**Before the Subcommittee on Transportation and Related Agencies,
House Appropriations Committee**

United States House of Representatives

Department of Transportation Budget for Fiscal Year 2003

Statement of

The Honorable Kenneth M. Mead

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Mr. Chairman and Members of the Subcommittee:

Thank you for inviting us to testify today as the Subcommittee begins its deliberations on the fiscal year (FY) 2003 appropriation for the Department of Transportation (DOT). Much has happened since we met at the beginning of last year's appropriations cycle. Last year, our testimony focused on aviation delays and cancellations, airline customer service, and what seemed like aviation gridlock. At that time, none of us could have imagined the events of September 11, 2001, and the challenges facing our nation today. Thus far, we in the Office of Inspector General (OIG) have been impressed with the diligence and aggressiveness with which the Department has moved forward to meet its new responsibilities.

In today's statement, I would like to highlight some of the most pressing transportation issues facing DOT. Not surprisingly, this list begins with responding to September 11, 2001, but it also includes other departmental issues that must remain on the front burner, including: supporting the nation's aviation system, deciding the future of inter-city rail passenger service, improving motor carrier and vehicle safety, balancing Coast Guard's missions and budget requirements, and improving the Department's stewardship and accountability over Federal funds.

RESPONDING TO SEPTEMBER 11, 2001

Establishing the Transportation Security Administration to Increase Aviation Security

The mission of creating a new Federal agency charged with ensuring security across all modes of the U.S. transportation system is a tremendously formidable task. Since passage of the Aviation and Transportation Security Act (Act), a sea change has been set in motion - all with very short timeframes.

Also, it is important to note that the Transportation Security Administration (TSA) is responsible for all aspects of transportation security, not just aviation security. Currently all modes of transportation (transit, rail, motor carriers, Coast Guard, etc.) are performing risk assessments. In the months ahead, TSA will have to focus resources on addressing security across all modes of transportation.

Since November, the OIG has been conducting "undercover audits" of security performance at airports nationwide, as requested by the President. We have seen that security has progressively improved and is clearly tighter today than before September 11th. However, there are still alarming lapses of security, and the process of ensuring that these lapses do not recur is just one challenge that lies ahead.

Mr. Chairman, the next major milestone for TSA is less than 1 week away, when the agency will assume control of all screener contracts. However, the two most critical deadlines lie still further ahead:

- November 19th, when TSA must ensure that there are enough Federal screeners, Federal law enforcement officers, and Federal security managers in place to conduct the screening of passengers and property at all commercial airports; and

- December 31st, when TSA must have a sufficient number of explosives detection systems in place to screen all checked bags.

Today, I would like to discuss progress towards these two deadlines.

Hiring and Training the TSA Workforce. The next major challenge facing TSA is the hiring and training of a qualified workforce. Recent estimates indicate that TSA will need to hire at least 40,000 employees, including over 30,000 screeners, an executive team, law enforcement officers, Federal air marshals, and support personnel. TSA and the Federal Aviation Administration (FAA) have expanded the Federal Air Marshal program for both domestic and international flights. Law enforcement personnel from several Federal agencies, including the OIG, have been selected and trained to augment the Federal Air Marshal program until TSA can recruit and train the necessary personnel.

As detailed in the next section, TSA does not yet know precisely which explosives detection equipment it will use and where. More screeners are needed to operate FAA-certified explosives detection systems (EDS) in airport lobbies than to operate EDS machines integrated into the baggage system. Using a combination of EDS and trace explosives detection devices to screen checked baggage would require even more screeners. Until TSA determines what equipment it will use and how many are needed at each airport, the number of screeners required remains an open issue. TSA needs to resolve this issue and is working to do so.

Airport screeners must now be U.S citizens. At Washington Dulles International Airport, it is estimated that up to 80 percent of the current screeners will not qualify for employment with TSA because they are not U.S. citizens. Although

we do not yet know the percentage nationally, a significant number of the current screening workforce may not qualify for screening positions with TSA. This will have a significant impact on how quickly TSA can hire and train the needed screeners, and how quickly the agency can assume screening at airports.

Screening Checked Baggage Through Explosives Detection Equipment. Air carriers are now required to screen 100 percent of checked baggage using either an FAA-certified EDS or an alternative method. Because there are limited EDS units currently available, carriers are relying primarily on positive passenger bag match. Based on our observations on January 18th and 21st at airports nationwide, we found high levels of compliance and minimal disruption of air carrier operations. Positive passenger bag match at the point of origin represents a significant achievement, especially in light of the concerns air carriers have expressed over the years that it would be either difficult or impractical to do.

However, positive passenger bag match at the point of origin has limitations. The concern is with the small percentage of connecting passengers who, for one reason or another, do not get on their connecting flight, though their checked baggage continues to its final destination. We have previously recommended that it would be advantageous to TSA, the industry, and the traveling public to initiate a pilot program of limited scope, perhaps 2 to 4 weeks at selected locations, to identify logistical issues and determine whether positive passenger bag match on all connecting flights is operationally feasible. The Under Secretary for Transportation Security announced last week that the Department will conduct such a pilot.

It is important to remember, however, that positive passenger bag match does not guarantee against future attempts by suicidal terrorists to blow up an aircraft, and it is not a permanent substitute for 100 percent EDS screening. This is why Congress has required, and the Department is aggressively moving to ensure, that all checked baggage is screened through an explosives detection system by December 31, 2002.

TSA is working toward having sufficient explosives detection equipment in place by the December deadline. Issues that need to be resolved include: (1) how many FAA-certified EDS machines the industry is capable of producing in the next year; (2) whether the required number of EDS machines can be installed in airport lobbies or baggage systems while allowing the aviation industry to run with a reasonable degree of efficiency; and (3) whether, given these exigencies, TSA will require that all bags be checked through an FAA-certified EDS machine by December 2002 or will instead employ (perhaps just as an interim measure) some combination of certified EDS machines and trace explosives detection equipment.

Interim Approach May Be Needed. Currently, there is a gap between the number of certified EDS machines needed to check all bags and the number of EDS machines that manufacturers can produce. FAA estimates over 2,000 additional EDS machines will need to be installed in over 400 airports nationwide over the next year. The Department hired a consulting firm to review how TSA could meet the 100 percent baggage screening requirement by December 2002. The consultant recently estimated that 2,990 machines were required to meet the 100 percent screening, but estimated that manufacturers could produce only 2,260 EDS by yearend, leaving a shortage of about 700 EDS machines.

There is also the question of whether all airport lobbies or baggage handling systems can be reconfigured to accommodate the EDS machines by the end of the year. It takes significantly more time to reconfigure an airport baggage system to accommodate one or more in-line EDS machines than to place an EDS in the airport lobby. However, there is simply not the space to install all EDS machines in airport lobbies, and it will take more staff hours to operate EDS machines located in lobbies rather than integrated into the baggage handling system.

Given these factors, TSA is likely to need an interim approach to meet the December deadline. Among the specific strategies being considered are the integration of EDS machines into the baggage system and, as an interim solution, use of a combination of trace explosives detection and EDS machines installed in the lobby. Using this method, approximately 1,800 EDS would be required. According to the consultants, manufacturers could produce sufficient numbers of EDS and trace explosives detection units to meet our needs.

Measuring TSA's Success in Improving Aviation Security

Congress, the Administration, and the traveling public all need to be able to gauge success in improving aviation security. We see three logical sets of measures for the next year.

First, whether the deadlines set in the Act will be met, two of which we have already described in detail.
- February 17, 2002 – TSA to assume screening contracts from airlines.
- November 19, 2002 – TSA must have a sufficient number of screeners, Federal law enforcement officers, and Federal airport security managers to screen all passengers and baggage.
- December 31, 2002 – TSA must deploy a sufficient number of explosives detection systems to screen all checked baggage.

Second, we propose the following metrics to measure TSA's progress toward meeting those date-specific goals:

- number of screeners hired;
- number of screeners that have completed training;
- number of airports with TSA employees performing screening;
- number of Federal airport security managers in place;
- number and percentage of background checks completed;
- number and type of EDS equipment deployed;
- number of airports ready to screen all checked baggage; and
- EDS equipment usage.

A third set of measures would address the bottom line issue of the extent and success of security coverage. There are sensitive security metrics that would be more appropriate to discuss in a closed session. Speaking in the broadest sense, however, these might include the number of flights covered by air marshals and the results of screener accuracy tests.

Funding the Transportation Security Administration

There are tremendous budgetary challenges facing TSA for this year and next, and it is increasingly clear that the cost of good security will be substantially greater than most had anticipated. The cost implications are both in terms of capital costs for equipment and operating costs for personnel. Key drivers are the sheer number of Federal screeners, Federal law enforcement officers, Federal security managers, and Federal air marshals that will be needed, as well as the pace and type of EDS installation.

Total capital costs for the EDS equipment could range between $1.9 billion and $2.5 billion, depending on the type and mix of equipment used. This does not include the cost to integrate EDS equipment at airports, which could exceed $2.3 billion. In addition, estimated operating costs for FY 2002 could range from $1.6 billion to $1.8 billion based on hiring, training, and deploying a Federal workforce of over 40,000 employees by the November 19th deadline. These will also include costs of assuming the existing contracts, which could be a significant expense. All of these requirements are against a projected revenue base for FY 2002 of between $2.0 billion and $2.4 billion. Clearly, a supplemental appropriation will be needed.

For FY 2003, operating costs for TSA's workforce could range between $2.7 billion and $3.3 billion, as the agency experiences its first full year of salary costs. However, revenue from the security fee and assessments from air carriers will not be sufficient for FY 2003. The security fee is estimated to generate only

about $1.7 billion in FY 2003 and the Department estimates that assessments from the carriers will only bring in around $700 million.

Given the pace of events since September 11th, it is understandable why there would be such substantial fluidity in the budget numbers. Now, an immediate task for TSA is to move out with dispatch to bring as much clarity as possible to its budgetary requirements for this year and next. Credible budgetary requirements will help Congress and the Administration resolve the questions of who will pay for what and in what amount. Much confusion exists in these areas because there are many funding sources – some of which are appropriated and some of which are not. These include revenue from fees, direct appropriations, and airline assessments, as well as changes to how airports can use grant money and passenger facility charges.

Given the large budgetary requirements, it is important that TSA have good cost controls. Vendors are very aware of the immense amount of equipment that will be purchased. As TSA begins reviewing its capital needs, vendors are lining up with a vast amount and array of equipment, and TSA must sort through the claims and counter claims of vendors who believe their technology is the best for meeting the established deadlines. Given the large budgetary implications, it is imperative that TSA ensure that its acquisition process is free from fraud, waste, and abuse.

Implementing Computer Security

Finally, although this subject will not fall under the TSA's purview, no discussion of security would be complete without a review of the Department's computer security. DOT computer systems (including those supporting air traffic control or monitoring trucks inspection results at the border) are important to public safety and support the nation's economic health.

DOT needs to make substantial improvements in computer security. Security over DOT's almost 550 mission-critical systems has been identified as a material weakness and DOT's Government Information Security Reform Act (GISRA) report was "disapproved" by OMB.

Despite some progress in the last year, much remains to be done. As a priority matter, DOT must:
- enhance network intrusion detection and incidents reporting procedures;
- enforce and enhance security requirements for third-party network connections;
- identify major DOT systems requiring security certification reviews;
- develop guidance for estimating, tracking, and reporting system security funding;
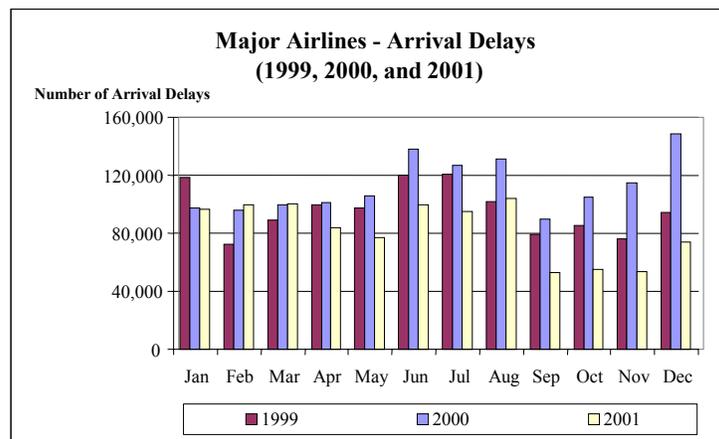
- reevaluate its identification of Presidential Decision Directive 63 (PDD-63) critical assets as some systems may have been inappropriately excluded; and
- complete proper background checks on DOT employees and contractor personnel, and incorporate background check requirements in contracts.
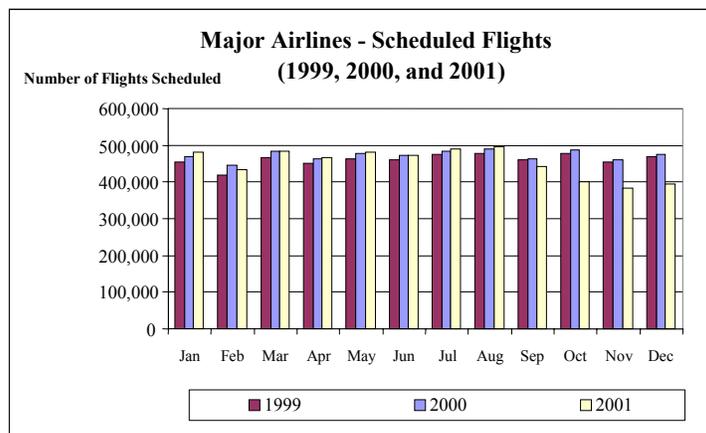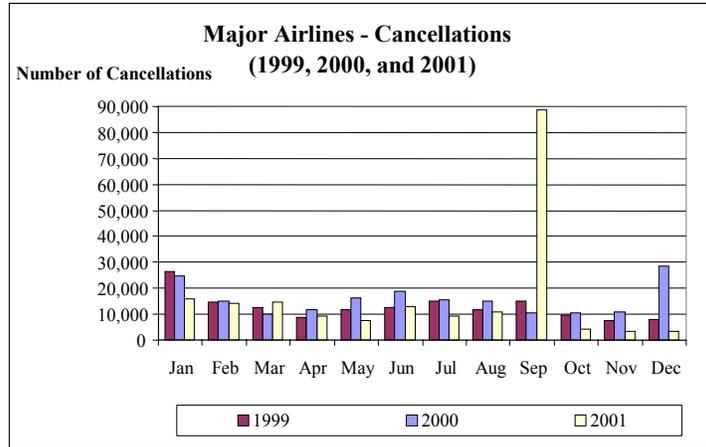
SUPPORTING THE NATION'S AVIATION SYSTEM

Being Positioned for When the Demand for Air Travel Rebounds

FAA must be well-positioned when the demand for air travel returns through a combination of new runways, better air traffic technology, airline scheduling practices, and greater of use of airports other than hubs. FAA's best estimate is that economic conditions and passenger demand will recover within 18 to 24 months. FAA projects that by 2004 passenger enplanements will return to pre-September 11 levels.

Vital Statistics. At our August hearing last year, we presented three charts illustrating how the delays and cancellations had fallen during the first half of 2001 compared to those of the prior 2 years. At that time, we reported that these reductions were due to various factors, including better weather conditions, no significant labor disruptions, FAA and airline efforts to improve communication and air traffic management, and voluntary schedule adjustments by several of the major airlines. The slowing economy, combined with September 11, however, only served to accelerate the decline--as illustrated by the following three figures and related statistics.

Major Airlines - Arrival Delays
(1999, 2000, and 2001)

Number of Arrival Delays

**Major Airlines - Cancellations
(1999, 2000, and 2001)**

Number of Cancellations

**Major Airlines - Scheduled Flights
(1999, 2000, and 2001)**

Number of Flights Scheduled

- During 2001, 22 percent of flights scheduled by the 9 major airlines[1] were delayed, canceled, or diverted, affecting an estimated 102 million passengers. In comparison, 27 percent of scheduled flights in 2000 were similarly impacted, affecting an estimated 163 million passengers.

- Arrival delays decreased nearly 27 percent (1,355,176 to 991,401) between 2000 and 2001. While cancellations increased about 4 percent in 2001, nearly half of all the cancelled flights (88,545) occurred in September.[2] If September's figures are excluded from the calculation, cancellations would have dropped 40 percent (176,952 to 105,782) for the remaining 11 months of the year.

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[1] Includes Trans World Airlines, which was purchased by American Airlines in 2001.

[2] Many of these cancellations occurred as a result of the September 11th terrorist attacks and the resulting shutdown of the National Aviation System.

- Not only were there fewer delays, but those occurring were shorter in duration. Of those flights arriving late, the average delay was about 49 minutes in 2001—a decline of over 3 minutes from the average in 2000.

- The number of flights experiencing taxi-out times of 1 hour or more decreased over 30 percent (from 45,993 to 32,019) between 2000 and 2001. Flights with taxi-out times of 2, 3, 4, and 5 hours decreased at even higher rates of 39, 53, 65, and 80 percent, respectively.

Number of Flights with Taxi-Out Times of 1 to 5+ Hours, 2000 and 2001

(BTS Data for 30 Largest Airports)

| Time Period	2000	2001	% Change
1-2 Hrs.	39,019	28,034	-28%
2-3 Hrs.	5,376	3,287	-39%
3-4 Hrs.	1,219	577	-53%
4-5 Hrs.	300	105	-65%
5 or > Hrs.	79	16	-80%
Total:	45,993	32,019	-30%

- Flights chronically delayed (30 minutes or more) and/or canceled decreased 59 percent (from 242,803 to 98,613) between 2000 and 2001.[3] Likewise, the number of unique flight numbers associated with these chronically delayed and canceled flights decreased 29 percent (from 10,717 to 7,601).

- Against this backdrop of decreasing delays and cancellations, consumer complaints also dropped. DOT Air Travel Consumer Report disclosed that consumer complaints against the major air carriers decreased nearly 32 percent (20,564 to 14,076) between 2000 and 2001.

- Scheduling data showed significant decreases during the last 4 months of 2001:

  -- BTS reported a small increase of 0.5 percent in scheduled flights during the first 8 months of 2001 over the prior year. In comparison, the last 4 months witnessed an overall decrease of 14 percent.[4]

  -- When breaking out schedule data by airport, we found considerable differences, with many of the 30 largest airports witnessing decreases greater than 14 percent, including: National (-44 percent), Kennedy (-27 percent), Boston (-27 percent), La Guardia (-24 percent), and Los Angeles (-23 percent). Those airports with the smallest decreases

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[3]   Under our definition, which differs slightly from Bureau of Transportation Statistics (BTS), chronically delayed and/or canceled flights are those regularly scheduled flights (e.g., Chicago to Miami) that arrived at least 30 minutes later than scheduled and/or were canceled at least 40 percent of the time during a single calendar month.

[4]   Overall, the major airlines reported a 4.4 percent decline in the number of scheduled flights in 2001 as compared to 2000.

during the last 4 months of 2001 included: Las Vegas (-5 percent), Tampa (-5 percent), and Baltimore (-7 percent).

- As a sign of the softening economy and the impact of the September 11 terrorist attacks, we found that the number of vacant seats has increased from last year. The average load factor (number of passenger seats filled) was down during 2001 for all months except January—as illustrated in the chart.

Monthly Passenger Load Factors (ATA Data)

Overall, the major airlines reported an average load factor of 70.3 percent in 2001—2.5 points lower than the overall average in 2000.
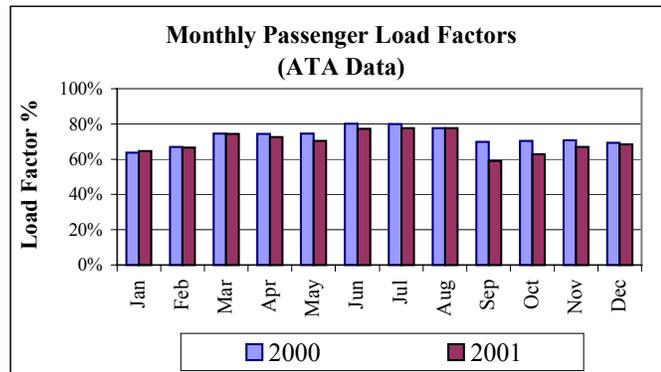
Moreover, as illustrated below, the number of business travelers (based on revenue passenger miles) decreased significantly faster than leisure travel during the first half of 2001, with large decreases in both categories after September 11. Overall, the Air Transportation Association (ATA) reported that leisure and business travel dropped approximately 6 and 21 percent, respectively, in 2001. Preliminary passenger data from ATA indicate that January 2002 statistics show little or no improvement, with revenue passenger miles still down approximately 14 percent from the year before.

Percent Change in Business and Leisure Travel From the Prior Year (ATA Data)
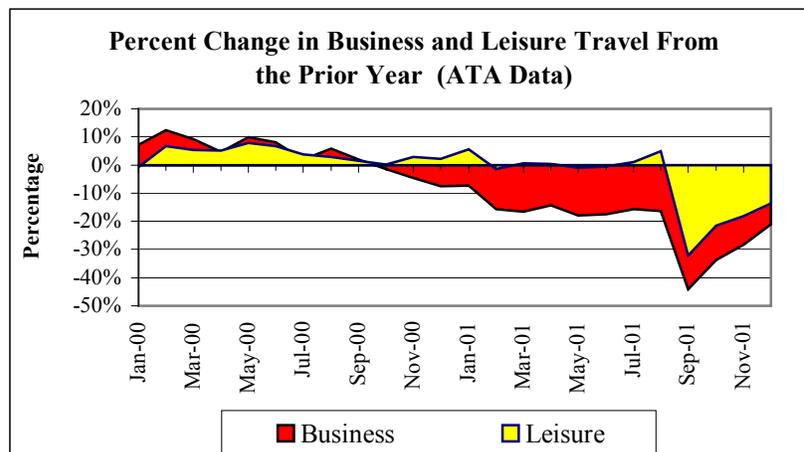
Keeping Capacity Enhancing Initiatives on Track. In the summer of 2001, FAA published its *Operational Evolution Plan* for enhancing the capacity of the National Airspace System. This new blue print was only 3 months old when the terrorists struck on September 11. FAA intends to invest $11.5 billion in the plan exclusive of the costs to provide air traffic services, new security requirements, and build new runways, but the true cost of implementing the plan is unknown.

The Operational Evolution Plan encompasses a range of efforts to enhance capacity, including choke point/airspace redesign initiatives, new procedures, and new technology. While choke point initiative and new controller automated tools enhance the flow of air traffic, building new runways provides the largest increases in capacity. Most of the 14 runway projects included in the plan remain on schedule and were not affected by the events of September 11. For example, Detroit's runway was completed as scheduled in December 2001.

While none of the 14 runway projects have been canceled, 2 airports have reported changes in their schedule (Minneapolis and Houston) and 2 airports are reconsidering their plans (Dallas-Ft. Worth and Charlotte). Minneapolis has made the most significant change by revising the estimated completion date for its runway by a year, from 2003 to 2004. Because Dallas-Ft. Worth airport officials have expressed so much uncertainty about their runway configuration, FAA has removed Dallas-Ft. Worth from the Operational Evolution Plan. Further, Atlanta airport officials told us that they may slip the runway completion date from 2005 to 2006 due to problems with the runway earthwork contract.

Airport officials also told us that other adjustments to planned infrastructure projects may occur as emphasis is placed on revamping airport terminals to accommodate new requirements for explosives detection equipment to screen checked baggage. Given the challenges that airports are facing, current schedules for completing major runways are aggressive. It is therefore incumbent that FAA continues to closely monitor these runways by both visiting airports to verify information, including those airports that say they are on track, and reviewing project financial plans. The following chart shows the status, cost, and challenges to timely completion for each of the 14 runway projects as provided by FAA and the airports.

Status of 14 Major Runway Projects as of February 2002
Information Provided by FAA and Airports

Airport	Estimated Completion Date	Phase(s)	Cost Estimate (Millions)*	Challenges to Timely Completion (as provided by the airport)
Detroit	*2001*	*Commissioned December 11, 2001*	*$231*	✓ *None. Runway completed.*
Miami	2003	Construction	$206	✓ None cited.
Orlando	2003	Construction	$203	✓ None cited.
Houston	2003**	Construction	$260	✓ Construction difficulties associated with a landfill.
Denver	2003	Construction	$162	✓ Obtaining FAA funding approval for paving and lighting project components. ✓ FAA follow-through on commitments to fund, design, and install NAVAIDs.
Minneapolis	2004***	Construction	$510	✓ Cooperation between Federal and state permitting and approval agencies. ✓ Construction weather delays. ✓ Contractor ability to carry large bonds and complete existing contracts on time after unexpected accidents, labor actions, work force problems, and material shortages. ✓ Financial status of hub air carrier.
Charlotte	2004	Land Acquisition	$187	✓ Obtaining sufficient Federal funding to retire debt from runway land acquisition. ✓ Financial status of hub air carrier.
Atlanta	2005	Construction	$1,200	✓ Obtaining fill material for the runway. ✓ Local authorities' relocation of existing road, utilities, and NAVAIDs. ✓ FAA funding and installation of NAVAIDs. ✓ FHWA and Georgia DOT design concurrence on runway support structures for the runway portion that extends over I-285.
Boston	2005	Environmental	$102	✓ Public and political opposition, including lawsuits from opposing groups and organizations. ✓ Lengthy EIS process.
Cincinnati	2005	Environmental	$240	✓ Beginning construction by March 2002. ✓ Timely land acquisition.

* Estimates were provided by airport authorities.
** Houston has slipped the runway completion date from April to October 2003 because of construction difficulties associated with a landfill.
*** Minneapolis has slipped its completion date by a year from 2003 to 2004 because of the economic impacts of September 11.

Status of 14 Major Runway Projects as of February 2002 (continued)
Information Provided by FAA and Airports

Airport	Estimated Completion Date	Phase(s)	Cost Estimate (Millions)	Challenges to Timely Completion (as provided by the airport)
St. Louis	2006	Construction	$1,100	✓ None cited.
Seattle	2006	Environmental and Construction	$773	✓ U.S. Army Corps of Engineers permit for wetland fills. ✓ Pending citizen lawsuits. ✓ Competing demands on FAA funding, equipment, and personnel.
Dulles	2007	Planning	$252	✓ None cited.
Dallas/ Fort Worth	Unknown****	Planning	$350-450	✓ Timely completion of the EIS and adoption of a rigorous project schedule.

**** Last year, Dallas Ft.-Worth had an estimated date of 2007, but now the date is unknown because of uncertainty regarding the runway configuration that would be best.

Managing FAA Acquisitions and Making Sound Business Decisions. FAA spends almost $3 billion annually to modernize the National Airspace System. FAA has made progress with a number of acquisitions, including Free Flight Phase 1, which introduced new automated controller tools as well as new information exchange systems that link FAA and airline operations centers.[5] However, cost and schedule problems persist with major acquisitions, and several programs require careful watching.

- The *Wide Area Augmentation System (WAAS)* has a long history of cost increases, schedule slippages, and vexing technical problems. The current cost estimate of $2.9 billion is under review. WAAS was originally estimated to cost $892 million and commence operations in 1998. FAA now expects to have WAAS operational in 2003 but this new satellite navigation system will provide less precision approach capability than initially promised. FAA must decide whether to stop WAAS development in 2003 or continue to refine the technology to meet more demanding precision approach capability known as a "Category I precision approach."[6] In a separate effort, FAA is pursuing the Local Area Augmentation System specifically for precision approach capability and expects to field a production system in 2004.

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[5] See Free Flight Phase 1 Technologies: Progress to Date and Future Challenges (AV-2002-067, December 14, 2001).
[6] Category I precision approaches provide for an approach to a height above touchdown of not less than 200 feet and visibility of ½ mile.

FAA expects to make a decision this spring on how to proceed with WAAS. The benefits of WAAS have shifted over time (FAA will no longer realize cost savings from phasing out ground based systems) and general aviation users will be the principle beneficiary of WAAS. Large commercial carriers who have equipped aircraft with sophisticated avionics and/or flight management systems may find little benefit in equipping with WAAS.

- FAA's *Standard Terminal Automation Replacement System (STARS)* is already 4 years late and is now estimated that it will cost $600 million over the original estimate of about $1 billion. STARS will provide controllers in the terminal environment with color displays, processors, and computer software at 166 FAA facilities. FAA has spent about $660 million on the STARS program but has only two early display configuration systems in operation, which provide new controller displays, but did not replace existing software.

  The cost and schedule to complete full STARS remains at risk. Testing of STARS continues to identify critical problems (trouble reports). Currently, there are 523 open trouble reports, and the number of reports deemed "critical" has remained relatively constant at about 175 between September 2001 and January 2002. This puts the installation for the first site in November 2002 (Philadelphia) at risk because all critical trouble reports must first be corrected. Also, STARS is dependent on the new ASR-11 digital radar that has experienced cost increases and schedule slips of its own. FAA has delayed a decision to authorize full production for the ASR-11 radar from December 2001 to November 2002 because of delays in resolving technical problems. Unless FAA modifies its deployment strategy or purchases equipment to make existing analog radars compatible with STARS, this will result in some STARS sites being deployed before the new digital radar is in place. This further complicates an already large, complex deployment that is scheduled to be complete by 2008.

- FAA and industry are pursuing *Automatic Dependent Surveillance–Broadcast[7],* commonly referred to as "ADS-B", through the Safe Flight 21 initiative ($215 million). The Safe Flight 21 initiative is a limited deployment with the bulk of development work being done in the Ohio River Valley and Alaska. ADS-B is a key Free Flight technology and can help pilots land in bad weather and, when coupled with cockpit moving map displays, can help prevent accidents on runways. In essence, ADS-B can provide "a second set of eyes" in the cockpit. To expedite the development of such new technologies, the

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[7] Automatic Dependent Surveillance-Broadcast uses the Global Positioning System. Aircraft equipped with ADS-B avionics transmit position information, along with aircraft identification, altitude, velocity, and possible intent data to ground systems and other properly equipped aircraft.

Congress provided $5 million for a pilot in Fiscal Year 2002 to integrate new GPS-based technologies with controller displays and other systems. Considerable controversy has focused on the data link and required radio frequency that will be used to transmit ADS-B information to aircraft and controllers. FAA expects to make a decision on these matters in March or April of this year. Reaching closure on these issues is important because it will solidify technical standards and facilitate the development and implementation of a new generation of cockpit avionics. ADS-B has considerable promise for enhancing capacity as well as safety and, in light of September 11, may offer some security features. To obtain benefits, airspace users must invest in new avionics.

- The *Weather and Radar Processor (WARP)* is expected to significantly improve the weather information on controller displays by providing accurate color graphics of weather on the same displays that controllers use to track aircraft, a capability that does not exist today. Since 1995, the estimated cost of the program has increased from $227.8 million to $276.8 million, or a 22 percent increase. The current plan is to begin using WARP on controller displays at the first site, the Dallas - Ft. Worth en route center, in July 2002, nearly a 3-year delay. Even with the cost increases and schedule delays, the current cost baseline is not realistic and the schedule is at risk.

- The *En Route Automation Modernization (ERAM)* program replaces the en route computer hardware and software used to receive, process, and track high altitude air traffic (also know as the Host computer system). The Host mainframe computer was replaced to address Y2K and maintenance concerns but the software was not. ERAM is essential to ensure the maintainability of the Host computer and accommodate Free Flight technologies. FAA estimates the Host computer system will reach its end-of -service life in 2008 and that it will take approximately 7 years for a contractor to develop and deploy a replacement system. Costs are uncertain but could exceed $1 billion. In June 2001, a General Services Administrative judge upheld a contractor protest and ruled that FAA did not fully develop the program requirements before announcing their intent to award a single source contract. FAA intends to solicit vendor proposals by the end of February 2002. FAA needs to definitize plans and develop a clear-cut strategy for replacing the Host computer hardware and software at the nation's en route air traffic control facilities.

- FAA's *Telecommunication Infrastructure (FTI)* effort is important because it replaces ground-to-ground owned and leased communications networks. The FTI project was initially established to replace six FAA networks with one integrated digital communications network to better support modernization efforts with an estimated cost of $1.9 billion over 10 years. The current cost

estimate of $1.9 billion may not be reflective of all the costs associated with the effort. In August 2001, we reported that the initial FTI design would significantly increase air traffic control systems vulnerability to unauthorized intrusion because critical systems would share the same network with administrative (such as accounting) systems with direct connections to the Internet. Based on our recommendations, FAA amended its FTI requirements in December 2001 to replace air traffic control networks only. FAA is currently evaluating revised proposals submitted by three vendor groups and now plans to award a contract by June 2002.

- *Safeguarding satellite-based systems from intentional and unintentional interference.* A key element in FAA's plans for modernizing the National Airspace System is the use of satellite-based systems for navigation, which include wide and local area augmentation systems. FAA had believed that satellite-based systems (GPS/WAAS) with appropriate augmentation could satisfy the required performance as the only navigation system installed in an aircraft or the only service provided by FAA. This is no longer the case.

  While satellite-based systems are becoming commonplace in all modes of transportation, they are susceptible to unintentional and intentional interference. The recent Volpe report on GPS vulnerability underscores the fact that satellite-based systems cannot serve as "sole means" systems as envisioned [8]. This affects not only aviation but also maritime, highway, and railroad efforts to harness GPS. The Department needs to continue risk mitigation efforts, rationalize its approach to back-up systems, and leverage the Department of Defense's work to develop anti-jamming technology.

Overarching Factors That Will Affect FAA's Performance. A common thread that runs through many FAA reform efforts is to bring more accountability to the agency with respect to delivering air traffic modernization projects on time and within budget, providing more efficient services, and controlling costs. In the spring of 2000, the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century established a Management Advisory Council (with a subcommittee to oversee air traffic services) and a Chief Operating Officer.

It has been 2 years now since the legislation, and a Management Advisory Council and an Air Traffic Control Subcommittee have been established. However, as of February 11, 2002, a Chief Operating Officer, responsible for negotiating a performance agreement with the FAA Administrator, has not been appointed and the Administrator's term expires this summer.

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[8] Vulnerability Assessment of the Transportation Infrastructure Relying on the Global Positioning System (Volpe National Transportation Systems Center, August 20, 2001).

One essential part of a Performance-Based Organization is a cost accounting system. Developing an effective cost accounting system is a significant undertaking, and FAA is making good progress. To date, FAA implemented the cost accounting system for its largest line of business, Air Traffic Services. The complete cost accounting system, which FAA estimates will cost $39 million, should be ready sometime after January 2003. However, for the cost accounting system to be credible, FAA also needs an effective labor distribution system.

To its credit, FAA has deployed a system called Cru-X that it plans to use to account for and distribute its Air Traffic Services line of business labor costs. However, we identified a serious internal control flaw in the Cru-X system FAA intends to use to track about $3 billion of its labor costs. Cru-X allows employees to override its internal clock and record any work arrival and departure time they want. FAA recognized and agreed that Cru-X has a management control weakness concerning sign-in and sign-out procedures. However, FAA has not yet implemented the necessary changes. FAA must have credible cost accounting and labor distribution systems to properly manage its programs, to know the real cost of the services it provides, and to identify areas where costs can be lowered without adversely impacting service.

The Impact of Falling Aviation Trust Fund Revenues

Since the attacks of September 11, the aviation community has seen a dramatic reduction in air travel. This has resulted in steep declines in airline revenues and a sharp reduction in the amount of tax revenues available to fund FAA and its programs. The decline in revenue, combined with requirements of AIR 21, will have implications to both the uncommitted balance of the Trust Fund and the amount of General Fund contributions that will be needed to fund FAA's operating costs.

Reductions in the Trust Fund's Uncommitted Balance. AIR 21 requires that all revenue and interest deposited in the Trust Fund each year be spent on FAA and airport needs. This amount is based on revenue estimates included in the President's budget submission, which is delivered to Congress 7 months prior to the beginning of the fiscal year. For FY 2002, the President's budget estimated revenue at $12.2 billion, which Congress appropriated in accordance with AIR 21 requirements. However, since September 11, expected Trust Fund revenues have dropped from $12.2 billion to $9.8 billion - $2.4 billion less or 20 percent below original projections. In addition, as a result of September 11, Congress authorized supplemental appropriations of an additional $600 million from the Trust Fund in response to increased security needs.

The FY 2002 appropriations and the subsequent supplemental appropriations are now committed against a significantly reduced revenue stream. This will result in a substantial draw down of the Trust Fund's uncommitted balance. As shown in the following chart, we estimate that the uncommitted balance in the Trust Fund could drop from $7.3 billion at the beginning of FY 2002 to about $4.3 billion by the end of FY 2002 - a $3 billion decrease.

Airport and Airway Trust Fund FY 2002 Projections
($ in billions)

Beginning Uncommitted Trust Fund Balance	**$7.3**
Trust Fund Revenue and Interest	$9.8
Available Trust Fund Resources	$17.1
FY 2002 FAA Appropriations (based on AIR 21)	$12.2
FY 2002 Emergency Supplemental	$0.6
Total Trust Fund Commitments	$12.8
Estimated Ending Uncommitted Balance	**$4.3**

Increased Funding Requirements from the General Fund. The steep decline in Trust Fund revenues combined with AIR 21 requirements will have significant implications for FAA's operations funding. AIR 21 requires FAA's Airport Improvement Program (AIP) and Facilities and Equipment (F&E) accounts to be funded at the authorized levels *before* allocating any Trust Fund revenue to FAA's Operations account.

If Congress follows AIR 21 requirements for FY 2003 and funds the AIP and F&E accounts at the authorized levels, there will be significantly less Trust Fund revenue available to fund FAA's operations than in prior years. As a result, FAA's General Fund requirements for FY 2003 may triple over General Fund requirements in FY 2002. As shown in the following chart, the amount of funding required from the General Fund to support FAA's operations could increase from $1.1 billion this year to over $3.7 billion in FY 2003.

General Fund Contributions Needed for FAA Operations
FY 2002 and FY 2003
($ in billions)

|	FY 2002 (Appropriated)	FY 2003 (Authorized)
Estimated Trust Fund Revenues	$12.2*	$10.3**
Less AIP	($3.3)	($3.4)
Less F&E	($2.9)	($3.0)
Residual Trust Fund Revenues Available for Operations	$6.0	$3.9
Operating Budget***	$7.1	$7.6
Difference (Amount Needed from the General Fund for Operations)	**$1.1**	**$3.7**

*President's budget for FY 2002.
**President's budget for FY 2003.
***Includes Research, Engineering, and Development Account.

The increased General Fund requirements could have significant implications for FAA's budget. The need for FAA to control its operating costs is now even more critical than in the past. FAA's operating budget, which is 73 percent payroll costs, has increased over the past 5 years at a significant rate. As shown in the graph on the following page, FAA's operations costs have increased from $5.5 billion in 1998 to $7.6 billion in FY 2003.
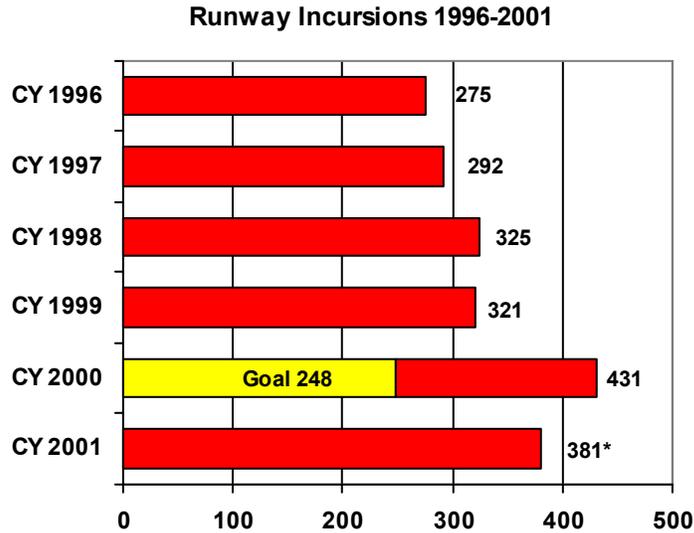
FAA's Budget by Program (FY 1998-2003)
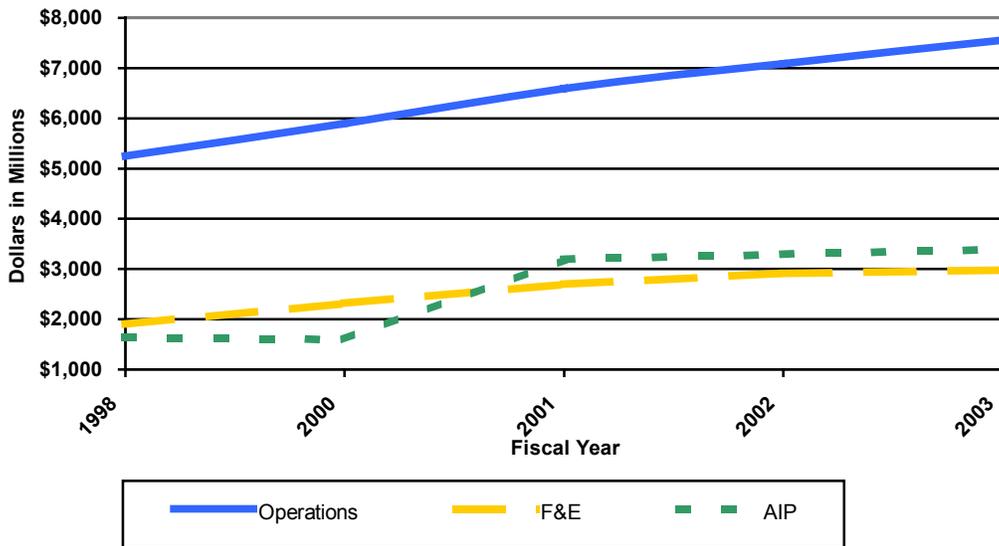
Much of the increase in operating costs have been driven by collective bargaining agreements negotiated under FAA's personnel reform legislation. For example, the 1998 agreement with the National Air Traffic Controllers Association (NATCA), which created the new pay system for controllers, was a significant cost driver requiring nearly $1 billion in additional funding over its 5-year life. Although the agreement contained workplace changes intended to offset escalated salary costs, FAA was unable to demonstrate any discernible productivity gains or cost savings associated with those changes. In FY 2003, the current agreement will expire, and FAA and NATCA will have to enter into negotiations over a new agreement

Ensuring that Aviation Safety Remains a Top Priority

While the focus of attention since September 11 has been on aviation security, FAA and the airline industry must ensure that aviation safety remains a top priority. During the past year, FAA has taken steps to strengthen its efforts to reduce runway incursions and operational errors, and in-fact, runway incursions are down, but further actions are needed to reduce the safety risk. Further steps must also be taken to strengthen FAA's oversight of airline operations and maintenance practices.

Reducing the Number of Runway Incursions and Operational Errors. This past year, FAA continued to focus on reducing runway incursions, incidents on the runway that can have very serious consequences. FAA established a system to categorize each runway incursion by one of four levels of accident risk to focus on

reducing the most serious incursions. (The top two categories are those incursions that barely avoid an accident.) FAA's full-time regional runway safety managers, appointed in October 2000, conducted approximately 100 safety evaluations of runways at specific airports. These initiatives are steps in the right direction.

Runway Incursions 1996-2001

Year	Incursions
CY 1996	275
CY 1997	292
CY 1998	325
CY 1999	321
CY 2000	Goal 248 / 431
CY 2001	381*

* Starting in October 2000, FAA changed its goal to a fiscal year basis. FAA missed its goal for FY 2001 (no more than 243), by 67 percent, with 407.

After a record high of 431 in calendar year 2000, the number of runway incursions decreased to 381 in 2001. The most severe incursions, those that barely avoided a collision, decreased from 67 in 2000 to 52 in 2001. While the numbers this past year have been encouraging, much of the decrease occurred after September 11 when air traffic levels, especially in general aviation, declined.

FAA needs to continue its actions to reduce runway incursions, which are still occurring at an average of more than one a day. This past year, FAA began commissioning the Airport Movement Area Safety System (AMASS) to alert controllers of potential collisions at the largest airports. FAA has been developing AMASS since 1991. As of January 31, FAA commissioned 9[9] systems at 8 airports, and plans to commission systems at the remaining 26 airports by the end of 2003.
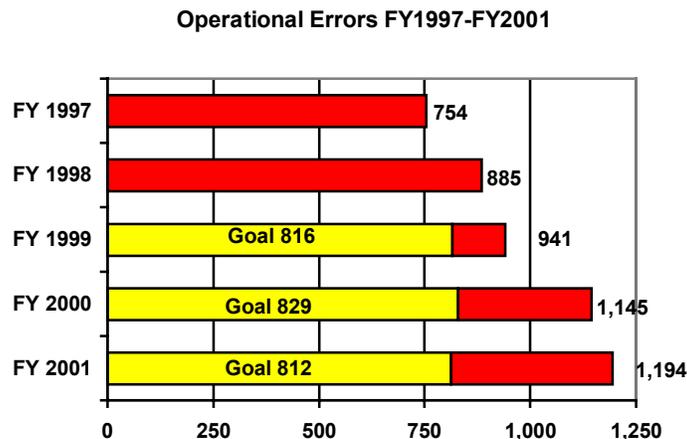
To ensure that runway incursions continue to decrease, when operations return to pre-September 11 levels, FAA needs to strengthen program accountability and

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[9] AMASS has been commissioned at airports at San Francisco, Detroit, Salt Lake City, Seattle, Chicago, St. Louis, Boston, and Los Angeles (2 systems).

expedite technologies to help pilots prevent runway incursions. FAA agreed with our recommendation made last June to strengthen program accountability and plans to implement a new oversight process by the end of June to ensure that various organizations complete runway incursion initiatives on time. FAA has not made a decision on our recommendation to expedite technologies such as the in-cockpit moving map displays and Automatic Dependent Surveillance Broadcast that have the most potential for reducing runway incursions.

To reduce operational errors that occur mostly in mid-air, FAA took action as recommended in our December 2000 report to improve its focus and oversight efforts to reduce operational errors. For example, in April 2001, together with NATCA, FAA implemented a procedure to identify the severity, or collision hazard, of each operational error. The purpose of this procedure was to focus resources on preventing the most severe errors and to take action based on the severity of these incidents. FAA also established a full time position to oversee regional efforts to reduce operational errors and issued guidance to improve regional operational error reduction plans.

As shown on the following chart, operational errors continued to increase, with almost 1,200 incidents in FY 2001. FAA did not meet its FY 2001 goal for reducing operational errors to 5 per 1 million operations, which was 812. Even with the decline in air traffic since September 11, operational errors continue to increase. During the first 4 months of FY 2002, there were 351 operational errors, exceeding the 341 errors that occurred during the same period in FY 2001.

Operational Errors FY1997-FY2001

Fiscal Year	Goal	Actual
FY 1997		754
FY 1998		885
FY 1999	Goal 816	941
FY 2000	Goal 829	1,145
FY 2001	Goal 812	1,194

To reverse the upward trend in operational errors, FAA must continue to strengthen its national oversight of those facilities and regions that do not show progress in reducing operational errors and establish a method to measure the effectiveness of initiatives implemented to reduce these incidents.

FAA must also address this committee's direction in the FY 2002 Appropriations Bill to stop reducing the number of air traffic control supervisors and expanding the Controller-in-Charge (CIC) Program. In 2001, FAA reduced 115 air traffic control supervisor positions through attrition by using the expanded CIC Program. The committee's position was that further expansion of the CIC Program and a reduction in supervisors was not appropriate given the number of runway incursions and operational errors. In addition, the committee was concerned about FAA's lack of action to address our October 2000 memorandum which stated that FAA was by-passing its own CIC selection requirements and making the CIC Program an entitlement, rather than ensuring that only the most qualified controllers are selected as CICs. In 2001, FAA evaluated the CIC Program at 27 facilities and found that 19, or 70 percent, had designated 100 percent of the air traffic controllers as CICs. These 19 facilities included large air traffic control towers, such as Atlanta Hartsfield, Dallas-Fort Worth, Washington Dulles, and Miami International.

Strengthening FAA's Safety Inspection Programs. The United States operates one of the safest aviation systems in the world, and industry and FAA rely on a series of overlapping controls to ensure this level of safety is maintained. Recently, we performed separate reviews of FAA's oversight for ensuring that carriers monitor their own aircraft maintenance practices, referred to as Continuing Analysis and Surveillance Systems (CASS), and FAA's progress in implementing its Air Transportation Oversight System (ATOS). ATOS is FAA's new approach to monitoring air carrier maintenance and operational safety practices.

Ensuring aircraft are properly maintained is the responsibility of the air carriers. Since 1964, FAA has required air carriers to have a CASS to serve as a self-correcting system carriers can use to track maintenance activities and problems. The CASS requirement provides FAA with a way to hold carriers accountable for evaluating their own maintenance procedures to identify and correct trends that could lead to an accident.

However, FAA has not consistently and thoroughly monitored CASS effectiveness as part of its oversight. FAA discovered CASS problems at 10 major commercial air carriers through special inspections that had not been identified through its routine inspection process. In reviewing FAA's routine oversight process, we found that FAA did not emphasize CASS. CASS inspections were not comprehensive or routinely conducted. For example, FAA's CASS oversight at some air carriers consisted of merely attending monthly maintenance meetings. In other instances, CASS deficiencies identified during FAA's routine surveillance were never corrected. At one carrier, maintenance deficiencies identified in July 1998 were not corrected and were identified again in FAA's July 2000 special

inspection at the air carrier. In October 2001, FAA again cited the carrier for maintenance deficiencies. The problems identified by FAA, but not corrected by the carrier, included using improper aircraft parts and repair procedures.

In December 2001, we recommended that FAA conduct comprehensive, annual CASS inspections and develop a follow-up system to ensure that identified deficiencies are corrected. We also recommended that FAA provide inspectors with appropriate CASS training and guidance.

As FAA works to make improvements in its CASS oversight, it also must continue to complete and refine its overall air carrier inspection system, known as ATOS. While CASS is the system *air carriers use* to monitor the effectiveness of their own aircraft maintenance programs, *ATOS is the system FAA uses* to oversee *all* aspects of an air carrier's operations, *including their CASS.*

FAA introduced ATOS in October 1998, as its new system for providing oversight of air carrier operations. When fully implemented, ATOS should allow FAA to more effectively use its inspector resources. Instead of random inspection activities focused only on identifying compliance with regulations, ATOS will rely on analysis of data collected during inspections to focus inspection activities on areas within the carriers' operations that pose the greatest safety risks. However, 3 years after FAA initiated ATOS, the new system is not completed at any of the 10 major air carriers and much work remains to implement the system. In addition, ATOS has not been expanded to the remaining passenger air carriers.

FAA also must better prepare its inspector workforce to conduct ATOS inspections and must refine methods for inspectors to collect and record inspection results. When interviewed, 71 percent of inspectors said they had not had adequate training and 83 percent of the lead inspectors said the ATOS data were not adequate. Analysis of inspection data is a critical element of the system; yet, FAA is still working to refine the data collection and analysis process. Without this valuable element, FAA cannot successfully target its inspections to areas of the greatest safety risks. For example, numerous deficiencies found at Alaska Airlines during a special inspection conducted after the January 2000 crash of Alaska Airlines Flight 261 had not been identified and corrected through the ATOS system. The special inspection, conducted in April 2000, disclosed improper maintenance practices, inadequate controls to ensure that aircraft parts were tested to proper standards, and ineffective quality control and quality assurance programs.

Within the last year, FAA has taken steps to address problems in ATOS and has made incremental progress, such as hiring staff to analyze ATOS data. However, to get the system operating as intended, FAA must complete implementation of

the new system, provide critical inspector training, improve national oversight of the ATOS program, and must fully integrate ATOS into its oversight of the remaining air carriers. We will be reporting more on ATOS in the next few weeks.

DECIDING THE FUTURE STRUCTURE AND FUNDING OF INTER-CITY PASSENGER RAIL (AMTRAK)

Since December 1997, Amtrak has operated under a Federal mandate to eliminate its need for Federal operating assistance by December 2, 2002. Amtrak has not succeeded in implementing enduring financial improvements of the magnitude necessary to attain and sustain self-sufficiency in and beyond 2003. Since receiving its mandate, Amtrak's passenger revenues and ridership have shown marked growth, rising 26.1 percent and 11.4 percent, respectively. However, expense growth has more than kept pace, so that for every $1 Amtrak realized in additional revenue, cash expenses increased by $1.05. Interest expenses related to borrowing will account for $225 million of Amtrak's total expenses by 2005, a growth of over 400 percent since 1995 when interest expenses totaled $43 million.

Amtrak's operating loss in 2001 of $1.1 billion was $129 million higher than the 2000 loss and the largest in Amtrak's history. Amtrak's cash losses, which are the basis for measuring Amtrak's progress towards self-sufficiency, were $585 million in 2001. This was $24 million worse than Amtrak's cash loss in 1998, the first year of Amtrak's self-sufficiency mandate. *By 2003, Amtrak must reduce its cash losses by more than $300 million in order to meet its deadline for achieving self-sufficiency. There simply is not sufficient time left for Amtrak to develop, implement, and realize results from meaningful and sustainable improvement plans. At this point in time, Amtrak will face a formidable challenge in 2002 just managing its cash resources – be they from operating revenues or Federal subsidies – to make ends meet without further borrowing.* In the coming year, Congress will be faced with multi-billion dollar decisions regarding the future of Amtrak.

Our assessment of Amtrak's 2001 Strategic Business Plan[10] predicted that Amtrak's cash losses in 2003 will be $511 million, which is $263 million greater than it would need to be for Amtrak to meet its self-sufficiency mandate. In the past year, Amtrak sought to compensate for cash shortfalls through a variety of means, including mortgaging portions of one of its most valuable assets, Penn Station – New York. *It would be possible for Amtrak to pursue additional transactions of this nature in the coming year and meet the letter of the self-sufficiency law. Amtrak could also take other draconian measures, such as widespread employee or service cuts. Both strategies are questionable.* While Amtrak would technically meet the letter of the law, the victory would be hollow. Not only would Amtrak's financial position be unsustainable – Amtrak's assets are finite – but more importantly, the cannibalization of the railroad's assets would

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[10] Report No. CR-2002-075, January 24, 2002. *2001 Assessment of Amtrak's Financial Performance and Requirements,* Office of Inspector General, U.S. Department of Transportation.

compromise the future of our intercity passenger rail network, regardless of who provides rail service. Such actions would also constrain options available to the Congress and the Administration as they deliberate Amtrak's future and the future of intercity passenger rail.

### *Operating Losses Are A Small Part of the Problem – Focus Should Be On Capital Requirements*

The debate over Amtrak has primarily focused on its inability to eliminate the need for Federal operating subsidies. It is important to keep sight of the fact that even if Amtrak were to succeed in becoming operationally self-sufficient, it would still rely heavily on the Federal Government for funding of its capital needs. The Northeast Corridor has a backlog of needs to bring it to a state of good repair that Amtrak has recently estimated to cost about $5 billion. Moreover, continuing Federal capital support is needed which Amtrak currently estimates will cost between $1 billion and $1.5 billion annually.

Two weeks ago, Amtrak announced plans to defer $175 million in capital improvements and reduce operating expenses by $110 million in order to conserve cash resources in 2002. These short-term actions are a measured response to an unsustainable situation; however, further deferring of capital improvements on a system that is rapidly approaching capital starvation is a cause for serious concern. Amtrak also outlined its request for $1.2 billion in Federal appropriations for FY 2003. Nearly three quarters of the request is needed for capital projects. Amtrak stated that appropriations below that amount would result in the elimination of long-distance service as early as October 2002.

Performance Trends

Amtrak's systemwide ridership grew 19.3 percent between 1996 and 2001, rising from 19.7 million to 23.5 million. Systemwide passenger revenue grew 44 percent between 1995 and 2001. The revenue growth trend that began in 1995 has brought Amtrak to the highest passenger revenue levels in its history. The chart on the following page illustrates growth in passenger revenue and ridership since 1991.

Passenger Revenue and Ridership Growth Since 1991
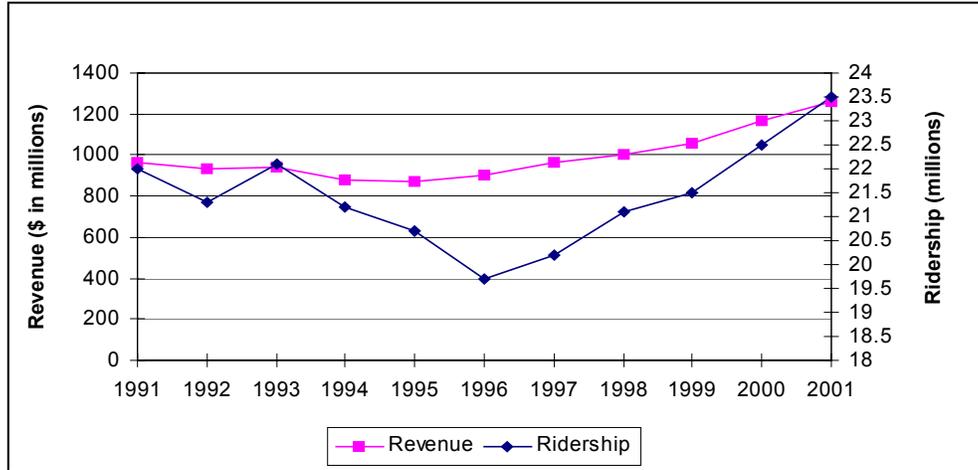
However, expense growth has also kept pace. Between 2000 and 2001, Amtrak's expenses, including depreciation, grew 9.8 percent, or a total of $294 million. While Amtrak's single largest expense category is labor, which accounted for 50 percent of Amtrak's total 2001 expenses, Amtrak has also experienced a significant increase in interest expenses related to borrowing. The interest expenses primarily relate to externally financed purchases of new equipment, including the Acela trainsets and high-horsepower locomotives in the Northeast Corridor. The chart below illustrates growth in interest expense since 1993 and projected growth through 2005[11].

**Growth in Interest Expense, 1993 Through 2005 (Estimated)**
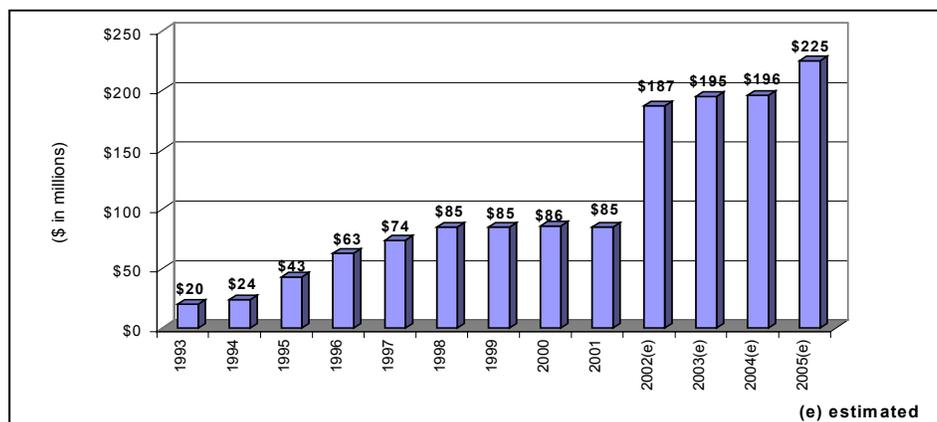
Since 1991, total operating expenses have grown about $1.2 billion, from $2.1 billion to $3.3 billion, representing an increase of 57 percent. In the same

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[11] Discussion of interest is on a cash interest basis, rather than accrual.

time period, total revenues grew by about $850 million. Continued expense growth coupled with lower-than-projected revenue growth has resulted in operating losses that have continued to increase since Amtrak's mandate was established in 1997 and have reached historic levels. The chart below illustrates growth in Amtrak's operating and cash losses since 1990.

Growth in Operating and Cash Losses, 1990 Through 2001
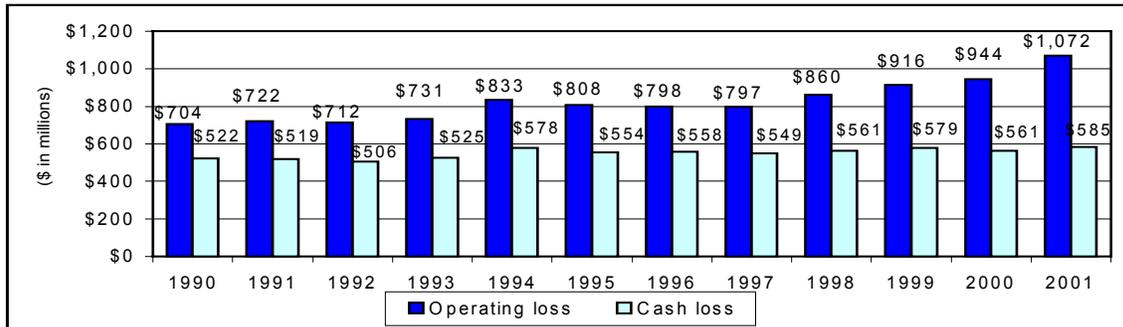
Amtrak's authorization expires in 2002 and the debate has begun on the future of intercity passenger rail in the United States and Amtrak's role within it. During the course of the debate, a number of issues will need to be addressed, including whether or not a linked national system of intercity passenger rail is desirable, the operating subsidies that would likely be needed to sustain such a system, the capital investment requirements associated with the resulting rail network, and the appropriate source or sources of any operating or capital subsidies. Factors other than Amtrak's financial performance should be considered during these discussions, including the role Amtrak has played since September 11 in providing an alternative to airline travel.

IMPROVING MOTOR CARRIER AND VEHICLE SAFETY

In 2000, over 5,000 fatalities resulted from crashes involving large trucks and over 36,000 fatalities resulted from motor vehicle crashes not involving large trucks - on average, someone was killed every 13 minutes. The Department set strategic goals to reduce fatalities and it now faces three major challenges in achieving its safety goals: (1) ensuring motor carrier safety at the U.S.-Mexico border, (2) tightening controls over the Commercial Driver's Licenses (CDLs) Program and preventing fraudulent issuance, and (3) implementing the Transportation Recall Enhancement, Accountability, and Documentation (TREAD) Act provisions to improve detection of motor vehicle safety defects.

Ensuring Motor Carrier Safety at the U.S.-Mexico Border

During FY 2001, the Department made improvements in its inspection presence and controls at the U.S.-Mexico border, but over the next few months, it must place 80 Federal inspectors at the border and obtain sufficient space and facilities at each commercial crossing to conduct inspections and put vehicles out-of-service. The Federal Motor Carrier Safety Administration (FMCSA) reports the out-of-service rate for Mexican trucks inspected at the border declined from 44 percent in 1997 to 36 percent in FY 2001 as the number of inspections performed increased. The Department developed a strategy and timeline for implementing the safety elements needed to open the U.S.-Mexico border to commercial trucking. The key to effectiveness of the safety strategy will be in its execution.

The FY 2002 Appropriations Act charges the OIG with determining whether safety elements are in place and reporting our findings to the Secretary within 180 days of the December 18, 2001 enactment. The Secretary is to address the Inspector General's findings on the mandated requirements and certify in writing that the opening of the border does not pose an unacceptable safety risk. We are proceeding with our assessment by deploying staff to each of the 27 commercial border crossings and developing a baseline on the status of the mandated requirements.

Tightening Controls Over the CDL Program and Preventing Fraudulent Issuance of CDLs

The OIG is very concerned about fraud in the testing and licensing of commercial drivers -- it is a significant problem that has compromised highway safety and raises questions about the integrity of the processes and the quality of commercial drivers. Criminal investigations by the OIG and other law enforcement agencies

have identified criminal activity dealing with CDLs in 15 states since 1998. Moreover, fraud in one state affects the Nation as shown by the largest Federal investigation of CDL improprieties---Operation Safe Road.

OIG investigators, FBI agents, and other Federal and state law enforcement personnel carried out Operation Safe Road. Investigators identified over 200 drivers who may have obtained fraudulent licenses in Illinois and who then transferred their licenses to 20 other states. Another 692 suspect drivers from Florida transferred licenses to 32 other states. As of December 2001, 39 individuals were convicted as a result of Operation Safe Road. Those convicted include state government officials and employees at state and third-party testing facilities that accepted "pay offs" in exchange for CDLs. For example, in Illinois a state employee was convicted for accepting at least $120,000 in bribes.

Federal standards, which provide a framework for state CDL programs and set parameters for FMCSA oversight, must be strengthened. Federal standards do not currently require CDL applicants to demonstrate they are legally present in the United States or to show proof of state residency, nor do the Federal standards require the states to verify Social Security information from a CDL applicant. Current standards also permit the use of foreign languages in the administration of the CDL tests and variations exist in this area across the states. Consistent standards across the nation would discourage license shopping across the states. FMCSA recognizes the need for stronger standards and has taken steps to improve its oversight of the states, but more should be done to expand the scope of FMCSA's reviews and to follow-up to ensure that sanctions are used if states fail to take corrective actions when problems are identified.

Implementing TREAD Act Provisions to Improve Detection of Motor Vehicle Safety Defects

Congress responded to the Firestone tire recall by passing the TREAD Act to establish early warning reporting requirements for manufacturers so that the National Highway Traffic Safety Administration (NHTSA) Office of Defects Investigation (ODI) is aware of potential defects as soon as possible. NHTSA faces several challenges in implementing the TREAD Act and improving its ability to identify potential safety defects.

In a January 2002 audit report on NHTSA[12] we addressed the following issues:

- NHTSA must successfully complete the remaining 12 of the 15 rulemakings required by the TREAD Act, most importantly the early warning reporting requirements rule, which is at the heart of the TREAD Act. The Notice of Proposed Rulemaking was issued on December 21, 2001 and the final rule has a statutory deadline for issuance of June 2002. Several of the 12 remaining rulemakings are complex and controversial and have statutory deadlines ranging from November 1, 2001 to November 1, 2002. Currently, NHTSA is late in issuing a rulemaking related to Tire Pressure Warning Devices. By statute, NHTSA was to have issued a final rule requiring a warning system in new vehicles to indicate when a tire is significantly under-inflated by November 1, 2001. NHTSA must adhere to the established rulemaking milestone dates and work with the Office of Management and Budget when its review is required.

- ODI's current processes for using and analyzing data to identify potential defects and decide that potential defects should be investigated are in need of major improvements. ODI's current procedures do not provide a methodology for analyzing complaints and there are no specific processes or procedures for opening investigations. We found several instances where ODI's decision to open or not open an investigation was not consistent with the seriousness or frequency of the complaint. Over a 22-month period, from February 1997 to November 1998, ODI received 23 complaints alleging exhaust leakage in a specific 1993 minivan with some complainants reporting headaches, nausea, and dizziness. Although ODI's Defects Analysis Division recommended an investigation, an investigation was not opened.

  ODI's Chief of Defects and Recall Information Analysis told us that a defect trend was not supported and that it was highly unlikely that exhaust fumes leaking into the cabin would cause the reported complaints of sickness. However, since the manufacturer issued three technical service bulletins over 2 1/2 years and ODI received multiple complaints on this problem, we questioned why an investigation was not opened.

  NHTSA must develop new processes for analyzing defects and for opening cases, and incorporate into these processes a peer review panel and process to help ensure that data used to identify potential defects are comprehensively and thoroughly analyzed and investigations are opened and prioritized in a consistent manner.

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[12] OIG Audit Report on the Review of the Office of Defects Investigation, National Highway Traffic Safety Administration, Report No. MH-2002-071, January 3, 2002

- ODI's current defect information system is seriously flawed and its project with Volpe National Transportation Systems Center to replace it with a new defect information system by Fall 2002 is significantly at risk of not meeting quality, cost, and schedule goals. The success of the TREAD Act will ultimately rise or fall on the quality and usefulness of a new information system and ODI's ability to identify potential defects. NHTSA must obtain the services of an independent entity to validate and verify that the new defect information system will meet NHTSA's needs and reduce development risk. This independent assessment could help spot problems before they result in major cost increases and schedule slippages.

The NHTSA Administrator agreed with our recommendations to:

(1) Report to the Secretary and begin reporting to Congress the milestone dates, budget estimates, and actions required to complete the TREAD Act rulemakings/actions, and ODI's new information system.
(2) Establish a peer review panel and process to ensure investigations are opened and prioritized in a consistent manner.
(3) Obtain the services of an independent entity to validate and verify the contractor's progress in developing ODI's new information system.

BALANCING COAST GUARD'S MISSION AND BUDGET REQUIREMENTS

The Coast Guard is seeking a significant increase in its budget to be able to deal with an expanded security mission, perform its other major missions, and proceed with an extraordinary set of important major acquisitions. The budget will increase from $5.7 billion in FY 2002 to $7.3 billion in FY 2003. There are currently a number of uncertainties about Coast Guard mission requirements, how it will execute major acquisition projects, and control costs. Coast Guard needs an effective cost accounting system that meets Federal accounting standards to provide a basis for accurately measuring the costs of specific activities and making decisions about where to apply resources.

There are three areas where uncertainties need to be addressed.

The Budget Request for FY 2003

Coast Guard is seeking an increase of $1.6 billion for FY 2003. The largest portion of the increase is $736 million for a required payment to Coast Guard's military retirement fund. Two other categories, Operating Expenses (up by $733 million) and Acquisitions (up by $92 million) account for most of the remaining increase. The increase in Coast Guard's operating capacity is not as large as it appears. About one-half of the operating fund increase will pay for entitlements and other inflationary adjustments and not add to operating capacity. The other half of the increase will fund the operation of new assets, such as seagoing buoy tenders and coastal patrol boats, continue increased security operations begun after September 11, and fund new security operations.

Immediately after September 11, Coast Guard devoted 58 percent of its resources to port safety and security, while deployment to other core missions fell. For FY 2003, Coast Guard plans to dedicate 27 percent of its resources to port safety and security programs. This is roughly twice the amount (14 percent) that Coast Guard planned to dedicate to these missions for FY 2001 prior to September 11. The amount of resources devoted to drug interdiction and fisheries enforcement is expected to decrease in FY 2003. Coast Guard views its FY 2003 budget request as the initial phase of a 3-year plan to enhance its homeland security missions while still conducting other diverse missions that remain national priorities. It is not clear to us if Coast Guard plans to request additional increases in FYs 2004 and 2005 to support this plan.

The Search and Rescue Program

Last year we reported that the readiness of the Coast Guard's small boat station search and rescue program was declining because it did not have sufficient numbers of qualified personnel, a formal training program for key staff, and equipment that was up to standards. Coast Guard developed a strategic plan to improve readiness, and the Congress provided $14.5 million for FY 2002 for added search and rescue program personnel and equipment. We have been directed to audit and certify that the $14.5 million supplements and does not supplant Coast Guard's FY 2001 level of effort in this area. The FY 2003 budget proposal seeks $22 million to follow through on search and rescue program enhancements, such as adding crew members to the 47-foot motor life boats, and procuring small and medium search and rescue boats.

Small boat stations are also playing a key role in port security activities since September 11. More than half of all station hours are devoted to port security, and operating tempo has increased significantly. Given the emphasis on security missions, it is unclear whether Coast Guard has implemented its plan to address the search and rescue program deficiencies we identified. As part of our audit to certify the use of FY 2002 funds, we will determine the status of Coast Guard's efforts to address deficiencies identified in our prior audit report.

Major Acquisition Projects

The FY 2003 budget seeks $590 million for Coast Guard's two largest acquisition projects: the Deepwater Capability Project and the National Distress System Modernization Projects. Both projects are critical to improving Coast Guard's operations, but both also have significant uncertainties that the Committee should expect to be resolved this fiscal year.

Deepwater. This is the second year that the Congress is being asked to appropriate procurement funding for the Deepwater project without a detailed cost and schedule estimate. If the Congress appropriates the $500 million Coast Guard is seeking for 2003, Coast Guard will have $800 million available for the procurement phase of the project. Given the approach that Coast Guard is using on this project, reliable estimates that describe exactly what assets will be modernized or replaced, at what cost, when that will occur, and when funding will be required, will have to await selection of a contractor later this year. The selection is currently scheduled for the third quarter of FY 2002.

Another area of uncertainty is how long the project will take to complete. Although Coast Guard originally thought this would be a 20 year project, the request for proposal states that the performance period for the contract could be up

to 30 years. It is not clear to us whether this means that (1) previously planned annual funding levels will remain the same and result in increased cost, or (2) the planned annual funding levels will be spread out and reduce the level of funding required each year.

National Distress System. Coast Guard has increased its estimate for the NDS project - the 911 system for mariners in distress - from $320 million to $580 million, and it is seeking $90 million in the FY 2003 budget to begin procurement. If the Congress appropriates the $90 million Coast Guard is seeking for 2003, it will have $125 million available for the procurement phase of the project. The current system has many deficiencies including more than 88 communication coverage gaps, totaling 21,490 square nautical miles along the U.S. coastline where Coast Guard cannot hear mariners or its own rescue boats. The revised system will provide a significant improvement over the existing system.

However, we are concerned that Coast Guard reduced or eliminated capabilities that it initially considered essential. This occurred because Coast Guard reduced performance specifications after contractors estimated that a system meeting Coast Guard requirements would cost more than $1 billion. As a result, the revised system will still contain gaps in communications coverage. Because this acquisition is being handled in the same manner as Deepwater, the number, size, and location of the gaps will not be known until a contractor's system is selected. Also, the specified time allowed to restore critical functions, if the system becomes unavailable, has been increased from 6 to 24 hours. We have recommended that Coast Guard develop an acquisition plan that includes cost and schedule estimates for upgrading the system to provide capabilities that were eliminated or reduced.

STEWARDSHIP AND ACCOUNTABILITY OVER FEDERAL FUNDS

Implementing Financial Accounting and Cost Accounting Systems

With an FY 2002 budget of $64 billion and total assets over $87 billion, it is extremely important that DOT properly manage its resources and maintain adequate fiscal controls. To obtain and sustain a clean audit opinion on its annual financial statements, DOT needs to implement a departmentwide state-of-the-art financial management and accounting system that provides accurate and timely financial data, complies with Federal accounting standards, and produces data for the financial statements. To date, seven of DOT's smaller agencies have implemented the new financial system, called Delphi. Also, OIG found significant deficiencies with Delphi that warranted immediate attention and delay of the implementation schedule. DOT is working hard to correct these deficiencies and plans to have all internal agencies on Delphi by January 2003 at a cost of about $80 million. However, it is not clear to us that this date will be met.

The development of a cost accounting system for DOT is important because Operating Administrations like FAA, Coast Guard, and the new Transportation Security Administration need good cost accounting information to be able to improve operations and make informed management decisions. FAA has made good progress on its cost accounting system during the past year. However, problems with Delphi implementation are leading to delays in implementing the cost accounting systems in FAA. FAA, TSA, and DOT as a whole must have a credible cost accounting system to properly manage their programs, to know the real cost of services they provide, and to identify areas where costs can be lowered without adversely impacting service.

Improving Contract Oversight

DOT and FAA oversight of cost-reimbursable contracts totaling about $4 billion annually is seriously inadequate. This vulnerability is particularly significant since FAA alone awarded about 800 cost-reimbursable contracts totaling $3.4 billion in FY 2001. We found that (1) FAA cost-reimbursable contracts totaling about $2 billion did not have the required incurred-cost audits, (2) about 1,800 DOT contracts totaling about $6 billion have been completed for between 3 and 12 years but were not closed timely, (3) contracting officers did not always have the documents to determine appropriate payments, and (4) contract files frequently did not include evidence that contractors' accounting systems were adequate. FAA's oversight of cost-reimbursable contracts is particularly

inadequate. OIG paid for audits by the Defense Contract Audit Agency until 1996 when Congress transferred the financial responsibilities to DOT agencies. Completed audits for DOT dropped from 468 in 1995 to a low of 53 in FY 1997. At the direction of the Subcommittee in FY 2000, the number of audits has begun to rise and totaled 169 in 2001. Although independent audits are increasing, these high-risk cost-reimbursable contracts need more audit scrutiny.

Enhancing Stewardship of Transportation Infrastructure Projects

In April 2001,Secretary Mineta told congressional committees that one of his priorities is to ensure that the traveling public receives what it pays for and that major transportation projects are managed wisely and appropriately. He said "if the project calls for concrete and it's a 10 sack job, we at DOT are going to be sure we don't end up with a 7 sack job." The Secretary added that DOT needs to strengthen mechanisms to prevent and detect fraud, waste, and abuse.

TEA-21 provided funding of $218 billion for highway and transit over six years. This represents an annual investment of about $30 billion for highway and $7 billion for transit--an increase of about 40 to 50 percent over prior investment levels. FHWA recently identified 60 mega-projects--generally those projects costing over $1 billion--which are either active or planned to start in the next few years at an estimated cost of about $118 billion. As infrastructure investments increase, the need for effective stewardship and oversight becomes more important. The following is a list of large active mega-projects.

Top Highway MegaProjects by Dollar Value

Project Name	Project Cost (Billions)
Central Artery/Ted Williams Tunnel – Boston, Massachusetts	$14.6
Interstate 64/Hampton Roads Third Crossing – Hampton, Virginia	$4.4
Central Texas Turnpike – Austin, Texas	$3.2
Interstate 80/San Francisco Oakland Bay Bridge (East Span)	$2.6
Alameda Corridor – Southern California	$2.4
Woodrow Wilson Bridge – District of Columbia, Maryland, Virginia	$2.4
Denver Southeast Corridor (Highway portion – I-25/I-225)	$1.7
Miami Intermodal Center	$1.4
Interstate 4/Interstate 275, Tampa, Florida	$1.4
New Mississippi River Bridge, St. Louis, Missouri	$1.1
Interstate 10/Katy Freeway - Houston, Texas	$1.1
State Route 30/Interstate 210 - Los Angeles, California	$1.0
Interstate 94/East-West Corridor - Milwaukee, Wisconsin	$1.0
Springfield Interchange – Alexandria, Virginia	$0.7

Top Transit MegaProjects by Dollar Value

Project Name	Project Cost (Billions)
San Juan Tren Urbano Rail Transit	$2.2
Central Link Light Rail – Seattle, Washington (suspended)	$2.1
Bay Area Rapid Transit Extension to San Francisco Airport	$1.5
Los Angeles Metro Rail Red Line	$1.3
New Jersey Transit Hudson-Bergen (MOS-2)	$1.2
Hudson-Bergen Light Rail Transit (MOS-1)	$1.0
Houston Regional Bus	$1.0
Denver Southeast Corridor (Transit portion)	$0.9
Minneapolis Hiawatha Corridor Light Rail	$0.7
South Boston Piers Transit Way	$0.6
Dallas North-Central Light Rail Extension	$0.5

Our work in this area has included in-depth reviews of several mega-projects, including the:

- $2.1 billion Central Link Light Rail System in Seattle, Washington;
- $2.2 billion Tren Urbano Transit System in San Juan, Puerto Rico;
- $1.6 billion Interstate 15 in Salt Lake City, Utah;
- $1.0 billion Hudson-Bergen Light Rail Transit in New Jersey;
- $2.4 billion Alameda Corridor in southern California;
- $2.4 billion Woodrow Wilson Bridge in Maryland and Virginia; and
- $14.6 billion Central Artery Tunnel in Boston, Massachusetts.

Some Signs of Increased Oversight. This past year, we have begun to see signs of improvement in FTA and FHWA's stewardship and accountability over major projects. These improvements are evident in a number of states as well. Both FTA and FHWA have issued guidance on the form and content of project financial statements. Although FTA can clearly do more, it is also clearly further along than FHWA. FTA has established mechanism to review large projects and has not been reluctant to act when problems have been detected. FHWA has begun to address stewardship through its policy on project financial statements, but its oversight efforts are not as institutionalized as FTA. We would like to see a strong initiative involving both agencies that aims to proactively strengthen stewardship and oversight processes.

Infrastructure Grant Oversight Needs Further Strengthening. Despite this progress, our work also found significant areas in FTA and FHWA that need further improvement.

- *Preventing and detecting fraud.* Between FYs 1999 and 2001:
  - indictments increased 225 percent, from 12 in 1999 to 39 in 2001;
  - convictions increased 117 percent, from 12 in 1999 to 26 in 2001; and

- monetary recoveries increased 173 percent, from $15.8 million in 1999 to $43.2 million in 2001.

- *Ensuring that disciplined project management tools are applied.* To make project finance plans truly useful to DOT management, FTA and FHWA must:
  - Ensure that finance plans are prepared in accordance with FTA and FHWA guidance. The agencies must ensure grant recipients submit plans with the required cost and schedule estimates, and information on funding sources and cash flows that are needed for effective oversight.
  - Independently verify the data in project finance plans and other project reports. This is an important safeguard to ensure project managers are providing a fair and accurate accounting of their project's performance.

- *Identifying and disseminating best practices.* One potential best practice we identified is periodically reviewing idle obligations and transferring those funds to other projects. Most highway programs under TEA-21 allow the states to use excess funds from one project on other valid projects. This flexibility, however, does not apply to statutorily earmarked projects. Our September 2001 report on FHWA inactive obligations identified 25,000 inactive obligations, totaling about $2.6 billion. We sampled $670 million of transactions and found that $238 million (about 36 percent) could be made available to other TEA-21 projects or returned to the Treasury Department. The states agreed that these funds were not needed on current projects. We believe an aggressive review by FHWA, the states, and DOT of the remaining $1.9 billion of idle obligations would identify significant additional funds.

  This may also be a way to offset some of the effects of the negative Revenue Aligned Budget Authority (RABA) provision affecting the Highway Trust Fund in FY 2003. In TEA-21, Congress directed that disbursements from the trust fund be adjusted annually to reflect actual receipts. A strong economy resulted in greater than expected receipts and the disbursement of those additional funds to the states from 1998 through 2002. In 2003, receipts into the trust fund are expected to be lower than TEA-21 projections, which will result in a reduction to apportionments of nearly $9 billion. Whether or not the Congress acts to mitigate the impact of declining funding, scrubbing the idle obligations for money that can be switched to other projects would help offset some portion of this crunch.

Mr. Chairman, this concludes my testimony. Thank you again for inviting me to testify before the Subcommittee today, I look forward to answering your questions.

Appendix

The following pages contain textual versions of the graphs presented in this document. These pages were not included in the original document, but have been provided for use on the web.

BTS Data: Major Airlines - Number of Arrival Delays			
Month	**1999**	**2000**	**2001**
January	118,153	97,699	96,670
February	72,793	95,920	99,621
March	88,715	99,890	100,347
April	99,351	101,445	83,699
May	97,022	105,425	76,911
June	119,811	138,348	99,887
July	120,603	126,682	94,805
August	101,734	131,224	103,993
September	79,014	90,086	52,681
October	85,013	104,943	55,312
November	76,175	114,788	53,414
December	94,341	148,726	74,061

BTS Data: Major Airlines - Number of Cancellations			
Month	**1999**	**2000**	**2001**
January	26,543	24,515	15,945
February	14,523	15,188	14,240
March	12,419	10,237	14,850
April	8,923	11,642	9,182
May	11,857	16,513	7,497
June	12,676	18,632	12,939
July	14,873	15,526	9,253
August	11,711	14,991	10,869
September	15,243	10,365	88,545
October	9,751	10,369	4,191
November	7,631	10,838	3,414
December	8,161	28,501	3,402

BTS Data: Major Airlines- Number of Scheduled Flights			
Month	1999	2000	2001
January	453,814	470,478	481,814
February	417,627	444,499	434,437
March	466,267	482,944	482,819
April	450,620	463,263	466,985
May	462,054	478,909	481,023
June	460,467	471,100	472,618
July	474,047	483,342	489,027
August	479,549	491,366	494,615
September	460,251	463,097	442,805
October	478,294	485,761	400,676
November	454,950	461,855	382,956
December	469,944	475,397	394,786

System-wide Passenger Load Factor Percent		
Month	2000	2001
January	64	65
February	67	67
March	75	74
April	74	72
May	75	70
June	80	77
July	80	77
August	78	78
September	70	59
October	71	63
November	71	67
December	69	69

Percent Change in Business and Leisure Travel		
Month	Business	Leisure
January 2000	7.02	-0.80
February 2000	12.39	6.79
March 2000	9.17	5.27
April 2000	4.66	5.19
May 2000	9.78	7.72
June 2000	7.97	6.64
July 2000	1.85	3.65
August 2000	5.67	2.77
September 2000	2.02	1.51
October 2000	-1.39	0.10
November 2000	-4.55	2.80
December 2000	-7.46	2.27
January 2001	-7.39	5.63
February 2001	-15.76	-1.41
March 2001	-16.61	0.53
April 2001	-14.29	0.45
May 2001	-18.04	-0.91
June 2001	-17.46	-0.60
July 2001	-15.58	1.02
August 2001	-16.34	4.89
September 2001	-44.23	-32.06
October 2001	-33.67	-21.46
November 2001	-28.31	-18.06
December 2001	-21.18	-13.70

FAA's Fiscal Year 1998 - 2003 Budget
($ in billions)

	Total	Operations/RE&D	F&E	AIP
FY 1998	$9.1	$5.5	$1.9	$1.7
FY 1999	$9.8	$5.7	$2.1	$2.0
FY 2000	$10.0	$6.1	$2.0	$1.9
FY 2001	$12.6	$6.8	$2.6	$3.2
FY 2002 Appropriated.	$13.3	$7.1	$2.9	$3.3
FY 2003 Budgeted.	$14.0	$7.6	$3.0	$3.4

Passenger Revenue and Ridership Growth Since 1991

	Revenues (in millions)		Riders (in millions)
1991	$965		22
1992	$930		21.3
1993	$943		22.1
1994	$880		21.2
1995	$874		20.7
1996	$900		19.7
1997	$964		20.2
1998	$1,001		21.1
1999	$1,058		21.5
2000	$1,166		22.5
2001	$1,262		23.5

Growth in Interest Expense, 1993 Through 2005 (Estimated)

1993 Total	$20 million
1994 Total	$ 24 million
1995 Total	$43 million
1996 Total	$63 million
1997 Total	$74 million
1998 Total	$85 million
1999 Total	$85 million
2000 Total	$86 million
2001 Total	$85 million
2002 Estimate	$187 million
2003 Estimate	$195 million
2004 Estimate	$196 million
2005 Estimate	$225 million
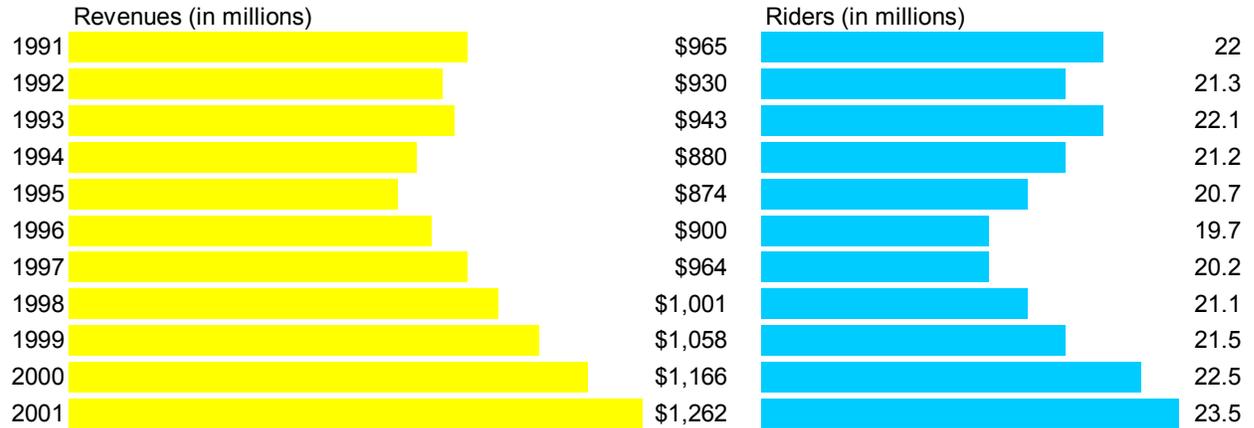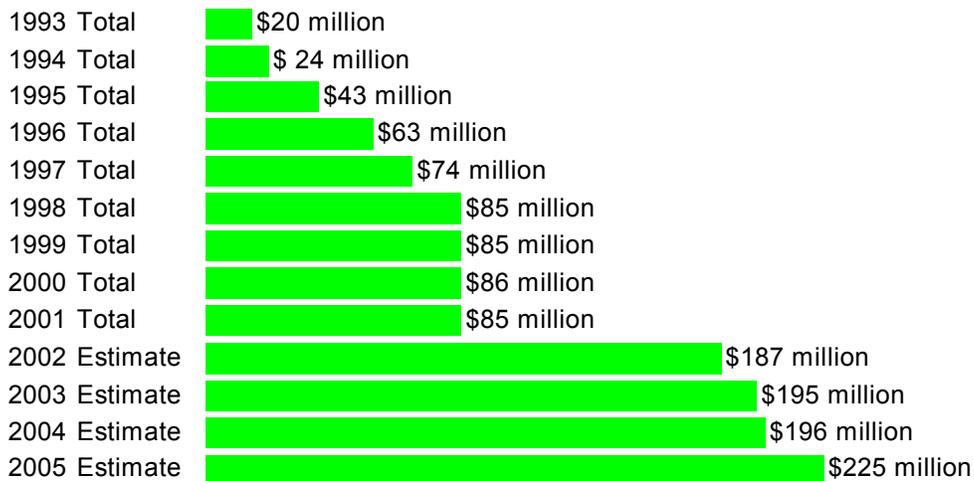
Growth in Operating and Cash Losses, 1990 Through 2001 ($ in millions)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Operating Loss	$704	$722	$712	$731	$833	$808	$798	$797	$860	$916	$944	$1,072
Cash Loss	$522	$519	$506	$525	$578	$554	$558	$549	$561	$579	$561	$585