

Exhibit 300 FY2010

FAAXX169: Wide Area Augmentation System (WAAS)

Part I: Summary Information And Justification (All Capital Assets)

Description: In Part I, complete Sections A, B, C, and D for all capital assets (IT and non-IT). Complete Sections E and F for IT capital assets.

I.A. Overview (All Capital Assets)

Description: The following series of questions are to be completed for all investments.

I.A.1. Date of Submission:	2009-03-27
I.A.2. Agency:	021
I.A.3. Bureau:	12
I.A.4. Name of this Capital Asset: Description: (Up to 250 characters)	FAAXX169: Wide Area Augmentation System (WAAS)
I.A.5. Unique Project (Investment) Identifier: Description: For IT investment only, see section 53. For all other, use agency ID system.	021-12-01-15-01-1010-00
I.A.6. What kind of investment will this be in FY2010? Description: Please NOTE: Investments moving to O&M in FY2010, with Planning/Acquisition activities prior to FY2010 should not select O&M. These investments should indicate their current status.	Mixed Life Cycle
I.A.8. Provide a brief summary and justification for this investment, including a brief description of how this closes in part or in whole an identified agency performance gap: Description: (Up to 2500 characters)	<p>WAAS is an aviation system providing precise satellite navigation and landing guidance to equipped aircraft in any weather. WAAS supports the DOT strategic goal for increased aviation safety in conjunction with the FAA Flight Plan Goal to reduce the number of fatal accidents in general aviation. WAAS results in safety and capacity improvements in the NAS and will reduce FAA operations costs by enabling the removal of approximately 40% of ground-based navigation infrastructure. WAAS uses a network of precisely located ground reference stations across the U.S., Canada & Mexico to monitor GPS satellite signals. WAAS addresses the following performance gaps: Lack of precise navigation capabilities that can handle continued air traffic growth; Lack of stable vertical guidance in all weather conditions; Aging navigation systems that are expensive to maintain (see Performance Table). WAAS is in a mixed life cycle. DME (CPIC control phase) continues in conjunction with O&M post IOC (CPIC evaluate phase) through four segments: IOC in 2003, Full WAAS LPV (Localizer Performance with Vertical Guidance) Performance (FLP) 2004-2008, WAAS Phase III LPV-200 scheduled for 2009- 2013, WAAS Phase IV Dual Frequency Operations through the rest of the life cycle 2013-2028. The FLP performance segment will expand service to 99% availability to the continental U.S. and 75% of Alaska. In Phase III, the FAA will develop a contract for FY 2009 - 2011 to perform DME and O&M life cycle support focus on transition from contractor-based support to FAA-led support. Phase III efforts will include acquisition of additional leased service for a WAAS Navigation Payload hosted on a Geostationary satellite (GEO), including development, testing and integration. Phase IV, Dual Frequency will provide better operational capability during periods of severe solar storm activity, additional protection against interference to the GPS, and enable FAA to decommission numerous ground-based navigation aids. The dual frequency upgrade will leverage improvements the DoD GPS modernization program. The SOS increased in 2007 & 2008 due to cost for surveys not planned in the May 2004 baseline. As part of FAA policy, WAAS is scheduled to replan in 2009, providing FAA management with detailed insight into the program's financial and technical plan for the next useful segment (5 year increments). Current LPV work effort is expected to be completed within cost and schedule parameters.</p>
I.A.9. Did the Agency's Executive/Investment Committee approve this request?	yes
I.A.9.a. If "yes," what was the date of this approval?	2004-05-03
I.A.10. Did the Project Manager review this Exhibit?	yes
I.A.12. Has the agency developed and/or promoted cost effective, energy-efficient and environmentally sustainable techniques or practices for this project?	no
I.A.12.a. Will this investment include electronic assets (including computers)?	yes
I.A.12.b. Is this investment for new construction or major retrofit of a Federal building or facility? (answer applicable to non-IT assets only)	no
I.A.12.b.1. If "yes," is an ESPC or UESC being used to help fund this investment?	
I.A.12.b.2. If "yes," will this investment meet sustainable design principles?	
I.A.12.b.3. If "yes," is it designed to be 30% more energy efficient than relevant code?	
I.A.13. Does this investment directly support any of the PMA initiatives?	no
I.A.13.a. If "yes," select all that apply:	

I.A.13.b. Briefly and specifically describe for each selected how this asset directly supports the identified initiative(s)? (e.g. If E-Gov is selected, is it an approved shared service provider or the managing partner?) Description: (Up to 500 characters)	
I.A.14. Does this investment support a program assessed using the Program Assessment Rating Tool (PART)? Description: (For more information about the PART, visit www.whitehouse.gov/omb/part .)	yes
I.A.14.a. If "yes," does this investment address a weakness found during a PART review?	yes
I.A.14.b. If "yes," what is the name of the PARTed program?	10001121 - FAA Air Traffic Services
I.A.14.c. If "yes," what rating did the PART receive?	Adequate
I.A.15. Is this investment for information technology?	yes
I.A.16 What is the level of the IT Project? (per CIO Council PM Guidance) Description: Level 1 - Projects with low-to-moderate complexity and risk. Example: Bureau-level project such as a stand-alone information system that has low- to-moderate complexity and risk. Level 2 - Projects with high complexity and/or risk which are critical to the mission of the organization. Examples: Projects that are part of a portfolio of projects/systems that impact each other and/or impact mission activities. Department-wide projects that impact cross-organizational missions, such as an agency-wide system integration that includes large scale Enterprise Resource Planning (e.g., the DoD Business Mgmt Modernization Program). Level 3 - Projects that have high complexity, and/or risk, and have government-wide impact. Examples: Government-wide initiative (E-GOV, President's Management Agenda). High interest projects with Congress, GAO, OMB, or the general public. Cross-cutting initiative (Homeland Security).	Level 3
I.A.17. In addition to the answer in 1.A.11.d, what project management qualifications does the Project Manager have? (per CIO Council PM Guidance)	(1) Project manager has been validated as qualified for this investment
I.A.18. Is this investment or any project(s) within this investment identified as "high risk" on the Q4-FY 2008 agency high risk report? (per OMB Memorandum M-05-23)	yes
I.A.19. Is this a financial management system?	no
I.A.19.a. If "yes," does this investment address a FFMIA compliance area?	
I.A.19.a.1. If "yes," which compliance area: Description: (Up to 250 characters)	
I.A.19.a.2. If "no," what does it address? Description: (Up to 500 characters)	
I.A.19.b. If "yes," please identify the system name(s) and system acronym(s) as reported in the most recent financial systems inventory update required by Circular A-11 section 52 Description: (Up to 2500 characters)	
I.A.20. What is the percentage breakout for the total FY2010 funding request for the following? Description: (This should total 100%)	
I.A.20.a. Hardware	25
I.A.20.b. Software	40
I.A.20.c. Services	26
I.A.20.d. Other	9
I.A.21. If this project produces information dissemination products for the public, are these products published to the Internet in conformance with OMB Memorandum 05-04 and included in your agency inventory, schedules and priorities?	n/a
I.A.23. Are the records produced by this investment appropriately scheduled with the National Archives and Records Administration's approval?	yes
I.A.24. Does this investment directly support one of the GAO High Risk Areas?	no

I.B. Summary of Spending (All Capital Assets)

I.B.1 Summary of Spending Table

Description: Provide the total estimated life-cycle cost for this investment by completing the following table. All amounts represent budget authority in millions, and are rounded to three decimal places. Federal personnel costs should be included only in the row designated "Government FTE Cost," and should be excluded from the amounts shown for "Planning," "Full Acquisition," and "Operation/Maintenance." The "TOTAL" estimated annual cost of the investment is the sum of costs for "Planning," "Full Acquisition,"

and "Operation/Maintenance." For Federal buildings and facilities, life-cycle costs should include long-term energy, environmental, decommissioning, and/or restoration costs. The costs associated with the entire life-cycle of the investment should be included in this report.

Note: For the multi-agency investments, this table should include all funding (both managing partner and partner agencies). Government FTE Costs should not be included as part of the TOTAL represented.

I.B.1.a. Summary of Spending for Project Phases

	PY-1 and earlier	PY 2008	CY 2009	BY 2010
Planning	\$17.665	\$2.530	\$2.475	\$3.052
Acquisition	\$1235.035	\$103.370	\$89.225	\$94.348
Subtotal Planning and Acquisition	\$1252.700	\$105.900	\$91.700	\$97.400
Operations and Maintenance	\$69.249	\$13.753	\$20.790	\$22.463
TOTAL	\$1321.949	\$119.653	\$112.490	\$119.863
Government FTE Costs	\$62.851	\$6.862	\$8.470	\$8.789

I.B.1.b. Summary of Spending for Project Phases (Government FTE Costs Only)

	PY-1 and earlier	PY 2008	CY 2009	BY 2010
Number of FTE represented by cost	472	51	54	54

I.B.2. Will this project require the agency to hire additional FTE's? no

I.B.2.a. If "yes," How many and in what year?

Description: (Up to 500 characters)

I.B.3. If the summary of spending has changed from the FY2009 President's budget request, briefly explain those changes:

Description: (Up to 2500 characters)

The numbers in the SOS table reflect CIP numbers. The WAAS program was scheduled to present the replanned baseline in July 2007 and is now scheduled to brief the JRC in April 2009. The replanned numbers will be reflected in the SOS Table that the WAAS program will present to the JRC. However, the numbers in the Table II.C reflect the replanned cost with a variance at the bottom indicating the difference between the CIP versus the replanned dollars. In addition, the Dual Frequency portion of the program was scheduled to begin in 2009. The WAAS program is rebaselining to align this portion of the program with the DoD GPS modernization program. The replanned effort will cost approximately \$280M less than the 2004 baseline. The 2010 SOS table differs from the 2009 submission because the total BY09 SOS, including FTEs was 4,388.15M, while this SOS totals 3,992.51M for BY10. The variance in the SOS table is due to: 1) use of actual costs for OPS in FY05 to FY 08 instead of baseline costs, 2) the acquisition of the next GEO, and 3) Adjustment of the lifecycle risk model. WAAS is required to return to the JRC in 2009 to rebaseline and receive approval for funding the next useful segment. In question II.C.2, the WAAS program is not exceeding the +/-10% variance threshold based on our replanned costs.

I.D. Performance Information (All Capital Assets)

I.D.1. Performance Information Table

Description: In order to successfully address this area of the exhibit 300, performance goals must be provided for the agency and be linked to the annual performance plan. The investment must discuss the agency's mission and strategic goals, and performance measures (indicators) must be provided. These goals need to map to the gap in the agency's strategic goals and objectives this investment is designed to fill. They are the internal and external performance benefits this investment is expected to deliver to the agency (e.g., improve efficiency by 60 percent, increase citizen participation by 300 percent a year to achieve an overall citizen participation rate of 75 percent by FY 2xxx, etc.). The goals must be clearly measurable investment outcomes, and if applicable, investment outputs. They do not include the completion date of the module, milestones, or investment, or general goals, such as, significant, better, improved that do not have a quantitative measure.

Agencies must use the following table to report performance goals and measures for the major investment and use the Federal Enterprise Architecture (FEA) Performance Reference Model (PRM). Map all Measurement Indicators to the corresponding "Measurement Area" and "Measurement Grouping" identified in the PRM. There should be at least one Measurement Indicator for each of the four different Measurement Areas (for each fiscal year). The PRM is available at www.egov.gov. The table can be extended to include performance measures for years beyond the next President's Budget.

Fiscal Year	Strategic Goal(s) Supported	Measurement Area	Measurement Grouping	Measurement Indicator
2005	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV signal availability
2005	Global Connectivity	Customer Results	New Customers and Market Penetration	Promote cooperation through the creation of bilateral international agreements with other nations on the use of GPS and its augmentations. This will encourage the use of

				GNSS and provide opportunities for American air carriers and industry
2005	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches
2005	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS.
2005	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers
2006	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV signal availability
2006	Global Connectivity	Customer Results	New Customers and Market Penetration	Promote cooperation through the creation of bilateral international agreements with other nations on the use of GPS and its augmentations. This will encourage the use of GNSS and provide opportunities for American air carriers and industry
2006	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches
2006	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS.
2006	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers
2007	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV signal availability
2007	Global Connectivity	Customer Results	New Customers and Market Penetration	Promote cooperation through the creation of bilateral international agreements with other nations on the use of GPS and its augmentations. This will encourage the use of GNSS and provide opportunities for American air carriers and industry
2007	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches
2007	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS. The cost savings of implementing an LPV approach instead of an ILS is approximately \$1 million per runway end.
2007	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers
2008	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV signal availability
2008	Global Connectivity	Customer Results	New Customers and Market Penetration	Promote cooperation through the creation of bilateral international agreements with other nations on the use of GPS and its augmentations. This will encourage the use of GNSS and provide opportunities for American air carriers and industry
2008	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches
2008	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS.
2008	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers

2009	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV signal availability
2009	Global Connectivity	Customer Results	New Customers and Market Penetration	Promote cooperation through the creation of bilateral international agreements with other nations on the use of GPS and its augmentations. This will encourage the use of GNSS and provide opportunities for American air carriers and industry
2009	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches
2009	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS.
2009	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers
2010	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV-200 signal availability.
2010	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches.
2010	Safety	Mission and Business Results	Air Transportation	Increased use of WAAS for emergency medical services aircraft.
2010	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS.
2010	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers.
2010	Organizational Excellence	Technology	User Satisfaction	Increase number of STCs for commercial aircraft for WAAS equipment
2011	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV-200 signal availability.
2011	Global Connectivity	Customer Results	New Customers and Market Penetration	Promote cooperation through the creation of bilateral agreements with other nations on the use of GPS and its augmentations. This will encourage the use of GNSS and provide opportunities for American air carriers and industry.
2011	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches.
2011	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS.
2011	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers.
2012	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV-200 signal availability.
2012	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches.
2012	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS.
2012	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers.
2013	Safety	Customer Results	Access	Provide additional availability to customers by increasing the WAAS LPV-200 signal availability.
2013	Global Connectivity	Customer Results	New Customers and Market	Promote cooperation through

			Penetration	the creation of bilateral international agreements with other nations on the use of GPS and its augmentations. This will encourage the use of GNSS and provide opportunities for American air carriers and industry.
2013	Safety	Mission and Business Results	Air Transportation	Increase safety and capacity of the airspace by providing new vertically guided approaches.
2013	Safety	Processes and Activities	Financial Management	Cost avoidance by providing WAAS service at runway ends currently not served by ILS. The cost savings of implementing an LPV approach instead of an ILS is approximately \$1 million per runway end.
2013	Organizational Excellence	Technology	User Satisfaction	Demonstrate user satisfaction through sales of WAAS-enabled receivers.

I.F. Enterprise Architecture (EA) (IT Capital Assets only)

Description: In order to successfully address this area of the capital asset plan and business case, the investment must be included in the agency's EA and Capital Planning and Investment Control (CPIC) process and mapped to and supporting the FEA. The business case must demonstrate the relationship between the investment and the business, performance, data, services, application, and technology layers of the agency's EA.

I.F.1. Is this investment included in your agency's target enterprise architecture?	yes
I.F.1.a. If "no," please explain why? Description: (Up to 2500 characters)	
I.F.2. Is this investment included in the agency's EA Transition Strategy?	yes
I.F.2.a. If "yes," provide the investment name as identified in the Transition Strategy provided in the agency's most recent annual EA Assessment. Description: (Up to 500 characters)	Wide Area Augmentation System (WAAS)
I.F.2.b. If "no," please explain why? Description: (Up to 2500 characters)	
I.F.3. Is this investment identified in a completed and approved segment architecture?	yes
I.F.3.a. If "yes," provide the six digit code corresponding to the agency segment architecture. The segment architecture codes are maintained by the agency Chief Architect. For detailed guidance regarding segment architecture codes, please refer to http://www.egov.gov . Description: (In the format "XXX-000")	102-000

I.F.4. Service Component Reference Model (SRM) Table

Description: Identify the service components funded by this major IT investment (e.g., knowledge management, content management, customer relationship management, etc.). Provide this information in the format of the following table. For detailed guidance regarding components, please refer to <http://www.egov.gov>.

- Use existing SRM Components or identify as "NEW". A "NEW" component is one not already identified as a service component in the FEA SRM.
- A reused component is one being funded by another investment, but being used by this investment. Rather than answer yes or no, identify the reused service component funded by the other investment and identify the other investment using the Unique Project Identifier (UPI) code from the OMB Ex 300 or Ex 53 submission.
- 'Internal' reuse is within an agency. For example, one agency within a department is reusing a service component provided by another agency within the same department. 'External' reuse is one agency within a department reusing a service component provided by another agency in another department. A good example of this is an E-Gov initiative service being reused by multiple organizations across the federal government.
- Please provide the percentage of the BY requested funding amount used for each service component listed in the table. If external, provide the percentage of the BY requested funding amount transferred to another agency to pay for the service. The percentages in this column can, but are not required to, add up to 100%.

Agency Component Name	Agency Component Description	FEA SRM Service Type	FEA SRM Component (a)	Service Component Reused - Component Name (b)
Airborne Guidance	NAS provides signals in space, through space-based mechanisms and ground-based aids, for point-in-space navigation through a variety of operating environments. These environments include structured routes, random routings, and transitions. Guidance is provided for	Visualization	Mapping / Geospatial / Elevation / GPS	

	position determination in both vertical and lateral planes in all phases of flight. Visual NAVAIDS provide approach and landing guidance to aircraft in addition to electronic type NAVAIDS. (NAS Navigation)			
Airborne Guidance	NAS provides signals in space, through space-based mechanisms and ground-based aids, for point-in-space navigation through a variety of operating environments. These environments include structured routes, random routings, and transitions. Guidance is provided for position determination in both vertical and lateral planes in all phases of flight. Visual NAVAIDS provide approach and landing guidance to aircraft in addition to electronic type NAVAIDS. (NAS Navigation)	Knowledge Management	Information Sharing	

I.F.5. Technical Reference Model (TRM) Table

Description: To demonstrate how this major IT investment aligns with the FEA Technical Reference Model (TRM), please list the Service Areas, Categories, Standards, and Service Specifications supporting this IT investment.

- a. Service Components identified in the previous question should be entered in this column. Please enter multiple rows for FEA SRM Components supported by multiple TRM Service Specifications.
- b. In the Service Specification field, agencies should provide information on the specified technical standard or vendor product mapped to the FEA TRM Service Standard, including model or version numbers, as appropriate.

FEA SRM Component (a)	FEA TRM Service Area	FEA TRM Service Category	FEA TRM Service Standard	Service Specification (b) (i.e., vendor and product name)
Information Sharing	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	IBM P615
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Hardware / Infrastructure	Servers / Computers	IBM 43P, IBM P615
Information Sharing	Service Access and Delivery	Access Channels	Other Electronic Channels	RTCA DO-229C
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Support Platforms	Dependent Platform	IBM AIX with Mission Specific Safety-of-life considerations
Information Sharing	Service Access and Delivery	Service Requirements	Legislative / Compliance	RTCA DO-229C, ICAO SARPS
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Hardware / Infrastructure	Local Area Network (LAN)	10/100 Mbps Ethernet
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	FTI Leased T1
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	ANICS Satcom
Mapping / Geospatial / Elevation / GPS	Service Platform and Infrastructure	Hardware / Infrastructure	Network Devices / Standards	CISCO 2650XM, 3745; Nortel Networks Access Router (ANH)

I.F.6. Will the application leverage existing components and/or applications across the Government (e.g. USA.gov, Pay.gov, etc.)? no

I.F.6.a. If "yes," please describe.
Description: (Up to 2500 characters)

Part IV: Planning for "Multi-Agency Collaboration" ONLY

Description: Part IV should be completed only for investments identified as an E-Gov initiative, a Line of Business (LOB) Initiative, or a Multi-Agency Collaboration effort. The "Multi-Agency Collaboration" choice should be selected in response to Question 6 in Part I, Section A above. Investments identified as "Multi-Agency Collaboration" will complete only Parts I and IV of the exhibit 300.

IV.A. Multi-Agency Collaboration Oversight (All Capital Assets)

Description: Multi-agency Collaborations, such as E-Gov and LOB initiatives, should develop a joint exhibit 300.

IV.A.1. Stakeholder Table

Description: As a joint exhibit 300, please identify all the agency stakeholders (all participating agencies, this should not be limited to agencies with financial commitment). All agency stakeholders should be listed regardless of approval. If the partner agency has approved this joint exhibit 300 please provide the date of

approval.	
IV.A.9. Will the selected alternative replace a legacy system in-part or in-whole?	
IV.A.9.a. If "yes," are the migration costs associated with the migration to the selected alternative included in this investment, the legacy investment, or in a separate migration investment?	
IV.A.9.b. If "yes," please provide the following information:	