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Testimony

IMPROVING AIR TRAFFIC CONTROL FOR THE AMERICAN PEOPLE: EXAMINING THE CURRENT SYSTEM

STATEMENT OF SHARON PINKERTON
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BEFORE THE
UNITED STATES SENATE COMMERCE COMMITTEE
SUBCOMMITTEE ON AVIATION AND SPACE

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Good afternoon, Chairman Cruz, Ranking Member Sinema and members of the Subcommittee. My name is Sharon Pinkerton, and I am the Senior Vice President of Legislative and Regulatory Policy at Airlines for America (A4A). Thank you for inviting me here today, and on behalf of all our A4A members, we appreciate the opportunity to participate in the Subcommittee's examination of the Air Traffic Control (ATC) system. As an industry, we remain committed to any fact-based search for solutions that will work to improve the safety, capacity and efficiency of our system.

The U.S. airline industry helps drive $1.5 trillion annually in U.S. economic activity and supports more than 10 million U.S. jobs. Concurrently, we operate the safest mode of transportation, carrying 2.4 million passengers and more than 58,000 tons of cargo daily. The U.S. airline industry continues to make safety its top priority, and it also has invested billions of dollars in equipment and aviation infrastructure to achieve maximum National Airspace System (NAS) efficiency. This efficiency allows U.S. airlines to operate an average of 28,000 flights every day across the globe in an environmentally responsible manner.

We are focused on the future. For years most stakeholders have acknowledged that we cannot continue to run the same ATC system the same way as it has been since the 1950s and expect different results. There are a string of reports from presidentially appointed aviation commissions, the Department of Transportation (DOT) Inspector General (IG), the Government Accountability Office (GAO) and independent private sector experts indicating the Federal Aviation Administration's (FAA) ATC modernization efforts have been plagued by significant cost overruns, delays and lack of benefits to users of the system. [See Slide 2] This recurring theme was most recently emphasized by yet another DOT IG report aptly entitled, "FAA Has Made Progress in Implementing Its Metroplex Program, but Benefits for Airspace Users Have Fallen Short of Expectations." In that report[1], the IG indicates that, "FAA's post-

[1] https://www.oig.dot.gov/sites/default/files/FAA%20Metroplex%20Program%20Final%20Report%5E08-27-19.pdf

implementation reports for the seven completed Metroplex sites show estimated annual benefits of $31.1 million—$30.5 million ***lower than the minimum amount of annual benefits initially expected*** when FAA first planned each…site." [See Slide 3]

Despite decades of agreement on the problem, unfortunately, there has not been agreement on the solution(s). Neither programs implemented nor tools deployed automatically translate to benefits delivered. According to the FAA's own definition, "NextGen is the FAA-led modernization of our nation's air transportation system. **It aims to increase** the **safety, efficiency, capacity, predictability**, and **resiliency of** American aviation. Since its inception, the overarching goal has been to modernize the National Airspace System (NAS) to be flexible and agile in order to **support** the **growing demand** and **changing needs** of NAS users." Yet while the system remains remarkably safe, the promise of increased efficiency, capacity and predictability have thus far proven elusive.

To address the proverbial "elephant in the room," it is widely known we supported efforts last Congress to transform the governance and funding structure of the FAA's Air Traffic Organization (ATO) to a commercialized non-profit model. We believe that model would have driven value for all stakeholders – most notably for the traveling public – while the non-profit status would have enabled a better balance between safety and efficiency. Ultimately, that approach was not adopted.

That being said, we are political realists and accept that Congress chose not to adopt that proposed solution. As a result, we are now challenged to fill the void left by a lack of transformational reform and instead are focusing our efforts on making the best of the status quo. As the largest users of the system, we will continue to work collaboratively with all stakeholders on implementation plans for system improvement. We still believe the FAA needs to have clear and measurable goals for our ATC system and accompanying Next Generation Air Transportation System (NextGen) programs. The challenge moving forward is answering the difficult policy questions like, "What is that plan (including cost and timing)?", and "How do we measure success?" While this proposed solution was not adopted, the underlying problem did not go away, and we encourage this Committee to remain focused on NextGen implementation and not accept that it is complete until it delivers tangible benefits to users of the airspace.

For example, the FAA has indicated that NextGen aims to increase safety, efficiency, capacity, predictability and resiliency. In terms of our member airlines and their customers, this should naturally include getting travelers and shipments from A to B more quickly. The reality, however, is that over the 2010-2018 timeframe to which FAA ascribes billions in benefits, the time to fly from one U.S. airport to another, on average, got longer – not shorter. This is especially true on the busiest routes. Of the 10

busiest routes, only one – Atlanta-New York LaGuardia – saw the time from departure gate to arrival gate (known as "block time") fall, by 4.3 minutes. On the busiest – Los Angeles-San Francisco – the average block time rose 12.3 minutes, affecting four million annual passengers. Those extra minutes on that one route alone cost passengers 94 years of lost time worth $40 million and cost airlines an estimated $34 million. Collectively, the average increase in block time across the 10 busiest routes was 7.1 minutes. Time matters, and NextGen implementation has failed to save time for airlines, passengers and shippers. [See Slides 4-5]

That is just one example, but admittedly very little is simple about our ATC system and there are many contributing factors to any given problem. However, when you upgrade to a new iPhone 11 from an iPhone 5, you expect better performance from the new technology. The FAA has deployed new technologies over the NextGen timeframe but thus far has been challenged to operationalize those technologies into meaningful benefits. Even taking the FAA's own inflated estimates of benefits at face value, the return on investment from NextGen expenditures has fallen short. [See Slide 6] This operational transition challenge is even more important as the FAA addresses the needs of an expanding commercial space industry and the exponential growth of Unmanned Aircraft Systems (UAS)/Drones and emerging new users such as Urban Air Mobility (UAM). Things are getting harder and more complicated, not easier. Oversight, focus and collaboration will be key moving forward.

While government and industry have been working on NextGen implementation for nearly two decades with varying degrees of quantifiable success, there are some renewed reasons for optimism. First, as we have continually pointed out, there are a lot of talented and hardworking FAA employees working on projects and programs that are tremendous assets for progress. Second, this Committee has played a crucial role in establishing a strong and stable leadership team at both DOT and the FAA. As the Committee knows, DOT Secretary Elaine L. Chao is a distinguished public servant who provides consummate leadership at the Department. We also commend the Committee for your confirmation of FAA Administrator Steve Dickson. We believe Administrator Dickson is uniquely qualified for that position and will bring the vision, knowledge and experience necessary to move the needle on NextGen implementation and other priorities. Finally, we also appreciate the Committee's work on passage of the waiver to ensure that Dan Elwell can continue serving as FAA Deputy Administrator. Together they are an outstanding team, and we look forward to a strong working relationship with them and this Committee.

For our own part, as a trade association, we have focused our efforts on advocating for the accelerated implementation of the FAA's NextGen air traffic management modernization program to achieve the benefits of enhanced safety, efficiency, capacity and reduced fuel and emissions. Examples of those initiatives include:

- **Domestic Automatic Dependent Surveillance-Broadcast (ADS-B).** The FAA needs to deliver on its defined benefits that were the basis of FAA ADS-B infrastructure and the more than $1 billion investment made by operators in meeting the upcoming January 2020 ADS-B equipage mandate. Those defined benefits include decreased spacing implementations such as increased capacity in multi-runway configurations, reduced terminal separation in selected Northeast Corridor sites and reduced EnRoute separation.

- **Space-based ADS-B.** The FAA should invest in and deploy space-based ADS-B capability in oceanic surveillance to leverage stakeholder investment and to enable improved surveillance and decreased spacing in FAA-controlled oceanic airspace.

- **Performance Based Navigation (PBN).** The aviation industry is frustrated by the lack of progress and benefits on this high-priority NextGen initiative. [See Slide 7] Because its success is key to the FAA's plans for Trajectory Based Operations, the FAA should develop and implement a plan for PBN implementations that will deliver on promised benefits of efficiency, de-conflictions between airports, emissions reductions and improved airport throughput. An essential component of PBN is the suite of controller "tools" that enable the management and sequencing of aircraft with mixed capabilities to implement PBN procedures. To best coordinate these efforts and to deploy benefit-producing advanced PBN, the FAA should establish a dedicated PBN program office.

- **En Route Data Communications (DataComm).** The industry strongly supports DataComm as a foundational means to modernize the communication between air traffic controllers and pilots. The first phase of using DataComm at 62 airports has proven beneficial, and the use in the En Route environment promises to deliver more efficiencies. We encourage the FAA to implement the program more expeditiously as it works with the industry to resolve implementation issues.

- **Northeast Corridor (NEC).** The industry and FAA have been partnering on tactical operational improvements, procedures and longer-term improvements to more efficiently manage traffic in the NEC. Continued industry collaboration with FAA and continued investment is necessary to ultimately improve operations in the NEC which has ripple effects throughout the NAS.

- **Dynamic Wake Separation.** The FAA has taken significant steps in improving the capacity at airports by leveraging tools that have safely made improvements in efficiency through Wake Recategorization. A promising capability being used at Heathrow Airport is Time Based

Separation (TBS). The FAA should evaluate this capability or the basic tenets of the TBS concept and determine how it would improve efficiency at select airports during periods of head winds conditions that adversely affect runway capacity.

- **Ground Based Augmentation Systems (GBAS).** The FAA should support and commit to implementation of full, all-weather capability of GBAS. Ultimately, the FAA should be in the position to takeover maintenance and support of the equipment as part of the path forward.

- **Other FAA Modernization Programs.** There are several other key FAA programs that will advance operations and leverage NextGen capabilities that should be expedited including the Terminal Flight Data Manager (TFDM) Program, Time Based Flow Management (TBFM), Ground Based Interval Management (GBIM), Terminal Sequencing and Spacing (TSAS), and Traffic Flow Management System (TFMS). These programs offer the prospect of reducing taxi times, reducing airport congestion, reducing fuel and emissions and improving on-time performance.

When it comes to NextGen, we believe the FAA should take steps to improve its process for engaging the industry in modernizing the ATC management system, stakeholder collaboration is critical to quantifiable progress. Congressional oversight will also play a key role in moving NextGen forward. It is important that the FAA is held accountable for how it is performing against its own NextGen Implementation Plan (NIP) and the resulting performance improvements that are supposed to accompany various NextGen implementations. Congress also should pay close attention to any identified FAA risks to NextGen implementation and the specific steps being taken to address those identified risks. Simply, we believe any solution set considered by the Committee should adhere to two basic principles:

- Deliver on the defined benefits of increasing safety, efficiency, capacity, predictability and resiliency that were the basis of FAA's NextGen program; and

- Annually report on the FAA-Industry agreed upon performance metrics[2] that assess the change in NAS performance of NextGen implementations.

NextGen has always been marketed as a modernization program that will ultimately lead to increased safety, efficiency, capacity, predictability and resiliency for U.S. aviation. Twenty years into the process, many would argue that NextGen is amorphous and undefined. It's time we renewed our focus and

[2] The NextGen Advisory Committee (NAC) approved recommended metrics that measure the effect on NAS performance attributable to the deployment of key NextGen capabilities are Actual Block Time, Actual Distance Flown, Estimated Fuel Burn, Throughput-Facility reported capacity rates, Taxi-out Time and Gate Departure Delay.

attention, then set some targeted, shared and public goals and identify the metrics by which we want to judge its success or failure. We would like to support the Committee in its oversight efforts and play a positive role is shaping those NextGen implementation policies that will benefit passengers, shippers, aircraft operators, the economy and the environment.

Finally, I would be remiss not to mention and thank Sen. Moran and House Transportation and Infrastructure Chairman DeFazio for their respective work on the 'Aviation Funding Stability Act of 2019' (S. 762/H.R. 1108), two bills that would provide much needed operational stability for the FAA during times of government shutdown caused by a lack of appropriation. Unlike most other federal agencies which rely on the General Fund, a vast majority of the FAA's budget is directly funded by federal excise taxes collected from operators and passengers utilizing the U.S. aviation system. During a government shutdown, like the one earlier this year, those taxes continue to be collected and deposited into the Airport and Airway Trust Fund (AATF). The AATF currently has an unobligated (reserve) balance of nearly $7 billion, projected to grow to nearly $8 billion in FY2020. Consistent with the parameters of the Moran and DeFazio legislation, we believe that those unobligated, but already collected, reserve funds should be allowed to be spent during a shutdown in order to keep the FAA operating. As an industry, we appreciate their work and the work of their co-sponsors, many of which sit on this Committee.

Thank you. I look forward to any questions.

Improving Air Traffic Control for the American People: Examining the Current System

Sharon L. Pinkerton, SVP-Legislative & Regulatory Policy

Testimony to U.S. Senate Committee on Commerce, Science and Transportation – Subcommittee on Aviation and Space
September 24, 2019

Multiple USG Reviews* Have Questioned Timely/Meaningful Delivery of NextGen Benefits

Feb-12	GAO	"Air Traffic Control Modernization: Management Challenges Associated with Program Costs and Schedules Could Hinder NextGen Implementation"
Apr-13	GAO	"NEXTGEN Air Transportation System: FAA Has Made Some Progress in Midterm Implementation, but Ongoing Challenges Limit Expected Benefits"
Jan-14	OIG	"FAA Made Limited Progress in Implementing NextGen Provisions of the FAA Modernization and Reform Act of 2012"
Nov-14	OIG	"Planning for High-Priority NextGen Capabilities Underway, But Much Work Remains for Full Realization of Benefits"
Aug-15	OIG	"FAA Has Not Effectively Deployed Controller Automation Tools That Optimize Benefits of PBN"
Jan-16	OIG	"FAA Reforms Have Not Achieved Expected Cost, Efficiency, and Modernization Outcomes"
Mar-18	OIG	"FAA Needs To Strengthen Its Management Controls Over the Use and Oversight of NextGen Developmental Funding"
Aug-19	OIG	"FAA Has Made Progress in Implementing Its Metroplex Program, but Benefits for Airspace Users Have Fallen Short of Expectations"

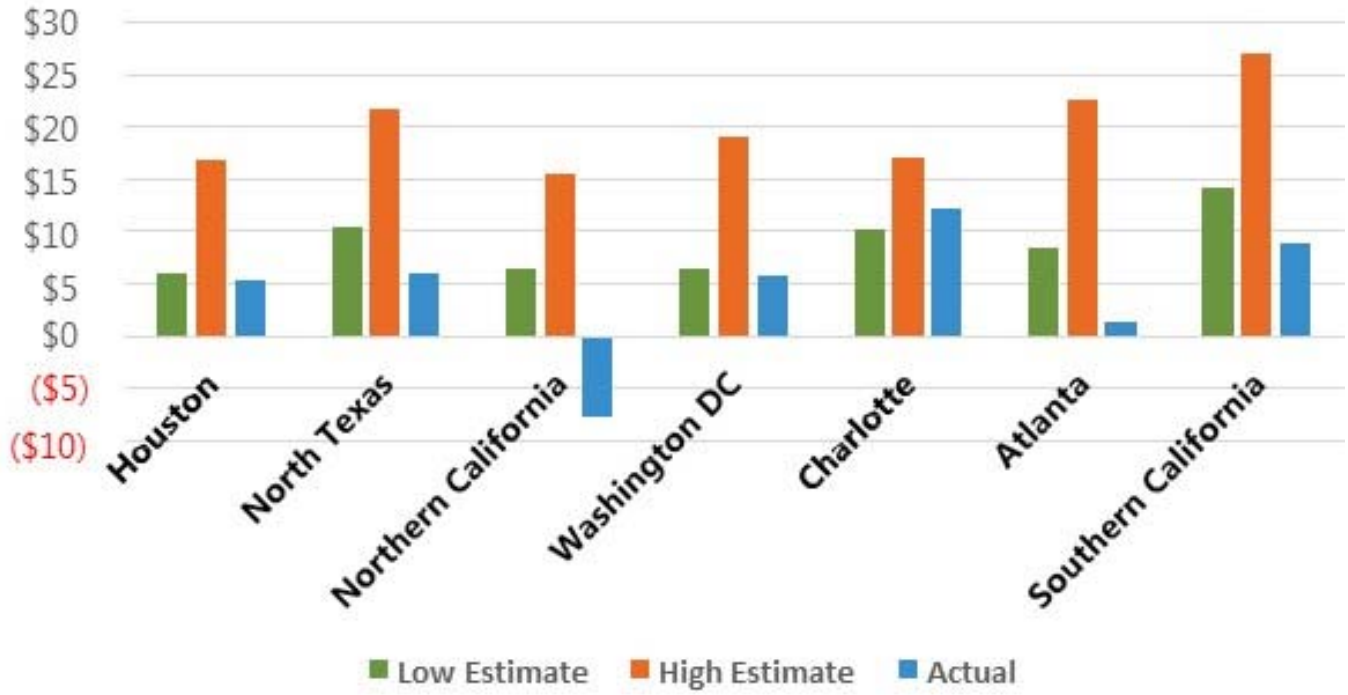
Source: A4A

* Selected reports/reviews only, commencing 2012; does not constitute a comprehensive list

DOT IG: Completed Metroplex Sites Have Achieved *Significantly* Lower Benefits Than Expected

"FAA's post-implementation reports for the seven completed Metroplex sites show **estimated annual benefits** of $31.1 million—**$30.5 million *lower* than the *minimum* amount** of annual benefits **initially expected** when FAA first planned each…site."

Metroplex Implementation Sites Pre- and Post-Implementation Estimated Annual Benefits (in Millions)



Source: DOT IG Report No. AV2019062 (Aug. 27, 2019)

On Nation's Busiest Routes, It's Taking Longer to Fly From A to B

Average "Block Times" Rose on All But One of the 10 Busiest Domestic Routes

Change in Average Gate-to-Gate Time (Each Way) on Busiest U.S. Routes

	Route	2010	2018	Change (Mins)	Change (%)
1	LAX-SFO	78.2	90.5	12.3	16
2	LGA-ORD	136.8	142.9	6.1	4
3	JFK-LAX	330.7	336.5	5.8	2
4	LAS-LAX	64.9	72.6	7.6	12
5	HNL-OGG	37.3	43.2	6.0	16
6	PDX-SEA	47.1	55.5	8.4	18
7	LAX-SEA	152.6	165.9	13.3	9
8	BOS-LGA	72.8	75.6	2.9	4
9	SEA-SFO	122.0	130.5	8.5	7
10	ATL-LGA	143.1	138.8	(4.3)	(3)

Source: A4A analysis of DOT T100 data

The Actual Time Required to Fly Between LAX and SFO *Rose* 16 Percent From 2010-2018

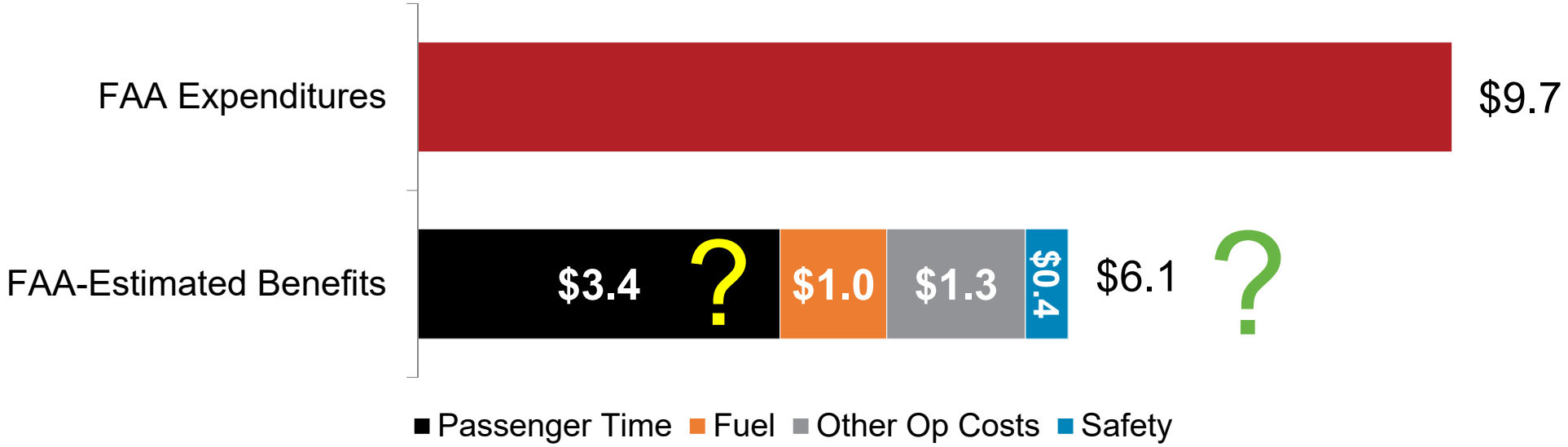
This Increase in "Block Time" Cost Passengers and Airlines a Combined $74M in 2018

- LAX-SFO is the most heavily traveled U.S. route.
- In 2010, it took an average of 78.2 minutes from gate to gate, each way, to operate the route.
- By 2018, it took an average of 90.5 minutes.
- That's an *increase* of 12.3 minutes, or 16 percent.
- That increase cost those 4 million passengers ~94 years of their time, worth an estimated $40 million.
- It cost airlines on the route an estimated $34 million.

Source: A4A analysis of DOT T100 data

Even Taking FAA's Inflated Estimates of Benefits at Face Value, the Return on Investment From NextGen Expenditures Has Fallen Short

NextGen Expenditures and *FAA-Estimated* Benefits (in $ Billions) **Through 2018***



Source: "NextGen Update," FAA Briefing to the House Subcommittee on Aviation (Sept. 2019)

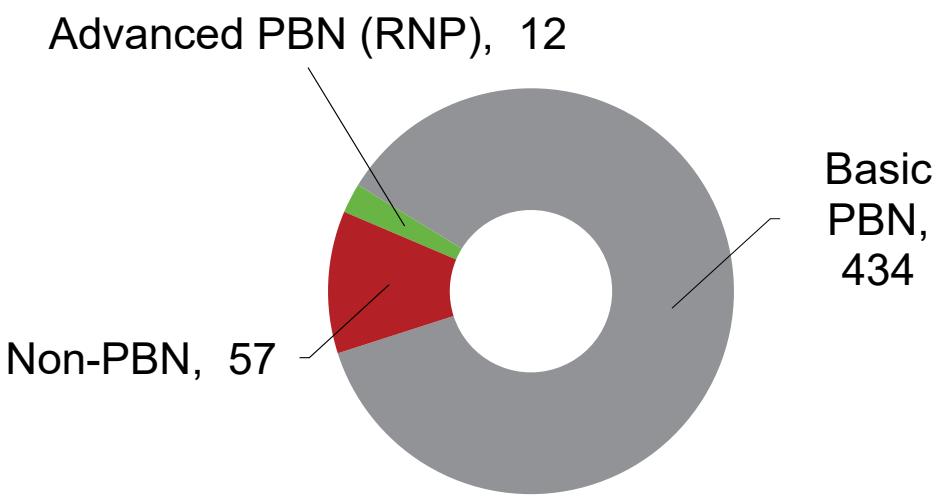
* Federal expenditures from 2007; benefits from 2010

FAA Has Been Slow to Deploy *Advanced* Performance Based Navigation (PBN), Which is Needed for NextGen Benefits and Key to FAA's Plans for a Trajectory-Based Operation

"In addition to noise concerns, **other previously identified PBN obstacles remain**, including a lack of automated decision support tools for controllers, unclear terminology used by pilots and controllers for referring to flight paths, and the lengthy procedure amendment process."

DOT IG (Aug. 27, 2019)

503 Procedures at First 7 Metroplex Locations*



FAA should develop/implement a plan for PBN that will deliver promised benefits of efficiency, de-conflictions between airports, emissions reductions and improved airport throughput.

Source: DOT IG Report No. AV2019062 (Aug. 27, 2019)

* Houston, North Texas, Northern California, Washington, DC, Atlanta, Charlotte, and Southern California

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