THE GENERAL COURT OF MASSACHUSETTS
STATE HOUSE, BOSTON 02133-1053

February 12, 2020

Mr. Flavio Leo
Director, Aviation Planning and Strategy
Massport

Dear Mr. Leo,

As state legislators representing communities overflown by departures from Logan's runway 33L, we are writing to support the request (attached) for additional information on RNAV and RNP procedures submitted earlier this week by the City of Cambridge on behalf of the Massport Community Advisory Committee (MCAC).

Since 2013, residents in our communities have been adversely affected by noise caused by the concentrated RNAV paths for planes departing from runway 33L. They (and we) were encouraged when Massport and the FAA agreed in late 2016 to engage MIT researchers under Prof. John Hansman to study alternatives to the current RNAV procedures. They (and we) have closely followed the periodic briefings from Prof. Hansman as he and his team have refined their study results.

The MCAC representatives from the 33L communities have been prepared for some time to work within their respective communities as well as regionally to take the results of Prof. Hansman's study and recommend alternatives to the current RNAV procedures. However, in order to do so, they need the further information requested in the above-referenced letter. We urge Massport to respond quickly and fully to the request, so that our MCAC representatives can work together to make recommendations to the full MCAC, Massport, and the FAA.

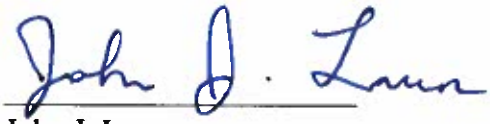
Thank you for your continued support and cooperation in our mutual efforts to address airplane noise from runway 33L.

Sincerely yours,

Jonathan Hecht
State Representative
29th Middlesex

Denise Provost
State Representative
27th Middlesex

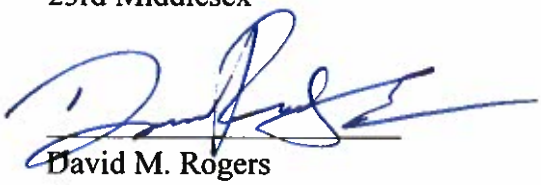
Paul J. Donato
State Representative
35th Middlesex



John J. Lawn
State Representative
10th Middlesex

Sean Garballey
State Representative
23rd Middlesex

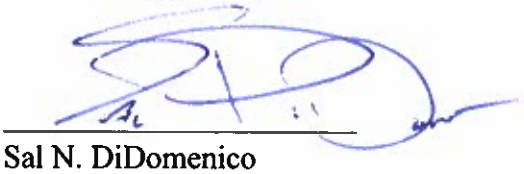
Christine P. Barber
State Representative
34th Middlesex



David M. Rogers
State Representative
24th Middlesex

Patricia D. Jehlen
State Senator
2nd Middlesex

William N. Brownsberger
State Senator
Second Suffolk and Middlesex



Sal N. DiDomenico
State Senator
Middlesex and Suffolk

CITY OF CAMBRIDGE
Community Development Department

IRAM FAROOQ
Assistant City Manager for Community Development

SANDRA CLARKE
Deputy Director Chief of Administration

KHALIL MOGASSABI
Deputy Director Chief Planner

Dave Carlon
Massport Community Advisory Committee Chair

Matthew Romero
Massport Community Advisory Committee Executive Director

Dear Dave and Matt,

I am writing in response to Dr. Hansman's letter of January 6th, 2020 regarding the responses he communicated on the analysis of RNAV and RNP procedure options.

As you are aware, the on-going RNAV study is one of the most significant efforts in the nation to mitigate the effects of concentrated aircraft noise from RNAV concentration by spreading it equitably among 33L communities over time and space. MCAC representatives of the 33L communities, including Cambridge, Medford, Belmont, Arlington and Somerville have reviewed the responses in relation to the original questions and data supplied and have formulated the questions, clarifications and requests attached based on our understanding of Dr. Hansman's responses.

In addition to better understanding the analysis based on the attached questions, a primary request is to gain closer involvement of the Federal Aviation Administration (FAA), which is a partner in this study, in understanding at an early stage, which of the proposed options from Dr. Hansman for spreading noise could work from an operations standpoint, and if not, gain suggestions from FAA on how they could be modified, or new options suggested.

We appreciate the efforts of Massport, the FAA and the CAC in helping to move this study to a successful conclusion this year. Thank you.

Sincerely,

Bill Deignan

for the 33L community representative to the Massport CAC

Cc:

Jonathan Hecht, State Representative

Flavio Leo, Massport

Colleen D'Alessandro, FAA Regional Administrator

344 Broadway
Cambridge, MA 02139
Voice: 617 349-4600
Fax: 617 349-4669
TTY: 617 349-4621
www.cambridgema.gov

2/5/2020 - Compiled Requests and Questions for 33L Dispersion Alternatives:
Includes responses received from John Hansman dated 1/6/2020:

#	DATE	Request or Question	JH Response 1/6	Comment 2/5
1.	7/11/19	Census tract level noise data for current set of 33L Block II dispersion options. **Note: Logan CAC communities were provided with modeled noise data by Massport as part of BLANS and that has been used to generate pre-post RNAV noise impact analysis. We would ideally like to be able to do the same for the dispersion concepts.**	Population data was provided in the high resolution grid which was used as the basis of analysis and is higher resolution then the census.	**Noise Data NOT PROVIDED We are restating our request for noise data: (DNL preferably by census block or grid) for each of the dispersion options.**
2.	7/11/19	Additional information on how a use plan for Variable Rotation Departure approach might work **Note: See #5 & #6 below.**	The VRD was proposed by the community group. The analysis was done on a single day of operation basis which is likely the most practical way to implement it although there is risk of this approach due to FMS memory limits and ATC workload or confusion concerns	**We would like to better understand the assumed deployment and also to hear from Study Team or FAA as to how any type of rotational concept might be deployed.**
3.	7/11/19	Assumed environmental process for each proposed option. **Note: we actually were hoping HMMH could run some of these through a NEPA analysis to see which path each option would likely take, whether it would be an EIS, EA or CATEX.**	Formal environmental review would be conducted by FAA and is beyond the scope of this study.	**We did not ask for formal environmental review. We were hoping to get commentary of the review path each option might take. This is related to our overall desire to get more direct feedback from the**

				FAA on the feasibility of all of the MIT-proposed concepts.
4.	11/5/19	Question about how the 2010 baseline flight tracks were generated (to match 2017 volume) and why they appear to be inconsistent with the Massport-provided actual flight track for 3 pre-RNAV days in 2013 that the 33L communities have been using for all of our analysis? Specific questions based on the provided illustrations were: • Is there a difference in center-line? • Are there more turns later? • The early left turns followed by straight heading look out of place? **Note: what we are trying to understand is if the 2010 baseline provided by MIT - and to be used by communities for comparison to what was experienced by residents and neighborhoods pre-RNAV - an accurate representation of where the 33L departures used to fly?**	No response or discussion	**We have heard that - as we surmised – the 2010 baseline was brought-up to match the 2017 volume through the manual addition of modeled flight paths.** **As illustrated in our slides from 11/5, we believe that the actual flight tracks from two days in January (17, 22) of 2013 – which represent what the 33L communities have been using as our pre-RNAV baseline for analysis for 5 years – are a more representative pre-RNAV baseline and they should be used instead.**
5.	11/5/19	In respect to the VRD option. • The flight tracks for the variable rotation 2-6 and waypoint relocation options show only five tracks each. Can we get some details about how these were used in the analysis? Presumably multiple	• Each of the VRD and Waypoint Relocation options have five distinct tracks representing different departure branches corresponding to different en-route directions (e.g. flights	**The request to explore a VRD-like option was intended to explore a hybrid approach with some number of paths, waypoints, branches that could be rotated on some**

		flights were modeled on each track, with a mix of aircraft type; is that correct? • In your opinion, what is the capability of the cockpit FMS's to handle a greater number of RNAV variants as described in the VRD option? • What is the ability of ATC to manage 4-6 variants? Is this a realistic option to be considering? **Note: the communities are trying to get a sense for whether VRD, Divergent Heading or some other form of rotation or having multiple RNAV variants used on different days or times is something that should be on the table for consideration? Are there operational or technical obstacles that we should know about?**	headed to the southwest vs. flights headed east). The entire 2017 peak day fleet mix was simulated, with each branch receiving the same fleet mix count and distribution that was observed on that branch during the 2017 peak day. The fleet was modeled using 7 representative aircraft types (B777, B757, B738, A320, MD88, E170, E145). • This is an area of risk. Under current procedure definition this would require separate procedures for each waypoint option. Likely will cause memory issues for some early FMS systems. • This is an area of risk and would depend on implementation. Minimal impact would be to have one waypoint active per day but ATC would likely have concerns which would surface stakeholder process.	**schedule. We ask that the Study Team with support from the FAA consider if there are ways to use this type or any other feasible approach to help the 33L communities to decrease impact to those under the concentrated flight paths and increase dispersion while not triggering a full EIS.**
6.	11/5/19	In respect to the Divergent Headings option:	• By destination	

		• How are flights allocated to branches (north, west, south)?
		  • Is it based on destination?
		  • Is it prescribed by destination or dynamic based on ATC
		  • Do you envision branch distribution to be tracked by ATC and somehow equalized?
		• How does distribution change based on volume/time- of-day? For example, would hours with many international departures (10pm-midnight) have a distribution weighted towards one branch?
		• Is there some ATC guidance that prevents any tracks from the 315 degree heading line from ever turning North?
		Note: the communities are trying to understand how this concept might be implemented. Are all branches used simultaneously? Are they rotated? Is the pizza slice "area with no flights" in the illustration a no-fly zone because of assumed simultaneous use? What if the headings were used on different days? Could flights then splay-off in both directions?
			• Since allocation is by destination it will vary during the day.
			• No, the initial turn location is set by obstacle clearance issues to the south. The modeled trajectories split as the tracks were allocated by destination.
				This still does not provide clarity as to whether you could use one Divergent Heading per day (like suggested for VRD) and if that would allow a different pattern off of the branch. As requested in #5 above, are there other feasible options or approaches that should be considered?

7.	11/14/19	Request for Controller-based Dispersion tracks. MatLab file for this option that was not included in data package – please provide.	No response	**Please provide.**

8.	02/05/2020	The October 17th presentation – 33L Departures Dispersion Analysis (2010 Baseline) did not include the Comparison histograms that were provided in the Runway 33L Impacted Communities Focus Briefing presented at the June 24th meeting in Cambridge. Could that analysis please be provided.		**This is a new request that was not previously communicated. This is just asking for the newer presentation is equal to what was provided to the public in April and to the 33L MWG in June.**
9.	02/05/2020	The various dispersion concepts modeled by the MIT Study Team and provided to communities in presentations in April, June and October of 2019 – have an "Ease of Implementation Scale". We understand that this is Dr. Hansman's learned perspective. Communities are being asked to pull together their Officials, residents and representatives to assess these options and see if we are able to reach a consensus on options to bring to a vote. The MOU signed in 2016 says that "the Authority and the FAA will cooperate in analyzing opportunities for noise reduction through changes or amendments to PBN procedures". And furthermore, that such cooperation could include analyzing the feasibility. It would very helpful for the FAA to provide direct feedback on the feasibility of the concepts being presented. If there are concepts which are known to be unfeasible – it would be very good for communities to know this		**Ask that the FAA be requested to participate more directly to provide feedback on feasibility on the concepts that have been presented and if there are known obstacles or constraints that that feedback be provided at a meeting with the 33L community representatives and officials.**

		before commencing the next round of assessment and public process.		
10.	02/05/2020	Going back to motions originally made by 33L communities at the Logan CAC, reinforced in many letters from Officials and Legislators, and reviewed at the meeting at FAA NE Headquarters in the fall of 2016 – we are looking for implementable alternatives that would increase dispersion of 33L departures. We are also sensitive to: 1. The environmental review hurdles and would like to avoid a prolonged review or negative outcome. 2. The need to get stakeholder approval as part of the .41 process. After 3+ years of analysis and work by the MIT Study Team, we are hopeful that the FAA can at this time participate more directly to help us in pursuing alternatives that can be implementable.		**Ask that the FAA be invited to suggest additional variants or alternatives for achieving implementable dispersion based on their knowledge of stakeholder concerns, route design constraints and regulatory approval hurdles.**
11.	2/05/2020	Changes in the number of flyovers are presented as a table for above 50, 100 and 200 in the 2018 report. Please use such a table for new noise analysis and include, if possible, the number of flyovers 65, 70 and 75db thresholds to get a better understanding of the number of planes with noise at these levels since this information is not available with DNL.		**This is a new request but asking for an update of something already provided in the 2018 report.**