

Howard County, Maryland

Howard County Office of Law

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Ellicott City, Maryland 21043

(410) 313-2100

March 9, 2018

Ms. Robin M. Bowie
Director, Office of Environmental Services
Maryland Department of Transportation
Maryland Aviation Administration
P.O. Box 8766
BWI Airport, MD 21240

RE: Howard County, Maryland Comments on MAA
Draft Environmental Assessment

Dear Ms. Bowie:

Pursuant to my responsibilities under Howard County law, CB8-2017, please find enclosed Howard County's comments on the *Draft Environmental Assessment and Draft Section 4(f) Determination for the Proposed Improvements 2016-2020 at Baltimore/Washington International Thurgood Marshal Airport* (January 5, 2018) ("Draft EA"), prepared by the Maryland Aviation Administration ("MAA") for approval by the Federal Aviation Administration ("FAA").

The Draft EA is legally insufficient in several respects and is not based on sufficient evidence. The Draft EA is based on non-representative and outdated noise data that MAA has acknowledged does not reflect actual conditions. Additionally, because FAA unilaterally abandoned the 14 CFR Part 150 Noise Compatibility Planning process, which is nowhere addressed in the Draft EA, all of the assumptions about harmful impacts due to noise, based on FAA compliance with Part 150 Planning and the outdated data, are false. Moreover, the Draft EA completely fails to acknowledge the highly controversial and significant harmful impacts that aircraft noise has had on Maryland citizens, including Howard County residents, as a result of FAA's implementation of NextGen. FAA has already recognized this by establishing the BWI Community Roundtable. Furthermore, the Draft EA is deficient in its failure to include sufficient analysis of other environmental impacts related to air quality, climate change, land use, historic

Ms. Robin M. Bowie
March 9, 2018
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preservation, and deforestation, and its almost complete failure to consider impacts in Howard County.

For all these reasons, FAA must deny the request for approval of the Proposed Action. Relying on the Draft EA would be arbitrary and capricious and would violate several State and federal statutes. Given the significant, and unexamined, harmful effects of the Proposed action on the quality of the human environment, FAA should order MAA to perform a full Environmental Impact Study pursuant to NEPA, NHPA, and Section 4(f) that includes Howard County, and is based on relevant and reliable noise data. Howard County looks forward to working with MAA to complete a legally sufficient Environmental Impact Statement ("EIS").

Sincerely,

HOWARD COUNTY OFFICE OF LAW



Gary W. Kuc
County Solicitor

GK:hst
Enclosures

cc: The Honorable Allan H. Kittleman, County Executive
The Honorable Mary Kay Sigaty, County Council Member & Council Chairperson
The Honorable Calvin Ball, County Council Member & Council Vice Chairperson
The Honorable Greg Fox, County Council Member
The Honorable Jennifer Terrasa, County Council Member
The Honorable Jon Weinstein, County Council Member
Lewis Taylor, Senior Assistant County Solicitor

Howard County Comments on the MAA Draft EA for Airport Expansion (2018)

The Draft EA contains numerous deficiencies that render it non-compliant with the mandates of Maryland State law, NEPA, NHPA, and Section 4(f). Perhaps most significantly, it excludes any meaningful consideration of Howard County. But it also proffers inaccurate data to support its noise analysis. This is because FAA's unilateral abandonment of State and federal noise abatement programs and FAA's implementation of new flight procedures have created significantly different noise contours than those depicted and relied upon in the Draft EA. The vast majority of noise data underlying the Draft EA is from before 2015. The flight procedure changes, including those that began to be flown in 2016, have resulted in highly controversial noise impacts. See BWI Community Roundtable letter to FAA dated March 31, 2017, attached as Exhibit A. MAA is on record stating that BWI did not have a noise problem before the final Metroplex procedural changes but that there was a noise problem after implementation of those changes. BWI Community Roundtable minutes, June 20, 2017 (in the first 20 days of June 2017, MAA received over noise 1,000 complaints); see also Exhibit B.

Because the Proposed Action is dedicated to "improving efficiency," "increasing operations," and accommodating "anticipated demand" it will have the direct and cumulative impact of significantly increasing harmful noise impacts on Maryland citizens, including the citizens of Howard County. Additionally, because the noise analysis is based on inaccurate information, the Draft EA land use analysis has also been subverted and is insufficient. Compounding these errors, the Draft EA's analysis of air quality, climate change, land use, historic preservation, and deforestation is also deficient.

The Proposed Action Will Cause Significant Harms to the Human Environment

The Proposed Action involves massive development of the Airport in an effort to increase "activity levels through 2020." (Draft EA at 2.1.2). The result of this development will increase the harmful impacts of NextGen aircraft noise. The Draft EA makes clear that the proposed development is intended to increase runway system efficiency. Draft EA at 2-4 and 3-11. The Proposed Action is also directed to address "anticipated demand." Draft EA 2-5 and 3-14. The Draft EA acknowledges that noise impacts will increase because of increased operations due to the Proposed Action. Draft EA K-3-7.

There is voluminous evidence of harmful impacts already. See Exhibit C. These impacts were not properly addressed in the DC Metroplex OAPM EA.¹ Approving the Draft EA would add to the cumulative impacts by continuing to ignore the significant effects caused by federal action at BWI. Because of the direct and cumulative impacts that will result from the Proposed Action, and for the reasons stated below, the Draft EA is not an adequate evaluation of impacts to the environment, nor is it a detailed review of the Proposed Action, as required by FAA Orders 5050.4B and 1050.1F.

The Draft EA Relies On Outdated and Inaccurate Noise Data

Old noise data was used in the Draft EA despite significant changes to air traffic. MAA's analysis in the Draft EA is based almost exclusively on data that is from 2014 or earlier. MAA has admitted this data is invalid because the 2014 Noise Contour Maps do not reflect real flight conditions due to FAA's implementation of NextGen flight procedures at BWI beginning in 2015. MAA attempted to partially address this by presenting "Existing Noise Contour Maps" based on only five weeks of data, three weeks of which were in 2015, before significant flight path changes occurred in February of 2016. The Existing Noise Contour Maps are not representative of noise resulting from BWI departures and MAA's existing noise exposure maps remain inaccurate. The real, existing, and future noise contours are indisputably different from what MAA relies upon because FAA significantly changed flight procedures without notice and the MAA noise monitoring system has been largely non-operational over the last 18 months.

The noise data relied on in the Draft EA does not represent real-life conditions because the majority of noise data was collected in 2014 and earlier.² However, in 2015, 2016, and 2017, FAA implemented new navigation waypoints and flight procedure changes that were not consistent with the federally approved and State required BWI Noise Abatement Plan ("NAP"). MD CODE ANN.,

¹ The DC Metroplex was an early inductee to NextGen and so got the worst of FAA's unlawful implementation, but FAA's actions in implementing NextGen flight procedure changes that were not in accordance with federal law has been documented in *City of Phoenix and Georgetown*. In the DC Metroplex, FAA actively mischaracterized its activities as having little to no effect below 3,000 feet altitude. FAA Finding of No Significant Impact for the DC OAPM (2013). In fact, there have been significant changes below 3,000 feet that FAA failed to disclose and which are adversely affecting thousands of Maryland residents, including in Howard County. FAA acknowledged this by creating the BWI Community Roundtable but, its interactions with the Roundtable have continued the misrepresentations and mischaracterizations by FAA.

² FAA approved the BWI noise exposure maps in 2016. 81 FR 59714-01 (August 30, 2016). This was based on the Airport Noise Zone Update prepared by MAA in 2014; revisions to the 2014 Update in 2016 did not affect noise contours, land use inventory, or population estimates.

TRANSP. § 5-805. In particular, the implementation of the TERPZ6 waypoint and the relocation of the WONCE waypoint contributed to a shift that had already begun of Runway 28 departures further to the north. This can be seen in Exhibit D. Consequently, as FAA has stated, the existing Noise Abatement Procedures “do not exist anymore.” Exhibit E.

The flight path changes included a quick right turn on departures from Runway 28 moving traffic to the north of areas that had been used since 1990 and concentrating traffic so that noise impacts are magnified. FAA has stated that the turn to the right was at least 10 degrees. BWI Community RoundTable minutes July 18, 2017. The turn takes place approximately 800 feet above ground level. FAA has noted that turns made at lower altitude require more power and therefore generate more noise. See Exhibit E.

MAA wrote to FAA as early as October of 2015, that the new procedures did not comply with the Noise Compatibility Program (“NCP”) or the NAP. MAA specifically informed FAA that the “NextGen departure procedures differ from the previous procedures in both flight track and altitude requirements for all runway departures below 3,000 feet AGL.” Exhibit F. MAA noted in the letter that these were the first meaningful changes that had occurred in the procedures since the NCP was approved by FAA in 1990.

MAA reiterated the same position in a April 25, 2016, letter to FAA, stating that the “new flight procedures place departing aircraft at lower altitudes and indifferent flight paths over long established residential communities” and “the Runway 28 departure procedures place departing aircraft along different flight paths and different altitudes than those specified in BWI Marshall’s NAP.” Exhibit F.

But MAA fails to adequately acknowledge any of this in the Draft EA. Instead, MAA relies on old noise data that MAA admits is no longer valid and a very limited set of new data, derived from computer models, that is not representative of current flight paths. A review of flight track imagery produced by FAA and MAA shows clearly that noise contour maps created in 2014 bear no relation to current noise contours, which have moved as a result of FAA’s flight procedure changes, and which include areas of Howard County. Exhibit G. It is telling that even incorporating only two weeks of 2016 flight track data, the Existing Noise Contours moved significantly to the north. Accurate data from flight tracks that are currently being flown would show a further movement north over areas of Howard County, including schools, that have not historically experienced 65dB DNL noise impacts.

The noise model inputs used to develop noise contours are supposed to rely on “representative flight track descriptions.” BWI Airport Noise Zone Update (“ANZ Update”) at 5. Because the flight tracks have changed, the old data is not a sufficient basis upon which to base the Draft EA noise analysis. FAA cannot continue to ignore the significant flight path changes that will increase under the Proposed Action, and which have caused harms to the people of Howard County. A full EIS must be performed that includes current flight track information and noise monitoring data.

It is clear from Figure K-2-4, that even the *de minimus* analysis of two weeks from 2016 significantly moved the noise contours to the north. An accurate noise exposure map would show them even further north. Figure 2-29 in Appendix K-2 shows the inaccuracy of the modeled efforts. Many radar flight tracks lie far outside the modeled paths. Moreover, because Runway 15R was also affected by the flight procedure changes and that traffic travels over the same areas of Howard County as Runway 28 departures, the noise levels in those areas have not been properly modeled. The Draft EA indicates that the Proposed Action will increase 65dB DNL noise contours by 8.3%, particularly off of Runway 28. Draft EA K-3-8. Confusingly, the Draft EA states elsewhere that the Proposed Action noise contours are expected to increase 1.3% over the No Action alternative. Draft EA at 5-32. Based on the increase in traffic that is the purported need for the Proposed Action, it makes no sense that the No Action alternative would result in the same noise impacts as the Proposed Action. An EIS should be performed based on real data so that a genuine alternatives analysis can occur, and real impacts evaluated.

It is important to note that throughout this time the MAA Noise Monitoring System has been barely functional. Throughout 2015 and 2016, only 7 out of 23 noise monitoring stations were operational. See Exhibit H. There are no results from 2015 for Columbia or the two Hanover locations. MAA acknowledged in 2014 that the noise monitoring systems was “outdated” and that “several pieces of equipment have failed.” ANZ Update at 59. The paucity of real data available means that an EIS must be performed. It is also noteworthy that MAA has conducted several noise studies in the last two years, due to massive increase in complaints, yet none of them were utilized or even mentioned in the Draft EA.

Increases in night operations, increases in stage-length, and the introduction of a new maintenance facility and de-icing pad, that will increase noise producing run-up operations are

additional factors that contribute to expanding noise contours that are not sufficiently captured or analyzed in the Draft EA.

Compounding the failure of MAA's noise analysis, is the fact that the BWI NAP and Airport Noise Zone ("ANZ") are currently in violation of State law because they do not reflect the significant flight procedure changes implemented by FAA. State law requires that the largest of the three contours (65dB+) in any area around the Airport determines the ANZ thereby offering protection within the largest of the existing or future noise exposure contours. ANZ Update at 53. Although the new procedures were implemented in 2015 and 2016, MAA has not updated the ANZ as required by law. TRANSP. §§ 5-805(b), 5-806, and 5-819. Given MAA's ongoing non-compliance with State law regarding noise abatement, and the fact that new areas of Howard County are now in the 65dB DNL, which constitutes a significant change, approval of the Draft EA would be arbitrary and capricious.

The Draft EA Land Use Analysis is Insufficient

Like the outdated noise data, MAA unreasonably relies on a land use analysis that ignores FAA's abandonment of a huge land use program that is imbedded in State law, the ANZ. State law requires NAP be established where an impacted land use area lies within a noise zone and where adjustments are necessary due to operational changes. TRANSP. § 5-805(b). MAA has failed to comply with both statutory mandates.³ Howard County lies within a noise zone and operational changes require adjustment to existing plans. See COMAR 11.03.01.02B(3), which requires that Howard County be included in the BWI Noise Zone.

Instead of addressing these issues, MAA relies on the 2014 noise contour maps, not the Existing Noise Contour maps, in its land use analysis. Draft EA 4-39, Fig. 4-10-2. Consequently, while the Draft EA discusses the Anne Arundel County General Development Plan, there is no discussion at all of Howard County land use planning. Draft EA section 4.13 also fails to discuss Howard County. Additionally, the land-use analysis relies on 2014 forecasts of noise levels in 2019 and 2024, Draft EA 4-39, which are demonstrably wrong due to the new flight procedure changes. Thus, the land use analysis is insufficient, whether it includes Howard County or not.

NEPA regulations require discussion of inconsistency with existing plans. 40 CFR 1506.2. But the Draft EA does not even mention that FAA has abandoned the Part 150 planning process.

³ MAA's failure to pursue a NAP is subject to a Writ of Mandamus. MAA has admitted that Howard County lies with 65dB DNL noise contours. See, e.g., Draft EA Table 4.12.2.

Draft EA 5-26, 5-30; see also Exhibit E. MAA cannot continue expansion plans while ignoring the fact that land use planning around the airport has been totally upended and failing to include Howard County in its land use analysis.

Other Draft EA Deficiencies

There are several other ways in which the Draft EA fails to meet statutory requirements. The Draft EA must be based on valid data. It must also include information sufficient to inform the general public of the impacts that will be imposed on them. Because the significant flight procedure changes are not addressed in the EA, the analysis of multiple environmental impacts fails.

The air quality and climate change analysis did not take into consideration the dramatic flight procedure changes imposed by FAA, which has resulted in significant air quality impacts. Incredibly, there was no air quality monitoring conducted in Howard County. Draft EA Table 4.2.7. This is totally unacceptable, particularly as Howard County is in a NAAQS non-attainment area and it receives the vast majority of departure traffic from BWI and a substantial amount of arrival traffic, all of which are now occurring at lower altitudes, which means less geographic dispersion of pollutants and pollutant precursors and thus greater impacts on Howard County citizens, including school children. Because the aircraft emissions data was based on the 2014 ANZ Update, it does not incorporate any of the considerable changes that have taken place since 2015. Draft EA Appendix G, 1-1. These changes include, among other things, increased thrust for low altitude turns. Increased thrust means increased emissions. The climate and GHG analysis also failed to consider these increased emissions. There is actually little climate analysis at all, with MAA apparently relying on the fact that there are no airport-related federal standards for GHG emissions. Draft EA 5-13. NEPA requires more. The Draft EA's failure to address all this means that a full EIS must be performed.

Closely connected to air quality and climate change are the impacts associated with deforestation. The Draft EA proposes significant tree removal but fails to consider how this will affect air quality, climate, or noise. Draft EA 3-10, Figure 3.2.8. The important noise buffering and air quality impacts associated with tree removal should be considered in a full EIS.

Historical Resource Impacts and Section 4(f)

The Draft EA seeks to address FAA's responsibilities under NHPA Section 106 in sections 4.9 and 5.8, but the analysis is inadequate. This is partly due to the fact that the noise exposure maps are wrong. It is also due to the fact that MAA has used an area of potential effects ("APE") that does not meet statutory criteria. The APE is supposed to be the "geographic area within which an undertaking may directly or indirectly cause alterations in the character of use of historic properties." Draft EA 4-33. But MAA used an APE with the same boundaries as the Study Area. This is inadequate because of the significant adverse effects aircraft noise has on historic properties outside of MAA's designated APE. The APE should extend at least through accurate 65dB DNL noise contours and possibly further depending on the historic properties involved.

The impact of noise on the character and settings of historic properties constitutes an adverse impact that MAA must study further. Attached as Exhibit I is a sample of the many historic properties in Howard County that are potentially threatened by the Proposed Action. None of these properties is discussed, or even mentioned in the Draft EA.

The Section 4(f) analysis is similarly impaired as no Howard County properties were considered, despite the fact that there are many publicly owned lands, including parks and historic sites of significance that will be constructively used due to the noise and visual impact of the Proposed Action.

The Alternatives Analysis is Inadequate

The alternatives analysis is generally inadequate because of the contradictory nature of the claims made by MAA. MAA claims that the Proposed Action is needed to increase operations and efficiency, reduce runway occupancy times, and to meet anticipated demand. But MAA claims both that the several No Action alternatives will not address the need to expand operations, but will result in the same level of air traffic. This is clearly an arbitrary conclusion. This conclusion is further undermined because the Proposed Action is not accurately evaluated based on the flight procedure changes that have taken place. Accordingly, the impacts of the Proposed Action are underestimated, while the No Action impacts are over estimated. One example of this is Draft EA figure K-7, which purports to show that the noise contours under the Proposed Action and No Action alternatives would be virtually the same. This obviously cannot be true given the 10 degree low altitude right turn Runway 28 departures make, which was not adequately analyzed in the Draft EA. The noise contours rely on old data, which is demonstrated by the fact that the

Draft EA No Action and Proposed Action contours would be the same. This shows that the Existing Noise Contours are based on unreliable information. Otherwise, they would show a deviation to the north. A full EIS with a genuine alternatives analysis must be conducted.

Conclusion

Relying on the Draft EA for compliance with NEPA, NHPA, and Section 4(f) would be not only be arbitrary and capricious, it would also be incredibly unfair to the citizens of Howard County. FAA and MAA have ostensibly been “engaged” with the community to solve the problems of NextGen, but there has been obfuscation and misdirection at every step. The failure of the Draft EA to adequately consider the significant flight procedure changes that have occurred since 2015 means that it is legally insufficient. For the same reasons, the Draft EA does not satisfy the requirements of the Maryland Environmental Policy Act. NAT. RES. § 1-301, *et seq.* A full EIS must be prepared that adequately addresses the impacts and effects associated with the Proposed Action.

EXHIBIT A

DC METROPLEX BWI COMMUNITY ROUNDTABLE
c/o Maryland Department of Transportation Aviation Administration
991 Corporate Boulevard
Linthicum, Maryland 21090

March 31, 2017

Mr. Michael P. Huerta
Administrator
Federal Aviation Administration
800 Independence Ave SW
Washington DC 20591

Re: Roundtable Resolution to Revert to Pre-DC Metroplex/NextGen Procedures

Dear Mr. Huerta:

As requested by the Federal Aviation Administration (FAA), the Maryland Department of Transportation Aviation Administration (MAA) worked with State and County elected officials to form a roundtable made up of community representatives impacted by the implementation of DC Metroplex/NextGen plan.

Now formed, we are identified as the DC Metroplex BWI Community Roundtable (Roundtable), and our first meeting was held on March 21, 2017. During that meeting, we approved the Charter, elected a Chairman and Vice Chairman, and established ourselves as a group of community representatives with the goal of mitigating noise and other harmful impacts and seeking alternatives for populations impacted by DC Metroplex/NextGen implementation. The MAA will provide you with the DC Metroplex BWI Community Roundtable Charter (approved at the meeting) and the Roundtable membership as of March 24, 2017.

We have been advised that the MAA has discussed with the FAA on multiple occasions that the MAA has received thousands of complaints from residents in the vicinity of BWI Marshall following the implementation of the DC Metroplex/NextGen flight paths and procedures. In general, the complainants assert that many aircraft are now flying nearer their homes, whether due to new flight paths, frequency, low altitude or otherwise. The aircraft produce unwanted and unacceptable noise, vibration and other undesirable effects that are traumatic and oppressive, and deprive affected residents of the quiet and peaceful enjoyment of their homes they had prior to the implementation of the procedures. Some residents report that it has become intolerable to stay in their homes due to DC Metroplex/NextGen.

At our March 21 meeting, our Roundtable unanimously adopted the following resolution on an urgent basis:

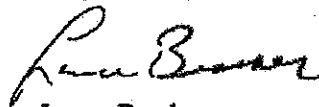
The DC Metroplex BWI Community Roundtable requests and recommends that the FAA immediately revert to flight paths and procedures that were in place prior to implementation of NextGen and the DC Metroplex plan (*i.e.*, the *status quo ante*) in order to provide urgent relief to residents adversely affected by these new flight paths and procedures, while a more deliberate and public-facing process to develop and implement NextGen and a DC Metroplex plan is undertaken.

The Roundtable also requests that you and other senior officials of the FAA participate in our next meeting on April 18, 2017 to (1) respond to this urgent resolution and (2) provide a review of stakeholder feedback from the October 27, 2016 open house sponsored by the MAA and FAA.

This is a matter that is of the utmost importance to the residents and communities harmed by the FAA's development and implementation of DC Metroplex/NextGen flight paths and procedures. While we welcomed the sincere acknowledgement by the FAA representative at our March 21 meeting that the FAA erred in the development and implementation of DC Metroplex/NextGen and his assurances that the FAA is committed to addressing the harm it has created, we have yet to see evidence of that commitment. We need for the FAA to make resolving this issue a top priority. We need for the FAA to take responsibility for the harm it has caused and is causing the BWI communities and residents and lead the efforts to correct this harm urgently.

The Roundtable has requested the MAA to transmit this letter to you. I would be pleased to meet with you and can be reached at any time on my mobile phone 443-995-0259 to discuss.

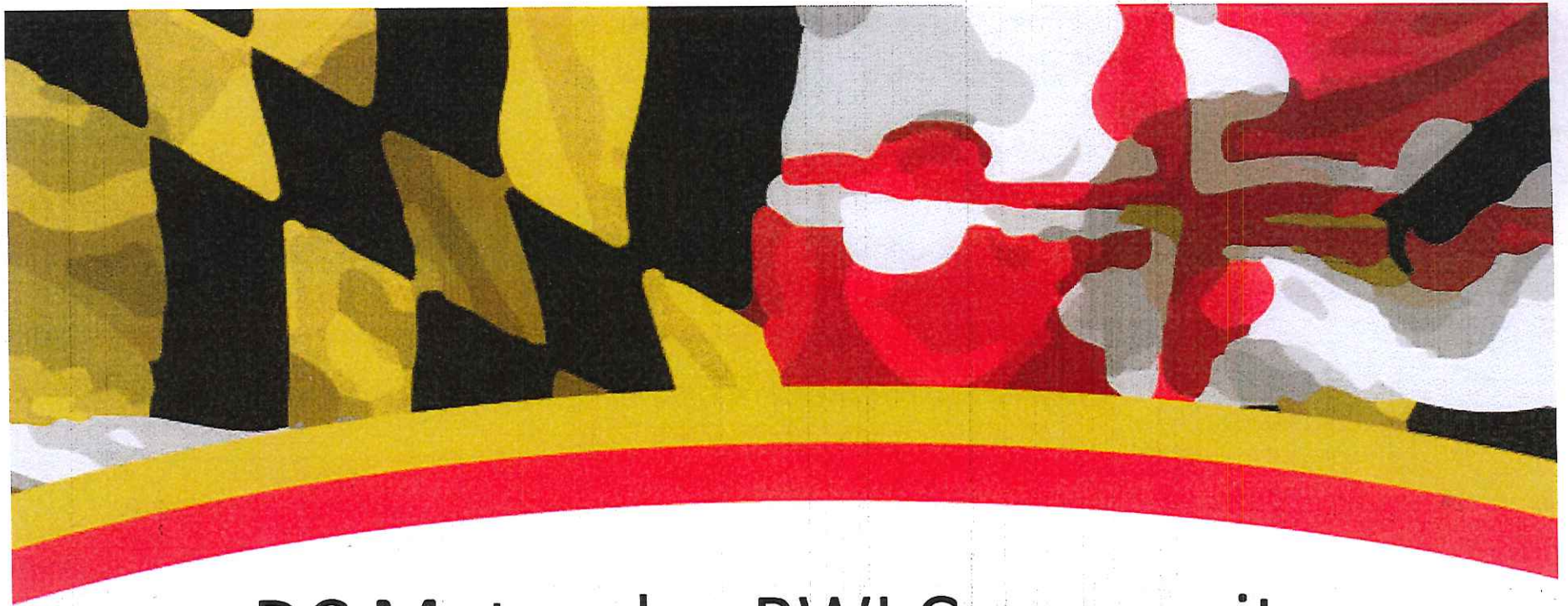
Very sincerely,



Lance Brasher
Chairman,
DC Metroplex BWI Community Roundtable

cc: Mr. Christopher Yates, DC Metroplex BWI Community Roundtable Vice
Chair
Mr. Carmine Gallo, Regional Administrator, Eastern Region, FAA
Ms. Elizabeth Ray, Vice President, Mission Support Services, FAA
Mr. Ricky Smith, Executive Director/CEO MAA
Mr. Paul Shank, P.E., Chief Engineer, Div. of Planning & Engineering, MAA
Ms. Ellen Sample, Director, Office of Real Estate & Noise Abatement, MAA

EXHIBIT B



DC Metroplex BWI Community
Roundtable
Complaint History and Runway Use
presented June 20, 2017



Number of Noise Complainants and Complaints around BWI Marshall and Notable Events

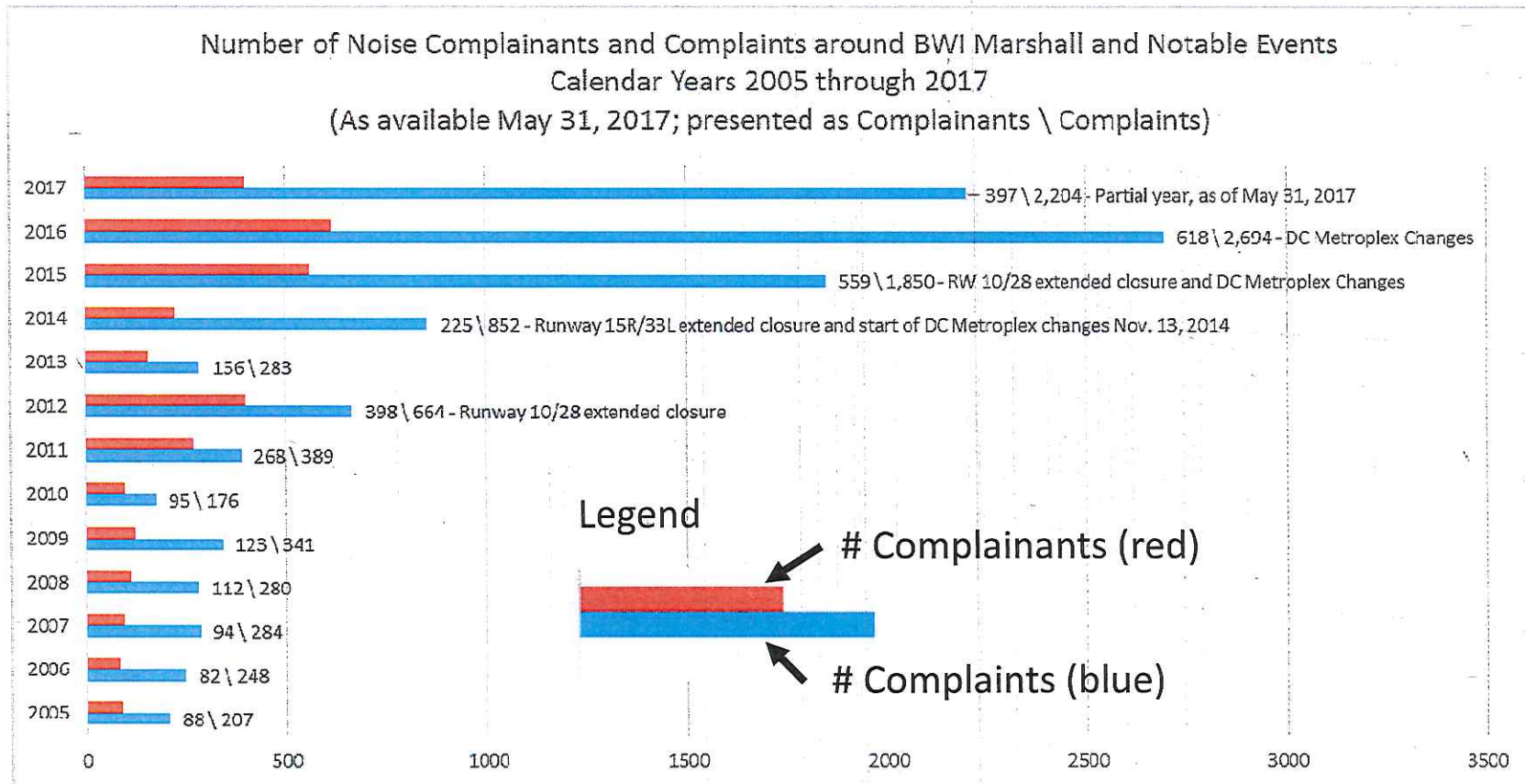


EXHIBIT C

DC METROPLEX BWI COMMUNITY ROUNDTABLE
c/o Maryland Aviation Administration
P.O. Box 8766
BWI Airport, MD 21240-0766

September 8, 2017

Michael P. Huerta
Administrator
U.S. Department of Transportation
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Dear Administrator Huerta,

In an effort to procure relief to thousands of residents in the vicinity of BWI Thurgood Marshall Airport suffering substantial mental and physical trauma, loss of quiet enjoyment of their homes and a destruction of property values due to changed arriving and departing aircraft flight paths and procedures arising out of or in connection with the DC Metroplex/NextGen scheme, on March 20, 2017, the newly formed DC Metroplex BWI Community Roundtable unanimously adopted a resolution to request that the FAA revert to flight paths and procedures in place prior to DC Metroplex/NextGen (the "*Status Quo Ante* Resolution"). See attachment 1 to this letter, prepared by the FAA, containing representative examples of pre-DC Metroplex/NextGen BWI departure and arrival flight paths. The Roundtable's request was submitted to you in a letter from the Roundtable, dated March 31, 2017. On April 18, 2017, the Maryland Congressional Delegation collectively sent a letter to the FAA in support of the *Status Quo Ante* Resolution. Subsequently, Maryland Governor Hogan made a similar request to the FAA on May 11, 2017 and to the Secretary of the U.S. Department of Transportation on August 1, 2017. These letters are attached as attachments 2, 3, 4 and 5. The governments of Anne Arundel, Baltimore and Howard Counties have also expressed support for the *Status Quo Ante* Resolution.

On May 12, 2017, Elizabeth Ray responded on behalf of the FAA to the Roundtable's letter stating the FAA's commitment on a high-priority basis to address *Status Quo Ante* Resolution. The Roundtable is appreciative of the commitment stated in Ms. Ray's letter and other communications and the efforts of the FAA team to date, including those of Bennie Hutto, Robert Owens and others. To be clear, however, we believe FAA leadership has full responsibility for and should take ownership for correcting the intuitively apparent and terribly harmful design defects in the DC Metroplex/NextGen scheme. Further, the reliance placed by the FAA on arcane measures for assessing significant environmental impact of the DC Metroplex/NextGen scheme was inexcusable and the implementation of the scheme following experience in Phoenix and other jurisdictions without correcting these obvious design defects,

such as the low altitude concentration of flight paths on departures and arrivals, was made in knowing disregard for the harm they would inflict on affected residents.

As the FAA PBN Implementation Working Group begins to address the *Status Quo Ante* Resolution, Ms. Ray has asked us to provide further guidance about what the Roundtable requires. As we have explained in Roundtable meetings as well as my discussions with Ms. Ray, the Roundtable believes that the FAA is singularly positioned to know what is needed to revert to the *status quo ante* and must take action to do so. The Roundtable comprises a group of concerned citizens, most of whom have little information about airport and FAA operations and procedures. Consequently, the Roundtable's views, certain of which we describe below, are based on limited information and observed harms communicated. Our response to FAA remedial proposals and our other requests for consideration are necessarily preliminary, they are not intended exclusive and they are guided by the principle of the *Status Quo Ante* Resolution.

Subject to the forgoing reservation, and as we have communicated to the FAA in our meetings or otherwise repeatedly, we have observed at least three main sources of problems with BWI flight paths and procedures arising out of or in connection with DC Metroplex/NextGen.

- The use of new flight paths
- The concentration of aircraft in narrow flight paths
- Lower aircraft altitudes

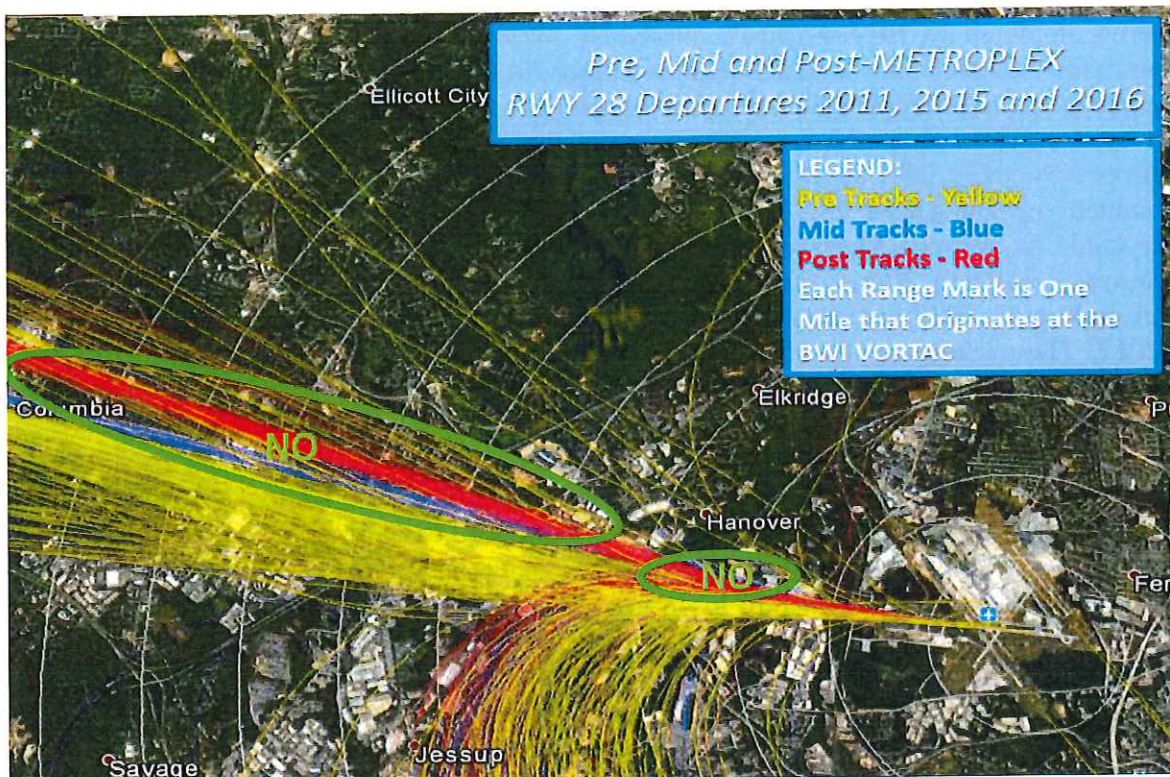


Figure 1A Runway 28 Departures - shows specific examples of aircraft flying where they were not flying prior to DC Metroplex/NextGen.

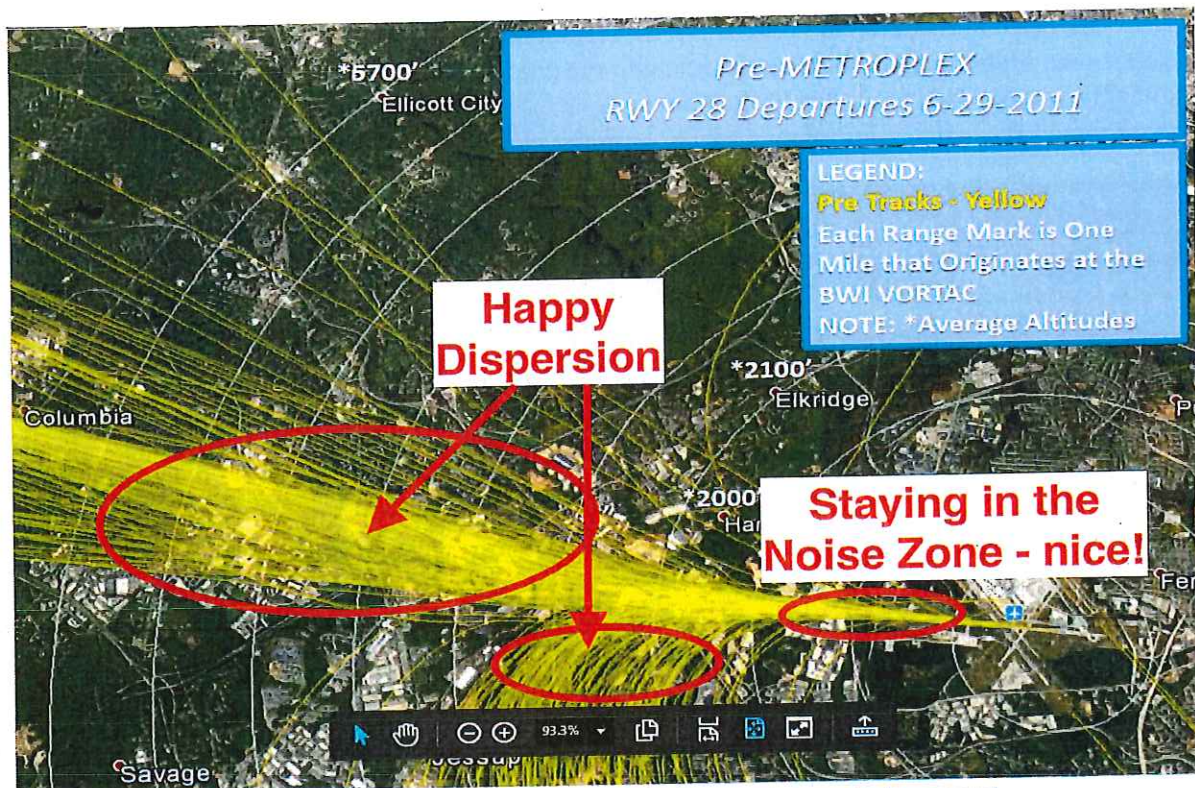


Figure 1B Runway 28 Departures – shows pre-DC Metroplex/NextGen features that need to be restored.

1. New flight paths have been created by DC Metroplex/NextGen; FAA must revert to old flight paths. Thousands of community residents have observed aircraft flying along flight paths that were not being flown previously. See Figures 1A, 2A and 3A and FAA flight path diagrams in Attachments 1 and 6 for comparison and as representative examples. These new flight paths include, among others:

- Runway 28 departure – early turn and path shift to the north and flying south at low altitude
- Runway 15 departure – earlier and lower turn
- Runway 33L and 10 arrivals – flights cleared direct to any waypoints from the RAVNN arrival (including waypoints GRAFE, SPLAT, JANNNS)

We have been advised by Ms. Ray and other FAA representatives that the FAA will be working to revert on the turns and flight paths for runway 28 and 15 departures.

Regarding runway 33L, as discussed at the Roundtable's July 18, 2017 meeting and requested in the Roundtable's letter to the FAA, dated July 25, 2017 (see Attachment 7), aircraft would not be "cleared direct" to GRAFE, SPLAT or JANNNS but would be vectored to the final approach course with the objective of achieving dispersion consistent with that illustrated in Attachment 1. Runway 10 arrivals, the ANTHM3 and TRISH2, also have resulted in concentrated flights upstream and at lower altitudes which are unacceptable.

As discussed below, the post-NextGen lack of controller vectoring has concentrated aircraft onto highly geographically specific and repetitive tracks over affected areas of Anne Arundel County. The result has been an increase in aircraft density and frequency in the same airspace over the same populations and any such increase is unacceptable.

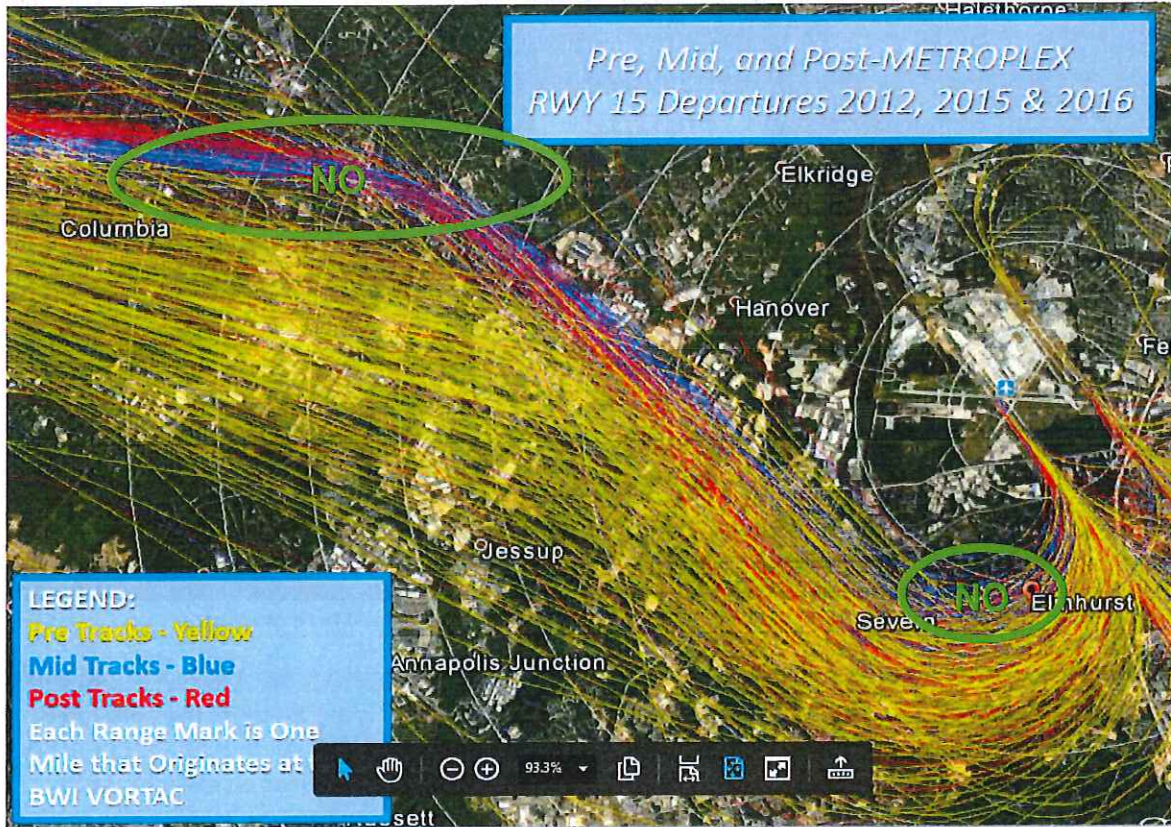


Figure 2A Runway 15 Departures - shows specific examples of planes flying where they were not flying prior to DC Metroplex/NextGen.

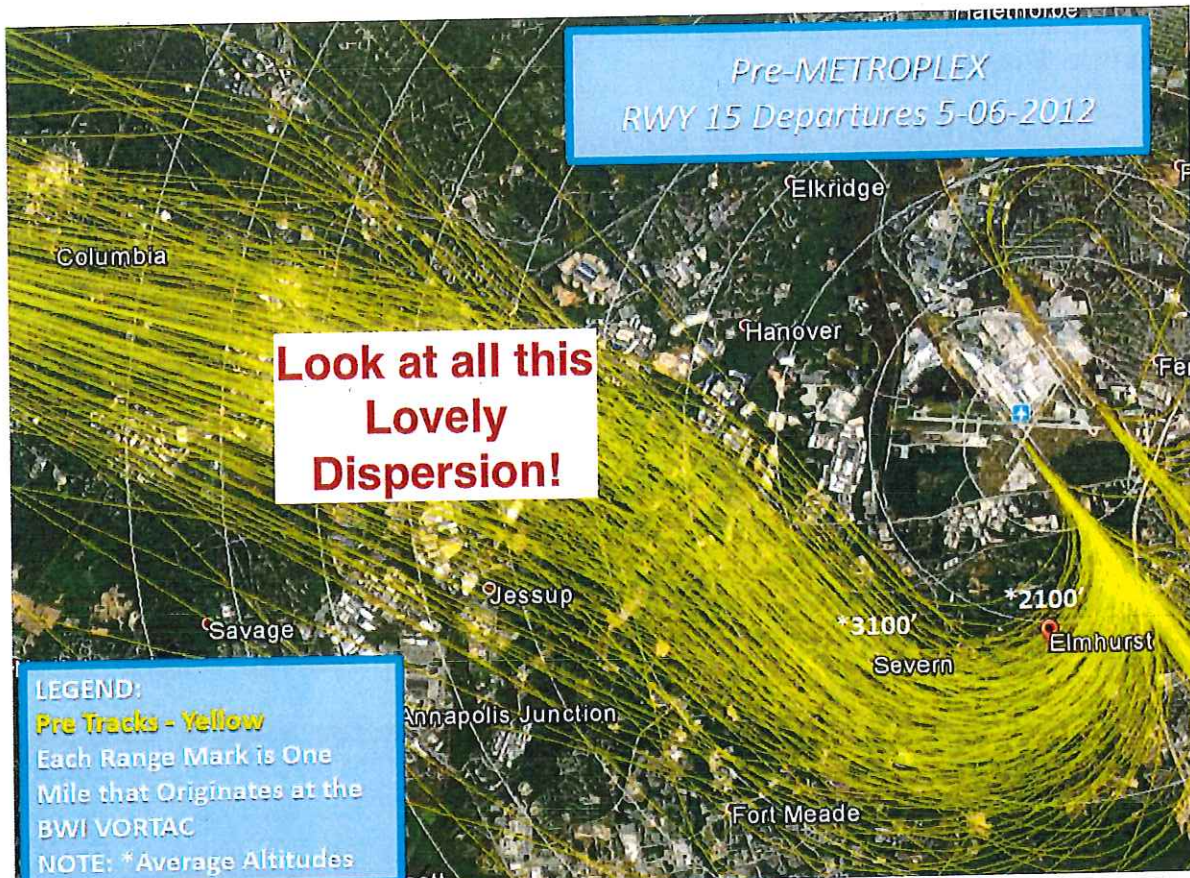


Figure 2B Runway 15 Departures – shows pre-DC Metroplex/NextGen features that need to be restored.

2. DC Metroplex/NextGen has resulted in a concentration of flight paths in narrow corridors; FAA must revert to old procedures that were effective in achieving dispersion. The concentration of low flying aircraft along the departure and arrival flight paths has been disastrous for residents underneath them. Numerous studies have demonstrated the harmful effect on mental and physical health due to aircraft and low frequency noise. In addition to the health effects, there is a questionably constitutional taking by the FAA of the residents' quiet and peaceful enjoyment of their homes and attendant economic loss due to lower property values. A comparison of pre- and post-DC Metroplex/NextGen flight paths as shown on Attachments 1 and 6 clearly shows the concentration of flight paths post-DC Metroplex/NextGen and that those under the flight paths would be significantly impacted is intuitive.

We understand from the FAA's presentation at the June 20, 2017, meeting of the Roundtable that for departures, the notional zones identified are intended to revert flight paths, not only to the location as mentioned above, but to achieve dispersion within the zones back to historical dispersion. We are concerned, however, that that the slides from the June 20 presentation do not adequately specify geographic boundaries. The notional zones identified on the June 20 presentation are based on a data set of 150 flights and time period of two months in 2014 that may be too small or not representative of historical dispersion. Additional data and time periods, such as those included in Attachment 1, should be considered in formulating a solution without delay. The PBN Working Group should continue its work while this additional

data is reviewed in order to maintain the timetable for published procedures described by the FAA in its June 20 presentation.

The June 20 presentation did not provide for notional zones to deal for dispersion on arrivals, but notwithstanding the presentation, Ms. Ray communicated at the meeting and in subsequent communications that the FAA understands the problem of concentration and the request for dispersion (examples of which are shown on Attachment 1) and would undertake efforts to recreate that dispersion on arrivals.

As you know, the Roundtable has requested in its letter dated July 25, 2017 to the FAA (Robert Owens) in that (i) for departures from BWI, the FAA seek the waiver that would allow air traffic controllers to vector aircraft to create dispersion as Robert Owens described during his presentation at the July 18 Roundtable meeting and (ii) for arrivals to BWI, air traffic controllers would revert to vectoring aircraft to the final approach course and would stop all direct clearances to waypoints in order to achieve spacing and dispersion and to eliminate concentrated flight paths. We request these remedial measures to be implemented immediately and made permanent or until such time it is demonstrated with certainty that NextGen as implemented will maintain dispersion at historical levels and avoid the current concentration of departures and arrivals.

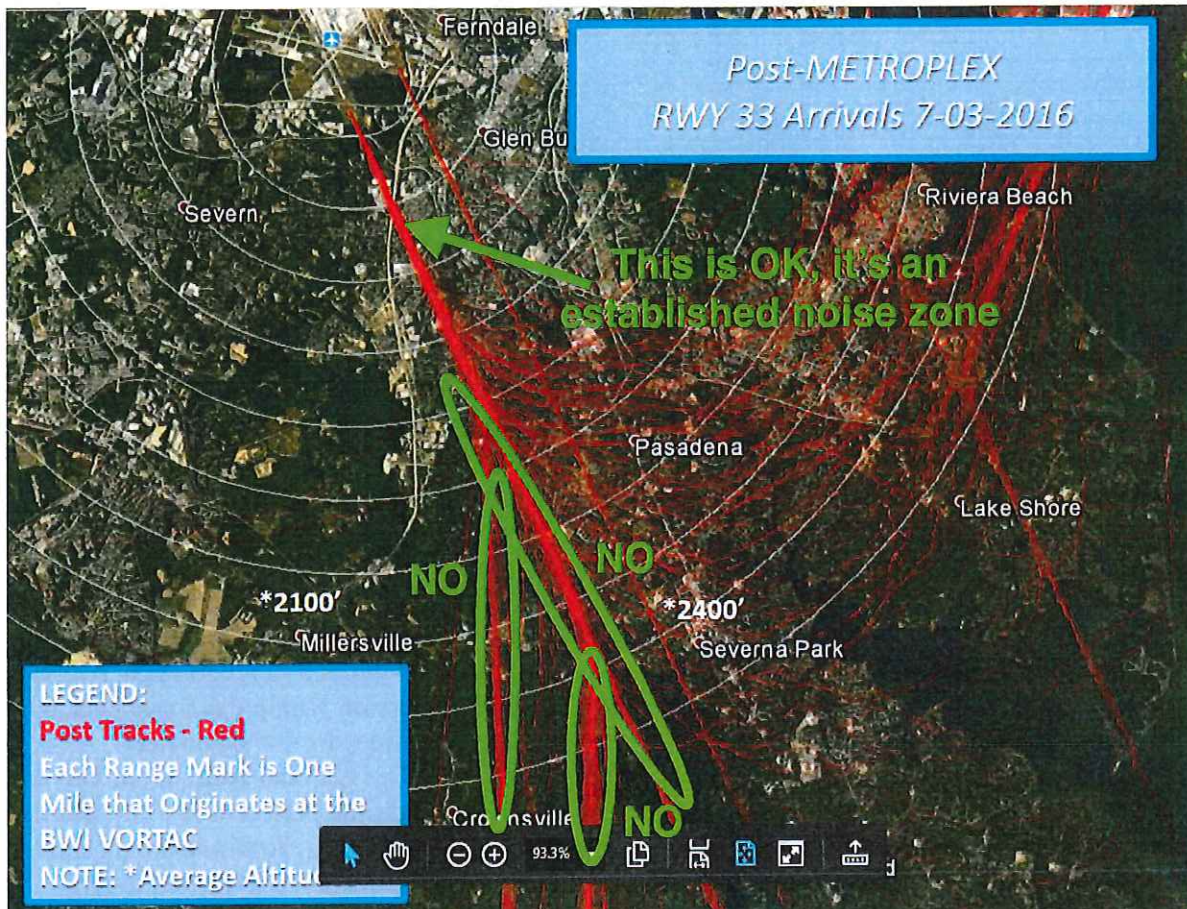


Figure 3A Runway 33L Arrivals - as well as figures 1 and 2 above, show examples of how planes are now concentrated into narrow corridors so that plane after plane are destructive for the residents beneath.

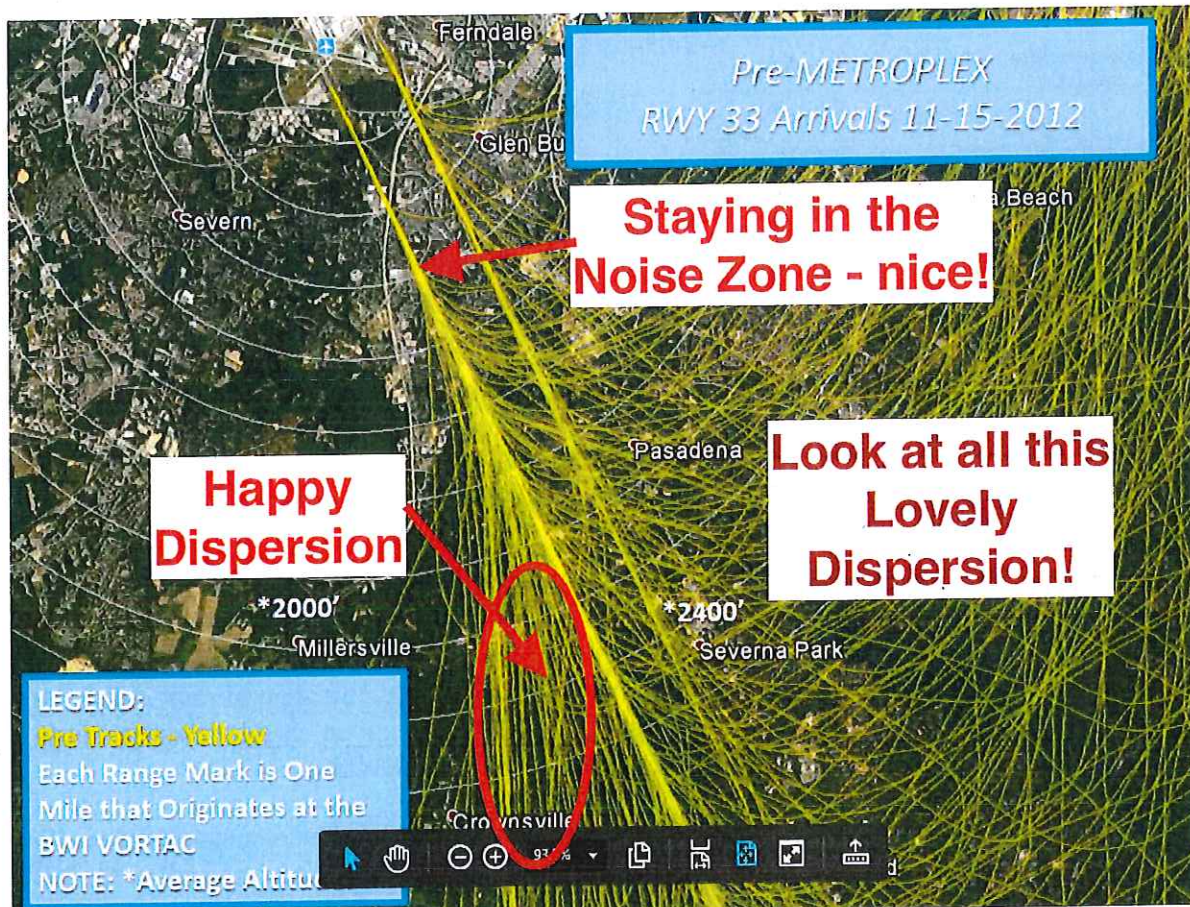


Figure 3B Runway 33L Arrivals - shows dispersion and features of pre-DC Metroplex/NextGen arrivals that must be restored.

3. FAA procedures permit aircraft to fly at altitudes too low; procedures must be modified to require aircraft to fly at the highest safe altitude at all times during departures and arrivals. Residents universally state that aircraft are flying lower under the DC Metroplex/NextGen scheme than previously. We understand there is conflicting data about how low aircraft are flying and issues regarding whether representations regarding aircraft altitude in DC Metroplex environmental assessment were accurate. As stated by FAA operations representatives for BWI approach control, the frequent ATC procedure of clearing aircraft for visual approaches has had the effect of alleviating an aircraft's obligation to comply with published arrival and approach procedure altitudes resulting in much lower flying aircraft. This has directly translated into an unacceptably lower altitude for regular flight operations. For arrival aircraft this has affected flights from as far out as the RAVNN waypoint on the RAVNN arrival and their joining of the final approach corridor into 33L at lower than IFR standard glideslope intercept altitudes. For 15R departures this has resulted in aircraft turning at lower altitudes; altitudes should be restored to previously established altitudes and the turn should be restored to 1 DME.

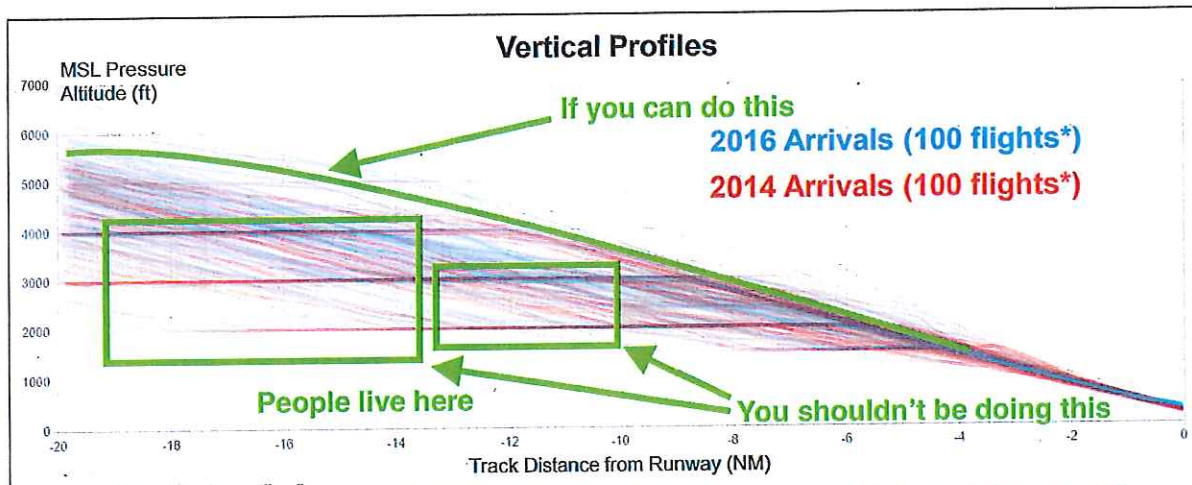


Figure 4 Vertical Profiles – shows how planes are flying at lower altitudes than necessary, as has been observed on all arrivals, particularly bothersome with arrivals on Runway 33L and Runway 10.

Also in our July 25 letter to the FAA, we have requested that the FAA implement the cooperation and training as proposed by Robert Owens at the July 18 meeting as soon as possible. We further request that FAA and airport procedures and rules be changed so that achieving and maintaining the highest safe altitude for departing and arriving aircraft is a requirement, rather than only a voluntary undertaking. All flights given visual clearances must not descend below published altitudes for the entire arrival and approach procedure.

In addition, we ask the FAA to look at procedural changes, including shifting flight paths for aircraft transiting the region, such as flights from DCA, away from the area to allow for BWI departures and arriving aircraft to achieve or maintain higher altitudes.

It is imperative that the FAA develop effective solutions expeditiously and on the first try. Also, any solution must be one that (i) is demonstrated to achieve the reversion to historical flight paths, the historical dispersion of aircraft and the higher aircraft altitudes described above, (ii) includes procedures with which controllers and others as applicable are mandated to comply, (iii) is a legal, valid and binding obligation of the FAA enforceable in accordance with its terms and (iv) is subject to monitoring and frequent and regular reporting to demonstrate compliance.

We believe there is the greatest possibility for this if the Roundtable is fully engaged in the FAA processes and kept frequently and timely apprised of developments with opportunity to review and comment on plans as they are developed. We look forward to working with the FAA and MAA collaboratively.

The mental and physical trauma, loss of peaceful enjoyment of homes and destruction of property values being suffered by thousands of residents are real. We look forward to the speedy development and implementation of solutions that correct the failings of the new flight paths and procedures. Time is of the essence.

Sincerely,



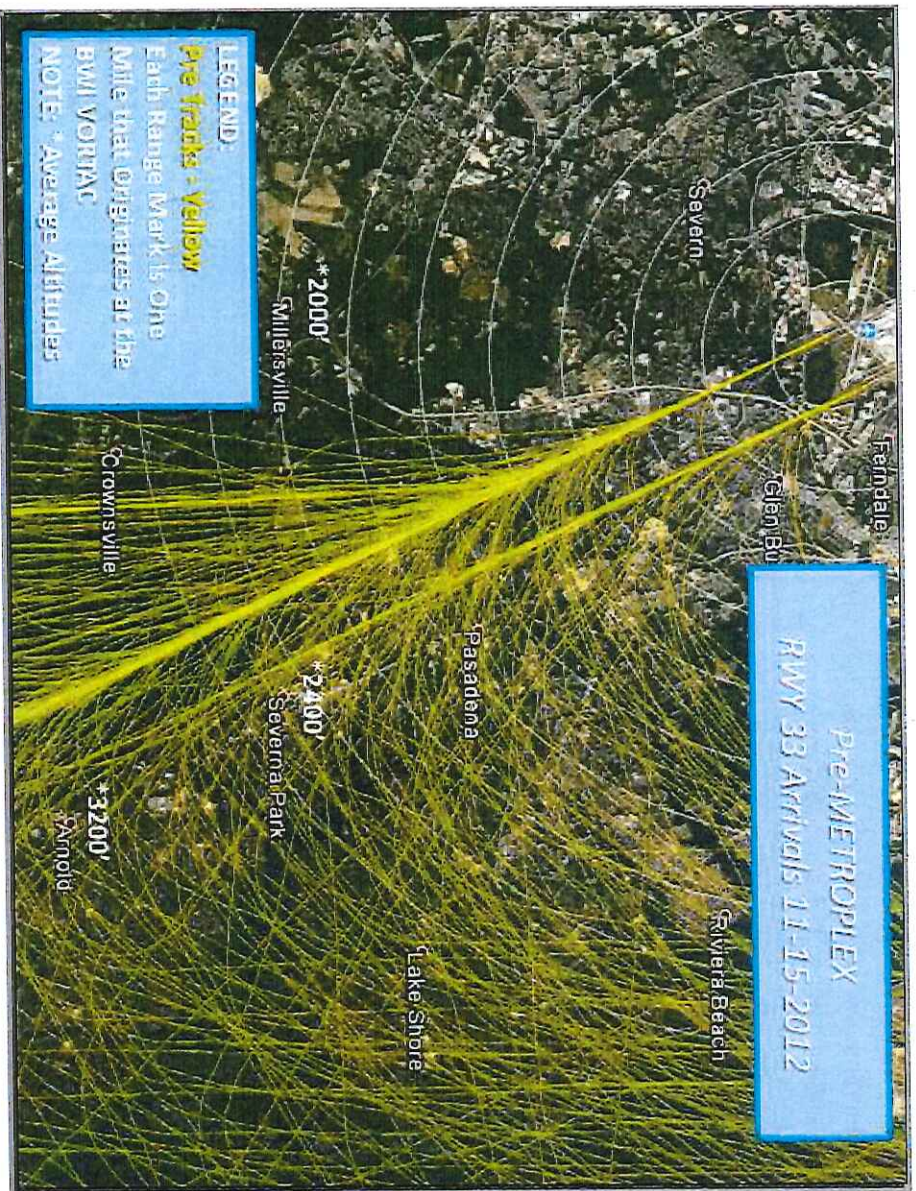
Lance Brasher
Chair

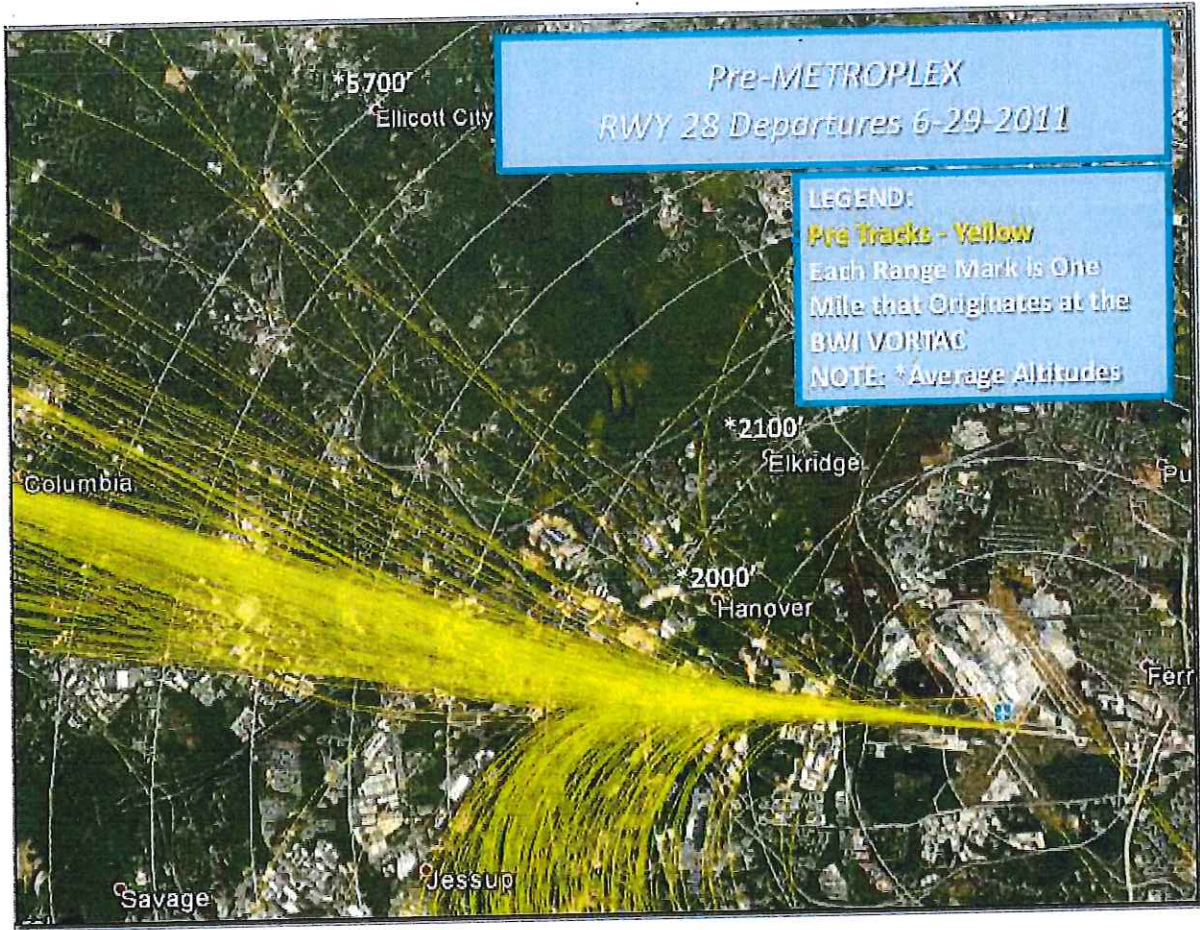
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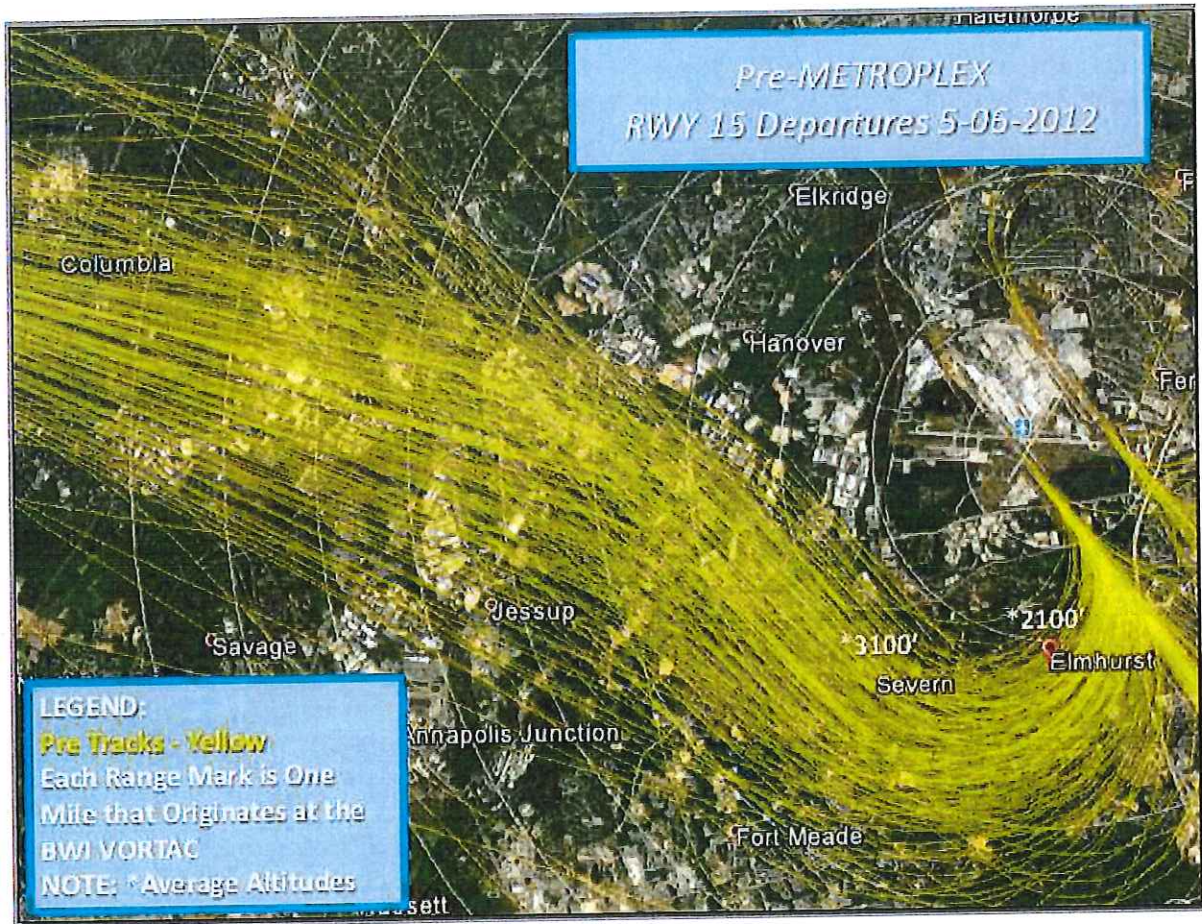
The Honorable Larry Hogan
The Honorable Benjamin L. Cardin
The Honorable Christopher Van Hollen, Jr.
The Honorable Andrew P. Harris, M.D.
The Honorable C.A. Dutch Ruppersberger
The Honorable John P. Sarbanes
The Honorable Anthony G. Brown
The Honorable Steny H. Hoyer
The Honorable John K. Delaney
The Honorable Elijah E. Cummings
The Honorable Jamie B. Raskin
Mr. Christopher Yates, DC Metroplex BWI Community Roundtable Vice Chair
Ms. Elizabeth Ray, Vice President, Mission Support Services, FAA
Mr. Paul Shank, P.E., Chief Engineer, Div. of Planning & Engineering, MAA

Attachment 1: FAA pre-DC Metroplex/NextGen flight path diagrams
Attachment 2: Roundtable letter to the FAA, dated March 31, 2017
Attachment 3: Congressional Delegation letter to the FAA, dated April 18, 2017
Attachment 4: Maryland Governor letter to the FAA, dated May 11, 2017
Attachment 5: Maryland Governor letter to the DOT, dated August 1, 2017
Attachment 6: FAA Post-DC Metroplex flight path diagrams
Attachment 7: Roundtable letter to the FAA, dated July 25, 2017

Attachment I







Attachment 2

DC METROPLEX BWI COMMUNITY ROUNDTABLE
c/o Maryland Department of Transportation Aviation Administration
991 Corporate Boulevard
Linthicum, Maryland 21090

March 31, 2017

Mr. Michael P. Huerta
Administrator
Federal Aviation Administration
800 Independence Ave SW
Washington DC 20591

Re: Roundtable Resolution to Revert to Pre-DC Metroplex/NextGen Procedures

Dear Mr. Huerta:

As requested by the Federal Aviation Administration (FAA), the Maryland Department of Transportation Aviation Administration (MDOTAA) worked with State and County elected officials to form a roundtable made up of community representatives impacted by the implementation of DC Metroplex/NextGen plan.

Now formed, we are identified as the DC Metroplex BWI Community Roundtable (Roundtable), and our first meeting was held on March 21, 2017. During that meeting, we approved the Charter, elected a Chairman and Vice Chairman, and established ourselves as a group of community representatives with the goal of mitigating noise and other harmful impacts and seeking alternatives for populations impacted by DC Metroplex/NextGen implementation. The MDOTAA will provide you with the DC Metroplex BWI Community Roundtable Charter (approved at the meeting) and the Roundtable membership as of March 24, 2017.

We have been advised that the MDOTAA has discussed with the FAA on multiple occasions that the MDOTAA has received thousands of complaints from residents in the vicinity of BWI Marshall following the implementation of the DC Metroplex/NextGen flight paths and procedures. In general, the complainants assert that many aircraft are now flying nearer their homes, whether due to new flight paths, frequency, low altitude or otherwise. The aircraft produce unwanted and unacceptable noise, vibration and other undesirable effects that are traumatic and oppressive, and deprive affected residents of the quiet and peaceful enjoyment of their homes they had prior to the implementation of the procedures. Some residents report that it has become intolerable to stay in their homes due to DC Metroplex/NextGen.

At our March 21 meeting, our Roundtable unanimously adopted the following resolution on an urgent basis:


The DC Metroplex BWI Community Roundtable requests and recommends that the FAA immediately revert to flight paths and procedures that were in place prior to implementation of NextGen and the DC Metroplex plan (*i.e.*, the *status quo ante*) in order to provide urgent relief to residents adversely affected by these new flight paths and procedures, while a more deliberate and public-facing process to develop and implement NextGen and a DC Metroplex plan is undertaken.

The Roundtable also requests that you and other senior officials of the FAA participate in our next meeting on April 18, 2017 to (1) respond to this urgent resolution and (2) provide a review of stakeholder feedback from the October 27, 2016 open house sponsored by the MAA and FAA.

This is a matter that is of the utmost importance to the residents and communities harmed by the FAA's development and implementation of DC Metroplex/NextGen flight paths and procedures. While we welcomed the sincere acknowledgement by the FAA representative at our March 21 meeting that the FAA erred in the development and implementation of DC Metroplex/NextGen and his assurances that the FAA is committed to addressing the harm it has created, we have yet to see evidence of that commitment. We need for the FAA to make resolving this issue a top priority. We need for the FAA to take responsibility for the harm it has caused and is causing the BWI communities and residents and lead the efforts to correct this harm urgently.

The Roundtable has requested the MAA to transmit this letter to you. I would be pleased to meet with you and can be reached at any time on my mobile phone 443-995-0259 to discuss.

Very sincerely,



Lance Brasher
Chairman,
DC Metroplex BWI Community Roundtable

cc: Mr. Christopher Yates, DC Metroplex BWI Community Roundtable Vice
Chair
Mr. Carmine Gallo, Regional Administrator, Eastern Region, FAA
Ms. Elizabeth Ray, Vice President, Mission Support Services, FAA
Mr. Ricky Smith, Executive Director/CEO MAA
Mr. Paul Shank, P.E., Chief Engineer, Div. of Planning & Engineering, MAA
Ms. Ellen Sample, Director, Office of Real Estate & Noise Abatement, MAA

Attachment 3

Congress of the United States
Washington, DC 20540

April 18, 2017

Hon. Michael P. Huerta
Administrator
Federal Aviation Administration
800 Independence Avenue SW
Washington, DC 20591-0004

Dear Administrator Huerta:

We are writing to you in support of the DC Metroplex BWI Community Roundtable's "Resolution to Revert to Pre-DC Metroplex/NextGen Procedures" that the Roundtable sent to you on March 31, 2017, a copy of which is attached.

As you know, the implementation of NextGen flights in 2015 has created an intolerable situation for those living under the flight paths. These residents cannot work or study at home, converse in a normal tone of voice, sleep well, or simply have the quiet enjoyment of their property. This is an unacceptable and unsustainable situation.

The DC Metroplex BWI Community Roundtable was formed by the Maryland Aviation Administration in response to the Federal Aviation Administration's request for a BWI community consensus before taking steps to change the NextGen flight paths. In its letter to Senator Benjamin Cardin dated December 12, 2016, the FAA stated that it is "committed to giving full and fair consideration to any formal CR [Community Roundtable] endorsed changes, which could include returning to previous flight paths if that is a consensus position after getting input from affected communities."

The Roundtable is comprised of representatives from each of the affected communities around BWI Thurgood Marshall Airport, as well as representatives from the aviation industry. Two appointed representatives from each legislative district in Anne Arundel and Howard Counties are included, as well as representatives from the offices of the Anne Arundel County Council President and the County Executives of Anne Arundel, Howard, and Baltimore Counties.

At its meeting on March 21, 2017, the members of the Roundtable voted unanimously to adopt the following Resolution:

The DC Metroplex BWI Community Roundtable requests and recommends that the FAA immediately revert to flight paths and procedures that were in place prior to implementation of NextGen and the DC Metroplex plan (i.e.,


the *status quo ante*) in order to provide urgent relief to residents adversely affected by these new flight paths and procedures, while a more deliberate and public-facing process to develop and implement NextGen and a DC Metroplex plan is undertaken.


This Resolution satisfies the FAA's request that a Community Roundtable reach a consensus position before the FAA will consider returning to previous flight paths. Now that the Roundtable has acted, we call upon you to accept the Roundtable's Resolution and take swift action to revert to pre-NextGen flight paths. It is essential to provide relief to the affected residents until an acceptable solution can be devised.

We look forward to your prompt response.

Sincerely,



Benjamin L. Cardin
United States Senator



Chris Van Hollen
United States Senator


Steny Hoyer
Member of Congress


Elijah Cummings
Member of Congress


C.A. Dutch Ruppersberger
Member of Congress


John Sarbanes
Member of Congress


John K. Delaney
Member of Congress


Anthony Brown
Member of Congress


Jamie Raskin
Member of Congress

Attachment 4



LARRY HOGAN
GOVERNOR

May 11, 2017

STATE OF MARYLAND
OFFICE OF THE GOVERNOR

Michael P. Huerta, Administrator
U.S. Department of Transportation
Federal Aviation Administration
800 Independence Avenue, SW
Washington, DC 20591

Re: NextGen Flight Path

Dear Mr. Huerta:

As you are aware, the Next Generation Air Transportation System (NextGen) at Baltimore/Washington International Thurgood Marshall Airport and Ronald Reagan Washington National Airport in November 2014 has dramatically increased the noise levels in several populous Maryland jurisdictions. To date, there has been little to no action taken to mitigate this noise pollution. In fact, the problem has only metastasized into the National Capital Region and beyond.

When the Maryland State Highway Administration designs and constructs new highways and bridges, we work hard to minimize the impact of traffic noise on our citizens. While vehicular noise is to be expected, we strive to provide reasonable actions. We do not willfully ignore the local communities and circumvent their input.

You advised the Maryland Aviation Administration to create a Community Roundtable of residents and industry representatives, indicating that the FAA requires a consensus prior to developing, testing and implementing any significant air space procedural changes. The Community Roundtable **unanimously** adopted the following resolution:

"The DC Metroplex BWI Community Roundtable requests and recommends that the FAA immediately revert to flight paths and procedures that were in place prior to implementation of NextGen and the DC Metroplex plan (i.e., the status quo ante) in order to provide urgent relief to residents adversely affected by these new flight paths and procedures, while a more deliberate and public-facing process to develop and implement NextGen and a DC Metroplex plan is undertaken."


STATE HOUSE, ANNAPOLIS, MARYLAND 21401
(410) 874-3800 1-800-811-8338
TTY USERS CALL VIA MD RELAY

Regardless, your agency has refused to make any meaningful adjustments. In fact, your agency stated at the April 18th meeting that the FAA would not return to the pre-NextGen flight paths, and would only make minor modifications. This is completely unacceptable. The FAA has a duty to listen and work with the communities it impacts. I am asking for the FAA to reconsider these procedures.

There is certainly merit in transitioning into a satellite-based air traffic control system. However, while the NextGen system will provide savings for the airline industry, I will not have the citizens of Anne Arundel, Baltimore, Howard, and Montgomery Counties pay a human cost with their health and emotional well-being.

Therefore, I ask the FAA to immediately return to the pre-NextGen flight patterns for a period of time while state and local stakeholders are engaged. I sincerely hope that we are able to find common ground and an amicable resolution. I welcome the opportunity to continue this discussion as soon as possible - please contact my Chief of Staff, Sam Maholtra, at sam.maholtra@maryland.gov, or at 410-974-5154, for arrangements. Thank you.

Sincerely,



Lawrence J. Hogan, Jr.
Governor

cc:

The Honorable Kevin Kamenetz
The Honorable Allan Kuttlerman
The Honorable Ike Leggett
The Honorable Steven Schub

Attachment 5



LARRY HOGAN
GOVERNOR

STATE OF MARYLAND
OFFICE OF THE GOVERNOR

August 01, 2017

The Honorable Elaine L. Chao, Secretary
U.S. Department of Transportation
1200 New Jersey Ave, SE - 9th Floor
Washington, DC 20590

Re: Next Generation Air Transportation System (NextGen)

Dear Secretary Chao:

Two months ago, I wrote a letter to Federal Aviation Administration (FAA) Administrator Michael Huerta expressing my deep concern about increased noise levels in several populous Maryland jurisdictions as a direct result of implementing the FAA's Next Generation Air Transportation System (NextGen). I also shared my strong displeasure that the FAA had not provided immediate and meaningful reform to date.

Following this recurring theme of little to no action by the FAA, I have yet to receive a reply to my May 11, 2017 letter (enclosed). The Administrator does not seem to understand that chronic aircraft noise exposes otherwise healthy people to stress and potential medical conditions, as well as directly negatively impacting property values for Maryland homeowners.

Baltimore Washington International Thurgood Marshall (BWI) Airport is the number one airport in the Mid-Atlantic region. With travel on the East Coast rapidly growing, this noise issue has been adversely affecting citizens in Anne Arundel, Baltimore, and Howard Counties for the past three years.

In addition the noise issues generated at BWI, our Montgomery County residents have been adversely affected by flight path changes at Ronald Reagan Washington National Airport. Montgomery County citizens are experiencing a growing sense of disenfranchisement when attempting to voice their concerns to the appropriate authorities.

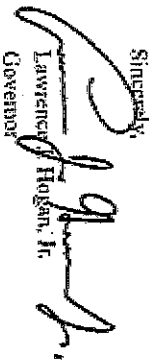
I respectfully request a review and path forward to address our citizens' concerns, and ask that the Administrator address these issues via a written response to my letter no later than August 15,

STATE HOUSE, ANNAPOLIS, MARYLAND 21401
14101574-3801 1-800-811-8336
TTY USERS CALL VIA MD RELAY

2017. Our administration is committed to seeking sincere resolution on this important matter, and we intend to maintain an open dialog with your office as we work to achieve a mutually acceptable solution.

I thank you for your time and attention to this matter. The Maryland Secretary of Transportation, Pete Rahn, is available to discuss further at 410-865-1660 or pahn@mdot.state.md.us, and of course, you may always contact me directly.

Sincerely,

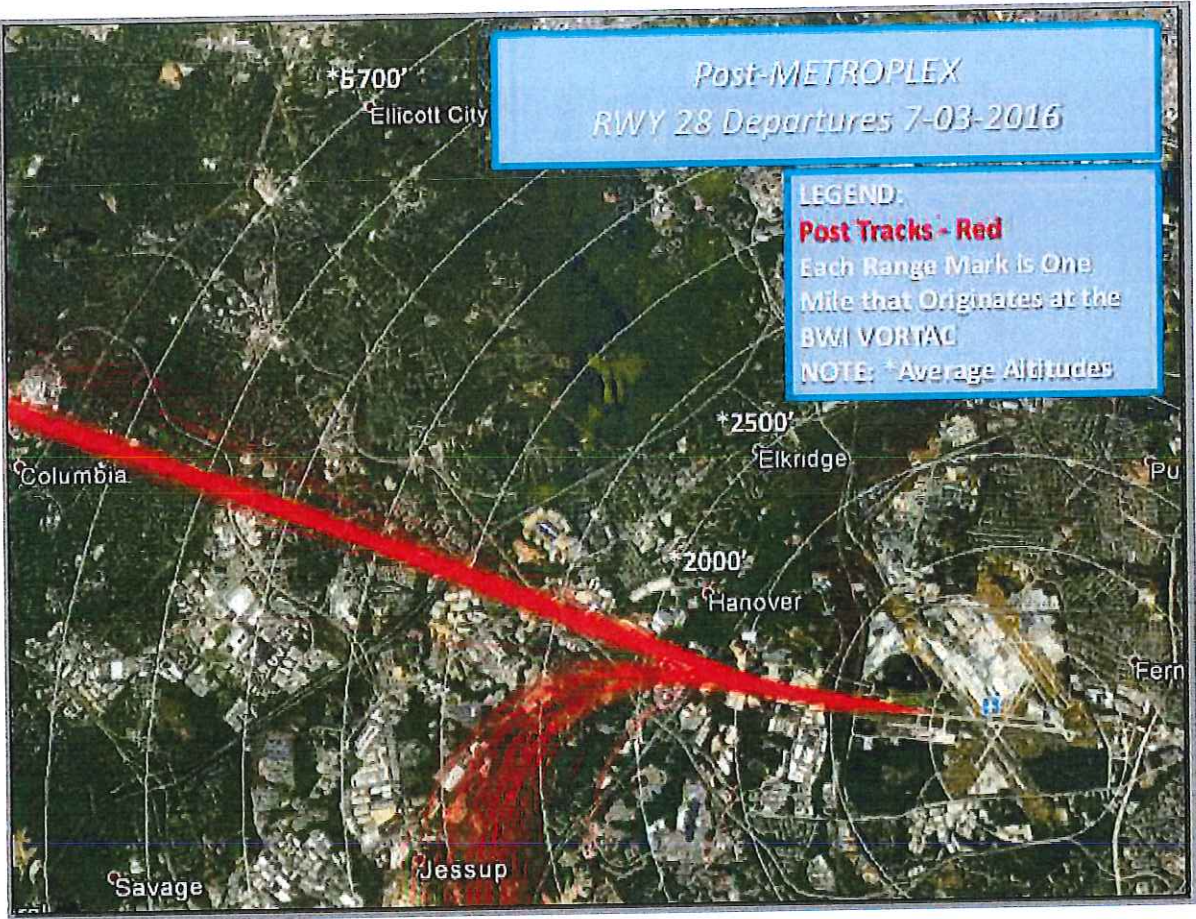
A handwritten signature in black ink, appearing to read 'Lawrence Hogan, Jr.', written over a printed name and title.

Lawrence Hogan, Jr.
Governor

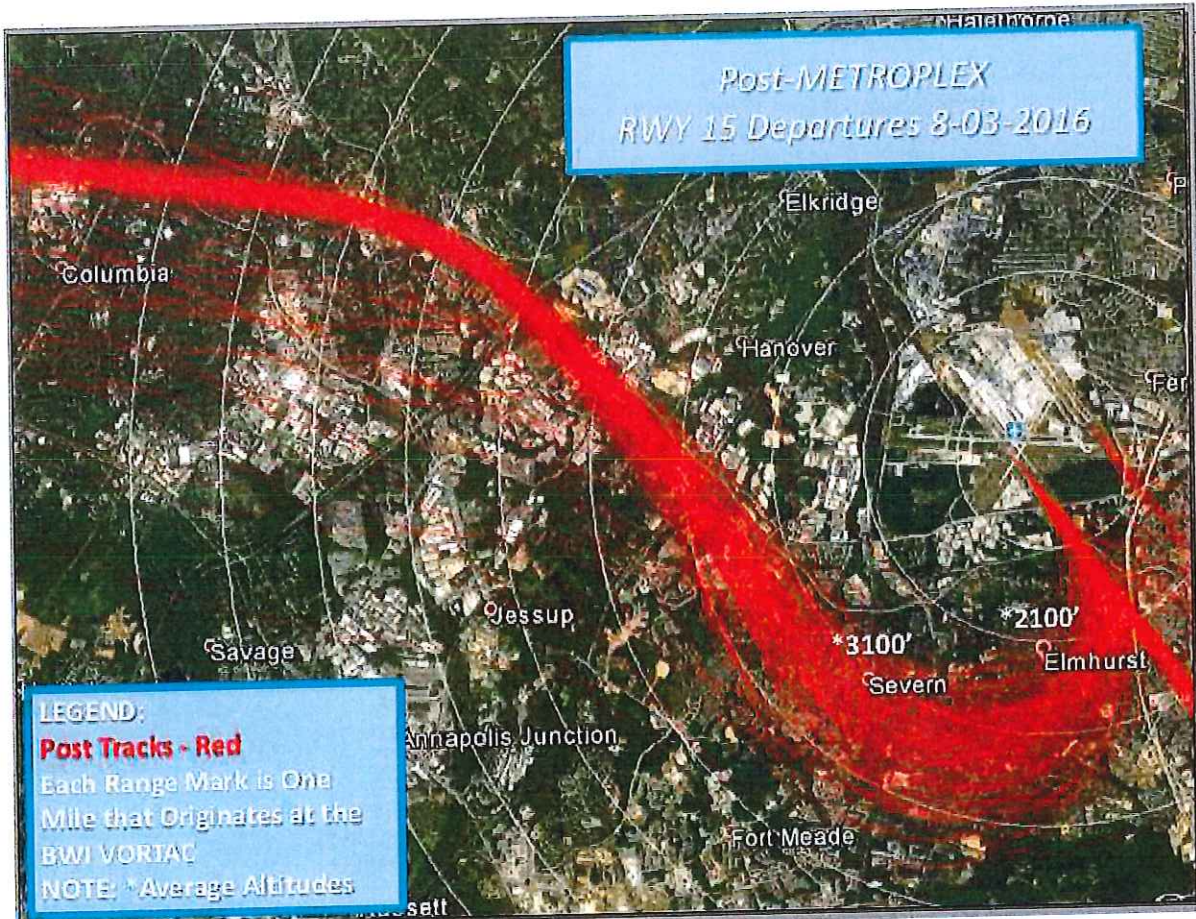
Encl: 2017.05.11 Governor Hogan Letter to Huerta Re Neal/Jan

Attachment 6





Post-METROPLEX
RWY 15 Departures 8-03-2016



LEGEND:
Post Tracks - Red
Each Range Mark is One
Mile that Originates at the
BWI VORTAC
NOTE: * Average Altitudes

Attachment 7

DC METROPLEX BWI COMMUNITY ROUNDTABLE
c/o Maryland Department of Transportation Aviation Administration
991 Corporate Boulevard
Linthicum, Maryland 21090

July 25, 2017

Mr. Robert A. Owens
Terminal Assistant District Manager
Capital District
Federal Aviation Administration
800 Independence Ave SW
Washington DC 20591

**Re: Operational Remedial Measures Related to BWI Community Roundtable
Status Quo Ante Resolution**

Dear Robert:

Thank you and Scott Proudfoot for your presentation on behalf of the FAA at the BWI Community Roundtable meeting on July 18, 2017. At the meeting, three remedial actions were discussed that the FAA could pursue while the FAA PBN Working Group develops changes in instrument flight procedures and other remedial actions are considered in response to the Roundtable's *status quo ante* resolution and request submitted to the FAA on March 31, 2017:

(a) On departures from BWI Airport, seek the waiver you described during your presentation to the Roundtable that would allow air traffic controllers to vector aircraft to recreate some of the flight path dispersion indicated on the attached FAA diagrams, and train and instruct controllers to do so:

(b) On arrivals to BWI Airport, revert to air traffic controllers vectoring aircraft on a course to the line of intercept (i.e., final approach course) rather than vectoring to a fixed way point, with the objective of recreating flight path dispersion of which the attached FAA diagrams are indicative. Controllers would not vector aircraft to fixed way points on arrivals:

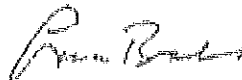
(c) With respect to aircraft altitudes, FAA would train controllers and coordinate with airlines, making them aware of the noise, vibration and other harmful effects thrust upon BWI community residents by low-flying aircraft, and request controllers and airlines maintain aircraft on the glide slope intercept altitudes out to 10 DME and, beyond 10 DME, maintain altitudes of at least 4000 feet, absent a compelling reason to the contrary (e.g., maintaining separation).

As we discussed, the Roundtable hereby requests that the FAA implement these measures as soon as possible. The Roundtable also inquires whether it is possible for controllers to instruct and require aircraft to achieve and maintain specified altitudes during takeoff and descent and, if so, include that as a measure to be implemented.

We are hopeful that implementing these steps as soon as possible will bring relief to harmed BWI Community residents which is badly needed. The efficacy of these measures can be evaluated while changes to instrument flight procedures are being developed by the FAA PBN Working Group and may factor into required instrument flight procedure changes.

We look forward to the expeditious implementation of these measures.

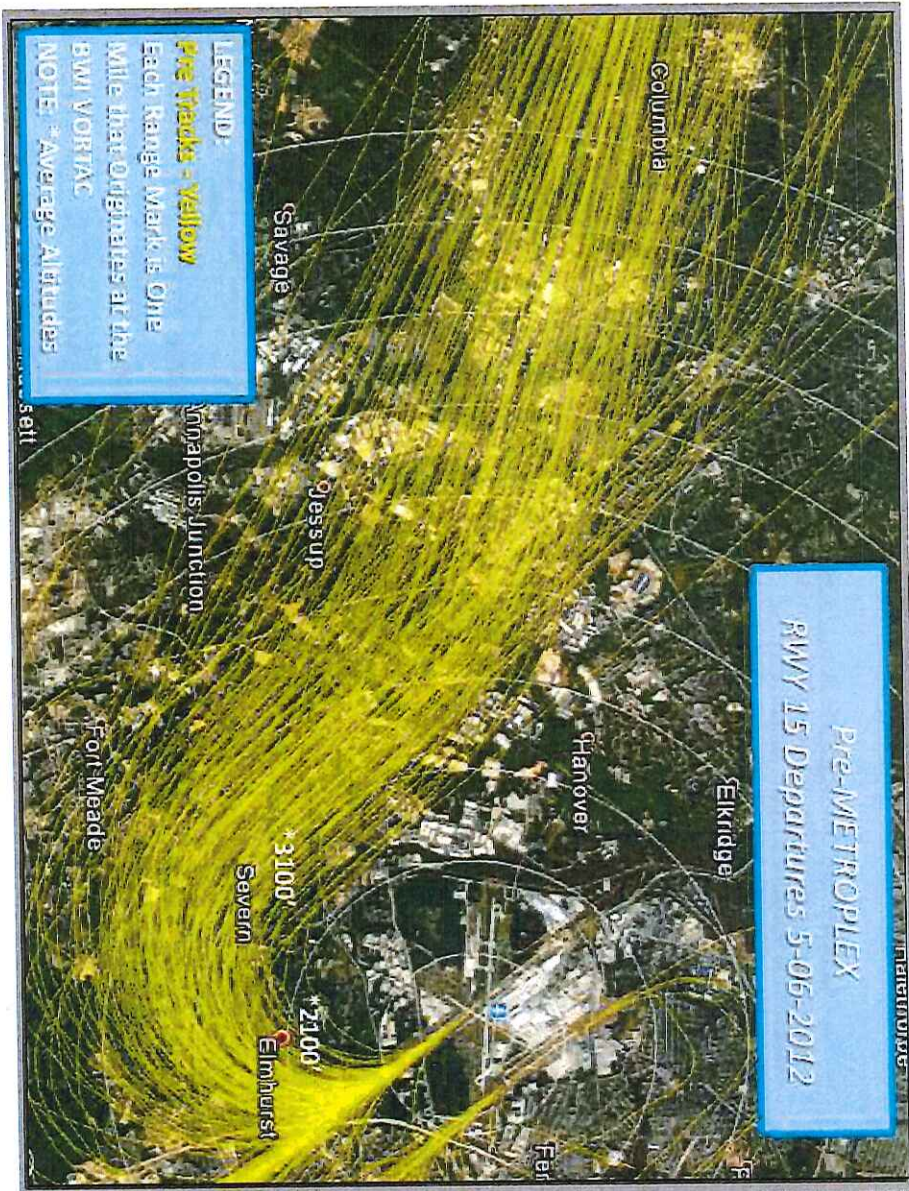
Very sincerely,



Lance Brasher
Chairman
DC Metroplex BWI Community Roundtable

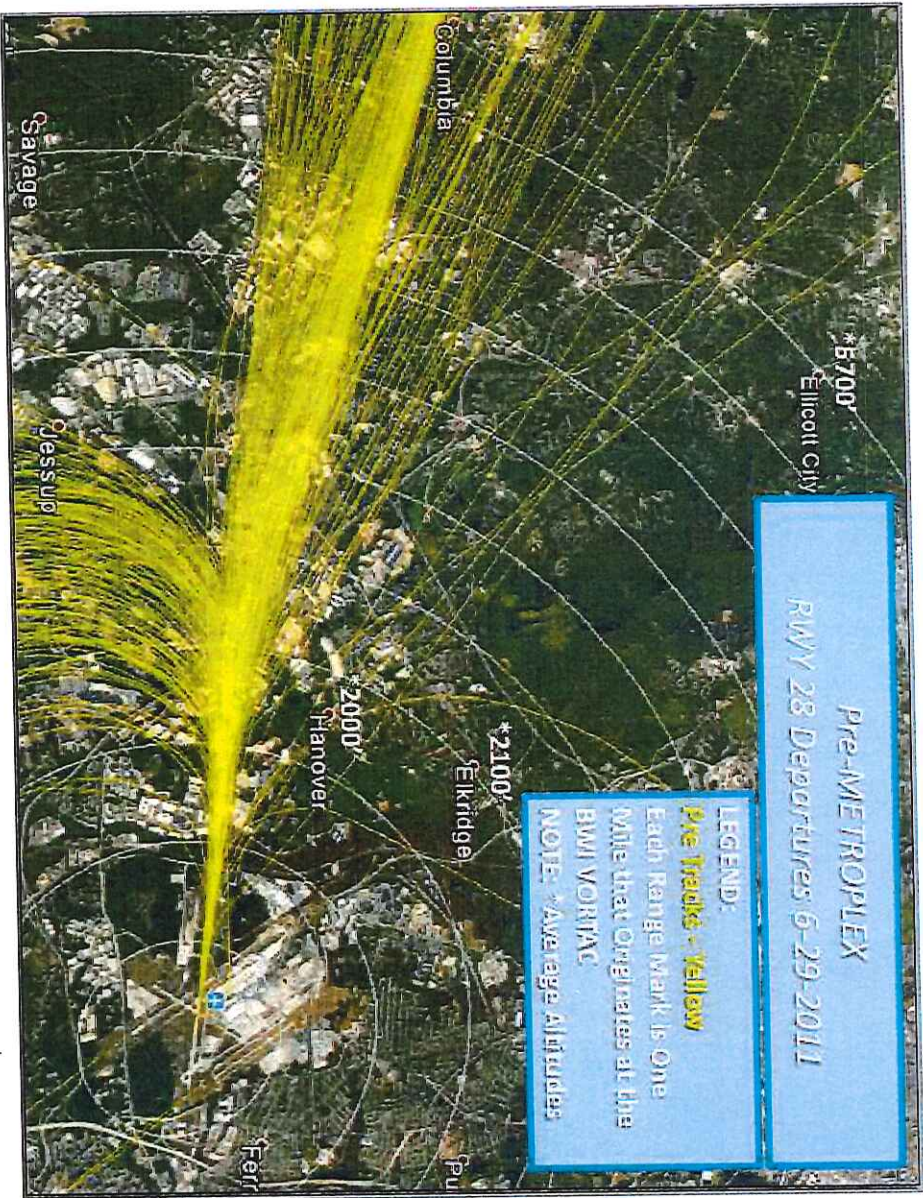
Attachments: FAA Diagrams from FAA BWI Workshop October 27, 2016

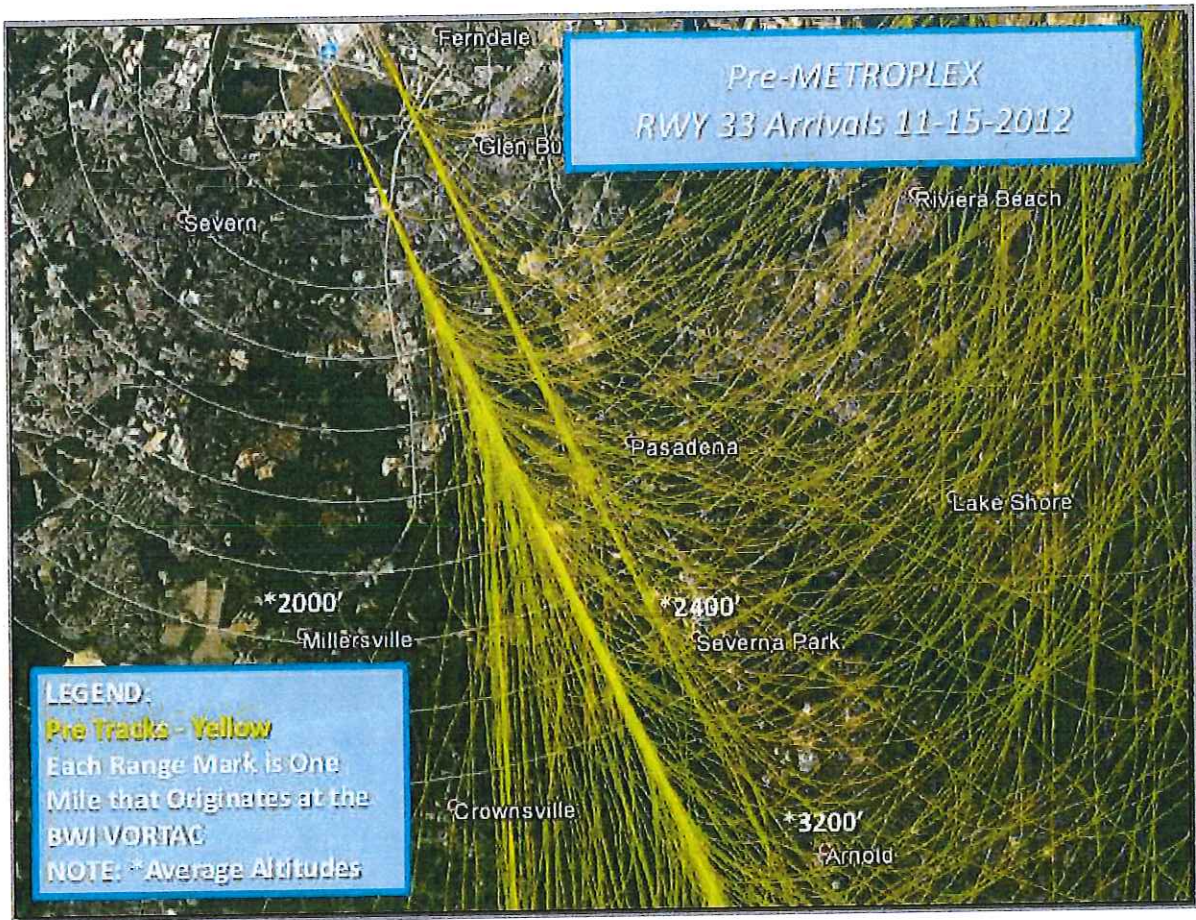
cc: Mr. Christopher Yates, DC Metroplex BWI Community Roundtable Vice
Chair
Ms. Marie Kennington-Gardner, Regional Administrator, Eastern Region, FAA
Ms. Elizabeth Ray, Vice President, Mission Support Services, FAA
Mr. Paul Shank, P.E., Chief Engineer, Div. of Planning & Engineering, MAA
Ms. Ellen Sample, Director, Office of Real Estate & Noise Abatement, MAA



Pre-METROPLEX
 RWY 15 Departures 5-06-2012

LEGEND:
Pre Tracks - Yellow
 Each Range Mark is One
 Mile from Originates at the
 BWI VORTAC
 NOTE - Average Altitudes





DC METROPLEX BWI COMMUNITY ROUNDTABLE
c/o Maryland Department of Transportation Aviation Administration
P.O. Box 8766
BWI Airport, Maryland 21240-0766
January 31, 2018

SUBJECT: 2017 Annual Report of the DC Metroplex BWI Community Roundtable

INTRODUCTION

The DC Metroplex BWI Community Roundtable members (RT) hereby submit our first Annual Report. This report is required by our charter with the Maryland Department of Transportation Aviation Administration (MAA). It includes the following topics: history, 2017 Roundtable meeting dates, current BWI operations – understanding the problem, RT request to date and the Federal Aviation Administration's (FAA) responses, RT's challenges in carrying out its obligations, possible solutions and conclusion.

HISTORY

The BWI Roundtable was requested by the FAA and formed by the MAA. In monthly meetings with the FAA, the Roundtable has sought solutions for the harmful effects brought about by the implementation of the DC Metroplex/ NEXTGEN scheme.

During our first meeting, held on March 21st, 2017, our Roundtable unanimously adopted the following resolution on an urgent basis:

The DC Metroplex BWI Community Roundtable requests and recommends that the FAA immediately revert to flight paths and procedures that were in place prior to the implementation of NEXTGEN and the DC Metroplex plan. They will provide urgent relief to residents adversely affected by these new flight paths and procedures. While a more deliberate and public-facing process to develop and implement NEXTGEN and a DC Metroplex plan is undertaken.

We have not wavered from this request to the FAA. Although, we have acknowledged that reversion may be "mimicked" using current or new technology.

The Roundtable meetings have consistently given FAA and MAA representatives a concise picture of the crushing impact that the NEXTGEN/DC Metroplex plan has had on Maryland residents living under current flight paths. Each meeting of the Roundtable involves technical discussions, presentations, as well as a public comment section. Individual homeowners have often given poignant and arresting descriptions of the damage being done to their lives, health, and properties. Not to mention their belief in government has changed as a result of how the federal and state governments allowed NEXTGEN to be implemented without any warning of, or protection from, the far reaching and life changing nature of it all. Many believe they are ambushed, abused, and abandoned by their government(s).

2017 ROUNDTABLE MEETINGS DATES

The Roundtable has met as a working body on the following dates: March 21, 2017, April 18, May 16, 2017, June 20, 2017, July 18, 2017, August 22, 2017, September 19, 2017, October 17, 2017, November 7, 2017, December 5, 2017, January 16, 2018

The full agenda and presentations are on the MAA website:

<http://maacommunityrelations.com//content/anznoiseupdate/dcroundtablecalendar.php>

Two Roundtable members attended the initial Technical Interchange Meeting of the FAA's PBN Working Group in Linthicum on August 10th, one in person and one by conference call. The PBN Working Group had been announced by the FAA at our June 20th meeting as the primary interdisciplinary vehicle within the FAA for addressing NEXTGEN design/redesign issues in the DC Metroplex.

Additionally, three Roundtable members visited the FAA's Potomac TRACON facility, which is responsible for air traffic operations in the DC Metroplex, in Virginia on December 7th, 2017,

CURRENT BWI OPERATIONS – UNDERSTANDING THE PROBLEM

The Roundtable has spent a large amount of time understanding the nature of the problem and has had to push very hard to get the FAA and MAA to describe what is happening in the BWI airspace. It is clear to residents that since the implementation of the NEXTGEN Performance Based Navigation (PBN) Air Traffic Control (ATC) system at BWI Marshall International Airport (BWI) there has been a drastic and unacceptable increase in the frequency, density and concentration of aircraft and noise over limited geography. Previously unaffected communities are now experiencing high volumes of aircrafts flying new and concentrated paths. We believe that this has a direct detriment on public health, the environment, and individual property values of residents under these new flight paths.

Prior to NEXTGEN, the ATC model utilized "vectoring" to allow for proper spacing and safety buffers between aircraft. Locally, this resulted in the dispersed, and noncontroversial, airplane operations at BWI. With the introduction of NEXTGEN vectoring, although still available, is no longer used in routine practice. Rather, Global Positioning System (GPS) aligned "waypoints" are used to create replicable procedures and standardized flight paths. This approach increases the predictability of operations and reduces pilot/ATC interaction; thereby potentially increasing safety. It also results in a continuous and disturbing number of planes traversing the exact same geography day-in and day out. Which is creating a nuisance for some and a painful, unbearable burden for others.

During the course of our education in the causes of the new noise problem, we have recognized that issues can be grouped into two main categories: departures and arrivals.

Departures (Image 1 provides a BWI runway map):

Issues have been identified for the two departure runways as follows:

Runway 28:

Flights departing from RWY 28, represent approximately 70% of all annual BWI westbound departures these all turn right immediately after takeoff which causes a significant increase in noise over Hanover, Elkridge, Columbia and Ellicott City. Prior to NextGen these areas had not previously experienced noticeable levels of plane noise. The turn takes place at approximately 800 ft. above ground level, which appears to be in contradiction of the FAA's Environmental Assessment required for the implementation of NEXTGEN in the DC Metroplex. The assessment states that NEXTGEN would result in no changes to flight patterns under 3000 ft. above ground level. Flights leaving RWY 28 heading south, approximately 30% of all departures, have been moved further west, concentrating noise over Odenton.

Runway 15R:

PBN procedures have led to much tighter turns off of RWY 15R, concentrating noise from low flying planes over Severn, Maryland. These planes continue along the path previously described for RWY 28 departures, concentrating noise over the previously mentioned Howard County communities.

Arrivals (Attachment 1 provides a BWI runway map):

We have been told that ATC is issuing a greater number of visual approach clearances to pilots and that approaching aircraft are being cleared directly to PBN waypoints. Both of these ATC procedures were enabled by the implementation of the NEXGEN system and have resulted in destructive noise in communities that previously were not impacted by aircraft noise. Aircraft are flying too low and too loud along the entire Annapolis peninsula and population centers of Anne Arundel County. These issues also affect Baltimore and Howard Counties but to a lesser degree due to the dominant wind direction-based nature of arrival and departure air operations at BWI.

Issues have been identified for the two main arrival runways as follows:

Runway 33L:

RWY 33L is used for approximately 70% of BWI arrivals. As stated by FAA operations representatives for BWI approach control, aircraft are being cleared direct to the PBN waypoints to RWY 33L as opposed to vectored sequencing along the entire final approach course. The lack of vectoring has concentrated these aircraft onto specific areas and caused repetitive paths over major population centers along the Annapolis peninsula. Resulting in the introduction of unacceptable aircraft density and frequency in the same airspace over the same populations. In the case of at least one of the waypoints over Crownsville, titled SPLAT by the FAA, there were very few planes using this waypoint prior to the implementation of the DC Metroplex/ NEXTGEN project, but is now a major "highway" for BWI arrivals.

As further stated by FAA operations representatives for BWI approach control, the frequent ATC procedure of clearing aircraft for visual approaches has had the effect of alleviating pilots' obligation to comply with published arrival and approach procedure altitudes. Which results in much lower flying aircraft from as far out on arrival as the RAVNN waypoint to the northeast of

Deale. This has directly translated into an unacceptably lower altitude for regular flight operations across the entire Annapolis peninsula and the final approach corridor into 33L. Not to mention these approaches are lower than IFR standard glideslope intercept altitudes. In many instances the MAA has catalogued of planes flying far below 3,000 ft. above ground level in both Anne Arundel and Howard Counties.

Runway 10:

RWY 10 is used for approximately 30% of BWI arrivals, primarily for the airport's "East Flow" operations. All of the detrimental issues identified for RWY 33L also exist for RWY10, with high concentrations of loud, low flying planes over Ellicott City and Columbia, where few if any existed before.

ROUNDTABLE REQUESTS TO DATE AND FAA RESPONSES

The BWI Roundtable has made the following three major requests of the FAA and received the corresponding responses:

1. *March 31, 2017 request:* To the FAA Administrator following our March 21st, 2017 resolution for the FAA to revert to pre-DC Metroplex/NEXTGEN flights and procedures.

FAA response: The FAA responded in a letter dated May 12th, 2017 from Lynn Ray, VP Mission Support Services, that reversion could not happen immediately because the procedures no longer existed. But that the FAA was committed to giving full consideration to our request. At the June 20th meeting the FAA presented its preliminary plan for moving both RWY 28 and RWY 15R departure flight paths to notional zones. But they offered nothing with respect to dispersion, altitude, or arrivals.

2. *July 25, 2017 request:* To Robert Owen, Assistant District Manager, for the FAA to implement near-term procedures to increase altitude and, by re-instating vectoring, recreate dispersion. Robert Owen stated at our July 18th meeting that these procedures were feasible and could be implemented readily upon receipt of FAA authorization. Lynn Ray repeatedly stated that these operational procedures were within Robert Owen's area of authority because they did not involve changes in instrument flight procedures.

FAA response: Despite repeated requests, we never received a written response to our July 25th, 2017 letter. However, shortly following the letter on a conference call with Lynn Ray and Robert Owen, Robert Owen explained to the chair of the RT, that he planned to meet with controllers and other relevant persons to raise awareness of altitude and dispersion issues. Essentially implementing operational procedures on an informal basis. Robert Owen later communicated that such informal steps would first require formal steps be taken to comply with the National Environmental Protection Act (NEPA). At a planning meeting with the MAA for the PBN Working Group meetings, the FAA provided slides that identified the Roundtable's concerns about altitude and dispersion while also setting tentative plans for shifting RWY 28 and RWY 15R departures to notional zones.

3. *September 8, 2017 request:* Reversion on flight paths and vectoring to recreate dispersion and requesting procedures be implemented so that arriving, departing, and crossing aircraft fly at the highest safe altitude. We also listed all of our concerns to give the PBN Working Group necessary information to guide their work. We were subsequently unofficially told by various PBN Working Group members that our letter had not been shared with them and that they were therefore unaware of the totality of our concerns.

FAA response: Jodi McCarthy, new VP mission support services, wrote in a letter on November 21st letter. That the FAA is pleased to consider community concerns and proposed solutions. Yet there was no explanation as to why the FAA cannot go back to the “conventional system”. Additionally, the PBN Working Group stated that the FAA would consider ways to increase dispersion while making no informative comment on altitude. They claim the FAA was committed to transparency.

Finally, at our January 16th, 2017 meeting we were informed by Paul Shank, Chief Engineer for the MAA, that the PBN Working Group work was nearly complete. Done without any additional changes to design of procedures for the BWI airspace aside from the shifts of departing flights from RWY 28 and RWY15R into the previously described notional zones.

RT'S CHALLENGES IN CARRYING OUT ITS OBLIGATIONS

The RT has been unable to effect significant change to the NEXTGEN/DC Metroplex plan. While the FAA’s proposed changes to departures from RWY 28 and RWY 10 are expected to be an improvement over the current paths. We have made no progress on arrivals, raising altitudes, or restoring dispersion. We have recently identified certain challenges in carrying out our obligations. They are as follows:

- The FAA essentially disowns responsibility for the noise and other environmental harm it causes by its decisions and refers these matters to the local airport operator. There is no federal legislative mandate requiring the FAA to consider or address the “complete” noise effect of its NEXTGEN plan or even to work “in good faith” with affected communities to reduce the noise to levels that are compatible with established residential development.
- The Noise Standards used by the FAA, which were adopted in 1971, are outdated and do not reflect the precise and unremitting effects of concentrated flight paths over limited geography created by modern technology. The FAA asserts that it is in compliance with all noise and other environmental requirements, yet thousands of airport community residents around the country are harmed by the adverse environmental effects of NEXTGEN. Clearly the legal standards are inadequate to protect citizens from the FAA’s actions.
- The FAA’s decision-making and reasoning are opaque and remote.
- The timeframes for taking effective action to alter the NEXTGEN system, even in small ways, are quite short.

- The RT was not created until 2 years into the NEXTGEN implementation process at BWI, after the initial designs and studies had been completed.
- The FAA has refused to redesign the current flight paths to increase airplane dispersion or raise altitudes.
- The RT has been unable to get clear information on the NEXTGEN flight paths that is understandable to regular citizens, such as RT members. For instance, maps given to the RT continually have no recognizable geographic or topographical features on them. This makes it difficult to ascertain the effects of the paths on the residents of the legislative districts represented by the RT members.
- Other requests to the MAA and FAA have been ignored or only partially addressed. The RT has made an effort to organize and prioritize the many requests for information to both the FAA and MAA, with very limited success in getting useful information.
- The RT's ability to influence the FAA is extremely limited and consists largely of "imploing" the FAA to solve the problem it created.

POTENTIAL SOLUTIONS

The following are possible actions that the RT could take to partially meet the challenges identified:

- *Specific requests of the FAA.* While the FAA has denied key elements of our general request for reversion and appears to have shown little initiative in developing solutions to solve problems that the RT has identified, Jodi McCarthy states in her letter that the FAA will consider community requests. This may put the RT in the unenviable and politically untenable position of making proposals that benefit certain communities, while harming others. This pitting of communities against one another in order to push the noise around is abhorrent.
- *Greater political support; remedial legislation.* Seek legislation and other political support at the federal, state and local levels to compel the FAA to act. The FAA reauthorization bill may be the vehicle for a new federal law. The BWI RT has drafted proposed legislation; it is being reviewed by RT members and members of other affected communities near NEXTGEN airports, including DCA, Logan, LaGuardia, as well as Senator Van Hollen's office.
- *Maryland action to compel the FAA.* Encourage the state of Maryland to proceed vigorously with a lawsuit to compel the FAA to correct the harm that Maryland residents who live under or near the concentrated flight paths are suffering from and give the RT's full support however we can.
- *FAA processes.* Complain vigorously to the FAA regarding the harms we are suffering from and comment on any procedures/rulemakings wherever possible.

- *New PBN Working Group.* The RT should work with the FAA to convene another version of the PBN Working Group to address issues such as dispersion, altitudes, and arrivals that were left unaddressed by the current group. We have been told that the FAA is out of budget for a new effort; perhaps our federal delegation can assist.
- *MAA and airport support.* Given that the FAA has largely not addressed the problems we are facing, consider petitioning the MAA, state, and local governments to require BWI airport to among other things (i) refrain from expanding facilities or operations that could lead to an increase in frequency of aircraft flights or noisier flights, (ii) reduce and restrict hours of operations to mitigate the adverse effect of the FAA's actions, (iii) demonstrate national leadership by applying a "best practices" approach and take all actions to reduce noise from departing and arriving aircraft and (iv) when conducting environmental reviews, not rely on outdated and ineffective noise and other legal standards; but apply more stringent standards relevant to the BWI communities and the nature of air traffic at BWI.
- *Airline help.* Petition the airlines to take actions within their control to reduce noise, whether through operational steps, fleet mix, or otherwise.

CONCLUSION

The DC Metroplex BWI Community Roundtable was created at the insistence of the FAA to act as the vehicle for addressing the harmful noise issues associated with the NEXTGEN/DC Metroplex project. Unfortunately, it appears to be a largely unsatisfactory approach. At this time, we believe there must be a change in approach in order to achieve broader results.

Without a major change in federal legislation, or a successful lawsuit, that creates mandatory incentives for the FAA to act mitigate the situation. The RT will fail in its goal of returning to a reasonable facsimile of the noncontroversial airport operations that existed at BWI prior to the implementation of the NEXTGEN/DC Metroplex project.

Despite the very limited positive outcome of the RT to date, the RT still has important work to do. The FAA will return to our March 2018 meeting with a full description of the changes that they are making to the departures from RWY 28 and RWY15R as a result of the PBN Working Group process. The RT will be the primary vehicle for community reaction to those proposed changes, and will be required to monitor progress well into final implementation of the new procedures, expected sometime in mid-2019.

It is also foreseeable that the RT will continue to work with the MAA and the airlines on operational changes within their control that may mitigate the noise effects of NEXTGEN at BWI.

The RT has gained valuable knowledge of the technical components of the new noise problem at the airport caused by NEXTGEN's implementation per the FAA. We believe that knowledge will be important as federal, state and local decision makers take the lead and continue to grapple with this issue. We hope that the RT can play a key supporting role in that effort.

Finally, we wish to conclude this report by reiterating that, at the BWI Roundtable meetings, numerous community residents harmed by the situation at BWI speak out publicly about their sorry predicament, the substantial negative impact on their health and mental wellbeing, their rest, their family, their ability to function at work, their use and enjoyment of their homes, the value of their single largest personal investment and their communities. This situation at BWI is not one where the harm is a potential one or one that may occur in the future. The harm is real and Maryland residents are bearing this harm now. Our government must act urgently to protect it citizens and resolve this harm.

Attachments

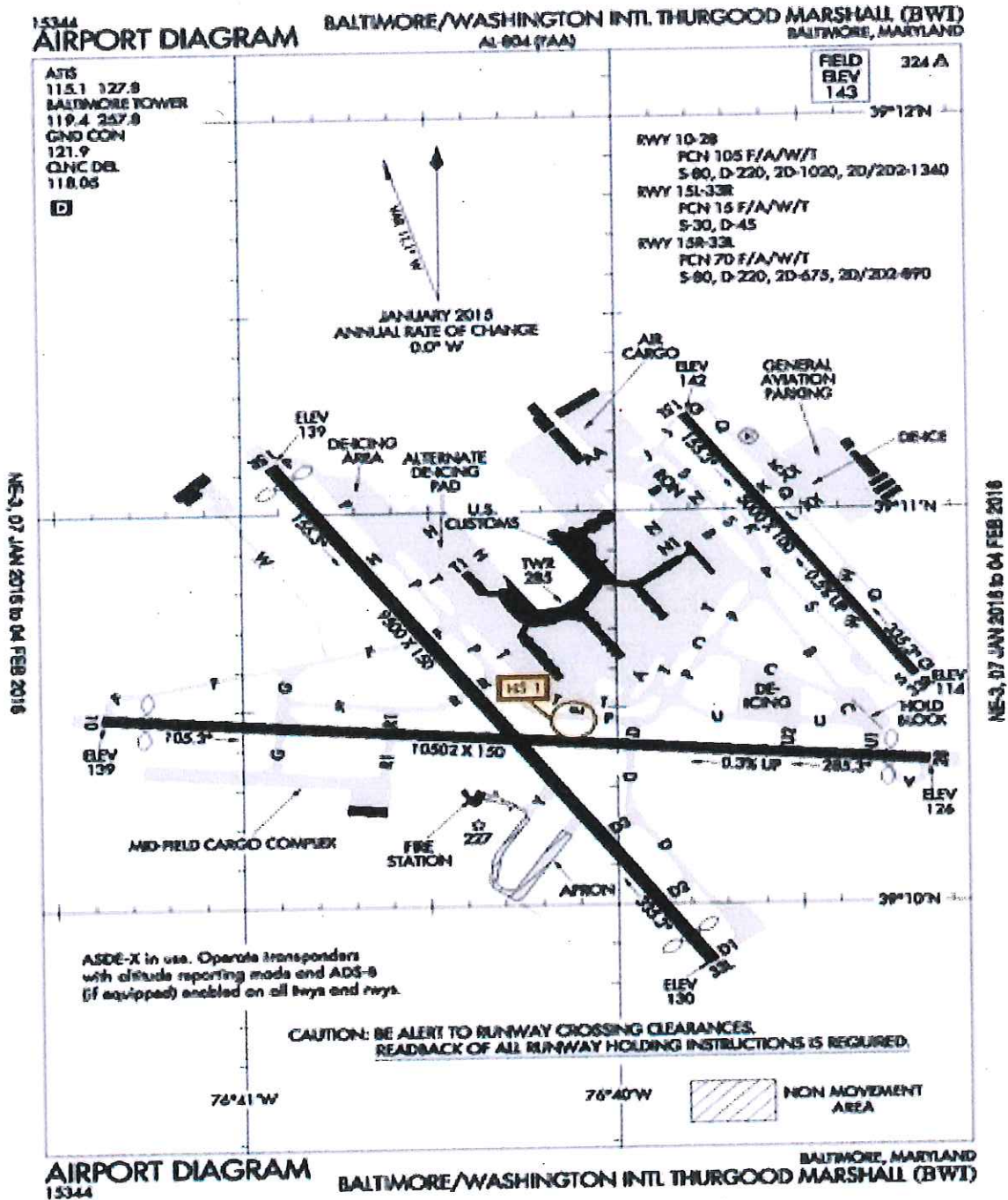
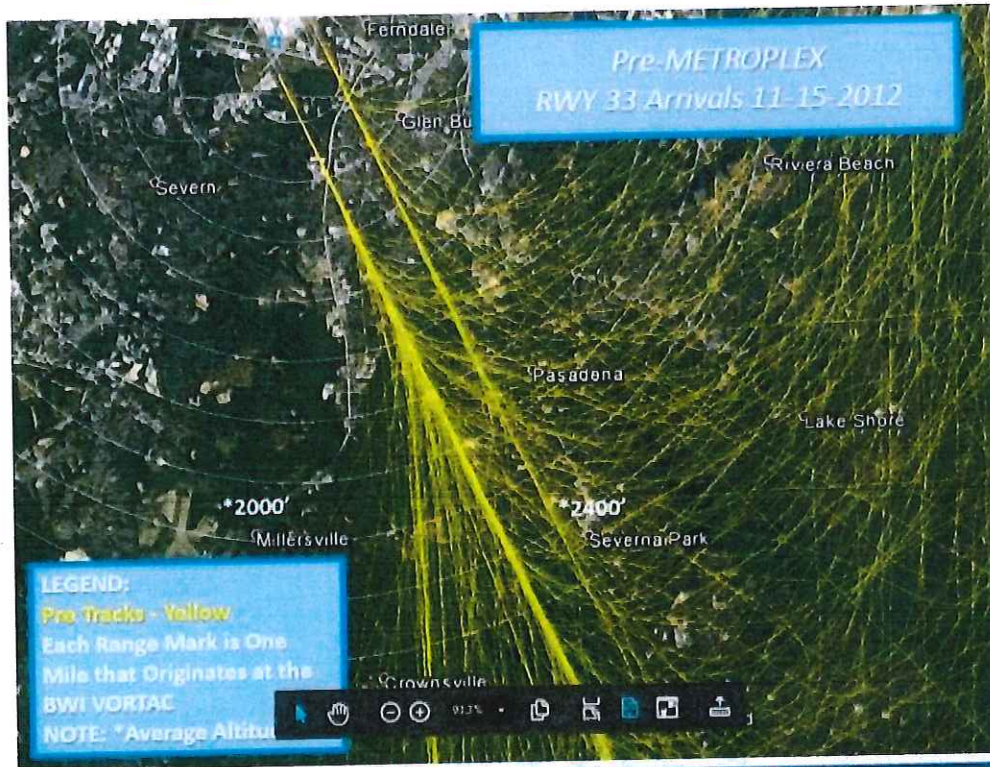


Image 1: BWI THURGOOD MARSHALL AIRPORT DIAGRAM

Arrivals into RWY 33L (Pre)



BWI Roundtable
April 18, 2017



Federal Aviation
Administration

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Image 2: BWI ARRIVAL 33L PRE-NEXTGEN

Arrivals into RWY 33L (Post)

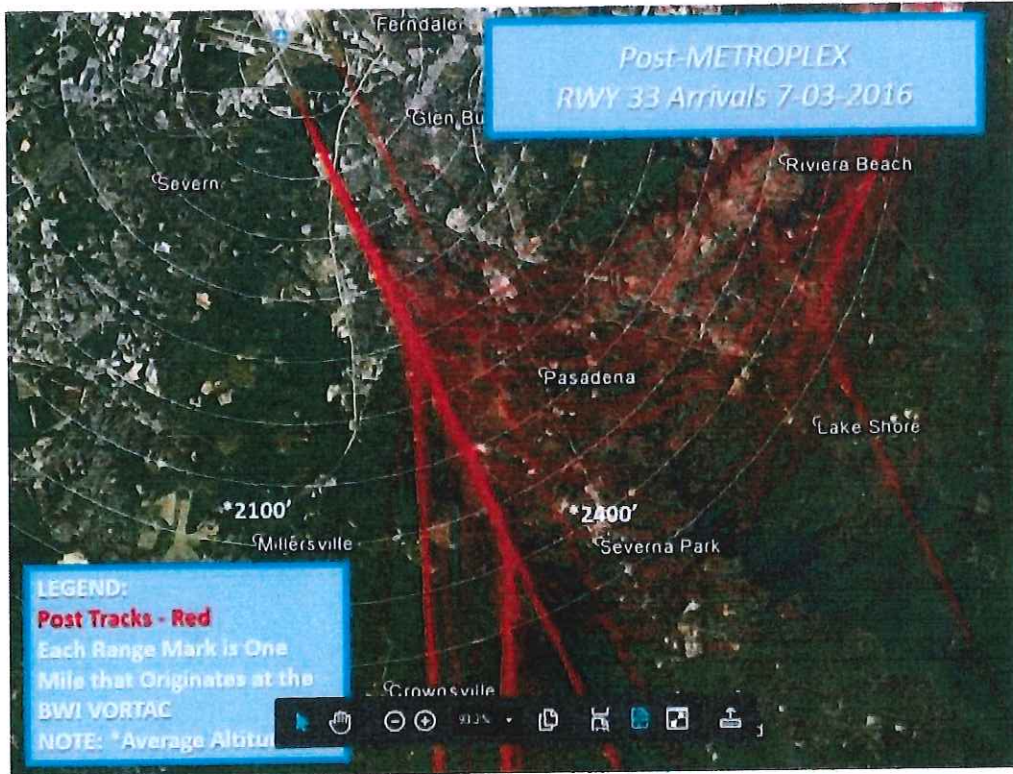
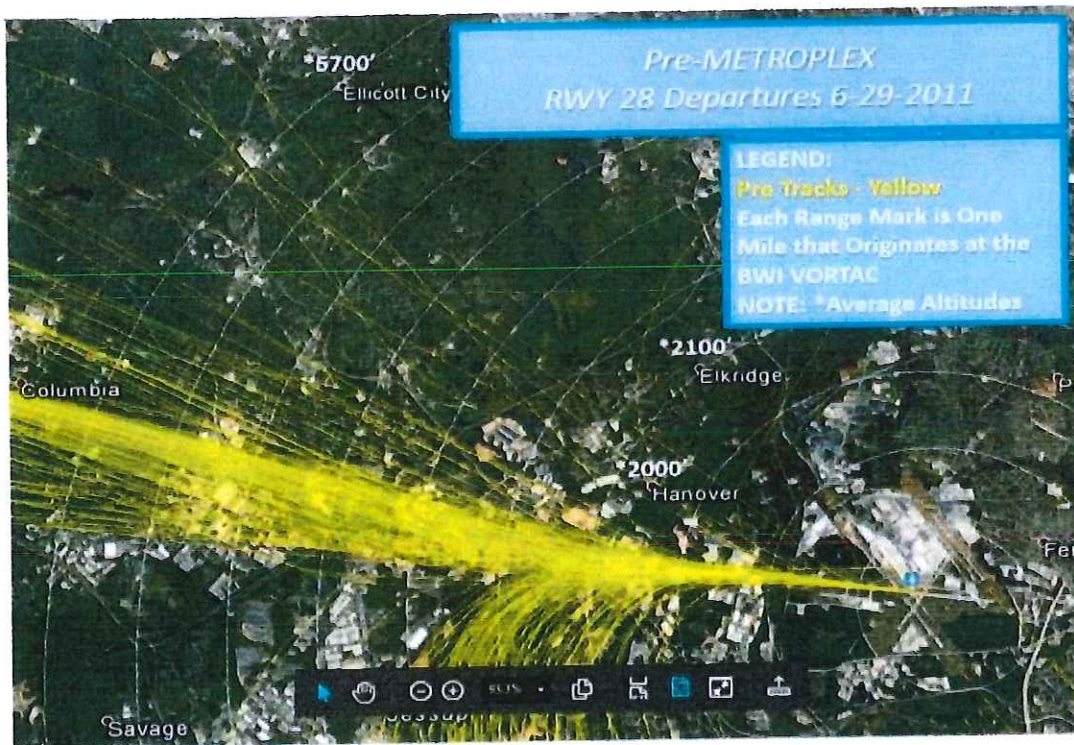


Image 3: BWI ARRIVAL 33L POST-NEXTGEN

TERPZ SID - RWY 28 (Pre)



BWI Roundtable
April 18, 2017

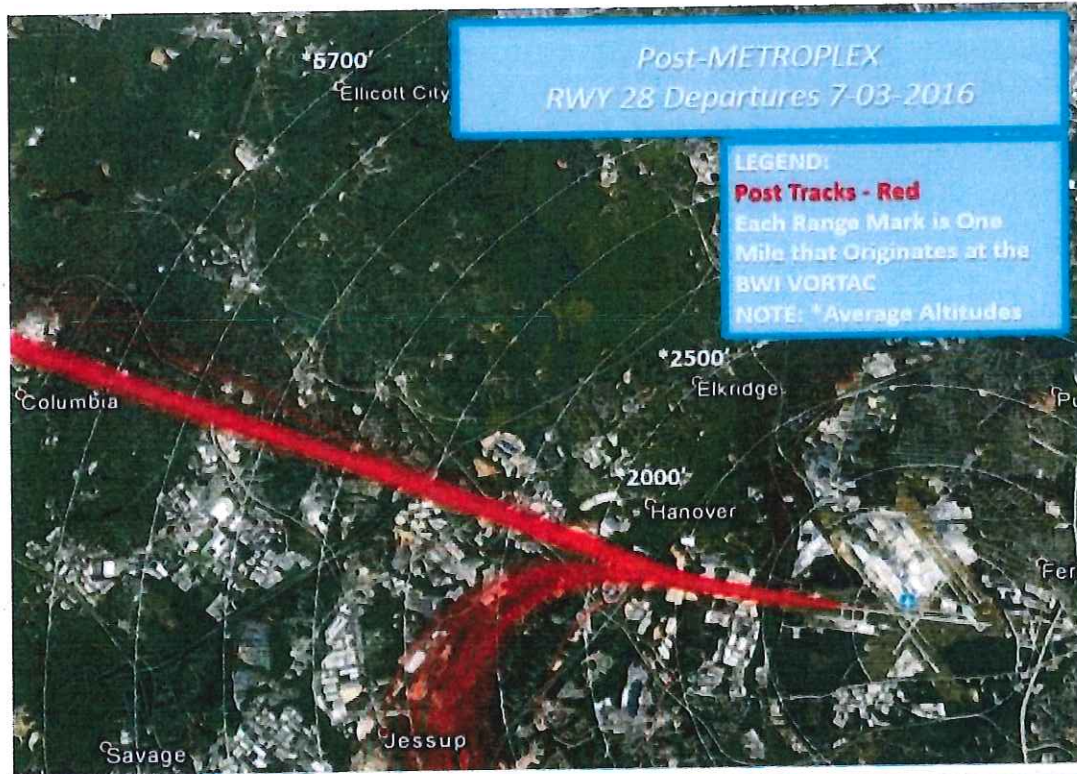


Federal Aviation
Administration

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Image 4: BWI DEPARTURE 28 PRE-NEXTGEN

TERPZ SID - RWY 28 (Post)



BWI Roundtable
April 18, 2017

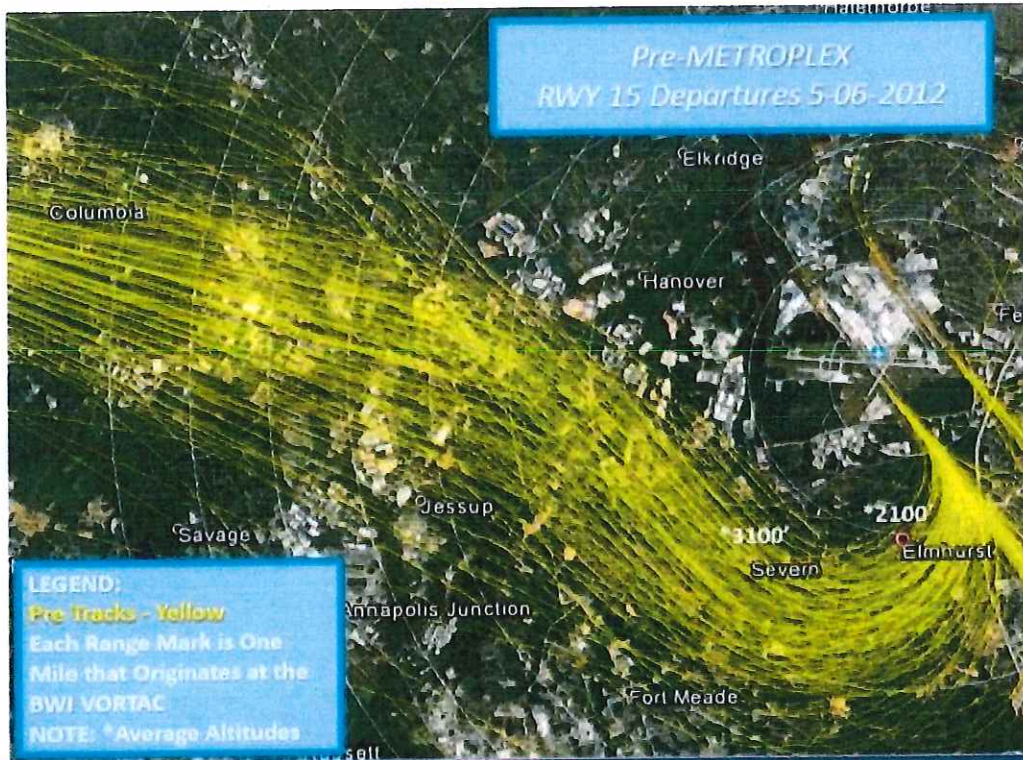


Federal Aviation
Administration

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Image 5: BWI DEPARTURE 28 POST-NEXTGEN

TERPZ SID - RWY 15R (Pre)



BWI Roundtable
April 18, 2017

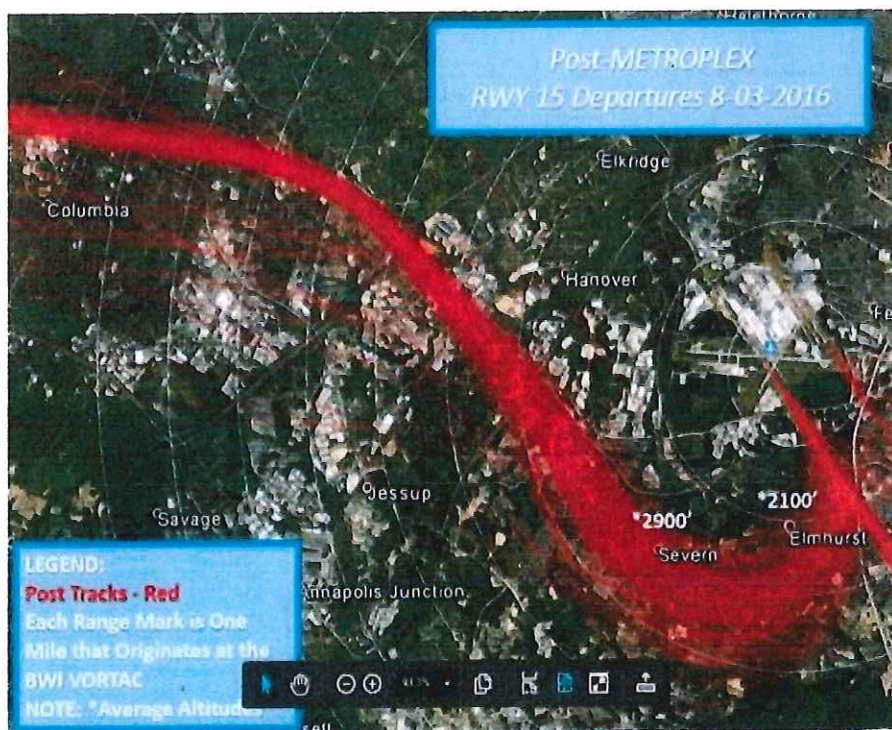


Federal Aviation
Administration

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Image 6: BWI DEPARTURE 15R PRE-NEXTGEN

TERPZ SID - RWY 15R (Post)



BWI Roundtable
April 18, 2017



Federal Aviation
Administration

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Image 7: BWI DEPARTURE 15R POST-NEXTGEN

EXHIBIT D

BWI Traffic Analysis and Notional Paths

To: DC Metroplex BWI Community
Roundtable Working Group

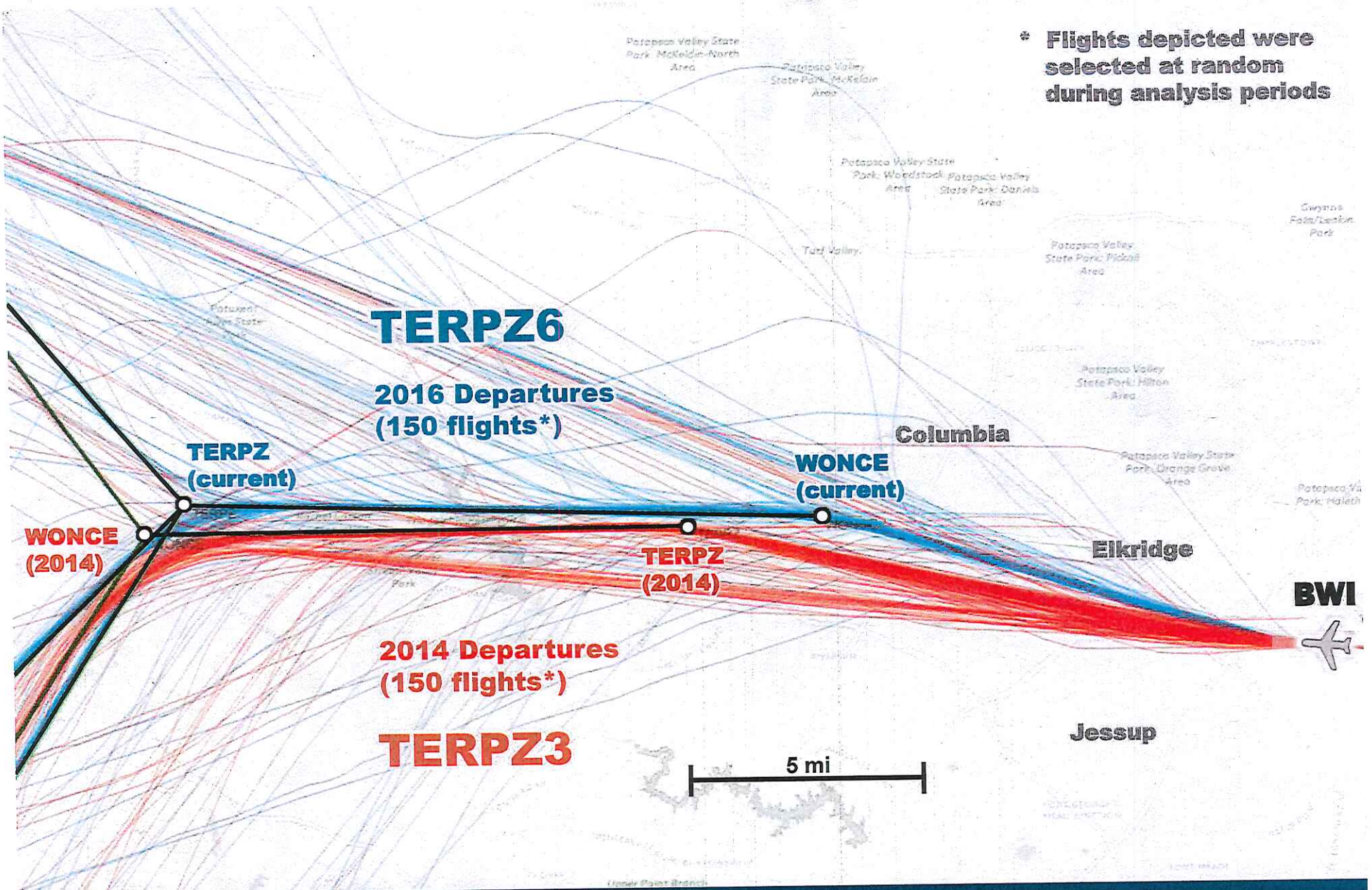
Date: June 20, 2017

Briefers: John Belk (FAA)
Bennie Hutto (NATCA)



Federal Aviation
Administration

* Flights depicted were selected at random during analysis periods



TERPZ6

**2016 Departures
(150 flights*)**

**TERPZ
(current)**

**WONCE
(2014)**

**WONCE
(current)**

**TERPZ
(2014)**

**2014 Departures
(150 flights*)**

TERPZ3

Columbia

Elkridge

BWI

Jessup

5 mi

TERPZ Rwy 28



Federal Aviation Administration

EXHIBIT E



Maryland Aviation Administration

Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

Pete K. Rahn
Secretary

Ricky D. Smith, Sr.
Executive Director/CEO

CONFERENCE CALL MINUTES

DATE: August 31, 2016

SUBJECT: Conference call with the Federal Aviation Administration (FAA) August 30, 2016 regarding the September 12, 2016 community meeting on the DC Area Metroplex

Participants

Carmine Gallo - Eastern Regional Administrator, FAA

Elizabeth (Lynn) Ray - Vice President, Mission Support Services, FAA

Paul Shank - MAA

Ellen Sample - MAA

The FAA stated they were not prepared to address the agenda items proposed by the MAA and they do not have the available staff to attend the meeting. The FAA advised they do want to support and address the issues and proposed using the September 12th date for a technical exchange between the FAA and MAA. They requested the community meeting be moved to the week of October 24-28, 2016. This additional time would allow the FAA to complete an initial feasibility and have more facts and possibilities to share with the residents.

Our exchange on September 12th would be to review the primary community concerns which are:

Runway 15 Right departure turns

Runway 28 departure turns

Runway 33L arrivals

Lower altitude arrivals in general

FAA advised that our Noise Abatement Procedures do not exist anymore and the new procedures put in place have interdependent segments so it cannot be just changed back without detailed study.

The FAA will form a Technical Working Group that will include technical personnel from the FAA and would also include technical representatives (pilots) from the Airlines. They did not see the MAA as being a member of the Technical Committee.

Page Two

Concurrent with preparation for the October community meeting, the FAA advised MAA to begin setting up a Working Group/Roundtable of community representatives. They suggested the representatives be appointed by elected officials representing the impacted communities. They also suggested the airlines and any other "user groups" (e.g. Tenants/AOPA/NBAA) be invited to join as voting members. The FAA would participate in a supporting role as "Subject Matter Experts" and would not be voting members of the Roundtable. The Roundtable may propose other alternatives besides the ones currently under evaluation. Carmine Gallo noted that one option worth considering was using a "straight climb out to a higher altitude with lower takeoff thrust" before turning on course as any turns made at lower altitudes require more power and therefore generate more noise. The FAA noted that once the conversation starts it generally does not stop there so the Roundtable would need to prioritize the issues to be studied by the FAA. Ms. Ray recommended we contact Ms. Margaret McKeough, Metropolitan Washington Airports Authority (MWAA) COO for a copy of the Bylaws for their Working Group.

Recommendations agreed upon by the Roundtable would then be forwarded to the FAA's Procedures Process Technical Working Group for analysis. The analysis may address DC Area Metroplex issues and could possibly lead to an environmental process depending upon the changes.

They recommended the October meeting be hosted by the MAA, scheduled for a three hour period and set up as a workshop with stations for each of the specific issue. The intent is to provide information and gather feedback. Residents may drop in at any time during that three hour period.

A handwritten signature, possibly "C. Gallo", enclosed within a hand-drawn circle. The signature is written in dark ink and is positioned to the right of the main text block.

EXHIBIT F



Maryland Aviation Administration

Larry Hogan
Governor

Boyd K. Rutherford
Lt. Governor

Pete K. Rahn
Secretary

Ricky D. Smith, Sr.
Executive Director/CEO

October 22, 2015

Mr. Michael P. Huerta
Administrator
Federal Aviation Administration Administrator
800 Independence Ave SW
Washington DC 20591

Dear Mr. Huerta:

Subject: NextGen Procedures at Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall)

In recent months, the Maryland Aviation Administration (MAA) has attended local neighborhood association meetings to report on the status of our runway construction activities being completed as part of the U. S. Congressional mandate for Runway Safety Area (RSA) compliance at commercial service airports. At those meetings, MAA heard citizen complaints about air carrier aircraft noise associated with the closure of Runway 10-18 because of the aforementioned construction. MAA also learned that citizens were upset about the noise associated with the changes in aircraft departure paths and lower altitudes being flown in accordance with the Federal Aviation Administration's (FAA) phased implementation of NextGen. Primarily citizens are troubled by the noise associated with NextGen departure procedures below 3,000 feet Above Ground Level (AGL). They assert that these NextGen changes in departure procedures were not addressed in sufficient detail in the FAA's June 2013 Metroplex Airspace Environmental Assessment and therefore the FAA's subsequent December 2013 Finding of No Significant Impact was improperly issued and not representative of the actual implementation.

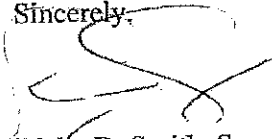
In the course of MAA's review of the FAA's phased implementation of the NextGen departure procedures at BWI Marshall since March of 2015, the MAA also learned that these new procedures do not comply with the MAA prepared, and FAA approved, Noise Compatibility Program (NCP), or our state mandated Noise Abatement Plan (NAP). The NextGen departure procedures differ from the previous procedures in both flight track and altitude requirements for all runway departures below 3,000 feet AGL at BWI Marshall. The FAA approved the flight procedures for BWI Marshall in June of 1990 as part of the NCP and no meaningful changes to those procedures has occurred until now. See FAA's Record of Approval of NCP for BWI Marshall dated June 21, 1990.



Mr. Michael P. Huerta
Page Two

Based upon the foregoing, the MAA requests that the FAA revise the NextGen departure procedures to comply with MAA's NCP and NAP departure procedures. Given the gravity of the present situation, the MAA respectfully requests to be included in the review, and approval, of any further changes in NextGen procedures at BWI Marshall. We look forward to working with you to expeditiously resolve this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Ricky D. Smith, Sr.", written over a faint circular stamp or watermark.

Ricky D. Smith, Sr.
Executive Director/CEO

Mr. Michael P. Huerta
Page Three

bcc: Louisa H. Goldstein, Counsel, MAA
Dale Hilliard, Chief of Staff, MAA
Robert J. Sager, Assistant Attorney General, MAA
D. Ellen Sample, Director, Office of Noise and Land Use Compatibility, MAA
Paul L. Shank, P. E., C. M., Chief Engineer, MAA



Ricky D. Smith, Sr.
Executive Director/CEO

April 25, 2016

Mr. Michael P. Huerta
Administrator
Federal Aviation Administration
800 Independence Avenue SW
Washington DC 20591

Dear Mr. Huerta:

Subject: NextGen Procedures at Baltimore/Washington International
Thurgood Marshall Airport (BWI Marshall)

This will acknowledge receipt of your letter dated March 9, 2016 written in response to the Maryland Aviation Administration's (MAA) letter of October 22, 2015. The MAA has shared your letter with representatives of the neighboring communities. MAA's understanding of the issues that continue to concern the residents of the neighboring communities are the noise and visual impacts resulting from the changes in flight paths and altitudes now being flown by aircraft utilizing BWI Marshall. The impacts mentioned in your letter associated with BWI Marshall's ongoing construction program are not the issue. The source of the residents' concerns are the changes in the departure paths directly associated with the implementation of the Federal Aviation Administration's (FAA) NextGen departure procedures for Runway 28 and Runway 15R.

Simply put, the FAA's NextGen procedures depart from the long established flight procedures jointly developed by the FAA, the MAA and the communities in June of 1990, as delineated in BWI Marshall's published Noise Abatement Program (NAP) and Federal Aviation Regulation Noise Compatibility Program (NCP). The recently implemented NextGen Terpz 6 departure procedures do not adequately address the communities' request that the FAA respect the NCP and NAP departure procedures. Moreover, it is clear that these changes were not adequately addressed in the FAA's Environmental Assessment (EA).

Specifically, on Runway 15R for departures the recent increase in aircraft altitude from 667' to 850' before turning does not utilize the altitudes previously specified in the NAP. Previously the departure aircraft maintained the runway heading for 1 nautical mile while climbing before turning (per the NAP). The new flight procedures place departing aircraft at lower altitudes and in different flight paths over long established residential communities. Similarly, the Runway 28 departure procedures place departing aircraft along different flight paths and different altitudes than those specified in BWI Marshall's NAP.

P.O. Box 8766
BWI Airport
Maryland 21240-0766

TOLL-FREE
1 800 I FLY BWI

FACSIMILE
410-850-4729

WEBSITE
www.bwiairport.com

Mr. Michael P. Huerta
Page Two

The communities also assert the environmental impacts associated with these changes in departure paths and altitudes were not addressed in the FAA's EA/FONSI as the EA scope of work was to only study impacts above 3,000 feet. It is important to note that All of the issues associated with the implementation of the NextGen at BWI Marshall relate to impacts occurring below 3,000 feet.

We greatly appreciate your expression of commitment to work with the MAA to reduce aviation noise impacts and have shared your statement with the residents of the affected communities. We too are committed to working with the FAA to resolve this matter. We again reiterate MAA's request that the FAA restore the departure procedures delineated in BWI Marshall's NAP.

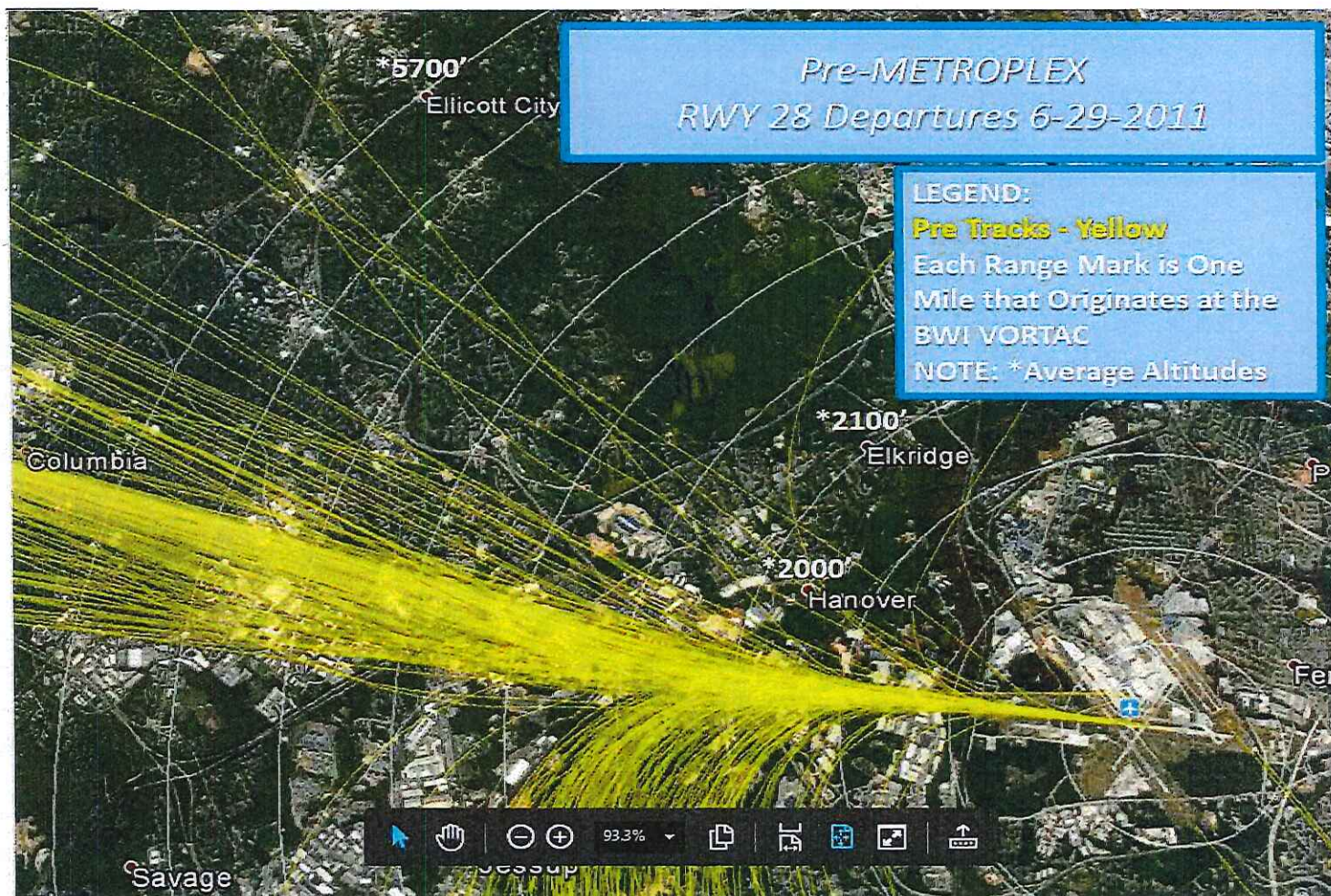
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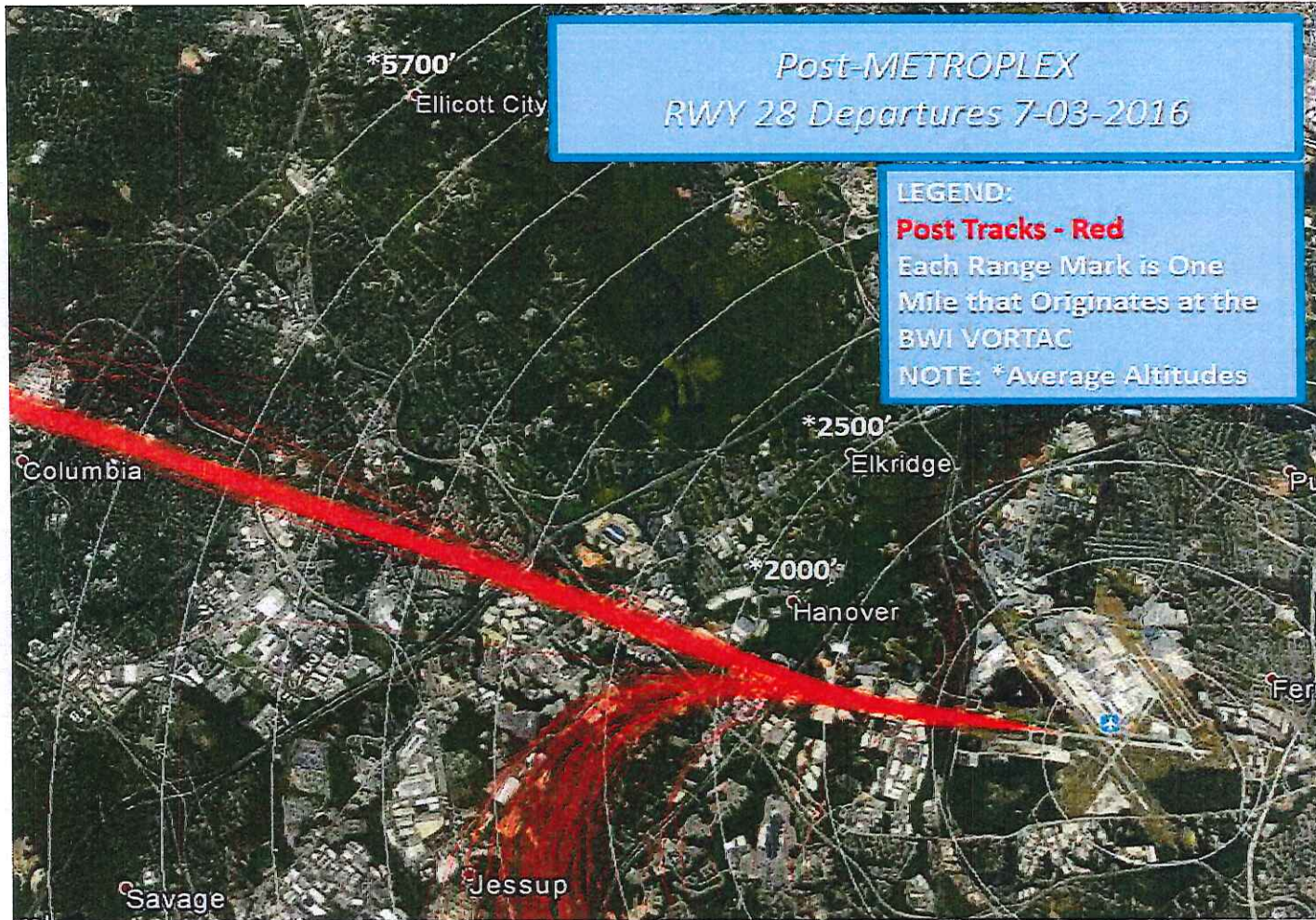
Ricky D. Smith, Sr.
Executive Director/CEO

EXHIBIT G

TERPZ SID - RWY 28 (Pre)



TERPZ SID - RWY 28 (Post)



FAA Updates to BWI Roundtable

May 16, 2017





*Pre-METROPLEX
RWY 28 Departures 6-29-2011*

LEGEND:

Pre Tracks - Yellow

Each Range Mark is One
Mile that Originates at the
BWI VORTAC

NOTE: *Average Altitudes

*5700'

Ellicott City

*2100'

Elkridge

Columbia

*2000'

Hanover

Pu

Ferr

Savage

Jessup

*5700'

Ellicott City

*Mid-METROPLEX TERPZ4-5 / CONLE
RWY 28 Departures 5-15-2015*

LEGEND:

Mid Tracks - Blue

Each Range Mark is One
Mile that Originates at the
BWI VORTAC

NOTE: *Average Altitudes

WONCE

Columbia

Elkridge

*2000'

Hanover

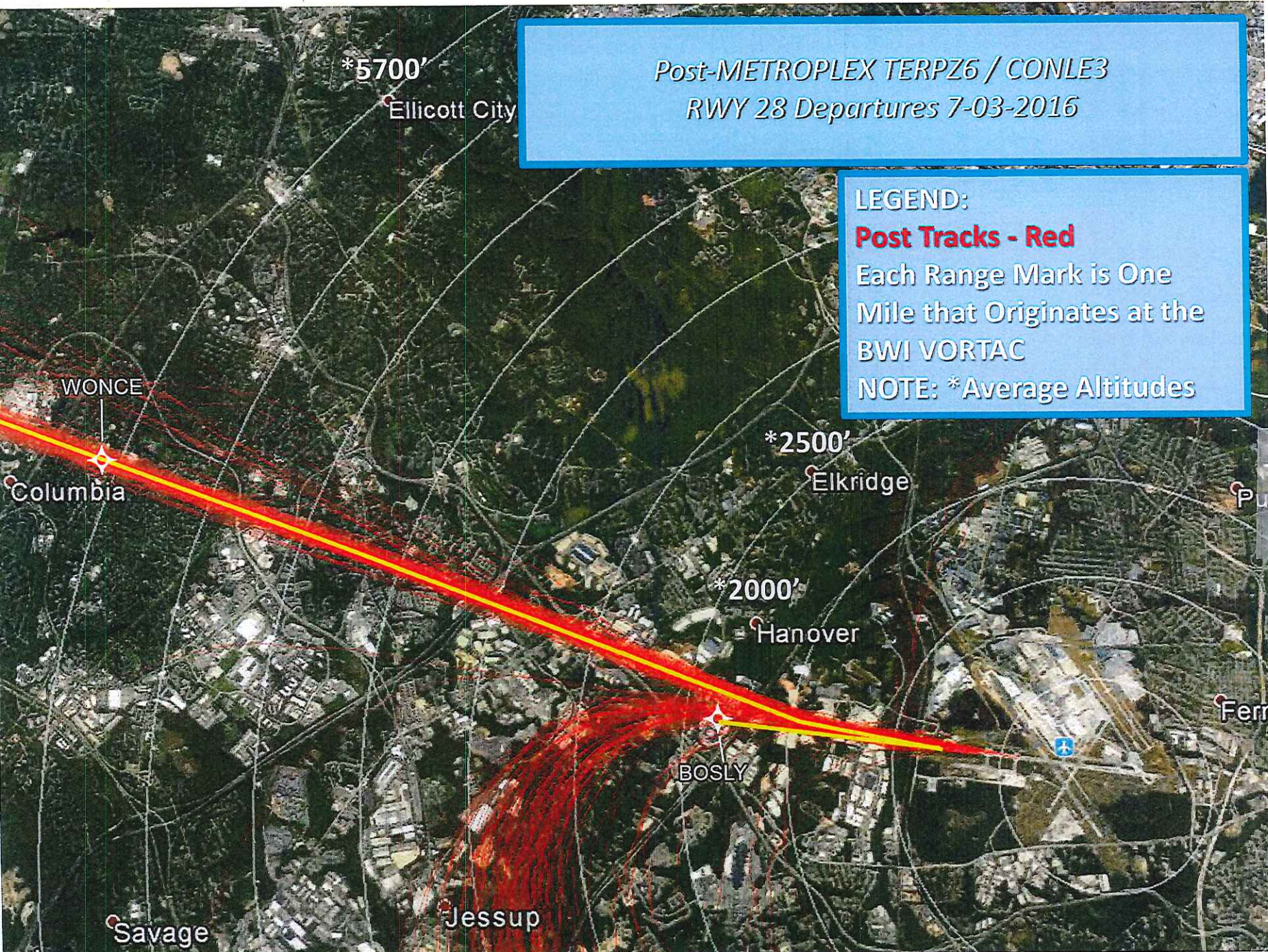
BOSLY

Ferr

Savage

Jessup





*Post-METROPLEX TERPZ6 / CONLE3
RWY 28 Departures 7-03-2016*

LEGEND:
Post Tracks - Red
Each Range Mark is One
Mile that Originates at the
BWI VORTAC
NOTE: *Average Altitudes

*5700'

Ellicott City

WONCE

Columbia

*2500'

Elkridge

*2000'

Hanover

BOSLY

Savage

Jessup

Fern

*Pre, Mid and Post-METROPLEX
RWY 28 Departures 2011, 2015 and 2016*

LEGEND:

Pre Tracks - Yellow

Mid Tracks - Blue

Post Tracks - Red

Each Range Mark is One
Mile that Originates at the
BWI VORTAC

Columbia

Ellicott City

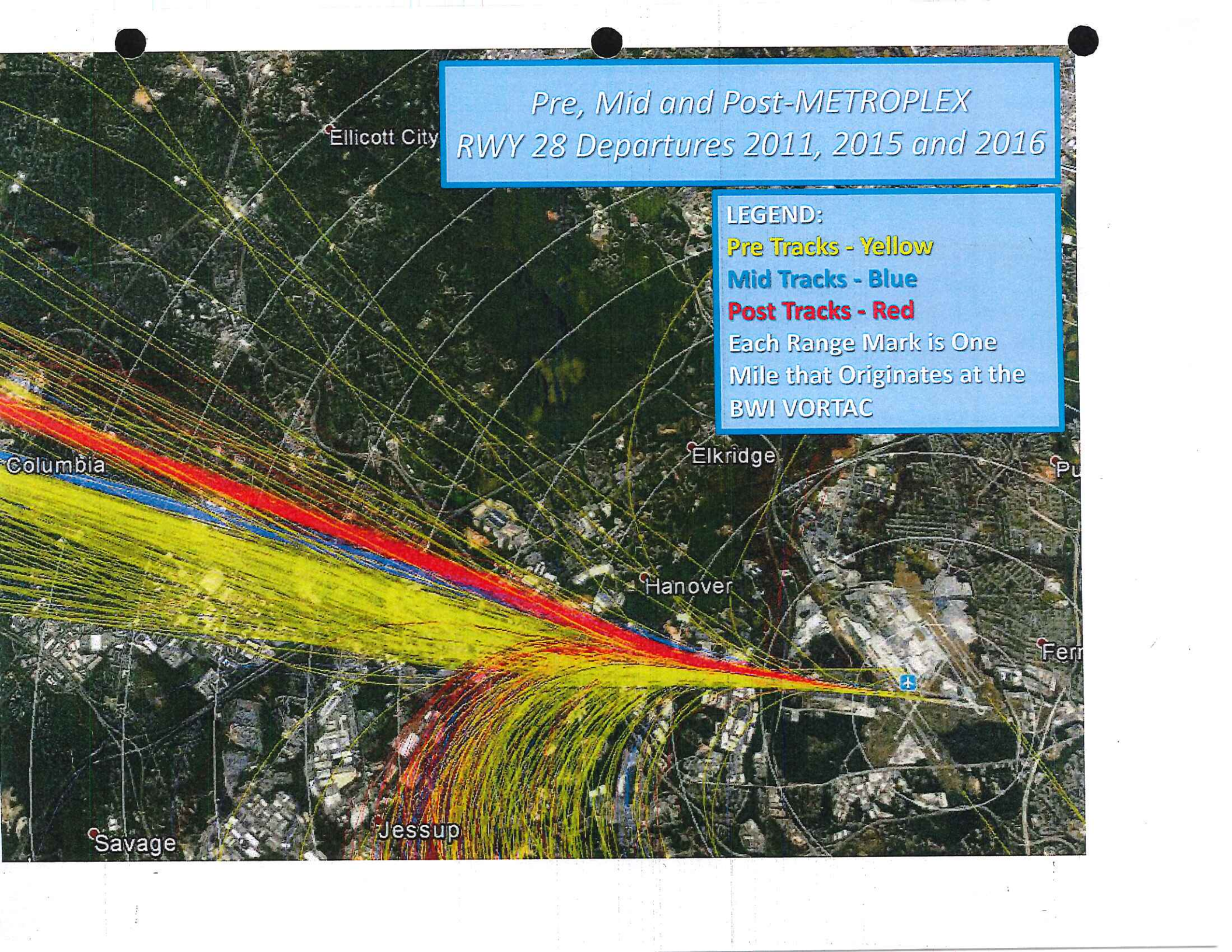
Elkridge

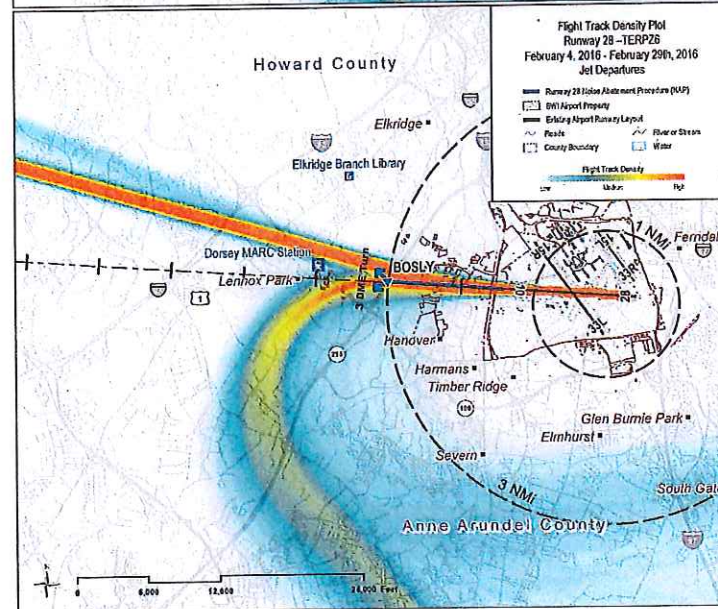
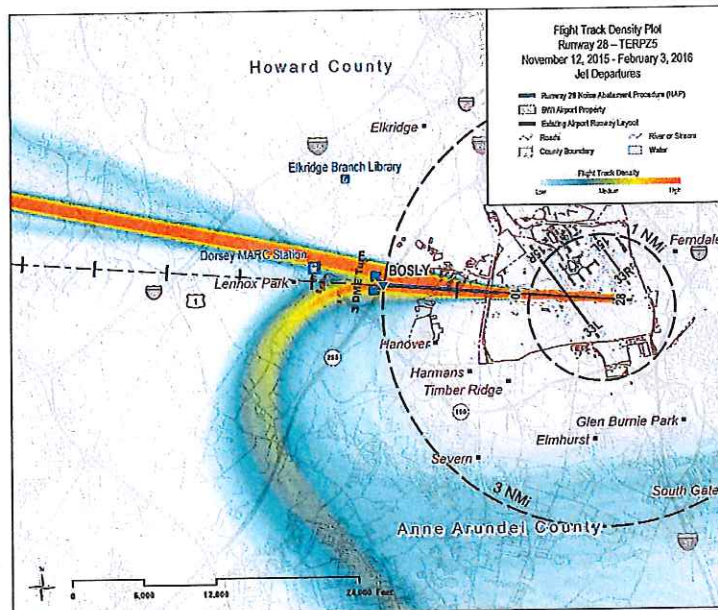
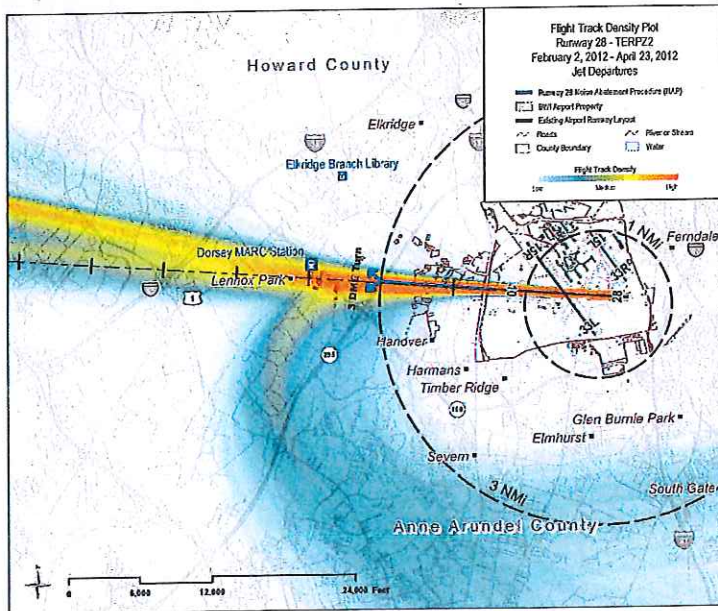
Hanover

Savage

Jessup

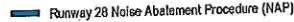



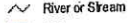
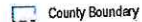

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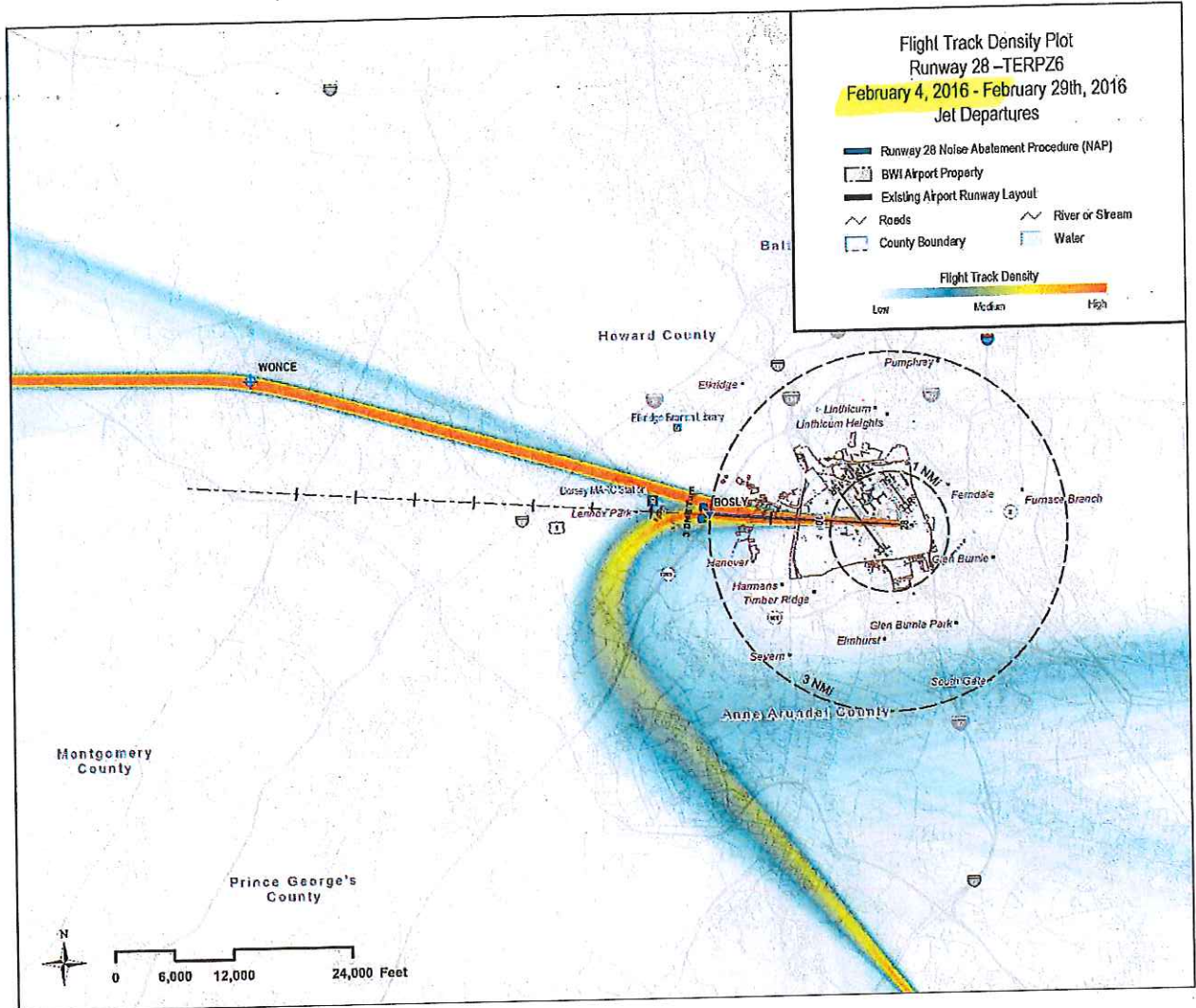




Initially Prepared for presentation at the Greater Elkridge Community Association (GECA) General Meeting, March 24, 2016
 Modified track figures to density plots with additional references, and two plot range, September 12, 2016

Flight Track Density Plot
 Runway 28 - TERPZ6
 February 4, 2016 - February 29th, 2016
 Jet Departures

-  Runway 28 Noise Abatement Procedure (NAP)
-  BWI Airport Property
-  Existing Airport Runway Layout
-  Roads
-  River or Stream
-  County Boundary
-  Water



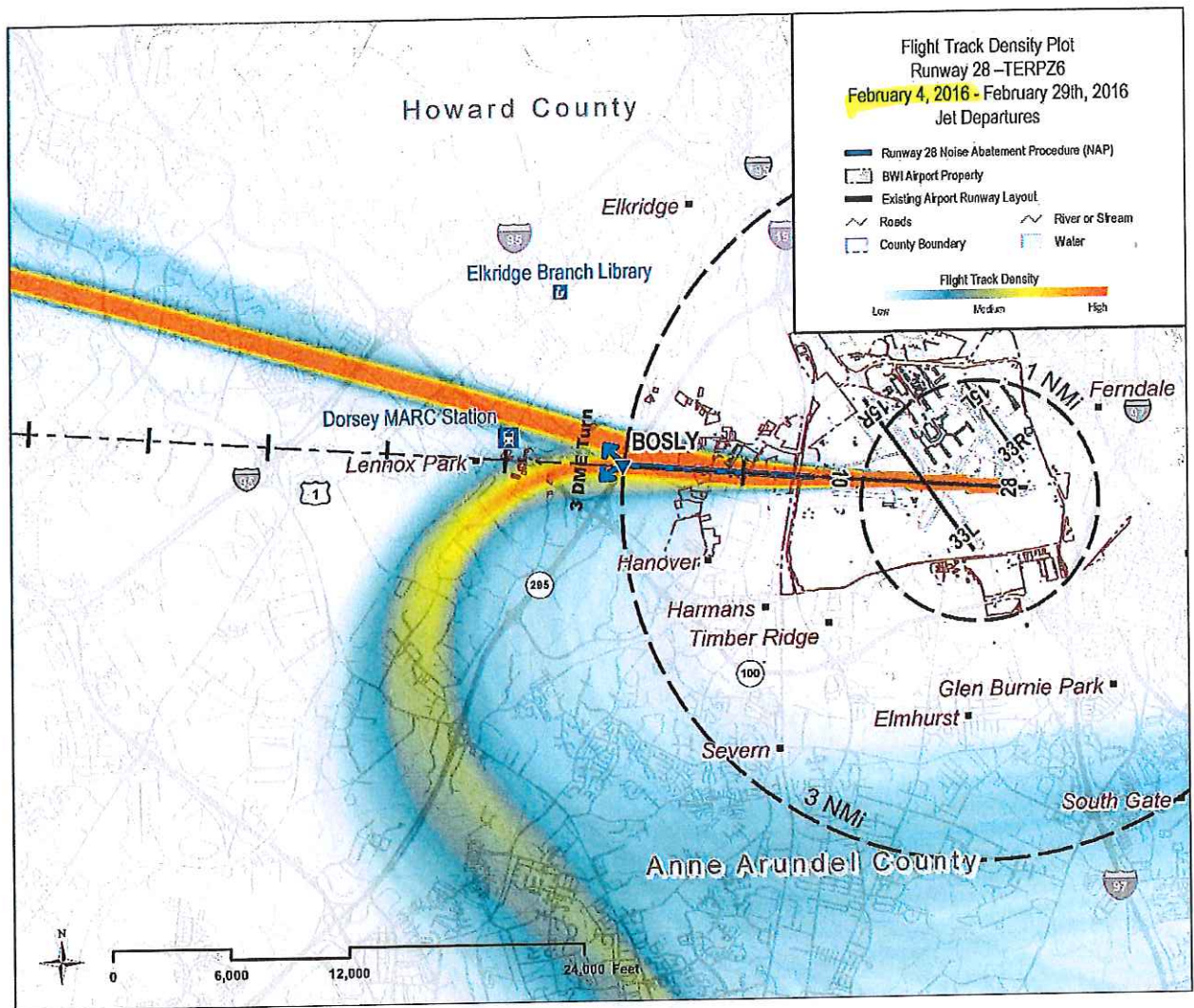


EXHIBIT H



**Supplemental Permanent Noise Monitoring Data for the
2015 and 2016 Quarterly Noise Reports
Prepared April 2017**

The Noise and Operations Monitoring System (NOMS) equipment in place at Baltimore/Washington International Thurgood Marshall Airport was installed in the late 1980's and early 1990's and is at the end of its useful life due to the age of the equipment and inability to obtain replacement parts. Additionally, five sites have been dismantled. The Maryland Aviation Administration is currently near completion of the procurement process for a new NOMS system with Notice to Proceed expected summer 2017. The attached tables present aircraft and community noise levels at the permanent noise monitors for 2015 and 2016 from the NOMS. A map of the noise monitoring locations is presented on the last page of this document.

The term DNL (symbolized as "Ldn" in mathematical equations) means Day-Night Average Sound Level, and is used to report aircraft, community and total noise levels. DNL is defined as the cumulative sound energy averaged over a twenty-four hour period, with ten-decibels (dB) added to noise events which occur between the hours of 10 p.m. and 7 a.m. This penalty accounts for the greater impact of noise events which occur at night. DNL is measured from midnight to midnight.

The tables show the quarterly Aircraft (A), Community (C), and Total (T) DNL values at each site, where data is available. At some sites community or environmental noise levels (street traffic and other neighborhood noises) exceed aircraft noise levels. Additional tables show the Aircraft (A) DNL by month. The tables also include the NOMS-reported percentage of time that each monitor was on (or has data) for the respective time period.

2015 Quarterly Noise Measurements

SITE/ RMS#	Location	Aircraft DNL (dBA)				Community DNL (dBA)				Total DNL (dBA)				Percent Time On			
		1QTR	2QTR	3QTR	4QTR	1QTR	2QTR	3QTR	4QTR	1QTR	2QTR	3QTR	4QTR	1QTR	2QTR	3QTR	4QTR
1	St. Augustine Church, ElkrIDGE	42	44	55	64	78	65	65	70*	78	65	66	71*	100	97	94	91
2	Melrose Ave., Harwood Park	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Lennox Ave., Dorsey	61	64	62	61	60	61	63	69	64	66	65	69	100	100	100	100
4	Ridge Rd, Hanover	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Harmans Elementary School	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Delmont United Methodist Church	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Wicklow Woods, Ferndale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Glen Burnie Heights	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	Army National Guard Armory	58	59	54	61	64	74	75	70	65	74	75	70	84	98	100	100
10	Pumping Station, Margate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Jones Rd., Queenstown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12	Rippling Woods Elementary	61	63	64	63	59	67	66	63	63	68	68	66	100	99	100	100
13	Oakwood Park, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Outer Approach End Rwy 15R	55	61	66	74	64	68	67	66	64	69	69	74	92	56	48	69
15	Inner Approach End Rwy 15R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Stoney Run, Hanover	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Timber Ridge Rd., Timber Ridge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Approach End Rwy 15L	59	59	60	65	59	59	61	60	62	62	63	67	100	97	98	100
19	Hollins Ferry, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Friendship Park, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Glen Burnie Park Elementary	0	63	63	63	89	68	64	74	89	69	67	74	0	23	51	90
22	Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Quarterfield Elementary School	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Due to an equipment malfunction, the Community DNL on 10/3/2015 was recorded as 137 dB. These values reflect the removal of this day from the quarterly totals.

2016 Quarterly Noise Measurements

SITE/ RMS#	Location	Aircraft DNL (dBA)				Community DNL (dBA)				Total DNL (dBA)				Percent Time On			
		1QTR	2QTR	3QTR	4QTR	1QTR	2QTR	3QTR	4QTR	1QTR	2QTR	3QTR	4QTR	1QTR	2QTR	3QTR	4QTR
1	St. Augustine Church, Elkridge	48	48	46	44	61	68	66	66	61	68	66	66	98	95	89	98
2	Melrose Ave., Harwood Park	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Lennox Ave., Dorsey	62	64	64	63	60	66	62	61	64	68	66	65	100	99	94	100
4	Ridge Rd, Hanover	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	Harmans Elementary School	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	Delmont United Methodist Church	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	Wicklow Woods, Ferndale	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8 *	Glen Burnie Heights	-	-	55	53	-	-	66	74	-	-	67	74	-	-	94	88
9	Army National Guard Armory	52	65	52	63	64	65	70	69	64	68	70	70	94	96	100	99
10	Pumping Station, Margate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	Jones Rd., Queenstown	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12 **	Rippling Woods Elementary	62	63	63	63	59	60	63	60	64	64	66	65	99	97	97	97
13	Oakwood Park, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Outer Approach End Rwy 15R	65	63	64	-	66	67	68	-	68	68	69	-	80	57	64	-
15	Inner Approach End Rwy 15R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Stoney Run, Hanover	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
17	Timber Ridge Rd., Timber Ridge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	Approach End Rwy 15L	58	59	59	63	60	63	62	60	62	64	64	65	99	98	98	100
19	Hollins Ferry, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Friendship Park, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Glen Burnie Park Elementary	62	66	63	62	61	67	63	64	65	69	66	66	100	100	100	98
22	Columbia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Quarterfield Elementary School	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

* Site 8: Due to tree growth near the monitor, the unit was not able to be calibrated during the two maintenance visits in 2016.

** Site 12: Reported values for June 15, 2016 and November 15, 2016 for Aircraft, Community and Total DNL were high for unknown reasons.
Both days have been removed from the Quarterly results

2016 Monthly Noise Measurements

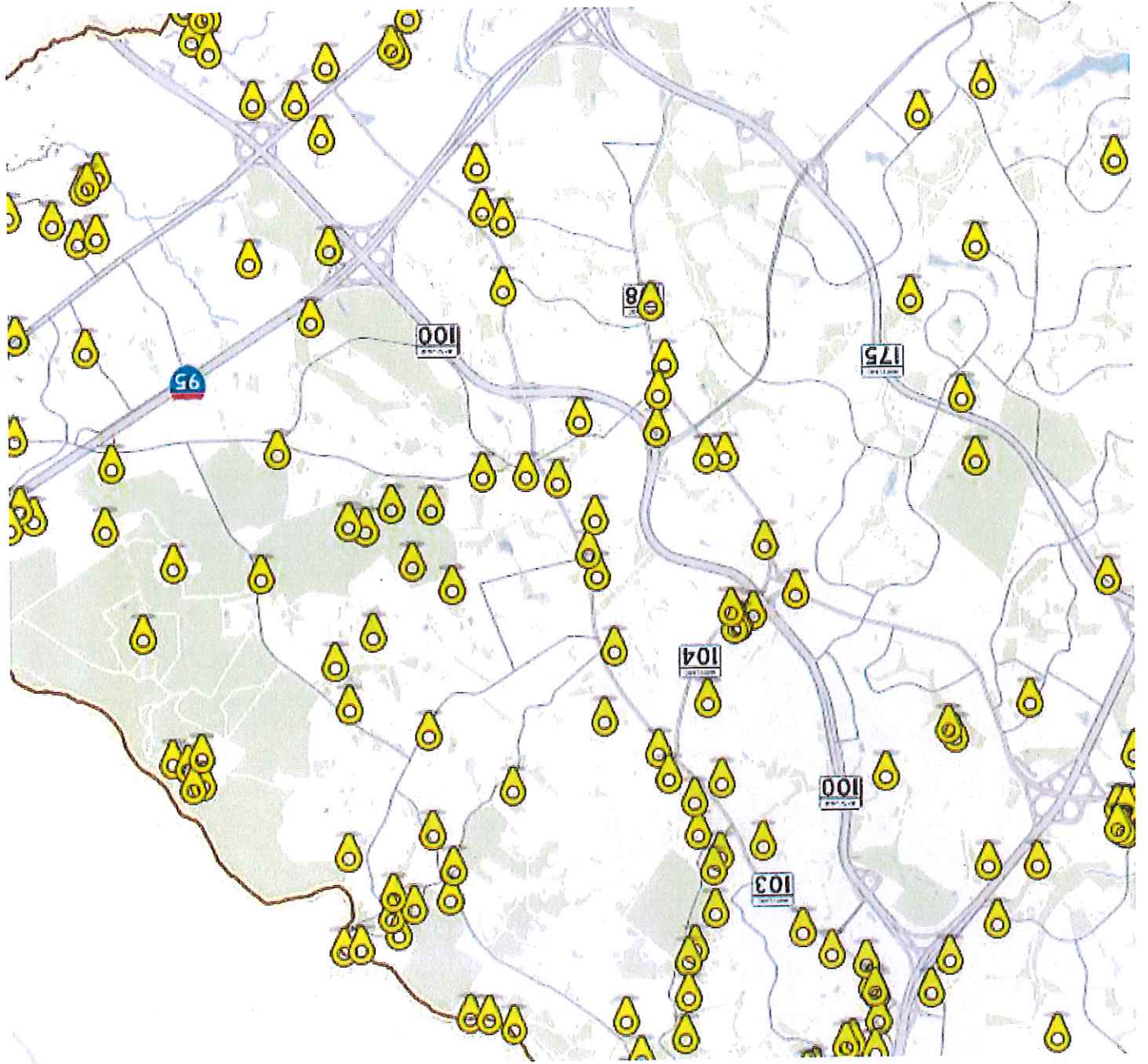
RMS#	Location	Monthly Aircraft DNL and (Percent Time On)											
		Jan 16	Feb 16	Mar 16	Apr 16	May 16	Jun 16	Jul 16	Aug 16	Sep 16	Oct 16	Nov 16	Dec 16
1	St. Augustine Church, Elkridge	45 (100)	47 (99)	51 (97)	46 (97)	50 (95)	45 (94)	46 (94)	49 (78)	43 (93)	44 (99)	46 (99)	43 (98)
2	Melrose Ave., Harwood Park	-	-	-	-	-	-	-	-	-	-	-	-
3	Lennox Ave., Dorsey	61 (99)	62 (100)	62 (100)	63 (100)	64 (100)	64 (96)	63 (97)	63 (96)	64 (90)	63 (100)	63 (100)	63 (100)
4	Ridge Rd, Hanover	-	-	-	-	-	-	-	-	-	-	-	-
5	Harmans Elementary School	-	-	-	-	-	-	-	-	-	-	-	-
6	Delmont United Methodist Church	-	-	-	-	-	-	-	-	-	-	-	-
7	Wicklow Woods, Ferndale	-	-	-	-	-	-	-	-	-	-	-	-
8 *	Glen Burnie Heights	-	-	-	-	-	-	32 (40)	-	55 (96)	54 (94)	53 (79)	50 (88)
9	Army National Guard Armory	52 (89)	49 (94)	54 (100)	59 (95)	53 (96)	69 (96)	54 (100)	51 (100)	52 (100)	54 (100)	67 (99)	56 (98)
10	Pumping Station, Margate	-	-	-	-	-	-	-	-	-	-	-	-
11	Jones Rd., Queenstown	-	-	-	-	-	-	-	-	-	-	-	-
12 **	Rippling Woods Elementary	61 (100)	62 (100)	63 (99)	62 (100)	63 (100)	63 (97)	64 (100)	63 (100)	61 (100)	63 (100)	63 (97)	63 (100)
13	Oakwood Park, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-
14	Outer Approach End Rwy 15R	-	60 (85)	66 (78)	60 (61)	64 (60)	63 (43)	-	64 (65)	37 (50)	-	-	-
15	Inner Approach End Rwy 15R	-	-	-	-	-	-	-	-	-	-	-	-
16	Stoney Run, Hanover	-	-	-	-	-	-	-	-	-	-	-	-
17	Timber Ridge Rd., Timber Ridge	-	-	-	-	-	-	-	-	-	-	-	-
18	Approach End Rwy 15L	58 (100)	58 (97)	59 (99)	59 (100)	59 (97)	59 (97)	59 (98)	60 (98)	58 (100)	59 (100)	67 (100)	59 (100)
19	Hollins Ferry, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-
20	Friendship Park, Glen Burnie	-	-	-	-	-	-	-	-	-	-	-	-
21	Glen Burnie Park Elementary	61 (100)	62 (100)	63 (100)	63 (100)	64 (100)	69 (100)	63 (100)	63 (100)	61 (100)	62 (98)	-	-
22	Columbia	-	-	-	-	-	-	-	-	-	-	-	-
23	Quarterfield Elementary School	-	-	-	-	-	-	-	-	-	-	-	-

* Site 8: Due to tree growth near the monitor, the unit was not able to be calibrated during the two maintenance visits in 2016.

** Site 12: Reported values for June 15, 2016 and November 15, 2016 for Aircraft, Community and Total DNL were high for unknown reasons.

Both days have been removed from the monthly results

EXHIBIT I



Yellow pins show the location of a historic site that is on the Howard County Historic Sites Inventory. There is an abundance of historic structures in this area; there are about 100 in the below map. Each house has an HO # and inventory information. This is the general location of the aviation concern.