Response to Written Question Submitted by Hon. John Thune to Hon. Calvin Scovel

Question 1. As you know I recently sent a letter to FAA Administrator Huerta requesting a detailed status update on NextGen. The letter highlighted much of the work you and your office have done, and specifically cited points made in several of your NextGen reports. Do you have any comments on FAA's response to my letter?

Answer. FAA's response includes valuable perspectives on measures of success, lessons learned, and plans for the future. However, we note the fact that NextGen has been redefined—this is a theme from our work as well as the May 2015 National Academy of Sciences report. We would like to offer several observations about FAA's responses.

- First, FAA states there is a misunderstanding or misconception based on our report[1] about the planned enhancements to the En Route Automation Modernization (ERAM) program, which modernizes systems controllers rely on to manage high-altitude traffic and integration issues with other programs. Contrary to FAA's comments, our report does not state that ERAM is broken but rather points to the integration challenges and the central role ERAM plays in critical NextGen efforts. Specifically, as we noted in our 2016 report on the transformational programs, FAA faces complex integration issues with ERAM and Data Comm for controllers and pilots to ensure that aircraft information can be displayed on controller displays and flight information can be transmitted from the aircraft to ground and FAA automation systems in the 2020 timeframe. We note that Data Comm is a joint FAA and industry NextGen investment priority.

- Second, FAA's comment about our observations regarding insufficient industry outreach is inaccurate and outdated. We have long pointed to the importance of stakeholder involvement as an important factor for success. Our ongoing work recognizes the collaboration between FAA and the NextGen Advisory Committee (NAC) on the NextGen priorities. The four high priority areas, which include Performance-Based Navigation (PBN) and Airport Surface Operations, have the potential for significant benefits for users. The NextGen investment priorities represent an important but long overdue effort. We plan to issue a report on FAA's risk-mitigation efforts for implementing the priorities this summer.

- Finally, we believe FAA's comments about their response to our January 2016 report[2] on FAA's progress with using congressionally mandated reform recommendations are accurate, but need some updating. We made three recommendations to improve FAA's management of major acquisitions and better meet the goals of its reforms, two of which are now closed. Our recommendation for FAA to identify and incorporate Federal and industry best practices and guidance for planning and acquiring major capital investments into their acquisition process remains open. We emphasize that FAA's efforts to respond to our recommendation will assist FAA in leveraging its reform authorities and achieve

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[1] *Total Costs, Schedules, and Benefits of FAA's NextGen Transformational Programs Remain Uncertain* (Report Number AV-2017-009), November 10, 2016

[2] *FAA Reforms Have Not Achieved Expected Cost, Efficiency, and Modernization Outcomes* (Report Number AV-2016-015), January 15, 2016

the efficiencies and productivity enhancements envisioned by the Congress to meet the Nation's aviation needs and result in better outcomes with major acquisitions.

Question 2. In his response to my letter, Administrator Huerta wrote that, "when [NextGen] programs are measured properly against a positive cost-benefit analysis and [FAA's] commitment to invest, [FAA is] now on or ahead of schedule with many of [its] large investment programs." Do you share this perspective?

Answer. FAA's statement requires some clarification about the costs and benefits of NextGen Programs. Each program is required by the FAA Acquisition Management System to have a cost-benefit analysis to drive investment decisions. However, as we reported in our November 2016 report, FAA NextGen Transformational Programs,[3] there is considerable uncertainty about when each program will deliver benefits to airspace users, and many benefits remain unquantified. This is illustrated by two of FAA's largest programs that have combined current cost estimates of $4.7 billion in Agency costs alone, which excludes airspace user costs to purchase and install new avionics and train flight crews.

- Automatic Dependent Surveillance-Broadcast (ADS-B): FAA has completed the ground-based infrastructure for the system and has mandated that airspace users must equip their aircraft with new avionics for *ADS-B Out* by January 2020. The benefits that FAA identified in its business case for the program depended on savings from the decommissioning of radars and the reduction of high-altitude separation standards (from 5 nautical miles down to 3 nautical miles). It remains uncertain when and if radars will be retired and if separation benefits from reducing separation standards will be realized. In addition, FAA has yet to quantify the benefits of *ADS-B Out* in congested airspace in the vicinity of airports in areas such as New York and Chicago.

- DataComm: FAA, in response to NextGen Advisory Committee recommendations, the Agency accelerated the implementation of digital messaging of pre-departure clearance capabilities to over 57 towers, 3 years ahead of its original schedule. However, the major benefit of the program will be in the high-altitude en route environment using digital messaging to reroute aircraft to avoid thunderstorms and other adverse weather. To complete this effort, FAA must modify its ERAM en route automation systems and train air traffic controllers, along with airlines equipping their aircraft and training their flight crews. FAA is planning to begin implementing this new capability in the 2020 timeframe. FAA has yet to quantify the productivity enhancements for the controller workforce, which could be significant.

Question 3. Many stakeholders in the aviation community cite funding stability as a past and ongoing concern with respect to modernization of the air traffic control system. Can we attribute the FAA's difficulties over the last dozen years, as laid out in independent reports from your office as well as the Government Accountability Office, solely to funding uncertainty?

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[3] *Total Costs, Schedules, and Benefits of FAA's NextGen Transformational Programs Remain Uncertain* (OIG Report No. AV-2017-009), November 10, 2016

Answer. While funding uncertainty and the sequester in the 2013 timeframe has impacted FAA, as with all Federal agencies, a lack of funding has not materially affected the pace of NextGen or air traffic control modernization in general. Our work shows that other factors have contributed to problems with NextGen. These include unrealistic expectations, an inability to establish requirements for key capabilities (like *ADS-B In* and the display of information in the cockpit), and a lack of agreed-upon investment priorities. FAA and the industry now have a set of investment priorities, including DataComm and Performance-Based Navigation—a long overdue step. We note Congress has provided $7.4 billion from fiscal years 2003 to 2016 to FAA to invest in various NextGen programs. A significant majority of FAA NextGen funding ($6.7 billion) has been in its Facilities and Equipment or capital accounts.

Question 4. At the hearing, you mentioned the importance of strengthening the cybersecurity of government information and systems. What are the most important steps the Secretary should take to increase the effectiveness of the agency's cybersecurity programs?

Answer**.** By taking the following steps, the Department could greatly strengthen its cybersecurity programs:

1. Complete the implementation of PIV cards for logical access.
2. Identify, assess risk, and improve the oversight of shared controls among DOT networks.
3. Ensure all systems have adequate contingency plans and test these plans.
4. Take action to reduce the risk of the growing number of systems operating in DOT without executive authorization (currently 70 systems) and the high number of unresolved security weaknesses.

Question 5. As your respective offices issue recommendations based on audit and investigation work, what steps do you take to ensure that the recommendations are discrete tasks that are feasible for the agency to implement in a reasonable timeframe?

Answer. Government auditing standards require that we make recommendations that flow logically from the findings and conclusions, are directed at resolving the causes of identified deficiencies and findings, and clearly state the actions recommended. Additionally, these standards specify that recommendations are effective when they are specific, practical, cost-effective, and measurable.

In addition to writing recommendations that adhere to these standards, we provide the audited agency with the opportunity to comment on the feasibility of our recommendations twice, first during the exit conference at the conclusion of the audit, and then again in their formal written comments to our draft report. Finally, to provide for recommendation closure in a timely manner, although audit standards do not specifically address the issue of timeframes, by DOT Order, the audited agency is required to provide a target date for completion for each recommendation once concurrence is reached. Depending on the complexity of the findings and recommendations, target dates may not be met, and new target dates may need to be established.

Response to Written Questions Submitted by Hon. Roy Blount to Hon. Calvin Scovel

Question 1. In a 2015 letter to five members of the House Transportation and Infrastructure committee, the Deputy Secretary of Transportation and Deputy Secretary of Defense announced that an eLoran system would be built to protect the nation from local and wide spread GPS disruptions**.** Why has the Department of Transportation taken no action on this?

Answer**.** We agree that it is important to have a backup system for GPS in the event of an intentional or unintentional problem with the system. However, we have not conducted any work on eLoran or the Department's decision to not pursue a backup system. We have forwarded the question to the Department for any response that they may have on this matter.

Question 2. I understand that private entities have made proposals to the Department of Transportation and other departments to build a backup system for GPS using private funds. Why has the government not acted on these offers?

Answer. We have not examined the proposals made to the Department by the private sector for a backup to the GPS system. We have forwarded the question to the Department for any response that they may have on this matter.

Response to Written Questions Submitted by Hon. Deb Fischer to Hon. Calvin Scovel

Question 1. Inspector General Scovel, you mentioned in your written testimony that DOT's "reported delinquent debt increased by over 300 percent from $170 million to $737 million" between 1999 and 2013. To me, these figures represent a massive mismanagement of critical transportation resources. What is the DOT doing to address delinquent debt recovery for financing programs such as RRIF and TIFIA**?**

Answer. In our delinquent debt report, issued July 2015, we addressed delinquent debt from RRIF and TIFIA ($984K and $6.2M respectively) and from other loan programs as well. Our specific recommendation for improving loan programs was that DOT develop or enhance policies and procedures for complying with their specific requirements for delinquent loan collections. These policies and procedures vary from program to program. However, overall weaknesses in this area remain present because DOT has not completed the required actions.

Question 2. Inspector General Scovel, you mentioned in your written testimony that the Pipelines and Hazardous Materials Safety Administration (PHMSA) has missed about 75 percent of its deadlines for Congressional mandates. This is unacceptable. Last year, Congress passed the Protecting Our Infrastructure of Pipelines and Enhancing Safety, or PIPES Act, which sought to study and reform how PHMSA oversees pipeline safety. Specifically, it re-prioritized outstanding Congressional directives from the 2011 PHMSA reauthorization, and gives PHMSA the ability to hire pipeline inspectors with greater flexibility. In your opinion, has PHMSA incorporated the recommendations from the PIPES Act into its oversight? What further recommendations do you have to reform PHMSA so the agency can complete its mandates on time?

Answer. The OIG has not specifically examined the extent to which PHMSA has incorporated recommendations from the PIPES Act into its oversight. However, in October 2016, we reported that an impediment to PHMSA's timely action in implementing mandates and recommendations from NTSB/GAO/OIG was the lack of agency-wide processes, guidance, and oversight. More specifically, between 2005 and 2015, PHMSA's two program offices, the Office of Pipeline Safety and the Office of Hazardous Materials Safety, were primarily responsible for mandate implementation. As we examined how these program offices implemented mandates, we found that staff rarely followed project management requirements, and there was little accountability for meeting deadlines—both internal and external.

To address the lack of processes, guidance, and oversight, we recommended that PHMSA develop a policy for mandate implementation. While we have not received information from PHMSA about its progress on this recommendation, PHMSA has made significant changes to its rulemaking process since we issued our report. Because many of PHMSA's safety-related mandates require rulemaking activities, we are encouraged that these recent changes will better position the Agency to address regulatory mandates more efficiently.

We recently initiated an audit mandated by the PIPES Act related to PHMSA workforce management that should provide Congress better insight into the Agency's oversight of pipeline safety. As part of our review of workforce management we are examining PHMSA’s efforts to hire inspectors. That work is currently underway, and we expect to report out later this year.

Response to Written Questions Submitted by Hon. Dean Heller to Hon. Calvin Scovel

Question 1. A difficulty for Inspectors General across federal agencies has always been getting the information they need and pushing back on the agency when they dispute the IG's claims.

It's something I've seen frequently at the Department of Veterans Affairs, and I've always felt very strongly that IG's must be willing to confront agencies to get the information they need to conduct a full investigation.

Have any of you had difficult accessing the information you need to hold your agency accountable and are there tools you need from Congress to increase transparency?

Answer. We have a good working relationship with the Department to access the information we require to ensure accountability. That being said, if we encounter delays and lack of timeliness in obtaining Agency documents, we work directly with Department officials at the proper level to resolve them. When appropriate, access and delay issues and their impact on the scope of our work are documented in our reports. We are not requesting any additional tools from Congress to increase transparency.

Question 2. Every year, our offices are flooded with requests from local government and transportation commissions on the assortment of discretionary grants that the Department is authorized to issue for specific transportation projects. Nevada has benefitted from some of these programs without a doubt – but there are some overarching concerns about how the Office of the Secretary reviews these applications from Administration to Administration. Regardless of who is in control of the executive branch, our local stakeholders should know what they need to do to compete for these federal resources year after year.

It is my understanding that you have conducted an audit on the policies and procedures in place for TIGER grant applications – what types of safeguards can be put into place to ensure applications to all discretionary programs are reviewed on the merits and each application is given a fair shake?

Answer. Currently, our office is conducting an audit of the Office of the Secretary of Transportation's (OST) policies and procedures for evaluating cost-benefit analyses in TIGER grant applications and plan to issue a report in early summer. Previously, on September 20, 2012, we issued a report—*DOT Established Timely Controls for the TIGER Discretionary Grant Program, But Opportunities Exist to Strengthen Oversight* (OIG Report No. MH201218)—that focused on OST's management and oversight of the TIGER program, including performance measures for determining economic and transportation-related impacts and (2) the policies and practices established for overseeing the TIGER projects once awarded. The report made seven recommendations to the Under Secretary of Transportation Policy to address vulnerabilities in the process for reviewing grants and documentation, capabilities to manage the TIGER program, and establish a methodology to identify program outcomes. OST completed implementation action on the last of these recommendations in January 2017. Of particular note is one recommendation directed at transparency, by establishing and implementing a systematic process for documenting significant management decisions involving the program and individual TIGER projects, including follow-up actions resulting from meetings with Department of Transportation agencies. We would view this as one key safeguard to put in place when reviewing grant applications.

Response to Written Questions Submitted by Hon. Todd Young to Hon. Calvin Scovel

Question 1. General Scovel, on August 20, 2015, your Office of Inspector General issued a report regarding the efficiency of FAA Air Traffic Control (ATC) towers. In this report, you found that the FAA regularly fails to analyze their internal databases to review cost data and potential productivity efficiencies. By the report's estimation, this failure to review data cost the FAA as much as $142 million each year due to ATC tower inefficiencies. What recommendations do you have for this committee to ensure that the FAA regularly reviews their own data and extrapolates cost efficiencies through the ATC tower network?

Answer. The recommendation we made in that report remains open. Specifically, we recommended that FAA identify the factors contributing to greater resource use by the least efficient towers as compared with the relatively efficient towers identified in the report, and develop a plan for addressing those factors.

FAA only partially concurred with the recommendation in its formal response to the report. On July 22, 2016, FAA provided documentation of analyses undertaken in an attempt to fulfill the recommendation. We found FAA's analyses inadequate, because they were too cursory to identify the factors driving differences in resource usage, let alone support development of a plan to address such differences.

We met with FAA personnel on October 5, 2016, and on February 16, 2017, to discuss what we would need from the Agency to close the recommendation. We also provided documentation on why their earlier response had been inadequate and additional information to help focus Agency efforts. Following the October meeting, FAA committed to a target action date of April 30, 2017. In the February meeting, they told us that they would probably ask for an extension after they had the opportunity to examine the additional information, but they have yet not done so.

While it would be fruitful in the future for FAA to analyze their data to identify inefficiencies, we are still waiting for the Agency to develop an adequate response to addressing the inefficiencies we have already identified.

Question 2. General Scovel, On April 5, 2012, your office of Inspector General issued a report reviewing the utilization of ARRA funding and suggested methods for the Federal Highway Administration (FHWA) to increase competition for State DOT contracts and advance best practices for the awarding of those federal-aid contracts. To date the FHWA has completed the OIG recommended assessment, but failed to implement several specific policies regarding the confidentially of bids, the implementation of performance metrics to assess state contract trends, and the sharing of best practices by State DOTs. What, if any, barriers currently exist that prevent states from sharing best practices and implementing policies that will result in increased competition for State DOTs**?**

Answer. FHWA has taken several actions to address our report's five recommendations. One recommendation is closed, and four remain open. One of the open recommendations addresses the sharing of State best practices, and the FHWA has made some progress toward closing it. Before our report was issued, FHWA—along with the American Association of State Highway and Transportation Officials (AASHTO)—began a Survey on Construction Cost Increases and Competition. This survey was completed in May of 2012, and identified industry trends and best practices. In February 2015, FHWA completed its National Review of State Cost Estimation Practices, which also addressed our report recommendations concerning evaluating competition and establishing performance metrics. The AASHTO survey and National Review results were transmitted to the States by FHWA in order to share best practices. In addition, we have been informed by FHWA that it plans to update its "Guidelines on Preparing the Engineer's Estimate, Bid Review & Evaluation" by September 1, 2017, as part of Agency efforts to address our recommendations and to implement performance metrics to assess State contract trends and share best practices among State DOTs.

At the completion of the 2015 National Review, FHWA concluded that the cost of keeping bidders' names and estimates confidential outweighed the benefits, because it would require resource-intensive regulatory revisions to Federal law and some State laws. Discussions concerning actions to close this recommendation are ongoing; the target action date for closure is September 1, 2017.

Question 3. General Scovel, as you note in the Top Management Challenges for FY17, the FAA continues to face significant hurdles as it attempts to implement the Next Generation Air Transportation System (NextGen). The FAA fails to properly define costs and meet delivery timelines for this program, impeding the implementation of this vital system. As Congress considers an FAA reauthorization bill this year, what advice does your office recommend to ensure for the on-time and on-budget delivery of NextGen's performance based navigation (PBN) to the American public?

Answer. While there has been some progress, FAA must continue to address key areas to ensure an on-time and on-budget delivery of PBN flight procedures that deliver benefits. This includes early outreach to communities to address potential noise concerns and collaboration with airspace users and air traffic controllers throughout the process. To maximize the benefits of PBN, our work shows FAA also needs to deploy automated decision support tools to help controllers space and sequence air traffic close to busy airports. This is important because many airlines are equipped with Required Navigation Performance technology that allows them to fly advanced flight procedures, including curved paths into airport runways. However, FAA has been slow to deploy advanced procedures and controller automation necessary to optimize benefits. Without these tools, it is difficult, if not impossible, for controllers to manage the flow of air traffic in a (mixed equipage) environment where some are using more advanced curved approaches and others are using straight-in approaches. FAA is currently developing an automated tool for managing airport arrivals, but will not begin deploying it until 2019 at the earliest.

Question 4. General Scovel, in a July 9, 2015 report, your office reported on the Department of Transportation's lax debt collection policies that left in excess of $700 million in uncollected delinquent debt. Through your office's audit, you identified that the DOT failed to comply with proper debt collection procedures on 66% of all debt obligations collected. The report cites multiple failures in the DOT's utilization of the Enterprise Services Center (ESC) that inhibit their ability to accurately report on delinquent debt. Could you please outline what immediate actions should be taken to ensure the Department reports debt by statutory timelines, improves training for the proper collection of the Department's debt, and ensures for the full compliance to standard operating procedures for the department's ESC personnel?

Answer. In our delinquent debt report issued July 2015, we made six actionable recommendations, which remain open, to address DOTs weaknesses in identifying, reporting, and recovering delinquent debts. These included developing and implementing department-wide policies and procedures for accurately identifying and reporting delinquent debt and recoveries, and collecting debts in a timely manner; establishing clear policies and guidance for overseeing delinquent debt collections made by Operating Administrations and ESC; requiring relevant training for all personnel who are responsible for identifying, collecting, and reporting on delinquent debt; directing Operating Administrations that must comply with legal requirements outside of the Debt Collection Improvement Act to develop clear and effective debt collection policies and procedures for their unique requirements and to share these policies and procedures with ESC; directing ESC to clarify its standard operating procedures (SOPs), including (a) delineating the different processes for administrative and loan debts and (b) identifying the Operating Administrations that the SOPs apply to and; directing Operating Administrations that have loan programs to develop or enhance policies and procedures for complying with their specific requirements for delinquent loan collections.