



U.S. Department  
of Transportation

**Federal Aviation  
Administration**

# **FEDERAL AVIATION ADMINISTRATION**

## **BUDGET IN BRIEF**

**Fiscal Year 1995**





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## OVERVIEW

The President is proposing \$8.8 billion for the Federal Aviation Administration's (FAA) budget in FY 1995. This is \$162 million (1.9 percent) above the FY 1994 enacted level. The budget continues to propose 75 percent of FAA's budget come from the Airport and Airway Trust Fund.

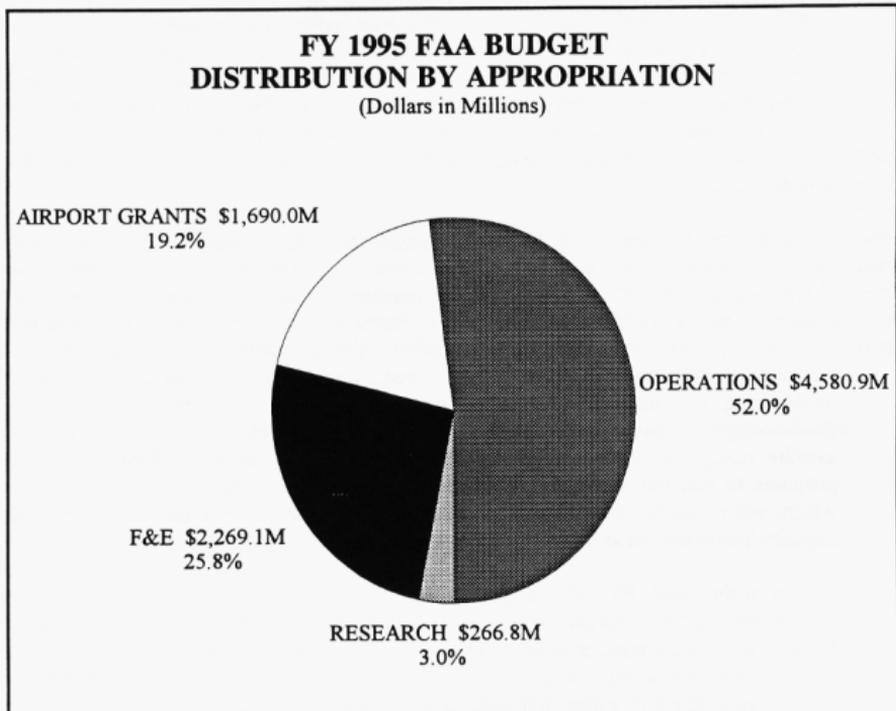


Figure 1

The FY 1995 budget for the FAA is structured around three themes: (1) reinventing government, (2) ensuring system safety, and (3) promoting the efficiency and competitiveness of U.S. aviation through increased investments in the aviation infrastructure and aviation research and development.

- **Reinventing Government:** The FAA is committed to streamlining its operations through reductions in overhead and support functions and staff, an organizational structure that reduces management layers, and the empowerment of its employees. These efficiencies and



## OVERVIEW

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cost-saving initiatives, offset by necessary growth in safety-related areas, has allowed us to propose a near no-growth Operations budget for FY 1995.

- Ensuring System Safety: The first priority of the FAA has been and always will be safety. In order to ensure a continuing high level of system safety, and in order to meet projected demand, the FY 1995 budget requests increases in the number of people responsible for aircraft and airmen certification and inspection. In addition, air traffic controllers, maintenance technicians, and security specialists will be kept at their already sufficient FY 1994 levels, except for non-safety-related reductions that can be made as a result of streamlined operations and increased reliance on contracting out certain functions to the private sector.
- Promoting the Efficiency and Competitiveness of the U.S. Aviation System: The ability of U.S. air carriers to increase their efficiencies at home and increase their competitiveness abroad rest in part on the infrastructure and aviation systems supporting their operations. In response, the FY 1995 budget proposes to increase our Nation's investment in aviation's infrastructure and our investment in the technologies of tomorrow. More specifically, the FY 1995 budget proposes a seven percent increase for Facilities and Equipment in support of modernizing our national airspace system and a five percent increase for Research, Engineering and Development in support of continued research into such important areas as satellite navigation, aircraft safety, and airport/air carrier security. Finally, the budget proposes to continue our current level of support for the Airport Improvement Program, which, when combined with local passenger facility charges, will promote much needed capacity improvements at our nation's airports.

In addition to the FAA's FY 1995 budget request, an important structural long-term issue faces the Administration, the Congress, and the aviation industry, is the need for the corporatization of the Nation's air traffic control system. Only through the corporatization of the air traffic control system will the FAA truly be able to fully streamline its operations -- procurement, personnel, and financing -- so as to provide more efficient, more cost-effective, more responsive, and more rapid services to its users -- the Nation's air carriers and general aviation aircraft, its airmen and women, and the hundreds of millions of passengers that rely on the system annually. The Administrator, the Deputy Administrator, and their senior managers are committed to corporatization and look forward to working closely with the Congress and the aviation industry to achieve this much needed structural reform.



## OVERVIEW

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### Operations

For FY 1995, the Administration is requesting \$4.581 billion for Operations, essentially the same level enacted for FY 1994. This budget proposes increases in certification and inspection staff (up 305, or over seven percent, from an end-of-FY 1994 level of 4,129), will maintain end-of-FY 1994 employment levels for security and airports staff, and will reduce controllers and maintenance technicians staffing slightly commensurate with contracting for the operation of low-level towers to the private sector and non-safety-related streamlining efficiencies. These reductions will have no effect on system safety. Support staff is estimated to decline by 868 through continued application of a hiring freeze, attrition and much needed buy-out legislation, now pending in Congress. Other reductions and efficiencies will be realized by terminating selected programs which we no longer need and can no longer afford (e.g., the pay demonstration program and the federal subsidy for DUATS), reductions in management training, further cuts in travel and awards, and fewer temporary employees. At the same time, modest funding increases are being proposed to support the introduction of new NAS equipment into the field (thereby allowing the benefits of new technology to be realized expeditiously), to support increased contracting for services, and to continue efforts in transitioning selected Department of Defense bases to civilian use.

The table on the following page summarizes the build-up of the FY 1995 Operations budget.



## OVERVIEW

Table 1

### Build-Up of the FY 1995 Operations Budget

(Dollars in Millions)

FY 1994 Enacted .....	4,580.5
Decreases .....	-233.7
Staffing Reductions	-99.1
Reductions in Telecommunication Costs (Net)	-17.1
Facility Decommissioning	-20.0
End Pay Demonstration Program	-15.0
Reductions in Travel	-14.8
Reductions in Training	-14.4
One Less Work Day in Year	-13.0
Absorption of Inflation in Contracts	-10.5
End Federal DUATS Subsidy	-9.0
Reductions in Awards	-5.3
Other Savings	-15.5
Increases .....	+234.1
FY 1995 Pay Raise	+42.2
Annualized Cost of FY 1994 Locality Pay <sup>1</sup>	+30.3
NAS Hand-Off Activities	+29.2
Additional Contracting Out Efforts:	
Contract Towers	+6.9
Contract Maintenance	+20.4
Inflation Adjustment <sup>1</sup>	+26.4
Within Grade Salary Increases	+24.4
Increase in Employee Benefits	+20.9
Additional Inspector/Certification Staffing	+12.2
AT Grade-to-Grade Increases	+10.0
Additional Permanent Change of Station Funding (to move people where they are most needed)	+8.6
DoD Base Closures	+2.5
Net Change .....	+0.4
FY 1995 Request .....	4,580.9



## **OVERVIEW**

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### **Facilities and Equipment**

The FY 1995 request for Facilities and Equipment (F&E) is \$2.269 billion, a seven percent increase over the FY 1994 enacted level. Included in this request are capital needs contained in the FAA's Capital Investment Plan (CIP). Projects include the Advanced Automation System (AAS) to upgrade air traffic control (ATC) computer technology, the Voice Switching and Control System (VSCS) to modernize the system's communications network and the Terminal Doppler Weather Radar (TDWR) and Long Range Radar (LRR) to improve weather services and replace obsolete en-route radar.

### **Research, Engineering and Development**

For Research, Engineering and Development (R,E&D) the budget requests \$267 million, a five percent increase over the FY 1994 enacted level. The R,E&D budget focuses on increased initiatives in satellite navigation, aircraft safety technology, primarily aging aircraft, security technology, specifically aircraft hardening, and human factors research along with the ongoing development of safety and capacity programs.

### **Airport Improvement Program**

The President's Budget provides \$1.690 billion (obligation limitation) in FY 1995 for planning and development of the Nation's airports; the same as the FY 1994 enacted level. This amount will fund formula grants for airport development projects at commercial airports as well as grants to states to improve smaller airports. The Aviation Safety and Capacity Expansion Act of 1990 (P.L. 101-508) authorized the establishment of the passenger facility charges (PFC) by local authorities who choose to do so. The proceeds from PFC's are a major source of local funding to finance eligible airport-related projects that preserve or enhance capacity, safety or security of the national air transportation system, reduce noise, or furnish opportunities for enhanced competition between or among air carriers.

### **Airport and Airway Trust Fund**

Public Law 102-581, Airport and Airway Safety, Capacity, Noise Improvement, and Intermodal Transportation Act of 1992, extended FAA's programs over different periods of time, placing the agency's accounts on separate reauthorization cycles. Authorization for Research, Engineering and Development expires October 1, 1994, and authorization for Facilities and Equipment and FAA Operations appropriation expires October 1, 1995.

Included in the Administration's draft reauthorization bill currently pending before Congress is a 4 year program, FY 1994 through FY 1997. Funding for the Facilities and Equipment program included in this proposal ranges from \$2.9 to \$2.5 billion per year for a 4 year total of \$10.8



## OVERVIEW

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billion. Funding for Airport Improvement Program is \$1.69 billion to \$1.89 billion for a 4 year total of \$7.06 billion. The reauthorization bill proposes to continue aviation user fees at current levels through calendar year 1997 and to finance 75 percent of the FAA's budget from the Airport and Airway Trust Fund. Funding for AIP will be supplemented by a new program of innovative financing for airport capacity and safety.

The Omnibus Budget Reconciliation Act of 1990 (OBRA90) increased (by 25 percent) the domestic passenger ticket tax, the freight waybill tax, and the non-commercial (general aviation) fuels tax. (The international departure tax was previously increased from \$3 to \$6 per passenger, effective January 1, 1990.) The air passenger ticket tax increased from 8 percent to 10 percent of the price of a ticket and the domestic air cargo tax increased from 5 per cent to 6.25 percent of the freight waybill. The fuels tax has two components: The tax on gasoline used in non-commercial aviation increased from 12 cents per gallon to 15 cents per gallon and the tax on non-commercial (jet fuel) increased from 14 to 17.5 cents per gallon.

Total revenues expected in FY 1995 are \$6.5 billion including \$0.7 billion from interest earned by the Trust Fund. The uncommitted balance in the Trust Fund was \$4.3 billion at the end of FY 1993 and estimated to be approximately \$4.6 and \$4.5 billion by the end of FY 1994 and FY 1995, respectively.



## OVERVIEW

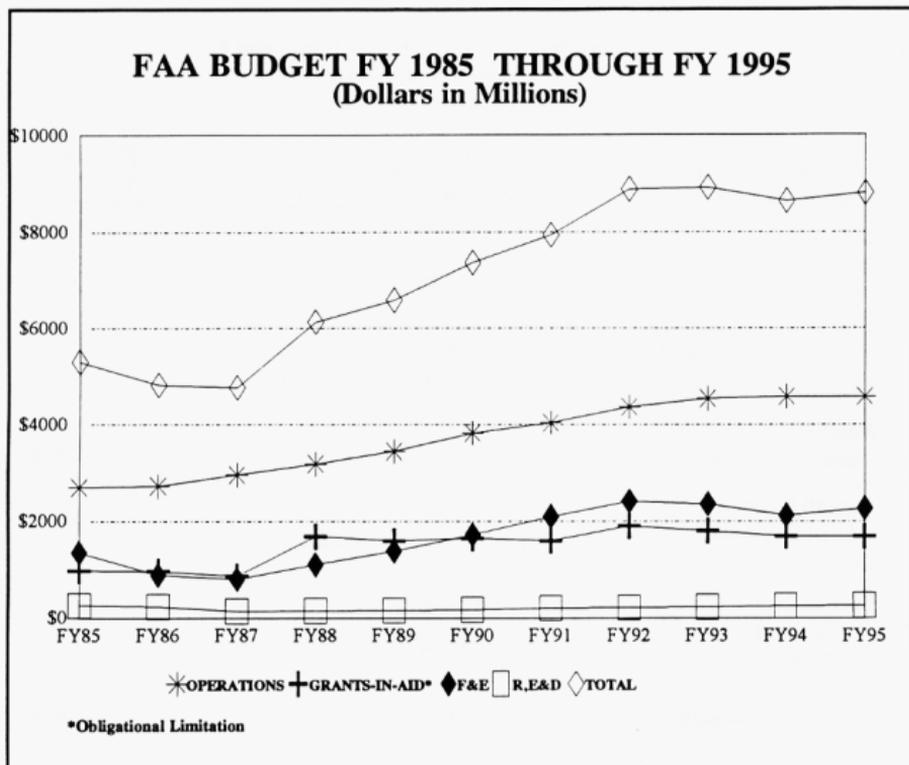


Figure 2

The FY 1995 budget requests \$4,580.9 million and 47,706 direct full-time equivalent (FTE) workyears to support FAA operations. Total FTEs will be 51,133 including those personnel funded by F&E and R,E&D appropriations and Aviation Insurance Revolving Fund and reimbursable agreements. The FY 1995 obligation limitation for Grants-in-Aid for Airports is \$1,690.0 million. To modernize and improve the nation's airspace system (NAS) and to improve air traffic control and airway facilities services, the FAA requires \$2,269.1 million. In research support \$266.8 million is requested in FAA's major mission areas of safety, security, capacity, and efficiency.



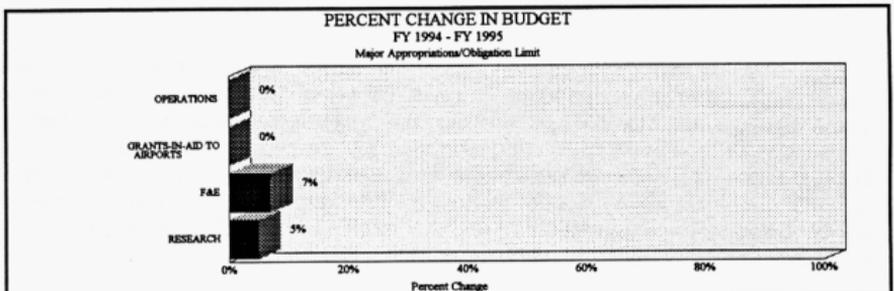
## OVERVIEW

**Table 2**

**Appropriations and Obligation Limitation 1/  
Summary of Funds  
(Dollars in Millions)**

<u>Appropriation</u>	<u>FY 1994 Enacted</u>	<u>Change</u>	<u>FY 1995 Request</u>
Operations (General)	\$4,580.5	0.4	\$4,580.9
(Trust)	(2,286.0)	-84.3	(2,201.7)
	(2,294.5)	84.7	(2,379.2)
Grants-In-Aid-Airports Obligation Limitation	1,690.0	0.0	1,690.0
Facilities and Equipment	2,120.1	149.0	2,269.1
Research, Engineering and Development	254.0	12.8	266.8
Aircraft Purchase Loan Guarantee	0.15	0.0	0.15
<b>TOTAL</b>	<b>\$8,644.8</b>	<b>162.2</b>	<b>\$8,806.9</b>
(General)	2,286.0	-84.3	2,201.7
(Trust)	6,358.6	246.5	6,605.1
Contract Authority Grants-In-Aid-Airports	1,690.0 1/	0.0	1,690.0 1/

1/ Pending enactment of authorizing legislation.



**Figure 3**



## OVERVIEW

Table 3

### FAA STAFFING LEVELS

	FY 1993		FY 1994		FY 1995	
	Actual		Enacted Level (Revised)		Request	
<u>OPERATIONS</u>	<u>POS</u>	<u>FTE 1/</u>	<u>POS</u>	<u>FTE 1/</u>	<u>POS</u>	<u>FTE 1/</u>
Operations of Traffic Control System	27,386	26,812	26,756	26,161	26,560	25,748
NAS Logistics	1,389	1,382	1,370	1,399	1,334	1,314
Maintenance of Traffic Control System	10,991	10,359	10,539	10,142	10,438	9,789
Aviation Regulation & Certification	5,420	4,384	5,350	4,319	5,350	4,385
Aviation Standards	1,414	1,258	1,341	1,242	1,310	1,185
Civil Aviation Security	1,031	864	997	861	997	835
NAS Design & Management	529	597	536	598	521	567
Administration of Airports Program	550	541	522	525	522	528
Direction, Staff & Supporting Services	1,434	1,492	1,444	1,472	1,407	1,389
Human Resources Management	1,533	1,584	1,445	1,558	1,405	1,442
Headquarters Administration	<u>574</u>	<u>508</u>	<u>513</u>	<u>549</u>	<u>498</u>	<u>524</u>
SUBTOTAL, OPERATIONS	52,251	49,781	50,813	48,826	50,342	47,706
<u>FACILITIES AND EQUIPMENT</u>	2,504	2,170	2,504	2,300	2,504	2,300
<u>RESEARCH, ENGINEERING AND DEVELOPMENT</u>	645	729	645	711	645	711
<u>AVIATION INSURANCE</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>	<u>2</u>
TOTAL, DIRECT PROGRAM	55,402	52,682	53,964	51,839	53,493	50,719
<u>REIMBURSABLE</u>						
Operations	490	407	390	390	390	353
Facilities and Engineering	55	53	55	55	55	55
Research, Engineering and Development	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>	<u>6</u>
TOTAL, REIMBURSABLE	551	466	451	451	451	414
GRAND TOTAL	55,953	53,148	54,415	52,290	53,944	51,133

1/ Includes Non-ceiling FTEs.



## OPERATIONS

The FY 1995 budget for the Federal Aviation Administration's Operations appropriation places continued emphasis on safety, security and efficiency of the national airspace system. In support of this, \$4.581 billion is required, a near no-growth budget compared to that enacted in FY 1994. The budget includes funding for 47,706 FTEs. Seventy-seven percent of the request supports payroll costs with contracts and rent, communications, and utilities accounting for most of the balance. (Figure 4)

The Operations appropriation budget consists of nine major activities (Figure 5) which provide essential support to the aviation system. Nine out of ten individuals in Operations perform essential safety related duties or directly manage those personnel and programs. Other personnel and activities provide the support which is essential to keep spare parts moving, to train personnel and to prevent fraud, waste and mismanagement.

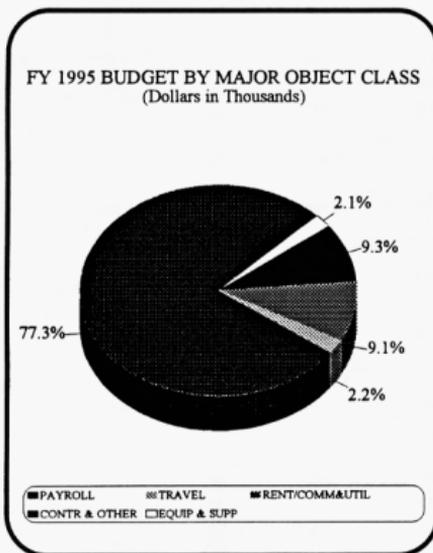


Figure 4

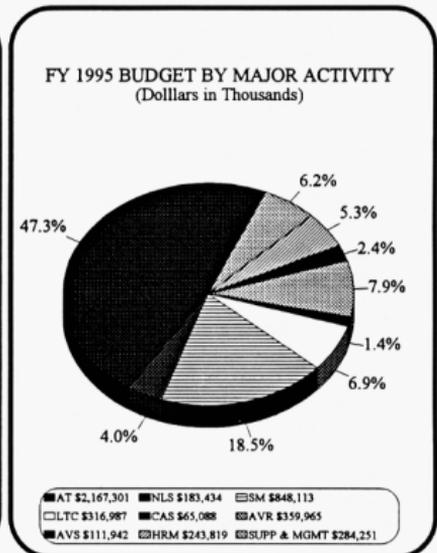


Figure 5



## OPERATIONS

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### Air Traffic - 26,560 Positions and \$2,167,301,000

This activity supports 24 hour air traffic control service for the United States, U.S. territories and U.S. possessions. With the aid of radar, communications, and other facilities, air traffic control personnel at 24 centers monitor and control en route flights of civil and military aircraft conducted under instrument flight rules to assure safety and to expedite the flow of traffic. An estimated 468 terminal facilities (385 with FAA controllers and 83 with contract controllers) will be operated at airports in FY 1995. Approximately 77 flight service stations (FSS) and 59 automated FSS's provided weather and aeronautical information to pilots, processed flight plans, and provided in-flight advisory and emergency service in FY 1993. About 8 FSS are being consolidated into Automated FSS locations in FY 1994 and 69 more will be consolidated in FY 1995.

End-of-year on-board controller work force (CWF) staffing in FY 1993 was 17,688. CWF end-of-year on-board staffing for FY 1994 is expected at 17,523 and will decrease to 17,300 by end-of-year FY 1995 as a result of contracting for lower level towers and will have no effect on system safety or operational readiness.

The FAA is expanding the FAA Contract Tower (FCT) Program over a period of four years to include FAA Level I towers presently staffed by FAA controllers. Funding for the program was identified by Congress in the agency's FY 1994 budget. FY 1995 is the second year of the planned expansion of the program. This expansion of the Contract Tower Program continues the Tower Streamlining initiative supported by Congress in FY 1994 and the Vice President's National Performance Review recommendation to contract Level I air traffic control towers. The increase will allow the agency to contract 25 additional FAA Level I towers (\$6.9 million) bringing to 50 the number of level I towers converted to contract operations by the end of FY 1995. In FY 1995, the FAA will have a total of 83 towers operated under contract. The FAA intends to phase out the operation of a number of control towers that do not meet benefit/cost criteria. At the end of the transition period, expected to last through FY 1999, the Federal Government will realize a savings of approximately \$20 million per year by converting smaller towers to contract operations.



## OPERATIONS

The FAA forecast traffic growth of 1.33 percent in FY 1994 and 1.48 percent in FY 1995. Key air traffic workload indicators for FY 1991-93 are shown in the following two graphs:

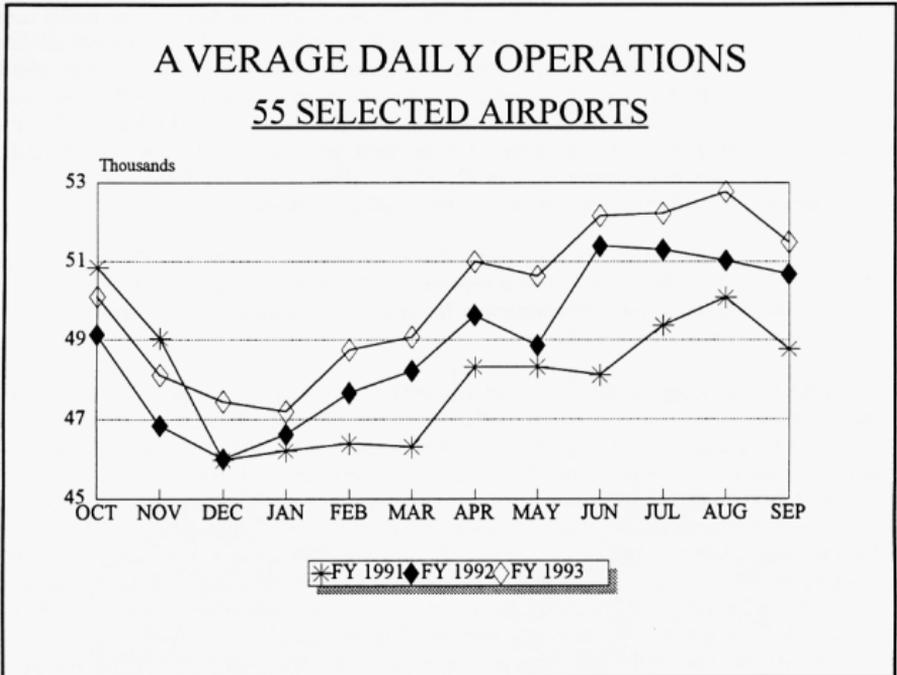


Figure 6



## OPERATIONS

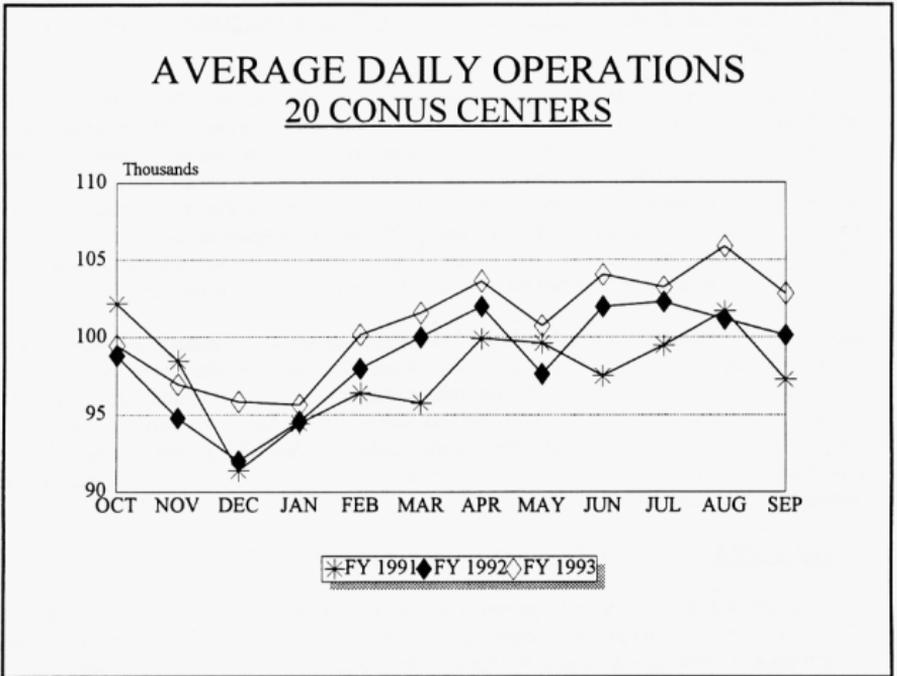


Figure 7



## **OPERATIONS**

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### **NATIONAL AIRSPACE SYSTEM (NAS) LOGISTICS SUPPORT - 1,334 Positions and \$183,434,000**

Workload in this activity is a direct result of ensuring the effective and efficient logistical support of air traffic and air navigational control facilities. The agency uses cradle to grave, life cycle acquisition processes. This is a structured process that allows for the acquisition, maintenance, and operation of National Airspace System (NAS) equipment in an efficient and economical manner. Approximately 30 percent of the required life cycle spare parts expenditure is funded through the F&E appropriation. The remaining 70 percent of spare parts and routine repairs is funded within the Operations appropriation. This activity covers the logistics portion of NAS equipment maintenance and operations necessary to complete a year of the life cycle.

The FY 1995 funding request will provide \$10,754,000 to cover the costs of providing life cycle support to approximately 21 new high technology NAS systems that were deployed during FY 1993 and FY 1994 within 7 FAA disciplines (automation, telecommunications, surveillance, navigation and landing, weather, environmental, and aircraft). Major systems requiring life cycle support in FY 1995 include: Next Generation Radar (NEXRAD), Airport Surface Detection Equipment (ASDE), On-Site Simulation Based Training (TSARTS) and Enhanced Traffic Management System (ETMS).

### **SYSTEMS MAINTENANCE - 10,438 Positions and \$848,113,000**

The Systems Maintenance activity provides for the maintenance, repair and engineering of over 29,000 facilities and equipment comprising the NAS including: air traffic control equipment, navigation and landing aids, flight service facilities, and support of FAA plant facilities. The introduction of new solid-state equipment and other new technologies resulting from the implementation of the Capital Investment Plan (CIP) presents this workforce with new challenges and resource requirements. CIP systems requiring new and expanded maintenance support in FY 1995 include: Next Generation Radar (NEXRAD), Airport Surface Detection Equipment (ASDE), On-Site Simulation Based Training (TSARTS) and Enhanced Traffic Management System (ETMS). In addition, the activity operates the Telecommunications Management and Operations (TM&O) Program which manages the expanding agency-owned telecommunications system in order to improve reliability and achieve projected savings associated with the implementation of a variety of new initiatives.

In FY 1995, the FAA intends to consolidate a number of its field offices to streamline the performance of the systems maintenance function. The agency is taking increasing advantage of remote maintenance monitoring of equipment which greatly increases the productivity of its maintenance personnel. These two initiatives -- streamlining and greater reliance on technology -- will allow us to reduce end-of-year field maintenance staffing by 148.



## **OPERATIONS**

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### **LEASED TELECOMMUNICATIONS - \$316,987,000**

Telecommunications to support and run the aviation system worldwide is funded by this activity. The FAA leases over 14,000 private line circuits to transmit radar data, voice grade data, and voice communication signals. While leased telecommunications rates have risen dramatically over the past 12 years, substantial cost savings/avoidance have been achieved due to implementation and utilization of FAA owned network resources such as the DATA Multiplexing Network, National Airspace DATA Interchange Network, Radio Communications Link, etc. Moreover, these resources have accommodated increasing new air traffic control (ATC) service requirements without commensurate cost increases.

The FY 1995 request provides for the continued implementation of Leased Interfacility NAS Communications Systems (LINCS) (circuit recompetition) as well as support to air traffic control and air navigation facilities and agency telecommunications. The budget also proposes to terminate the unnecessary federal subsidy for DUATS.

### **AVIATION REGULATION AND CERTIFICATION - 5,350 Positions and \$359,965,000**

Civil aviation safety is promoted through this activity by assuring the airworthiness of aircraft and the competence of pilots, aviators and aviator technicians. In addition, the program includes the development, publication, and administration of the safety standards, rules and regulations applicable to airmen, aircraft, and operations involved in all United States civil aviation throughout the world, as well as foreign operations into and over United States territory.

Certification and inspection activities are associated with the operation and maintenance of aircraft by air carriers and the general aviation community, air agencies and all airmen (i.e., pilots, mechanics, etc.). Surveillance is also maintained over taxi operations, fixed-based operators, training schools, and repair stations to determine that operators and maintenance are in conformance with safety regulations.

With regard to the development and administration of standards, the FAA's responsibilities begin with the development of the standards, continues with the examination of applications for certifications, and carry through to the engineering design and flight test phases. Following design approval, FAA's responsibilities extend to the approval of quality control procedures for production, determination that each product is safe for operations and the assurance that corrections are made for any difficulties encountered in actual service.

To provide the staffing necessary to meet current and anticipated demand, the budget proposes to increase end-of-year staffing from 4,129 in FY 1994 to 4,434 in FY 1995, an increase of 305 or 7.4 percent. This is the only area of FAA Operations experiencing real staff growth in FY 1995.



## OPERATIONS

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### **AVIATION STANDARDS - 1,310 Positions and \$111,942,000**

Aviation safety is promoted through this activity by assuring the adequacy of flight procedures and air operations and the evaluation of in-flight performance for compliance with prescribed standards. The FAA operates 30 specially equipped aircraft to monitor signal accuracy emitted by the aids to air navigation and to develop flight procedures for use of United States civil and military aviation and foreign air carriers operating in this country. Registration and recordation of airmen and aircraft certificates are also assured through this program. Aviation safety is further promoted by participating in accident investigations and by focusing on medical issues and occupational health responsibilities as they relate to the National Airspace System for both the aviation industry and the FAA. Aviation safety is improved by: ensuring the health of airmen; ensuring a drug and alcohol free aviation work force and eliminating drug use and abuse in commercial aviation; promoting education programs; improving the FAA work force effectiveness through healthful work environments for agency employees and the aviation industry; and ensuring standardization, compliance and consistency among all regions regarding air traffic control specialists and employee health standards for safety related positions. The program is requesting \$3,000,000 to support the introduction and operational readiness of new NAS equipment in the field including funds for the EDMS at the Registry, and funds for contract maintenance of new systems and equipment within the flight program.

### **AVIATION SECURITY - 997 Positions and \$65,088,000**

The Aviation Security Program operates under the concept of shared responsibilities among air carriers, airports, Federal, State, and local governments. The FAA is responsible for establishing and enforcing regulations, policies, and procedures; identifying potential threats and appropriate countermeasures; and in general, providing guidance for the safety of passengers, baggage, and cargo, and the safeguarding of the aircraft. The air carriers provide screening for passengers and baggage. The responsibility for maintaining a secure ground environment and for providing local law enforcement belongs to each airport authority.

The FAA conducts foreign airport security assessments on behalf of the Secretary of Transportation. Assessments consist of in-depth analyses of the security measures at airports. Currently, there are approximately 250 foreign airports that meet the assessment requirement. The Civil Aviation Security Program also develops and reviews policies for the security of FAA operations, resources, and facilities, including communications/telecommunications, automatic information security, personnel, and industrial security programs. The FAA's security program also supports Federal, State, and local law enforcement agencies engaged in the investigation and interdiction of drug smuggling.

Given the importance of security, this activity will be exempt from the agency wide hiring freeze, allowing us to backfill for attrition so there is no net reduction in our aviation security staffing.



## **OPERATIONS**

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### **NATIONAL AIRSPACE SYSTEM DESIGN AND MANAGEMENT - 521 Positions and \$55,745,000**

This activity covers a portion of the systems engineering, technical and administrative leadership for the \$38.8 billion (FY 1982-FY 2003) CIP. The program supports Research, Engineering and Development and Facilities and Equipment programs that will lead to development and implementation of a global aviation system designed to exceed user demand for increasing system safety, capacity, and productivity, and dedicated to achieving the mission of the FAA. The program also provides for the development and promulgation of national aviation policy, as it relates to the development and coordination of the overall FAA energy conservation initiatives.

The 1995 funding request supports the functions for the Associate Administrator for Contracting and Quality Assurance and the Technical Center that were transferred from the NAS Logistics Activity during FY 1993. These resources are for the procurement and implementation of the acquisition of material, equipment, and services for the NAS, interagency, and international programs.

### **ADMINISTRATION OF AIRPORTS - 522 Positions and \$40,477,000**

The Airports Program covers the identification, planning, development, capacity enhancement, and safety certification of the Nation's system of public airports to serve the needs of civil aviation in the fifty states and territories. Principal activities in the program include: planning and promoting efforts to enhance airport capacity and reduce delays; participating in safety efforts at national and international airports; administering grants for the Airport Improvement Program; and certifying the safety of the Nation's airports.

Funding in FY 1995 will support the FAA's continued emphasis on expansion and anticipation of the future needs of the airport system. Realizing the importance of these efforts, the FY 1995 budget will exempt this activity from the agency wide hiring freeze and will allow backfilling for attrition so there is no net reduction in our airports staffing.



## OPERATIONS

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### **DIRECTION, STAFF AND SUPPORT SERVICES - 1,407 Positions and \$141,077,000**

The FAA's essential administrative and infrastructure services are supported in this program. Activities associated with the direction and management, public affairs, international aviation, legal, policy and plans, as well as requirements for administrative payrolls, communications, administrative supplies and other support services at the center, regional and overseas offices are funded in this program.

Commensurate with the need to reduce overhead staff and streamline support services, the FY 1995 budget proposes to reduce this activity by \$5.6 million and 37 positions to \$141.1 million and 1,407 positions, respectively.

### **HUMAN RESOURCES MANAGEMENT - 1,405 Positions and \$243,819,000**

The Human Resources Management Program supports the agency's employee recruitment, development, training, compensation and labor-management relations activities. The most important goal of the program is to provide a cadre of highly skilled, competent, and motivated professionals to accomplish ongoing objectives in improving air safety while promoting aviation-related activities. Funding is provided for technical and management training programs, personnel programs, labor relations activities, and targeting increased employee productivity. The HRM activity includes a \$78 million Department of Labor workers' compensation payment for former FAA employees.

Commensurate with the need to reduce overhead staff and streamline support services, the FY 1995 budget proposes to reduce this activity by \$23.4 million and 40 positions to \$243.8 million and 1,405 positions, respectively. A large part of this dollar reduction is due to substantial reductions in management training, including the Center for Management Development in Florida, and related travel expenses.

### **HEADQUARTERS ADMINISTRATION - 498 Positions and \$46,952,000**

This activity supports all of the Washington headquarters administrative functions that establish policy and direct and develop programs, including the Executive Director for Acquisition and Safety Oversight and the Office of Aviation Safety. The administrative services include: Office of the Administrator and Deputy Administrator, Executive Directors, Policy and Plans, Accounting, Budget, Civil Rights, International Aviation, and Management Systems and Data Systems. The Office of Aviation Safety has oversight responsibility for safety within the FAA.

Commensurate with the need to reduce overhead staff and streamline support services, the FY 1995 budget proposes to reduce this activity by \$1.3 million and 15 positions to \$47.0 million and 498 positions, respectively.



## OPERATIONS

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Table 4a

### FY 1995 BUDGET REQUEST DOLLAR RESOURCES (Dollars in Thousands)

	FY 1993 <u>Actual</u>	FY 1994 <u>Estimate</u>	FY 1995 <u>Request</u>	FY 94-95 Percent <u>Change</u>
Operations of Traffic Control System	2,092,647	2,138,301	2,167,301	1.4%
NAS Logistics Support	175,538	176,041	183,434	4.2%
Maintenance of Traffic Control System	846,362	855,302	848,113	-0.8%
Leased Telecommunications Services	320,206	324,529	316,987	-2.3%
Aviation Regulations and Certification	335,893	347,392	359,965	3.6%
Aviation Standards	120,586	115,418	111,942	-3.0%
Civil Aviation Security	68,343	65,866	65,088	-1.2%
NAS Design & Management	54,398	56,628	55,745	-1.6%
Administration of Airport Programs	41,239	38,856	40,477	4.2%
Direction, Staff & Supporting Services	153,076	146,713	141,077	-3.8%
Human Resources Management	271,724	267,239	243,819	-8.8%
Headquarters Administration	<u>50,689</u>	<u>48,233</u>	<u>46,952</u>	<u>-2.7%</u>
<b>TOTAL OPERATIONS</b>	4,530,701	4,580,518	4,580,900	0.0%



## OPERATIONS

Table 4b

### FY 1995 BUDGET REQUEST BY MAJOR OBJECT CLASS (Dollars in Thousands)

	<u>FY 1993 Actual</u>	<u>FY 1994 Estimate</u>	<u>FY 1995 Estimate</u>
11.1 Full-time permanent	2,441,842	2,541,849	2,538,891
11.3 Other than full-time permanent	28,844	27,266	21,685
11.5 Other personnel compensation	275,560	271,731	264,847
11.8 Special personal services payments	<u>4,964</u>	<u>4,975</u>	<u>4,592</u>
11.9 Total personnel compensation	2,751,210	2,845,821	2,830,015
12.1 Civilian personnel benefits	678,897	683,048	710,440
13.0 Benefits for former personnel	199	1,381	1,331
21.0 Travel and transportation of persons	103,169	93,686	82,695
22.0 Transportation of things	15,179	17,323	19,363
23.2 Rental payments to others	44,933	43,038	25,195
23.3 Comm., utilities and miscellaneous charges	377,035	394,104	391,260
24.0 Printing and reproduction	12,116	9,328	9,582
25.1 Consulting services	1,954	1,505	1,543
25.2 Other services	427,240	407,650	413,281
26.0 Supplies and materials	77,840	68,257	79,237
31.0 Equipment	40,230	15,480	16,123
32.0 Lands and structures	113	341	350
42.0 Insurance claims and indemnities	<u>586</u>	<u>472</u>	<u>485</u>
99.0 Subtotal, direct obligations	4,530,701	4,581,434	4,580,900



## **OPERATIONS**

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### SPECIAL INTEREST WORKFORCE

#### Controller Workforce

- One of the FAA's highest and most essential priorities is to ensure that flying remains one of the safest and most efficient forms of transportation. The current workforce is doing an outstanding job. Safety has not been and will not be jeopardized.
- As of September 30, 1993, controller workforce (CWF) employment was 17,688. Because of contracting for level 1 towers and essentially level projections of traffic growth, we plan to scale back the CWF slightly through attrition to 17,300 by September 1995.

#### Flight Standards Staffing

- For FY 1995, Flight Standards end-of-year staffing level will be 3,534 an increase of 231 above the FY 1994 level of 3,303.
- Major program initiatives such as international activities to provide certification and surveillance services to the global aviation community and Strategic Quality Management of all flight standards programs will continue as planned.

#### Aircraft Certification

- For FY 1995, Aircraft Certification end-of-year staffing will reach an employment level of 900, up 74 from the FY 1994 level of 826.
- The Aircraft Certification Service will continue to address enhanced activity and growth in international work, aging aircraft, and continued commonality both here and abroad.
- Increased emphasis on internationalization in the certification process of civil aviation industries will continue to be a top priority. Continued operational safety, regulatory policy development and new certifications, appointments and approvals will ensure maximum aviation safety to the public.



## OPERATIONS

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### Civil Aviation Security Staffing

- ➔ In FY 1995, FAA will maintain an end-of-year employment level of 812 in the Civil Aviation Security workforce.
- ➔ Aviation security personnel safeguard passengers, crew, aircraft, and airports from the threat of violence from hijacking, sabotage, and other criminal acts. Initiatives include implementation of effective security programs, use of Federal Air Marshals (FAM) and enhanced assessment and monitoring of foreign/domestic airports and air carriers. Some agents will perform FAM duties, and others will be utilized to support foreign airport assessments, U.S. and foreign airport/air carrier station inspections and assessments (including inspection and enforcement activity to ensure compliance with security requirements and compliance and enforcement of regulations on the shipment of hazardous materials). In addition, agents will be utilized to support the review and approval of foreign air carrier security programs, the implementation of explosives detection security programs, the development of critical terrorist threat information through intelligence analyses, and the protection of those traveling in air commerce.

### Field Maintenance Staffing

- ➔ Field maintenance technicians are responsible for maintaining and repairing facilities and equipment comprising the National Airspace System (NAS). The NAS includes the following major types of facilities: navigation and landing aids, radar, automation systems, and communication equipment. The workforce is responsible for the maintenance of physical structures and grounds.
- ➔ It is expected that the end-of-year employment level for FY 1995 will be comprised of 8,200 personnel in the field maintenance workforce, which is responsible for maintaining over 29,000 facilities.

### Other Staffing

- ➔ All other staffing (e.g., flight inspection pilots, logisticians, procurement and contract specialists, public affairs, congressional liaisons, instructors, and attorneys) will be subject to a hiring freeze in FY 1994 and FY 1995 and therefore will decline by normal attrition, and as a result of buy out legislation. The budget assumes that this sector of the FAA workforce will decline by 1,225 personnel or about 7.5 percent in FY 1994 and FY 1995.



## OPERATIONS

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Table 5

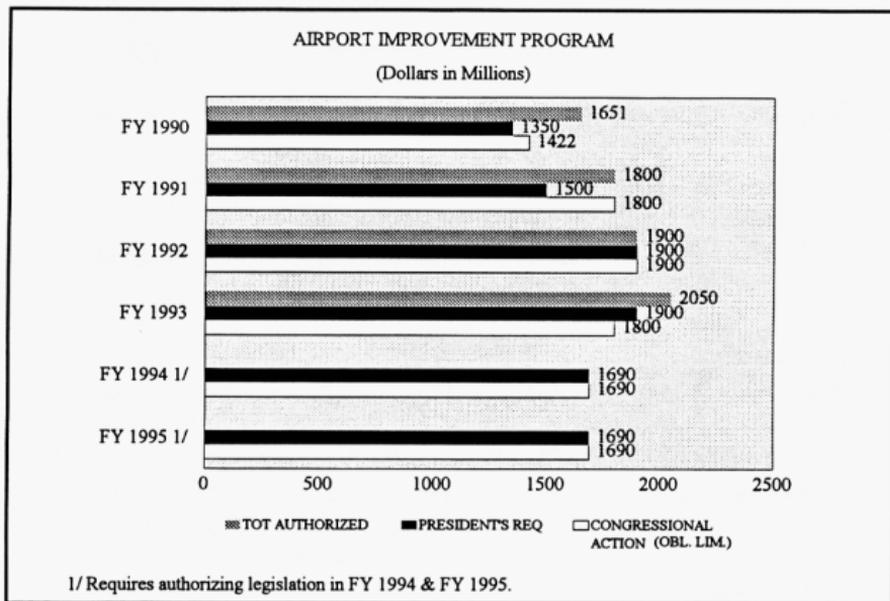
### SPECIAL INTEREST STAFFING End-of-Year Employment

	<u>1991</u>	<u>1992</u>	<u>1993</u>	1994 <u>EST</u>	1995 <u>EST</u>	Change <u>94 - 95</u>
Controller Workforce	17,721	17,982	17,688	17,523	17,300	-223
Flight Standards Workforce	3,571	3,481	3,381	3,303	3,534	231
Aircraft Certification Workforce	854	837	845	826	900	74
Civil Aviation Security	810	852	831	812	812	0
Field Maintenance Workforce	8,994	8,995	8,756	8,348	8,200	-148
Airports Workforce	501	507	506	496	496	0



## GRANTS-IN-AID TO AIRPORTS

The FY 1995 request is for a \$1.690 billion obligation limitation for Airport Improvement Grants to eligible airports to enhance capacity, emphasize safety and security needs, and mitigate noise. Airport funding is further augmented by continued implementation of the passenger facility charges (PFCs). As of January 1994, 165 airports were approved to collect PFCs totaling more than \$8.8 billion over the next 40 years.



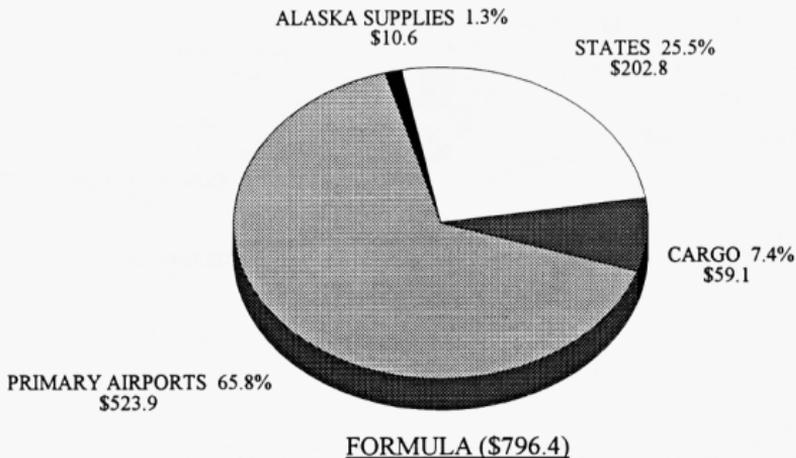
**Figure 8**

In addition, the FAA was authorized in FY 1988 to issue a letter of intent (LOI) for certain airport development projects. Under this provision, a sponsor may notify the FAA of an intention to carry out a project that will enhance system wide airport capacity without Federal funds. The benefit to the sponsor is that if approved by the FAA, they may proceed with a project and, may receive more favorable private financing (e.g., bond ratings) due to the announced intention of Federal support for the project. The FAA's LOI's to date may reimburse airport sponsors up to a total of \$1,425.7 million in both formula and discretionary from FY 1994 through FY 2005, subject to fund availability.



## GRANTS-IN-AID TO AIRPORTS

### AIRPORT IMPROVEMENT PROGRAM FY 1995 FORMULA (Dollars in Millions)



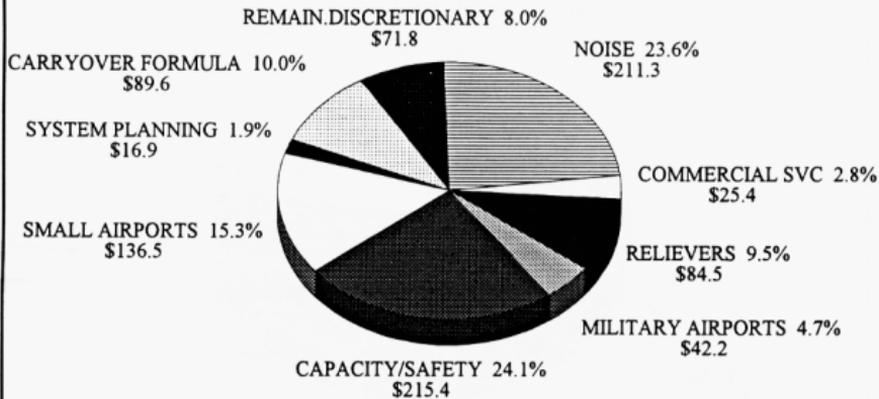
FY 1994 & FY 1995 Distribution reflects the Administration's Reauthorization Proposal dated 1/26/94.

Figure 9



## GRANTS-IN-AID TO AIRPORTS

### AIRPORT IMPROVEMENT PROGRAM FY 1995 DISCRETIONARY GRANTS (Dollars in Millions)



**DISCRETIONARY (\$893.6)**

FY 1994 & FY 1995 Distribution reflects the Administration's Reauthorization Proposal dated 1/26/94.

Figure 10



## FACILITIES AND EQUIPMENT

For FY 1995, \$2.269 billion, a seven percent increase (\$149 million) over FY 1994 as enacted, is requested in the Facilities and Equipment (F&E) appropriation to fund planned facility improvements, equipment development and procurement, and the necessary technical support for systems installation. The funding requested for FY 1995 supports the FAA's comprehensive Capital Investment Plan (CIP) to modernize and improve the National Airspace System (NAS) to accommodate demands for aviation services and maximize operational efficiency, constrain costs, modernize automation and communication technology and systems, and deal with aging facilities.

In addition to providing the systems and infrastructure necessary for continued growth in aviation activity, F&E expenditures have a positive effect on national priorities including economic productivity, energy conservation, safety and security, environmental protection, and technological leadership. Examples of F&E project contributions to national priorities and user benefits are presented below in Table 5.

**Table 6 - Benefits of F&E Investments and Contribution to Major Administration Themes**

Project	Feature	Benefits	Major Administration Themes				
			Economy	Safety	Environmental	Technology	Intermodalism
<b>En Route Projects</b>							
Advanced Automation System	<ul style="list-style-type: none"> <li>Improved system efficiency via increased user preferred trajectories and altitudes</li> <li>Replaces obsolete automation equipment</li> </ul>	<ul style="list-style-type: none"> <li>Reduce User Operating Costs</li> <li>Reduce Flight Delays</li> <li>Increased User Preferred Trajectories and Altitudes</li> </ul>	●		●	●	
Oceanic Automation System	<ul style="list-style-type: none"> <li>Decreased oceanic separation standards</li> </ul>	<ul style="list-style-type: none"> <li>Reduce User Operating Costs</li> <li>Reduce Flight Delays</li> <li>Increased User Preferred Trajectories and Altitudes</li> </ul>	●				
<b>Terminal Projects</b>							
DFW Metroplex	<ul style="list-style-type: none"> <li>Service forecasted air traffic growth in the Dallas - Ft Worth Areas</li> </ul>	<ul style="list-style-type: none"> <li>Reduce User Operating Costs</li> <li>Reduce Flight Delays</li> <li>Regional Economic Growth</li> </ul>	●		●		
ATCT/TRACON Modernization/ Replacement	<ul style="list-style-type: none"> <li>Replace obsolete environmental equipment, aging facilities</li> <li>Remove facility space constraints</li> </ul>	<ul style="list-style-type: none"> <li>Provide space for growth</li> <li>Modernize environmental systems</li> <li>Remove Environmental Hazards</li> </ul>	●	●			
Terminal Air Traffic Control Automation	<ul style="list-style-type: none"> <li>Provide terminal aircraft spacing automation</li> </ul>	<ul style="list-style-type: none"> <li>Reduce User Operating Costs</li> <li>Reduce Flight Delays</li> <li>Increase efficiency of terminal aircraft operations</li> </ul>	●		●		
Airport Surface Detection Equipment/ Movement Area Safety System/ Surface Traffic Automation	<ul style="list-style-type: none"> <li>Provide runway incursion indicators</li> <li>Provide conflict alert for airport surface</li> </ul>	<ul style="list-style-type: none"> <li>Increase runway departure capacity</li> <li>Improved airport safety</li> </ul>	●	●	●		



## FACILITIES AND EQUIPMENT

**Table 6 - Benefits of F&E Investments and Contribution to Major Administration Themes  
(Continued)**

Project	Feature	Benefits	Major Administration Themes				
			Economy	Safety	Environmental	Technology	Intermodalism
<b>Flight Service/Weather Projects</b>							
Aeronautical Data Link	<ul style="list-style-type: none"> <li>Improve air-to-ground communications</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Controller/Pilot workload</li> <li>Increased efficiency</li> <li>Increased capacity through error-free communications</li> </ul>	●	●	●	●	
Automated Weather Observing System	<ul style="list-style-type: none"> <li>Improved/more timely weather information</li> </ul>	<ul style="list-style-type: none"> <li>Improved safety</li> <li>Increased terminal capacity</li> <li>Manpower savings</li> </ul>	●	●	●		
Integrated Terminal Weather System	<ul style="list-style-type: none"> <li>Provide integrated timely weather products in terminal environment</li> </ul>	<ul style="list-style-type: none"> <li>Decreased terminal delays</li> <li>Improved safety</li> </ul>	●	●	●		
Aviation Weather Products Generator	<ul style="list-style-type: none"> <li>Provide integrated user weather graphics and forecast products in the en route environment</li> </ul>	<ul style="list-style-type: none"> <li>Decreased en route delays</li> <li>Improved safety</li> </ul>	●	●	●		
<b>Ground-to-Air Projects</b>							
Long Range Radar	<ul style="list-style-type: none"> <li>Replace obsolete long range radars</li> </ul>	<ul style="list-style-type: none"> <li>Reduced maintenance and support costs</li> <li>Improved safety</li> </ul>		●			
Next Generation Weather Radar	<ul style="list-style-type: none"> <li>Provide timely, accurate, and detailed ATC weather data</li> </ul>	<ul style="list-style-type: none"> <li>Improved input to AAS</li> <li>Increased safety</li> <li>Increase fuel efficiency from improved weather data</li> </ul>	●	●	●		
Terminal Doppler Weather Radar	<ul style="list-style-type: none"> <li>Provide timely and accurate windshear data</li> </ul>	<ul style="list-style-type: none"> <li>Increased safety</li> <li>Decreased delays due to changing weather conditions</li> </ul>	●	●	●		
Global Navigation Satellite Systems	<ul style="list-style-type: none"> <li>Replace aging equipment (VOR/DME/NDB) with modern technology</li> <li>Provide possible means to decommission multiple navigation systems</li> </ul>	<ul style="list-style-type: none"> <li>Precise positioning and time measurement</li> <li>Potential reduction aircraft avionics cost via provision of navigation and approach capabilities in one system</li> </ul>	●		●	●	●
Precision Landing Systems	<ul style="list-style-type: none"> <li>Provide more precision approaches in US</li> <li>Replace aging equipment</li> <li>Potential means to clear-up ILS Frequency congestion</li> </ul>	<ul style="list-style-type: none"> <li>Decreased Delays</li> <li>Save fuel</li> <li>Capacity increase/operating cost savings from curved approaches</li> </ul>	●	●	●		●
<b>Interfacility Communications Projects</b>							
Radio Control Equipment	<ul style="list-style-type: none"> <li>Replace obsolete radio control equipment (VFSS and keying control equipment)</li> </ul>	<ul style="list-style-type: none"> <li>Reduce maintenance costs</li> <li>Improve operational performance</li> </ul>			●		
Routing and Circuit Restoral	<ul style="list-style-type: none"> <li>Provide automatic restoration and re-routing communications capability</li> </ul>	<ul style="list-style-type: none"> <li>Safety and Delay benefits from faster fault detection &amp; restoral</li> <li>Potential Leased Comm savings</li> </ul>			●		
<b>Maintenance and Operations Projects</b>							
Remote Maintenance Monitoring System	<ul style="list-style-type: none"> <li>Provide more timely fault monitoring and equipment status information</li> </ul>	<ul style="list-style-type: none"> <li>Decreased maintenance costs</li> </ul>	●				
ARTCC Plant Modernization	<ul style="list-style-type: none"> <li>Modernize aged plant and structures</li> <li>Improve energy systems</li> <li>Eliminate environmental problems</li> </ul>	<ul style="list-style-type: none"> <li>Energy conservation</li> <li>Elimination of environmental hazards</li> </ul>	●		●	●	



## FACILITIES AND EQUIPMENT

**Table 6 - Benefits of F&E Investments and Contribution to Major Administration Themes  
(Continued)**

Project	Feature	Benefits	Major Administration Themes				
			Economy	Safety	Environmental	Technology	Intermodalism
<b>Maintenance and Operations Projects</b>							
Fuel Storage	<ul style="list-style-type: none"> <li>Eliminate leaking tanks which pose environmental threat</li> </ul>	<ul style="list-style-type: none"> <li>Law compliance</li> <li>Improve environment</li> </ul>			●		
ATCT Safety Upgrades	<ul style="list-style-type: none"> <li>Bring ATC tower facilities into compliance with OSHA life, fire, and personnel safety standards</li> </ul>	<ul style="list-style-type: none"> <li>Elimination of environmental hazards</li> <li>Improve workplace safety</li> </ul>		●			
Aircraft Fleet Modernization	<ul style="list-style-type: none"> <li>Provide aircraft equipment needed to meet flight inspection needs</li> </ul>	<ul style="list-style-type: none"> <li>Upgrade avionics to new technology</li> <li>Reduce noise pollution</li> <li>Promote timely implementation of new navigation aids</li> </ul>	●	●		●	
Computer Resources Nucleus	<ul style="list-style-type: none"> <li>Provide uniform, Agency-wide computing resource</li> </ul>	<ul style="list-style-type: none"> <li>Provide timely, responsive, and economical ADP resource</li> <li>Increase productivity of programs and personnel</li> <li>Reduce procurement frequency ADP equipment</li> </ul>	●				
Aviation Safety Analysis System	<ul style="list-style-type: none"> <li>Provide single safety related information data structure</li> </ul>	<ul style="list-style-type: none"> <li>Improved access to more reliable and timely certification and safety information data</li> </ul>		●			

Funds requested for FY 1995 will continue the implementation of modernization projects such as the Advanced Automation System (AAS) designed to upgrade the national airspace system's air traffic control computer technology and the Voice Switching and Control System (VSCS) designed to modernize the outdated communications network. Also included in the FY 1995 President's Budget is funding to sustain the existing infrastructure of various agency facilities.



## FACILITIES AND EQUIPMENT

Major FY 1995 programs are: (\$ in millions)

Advanced Automation System (AAS)	\$510
Voice Switching and Control System (VSCS)	231
Systems Engineering and Development Support	95
Long Range Radar (LRR)	22
Terminal Air Traffic Control Facilities - Replace	54
Microwave Landing System (MLS)	23
Flight Inspection Aircraft Procurement	50
Airport Surveillance Radar (ASR)	23
Technical Services Support Contract (TSSC)	62



## **FACILITIES AND EQUIPMENT**

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The F&E budget consists of five activities which fund the FAA's effort to modernize and improve air traffic control systems and facility improvements. Summaries of these activities follow.

### **ENGINEERING, DEVELOPMENT, TEST AND EVALUATION**

This Activity includes programs which have migrated from the R,E&D appropriation, programs requiring developmental efforts that were initiated in F&E and will continue in F&E (grandfathered), and those programs that are in acquisition phases prior to Key Decision Point 4 (KDP-4) consistent with the Office of Management and Budget (OMB) Circular A-109. The funds requested would initiate or continue programs currently undergoing mission need determination, alternative design concept exploration and identification, or full scale development and limited production without duplicating any R,E&D program work.

The advanced automation system (AAS) \$510 million, will improve the safety and efficiency of the NAS, improve the productivity of the air traffic controllers and provide the ability to handle the projected air traffic load and the capability to perform new functionality to be introduced in the 21st century. In FY 1995, funds are requested to continue Air Route Traffic Control Center (ARTCC) site preparation activities for the Initial Sector Suite System (ISSS). For the Terminal Advanced Automation System (TAAS), system level tests will be conducted followed by formal factory tests. Following successful completion of formal factory tests, the system will be installed at the FAA Technical Center and early operational test and evaluation will begin. Also during FY 1995, the FAA Technical Center will complete formal ISSS operational test and evaluation with ISSS being delivered to the first three sites. At the time of this printing, the agency is conducting a comprehensive reassessment of the AAS schedule and costs.

Other initiatives in FY 1995 include \$23 million to complete the development of 12 Category II/III microwave landing system prototypes that would be installed on international runways throughout the U.S., aviation weather services improvements, and ongoing FAA efforts to improve test and evaluation facilities.

### **PROCUREMENT AND MODERNIZATION OF AIR TRAFFIC CONTROL FACILITIES AND EQUIPMENT**

Initiatives in this activity will reduce delays and improve safety at congested airports. The Next Generation Weather Radar (NEXRAD) \$62 million, program will establish a weather radar network that will provide accurate aviation weather products for en route applications, providing an improvement over current weather data and enabling increases in aviation safety and fuel efficiency. The Voice Switching and Control System (VSCS) \$231 million, will provide a voice communications system which performs the intercom, interphone, and air/ground voice connectivity and control functions needed for air traffic control operations and will reduce leased costs, increase modularity and growth capability, and increase controller productivity over



## FACILITIES AND EQUIPMENT

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current services. The requested funding continues the production buy of new switches for enroute facilities. Installation, checkout and shakedown testing activities are planned for systems at nine locations. Funds are also requested to support the long range radar program to in replacing obsolete hardware with new radars; replacing outdated Radar Microwave Link (RML) systems with new Radio Communication Link (RCL) systems to provide increased transmission reliability; and providing aviation weather service improvements including the Terminal Doppler Weather Radar (TDWR) and NEXRAD programs. In addition, the FAA must invest in the necessary infrastructure to support local airport improvement projects to ensure that added demand for airspace and airport capacity is met efficiently.

This activity also includes the acquisition and modification of aircraft which support the agency flight inspection of navigational aids, training, support, and research and development functions, and the procurement and installation of equipment related to the mission-readiness of the FAA fleet of aircraft. Funds are requested to procure and equip agency aircraft with VHF Interference Canceler systems and continue the development and implementation of other flight inspection system enhancements.

Other programs funded in this activity will modernize and improve FAA air traffic control towers, replace tower equipment, and upgrade existing buildings and plant equipment which house and support NAS navigation, communications, surveillance, and visual/electronic landing systems. Also funded under this activity is the removal of leaking fuel storage tanks, site cleanup, and fuel tank, engine generator, and associated electrical equipment disposal. In addition, this activity provides for procurement of landing and navigational aids such as instrumental landing systems.

Flight service station equipment and automation which includes \$37 million for automated weather observing and thunderstorm detection, and \$26 million for development of a wide area augmentation system for GPS.

### PROCUREMENT AND MODERNIZATION OF NON-AIR TRAFFIC CONTROL FACILITIES AND EQUIPMENT

This activity totals \$127 million to provide general facility support requirements which apply to a wide range of FAA facilities and equipment that are not directly related to the air traffic control system. Continued funding support is requested for the Computer Resources Nucleus (CORN) project which will provide FAA with expanded, modern computer resources to accommodate increased operational and administrative programs. Also, a national program has been established to ensure that all FAA facilities meet existing and future Federal, State, and local environmental regulations for the cleanup of hazardous substances resulting from FAA activities. Funds requested will assess the severity of the problem, and, if environmental damage has occurred, feasibility studies will be conducted to determine the extent of contamination the best technology to be used for cleanup.



## **FACILITIES AND EQUIPMENT**

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### **FACILITIES AND EQUIPMENT MISSION SUPPORT**

Requested in this activity is \$274 million, which includes system engineering and integration and transition engineering support contracts which provide technical and management support in all phases of CIP implementation schedules including new equipment installation.

### **PERSONNEL AND RELATED EXPENSES**

Funding for all personnel compensation, benefits, travel and related expenses associated with the Facilities and Equipment programs are budgeted under one consolidated activity. These funds directly support FAA personnel who are primarily responsible for NAS equipment installation and implementation.

In FY 1995, the FAA requests \$215.4 million to support the F&E workforce. The request level includes an increase to support growing travel requirements associated with engineering, installation, and testing of new NAS equipment and systems. In addition, this activity will continue to support permanent change of station (PCS) costs directly associated with the actual consolidation or opening of various NAS facilities. In FY 1995, the budget includes \$20.0 million for one-time moves in which a large number of Air Traffic and Airway Facilities personnel will be transferred to new facilities such as Dallas/Fort Worth Metroplex and the New Chicago TRACON or Department of Defense (DoD) base closures or Level I tower closures.

The table on the following pages reflects the FY 1994 appropriation versus the FY 1995 President's budget request.



## FACILITIES AND EQUIPMENT

**Table 7**

TITLE	FY 1994 APPROP	FY 1995 CONG SUBMIT	DELTA
AVIATION WEATHER SERVICES IMPROVEMENTS	19,351.0	23,500.0	4,149.0
ADVANCED AUTOMATION SYSTEM (AAS) - E,D,T&E	267,150.0	473,500.0	206,350.0
AUTOMATIC DEPENDENT SURVEILLANCE (ADS)	4,200.0	0.0	-4,200.0
AERONAUTICAL DATA LINK (ADL)	1,700.0	0.0	-1,700.0
VOICE SWITCHING AND CONTROL SYSTEM (VSCS) - EDT&E	61,500.0	0.0	-61,500.0
	<b>353,901.0</b>	<b>497,000.0</b>	<b>143,099.0</b>
AIRPORT SURVEILLANCE RADAR (ASR)	<b>1,000.0</b>	<b>3,000.0</b>	<b>2,000.0</b>
MICROWAVE LANDING SYSTEM (MLS)	<b>41,218.0</b>	<b>23,300.0</b>	<b>-17,918.0</b>
FAA TECHNICAL CENTER FACILITY - TECHNICAL BUILDING LEASE	5,290.0	5,290.0	0.0
UTILITY PLANT MODIFICATIONS	1,660.0	1,200.0	-460.0
NAS IMPROVEMENT OF SYSTEM SUPPORT LABORATORY	3,000.0	4,500.0	1,500.0
TECHNICAL CENTER FACILITIES	7,000.0	9,000.0	2,000.0
TECHNICAL CENTER TEST EQUIPMENT	0.0	300.0	300.0
PRECISION AUTOMATED TRACKING SYSTEM	2,100.0	1,400.0	-700.0
CAMI INFRASTRUCTURE - MODERNIZATION	1,400.0	2,900.0	1,500.0
INDEPENDENT OPERATIONAL TEST AND EVALUATION (IOT&E) SUPPORT	4,250.0		-4,250.0
TECHNICAL CENTER R&D LABORATORY - ESTABLISH	3,000.0		-3,000.0
	<b>27,700.0</b>	<b>24,590.0</b>	<b>-3,110.0</b>
TOTAL ACTIVITY 1	<b>423,819.0</b>	<b>547,890.0</b>	<b>124,071.0</b>
LONG RANGE RADAR (LRR) PROGRAM - REPLACE/ESTABLISH	30,417.0	21,100.0	-9,317.0
ARSR-3 LEAP FROG PROGRAM	0.0	2,000.0	2,000.0
RADAR MICROWAVE LINK (RML) SYSTEM REPLACEMENT/EXPANSION	10,500.0	8,000.0	-2,500.0
NEXT GENERATION WEATHER RADAR (NEXRAD) - PROVIDE	53,600.0	62,000.0	8,400.0
AIR TRAFFIC CONTROL EN ROUTE RADAR FACILITIES IMPROVEMENTS	5,400.0	8,898.0	3,498.0
ADVANCED AUTOMATION SYSTEM (AAS) - CENTER MODERNIZATION PROGRAM	26,000.0	36,400.0	10,400.0
EN ROUTE SOFTWARE DEVELOPMENT AND INTEGRATION SUPPORT	7,000.0	10,300.0	3,300.0
METEOROLOGIST WEATHER PROCESSOR (MWP II)	1,400.0	4,700.0	3,300.0
AERONAUTICAL DATA LINK (ADL) APPLICATIONS	19,900.0	15,000.0	-4,900.0
EN ROUTE AUTOMATION EQUIPMENT - IMPROVE	4,000.0	4,000.0	0.0
OCEANIC AUTOMATION SYSTEM	25,282.0	16,400.0	-8,882.0
ARTCC BUILDING IMPROVEMENTS/PLANT IMPROVEMENTS	68,000.0	59,128.0	-8,872.0
VOICE SWITCHING AND CONTROL SYSTEM (VSCS)	146,000.0	231,200.0	85,200.0
REMOTE COMMUNICATIONS FACILITIES (RCF) - EXPAND/RELOCATE	5,500.0	5,400.0	-100.0
TRAFFIC MANAGEMENT SYSTEM (TMS) - UPGRADE	16,200.0	10,800.0	-5,400.0
DATA MULTIPLEXING NETWORK (DMN)	17,500.0	5,500.0	-12,000.0



## FACILITIES AND EQUIPMENT

Table 7 (Continued)

TITLE	FY 1994 APPROP	FY 1995 CONG SUBMIT	DELTA
CRITICAL COMMUNICATIONS SUPPORT	2,000.0	12,700.0	10,700.0
EN ROUTE COMMUNICATIONS AND CONTROL FACILITIES IMPROVEMENT	8,856.0	7,189.0	-1,667.0
NADIN II ENHANCEMENTS - PROVIDE	7,600.0	3,800.0	-3,800.0
SATELLITE COMMUNICATIONS CIRCUIT BACK-UP		1,500.0	1,500.0
DOD BASE CLOSURE - FACILITY TRANSFER	7,600.0	10,700.0	3,100.0
CENTRAL ALTITUDE RESERVATION FUNCTION (CARF)	1,500.0	1,500.0	0.0
DISPLAY CHANNEL COMPLEX REHOST	2,000.0	2,000.0	0.0
EN ROUTE ANALYSIS AND REPORTING SYSTEM		2,000.0	2,000.0
PERFORMANCE MONITORING ANALYSIS SYSTEM	900.0	1,000.0	100.0
BACK-UP EMERGENCY COMMUNICATIONS (BUEC) - INTERIM		3,000.0	3,000.0
CENTRAL FLOW CONTROL FACILITY - RELOCATE	1,400.0		-1,400.0
AIR/GROUND COMMUNICATION RADIO FREQUENCY INTERFERENCE (RFI) ELIMINATION	2,000.0		-2,000.0
	<b>470,555.0</b>	<b>546,215.0</b>	<b>75,660.0</b>
AIRPORT SURVEILLANCE RADAR (ASR)	44,300.0	20,500.0	-23,800.0
TERMINAL DOPPLER WEATHER RADAR (TDWR) - PROVIDE	5,800.0	25,000.0	19,200.0
MODE S - PROVIDE	10,100.0	24,900.0	14,800.0
DIGITAL BRITE RADAR INDICATOR TOWER EQUIPMENT (DBRITE)	3,600.0	2,700.0	-900.0
TERMINAL SOFTWARE DEVELOPMENT SUPPORT	7,400.0	4,000.0	-3,400.0
CHICAGO TERMINAL RADAR APPROACH CONTROL (TRACON) RELOCATION	18,200.0	2,400.0	-15,800.0
ARTS IIIA UPGRADES FOR SELECTED AIR TRAFFIC FACILITIES - PROVIDE	17,300.0	10,000.0	-7,300.0
REMOTE MAINTENANCE MONITORING SYSTEM (RMMS) - PROVIDE	27,700.0	10,000.0	-17,700.0
TERMINAL AIR TRAFFIC CONTROL FACILITIES - REPLACE	0.0	54,500.0	54,500.0
AIR TRAFFIC CONTROL TOWER (ATCT)/TRACON FACILITIES - IMPROVE	20,200.0	16,433.0	-3,767.0
EMERGENCY TRANSCEIVERS - REPLACEMENT	3,000.0	3,000.0	0.0
TERMINAL VOICE SWITCH REPLACEMENT (TVSR)	26,600.0	15,500.0	-11,100.0
RADIO CONTROL EQUIPMENT (RCE) - PROVIDE	14,900.0	9,600.0	-5,300.0
RUNWAY STATUS LIGHT SYSTEM (AIRPORT SURFACE TRAFFIC AUTOMATION (ASTA))	2,000.0	4,000.0	2,000.0
AIRPORT SURFACE DETECTION EQUIPMENT (ASDE) - ADDITIONAL ESTABLISHMENT	26,600.0	7,000.0	-19,600.0
ARTS IIIA MODE C INTRUDER CAPABILITY AND VIDEO COMPRESSION	26,100.0	9,400.0	-16,700.0
TERMINAL AIR TRAFFIC CONTROL AUTOMATION (TATCA)	8,650.0	13,000.0	4,350.0
TERMINAL RADAR (ASR) - IMPROVE	9,395.0	3,898.0	-5,497.0
DALLAS/FORT WORTH METROPLEX PROGRAM	13,300.0	5,500.0	-7,800.0
POTOMAC PROJECT METROPLEX		2,800.0	2,800.0
NORTHERN CALIFORNIA METROPLEX		1,500.0	1,500.0
ATLANTA METROPLEX		1,500.0	1,500.0
EMPLOYEE SAFETY/OSHA AND ENVIRONMENTAL COMPLIANCE STANDARDS	36,000.0	31,300.0	-4,700.0
TERMINAL COMMUNICATIONS - IMPROVE	2,062.0	2,677.0	615.0
PRECISION RUNWAY MONITORS	22,000.0	1,000.0	-21,000.0
SOUTHERN CALIFORNIA METROPLEX		17,000.0	17,000.0
NEW AUSTIN AIRPORT AT BERGSTROM		20,000.0	20,000.0



## FACILITIES AND EQUIPMENT

**Table 7 (Continued)**

TITLE	FY 1994 APPROP	FY 1995 CONG SUBMIT	DELTA
AIRPORT MOVEMENT AREA SAFETY SYSTEM (AMASS)	13,100.0		-13,100.0
MODE C INTRUDER (MCI) EXPAND ARTS IIIA CAPACITY	2,500.0		-2,500.0
SOUTHERN CALIFORNIA TRACON CONSOLIDATION/PROGRAM SUPPORT	1,000.0		-1,000.0
NEW DENVER AIRPORT ESTABLISHMENT - FAA SUPPORT	1,200.0		-1,200.0
ATC TOWER STREAMLINING PROJECT (CONGRESSIONAL ADD)	8,500.0		-8,500.0
	<b>371,507.0</b>	<b>319,108.0</b>	<b>-52,399.0</b>
FLIGHT SERVICE STATION (FSS) AUTOMATION	8,800.0	8,000.0	-800.0
AUTOMATED SURFACE OBSERVING SYSTEM (ASOS)	19,900.0	37,200.0	17,300.0
WIDE AREA AUGMENTATION SYSTEM (WAAS) FOR GPS		25,900.0	25,900.0
FSAS OPERATIONAL AND SUPPORTABILITY IMPLEMENTATION SYSTEM (OASIS)	1,000.0	2,000.0	1,000.0
FLIGHT SERVICE FACILITIES IMPROVEMENT		2,289.0	2,289.0
VERY HIGH FREQUENCY DIRECTION FINDER (DF) NETWORK PROGRAM	10,000.0		-10,000.0
DIGITAL ALTIMETER SETTING INDICATORS (DASI) - REPLACE	1,500.0		-1,500.0
WEATHER MESSAGE SWITCHING CENTER REPLACEMENT (WMSCR)	3,600.0		-3,600.0
AFSS - IMPROVE	3,426.0		-3,426.0
	<b>48,226.0</b>	<b>75,389.0</b>	<b>27,163.0</b>
VOR/DME/TACAN NETWORK PLAN	9,000.0	623.0	-8,377.0
APPROACH LIGHTING SYSTEM IMPROVEMENT PROGRAM (ALSIP)	1,700.0	2,000.0	300.0
ILS - REPLACE MARK 1A, 1B, AND 1C	20,000.0	6,000.0	-14,000.0
INSTRUMENT LANDING SYSTEM (ILS) - ESTABLISH/UPGRADE	36,174.0	18,600.0	-17,574.0
VISUAL NAV AIDS - ESTABLISH/EXPAND	6,310.0	2,565.0	-3,745.0
RUNWAY VISUAL RANGE (RVR)	3,000.0	2,500.0	-500.0
ILS - REPLACE WILCOX CAT II/III		11,600.0	11,600.0
INSTRUMENT APPROACH PROCEDURES AUTOMATION (IAPA)		1,000.0	1,000.0
GULF OF MEXICO OFFSHORE PROGRAM		5,400.0	5,400.0
ILS AND VISUAL NAV AID COMPONENT SPARING	5,000.0		-5,000.0
ILS - FAA ASSUMPTION OF AIRCRAFT IMPROVEMENT PROGRAM FUNDING ILS'S	3,000.0		-3,000.0
NAVIGATIONAL AND LANDING AIDS - IMPROVE	8,975.0		-8,975.0
	<b>93,159.0</b>	<b>50,288.0</b>	<b>-42,871.0</b>
ALASKAN NAS INTERFACILITY COMMUNICATIONS SYSTEM (ANICS)	9,000.0	5,000.0	-4,000.0
FUEL STORAGE TANK REPLACEMENT AND MONITORING	9,000.0	10,500.0	1,500.0
FAA BUILDINGS AND EQUIPMENT - IMPROVE/MODERNIZE	17,000.0	11,645.0	-5,355.0
ELECTRICAL POWER SYSTEMS - SUSTAIN/SUPPORT	7,000.0	7,000.0	0.0
AIR NAVIGATIONAL AIDS AND ATC FACILITIES (LOCAL PROJECTS)	7,019.0	6,000.0	-1,019.0
AIR NAVIGATION FACILITY/ATC SYSTEM SUPPORT - PROVIDE	5,000.0	9,000.0	4,000.0
PURCHASE LAND OR EASEMENT FOR EXISTING FACILITIES	1,400.0	1,500.0	100.0
AIRCRAFT RELATED EQUIPMENT PROGRAM	6,000.0	6,000.0	0.0
AIRCRAFT FLEET MODERNIZATION	0.0	50,000.0	50,000.0



## FACILITIES AND EQUIPMENT

Table 7 (Continued)

TITLE	FY 1994 APPROP	FY 1995 CONG SUBMIT	DELTA
AIR TRAFFIC CONTROLLER CHAIRS - REPLACE		1,000.0	1,000.0
AIRPORT CABLE LOOP SYSTEMS - SUSTAINED SUPPORT	1,000.0	6,113.0	5,113.0
COMPUTER AIDED ENGINEERING GRAPHICS (CAEG) REPLACEMENT	1,500.0	1,000.0	-500.0
SPECIAL USE AIRSPACE MANAGEMENT SYSTEM (SAMS)	3,000.0		-3,000.0
	<b>66,919.0</b>	<b>114,758.0</b>	<b>47,839.0</b>
TOTAL ACTIVITY 2	<b>1,050,366.0</b>	<b>1,105,758.0</b>	<b>55,392.0</b>
AUTOMATED DATA PROCESSING (ADP) FACILITIES MANAGEMENT (CORN)	35,000.0	20,600.0	-14,400.0
NAS MANAGEMENT AUTOMATION PROGRAM (NASMAP)	4,000.0	4,500.0	500.0
HAZARDOUS MATERIALS MANAGEMENT	12,750.0	15,000.0	2,250.0
AVIATION SAFETY ANALYSIS SYSTEM (ASAS)	18,000.0	15,392.0	-2,608.0
OPERATIONAL DATA MANAGEMENT SYSTEM (ODMS)	4,650.0	5,000.0	350.0
CHILD CARE FACILITIES	4,845.0	4,400.0	-445.0
FAA EMPLOYEE HOUSING - PROVIDE	18,500.0	8,000.0	-10,500.0
LOGISTICS SUPPORT SYSTEM AND FACILITIES	5,000.0	5,000.0	0.0
TEST EQUIPMENT - MAINTENANCE SUPPORT FOR REPLACEMENT	9,000.0	4,000.0	-5,000.0
RADIO FREQUENCY INTERFERENCE (RFI) VANS	2,000.0	2,300.0	300.0
INTEGRATED FLIGHT QUALITY ASSURANCE	0.0	2,500.0	2,500.0
SAFETY PERFORMANCE ANALYSIS SUBSYSTEM (SPAS)		7,400.0	7,400.0
PORTABLE PERFORMANCE SUPPORT SYS PEN-BASED TECHNOLOGY		2,543.0	2,543.0
NATIONAL AVIATION SAFETY DATA CENTER (ASAAP)	2,000.0	4,000.0	2,000.0
AIRPORT DATUM MONUMENT PROGRAM	1,500.0	1,500.0	0.0
NATIONAL AIRSPACE SYSTEM (NAS) RECOVERY COMMUNICATIONS (RCOM)	6,800.0		-6,800.0
EXPLOSIVE DETECTION SYSTEM - INSTALL, OPERATE AND MAINTAIN	1,500.0		-1,500.0
AIRMEN AND AIRCRAFT REGISTRY REPORTING SYSTEMS - RENOVATION	9,100.0		-9,100.0
TRANSIENT CREW SECURITY SYSTEM (CONGRESSIONAL ADD)	2,000.0		-2,000.0
	<b>136,645.0</b>	<b>102,135.0</b>	<b>-34,510.0</b>
COMPUTER BASED INSTRUCTION (CBI) - EXPAND/IMPROVE	4,100.0	4,500.0	400.0
AERONAUTICAL CENTER TRAINING AND SUPPORT FACILITIES	6,600.0	13,900.0	7,300.0
NATIONAL AIRSPACE SYSTEM (NAS) TRAINING FACILITIES	6,100.0	6,000.0	-100.0
SIMULATION BASED TRAINING SYSTEMS	24,300.0		-24,300.0
	<b>41,100.0</b>	<b>24,400.0</b>	<b>-16,700.0</b>
TOTAL ACTIVITY 3	<b>177,745.0</b>	<b>126,535.0</b>	<b>-51,210.0</b>
SYSTEM ENGINEERING AND TECHNICAL ASSISTANCE (SETA)	110,000.0	95,200.0	-14,800.0
LOGISTICS SUPPORT SERVICES	12,000.0	8,000.0	-4,000.0
MIKE MONRONEY AERONAUTICAL CENTER - LEASE	13,200.0	14,800.0	1,600.0
IN-PLANT NAS CONTRACT SUPPORT SERVICES	5,400.0	5,700.0	300.0
TRANSITION ENGINEERING SUPPORT	48,274.0	52,000.0	3,726.0



## FACILITIES AND EQUIPMENT

**Table 7 (Continued)**

TITLE	FY 1994 APPROP	FY 1995 CONG SUBMIT	DELTA
NATIONAL AIRSPACE LOGISTICS SUPPORT (NALS)	7,000.0	5,000.0	-2,000.0
FREQUENCY AND SPECTRUM ENGINEERING - PROVIDE	2,000.0	1,600.0	-400.0
ACQUISITION OVERSIGHT	1,700.0	2,000.0	300.0
FAA SYSTEM ARCHITECTURE	2,000.0	3,000.0	1,000.0
TECHNICAL SERVICES SUPPORT CONTRACT (TSSC)	64,900.0	62,000.0	-2,900.0
PROGRAM SUPPORT SERVICES		5,000.0	5,000.0
PROGRAM SUPPORT LEASES		19,217.0	19,217.0
HUMAN RESOURCE MANAGEMENT PLAN FOR NAS TRANSITION/IMPLEMENTATION	1,700.0		-1,700.0
TOTAL ACTIVITY 4	<b>268,174.0</b>	<b>273,517.0</b>	<b>5,343.0</b>
PERSONNEL AND RELATED EXPENSES	<b>198,000.0</b>	<b>215,400.0</b>	17,400.0
UNDISTRIBUTED CONGRESSIONAL ADD	2,000.0	0.0	-2,000.0
TOTAL	2,120,104.0	2,269,100.0	148,996.0



## FACILITIES AND EQUIPMENT

### F&E FUNDING HISTORY COMPARISON (Dollars in Millions)

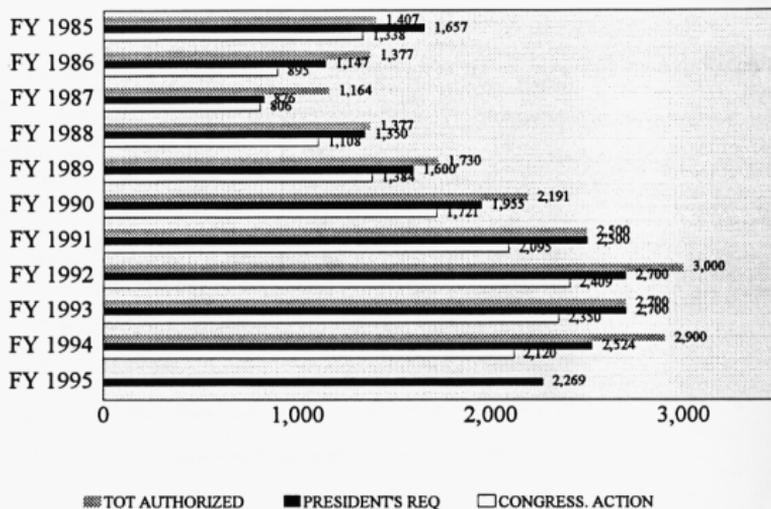


Figure 11



## RESEARCH, ENGINEERING & DEVELOPMENT

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For FY 1995, \$267 million, a five percent increase (\$13 million) over the FY 1994 enacted level, is requested to support the Research, Engineering and Development (R,E&D) program. The R,E&D budget continues to foster new and innovative improvements in meeting the challenges of tomorrow's growing demands on our aviation system, limited capacity, changing work force, security threats and provides for a balanced increase in research in the development of new and across all ongoing technologies.

FAA's R,E&D program is an investment in the current and future air traffic control (ATC) system of the 21st Century which provides safe and efficient travel and commerce to the U.S. public and industry; new technologies indirectly strengthening the financial condition of the U.S. air carriers; and contributes to market stimulation and the creation of new markets nationally and internationally. The economic benefits of an ATC oriented R,E&D program are enormous for fuel conservation, operating costs, and maintaining world preeminence in ATC systems and safety. In addition, needed capacity improvements can be derived from ATM, TATCA, Oceanic, Data Link, AT Models, and simulation activities; pressures from the European community on increasing noise standards will be addressed by the environment and energy program; and human factors initiatives will lead to further safety and efficiency.



## RESEARCH, ENGINEERING & DEVELOPMENT

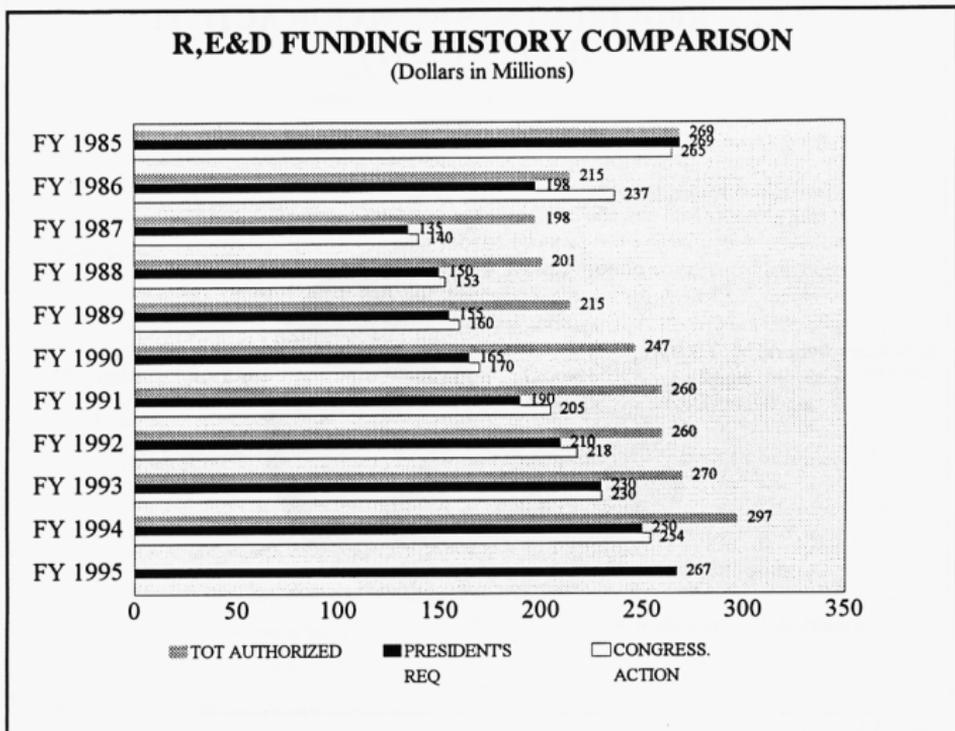


Figure 12



### R,E&D REQUIREMENTS BY MAJOR ACTIVITY (IN PERCENT)

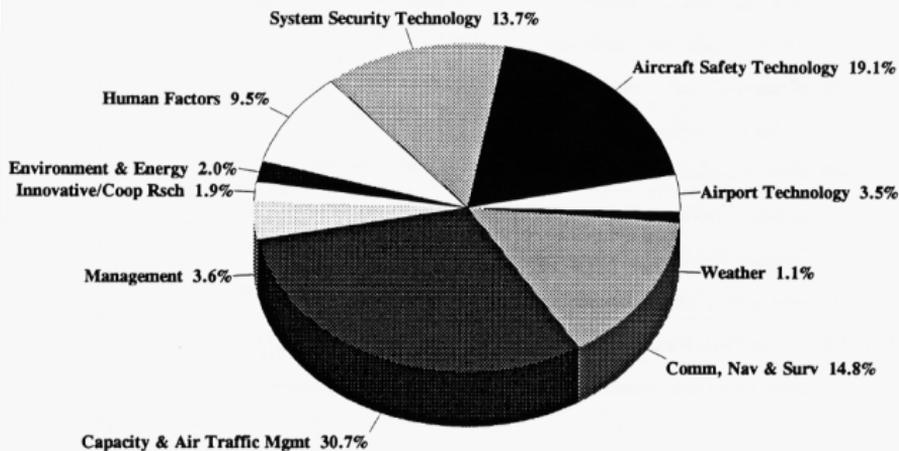


Figure 13



## RESEARCH, ENGINEERING & DEVELOPMENT

Table 8

Research, Engineering & Development  
Summary of Requirements by Activity/Program  
(Dollars in Thousands)

		FY 1994	FY 1995
		<u>Enacted</u>	<u>Request</u>
1	Management and Infrastructure	10,498	9,673
	R,E&D Plans and Programs	7,012	3,873
	Technical Laboratory Facility	3,486	5,800
2	Capacity & Air Traffic Management Technology	76,939	81,901 1/
	Air Traffic Management Technology	6,372	11,063
	Oceanic Automation Program	11,449	10,910
	Terminal ATC Automation (TATCA)	15,191	17,242
	Runway Incursion Reduction/Tower Automation	9,981	8,135
	System Capacity, Planning & Improvements	11,159	12,330
	Cockpit Technology	6,251	7,613
	Vertical Flight Program	3,222	3,663
	Modeling and Simulation	12,814	9,915
	Future Airway Facilities Maintenance Technology	500	1,030
3	Communications, Navigation & Surv.	38,675	39,472
	Communications	14,745	19,333
	Navigation	20,930	14,922
	Surveillance	3,000	5,217
4	Weather	1,908	2,909
5	Airport Technology	7,509	9,443
6	Aircraft Safety Technology	43,175	51,004
	Aircraft Systems Fire Safety	5,697	5,337
	Advanced Materials/Structural Safety	4,112	5,245
	Propulsion and Fuel Systems	2,784	4,436
	Flight Safety/Atmospheric Hazards Research	3,226	5,296
	Aging Aircraft	24,655	22,957
	Aircraft Catastrophic Failure Prevention Research	2,701	2,705
	Fire Research	0 2/	5,028
7	System Security Technology	35,930	36,604
	Explosives/Weapons Detection	22,829	23,675
	NAS Security	2,454	1,977
	Aviation Security Human Factors	2,845	3,124
	Aircraft Hardening	7,802	7,828
8	Human Factors/Aviation Medicine	29,256	25,329
	Flightdeck Human Factors	7,563	6,890
	ATC Human Factors	7,192	6,198
	Airway Facilities Maint. Human Factors	3,692	2,333
	Flightdeck/ATC System Integration	4,342	2,199
	Aircraft Maintenance Human Factors	2,134	1,579
	Aeromedical Research	4,333	6,130 3/
9	Environment and Energy	5,385	5,429
10	Innovative/Cooperative Research	4,725	5,036
TOTAL, R,E&D		254,000	266,800

- 1/ Reflects management of Operational Traffic Flow Planning to Modeling and Simulation.  
 2/ Previously funded under Aircraft System Fire Safety.  
 3/ Reflects realignment of ongoing tasks from other budget lines within Budget Activity 8.



## RESEARCH, ENGINEERING & DEVELOPMENT

### Relationship To National Priorities

The table below provides a list of R,E&D program areas describing their key features, benefits, and the program area's relationship to these major administration themes.

**Table 9 - Relationship of R,E&D Programs to Major Administration Themes**

Program Area	Feature	Benefits	Major Administration Themes					
			Economic Productivity					
			Safety/Security					
			Environmental Protection					
			Technological Leadership					
Intermodalism								
Air Traffic Management System	<ul style="list-style-type: none"> <li>Ability to Handle Increased Traffic</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Operating Costs</li> <li>Reduce Flight Delays</li> <li>Accommodate Requested Routes</li> </ul>	●	●				
Oceanic ATC Automation	<ul style="list-style-type: none"> <li>Ability to Handle Increased Traffic</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Operating Costs</li> <li>Reduce Flight Delays</li> <li>Accommodate Requested Routes</li> </ul>	●	●	●			
Terminal ATC Automation	<ul style="list-style-type: none"> <li>Ability to Improve Aircraft Arrival Capacities</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Operating Costs</li> <li>Reduce Flight Delays</li> </ul>	●	●				
Airport Surface Traffic Automation	<ul style="list-style-type: none"> <li>Ability to Prevent Runway Accidents/Incidents</li> </ul>	<ul style="list-style-type: none"> <li>Improve Safety on Airport Surface</li> </ul>	●	●				
Aviation System Capacity Planning	<ul style="list-style-type: none"> <li>Ability to Provide Short Term Capacity Improvements</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Impact of Projected Traffic Bottlenecks</li> </ul>	●	●				●
Traffic Alert and Collision Avoidance System	<ul style="list-style-type: none"> <li>Ability to Reduce Chance for Midair Collision</li> </ul>	<ul style="list-style-type: none"> <li>Improve Safety in Air</li> </ul>		●				
Vertical Flight Program	<ul style="list-style-type: none"> <li>Ability to Create More Efficient Linkages With Ground Transportation Modes</li> </ul>	<ul style="list-style-type: none"> <li>Increase Traffic Flow in Existing Facilities</li> <li>Relieve Congestion in Airports</li> </ul>	●					●
National Simulation Capability	<ul style="list-style-type: none"> <li>Ability to Validate Ideas</li> <li>Ability to Engage in Applied Research</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Development Risk</li> <li>Improve Human Factors</li> </ul>	●				●	
Aeronautical Data Link	<ul style="list-style-type: none"> <li>Ability to Fully Use Data Link Capability</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Miscommunication Between Pilot and Controller</li> <li>Reduce Congestion in Communication Links</li> </ul>	●	●			●	
Satellite Navigation	<ul style="list-style-type: none"> <li>Ability to Use Satellites in Aircraft Navigation</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Operating Costs</li> <li>Reduce Delays</li> </ul>	●	●			●	
Terminal Area Surveillance System	<ul style="list-style-type: none"> <li>Ability to Define Next Generation Sensors</li> </ul>	<ul style="list-style-type: none"> <li>Increase Terminal Area Capacity</li> <li>Increase Airport Safety</li> </ul>	●	●			●	
Weather Detection/ Dissemination	<ul style="list-style-type: none"> <li>Ability to Reduce Impact of Weather</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Delays Due to Weather</li> <li>Reduce Operating Cost</li> </ul>	●	●				



## RESEARCH, ENGINEERING & DEVELOPMENT

Table 9 - Relationship of R,E&D Programs to Major Administration Themes (Continued)

Program Area	Feature	Benefits	Major Administration Themes				
			Economic Productivity	Safety/Security	Environmental Protection	Technological Leadership	Intermodalism
Airport Technology	<ul style="list-style-type: none"> <li>Ability to Improve Airport Planning, Design, Construction and Operation</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Airport and Airline Operating Costs</li> <li>Reduce Airport Surface Accidents</li> </ul>	●	●	●	●	●
Aircraft Systems Fire Safety	<ul style="list-style-type: none"> <li>Ability to Improve Fire Detection and Suppression</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Fire Related Injuries and Deaths</li> </ul>		●	●	●	
Aircraft Crashworthiness	<ul style="list-style-type: none"> <li>Ability to Increase Passenger Protection From an Accident</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Crash Related Injuries and Deaths</li> </ul>		●		●	
Propulsion and Fuel Systems	<ul style="list-style-type: none"> <li>Ability to Increase the Safety, Reliability, and Durability of Engines and Fuel Systems</li> </ul>	<ul style="list-style-type: none"> <li>Enhance Airworthiness</li> <li>Reduce Accidents</li> </ul>		●	●	●	
Flight Safety/Atmospheric Hazards Research	<ul style="list-style-type: none"> <li>Ability to Improve Methods for Dealing With Ice, Lightning, and Other Hazards</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Accidents</li> <li>Develop Criteria for Aircraft Design</li> </ul>		●	●	●	
Aging Aircraft	<ul style="list-style-type: none"> <li>Ability to Detect, Control and Prevent Aircraft Structural Weaknesses</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Accidents</li> <li>Develop Criteria for Aircraft Design</li> </ul>		●		●	
Aircraft Catastrophic Research	<ul style="list-style-type: none"> <li>Ability to Prevent Catastrophic Aircraft Failures</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Crash Related Injuries and Deaths</li> <li>Reduce Hull Losses</li> </ul>		●		●	
Fire Research	<ul style="list-style-type: none"> <li>Ability to Improve Fire Safety characteristics of aircraft</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate fire as a cause of fatalities in aircraft accidents</li> </ul>		●		●	
Threat Detection	<ul style="list-style-type: none"> <li>Ability to Improve Weapons and Explosives Detection</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate Terrorism</li> <li>Increase Public Confidence</li> </ul>	●	●		●	
National Airspace System Security	<ul style="list-style-type: none"> <li>Ability to Evaluate Security Improvement Ideas</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Security Threats</li> </ul>	●	●		●	
Aircraft Hardening	<ul style="list-style-type: none"> <li>Ability to Reduce Damage From Explosives</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Explosive Related Injuries and Deaths</li> <li>Reduce Hull Losses</li> </ul>	●	●		●	
Human Factors and Aeromedical Research	<ul style="list-style-type: none"> <li>Ability to Reduce Human Errors or Inefficiencies</li> </ul>	<ul style="list-style-type: none"> <li>Reduce Human Caused Accidents, Incidents and Inefficiencies</li> </ul>	●	●		●	
Environment and Energy	<ul style="list-style-type: none"> <li>Ability to Reduce Noise and Air Pollution</li> <li>Ability to Conserve Fuel</li> </ul>	<ul style="list-style-type: none"> <li>Improve Air Quality</li> <li>Reduce Noise</li> <li>Reduce Fuel Consumption</li> </ul>	●		●	●	
Innovative/Cooperative Research	<ul style="list-style-type: none"> <li>Ability to Jointly Develop New Ideas</li> </ul>	<ul style="list-style-type: none"> <li>Stimulate Market Productivity</li> <li>Increase Technology Injection</li> </ul>	●	●	●	●	



## AIRPORT AND AIRWAY TRUST FUND

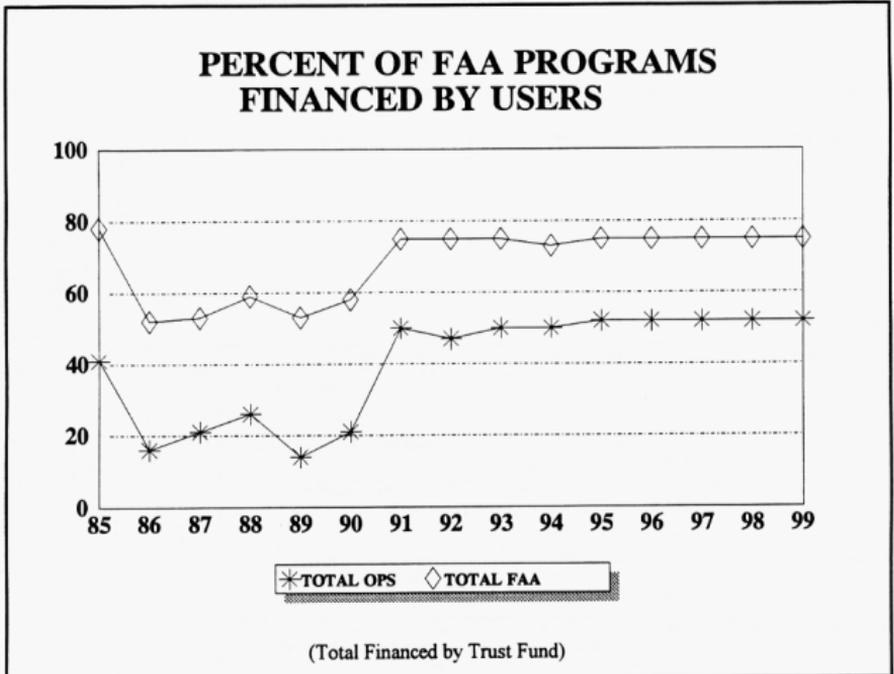


Figure 14



## AIRPORT AND AIRWAY TRUST FUND

### TRUST FUND SHARE OF FAA COSTS

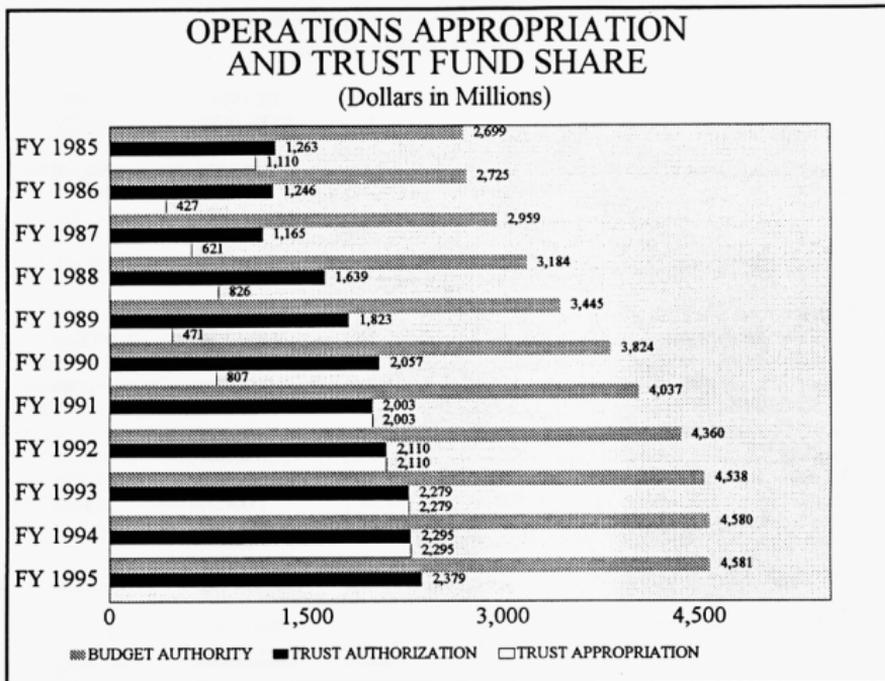


Figure 15



## AIRPORT AND AIRWAY TRUST FUND

**Table 10**

### Amounts Available for Appropriation (Dollars in Thousands)

	<u>FY 1993</u> <u>ACTUAL</u>	<u>FY 1994</u> <u>ESTIMATE</u>	<u>FY 1995</u> <u>ESTIMATE</u>
Unappropriated balance, start of year.....	10,538,348	7,883,877	7,264,666
Revenue.....	6,096,070	6,279,673	6,509,761
Transfer to the General Fund.....	<u>(1,794,522)</u>	-----	-----
 Total available for appropriation.....	 <u>14,839,896</u>	 <u>14,163,550</u>	 <u>13,774,427</u>
 Appropriations:			
Facilities and equipment.....	(2,301,700)	(2,120,104)	(2,269,100)
Facilities and equipment rescission		40,257	
Research, engineering and development.....	(230,000)	(254,000)	(266,800)
Grants-in-aid for airports:			
Appropriation to liquidate contract authority.....	(2,100,000)	(2,200,000)	(1,500,000)
Trust fund share of FAA operations.....	(2,279,321)	(2,294,500)	(2,379,200)
OST: Payments to Air Carriers.....	(38,600)	(33,423)	(25,600)
OST: GSA Rent.....	<u>(29,887)</u>	<u>(37,114)</u>	<u>(40,797)</u>
 Total appropriations.....	 <u>(6,979,508)</u>	 <u>(6,898,884)</u>	 <u>(6,481,497)</u>
 Unobligated balance returned to receipts.....	 <u>23,489</u>	 -----	 -----
 Unappropriated balance, end of year.....	 <u>7,883,877</u>	 <u>7,264,666</u>	 <u>7,292,930</u>
 Unexpended balance, start of year :			
U.S. securities (par).....	15,090,296	12,671,636	12,519,720
Cash.....	<u>112,643</u>	<u>178,158</u>	<u>120,300</u>
 Balance of fund, start of year.....	 <u>15,202,939</u>	 <u>12,849,794</u>	 <u>12,640,020</u>
 Cash income during the year:			
Government receipts:			
From excise taxes:			
Passenger ticket tax.....	4,471,698	4,741,861	5,087,279
Waybill tax.....	255,376	260,910	282,497
Fuel tax.....	120,473	183,312	175,730
International departure tax.....	223,287	235,350	252,315
Refund of Taxes.....	<u>(14,527)</u>	<u>(14,560)</u>	<u>(14,560)</u>



## AIRPORT AND AIRWAY TRUST FUND

Table 10 (Continued)

### Amounts Available for Appropriation (Dollars in Thousands)

	FY 1993	"EST" FY 1994	"EST" FY 1995
Transfer to General Fund.....	(1,794,522)	-----	-----
Intrabudgetary transaction:			
Interest on investments.....	<u>1,039,763</u>	<u>872,800</u>	<u>726,500</u>
Total annual income.....	<u>4,301,548</u>	<u>6,279,673</u>	<u>6,509,761</u>
Cash outlays during the year:			
Federal Aviation Administration:			
Grants-in-aid for airports.....	1,931,239	1,850,200	1,709,900
Facilities and equipment.....	2,166,371	2,023,151	2,103,062
Facilities and equipment proposed rescission		(8,051)	(9,662)
Research, engineering and development...	212,312	266,600	278,300
Operations.....	2,279,313	2,294,500	2,379,200
OST: Payment to Air Carriers	35,571	25,933	28,729
OST: GSA Rent	<u>29,887</u>	<u>37,114</u>	<u>40,797</u>
Total annual outlays.....	<u>6,654,693</u>	<u>6,489,447</u>	<u>6,530,326</u>
Unexpended balance carried forward:			
U.S. securities (par).....	12,671,636	12,519,720	12,482,055
Treasury balance.....	<u>178,158</u>	<u>120,300</u>	<u>137,400</u>
Balance of fund, end of year.....	<u>12,849,794</u>	<u>12,640,020</u>	<u>12,619,455</u>
Commitments against unexpended balances:			
Appropriated but not expended.....	(4,965,917)	(5,375,354)	(5,326,525)
Committed to future appropriations to liquidate outstanding obligations (contract authority).....	(2,523,953)	(2,013,953)	(2,203,953)
Unobligated balance of contract authority.....	(1,092,410)	(1,092,410)	(604,210)
Proposed rescission of contract authority.....	-----	<u>488,200</u>	-----
Uncommitted cash balance, end of year.....	<u>4,267,514</u>	<u>4,646,503</u>	<u>4,484,767</u>



## FISCAL YEAR 1994 FUNDING

Table 11

### AMOUNTS AVAILABLE IN FY 1994 (Dollars in Millions)

	<u>FY 1994 President's Budget</u>	<u>FY 1994 Enacted</u>	<u>Difference</u>
Budget Authority			
Operations	\$4,576.0	\$4,580.5	\$4.5
General	(2,307.2)	(2,286.0)	-21.2
Trust	(2,268.8)	(2,294.5)	25.7
Grants-in-Aid to Airports			
Obligation Limitation	1,879.0	1,690.0	-189.0
Facilities and Equipment	2,524.0	2,120.1	-403.9
Research, Engineering and Development	250.0	254.0	4.0
Aircraft Purchase Loan Guarantee	0.15	0.15	0.0
Total Amounts Available	<u>\$9,229.0</u>	<u>\$8,644.6</u>	<u>\$584.4</u>
FTE's 1/			
Operations	49,319	48,826	-493.0
Facilities and Equipment	2,300	2,300	0.0
Research, Engineering and Development	711	711	0.0
Aviation Insurance Revolving Fund	2	2	0.0
Reimbursable	451	451	0.0

1/ Includes non-ceiling FTEs.



## OUTLAYS

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Table 12

### Summary of Outlays 1/ (Dollars in Thousands)

<u>Appropriation</u>	<u>FY 1993 Actual</u>	<u>FY 1994 Estimate</u>	<u>FY 1995 Estimate</u>
Operations	4,491,813	4,589,820	4,580,830
(Trust Fund)	2,279,321	2,294,500	2,379,200
(General)	2,212,492	2,295,320	2,201,630
Facilities and Equipment	2,166,371	2,023,151	2,103,062
Research, Engineering and Development	212,312	266,600	278,300
Grants-in-Aid to Airports	1,931,239	1,850,200	1,709,900
Aircraft Purchase Loan Guarantee	36	151	148
Aviation Insurance Revolving Fund	<u>-1,786</u>	<u>-3,600</u>	<u>-3,600</u>
TOTAL	8,799,985	8,726,322	8,668,640

1/Does not include outlays associated with the proposed recession.