MEMORANDUM OF UNDERSTANDING

BETWEEN THE

FEDERAL AVIATION ADMINISTRATION

AND THE

MASSACHUSETTS PORT AUTHORITY

1. Parties

The parties to this Memorandum of Understanding ("MOU") are the Federal Aviation Administration ("FAA") and the Massachusetts Port Authority (the "Authority").

2. Purpose

This MOU outlines the actions the Authority and the FAA intend to undertake in seeking reductions to overflight noise impacts of aircraft operations at Boston Logan International Airport (BOS) that result from the FAA's implementation of NexGen precision-based navigation (PBN) procedures including RNAV. The Authority and the FAA will cooperate in analyzing opportunities for noise reduction through changes or amendments to PBN procedures. Such cooperation could include analyzing the feasibility, the benefits and impacts, testing (as deemed necessary by the FAA), developing an implementation plan (including environmental analysis), and coordinating on community outreach.

3. Objectives

This MOU establishes a framework for cooperation by the FAA and the Authority in exploring, evaluating and advancing changes or amendments to PBN procedures that reduce impacts from aircraft overflight noise, while at the same time maintaining the safety and efficiency benefits of PBN procedures at BOS. To that end, a specific goal of the Parties is to determine the degree to which procedural changes or amendments will result in improvements to the noise environment that results from RNAV flight path concentration, including:

- (a) Identification of procedural changes or amendments to reduce overflight noise from RNAV concentration;
- (b) Feasibility assessment of specific noise abatement procedures;
- (c) Design and modeling of proposed changes or amendments to procedures to assess safety, level of benefits and potential impacts, further refinement, and consideration for testing (as deemed necessary by the FAA) and/or implementation (if deemed feasible by the FAA); and
- (d) Incorporation of community outreach and feedback and consideration of further potential refinement of procedural changes or amendments based on such feedback.

4. Responsibilities of the Parties

(a) The Authority will:

- (1) Select and convene a technical team, at its own cost, of subject matter experts including experts in procedure design and modeling, aviation acoustical analysis, air traffic/airspace management, design, optimization, aircraft FMS capabilities, and community engagement /communication
- (2) Develop a detailed scope of work to investigate the feasibility of the following procedural changes or amendments:
 - (i) Creating additional RNAV departure procedures for Runway 33L to reduce track concentration.
 - (ii) Moving Runway 22R RNAV SID departure track further north of Hull peninsula, while maintaining separation with Runway 27 arrivals, to reduce impact over Hull, Massachusetts.
 - (iii)Designing a special RNAV procedure for Runway 4R arrivals that includes an off-set approach and follows compatible land use to reduce the impact of Runway 4R arrivals on the standard ILS approach.
 - (iv)Maximize the use of late-night over-the-water arrival procedures to Runway 33L. This work is already underway with the FAA and the Authority working to increase airline participation in the Jet Blue RNAV visual procedure, which keeps Runway 33L arrivals over water.
- (3) Propose supplemental noise metrics for disclosure purposes. The Authority understands that supplemental noise metrics will not be considered by the FAA in making decisions regarding the significance of noise impacts and will be presented for information only.
- (4) Conduct initial analyses and modeling to determine the feasibility of proposed changes or amendments to PBN procedures and identify benefits and impacts of such proposed changes or amendments, including assessing impacts of the proposed changes or amendments to PBN procedures to other communities.
- (5) Provide outreach to communities to incorporate community feedback and input regarding the proposed changes or amendments to PBN procedures.
- (6) Propose changes or amendments to PBN procedures to FAA for implementation.

(b) The FAA will:

(1) Receive proposed changes or amendments to PBN procedures from the Authority.

(2) Evaluate each change or amendment to the PBN procedures proposed by the Authority for safety and its impact on the efficiency of BOS and the NAS. Prior to making a decision as to whether to implement any of the Authority's proposed changes or amendments to the PBN procedures, FAA will comply with the National Environmental Policy Act and any other legal requirements. Participate in public outreach in a supportive role to Massport.

5. POINTS OF CONTACT

For the Federal Aviation Administration:

For the Massachusetts Port Authority:

Flavio Leo Director of Aviation Planning Massachusetts Port Authority One Harborside Drive East Boston MA 02128 (617) 568-3528

6. Funding

No funds are obligated under this MOU. Each party shall bear the full cost it incurs in performing, managing, and administering its responsibilities under this MOU.

7. Warranties

Neither the FAA nor the Authority makes any express or implied warranty as to any matter arising under this MOU.

8. Protection of Confidential/Privileged Information

Each party shall take appropriate measures to protect proprietary, privileged or otherwise confidential information obtained as a result of its activities under this MOU.

9. Amendments

The Parties may amend this MOU by mutual agreement. The Parties shall document the details of any such amendment in a writing signed by both Parties.

10. Construction

The parties understand and agree that this MOU does not confer any legal rights, duties or obligations on either party and is not subject to dispute in any forum. Neither party is authorized or empowered to act on behalf of the other with regard to any matter, and neither party shall be bound by the acts or conduct of the other in connection with any activity under this MOU. This provision shall survive termination of this MOU.

11. Effective Date/Term/Termination

This MOU shall be effective on the date of the last signature of the parties and shall remain in force until terminated by mutual agreement or unilaterally by either party upon 30 days notice to the other party.

12. Authority

The authority for this MOU is 49 U.S.C. 106(f)(2)(A) and 106(l) and (m).

Massachusetts Port Authority	Federal Aviation Administration
By: Mahail Q. Threem	By: Deri L. Bristol Title: Chief Operating Officer
Michael A. Grieco Title: Assistant Secretary-Treasurer	Title: Chief Operating Officer
Date: 9/31/16	Date: <u>9/27/16</u>