



U.S. DEPARTMENT OF TRANSPORTATION  
**OFFICE OF INSPECTOR GENERAL**

**FAA's Competitive Award Practices  
Expose Its Major Program Contracts  
to Cost and Performance Risks**

**FAA**

Report No. ZA2020020

March 9, 2020





## FAA's Competitive Award Practices Expose Its Major Program Contracts to Cost and Performance Risks

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*Requested by Chairman Bill Shuster of the House Committee on Transportation and Infrastructure*

Federal Aviation Administration | ZA2020020 | March 9, 2020

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### What We Looked At

In support of its mission to operate the National Airspace System, the Federal Aviation Administration (FAA) relies on an expansive portfolio of capital assets—including infrastructure, technology, and systems. These capital investments contribute to the multibillion-dollar acquisition portfolio that FAA manages each fiscal year. Over the years, various stakeholders have identified significant issues with the Agency's acquisition processes and practices. Citing those concerns, Representative Bill Shuster, then Chairman of the House Committee on Transportation and Infrastructure, asked us to conduct a review. Accordingly, our audit objective was to assess FAA's competitive award practices for its major acquisition program contracts, including safeguards against conflicts of interest (COI) on the part of FAA officials involved in the award process.

### What We Found

FAA's competitive award practices for its major program contracts expose the Agency to cost and performance risks. First, FAA's actions to establish fair, reasonable, and realistic contract pricing lack sufficient support—specifically, independent Government cost estimates (IGCE) and price analyses, both of which are key to efficient pricing. Second, FAA's award practices for its major program contracts do not always promote competition, which could contribute to the Agency's continued reliance on the same small pool of contractors. Third, FAA is putting the integrity of its procurement process at risk because it does not consistently take required actions to prevent COI. For example, FAA could not provide complete COI agreements for all the officials involved in the selection process for five contracts with a total value of over \$1 billion. Finally, FAA lacks complete award documentation and a tracking process for its major program contracts, which impacts its ability to manage potential cost and schedule risks. We determined that FAA put up to \$4.9 billion in Federal funds at risk because it did not have required IGCEs before it awarded three competitive contracts and did not provide a sound rational basis for awarding another three contracts noncompetitively.

### Our Recommendations

FAA concurred with all 10 of our recommendations to improve its major program contract award practices and provided appropriate completion dates.

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## Memorandum

Date: March 9, 2020

Subject: ACTION: FAA's Competitive Award Practices Expose Its Major Program Contracts to Cost and Performance Risks | Report No. ZA2020020

From: Mary Kay Langan-Feirson  
Assistant Inspector General for Acquisition and Procurement 

To: Federal Aviation Administrator

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In support of its mission to operate, maintain, and modernize the National Airspace System (NAS), the Federal Aviation Administration (FAA) relies on an expansive portfolio of capital assets—including infrastructure, technology, and systems. Each fiscal year, FAA manages a multibillion dollar acquisition portfolio made up of major and non-major acquisition programs.<sup>1</sup> The contracts associated with FAA's fiscal year 2017 major acquisition programs represent a total potential value<sup>2</sup> of over \$18.9 billion.

Acquisition plays a key role in supporting FAA's mission to operate the NAS and modernize air traffic control through implementation of the Next Generation Air Transportation System (NextGen).<sup>3</sup> Yet the Office of Inspector General (OIG) and various stakeholders have identified significant issues with the Agency's acquisition processes and practices over the years. Citing concerns that these problems have spanned decades despite the enactment of acquisition reform, Representative Bill Shuster, then Chairman of the House Committee on Transportation and Infrastructure, requested that we review FAA's procurement programs and processes. Specifically, Representative Shuster asked us to focus

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<sup>1</sup> FAA defines a major program as one classified with Acquisition Category level 1, 2, 3, or that is of strategic importance to the Agency. Non-major programs are defined at Acquisition Category levels of 4 or 5. Major programs typically have Facilities and Equipment (F&E) costs greater than \$100 million and/or significant impact, complexity, risk, sensitivity, safety, or security issues.

<sup>2</sup> Throughout this report, when we reference the total potential value or total value (which includes the base award plus all potential option periods), that amount is as of July 2019, unless otherwise noted.

<sup>3</sup> NextGen is the ongoing multibillion-dollar transformation of the NAS to ensure that FAA can meet future safety, capacity, and environmental requirements. NextGen is supported by capital programs that will fundamentally change the way air traffic is managed by combining new technologies for surveillance, navigation, and communications with automation system enhancements, workforce training, procedural changes, and airfield development.

on the Agency's competitive award practices for its NextGen and air traffic control equipment and service contracts spanning over the last 20 years and its safeguards against conflicts of interest in the contracting process.

Based on this request and the important role that competition plays in achieving the best possible return on investment for taxpayers, our audit objective was to assess FAA's competitive award practices for its major acquisition program contracts, including safeguards against conflicts of interest on the part of FAA officials involved in the award process.

We conducted our audit work from April 2019 to January 2020 in accordance with generally accepted Government auditing standards. To assess FAA's award of major program contracts, we reviewed a universe of the primary acquisitions<sup>4</sup> associated with the Agency's 27 major programs active during fiscal year 2017.<sup>5</sup> This universe consisted of 2 inter-agency agreements (IAA) and 19 contracts.<sup>6</sup> The analysis in this report focuses on those 19 contracts, which had a total potential value of \$14.6 billion at award and \$18.9 billion as of July 2019.<sup>7</sup> For each of the 19 contracts, we reviewed award file documentation using a standardized checklist of FAA procurement policy and guidance requirements and communicated directly with the contracting officers (CO) and other officials to address specific questions and follow-up requests. We also interviewed officials from FAA's Acquisition and Contracting Office and the Acquisition Policy and Oversight Office.

We appreciate the courtesies and cooperation of Department of Transportation (DOT) representatives during this audit. If you have any questions concerning this report, please call me or Darren Murphy, Program Director, at (206) 255-1929.

cc: The Secretary  
DOT Audit Liaison, M-1  
FAA Audit Liaison, AAE-100

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<sup>4</sup> FAA considers the primary acquisition to be the one that carries out the core contractual work for the associated major program(s).

<sup>5</sup> This list of 27 major programs came from FAA's *Acquisition Baseline Performance Report Fiscal Year 2017 Update*, which provides a summary analysis of the cost, schedule, and performance for major and non-major programs active during the fiscal year. See exhibit D for a list of the 27 major programs.

<sup>6</sup> Our universe of 21 acquisitions represents all 27 major programs because several of the contracts support more than one program. Three of the 19 contracts were awarded noncompetitively.

<sup>7</sup> FAA did not estimate the total potential value at award for one because it is a letter contract. Therefore, in calculating the \$14.6 billion, we used the total potential value FAA provided in December 2018 when we were developing our universe.

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## Results in Brief

### **FAA's competitive award practices for its major program contracts expose the Agency to cost and performance risks.**

The specific award risks facing FAA include the following:

**FAA's actions to establish fair, reasonable, and realistic contract pricing lack sufficient support.** The Agency recognizes that establishing a fair and reasonable contract price can save millions of dollars and lead to the selection of the best-value contractor. However, we found issues with FAA's independent government cost estimates (IGCE) and price analyses—both of which are key to efficient pricing. For example, FAA lacked required IGCEs for 3 of the 19 contracts in our universe, totaling \$9.5 billion. Although FAA was able to provide IGCEs for work after the initial awards for two of these contracts, approximately \$4.9 billion of the total value of these three contracts was not supported by required cost estimates. Furthermore, 12 contracts had deficient IGCEs, and 13 had missing or unreliable price analyses. These inadequacies were due largely to FAA's use of a single contract for achieving many of its major program initiatives—making it virtually impossible for staff to fully understand or define the work requirements and associated costs of these major program contracts at inception. This is especially true for the major program contracts requiring the development of highly technical systems. These inadequacies also hinder the Agency's ability to set realistic prices and control contractor costs.

**FAA's award practices for its major program contracts do not always promote competition.** While the Agency's procurement policy recommends maintaining competition throughout the lifecycle of a product or service, FAA's award practices for its major program contracts often limit competition. These practices include inaccurately or poorly defined contract requirements, missed opportunities for competition throughout the lifecycle, and an unsound rationale for decisions to noncompetitively award contracts. These factors could be contributing to FAA's continued reliance on the same small pool of contractors to meet its needs. Specifically for the 16 competitive contracts in our universe, 3 contractors represented 11 (69 percent) of those contracts, for a total value of \$17.1 billion—which is 91 percent of the total value of all 16 contracts. FAA's reliance on such a small number of contractors increases the risk that the Agency is not getting the best value for its multibillion dollar major program contract investments.

**FAA does not consistently take required actions to prevent conflicts of interest (COI).** Safeguarding against COI among procurement officials is critical to ensuring a contract is awarded impartially and meets the Government's best

interest. FAA's standards of conduct requires employees to avoid even the appearance of COI when dealing with contractors. However, weaknesses in its major program contract award practices expose the Agency to increased risk of actual or perceived COI. For example, FAA could not provide complete COI agreements for all the officials involved in the selection process for 5 of the 19 contracts in our universe, totaling over \$1 billion. Weak controls in this area present increased risk to the integrity of FAA's procurement process.

**FAA lacks complete award documentation and a tracking process for its major program contracts.** According to FAA's procurement policy, the office or individual administering a contract must maintain records of all contractual actions and must not archive these records until the contract is closed and final payment is made. However, the award files for 8 of the 19 contracts in our universe were missing such key items as proposals, IGCEs, cost team evaluation reports, and past performance submissions, and/or were not maintained in an organized and central location. This impacts FAA's ability to support its award decisions and manage potential cost and schedule risks moving forward. Furthermore, FAA lacks a process to identify which contracts are associated with its major programs, which calls into question how the Agency is able to accurately track and annually report the cost of its programs to Congress and other key stakeholders.

Based on these findings, we determined that FAA put up to \$4.9 billion in Federal funds at risk because it did not have required IGCEs before it awarded three competitive contracts and did not provide a sound rational basis for awarding another three contracts noncompetitively.

Three overarching causes for most of these award risks include FAA's: (1) use of a single contract acquisition strategy for complex major program initiatives rather than an incremental one that utilizes a series of more manageable contracts that progressively build on already completed work; (2) policy and guidance that apply generally to all procurements<sup>8</sup> and do not address challenges specific to the award of major program contracts; and (3) inadequate internal controls for verifying compliance with some key Agency procurement requirements when it awards major program contracts.

We are making recommendations to improve FAA's major program contract award practices to achieve successful implementation of its initiatives and mitigate contract costs and performance risk.

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<sup>8</sup> FAA does set dollar thresholds for certain procurement policy requirements.

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## Background

In DOT's fiscal year 1996 Appropriations Act, Congress provided FAA with broad authority to develop its own acquisition system, which relieved the Agency from having to comply with the Federal Acquisition Regulation (FAR). FAA established the Acquisition Management System (AMS), a set of policies and guidance designed to address the unique needs of the Agency, which became effective on April 1, 1996. As such, FAA's entire acquisition process, including the award of major program contracts, is governed by AMS.

FAA receives an annual Facilities and Equipment (F&E) appropriation to fund its capital investments, which the Agency needs to sustain and modernize the infrastructure, systems, services, and procedures required for the safe and efficient operation of the NAS. In fiscal years 2017 and 2018, these appropriations represented \$2.86 billion and \$3.25 billion, respectively.<sup>9</sup>

According to FAA's *NAS Capital Investment Plan fiscal year 2018–2022*, the 27 major programs—covered by the 19 contracts and 2 IAAs in our audit universe—fall under the following budget activities within the Agency's F&E account<sup>10</sup> for capital spending:

- 23 are air traffic control investments;
- 3 are other types of investments; and
- 1 is mission support.

Eighteen of the 27 programs are identified specifically as NextGen related.

The 19 contracts in our universe were awarded between fiscal years 1996 and 2018, in keeping with the congressional request, which asked us to examine FAA's award practices of "contracts over the last 5, 10, 15, and 20 years." Our review of these 19 contracts focused on FAA's initial award practices rather than its subsequent actions (e.g., later modifications). Since these contracts began as far back as 1996, some have been modified many times since the initial award. Moreover, FAA has also modified or enhanced its procurement policies and practices during this timeframe. As such, Agency officials asked us to recognize that FAA may currently apply different practices to modifications of the initial

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<sup>9</sup> As determined by the amount appropriated to F&E in the *Consolidated Appropriations Act, 2017*, and enacted for F&E in the *Consolidated Appropriations Act, 2018*.

<sup>10</sup> According to the Agency's *NAS Capital Investment Plan*, this account has five budget activities: (1) engineering development, (2) air traffic control investments, (3) other (non-air traffic control) FAA investments, (4) mission support, and (5) personnel costs.



contracts in our universe. We did not review or audit this assertion, but agreed to provide this context to the reader.

That said, we identified issues with all the contracts in our universe and, in some instances, the effect of these issues may continue throughout the term of the contract. Most notably, as of the end of our review, 15 of the 19 contracts remain ongoing—potentially until fiscal years 2021 through 2030. Furthermore, FAA has used a single contract acquisition strategy to award major program contracts throughout the entire 2-decade time period covered by our universe, which we identified as a main cause of many of our findings. Additionally, two prior OIG recommendations to mitigate FAA's use of this strategy remain open, although the Agency is currently working on addressing both. Moreover, although our universe of contracts spans decades, the Agency's initial award decisions for some of its older contracts still have consequences that are relevant today.

Finally, due to the sensitive nature of certain procurement data—such as contractor proposal information—we limited the level of detail provided in many of our examples. We also did not include specific contractor names—instead consistently referring to them as contractor A, B, C, etc., throughout the report.

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## FAA's Competitive Award Practices for Its Major Program Contracts Expose the Agency to Cost and Performance Risks

FAA's stated goal for its unique procurement system is to obtain high-quality products and services in a timely, cost-effective manner, at prices that are fair and reasonable and give the Agency the flexibility to select the right vendor. However, FAA's competitive award practices for its major program contracts include a number of vulnerabilities that expose the Agency to cost and performance risks. Specifically, these vulnerabilities involve establishing fair, reasonable, and realistic pricing; promoting competitive awards whenever possible; mitigating against conflicts of interest among award-selection officials; and establishing effective contract management.

Our 2016 report on FAA reforms identified some of these vulnerabilities as management weaknesses that were impacting the outcomes of FAA's major acquisitions.<sup>11</sup> A critical reason for the vulnerabilities is that FAA often uses a single contract acquisition strategy rather than an incremental one for its major

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<sup>11</sup> *FAA Reforms Have Not Achieved Expected Cost, Efficiency, and Modernization Outcomes* (OIG Report Number AV-2016-015) January 15, 2016. OIG reports are available on our website: <https://www.oig.dot.gov/>.

program contracts. Specifically, to achieve its programmatic needs, FAA awards single contracts instead of more manageable successive contracts that progressively build on already completed work. According to Government Accountability Office (GAO) best practices, an incremental strategy reduces cost and schedule risks for major acquisition programs.<sup>12</sup> The Office of Management and Budget (OMB) also recommends breaking large acquisitions into smaller, more manageable independent contractual increments that can be successively priced (i.e., modular contracting) as a best practice for capital assets.<sup>13</sup> In 2016 and 2017, we also recommended that FAA consider using a more successive and incremental contracting strategy (see exhibit E). While both recommendations remain open, we are currently working with FAA to close them.

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## FAA's Actions To Establish Fair, Reasonable, and Realistic Pricing Lack Sufficient Support

According to FAA, the establishment of a fair and reasonable price (which the Agency calls "pricing") is a necessary part of any acquisition process and generates the data procurement officials need to make the best decision possible. This approach supports one of FAA's fundamental procurement principles: to select the contractor that is best able to satisfy FAA's mission. Thus, the Agency requires all procurement files to include a statement justifying the fairness and reasonableness of the price. FAA's *Contract Pricing Handbook* recognizes that a procurement official who establishes efficient pricing can save the Agency millions of dollars. A sound IGCE, as well as an adequate price analysis—and, at times, cost analysis—are keys to efficient pricing. However, we found issues regarding FAA's use of these pricing tools in 17 of the 19 major program contracts in our universe.

### FAA Could Not Provide IGCEs for Several Contracts

Per AMS, an IGCE is an internal Government estimate supported by factual or reasoned data that describes how much the Agency could reasonably expect to pay for needed supplies or services. It is required for any anticipated

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<sup>12</sup> GAO, *Detailed Systems Engineering Prior to Product Development Positions Programs for Success* (GAO-17-77), November 2016. This report focused specifically on major defense acquisition programs from the Department of Defense (DoD), Army, Air Force, and Navy/Marine Corps.

<sup>13</sup> *Capital Programming Guide: v 3.0, Supplement to OMB Circular A-11: Planning, Budgeting, and Acquisition of Capital Assets*, 2016.

procurement action with a total estimated value of \$150,000 or more.<sup>14</sup> The Governmentwide acquisition community<sup>15</sup> recognizes that a quality IGCE is an unbiased, realistic cost estimate for proposed contract supplies and services that supports the decisions made by program and contracting officials throughout the award process; serves as the basis for projecting and setting aside funds for the procurement; acts as a benchmark of reasonableness to compare to offerors' proposed prices; and supports contract price negotiations.

However, FAA could not provide an IGCE to support the award of 3 of the 19 contracts in our universe. For two of these contracts, FAA was able to provide IGCEs for work added after the initial awards. Nevertheless, of the \$9.5 billion total value for these 3 contracts, \$4.9 billion was still not supported by any IGCE. In particular:

- For its Standard Terminal Automation Replacement System (STARS) program contract valued at \$2.9 billion, FAA could not provide an IGCE for around \$1.5 billion associated with the initial scope of work. Specifically, FAA officials acknowledged they did not develop an IGCE when awarding this contract in 1996 for \$953 million, which will end in 2021. The STARS program seeks to upgrade air traffic control systems nationwide and give controllers a complete, precise picture of the airspace, enabling them to manage aircraft they are tracking with radar or satellite signals. FAA did develop an IGCE in 2009 to support costs moving forward under this contract. However, the IGCE did not support the costs of the initial award and subsequent contract value increase to just over \$1.5 billion.
- For its En Route Automation Modernization (ERAM) program contract valued at \$4.5 billion, FAA could not provide an IGCE for approximately \$1.3 billion associated with the initial scope of work. Specifically, FAA could not provide the IGCE document to support its \$971 million award of this contract, whose period of performance was originally 2002 to 2021. The ERAM program is to provide the technology that is the foundation of NextGen and guide the aviation industry in the transition from a ground-based to a satellite-based air traffic management. It is unclear whether an IGCE was actually not done or just could not be located because the CO said he is uncertain if the missing contract documentation was misplaced, archived, or destroyed. FAA did develop an IGCE in 2004 to support costs

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<sup>14</sup> Exemptions to this requirement include: (1) modifications to exercise priced options, (2) incremental funding modifications, (3) delivery orders for priced supplies or services under indefinite delivery contracts, (4) acquisition of real property, and (5) supplies or services with prices set by law or regulation.

<sup>15</sup> *DoD IGCE Handbook for Services Acquisition*, December 2017, updated February 2018; GAO, *Agencies Should Take Steps to More Effectively Use Independent Government Cost Estimates* (GAO-17-398), May 2017; and GAO *Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs* (GAO-09-3SP), March 2009.

moving forward under this contract. However, the IGCE did not support the costs associated with the initial award and subsequent contract value increase to approximately \$1.3 billion.

- For its Automatic Dependent Surveillance Broadcast (ADS-B) program contract, FAA could not provide an IGCE for the entire \$2.1 billion contract value. Specifically, FAA could not locate the IGCE document for this contract, awarded in 2007 with a period of performance through 2025. ADS-B is designed to enhance safety and efficiency in the air and on runways by moving air traffic control from ground-based radar to more precise satellite signals. However, the cost evaluation report associated with the original contract award referenced an IGCE amount of \$1.5 billion even though the Agency could not produce the actual IGCE documentation. FAA did develop a Life Cycle Cost Estimate for ADS-B implementation prior to the contract award, which FAA contracting officials asserted was the genesis for the IGCE but could not directly correlate it to the IGCE amount cited in the cost evaluation report.

FAA did not develop or could not provide a required IGCE—which is used as an independent benchmark for establishing fair and reasonable pricing—for the award of any of these three major program contracts. Therefore, it is unclear whether FAA obtained the best pricing for these contracts or could have expended potentially up to \$4.9 billion more efficiently, putting these Federal funds at risk. FAA did provide IGCEs for the other 16 contracts.

### **Most of the IGCEs Reviewed Were Deficient**

FAA's *Contract Pricing Handbook* stipulates that estimates must relate to proposal evaluations to help Agency officials determine whether an offeror's bid price is complete, reasonable, and realistic. For complex procurements like the major program contracts, the estimates should provide cost details that relate to the contract line item numbers (CLIN)<sup>16</sup> and work breakdown structure instead of a lump-sum, bottom-line estimate.

However, for six contracts in our universe, totaling \$2.3 billion, FAA could not provide IGCEs that matched the IGCE amounts the cost evaluation team used to evaluate offeror proposals. Furthermore, the IGCEs FAA developed for 12 of the contracts, totaling \$9.7 billion, did not meet the Agency's criteria, making them deficient—some of which FAA cost evaluation officials also recognized as inadequate. This occurred for various reasons: FAA based the estimates on

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<sup>16</sup> A CLIN is a number that identifies a separate supply or service to be provided under the contract. CLINs serve two purposes: (1) they break the contract down based on the commodities to be procured (labor hours of services, funding for travel, quantity of product A, quantity of product B, etc.) and (2) they provide traceable accounting classifications.

outdated systems and efforts; did not account for requirement updates; was not able to adequately price the requirements beyond the initial base year(s) or for specific CLINs; and assumed a different technical approach than what the offeror(s) proposed.

For example, the IGCE for a contract implementing FAA's NextGen Weather Processor (NWP)<sup>17</sup> was 57 to 72 percent higher than the proposed prices from each of the three offerors. The price evaluation team determined the IGCE was deficient because the estimate was based on a different technical approach than the one proposed by the offerors (who leveraged existing resources) and did not include estimated prices for subsequent work requirements that would build off the work completed in the initial contract years. In the end, the multimillion-dollar contract was awarded at an amount that was 3 percent less than the winning offeror's original proposed price and 70 percent less than the original IGCE.

Given that an IGCE is supposed to represent how much the Agency could reasonably expect to pay for needed supplies or services, it could signify a problem if the estimate varies significantly from the offerors' proposed costs. For example, either FAA or the contractors may not understand the contract requirements, or the contractors may be offering unreasonably low bids in order to win the award. As such, AMS and the *Contract Pricing Handbook* state that when an IGCE varies by more than 15 percent from the price of the offer proposed for award, the CO should notify the program official for "appropriate remedial actions"—although neither defines what those actions entail.<sup>18</sup> Moreover, AMS also requires the Program Office to submit a revised estimate with an explanation and reconciliation to the Office of Financial Analysis (OFA) prior to the contract award.<sup>19</sup> Ten of the 12 deficient IGCEs we identified varied from the selected offer by more than 15 percent; however, FAA revised the estimates for only 4 of them (see table 1, rows 2, 4, 8, and 9). The revised estimate for one of these four contracts was properly submitted to OFA prior to contract award (see table 1, row 9). However the revised estimates for another two contracts were not submitted until after the contracts were already awarded (see table 1, rows 2 and 8). The current CO was unable to obtain from Program Office

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<sup>17</sup> NWP is a common weather processing platform that combines information from weather radar, environmental satellites, lightning, meteorological observations (from surface stations and aircraft), and National Oceanic and Atmospheric Administration numerical forecast model output to generate improved products for NAS stakeholders. NWP is intended to achieve more efficient strategic and tactical use of the airspace, significantly reduce weather-related air traffic delays, and maintain terminal aviation safety products.

<sup>18</sup> AMS T3.2.3(A)(2)(g), *Cost and Price Methodology: Differences Between Proposal Price and IGCE; and FAA Contract Pricing Handbook*, chapter 5, "Price Analysis," section 5.2.5 (January 2012).

<sup>19</sup> AMS T3.2.1.4(A)(1)(k), *CFO Requirements: Authorization for Procurement Request*.

officials the date that the revised estimate for the fourth contract was submitted (see table 1, row 4).

Table 1. Contracts With IGCEs Varying by 15 Percent or More From Selected Offer (in Millions)

Selected contractor	% Difference between selected offer and IGCE	\$ Difference between selected offer and IGCE	Estimate revised	Revised estimate submitted to OFA prior to award
(1) Contractor A	(27%)	(\$629.3)	No	N/A
(2) Contractor A	30%	\$437.4	Yes	No
(3) Contractor F	(44%)	(\$180.0)	No	N/A
(4) Contractor A	(45%)	(\$148.2)	Yes	Unknown
(5) Contractor B	(24%)	(\$42.8)	No	N/A
(6) Contractor D	(41%)	(\$55.9)	No	N/A
(7) Contractor A	(69%)	(\$104.7)	No	N/A
(8) Contractor B	(69%)	(\$173.4)	Yes	No
(9) Contractor C	(26%)	(\$122.5)	Yes	Yes
(10) Contractor E	(30%)	(\$296.5)	No	N/A

Note: The award dates for these 10 contracts span fiscal years 2002 to 2018.

Source: OIG analysis of the 19 FAA major program contracts in our universe

In 2017, GAO reviewed how various Federal agencies use IGCEs,<sup>20</sup> and reported that Department of Defense (DoD) officials found it difficult to develop useful IGCEs when contract requirements were not fully understood. Although DoD officials were describing Research and Development contracts, this example still illustrates the obstacle FAA faces in developing complete, reasonable, and realistic IGCEs for its major program contracts, which often include design and development work. By awarding a single contract for an entire effort—which may include design, development, deployment, testing, and maintenance of new technology or services—an FAA procurement official must understand all the requirements needed to achieve the intended contract result, as well as establish a viable cost estimate for these requirements. As GAO reported, sound cost estimates—especially for large system acquisition programs—depend on an

<sup>20</sup> GAO, *Agencies Should Take Steps to More Effectively Use Independent Government Cost Estimates* (GAO-17-398), May 2017.

incremental acquisition strategy as opposed to a single contract acquisition strategy.<sup>21</sup>

Without a sound cost estimate, FAA cannot have a clear understanding of the cost and schedule risks inherent in these major program contracts or the information it needs to make programmatic decisions. Therefore, continuing the award process without a reasonable estimate, or an understanding of the requirements, exposes FAA to cost and performance risks that, in the case of these major program contracts, could result in millions of wasted Government funds. In response to this finding about deficient IGCEs, FAA acquisition officials told us that they revised AMS in 2016 to indicate that an IGCE should track directly to the proposed contract CLIN structure to allow for valid comparisons when evaluating proposals. Moreover, FAA officials told us that in 2019, the Agency had developed an introductory cost-estimating course to facilitate better understanding of cost-estimating considerations in developing IGCEs. However, we did not see evidence that controls are yet sufficient to promote compliance with the Agency's IGCE requirements.

### **FAA Did Not Always Complete Required Price Analyses**

AMS identifies price and cost analysis<sup>22</sup> as another critical tool for determining if offeror bids are allowable, reasonable, and realistic. According to AMS, during the selection process, the CO and the procurement team are responsible for using these methods to evaluate all offeror proposals, particularly competitive proposals. AMS further notes that price analysis must be performed on all offeror proposals and is the preferred method for evaluating competitive proposals. Cost analysis, on the other hand, must only be performed for competitive proposals when price analysis alone will not ensure fairness and reasonableness; the Agency seeks to understand whether the cost buildup in the proposal is realistic; and/or when the Screening Information Request (SIR)<sup>23</sup> indicates cost analysis will be part of the proposal evaluation.

Yet FAA officials acknowledged that they did not conduct a price analysis or were unable to provide evidence that it had been completed for 2 of the 16 competitive contracts in our universe, valued at \$2.9 billion and \$4.5 billion. These two contracts also lacked an IGCE. Furthermore, for another \$215 million

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<sup>21</sup> GAO, *Weapon System Requirements: Detailed Systems Engineering Prior to Product Development Positions Programs for Success* (GAO-17-77), November 2016.

<sup>22</sup> According to FAA, *price analysis* is the process of examining and analyzing a proposed price without evaluating its separate cost elements and the offeror's proposed profit/fee. *Cost analysis* is the review and evaluation of the separate cost elements and the proposed profit/fee.

<sup>23</sup> A SIR is a request from FAA for documentation, information, presentations, proposals, or binding offers. There are three categories of SIRs: (1) qualification information, (2) screening information, and (3) request for offers. FAA may use one or a series of SIRs (with a screening decision after each one) to arrive at an award selection decision.

competitive contract, FAA only conducted a cost analysis, but it did not do a price analysis.

FAA's *Contract Pricing Handbook* also states that both price and cost analysis should be used for noncompetitive contracts. However, FAA conducted only a price analysis for each of three noncompetitive contracts in our universe, totaling \$17.3 million. One of these noncompetitive contracts, for example, was an approximately \$10 million dollar follow-on request for support services from the incumbent small business contractor for the System Wide Information Management (SWIM) Program.<sup>24</sup> FAA only performed a price analysis, which was inadequate because FAA merely accepted the contractor's rates as fair and reasonable without further analysis. When FAA added the two new labor categories to this follow-on contract, it just accepted the contractor's rates—which were based on earlier contracts—even though they were 29 and 26 percent higher than the Government's estimate. Furthermore, these rates were almost 20 percent more than the comparable rates listed on the Agency's small business procurement vehicle.<sup>25</sup>

### **FAA's Required Price Analyses Were Often Unreliable**

Several of the techniques for conducting price analysis in AMS and the *Contract Pricing Handbook* are not easily applied to FAA's major program contracts, which usually involve new technologies and services. That means Agency officials do not have prior proposed prices, rough yardsticks, or published catalogue or market prices for the same or similar services or products to use as a means of comparison. As a result, the most applicable price analysis techniques identified in the guidance includes comparing offerors' proposed prices with the IGCE and also with each other. However, the *Contract Pricing Handbook* adds that comparing offerors' proposed prices should only be used if the proposal terms and conditions are comparable. In addition, the Defense Acquisition University's Contract Pricing Reference Guide states that comparisons with other proposed prices are less reliable when the requirements permit offerors to propose widely different technical approaches.

As such, we determined FAA's price analysis for 11 contracts, totaling \$9.2 billion, to be inadequate for such reasons as the Agency used a deficient IGCE as a price analysis tool; compared offers with significantly different technical approaches; and stated that it could not make a fair and reasonable determination based on the price analysis yet did not complete a cost analysis. Due to the magnitude of innovative and forward-looking services and products FAA is acquiring under

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<sup>24</sup> FAA established the SWIM program to implement a set of information technology principles in the NAS and provide users with relevant and commonly understandable information. SWIM is an information-sharing platform that offers a single point of access for aviation data and will serve as the digital data-sharing backbone of NextGen.

<sup>25</sup> FAA's small business procurement vehicle is called Electronic FAA Accelerated and Simplified Tasks or eFAST.



these major program contracts, the offerors' proposed technical approaches often varied from one another, at times significantly. Furthermore, as previously mentioned, FAA's single contract acquisition strategy contributed to the development of deficient IGCEs, making them inadequate price analysis tools. However, FAA used and relied on both comparing offerors' proposed prices with the IGCE and also with each other as price analysis techniques when evaluating proposals during the award process for most of the major program contracts we reviewed.

For example, in 2014, FAA issued a SIR for the award of a services and support contract for FAA's Aeronautical Information Management Modernization (AIMM) Program.<sup>26</sup> The scope of the award included software design, development, testing, and deployment; hardware and software licensing and maintenance; software selection, procurement, and configuration; requirements finalization; engineering service to transition FAA to Cloud Services; technical documentation development, etc. FAA received proposals from four offerors with prices ranging from \$81.8 million to \$125.8 million. To conduct price analysis, the price evaluation team compared the offers to the IGCE and among each other despite the fact that they recognized that the IGCE and offers had large variances, mostly due to differences in technical approach. Specifically, two offerors used virtual solutions, while the other two used non-virtual ones. Furthermore, two of the offerors leveraged existing hardware while the other two did not. FAA selected the offeror with the lowest price even though it did not receive the top technical rating, and technical approach was the most important award factor. Price was an unscored factor that was only evaluated for reasonableness in correlation with the proposed technical approach. During a reevaluation of offers due to a protest by one of the unsuccessful offerors, FAA officials admitted the IGCE was "flawed as a price analysis tool" as it did not match the offerors' proposed technical approaches, relied on outdated models for contract components, and used more skilled labor than was required by the statement of work. The reevaluation did not change the ultimate best-value award decision. Within 3 years of the award, the contractor was experiencing performance issues, incomplete deliverables, over \$10 million in cost overruns, and 21-month schedule delays. FAA reported that the contract's initial value of \$81.8 million increased to \$94.6 million due to these issues.

Using an incremental acquisition strategy recommended by GAO and OMB allows for more realistic and complete IGCEs and reduces the differences between proposed technical approaches and their associated costs. This approach also allows officials to conduct a more reliable and sound price analysis.

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<sup>26</sup> AIMM is intended to deliver modern, integrated digital aeronautical information to the NAS. Its mission is to enhance the safety and efficiency of the NAS by establishing a single trusted access point of digital aeronautical information.

FAA's use of a single contract acquisition strategy for major program initiatives allows for too many unknowns regarding technical requirements and total price. Furthermore, FAA's AMS and *Contract Pricing Handbook*, which include policy and guidance on conducting price and cost analysis, do not discuss these unique challenges related to major program contracts that can affect the reliability of analysis and award selection results. As such, FAA is impeded in ensuring that its major program contracts are fairly and reasonably priced.

### **FAA's Contract Ceilings Are Often Unreliable**

A ceiling price represents the Government's maximum liability under the contract, as it is the maximum amount that can be paid to the contractor. Thus, the higher the ceiling, the lower the overall incentive for the contractor to control costs since it has a greater ability to recover its expenses.

FAA, however, is severely challenged in its ability to establish reliable contract ceilings because many of its major program contracts span a decade or more. They also may have uncertain requirements, particularly when future contract work is dependent on developments that happen during the initial contract years. Furthermore, FAA's procurement policy and *Contract Pricing Handbook* do not specifically address how to establish ceilings for major program contracts. Instead, the Agency often establishes a ceiling amount by using the upper range of its estimates, which are calculated based on assumptions and trends rather than on well-defined programmatic needs.

For example, when FAA awarded a 19-year letter contract<sup>27</sup> for ERAM in 2002—which included the full design, development, and deployment, as well as lifecycle management—FAA did not establish an overall contract ceiling price, award amount, or total potential value. Instead, the Agency estimated a ceiling price of \$880 million for three CLINs under the contract and authorized \$6 million in funding for two of the three CLINs. The current CO explained that the lack of a contract ceiling was unique and believed it was due to the fact that at the time of award, there was no reliable way to project the work over the next 20 years. The CO did not know why the contract was approved without a ceiling, and added that the Agency did not plan to establish one, as the contract is set to expire on December 31, 2021. FAA has expended approximately \$4 billion under this contract.

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<sup>27</sup> A letter contract is a preliminary contractual instrument that authorizes a contractor to begin work immediately, subject to the negotiation of a definitive contract. It includes a brief description of the work, performance period, and a limitation on the total amount the contractor may expend and FAA will pay. According to AMS, it is used when either (1) FAA's interests demand that it give the contractor a binding commitment so that work can start immediately and negotiating a definitive contract is not possible in sufficient time to meet the requirement or (2) in emergency or other special situations for limited amounts.

Furthermore, as of September 2019, 10 of the ERAM contract's approximately 200 CLINs remain undefinitized.<sup>28</sup> Without definitizing the CLINs, FAA is challenged to establish a reliable contract ceiling. According to the CO, definitizing the CLINs in a timely manner is a goal, but the magnitude and complexity of the work make that hard, and that is not likely to change. The CO also noted that, in his experience, a big reason for the delay in the CLIN definitization process is often because Program Office officials take so long to sign off on the Chief Financial Officer (CFO) procurement approval package.<sup>29</sup> But he added that FAA is implementing OIG's 2012 recommendation to revise the ERAM CLIN structure to more effectively track costs.<sup>30</sup> Moreover, although the Agency's standard operating procedure<sup>31</sup> includes a 60-day estimated timeframe for the CFO to approve a completed procurement package, it does not include a timeframe for the necessary officials to provide their signatures on the package before it can be submitted to the CFO for approval. FAA told us this standard operating procedure is in the process of being updated.

A second example relates to two multiphase contracts for closely related weather programs—NWP and Common Support Services–Weather (CSS-Wx)<sup>32</sup>—awarded in March 2015 for \$75.4 million and \$48.2 million, respectively. The scopes of work included, among other things, software and system design, integration, testing, deployment, support, and maintenance. The ceilings for these contracts were initially set at \$389 million and \$237.8 million, respectively. In both cases, FAA established the ceiling amounts using a Rough Order Magnitude (ROM)<sup>33</sup> to account for work to be completed in future years of the contract, which were not priced in either the IGCE or the winning offeror's proposed price. According to GAO,<sup>34</sup> a ROM is developed from limited data when a quick estimate is needed

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<sup>28</sup> Definitization occurs when previously undefined contract terms, specifications, and prices are determined. AMS does not include a requirement for definitizing a letter contract. However, it states definitization of a ceiling-priced contract should be completed within 180 days after the date of the ceiling-priced contract or before 40 percent of the work has been completed, whichever occurs first. FAR and DFARS both have this requirement for letter contracts, except DFARS states 180 days or "the date on which the amount of funds obligated under the contract action is equal to more than 50 percent of the not-to-exceed price."

<sup>29</sup> CFO approval is required on any procurement action valued at \$10 million or more. This includes modifications not approved by the CFO to a contract with a ceiling or value of \$10 million or more that increases the CFO-approved amount 15 percent or \$10 million, whichever is less.

<sup>30</sup> *Weaknesses in Program and Contract Management Contribute to ERAM Delays and Put Other NextGen Initiatives at Risk* (OIG Report Number AV-2012-179), September 2012.

<sup>31</sup> FAA, *Office of Financial Analysis Acquisition Oversight Division (AFA-100) Standard Operating Procedure for All Acquisitions of \$10 million or More*, September 2014.

<sup>32</sup> CSS-Wx is the single provider of weather data, products, and imagery within the NAS, and uses standards-based weather dissemination via SWIM. It is intended to improve the quality of traffic management decisions and reduce controller workload during severe weather.

<sup>33</sup> A ROM is a quick and broad cost estimate that helps develop a general range of cost requirements in the early stages of the acquisition lifecycle.

<sup>34</sup> GAO, *GAO Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs* (GAO-09-3SP), March 2009.

and few details are available or required. It is typically developed to determine the feasibility of a project and may only cover a portion of the entire cost estimate. Because an estimate based on a ROM analysis could vary by as much as 100 percent from the actual costs, it is not considered a budget-quality cost estimate. According to FAA, the NWP and CSS-Wx contracts were set up for flexibility in case additional services were needed. As of July 2019, both contracts had experienced a combined \$26 million in cost overruns and 3 years in schedule delays.

FAA's single contract acquisition strategy for major program contracts puts the Agency in the position of establishing multimillion- and multibillion-dollar ceiling amounts for contracts that span a decade or more, where the work requirements beyond the initial contract year(s) are uncertain. This approach runs counter to guidance from GAO and OMB, which describe breaking large acquisitions into manageable contractual increments as a best practice for Federal agencies. Furthermore, realistic and reliable contract ceiling amounts are critical for helping FAA control contractor costs. Therefore, FAA's current practices expose the Agency to risks of paying more than needed, and hinder its ability to manage costs and accurately plan for future funding.

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## **FAA's Award Practices for Its Major Program Contracts Do Not Always Promote Competition**

Competition is a critical tool in Federal Government contracting to achieve the best possible value for taxpayers. The benefits of competition in acquiring goods and services from the private sector are well established, as competitive contracts not only help save the taxpayer money but can also improve contractor performance, curb fraud, and promote accountability for results. Fundamental principles of FAA's AMS procurement system include encouraging competition as the preferred method of contracting and enabling selection of the contractor with the best value to satisfy FAA's needs. However, the Agency's award practices for its major program contracts limit the full potential of competition and the intended benefits. These practices include issues such as the challenges in defining contract requirements, failure to optimize opportunities for competition throughout the product or service lifecycle, and poorly reasoned noncompetitive award decisions.

### **FAA Faces Challenges in Defining Requirements for Major Program Contracts**

Contract requirements describe the Government's needs when procuring products and services. FAA's procurement policy states a properly written

statement of work (which is part of the SIR) is critical for the Agency to describe the requirements for the work to be accomplished and acquire what it needs. Moreover, in September 2018, GAO reported that Federal statute, policy, and best practices emphasize the need for valid, clear, and achievable requirements early in the acquisition process.<sup>35</sup> Defining contract requirements up front helps ensure they are essential, technically feasible, and affordable. When requirements are ill-defined, trade-offs are harder to make, which can lead to cost increases and schedule delays post-award. For instance, in June 2015, GAO reported that DoD was experiencing cost and schedule growth in its major acquisition programs because contract requirements were not initially well defined and understood.

Ill-defined requirements can also affect competition and the number and quality of offers an agency receives in response to its request for proposals or, in FAA's case, a SIR. A Congressional Acquisition Advisory Panel<sup>36</sup> reported in 2007 that defining requirements is key to achieving the benefits of competition because procurements with clear requirements are far more likely to produce competitive offers that meet an agency's needs. Having a reduced pool of responsive offers during any competitive acquisition ultimately hinders an agency's ability to select the best-value contractor.

As such, FAA's use of a single contract acquisition strategy for a major program generally results in more SIR requirements in order for a potential contractor to qualify for the award than an incremental strategy where the requirements are spread over several successive contracts. Therefore, FAA's approach may ultimately limit the number of offers received.

Furthermore, since major program contracts frequently include many unknowns and emerging technologies, waivers and deviations from the requirements outlined in the SIRs are to be expected. However, the likelihood of such waivers and deviations only increases with the single contract acquisition strategy—given that a single major program contract for everything from design to engineering to implementation and maintenance will include more requirements and more unknowns than if a series of incremental contracts were used for the same efforts.

For example, for four of the competitive contracts in our review, FAA granted a number of waivers and deviations to the SIR technical requirements after the contractor had been selected and the award was made. These contracts had a total value of \$10.1 billion (see table 2). In one case, the SIR for a \$5 billion, 20-year plus contract awarded back in July 2002 included 777 mandatory technical

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<sup>35</sup> GAO, *Federal Acquisitions: Congress and the Executive Branch Have Taken Steps to Address Key Issues, but Challenges Endure* (GAO-18-627), September 2018.

<sup>36</sup> Congress established the Panel in the Service Acquisition Reform Act of 2003 to review Federal acquisition laws, regulations, and policies, as well as identify opportunities for improvements.

requirements. This contract for the FAA Telecommunications Infrastructure Program is for a wide range of telecommunications services to support NAS operational and mission support.<sup>37</sup> As of July 2019, FAA had granted 218 waivers, which affected approximately 50 of the contract’s original mandatory requirements, and changed over 960 contract items—including requirements (see table 2, row 2).

Table 2. Four Contracts With the Highest Number of Technical Requirements and Post-Award Waivers and Deviations

Contractor	Award date	Potential value, July 2019 (in millions)	Number of technical requirements in SIR	Number of waivers and deviations granted
(1) Contractor B	9/16/1996	\$2,897.0	1,432	135
(2) Contractor A	7/15/2002	\$5,000.0	777	218
(3) Contractor A	8/30/2007	\$2,073.8	695	86
(4) Contractor D	10/29/2014	\$94.6	1,634	221

Source: OIG analysis of the 19 FAA major program contracts in our universe

By including unnecessary or poorly defined requirements in the SIR, FAA may be unintentionally limiting competition as some potential contractors may not submit proposals. FAA’s AMS acknowledges that overly restrictive requirements inhibit competition. Additionally, requirements come at a cost and factor into the award amount. While post-award waivers and deviations could result in cost-savings to the Agency, they could also lead to FAA paying for requirements that have been waived or for deviations that have been granted without making appropriate corresponding adjustments to contract pricing.

With an incremental acquisition strategy, FAA could more accurately define its requirements for its major program contracts and potentially reduce the number of requirements in a single contract. This in turn could help FAA mitigate risks to cost and schedule and potentially expand its contractor pool with the goal of selecting the best value to meet the Agency’s mission. As previously mentioned, GAO and OMB have both recognized that the use of an incremental contracting strategy can help Federal agencies increase the quality and quantity of

<sup>37</sup> The scope of work includes, but is not limited to, the following areas: Program Management, Telecommunications Planning and Engineering, Security, Service Verification, Implementation, Network Management and Operations, Service Maintenance, Quality Assurance and Configuration Management, and Service Ordering and Invoicing.

competition and reduce risk by accommodating changing technology and agency priorities.

In response to one of our previous reviews and recommendations (see exhibit E), FAA's Director of Office of Audit and Evaluation stated that, during calendar year 2016, the Agency would review Federal and industry best practices for acquiring major capital investments—including the use of successive contracting and modular concepts—to determine whether to make changes to AMS. Because we have already made two recommendations on FAA adopting an incremental and successive contract acquisition strategy, and are currently working with the Agency to close them, we are not making another related recommendation in this report.

### **FAA Does Not Optimize Opportunities for Competition Throughout the Product or Service Lifecycle**

AMS states that the Agency should consider methods for maintaining competition throughout the lifecycle of any product or service. Given the magnitude and complexity of the work and services its major programs require, FAA already has a limited pool of capable potential contractors. The Agency's acquisition strategy to use a single contract to accomplish the design, development, installation, and implementation of a major program, under contracts that sometimes span decades, further limits the contractor pool, and thus the extent of competition. As a result, FAA relies on the same small pool of contractors for the majority of its major program work. For example, of the 16 competitive contracts in our universe, just 3 contractors represented 11 (69 percent) of those contracts for a total value of \$17.1 billion—which is 91 percent of the total value of all 16 contracts (see table 3).

Table 3. “Big Three” Representation in the 16 Competitive Contracts OIG Reviewed

Selected Contractor	Number of contracts with offers (out of 16)	Number of contracts awarded* (out of 16)	% of all 16 contracts awarded	Total value of contracts awarded (in millions)	% total value of all 16 contracts awarded
Contractor A	7	5	31%	\$8,666.7	46%
Contractor B	7	3	19%	\$3,213.3	17%
Contractor C	7	3	19%	\$5,263.6	28%
<b>Big 3 Totals</b>	<b>21</b>	<b>11</b>	<b>69%</b>	<b>\$17,143.6</b>	<b>91%</b>

\* For 4 of these 11 contracts, the initial award went to a different company that was later merged or acquired by one of the “Big Three.”

Source: OIG analysis of the 16 competitive FAA major program contracts in our universe

Such experiences with previous or similar contracts may offer contractors like these three a competitive advantage—potentially allowing them to offer more responsive proposals. It also makes it easier for FAA to justify noncompetitively awarding follow-on contracts because the offerors have built such an intimate knowledge of the work. Furthermore, FAA does not always schedule enough time to compete subsequent or follow-on work but instead continues with the incumbent contractor, regardless of performance, cost, or schedule issues. In addition to stating there is not enough time to compete an award, FAA justifies this noncompetitive approach by focusing on the contractor’s experience and knowledge associated with the already completed work, as well as risks associated with a new contractor’s learning curve that could cause delays. Moreover, while AMS identifies competition among two or more sources as the preferred method of procurement, FAA classifies an award as competitive if only one bid is received<sup>38</sup> or only one of the bids is determined responsive.<sup>39</sup> Our concerns are exemplified in the following contract awards:

In August 2012, FAA competitively awarded a \$291.6 million, 15-year contract to provide for the development, engineering, testing, implementation, technical

<sup>38</sup> FAA acquisition officials told us they document justifications for one-bid competitive awards. However, we did not see any justification for the one competitive contract in our universe that received only one responsive bid.

<sup>39</sup> Both Congress and GAO have identified contracts awarded using competitive procedures but where only one offer is received as an area of concern. Moreover, the Office of Federal Procurement Policy Act, as amended by the Competition in Contracting Act, stipulates that these one-offer contracts should be recorded as “noncompetitive procurements using competitive procedures.” The Office of Federal Procurement Policy also noted that competitions that yield only one offer deprive agencies of the ability to consider alternative solutions in a reasoned and structured manner.



support, and training for the NAS Voice System (NVS)<sup>40</sup> deployment and operation. The SIR included 4,160 technical requirements for qualification, and Contractor A was ultimately selected over the two other offerors. Contractor A had been the contractor on the Agency's previous voice system contract, which had experienced performance issues and cost overruns—including missed deadlines and product development delays. Under this 2012 contract, Contractor A also had performance issues, including missed technical and schedule baselines, product development delays, and requirements without technical solutions. Although the CO noted a "multitude of shortfalls," FAA decided in September 2017 to exercise the option period and extended this contract to September 30, 2019. The Agency justified the contract extension as the most advantageous method for fulfilling its needs based on the nature of the requirements, the substantial investment to date, and because it "would not be practical for the FAA to consider acquisition of the option year contract requirements from an alternate supplier, due to the proprietary nature of the NVS design and cost/time restraints of a new competition." Yet by May 2018, FAA had issued a stop work order due to all the contract issues and ultimately terminated the contract in December 2018. Of the \$71.2 million FAA spent on this project, the CO reported that \$61.6 million was a total loss.<sup>41</sup>

As a second example, for FAA's October 2014 competitively awarded \$81.7 million AIMM program support and services contract, the SIR included 1,634 technical requirements. The technical proposal was the most heavily weighed factor in the best-value award-selection decision. Contractor D ultimately won the award, although its technical approach did not demonstrate or support accomplishing a number of requirements. However, FAA partially justified its selection because of Contractor D's low pricing—even though price was not scored and was only evaluated for reasonableness in correlation with the technical proposal. In March 2019, the CO reported that Contractor D's performance under this contract had been unsatisfactory due to incomplete and noncompliant deliveries. As a result, there were 21 months of schedule delays and \$10.6 million (13 percent) in increased costs, although the scope of work remained the same. Even so, in November 2018, FAA exercised a 1-year option period and increased the contract ceiling to \$92.4 million—covering the \$10.6 million in cost overruns. The Agency stated that (1) Contractor D's expertise and experience would "not be available from another offeror on a moment's notice;" (2) trying to familiarize a new company with the contract requirements would interrupt vital services and cause program destabilization—an unnecessary

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<sup>40</sup> NVS was intended to replace FAA's 40-year-old voice switches with a modern and flexible operational voice capability and to support communications between air traffic controllers and between controllers and aircraft.

<sup>41</sup> FAA officials are planning a new strategy to fulfill this mission shortfall, which they anticipate will result in several competitive procurements. FAA issued a market survey for this new strategy in June 2019, which included a discussion of the proposed approach.

waste of both time and funding; and (3) any alternatives to exercising the option period would be “non-viable.” As of July 2019, the ceiling has been further increased to \$94.6 million.

A third example concerns a 7-year contract to update FAA’s Wide Area Augmentation System (WAAS) infrastructure, which FAA competitively awarded in September 2014. The contract included services such as engineering; hardware and software design; development; procurement and production; system development testing and evaluation; and the integration of two new geostationary earth orbit satellites. The SIR included 220 pages of technical requirements, and the only responsive offer came from the 17-year incumbent contractor, Contractor B. Another proposal was submitted—from a vendor that has a joint venture with Contractor B—but it included only one of the four submission requirements. FAA decided in October 2018 to noncompetitively award the 2 option years to Contractor B before the contract expiration on September 25, 2019. As a result of this decision, FAA increased the contract ceiling by \$41 million. The Agency stated that Contractor B’s prior experience made it “uniquely qualified,” but noted it did not have time to conduct a market analysis to support its decision.

FAA’s 25-year, \$2.9 billion contract for its STARS program provides yet another example. Awarded in September 1996, the contract was to standardize, modernize, and replace aging air traffic control systems to meet current and projected air traffic demands, and included such tasks as software and other engineering services; site analysis; installation and transition planning; system design; system test and evaluation; and integrated logistics support. The SIR included 1,432 technical requirements, and 3 offers were received. Contractor B was selected. As this contract will end in September 2021, FAA has already publicly announced its intent to noncompetitively award Contractor B the follow-on contract for the continued system integration, sustainment, and enhancement of STARS. Given that the follow-on contract is set to span 10 years, by the end of its performance period, Contractor B will have provided these services for 34 years. In May 2019, FAA reported that the STARS program had \$489.5 million in cost overruns, but did not report any overruns for the contract itself, perhaps because the Agency never set a ceiling or total potential value for this contract.

In May 2016, we recommended FAA establish and implement a standardized process for identifying and assessing potential follow-on procurements to improve its ability to identify requirements that could be competed in the future. This recommendation remains open.<sup>42</sup>

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<sup>42</sup> *FAA Lacks Adequate Controls To Accurately Track and Award Its Sole-Source Contracts* (OIG Report Number ZA-2016-065), May 9, 2016.



In June 2017, FAA noncompetitively awarded a \$9.99 million, follow-on contract to the incumbent small business (Contractor I) for support services for FAA's SWIM program. The Agency based its rationale on a market survey that identified Contractor I as the only service-disabled, veteran-owned small business—among nine others—that could meet all the contract requirements for the original \$4.9 million price. The Agency also stated that the existing contract was expiring and that bringing in a new contractor would result in a significant learning curve and cause unnecessary costs and delays. However, right before it awarded the contract, FAA modified the scope of work by adding two labor categories and several option years. This doubled the contract ceiling from \$4.9 million to \$9.9 million; furthermore, the contract was no longer a follow-on as the scope of work had changed. FAA never reevaluated its noncompetitive award decision based on the expanded scope and doubled award value.

FAA did not provide a sound rational basis for bypassing competition on these contracts. As such, it failed to realize the potential benefits of competition and achieve a more efficient use of up to \$17.3 million, putting these Federal funds at risk.

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## **FAA Does Not Consistently Take Required Actions To Prevent Conflicts of Interest**

Safeguarding against COI among procurement officials involved in source selection is critical to ensuring the integrity of the procurement process. Individuals who have a real or apparent COI may be unable to render impartial, technically sound, and objective assistance, advice, or decisions. As such, FAA's standards of conduct for its employees includes a general rule to strictly avoid any actual or perceived COI in FAA-contractor relationships. However, vulnerabilities in its major program contract award practices expose the Agency to an increased risk of actual or perceived COI. For example, officials involved in the source selection process did not always complete the required conflict of interest and disclosure agreements. Furthermore, FAA did not always have the source selection evaluation plans completed and approved before offers were submitted. Ultimately, this undermines the integrity of FAA's acquisition process and can put contract funds at risk.

## Required COI and Disclosure Agreements Were Not Completed by All Source Selection Officials

According to AMS, for each procurement estimated at \$150,000 or more, all persons involved in the source selection process must sign and submit an Agreement Regarding COI to the Source Selection Official (SSO)<sup>46</sup> or designee before any participation in the process. FAA also recognizes that maintaining the security of sensitive procurement information and source selection proceedings protects the integrity of the selection process. As such, the Agency requires the SSO and each procurement team member—program officials, contracting personnel, legal counsel, and other support staff, including advisors—to sign an Agreement Regarding Non-Disclosure of Information<sup>47</sup> before it issues a SIR for any procurements \$150,000 or greater. However, FAA was unable to give us completed COI or non-disclosure agreements for all officials involved in the selection process for 3 of the 16 competitive contracts we reviewed, which have a combined total value of just over \$1 billion. Specifically, for one contract valued at \$215 million, FAA lacked completed agreements for any official involved in the source selection. For the other two contracts, FAA could provide some agreements but not all. Missing agreements included those for key source selection officials, such as the awarding CO, chairman of the Source Evaluation Board, and various members of the cost and technical evaluation teams.

Specific to noncompetitive contracts, the COI agreement terms are incorporated into the justification for not competing the award. Any person involved in the source selection process who does not sign the justification must complete a separate COI agreement. The non-disclosure agreement requirements also apply to noncompetitive awards. However, for two of the three noncompetitive contracts, totaling \$7.3 million, FAA could not provide completed agreements for the Program Office officials involved in the source selection process. These officials were the designated contracting officer representatives and helped develop the IGCEs. Ensuring these officials complete these agreements is especially important as it is the Program Office that recommends the specific contractor for the noncompetitive award.

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<sup>46</sup> The SSO's responsibilities include, among other things, ensuring the selection process is conducted properly and according to applicable policies and laws; establishing the source evaluation team and ensuring the team has the skills, expertise, and experience to perform the evaluation; ensuring actual or apparent conflicts of interest are avoided; approving the evaluation criteria and plan; and making the final source selection decision for an award. The Product or Service Team Lead or Director of the Requiring Organization serves as the SSO if the procurement is subject to the Joint Resource Council investment-decision process, unless otherwise designated by the Council.

<sup>47</sup> This agreement provides notice of the type of information that requires protection and the penalties for improperly disclosing such information.

## Weaknesses in FAA's Controls Over Source Selection Documentation Increases COI Risks

The source selection evaluation plan outlines the people, schedules, processes, criteria, and other information necessary for evaluating responses to a SIR and selecting the awardee. The size and detail of the evaluation plan is based on the complexity of the procurement, but at a minimum must include: (1) names of the SSO and source selection team members, including the CO; (2) evaluation factors listed in the SIR, their relative importance, and standards for rating offerors against the factors; and (3) the basis for the selection and award. The SSO must ensure the evaluation plan is consistent with the SIR and approve the plan before offeror responses are received.

Yet FAA was unable to provide us with an evaluation plan for its \$4.5 billion ERAM contract, awarded in 2002, and its \$2.9 billion STARS contract, awarded in 1996. Both contracts were awarded to a Big Three contractor (see table 3, page 21). The evaluation plans for another 10 of the 16 competitive contracts, with a total value of over \$10.7 billion, were not completed and approved by the SSOs before FAA received responses to the SIR. Moreover, we could not determine when the SSOs approved the plans for two other competitive contracts, totaling nearly \$200 million, as the signatures on the plans were undated.

Furthermore, the factor weights listed in the evaluation plan for a \$420 million contract to design, develop, test, implement, and support the Agency's Time Based Flow Management (TBFM) program<sup>48</sup> did not match the weights used in the proposal evaluations, and the SIR did not include any weights. When we questioned the CO about this, she provided an addendum to the plan with revised factor weights that matched the evaluation results. This addendum explained that changes had been made because the plan's initial factor weights did not comply with language in the SIR. However, the addendum was not dated or signed, and did not demonstrate any official approval. Therefore, it is unclear if these revised weights were established before FAA received responses to the SIR.

Lacking an approved evaluation plan prior to receipt of proposals—or making changes to evaluation factors or previously approved weights—could be seen as an attempt to steer award decisions to a particular contractor. FAA's lack of sound internal controls over this critical source selection documentation increases the possibility for COIs and may lead to questions about the integrity of the Agency's award decisions.

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<sup>48</sup> TBFM is part of FAA's NextGen portfolio and will focus on achieving and closing the performance gap during the transition to NextGen Trajectory Based Operations. It is intended to enhance efficiency in the NAS, optimize demand, and allow airspace users and air traffic management service providers to deliver consistent and dependable levels of performance.







request, the senior acquisition official said that he asked FAA's Joint Resource Council secretariat to begin tracking contract information with the major program data, which will "hopefully avoid such unacceptable delays for similar information in the future."

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## Conclusion

FAA carries a tremendous responsibility: to provide the safest, most efficient airspace system in the world and also to modernize it by making transformative changes via the Next Generation Air Transportation System (NextGen). The Agency relies on its major program contracts to build the necessary capacity to implement and carry out these important program missions. However, until FAA addresses critical vulnerabilities specific to the award of these contracts, it will be unable to better mitigate cost and performance risks for NextGen and its other programs necessary for ensuring safe and efficient air travel around the Nation. This in turn makes it more difficult for the Agency to maintain diligent stewardship of taxpayer dollars and ultimately achieve a safe, effective, and modern airspace system.

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## Recommendations

To enhance FAA's ability to achieve successful implementation of its major program initiatives and to mitigate contract cost and performance risks, we recommend that the Federal Aviation Administrator:

1. Revise the Acquisition Management System (AMS) and/or FAA's *Contract Pricing Handbook* to address challenges around conducting appropriate price and cost analyses in order to reliably assert and support a fair and reasonable price determination for a major program contract award. This should include techniques and scenarios to address specific issues that could arise during the award process, such as establishment of a contract ceiling amount at award that includes pricing for all contract work (including option years) using a sound source or basis.
2. Revise AMS to require acquisition planning for both competitive and noncompetitive major program contracts to allow adequate time and the possibility for achieving competition of option years and follow-on contracts.
3. Strengthen internal controls to verify that all independent government cost estimates (IGCE) are completed in compliance with Agency requirements prior to the award of a major program contract. Implementing this

recommendation could put up to \$4.9 billion in Federal funds to better use by improving FAA's ability to establish contract pricing that is fair, reasonable, and realistic.

4. Revise AMS to clarify requirements around what actions the Program Office must take prior to the award of a major program contract when an IGCE varies by more than 15 percent from the proposed offer, and strengthen internal controls to verify these requirements are followed.
5. Strengthen internal controls to hold acquisition and program officials accountable for providing timely signatures on packages for any major program contract procurement action—such as increasing the ceiling or definitizing a contract line item number—to be submitted for Chief Financial Officer approval, per Agency requirements.
6. Strengthen internal controls to ensure a sound rationale is documented to support each noncompetitive major program contract, per Agency requirements, before the award is made. Implementing this recommendation could put up to \$17.3 million to better use by allowing FAA to realize the benefits of competition and make more efficient use of these Federal funds.
7. Strengthen internal controls to verify compliance with Agency requirements for conflict of interest agreements to be completed by all officials involved in a major program contract source selection process before they perform any of their responsibilities.
8. Strengthen internal controls to verify compliance with Agency requirements regarding completion and approval of source selection evaluation plans for major program contracts.
9. Strengthen internal controls to verify compliance with Agency requirements to use code names in lieu of contractor names in all source selection and evaluation communication and documentation for major program contracts.
10. Strengthen internal controls to verify compliance with Agency requirements for maintaining centralized files for major program contracts—including a complete record of the acquisition history and decisions—and for archiving and destroying documentation.

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## Agency Comments and OIG Response

We provided FAA with our draft report on January 13, 2020, and received its response on February 10, 2020, which is included as an appendix to this report. FAA concurred with all 10 of our recommendations as written and provided

appropriate completion dates. Accordingly, we consider these recommendations resolved but open pending completion of the planned actions.

FAA, however, questioned whether “better record keeping alone” would result in \$4.9 billion and \$17.3 million for the Agency to put to better use. Agency officials also questioned our use of the contracts’ total potential value beyond the value at award and did not agree that issues with initial award practices can affect the entire contract term.

We identified up to \$4.9 billion and \$17.3 million of Federal funds at risk based on requirements put in place to ensure that contracts both meet the Agency’s needs and make the most efficient use of Federal dollars. These requirements involve more than mere record keeping. FAA itself states that “Independent government cost estimates and a sound [noncompetitive] rationale are critical to ensuring FAA received a reasonable price for a requirement.” However, FAA either did not comply or could not provide the support to verify it had complied with these two key requirements; that is why we identified *up to* \$4.9 billion and \$17.3 million in Federal funds at risk.

Furthermore, we used a conservative approach when determining our monetary findings and worked with FAA officials to ensure agreement on the amounts that comprise the \$4.9 billion. For example, we did not factor in any associated contract value if the Agency demonstrated it had developed an IGCE at some point during the contract term, after it made the initial award. We also did not factor in the dollars associated with contracts in which government cost estimates were developed but deemed inadequate by FAA officials during the award selection process.

Additionally, it is unclear how FAA can argue that issues with a contract’s award practices—particularly those involving pricing and a lack of competition—do not impact the entire term of the contract. Deficiencies in award practices—like estimating total contract costs, allowing for competition, and defining requirements—can impact pricing, performance, and technical approach for the life of the contract. We therefore stand by our analysis and support for our monetary findings.

Finally, we recognize that in October 2019, at the end of our audit work and several years after prior OIG recommendations, FAA revised its Program Requirements template to include language to “encourage” consideration of a modular contracting approach. However, the Agency must make further revisions to the language it added to the template or provide additional guidance before we can agree to close these recommendations. Moreover, we do not yet know how Agency contracting and program officials will implement this optional guidance or the impact it will have on the conditions we identify in this report.

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## Actions Required

We consider recommendations 1 through 10 resolved but open pending completion of FAA's planned actions.

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## Exhibit A. Scope and Methodology

We conducted this performance audit between April 2019 and January 2020 in accordance with generally accepted Government auditing standards as prescribed by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

On July 11, 2018, then Chairman of the House Committee on Transportation and Infrastructure Bill Shuster requested that we conduct a review of FAA's procurement programs and processes. Specifically, Mr. Shuster asked us to focus on the Agency's competitive award practices for its NextGen and air traffic control equipment and service contracts and its safeguards against conflicts of interest in the contracting process.

To assess FAA's competitive award practices, we asked FAA for a list of all the acquisition award numbers associated with the 27 major programs identified in the Agency's *System Acquisition Baseline Performance Fiscal Year 2017 Update* report. An FAA official disclosed that the Agency did not have a system for identifying this information and therefore had to rely on the Divisions to confirm the appropriate award number for each program. We also met with Agency acquisition officials to discuss the list of award numbers and ensure it represented all 27 major programs. The result was a list of 21 award numbers that represented the primary acquisitions<sup>49</sup> associated with the 27 major programs.<sup>50</sup> According to FAA, our list does not include the smaller procurements that support each major program (such as a contract for security equipment) as the Agency did not have a way to identify or quantify them when it developed the list. Therefore, this list of 21 procurements awarded at a total potential value of \$14,610,596,791<sup>51</sup> became our audit universe.

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<sup>49</sup> FAA considers the primary acquisition to be the one that carries out the core contractual work for the associated major program(s). The only exception is FSRM, which, instead of a primary acquisition, has seven smaller (\$4 million to \$200 million) service contracts for things such as guarding and maintaining air traffic control facilities, and security equipment, such as secure entry gates, personal identity verification card readers, x-ray machines, and specialized doors. We reviewed one of these seven contracts based on the award number FAA provided when we were developing our universe in December 2018.

<sup>50</sup> Our universe of 21 acquisitions represents all 27 major programs because several contracts support more than one program.

<sup>51</sup> FAA did not estimate the total potential value at award for one contract because it was a letter contract. Therefore, in calculating the universe total of \$14.6 billion, we used the total potential value FAA provided in December 2018 when we were developing our universe. For the two IAAs, we used the initial funded amounts, which totaled \$2 million.

Since FAA did not have a system in place to identify the award numbers for major programs, the team was limited in its methodology to validate the accuracy and completeness of the audit universe. However, we tested the accuracy of the universe data by comparing it to the information contained in the award documentation we reviewed for each of the 21 procurements and identified inconsequential discrepancies. Furthermore, through our award document reviews and discussions with the COs and other Agency officials, we were able to assert a level of confidence sufficient for the purpose of this audit that our universe was a complete representation of the primary acquisition for each of the 27 major programs.

However, 2 of the 21 acquisitions in our universe were IAAs. Our review of these two IAAs was limited and was not included in the main audit analysis of the remaining 19 procurements that represented contracts. These 19 major program contracts were awarded at a total potential value of \$14,608,600,504 and, as of July 2019, represented a total potential value of \$18,887,081,357. These 19 contracts covered 26 of the 27 major programs<sup>52</sup> and had award dates spanning fiscal years 1996 to 2018. As we completed our audit work, 4 of these contracts had ended, with the remaining 15 potentially continuing as far out as fiscal year 2030.

We reviewed the Agency's procurement policy and guidance, including AMS and FAA's *Contract Pricing Handbook*. We interviewed officials in both the Acquisition and Contracting Office and the Acquisition Policy and Oversight Office at FAA Headquarters, and communicated extensively with the COs for our 19 contracts in person and via phone and email. This included several standardized data calls to the COs for all 19 contracts.

Using FAA's acquisition policy and guidance, the audit team developed a standardized checklist to guide their review of the contract award documents—focusing on key aspect of the award selection decision process. They then gave FAA a specific list of requested award documents based on the checklist questions, which proved critical given the large-volume files of contract documents and the lack of centralized or complete contract files. FAA provided the team with hard copy files, flash drives, and access to its electronic databases, including the Electronic Document Storage system and Knowledge Services Network. We then completed the standardized checklist for all 19 contracts based on the provided contract documentation and subsequent follow-up with the COs.

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<sup>52</sup> One major program was not covered by any of our 19 contracts: System Approach for Safety Oversight (SASO), which was covered by one of the two IAAs. The major program covered by the other IAA was also associated with 1 of the 19 contracts.

Finally, we reviewed relevant GAO reports on major programs, competitive award practices, and related activities. We also reviewed applicable sections of the FAR, DoD acquisition policies and guidance, and the Code of Federal Regulations for comparison purposes.

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## **Exhibit B.** Organizations Visited or Contacted

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### **Federal Aviation Administration**

FAA Headquarters, Washington, DC

- FAA Acquisition and Contracting Office
- FAA Acquisition and Policy Oversight Office



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## Exhibit C. List of Acronyms

ADS-B	Automatic Dependent Surveillance Broadcast
AIMM	Aeronautical Information Management Modernization
AMS	Acquisition Management System
CFO	Chief Financial Officer
CLIN	Contract line item number
CO	Contracting Officer
COI	Conflict of interest
CSS-Wx	Common Support Services–Weather
DoD	Department of Defense
DOT	Department of Transportation
ERAM	En Route Automation Modernization
F&E	Facilities and Equipment
FAA	Federal Aviation Administration
FAR	Federal Acquisition Regulation
FSRM	Facility Security Risk Management
GAO	Government Accountability Office
IAA	Inter-agency agreement
IGCE	Independent government cost estimate
OFA	Office of Financial Analysis
OIG	Office of Inspector General
OMB	Office of Management and Budget
NAS	National Airspace System
NextGen	Next Generation Air Transportation System
NVS	NAS Voice System
NWP	NextGen Weather Processor
ROM	Rough Order Magnitude
SIR	Screening Information Request
SSO	Source Selection Official
STARS	Standard Terminal Automation Replacement System

SWIM	System Wide Information Management
TBFM	Time Based Flow Management
WAAS	Wide Area Augmentation System

## Exhibit D. FAA's 27 Major Programs Active in Fiscal Year 2017

Program Name	
1	Aeronautical Information Management Modernization (AIMM) Segment 2
2	Automated Dependent Surveillance-Broadcast (ADS-B) Baseline Services and Applications
3	Collaborative Air Traffic Management Technologies (CATMT) Work Package 4 (WP4)
4	Common Support Services Weather (CSS Wx)
5	Data Communications (DataComm) Segment 1, Phase 1 (S1P1)
6	Data Communications (DataComm) Segment 1, Phase 2 (S1P2) Full En Route Services
7	Data Communications (DataComm) Segment 1, Phase 2 (S1P2) Initial En Route Services
8	En Route Automation Modernization (ERAM) Enhancements 2
9	En Route Automation Modernization (ERAM) Tech Refresh 2 (TR2)
10	En Route Automation Modernization (ERAM) System Enhancements and Tech Refresh (SETR)
11	Facility Security and Risk Management (FSRM) 2
12	Logistics Center Support System (LCSS)
13	NAS Voice System (NVS) Demonstration & Qualification Phase
14	Next Generation Air-to-Ground Communication System (NEXCOM) Segment 2, Phase 1
15	Next Generation Air-to-Ground Communication System (NEXCOM) Segment 2, Phase 2
16	Next Generation Weather Processor (NWP)
17	Runway Status Lights (RWSL)
18	System Approach for Safety Oversight (SASO) Phase 2B Segment 1A
19	System Wide Information Management (SWIM) Segment 2A
20	System Wide Information Management (SWIM) Segment 2B
21	Standard Terminal Automation Replacement System (STARS) Technology Refresh/Sustainment 2
22	Terminal Automation Modernization Replacement (TAMR) Phase 1, Tech Refresh
23	Terminal Automation Modernization Replacement (TAMR) Phase 3, Segment 1 (P3S1)
24	Terminal Automation Modernization Replacement (TAMR) Phase 3, Segment 2 (P3S2)
25	Terminal Flight Data Manager (TFDM)
26	Time Based Flow Management (TBFM) WP3
27	Wide Area Augmentation System (WAAS) Phase 4, Segment 1 Dual Frequency Operations (DFO)

Source: FAA's Acquisition Baseline Performance Report Fiscal Year 2017 Update

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## Exhibit E. Past OIG Recommendations to FAA Regarding the Use of a More Successive and Incremental Contracting Structure

### AV-2016-015: FAA Reforms Have Not Achieved Expected Cost, Efficiency, and Modernization Outcomes, January 15, 2016.

**Recommendation 3:** Review and identify Federal and industry best practices and guidance from OMB and the Federal CIO [Chief Information Officer] that may be incorporated into AMS for acquiring major capital investments and IT systems, including the use of successive contracts that are separately priced and the use of modular concepts when planning and purchasing IT, and determine which are appropriate for incorporation into AMS.

**FAA's Response to Recommendation 3:** Regarding recommendation 3, the FAA will review Federal and industry best practices for acquiring major capital investments and Information Technology systems. This review will include the use of successive contracting and the use of modular concepts. The FAA will conduct this review over the upcoming calendar year and based on the findings, will determine what changes, if any, to incorporate into AMS.

FAA concurs with this recommendation, as written, and plans to complete actions for it by January 31, 2017.

**Status of Recommendation 3:** Resolved but open, as of February 2020.

### AV2017075: Greater Adherence to ADS-B Contract Terms May Generate Better Performance and Cost Savings for FAA, September 5, 2017.

**Recommendation 7:** Strengthen future acquisitions by adding or modifying guidance to AMS to incorporate concepts from the OMB Capital Programming Guide on considering the use of successive or incrementally priced contract, orders, or contract line items when acquiring or developing systems spanning many years. This guidance may be incorporated into planned guidance regarding the use of modular contracting concepts.

**FAA's Response to Recommendation 7:** FAA concurs with recommendation 7 as written and plans to implement it by January 31, 2018.

**Status of Recommendation 7:** Resolved but open, as of February 2020.

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## Exhibit F. Major Contributors to This Report

DARREN MURPHY	PROGRAM DIRECTOR
JILL COTTONARO	PROJECT MANAGER
STACIE SEABORNE	SENIOR ANALYST
DEE BA	ANALYST
ANDREW WALLACH	ANALYST
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PETRA SWARTZLANDER	SENIOR STATISTICIAN
JANE LUSAKA	WRITER-EDITOR

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## Appendix. Agency Comments




# Federal Aviation Administration

## Memorandum

Date: February 10, 2020

To: Mary Kay Langan-Feirson, Assistant Inspector General for Acquisition & Procurement Audits

From: H. Clayton Foushee, Director, Office of Audit and Evaluation, AAE-

Subject: Federal Aviation Administration's (FAA) Response to Office of Inspector General (OIG) Draft Report: FAA's Competitive Award Practices Expose Its Major Program Contracts to Cost and Performance Risks

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The Federal Aviation Administration's (FAA) Acquisition Management System (AMS) was established in 1996 in response to the Department of Transportation (DOT) and Related Agencies Appropriations Act of 1996,<sup>1</sup> which directed the FAA to "implement an acquisition management system...that addresses the unique needs of the agency..." Effective competition, appropriate cost and price analysis, and integrity in process and source selection continue to be the foundational elements of AMS and the acquisition process. FAA continually enhances the AMS, including with organizational improvements, such as the establishment of the Air Traffic Organization Program Management Office, and FAA has taken into account government and industry best practices, oversight findings, and internal assessments. Since AMS was implemented, the competitive award of contracts increased from 54 percent in FY 1994 to 88 percent in FY 2019.

The FAA has reviewed the OIG draft report and provides the following comments:

- The report states that the scope of the audit was for "initial award" practices for the 19 contracts sampled, with an initial total estimated potential value (TEPV) of \$14.6 billion. However, at multiple points throughout the document, the values cited include funding obligated through contract modifications. The FAA requests that OIG restrict the contract values to the TEPV at initial award for consistency.
- The scope of the OIG sample was from 1996 to 2018, and given the Congressional request that the audit focus upon initial award practices, the findings do not reflect improvements made to programs after award or controls

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<sup>1</sup> Public Law 104-50

implemented during contract lifecycles. The report incorrectly states, “the

- effects of these issues may continue throughout the term of the contract” and “the Agency’s initial award practices for even its older contracts have consequences that are relevant today.” However, the report did not recognize FAA’s improvements to practices and its successful delivery of programs.
- The draft report cites in several instances that FAA should implement incremental development, or modular contracting to achieve its mission and programmatic needs. FAA disagrees that this method has not been considered by the agency or implemented where appropriate and reasonable. The Office of Management and Budget (OMB) issued Contracting Guidance to Support Modular Development in June 2012, subsequent to the award of multiple contracts included in the OIG sample. In October 2019, FAA revised AMS to ensure that acquisition planning, including the Preliminary Program Requirements Document, addresses the use of modular contracting. FAA’s use of the practice should be evaluated only for new acquisitions governed by current standards, not contracts awarded prior to guidance OMB issued for its implementation.
- Further, although modular contracting can be an effective strategy for program development, it cannot appropriately be cited as the only method that should be followed. As cited by OMB in the Capital Planning Guide V3.0, Supplement to Office of Management and Budget Circular A-11, Planning, Budgeting, and Acquisition of Capital Assets, “each module must be economically and programmatically viable,” with the following factors considered: separability; interoperability; and performance requirements. While modular contracting can be an effective tool, the associated program must complement modularization, and FAA considers its application independently for each program versus automatically applying it enterprise-wide.
- Maintaining the integrity of the acquisition process and properly identifying and addressing conflicts of interest (COI) are FAA’s priorities and AMS’s core values. The OIG draft report did not cite any cases of COI, improper disclosure of acquisition sensitive information, or other fraud. Regardless, FAA is committed to continuously improving its documentation of contract awards and COI and/or non-disclosure agreements.

We concur with the ten recommendations in the draft report, as written, and we will complete actions to implement each recommendation by December 31, 2020. While we concur with recommendations 3 and 6 citing the need to improve contract documentation and record keeping, we do question the OIG’s assumption that better record keeping alone will allow FAA to put \$4.9 billion and \$17.3 million to better use. Independent government cost estimates and a sound rationale are critical to ensuring FAA received a reasonable price for a requirement. However, for OIG to conclude that the presence of documentation alone will change a sourcing decision and/or price reasonableness determination for the entire value of the award is unsupported.

We appreciate this opportunity to respond to the OIG draft report. Please contact H. Clayton Foushee at (202) 267-9000 if you have any questions or require additional information about these comments.

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