



## **Runway 4-Left RNAV (GPS) Approach Procedure**

### **Draft Environmental Assessment**

On September 21, 2020 the FAA will release the Draft Environmental Assessment (EA) for a satellite-based approach procedure to Runway 4-Left. The agency also will open a 60-day public comment period that will end on November 20, 2020. The FAA will review and consider all comments it receives during the comment period as it develops the final environmental determination. The agency expects to issue the environmental determination in early 2021.

The FAA will hold two virtual public workshops in late October to help educate the community about the Draft EA and the proposed new procedure. The Draft EA and information about the workshops will be posted at [FAABostonWorkshops.com](http://FAABostonWorkshops.com) on September 21, 2020.

The National Environmental Policy Act (NEPA) and FAA policy require the agency to conduct an environmental review before implementing new procedures. NEPA requires federal agencies to inform the public about proposed changes and allows for community input through public workshops and a public comment period.

#### **Purpose and Need for the Procedure – Safety and Efficiency**

Implementing the Runway 4-Left RNAV GPS approach procedure is critical for flight safety. It is an operational necessity for Boston Logan International Airport and the National Airspace System (NAS.) The runway does not have an instrument approach procedure.

The proposed new procedure will follow existing flight tracks it will enable pilots and air traffic controllers to guide aircraft to land on Runway 4-Left using the latest available technology.

The RNAV GPS Approach for Runway 4-Left will enhance safety and efficiency by:

- Allowing air traffic controllers to more precisely monitor arriving aircraft vertically and laterally along the approach path.
- Enabling air carriers to make instrument approaches to Runway 4-Left during bad weather or low visibility conditions and when Runway 4-Right is not available due to vessels in the harbor, an emergency on the runway, or construction on the airfield.
- Significantly reducing the need to use the Instrument Landing System (ILS) approach to Runway 15R with a transition to a Visual Approach to Runway 4-Left. This procedure is safe, but the maneuver increases workload for the pilots. They must see other aircraft

approaching Runway 4-Right, while identifying and avoiding other runways and taxiways during the visual approach to Runway 4-Left.

- Reducing delays during bad weather. Flights that would be delayed waiting for an Instrument Approach to Runway 4-Right, would be able to land on Runway 4-Left. This means that during bad weather, flights could land earlier in the evening, avoiding late night arrivals at the airport.
- Implementation is projected for late 2021/early 2022 (calendar year) based on a favorable environmental determination.

## **Background**

The FAA proposed the permanent implementation of the procedure in 2015. Since that time, the agency has been coordinating with Massport, elected officials of potentially affected communities and community advisory committees on the need for the procedure. Initial environmental reviews indicated that the proposed procedure would not result in a reportable or significant noise impacts over noise-sensitive areas. In September 2019, the agency contracted with a consultant to develop an Environmental Assessment for the proposed procedure.

[Graphic of the Procedure](#) (PDF)

Fact Sheet – August 18, 2020 – [NextGen and Performance Based Navigation \(PBN\)](#)

## **FAA and Massachusetts Port Authority Memorandum of Understanding (MOU) Background**

The Federal Aviation Administration and the Massachusetts Institute of Technology (MIT) in 2015 began working jointly on noise research through the Aviation Sustainability Center ([ASCENT](#)), the FAA's Center of Excellence for Alternative Jet Fuels and Environment. Under this program, MIT continues to explore ideas for reducing noise in communities around airports with consideration for potential operational impacts. The Massachusetts Port Authority (Massport) has been a cost-share partner.

The FAA, Massport and MIT in 2016 discussed utilizing BOS as a case study to evaluate ideas developed under ASCENT. Focus areas included developing environmental tools and concepts that could be applied at other airports, and sharing ideas on other ways to manage aircraft noise.

In September 2016, the FAA and Massport signed a Memorandum of Understanding (MOU) establishing an agreement on how they would work to reduce the effects of aircraft noise, while maintaining the safety and efficiency benefits of Performance Based Navigation (PBN) procedures at BOS. The agencies agreed that Massport is responsible for recommending changes to flight procedures to the FAA. Massport has partnered with MIT to identify promising concepts for further study under the MOU. Massport also coordinates with the Massport Community Advisory Committee (MCAC) before submitting recommendations to the FAA.

Proposed changes to flight procedures are subject to safety and environmental reviews. The FAA gathers input from the public through its community involvement process before implementing new procedures.

Under the MOU, ideas for potential procedure modifications were separated into two sequential "Blocks" by MIT. Block 1 procedures were characterized by MIT as having clear predicted noise benefits, limited operational/technical barriers, and a lack of equity issues (defined as noise redistribution between communities for the purposes of this study). Block 2 procedures exhibit greater complexity due to potential operational and technical barriers as well as equity issues.

Massport submitted an initial set of Block 1 recommendations to the FAA on December 20, 2017. The FAA evaluated the recommendations for safety and their effect on efficiency at BOS and the National Airspace System.

This chart lists the recommendations.

## Block 1 Procedure Recommendations

Proc. ID D = Dep. A = Arr.	Procedure	Primary Benefits
1-D1	Restrict target climb speed for jet departures from Runways 33L and 27 to 220 knots or minimum safe airspeed in clean configuration, whichever is higher.	Reduced airframe and total noise during climb below 10,000 ft (beyond immediate airport vicinity)
1-D2	Modify RNAV SID from Runway 15R to move tracks further to the north away from populated areas.	Departure flight paths moved north away from Hull
1-D3	Modify RNAV SID from Runway 22L and 22R to initiate turns sooner after takeoff and move tracks further to the north away from populated areas.	Departure flight paths moved north away from Hull and South Boston
1-D3a	<i>Option A:</i> Climb to intercept course (VI-CF) procedure	
1-D3b	<i>Option B:</i> Climb to altitude, then direct (VA-DF) procedure	
1-D3c	<i>Option C:</i> Heading-based procedure	
1-A1	Implement an overwater RNAV approach procedure with RNP overlay to Runway 33L that follows the ground track of the jetBlue RNAV Visual procedure as closely as possible.	Arrival flight paths moved overwater instead of over the Hull peninsula and points further south
1-A1a	<i>Option A:</i> Published instrument approach procedure	
1-A1b	<i>Option B:</i> Public distribution of RNAV Visual procedure	

Block 1 recommendations accepted by the FAA are 1-D2 and 1-A1/1-A1a. FAA continues to work closely with Massport and MCAC on final procedure designs that meet FAA safety criteria and meet the intent of the recommendations. Block 2 recommendations have not yet been formally submitted to FAA.

### Link to MIT Report

#### Proposed Departure Procedure for Runway 15-Right (1D-2) -

[https://www.dropbox.com/s/x2si9bagc7aypob/FAA\\_bos\\_blzr\\_07312020\\_CC.mp4?dl=0](https://www.dropbox.com/s/x2si9bagc7aypob/FAA_bos_blzr_07312020_CC.mp4?dl=0)

### Links to more information:

**Link to MOU**

**News Release – October 7, 2016: [FAA and Massport to Explore Noise Mitigation](#)**

## **Boston Logan Airport Noise Study (BLANS) 2003 through 2017**

The Federal Aviation Administration (FAA) in December 2017 released the Final Boston Logan Airport Noise Study (BLANS) Report. The goal of the study was to explore ways to reduce noise from flight procedures and ground operations at Boston Logan International Airport to the practicable extent possible for the greatest number of people residing in communities within a 20-mile radius of the airport. The three-phase study began in 2003 and ended in December 2016.

### **Background**

When the FAA issued the 2002 Environmental Record of Decision for the Boston Logan Airside Improvements Planning Project, the agency required the Boston Overflight Noise Study (BONS) as part of the project mitigation. The Record of Decision required the FAA, the Massachusetts Port Authority (Massport) and the Logan Airport Community Advisory Committee (CAC) to work together to develop a noise study scope that would enhance existing noise abatement measures and develop new measures that could apply to aircraft overflights.

**Phase 1** identified safe and efficient noise abatement measures that would not adversely affect other communities within the noise study area and that could be implemented before the study's completion. That effort produced several modified arrival and departure flight procedures that raised aircraft altitudes over communities or maximized the use of over-water flight routes when conditions permitted. These measures notably reduced noise levels over land.

The FAA renamed BONS at the beginning of **Phase 2**. The initiative was renamed Boston Logan Airport Noise Study (BLANS). It identified and implemented other potential measures to reduce noise impacts to communities surrounding Boston Logan International Airport. The FAA evaluated dozens of potential noise abatement measures for ground operations, arrivals, departures and local aircraft traffic and implemented two ground measures. Those measures established an area for engine run-ups and a location for holding aircraft that are delayed before departure. Several other measures included encouraging airlines to use a single engine while taxiing, and establishing and maintaining communications with helicopters and propeller aircraft to maintain altitudes of 2,000 feet over downtown Boston.

The goal of **Phase 3** was to develop a Runway Use Program that would replace the airport's Preferential Runway Advisory System (PRAS). The CAC was unable to recommend such a program before the Boston Logan Airport Noise Study ended. At CAC's request, its consultant developed a detailed noise abatement data report that could eventually be used to support the development of a Runway Use Program.

### **BLANS Final Report pdf**

[Aircraft Noise Portal](#)

[Airports Division Environmental Information](#)