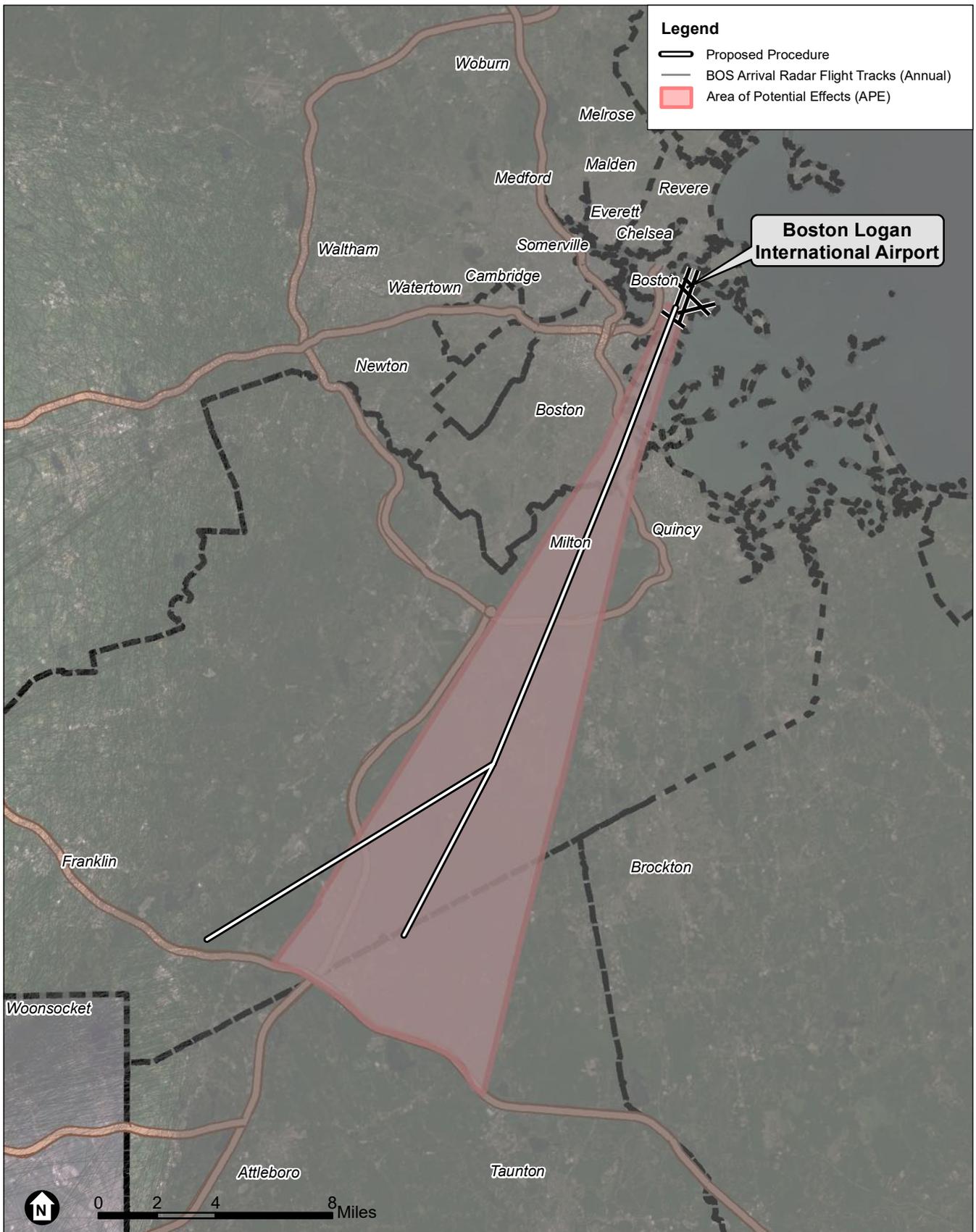
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
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Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

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This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

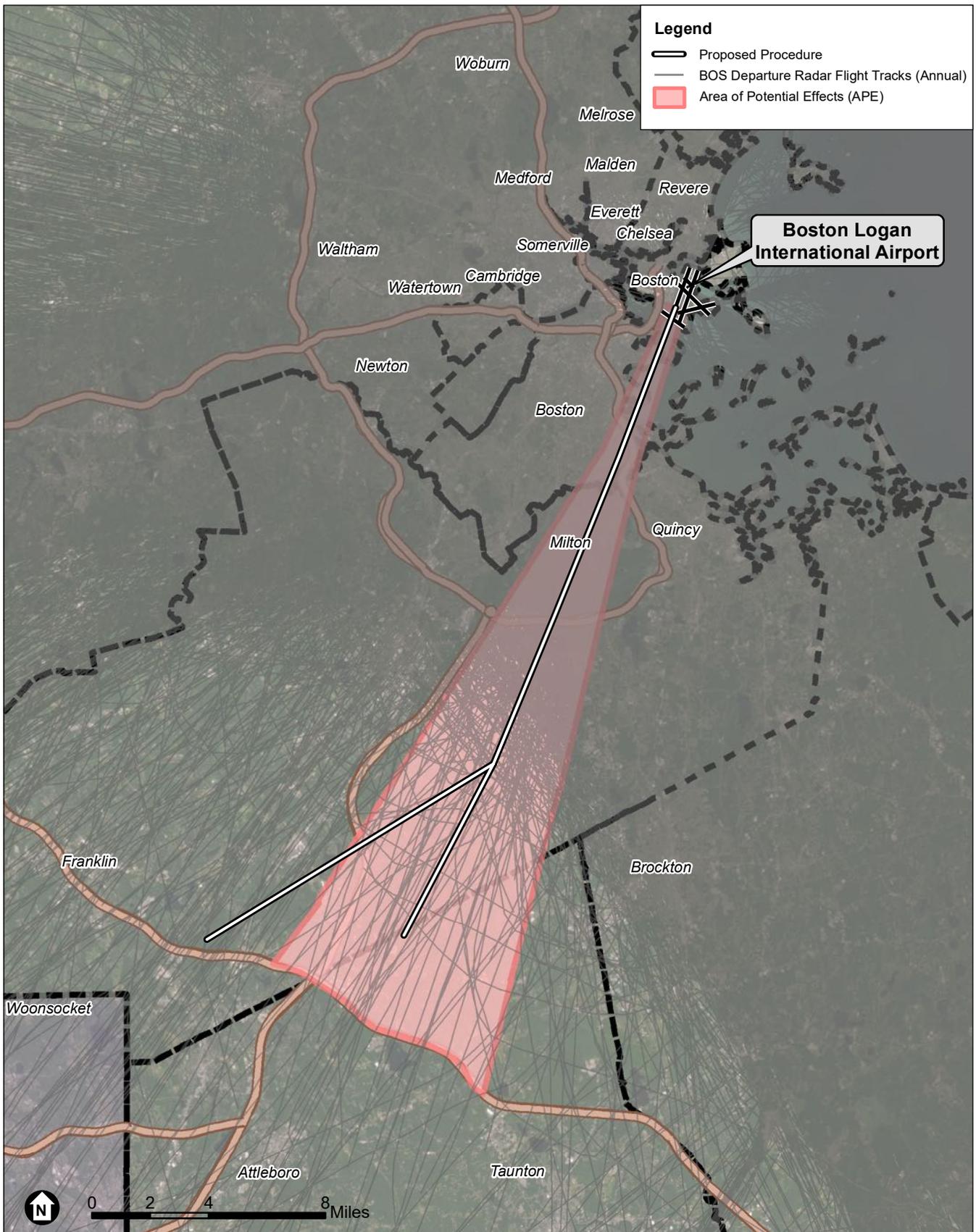
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

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The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

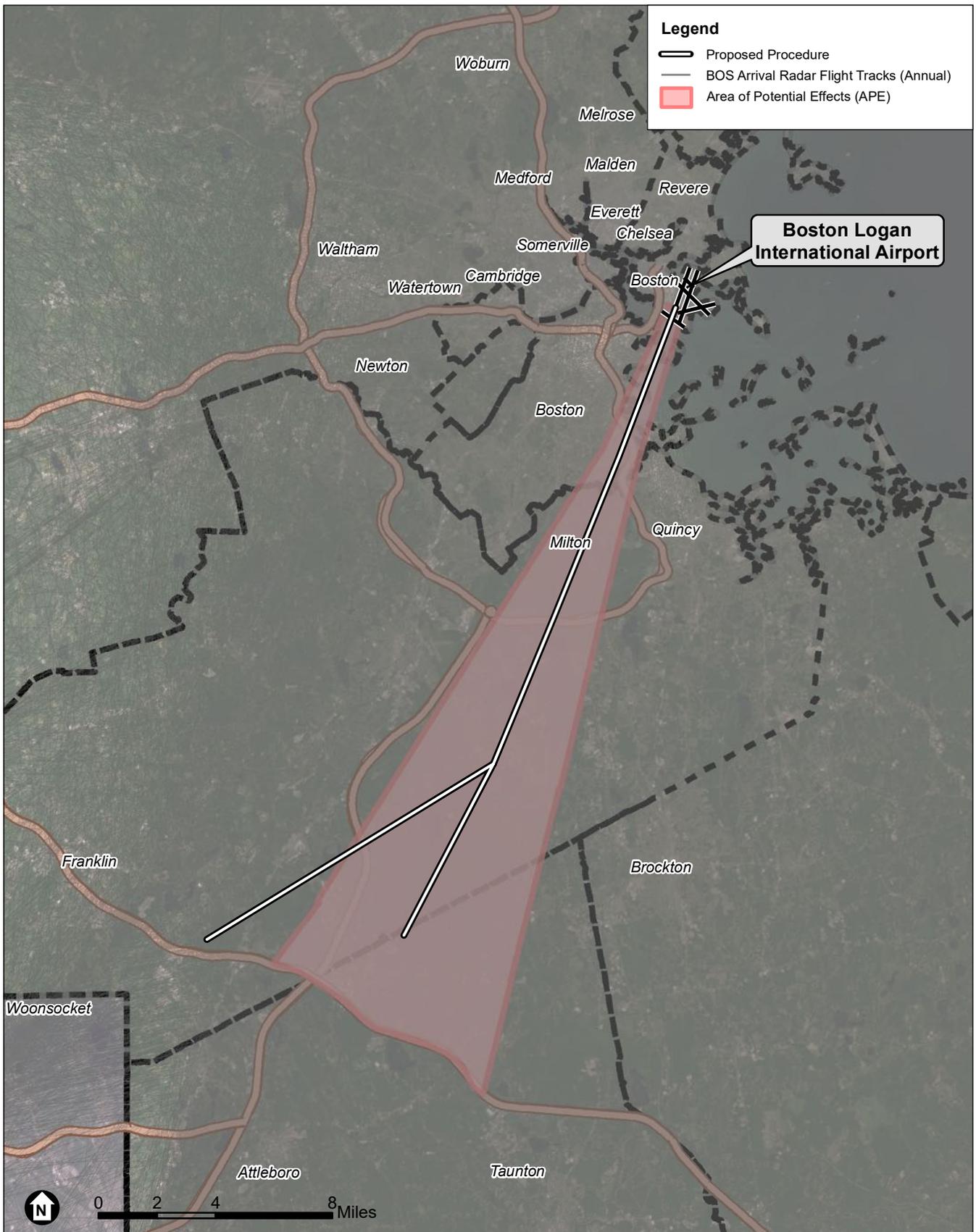
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Milton Planning Board
525 Canton Avenue
Milton, Massachusetts 02186

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

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Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
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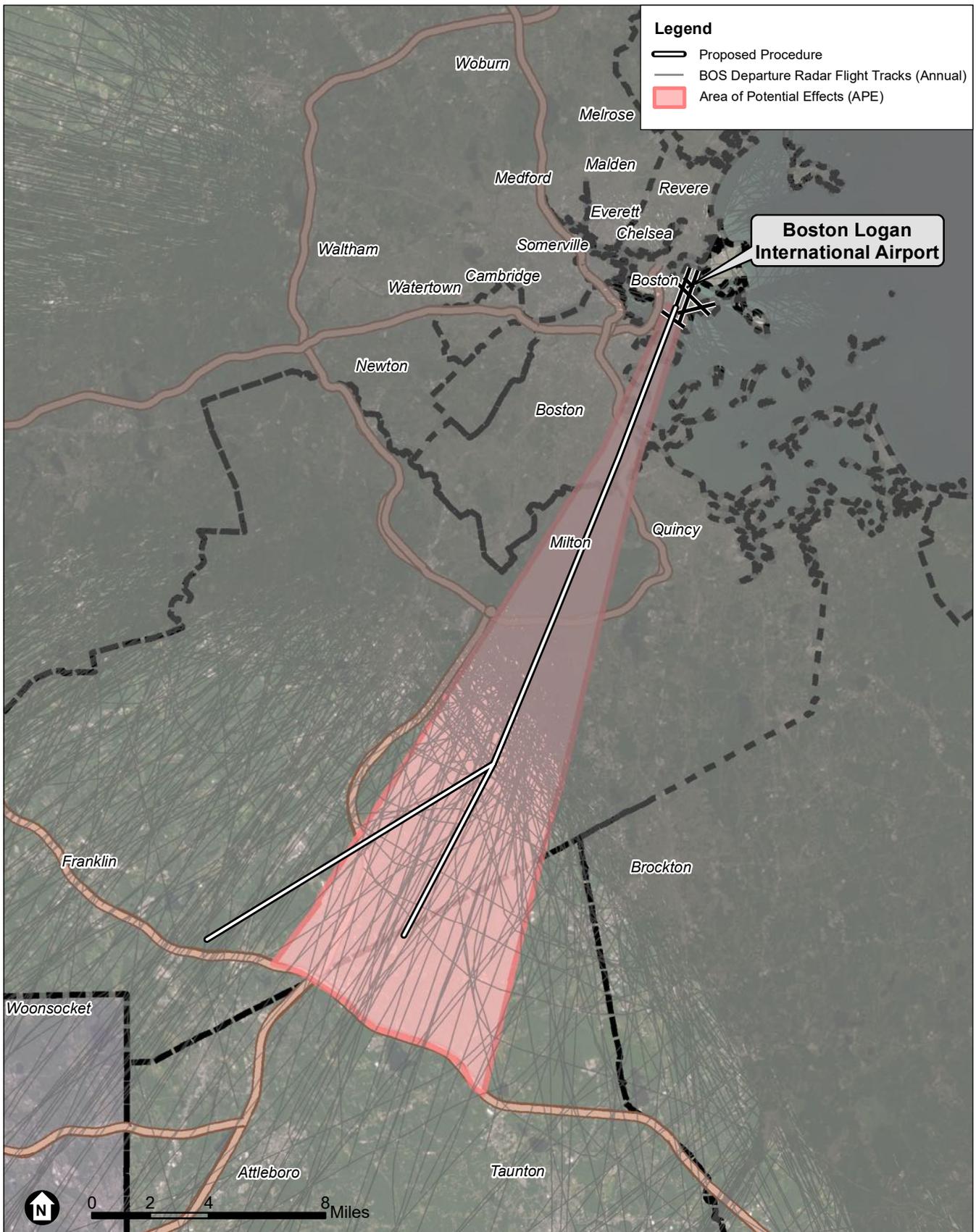
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In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

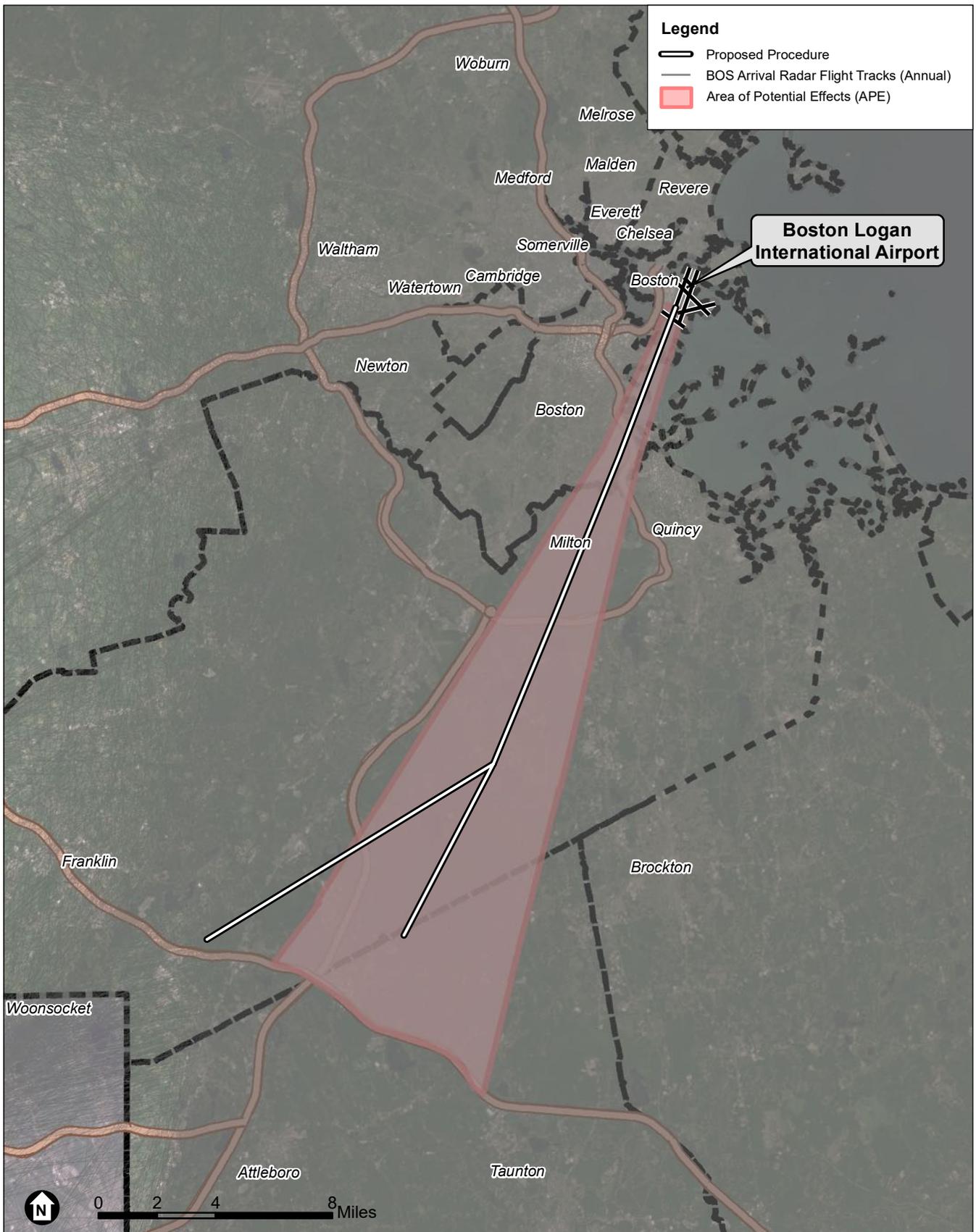
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment B
 Area of Potential Effects and Arrival Radar Flight Tracks

Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
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1701 Columbia Avenue
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U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

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June 9, 2021

Norton Planning and Economic Development
Norton Municipal Center- 2nd Floor
70 East Main St
Norton, MA 02788
United States

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

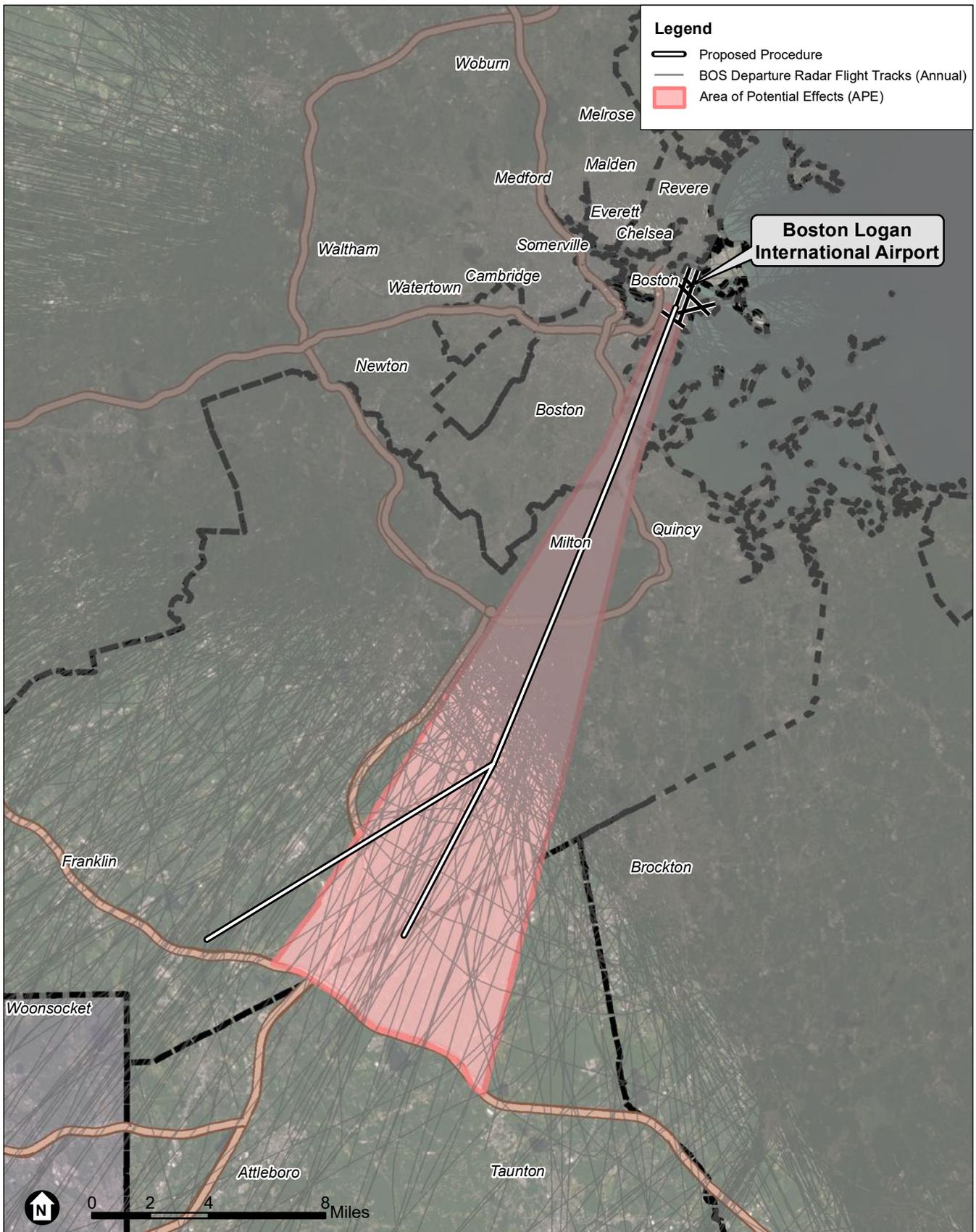
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.

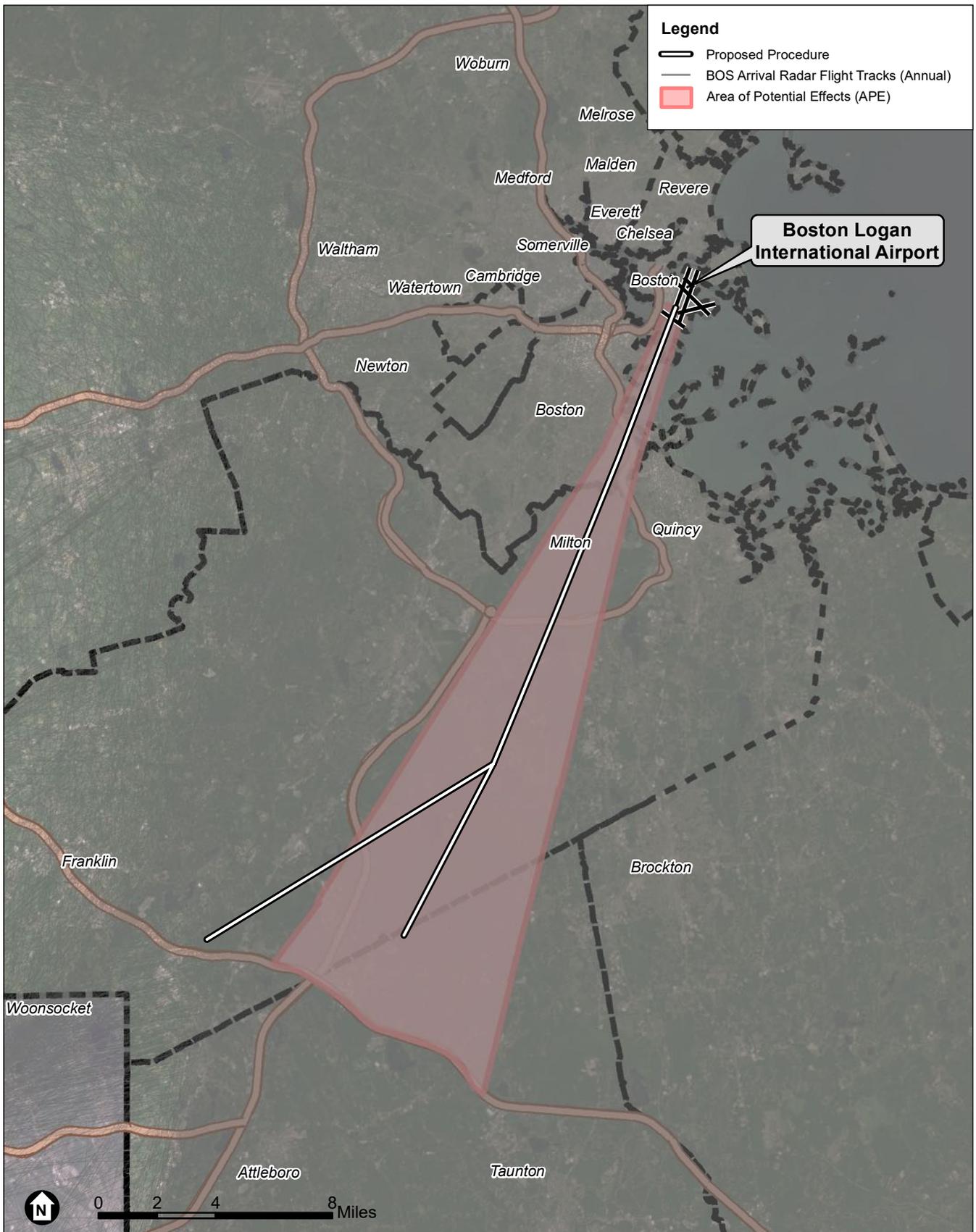


SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment A
 Area of Potential Effects and Departure Radar Flight Tracks



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
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U.S. Department
of Transportation
**Federal Aviation
Administration**

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June 9, 2021

City of Quincy Planning Board
1305 Hancock St.
Quincy, MA 02169

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

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Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
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Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
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Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
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Foxborough	194
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Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

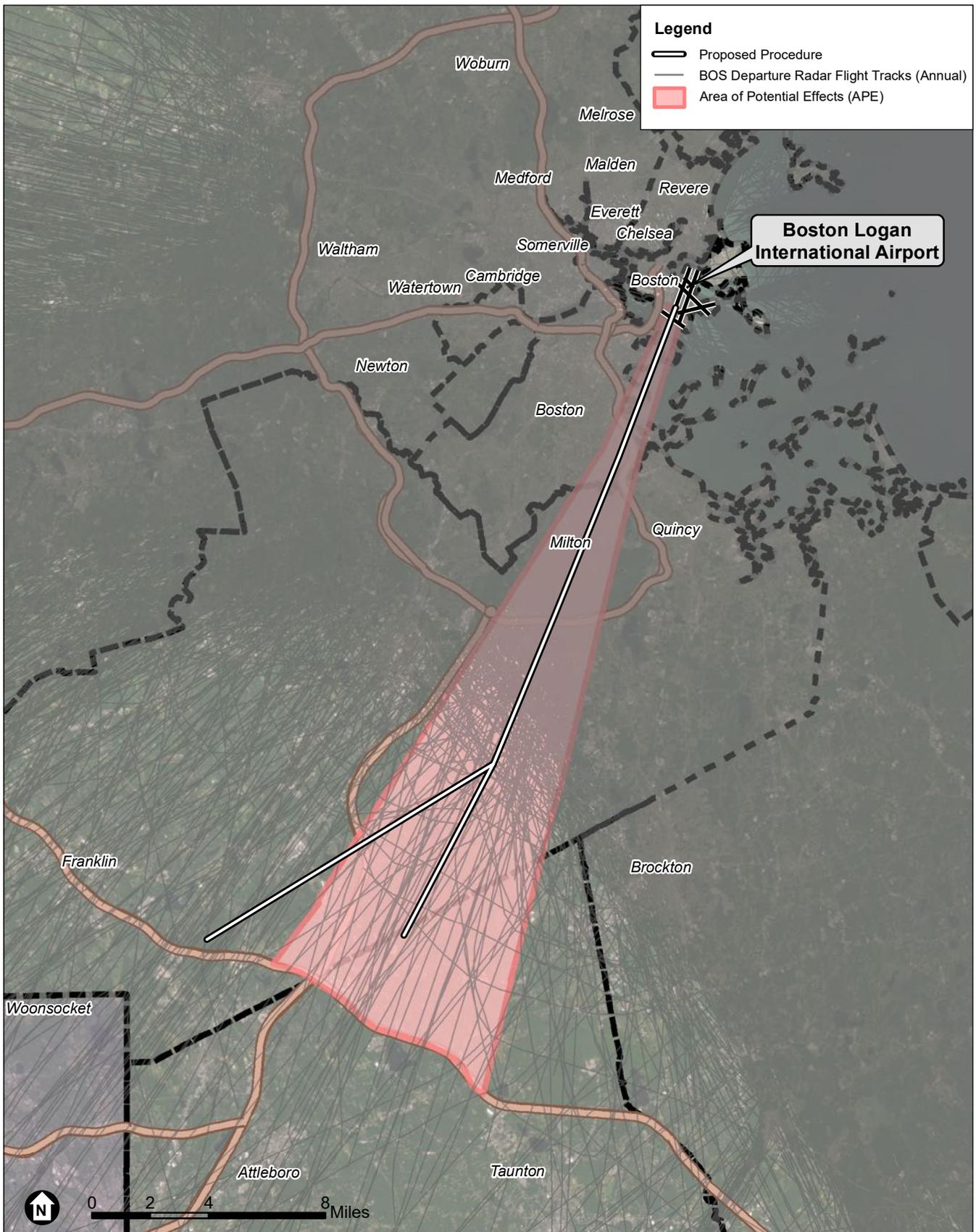
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

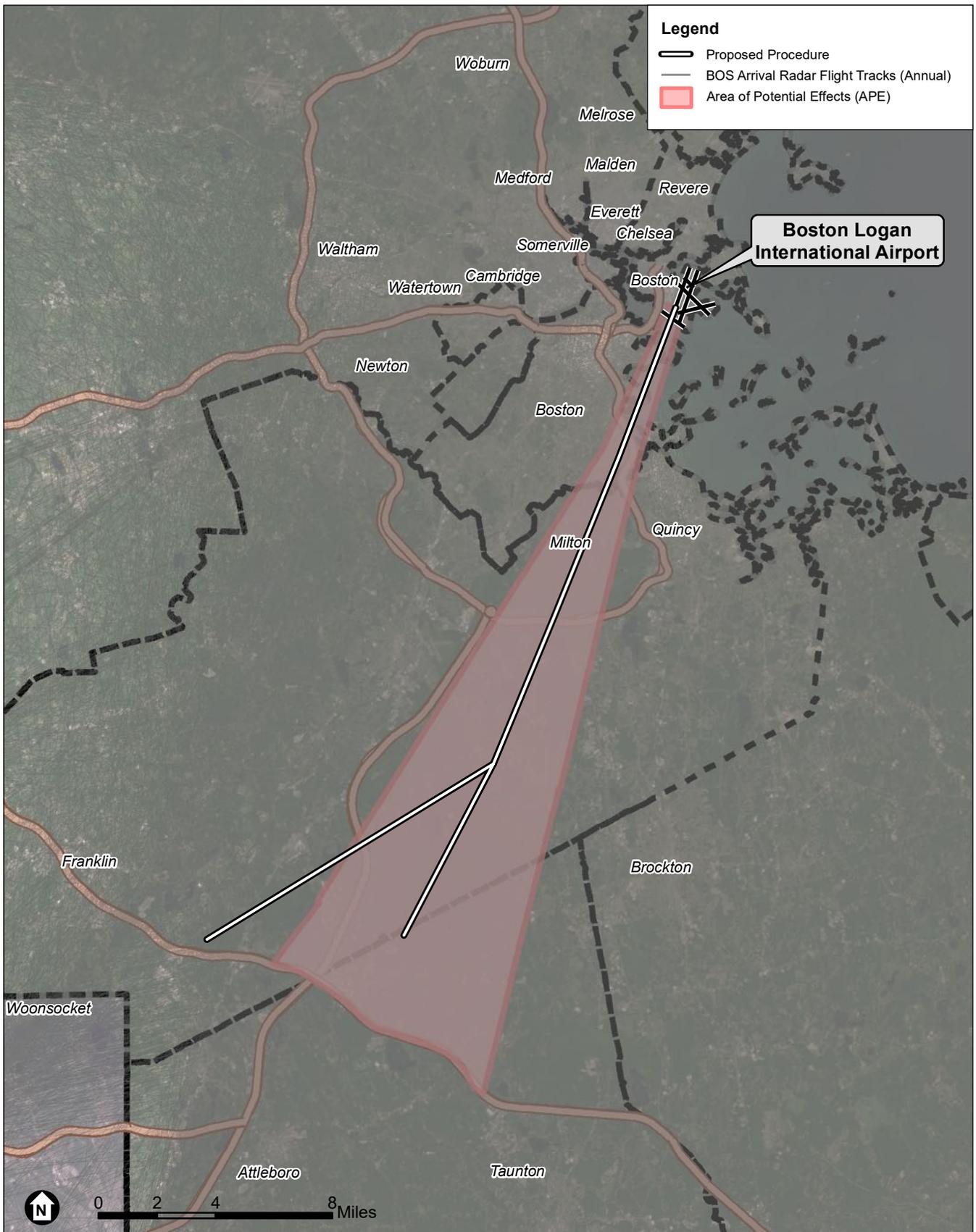
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





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Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Town of Randolph Planning Department
41 South Main Street
Randolph, MA 02368
United States

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

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Grand Total	4,184

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In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

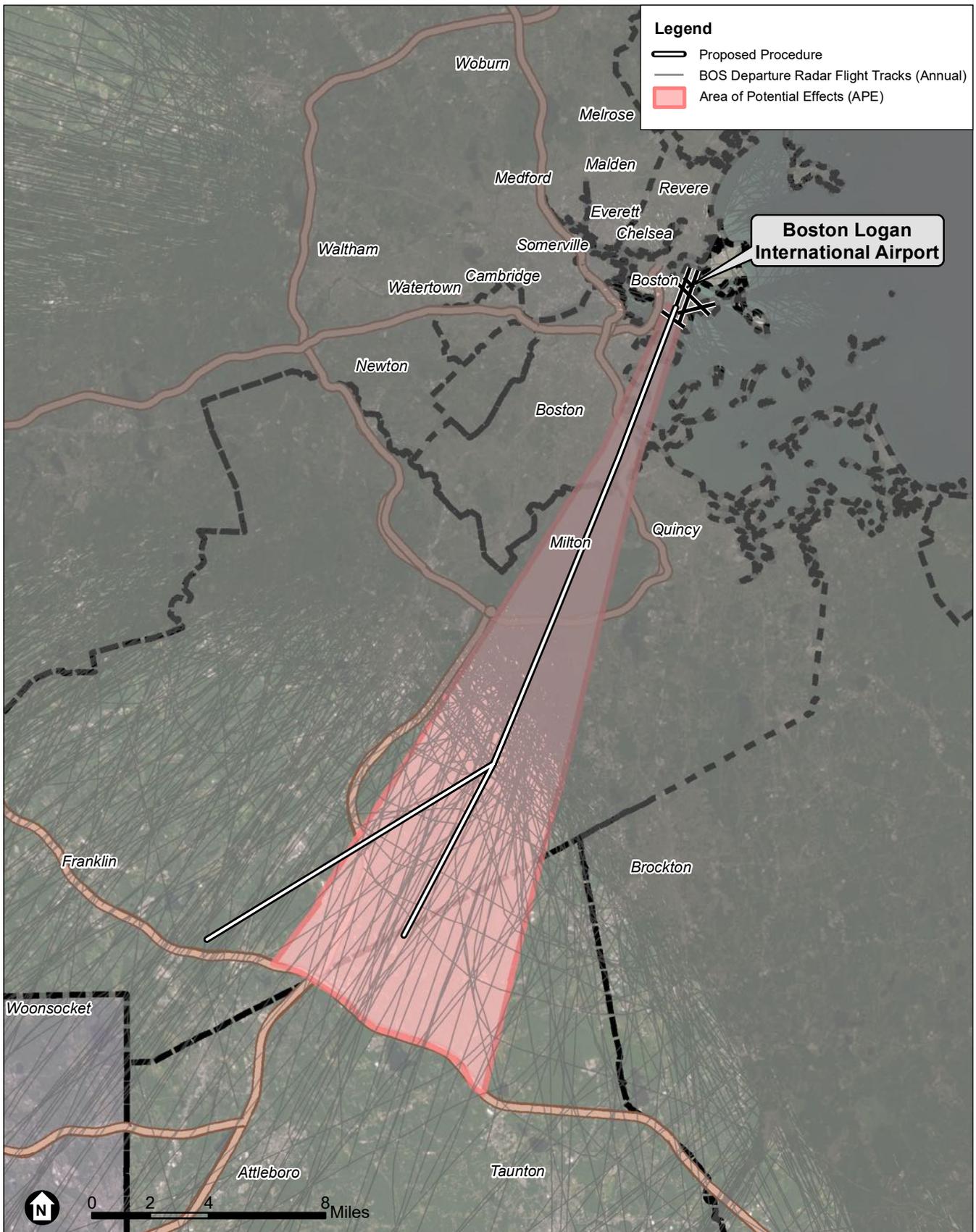
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

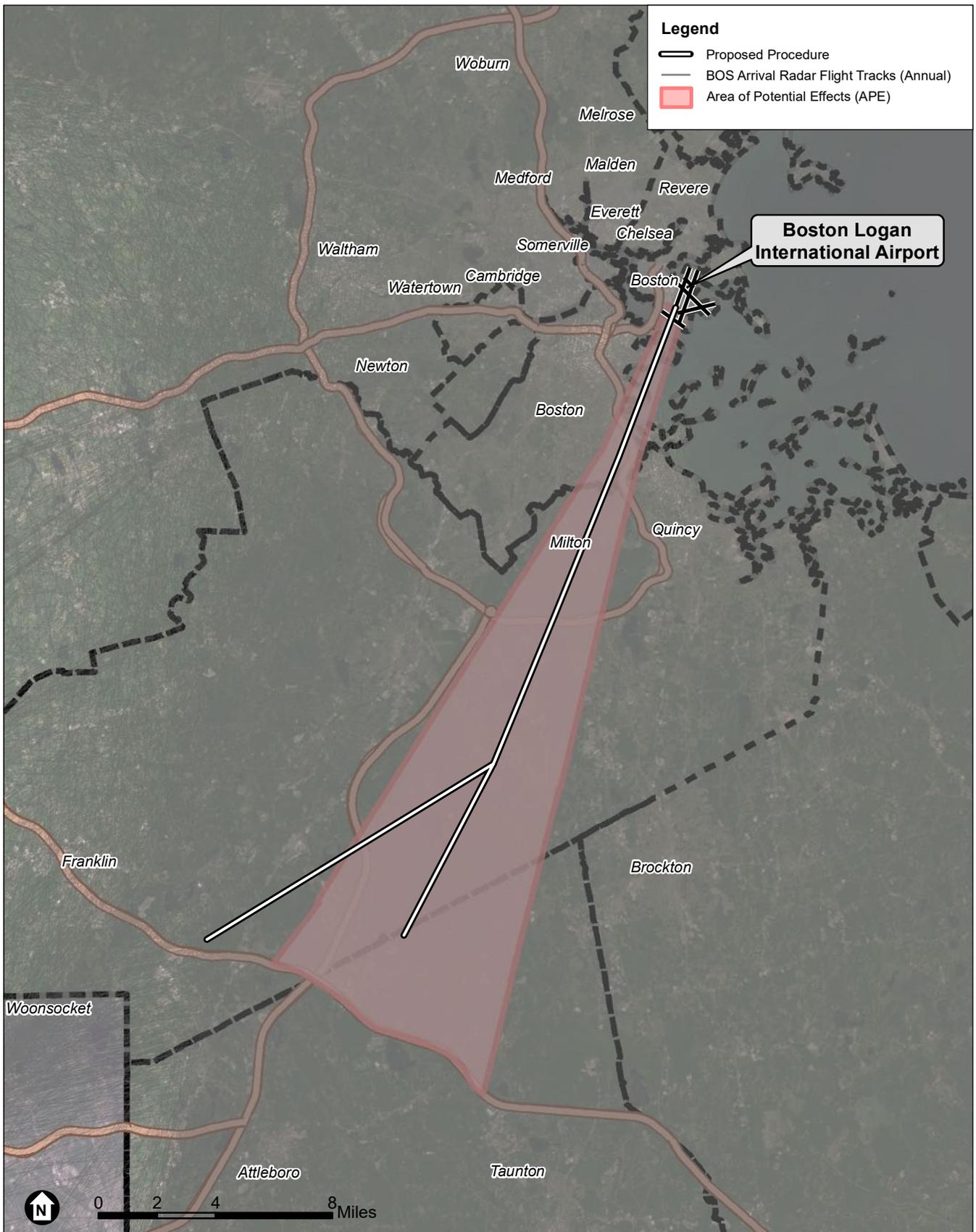
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Town of Sharon Planning Board
90 South Main Street
Sharon, MA 02067

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

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- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

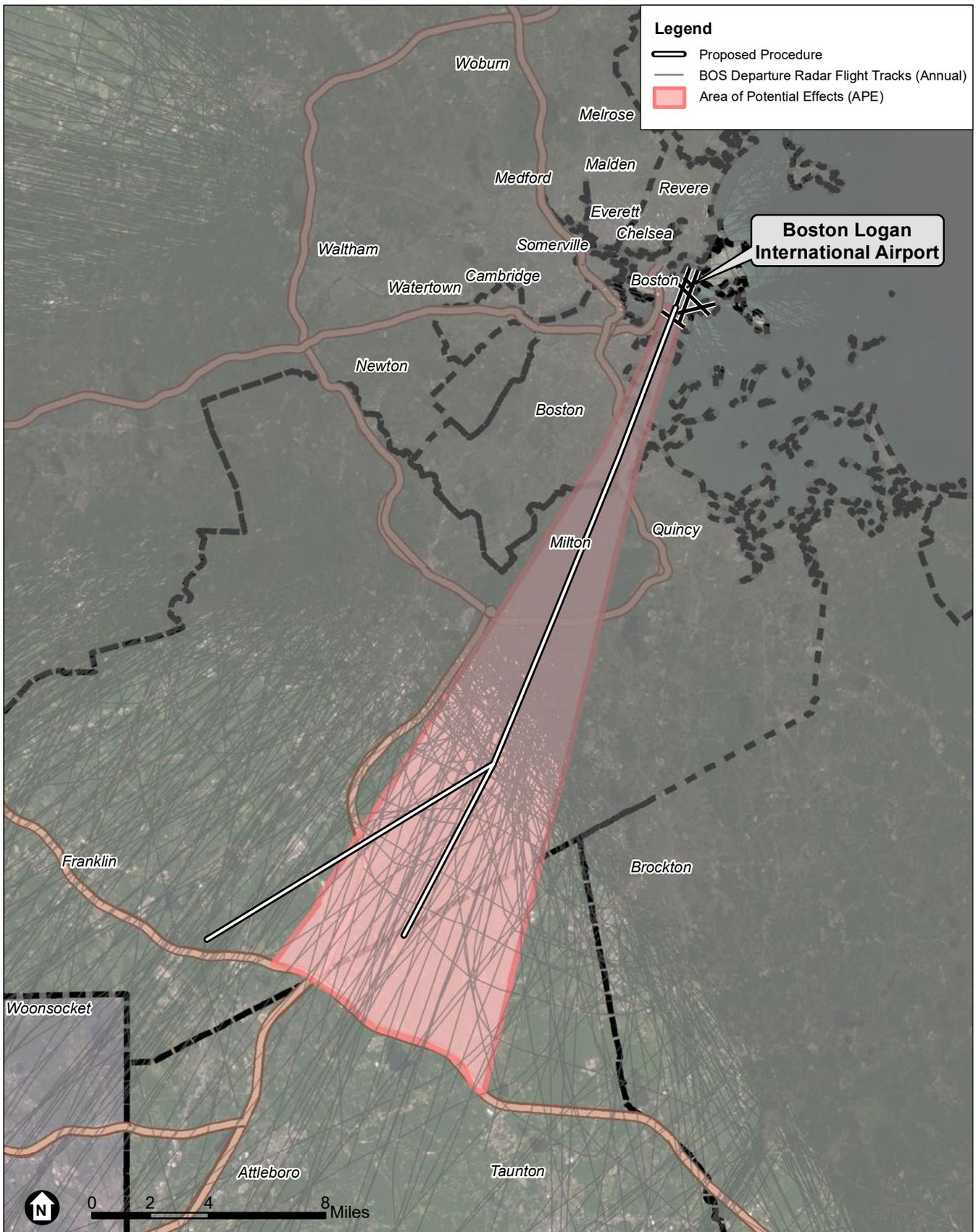
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.

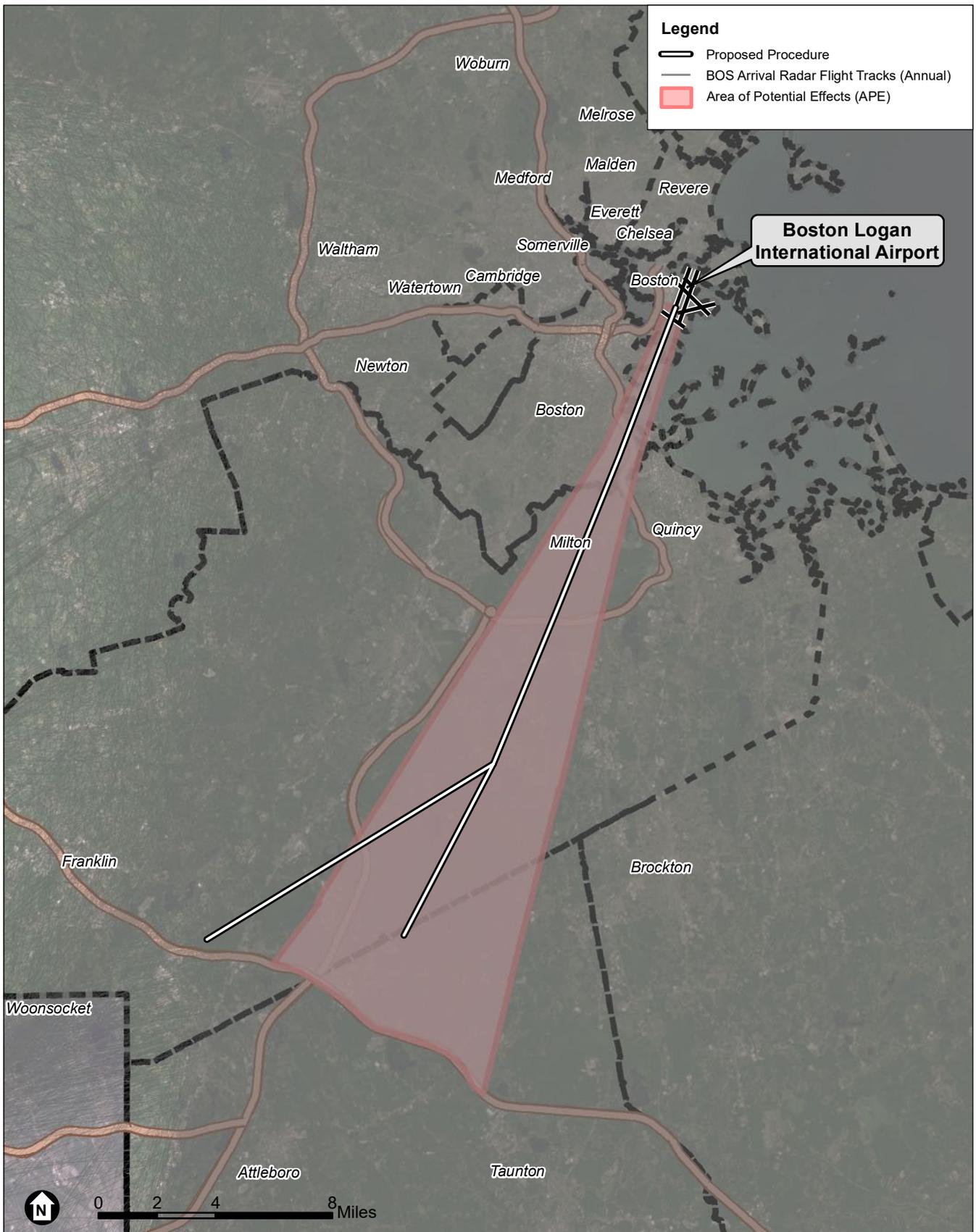


SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment A
 Area of Potential Effects and Departure Radar Flight Tracks



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment B
Area of Potential Effects and Arrival Radar Flight Tracks

Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

June 9, 2021

Town of Stoughton Planning Board
10 Pearl Street
Stoughton, MA 02072

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

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Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

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Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

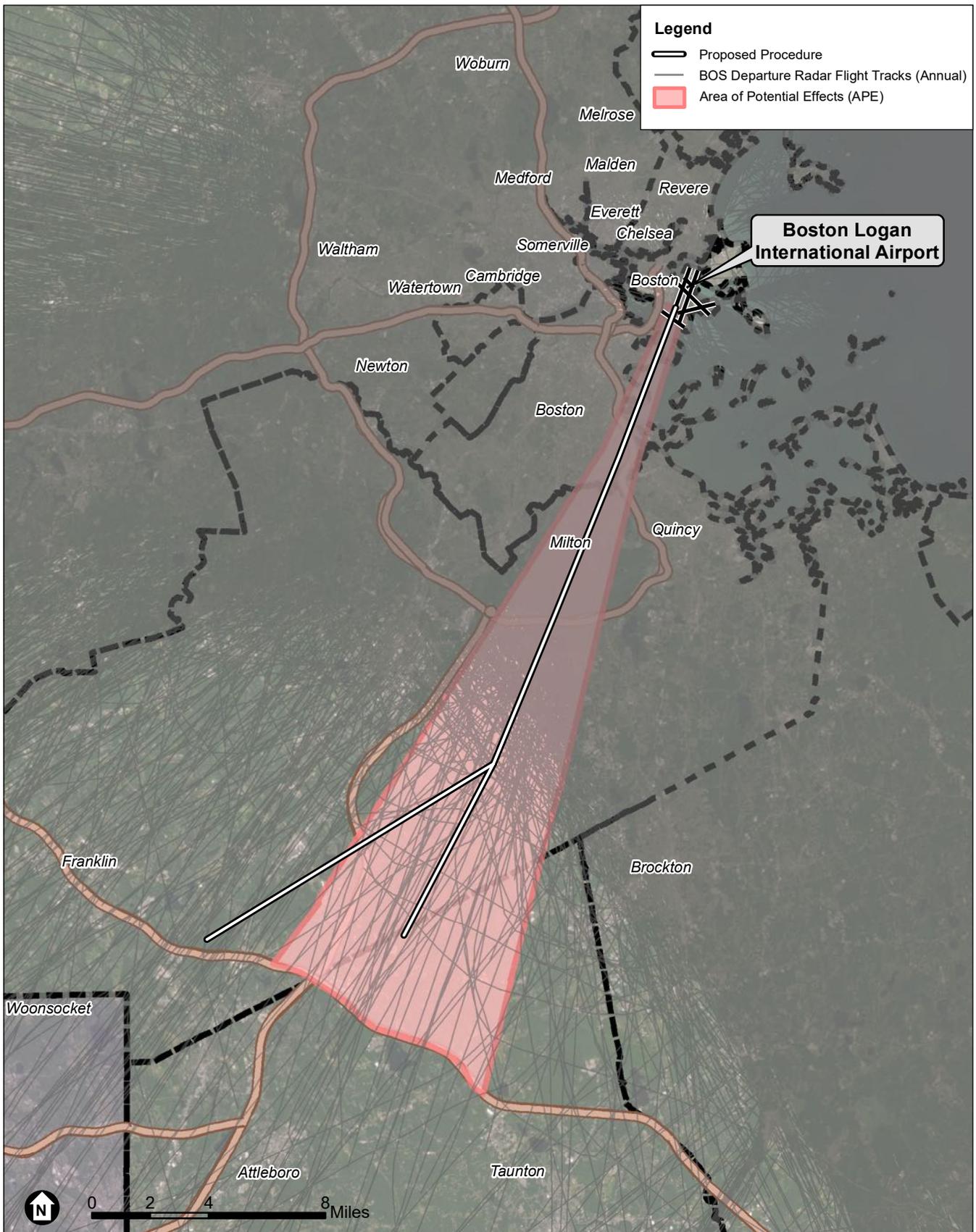
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

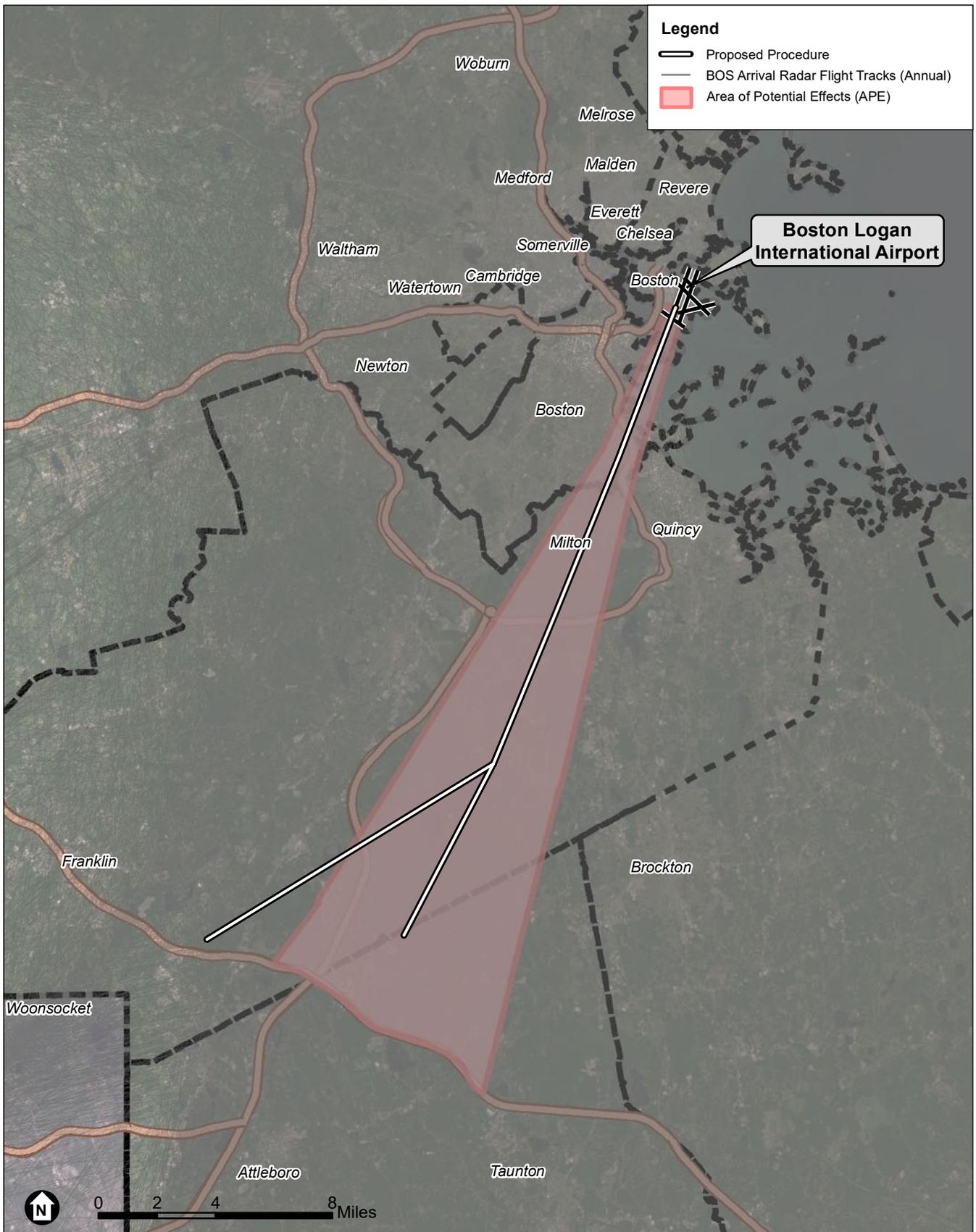
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

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June 9, 2021

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438 Great Neck Road South
Mashpee, MA 02649
(508)-477-0208

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Table 2: Number of State & Local Designated Properties within the APE

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Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

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This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

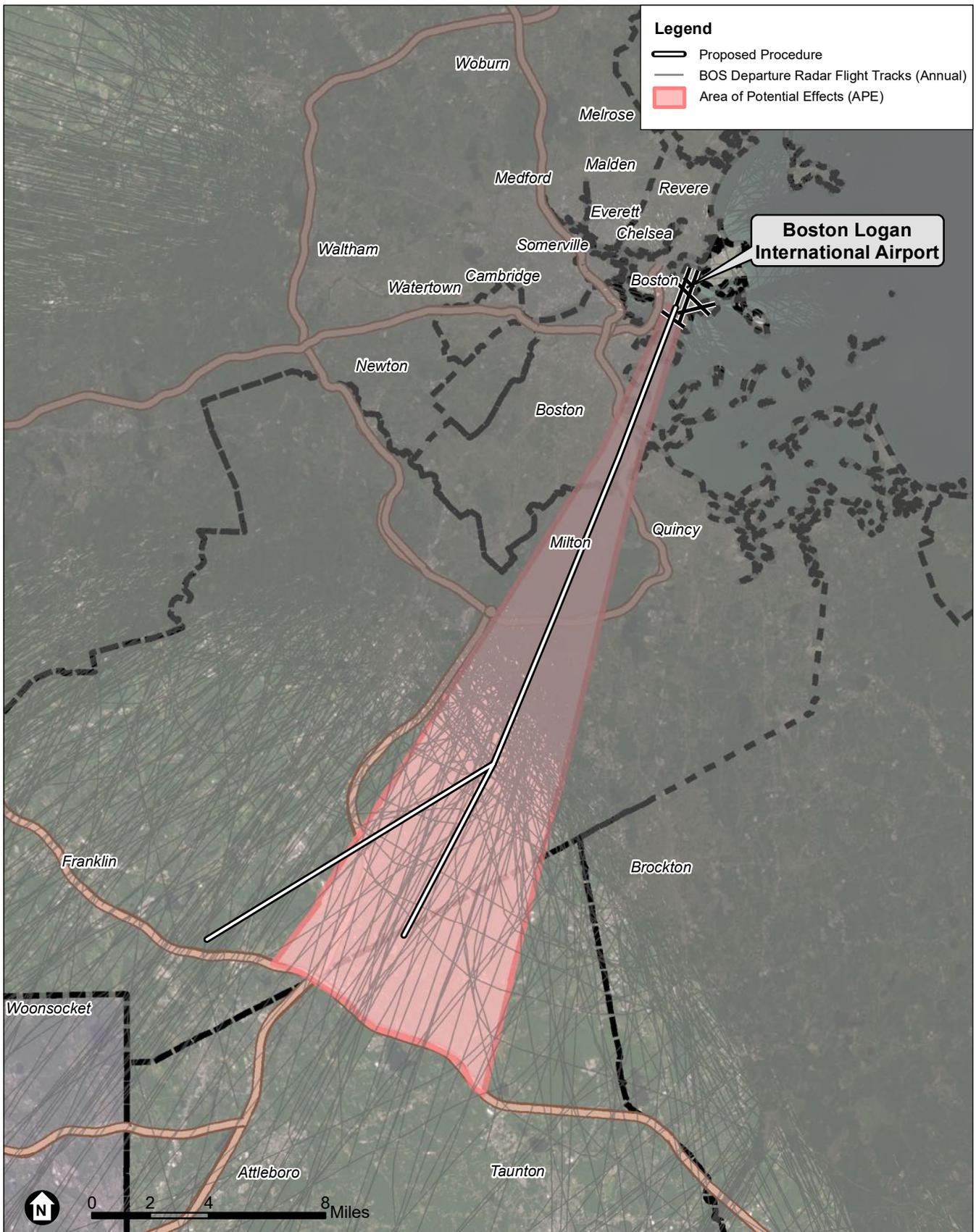
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when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

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In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

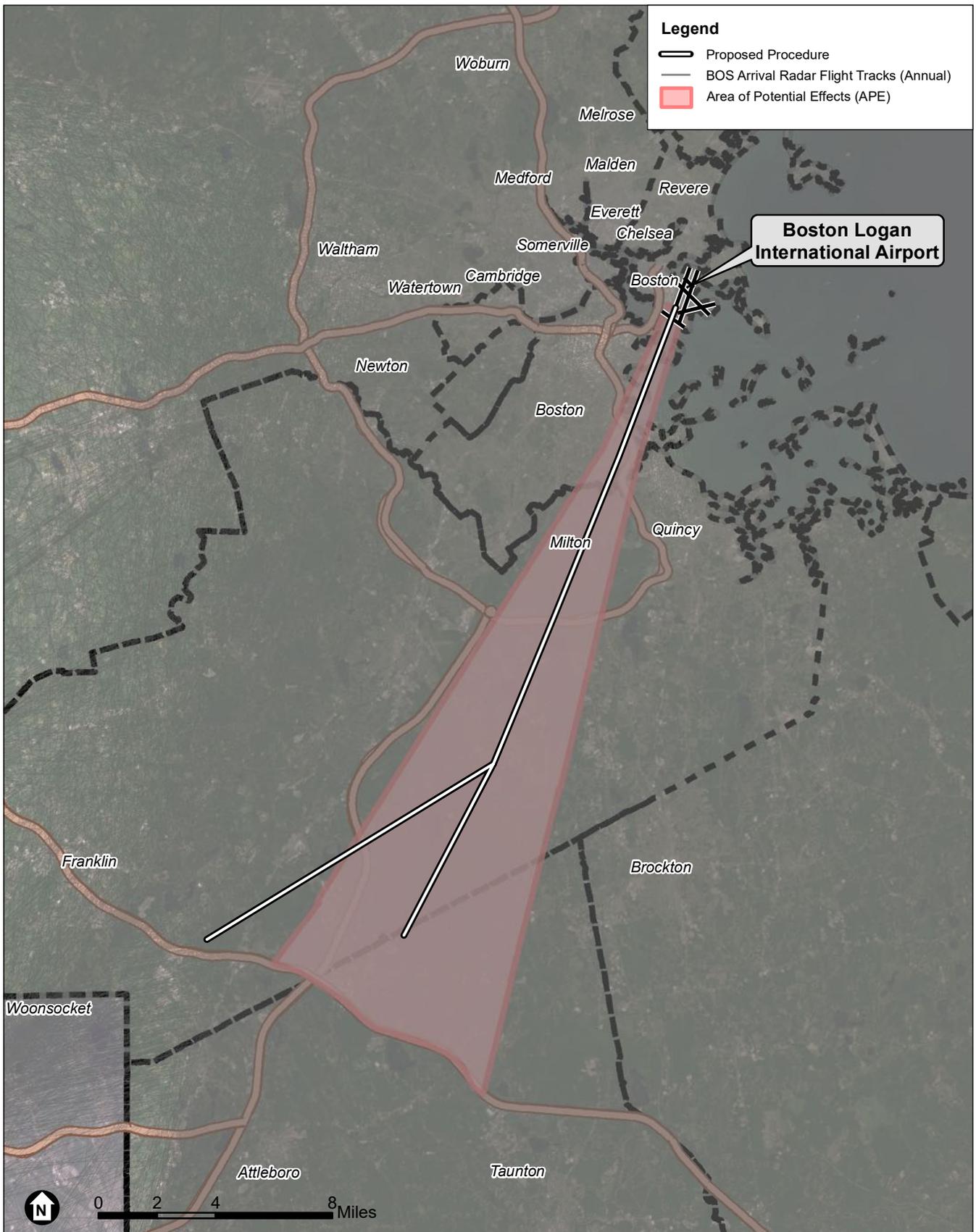
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





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Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

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June 9, 2021

Wampanoag Tribe of Gay Head (Aquinnah)
20 Black Brook Road
Aquinnah, MA 02535-1546
(508)-645-9265

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

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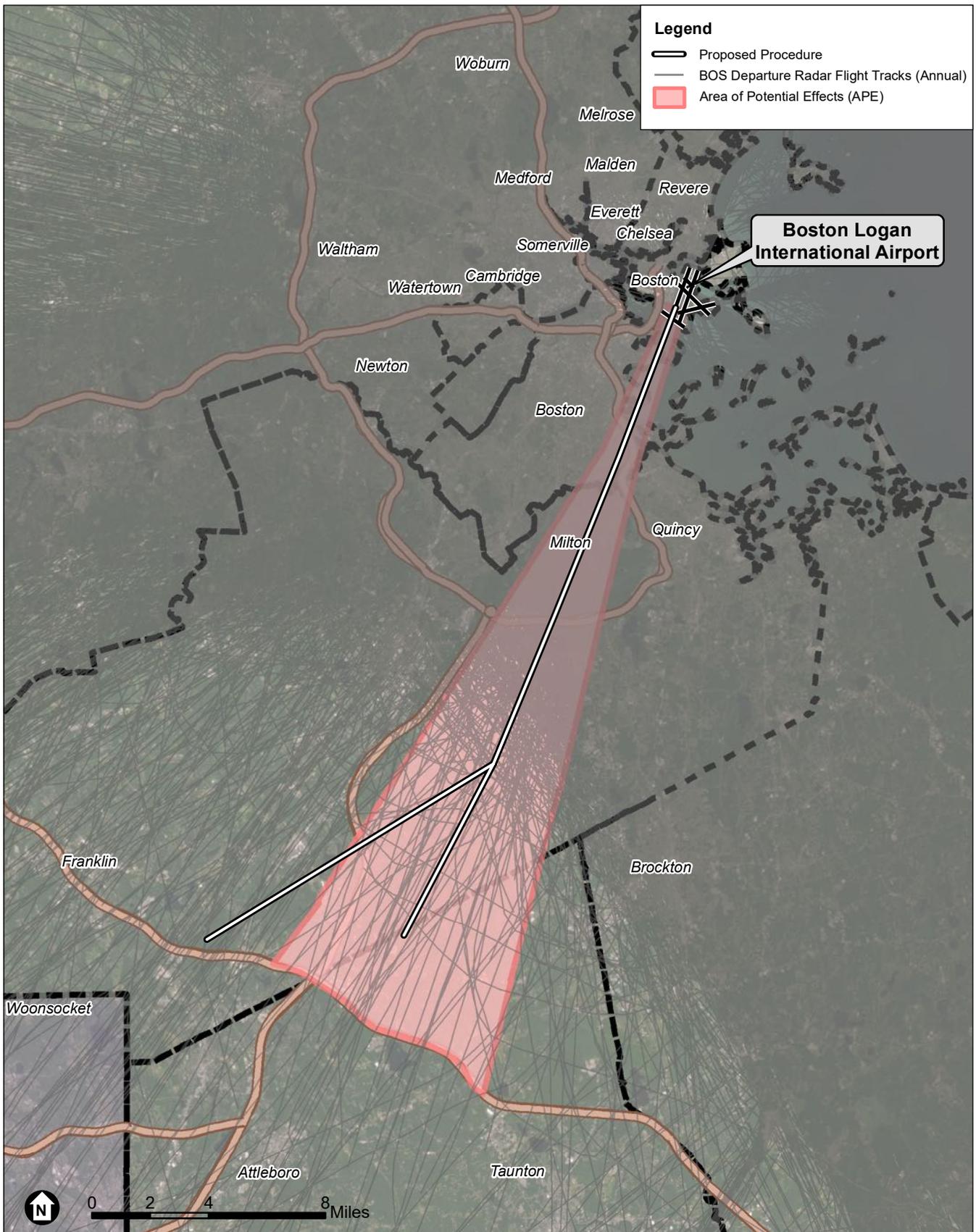
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when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.

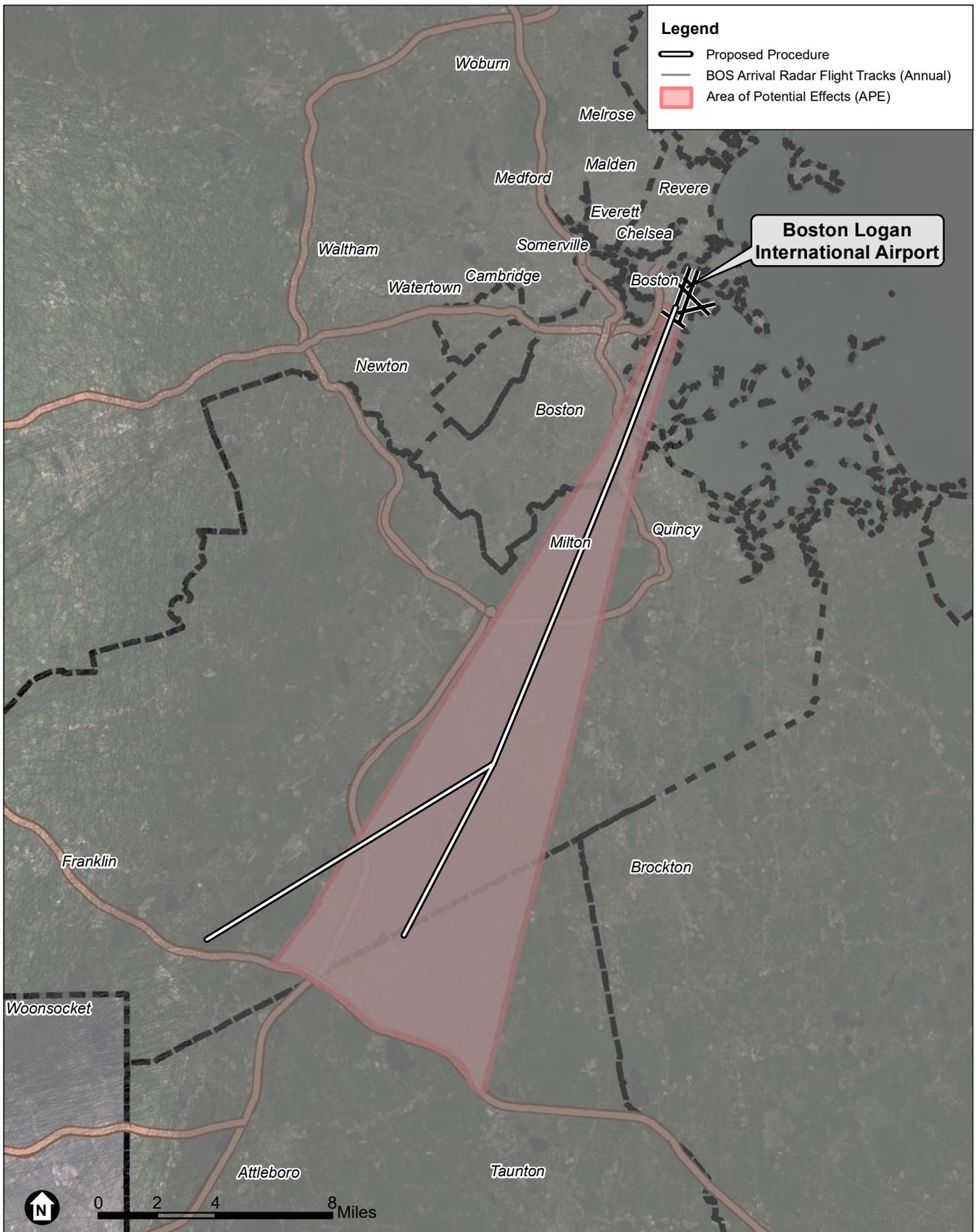


SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment A
 Area of Potential Effects and Departure Radar Flight Tracks



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

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U.S. Department
of Transportation
**Federal Aviation
Administration**

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June 9, 2021

AIR INC.
airportimpactreliefinc.org

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

NRHP Property Name	Brief Property Description
Dorchester--Milton Lower Mills Industrial District (Boundary Increase)	The Dorchester-Milton Lower Mills Industrial District is a historic district on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.
Savin Hill Historic District	The Savin Hill Historic District is significant for its association with the development of the area from a mid-19th century speculative housing development for Boston's upper-middle class to a close-knit neighborhood of residents from diverse socioeconomic backgrounds. The surviving historic resources catalogue Savin Hill's rich history and remain a cohesive collection of well-preserved historic homes. The district further attains significance as an intact collection of buildings representing a full range of architectural styles.
Blue Hills Parkway	The Blue Hills Parkway, a 1.5-mile-long boulevard in Boston and Milton, is significant as one of the earliest connecting parkways designed for the Metropolitan Parks Commission (MPC) by Olmsted, Olmsted and Eliot and its successor firm, Olmsted Brothers, and it is emblematic of the firm's principles of parkway creation. A divided highway that runs directly south through early 20 th -century residential neighborhoods, the Blue Hills Parkway directly connects the Blue Hills Reservation (the largest open space in Metropolitan Boston) with Boston, the Neponset River Reservation, and Truman Parkway.
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	The Metropolitan Park System of Greater Boston, in Massachusetts, is especially noteworthy because it is the first regional park system in the United States.
Foxborough Pumping Station	The Foxborough Pumping Station is a historic water pumping station at 25 Pumping Station Road in Foxborough, Massachusetts. Its main pumphouse was designed by Ernest Boyden, a regionally-known architect of water supply systems, and was built in 1891; it is a brick structure with Queen Anne styling. The station also includes several historic wells, a period garage, and the man-made Fales Pond, a once-dammed section of the Neponset Reservoir near the pumphouse.
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	The Old Harbor Reservation Parkways are three historic roads in the Old Harbor area of Boston. They are part of the Boston parkway system designed by Frederick Law Olmsted.
Dorchester-Milton Lower Mills Industrial District	The Dorchester-Milton Lower Mills Industrial District is located on both sides of the Neponset River in the Dorchester area of Boston and in the town of Milton, Massachusetts. It encompasses an industrial factory complex, most of which was historically associated with the Walter Baker & Company, the first major maker of chocolate products in the United States.

NRHP Property Name	Brief Property Description
Furnace Village Historic District	The Furnace Village Historic District encompasses the historic colonial industrial area in Easton, Massachusetts. At its center is at the intersection of Foundry street, South street and Poquanticut Avenue. The area was settled in 1723, with industrial activity beginning in 1742. The iron furnace was established in 1751, and for industrial purposes, continued in the 19th century. In addition to the colonial era, there is also an employee of the housing of the 19th century.
Milton Centre Historic District	The Milton Centre Historic District is both the historical and geographic center of the town of Milton. The 23-acre historic district includes Canton Avenue between Reedsdale Road and Thacher and Highland Streets. Milton Centre is historically significant for its association with the development of the town following the relocation of the third meeting house to Academy Hill in 1728, and the subsequent shift of the town center from Milton Hill.
Scott's Woods Historic District	Scott's Woods Historic District is the area of Hillside, Harland and Forest Streets between Randolph Avenue and the ridge between Hancock and Bugbee Hills, now the MDC Blue Hills Reservation. The Scott's Woods Historic District in Milton, Massachusetts is a semirural, residential area that contains a significant concentration of 18th, 19th and early 20th century dwellings and barns that reflect the Town's agricultural and architectural history from 1713 to 1932, the district's period of significance. Originally known as the "Blue Hill Land," a three thousand-acre tract of land sold by the town of Boston in 1711 to four residents of Milton. The area in the southwest part of Milton is thought to have been named for a member of the Scott Family that lived in the area in the early eighteenth century. Hillside Street, named for being literally on the 'side' of Blue Hill, is the major thoroughfare in the district.
Milton Hill Historic District	Milton Hill Historic District is located on a lofty hill between Milton Village and Algerene Corner, formerly known as Union Square at the junction of Adams and Centre Streets. The Milton Hill Historic District in Milton, Massachusetts is a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in the Town. As Milton developed from a rural community to a prosperous suburb of Boston, Milton Hill, throughout the period of significance, 1740-1945, has been the home of wealthy Milton and Boston business, professional and civic leaders. It began its rise to prominence as an estate district in 1742 with the establishment of Governor Thomas Hutchinson's summer estate. For the next two hundred years, attracted by the rural scenery afforded by the Neponset River and the Blue Hills and the proximity of the Town's commercial center and Boston, prominent families built country homes, a number designed by noted national and local architects, including William Ralph Emerson; Peabody and Steams; and Perry, Shaw and Hepbum.

NRHP Property Name	Brief Property Description
Harrison Square Historic District	Clam Point (also known as Harrison Square) is a sub-neighborhood in Boston, noteworthy for its collection of substantial Italianate Mansard residences. The area is known to have the most cohesive, intact collection of mansion-scale, mid-19 th century housing in Boston, and includes the Park, Everett, Freeport, Mill, Ashland, Blanche streets, and Victory Road in the Dorchester neighborhood of Boston.
Canton Corner Historic District	The Canton Corner Historic District encompasses the historic town center of Canton, Massachusetts. Centered on the junction of Pleasant and Washington streets, it includes more than 25 properties and 170 acres (69 ha), whose architectural history spans 250 years of occupation and includes the town's major civic buildings.
Ponkapoag Camp of Appalachian Mountain Club	The Appalachian Mountain Club Ponkapoag Camp is one of the original camps of the oldest outing club in the United States, founded in 1876. Early in the twentieth century tent sites were established at the east end of Ponkapoag Pond in the Blue Hills reservation by the president of the Appalachian Mountain Club, William Rogers, who was also an M.D.C. commissioner. The camp represents an early outing club's architecture for "roughing it" and are important as such structures succumb to fire, rot, and vandalism.
Boyden, Seth, House	The Seth Boyden House is a historic house at 135 Oak Street in Foxborough, Massachusetts. The home is significant for its unusual architectural design as well for its association with the Boyden family, whose members were prominent locally and regionally in the 18 th and 19 th century,
Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Adapted by Environmental Science Associates, 2021.	

Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
Boston	838
Canton	445
Easton	142
Foxborough	194
Mansfield	190
Milton	1,559
Norton	16
Quincy	2
Randolph	225
Sharon	491
Stoughton	82
Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

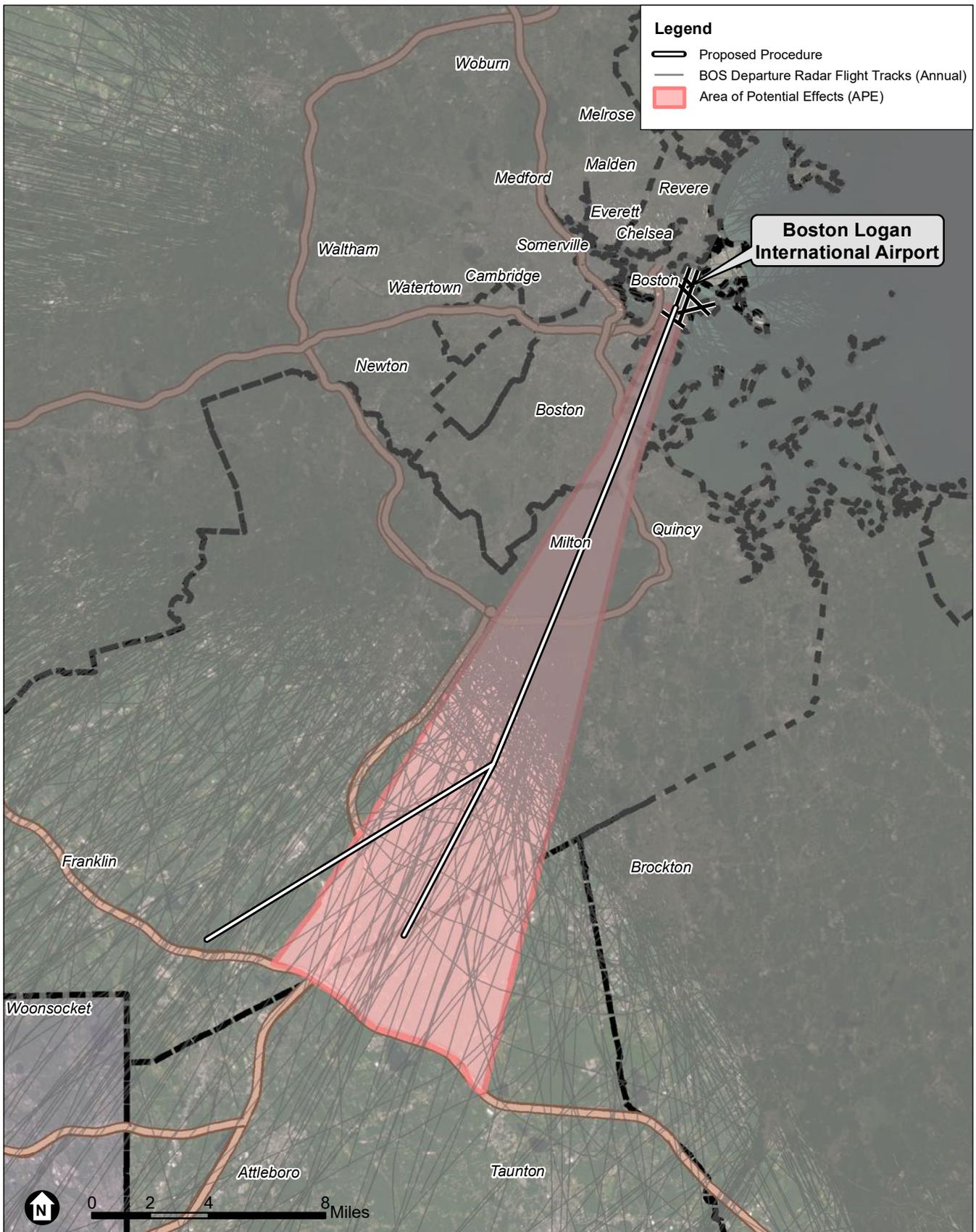
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.

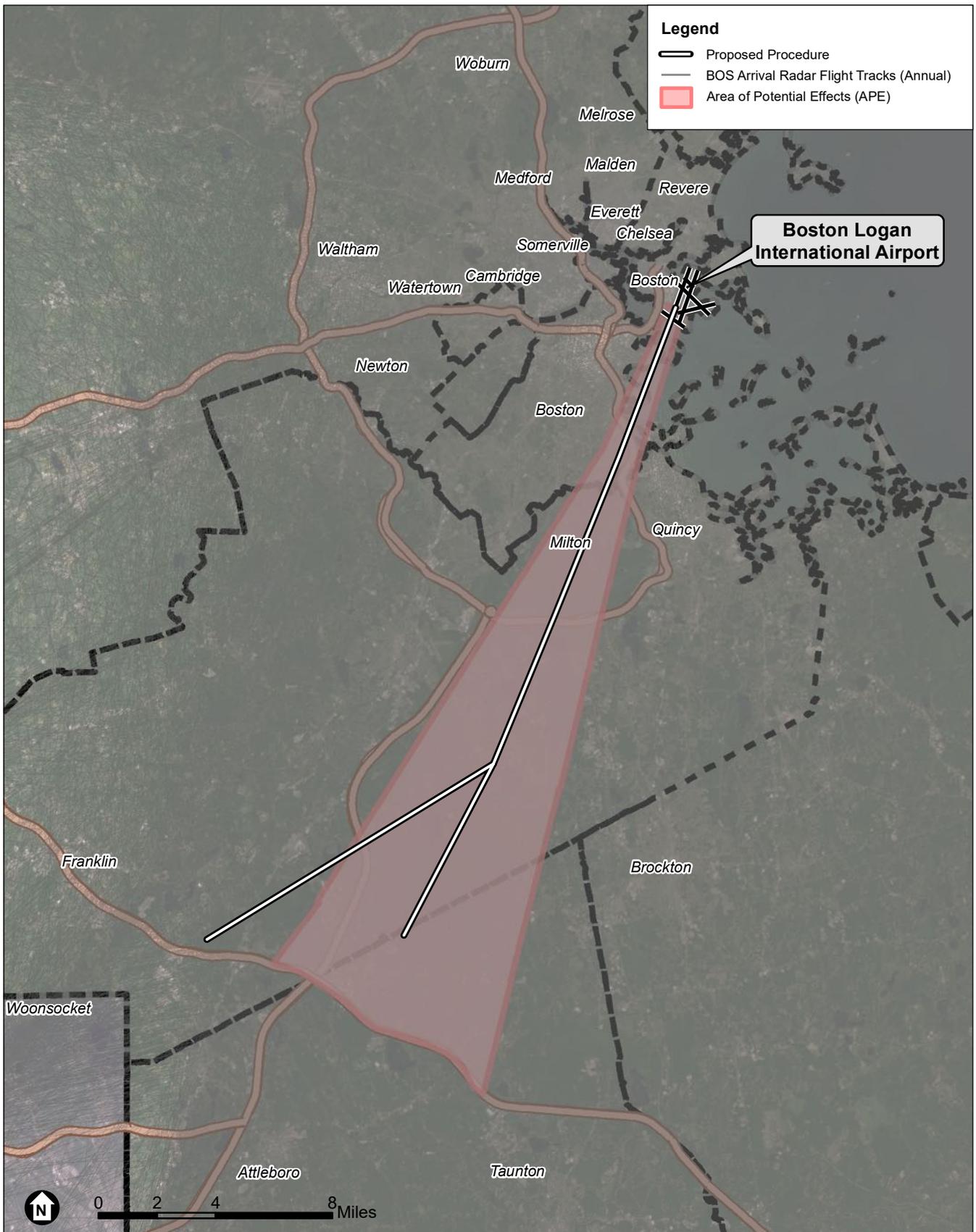


SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment A
 Area of Potential Effects and Departure Radar Flight Tracks



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

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U.S. Department
of Transportation
**Federal Aviation
Administration**

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June 9, 2021

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Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

The National Register of Historic Places (NRHP), the Massachusetts Historical Commission, and the Boston Landmarks Commission's data sources were used to gather a comprehensive directory of all potential historic and cultural resources within the APE. A total of 19 properties within the APE were found to be listed in the National Register of Historic Places as historic districts or individual properties in accordance with the criteria described in the NHPA. These 19 properties are identified and described in Table 1. A total of 4,184 state and local designated properties were identified within the APE and are summarized by their location in Table 2. These 4,184 properties represent the group of potential resources that would be evaluated for National Register eligibility. For the purposes of this proposed finding, we assume all of these properties are eligible for the National Register and propose a finding of no adverse effect for all properties within the APE currently listed, determined eligible for listing, and assumed eligible for listing in the NRHP.

Table 1: National Register of Historic Places Properties within the APE

<i>NRHP Property Name</i>	<i>Brief Property Description</i>
Milton Cemetery	Milton Cemetery contains some of the best examples of funerary art from the colonial times to the Victorian era. An historic garden cemetery, it was established as the Town's only cemetery in 1672.
Spring Brook Cemetery	The most prominent structure in the cemetery, Card Memorial Chapel, was designed by Charles Eastman & built in 1898 and funded by Simon & Mary Card in memory of their daughter Lulu.
Dorchester Park	Dorchester Park is a historic park bounded by Dorchester Avenue, Richmond, Adams and Richview Streets in the Dorchester neighborhood of Boston, Massachusetts.

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Borderland Historic District	The Borderland Historic District was the 1,200 acre estate of Blanche Ames Ames. The mansion was constructed in 1910 and the property includes a system of ponds, dams, and causeways surrounding the mansion. The exterior of the mansion was built using locally cut field stones. The district is considered significant due to its connection to the estate of Blanche Ames Ames. She was a inventor who was involved in art, farming, engineering and politics. She designed a hexagonal lumber cutter, patented a method for ensnaring airplanes in wires hung from balloons during World War II, and developed a water anti-pollution device in the late 1960s.
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Table 2: Number of State & Local Designated Properties within the APE

Town	Number of State & Local Designated Properties
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Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

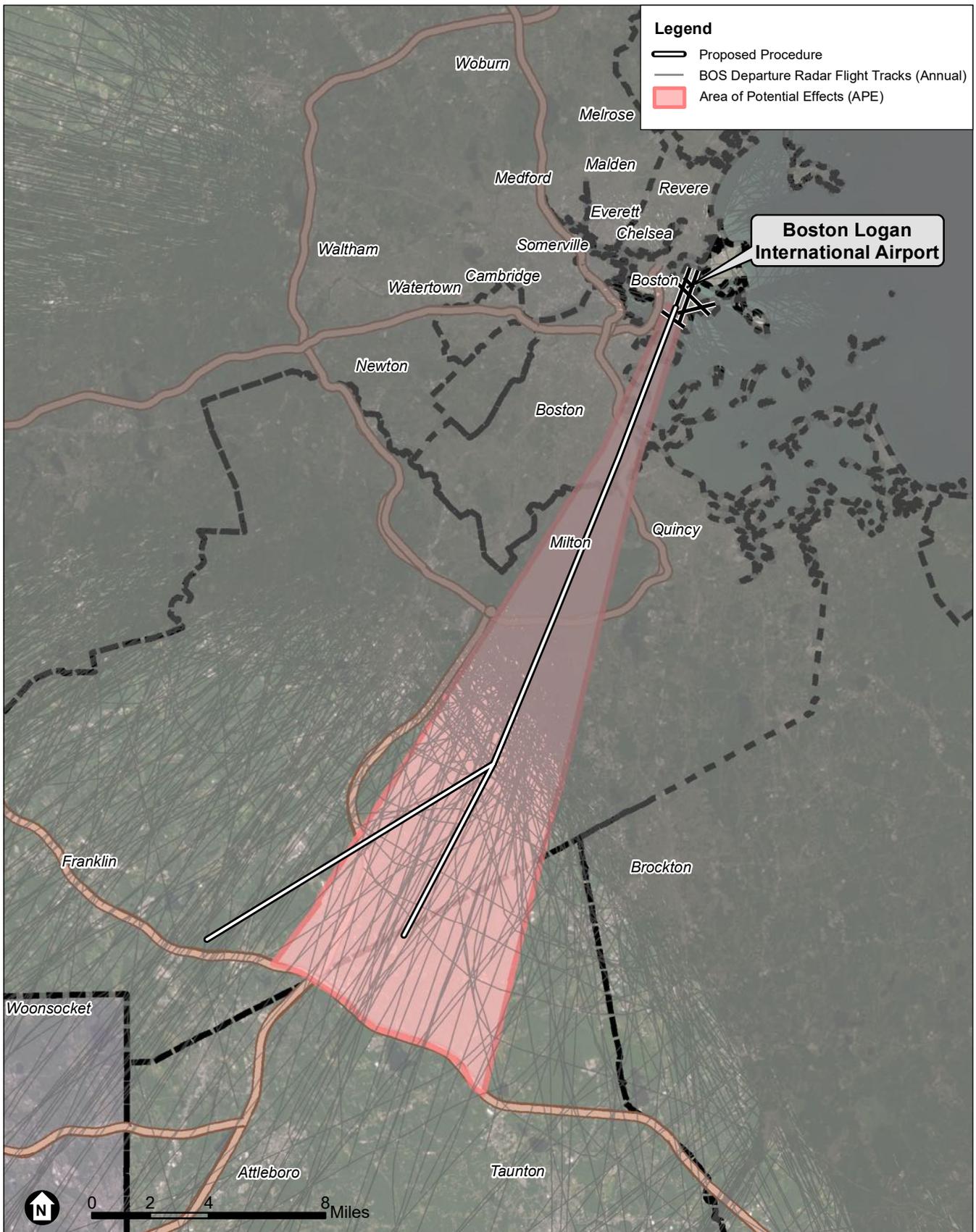
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

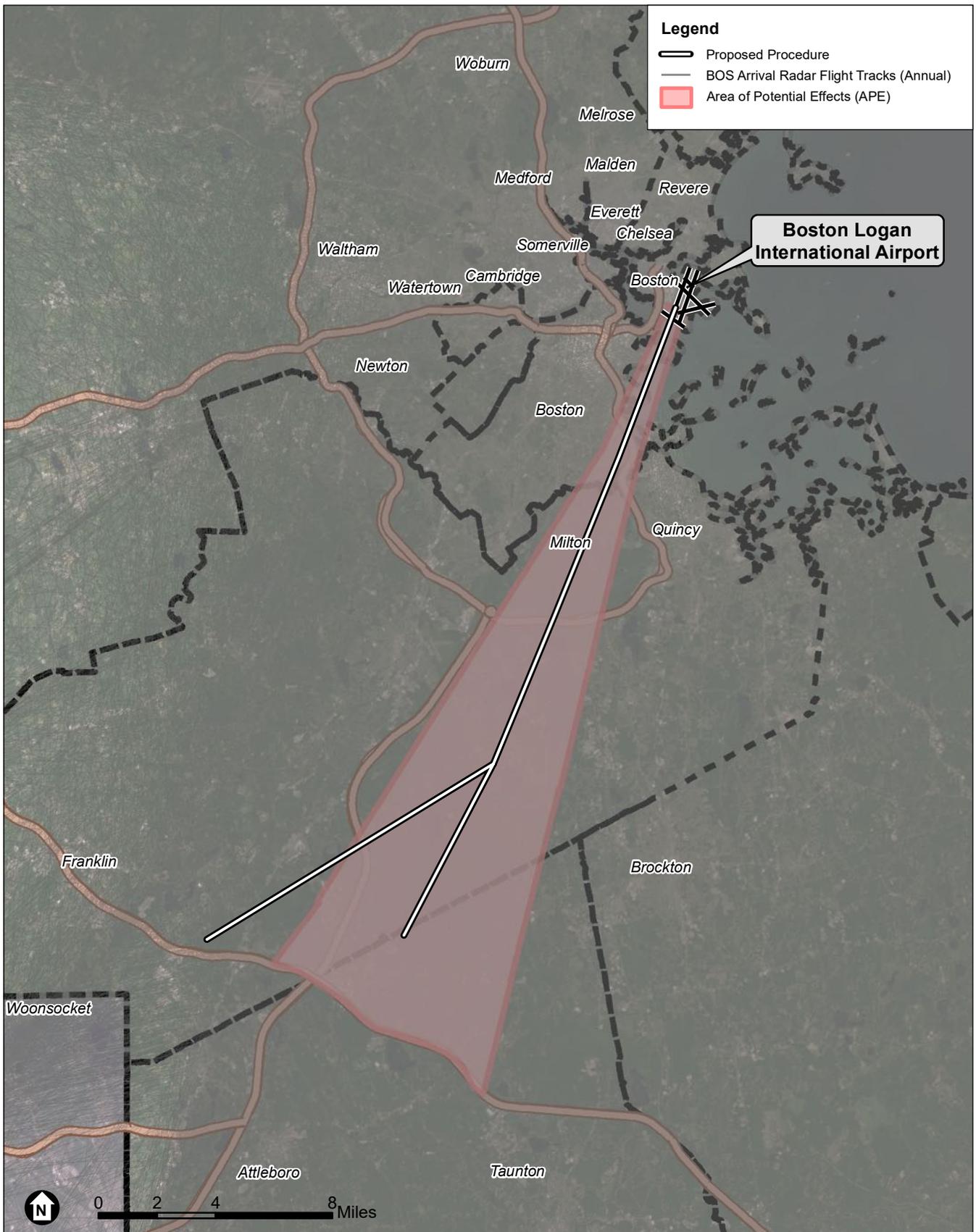
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





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Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

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June 9, 2021

Fair Skies Nation
fairskiesnation.com
info@fairskiesnation.com

Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA

To Whom It May Concern,

The Federal Aviation Administration (FAA) is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at Boston Logan International Airport (BOS). This new procedure would allow for aircraft to land onto Runway 4L with GPS technological automation as well as allow for landing during low visibility conditions. These additional procedural capabilities would increase the safety and efficiency of the airspace around BOS.

Pursuant to 36 CFR 800.4(a), the FAA previously consulted with the Massachusetts Historical Commission to identify the Area of Potential Effects for this undertaking. In continuing with our responsibilities under Section 106 of the National Historic Preservation Act and its implementing regulations, the FAA invites you to participate as a consulting party and submits this assessment of adverse effects, which concludes with a proposed Finding of No Adverse Effects and our supporting rationale for that finding. The FAA seeks your views or comments on this finding, which can be addressed to the FAA using the email or address given at the conclusion of this letter. Pursuant to 36 CFR 800.5(c), please provide any comments within 30 days from receipt of this letter.

Project Background

As described in greater detail in the FAA's Draft Environmental Assessment (EA), which can be accessed at www.faabostonworkshops.com, the FAA is evaluating a new proposed Area Navigation (RNAV) Global Positioning System (GPS) instrument approach procedure at BOS. This new procedure, which is depicted in Attachments A and B, is needed to allow aircraft to land onto Runway 4L with GPS technological automation. The current absence of an RNAV procedure to Runway 4L precludes use of the runway during low visibility conditions. The proposed procedure route is an overlay of existing arrivals and is expected to lead to a net increase of 255 annual arrivals to BOS generally, which represents 0.1% of the total annual arrivals, and an increase of 359 annual arrivals specifically to Runway 4L. These additional

procedural capabilities would increase the safety and efficiency of the airspace around BOS. Publication of the proposed procedure would constitute an undertaking under Section 106 of the National Historic Preservation Act (NHPA).

Regulatory Overview

Under NEPA, the FAA is responsible for analyzing the impacts of its action on historical, architectural, archeological and cultural resources as part of its broader review of the human environment. Because the National Historic Preservation Act (NHPA) is the principal statute concerning such resources, most of this analysis is conducted in coordination with the process under Section 106 of the NHPA, which requires federal agencies to consider the effects of their projects on properties listed, or eligible for listing, in the National Register of Historic Places (NRHP). As this is an FAA Action, the FAA document *Section 106 Handbook: How to Assess the Effects of FAA Actions on Historic Properties under Section 106 of the National Historic Preservation Act* was consulted and referenced in order to make this determination.

Review of Historic/Eligible Properties

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Grand Total	4,184

Assessment of Noise and Visual Impacts by Proposed Action

In our earlier correspondence, the FAA noted that we are “considering the possibility that changes in noise levels or additional visual impacts from an increase in overflights could alter the character or use of certain kinds of historic properties where a quiet setting is a generally recognized purpose and attribute.” In order to address this possibility, an assessment was done to further quantify the auditory and visual impacts on the historic properties within the Area of Potential Effects.

In order to assess the auditory impacts, the FAA used a metric known as Day-night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used here to assess the potential impact on every identified historic property within the Area of Potential Effects.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL is a graphical representation of the distribution of noise over the surrounding area from an airport’s average operations. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours.” In the calculation of DNL, for each hour during nighttime hours (10:00 p.m. to 7:00 a.m.), the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed. The weighting penalty accounts for the more intrusive nature of noise during the nighttime hours. The significance thresholds for aircraft noise for DNL, as spelled out in FAA Order 1050.1F, are given below.

- For DNL 65 dB and higher: +1.5 dB

This threshold has been used by FAA for many years and is applied at airports across the country and will be used to determine noise impacts on historic properties within the APE. The use of this threshold is consistent with the Section 106 analyses for many FAA projects, including the Northern California and Southern Florida Metroplex projects, two of FAA’s most recent projects that also modified the flight path of aircraft through the airspace.

According to FAA Order 1050.1F, a significant noise impact could occur to noise sensitive land uses if it had a level of DNL 65 dB with the Proposed Action and also experienced an increase of 1.5 dB when compared to the No Action Alternative. The FAA also recognizes that, in limited instances, resources that have a “quiet setting” as a qualifying attribute may be adversely affected by noise increases that would otherwise not be significant. There are no NRHP properties with a noise exposure of DNL 65 that experience a 1.5 dB noise increase. Further, the NRHP properties were reviewed and none of them were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook.

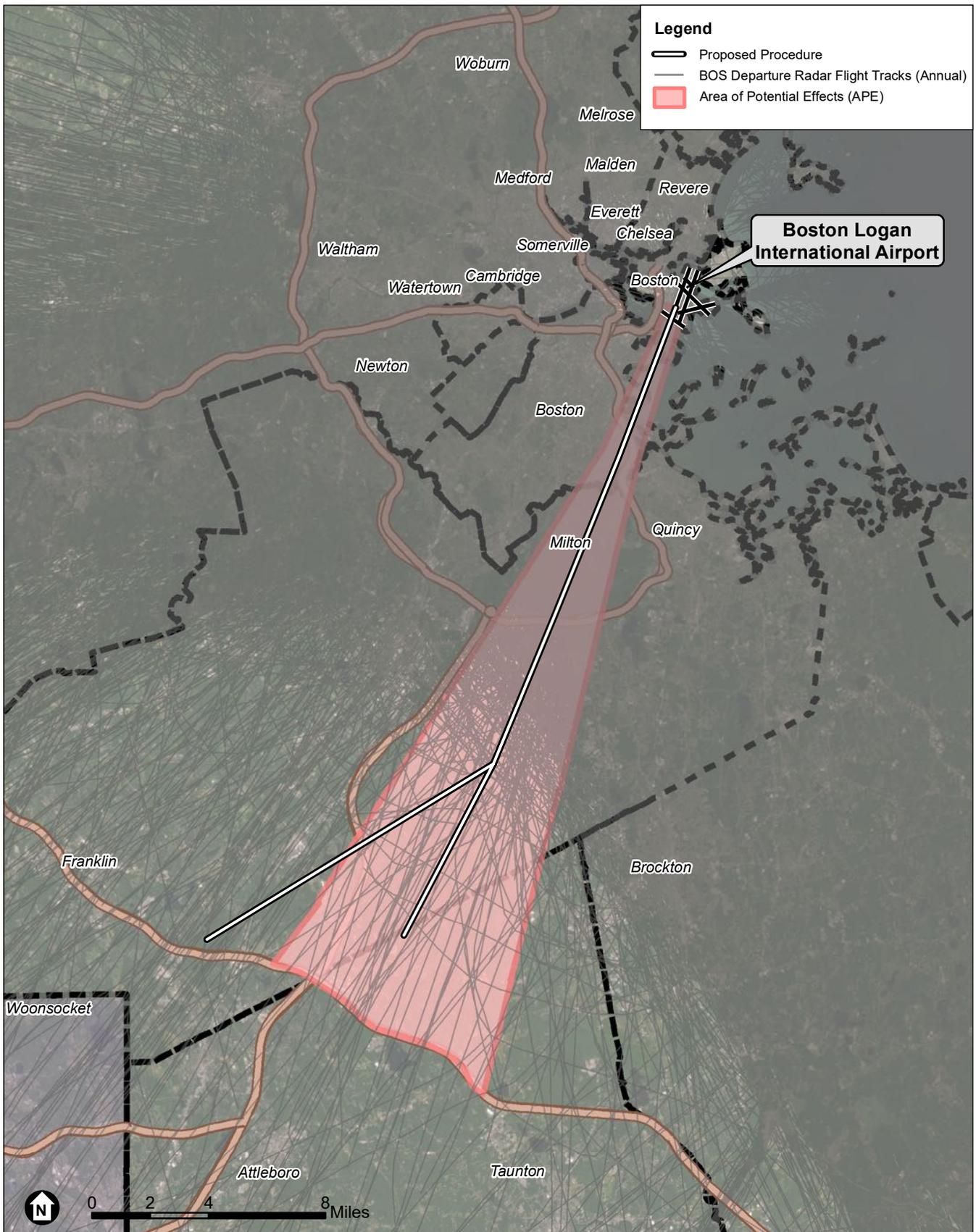
When the analysis is expanded to include the state and local designated properties that are assumed to be eligible for the NRHP, there are no properties that experience a 1.5 dB noise level increase with a proposed action noise level of DNL 65 or greater. As indicated in Table 4.6-3 of the Draft EA, the maximum exposed noise level *decreases* as a result of the Proposed Project

when compared to the No Action Alternative when considering towns/neighborhoods as a whole. Furthermore, as described below, the largest proposed noise changes within the APE are multiple orders of magnitude below the noise thresholds given within FAA Order 1050.1F.

The FAA's noise analysis demonstrates that historic resources will generally experience equivalent noise exposure with the addition of the Proposed Action. Specifically, the maximum change in noise exposure for a historic property is less than 0.2 dB across all historic properties in the APE. For example, one of these properties has a value of 22 dB under the No Action Alternative and 22.1 dB with the Proposed Procedure. Importantly, as depicted in Attachment A, the procedure is an overlay of existing traffic to Runway 4L and is only expected to lead to an annual net increase of 255 arrivals to BOS, out of a current total of 205,837 arrivals. In sum, the FAA will not be introducing audible impacts to resources not already experiencing noise impacts, and any change in noise exposure will be minimal.

In order to assess the potential visual impacts of the historic properties, the data for a year of overflights at BOS from the previous memorandum was reassessed to compare to the newly designated APE. Considering one year of radar track data, the APE experiences 78,879 arrival and 18,989 departure overflights annually. On an average daily basis that corresponds to 216.1 arrival and 52.0 departure overflights. The Proposed Action is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. When considering the APE as a whole, the increase in overflights would amount to just a 0.26% increase in overflights and would not introduce audible or visual noise in the APE. In order to confirm that the overflights over the APE were not focused on particular historic resources in the APE, the dataset of departure overflights and arrival overflights was mapped over the APE in Attachments A and B respectively. Attachment A shows that the APE areas closest to the airport are already dense with overflights but the flights become more disperse as the APE moves to the southwest. However, Attachment B, which displays a year of arrival radar tracks, show that the APE is already heavily overflowed over the full extent of the APE.

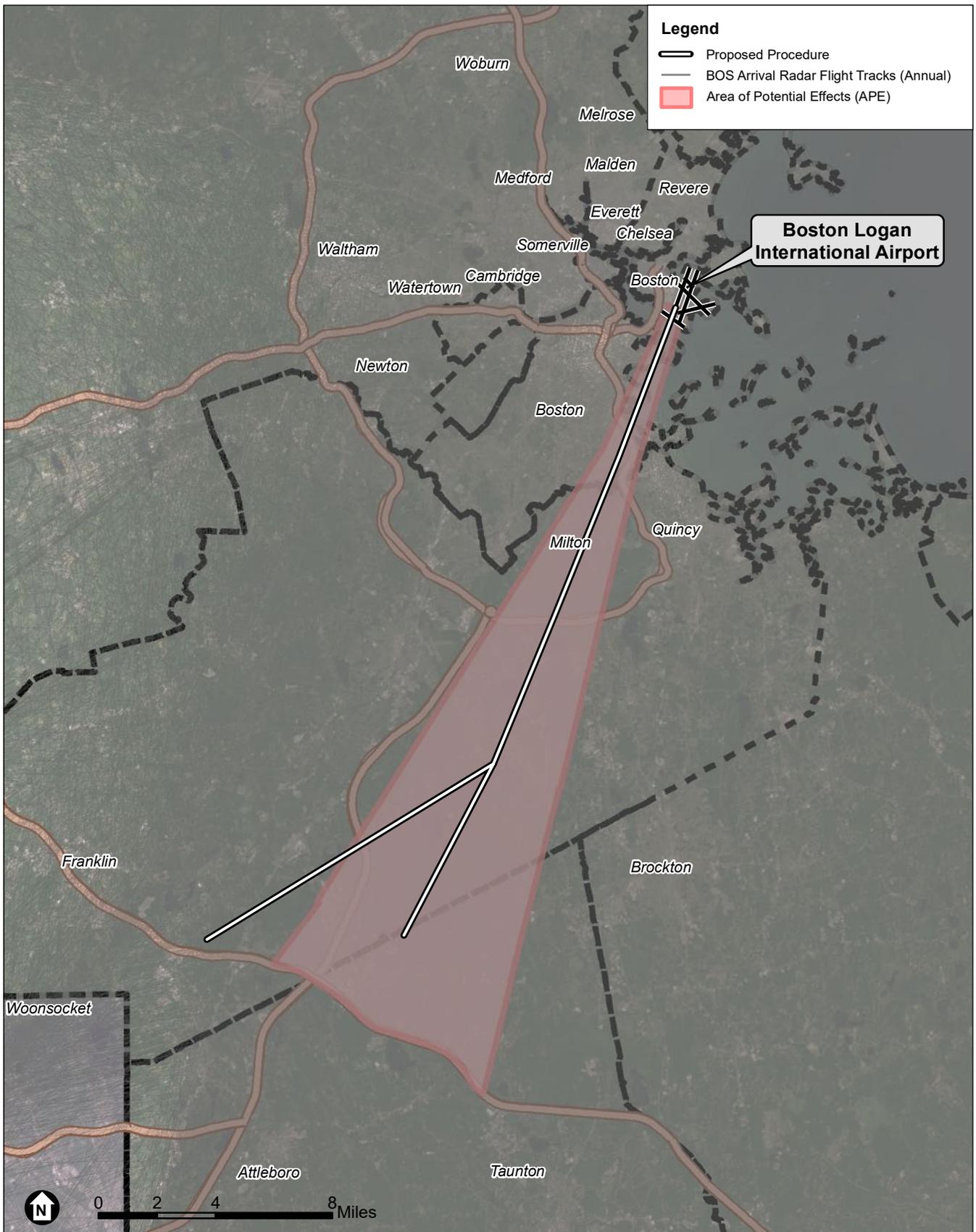
For more information on the analyses performed as a part of the Draft EA, please visit www.faabostonworkshops.com for a copy of the Draft EA. More information on the noise analysis can be found at www.faabostonworkshops.com/noise-visualization/ and in Sections 3.4.6 and 4.6 of the Draft EA. The Noise Modeling Technical Report is included in Appendix D of the Draft EA.



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Finding of No Adverse Effect Criteria

In order to establish a Finding of No Adverse Effect, the Proposed Action must not meet any of the criteria spelled out in the FAA's Section 106 Handbook, which are based on criteria in ACHP's section 106 regulations in 36 CFR Part 800. This section presents why the Proposed Action does not meet any of these criteria.

- Does the Proposed Action physically destroy or damage the property?
 - o The Proposed Action will not have any physical impact on any property. The Proposed Action changes the location of arrival flights in the airspace around Boston Logan International Airport.

- Does the Proposed Action alter the property in any way that is consistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - o The Standards guide the design and implementation of physical changes to historic properties. This may include changes in use, material repair or substitution, or modification of historically important features. The Proposed Action is located in the airspace above historic resources does not result in any changes in use, material alteration, or physical modifications to these resources.

- Does the Proposed Action remove a property from its historic location?
 - o The Proposed Action does not remove any property from its location.

- Does the Proposed Action change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - o The Proposed Action does not change the character of a property's use or any physical features in any historical property's setting.
 - o Any changes to setting as a result of the Proposed action would be audible or visual features which are discussed in the following criterion.

- Does the Proposed Action introduce an atmospheric, audible, or visual feature to the area that would diminish the integrity of the property's significant historic features?
 - o Audible: there will not be an introduction of audible noise as a result of the Proposed Action. Furthermore, the noise impacts of the Proposed Action on all of the historic resources in the APE will either decrease noise exposure or cause increases that are orders of magnitude below the significance thresholds for DNL aircraft noise as described in FAA Order 1050.1F and therefore will not cause an introduction of audible impact on any of the properties.
 - o Visual: there will not be an introduction of visual impacts as a result of the Proposed Action. Furthermore, the entire APE currently experiences 268 average daily overflights as described in the above analysis. The Proposed Action will add less than 1 additional overflight per day. This increase will not change the current visual features of any historic resource in the APE, as depicted in Attachment B.

- Does the Proposed Action result in neglect of a property which would result in its deterioration, transfer, sale or lease?

- The Proposed Action will not cause any property to be sold or transferred.

Given the results discussed in this letter, the FAA is putting forth at this point a Proposed Finding of No Adverse Effect. This determination is based on the findings discussed in this letter, which includes that none of the NRHP listed properties reviewed herein were found to have a “quiet setting” as described in the FAA’s Section 106 Handbook. Furthermore, the net change in aircraft operations as a result of the Proposed Action would be minimal and would not cause an adverse effect, including no physical impacts and no introduction of audible or visual impacts within the APE.

Public Meetings, Comments, and Consultation

The FAA conducted Virtual Public Workshops for the Draft EA on October 23rd, and October 28th, 2020. By attending the Virtual Public Workshops, participants were provided with an overview of the Draft EA which includes results from the noise analysis performed to assess the potential noise impacts of the Proposed Action on historic resources and populations located within the General Study Area. The MHC concurred with the APE on December 8, 2020 so the impacts were shown for historic resources throughout the entire Study Area. During the meeting, the FAA responded to a large number of questions from the community. These meetings were recorded and remain on the FAA’s YouTube page for interested community members to review. During the meeting and other forms of engagement, the FAA received over 40 comments regarding the Proposed Action. The FAA is currently reviewing and developing responses to these comments to be shared with the public as part of the Final Environmental Assessment but it should be noted that none of the comments mention any potential impact to historic resources from the Proposed Action.

We look forward to hearing back from you on the FAA’s proposed finding. We welcome the input from consulting parties on the historic properties considered as part of the analysis and on the finding itself. If you have any additional comments or questions on this undertaking, please contact me at veronda.johnson@faa.gov or at the address below.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



Foxborough Historical Commission

TOWN OF FOXBOROUGH, TOWN HALL, FOXBOROUGH, MASSACHUSETTS 02065

Tuesday, June 29, 2021

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337

Dear Ms. Johnson,

This letter is to acknowledge receipt of your invitation to comment on FAA's Proposed Finding of no adverse effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure in Boston MA.

The Foxborough Historical Commission does not believe that this will have any impact on any historical property in the town.

Respectfully submitted

Mark Ferencik

Chairman, Foxborough Historical Commission



The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

July 21, 2021

Veronda Johnson
Environmental Protection Specialist
Operations Support Group
Federal Aviation Administration
Eastern Service Center
1701 Columbia Avenue
College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWL 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on June 21, 2021, for the project referenced above.

The information submitted referenced a number of websites where pertinent information could be found. The MHC requires that all information be submitted to this office in hard copy. The MHC does not accept electronic submissions. Please forward the information to this office in hard copy. Please submit a hard copy of the Draft Environmental Assessment (EA) and noise/visual analysis reports.

Additionally, the staff of the MHC understands that the FAA is currently reaching out to historical commissions, regional planning commissions, and other organizations that MHC identified as possibly consulting parties. Please forward all comments from these groups to our office for review.

Finally, the staff of the MHC understands that the FAA has held Virtual Public Workshops which provided an overview to the Environmental Assessment (EA). The letter received states that the FAA received over 40 comments regarding this project. Please forward these comments to our office for review.

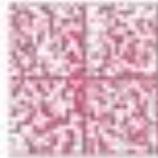
These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,

A handwritten signature in cursive script that reads "Brona Simon".

Brona Simon
State Historic Preservation Officer
Executive Director

William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission
225 Morrissey Boulevard
Boston, MA 02122



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Veranda Johnson
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U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

August 9, 2021

Ms. Brona Simon
State Historic Preservation Officer/Executive Director
Massachusetts Historical Commission
220 Morrissey Blvd
Boston, MA 02125

Reference: Follow up on Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA (MHC# RC.68314)

Dear Ms. Simon,

Your letter dated July 21, 2021 was received by the FAA and we have prepared the requested additional materials for your review. You will find enclosed in this package the following items:

- The Draft Environmental Assessment for the Boston Logan RNAV (GPS) RWY 4L procedure including all appendices.
- The replies received from historical commissions, regional planning commissions, and other organizations as of 8/9/2021, which consists of a single letter from the Foxborough Historical Commission. For your reference, the table below contains all the organizations with whom the proposed finding was shared.
- The comments received from the public in response to the Draft Environmental Assessment.

We would ask that you please expediate your review of the proposed finding if possible. If you have any additional comments or questions on this undertaking, please don't hesitate to contact me at (404)-305-5598, or at veronda.johnson@faa.gov.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337

Organization Type	Organization Name	Organization Location
Indian Tribe	Mashpee Wampanoag Tribe	Mashpee, MA
Indian Tribe	Wampanoag Tribe of Gay Head (Aquinnah)	Aquinnah, MA
Historical Commission	Boston Landmarks Commission	Boston, MA
Historical Commission	Canton Historical Commission	Canton, MA
Historical Commission	Easton Historical Commission	Easton, MA
Historical Commission	Foxborough Historical Commission	Foxborough, MA
Historical Commission	Mansfield Historical Commission	Mansfield, MA
Historical Commission	Milton Historical Commission	Milton, MA
Historical Commission	Norton Historical Commission	Norton, MA
Historical Commission	Quincy Historical Commission	Quincy, MA
Historical Commission	Town of Randolph Historical Commission	Randolph, MA
Historical Commission	Town of Sharon Historical Commission	Sharon, MA
Historical Commission	Town of Stoughton Historical Commission	Stoughton, MA
Planning Board	Boston Planning & Development Agency	Boston, MA
Planning Board	Canton Office of the Planning Board	Canton, MA
Planning Board	Easton Planning & Zoning Board	North Easton, MA
Planning Board	Foxborough Planning Board	Foxborough, MA
Planning Board	Mansfield Planning Board	Mansfield, MA
Planning Board	Milton Planning Board	Milton, MA
Planning Board	Norton Planning and Economic Development	Norton, MA
Planning Board	City of Quincy Planning Board	Quincy, MA
Planning Board	Town of Randolph Planning Department	Randolph, MA
Planning Board	Town of Sharon Planning Board	Sharon, MA
Planning Board	Town of Stoughton Planning Board	Stoughton, MA
Miscellaneous	Air Inc.	East Boston, MA
Miscellaneous	Eagle Hill Civic Association	Eagle Hill, East Boston, MA
Miscellaneous	Fair Skies Nation	Milton, MA



Foxborough Historical Commission

TOWN OF FOXBOROUGH, TOWN HALL, FOXBOROUGH, MASSACHUSETTS 02065

Tuesday, June 29, 2021

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337

Dear Ms. Johnson,

This letter is to acknowledge receipt of your invitation to comment on FAA's Proposed Finding of no adverse effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure in Boston MA.

The Foxborough Historical Commission does not believe that this will have any impact on any historical property in the town.

Respectfully submitted

Mark Ferencik

Chairman, Foxborough Historical Commission



Fitchburg Historical Commission
TOWN OF FITCHBURGH
TOWN HALL
FITCHBURGH, MASSACHUSETTS 01525

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30337

Attn: Veronka Johnson

30337-271401





The Commonwealth of Massachusetts
William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

September 10, 2021

Veronda Johnson
Environmental Protection Specialist
Operations Support Group
Federal Aviation Administration
Eastern Service Center
1701 Columbia Avenue
College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWY 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on August 11, 2021, for the project referenced above.

The FAA's June 21, 2021 submission indicated that at that time the FAA was reaching out to historical commissions, regional planning commission, and other organizations that MHC identified as possible consulting parties. MHC staff had requested that all comments from these groups be submitted to our office for review. The MHC reiterates this request. The MHC received an email request from the FAA on June 14, 2021 for an email address of Air, Inc., one of the potential consulting parties that MHC had recommended be notified. Please confirm that the FAA sent correspondence inviting each party that MHC recommended. Staff would also like to note that many Local Historical Commissions have reduced meetings during the summer months and the notifications may have taken longer to be received by the Local Historical Commissions.

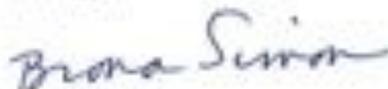
MHC staff understand that there is also a public information session to be hosted by Massport and the FAA scheduled for September 23, 2021 at 5:30pm. The session is regarding the Boston Logan RNAV Study and current Block 2 recommendations. The Study was in response to community concerns related to the FAA's implementation of NextGen procedures including RNAV. Block 2 was identified as a block within the Runway 4L path. Public comments from this information session should be provided to the MHC.

The MHC cannot concur with FAA's finding of "no adverse effect" to historic properties.

The proposed RNAV (GPS) Runway 4L approach procedures will concentrate flights in a more precise vertical and horizontal track. As indicated in the draft Environmental Assessment (EA), the number of overflights will increase and result in an increased number of events when air traffic noise will be heard over historic resources (see 36 CFR 800.5(2)(v)).

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,



Brona Simon
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

xc: Milton Historical Commission
Boston Landmarks Commission
AIR, Inc.
BOS Fair Skies/Fair Skies Nation
Eagle Hill Civic Association

William Francis Guhin, Secretary of the Commonwealth
Massachusetts Historical Commission
200 Morrissey Boulevard
Boston, MA 02125



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Veranda Johnson
Environmental Protection Specialist
Operations Support Group Federal Aviation Administration
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College Park, GA 30337

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U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

October 12, 2021

Ms. Brona Simon
State Historic Preservation Officer/Executive Director
Massachusetts Historical Commission
220 Morrissey Blvd
Boston, MA 02125

Reference: Follow up on Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA (MHC# RC.68314)

Dear Ms. Simon,

Your letter dated September 10, 2021, stating your non-concurrence with our proposed finding of “no adverse effect” was received by the Federal Aviation Administration (FAA) on September 21, 2021 and we have prepared the following additional information.

To address the issues raised in your letter, we can confirm that FAA did reach out to all of the organizations identified in the Massachusetts Historic Commission (MHC) letter dated July 24, 2020 as possible consulting parties:

- All Local Historical Commissions of the cities and towns in the Area of Potential Effects (APE)
- All Regional Planning Commission in the APE
- Air Inc.
- Eagle Hill Civic Association
- Fair Skies Nation

A letter inviting participation as a consulting party was sent to historical commissions and planning boards from Milton, Quincy, Stoughton, Sharon, Randolph, Norton, Mansfield, Canton, Easton, Foxborough, and Boston, Massachusetts. The Mashpee Wampanoag Tribe, and the Wampanoag Tribe of Gay Head were invited to participate in consultation by letters sent June 9, 2021. Air Inc., Eagle Hill Civic Association, Fair Skies Nation, were also invited to participate in consultation, for a total of twenty-seven parties. The Proposed Finding was mailed via USPS to all of these organizations in June 2021 with a signature confirmation with the exceptions of Fair Skies Nation and the Eagle Hill Civic Association to whom the Proposed Finding was emailed. Confirmation of receipt was obtained for all of these potential consulting parties.

The only responses received to date have been from the Foxborough Historical Commission and a recent email from Fair Skies Nation. The letter from the Foxborough Historical Commission, which was previously shared with the MHC in the FAA’s package dated August 9th, 2021, stated that the Foxborough Historical Commission “does not believe that this will have any impact on

any historical property in the town.” The email from Fair Skies Nation, which was received on September 19, 2021 stated that “implementation of the 4L RNAV actually would help relieve some of the excessive noise and pollution that residents and historic areas under the overused 4R path experience.” That email from Fair Skies Nation, received by the FAA on September 19, 2021, is included here per your request for all comments related to the Proposed Finding.

The public information session hosted by Massport on September 23, 2021, referenced in your September 10th letter, concerned a different project: the Boston Logan RNAV Study and the Block 2 Recommendations. This study, which is a collaborative effort involving Massachusetts Port Authority (Massport), the FAA, and experts from the Massachusetts Institute of Technology (MIT) to attempt to address the effect of aircraft noise while maintaining safety at the airport, is a separate undertaking than the Proposed RNAV (GPS) RWY 4L Approach Procedure. The confusion between that project and this undertaking may have arisen because in the methodology described in the FAA letter dated October 29, 2020 for selecting an APE for this project, the descriptor “BLOCK2” was used to describe an area of land for the overflight analysis. This “BLOCK2” has been recreated in Attachment A and is simply a polygon around the Proposed Procedure, which was used to estimate overflights in the area of the Proposed Action. This “BLOCK2” polygon was introduced to help establish an APE for this undertaking and is not related to the Block 2 recommendations referenced in the September 23, 2021 meeting. The use of similar terminology for the two unrelated projects is simply coincidental. Therefore, the comments from this recent meeting are not included in this correspondence.

The FAA would like to continue consultation regarding the Proposed Finding and better understand MHC’s position that the undertaking would meet the criterion of adverse effects cited in your letter (36 CFR 800.5(2)(v)). Specifically, FAA seeks further information on the types of resources the MHC believes would be adversely affected by the undertaking through the introduction of visual or audible elements, given that the area is already heavily overflowed.

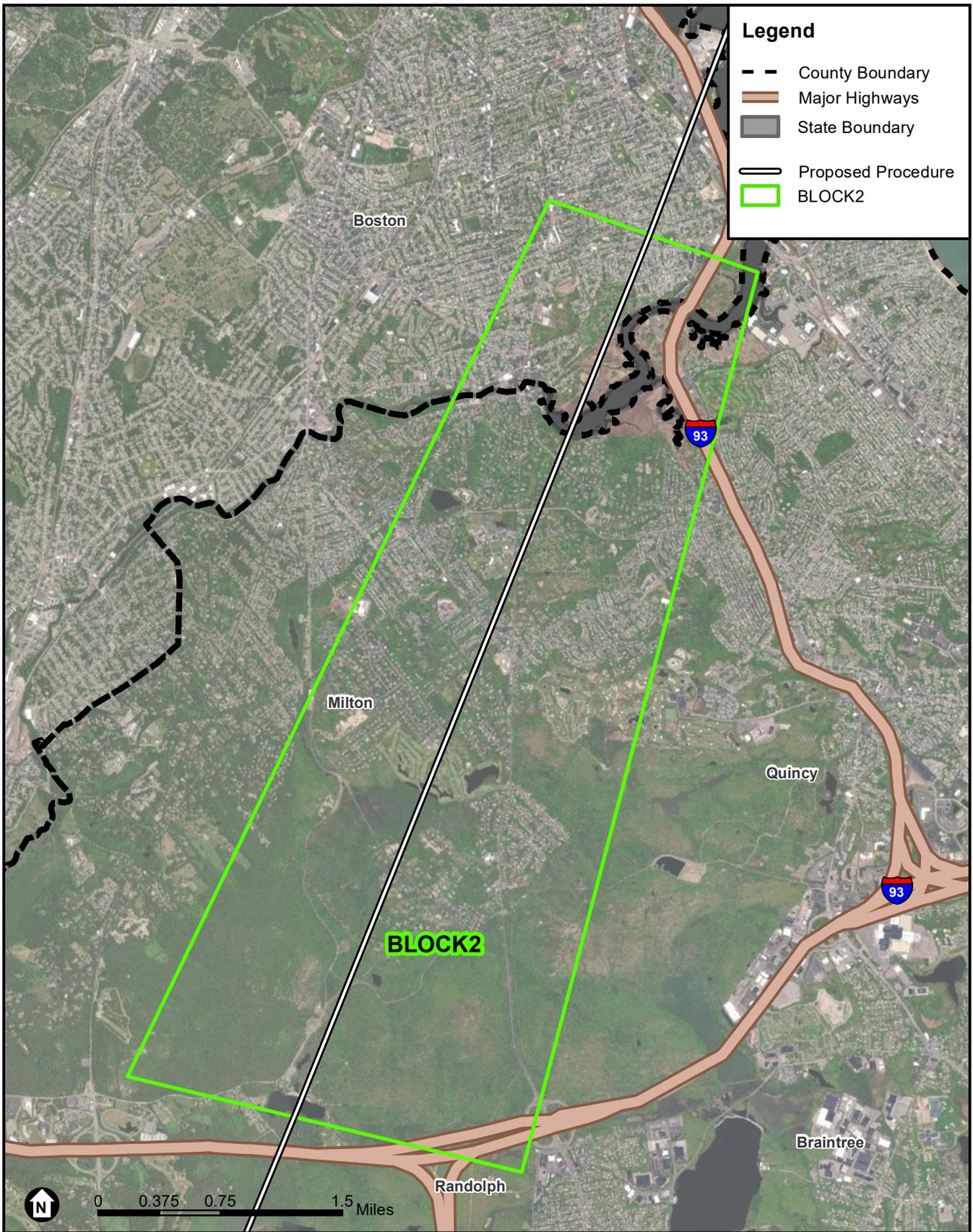
In our June 10, 2021 letter proposing a finding of “no adverse effect” we described our methodology for assessing auditory and visual impacts to the historic properties where a quiet setting is a generally recognized purpose and attribute.¹ MHC’s September 10th letter states that the proposed undertaking “will concentrate flights in a more precise vertical and horizontal track” but does not provide an explanation of how any such concentration would diminish the integrity of significant historic features of properties in the APE. With a better understanding of the basis for MHC’s non-concurrence, FAA may be able to provide additional information or analysis that might help us to reach consensus.

¹ Because this undertaking does not require land acquisition, construction, or ground disturbance, the FAA focused its “reasonable and good faith effort to carry out appropriate identification efforts” on properties for which setting and feeling are characteristics contributing to the property’s National Register eligibility and where integrity of significant historic features could be affected by the introduction of visual or audible elements.

If the MHC is open to further discussion, we would welcome a Zoom meeting to facilitate continued consultation that could assist in clarifying the Proposed Finding for this project. The meeting could be recorded so it could be presented as part of the record of correspondence between the FAA and the MHC. Please respond by contacting me at 404-305-5598, or at veronda.johnson@faa.gov to indicate how you would like to proceed.

Sincerely,

Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



From: BOS FAIR SKIES <bosfairskies@gmail.com>
Sent: Sunday, September 19, 2021 11:04 PM
To: mhc@sec.state.ma.us; Johnson, Veronda (FAA) <Veronda.Johnson@faa.gov>
Subject: FAA's 4L proposed RNAV approach path

BOS Fair Skies received a copy of a 9/10/21 letter from Brona Simon, Executive Director Massachusetts Historical Commission, to Ms. Veronda Johnson at the FAA about the FAA's proposed RNAV flight path for Runway 4L approaches to Logan Airport. Air Inc, a group we collaborate with on many efforts, shared the letter with BOS Fair Skies.

Implementation of the 4L RNAV actually would help relieve some of the excessive noise and pollution that residents and historic areas under the overused 4R path experience. In 2019, those under the 4R flightpath had 9 aviation noise events for every 1 to 4L. The two RNAV approach paths to 4L should be used to disperse the planes from 4R to an area that has few fly overs when compared to those under the 4R path, which also affects residents and historic places in Quincy and Braintree.

If you would like more information about why the 4L RNAV path is needed for dispersion, equity, and fairness, please respond to this email and ask that your response be forwarded to Phil Johenning or Cindy L. Christiansen. One or both of them will connect with you directly. Thanks.

=====

NOTE: BOS Fair Skies is not associated with Fair Skies Nation



The Commonwealth of Massachusetts

William Francis Galvin, Secretary of the Commonwealth
Massachusetts Historical Commission

November 15, 2021

Veronda Johnson
Environmental Protection Specialist
Operations Support Group
Federal Aviation Administration
Eastern Service Center
1701 Columbia Avenue
College Park, GA 30337

RE: Logan Airport RNAV (GPS) RWY 4L Approach Procedures, Boston, MA; MHC# RC.68314

Dear Ms. Johnson:

Staff of the Massachusetts Historical Commission (MHC) have reviewed the information you submitted, received at this office on October 13, 2021, for the project referenced above.

Your letter seeks further information on the types of resources the MHC believes would be adversely affected by the undertaking through the introduction of visual or audible elements.

Concentrated flights in a more precise vertical and horizontal track will place a higher volume of aircraft in the 4L RNAV flight path. This increase of 359 flights annually will introduce increased visual and audible events which will affect the historic resources under and near the 4L RNAV flight path.

In addition to the properties identified in your correspondence, received at this office on June 21, 2021, it is the opinion of MHC that a number of other important historic resources will be impacted by additional audible and visible flight events. Please see a list below:

Cedar Grove Cemetery

The Cedar Grove Cemetery is located directly below the proposed RNAV Runway 4L flight path. MHC's *Inventory of Historic and Archaeological Assets of the Commonwealth* provides information on the importance of this historic resource that in MHC staff's opinion meets the criteria of eligibility for listing on the National Register of Historic Places. "Cedar Grove's land bordering the Neponset with its low lying hills, marshland and wooded areas constituted a textbook perfect location for a rural garden cemetery of the type pioneered by Dr. Jacob Bigelow, General Dearborn and others at Mt. Auburn Cemetery in Cambridge/Watertown in the 1830s. The peace and charm of the place was apparent to the fashionable strollers of the mid 19th century." The Luther Briggs, Jr. designed Cedar Grove Cemetery with Dorchester Park provide a glimpse of the marshland, meadows, and gently rolling hills characteristic of southern Dorchester before intensive, post 1890-development.

Governor Hutchinson's Field

Governor Hutchinson's Field is listed in the National Register of Historic Places as a contributing element of the Milton Hill Historic District. Governor Hutchinson built his family a country estate on Milton Hill to escape the city. According to *A History of Milton 1640-1887*, "he found leisure to cultivate his rural tastes and spent much time in laboring with his men in setting out and grafting trees and attending to the routine of farming and of cultivating fruits..." The field is all that remains of the estate today but continues to represent the former rural peaceful landscape of those who left the city for a rural respite.

Captain R. B. Forbes House

The Captain R. B. Forbes House and Carriage House is a National Historic Landmark. The structures and site are also listed in the National Register of Historic Places as contributing elements to the Milton Hill Historic District.

Blue Hills Reservation Multiple Resource Area

While the list the FAA provided includes the Blue Hills Parkway and Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston, the list does not include the Blue Hills Reservation Multiple Resource Area. The Blue Hills Reservation is listed in the National Register of Historic Places and includes prehistoric and historic resources of the Blue Hills and Neponset River Reservations. The Blue Hills Reservation has served as an important recreation area since the latter decades of the nineteenth century. Improvements at the turn of the last century included the construction of buildings to support the public's use of the important outdoor space for the residents of the surrounding communities. The Great Blue Hill Weather Observatory, found at the top of the Great Blue Hill, is a National Historic Landmark.

Historic properties that are associated with or designed for leisure, respite, or places of rest and solemnity would be adversely effected by the increased flight events. Through the introduction of visible and audible elements that are out of character with the setting of these historic properties (36 CFR 800.5(a)(2)(v)).

Thus, the MHC cannot concur with FAA's finding of "no adverse effect" to historic properties.

The proposed RNAV (GPS) Runway 4L approach procedures will concentrate flights in a more precise vertical and horizontal track. As indicated in the draft Environmental Assessment (EA), the number of overflights will increase and result in an increased number of events when air traffic noise will be heard over historic resources (see 36 CFR 800.5(2)(v)).

These comments are offered to assist in compliance with Section 106 of the National Historic Preservation Act of 1966 (36 CFR 800). Please do not hesitate to contact Elizabeth Sherva of my staff if you have any questions.

Sincerely,



Brona Simon
State Historic Preservation Officer
Executive Director
Massachusetts Historical Commission

cc: Jamie Loichinger, ACHP
Milton Historical Commission
Boston Landmarks Commission
AIR, Inc.
BOS Fair Skies/Fair Skies Nation
Eagle Hill Civic Association



U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

January 5, 2022

Ms. Brona Simon
State Historic Preservation Officer/Executive Director
Massachusetts Historical Commission
220 Morrissey Blvd
Boston, MA 02125

Reference: Additional Information Regarding FAA's Proposed Finding of No Adverse Effect for the Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure, Boston, MA (MHC# RC.68314)

Dear Ms. Simon,

The FAA and MHC have engaged in correspondence since June 2020 regarding the proposed Boston Logan International Airport RNAV (GPS) RWY 4L Approach Procedure (the undertaking), which is proposed to enhance safety at the airport. Letters from the MHC dated July 21, 2021, and September 10, 2021, have briefly discussed the MHC's concerns with the Proposed Finding of No Adverse Effect as a result of the undertaking. The FAA has attempted to address those concerns by providing additional information and responding to your questions in correspondence dated August 9 and October 12, 2021. In our most recent October 12th letter, we asked to continue consultation to better understand MHC's position that the undertaking would meet the criteria to cause adverse effects and for further information on the types of resources the MHC believes would be adversely affected by the undertaking. In that letter, as well as in previous telephone conversations with your staff, we offered to meet with MHC to discuss this further. MHC responded by letter dated November 15, 2021 with further information on the types of resources it believes would be adversely affected by the undertaking through the introduction of visual or audible elements.

As contemplated in 36 CFR 800.5(c)(2), the FAA is interested in consulting with MHC to resolve the disagreement with our proposed finding. We have reviewed the information you provided and offered additional analysis of potential effects to six resources described below, which include the four resources cited in your letter and two additional resources we believe are representative of the effects of the undertaking. Based on that further analysis, we are reaffirming our Proposed Finding of No Adverse Effect, re-notifying you pursuant to 36 CFR § 800.5(b), and providing the supporting documentation specified in 36 CFR § 800.11(e).

This letter summarizes and provides additional information about the analysis undertaken to support the FAA's Proposed Finding of No Adverse Effect and includes additional discussion and information regarding the specifics of that analysis. We request that you review this information and advise the FAA within 30 days whether you now concur with, or have no objection to, our Proposed Finding of No Adverse Effect.

Undertaking Summary

The undertaking would enhance aviation safety and efficiency by providing lateral and vertical guidance to aircraft landing on Runway 4L over four different paths converging onto a common final approach path. The undertaking is a RNAV (GPS) Instrument Arrival Procedure (IAP)¹, which requires that an aircraft flying the procedure remain within one nautical mile of the procedure centerline 95% of the total flight time. The expected change to airport operations from the proposed undertaking would be comprised of the following:

- A net annual increase of 255 arrivals at Boston Logan. This increase is attributable to previously scheduled arrivals that will no longer need to be cancelled due to increased Airport efficiency during instrument meteorological conditions (IMC) or “poor weather.” With the availability of the 4L RNAV procedure, these arrivals will now be able to land on Runway 4L instead of being cancelled.
- A shift of 104 annual arrivals from Runway 4R to Runway 4L. These 104 arrivals represent flights that would otherwise have been delayed for a landing on Runway 4R, but with the availability of a 4L RNAV procedure would instead be able to land on Runway 4L earlier in the day.
- Combined, there will be an expected increase of 359 arrivals to Runway 4L, representing 255 flights that no longer need to be cancelled and 104 flights no longer delayed due to poor weather conditions.² All other airport operations in the No Action Alternative and Proposed Action Alternative are expected to be the same.

The net increase in 255 annual arrivals resulting from the undertaking would be the result of aircraft being able to access Runway 4L during IMC, which is not currently possible. The undertaking is not expected to result in any changes in flight tracks of arrivals for aircraft currently flying a visual (as opposed to an instrument) approach.

Area of Potential Effects

In a letter dated June 18, 2020, the FAA proposed an initial approach for determining the Area of Potential Effects (APE). After receiving feedback from MHC on October 29, 2020, the FAA proposed an updated methodology that focused the APE. This APE was determined by reviewing the altitudes of aircraft flying in and out of the airport and calculating the increase in overflights from the proposed undertaking in order to identify those areas that would be most impacted by the proposed undertaking. The MHC did not disagree with the proposed focused APE as stated in

¹ The term RNAV means “area navigation” in this context. Within RNAV procedures, there are two categories of navigation specifications, area navigation (RNAV) and required navigation performance (RNP). RNP is a system that allows for more precise flying due to additional equipment on the aircraft. In the United States, RNP approach or arrival procedure are titled RNAV(GPS) procedures. For more information about RNAV and RNAV (GPS) procedures, refer to https://www.faa.gov/air_traffic/publications/atpubs/aip_html/part2_enr_section_1.17.html.

² This estimate of additional flights only includes aircraft flying in instrument meteorological conditions (IMC) or “poor weather”; aircraft flying in visual meteorological conditions (VMC) or “good weather” are not expected to use the proposed undertaking. Aircraft flying VMC would continue to fly the same current path until within approximately five nautical miles of the Airport. At this point, they would have the option to utilize the proposed undertaking for reference purposes because all aircraft converge on the runway at this point; aircraft flight paths would not meaningfully differ from those associated with a visual approach.

a letter dated December 8, 2020. (A map of the APE can be found in **Attachment A** of this letter.)

Summary of Historic Properties

The online electronic files of the National Register of Historic Places (NRHP), MHC, and the Boston Landmarks Commission were used to compile a comprehensive list of historic properties previously identified within the APE.³ Additionally, the FAA requested input from the historical commissions and planning boards from Milton, Quincy, Stoughton, Sharon, Randolph, Norton, Mansfield, Canton, Easton, Foxborough, and Boston, Massachusetts, as well as the Mashpee Wampanoag Tribe and the Wampanoag Tribe of Gay Head to identify additional properties not previously identified as eligible for the NRHP. This effort identified 4,242 properties listed in or potentially eligible for listing in national, state, or local historic registers. Of these, 58 properties within the APE are currently listed in or have been formally determined eligible for listing in the NRHP. These properties are listed by name along with their NRHP-designated area of significance and city in **Table 1**. For the purposes of the analysis, FAA assumed all 4,242 properties within the APE are eligible for listing in the NRHP.

The FAA received correspondence from MHC dated November 15, 2021. In this letter, the MHC states that historic resources “would be adversely effected by the increased flight events through the introduction of visible and audible elements.” They also identified four specific “important historic resources” under or near the 4L RNAV flight path that the MHC believes would be “impacted by audible and visible flight events” introduced by the proposed undertaking. These identified historic resources are Cedar Grove Cemetery, Governor Hutchinson’s Field, Captain R.B. Forbes House, and the Blue Hills Reservation Multiple Resource Area (MRA).⁴ These properties were identified or had multiple historic resources found within the MRA as part of the initial inventory of 4,242 historic resources.

Because the undertaking would not have physical effects (see discussion below), this identification effort focused on identifying properties for which *setting* and *feeling* are characteristics contributing to the property’s NRHP eligibility. These may include isolated properties where a cultural landscape is part of the property’s significance, rural historic districts, outdoor spaces designed for meditation or contemplation, and certain traditional cultural properties in continuous use. These property types are more susceptible to auditory and visual impacts and include sacred spaces such as cemeteries, places of worship and sites of religious significance to tribes; parks and open recreational lands; historic properties that include designed or vernacular landscapes, and areas culturally significant to tribes and other distinct populations.

³ “National Register Database and Research, Searchable Table,” *National Park Service*, <https://www.nps.gov/subjects/nationalregister/database-research.htm#table>; “MassGIS Data: MHC Historic Inventory,” *State of Massachusetts Bureau of Geographic Information*, <https://www.mass.gov/info-details/massgis-data-mhc-historic-inventory>; “Boston Landmarks Commission (BLC) Historic Districts,” *Boston Landmarks Commission*, <https://bostonopendata-boston.opendata.arcgis.com/datasets/boston-landmarks-commission-blc-historic-districts/explore>.

⁴ The Blue Hills Reservation MRA is 7,000 acres spanning from Quincy to Dedham, Milton to Randolph. This resource is a multiple property listing that includes individually-listed resources in the NRHP. The MRA includes prehistoric and historic sites where location data is restricted and not available.

We have selected six examples of properties that fall within these property types to demonstrate the anticipated effects as a result of the proposed undertaking. This includes the four properties identified by MHC on November 15, 2021, and two others identified by FAA as exemplifying the significant historic features that could be affected by the proposed undertaking.

Many of the historic resources within the APE were designated in the 1970s, 1980s, and 1990s. As such, they have been potentially subject to decades of change including the introduction of visual and audible elements. This includes incremental changes, such as the increase in surface and aircraft traffic throughout the APE, as well as large changes such as widening of Interstate 93 through the Blue Hills Reservation. These changes may have diminished the integrity of the properties setting or feeling, although other aspects of integrity may be sufficient to convey the properties' significance, and none have been removed from the National Register. However, for purposes of this analysis FAA looked specifically at whether the properties retain integrity of setting and feeling under existing conditions. Therefore, the FAA assumes that all retain sufficient integrity to be considered historic resources for the purposes of this study.

Table 1: National Register of Historic Places Properties and Properties Identified by MHC to be Considered Eligible for NRHP within the APE

<i>NRHP Property Name</i>	<i>Area of Significance</i>	<i>City in Massachusetts</i>
All Saints' Church	Art; Architecture	Boston
Belcher-Rowe House	Architecture; Social History	Milton
Bent, G.H., Company Factory	Industry; Commerce; Architecture	Milton
Blue Hills Headquarters*	Community Planning and Development; Entertainment/Recreation; Architecture	Milton
Blue Hills Reservation and the Neponset River Reservation MRA	Archeology—Prehistoric; Conservation; Industry	Canton, Milton, Quincy, Randolph, Braintree
Blue Hills Parkway	Community Planning and Development; Engineering; Landscape Architecture; Transportation	Boston, Milton
Blue Hills Reservation Parkways-Metropolitan Park System of Greater Boston	Community Planning and Development; Conservation; Engineering; Entertainment/Recreation; Landscape Architecture; Transportation	Braintree
Borderland Historic District	Agriculture; Historic - Aboriginal; Architecture; Art; Commerce; Engineering; Industry; Invention; Landscape Architecture; Science	North Easton
Boston Young Men's Christian Association	Architecture; Education; Social History	Boston
Boyden, Seth, House	Architecture	Foxboro

<i>NRHP Property Name</i>	<i>Area of Significance</i>	<i>City in Massachusetts</i>
Brookwood Farm*	Agriculture; Exploration/Settlement	Milton
Calf Pasture Pumping Station Complex	Community Planning and Development; Engineering; Architecture; Invention	Boston
Canton Corner Historic District	Architecture; Community Planning and Development; Landscape Architecture; Social History	Canton
Canton Viaduct	Engineering; Transportation; Architecture	Canton
Carpenter, Ezra, House	Industry; Commerce; Architecture	Foxborough
Cary, Otis, House	Industry; Politics/Government; Architecture	Foxboro
Cedar Grove Cemetery	Considered eligible for NRHP determination but not currently listed	Dorchester
Chickatawbut Observation Tower*	Entertainment/Recreation	Quincy
Clapp, Lucius, Memorial	Community Planning and Development; Architecture	Stoughton
Cobb's Tavern	Communications; Social History	Sharon
Comfort Station*	Entertainment/Recreation; Architecture	Milton
Dorchester Park	Community Planning and Development; Landscape Architecture	Boston
Dorchester Pottery Works	Industry; Historic - Non-Aboriginal; Art; Architecture	Boston
Dorchester South Burying Ground	Art; Community Planning and Development; Landscape Architecture; Social History	Boston
Dorchester-Milton Lower Mills Industrial District	Industry; Commerce; Architecture	Boston
Eliot Memorial Bridge*	Entertainment/Recreation	Milton
Fisher-Richardson House	Architecture; Conservation; Education; Social History	Mansfield
Forbes, Capt. Robert B., House (NHL)	Commerce; Architecture; Maritime History	Milton
Foxboro Grange Hall	Industry; Architecture; Social History	Foxboro
Foxborough Pumping Station	Architecture; Community Planning and Development; Engineering	Foxborough
Furnace Village Historic District	Industry; Prehistoric; Historic - Aboriginal; Historic - Non-Aboriginal; Health/Medicine; Architecture	Easton

<i>NRHP Property Name</i>	<i>Area of Significance</i>	<i>City in Massachusetts</i>
Great Blue Hill Observation Tower*	Entertainment/Recreation	Milton
Great Blue Hill Weather Observatory (NHL)*	Science; Architecture; Invention	Milton
Green Hill Site*	Prehistoric	Canton (location data restricted)
Harrison Square Historic District	Architecture; Community Planning and Development; Landscape Architecture; Social History	Boston
Holbrook, Dr. Amos, House	Art; Health/Medicine; Architecture	Milton
House at 155 Reservoir	Architecture	Brookline
Hutchinson's, Gov. Thomas, Ha-ha	Landscape Architecture; Politics/Government	Milton
Loring, Harrison, House	Industry; Architecture	Boston
Lyon's Turning Mill*	Industry; Architecture	Quincy (location data restricted)
Massachusetts Hornfels-Braintree Slate Quarry*	Industry; Prehistoric	Milton (location data restricted)
Memorial Hall	Architecture	Foxboro
Metropolitan District Commission Stable*	Community Planning and Development; Entertainment/Recreation; Architecture	Milton
Milton Cemetery	Art; Architecture; Community Planning and Development; Landscape Architecture; Social History	Milton
Milton Centre Historic District	Community Planning and Development; Architecture	Milton
Milton Hill Historic District	Conservation; Community Planning and Development; Architecture	Milton
Old Barn*	Exploration/Settlement; Architecture	Milton
Old Harbor Reservation Parkways, Metropolitan Park System of Greater Boston	Community Planning and Development; Conservation; Engineering; Entertainment/Recreation; Landscape Architecture; Transportation	Boston
Peabody, The	Architecture; Community Planning and Development	Boston
Pierce House	Industry; Architecture	Reading
Ponkapoag Camp of Appalachian Mountain Club*	Entertainment/Recreation	Randolph

<i>NRHP Property Name</i>	<i>Area of Significance</i>	<i>City in Massachusetts</i>
Pratt, Capt. Josiah, House	Military; Politics/Government; Architecture	Foxboro
Redman Farm House*	Agriculture; Architecture	Canton
Refreshment Pavillion*	Entertainment/Recreation	Milton
Savin Hill Historic District	Architecture; Community Planning and Development	Boston
Scott's Woods Historic District	Agriculture; Architecture	Milton
Sharon Historic District	Exploration/Settlement; Architecture	Sharon
Soldiers' Memorial Library	Architecture; Community Planning and Development; Social History	Mansfield
Spring Brook Cemetery	Art; Community Planning and Development; Social History	Mansfield
Stoneholm	Industry; Politics/Government; Architecture	Sharon
Stoughton Railroad Station	Transportation; Architecture	Stoughton
Suffolk Resolves House	Politics/Government	Milton
Wilber, Charles R., School	Education; Architecture	Sharon
NOTES: * Part of the Blue Hills and Neponset River Reservations MRA. SOURCE: National Register Database; https://www.nps.gov/subjects/nationalregister/database-research.htm#table , Massachusetts Historic Commission, Adapted by Environmental Science Associates, 2021.		

Assessment of Effects

The undertaking would have an effect on a historic property if it alters the characteristics qualifying that property for the National Register. Such effects are considered "adverse" if they would diminish the integrity of a property's significant historical features (including its setting, provided the setting is a contributing factor to the property's historical significance). The undertaking does not require land acquisition, construction, or ground disturbance, and the FAA anticipates no physical effects to historic properties. However, the FAA recognizes that for certain types of historic properties, particularly those where the property's setting contributes to its historical significance, the introduction of visual, atmospheric, or audible elements could diminish the integrity of a property's significant historical features, and therefore aircraft operations could result in non-physical effects.

Therefore, the FAA focused its assessment of effects on the potential for the undertaking to introduce visual or audible elements that would diminish the integrity of setting or feeling for historic properties where those are significant historical features. The FAA also considered the extent to which those aspects of integrity have already been diminished under existing conditions.

Assessment of Auditory Effects

In order to assess the auditory impacts of the undertaking on historic properties, the FAA first modeled the projected noise attributable to additional arrivals using a metric known as Day-Night Average Sound Level (DNL). DNL is the standard noise metric used for all FAA studies of aviation noise exposure in airport communities and was used to assess the potential noise exposure of every identified historic property within the APE.

DNL is a 24-hour, time-weighted average noise metric, expressed in terms of decibel units of sound heard by the human ear, which accounts for the noise levels of individual aircraft events, the number of times those events occur, and the time of day they occur. DNL takes the contribution of noise from average aircraft operations and allows for a single number to represent aviation noise over a 24-hour period. There is one unique modification in that there is a “noise penalty” of any noise generated during “nighttime hours” (10:00 p.m. to 7:00 a.m.). In the calculation of DNL, for each hour during nighttime hours, the sound levels are increased by a 10 decibel-weighting penalty (equivalent to a 10-fold increase in aircraft operations) before the 24-hour value is computed.

The FAA’s procedures for compliance with the National Environmental Policy Act (NEPA) define a significant noise impact as an increase of a DNL by 1.5 dB in areas exposed to aircraft noise of DNL 65 dB and higher.⁵

As presented in section 4.6 of the Draft EA, the noise impacts resulting from the proposed undertaking are an order of magnitude below the significance threshold given above. Using the DNL metric, the largest noise change at a historic resource is 0.2 dB across the APE, which is a change in noise that is imperceptible to the human ear.⁶ Many historic resources within the APE experience either no difference or a small decrease in noise exposure between the Proposed Action and the No Action Alternative. These locations are currently affected by the noise from 78,879 annual flights. The additional net 255 annual flights introduce a relatively small noise change reflective of an average of less than one additional daily flight and a projected decrease of 52 nighttime arrivals.⁷

However, FAA’s NEPA procedures also note that special consideration needs to be given to the evaluation of the significance of noise impacts on noise sensitive areas within historic sites, including traditional cultural properties, where the land use compatibility guidelines in 14 CFR Part 150 are not relevant to the value, significance, and enjoyment of the area in question. For example, the DNL 65 dB threshold may not adequately address the impacts of noise on areas

⁵ Specifically, the action would increase noise by DNL 1.5 dB or more for a noise sensitive area that is exposed to noise at or above the DNL 65 dB noise exposure level, or that will be exposed at or above the DNL 65 dB level due to a DNL 1.5 dB or greater increase, when compared to the no action alternative for the same timeframe. FAA Order 1050.1F, Ex. 4-1 at p. 4-8.

⁶ World Health Organization. Hansen, Colin. (1951). *Fundamentals of acoustics*. American Journal of Physics - AMER J PHYS. 19. Accessed in December 2021 at https://www.who.int/occupational_health/publications/noise1.pdf?ua=1 https://www.who.int/occupational_health/publications/noise1.pdf?ua=1

⁷ “Nighttime” is referring to its definition relative to the DNL noise metric, 10:00 p.m. to 7:00 a.m.

where other noise is very low, and a quiet setting is a generally recognized purpose and attribute.

In order to assess the potential for incremental changes in noise levels or changes in the character of aircraft noise that may result in alteration of those characteristics of historic properties that qualify them for inclusion in the NRHP, the FAA considered the projected increase in the number or concentration of overflights over these areas. This analysis also informed the assessment of visual effects described below. As illustrated in the examples below, increasing overflights by an average of less than one per day would not introduce audible elements that would alter those characteristics of a historic property that qualify it for inclusion in the NRHP.

Assessment of Visual Effects

Recognizing that some types of historic properties may be affected by overflights due to visual impacts, the FAA also considered the potential for the introduction of visual elements that could diminish the integrity of the property's historical features. In order to assess the potential visual impacts on historic properties, the data for a year of overflights at the airport was overlain on the APE in ArcGIS.⁸ The APE experiences 78,879 arrival and 18,989 departure overflights annually, which corresponds to 216.1 daily arrival overflights and 52.0 daily departure overflights within the APE. Looking at the APE as a whole, the undertaking is estimated to add 255 annual arrival overflights or 0.70 daily average overflights to the APE. This is a 0.26% increase in overflights within the APE. This shows that the APE is already heavily overflowed as a whole. However, existing flights are not evenly distributed over the APE but follow flight paths which converge close to and in line with the runways. In order to further assess the impact of the undertaking on individual historic resources within the APE, the FAA considered the possibility that the undertaking could increase flights over parts of the APE that are not heavily overflowed under current conditions. This was done by mapping the dataset of departure overflights and arrival overflights over the APE (see **Attachments B** and **C**) to look for specific areas within the APE that would experience overflights from the undertaking in locations that are not already heavily overflowed. Attachment B shows that when looking only at departures, the APE areas closest to the airport are already dense with overflights but the flight tracks become more dispersed as the APE moves to the southwest. However, when arrivals are considered, this pattern disappears. Attachment C, which displays a year of arrival radar tracks, shows that the APE is already heavily overflowed over the full extent of the APE. The combined effect is that historic properties throughout the entire APE are heavily overflowed under current conditions.

When considering the potential for introduction of visual elements to historic properties, the analysis compared the numbers and locations of existing overflights within the APE against the undertaking. The undertaking would increase overflights within the APE from 268.1 daily overflights to 268.8 daily overflights, an average of less than one per day. A visual analysis of the current flight tracks shows that the entire APE is densely overflowed. As noted above, the increase in overflights attributable to the undertaking is very small compared to the existing level of overflights (a 0.26% increase). As illustrated in the examples below, the additional 0.7 average daily overflights would not be expected to introduce visual elements that would change the existing characteristics of a historic property that qualify it for inclusion in the NRHP.

⁸ The year of overflight data used was from November 1, 2018, to October 31, 2019.

Analysis of Potential Auditory and Visual Effects on Representative Historic Properties

To exemplify the potential impacts on historic properties within the APE that are especially sensitive to overflights (i.e., where the introduction of visual or audible elements could diminish the integrity of a property’s significant historical features), the FAA looked more closely at six properties: Milton Cemetery, Dorchester Park, Cedar Grove Cemetery, Governor Hutchinson’s Field, the Captain R. B. Forbes House, and the Blue Hills Reservation MRA. Milton Cemetery and Dorchester Park were selected from the NRHP properties in the APE as property types sensitive to noise and visual intrusions that could experience the maximum potential impact from the undertaking as they are located as close as possible to where the aircraft flying on the proposed procedure are closest to the ground. The other four properties were identified by MHC in their November 15, 2021, letter as “other important historic resources” that warranted a closer analysis of the potential impacts of the undertaking. These six properties are pictured with the proposed undertaking and the overflight radar data in **Attachments D1 and D2**.

Milton Cemetery was established in 1672, covers 104 acres, and has gravestones ranging back to the late 1600s. It was listed in the NRHP in 2004 under Criterion A (events) and C (architecture) as a landscape representative of the evolution of traditional New England burial sites, and for being designed by noted landscape architects Robert Morris Copeland, Horace William Shaler Cleveland, and Ernest W. Bowditch in the 19th century “rural” cemetery movement.⁹ The gravestones represent a valuable collection of folk and burial arts spanning over 300 years, and several are attributed to master craftsmen. It has a period of significance of 1672-1954.¹⁰ As an example of the rural cemetery movement, it is a property where a pastoral setting and a feeling of serenity are attributes of significance.¹¹ The Milton Cemetery is completely within the APE, is 6.3 nautical miles from Boston Logan, and would be directly overflowed by aircraft using the proposed undertaking.

Dorchester Park was established in 1891 and stretches over 28.45 acres in the Dorchester neighborhood of Boston. It was listed in the NRHP in 2008 under Criterion A (events) and C (architecture) for both its association with the Colonial period and early development of the Dorchester neighborhood as evidenced in the mile marker located on Adams Street, and as the work of a master designer, the notable landscape design firm of Olmsted, Olmsted, and Eliot.¹² It has multiple periods of significance. The first is 1734, the date of the mile marker. The second is 1891 to 1957, corresponding to when the park was established through 1957.¹³ The Park contains athletic fields and a forest with scenic pathways. As a park that was designed by Frederick Law Olmsted’s successor firm that forms part of Boston’s “Emerald Necklace,” it represents the naturalistic design that is characteristic of Olmsted’s work. The landscape setting and the feeling of escape from city life are characteristics of its significance. Dorchester Park is completely within the APE, is 5.9 miles from Boston Logan, and is 0.35 miles from the center path of the undertaking.

⁹ Edith Clifford, *National Register of Historic Places Nomination: Milton Cemetery*, 2004.

¹⁰ Ibid.

¹¹ See National Register Bulletin 41, *Guidelines for Evaluating and Registering Cemeteries and Burial Places* (National Park Service, 1992) at p.6.

¹² Shary Page Berg, *National Register of Historic Places Nomination: Dorchester Park*, 2007.

¹³ Ibid.

Cedar Grove Cemetery was established in 1868 to provide additional burial grounds for the Town of Dorchester. The land along “the Neponset with its low-lying hills, marshland and wooded areas constituted a text book-perfect [*sic*] location for a rural garden cemetery... The peace and charm of this place was apparent to fashionable strollers of the mid 19th century [*sic*].”¹⁴ It was purchased for \$17,648.83 and laid out by architect Luther Briggs Jr. It was constructed between c.1880 and 1930 as part of a small residential settlement and large public park in the Dorchester neighborhood of Boston.¹⁵ It is associated with early residential development as well as with the rural cemetery movement of the mid- to late-19th century. While not formally listed in the NRHP, MHC has indicated that this historic resource is considered eligible for listing in the NRHP.¹⁶ Like Milton Cemetery above, it is a property where a pastoral setting and feeling of serenity are attributes of its historical significance. The Cedar Grove Cemetery is located immediately east and across Adams Street from Dorchester Park. It is completely within the APE, is 5.4 nautical miles from Boston Logan, and would be directly overflowed by aircraft using the proposed undertaking.

Governor Hutchinson’s Field is a contributing element of the Milton Hill Historic District. As such, it was listed on the NRHP in 1995 under Criterion A (events) and C (architecture) as “a residential area that contains the most significant concentration of 19th and early 20th century high-style and period architecture in [Boston].”¹⁷ It has a period of significance of 1740 – 1945, marking the district’s rise to prominence as an estate district with the founding of Governor Thomas Hutchinson’s summer estate in 1742, through to the 50-year significance cutoff of the nomination.¹⁸ The district contains a number of features, including Governor Hutchinson’s Field. This feature is a 9.65-acre rectangular open area that extend from the Neponset River to the crest of Milton Hill. It once functioned as a fruit orchard associated with the Hutchinson estate. Since 1898 it has been maintained as a public open space used for passive recreation and “affords an unobstructed view of the Neponset River and Boston from the summit of Milton Hill.”¹⁹ While not recognized individually as a historic resource, it contributes to the Milton Hill Historic District as an open space historically associated with both agriculture and recreation. Governor Hutchinson’s Field functions as a reminder of the early history of the district when it was part of a more rural setting and represents late 19th-century efforts to preserve remnants of a pastoral landscape for public recreation. As such, it is a property where a rural and pastoral setting are attributes of its historical significance. It is completely within the APE, approximately 6.5 nautical miles from Boston Logan, and would be directly overflowed by aircraft using the proposed undertaking.

The Captain R. B. Forbes House (215 Adams Street, Milton, MA) is individually listed as a National Historic Landmark and is located within the Milton Hill Historic District. It is recognized as exemplifying both the Greek Revival style, as designed by the Boston architect Isiah Rogers, and the influences of 18th and 19th century trade with China. The house, built in

¹⁴ Edward Gordon, *Massachusetts Historical Commission Inventory Form: Cedar Grove/Richview*, 1995.

¹⁵ *Ibid.*

¹⁶ Massachusetts Historical Commission (MHC), letter to FAA, November 15, 2021.

¹⁷ Edith Gifford, *National Register Nomination Form: Milton Hill Historic District*, 1995.

¹⁸ *Ibid.* The nomination was submitted in 1995.

¹⁹ *Ibid.*

1833, is decorated with Chinese and nautical motifs and furnished with period furniture and art imported from China. It has a “large octagonal cupola enabling the captain’s mother and sister to watch for ships entering and leaving Boston Harbor.”²⁰ Its owner, Captain R.B Forbes, was head of the Chinese trade firm Russell and Company. It was listed as a National Historic Landmark in 1966.²¹ It has a period of significance of 1833 and is presumably listed under Criterion C (architecture) as both its date of construction (1833) and design are presented prominently in the documentation.²² As a residence constructed at the top of a local prominence (Milton Hill) and within an established residential community (Milton Hill neighborhood/historic district), this resource could be considered to have special visual characteristics that could be attributes of its historical significance. It is within the APE, approximately 6.6 nautical miles from Boston Logan, and would be directly overflown by aircraft using the proposed undertaking.

Blue Hills Reservation Multiple Resource Area includes both prehistoric and historic archeological sites and historic-era architectural and landscape resources.²³ This resource area encompasses the entirety of the Blue Hills Reservation and includes multiple properties individually listed in the NRHP. While a comprehensive inventory of sites has not been completed, notable contributors to the Multiple Resource Area (MRA) include areas where Quincy’s granite industry flourished (Lyons Turning Mill and Fuller Quarry, both outside the APE), as well as natural landscapes that were identified for preservation in the late 19th century and developed for passive and active recreation in the early 20th century. Even before it was established as part of the Metropolitan Park System, the area was a popular destination for outdoor recreation such as hiking, as well as for early meteorological experimentation. The views from Great Blue Hill were enjoyed by visitors and provided unobstructed sightlines to the shoreline, prompting construction of an observatory tower in 1885 (Blue Hills Meteorological Observatory). The Blue Hill Meteorological Observatory is documented as “the most important historic building in the Blue Hills Area.”²⁴ It was listed as a National Historic Landmark in 1989.²⁵ In the 1930s, the Civilian Conservation Corps built a second tower on Great Blue Hill (Eliot Tower) which provides views of the skyline of Boston to the north, the harbor islands to the northeast, Houghton’s and Ponkapoag ponds to the east, and Mount Wachusett to the west. The park structures in the area were designed in the early 20th century by the master architectural firm Stickney and Austin, and areas for camping and nature study were later developed by the Appalachian Mountain Club in the 1920s-40s. The area has been altered by the reconstruction of Route 128 in the 1960s to expand it to a six-to-eight lane highway. As a landscape that derives part of its historical significance from views of Boston as well as sightlines to the coast, the Blue Hills Reservation MRA is sensitive to visual effects. It is almost completely within the APE and approximately 7.4 nautical miles from Boston Logan. Given the size of the MRA, there are portions that would be directly overflown by aircraft using the proposed undertaking.

²⁰ Patricia Heintzelman, *National Register Nomination Form: Captain R.B. Forbes House*, 1975

²¹ The digital file for this resource includes correspondence and earlier documentation associated with listing of the house as a National Historic Landmark in 1966.

²² Specific criteria are not listed, although both “architecture” and “commerce” are checked as areas of significance.

²³ Stephen Cole and Sara Chase, *National Register of Historic Places Nomination: Blue Hills and Neponset River Reservation Multiple Resource Area*, 1980. No specific criteria or period of significance is noted in the nomination. Many of the individual contributing elements have been documented separately.

²⁴ Sara Chase, *Massachusetts Historical Commission Form B: Great Blue Hill Weather Observatory*, 1979.

²⁵ National Park Service, “List of NHLs by State,” <https://www.nps.gov/subjects/nationalhistoriclandmarks/list-of-nhls-by-state.htm>

Auditory Effects

The noise impact on the six properties discussed above was calculated and compared against the existing noise exposure from aircraft as measured in DNL. The current noise conditions for each resource are as follows:

- Milton Cemetery – DNL 53.4 dB
- Dorchester Park – DNL 51.3 dB
- Governor Hutchinson’s Field (part of Milton Hill Historic District) – DNL 52.1 dB
- Captain R. B. Forbes House – DNL 52.4 dB
- Cedar Grove Cemetery – DNL 54.0 dB
- Blue Hills Reservation MRA –DNL 39.2 to 50.7 dB across the entire MRA

These noise levels are consistent with a quiet urban environment, and all properties appear to retain integrity of setting and feeling under the existing conditions.²⁶ The cumulative noise exposure of these properties, measured in DNL, would be unchanged under the proposed undertaking.²⁷

In addition, FAA considered whether there might be a change in the character of aircraft noise over the area that could affect these properties.²⁸ Because the area is already densely overflown and the undertaking would increase overflights by an average of less than one per day, we have concluded that the incremental increase in overflights caused by the undertaking would not introduce any audible elements that would diminish the integrity of these properties’ significant historical features.

Visual Effect

The visual impact on the six properties attributable to the increase in overflights was calculated and compared against the existing conditions. This includes consideration of both direct overflights and flights that may be visible from the historic resource.²⁹ The visual impacts for properties where the undertaking would likely result in direct and/or visible overflights is discussed below.

- Milton Cemetery is currently directly overflown by 177.1 average daily overflights. The undertaking would increase the number of daily overflights by 0.7 flights, for a total of

²⁶ “Fundamentals of Noise and Sound,” *Federal Aviation Administration*, https://www.faa.gov/regulations_policies/policy_guidance/noise/basics/. It should be noted that the figure referencing the “quiet urban environment” is an A-weighted SEL level while the calculated values above are DNL, which is weighted over 24 hours instead of 1 second and includes a nighttime penalty. As a point of reference, noise exposure levels below DNL 65 dB are considered compatible with residential use, parks, churches, and concert halls. 14 CFR part 150, appendix A.

²⁷ When analyzing the potential noise impacts to historic resources, the current and future no-action conditions were modeled with consideration to the less precise level of dispersion of flights that would be reflective of conditions without the proposed undertaking. When the future action alternative was modeled, the more concentrated flight tracks that would result from use of the proposed undertaking were used.

²⁸ For example, a shift from small numbers of relatively loud operations to large numbers of relatively quiet operations can result in the same DNL but have different effects on historic properties.

²⁹ Visual impacts were assessed by determining the total number of arrival and departures (e.g., overflights) that would be considered visible at each property. Aircraft were assumed to be visible if the overflight was within five miles of the historic resource.

177.8 average daily overflights. Milton Cemetery also currently experiences a daily average of 288.7 visible flights. The undertaking would increase the number of visible flights by 0.7, for a total daily average of 289.4.

- Dorchester Park is currently directly overflown by 4.5 average daily overflights. It is located 0.35 nautical miles laterally from the proposed procedure's centerline but aircraft on the final approach to Runway 4L are flying on such a straight line that they do not directly overfly Dorchester Park, and the undertaking would not increase the number of direct overflights over Dorchester Park. It would increase the number of daily visible flights. Dorchester Park currently experiences a daily average daily of 321.2 visible flights. The undertaking would increase the number of visible flights by less than one per day, for a daily total average of 321.9.
- Cedar Grove Cemetery is currently directly overflown by 11.4 average daily overflights. The undertaking would increase the number of daily overflights by 0.7 flights, for a total of 12.1 average daily overflights. Cedar Grove Cemetery also experiences a daily average of 323.8 visible flights. The undertaking would increase the number of visible flights by 0.7, for a total daily average of 324.5.
- Governor Hutchinson's Field (part of Milton Hill Historic District) is currently directly overflown by 3.0 average daily overflights. The undertaking would increase the number of daily overflights by 0.7 flights, for a total of 3.7 average daily overflights. This resource also currently experiences a daily average of 293.7 visible flights. The undertaking would increase the number of visible flights by 0.7 flights, for a total daily average of 294.4.
- Captain R. B. Forbes House is currently directly overflown by 1.7 average daily overflights. It is located 0.06 nautical miles laterally from the proposed undertaking. Although this resource is very close to the final approach centerline of the undertaking, aircraft would be expected to fly on such a straight line as to not directly overfly the House. Therefore, the undertaking would not increase the number of direct overflights but would increase the number of daily flights that are visible to visitors. The House currently experiences a daily average of 293.6 visible flights. The undertaking would increase the number of visible flights by 0.7, for a total daily average of 294.3.
- The entire Blue Hills Reservation MRA is currently directly overflown by 213.0 average daily overflights across the 7,000-acre resource. The undertaking would increase the number of daily average overflights by 0.7, for a total of 213.7 average daily overflights. The Blue Hills Reservation MRA also experiences a daily average of 225.7 visible flights. The undertaking would increase the number of visible flights by a daily average of 0.7, for a total of 226.4 daily average of visible flights.

The average altitude of direct overflights was estimated for the six properties and compared against the undertaking to assess the visual impacts. The average altitude of overflights for the properties that would result in less than one direct and/or visible overflight as a result of the undertaking is discussed below.

- Milton Cemetery currently experiences overflights at an average altitude of 2,090 feet above ground level (AGL) for arriving aircraft and 3,470 feet AGL for departing aircraft.

The undertaking would result in an increase of less than one direct overflight per day with an altitude between 2,140 to 2,340 feet AGL.

- Dorchester Park currently experiences overflights traveling at 1,880 feet AGL for arriving aircraft and 3,260 feet AGL for departing aircraft. The resource is located 0.35 nautical miles laterally from the proposed undertaking but aircraft on final approach to Runway 4L are flying on such a straight line that they do not directly overfly Dorchester Park. Therefore, the undertaking would not increase the number of direct overflights over Dorchester Park but would increase the number of daily visible flights by less than one per day with an altitude between 1,690 to 1,790 feet AGL.
- Cedar Grove Cemetery currently experiences overflights at an average altitude of 1,800 feet AGL for arriving aircraft and 3,140 feet AGL for departing aircraft. The undertaking would result in an increase of less than one direct overflight per day with an altitude between 1,720 to 1,820 feet AGL.
- Governor Hutchinson's Field (part of Milton Hill Historic District) currently experiences direct overflights at an average altitude of 1,960 feet AGL for arriving aircraft and 3,360 feet AGL for departing aircraft. The undertaking would result in an increase of less than one direct overflight per day with an altitude between 1,880 to 2,080 feet AGL.
- Captain R. B. Forbes House currently experiences overflights at an average altitude of 2,000 feet AGL for arriving aircraft and 3,680 feet AGL for departing aircraft. This resource is located 0.06 nautical miles laterally from the proposed undertaking. Although this resource is very close to the undertaking's final approach centerline, aircraft would be expected to fly on such a straight line as to not directly overfly the historic resource. Therefore, the proposed undertaking would not increase the number of direct overflights, but the proposed undertaking would increase visible flights by less than one per day with an altitude between 1,870 to 2,070 feet AGL.
- The entire Blue Hills Reservation MRA currently experiences overflights with an average altitude of 2,680 feet AGL for arriving aircraft and 6,210 feet AGL for departing aircraft. The undertaking would result in an increase of less than one direct overflight per day with an average altitude between 2,410 to 2,610 feet AGL.

These examples represent types of historic properties that are most sensitive to aircraft overflights and are located where the undertaking's effects would be the most pronounced. Although some of the six properties would experience additional overflights at a lower altitude on average as a result of the proposed undertaking, each area is already directly overflown, and the undertaking would increase overflights by an average of less than one per day. Given that overflights and visible flights would increase by an average of less than one per day, we conclude that the incremental increase in overflights caused by the undertaking would not introduce any visual elements that would diminish the integrity of these properties' significant historic features and therefore would not adversely affect the historic properties. This indicates that historic properties that are less sensitive to noise or visual intrusions and/or are farther removed from the centerline of the proposed procedure would also not be adversely affected by the undertaking.

Finding of No Adverse Effect Criteria

To support a Finding of No Adverse Effect, an undertaking must not meet any of the criteria set forth in the Advisory Council on Historic Preservation's Section 106 regulations at 36 CFR § 800.5(a). This section presents why the undertaking does not meet any of these criteria.

- Does the undertaking physically destroy or damage the property?
 - The undertaking would not have any physical impact on any property.
- Does the undertaking alter the property in any way that is inconsistent with the Secretary of the Interior's Standards for Treatment of Historic Properties (36 CFR Part 68)?
 - The undertaking is located in the airspace above the historic resources and would not result in any alteration or physical modifications to these resources.
- Does the undertaking remove a property from its historic location?
 - The undertaking would not remove any property from its location.
- Does the undertaking change the character of the property's use, or of physical features within the property's setting that contribute to its historic significance?
 - The undertaking would not change the character of any property's use or any physical features in any historical property's setting.
- Does the undertaking introduce an atmospheric, audible, or visual element to the area that would diminish the integrity of the property's significant historic features?
 - As discussed above and illustrated by the six examples (of Milton Cemetery, Dorchester Park, Cedar Grove Cemetery, Governor Hutchinson's Field, the Captain R. B. Forbes House, and the Blue Hills Reservation MRA), the small increase in overflights attributable to the undertaking, less than one additional overflight per day, would not introduce audible or visual elements that would diminish the integrity of the significant historical features of any historic resource in the APE.
- Does the undertaking result in neglect of a property which would result in its deterioration, transfer, sale, or lease?
 - The undertaking would not cause any property to be neglected, sold, or transferred.

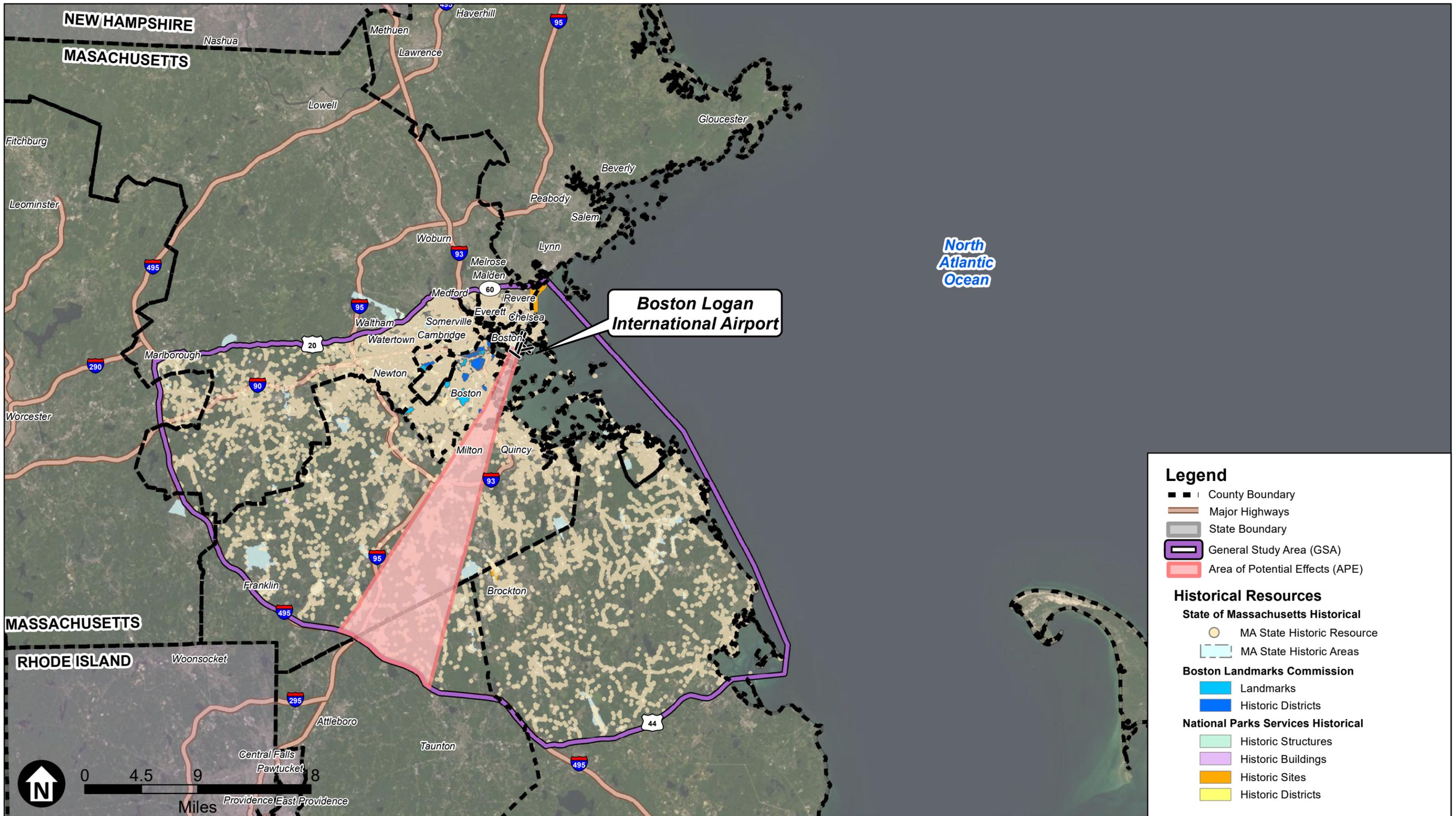
Based on the analysis offered above, the FAA is reaffirming our Proposed Finding of No Adverse Effect. Although the undertaking potentially affects the setting and feeling of certain types of historic properties that would be overflown by aircraft using the proposed procedure, the incremental increase in overflights (an average of less than one per day) in an area already densely overflown would not diminish the integrity of any historic properties' significant historical features. We hope this additional information and analysis responds to your concerns and addresses your previous non-concurrence to the FAA's Proposed Finding of No Adverse Effect. The FAA has attempted to address those concerns by providing additional information and analysis responding to your questions in correspondence.

We request that you review this information and advise the FAA within 30 days of receipt of this letter whether you now concur with, or have no objection to, our Proposed Finding of No Adverse Effect.

Sincerely,

Veronda Johnson

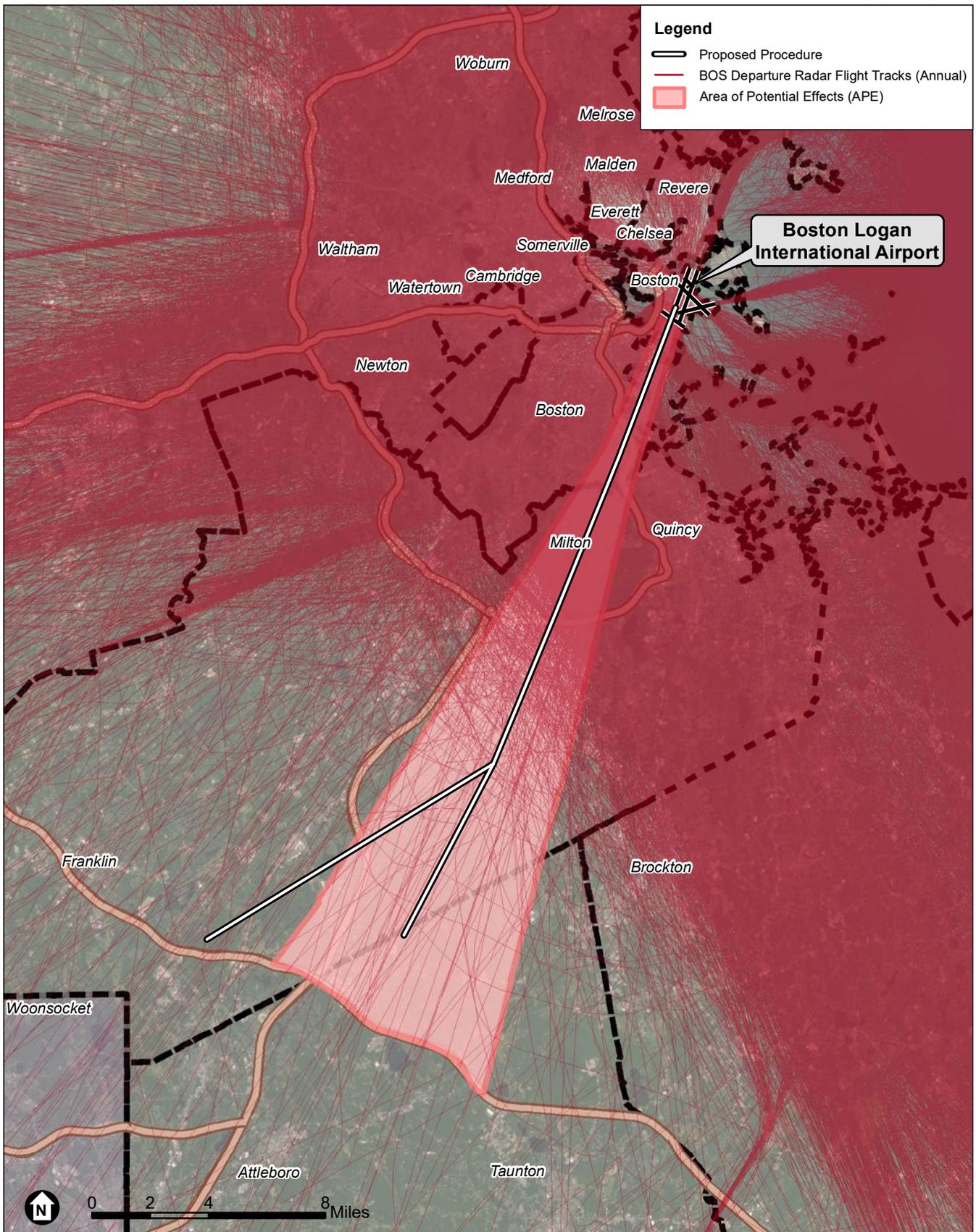
Veronda Johnson
Eastern Service Center
Federal Aviation Administration
Operations Support Group AJV-E250
1701 Columbia Avenue
College Park, GA 30337



SOURCE: Esri; Prepared by Jacobsen Daniels, 2020

Boston Logan RNAV (GPS) RWY 4L EA



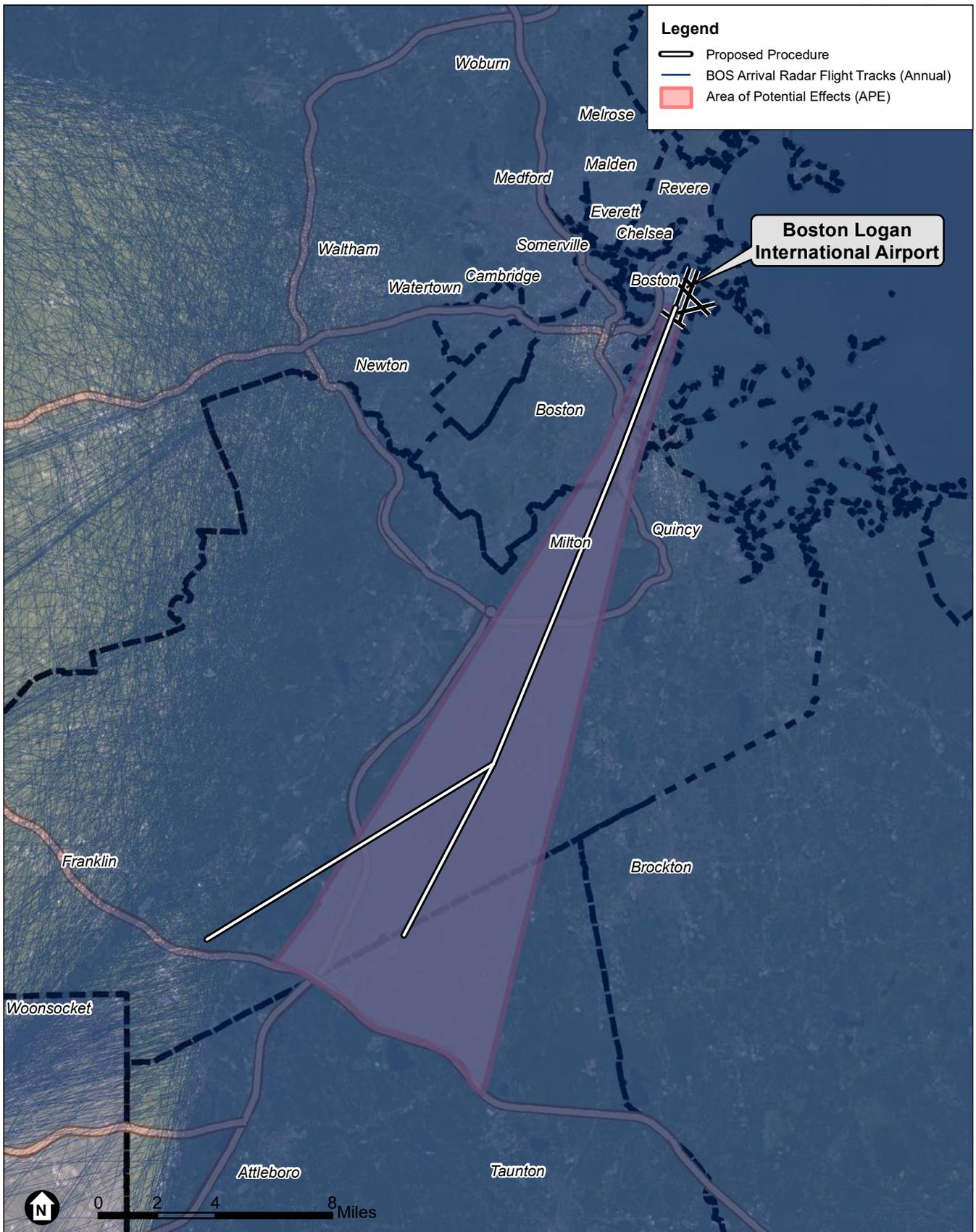


SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



Attachment B
 Area of Potential Effects and Departure Radar Flight Tracks

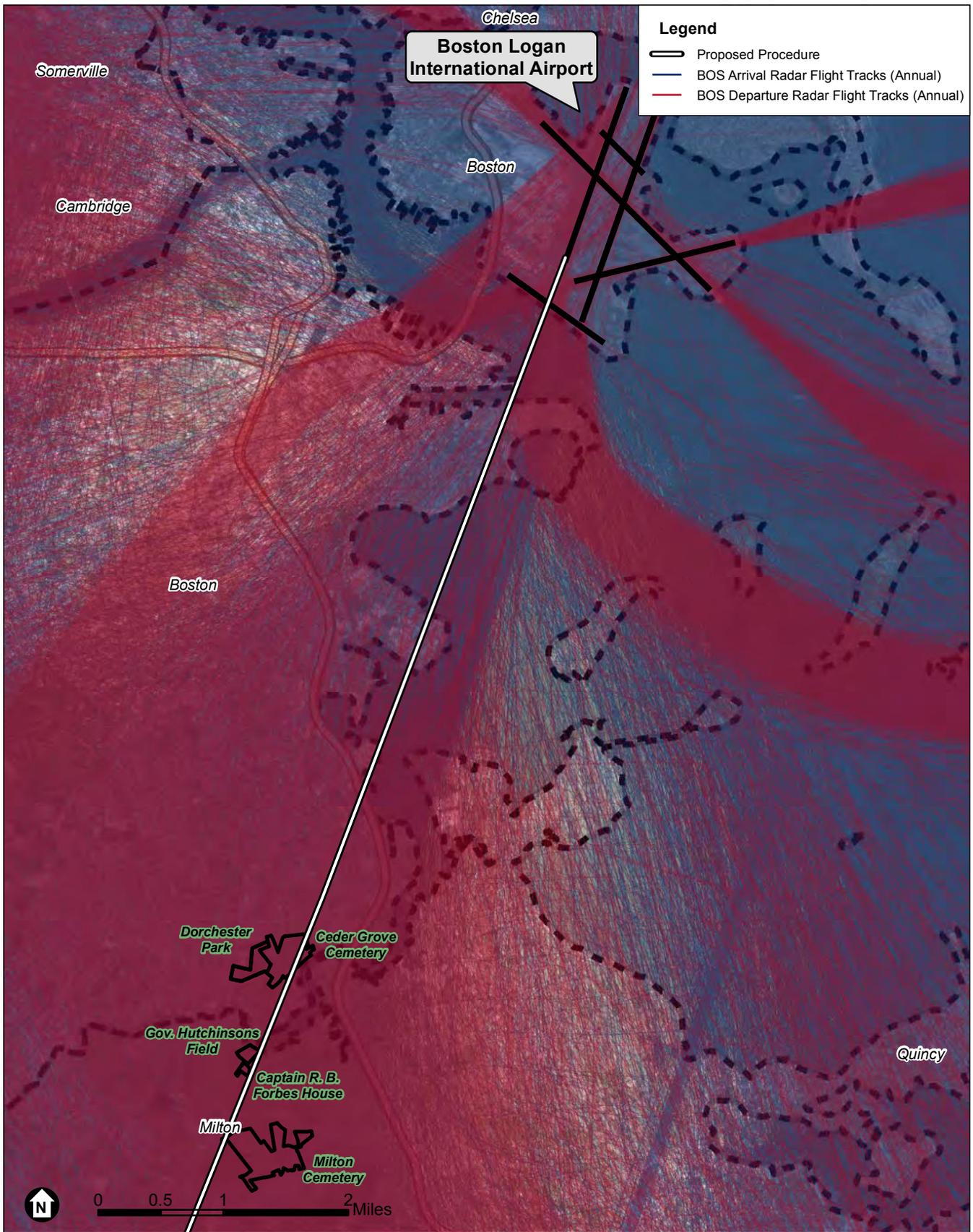


SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA



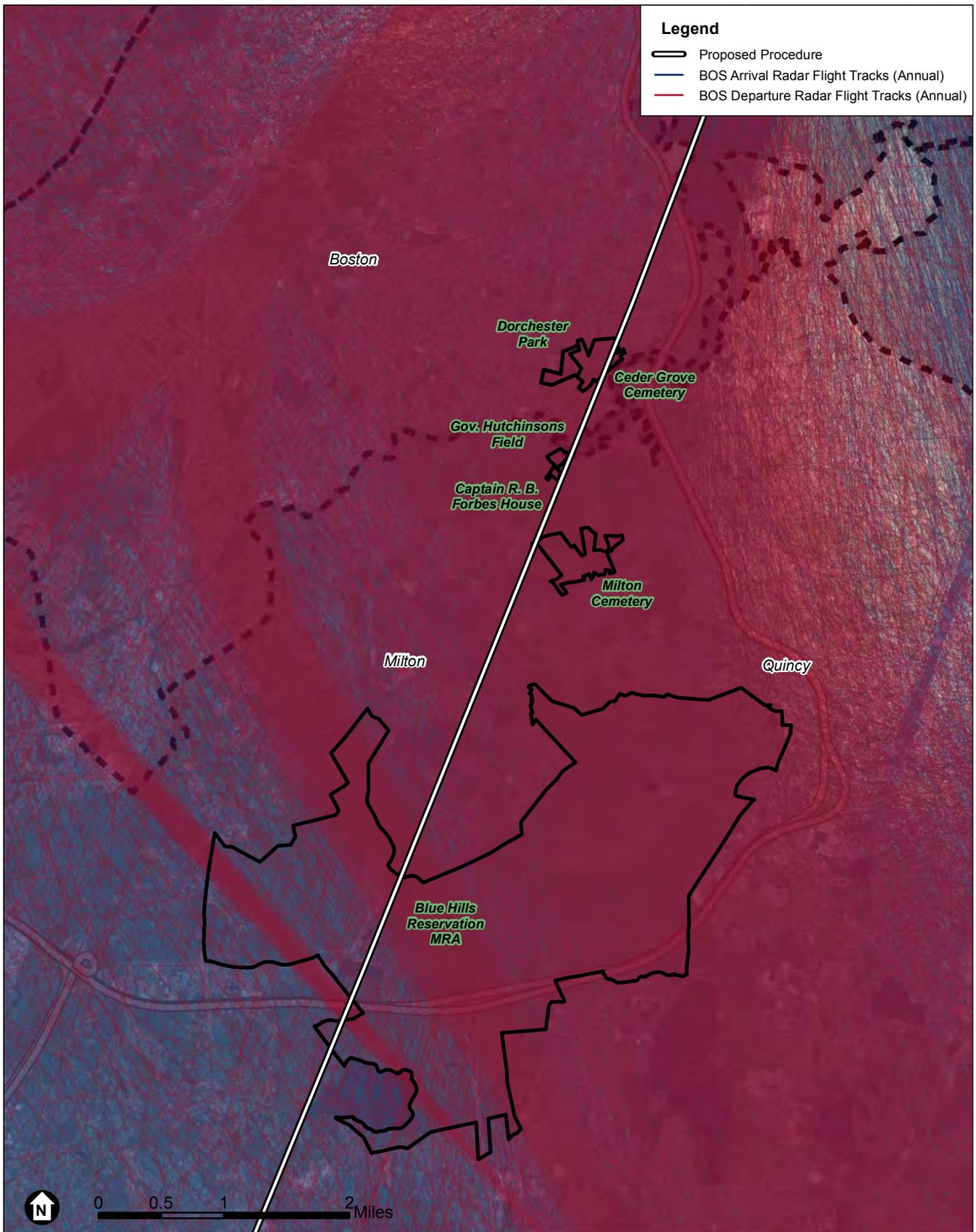
Attachment C
Area of Potential Effects and Arrival Radar Flight Tracks



SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





SOURCE: Esri; RoVolus, 2021; ESA, 2021

Boston Logan RNAV (GPS) RWY 4L EA





U.S. Department
of Transportation
**Federal Aviation
Administration**

Eastern Service Center

1701 Columbia Avenue
College Park, Georgia 30337

Dear Secretary Haaland:

This letter is intended to provide you with notice of a consultation involving National Historic Landmarks, as set forth in 36 C.F.R. § 800.10(c). Specifically, the FAA is proposing to publish a new satellite-based arrival procedure for Runway 4L at Boston Logan International Airport (BOS) and there are two National Historic Landmarks located within the Area of Potential Effects.

The procedure is needed to enhance the safety and efficiency of aircraft operations at BOS by providing vertical and lateral electronic guidance to aircraft, which is particularly important during poor weather conditions. The procedure will allow for a stabilized approach and will reduce pilot workload during those conditions, and also reduce delays and cancellations at BOS. Once the procedure is published, the FAA expects there would be an annual increase of 255 arrivals to Runway 4L at BOS, which were previously scheduled flights that would no longer need to be cancelled due to increased efficiency. The procedure would also allow for the shift of 104 annual arrivals from Runway 4R to Runway 4L due to increased efficiency on Runway 4L. Besides the overall increase of 359 flights to Runway 4L and the decrease of 104 flights to Runway 4R, the number of annual operations at BOS would not change.

This proposal is an undertaking under Section 106 of the National Historic Preservation Act. As part of the FAA's assessment of effects to historic resources from this undertaking, the FAA identified two National Historic Landmarks within the Area of Potential Effects: the Captain Robert Bennet Forbes House (215 Adams Street, Milton, MA) and the Great Blue Hill Weather Observatory (located in the Blue Hills Reservation MRA, East Milton, MA). However, based on its assessment of adverse effects, the FAA has proposed a Finding of No Adverse Effects.

Enclosed please find the FAA's initial Finding of No Adverse Effects, which was sent to all consulting parties, as well as additional consultation letters between the FAA and the Massachusetts Historical Commission (MHC) relating, in part, to the Captain Robert Bennet Forbes House. To date, the MHC has indicated it cannot concur with the FAA's Finding of No Adverse Effect and has stated that "this increase of 359 flights annually will introduce increased visual and audible events which will affect the historic resources under and near the 4L RNAV flight path." The FAA is currently engaged in additional consultation with MHC and has provided additional analysis of the effect on historic properties under the procedure's flight path that we believe shows that the procedure will not introduce any audible or visual elements that would diminish the integrity of the properties' significant historic features. In addition, you can access the FAA's Draft Environmental Assessment for the procedure, prepared pursuant to the National Environmental Policy Act, at the following website: <https://faabostonworkshops.com/>.

We believe this letter and the enclosed consultation letters satisfy our responsibility to notify the Secretary of the Interior under 36 C.F.R. § 800.10(c). Please do not hesitate to contact us with any questions.

Sincerely,

Veronda Johnson

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