

National Civil Aviation Review Commission
Norman Y. Mineta, Chair

AVOIDING AVIATION GRIDLOCK AND
REDUCING THE ACCIDENT RATE

A Consensus for Change

December 1997

December 11, 1997

Honorable Rodney E. Slater Honorable Jane F. Garvey
Secretary Administrator
United States Department of Transportation Federal Aviation Administration

Dear Secretary Slater and Administrator Garvey,

The National Civil Aviation Review Commission has completed the two reports that the United States Congress directed. The first addresses future financing of the nation's aviation programs, and the second focuses on aviation safety matters.

The Commission began its work last April. It held numerous meetings, including two days of public hearings. The Commission received many detailed briefings from a wide array of experts from organizations in the private and public sectors. The Members of the Commission, themselves, brought a wealth of background and experience in the issues we were charged to examine.

Included in the title of this report is "A Consensus for Change." Aside from the strong substantive recommendations embodied in this report, these two reports are significant because they do represent a consensus on how aviation funding and safety should be approached in the future. By virtue of the appointments made by you, Mr. Secretary, and the bipartisan Congressional leadership, this Commission was comprised of persons who came from all areas of aviation, as well as people from outside of the aviation field.

All twenty-one Commission Members have signed the two reports. I would strongly recommend that as you consider the findings and recommendations of the Commission, you continually remind yourselves that this report is where the consensus on these difficult issues rests. To move forward to solve the problems in our aviation system, there will have to be a unity of perspective and purpose. Without a working consensus, there will not be enough timely progress in making the significant changes that are needed.

I know that I speak for all twenty-one Commission Members that we feel tremendously honored to have been asked to serve on this Commission. As Chair of the Commission, I have never worked with a more dedicated, public-spirited group of individuals. We stand ready to work with you and the Congress to see that these recommendations are implemented.

Again, we appreciate having the opportunity to serve on the Commission.

Sincerely,
Norman Y. Mineta
Chair, NCARC

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PART 1 EXECUTIVE SUMMARY

The National Civil Aviation Review Commission was charged with developing two distinct reports — one on funding the nation’s civil aviation programs and another on aviation safety.

While the reports are distinct, the Commission believes that the issues of better funding mechanisms and improved safety performance are inextricably linked.

COMMISSION FINDINGS AND RECOMMENDATIONS ON FUNDING

The aviation system of the United States is at a critical crossroads. Aviation activity is growing, the technology of aviation is changing rapidly, and the business of aviation is becoming more complex.

Yet, a critical piece of aviation’s future is in doubt. The Federal Aviation Administration (FAA) currently lacks the organizational, management, and financial wherewithal to keep pace with the dynamic aviation community. Unless the FAA and various aviation stakeholders — the Congress, the Executive Branch, and the aviation community — change the status quo, internal and external to the FAA, our nation’s aviation system will succumb to gridlock. Delays will skyrocket while we reminisce about the “reliable” flight schedules of the past. This current course will impair our domestic economy, reduce our standing in the global marketplace, and result in a long term deterioration of aviation safety. In this regard, the Commission has made several critical findings.

Findings on Funding

- Gridlock is near and will be expensive. Traffic data and trends indicate that adding just a few minutes of delay to each airline flight in the United States will bring the aviation system to gridlock with dramatic negative impacts on the economy. The airline industry’s complicated schedules are based on precise and efficient air traffic control technology and management. Rapidly growing demand combined with a reduction in capacity, as the result of continued reliance on outdated equipment, will bring our nation’s aviation system to gridlock soon after the turn of the century. Gridlock could also have safety implications as pressures to meet flight schedules grow just at a time when capacity is increasingly being constrained.
- Federal budget rules are crippling. The present system of federal budget regulation is inappropriate for a system controlling commercial operations that needs to be driven by demand for services. Budget rules that govern the federal aviation system must be

revised. The money problem that faces the FAA is an inability to access the revenues collected for its use.

- There are “too many cooks”, making authority and accountability too diffused. Authority and accountability are too diffused to run a 24 hour-a-day, high technology, rapidly changing operating system for a major commercial industry. Everyone responsible for the current air traffic control (ATC) system — the FAA, the DOT, the aviation industry, the Administration, and the Congress — wants to make the system work. But there are too many people in charge. The problems are systemic and require basic changes in command and control.
- FAA is nearsighted. While the vast majority of individual FAA employees remain dedicated and professional, the FAA as an institution impedes needed modernization by not focusing enough on determining and meeting its external users’ needs for high quality and modern services at reasonable costs. Modern business tools, such as a cost accounting system, that tie specific costs to services, and measurement tools that assess how well services are provided are not yet available. Incentives are needed for the FAA’s culture to become more externally focused on users and services, more businesslike, and more responsive.
- Increasing operational costs overshadow capital investments. The funding system forces trade-offs, which substitute operational costs for capital investments. The system is in a downward spiral where increasing operation and maintenance costs, driven by outdated equipment, are “freezing out” new investments under current federal budget cap assumptions. Future system capacity will be reduced in real terms from today’s capacity.
- Airport needs are not being met. Airport-related congestion will increase in the future without a strong federal commitment of resources. Airport capital investments must go hand-in-hand with ATC investment to maintain system capacity.
- International competitive stature will be hurt. Historically, the U.S. has been the leader in air traffic management and technology. However, other countries are now or soon will be moving ahead of the United States in making improvements to their aviation infrastructure. Falling behind other countries in making critical capital investments will certainly affect the international competitive position of the U.S.

The National Civil Aviation Review Commission believes these problems can be rectified, but it will take dramatic changes in the way that the air traffic system and airport development are managed and financed. Institutional relations within the FAA and among the various stakeholders must be altered if we are to increase accountability at the agency, improve management performance, and ensure that resources are sufficient and used effectively.

These problems have been identified by previous Commissions and analyses. Among these are the National Commission for a Strong Competitive Airline Industry (1993), the

Clinton Administration Air Traffic Control Corporation Study (1994), the White House Commission on Safety and Security (early 1997), and the Coopers & Lybrand FAA-Independent Financial Assessment (early 1997). While these problems are not new, there is now a realization and a consensus as to their seriousness and implications.

Recommendations on an Integrated and Comprehensive Funding Package

Meeting the demands of a growing, complex aviation system is no small task. In the funding report, the Commission recommends broad and sweeping changes in the ways the FAA is managed, sets its priorities, assesses and achieves performance outcomes, and is financed. As a package, these reforms put the FAA and aviation stakeholders in position to take advantage of industry growth and technological change.

The Commission has agreed on a set of five broad recommendations that stem from their findings. The recommendations are viewed as a comprehensive package and are strongly supported by all Commissioners. Any alternative to the Commission's proposal must demonstrate similar consensus to be credible. It must be recognized that the strong agreement within the Commission for these recommendations exists because they are viewed as a comprehensive package. Moving forward on implementing some elements of the package without the others being addressed would result in a loss of unanimity. The importance of this consensus is demonstrated by the shortfall of previous efforts, which lacked full public and industry support to reform the FAA. The Commission's recommendations are included, as appropriate, in the proposed legislation in Attachment 1, and are summarized below.

- FAA's budget treatment must change. The Commission recommends that the FAA's funding and financing system receive a federal budget treatment ensuring that revenues from aviation users and spending on aviation services are directly linked and shielded from discretionary budget caps. This will ensure that FAA expenditures will be driven by aviation demand.
- FAA's management must become performance based. The Commission recommends that services related to the air traffic system be placed in a Performance Based Organization (PBO), which is managed by a Chief Operating Officer and overseen by a board of public interest directors. In addition, the FAA should institute a cost accounting system and be given authority to implement innovative programs involving leasing and borrowing authority. The Commission further recommends that the safety and security functions of the FAA, which are separate from the PBO, should also adopt a performance based management philosophy so that the quality of these programs can be improved.
- FAA's revenue stream must become more cost based. The Commission recommends that the FAA adopt a cost-based revenue stream to support its air traffic system activities including capital investments. At the same time, funding for aviation security, safety, and government use of the air traffic system should be provided by the federal government's general fund.

- FAA must control its operating costs and increase capital investments. The Commission has reviewed the FAA's forecasted budget needs and assumes the agency's budget projections to be reasonable in a status quo environment. However, the Commission recommends that FAA operating costs could be better managed and controlled and that investments in air traffic control modernization should be increased.
- Airport capital needs must be met. The federal requirements of airport capital development currently exceed the amount of revenue presently available to finance these requirements. The Airport Improvement Program (AIP) is the linchpin of airport financial planning and the Commission believes AIP should be funded at a minimum of \$2 billion annually over the next five years.

These funding-related recommendations are strongly interconnected. Without budget treatment that links aviation revenues and spending together, key capital investments will not be made despite industry's willingness to pay. Without movement to a cost-based system, FAA's improved performance will be limited because the agency will lack critical data to judge performance and appropriate market signals to make sound investment decisions. Without management and organizational changes, there will be no guarantee that any dollar that goes into the FAA is used wisely and efficiently.

These connections are the basis for why the Commission's recommendations are comprehensive and sweeping. It is the belief of the Commission that without these changes, the aviation system infrastructure of this country will become an impediment to economic growth. Critics of these proposals, or defenders of the status quo, must provide a compelling alternative, because the current system is headed down a path toward economic disaster and reduced safety. Since this is unacceptable, the Commission offers its funding report as a clarion call to action and innovation.

COMMISSION FINDINGS AND RECOMMENDATIONS ON AVIATION SAFETY

The Commission was charged to look at the ability of the Federal Aviation Administration (FAA) to anticipate changes in the aviation industry and develop policies and actions to ensure the highest level of aviation safety in the 21st century. The Commission was also directed to examine some specific safety issues.

Commercial aviation is an extraordinarily safe human endeavor. The risk of perishing in a commercial aircraft accident is about one in every two million flights. This safety record is due to the high standards that exist in the building and operation of commercial aircraft. These high standards are the result of decades of strong interaction between government regulators and safety professionals within the aviation industry.

Even with this excellent safety record, there is a growing sense that the high level of public confidence in the safety of the aviation system will slowly erode over the next 10-15 years if significant steps are not taken to further improve aviation safety.

Findings on Aviation Safety

- The commercial aviation accident rate is extraordinarily low, but it has shown virtually no improvement over the past 30 years. By the end of the 1960s, the large-transport aircraft fleet had become mostly jet powered. The introduction of highly reliable jets into commercial aviation resulted in a dramatic, multifold reduction in the accident rate, but since that time the accident rate has remained virtually unchanged.
- A flat accident rate coupled with the anticipated healthy growth in aviation will lead to a significant increase in the absolute number of accidents. If there is no change in the accident rate, and the anticipated growth occurs, there will be a large airliner accident somewhere in the world every 7-10 days by the year 2010.
- The public, their government representatives, and the aviation industry will find an increasing number of accidents wholly unacceptable. Public interest in aviation safety runs very high, with demands for improvements ever present. If the public perceives that air transportation safety is deteriorating, the demands for improvement will become increasingly strong.
- The accident rate must be reduced significantly. Safety professionals in industry and government believe that the current rate should and can realistically be reduced by 80%.

Recommendations on Aviation Safety

The Commission believes that the accident rate can be reduced, but this will take a comprehensive and concerted program by government and industry that will require new ways of doing business with each other and a greater emphasis on cooperation and collaboration.

- FAA and the aviation industry must develop a strategic plan to improve safety, with specific priorities based on objective, quantitative analysis of safety information and data. Presently, there is no agreed upon safety improvement strategy; rather there are many tactical efforts at work. Without a comprehensive strategy, priorities are allowed to fluctuate and progress toward safety improvement is slowed.
- Aviation safety programs in industry and government need to be improved by establishing more effective safety risk management programs. This should include self-audit and self-disclosure programs within aviation companies, protecting and sharing safety information in non-punitive ways, and encouraging research to support these activities. Where possible, these programs should include the analysis of real flight and operational data. The aviation community must look deeper than accidents and incidents to identify latent and emerging problems and fix them before a mishap occurs. There needs to be a willingness in government and industry to invest in new ways of doing business. This will require changes in the traditional regulatory relationship so that tools beyond the simple enforcement of rules are available to improve safety.
- FAA safety programs need to become performance-oriented. The FAA must establish

performance measures to focus resources and hold the agency's safety management accountable to make improvements.

- Government and industry should expand on their programs to improve aviation safety in other parts of the world. There are areas of the world where the accident rate is significantly higher than it is in the U.S. It is in the U.S. traveling public's interest, as well U.S. commercial and trade interests, to see that safety is improved everywhere, not just in the U.S.

The safety report also provides analysis and recommendations on a number of specific issues: the use of suspected unapproved aircraft parts, electronic maintenance record keeping, staffing and training of FAA safety personnel, runway incursions, flight data recorders, and FAA oversight in the future.

PART I1

FUNDING REPORT

Part ii: Funding Report
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I. INTRODUCTION: WASHINGTON, WE HAVE A PROBLEM

Without prompt action, the United States' aviation system is headed toward gridlock shortly after the turn of the century. If this gridlock is allowed to happen, it will result in a deterioration of aviation safety, harm the efficiency and growth of our domestic economy, and hurt our position in the global marketplace. Lives may be endangered; the profitability and strength of the aviation sector could disappear; and jobs and business opportunities far beyond aviation could be forgone.

Currently, the aviation sector of our economy is vibrant and growing. At its core are technological innovation and managerial success. U.S. aircraft manufacturing leads the global market, and U.S. airline operations are the most competitive and efficient in the world. Our nation's airports are recognized as professionally managed enterprises that are the engines of local and regional economies. The system is a true "public-private partnership," as air transport services, carrying passengers and freight, are produced by a combination of private firms and public agencies.

The private firms, passenger and cargo carriers, provide the equipment and crews that actually move people and goods, as well as the required support services — reservations and booking, ticketing, and baggage handling. The public agencies, the FAA, to a limited extent DoD, and airport authorities, provide the infrastructure of facilities, technology and services necessary for the safe and efficient operation of a large number of commercial aircraft, frequently in heavy-traffic conditions. The FAA provides the civilian air traffic control (ATC) system, including facilities, personnel, hardware and software. The airport authorities provide runways, terminal buildings (often in partnership with air carriers) and extensive support facilities.

In just the past several decades, this partnership has moved aviation from a minor industrial sector to being 6% of the Gross Domestic Product (GDP). U.S. airline and aerospace industries directly employ approximately 1.5 million people, mostly in highly skilled, high-paying jobs that generate more than \$100 billion a year in wages.

According to the 1997 World Development Survey, the world's air travelers are expected to double from one billion to more than two billion over the next twenty years. The total economic impact of air transport on the world economy was \$1.14 trillion in 1994. This is expected to increase to \$1.7 trillion by the year 2010. Presently, over \$1.5 trillion worth of freight is moved through the air around the globe annually.

The aviation system offers one of the most significant engines for national economic growth. If managed well, this economic advantage will become ever more

important as there is continued movement toward a global economy dominated by services and lighter-weight, high-value manufacturing.

There are dark storm clouds on the horizon, however. Our ability, as a nation, to provide the financial and management resources needed to support the underlying infrastructure (that is, our air traffic system and airports) and keep the aviation system vibrant and growing is slowly, but steadily, evaporating. The present process by which the air traffic control system and federally related airport development is financed and managed will not meet the future needs of the national economy and the traveling public.

The effects are already being felt, but our current problems pale in comparison to what is anticipated to come in a few short years. What happens in the aviation sector of our economy will have an enormous impact beyond that 6% of the GDP. The problems that this country faces could be wide ranging because the rest of the GDP and its productivity have become inextricably linked to our aviation system. Try to picture our economy with a gridlocked aviation system and what could and could not be produced.

The problem is difficult to solve because it is multifaceted and the solution requires dramatic changes in the way the business of air traffic control and federally related airport development is conducted. The Congress, the Executive Branch, the FAA, and the aviation community will all have to be part of the changes. The solution is all the more difficult to achieve because long-standing institutional relationships must be dramatically altered if our nation is to avoid the problem that is about to be delivered on its doorstep.

The U.S. air traffic control system does not have enough capital resources to overhaul its technological components as quickly as needed and to continue operating on a day-in-and-day-out basis at a tempo that the public expects and that economic activity and growth require. Similarly, our airports need more federally related resources to meet the future capital requirements that growth in air transportation will demand.

Just focusing on financial resources, however, would dramatically understate the problem confronting our country. How we organize, manage, make plans for, and execute critical decisions about the future of this basic building block of our economy are just as significant. Sweeping organizational, institutional, and management changes are also required. Money alone is not the answer.

Every day that passes without financial and management reforms means the coming gridlock will be here sooner and last longer than if the country steps up to the problems now. The U.S. air transportation system is falling into a hole. Climbing out of this hole will take a great deal of money and time. We, as a nation, still have a grip on the edge of that hole, but significant steps need to be taken very soon or that grip will be lost. Not just aviation will be pulled into the pit. Because aviation has become such a normal and ubiquitous part of our economic way of life, nearly every other sector of our economy will find itself dragged into it in one degree or another.

A. Without Change, Delays and Congestion Will Become Overwhelming

As stated above, the problems with the financing and management of our air traffic control system are already becoming manifest. In 1995, the FAA estimated that airline delays cost the industry approximately \$2.5 billion per year in higher operating expenses. That cost is clearly higher today and will grow. Recent data indicate the delay problem is getting worse. The number of daily aircraft delays of 15 minutes or longer was 18.9% higher in 1996 than in 1995. As illustrated in Figure 1, American Airlines data show that delays are likely to grow at ever-increasing rates unless some action is taken soon. American Airlines has estimated that by 2014 it expects delays to increase by a factor of three, bringing its hub and spoke system to its knees.

Moreover, delays appear to be lengthening. The Air Transport Association reports that the amount of time per delay rose 10% between 1995 and 1996. This figure masks the problem, however, because delay has become such a normal operational feature of the air traffic control system that airlines have simply built additional time into their flight schedules to accommodate it.

While extremely costly, delay in the air traffic and airport system will soon move beyond a cost and an inconvenience to be borne and will become a major breakdown of our air transportation system. Most major airlines operate with a hub-and-spoke route system or require quick turnaround times at gates. The efficiency and efficacy of these approaches are entirely dependent on the ability to reliably and dependably schedule flights to arrive at and leave airports in relatively narrow windows of time. The uncertainty created by delays is occurring at the same time that today's economy requires better reliability and predictability. There are at least three significant and rising costs generated by a system that is approaching gridlock:

- Direct costs to operate and maintain aircraft — paid by the airlines, but passed onto travelers in the form of higher fares.
- Costs to travelers of delays caused by increased travel time.
- Broader economic losses due to uncertainty in the delivery of goods and people.

For example, air traffic inefficiencies cost Delta Air Lines approximately \$300 million per year. Delta Air Lines estimates that if just four more minutes are added to the average time of each flight, it will not be able to reliably operate its hubs. The foundation of Southwest Airlines' low-fare operation is a 20-minute turnaround between flights. If just five minutes are added to the average turnaround time per flight, Southwest would be forced to fly each of its aircraft one less flight per day, jeopardizing its ability to continue to offer low fares. A recent MITRE Corporation analysis confirms these projections and estimates. As airlines strive to maintain the reliability of their operations, the result will inevitably be reductions in air service with the attendant negative economic impact.

B. Without Change, Anticipated Growth in Aviation Will Stop and Economic Growth Will Be Constrained

Given the delay and congestion problems that already exist, anticipated growth, without needed expansion of capacity in the air and on the ground, will simply reach a point at which it cannot be accommodated. Historically, the growth of aviation has outpaced overall economic growth. For example, in 1996, the strong U.S. economy (growing at approximately 3%) spurred domestic airline traffic to grow 6.6%.

Many will recall that in the 1980s growth in aviation was constrained by the failure to rebuild the air traffic control workforce after the 1981 strike. The air transportation system was widely viewed as hitting a ceiling in terms of moving people and shipments smoothly, effectively, and efficiently. A similar situation awaits us, albeit for different reasons, but the result will be the same and likely worse.

Every forecast of aviation activity predicts steady growth well into the next century. U.S. domestic and international passenger enplanements are expected to increase by 52% between 1996 and 2006 (from 606 million to 920 million). For the next ten years, the FAA forecasts that annual growth in revenue passenger miles will average 4.2%. Aircraft movements are also expected to rise dramatically. In 2008, there are forecasted to be nearly 10 million more annual aircraft operations than the 63 million operations expected by the end of this year. While aviation activity is growing, the FAA's capital investments are decreasing. Between 1992 and 1997, the effective buying power of the FAA's capital budget has decreased nearly 40%.

In short, growth, without significant capacity improvements, is already posing a serious challenge to the efficiency of our air transportation system, and hence the economy at large. Continued steady growth, without adequate investment in the air traffic control and airport system, will make this challenge even more daunting with each passing day. Without action, the challenge will become completely unmanageable, and growth in aviation will stop. The effect of this will ripple throughout the economy affecting other sectors' ability to grow.

As mentioned above, the aviation system has become integral to the national and global economies. Virtually all sectors of the economy are now dependent on air transportation for the movement of goods and people. Approximately half of air travel is undertaken in the course of conducting business. Even in the face of new and improved electronic and telephonic means of communication, air travel continues to grow, indicating that face-to-face communication remains a necessity for business transactions. In short, the aviation system has become a basic element of the infrastructure of the nation's and the world's economic way of life. Significant problems that cause inefficiency in the air transportation system will hinder the ability of businesses to open new markets and create new opportunities to expand and grow.

C. Without Change, Air Traffic Control Will Live Increasingly Hand-To-Mouth

The FAA has both large capital requirements and large day-to-day operating needs. The FAA is unique for a government agency in that it provides around-the-clock, 365-days-a-year air traffic control services — a linchpin of our nation's economic well-being. However, the FAA is funded and budgeted like other government agencies, most of which do not have this type of operating responsibility.

Being subject to the increasingly stringent federal budgetary spending caps, the agency is placed in the unsustainable position of having to forgo capital development programs in order to keep the day-to-day operations adequately staffed. The FAA's capital investments have decreased by approximately 20% since FY 1992, while funding for operations has increased by more than 10% over the same period.

In recent years, this predicament has forced the FAA to cut back on airport grants and forgo full investment in modernizing air traffic control equipment. A process that forces the agency to be shortsighted will inevitably harm the entire aviation system in the long term. Unfortunately, the long-term consequences are actually just around the corner.

Unless the budgeting and funding picture is dramatically altered so that aviation revenues can be directly linked to the programs they ostensibly support, rising operating expenses will outstrip the FAA's ability to make capital investments in air traffic control and airports. When faced with limited resources, operating and maintaining the present system prevails over the need to modernize.

Operating expenses are climbing because of traffic growth in the system and the rising costs of maintaining a large inventory of antiquated equipment. Because much of the equipment is old, its failure rates and outage intervals are resulting in ever-increasing maintenance costs as FAA strives to keep the equipment up and running. Just between 1992 and 1996, the number of hours of unscheduled outages more than doubled. When budget constraints guide policy choices in this kind of operating environment, the inevitable result is a downward spiral of disinvestment and increased operating costs. This is painfully ironic since one of the principal reasons for capital investment is to reduce the growth in the operations budget.

The problems of the current budget predicament were brought home to the aviation community when the recent 5-year federal budget agreement was enacted into law. It raises an extra \$4 billion from the aviation community (including passengers and shippers), all of which will be deposited into the Airport and Airway Trust Fund. Although the aviation users will pay significantly more in taxes, there are no guarantees that the funds will be spent on aviation purposes. The current budget caps and rules will likely result in the extra revenue only being locked up in the Trust Fund, unavailable to be used to develop and operate the system. In effect, virtually all of the new revenue will be used to off-set spending on non-aviation programs, setting a very damaging precedent for the future.

The likely effect of the recent budget agreement on the near-term funding of aviation programs makes change imperative. The case becomes even stronger if the longer

term effects of the budget agreement lead to the federal deficit beginning to climb after 2002. If that happens, the FAA's programs will come under even greater pressure just as the congestion and delay crises described above are beginning to strangle the national air transportation system and the overall economy.

D. Without Change, Federally Authorized Investment in Airport Infrastructure Will Remain Inadequate.

In the face of growing demands on airport infrastructure because of the passenger and traffic growth, safety and environmental requirements, and the continual need to refurbish existing infrastructure, the federal government's role in providing airport capital investment has actually slackened in recent years. Between 1992 and 1996, the annual funding level for the Airport Improvement Program (AIP) was reduced by nearly \$500 million, or 23%. For FY 1998 the Congress will fund AIP at \$1.7 billion, but this is well below the authorized amount.

While the congressional appropriations process may well provide a greater amount than that requested by the President for next year, the uncertainty and instability that pervades the airport funding picture has reached such a level that local planning is virtually impossible to accomplish in some circumstances. This has resulted in the delay or deferral of capacity-critical projects.

The budgeting and funding process has become so flawed that the aviation community finds itself standing up and cheering when an extra \$250 million in airport grants are available, even though that restores the program to \$200 million shy of its highest level of \$1.9 billion, and \$500 million below where most believe it should be to support 3,400 airports.

Such underinvestment will certainly lead to further congestion in the aviation system. In 1995, 25 of the largest U.S. airports were characterized as "severely congested" by the FAA. Without adequate capacity enhancements, this number will climb to 29 by 2005. Among those airports that would newly achieve this dubious distinction are Baltimore-Washington, San Diego, and Memphis. Each of the nation's ten most congested airports averaged more than 3,000 hours of delay per month for the first four months of this year. This will continue and only get worse if adequate infrastructure is not developed.

In 1990, a new source of airport development funds was created, known as passenger facility charges (PFCs). These are locally levied charges of up to \$3 per passenger for specific airport capital improvement projects. While the FAA has no role in collecting these funds, it does approve specific projects before a PFC can be levied. When PFCs were established, it was for the purpose of creating a whole new funding stream on top of the AIP. In some respects, with AIP funding dropping off in recent years because of the overall budget situation, the PFC program has come to act largely as a replacement for AIP funds in the minds of aviation policy makers in the Executive and Legislative Branches. This mind-set is hurting both of these vitally important programs.

The Commission believes that underinvestment in airport infrastructure undermines the benefits that can be expected through modernization of the air traffic control system. If airport and air traffic investments do not keep pace with one another, capacity gained on the air traffic side cannot be fully realized. Whether an aircraft is delayed because of a lack of runway, taxiway, or terminal constraints, or if it is because of inadequate air traffic control equipment, the effect on the traveling public and the broader economy is the same: higher costs, lost productivity, and poorer economic performance.

E. Without Change, FAA Will Remain Disconnected from Its Customers' Needs

Aviation users perceive a lack of connection between the FAA's management of the air traffic control system and the agency's ability to reduce the cost of operating in the system. Members of the aviation community have lost faith that the FAA can meet their needs for lower operational costs. This has manifested itself in significant ways and at great cost.

Fifteen years ago, the FAA embarked on a program to modernize the air traffic control system. Unfortunately, the agency looked at itself as the "customer" of the system, rather than those who pay to use it. This approach led to a collection of excessively ambitious, out-of-scope, too expensive, and poorly managed projects that have fallen years behind schedule with cost overruns in multiples of their original projections. For the most part, when these projects are finally delivered, there will be no additional system performance or capability from the users' perspective, no reduction in costs to use the system, and few improvements in safety. The follow-on programs to the Advanced Automation System (AAS), for example, will provide the same basic functionality of today's systems on modern hardware. While system outages and breakdowns are expected to decrease, new tools designed to enhance controllers' productivity will not be implemented for a least another 5 years unless there is a change in acquisition philosophy.

Another recent example of how this approach continues is seen in the Wide Area Augmentation System (WAAS) program, which makes satellite navigation signals accurate and reliable enough to be used in commercial aviation. The airline industry, which WAAS is supposed to benefit, has never been fully supportive of the FAA's approach to the problem that this program is intended to solve. The program is perceived to be troubled with costs and schedules under review. These difficulties, coupled with an industry skeptical of the FAA's approach even if the program was on track, undermine aviation stakeholders' confidence in the FAA's ability to meet their needs at a reasonable price.

If there is any hope in the near term of making improvements that provide significant benefits to air travelers, shippers, and other users of the system, the air traffic control system (including its capital investment) must become managed from a perspective that enables its performance to be continually assessed and improved. Without this change, critical safety and operational problems loom in the immediate future.

F. Without Change, the Economics of Air Traffic Services Will Be Poorly Understood and, Hence, Poorly Managed

Part of the disconnect between the FAA's management of the air traffic control system and the user community resides in the inability of both the FAA and its users to assess and act upon the true costs of their plans and actions. This failing has led new projects and procedures to be launched and ongoing projects and procedures to be continued without proper and crucial management knowledge and user input and support.

Better data on the costs of specific air traffic control services and related pricing mechanisms will send better economic and market-type signals to both FAA managers and the industry. This would improve decision-making by forcing both to examine whether there were better, less expensive ways to provide a service, or whether a service was really worth the costs from the users' perspective.

Because system delays and congestion are related to the most heavily used components of the aviation system, additional resources (capital or operational) focused on trouble spots will undoubtedly yield system-wide benefits. A better allocation of existing funds for needed investments or operational changes could make a real difference in solving these problems. Currently, however, such information about system needs is incomplete at best.

In a free market, a business can look at its revenues and its costs of services and product lines and learn a great deal about how customers value products relative to their costs, where cost savings can be found, where to make improvements, and the most attractive opportunities to invest new capital. At present, there is a dearth of this kind of information flowing in either direction between the FAA and its customers. An approach is required that mimics the information and resources that market-price signaling provides the private sector, so that best business practices and management can be brought to bear on a system that is so important to the nation's economic well-being. A move toward a system that is able to convey market-like financial and economic signals would help FAA better manage the day-to-day air traffic control operation and develop an investment strategy for the future that is more sophisticated than "more is better."

The Commission believes that without a fundamental change in management practices and perspective, coupled with cost-based accounting and financing mechanisms, the management of the ATC system will be largely focused on evolving day-to-day operations, without the foresight to implement long-term improvement strategies. The costs of continuing in this fashion are enormous and not sustainable.

G. Without Change, the U.S. Global Competitive Posture Will Be Harmed

Since the dawn of aviation, it has been said that the U.S. air traffic control system is second to none. There are already indications that this may no longer be the case. Numerous other countries are taking steps to improve airport facilities dramatically and

modernize air traffic control systems with state-of-the-art technology.

The irony is that, more often than not, these countries are procuring advanced technology from U.S. companies that have been unable to sell their wares to the FAA. The irony of the U.S. exporting advanced air traffic equipment is compounded because the FAA still imports vacuum tubes to run some of its antiquated equipment. This predicament is due in part to cumbersome procurement rules (from which the FAA was recently freed), lack of good management approaches and practices, the absence of a steady and reliable funding source, and a budgeting process that tilts away from taking the long view.

Because of the FAA's lack of modern ATC equipment, there have been suggestions in International Civil Aviation Organization forums about re delegating oceanic ATC responsibilities that now rest with the United States. Canada, Germany, Norway, the United Kingdom, and some Asian, Latin American, and Eastern European countries are installing and, in some cases, now using state-of-the-art equipment. Although 19 out of 20 of the busiest airports in the world are in the U.S., the nation can no longer claim that it has the world's most modern air traffic control system.

This was further underscored in an Aviation Week article from January 27, 1997, describing a variety of satellite navigation developments that have been initiated by the island nation of Fiji. The article stated: "The United States is being left behind in the implementation of satellite navigation and digital data communication for air traffic management in the Asian/Pacific areas."

Other countries are also making multi-billion dollar investments to upgrade and build new airports. For example, whole new airports representing investments of billions of dollars are being built in Asia. Existing ones are being refurbished and given new capacity. Osaka and Munich recently opened new airports. These investments are being made because there is a recognition that to compete well in the global economic system, markets need to be served with strong airport infrastructure. While the U.S. recognizes this need as well, the present funding system forces the country to invest less than it should on needed capital projects at airports.

For the United States to compete well in the global marketplace this picture must change dramatically. If it does not, the U.S. simply should not expect to have an aviation system that provides competitive benefits.

H. Without Change, Maintaining Safety Standards Will Become a Real Challenge

Outdated technology and ever increasing capacity demands placed on our airports and air traffic control system can have an impact on safety. As the pace of activity quickens and greater demands are placed on our aging communication, navigation and surveillance equipment, failures are bound to occur. Antiquated backup systems cannot be expected to provide needed safety assurance as communication and radar failures become a more frequent occurrence.

Maintaining old equipment and responding to capacity demands are not, therefore, simply economic efficiency issues. Like old bridges and crowded highways, congested airports and airways supported by outdated equipment can be less safe. A system straining at the seams of capacity is one that is also straining to be safe. Even apart from the risks posed by congestion, sheer growth is going to result in more accidents if nothing is done to dramatically reduce the accident rate.

A Boeing Company analysis (as shown in Figure 2) found that when today's accident rate is applied to the traffic forecast for 2015, the result would be an airliner crashing somewhere in the world almost weekly. If the problems caused by congestion and failing equipment are laid over this, it presents a safety problem the public will find intolerable.

To summarize, this report will set out a path to steer us away from the looming disaster. Those who are prepared to argue that this path should not be followed, must be ready to offer a viable alternative, because staying on the present path is untenable. The American public deserves better than gridlock in the sky and congestion on the ground. The Commission's recommendations will change the current course and lead to a stronger aviation system in the future. The nation will be more prosperous and the traveling public will be safer if the recommendations of the National Civil Aviation Review Commission are adopted.

II. FAA'S BUDGET TREATMENT MUST CHANGE

A. Recommendation

The Commission believes that if users of FAA services are expected to pay special aviation charges, every dollar raised should be directly linked to supporting FAA programs. The Commission recommends that the FAA's funding and financing system receive a budget treatment ensuring that revenues from aviation users and spending on aviation services are directly linked, and shielded from discretionary budget caps. In general, funds raised for aviation purposes should be available for aviation purposes. In the same vein, services provided to the users should be supported by them financially. However, the services that are of a general public benefit should be supported by the general tax payers.

This was the first recommendation made by the Commission and acts as the foundation for the other recommendations. Commission Chairman Mineta, on behalf of all the Commissioners, wrote the following to the House of Representatives and Senate leadership in early June:

"Without providing the type of budget treatment recommended..., the Commission cannot achieve the objectives of the enabling legislation. This failure will only lead to a crisis in the future of safety, delays, bottlenecks and air traffic gridlock. At that point, it will take more time and resources (measured in years and billions of dollars) to fix than if we succeed with our mandate now." (See Attachment 8.)

B. Background

Because the FAA is part of the federal government, the treatment of its budget and spending currently follows federal budget rules. Like most federal agencies, the FAA's budget must be annually passed by the Congress and signed into law by the President. However, unlike many agencies in the federal government, users of FAA facilities and services must pay special aviation excise taxes (including the aviation ticket tax, the flight segment tax, the cargo waybill tax, the international departure and arrival fees, and certain fuel taxes) ostensibly levied to support the FAA's programs. These excise taxes are deposited into the Airport and Airway Trust Fund.

The aviation Trust Fund was established in 1970 with the purpose of financing the FAA's capital investment in the airport and airway system. Over the years, Trust Fund monies have also been increasingly used to support the FAA's operations. Statutory language limits the amount of Trust Fund money allowed to support FAA's operations. The law is intended to encourage more capital investment; if more Trust Fund money is appropriated for capital needs, more Trust Fund money can be spent on the FAA's operations.

But, with the FAA's total budget limited due to federal deficit concerns, the immediate

needs of the FAA's operations must take priority over capital investment needs. Since not all of the Trust Fund money is spent annually, the balance grows. Every year that there is an aviation Trust Fund surplus, some fees are not being spent on the intended aviation purposes. With the new taxes the Congress has levied and the limits placed on spending due to federal deficit concerns, Trust Fund balances are expected to increase dramatically. There are some estimates that, with the new aviation taxes, projections of FAA requirements, and statutory limits on Trust Fund spending, the uncommitted balance (surplus) of the Trust Fund could grow to more than \$9 billion by 2002. This buildup in the Trust Fund clearly reflects that annual tax revenues extracted from aviation users soon will exceed annual spending on aviation allowed by current budget constraints.

The ATC function of the FAA is unique in our federal government. The government is charged with running the "production line" of a major commercial industry; every unit of production — in this case every flight — needs the FAA's input to make it a deliverable product. If that operation is to become performance-based and financed by the users and beneficiaries of the system, it must have its revenues driven by demand, which in turn drives expenditures. If the ATC system remains part of a budget process driven by external forces, such as reducing total federal domestic discretionary spending, it will never be performance based, no matter what label anyone might wish to hang on it.

The lack of any direct linkage between revenues and spending was crystallized by the tax-writing committees in the Congress during consideration of this year's budget reconciliation bill. Taxes have been dramatically increased on airline passengers and air carriers without assuring that the additional revenue raised will be dedicated to aviation safety and capacity improvements. As we move toward and past the turn of the century, the revenues from this increased aviation consumer and carrier tax will not be invested in additional modernization of the aging air traffic control infrastructure unless the budget treatment is changed. Without change, passengers will pay more and receive less-efficient ATC service in the form of more delays and less safety.

C. The FAA's Revenues and Spending Should Be Linked and Spending Shielded from Budget Caps

1. Current Situation

The FAA is funded through the appropriations process and must compete for funding with other modes of transportation (and other government programs like education or health programs), even though the FAA is primarily supported with money from the Airport and Airway Trust Fund. The Trust Fund is fully supported with revenues from aviation users. Under existing budget process rules, the budget cap that applies to the Department of Transportation and related agencies does not take into consideration the seemingly dedicated revenue stream derived from aviation users.

In the simplest form, there are two types of federal government revenues and spending: mandatory and discretionary. The rules for spending and controlling mandatory versus

discretionary funds are completely different. While the FAA's spending is considered discretionary, the revenue supporting the Trust Fund is considered mandatory. Decisions made regarding the FAA's mandatory revenues are made with little consideration of the FAA's discretionary spending, and vice versa. Therefore, there is very little relationship between the revenues flowing into the Trust Fund and the level of the FAA funding. For instance, in FY 1995, there was a \$5 billion uncommitted balance (surplus) in the Trust Fund; however, the FAA's appropriations were reduced 4% from the FY 1994 level. (See Appendix for additional information on budget issues.)

The FAA's budget classification also means that, if the FAA proposes a program that would significantly reduce its costs, there would be no reason for the tax committees to implement a corresponding reduction in aviation taxes. Since the FAA's spending is discretionary, any cost savings could only benefit other discretionary programs. In fact, there is little incentive for cost savings by the FAA because any savings usually translate into lower funding the next year rather than rewards for productive employees or additional investments in capital programs.

2. Commission Recommendations

The Commission believes that this lack of linkage between the FAA's revenues and spending is inappropriate and unnecessarily causes very difficult situations for the FAA and the aviation industry. The FAA and the industry should be able to benefit from the user revenues that are collected. The FAA should also be able to reduce charges imposed on aviation users if the FAA's needs are below the level of funds raised by the current charges. In other words, the FAA should have the flexibility to alter the user charges relative to aviation system demands. Under the current system these options are not available to the FAA.

The Commission believes that since the FAA is largely funded by its own revenue sources supported by users, the agency's spending of user charges should be controlled by its revenues, not by the budget caps. The budget caps are to reduce the federal deficit. If the level of FAA spending was limited to its means, then it would have the same overall impact as the budget caps. Therefore, the Commission believes the FAA's user-supported budget should be able to function outside the federal budget caps so long as that does not increase the deficit. This change will also alter the terms of overall FAA spending decisions. Currently, the funding trade-offs are between FAA spending relative to other government programs. Instead, the focus needs to be the appropriate level of spending within the FAA, prioritized by the anticipated economic efficiencies and benefits of a "linked" budget system. The Commission's recommended budget treatment will achieve this result.

The Commission recommends a change that would, in its simplest form, allow aviation user revenues to be spent on FAA programs. The Commission understands that the federal government must function under strong budget rules to control spending. In addition, the Commission believes that certain budget controls for the FAA are necessary. For example, the FAA should not be allowed to spend beyond its means.

However, the budget rules regarding aviation revenues currently lead to some inappropriate or unwise policy choices, needless delay in implementing programs, and decreased employee efficiency and morale.

In a recent case, the FAA attempted to use internal reprogramming authority (established by Congress) to address a commissioning backlog of Automated Surface Observation System (ASOS) weather measurement equipment. The backlog was a result of congressional direction on purchasing the systems, although there were already many ASOS in the FAA inventory. Funds appropriated by Congress for ASOS covered the acquisition of new systems but did not cover the commissioning costs for new and previously procured systems. FAA attempted to reprogram internally in FY 1997 to address a portion of the backlog but that was met with a significant resistance from congressional staff, resulting in the need for a formal and time consuming reprogramming request. The FAA had other important shortfalls at the time, and after the initial feedback from congressional staff, chose not to pursue a formal ASOS reprogramming request at that time to concentrate on other priorities.

The budgetary treatment of the collection and spending of aviation user charges will, in all likelihood, depend upon the precise nature of the user charges. Therefore, the Commission's decision to move toward a more cost-based funding system (which is discussed in detail in Section IV of this report) has an impact on how future collection and spending would be scored in the budget, unless changes or exceptions are made to the existing budget rules. In general, cost-based funding should be scored consistently with the budget treatment advocated in this report.

3. Budget Scoring

The Commission recommends that the FAA revenues and spending should be on the same side of the budget. This would allow any increases in need to be compensated with increases in revenues and spending. This would also allow any reduction in spending to be countered with a reduction in revenues. The Commission's recommended budget treatment for the FAA should not increase the federal deficit estimates through FY 2002.

As discussed later in Section III, appropriate budget scoring of borrowing activity would enable the agency to utilize financial resources available to it in a businesslike manner. The changes in budget treatment should recognize that borrowing by a day-to-day operating organization, such as the air traffic system, is a necessary flexibility to achieve the safety and efficiency benefits the public demands.

Regardless of the nuances of the current budget system, the Commission recommends that the majority of the FAA's funding be placed on the mandatory side of the federal budget so that spending would be limited to the monies raised through dedicated user charges. This would be similar to the "permanent appropriations" treatment the United States Postal Service (USPS) receives, whereby all revenues generated from USPS services (e.g., first class stamps) are automatically appropriated (U.S.C. Title 39,

Section 2401) and transferred to USPS accounts for their use (U.S.C. Title 39, Section 2003). Under such a plan, the statutory budget caps on overall federal discretionary spending would be lowered and used as a one-time offset for the increase in mandatory spending that would occur.

The remainder of the FAA's programs (safety, security and the governmental usage of the ATC system) would continue to be discretionary in nature since the Commission is also recommending that those programs be funded through an appropriated general fund contribution (discussed in Section IV). The Commission believes that such appropriations (approximately \$1.4 billion in 1995) should be made on a multiyear basis so that there would be funding stability for those important safety and security activities.

Although not the preferred course of action, it would be acceptable to move the collection of user charges to the discretionary side of the budget (as offsetting collections) with spending on the majority of the FAA's programs being placed in its own budgetary category, much as has been done with the Violent Crime Reduction Trust Fund (which is not subject to many of the usual budget pressures). This would require a one-time budget scoring exemption (a pay-as-you-go offset) if the current mandatory aviation taxes were replaced by an equal amount (through FY 2002) of aviation user charges on the discretionary side of the budget.

If Congress should decide that the budget process for aviation programs should not be changed as the Commission recommends, then taxes must be reduced subsequent to when appropriations fall below the authorized amount so there will not be a buildup in the Trust Fund balance. Simple fairness requires that the taxes to fund aviation programs be in line with the programs funded by those taxes, otherwise the American traveling public is being misled and overcharged.

The FAA is providing services to aviation travelers, the aviation industry, and the general public. The beneficiaries of the aviation system should pay for those services that relate to them — services provided to the aviation community should be funded by the users, and services to the general public should be funded by the general tax revenues.

III. FAA MANAGEMENT MUST BECOME PERFORMANCE BASED

A. Recommendation

The Commission recommends that the FAA move to a Performance Based Organization (PBO), with a management board, and strong financial management to effectively provide the air traffic services and related capital investment required in the next century. Establishment of such a PBO would enable the FAA to reap the full benefits of personnel and procurement reforms already enacted by the Administration and the Congress. Through those previous actions the Administration and Congress demonstrated recognition of the FAA's unique management needs.

The Commission also recommends that the FAA's Management Advisory Council (MAC) be put in place as quickly as possible to provide guidance to the FAA on operating in a new, performance-based environment for both air traffic services and for airport, safety, and security concerns.

There have been numerous organizational shifts at the FAA over the past decade, all intending to improve FAA management. The structure of the FAA's air traffic services organization evolves almost continually, the FAA's Research and Acquisition organization has begun to implement Integrated Product Teams, and other changes associated with personnel and procurement reform have been instituted.

Despite these organizational shifts, there has been no fundamental change in the results attained by the FAA. The Commission notes that the existing structure is ill-suited to making the fundamental shift required to attain substantially improved results focused on the needs of the FAA's customers.

Existing rules and regulations, coupled with existing cultural norms, make it very difficult for the FAA to move from its old management by a control structure to a new management organization focused on providing continually improved services to users of the National Airspace System (NAS).

The Commission believes that establishment of a PBO within the FAA for the development, management, and provision of air traffic services would help bring about such a change in the FAA's management. These changes will ensure that the FAA's performance will be continually measured and improved, that service costs will be reduced, and that efficiencies will be maximized. The provision of air traffic services is the FAA function that is most similar to a commercial enterprise. The Vice President's National Performance Review designed the PBO structure specifically to allow more businesslike parts of government organizations greater institutional flexibility to meet the business performance requirements of their clients. Air traffic services are an almost perfect model of the types of services envisioned by the Vice President in proposing the

PBO structure.

The Commission also recommends that the law establishing the MAC be amended. Currently, the law requires Presidential appointment with Senate confirmation of the appointees to the MAC. Since the MAC's role is advisory, the Commission believes that the process of appointment and confirmation is disproportionate to their role. A more appropriate process for the MAC, particularly in the light of moving to a performance-based organization governed by a Presidentially appointed/Senate confirmed Board, would be to have the FAA Administrator appoint the MAC, much in the same way other advisory organizations to Federal agencies are appointed.

The following subsections detail a number of the issues associated with a PBO for the air traffic system and higher performance standards for the remaining more governmental safety and security organizations of the FAA. The Commission believes these changes will help improve the overall efficiency of the FAA and ensure that aviation users and the general public get more value for their money.

B. Performance Based Organization for the Air Traffic System

The Congress and the Administration have introduced various approaches in recent years to make federal agencies more results-oriented and federal managers more accountable for results. For example, the Government Performance and Results Act of 1993 (GPRA) requires agencies to set goals, measure results and report on their accomplishments. More recently, the Clinton Administration has proposed the formation of PBOs for certain agencies within the federal government.

A PBO is a distinct management unit within a government agency and contains strong incentives to manage for results. It would be held accountable by committing to specific measurable goals with targets for improved performance. In exchange, the PBO is granted managerial flexibilities. To become a PBO, an organization must have a clear mission with measurable services and a measurement system in place or in development. The organization should have a focus on external customers, and its operation should be separate from policymaking. There must be a clear line of accountability to an agency head who would have policy responsibility. Finally, there must be funding levels that correspond to the organization's business operations.

Because the FAA's Air Traffic Services organization (including the research, development and acquisition of equipment used by the air traffic controllers) fits this description of the PBO extraordinarily well, and because the Commission believes that the operation of air traffic services in a more businesslike manner is crucial, the Commission recommends that the existing Air Traffic Services and Research and Acquisition Organizations be formed into a PBO.

Being more governmental in nature, the remaining parts of the FAA (safety, security, the airports office, and FAA administration functions) would remain as a traditional government agency, but one that also should become more performance oriented. The

PBO for the Air Traffic System would still be part of the FAA and would still be subject to the safety, security, certification, and broad policymaking responsibilities of the FAA. It would contribute its share to support the Administrator's staff offices and other agency-wide administrative activities and programs. However, the PBO will have the flexibility to use the administrative services of the FAA or to contract out for these services. The degree of cooperation and coordination between the PBO and the rest of the FAA would need to be strong, given the critical role the safety organization plays in air traffic system modernization through its certification of aviation-related technology.

The Commission also believes that the PBO can improve coordination between airport development programs of the agency and air traffic services. Too often in the past, airport infrastructure has been put in place without sufficient coordination between the air traffic services, research and acquisitions, and airports organizations in the FAA.

1. Performance Based Organization Board

The Commission believes that a management/oversight board for the PBO for the Air Traffic System should be established. If government and industry are going to provide the PBO with full authority over revenues, expenditures, and operations, a board is needed. Vesting complete authority in one individual would place too much power in that individual. To be successful, a board over the PBO for the Air Traffic System needs to bring different perspectives and expertise to the governance of the organization. The PBO Board will help provide stability and continuity of leadership. In addition, management direction and leadership of most business entities is provided by a governance structure within which a board hires and evaluates a Chief Operating Officer (COO), who is responsible for day-to-day operations. The PBO Board provides that type of structure.

As a Board with full authority over the Performance Based Organization, its duties and responsibilities would include: hiring, firing, and setting compensation for the Chief Operating Officer of the PBO; setting and adjusting charges for services provided by the PBO; providing direction to the total affairs of the PBO to ensure its development and growth in services and financial results; overseeing total performance of the PBO; approving all financing programs and policies; and reviewing and approving major capital investment programs. Specific responsibilities would include preparation of a business plan, an annual financial plan, an annual budget, annual financial and performance targets, details of performance-based pay systems, and other incentives for PBO employees. In fulfilling these duties the Board members would not represent any specific segment of the aviation industry, but would manage the PBO in the best public interest.

The PBO Board should be made up of seven members. Members would include the FAA Administrator and six public interest individuals with no direct pecuniary ties to the aviation industry but are generally knowledgeable of best business and management practices. The legislation the Commission recommends would require three Board members, other than the Administrator, to be knowledgeable in the aviation field. This

would ensure that aviation experience could be brought to bear on the issues considered by the Board. The Administrator of the FAA would chair the Board. The Board members would have fiduciary responsibilities appropriate to the Board's responsibilities. The public interest members of the Board would be appointed by the President and confirmed by the Senate for five-year, staggered terms.

2. Creation of the Position of the Chief Operating Officer

A key function of the Board is the appointment of the COO for the PBO. The ultimate goal is to create an executive structure where broad policy issues are determined by policy officials and operational and financial issues are managed by the COO, who will be hired by the Board based on her or his managerial experience and qualifications.

The Chief Operating Officer will sign with the Board an incentive-based contract with an appropriate level of compensation. The contract will define the parameters for the business expected of the COO. If the COO does not perform appropriately, s/he could be dismissed; likewise, if the COO succeeds in an outstanding manner, s/he could be rewarded.

The contract will run for a fixed term (three to five years), be based on the COO's performance, and could be extended at its end. A career government employee would have to surrender his or her career status to take the position as Chief Operating Officer.

The COO's contract, as a performance agreement, will establish the basis for measuring results and achievements against clearly defined, measurable, and meaningful performance indicators (discussed in more detail below). The agreement would also include specific financial management indicators. Other performance indicators might include productivity, efficiency, effectiveness, quality, timeliness, delivery of end user benefits within specified cost targets, cost-reduction, innovative service delivery techniques, and customer satisfaction. The agreement may stipulate important benchmarking initiatives designed to identify and promulgate "best practices" throughout the PBO for the Air Traffic System. The COO would also have the flexibility in coordination with the Board to provide or contract for administrative services for the PBO, including the budget and personnel management services. In general terms, the Chief Operating Officer would be responsible for reporting to the Board on all matters concerning the operational and financial management of the air traffic system PBO.

The performance agreement establishing organizational targets for the year would cascade downward throughout the organization. The Chief Operating Officer would be responsible for the hiring and firing of senior managers within the PBO, and would assign individual performance goals to the PBO, senior management and subordinate departments. Success of the organization and the tenure of its officers and employees could be defined and measured by the achievement of these goals.

3. First Steps in Establishing the PBO

The Commission recognizes that in moving to a Performance Based Organization in the FAA, it may be useful to first transition a subset of FAA operations. Oceanic air traffic control provides a segment of operations that is large enough to include all of the areas of FAA business, but small enough to be an appropriate first step in the complete transition to a PBO as recommended by the Commission.

In the opinion of the Commission, the oceanic model could potentially allow the FAA to move more rapidly to institute a complete PBO for the air traffic system by allowing the agency to work each step of the process for the oceanic system while moving to implement those steps for the larger system.

4. Establishing Specific Measures for FAA Operational and Financial Performance

The Commission believes that specific measures must be established for identifying the performance of the FAA in terms of the provision of air traffic services, financial management, and the maintenance of system safety and security.

These measures should encompass all aspects of the FAA, including the PBO and the operations of the airports, safety and security functions that would remain under the more governmental structure of the remainder of the FAA. The MAC could play a critical role in establishing performance measures for the new PBO as well as for the remainder of the FAA.

a. Quantifying System Performance

The Commission believes that a fundamental truth about the FAA's Air Traffic Services organization, or about any organization, is that one cannot improve what one cannot measure. The FAA has begun a number of initiatives to quantify and measure the agency's performance, but these are in their infancy and need to be expanded. Therefore, the Commission recommends that the FAA adopt a more comprehensive set of system performance measures as a first and critical step to forming a Performance Based Organization for the entire air traffic control system. This building block will be a critical management tool for the new PBO Board. Similarly, concrete measures of performance are needed to effectively manage the airport, safety, and security organizations within the FAA.

The Commission recognizes that the FAA currently measures aggregate delay within the system, and accounts for the causes of that delay. However, this measure does not fully address the economic interests of the users of the National Airspace System (NAS), and masks many of the inefficiencies of the system. For example, measuring aggregate delay does not take into account delays "accepted" by the system as a result of schedule padding to ensure that favorable "delay by airline" statistics are reported to the DOT. The Commission recommends that the FAA quickly complete its current investigations of the type of measures of performance noted below, and implement reporting of such measures as soon as possible.

User impacts can be defined in terms of four classes of performance indicators: flexibility, predictability, access, and delay. Diminished performance in any of these categories carries a cost to users. Some examples of measures the FAA is reviewing that could measure system flexibility include: reducing the number of procedural restrictions in the system; reducing the deviation between the route requested and the route flown; increasing the peak acceptance rate of airports and airspace; and increasing the number of decisions involving pilot-controller collaboration.

The FAA could measure system predictability by measuring: reductions in the variation in system performance associated with changes in weather; reductions in the impact of system outages; and increases in the number of delay allocation decisions made with direct user input. With regard to system access, or the ability of users to enter the system and obtain services on demand, examples of measures the FAA could use might include: increases in the number of airports with precision approach capability; increases in civilian utilization of Special Use Airspace; increases in the availability and quality of VFR inflight services; and increases in the coverage of air traffic control surveillance and communication.

Measures by which the FAA could measure improvements in system delay include: reductions in ground movement times at key airports during peak operations; reductions in the difference between estimated and average en route time; and reductions in the number, duration, and impact of ground delays imposed by the Air Traffic Command Center.

Other measures of performance include process performance measures that motivate people within that process to help anticipate and prevent problems. Examples include measures of cycle times, number of process steps, number of process departures, etc. In addition, output performance measures report the results of a process to management and are used to control resources. Such measures are both financial and operational, with examples being cost per unit of service, earnings per share, etc. All the measures discussed above will be needed to support continuous process improvement, innovation, and mission-critical objectives.

b. Implementation of a Cost Accounting System

The Commission supports the congressional mandate contained in the Federal Aviation Reauthorization Act of 1996 for the FAA to move immediately to implement an effective, reliable, and comprehensive cost accounting system to accurately determine agency costs. This will allow the agency to understand the costs associated with providing ATC and other services and programs, as well as provide needed management tools as the FAA seeks to become increasingly performance based.

Without an effective cost accounting system it will not be possible for the FAA to manage its resources in a businesslike manner, nor will the PBO Board be able to allocate its costs correctly and fairly to users as the basis for a cost-based user charge

system. The Commission believes that only with this effective management tool can a substantial improvement in cost accuracy and service be obtained by the FAA.

Specifically, under existing accounting and cost-benefit analysis practices, and because of budget pressures, the FAA tends to focus its investments on items that will improve the ability of the agency to reduce its costs. While significant, it understates the importance of programs, especially automation programs, that would allow controllers to provide more and better services to users of the system. This tendency is linked by most observers to the simple fact that the FAA may not charge users for services provided. The agency is, therefore, unable to recoup the costs of fielding new systems that would provide better service. As a result, the performance of the FAA, insofar as it would apply to providing better performance to users, is not always effectively considered in making agency investment decisions.

The work that the FAA has undertaken with regard to implementing a cost accounting system must be a top priority of the new FAA Administrator; preliminary and limited performance data should be delivered to the Congress and senior FAA managers beginning in October 1997. The system should be operational by October 1998. The Commission believes that it is essential that the FAA senior managers be fully involved and supportive of this effort if full implementation is to be achieved. In addition, the FAA must implement adequate training for appropriate personnel so that the resulting data from the cost accounting system can be used most effectively. The Commission cannot overstate the importance of the implementation of a cost-based accounting system with reliable and meaningful information so that the full benefits of the recommendations in this report can be realized.

5. Structural Recommendations to Achieve Effective FAA Financial Reform

This part of the report contains specific recommendations from the Commission on how the FAA can generally improve its performance. Many of these recommendations are not new; some of them are contained in the recommendations of previous commissions established to examine the operating practices of the FAA. The recommendations are fairly specific and intended to provide operating guidance to the Congress and the FAA as to measures that would improve the services provided to the aviation industry and the flying public by the FAA.

a. Enhance Financial Flexibility and Focus on Core Mission

The FAA at present is responsible for many activities that in the private sector would not be considered part of its core business activity. For example, today much of the FAA's ATC communications infrastructure is owned and operated by the agency.

In order to have an ATC system that is responsive to the growing and changing demands of airspace users, the Commission recommends that more services the FAA currently provides to itself could be leased from private vendors saving development and maintenance costs. From our discussions with private industry, it appears that

industry could “tailor” their documentation and testing processes more efficiently than the FAA bureaucracy. The FAA has already initiated steps in this direction. For example, the new technology that further automates the flight service stations will be procured by the FAA through a lease. This approach should be further examined and expanded in order to reduce up-front capital costs and recurring maintenance costs. In addition, many such leased services can more easily incorporate new technology, enhancing overall system efficiency.

As a specific example, the Commission recommends that the FAA explore the establishment of a “consortium” to modernize and maintain the Communications, Navigation, and Surveillance (CNS) infrastructure. This consortium would operate as a business and lease services back to the FAA. A starting point for this concept could be augmentation of the satellite navigation system at the local level to make it reliable and accurate enough for precision approaches to airports. Such a consortium could also help integrate FAA investment decisions with industry equipage decisions. This integration is critical to the success of “Free Flight” and other modernization decisions.

b. Define and Develop Innovative Financial Options

Innovative management, financial, and operational reforms of the FAA are also critically needed. Numerous commentators have suggested changes to the FAA’s management approach and evolution of the FAA’s culture. A lack of accountability is often cited as one of the foremost problems of FAA management. Organizational changes and changes in management practices, including use of innovative financial practices, could go much further to increase accountability and foster improvement in management and FAA culture.

Unfortunately, the current budget process for the agency reduces accountability. Because there is so much dispersed power and authority in making budget decisions, FAA managers, industry, and the Congress can always point fingers when something goes awry. Financial reform will help establish clear lines of accountability.

The need for financial innovation is illustrated by the FAA’s need to coordinate modernization of the ATC system with industry’s modernization of aircraft navigation systems. Such coordination would maximize the benefits of these investments to both industry and the FAA. In many cases, industry is waiting for the FAA to field systems before modernizing their aircraft fleets. The FAA needs to have a steady and flexible funding sources for capital investments to make commitments to the aviation industry. The Commission believes that funding for the FAA’s modernization must be predictable and flexible; it should not be limited by arbitrary budget scoring rules. In the private sector, this predictability and flexibility is obtained by capital budgeting, which allows for the sale of bonds and other debt instruments to rationalize capital flow.

The Commission recommends adoption of financial reform initiatives, such as those discussed below. Rationalizing the FAA’s capital flow is absolutely critical to the success of all other reforms recommended in this report.

Borrowing Authority. The FAA should be given authority for long-term borrowing from the U.S. Treasury or from private capital markets. To finance the air traffic control investments of the PBO for the Air Traffic System, it may be necessary to increase the total investment level from the currently constrained levels of about \$2 billion per year to as much as \$3 billion per year. Such an increased investment level does not even take into account the cost of accelerating the air traffic services modernization as set forth by the White House Commission on Aviation Safety and Security Report. Borrowing is not an option but a necessity for capital intensive enterprises, especially in technology transitions.

Borrowing authority permits a federal agency to incur obligations and to make outlays against those obligations. Borrowing authority is usually authorized for businesslike activities where the activity being financed is expected to produce income or has a dedicated revenue stream over time with which to repay the borrowed principal with interest. This is a perfect fit for a cost-based funding structure and the FAA's need for a large capital program for system replacement and modernization.

Borrowing allows leveraging of resources by enabling key long-term investments to be made while repayments are made over time. Such investments could help reduce costs to the FAA or benefit system users. Borrowing for such investments would allow the cost to be repaid as the benefits of the investment are received. The ability to borrow would give the FAA greater flexibility to take advantage of capital investment opportunities as technology changes. A cap on borrowing could be established based on the size of the FAA capital program and the ability of user charges to support debt. The Secretary of the Treasury could be consulted on borrowing from the private sector ensuring that doing so would represent a sound business decision.

Borrowing for needed ATC investments should be viewed in the broader context of the PBO for the Air Traffic System managed by a professional board. Users and the PBO will have the same objective of providing a level of service quality at the lowest reasonable cost. Users would have greater input into capital decisions, capital budgets, and annual business plans. Borrowing for needed capital investment is a tool that can be used to expedite the introduction of new equipment.

Borrowing for air traffic control modernization would result in outlays that would have to be scored under the rules of the Budget Enforcement Act. The current rules on government scoring may stand in the way of the flexibility needed for the FAA to realize the full potential of borrowing authority. Current scoring rules could require the FAA to match any outlay from the use of borrowed funds with the same level of receipts. While this would give the FAA some needed flexibility in capital acquisition compared to the present system, it would fall short of the "best business practices" and would have relatively limited value.

The Commission recommends that in addition to the authority to borrow, the FAA also be given scoring treatment to allow only the annual current FAA outlays to repay debt

service to be scored. This authority would only be effective when the FAA has established dedicated user charges for air traffic control services. This exception will promote efficiency in that it allows the FAA to borrow efficiently, behave in a more traditional businesslike mode, and still provide protection for debt repayment to the Treasury or private capital markets.

Capital Leasing. The Commission believes that, instead of outright purchase of capital equipment, a variety of leasing options exist that should be considered by the FAA in its capital decisions. Simply stated, a lease can allow full use of specified capital equipment, facilities, or systems for a stated period at a stated price per month. The lease, given appropriate budget scoring treatment¹, avoids the up-front capital costs of purchasing the equipment and potential obsolescence. The risk of owning the equipment are not taken on directly by the government, rather by the equipment owner. Leases can be customized to guarantee specific performance levels of equipment or systems, allowing and/or encouraging periodic technology update by the owner of the capital good to meet or exceed performance levels at lower costs. The FAA has made minimal use of leasing in the past, but seems more receptive to considering this option at present.

Leveraging New ATC System Development Abroad. For some of its future modernization, the FAA could reduce costs by engaging to a greater extent in joint development efforts with foreign countries. Additionally, the FAA could take advantage of ATC systems and standards developed by other countries. To some degree, the FAA is attempting to take advantage of foreign development efforts by promoting commercial off-the-shelf (COTS) acquisitions. Other opportunities might include some cost sharing on future navigation technologies or recovery of FAA investment by selling FAA navigation technologies abroad.

Some would argue that the FAA's mission is far more complex than any foreign country's ATC environment. While this may be true in the aggregate, there are busy terminal and en route airspace areas abroad that are comparable to the U.S. and where new equipment has been fielded. The FAA will need to change its requirements generating process to capitalize on foreign developments. The FAA culture would also need to become more accepting of outside solutions.

C. Institute Management Reforms in All Components of the FAA

Much of the preceding discussion has focused on reforms associated with the PBO that the Commission recommends be established for the management of the FAA's air traffic system. The Commission also recommends that the airports, safety, security, and administrative components of the FAA undertake substantive management and financial reform.

Good Government Reforms. The Commission recommends a series of FAA reforms including the use of "line of business" budgeting, which will enable greater certainty and accountability among the FAA's lines of business for airports, safety and security. In

addition, the Commission recommends the adoption of multiyear appropriations. This process will promote better overall business planning and provide greater stability for the FAA's safety, security and public use functions, all of which will still be governed by the authorization/appropriation process.

Cultural Change Incentives. The Commission believes that the PBO structure and management system will provide adequate incentives to the air traffic services portion of the FAA. The Commission notes that the incentives confronting FAA government managers in the remainder of the agency often do not promote efficiency. New incentives need to be implemented to influence management and agency behavior. For example, the FAA needs to be more businesslike by benchmarking against best practices in the private sector. This concept should be extended to compare like facilities or functions within the FAA (i.e., benchmark against the best in the agency). The FAA should provide incentives, such as rewards or gainsharing, for managers, organizations, or facilities to be high performance, and then determine why specific facilities cannot measure up to the best. Aggressive FAA reform, involving greater focus on proper use of incentives, would work especially well if coupled with a new cost accounting system, cost-based charges, Performance Based Organizations, and other financial innovations and initiatives. In particular, the cost data would enable rapid, timely cost tracking and post-implementation evaluation of different strategies at different facilities.

D. Summary

Overall, the Commission believes that a PBO structure would greatly facilitate the FAA's movement to a customer-oriented agency. Despite existing performance improvement initiatives, little service performance has been measured to date and few results are being reported; improvements in service performance are not being achieved. From an aviation system user's perspective, several productivity benefits could result if the FAA transitions to a performance-based philosophy that would complement the cost-based financing system that is being recommended.

By adopting this structure for managing the air traffic system, the Commission believes that the system will be run in a more productive and cost-effective manner. Given the fact that labor costs at the FAA are rising 6% annually, a PBO governance structure should lead to appropriate and effective capital investments. Such investments should, in turn, lead to an increase in productivity, thereby reducing labor costs and freeing additional capital for further needed investments. This will ultimately reduce the day-to-day costs of operating aircraft. When coupled with the concept of free flight, in which aircraft will be able to take relatively unhindered, direct routings, a PBO will likely result in significantly lower ATC operating expenses for users of the system. Adoption of such an operating philosophy also might facilitate user insight into what drives FAA service performance and increase the FAA's willingness to respond to users' service improvement suggestions. Absent a move to a PBO, the Commission sees no alternative but to revisit the concept of establishing a government corporation to run the air traffic system.

The Commission strongly believes that the management reforms outlined in this section of the report are essential for the FAA to move effectively into the next century and avoid the impending gridlock of the nation's air traffic system. The Commission also notes that these management reforms cannot be fully achieved unless the agency receives appropriate budget treatment, as recommended in this report, and moves to a cost-based funding system. Furthermore, the Commission believes that the establishment of a performance-based culture in all parts of the FAA will make it possible to better establish the future capital and operational requirements of the agency.

IV. FAA'S REVENUE STREAM MUST BECOME COST-BASED

A. Recommendation

The Commission recommends that the FAA be primarily funded through cost-based user charges for commercial passenger and cargo air carriers and a fuel tax for general aviation aircraft. The Commission also recommends that a continuing U.S. Treasury general fund contribution pays for safety, security and the governmental use of the air traffic control system. These charges must be treated consistently with the budget treatment advocated by the Commission.

A cost-based system of charges will change the way the government, as the provider of ATC services, and the aviation industry, as the user of ATC services develop their respective policy and management decisions. Using such a system, in and of itself, will bring about a very significant management improvement. The questions that could be answered in a cost-based environment cannot be answered today. Using a system based on costs borne by users will enable the safety, efficiency, and cost reduction performance of the organization to be measured and adjusted.

B. Present Method of Financing the FAA

Based on a statutory formula, ATC system users at present pay approximately 70% of the FAA's annual costs through taxes deposited into the Airport and Airway Trust Fund. In addition to user payments, the U.S. Treasury general fund contributes, on average, the remaining 30% of the FAA's annual costs². As of October 1, 1997, ATC users will pay into the Airport and Airway Trust Fund through the following means:

Commercial

- Ticket tax of 9% in FY 1998, 8% in FY 1999, and 7.5% in FY 2000 through FY 2002;
- Segment charges per passenger of \$1.00 in FY 1998, \$2.00 in FY 1999, \$2.25 in FY 2000, \$2.75 in FY 2001, and \$3.00 in FY 2002;
- International departure and arrival taxes of \$12;
- Frequent flyer award tax;
- \$0.043 commercial user fuel tax (formerly the deficit reduction tax);
- 6.25% cargo waybill tax;

Non-Commercial

- \$0.193 aviation gasoline tax (\$0.15 + \$0.043);
- \$0.218 aviation jet fuel tax (\$0.175 + \$0.043).

Initial estimates of the revenue to be collected from users through these taxes are shown in Figure 3.

Prior to the 1997 agreement to balance the federal budget, aviation taxes deposited into

the Airport and Airway Trust Fund were limited to a 10% ticket tax, a 6.25% cargo waybill tax, a \$6 international departure tax, a 17.5 cents per gallon general aviation jet fuel tax, and a 15 cents per gallon general aviation gasoline tax. These taxes and fees levied on the aviation community (including passengers and shippers) have been increased to help reduce the federal budget deficit or to pay for tax cuts in other areas. As such, once these additional revenues are collected, they will likely remain unavailable for FAA funding unless the FAA receives the budget treatment sought by the Commission.

C. Why Change Is Needed

The Commission believes that there are compelling reasons to move to a cost-based system of charges for ATC-related services which include the FAA's operational and capital investment programs in airport grants, facilities and equipment, and research, engineering and development.

As manager of the aviation system, the FAA provides its customers with a variety of facilities and services. The customers pay for the system, but current payments bear little relationship to the particular facilities and services they actually use and whether they use them at busy or slack times.

By contrast, a private sector firm can look at the revenues and costs of its services and product lines and learn a lot about how customers, including passengers, value products relative to their costs, where the firm should try to reduce costs, what product lines to improve or develop, the most attractive opportunities to invest new capital, and so forth. The FAA does not get that kind of detailed information from its customers, nor do its customers receive detailed information on the costs of providing the services they use.

Changing to a cost-based system is essential to the development of a more independent, more businesslike and more efficient air traffic system. If charges for services have little or no relationship to real costs, there is neither the means nor the opportunity for service providers to enter into realistic consultations with customers as to what services are needed, how they should be provided, and what the charges should be.

To provide more efficient services, the FAA must distinguish between the buyers of air transport services, the users of the system, and the beneficiaries of the air transportation industry. The buyers — largely travelers and shippers — pay market prices for the services they receive. On the other hand, none of the direct users of the public infrastructure — including airlines and owners of general aviation aircraft — pay market prices for air traffic control services. Rather, they collect ticket or waybill taxes from buyers, or they pay fuel taxes. These taxes, however, are not directly related to the FAA's costs in providing the specific services used. Moreover, beneficiaries of the

air transport system, including the general public and all businesses, have little insight concerning the infrastructure that makes up the public component of the aviation system, and little or no idea about how the public component of the system is financed.

The Commission's approach has been to develop alternatives to provide system managers with useful information as well as the power and resources to act on that information. This approach mimics the information and resources that the market system provides to the private portions of the aviation system and will provide valuable tools to decision makers in the aviation system. Revenue streams will serve as signals to providers within the system — including the FAA, airports, airlines — as to where improvement is needed or demand is not being met. This approach also ensures that these revenue streams provide the financial resources needed to act on those signals and provide the means to increase capacity (or decrease it, if less capacity is needed).

The Commission believes that better spending decisions will come from better information. It is not hard to make a strong, general case for the gains from imposing user charges that reflect the costs of providing air traffic control services. This is a basic tenet of a free-market economy. The FAA, the aviation system in general, and the individuals and businesses who depend on air travel would all benefit from a move to charges that reflect FAA's actual costs to provide specific services. Similarly, the FAA needs more information from its customers on their costs of specific operations, including operations of particular aircraft types, time of day differentials, etc., in order to evaluate its operations, investments, and pricing. Better information on revenues and costs would have several important impacts:

- First, the FAA, and its customers, would be able to plan more effectively. Better information allows better analysis and better decisions. The FAA would be able to see more clearly where more spending, faster development or deployment of new technologies, and new investment are required. Such analysis could point to greater emphasis on particular improvements or technologies applicable to many elements of the system or to solutions of problems at particular locations, as appropriate.
- Similarly, the FAA would have access to realistic information about its performance. Public availability of data on revenues and costs of system elements will encourage FAA managers to focus their efforts. Such data would also be helpful in the development of a system of performance measures which customers, the Congress, and the general public could use to judge how well FAA does its job.
- Further, there will be revenue and pricing effects to the extent that customers and the FAA adjust their behavior. Some carriers may decide to avoid times and places with higher prices. Other carriers may decide that the cost of air traffic services is not a critical component of their operations decisions, and will be undeterred by such prices. Behavioral changes of this kind could reduce system costs while helping to expand system capacity. At the same time, the FAA will be able to focus its revenues on particular costs, sectors or locations, speeding needed deployment of new air traffic technologies, personnel, or even helping to finance needed system runway expansion.

In addition to these economic performance reasons for moving to cost-based user charges, there are other, institutional benefits from such a system. Revenue raised through a cost-based system normally receives more favorable treatment in the budget process. A cost-based system is more likely to receive the budget treatment recommended by the Commission, allowing all of the revenues from the system to fund relevant programs. In addition, the current excise taxes have been challenged as not being appropriately tied to the ATC services provided to a particular flight and, therefore, do not fairly distribute costs among users. A cost-based system — founded upon a cost accounting system — would finally clarify whether this perceived lack of connection is real. Finally, a cost-based system could be more readily adjusted in order to take into account new aviation system priorities, new programs, and/or FAA cost reductions.

D. Future Method of Funding the FAA

1. Future User Charge System

The Commission recommends that the future cost-based funding system for the FAA should have the following features:

- Have accurate costs as its foundation;
- Be easy to administer;
- Be readily adjustable;
- Ensure that the FAA has a stable and adequate funding source;
- Ensure that the nation's airports and airways are safe and are used as efficiently as possible;
- Encourage a strong, competitive aviation industry; and
- Make the FAA more accountable to its customers.

2. Air Carriers Should Pay Cost-Based User Charges

The Commission recommends that the cost-based user charges for air carriers fully recover the FAA's operating costs and capital needs (other than those recovered by general aviation fuel taxes and the proposed general fund contribution for public use of the system). When developing a cost-based system, the FAA should first rely on the new cost accounting system to best determine where and how system costs are generated. The FAA may also consider guidelines such as those established by the International Civil Aviation Organization (ICAO). ICAO-approved formulas are typically based on separate en-route/in-flight and terminal/approach charges, taking into account aircraft weight and distance flown. However, there are many other factors which are not part of the ICAO formula that would be critical to the development of a true cost-based system, and therefore should also be taken into consideration when developing user charges (i.e., time of day when the flight occurs and the level of congestion in the airports and airspace utilized). In addition, when establishing this new system, the competitive balance among industry segments must be taken into consideration.

3. Process for Getting to Cost-Based User Charges

Listed below is the process recommended by the Commission to develop and implement cost-based user charges:

- The FAA Administrator should be empowered and directed to develop and implement, after approval of the new Performance Based Organization Board, a schedule of charges for all commercial users of the ATC system. The charges for ATC services should differentiate between the provision of services (including capital investment) related to the landing and takeoff of aircraft and the provision of services related to handling aircraft in flight, and must reflect a reasonable allocation of the costs of providing those services using the best available cost accounting data.
- The Administrator and the Board would consider, when establishing the charges for ATC services, the cost of services provided at different size terminals, to different size aircraft, and at different times of day. Ease of administration and the competitive balance among industry segments must be taken into consideration as well as the unique circumstances associated with inter-island air carrier service in Hawaii and rural air service in Alaska.
- The Administrator and the Board could formulate charges for some users that would not be solely cost-based if s/he determined that the public interest would be better served to do so (such as small regional air carriers, if it was determined that certain charges would result in a significant loss of air service), or because of safety concerns.
- The initial schedule of charges would be developed in consultation with the FAA's Management Advisory Council and the Congress.
- The FAA Administrator would publish the schedule of charges as a Notice of Proposed Rulemaking by July 1, 1999. The schedule published by the Administrator must be accompanied by the cost allocation data forming the basis of the charges.
- A Final Rule on charges for ATC would be issued after public comment and hearing by March 1, 2000, and would take effect on July 1, 2000. During this four-month period, the Congress would have an opportunity to disapprove the Final Rule. Using expedited legislative procedures (similar to those used to consider military base closures), the Congress would essentially vote up or down on the funding proposal. Existing user charges, except on general aviation fuel, would be repealed at that time, when duplicative.
- The Administrator would have the authority to adjust charges based on improved cost accounting data and the need to fund new or accelerated programs after approval by the Performance Based Organization Board and public hearings and comment through the Notice of Proposed Rulemaking process. If the proposed adjustments would exceed the rate of inflation or significantly reallocate relative payments among users, Congress would have an opportunity to disapprove the charges through another

expedited process.

The Commissioners believe this process will help gain credibility and support for a new financing system, provided that the cost information used as the foundation for pricing is highly specific and sophisticated. Commissioners and the aviation industry have expressed concern over the high percentage of fixed costs in past cost allocation studies. Only through more reliable cost allocation data can a system based on costs help improve the FAA's performance and cause the aviation industry users to become more sensitive to the costs of services provided by the agency. The Commissioners hope that the positive example set by the Food and Drug Administration of improvement in performance linked to cost-based charges will also be true of the FAA. Finally, the combination of more accurate costs and the performance improvements suggested in this report should serve as a solid funding foundation for the FAA and the industry to meet the aviation challenges of the 21st century.

The law establishing the Commission directed it to analyze and determine the effect of a new financing system on a variety of aspects of the nation's air transportation system, such as the effect on Alaska, Hawaii, rural areas and small communities. Since the Commission is not recommending a specific financing formula or proposal, it is unable to provide this analysis or determination. However, the legislation accompanying this report includes them as factors to be considered in the development of a cost-based user charge system.

4. General Aviation Should Continue to Pay a Fuel Tax

The Commission recommends a continuation of the fuel tax for general aviation. A fuel tax is an efficient, easy to administer revenue collection mechanism. Any fuel excise tax must receive the same special budget treatment as the Commission seeks for all aviation user charges, and these taxes should be used to support the air traffic and airport development activities of the FAA. In addition, the Commission believes the Congress should allow air taxis (air carriers operating non-scheduled air transportation under 14 CFR Part 135) to pay the general aviation fuel tax instead of the air transportation taxes that their customers currently pay.

Notwithstanding this recommendation, it is clear from existing aviation cost allocation studies that the current level of tax payments does not cover the costs general aviation imposes on the FAA. The Commission believes that fuel taxes imposed on general aviation should be re-evaluated based on an accurate analysis of the costs of providing ATC and related services to them. It must also be recognized that general aviation is a unique user of our nation's aviation system and consideration should be given to its unique status and the benefits it provides.

The Commission anticipates that general aviation users and the FAA will work together to allow the FAA to provide more cost-effective services to general aviation to reduce the costs they impose on the aviation system. For example, a cost-effective DUATS (Direct User Access Terminal, which provides automated flight service information via

computer link) could be used more often in place of automated on-site flight service facilities.

5. There Should Continue to Be a General Fund Contribution

The Commission recommends that the FAA should continue to receive a portion of its funding from the U.S. Treasury general fund. This contribution should be made to cover the costs of FAA programs that are clearly of public benefit, such as the military/government use of the ATC system and the safety and security lines of business at the FAA.

Some people argue that the general fund contribution is not needed and that the FAA should be entirely supported by the aviation system users. However, the Commission believes that the FAA should be partially funded by general tax revenues, in part because aviation system benefits all of society, not just system users. Non-aviation users benefit economically and socially from a safe, efficient, and effective air transportation system.

Examples of this public benefit include: increased property values and employment levels in areas which have good access to air transportation; people who benefit directly from the air transportation system without getting on a plane, including cab drivers, hotel employees, and shop workers who manufacture goods destined for the global economy; and all members of our society benefit from a safe aviation system that prevents fatal aircraft accidents involving family, friends, and coworkers.

This public benefit is not readily susceptible to quantification in terms of the FAA's annual budget. So the Commission's recommendation on the portion of the FAA budget to be supported by the general fund is based on a quantification of those portions of the budget that are most directly of general benefit. The cost of safety regulation and certification should be borne by a general fund contribution as these activities are consistent with the government's traditional role of providing for the general welfare of the citizens and are clearly in the broad public interest. Safety is fundamental to public confidence in the transportation system. That confidence is necessary for transportation to serve the country and the economy as a whole.

The Commissioners concur with the conclusion of the White House Commission on Aviation Safety and Security that ". . . terrorist attacks on civil aviation are directed at the United States, and that there should be an ongoing federal commitment to reducing the threats that they pose." Therefore, the Commission recommends that the security functions of the FAA be paid for through a general fund contribution.

Using FY 1995 as an illustrative example, the total cost to the general fund of public use, regulation and certification (including administrative and research, engineering and development costs), and security (including administrative and research, engineering and development costs) would have been:

Military and Other

Government Uses: \$558.7 million
Certification and Regulation: \$695.7 million
Security: \$115.7 million
Total: \$1,370 million

It must be noted that events that have occurred since FY 1995 have placed pressure on the FAA to make additional investments in the safety and security areas. Therefore, the general fund contribution for these functions is expected to increase accordingly above the FY 1995 levels. This dollar amount is intended to be illustrative of the scope of a general fund contribution, not an exact recommended amount.

The Commissioners recognize that this subjects these programs to the pressures of the federal budget process. However, by limiting the general fund contribution to public use, safety, and security, the Commissioners believe this is a fair and appropriate decision. The Congress and the Administration should strongly support and — as they have in the past — provide adequate funding for these critical safety and security programs.

Regarding the FAA's functions funded by the general fund, the Commission recommends a multiyear appropriation, which would greatly improve the planning and management of these programs. Presently, the FAA safety and security offices find themselves concerned with three budget cycles at one time — the current budget, next years budget being considered by the Congress, and the budget two years out being developed by the agency. This type of budget planning is distracting and unproductive. A multiyear appropriation will allow the FAA to focus on its job, not its budgetary plans and strategies.

V. FAA MUST BETTER MANAGE AIR TRAFFIC CONTROL OPERATING COSTS AND INCREASE CAPITAL INVESTMENTS

A. Recommendation

As required by the Federal Aviation Reauthorization Act of 1996, the Commission has analyzed the FAA's budgetary requirements through FY 2002 and assumes the agency's own budget projections to be reasonable in a status quo environment. However, the Commission also believes that the status quo cannot be maintained and that total system costs can only be completely determined when the FAA establishes a credible cost accounting system. Moreover, the Commission recommends management efficiencies and productivity enhancements aimed at reducing the FAA's operating costs, but recognizes the FAA's need for increased capital investments. Below are the findings of the Commission regarding the FAA's future requirements, including a discussion of cost-saving opportunities.

B. The FAA's Requirements Estimates

The validity of the FAA's future financial requirements has been debated vigorously in the aviation community over the past few years. Despite staffing reductions, the FAA's operating costs have continued to increase. Outside critics argue that the FAA should be able to reduce cost through management efficiencies and productivity enhancements. The FAA responds that workload is increasing as the aviation industry continues to grow and new services are provided. Additionally, the FAA has stated that transitioning to modern air traffic control equipment often requires maintaining dual FAA systems until all aircraft have corresponding avionics upgrades.

In June 1995 the FAA projected its financial requirements to be \$12 billion above allocated budget targets for the period from FY 1997 to FY 2002. The Congress and the aviation industry questioned the FAA's estimates resulting in the Federal Aviation Reauthorization Act of 1996 requiring an independent financial assessment of the FAA's budget requirements from FY 1997 to

FY 2002. Coopers & Lybrand conducted the independent financial assessment and determined that the FAA's calculation of requirements was reasonable within a status quo environment.

Coopers & Lybrand argued that this status quo was unsustainable and suggested a number of cost-saving opportunities. (They also recognized the difficulty of achieving agreement on reductions because of industry or congressional opposition.) Most cost saving recommendations are associated with the FAA's increasing operating costs. For capital investments, Coopers & Lybrand pointed out potential cost increases the FAA may face, such as:

- White House Commission on Aviation Safety and Security (Gore Commission) recommendations;
- Problems with FAA computers approaching the year 2000; and
- Flight 2000 initiative, which provides satellite navigation infrastructure and equipment for a test program for aviation users in Alaska and Hawaii.

As stated above, the Commission agrees with Coopers & Lybrand's findings regarding both the general validity of the FAA's future requirements and the unacceptability of a status quo environment. The Commission's recommendation for a Performance Based Organization (discussed in Section III) should provide a catalyst for cost savings. The Commission strongly urges the FAA to look at improving cost management through a new cost accounting system designed to identify "best practices" and efficiently allocate resources. Additional recommendations for cost savings are discussed at the end of this Section.

The Commission believes that under its proposed agency structure, wherein the FAA is able to borrow and function like a capital-intensive business, annual financial requirements may change significantly. Any additional funds made available from financing capital investments or operational cost efficiencies, may be needed to fund new capital requirements in both the FAA's air traffic control facilities and equipment modernization program, and the airport grant program. The Commission recognizes, however, that funds are scarce with many competing demands, and providers of capital will resist additional funding for the national airspace system unless they are confident the funds will be invested effectively.

Most capital investments in air traffic control (ATC) modernization do not generate immediate reductions in operations and maintenance costs. In addition, for many equipment modernization programs, existing systems must be phased out to minimize the impact on aviation users. In some cases, this means overall operating costs can increase since two systems may provide the same function during the phase out process. The transition from a ground-based to a space-based navigation system is an excellent example of where the FAA will be required to maintain dual systems until the aviation community is properly equipped. The Commission believes that improved coordination between FAA planning and industry equipage can help minimize these costs.

While some investments will lead to efficiencies and reductions in FAA operations and maintenance costs, other investments will lead to new sites, new functions and new support staff. The integrated terminal weather system (ITWS), for example, will provide controllers more accurate and timely weather information. ITWS will save the airlines significant operating costs by reducing delays. When deployed, however, ITWS will increase the FAA's operating cost. This helps explain the FAA's dilemma in prioritizing programs within budget constraints, which are in no way connected to the benefits to

the aviation industry. These nuances account for why a decrease in the FAA's operating costs is not seen either during or right after modernization. Most FAA savings for capital investments in the FY 1998 to FY 2002 time period will not be realized until after FY 2002. However, airline operating costs during this time period should be reduced as a result of the FAA's capital investments.

Another factor contributing to the difficulty of cost reductions is the more than 15% decrease in effective buying power of the budget since FY 1992. This decrease has occurred over a period when aviation activity increased by nearly 15%.

The FAA's budget is divided into four accounts: (1) Operations, which supports FAA air traffic controllers, aircraft and airline inspectors, security specialists, and headquarters staff; (2) Facilities and Equipment (F&E), which supports capital equipment expenses such as new radar equipment, air traffic control towers, and air traffic controller equipment; (3) Airport Improvement Program (AIP) grants, which supports capital needs at airports such as new runways and taxiways; and (4) Research, Engineering, and Development (RE&D), which supports various research projects, including development of new air traffic control automation tools, improved explosive detection equipment and lighter and stronger material for aircraft manufacturing. The following discussion focuses on the FAA's funding requirements for the Operations, F&E, and RE&D budget accounts followed by a discussion of specific cost saving recommendations. The AIP budget is discussed in Section VI on airport needs.

Much of the FAA's funding erosion has resulted from budget targets set by both the Administration and Congress aimed at reducing the deficit. Through FY 1997, the agency's overall budget decline has been heavily skewed to the F&E and AIP capital accounts, which have been reduced by 19% and 23%, respectively, since FY 1992. The Operations account actually has grown by about 12%, largely in response to increased labor costs (6% per year) and relatively small staffing growth for aviation safety and security (although reductions have occurred in the FAA's administrative staffing). In summary, growth in FAA operating costs and reductions in the FAA's overall funding have resulted in significant decreases in FAA capital investments.

The FAA is at a juncture similar to the one faced 12 years ago by two airports that serve the Washington, D.C. area. These two airports, which at the time were run by the federal government, had gone for years without significant capital improvement because of federal budget constraints. The capital plant was deteriorating and there was concern that the hundreds of millions of dollars needed would not be made available. Congress decided to create a new organization with budgetary and management options and flexibilities to undertake the development and renewal that was required; the Metropolitan Washington Airports Authority was established. The new terminals and associated work at the two airports are widely viewed as showcase airport development projects. A similar "breakout" solution is needed for the national air traffic control system.

1. Operations

The Operations account finances the personnel and support costs required to operate and maintain the ATC system, and to ensure the safety and security of its operation. It is the FAA's largest account, comprising 58% of the agency's FY 1997 appropriations. The account pays for 17,300 controllers, 8,410 maintenance technicians, 3,247 safety inspectors, 962 security agents, 3,333 flight service personnel, 578 flight inspection personnel, and 12,858 technical and support personnel. Figure 4, below, illustrates the breakdown of expenditures within this category.

The Operations portion of the \$61.9 billion requirements estimate from FY 1997 to FY 2002 is \$36 billion. The Operations requirement estimate provides resources (with inflation) to continue existing services through the six-year period along with the following additional expenses: growth in the controller work force to accommodate anticipated growth in aviation activity; minimal growth in the maintenance technician work force (25 employees per year); and increases of \$70 million to \$90 million per year for the operation and maintenance of new air traffic control systems going on-line. This Operations estimate also includes growth in the safety inspector and security workforces as recommended by the Gore Commission and internal FAA safety studies.

As stated previously, the Commission believes significant, long-term opportunities for cost savings and efficiencies exist within the Operations budget and these are discussed later in this Section. One such positive example has been the contract tower program for Level One towers.

2. Facilities and Equipment

Until 1993, the FAA had premised its F&E capital investment planning on a sustained \$2.9 billion annual funding level. In FY 1997, the F&E budget decreased to \$1.937 billion which represents a cut of 38% in real annual capital funding compared to FY 1992 actual appropriations and a 45% real cut in F&E funding planning levels since FY 1993. Figure 5 illustrates the reduction in F&E funding levels in actual and inflation-adjusted values from FY 1992 through FY 1997.

The FAA capital inventory includes over 24,000 facilities or equipment sites. These include 591 major air traffic control facilities, 396 radars, 1,027 navigational aids, 1,197 landing systems, and 2,427 communication sites. Most of these facilities and systems are being modernized. Many of the FAA's essential ATC systems have been in service well beyond their intended lives. Some of the controllers' data displays, for example, have been in operation for more than twice as long as originally expected. Figure 6 illustrates a part of the FAA's aging infrastructure in need of modernization.

The F&E account contains the FAA's funding for all capital investments (except airport infrastructure), including development, implementation, and the first year's support costs. Currently, the F&E account is made up of nearly 200 separate projects, which are individually justified in the budget request the President submits to the Congress. For planning purposes, the FAA groups these projects into the following categories:

automation, communication, mission support, navigation and landing, facilities, weather, and surveillance.

Figure 7 illustrates the percentage of F&E funds allocated to these investment areas.

In the FAA's revised requirements estimate of \$61.9 billion, the F&E portion is \$13.6 billion. From FY 1999 to FY 2002, the average annual F&E investment would be approximately \$2.4 billion (excluding \$150 million per year for airport security systems). The \$2.4 billion annual level allows the FAA to cost-effectively modernize aging infrastructure and implement new air traffic control (ATC) tools designed to improve air space management and reduce aircraft operating costs. Modernization includes a new space-based navigation system, new communications with automatic data link between controllers and the aircraft flight deck, and new controller automation equipment in ATC facilities. Also included in the FAA's estimates are, support contractors, facility leases, support equipment, and the modernization and/or replacement of many of the 591 ATC facilities.

Many of the new ATC tools, which provide cost savings to airway system users, are now in prototype form. These software intensive systems will help maximize the capacity of congested airspace and airports, reduce delays, and increase direct routing of aircraft. As the FAA's controllers begin to rely on these tools and aircraft separation is reduced, it becomes extremely important that these systems are highly accurate and reliable. These tools represent the building blocks for future "Free Flight", which will allow aircraft to fly the most efficient routes of their choice. Full-scale development of these systems and implementation across numerous sites with unique requirements is both time consuming and costly.

The FAA's revised requirement estimate also includes an additional \$600 million for aviation security based on Gore Commission recommendations. It is an initial estimate inserted for explosives detection equipment at airports, similar to equipment acquired in the FY 1997 supplemental appropriation which included sophisticated baggage checking equipment for installation at the FAA's top 30 airports.

One area in the "navigation and landing" category of the Facilities and Equipment budget has caused concern for members of the Commission. In a recent version of FAA's "NAS Architecture" plan, the agency suggested that certain navigation and landing aids should be the financial responsibility of non-federal parties such as airport authorities. The Commission believes that the FAA has the responsibility to provide a nationwide system of air traffic control services and equipment and that proposals to shift a subset of these responsibilities are inappropriate and could negatively impact on aviation safety.

If F&E investments are not increased, the FAA will have to make tradeoffs between providing improved services and sustaining current services. Reductions in funding to sustain current services will impact the availability and predictability of the air traffic control (ATC) services, due to more frequent and longer lasting equipment failures associated with aging equipment. Because safety will always be paramount, ground

delay programs may be used to ensure that NAS safety is not jeopardized. The users of the ATC system would experience increased system delays, mostly on the ground, due to equipment outages and more airports and sectors reaching critical capacity. The users also would experience decreased system flexibility due to the system being operated near its capacity limit for longer periods of time. In essence, without these increased investments, the air traffic control system will approach gridlock shortly after the turn of the century.

3. Research, Engineering & Development

Although the RE&D budget is a relatively small portion (about 2%) of the total FAA budget, RE&D is viewed as having a central role in helping the FAA accomplish its missions. The RE&D budget normally is not used for full-scale development of air traffic control systems which is funded under the F&E account. RE&D includes programs in the following areas: air traffic management (ATM) (including Flight 2000 and Free Flight), digital air-ground communications, weather research, surveillance (runway incursions), airway facilities maintenance technology, airport technology (pavement research), aircraft safety, human factors and aviation medicine, and environment and energy.

The FAA's six-year requirements estimate recommended more than doubling RE&D funding to a level of \$420 million in FY 2002 from \$208 million in FY 1997. This level of requirements was based on an intensive 30-day, zero-base review accomplished jointly with the National Aeronautics and Space Administration (NASA), and that review resulted in a program report in November 1996. The program report shows funding levels year-by-year of between \$400 million to \$450 million, peaking in FY 1999. Examples of RE&D efforts that would be increased under the requirements estimate include the following:

- Human factors;
- Aircraft safety;
- Wake vortex detection/prediction;
- Full-scale validation and demo installation of new ATM technologies;
- ATM operations concept development and system design;
- Aviation weather research;
- Safety and security of ATM software and communications;
- More cost-effective aircraft and system certification methods;
- Air-ground digital communications;
- System maintenance technology; and
- Surveillance, including mitigation of runway incursions.

The Flight 2000 initiatives have not yet been factored into this requirements base. Nonetheless, the requirements estimated noted above is considered a satisfactory level of funding, assuming cooperative leveraging of NASA, DoD and industry research. (NASA currently is proposing to spend approximately \$500 million over the next five years on aviation safety research.) The Commission supports NASA's role to develop

break-through safety technologies while the FAA works to improve safety today.

At the current RE&D funding level (approximately \$200 million annually), the FAA would be unable to expand its RE&D efforts, especially in emerging areas such as human factors, considered key to improving aviation safety and reducing accidents. Moreover, some RE&D is intended in part to “create” commercial products/non-developmental items (COTS/NDI) that FAA could then acquire cheaply and quickly. The net effect of failing to make such investments would be to increase the cost and time required to acquire new systems through the F&E process. Such a result would unravel the gains of FAA acquisition reform and defer the ultimate cost savings that would be otherwise available through greater productivity in FAA/NAS operations. Finally, there would be a harmful effect on ATM equipment exports, a surplus area for U.S. trade, since these same products are proven first in the FAA environment and then become the commercial leaders in markets overseas.

The Commission supports increased RE&D funding but recommends phasing in an increase over a four-year period. The Commission is skeptical that increasing RE&D funding from \$200 million to more than \$400 million over a one-year period would be effective. However, if there are new programs, like Flight 2000, which could be implemented independently, specific increases may be justifiable.

C. Potential Budget Savings from the FAA Requirements Baseline

The Commission believes that opportunities for cost savings exist within the FAA requirements baseline. These savings may be needed to fund additional capital investments requirements, such as improved radios, not currently included in the budget. To achieve savings, the FAA needs the mandate to operate like a business and provide services in the most efficient and cost-effective manner. The Commission’s proposed Performance Based Organization for the Air Traffic System would help establish a businesslike framework for implementing cost saving initiatives. Below are the Commission’s cost saving recommendations for the FAA, both within and outside of the PBO. The Commission would expect the PBO to continually look for cost saving opportunities and productivity increases.

Organizational and geographic consolidation of major FAA functions and facilities is one area where the FAA’s cost of service can be reduced. Such consolidations can create economies of scale for the FAA, thereby reducing costs, with little or no decrease in quality, timeliness, or other measures of service effectiveness and delivery, and with no decrease in customer satisfaction. In the FAA, regional office consolidation has been discussed repeatedly, but changes have not been made. FAA efforts at facility consolidation have rarely been successful, and those few successes have been needlessly delayed by political resistance to closing facilities. Clearly the FAA needs to reverse this process and close/consolidate facilities as needed over time for efficiency and cost savings. The Commission recommends that a regional office consolidation take place reducing from nine to three regions. Studies have shown this consolidation could reduce the FAA’s operating costs by nearly \$100 million per year while improving

or standardizing services.

Additionally, the following specific actions should be considered:

- Streamline FAA controller training.

This would reduce both the direct and the overhead costs associated with controller training using any of several measures, including building on the civilian university controller training programs or consolidation of FAA and DoD controller training programs

- Improve the efficiency of the FAA logistics function (spare parts management and delivery).

Based on existing corporate practices, allow the FAA to contract out its logistics functions, currently managed out of the Oklahoma City Center, to a private vendor specializing in parts inventory management and delivery to remote sites. The FAA needs to take advantage of the private sector's improvements in spare parts management and delivery. The FAA should work with private entities to possibly locate where they could take advantage of just-in-time inventory practices and better transportation of parts. This should have no impact on field maintenance staffing.

- Further consolidate Flight Service Stations and rely more heavily on personal computers for pilot contacts and flight plan filing.

Consolidation of Flight Service Stations and relying on an expanded Direct User Access Terminal Service (DUATS) program to provide preflight briefings, weather briefings, and flight plan filings could save the FAA over \$1 billion over the next five years while maintaining or improving safety and existing services to the general aviation community.

- Accelerate the transition to a space-based navigation system.

The FAA will have to bear the full costs of maintaining both the existing navigation system and the new space-based system until the old system is decommissioned. Accelerating the decommissioning process, possibly in stages beginning with long-range radars and moving to navigational beacons, and concluding with instrument landing systems could save the FAA over \$100 million per year.

- Leased or contract services.

In the short term, a potential savings' vehicle would be for corporations to capitalize development and lease back equipment/services. Allowing private companies to have more control over development costs may reduce overruns often blamed on additional features added by the FAA that were not originally planned.

The savings considerations above could cause significant discomfort within both the FAA and the Congress. The FAA's new Performance Based Organization (PBO) for the Air Traffic System will provide the organizational structure to support these cost saving recommendations. A PBO coupled with the proper budget treatment that allows the FAA financial flexibility, will lead to an improved aviation system for all customers and stakeholders.

VI. AIRPORT CAPITAL FINANCING REQUIREMENTS MUST BE MET

A. Recommendations

- Airport Improvement Program (AIP) funding serves as the linchpin of airport financial planning and, therefore, must be funded adequately on a reliable basis. The Commission recommends that AIP contributions to airport capital requirements should be funded at \$2 billion annually over the next five years assuming growth adjustments through this period. Further, AIP should be provided requisite budget treatment to ensure a stable and predictable federal funding source for airport capital development.
- The Commission recommends that the Congress look to AIP and Passenger Facility Charges (PFCs) as sources of additional revenues to finance future airport capital needs. This recommendation is made reiterating the Commission's very strong belief that all elements of this report on aviation financing are viewed as a comprehensive package and not as individual parts to be implemented piecemeal.
- The Commission also recommends that smaller airports receive funding at a higher level, so that their capital development needs can be met and thereby allowing them to continue serving as a critical element of the air transportation system. The Airport Improvement Program is essential for capital development at smaller airports as they have less capability to draw in a meaningful way from other sources of capital funds.

B. Background

The Commission was encouraged by its enacting legislation to consider airport infrastructure needs for airports of all sizes, and to provide recommendations on funding alternatives for airport capacity development. To assist the Commission in this effort, the Federal Aviation Reauthorization Act of 1996 requested that the General Accounting Office (GAO-Airport Development Needs, April 1997) and an independent entity (Coopers & Lybrand LLP-Independent Financial Assessment, February 1997) provide independent assessments of future airport development capital needs. The Commission reviewed and considered these studies and notes that both entities reviewed previous airport capital requirement studies, which contained different underlying assumptions and, hence, conclusions as to the total estimated needs over the next five years.

The Commission agrees with GAO and Coopers & Lybrand that there are several key reasons for the differing assessments of airport capital requirements: incompatibility and purpose of collected data, availability of data, and the underlying premise of the data collection process. There are also significant differences in terms of time periods, AIP eligibility, and data sources. In its report, Coopers & Lybrand estimated that the average annual capital requirements total for 1997-2002 will be \$7 billion to \$8 billion per year in constant 1997 dollars. In its report, GAO created four separate models to

create an estimated range of \$1.4 billion to \$10.1 billion per year from 1997-2001. While not resulting in a single agreed upon estimate of needs, the Commission notes that these reports all confirm that airport needs are significant and are expected to increase due to emerging new requirements and forecasted growth in airport operations. Current airport revenue sources have not provided the funding to meet the needs identified in the Coopers & Lybrand and GAO reports.

The Commission examined the FAA's AIP requirement level of \$1.7 billion, an estimate derived from historic appropriation levels and budget constraints. While the FAA states that at this level, it is able to fund most safety, security, rehabilitation, standards and capacity projects, the Commission does not agree. At such a level of annual funding the FAA has not provided single-year AIP grants for all high priority capacity projects and noise mitigation projects that were ready for construction. The FAA acknowledges that at less than a \$2 billion level it cannot satisfy all requests for worthy noise mitigation projects and multiyear letters of intent (LOI) that have been requested for capacity projects important to the national system of airports.

The Commission believes that a \$2 billion annual AIP should serve as the minimal federal investment level in airport infrastructure, and that this amount should be made available on a reliable and predictable basis. Funding at the \$2 billion level would accomplish the following:

- There would be increased preservation of airport infrastructure at smaller airports that are dependent on federal aid. This is especially important at general aviation airports, which largely use funds to improve safety and bring existing infrastructure up to standards. There would also be more funding for capacity projects at reliever airports and small commercial service and non-hub airports that can have regional or system capacity benefits.
- More safety and security projects could be funded at airports of all types and sizes. Legislation enacted last year requires smaller airports served by commuter-type operations to meet higher safety standards consistent with those that airports serving larger aircraft meet. AIP will be the principal source of funds to meet these standards. Security expectations of the public can also be expected to drive further standards in this area. Higher AIP will be a primary source to meet any new objectives for security.
- While there have been tremendous achievements in noise mitigation near airports, millions of people living in areas near airports still experience noise levels that are incompatible with residential usage. The noise funding set aside was cut last year based on lower funding assumptions. If a higher funding level were achieved, noise mitigation through AIP could achieve much more environmental benefit and timely results.

More AIP funding will result in more system capacity being developed. With higher AIP, substantial progress can be made at meeting these needs. For large airports, further commitments in the form of Letters of Intent (LOI — a multiyear commitment or promise

by the FAA to fund a large project at a particular airport) could be made. These commitments are typically for projects that will have a significant system-wide impact. There are over \$2 billion in pending LOI applications. With a higher AIP funding level, a more significant improvement in overall airport capacity could be achieved.

The Commission notes that this \$2 billion AIP level is less than the current authorized level for AIP in existing law. This recommendation is based on the requirement to balance capital spending of federally collected taxes and fees between air traffic control and airport needs, and the recognition that airport capital funding has a second federally authorized revenue source in PFCs.

In addition to considering needs assessments, the Commission also examined actual airport capital spending from all known sources of airport capital financing: airport revenue bonds, AIP, State and local grants, and Passenger Facility Charges (PFCs) (but not including other potential revenue sources more difficult to quantify, such as that portion of an airport's operating budget which may finance small capital projects). In examining these revenue sources, the Commission makes the following observations and conclusions:

- From 1990-1996, total airport capital spending from "known" sources ranged between \$4.5 billion and \$7 billion and averaged approximately \$6 billion per year.

- Of this total, the principal source of capital for airport development at large and medium hub airports was airport revenue bonds. On average, the Commission notes that airport revenue bonds accounted for \$3.5 billion a year in "new money", and an additional \$1.6 billion a year in "refunding" or debt restructuring designed to enable future borrowing or to reduce airport related costs to users. Further, the Commission notes that this level of bond financing has persisted, on average, even with the advent and expanded use of PFC revenue.

Between 1992 and 1996, the AIP program has been reduced from \$1.9 billion to \$1.45 billion, a 23% drop-off. This has tremendously eroded the effectiveness of this program to meet airport infrastructure requirements. Looked at another way, the proportion of the FAA's budget that goes for airports has declined precipitously. Figure 9, below, illustrates the relative decline in the airport program compared to the rest of the FAA's activities and programs. Aside from fiscal impact on airport development, this is a very strong policy statement about priorities. It is one that the Commission strongly opposes and believes should be reversed.

- Since 1992, PFCs have provided an important new financing option for airport capital development, generating over \$1.1 billion annually. Airports and airlines have generally agreed with the majority of proposed PFC financed projects. In those cases in which airlines register disagreement, most often landside related development has been proposed. The Commission recognizes that untapped, annual PFC authority of approximately \$500 million exists at certain large and medium hub airports, as well as an additional revenue potential of \$60 million per year at certain small commercial service airports. However, untapped PFCs represent potential local resources which

may not presently align with where the capital needs are in the airport system. Even if fully utilized, current PFCs are insufficient to satisfy unmet infrastructure requirements.

- In 1990, Congress, when considering all sources of airport revenue, determined that airport infrastructure requirements could best be met by granting airports PFC authority of up to \$3 per passenger, and by increasing AIP spending to \$2 billion a year or higher. Yet, since 1993, AIP funding has steadily declined, to the extent that in 1997, a gap of over of \$800 million exists between AIP authorized and appropriated levels.

C. Other Recommendations and Findings

- Airport revenue bonds are the single most important financing tool available to large and medium airports. These airports boast an unbroken record of creditworthy financial performance, earning the status of premium-grade investments in the tax-exempt municipal bond market. Preservation and potential enhancement of the tax-exempt status of this financing tool is essential to meeting the capital demands of large and medium hub airports.
- Considering the Commission's recommendations for higher AIP funding, it recognizes that Letters of Intent (LOIs) are an effective, innovative financing technique and recommends that the use of LOIs should be continued and concentrated on projects which increase airfield capacity. Further, the FAA should maintain and strictly enforce existing requirements that LOI proposals be subject to rigorous cost-benefit analysis, as well as an affirmative determination of system benefits.
- In addition to LOIs, the Commission examined other innovative financing techniques and alternatives. The Commission concludes that innovative financing options, such as revolving loan programs, loan guarantees, and various credit enhancements, offer, at best, marginal and limited opportunities to leverage federal funds or to increase total airport capital development spending. This is because the essential elements of innovative finance have long been institutionalized at large, medium and small airports capable of borrowing. Airports not capable of borrowing generally rely on local subsidies to meet operating expenses and federal support to meet capital requirements. With regard to airport privatization, the Commission believes that the results of the current congressionally mandated pilot program should be analyzed before any conclusions are reached on the additional statutory or policy changes.
- To meet the needs for airport infrastructure investment, the Commission recommends that, in the future, the current \$3 ceiling on PFCs will need to be raised. As an alternative, AIP levels would need to be funded at a level substantially above the \$2 billion annual level recommended in this report. If Congress decides to increase the PFC, the Commission recommends that there be a process established that places a strong emphasis on negotiation between local airports and tenant airlines when a higher-than-\$3 PFC is being proposed. When a higher-than-\$3 PFC is proposed, the Commission recommends that when there is written agreement between an airport and its tenant airlines for the airport to levy a PFC higher than \$3, there should be no

statutory PFC dollar limit, and the FAA's approval process should be ministerial. The Commission recognizes that the airport and airline industry groups have very strongly held and, at times, differing views on the matters of when and how such an increase should take place. Those matters will still require resolution in the context of comprehensive airport funding legislation. Therefore, the Commission's legislative proposal only includes a "findings" statement on the need for a general PFC or AIP increase to meet significant airport capital needs to accommodate growth. Again, this recommendation is made in the context of the overall financing report of the Commission being treated as a total package and not as elements to be separately implemented.

- The Commission stresses the need for treatment in the federal budget process of the AIP so that it can be a steady, dependable and reliable source of airport capital development funding.

VII. CONCLUSION

The Commission believes that tremendous industry growth, new industry practices and rapid technological change will dramatically change the aviation system over the next ten years. These changes offer great promise for aviation, but only if there is a strong FAA able to meet the challenges such change brings.

The Commission's recommendations — appropriate budget treatment which links revenue and spending together, a cost-based revenue system, better FAA performance, control of the FAA's operating costs, and increased capital investment — are designed to ensure that our nation's aviation system remains preeminent and that the FAA is up to the challenge. The recommendations complement and reinforce each other to make certain that the FAA is a well-managed organization, meets the highest standards of performance, responds to customer needs, and has adequate resources to make critical investments.

Again, the Commission stresses that these recommendations are an integrated, comprehensive package. The consensus the Commission developed rests in large part on the recommendations being adopted in whole, not piecemeal.

Without adoption of these recommendations, delays and congestion will become overwhelming; the current safety record will be jeopardized; anticipated growth in the aviation industry will stop; air traffic control services and investments will be, at the same time, inadequately funded, disconnected from users' needs, and poorly managed; and the global competitive position of the United States will be threatened.

As with all significant changes, these recommendations are not without controversy. They will require the major stakeholders in aviation — the FAA, the Congress, the Executive Branch, and the aviation community — to assume new or changed roles. This is not taken lightly by the Commission. It is only because we believe the air traffic system is facing gridlock with potential safety consequences that we propose such action. It is increasingly difficult to effectively run an agency every day and hour of the year within the constraints of the current federal budget process and the current organizational and management structure of the agency. These problems will become more pronounced as the FAA tries to keep up with technological changes and industry growth at a time of increasingly scarce federal resources.

It is the hope of the Commissioners that this report and its accompanying legislative proposal will help build consensus for these needed and necessary changes. All sectors of the industry have been included in the Commission's deliberations, and we believe there will be widespread support for the recommendations. The Commissioners stand ready to work with anyone to explain and help implement this proposal as the Commission's recommendations are read, discussed and acted upon.

This is a unique opportunity for change. Members of Congress, the Administration, the aviation community, and the FAA have all expressed a willingness to end business as usual. It is our hope that the Commission's recommendations serve as a catalyst for delivering significant reform to an essential part of our aviation system.

APPENDIX: GENERAL BUDGET INFORMATION

This is not an attempt to explain and discuss all basic federal budget concepts. Instead, this is an attempt to highlight only those budget issues that relate to the Commission's recommendations.

There are two types of federal government funding and spending: mandatory and discretionary. Mandatory spending (e.g., Social Security, Medicare, and food stamps), accounts for approximately 68% of all federal government spending. Mandatory spending is controlled by the authorizing committees (primarily the House Ways and Means Committee and the Senate Finance Committee) and does not need an annual appropriation.

The FAA's budget is primarily discretionary and must be authorized, and then annually appropriated.⁵ The Congress appropriates money for the FAA's budget as part of the Department of Transportation's (DOT's) appropriations bill. The DOT's appropriations bill is one of the 13 major appropriations bills. Every year, each of the 13 bills must eventually pass the House and the Senate in an identical form and be signed by the President.

In an effort to reduce the annual budget deficit, the Administration and the Congress try to control spending and revenue raising. There are two different budget rules to control the two types of spending: mandatory spending is controlled by "pay as you go" restrictions, and discretionary spending is controlled by spending (budget) caps.

Mandatory spending is usually included in bills authorizing various federal programs. Once in place, a typical mandatory program receives annual funding sufficient to provide the benefits specified in law without any additional congressional action. Laws providing mandatory spending often do not include expiration dates. Therefore, to stop, lower, or increase the funding level of

a mandatory program, the Congress must pass, and the President must sign, another bill. (This is in contrast to discretionary spending, which is usually limited to one year.)

As already mentioned, to control mandatory spending, the Congress must abide by the "pay as you go" (or PAYGO) rules. In its simplest form, PAYGO means that any new mandatory spending must be offset by increases in mandatory revenues (i.e., virtually all taxes) or decreases in other mandatory spending. For instance, if the Congress decided that the FAA's spending should become a mandatory program, the Congress would have to increase mandatory revenues (taxes), or cut mandatory spending, in an amount equal to the proposed mandatory FAA spending. However, the FAA currently is a discretionary spending program, so a bill that included a reduction in aviation taxes could not offer a reduction in FAA spending as a PAYGO offset because the taxes are mandatory and the FAA's spending is classified as discretionary. If a bill including new mandatory spending is considered for passage and there is no PAYGO offset (i.e.,

mandatory revenue increase or mandatory spending decrease), the bill can be struck down in the House or Senate by a parliamentary point of order because it would increase the federal deficit; however, budget points of order can be waived in the Senate, usually by a three-fifths majority vote, and in the House usually by protective parliamentary procedures.

Discretionary spending is controlled with budget caps. The budget resolution develops overall federal spending levels which are allocated to each committee (with virtually all discretionary spending allocated to the appropriations committees). Each appropriations committee then decides how much each of its subcommittees will be allowed to spend for a fiscal year without going above the budget caps.

The FAA receives funding from both the Airport and Airway Trust Fund and the general revenue fund. The Airport and Airway Trust Fund receives its revenues from aviation user charges and taxes. The general fund receives revenue from general government sources, primarily taxes. The Commission believes the special budget treatment should only apply to those funds collected from aviation users. The Commission is recommending that the general fund contribution continue. It is assumed that the general fund contribution will continue to be allocated under typical budget rules or a multiyear appropriation.

1 To be useful, it would be necessary for the lease payments to be scored on an annual outlay basis rather than for the total value of the lease to be scored in the first year of the lease as it would be under current federal budget rules.

2 The FAA is currently authorized to collect \$100 million in overflight fees for FY 1997 which will be paid directly to the FAA (\$50 million of which will go to support the Essential Air Service program).

3 Preliminary estimates. Ongoing refinements needed for ticket tax in rural areas, impact of Alaska and Hawaii on international departure taxes, and frequent flier taxes.

4 Interest calculation assumes Trust Fund continues to fund the FAA at current rates.

5 The Airport Improvement Program (AIP) is funded with contract authority, which is a mandatory program. However, traditionally the DOT annual appropriations bill has an obligation limitation on AIP funds. For scoring purposes, AIP's contract authority is mandatory and its outlays are discretionary.

PART I11
SAFETY REPORT

PART III: SAFETY REPORT
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I. INTRODUCTION

A. Commission's Mandate

The legislation that established the Commission directed that three areas relating to the Federal Aviation Administration's (FAA) safety mission be assessed in the context of analyzing aviation safety in the United States and emerging trends in the safety of particular aviation sectors.

1. The adequacy of staffing and training resources for safety personnel of the FAA, including safety inspectors.
2. The FAA's processes for ensuring the public safety from fraudulent parts in civil aviation and the extent to which the use of suspected unapproved parts requires additional oversight or enforcement action.
3. The ability of the FAA to anticipate changes in the aviation industry and to develop policies and actions to ensure the highest level of aviation safety in the 21st century.

This report addresses each of these issues. The first two are important but are relatively narrow and definable in scope, while the third is relatively broad and invites an assessment of safety regulation policy or philosophy. This report will be largely organized around the third issue, with the first two addressed in more of a stand-alone fashion.

B. Regulation of Aviation Safety and Accident Trends

Virtually every facet of the safety of the civil aviation industry is highly regulated by the federal government. Safety regulation of aviation exceeds that found in any other industry or sector of the economy, including food, medicine, nuclear power, and other modes of transportation. Every person who operates an airplane, designs and manufactures an airplane and its component parts, or repairs or modifies an airplane does so under detailed standards prescribed by the FAA. Only in relatively limited circumstances does a commercial airplane move through U.S. airspace without permission and direction from an FAA air traffic controller. This high level of safety regulation is expected by the public. While there are differing views on some specific issues of regulatory policy and approach, the aviation industry accepts the regulatory relationship it has with the FAA.

While the FAA wields strong regulatory powers over the industry, the law also requires the industry, irrespective of FAA oversight, to conduct its activities in a manner consistent with the highest degree of safety. This means that the FAA's standards are minimums below which no one in the industry should dip. In day-to-day practice, the industry typically exceeds FAA standards. However, when the FAA's standards are not met, the agency has broad powers and authority to take enforcement action, including

stopping a flight from being made or even grounding an airline's fleet until the FAA is convinced that its standards will be met.

When compared to most any other human endeavor, aviation industry practices, whether they be in manufacturing, operations, or maintenance, coupled with the FAA's strong regulatory role have resulted in an extraordinarily high level of safety since the mid-1960s. Nevertheless, when an airplane has an accident, there can be a catastrophic loss of life involving scores or even hundreds of people. Apart from war and natural disasters, a large airplane accident can cause more deaths in an instant than most any other type of event; hence, there is tremendous public and media interest in aviation safety.

For the past 30 years, the annual, worldwide rate of catastrophic accidents (e.g., the aircraft was destroyed) has been 1-3 accidents per one million departures of large jets. In the United States, the annual rate has been consistently around one accident or less per million flights. These rates have been relatively constant over the 30-year period. By comparison, in 1959, the rate worldwide was over 30 accidents per million flights, and in the U.S. the rate was approximately 26 per million flights. The rapid improvement during the 1960s was due to the introduction of jet aircraft with far more reliable engines than piston operated aircraft.

During the last 30 years, the number of departures by airline jet aircraft has more than quadrupled from approximately 4 million worldwide in 1967 to approximately 16.3 million this year. Similarly, the number of jet aircraft operating worldwide has climbed from approximately 3,000 to over 12,000 today.

As was found in developing the Commission's report on funding and financing of the federal aviation programs, growth in aviation activity is anticipated to be healthy and steady for the foreseeable future (if the aviation system is able to accommodate this demand with new management and funding approaches for the FAA). Worldwide flights are expected to increase from 16.3 million this year to over 25 million by 2010. If the current accident rate is extrapolated over that traffic level, the number of accidents can be expected to climb to a point where there is a large jet aircraft crash every 7-10 days somewhere in the world. If the extrapolation is carried further out into the future, the interval between major crashes, of course, decreases even further. Within just the U.S., the existing accident rate coupled with expected traffic growth would lead the number of catastrophic accidents to rise from the current total annual level of 3-4 to 6-7 by 2010.

As mentioned above, the replacement of large propeller-driven aircraft with more reliable jets in the 1960s and the first half of the 1970s produced multifold reductions of the accident rate. It does not appear realistic to expect another introduction of a technology to produce a similarly dramatic reduction over a relatively short period of time. There is no "silver bullet", so to speak, for further safety improvements.

C. Regional Airlines, Air Taxis, and General Aviation Trends

Regarding regional air carriers, the accident rate also has fallen sharply. Between 1975 and 1996, the accident rate for regional air carriers fell from 33 per million departures to 3.47 per million departures. This remarkable improvement came about despite dramatic growth in the industry and fundamental changes in its character. In 1994, regional air carriers (defined through 1996 as scheduled flights in aircraft with 30 or fewer seats) carried 53 million passengers — twice the number carried just 7 years earlier. By 1996, the number of passengers approached 58 million.

Airline deregulation has led to equity and contractual relationships between regional and larger air carriers and a subsequently sudden transformation in the U.S. regional fleet. Regional carriers are no longer characterized by small aircraft on short feeder flights; today's regional airline fleet consists primarily of sophisticated turboprops (or "jet props"). By 1996, the accident rate among the larger regional aircraft had become comparable to that of large air carriers. (See Figure 2.) This trend should be reinforced by the recently implemented one-level-of-safety rule, in which both smaller aircraft and airports are required to adhere to equally or similarly stringent safety rules as larger aircraft and airports. Today, even more capable turboprops and new regional jets, along with corresponding training in advanced simulators, are about to revolutionize the industry again. These developments offer promise of still better safety performance in the industry.

As with scheduled air carriers, the accident rates for on-demand air taxis have remained relatively steady over the last 15 years. An air taxi service is defined as an aircraft operator who conducts operations for hire or compensation on an on-demand basis and does not meet the "scheduled flight" qualifications of a regional carrier. On-demand air taxi companies utilize a wide variety of aircraft ranging from four-seat piston-powered aircraft to sophisticated nineteen-seat multi-engine turbine-powered jets. Although there have been fluctuations in the rate from year to year, since 1982 there have been about 4.4 air taxi accidents per 100,000 flight hours and about 1 fatal accident per 100,000 flight hours. (Please note that the accident rate for air taxis and general aviation are discussed in terms of flight hours because data on the number of departures is not readily available.) Within the broad range of air taxi operators, however, the accident rates vary. According to one industry analysis of government figures, the accident rate for turbine-powered aircraft operated as on-demand air taxis was extraordinarily low from 1993 to 1996 when compared with any other type of aviation activity.

Over the past few years, accident rates for general aviation aircraft have resumed their long-term improvements after a brief aberration in the early 1990s when there was a small upturn in the rates. "General aviation" (GA) captures many dissimilar types of aviation activity, ranging from high-performance corporate jets with professional crews to the weekend recreational pilot. It should be noted that accident rates within the GA community vary significantly depending upon the type of activity. For example, over the last 10 years the accident rate for turboprop/jet aircraft has been about one-fourth of the rate for single-engine reciprocating aircraft.

In the aggregate, the fatal accident rate in GA reached a new low in 1996. (See Figure

3.) Specifically, in the United States there were 1,908 GA accidents in 1996 with an accident rate of 8.11 per 100,000 flight hours. When compared to 1995, the figures for 1996 represented an 8% decline in the number of accidents and a 17% drop in the accident rate. According to the FAA, through August 1997, GA appears ready to achieve still another new low fatal accident rate in 1997.

D. The Current Accident Rate Is Unacceptable And Should Be Cut Significantly

The Commission believes that an increasing frequency of large jet accidents is unacceptable, and steps should either be initiated or carried out that will lead to a significant reduction in the accident rate. The Commission's views reflect a consensus that has developed among safety professionals in the pilot community, the manufacturing sector, the airlines industry, and the government. The recent White House Commission on Aviation Safety and Security recommended the adoption of a goal of an 80% reduction in the fatal accident rate within 10 years. The Commission believes that this is a reasonable target upon which to focus accident reduction policies. The Commission believes that steps taken in the near future can bring the accident rate down significantly over the next several years.

E. Resources For Aviation Safety

The importance of adequate resources to meet the needs of aviation safety cannot be overstated. Nevertheless, the Commission recognizes that the aviation industry and the federal government must work within fiscal constraints even in the best of times. The demands of safety can be met (and in the past have been met) by a conscientious application of resources to crucial priorities. As to the recommendations and suggestions made by the Commission in this report, resources are a fundamental concern. The report of the Commission's Funding Task Force addressed the matter by recommending that the FAA's aviation safety programs be funded through the general fund of the Treasury. As explained in that report, the federal government must maintain a sufficient funding level for aviation safety, which is a broad-based public good. These financial resources can be effectively leveraged using the strategic priorities developed pursuant to recommendations in this report.

F. FAA and the Aviation Industry Need to Prioritize Their Safety Agenda and Implement a Strategic Plan

Over approximately the past three years, hundreds of specific and concrete recommendations and initiatives to improve aviation safety have been issued by previous commissions, industry/government working groups, task forces, committees, FAA analyses, General Accounting Office reports, and congressional actions. The Commission strongly recommends that the FAA determine the priority of all these recommendations and develop a comprehensive, integrated strategic safety plan to implement them.

In establishing these priorities and a strategic plan for safety, the FAA needs to be in a

partnership with all elements of the aviation industry. To the greatest extent possible, there should be a consensus on priorities with the industry. Where a consensus is not readily achievable, however, it is incumbent on the FAA to exercise leadership and make the proper choices. If the prioritization is based on an objective analysis of known data with a methodology that is well understood, the FAA will be able to move forward and justify its actions. It is important that this prioritization and plan be developed and publicly announced soon. The Commission believes that with all the previous analyses by industry and government agencies, the tools exist to do this now.

The FAA should function as a facilitator and catalyst for aviation safety improvement by gathering data and information from the best sources, assessing information with stakeholders, and then exercising its leadership role and responsibilities. In doing so, the agency must decide on those critical items that:

- Will provide a significant public benefit;
- Make the best use of limited resources;
- Can realistically be implemented in the commercial sector; and
- Will benefit from government support or intervention.

This process should begin with analysis of previous and potential failures to meet safety expectations (i.e., accidents, incidents, insight from flight operational data, and aviation system changes), proceed to identification of root causes, and then transition to consideration of accident prevention opportunities that have high leverage potential. As noted above, there has been an extensive amount of thought and analysis on these matters already, and full advantage should be taken of that work.

Accident prevention plans should be evaluated based on the number of safety events that would be addressed, the severity of those events, the expected effectiveness of the plans, and any possible unintended consequences. By taking this approach, accident prevention would become the highest strategic priority in safety. In essence, this would be the beginnings of a safety risk management program at the national level.

The process must be conducted with the cooperation and full participation of aviation industry stakeholders. Industry has a wealth of data, expertise, and experience that must be brought to bear to solve the complex problem of further reducing an already low accident rate. In this regard, the Commission believes that legislative and regulatory barriers should be eliminated to allow the protection of safety data, the free flow of ideas, and innovative implementation of operational or design improvements.

Safety improvements are not likely to be broadly effective if traditional regulatory enforcement is the primary approach taken by the federal government. Legal, organizational and cultural barriers should be removed to the maximum extent possible to facilitate cooperative selection and implementation of safety improvements. By fully including stakeholders in a roundtable kind of process, decision making can be more timely and effective.

The Commission believes that the FAA has the ultimate responsibility to make appropriate choices for U.S. government action to enhance aviation safety. The agency should facilitate and encourage, and in some cases mandate, complementary actions by industry. By cooperatively and selectively pursuing a few well-justified, data-driven, benefit-focused, and highly leveraged actions, more lives are likely to be saved in the future than by attempting to “take a bite out of every item on the menu.” Prioritization and strategic planning are addressed in more detail in Section II of this report.

G. FAA Safety Programs Must Become Performance Oriented

The Commission is recommending that federal air traffic services be provided by a Performance Based Organization (PBO). Under the Commission’s recommendations, FAA safety and regulatory programs are not placed under the formal PBO structure. Conceptually, the PBO is suited to an organization that is providing a service to customers or users. Safety regulation is policymaking, regulatory enforcement, and acting in the general public interest.

Having said that, the Commission strongly recommends that the FAA’s safety programs become performance oriented, with measures of performance developed and used to hold the safety organization accountable. This is essential to improving the aviation accident rate. The first steps in accomplishing this would come in implementing the Commission recommendation that safety priorities be established and a strategic plan be developed to implement programs based on those priorities. After that, measures and milestones should be developed to assess whether the safety goals of the organization are being achieved and are producing safety results. This recommendation is discussed further in Section II of this report.

H. Government/Industry Partnerships On Safety Need To Be Strengthened

The Commission believes that for much of the aviation industry, particularly with regard to manufacturing and most commercial operations, the relationship between the regulator and the regulated needs to change in some important respects to reflect the current industry “maturity” level on safety matters. Moreover, the Commission recommends that, in some critical areas, a move toward a government/industry partnership is essential to reducing the accident rate below the plateau that has existed for the last 30 years.

A strong consensus among aviation safety professionals has developed that making safety improvements based largely on accident data, and to some extent incident data, will result in improvements, but may not be sufficient to anticipate future problems. Robust data that would capture the precursors of incidents and accidents are also required.

One FAA/industry cooperative effort, in its infancy, is a program to collect, analyze, and share data on actual flight operations. While this may appear to be a relatively straightforward matter, the sharing of this data between a regulatory authority and

regulated entities has raised complex legal, enforcement, and proprietary information issues that must be resolved.

The best available source of this type of data is from flight data recorders, which are typically only analyzed after an accident to help determine its cause. But recorders can collect flight data on each flight and serve as an information base to spot developments or problems outside of the context of an accident, thereby enabling corrective steps to be taken before trouble occurs. The Commission believes quality assurance programs based on day-to-day operational data could be applied to other sectors of the aviation industry beyond the airlines.

As mentioned above, the traditional regulatory relationship between the agency and industry must be altered for this type of analysis to fully blossom. The Commission recommends that the FAA and industry take immediate steps to resolve the legal issues so that this real-world operational data can be effectively shared and analyzed in the effort to reduce significantly the accident rate. At the same time, the Commission believes that the FAA cannot forego its enforcement role in the partnership as it is an important tool that should be used when appropriate to protect the safety of the traveling public. Section III of this report covers these issues in greater depth.

I. The FAA's International Safety Activities Should Be Expanded

There is significant variability in the accident rates among the regions of the world. The following graph indicates that accident rates in Eastern Europe, Russia, Asia, Latin America, and Africa are many times greater than the rates in the U.S., Western Europe, and Oceania. Any effort to significantly reduce an increasing number of accidents must involve the aviation authorities and aviation industries in all regions of the world.

The reasons for addressing safety on an international basis are the following:

- This is where the largest number of aviation fatalities are occurring;
- U.S. passengers and airlines fly frequently in these regions and need improved safety; and
- International air transportation of people and cargo is a critical enabling factor for economic development, and benefits both the U.S. and world economies.

The FAA, in recent years, has taken the lead in working with foreign aeronautical authorities to ensure that international standards are being met. The agency's efforts include assessments of foreign governments' regulatory capabilities, entering into bilateral safety agreements, and harmonizing regulatory standards.

The Commission recognizes that working with foreign governments is a two-way street, and, for these efforts to succeed, full cooperation with foreign authorities is essential. As detailed in Section IV, the Commission recommends that the FAA review its

international safety programs with an eye toward whether adequate U.S. resources are being devoted to this area. The Commission strongly believes that significant strides must be made at reducing the accident rate in regions of the world beyond the U.S., Europe, and Oceania.

J. Specific Safety Issues

In Section V, the Commission makes findings and recommendations on the specific issues of suspected unapproved parts, electronic maintenance recordkeeping, FAA staffing and training, runway incursions, flight data recorders, and FAA oversight.

II. STRATEGIC PLANNING, PRIORITIZATION AND PERFORMANCE MEASUREMENT OF CURRENT AND FUTURE INITIATIVES

The Commission believes that aviation safety is achieved through the combined efforts of manufacturers, airlines, unions, and the government. Promoting safety in an efficient aviation transportation system is, and must continue to be, the FAA's and industry's top priority. The FAA must take the lead in promoting safety through collaboration as well as compliance. The collaboration of aviation industry management, workers and the government to evaluate and prioritize safety initiatives should serve as the basic foundation for ensuring and improving safety.

The challenge for the FAA and the aviation industry is to collectively agree on a course of action to prioritize the many recommendations and initiatives the FAA has received over the past few years. For example, the FAA's Associate Administrator for Regulation and Certification has identified more than 350 proposed safety-related initiatives in Flight Standards alone. These initiatives and recommendations have come from numerous internal and external sources, such as the National Transportation Safety Board, the General Accounting Office, the White House Commission on Safety and Security (the Gore Commission), a 1996 90-Day Safety Review, the 1995 Aviation Safety Summit, and the Challenge 2000 report (which explores safety regulation in the 21st Century), just to name a few.

The recommendations run the gamut from the very broad (e.g., the establishment of a national goal to reduce the aviation fatal accident rate by a factor of five within 10 years) to the very specific (e.g., the identification and elimination of contradictions in guidance material to inspectors on how to verify implementation of airline maintenance programs).

A. Industry and FAA Prioritization Efforts Need to Merge

The FAA has identified and undertaken numerous safety initiatives. Further steps need to be undertaken, however, to prioritize all of these initiatives and recommendations so that government and industry resources are applied where the most safety improvement will be accomplished. To the greatest extent possible, there needs to be a coordinated, consolidated, and agreed upon FAA and industry safety strategy to ensure the maximum safety enhancement. A great deal of groundwork has been laid already to narrow the wide scope of existing safety recommendations by the development of the annually prepared Aviation Safety Plan, which was begun in 1995. The Commission strongly believes that it is time for the FAA and the industry to move further, beyond the identification stage and into the priority-setting stage.

The beginnings of priority setting have begun with the Integrated Safety Strategy Team (ISST). This group is composed of leaders from the FAA, the Air Transport Association, the Air Line Pilots Association, the Allied Pilots Association, and airframe and engine manufacturers. The ISST was created to bring together these various organizations to

coordinate, consolidate and agree upon safety strategies.

The Commission believes that the ISST's stated objective captures very well what needs to be done: "Develop an integrated safety strategy so that industry and the government can set safety-related goals and objectives focused on the right things prioritized to result in the greatest improvement in commercial aviation safety." Simply stated, the objectives should be to identify and reach consensus on those things that will bring about the biggest improvements in the safety of the aviation system, to prioritize them, and to achieve a public awareness of what is to be accomplished.

B. Priorities Need to be Coordinated

The Commission is concerned that there is often at least the appearance that the National Transportation Safety Board (NTSB) and the Federal Aviation Administration are at odds over what the safety priorities should be. Moreover, it appears that the relationship between the two principle agencies responsible for aviation safety has deteriorated. This is not helping to improve aviation safety or the public's perception of it.

In the development of the prioritization and strategic plan for safety, there should be full cooperation with the NTSB, just as there should be with all elements of the aviation industry as mentioned in the preceding section.

The Commission recognizes the different statutory mandates of NTSB and the FAA. NTSB's safety recommendations are derived from accident investigations. The FAA, on the other hand, has ongoing safety responsibilities which are far broader and more extensive. In addition to responding to specific accident issues, the FAA must also develop and implement a long-term safety strategy and strengthen its long-term regulatory and inspection oversight. NTSB recommendations are indeed important (evidenced by the FAA implementing the vast majority of recommendations), but comprise only one segment of the FAA's safety priorities and programs.

The Commission recognizes that recommendations resulting from accident investigation by the NTSB will require immediate attention in spite of whatever priorities may be developed as part of an overall strategic approach to safety improvement. Therefore, it becomes increasingly important that the recommendations developed during an accident investigation process benefit from all of the expertise that is reasonably available to the NTSB. Accordingly, it appears to the Commission that the accident investigation process could be improved and given even greater credibility than it now has by using outside experts or "parties" to a greater extent in the analytical process of determining an accident's cause. This could be accomplished much in the same way that is spelled out in international guidelines for accident investigation. The Commission believes that, in doing this, NTSB should take steps to ensure that the independence and integrity of its decision-making is preserved.

Furthermore, the Commission is concerned about the newly formalized NTSB role of

assisting the families of accident victims, which is certainly a needed humanitarian function, and whether this responsibility, over time, might divert its focus and budget resources from its primary role to investigate accidents and make safety recommendations. The Commission was pleased to learn that NTSB recognizes this problem and has established procedures to separate accident investigation from family assistance. The Commission believes that this will need constant vigilance.

The NTSB's independence in the accident investigation process is essential and should not be jeopardized. The strength and credibility of the accident investigation process requires this independence, whether it be from other government agencies or the industry. In recognizing the critical need for independence in its accident investigation work and mission, the Commission believes that there is no conflict if the two agencies charged with improving aviation safety were to coordinate and agree upon what is important and should receive priority in an overall safety strategy.

The Commission recommends that there be a much improved and better coordinated process and relationship between the FAA, NTSB, as well as the aviation industry, over what the safety priorities should be. The Commission recommends that the agencies and industry take concrete steps to ensure that this occurs.

C. Coordination Of Other Government Agencies' Policies With The FAA.

With regard to the FAA's priorities for safety and the strategic plan to implement them, the Commission finds that it is critical that other government agencies be cognizant that their actions, regulations, and policies can have unintended aviation safety consequences. There have been instances in which tax, environmental, and other policy proposals or changes have raised aviation safety concerns. When other agencies are proposing a policy that they know will have an impact on the aviation industry, those agencies should be communicating with the FAA to learn if there might be any safety consequences in their actions. Furthermore, as the FAA becomes aware of actions or policies by other federal agencies that may impact aviation safety, the FAA should communicate its concerns to the relevant agencies so that non-aviation regulatory policies are not working against those aimed at improving safety.

D. FAA Must Utilize Available Data To Set Safety Priorities

The establishment of priorities and the implementation of the strategic plan must be driven by objective analysis of safety data. Both the FAA and the aviation industry have conducted extensive analyses as to the historical causes of accidents, so it does not appear that a fresh start is needed. Using those analyses, the Commission recommends that the hundreds of recommendations that presently exist should be evaluated to determine the initiatives that will result in the greatest safety benefits. The FAA and the industry must quantitatively determine, where feasible, which recommendations can be expected to reduce the most accidents, incidents, and the precursors of those events in the short and long term.

This quantitative analysis must serve as the basis for setting aviation priorities in the future. The FAA and industry must be held accountable to complete the priority actions that will reduce the causes of aviation accidents and incidents. At the same time, the FAA must be afforded the support, in both resources and political will to address these safety priorities.

E. Setting Priorities and Establishing Goals

As previously mentioned, there have been a significant number of distinct efforts by government and industry to identify and prioritize safety issues. These efforts, until very recently, have focused on cataloging and categorizing the myriad of recommendations.

Recently, the FAA and the industry, through the industry/government consortium described previously as the ISST, conducted analyses of what issues should be given priority. Through the ISST, it appears that a common understanding is emerging as to which issues, at a macro-level, should receive priority attention. The reason for this emerging consensus is that the analyses are data driven; that is, the priorities are grounded in the analysis of accident causes in the modern jet era. The Commission recommends that the priorities identified by this analysis serve as the basis for formulating the strategic safety plan called for in this report.

Increasingly, safety professionals are looking at safety improvements being accomplished through opportunities to intervene in an accident scenario before it runs its course. Accidents result when a series of events or occurrences come together in a unique way. Remove just one of the events from the others in the scenario, and the accident would not have happened. With an eye toward this type of approach, both the FAA and industry have identified several critical “intervention opportunities”. Please note that some of the following “opportunities” may overlap or intersect with each other for accidents that might be prevented.

Controlled Flight Into Terrain Accidents. Controlled flight into terrain is an accident in which the aircraft is under control, but the pilots lose their sense of where the aircraft is in relation to the ground or other terrain features such as mountains or hills. In the last 10 years, approximately one fourth of all commercial jet accidents worldwide (35 out of a total of 136) have the common feature of the aircraft being otherwise under control, but literally flying into the ground. Such accidents are relatively less common in the United States, but it does account for approximately one in seven accidents during the same period. If not further addressed, historical statistics would point toward a controlled flight into terrain accident every two years within the U.S.

The Commission recommends that the strategic plan for accident reduction contain specific action items to reduce the incidence of controlled flight into terrain. Among these action items should be the implementation of requirements for enhanced ground proximity warning systems. Such warning devices currently are required, but in some situations they do not provide enough warning time or a visual depiction of the terrain. The new enhanced systems provide a visual display of any hazardous terrain features

in the vicinity of the aircraft. Some U.S. airlines are already outfitting their aircraft with the new systems ahead of any requirement by the FAA to do so. In addition to these systems, both the FAA and the industry believe that there are training issues that need to be addressed to enhance pilot awareness of altitude and location relative to hazardous terrain.

Loss of Control Accidents. Loss of control accidents occur when the aircraft gets into a situation, such as an unusual attitude or a mechanical malfunction, in which the pilot may have been able to recover control but did not. These accidents also account for approximately one fourth of the worldwide accidents. Within the U.S. they account for 11 out of 36 accidents in the past 10 years. If this 10-year trend continues, about one such accident can be expected each year.

The Commission recommends that the FAA and industry, as part of a strategic plan, develop new pilot training programs that better enable pilots to recover from a loss of control of their aircraft. In the mid 1980s, the FAA and the industry embarked on developing better training for pilots to escape from hazardous windshear encounters utilizing improved technology, and the result has been dramatic. Within the past 10 years, there has been only one windshear-related accident in the U.S. A similarly focused effort on pilot training for loss of control situations should be a priority in the strategic plan.

Human Factor Errors. An analysis by Boeing of all commercial jet accidents, worldwide over the last 10 years, found that approximately 72% of them had, as their primary cause, errors by the flight crew. (See Figure 5.) Regarding U.S. accidents, the percentage has been approximately 65%. All other broad categories of primary accident causes pale by comparison as a percentage of the total.

Any strategy to bring about a dramatic reduction in the accident rate must include government and industry programs that strive to bring down the incidence of human error. Unfortunately, human error and its causes are much more difficult to fix than mechanical failures. It appears that virtually all the improvement in the short term will have to come through improved training and procedures.

The needed training in this area must be focused on improving the performance of the flight deck crew as a whole rather than just improving individual flying skills and performance. Some airlines have instituted “crew resource management” programs in which pilots are trained to improve communication techniques among themselves and to coordinate tasks in particular situations. These kinds of programs should be expanded throughout the industry.

Analyses of accidents also indicate that at the onset of an accident, pilots sometimes deviate from standard operating procedures and make inappropriate responses to emergencies. Had they not done so in some cases, it is believed that the accident could have been averted. Again, improved training programs aimed at these human factor problems should be a priority in the strategic safety plan.

Landing and Approach Accidents. In the typical flight the percentage of time spent making the approach and landing is approximately 16%; however, this is the phase of flight in which 56% of all accidents occur. (See Figure 6.) Analyses indicate that through pilot actions or air traffic control procedures, a frequent ingredient in this type of accident is the failure to establish an early, stabilized approach. Also an element in this area is the hesitancy by some pilots to “go around” when prudence would dictate calling off the landing and making another attempt.

Again, this is an area that, in the short term, calls for improved training in following standard procedures and breaking down the perception that it is a “mistake” to call off a landing when something is not quite right.

Weather and Turbulence-Related Accidents. Accidents attributed primarily to weather are a very small percentage of the total, approximately 3% over the past 10 years. Aircraft are designed to fly through most weather phenomena and do so safely. However, in an accident situation, it is often weather that creates the non-routine situation in which pilots do not follow standardized procedures or otherwise perform appropriately.

Improved weather training, as well as improved weather detection and display technologies for aircraft and air traffic controllers, should be part of a strategic plan for safety improvement. The focus should be on better detection and avoidance of windshear, ice and freezing conditions, wake turbulence generated by other aircraft, and clear air turbulence.

Runway Incursions. Runway incursions (that is, aircraft, other vehicles or pedestrians incorrectly occupying a runway that is in use by another aircraft) are discussed in greater detail later in this report. Accidents resulting from runway incursions are relatively rare. However, reducing the incidence of them should be a priority because there are few, if any, human or technological redundancies in place at most airports to override a pilot or controller mistake that may precipitate a runway incursion. The results can be catastrophic. Also, the data indicate that the incidence of incursions is on the rise.

Technology that will enable controllers to anticipate potential conflicts on an airport’s runway and taxiway system is now in the initial stages of deployment. The FAA and the industry are considering whether to deploy similar technology on a wider basis.

Including runway incursions as a priority in the strategic plan would keep a needed continual focus on this program. While runway incursions have been given a high priority from time to time in the FAA and the industry, the interest in this problem waxes and wanes. It appears that, while a runway incursion action plan has been developed, and elements of it have been implemented, it is time again to jump-start this program.

Uncontained Engine Failures. An uncontained engine failure occurs when the engine experiences an internal failure of a high energy rotating component that cannot be contained within the engine casing. An engine stoppage or failure is typically not a

significant safety issue because all aircraft are designed to fly on a remaining engine. However, when parts of the engine fail with enough force to damage the aircraft's structure or critical systems, the incident can have catastrophic consequences and result in injury or loss of life of passengers and crew.

The Commission believes that reducing the incidence of uncontained engine failures should be a priority in the strategic safety plan. Improvement of inspection techniques for critical engine components needs to be accomplished as well as better damage mitigation from these failures.

Human Errors in Maintenance. Improper or poor aircraft maintenance has been cited as a primary causal factor in approximately 10% of all commercial jet accidents over the past 10 years. Just as with human errors in piloting, a reduction in these types of accidents will be achieved through improved training and standardized maintenance procedures. Standardized record keeping on maintenance performed would enable better maintenance quality assurance programs to be implemented.

The Commission believes that human performance analyses and improvement programs applied to the aircraft maintenance area would help reduce the accident rate and should be part of the strategic safety plan to be developed.

Crash Survivability. While not on the initial ISST list of priorities, the Commission believes that there needs to be continued attention given to improving the chances of passengers and crew surviving an aircraft accident. Since the mid 1980s, the FAA and the industry have devoted considerable attention to making improvements in crash survivability: improved flammability standards for materials used in the interiors of transport airplane cabins; improved access to emergency overwing exits; emergency floor level lighting; hands-on training for flight attendants; and the location of passenger emergency exits.

During accident investigations, the NTSB has found that lives have been saved because of measures taken in these areas. The Commission recommends that, as new aircraft are developed and existing ones refurbished, the FAA and the aviation industry keep accident survivability improvements a priority since most accidents can have survivors.

Further, testimony was presented at the Commission's public hearing on safety that the federal requirements on airport fire fighting training specifically include aircraft familiarization training so that firefighters know how to open aircraft doors from the outside in an emergency. The Commission believes that such training be in the training curricula for airport firefighters that are submitted for approval to the FAA.

Safety Data Analysis. The Integrated Safety Strategy Team effort also identified safety data analysis as an important means to reducing the accident rate in the future. The need to make safety data analysis a high priority is discussed in detail in the next section of the report.

These broad priorities need further refinement and should continue to build on the safety prioritization process established in the industry/government “1997 Aviation Safety Plan”. This safety plan, resulting from the January 1995 Aviation Safety Conference and subsequent workshops, identifies similar priorities and establishes a systematic tracking method. Both the ISST analysis and the Aviation Safety Plan process should be used as a basis for setting FAA and industry safety priorities.

F. A Strategic Plan Is Required

After the priorities for ongoing and future safety initiatives have been established, the Commission recommends that the FAA develop a comprehensive, strategic implementation plan. The Commission finds that the FAA’s safety agenda and the use of its scarce resources currently are too much determined by reacting or responding to the latest aviation accident. The Commission recognizes that when there is an accident, safety regulatory officials are obligated to respond to those events and determine if expedited or emergency actions are needed to address the causes of the accident. However, in making such responses, it appears that the FAA’s attention, particularly of its leaders, is easily diverted from other activities that may well have a larger safety benefit in the long run. If the FAA were to have a strategic prioritization of safety initiatives supported by quantifiable data, there would always be a sense of where the latest event fell on the yardstick of overall priorities. More importantly, when implemented, the strategic plan would allocate resources and establish program milestones that could be measured.

When the FAA sets the priorities and develops a strategic plan for safety, it should be in cooperation with all elements of the aviation industry, as well as the National Transportation Safety Board, so that a strong consensus on top priorities can be achieved. With a prioritization based on objective analysis of known data and a methodology for making choices that is well understood, the FAA will be able to move forward. As discussed above, the Commission believes the recent accomplishments of the government/industry ISST and the annual Aviation Safety Plan are an excellent start. With all the previous analyses by industry and government agencies, the tools exist now to establish a firm set of priorities and a strategic plan to achieve successful results to improve safety.

This strategic plan should have a short-term as well as a long-term focus and should lay out where the industry and the agency should devote their resources. The plan should recognize the need for some resources to be allocated to investigate high-profile accidents. There must be a recognition that some ongoing safety initiatives may need to be deferred because they have a lower priority. Based on priorities, the plan should allocate resources to achieve goals and establish a means of measuring progress.

The plan should be detailed enough so that milestones for accomplishing specific tasks can be readily recognized by agency management and the industry, as well as the public. The FAA should periodically report on where initiatives stand, why any delays

are occurring, and whether and why changes are being made to the plan.

In short, the plan should serve as a roadmap for how government and industry are lowering the accident rate and as a location finder for where they are at any given point in time.

There should be a recognition that immediate issues will arise that will require short-term, unplanned analyses, responses and actions. When an accident happens, the FAA is obligated to provide the public information about the issues that arise from that accident. By having a strategic plan focused on specific issues and objectives with identified resources and milestones, the “fire” that springs up one day should not serve as an indefinite diversion from other ongoing programs.

While there should be staff and resources devoted to operating the “firetruck” on a day-in-and-day-out basis, they should be distinct from the people and resources focused on installing the “smoke detectors” so that future fires do not get out of control. There needs to be a group within the FAA and the industry whose sole mission is to carry out the strategic plan. The FAA and the industry cannot be put in the position of having to set the plan aside to confront the emergencies of the moment.

G. Establishing Performance Measures for the FAA’s Safety Organizations

In concert with developing priorities, performance goals and a strategic plan, the FAA must establish performance measures to focus resources and hold the FAA’s safety management accountable to make improvements. For the operation and management of the service-oriented air traffic control segment of the FAA, the Commission has proposed establishing a performance based organization (PBO) within the agency. A PBO is not appropriately suited, however, for the more traditional regulatory role of acting in the interest of public safety. But this does not mean that the performance of the FAA’s safety and regulatory functions cannot be measured and assessed.

The Commission recommends that safety programs become performance based with specific goals, milestones and measures to assess whether safety goals are being achieved and producing a safer aviation system. The “intervention opportunities” established by the government/industry ISST are a sound basis for developing specific goals and measures. These goals, however, need to be further refined and broken down into specific actions to be taken by various safety organizations within the FAA. The Commission believes the FAA’s performance measures should address the time required to issue new safety rules and regulations, or resolve other issues that may expedite safety improvements. Where appropriate, the FAA should measure performance towards safety goals for individual segments of the aviation industry (e.g., commercial transport, air taxi, general aviation, or rotorcraft), because each may have its own risks and optimal mitigation strategies.

Of course, the resources to address safety risks across all aviation segments need to be identified and budgeted. The Commission recommends that the FAA merge

performance data on safety initiatives with cost data to better understand the effectiveness of allocated safety resources. Although the FAA's existing performance measures are focused on safety outcomes, the resources required to achieve them have yet to be tracked or allocated. As the FAA institutes a cost accounting system, the cost of achieving individual goals should be better understood. The combination of safety initiatives and their costs will help identify the most efficient use of resources. For future planning, however, FAA resource allocation plans should be able to incorporate any new breakthroughs that would significantly increase safety.

H. In Sum, FAA's Safety Strategy Must be Institutionalized

While the FAA takes many actions to enhance aviation safety, it is perceived as an agency that reacts to the "crisis of the day". An institutionalized methodology that establishes standards for prioritization, sets goals, allocates resources, and measures performance will support the safety decisions the agency and industry make while also responding to the changing events that occur in this dynamic industry. Although the FAA must continually gather new information and reassess priorities, the Commission strongly emphasizes the importance of a strategic approach based on established priorities.

The Commission recommends that FAA form a joint industry/FAA safety council to periodically review safety priorities and the implementation of the strategic safety plan. The Commission also recommends that there be an annual public safety conference, with workshops addressing safety initiatives, based on the process established in the industry/government Aviation Safety Plan.

The Aviation Safety Plan established a process (formation of an oversight body and steering committee to monitor progress) to ensure that high priority safety initiatives are tracked and receive appropriate attention. The Commission strongly recommends the continuation of a similar oversight body including senior government and industry officials. As with the Safety Action Plan, an assessment of progress should be provided to the FAA Administrator and Secretary of Transportation. The annual safety conference would review the progress of the action plan in a public forum. Such a conference would increase public awareness that safety is being addressed comprehensively.

In addition, although the Federal Aviation Reauthorization Act of 1996 specifically stated that the Federal Advisory Committee Act need not apply to aviation rulemaking committees designated by the Administrator, it does not appear to have addressed the issue fully. In order for the FAA to take full advantage of the opportunities to work in cooperation with industry, the Commission recommends that representatives from the FAA, the Department of Transportation, and the Congress should continue to identify statutory or other impediments, such as elements of the Federal Advisory Committee Act and the Administrative Procedure Act.

III. ENCOURAGE THE IMPROVEMENT OF AVIATION SAFETY PROGRAMS IN INDUSTRY AND GOVERNMENT

As described in the introduction to this report, the accident rate has leveled over the past three decades. If accident rates are to be lowered to meet the national goal of reducing the fatal accident rate five fold within 10 years, fundamental change must take place in how safety is provided. The aviation community must look deeper than accidents and incidents to identify latent and emerging problems and fix them before a mishap occurs.

Today, technology, safety reporting, and risk management concepts are emerging that could literally identify most aviation safety problems before they become accidents. If used in combination, safety could be dramatically improved. These concepts require the collection, analysis, and sharing of types of data and information that are just now beginning to be routinely studied in the U.S. aviation industry. Among these are programs in which pilots, mechanics and other safety-related personnel are encouraged to report problems without penalty; safety self-audit and analysis programs within airlines; and programs that analyze digitally recorded flight operations data from actual flights.

Each of these approaches uses information and data in new and different ways as a means to take corrective actions before problems turn into accidents. These programs also require that the traditional FAA/industry regulatory relationship be changed so that the intended broad safety benefits (prevention of accidents) can be realized.

Regarding the analysis of flight operations data, an important means to improve safety risk management programs is now in its infancy in the United States. It involves utilizing digitally recorded flight operations data in a program known as Flight Operations Quality Assurance (FOQA). To bring FOQA and other self-reporting programs into full fruition and realize their potential safety benefits, impediments to the collection and analysis of flight, air traffic, and other safety data

need to be removed. There also needs to be a willingness in government and industry to invest in new ways of doing business.

A. Safety Risk Management Programs Should Exist Throughout Industry and Government.

Historically, air carriers and unions have used reports from flight and maintenance crews as a means of identifying potential safety problems within companies. Within the past few years, the FAA has required each airline to have a senior safety executive and encouraged airline self-audit and self-disclosure programs. The FAA has also encouraged partnerships between unions, air carrier safety departments, and the FAA itself to jointly identify safety problems and take constructive action, such as in the USAirways program that was created to address altitude deviations.

The American Airlines' Airline Safety Action Partnership (ASAP) is a prime example of such efforts. ASAP consists of an agreement between pilots, their union, American and the FAA whereby pilots are encouraged to report safety problems and the other parties agree to work to address the problems in a way that is not threatening to the person who does the reporting. Each pilot report is submitted to the NASA Aviation Safety Reporting System (ASRS) to feed a national safety database for broader analysis and to guarantee immunity from FAA certificate action or civil penalties. A committee of all the parties then meets and works to resolve each safety issue as effectively and expeditiously as possible.

The Commission finds that an effective means to quickly reduce the accident rate is to implement a safety risk management program in each company across the aviation community. The risk management program should include a combination of a company self-audit and an ASAP-like self-disclosure program. Such programs should include the analysis and sharing of reports from aviation professionals among industry members and between the industry and the FAA. A similar but more aggregated program should be administered at the national level to ensure that the government is focusing its aviation safety resources according to the results of such programs.

B. Whenever Possible, FOQA Should Become Part of Safety Risk Management Programs

Programs similar to the American Airlines ASAP program should be pursued across the aviation community as the foundation of any safety risk management program. There is additional information now available which many companies may also use to improve their safety program. Aviation is one industry where almost every activity can be digitally recorded. It will be possible in the future to monitor, analyze, model, and simulate the aviation system using digital flight and air traffic management data. This could become a new method for the aviation community (crew members, airlines, manufacturers, airport operators, maintenance facilities, air traffic services, etc.) to identify and fix problems before they become accidents and for the FAA to oversee and improve the aviation system at a fraction of today's costs.

In the United States, recorded flight data has been used in support of maintenance programs and for accident investigations. In other countries, however, these data are also beginning to be used to detect flight safety problems before accidents occur. Flight Operations Quality Assurance (FOQA) programs have been providing critical safety information to non-U.S. airlines for over two decades. The Flight Safety Foundation has described a FOQA system as "a program for obtaining and analyzing data recorded in flight to improve flight crew performance, air-carrier training programs and operating procedures, air traffic control procedures, airport maintenance and design, and aircraft operations and design." Currently, more than 25 non-U.S. airlines screen flight data for deviations from prescribed operations. Some airlines perform these analyses on data from all flights. While three U.S. airlines (United, Alaska, and USAirways) have established flight data analysis programs, most U.S. airlines have not done so largely because of concerns about data protection and the expense of conducting such

programs. The Commission finds it regrettable that more airlines have not been able to institute these types of programs.

Today's FOQA concepts were derived from the flight-data efforts of foreign air carriers such as British Airways, SAS, KLM, and TAP Air Portugal over the past several decades. These systems share two common features. First, they are primarily concerned with identifying and counting unwanted events. These include, for example, approach speeds being too high at specified altitudes, vertical acceleration at landing being too high, an abandoned take-off, a go-around, etc. Second, the systems are as much, or more, concerned with detecting trends in the frequencies of these events as they are with individual event occurrences. The event detection and tracking systems developed by these airlines would, if implemented, provide valuable safety information to U.S. carriers.

FOQA programs basically involve converting digitally recorded flight data into useful safety information. Early aircraft flight data recorders (FDRs) had relatively few basic parameters, such as speed, time, altitude, pitch, compass heading and vertical acceleration. Newer aircraft can record up to 200 parameters, several times per second. The Boeing 777 records up to 700 parameters every eighth of a second. Ongoing research by the FAA, NASA, and the aviation industry, and the revolution in information technology, are now beginning to make it possible to use this data in ways not dreamed possible before. FOQA systems have the potential of becoming the basis for making aviation safety decisions at three levels: the company, the air crew, and the air transport system as a whole.

At the company level, a FOQA program could be used to evaluate the safety and efficacy of flight operations within each airline. It could help identify operational problems specific to the airports served by that air carrier or to the aircraft fleets it employs. These data could be used to shape and evaluate air-carrier procedures and training. In this regard, FOQA could become an essential ingredient in streamlining air carrier training procedures, and serve as a performance-measurement tool for company risk management programs and for assessing the effectiveness of training. Special-event identification and the statistical analysis of all flight data could be complementary and synergistic activities. Together, these analyses could provide a fuller picture of air-carrier operational performance.

At the air-crew level, FOQA data could be used for crew member self-assessment and training. Computer animation of flight data could allow flight crews to review their own performance, as well as that of other flights depicting both optimal and unacceptable performances. The ability to replay events is an important feedback element that could result in improved piloting, and crew coordination skills and could also assist in understanding the context of an event.

At the air transport system level, bringing together FOQA information with pilot, dispatcher, and mechanic reports across companies and with air traffic controller reports could assist in evaluating the overall safety and efficacy of the aviation system.

For example, FOQA data could be used in models of air traffic operations to evaluate airspace allocation and to develop improved measures of practical traffic capacity, or to monitor the consequences of introducing new traffic control concepts such as “Free Flight”. FOQA data could also be used to validate new training practices in ground-training devices, and to provide operational data pertinent to ongoing research.

FOQA information at a national level could identify faults in system procedures, airport operations, airspace structures, aircraft certification, and human-automation interface. Manufacturers, airlines, air crews, and regulators are held accountable by the flying public for the effective risk management of aviation operations. Most accidents stem from the interaction of the pilot, other crew members, the aircraft, the company flight operations center, and the air traffic system. This suggests the need for a national and perhaps international system-wide FOQA program. But data to conduct FOQA programs are not being collected at the national level today, and most airlines are not prepared to implement FOQA programs. The main reason is data protection.

C. Safety Information Should Be Protected and Shared

FOQA and other safety risk management programs are based on trust. Accident prevention depends on the ability to identify variance from normal operations, adverse trends, and incidents that may be precursors to accidents. In each case, recorded data and incident reporting is essential to identifying these precursors. Keeping this data confidential is the key to acquiring the information. Military safety programs have effectively used confidential/privileged information for over 40 years to identify and correct safety problems that would not have been otherwise detected. Since companies only have information from their own operations, it is to their benefit to obtain information from other companies to put their operations into perspective and to have enough data when measuring rare events to ensure statistical validity. This is the objective of the FAA initiative to encourage data exchange titled Global Analysis Information Network (GAIN). The FAA’s GAIN proposal involves establishing a voluntary, privately owned and operated worldwide infrastructure to collect, analyze, and disseminate aviation safety information (including FOQA data).

It appears that the only way to obtain in-depth safety information within a company, between companies, or involving the FAA, is for people who operate in the system (pilots, mechanics, controllers, dispatchers, airlines, manufacturers, airport operators, etc.) to agree to disclose this information and to allow it to be consolidated and analyzed for accident prevention purposes. Individuals and companies will not agree to assemble or disclose safety data if it can be used punitively, be misinterpreted by non-experts, reveal trade secrets, or expose them to undue liability.

The central fear is that the data could be badly misunderstood by the press or public, or even be knowingly misrepresented. Safety risk management programs must include assurances to protect aviation professionals and companies from punitive action as a result of sharing such data with each other or the FAA. Similarly, each carrier, pilot, mechanic, etc., must have assurances against the risk of public humiliation from either

innocent or malevolent misrepresentation. The system must not be threatening in any way to the sources of the data or the insights from such disclosure will be lost. If the system is perceived to be punitive or threatening at any level, it will be doomed to fail.

The Flight Safety Foundation has studied this issue and concluded that data protection over time is critical to building the trust necessary for people to reveal problems in the aviation system. The joint industry/labor/government Aviation Safety Plan cites data protection as a key to achieving “zero accidents”.

D. Sharing of Safety Information among the Aviation Community and the FAA Should Not Result in Punitive Actions

At the 1995 Aviation Safety Summit hosted by Transportation Secretary Peña, the FAA acknowledged the importance of sharing safety information and promised to initiate a rulemaking to make it clear that FAA will not take punitive action against individuals or companies who self-disclose information for safety improvement purposes. To date, the agency has failed to do so. In 1996, legislation was enacted permitting voluntarily submitted information given to the FAA and NTSB to be exempt from the Freedom of Information Act (FOIA). The FAA must issue implementing regulations for the legislation to apply, but it has yet to do so.

There are several notable problems with the type of information sharing associated with safety risk management programs. As already mentioned, information might be used for punitive or enforcement purposes by a company or the FAA. A pilot or other employee might be reluctant to report a problem or mistake if there was the possibility of punishment. An otherwise harmless mistake that goes unreported could be repeated by others enough times until it becomes a link in a chain of events leading to an accident. The Commission notes that while company retaliation against employees who call attention to safety problems is rare, aviation safety would be advanced if there were “whistleblower” protections for all aviation employees who report safety problems. Aviation employees should be afforded the same protection that exists for virtually all other safety-related occupations.

The FAA has determined that airline-operated FOQA programs have been demonstrated to provide significant potential for the enhancement of both safety and efficiency. It is in the public interest for the FAA to encourage voluntary implementation of such programs by assuring that information obtained would not be used in punitive enforcement actions. An FAA rulemaking process on this issue needs to move forward to ensure the protection of such information unless there is an indication of deliberate or willful action.

The question of whether self-disclosed information should be used for remedial enforcement action is a more difficult issue. The FAA has engaged in an internal debate over whether pilots or airlines can or should be given immunity if self-disclosed information reveals deficiencies in the fundamental qualifications of an individual or company. For example, if shared information reveals that a pilot is unqualified from a

certification standpoint, the FAA arguably should not allow that pilot to continue flying. In fact, some argue that the FAA has an unwaivable legal duty to ground such a pilot regardless of how or where the information was obtained. Safety programs involving self-disclosure are designed to identify safety problems and to take action to correct them. FAA action would only be required if company-based programs fail to take action. The question then is whether it is better to accept the small risk of a problem not being addressed by the company in a timely way in exchange for the large volumes of valuable safety information that would otherwise not be available without the assurance of immunity. Furthermore, the FAA is expecting to receive de-identified and aggregate data from airlines with FOQA programs, so it would be very difficult for the agency to even have a basis upon which to take remedial enforcement.

In essence, there are two competing concerns at issue here. One is the duty of the FAA to ensure that only qualified individuals and companies and airworthy aircraft are being operated. The other is the duty to ensure that the overall aviation system is as safe as possible by preventing accidents before they occur. While both policies have the same ultimate goal of a safe system, they can come into conflict in the particular area of information sharing. Given the rather small chance that there are truly unqualified persons operating in the system and that information sharing would be the means of discovering such persons, the Commission believes that the FAA should favor the policy of protecting the information to bring down the overall accident rate.

As already mentioned, the FAA currently is working on two proposed regulations related to information sharing. One has to do with the withholding from public disclosure of voluntarily submitted information, and the other specifically addresses the agency's use of information provided through FOQA-type programs. Regarding the latter, the FAA has reportedly resolved its internal debate on the question of whether and how to use FOQA information for remedial enforcement action against unqualified certificate holders. Despite claims to making progress on development of both rules, the FAA must move these matters forward into the next phase of issuing Notices of Proposed Rulemaking (NPRMs). Given the potential benefits of information and data sharing and increasing industry interest, the Commission believes that further delay is unacceptable. It appears from recent announcements by the FAA Administrator that the FAA is prepared to take the necessary actions.

E. FAA Must Take Action on Safety Risk Management Initiatives

The Commission believes that the establishment of company safety risk management programs, which include both the American Airlines ASAP-type self-disclosure program and company self-audit programs, are among the most important actions the aviation community can take to achieve a major reduction in accident rates. These types of programs should become routine and ubiquitous throughout the industry.

The ultimate success of these programs will depend on building trust, developing an experience base to understand the benefits, and identifying the tools and technologies needed to efficiently and effectively share and analyze safety related information.

Therefore, the Commission recommends encouraging the aviation industry to move as rapidly as possible to incorporate FOQA-type programs into a comprehensive aviation risk management program in each company in the aviation system. The Commission also believes FOQA-type programs could have applicability in improving the safety and performance of the air traffic control system. If each airline, airport, maintenance facility, manufacturer, en route center, etc., had such a program to assist them in identifying problems before they contributed to accidents, aviation safety management would be transformed.

F. Encourage R&D to Develop Analytical Tools That Make Data Analysis Affordable and Effective for All Aviation Users Large and Small

Apart from data protection, costs are a significant constraint to the implementation of FOQA programs. Today, data analysis tools are available to implement such programs, but many are labor intensive. Costs, especially for small operators, can discourage implementation. The FAA and NASA are collaborating with United and Alaska Airlines to develop tools that will make data analysis more affordable and effective. These tools are also important because they will make it possible both to document normal operations, in order to be able to determine variance from the norm, and to identify other unwanted events that are not apparent without such analysis. Without accurately knowing what is normal, it is impossible to take optimal action to prevent accidents or to validate that actions have the appropriate effect. The Commission applauds and encourages these research efforts.

IV. THE FAA'S ROLE IN INTERNATIONAL AVIATION SAFETY NEEDS TO BE STRENGTHENED

A. It Is Critical for the FAA to Increase Its Role in International Aviation Safety

With the rapid increase in the internationalization of air travel, it is critical that the FAA strengthens its role in international aviation safety. The FAA needs to be certain that it has deployed its resources to take into account that U.S. citizens fly all over the globe, U.S. carriers have increased their overseas presence as foreign carriers seek to do the same here, and aircraft manufacturing is now a multinational business with facilities on all five continents.

When compared with the rest of the world, aircraft flying within U.S. airspace have an exemplary safety record. (See Figures 7 and 8.) Once a passenger (or aircraft) leaves the U.S. aviation system, however, that passenger (or aircraft) faces a higher safety risk. According to a recent analysis by Boeing, the hull loss accident rate in North America was more than 20 times lower than it was in Africa, and more than 10 times lower than in Latin America and the Caribbean. If overall aviation accident rates are to be reduced by any significant amount, greater emphasis must be placed on international aviation safety.

An analysis of worldwide accident rates for similar aircraft shows a significant difference in accident rates depending on the region of operation. The data suggest that there are significant factors other than airplane design itself that influence the worldwide accident

rate, such as regulatory structure and oversight, flight operations and maintenance, air traffic management, and infrastructure. (See Figure 8.)

B. Growth of International Aviation

Aviation is expected to continue its rapid growth throughout the world. Without a radical reduction in accident rates, this growth is forecasted to result in one major aviation accident every 7-10 days 10 years from now. More than 70% of those accidents can be expected to occur outside of North America and Western Europe. Clearly this is unacceptable to the flying public and aviation community as U.S. lives and aircraft will be at stake.

C. Current U.S. Government Role in Reducing International Accident Rates

The Commission believes that a significant reduction in international aviation accidents can be brought about by increasing the harmonization of regulations, standards, and procedures with other countries; by providing training and technical assistance abroad; and by working with other countries and international organizations to improve safety, security, and efficiency around the world. To fulfill this objective, the FAA has begun to undertake a number of initiatives designed to reduce international aviation accidents.

International Aviation Safety Assessment Program (IASA)

In August 1992, following a variety of safety problems, incidents, and accidents involving foreign air carriers flying to and from the United States, the FAA's International Aviation Safety Assessment Program (IASA) was officially initiated. The program assesses the ability of a foreign government to enforce compliance with the international standards and recommended practices for aircraft operations and maintenance established by the United Nation's technical agency for aviation, the International Civil Aviation Organization (ICAO). IASA focuses on a country's ability to adhere to ICAO's international aviation safety standards, not on individual air carriers. At present, approximately 100 countries or regional country alliances have oversight responsibility for the close to 600 foreign air carriers that fly to and from the United States.

Of the approximately 80 assessments performed to date, more than 30 of the countries assessed have been found not to be in compliance with ICAO standards. For those countries that do not meet international safety standards, the FAA has placed restrictions on their air carriers operating to the United States. Until the agency is confident that ICAO can perform these assessments, the FAA will continue to monitor the more than 100 countries that either have or have expressed interest in having direct air service to the United States.

The identification of countries with difficulties in establishing effective aviation safety compliance programs is only the first step. The Commission recommends that the FAA, in coordination with other U.S. government agencies and multilateral institutions, focus

sufficient resources on helping such countries achieve ICAO-level compliance through training and other technical assistance.

Bilateral Aviation Safety Agreements (BASA)

Seeking to improve the safety level of the world's aviation system and to create greater regulatory efficiencies through more effective utilization of the agency's budget and personnel, the FAA has sought to build a network of regulatory cooperation with other competent civil aviation authorities.

This network is being based upon the negotiation of Bilateral Aviation Safety Agreements (BASA) with appropriate countries. A BASA may cover any or all the following technical areas depending on the Implementation Procedures that are developed with the FAA's counterpart authority:

- Airworthiness approvals for civil aeronautical products;
- Environmental approval and environmental testing;
- Approval and monitoring of manufacturing and maintenance facilities as well as the alteration or modification of facilities;
- Approval and monitoring of manufacturing and maintenance personnel;
- Approval and monitoring of flight simulators; and
- Approval and monitoring of flight operations.

Under these agreements, the FAA will be able to make maximum use of work performed by competent foreign counterparts while retaining the authority to issue or withdraw airworthiness certificates and approvals as appropriate. As a result of such cooperation, the FAA anticipates greater regulatory efficiencies, enabling the FAA to shift scarce resources to focus on higher safety priorities. Additionally, industry should enjoy spin-off benefits of cost and time savings associated with reduced duplication of international certification work.

Together with the State Department, the FAA intends to negotiate BASAs with all countries with which the United States has a Bilateral Airworthiness Agreement, with all member states of the European Joint Aviation Authorities, and with any country that favorably concludes the technical assessment necessary to allow for such a bilateral agreement. Since the program's beginning in 1996, the United States has signed 8 BASA Executive Agreements, but only 1 Implementation Procedure. With more than 40 countries either eligible or having requested BASAs, the Commission strongly urges the FAA to expend the resources necessary to complete technical assessments in developing Implementation Procedures to achieve a fully functioning and vital program.

Regulatory Harmonization

The safety and cost advantages of a standard set of rules that would apply to all aeronautical products and operations around the world are obvious. The FAA and the Joint Aviation Authorities of Europe (JAA) are working together to increase regulatory efficiency and to reduce certification redundancy by harmonizing regulations and

standards. The FAA and JAA are concentrating on those rules and policies where the difference either results in a major discrepancy in the level of safety between the two regulations, or creates significant extra certification work to comply with both FAA and JAA regulations. To date, efforts have focused on aircraft and environmental certification, maintenance approvals, flight operations surveillance, and simulator qualifications.

To further regulatory harmonization, the International Civil Aviation Organization (ICAO) has established minimum aviation safety standards and recommended practices for its individual signatory countries to use as a guide. However, these guidelines lack the degree of detail and comprehensives necessary to act as a country's stand alone civil aviation regulations. In response, the FAA is developing a model set of aviation documents (aviation laws, safety regulations and implementation standards) that could be adopted by a country seeking to upgrade its safety oversight programs and increase the compatibility of its regulations with FAA, JAA, and ICAO standards and suggested practices. These model regulations focus on maintenance, operations, and airmen licensing requirements.

The Commission recommends that the FAA continue to harmonize its regulations with other countries' regulations so that the safety and cost saving benefits of doing so can be fully realized. The FAA must ensure that the highest level of safety be retained when harmonizing two or more regulations.

International Industry Safety Coordination

The Commission believes that programs to improve the accident rate in certain areas abroad need not just be government to government-type efforts. There is a large reservoir of expertise and willingness to lend assistance. In fact, presentations to the Commission indicate that there are already formal and informal programs in place by international pilot organizations as well as U.S. airlines, who have ongoing contacts and relationships with foreign aeronautical authorities, to bring foreign aviation authorities and aviation companies up to higher standards. The Commission strongly believes those activities should be further encouraged.

The Commission has also been made aware of non-aviation multinational corporations wanting to provide assistance in this regard. As U.S. companies expand their business overseas, U.S. citizens are increasingly being required to travel to remote areas of the world. This travel has made aviation safety abroad a growing concern to U.S. multinational business executives. Many of these non-aviation companies have extensive flight operations experience that could be brought to bear on improving safety abroad. The Commission recommends that the FAA take the necessary steps to encourage the development of programs and activities in this regard through facilitating or initiating joint government/business round tables on this issue. This would be another avenue to encourage the utilization of government/industry partnerships to improve aviation safety and reduce the accident rate.

V. SPECIFIC SAFETY ISSUES

A. Suspected Unapproved Parts (SUPs)

There has been a significant amount of public attention on the use of aircraft parts and components that do not meet FAA regulatory standards. The Commission was specifically charged with examining this issue and whether the FAA is adequately addressing it. Based on information and presentations made to the Commission, the Commission finds the following:

- The proportion of unapproved parts that are in the inventory of aircraft operators is minuscule compared to those that are approved.
- The vast majority of those relatively few unapproved parts are no different from approved parts except that the source of the parts is not, in a technical regulatory sense, supposed to supply them directly to aircraft operators.
- There is a very small but serious problem of some persons manufacturing and distributing counterfeit and substandard parts in a criminal manner, but to date there have been no commercial accidents in the U.S. attributable to these types of parts. This is because, in commercial aviation, there are ongoing systems in place at manufacturers and airlines to prevent such parts from finding their way into the inventory or onto an aircraft.

Regulation of Approved and Unapproved Parts

A comprehensive network of federally prescribed controls governs the design and manufacture of aviation spare parts. Between the manufacture and the end use of an aeronautical part, checks and inspections occur by the personnel who purchase the part or select it from a stockroom for installation on an aircraft, aircraft engine, propeller, or component. Nevertheless, whether by inadvertent action or deliberate action, parts that are not eligible for installation do circumvent these controls and sometimes make their way into inventories and onto aircraft.

An “approved part” is one that is eligible to be installed on an aircraft or other type-certificated product (only an aircraft, aircraft engine, or propeller receives a type certification). In other words, an approved part has been designed, produced and maintained in accordance with federal aviation regulations and is in a condition for safe operation. This includes parts designed and produced under FAA approval as well as parts designed and manufactured under other systems that the regulations recognize as being acceptable.

An “unapproved part” does not meet these requirements. Examples of “unapproved parts” include:

- “Counterfeit” or fraudulently marked parts, components, or materials;

- Parts shipped directly to users by a manufacturer, supplier, or distributor who does not hold, or operate under, the authority to produce the part for sale directly to operators or repair facilities; and
- Parts that have been maintained or repaired and returned to service by persons or facilities that are not authorized to do so.

According to FAA, the Department of Transportation Inspector General's Office, and industry presentations to the Commission, the vast majority of SUPs come from legitimate part manufacturers, distributors, and others (such as airlines who may sell a part out of their inventory) who have either not kept proper documentation or do not have the necessary authority to sell a part directly to another customer. While such practices are technically inconsistent with FAA rules and approvals, the direct shipment of these parts had become a relatively standard activity against which FAA did not routinely take enforcement action until recently.

Nevertheless, it is clear that the criminal element producing counterfeit parts has been attracted to this market due to the high prices of parts and high costs of adhering to regulations associated with aircraft parts.

The FAA's Suspected Unapproved Parts Program Office has actively promoted close cooperation with a number of law enforcement agencies, including the Federal Bureau of Investigations, the Defense Criminal Investigative Service, U.S. Customs, and the Department of Transportation Office of Inspector General. From 1990 to the present, there have been 212 prosecuted SUP cases in which 95% knowingly and willfully manufactured or sold suspected unapproved parts. Law enforcement agencies have a 95% conviction/guilty plea rate in these cases. At present, there are approximately 300 investigations underway.

FAA Actions

Until public concern raised by the press pushed this issue in the mid-1990s, the FAA did not consider suspected unapproved parts a priority safety problem. To date, the FAA has been unable to document any commercial passenger flight accident in the United States that was primarily attributed to the use of an unapproved part. Furthermore, an analysis over a recent 13-year period indicates that there have been only a handful of annual general aviation accidents and incidents attributable to unapproved parts. Nevertheless, investigations have revealed that unapproved parts have either entered the inventory of an air carrier or were installed on commercial aircraft.

In response to this public concern over suspected unapproved parts in the aviation industry, the FAA created a task force to conduct a thorough review of the issue and to devise a comprehensive program to more aggressively address SUPs. The task force made 30 specific recommendations on combating the SUPs problem, including rulemaking projects, a national SUPs training program, and the establishment of a SUP

program office.

Since its inception in November 1995, the Suspected Unapproved Parts Program Office has been charged with the implementation and monitoring of the taskforce's recommendations as well as the coordination of working relationships with law enforcement agencies. To date, the SUP Program has implemented the following key steps:

- Developed and implemented a national SUP training program for both FAA and industry that has received high marks both within the FAA and the aviation community;
- Initiated several rulemaking projects, including the mandatory reporting of SUPs, regulations on record keeping, and increasing civil penalties for persons other than airlines; and
- Created a national database for use by FAA inspectors and law enforcement personnel to keep track of suspected unapproved parts.

Recommendations

To address some of the remaining concerns about SUPs in the aviation community, the Commission makes the following recommendations:

- The FAA should expedite its efforts to clear up the regulatory issues surrounding proper documentation of parts that are technically "unapproved" by virtue of regulatory policy changes and new interpretations but would otherwise be legitimate.
- The DOT Inspector General and the FAA should continue to vigorously pursue those who manufacture and distribute counterfeit and substandard parts, so that the potential threat to aviation safety is eliminated.
- The penalties for criminal activity in this area should be increased. Convicted SUPs offenders have been returning to the industry after serving relatively short sentences. New legislation should prohibit convicted offenders from working in the industry again. Also, law enforcement agencies should be given the authority to destroy confiscated unapproved parts.
- The FAA should continue to work together with industry to train aircraft maintenance personnel on the problems with and the identification of SUPs.

B. Electronic Maintenance Recordkeeping

The Commission urges the FAA to issue the Notice of Proposed Rulemaking (NPRM) critically needed for the industry to take advantage of the use of electronic maintenance recordkeeping and the use of electronic signatures. The Commission believes that the technology developed for the use of electronic maintenance recordkeeping could be utilized with great benefit in the effort to control the use of suspected unapproved parts.

Since 1991, the FAA, through the Aviation Rulemaking Advisory Committee (ARAC), has been debating the release of the NPRM, which would allow aircraft mechanics, repair stations, and airlines to keep aircraft maintenance records in an electronic “format” and manner acceptable to the FAA Administrator. The current Federal Aviation Regulations state that the maintenance records must be kept in a “form” acceptable to the Administrator. Unfortunately, this equates to a cumbersome paper (“hard copy”) maintenance record system. A change in the current regulations will open the door to future electronic technologies as well as current data storage and retrieval systems.

Several advantages of electronic recordkeeping were noted in testimony to the Commission during its recent public hearing on aviation safety. For example, a typical aircraft’s maintenance logbook could be hundreds or even thousands of pages. It is not uncommon for the review of these logs to take three to five days to determine the current maintenance status of an aircraft. Often the logbooks are illegible and present challenges when searching for specific items of information.

One of the primary precursors to maintenance errors is human factors. The Commission believes that there is sufficient technology available that lends itself to application in a maintenance environment, and would prove to be a great safety and efficiency benefit.

C. FAA Safety Personnel Staffing and Training

In response to the legislative mandate for a review of the adequacy of the staffing and training resources of safety personnel within the FAA, the Commission examined the agency’s hiring and training practices, interviewed members of management and the appropriate labor organizations, and reviewed agency plans for future requirements and hiring.

The Commission received information and statements from both management and labor indicating that there are currently no individuals (including either safety inspectors, flight standards examiners, air traffic controllers and airway facilities technicians) who are not fully trained and certified to perform their functions.

After an agency review of staffing levels for all organizations within the FAA in light of budget restrictions, a general reduction in overall staffing began in FY 1992. These reductions, which were largely driven by the guidelines from the National Performance Review, resulted in a decrease in the number of positions within each FAA organization. Subsequently, it was determined that these reductions had the potential of creating impacts on certain safety organizations, and staffing levels began to rise again. To meet the demand for services, staffing levels are projected to increase within each organization’s safety related workforces as the agency approaches the year 2000.

Beginning in 1994, the Administration and the Congress increased agency hiring of safety personnel but did not provide sufficient funding for training, and that resulted in a backlog of training for some safety inspectors and flight standards personnel. Similar mandates in the air traffic service and airways facilities organizations resulted in backlogs in the training pipeline that delayed certification of personnel. This approach

to hiring without budgeting for training was shortsighted and wasteful of resources.

When personnel are hired in the future, the FAA, the Administration, and the Congress should ensure that training resources are available. The Commission finds that agency plans for future hiring do currently factor in the requirements for training, including modernization and enhancement of training programs and tools. The Commission strongly recommends that the FAA ensure that the appropriate training continue to be provided for all future hires as well as current employees.

Figure 9 which depicts training budget resources, indicates the pattern described above and that the FAA, the Administration, and the Congress are now recognizing the need to have training resources available as staffing increases.

If the Commission's recommendations on safety risk management initiatives, such as self-reporting of problems, company safety audits, and flight operator data analysis, become as widely adopted as this report suggests, new types of training will be required for inspectors and other FAA officials. Training will have to recognize the value of these voluntary programs with airline companies. The Commission recommends that training initiatives for FAA personnel be initiated to minimize the misunderstandings and maximize the safety benefits brought into fruition.

With respect to the controller and inspector workforces, the on-board level does roughly approximate the staffing standard, which is the level of staff needed to meet the workload. However, with the airways maintenance staffing, the on-board level has historically been significantly below what the staffing standard seemingly requires.

The Commission has been advised by the FAA that this is because the agency has implemented many management and business process reengineering improvements to increase staffing efficiencies. Such improvements include remote maintenance monitoring and service management coverage, Operations Control Centers (OCC), and a reduction of organizational layers (e.g., improved employee to supervisor ratios). However, these efficiencies are not completely reflected in the staffing standard methodology used to determine and establish organizational staffing requirements.

The Commission is concerned that the agency is not able to provide an accurate forecast of staffing requirements because outdated methodology is being used to determine those requirements. The FAA has initiated an effort to revalidate and modify staffing standards to reflect more accurately staffing requirements in light of the practices described above. The Commission strongly recommends that the agency accelerate this review so that any action that may be necessary to address staffing levels can be taken quickly.

D. Runway Incursions

Because of the critical nature of runway incursions, the Commission has focused on this safety concern. Runway incursions are a very significant safety problem because there

is little built-in redundancy to override a mistake by an air traffic controller or pilot. If an aircraft enters a runway without appropriate authorization in poor visibility conditions, the only hope of preventing a potential collision rests with the pilots seeing the conflict in time to take action.

Runway incursions are defined as “any occurrence at an airport involving an aircraft, vehicle, person, or object on the ground that creates a collision hazard or results in loss of separation with an aircraft taking off, intending to takeoff, landing, or intending to land.” These events can be the result of air traffic control or pilot errors, or pedestrian/vehicle deviations.

The Commission is disturbed that the overall number of runway incursions has risen in the last two fiscal years when compared with the preceding three years, especially in the area of events caused by pilot error and vehicle and pedestrian deviations. The number of incursions that were the result of air traffic control errors has steadily declined since FY 1993.

The Commission believes that the existing FAA runway incursion program should continue to assist in the implementation of automation improvements designed to reduce incursions and maintain an agency focus on required actions to eliminate these events. The Commission is encouraged by the agency’s actions regarding the installation of Airport Movement Area Safety System (AMASS) at 38 sites by the third quarter of FY 2000. AMASS is a computer technology utilizing radar information to alert controllers to potential conflicts on the airfield.

Because several airports slated to receive AMASS are “dual site” locations that will receive two AMASS systems because of the geographical size of the airport, there will be a total of 34 airports that receive this system. Although the agency does not believe AMASS will completely eliminate the possibility of runway incursions, it is optimistic that it will greatly reduce the risk of surface accidents by providing an early warning to the controller. Currently, there is one, non-commissioned prototype, AMASS unit undergoing operational testing at San Francisco International Airport.

Since there are over 400 airports receiving commercial service, the Commission believes this technology should be further deployed to expand this safety net at other locations. Implementing AMASS as developed, however, costs almost \$8 million per site. The Commission is encouraged by the initial agency plans to study the feasibility of deploying a less costly AMASS-type of coverage at another 100 airports. In addition, NASA and FAA research has developed cockpit and ATC displays which present moving map and virtual heads-up presentations of airport taxi-routes and traffic during low visibility. This technology offers great promise for the future.

The Commission is concerned however, by the rise in pilot error incursions, especially as it relates to the number of general aviation pilots who are involved in these events. A review of data indicates that although the number of runway incursions caused by airline or air taxi pilots has remained relatively stable, the number of incidents involving

general aviation has increased dramatically. Upon investigation, it appears that these pilots are not following ATC instructions, have an inadequate knowledge of ATC procedures, or become disoriented during low visibility taxiing.

Beginning in FY 1998, the FAA will have available new training aids and programs designed specifically to address the issue of runway incursions. Although these actions are encouraging, the Commission is concerned about the overall upward trend in spite of past FAA efforts. The FAA needs a plan to address this issue. The Commission also recommends that the FAA develop guidance and encourage a runway incursion program at certificated airports based on the concepts of the Aviation Safety Action Partnership (previously discussed in Section III.A.). Under such a program, pilots would feel free to report and discuss runway incursion problems with local air traffic and airport officials. This program would address runway incursion problems for all aviation segments, including general aviation, and should be centered at airports so that these and other safety issues can be raised and solved locally without fear of punitive action. For issues that exceed the ability of local operators, airport personnel, and air traffic control officials to solve, there should be procedures to raise these issues to regional or national levels as appropriate.

E. Flight Data Recorders – Expanding Parameter Recording

Expanding the parameters on flight data recorders (FDRs) is one of the National Transportation Safety Board's (NTSB) "Most Wanted" transportation safety improvements. FDRs and cockpit voice recorders (CVRs) are the "black boxes" that record key parameters of an aircraft's flight. FDRs can help determine the cause of accidents and incidents and provide valuable data for developing mitigation strategies for preventing future safety problems.

Recently, the FAA issued a regulation requiring that certain airplanes be equipped to accommodate additional digital flight data recorder parameters. This regulation was developed in response to the NTSB's recommendation. The regulation requires additional information to be collected on certain aircraft to ensure more thorough accident or incident investigations and to enable industry to predict certain trends and make necessary modifications before an incident or accident occurs.

The Commission urges the aviation industry to aggressively expedite continued upgrading of flight data sensing and recording equipment with the standards established in the regulation. This would not only help to improve accident investigations, but would also facilitate FOQA programs (discussed in Section III of this report).

F. FAA Oversight in the Future

While this report places a strong emphasis on improving aviation safety through a variety of cooperative and collaborative programs between government and industry, it must be strongly emphasized that the FAA's oversight and inspection role continues. The FAA has taken steps, such as the 90-day review in the Summer of 1996 of FAA

policies regarding surveillance, to ensure that its inspection resources are directed where they are most needed.

The FAA has a long standing policy to direct increased surveillance toward airlines in the throes of financial difficulty or undergoing a merger or acquisition. More recently the FAA has indicated that rapid expansion of an airline's operation will precipitate increased FAA attention on that airline. While financial problems or rapid growth do not necessarily pose safety problems, the FAA must be aware of how the dynamics at a particular airline fit with the management style and safety philosophy of an airline undergoing those changes.

The FAA needs to be constantly vigilant and aware that the dynamics of an economically deregulated airline industry will continually raise issues of capital financing, ownership of aircraft, innovative management approaches, performance of maintenance and training, and operational control. Industry responses to the competitive business environment will require corresponding safety inspection policy and resource adjustments by the FAA to reflect ever changing airline practices in the economically competitive environment that exists.

VI. CONCLUSION

After approximately 30 years of a commercial aviation accident rate that has been low overall but has not been improving, a consensus has developed in the aviation industry and the federal government that steps need to be taken to reduce the accident rate in a very significant way. The anticipated growth in aviation between now and the first quarter of the next century will almost certainly lean to an occurrence of aviation accidents with a frequency that will be wholly unacceptable to the public. The White House Commission on Safety and Security, chaired by Vice President Gore, recommended earlier this year that a goal of an 80% reduction in the accident rate over the next 10 years be established. This Commission concurs in that goal.

From a safety standpoint, aviation is one of the most regulated activities in existence. This should continue. The relationship between government and the aviation industry over the past several decades, which has produced the safest means of commercial transportation, is a remarkable success story. But the time has come to embark on a concerted effort to improve the safety of the aviation system even further.

Accomplishing the goal of a dramatic reduction in the accident rate will require a strategic plan with identified priorities, resources, and milestones for action. At present, there is not one. Without a plan, the FAA and industry safety agenda will naturally reside with fixing the problem that caused the last accident. Fixing the problems that led to the last accident is important, but that last accident may have only a small relevance to the effort to reduce the overall accident rate dramatically. An ongoing public strategy is required to ensure that the right issues are receiving the attention and resources needed over the long term.

To further accomplish the goal of a significant reduction in the accident rate, government and industry must also take some fundamentally different approaches in

their relationship to each other. This will require a breaking of the traditional regulatory and enforcement pattern. Government enforcement of safety rules must continue, but there needs to be a recognition in the future that working for safety improvements from only a traditional enforcement-of-the-rules perspective will not produce the results that are needed. There will need to be a much stronger emphasis placed on cooperative interaction, information sharing, and collaborative development of solutions to safety issues.

A number of approaches are in their infancy and should be expanded throughout the industry. Examples include programs in which airlines and pilots self-report safety issues with no risk of punitive action, airline internal safety audit programs, and programs to use digitally recorded flight data to analyze real world operations. For these programs to become widespread and tools in the effort to reduce the accident rate, the data from these programs needs to be shared and protected from inappropriate uses or punitive actions. The FAA and the industry very much need to cut through the thicket of legal and bureaucratic tangles that are preventing these important safety and accident prevention programs from being implemented.

It is also clear that safety must be addresses globally. Aviation has become very internationalized as trade expands. Reducing the accident rate is going to be far more difficult in some places than in others. The FAA has embarked on a course of action to work with other countries' regulatory authorities to ensure that standards are being met, that regulations are harmonized to the greatest extent possible, and that there are cooperative agreements to improve safety. This must continue and expand if the accident rate is to be reduced.

A consensus has developed to take these actions to improve aviation safety. The Commission believes it is time for industry and government to take the steps outlined in this report so that safety is not just regulated, but is promoted.

PART IV
ATTACHMENTS

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DRAFT LEGISLATION

SEC. 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.— This Act may be cited as the `Aviation System Improvement Act'.

(b) TABLE OF CONTENTS.—

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SEC. 2. AMENDMENTS TO TITLE 49, UNITED STATES CODE.

Except as otherwise specifically provided, whenever in this Act an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision of law, the reference shall be considered to be made to a section or other provision of title 49, United States Code.

SEC. 3. APPLICABILITY.

Except as otherwise specifically provided, this Act and the amendments made by this Act apply only to fiscal years beginning after September 30, 1998.

SEC. 4. DEFINITIONS.

In this Act, the following definitions apply:

(1) ADMINISTRATION.— The term `Administration' means the Federal Aviation Administration.

(2) ADMINISTRATOR.— The term `Administrator' means the Administrator of the Federal Aviation Administration.

(3) SECRETARY.— The term `Secretary' means the Secretary of Transportation.

SEC. 5. EFFECTIVE DATE.

Unless otherwise specified in this Act, the provisions of this Act and the amendments made by this Act shall take effect on the date that is 30 days after the date of the enactment of this Act.

SEC. 6. FINDINGS

Congress finds the following:

(1) Traffic data and trends indicate that adding a few minutes of delay to each airline flight in the United States will bring the aviation system to gridlock with dramatic negative impacts on the economy. The airline industry's complicated schedules are based on precise and efficient air traffic control technology and management. Rapidly growing demand combined with a reduction in capacity, as the result of outdated equipment, will bring our nation's aviation system to gridlock soon after the turn of the century. Gridlock could also have safety implications as pressures to meet flight schedules grow just at a time when capacity is increasingly constrained.

(2) The present system of federal budget regulation is inappropriate for a system controlling commercial operations that need to be driven by demand for services. Budget rules that govern the federal aviation system must be revised. The money problem that faces the Federal Aviation Administration (FAA) is an inability to access the revenues collected for its use.

(3) Authority and accountability are too diffused to run a 24 hour-a-day,

high technology, rapidly changing operating system for a major commercial industry. Everyone responsible for the current air traffic control (ATC) system — the Federal Aviation Administration, the Department of Transportation, the aviation industry, the Administration, and the Congress — want to make the system work. But there are too many people in charge. The problems are systemic and require basic changes in command and control.

(4) While the vast majority of FAA employees remain dedicated and professional, the FAA itself impedes needed modernization by not focusing enough on determining and meeting its external users' needs for high quality and modern services at reasonable costs. Modern business tools such as a cost accounting system that tie specific costs to services and measurement tools to assess how well services are provided are not yet available. Incentives are needed to change the FAA culture to be more externally focused on users and services and more businesslike and responsive.

(5) The funding system forces trade-offs which substitute operational costs for capital investments. The system is in a downward spiral where increasing operational and maintenance costs, driven by outdated equipment, are "freezing out" new investments under current federal budget cap assumptions. Future system capacity will be reduced in real terms from today's capacity.

(6) Airport-related congestion will increase in the future without a strong federal commitment of resources. Airport capital investments must go hand-in-hand with ATC investment to maintain system capacity.

(7) Airport Improvement Program (AIP) funding serves as the linchpin of airport financial planning and, therefore, must be funded adequately on a reliable basis. AIP contributions to airport capital requirements should be funded at \$2 billion annually over the next five years assuming growth adjustments through this period. Further, AIP should be provided requisite budget treatment to ensure a stable and predictable federal funding source for airport capital development. More AIP funding will result in more system capacity being developed.

(8) Smaller airports should receive funding at a higher level, so that their capital development needs can be met and thereby allowing them to continue serving as a critical element of the air transportation system. The Airport Improvement Program is essential for capital development at smaller airports as they have less capability to draw in a meaningful way from other sources of capital funds.

(9) In order to meet the needs for airport infrastructure investment, in the future, the current \$3 ceiling on passenger facility charges (PFCs) will need to be raised. As an alternative, AIP levels would need to be funded at a level substantially above a \$2 billion annual level. If the limit on PFCs is increased, there should be a process established that places a strong emphasis on negotiation between local airports and tenant airlines when a higher-than-\$3 PFC is being proposed. When there is written agreement between an airport and its tenant airlines for the airport to levy a PFC higher

than \$3, there should be no statutory PFC dollar limit, and the FAA's approval process should be ministerial.

(10) Historically, the United States has been the leader in air traffic management and technology. However, other countries are moving ahead of the United States in making improvements to their aviation infrastructure. Falling behind other countries in making critical capital investments will certainly affect the international competitive position of the United States.

SEC. 7. PURPOSES

The purposes of this Act are—

(1) to ensure that the United States continues to have a safe, secure, and efficient air transportation system;

(2) to ensure that there is an adequate and stable funding system specifically dedicated to support the programs of the Administration;

(3) to reform and authorize the programs of the Administration that ensure a safe and healthy national air transportation system;

(4) to permit the Administration to establish a program to improve air traffic system performance and to establish appropriate levels of cost accountability for air traffic services provided by the Administration;

(5) to make the Administration a more efficient and effective organization, able to meet the needs of a dynamic, growing industry, and to ensure the safety of the traveling public;

(6) to provide a financial structure for the Administration so that it will be able to safely support the future growth in the national aviation and airport system;

(7) to establish a process for the creation of an improved financing and funding system for the Administration, including performance- and incentive-based user charges for certain services, and to establish a program to improve air traffic system performance and to establish appropriate levels of cost accountability for air traffic services provided by the Administration;

(8) to ensure that any funding derived from aviation system users will be dedicated solely for the use of the Administration;

(9) to establish a process for the implementation of a user charge system based on an accurate and comprehensive accounting of the costs of the services provided;

(10) to develop an aviation funding system to provide for the long-term efficient and cost-effective support of the Administration and the national aviation system; and

(11) to achieve a more efficient and effective Administration for the benefit of all users of the national aviation transportation system, including the aviation transportation industry.

SEC. A. ESTABLISHMENT OF THE PERFORMANCE BASED ORGANIZATION FOR THE AIR TRAFFIC SYSTEM.

(a) Subtitle VII is amended by inserting after chapter 445 the following:

`CHAPTER 446—PERFORMANCE BASED ORGANIZATION FOR THE AIR TRAFFIC SYSTEM

`SUBCHAPTER I—GENERAL PROVISIONS

`44601. Definitions.

`SUBCHAPTER II—ORGANIZATION AND ADMINISTRATIVE

`44611. Establishment.

`44612. Governing Board.

`44613. Officers.

`44614. Performance management

`44615. Authority to incur indebtedness

`SUBCHAPTER I—GENERAL PROVISIONS

`Sec. 44601. Definitions

`In this chapter, the following definitions apply:

`(1) `Airport and Airway Trust Fund' means the Airport and Airway Trust Fund established under section 9502 of the Internal Revenue Code of 1986 (26 U.S.C. 9502).

`(2) `Board' means the Governing Board established by section 44612.

`(3) `Chief Operating Officer' or `COO' means the Chief Operating Officer established by section 44613(a).

`SUBCHAPTER II—STRUCTURE OF ORGANIZATION

`Sec. 44611. Establishment

`(a) In General.— There is established an entity within the Federal Aviation Administration to be known as the Performance Based Organization for the Air

Traffic System (hereinafter referred to as the “PBO-ATS”).

‘(b) General Authority and Responsibilities of the PBO-ATS.—
Except as otherwise specifically provided in this part of subtitle VII of this title after enactment of this chapter, the PBO-ATS shall—

‘(1) exercise the authority of the Federal Aviation Administration over day-to-day operational supervision and control over the movement of aircraft;

‘(2) develop and implement airspace orders, procedures, and other directives with respect to the use of navigable airspace. This authority includes the ability to issue routine airspace actions and airspace assignments and designations in accordance with rules prescribed for the PBO-ATS by the Administrator of the Administration. Notwithstanding the PBO-ATS’s safety functions and responsibilities with regard to any orders or directives it may prescribe, the authority and responsibility for prescribing safety standards and the policies encompassing the safety structure of the National Airspace System remain with the Administrator. The PBO-ATS shall faithfully and efficiently adhere to and abide by all safety and security standards and regulations prescribed by the Administrator.

‘(3) develop and implement air traffic orders, procedures, and other directives governing the flight of aircraft, for the navigation, protection, and identification of aircraft, for the protection of persons and property on the ground, and for the efficient utilization of the navigable airspace, including procedures as to safe altitudes of flight and the prevention of collision between aircraft and land or water vehicles, and between aircraft and airborne objects;

‘(4) be authorized to—

‘(A) acquire, establish, improve, dispose of, and eliminate air navigation facilities or equipment wherever necessary;

‘(B) operate and maintain such air-navigation facilities; and

‘(C) provide necessary facilities and personnel for the management and protection of air traffic. The PBO-ATS shall update and arrange for publication of clearly defined routes for navigation through airspace where the PBO-ATS determines that publication of such routes would promote safety in air navigation;

‘(5) to encourage and allow maximum use of the navigable airspace by civil aircraft consistent with national security, and subject to appropriate military authority exercised pursuant to section 40106 of this title, recommend for issuance by the Administrator, in consultation with the Secretary of Defense, regulations that establish areas in the airspace the Administrator decides are necessary in the interest of national defense, and to restrict or prohibit flight of civil aircraft that the PBO-

ATS cannot identify, locate, and control with available facilities in those areas;

‘(6) recommend to the Administrator long-range plans and policy for the orderly development and use of the navigable airspace and airport infrastructure that will best meet the needs of, and serve the interests of, civil aeronautics and the national defense, except for needs of the armed forces that are peculiar to warfare and primarily of military concern. In making recommendations, the PBO-ATS shall emphasize—

‘(A) providing the highest degree of safety and efficiency in air commerce;

‘(B) meeting the forecasted needs of civil aeronautics; and

‘(C) meeting the requirements that the Secretary of Defense establishes for the support of the national defense.

‘(7) to implement the authority in this section, undertake reasonable actions, including action to—

‘(A) develop, alter, test, and evaluate systems, procedures, facilities, and devices, and define their performance characteristics, to meet the needs for safe and efficient navigation and air traffic control of civil and military aviation, except for needs of the armed forces that are peculiar to warfare and primarily of military concern; and

‘(B) select systems, procedures, facilities, and devices that will best serve those needs and promote maximum coordination of air traffic control, air defense, and range surveillance systems except for needs of the armed forces that are peculiar to warfare and primarily of military concern;

‘(8) establish procedures to notify the public when major changes in service are contemplated;

‘(9) in any case where negotiations with other countries over airspace control and air navigation may be necessary or desirable, act through the Administrator; and

‘(10) exercise the authority of the Administrator under sections 347 and 348 of Public Law 104-50 (109 Stat. 436; November 15, 1995) (as amended), under subtitle B of Title II of the Federal Aviation Reauthorization Act of 1996, and under section 106(l) of this title.

Sec. 44612. Governing Board

(a) IN GENERAL.— There is established a Governing Board

(“Board”) in which the powers and authority of the PBO-ATS are vested.

“(b) FUNCTIONS.—

“(1) IN GENERAL.— The Board shall be responsible for the major actions and policy functions of the PBO-ATS, including the following:

“(A) The appointment and removal of the Chief Operating Officer and the approval of other senior officers of the PBO-ATS under section 44615. The Board may retain outside experts or consultants as part of any effort to identify potential candidates for the position of Chief Operating Officer.

“(B) Authorization for issuance of indebtedness.

“(C) Long-range and strategic planning for the PBO-ATS.

“(D) Approval or modification of user fees and other charges to the public imposed under section 45313 of this title.

“(E) Approval of annual plan for PBO-ATS expenditures.

“(F) Such other significant actions as the Board considers appropriate and are consistent with the Aviation System Performance Improvement Act.

“(2) NONDELEGABLE FUNCTIONS.— The Board may not delegate the functions described in subparagraphs (A) through (E) of paragraph (1).

“(3) NOT SUBJECT TO ENTITIES CREATED BY EXECUTIVE ORDER.— The PBO-ATS shall not submit decisions for the approval of, and shall not be bound by the decisions or recommendations of, any committee, board, or other organization established by Executive order.

“(c) MEMBERSHIP.— The Board shall be composed of the Administrator of the Federal Aviation Administration and 6 other voting Members to be appointed by the President, by and with the advice and consent of the Senate. The initial members of the Board shall be appointed as soon as practicable after the date of the enactment of the Aviation System Performance Improvement Act.

“(d) QUALIFICATIONS.—

“(1) IN GENERAL.— Members appointed to the Board under subsection (c) of this section shall have a fiduciary responsibility to represent the public interest, shall be citizens of the United States, shall have knowledge of sound corporate

business practices, and at least three of whom should be selected from individuals who have knowledge of or a background in aviation. Members of the Board may not—

 (A) have a pecuniary interest in, or own stock in or bonds of, an aviation or aeronautical enterprise;

 (B) engage in another business, vocation, or employment of an aviation or aeronautical nature;

 (C) be a member of any organization a substantial part of whose activities are for the purpose of influencing aviation-related legislation;

 (D) be an employee of the Administration or PBO-ATS (except for the Administrator); and

 (E) serve more than two consecutive five-year terms, as defined in subsection (e) of this section.

 (2) DEFINITION.— In this subsection, ‘influencing legislation’ has the meaning such term has under section 4911(d) of the Internal Revenue Code of 1986 (26 U.S.C. 4911(d)).

 (e) TERMS.—

 (1) IN GENERAL.— Subject to paragraphs (2) and (3) of this subsection, each Member of the Board appointed under subsection (c) of this subsection shall be appointed for a term of 5 years.

 (2) TERMS OF APPOINTEES.—Members other than the Administrator shall be appointed to the Board for a term of 5 years except that, of the Members first appointed, two shall be appointed by the President for 1-year terms, two shall be appointed by the President for 3-year terms, and two shall be appointed by the President for 5-year terms. Administrators shall serve terms coincident with their service in their positions.

 (3) VACANCIES.— Any Member appointed under subsection (c) of this section to fill a vacancy occurring before the expiration of the term for which the Member’s predecessor was appointed shall be appointed only for the remainder of that term. A Member may serve after the expiration of that Member’s term until a successor has taken office.

 (f) REMOVAL.— Members of the Board appointed under subsection (c) of this section may be removed by the President for inefficiency, neglect of duty, or malfeasance in office.

 (g) CHAIRPERSON.— The Chairperson of the Board shall be the

Administrator.

“(h) QUORUM AND MAJORITY APPROVAL.— Four members of the Board shall constitute a quorum for carrying out the duties and powers of the Board. Decisions of the Board require approval by a majority vote of all Members of the Board. In the case of a crisis or emergency, the Administrator may take an action or make a decision on behalf of the Board, but such action or decision may only stand if ratified by a majority of the Board Members within 15 days.

“(i) PAY AND EXPENSES.— Each Member not employed by the United States Government is entitled to compensation as set by the President, which may be comparable to corporate boards when performing Board duties and powers. Each Member is entitled to reimbursement for necessary travel, reasonable secretarial support, and subsistence expenses incurred in attending Board meetings.

“(j) BYLAWS.— The Board may adopt and amend bylaws governing the operation of the PBO-ATS. The bylaws shall be consistent with this chapter.

“(k) PUBLIC HEARINGS.— At least twice each year, the Board shall hold a public hearing to take public and aviation industry input on issues relevant to responsibilities and activities of the PBO-ATS.

“(l) MEETINGS.— The Board shall meet at least six times each year, or at the call of the Chairperson.

“Sec. 44613. Officers

“(a) CHIEF OPERATING OFFICER.—

“(1) APPOINTMENT.— The Board shall appoint a Chief Operating Officer for an initial period of three to five years. The appointment shall be made on the basis of demonstrated ability in management and without regard to political affiliation or activity. The COO also should have knowledge of or experience in aviation. The Board may reappoint the COO to subsequent terms so long as performance, as set forth in the annual performance agreement (as defined in paragraph (4) of this subsection), is satisfactory or better. However, until the Board appointed pursuant to section 44613 makes an appointment, an individual with the qualifications specified by this subsection may be appointed, by the Administrator, within 30 days of the enactment of the Aviation System Performance Improvement Act, to serve as an interim COO. The COO is subject to the policy guidance of the Board and reports to the Board. The Board may revoke, rescind, or modify actions of the COO.

“(2) DUTIES.— The Chief Operating Officer shall manage the day-to-day operation of the PBO-ATS, including (except as provided in section 44612(b) of this title) the hiring, firing, and assignment of employees, acquisition of

facilities and equipment, preparation of the annual budget submission, and such other functions as the Board considers appropriate.

‘(3) REMOVAL.— The Chief Operating Officer shall serve at the pleasure of the Board, except that the Board shall make every effort to ensure stability and continuity in the leadership of the PBO-ATS.

‘(4) PERFORMANCE AGREEMENT.— The Board and the COO shall enter into an annual performance agreement which shall set forth measurable organizational and individual goals for the COO in key operational areas. The agreement shall be subject to review and renegotiation on an annual basis.

‘(5) COMPENSATION.— The COO is authorized to be paid an annual rate of basic pay not to exceed that of the Administrator. In addition, the COO may receive a bonus in an amount up to, but not in excess of, 50 percent of such annual rate of basic pay, based upon the Board’s evaluation of the COO’s performance in relation to the performance goal set forth in the performance agreement described in paragraph (4). Payment of the bonus may be made to the COO only to the extent that such payment does not cause the COO’s total aggregate compensation in a calendar year to equal or exceed the amount of the President’s salary under section 102 of title 3, United States Code.

‘(6) ANNUAL REPORT.— The COO shall prepare and submit to the Board an annual management report containing such information as the Board shall prescribe.

‘(7) COORDINATION.— The COO shall coordinate with, but not be subject to, the headquarters and regional administrative structure of the Federal Aviation Administration.

‘(b) OTHER OFFICERS.— Subject to the approval of the Board, the Chief Operating Officer shall appoint other senior officers who shall each have such duties as the Chief Operating Officer may prescribe. Within the limits of sections 347 and 348 of Public Law 104-50 (109 Stat. 436; November 15, 1995) (as amended), and subtitle B of Title II of the Federal Aviation Reauthorization Act of 1996, and subject to the approval of the Board, the COO has exclusive authority, which may be delegated, to fix the pay of the officers and other employees of the PBO-ATS, except that the Board shall fix the pay of the COO. No such officer or employee may have a base rate exceeding the Administrator’s base rate of pay. However, the Administrator shall fix the pay, at a rate not to exceed level III of the Executive Schedule, of the COO until the Board is appointed.

‘(c) COUNSEL.— Subject to the approval of the Board, the Chief Operating Officer may appoint a counsel who shall be the chief legal officer for all legal matters arising from the activities of the PBO-ATS, or the COO may retain outside legal counsel, or both.

`(d) CHIEF FINANCIAL OFFICER.— Subject to the approval of the Board, the Chief Operating Officer shall appoint an officer who shall be the chief financial officer for all financial matters arising from the activities of the PBO-ATS.

‘(e) OTHER SERVICES.— Subject to the approval of the Board, the COO may contract for personnel management, financial accounting, or budgeting activities of the PBO-ATS.

‘Sec. 44614. Performance management

‘(a) The PBO-ATS shall establish a performance management system which—

‘(1) maintains individual accountability by—

‘(A) establishing one or more retention standards for each employee related to the work of the employee and expressed in terms of individual performance, and communicating such retention standards to employees;

‘(B) making periodic determinations of whether each employee meets or does not meet the employee’s established retention standards; and

‘(C) with respect to any employee whose performance does not meet established retention standards—

‘(i) in accordance with applicable provisions of law and regulation, denying any increases in basic pay, promotions, and credit for performance; and

‘(ii) taking one or more of the following actions:
‘(I) reassignment; or
‘(II) other appropriate action, including termination, to resolve the performance problem; and

‘(2) strengthens its effectiveness by—

‘(A) establishing goals or objectives for individual, group, or organizational performance (or any combination thereof), consistent with the annual performance agreement described in section 44613(b) and the PBO-ATS performance planning procedures, including those established under the Government Performance and Results Act of 1993, and communicating such goals or objectives to employees;

‘(B) using such goals and objectives to make performance distinctions among employees or groups of employees; and

‘(C) using performance assessments as a basis for granting employee awards, adjusting an employee’s rate of basic pay, and other appropriate personnel actions, in accordance with applicable provisions of law and regulation. For purposes of this subparagraph, “performance assessment” means a determination of whether or not retention standards established under paragraph (1)(A) are met, and any additional performance determination made on the basis of performance goals and objectives established under subparagraph (A) of the paragraph.

‘(b) The PBO-ATS shall establish an awards program designed to provide incentives for and recognition of organizational, group, and individual achievements by providing for granting awards to employees who, as individuals or members of a group, contribute to meeting the performance goals and objectives established under the section by means of a superior individual or group accomplishment, a documented productivity gain, or sustained superior performance.

‘Sec. 44615. Authority to incur indebtedness

‘(a) General authority.— Beginning July 1, 2000, and subject to the authority of the Secretary of Transportation pursuant to subsection (d) of this section to disapprove the issuance of indebtedness by the PBO-ATS, the PBO-ATS may issue such notes or other obligations as the PBO-ATS determines necessary to carry out the purposes of section 44611(b)(4)(A) of this title, either to the Secretary of the Treasury pursuant to subsection (b) of this section or to private entities pursuant to subsection (c) of this section. The aggregate amount of any such obligations outstanding at any one time shall not exceed \$15,000,000,000.

‘(b) Treasury borrowing.— The PBO-ATS may issue to the Secretary of the Treasury notes or other obligations in such forms and denominations, bearing such maturities, and subject to such terms and conditions, as may be prescribed by the Secretary of the Treasury. Such notes shall bear interest at a rate determined by the Secretary of the Treasury, taking into consideration current market yields on outstanding marketable obligations of the United States of comparable maturities. The Secretary of the Treasury shall purchase any notes or other obligations issued hereunder, and for that purpose such Secretary is authorized to use as a public debt transaction the proceeds from the sale of any securities issued under chapter 31 of title 31, United States Code, and the purposes for which securities may be issued under that Act are extended to include any purchase of such notes or obligations acquired by him or her under this subsection. The Secretary of the Treasury may at any time sell any notes or other obligations acquired by him or her under this subsection.

‘(c) Market borrowing.—

‘(1) After consulting with the Secretary of the Treasury and the Secretary of Transportation, the PBO-ATS is authorized to issue notes and other

obligations to private entities consistent with this subsection.

‘(2) The PBO-ATS may pledge air traffic system assets under its control and pledge and use its user charge collections and receipts for the payment of the principal or interest on its obligations, for the purchase or redemption thereof, and for other purposes incidental thereto, including creation of reserve, sinking, and other funds which may be similarly pledged and used, to such extent and in such manner as the Board deems necessary or desirable. The PBO-ATS is authorized to enter into binding covenants with the holders of such obligations, and with the trustee, if any, under any agreement entered into in accordance with the issuance thereof with respect to the establishment of reserve, sinking, and other funds, application and use of user charge collections and receipts of the PBO-ATS, stipulations concerning the subsequent issuance of obligations or the execution of leases or lease/purchases relating to properties under its control, and such other matters as the Board deems necessary or desirable to enhance the marketability of such obligations. However, the PBO-ATS may not enter into covenants that have the effect of conflicting with any requirement of this Act, as determined by the Secretary in approving the issuance of indebtedness pursuant to subsection (d) of this section.

‘(3) Obligations issued by the PBO-ATS under this subsection shall be subject to such terms and conditions as the Board determines.

‘(4) Obligations issued by the PBO-ATS under this subsection shall—

‘(A) be negotiable or nonnegotiable and bearer or registered instruments, as specified therein and in any indenture or covenant relating thereto;

‘(B) contain a recital that they are issued under this section, and such recital shall be conclusive evidence of the regularity of the issuance of sale of such obligations and of their validity; and

‘(C) be treated as an obligation or security of the United States for purposes of the counterfeiting and forgery provisions of title 18, United States Code.

‘(d) Review of borrowing.— The issuance of indebtedness by the PBO-ATS may be disapproved by the Secretary of Transportation if the Secretary determines that the total revenues of the PBO-ATS are insufficient to satisfy obligations incurred by the PBO-ATS, including those that are held by the United States. Within 30 days of the receipt of a proposal for the issuance of indebtedness, the Secretary shall notify the Board of any disapproval, with justification for a disapproval.’.

(b) Section 106 of title 49, United States Code, is amended by inserting at the end the following new subsection:

‘(r) Relationship of Administrator and PBO-ATS.—

'(1) The Administrator shall delegate such powers, authorities, and responsibilities of the Administration to the PBO-ATS as the Administrator deems are necessary to fulfill the requirements of the Aviation System Performance Improvement Act.'

'(2) To the extent necessary, the Administrator shall, through the PBO-ATS entity, execute and otherwise carry out the decisions of the Board (as established in section 44613) to carry out the functions and responsibilities of the PBO-ATS.

'(3) By no later than February 1, 1999, the PBO-ATS and the Administrator must enter into a Memorandum of Understanding concerning the exercise of the PBO-ATS' air traffic system related authorities and responsibilities to ensure clear lines of authority and responsibility for the safe and efficient movement of air traffic.

'(4) By no later than February 1, 1999, the PBO-ATS and the Administrator must enter into a Memorandum of Understanding concerning the allocation of the Administration's administrative expenses to the PBO-ATS and providing for reimbursement to Administration of such expenses.'

SEC. B. AIR TRAFFIC PERFORMANCE FUND.

Section 45303(c) is amended by—

(1) inserting "under this chapter (except for section 45302)" after "Administration" where it first appears; and

(2) striking paragraph (1) and inserting a new paragraph (1) as follows:

"(1) shall be credited as offsetting collections to a separate account in the Treasury, to be known as the Air Traffic Performance Fund, and made available for the activities of the PBO-ATS established under section 44611 of this title and for airport planning and development and noise compatibility and programs;"

SEC. C. FUNDS TO SUPPORT FAA PROGRAMS THROUGH JUNE 2000.

(a) IN GENERAL.— Chapter 453 is amended by adding at the end the following:

Sec. 45305. Aviation User Charges Through FY 2000.

'(a) In General.—There is hereby imposed on the amount paid for leviable transportation of any person a fee equal to 7.5 percent of the amount so paid.

'(b) Domestic Segments of Leviable Transportation.—

'(1) In general.— There is hereby imposed on the amount paid for each domestic segment of leviabale transportation by air a fee in the amount determined in accordance with the following table for the period in which the segment begins:

In the case of segments beginning:	The fee is:
After January 31, 1999, and before October 1, 1999	\$2.00
After September 30, 1999, and before July 1, 2000	\$2.25

'(2) Domestic segment.—For purposes of this section, the term 'domestic segment' means any segment consisting of 1 takeoff and 1 landing and which is leviabale transportation described in section 45306(a)(1).

'(3) Changes in segments by reason of rerouting.— If—

'(A) transportation is purchased between 2 locations on specified flights, and

'(B) there is a change in the route taken between such 2 locations which changes the number of domestic segments, but there is no change in the amount charged for such transportation, the fee imposed by paragraph (1) shall be determined without regard to such change in route.

'(c) Use of International Travel Facilities.—

'(1) In general.—There is hereby imposed a fee of \$12.00 on any amount paid (whether within or without the United States) for any transportation of any person by air, if such transportation begins or ends in the United States.

'(2) Exception for transportation entirely leviabale under subsection (a).— This subsection shall not apply to any transportation all of which is leviabale under subsection (a) (determined without regard to sections 45310 and 45311).

'(3) Special rule for Alaska and Hawaii.— In any case in which the fee imposed by paragraph (1) applies to a domestic segment beginning or ending in Alaska or Hawaii, such fee shall apply only to departures and shall be at the rate of \$6.

'(d) By whom paid.— Except as provided in section 45307(a), the fees imposed by this section shall be paid by the person making the payment subject to the fee.

‘(e) Special Rules.—

‘(1) Segments to and from rural airports.—

‘(A) Exception from segment fee.—The fee imposed by subsection (b)(1) shall not apply to any domestic segment beginning or ending at an airport which is a rural airport for the calendar year in which such segment begins or ends (as the case may be).

‘(B) Rural airport.— For purposes of this paragraph, the term ‘rural airport’ means, with respect to any calendar year, any airport if—

‘(i) there were fewer than 100,000 commercial passengers departing by air during the second preceding calendar year from such airport, and

‘(ii) such airport—

‘(I) is not located within 75 miles of another airport which is not described in clause (i), or

‘(II) is receiving essential air service subsidies as of the date of the enactment of this paragraph.

‘(C) No phase in of reduced ticket fee.—In the case of transportation beginning before October 1, 1999—

‘(i) In general.— Paragraph (5) shall not apply to any domestic segment beginning or ending at an airport which is a rural airport for the calendar year in which such segment begins or ends (as the case may be).

‘(ii) Transportation involving multiple segments.— In the case of transportation involving more than 1 domestic segment at least 1 of which does not begin or end at a rural airport, the 7.5 percent rate applicable by reason of clause (i) shall be applied by taking into account only an amount which bears the same ratio to the amount paid for such transportation as the number of specified miles in domestic segments which begin or end at a rural airport bears to the total number of specified miles in such transportation.

‘(2) Amounts paid outside the United States.— In the case of amounts paid outside the United States for leviable transportation, the fees imposed by subsections (a) and (b) shall apply only if such transportation begins and ends in the United States.

‘(3) Amounts paid for right to award free or reduced rate air transportation.—

‘(A) In general.—Any amount paid (and the value of any other benefit provided) to an air carrier (or any related person) for the right to provide mileage awards for (or other reductions in the cost of) any transportation of persons by air shall be treated for purposes of subsection (a) as an amount paid for leviable transportation, and such amount shall be leviable under subsection (a) without regard to any other provision of this subchapter.

‘(B) Controlled group.—For purposes of subparagraph (A), a corporation and all wholly owned subsidiaries of such corporation shall be treated as 1 corporation.

‘(C) Regulations.—The Secretary of the Treasury shall prescribe rules which reallocate items of income, deduction, credit, exclusion, or other allowance to the extent necessary to prevent the avoidance of the fee imposed by reason of this paragraph. The Administrator may prescribe rules which exclude from the fee imposed by subsection (a) amounts attributable to mileage awards which are used other than for transportation of persons by air.

‘(4) Inflation adjustment of dollar rates of fee.—

‘(A) In general.—In the case of leviable events in a calendar year after the last nonindexed year, each dollar amount contained in subsection (c) shall be increased by an amount equal to—

‘(i) such dollar amount, multiplied by

‘(ii) the cost-of-living adjustment determined under section 1(f)(3) of title 26, United States Code, for such calendar year by substituting the year before the last nonindexed year for ‘calendar year 1992’ in subparagraph (B) thereof.

‘If any increase determined under the preceding sentence is not a multiple of 10 cents, such increase shall be rounded to the nearest multiple of 10 cents.

‘(B) Last nonindexed year.—For purposes of subparagraph (A), the last nonindexed year is 1998 in the case of the dollar amounts contained in subsection (c) of this section.

‘(5) Rates of ticket fee for transportation beginning before October 1, 1999.— Subsection (a) shall be applied by substituting for ‘7.5 percent’, ‘8 percent’ in the case of transportation beginning after January 31, 1998, and before October 1, 1999.

‘(f) Exemption for certain helicopter uses.— No fee shall be imposed

under subsection (a) or (b) on air transportation by helicopter for the purpose of —

‘(1) transporting individuals, equipment, or supplies in—

‘(A) the exploration for, or the development or removal of,
hard minerals, or

‘(B) the exploration for oil, or gas, or

‘(2) the planting, cultivation, cutting, or transportation of, or caring
for, trees (including logging operations),

‘but only if the helicopter does not take off from, or land at, a facility
eligible for assistance under the Airport and Airway Development Act of 1970, or
otherwise use services provided pursuant to sections 44509 or 44913(b) or subchapter I
of chapter 471 of this title, during such use. In the case of helicopter transportation
described in paragraph (1), this subsection shall be applied by treating each flight
segment as a distinct flight.

‘(g) Exemption for certain emergency medical transportation.— No fee
shall be imposed under this section or section 45308 on any air transportation for the
purpose of providing emergency medical services —

‘(1) by helicopter, or

‘(2) by a fixed-wing aircraft equipped for and exclusively dedicated
to acute care medical services.

‘(h) Application of fees.— The fees imposed by this section shall apply to
—

‘(1) transportation beginning during the period —

‘(A) beginning on February 1, 1999, and

‘(B) ending on June 30, 2000, and

‘(2) amounts paid during such period for transportation beginning
after such period.

‘(i) Collection system.— No later than January 31, 1999, the PBO-ATS
shall have in place a system for the collection of fees established under this section.

‘Sec. 45306. Definition of leviable transportation.

‘(a) Leviable transportation; in general.— For purposes of this section and
sections 45305 and 45307 of this title, except as provided in subsection (b), the term
“leviable transportation” means —

'(1) transportation by air which begins in the United States or in the 225-mile zone and ends in the United States or in the 225-mile zone; and

'(2) in the case of transportation by air other than transportation described in paragraph (1), that portion of such transportation which is directly or indirectly from one port or station in the United States to another port or station in the United States, but only if such portion is not a part of uninterrupted international air transportation (within the meaning of subsection (c)(3)).

'(b) Exclusion of certain travel.— For purposes of this part, the term "leivable transportation" does not include that portion of any transportation by air which meets all 4 of the following requirements:

'(1) such portion is outside the United States;

'(2) neither such portion nor any segment thereof is directly or indirectly —

'(A) between (i) a point where the route of the transportation leaves or enters the continental United States, or (ii) a port or station in the 225-mile zone, and

'(B) a port or station in the 225-mile zone;

'(3) such portion—

'(A) begins at either (i) the point where the route of the transportation leaves the United States, or (ii) a port or station in the 225-mile zone, and

'(B) ends at either (i) the point where the route of the transportation enters the United States, or (ii) a port or station in the 225-mile zone; and

'(4) a direct line from the point (or the port or station) specified in paragraph (3)(A), to the point (or the port or station) specified in paragraph (3)(B), passes through or over a point which is not within 225 miles of the United States.

'(c) Definitions.— For purposes of this section—

'(1) Continental United States.— The term "continental United States" means the District of Columbia and the States other than Alaska and Hawaii.

'(2) 225-mile zone.- The term "225-mile zone" means that portion of Canada and Mexico which is not more than 225 miles from the nearest point in the continental United States.

'(3) Uninterrupted international air transportation.— The term

“uninterrupted international air transportation” means any transportation by air which is not transportation described in subsection (a)(1) and in which—

‘(A) the scheduled interval between (i) the beginning or end of the portion of such transportation which is directly or indirectly from one port or station in the United States to another port or station in the United States and (ii) the end or beginning of the other portion of such transportation is not more than 12 hours, and

‘(B) the scheduled interval between the beginning or end and the end or beginning of any two segments of the portion of such transportation referred to in subparagraph (A)(i) is not more than 12 hours.

‘For purposes of this paragraph, in the case of personnel of the United States Army, Air Force, Navy, Marine Corps, and Coast Guard traveling in uniform at their own expense when on official leave, furlough, or pass, the scheduled interval described in subparagraph (A) shall be deemed to be not more than 12 hours if a ticket for the subsequent portion of such transportation is purchased within 12 hours after the end of the earlier portion of such transportation and the purchaser accepts and utilizes the first accommodations actually available to him for such subsequent portion.

‘(d) Transportation.— For purposes of this part, the term “transportation” includes layover or waiting time and movement of the aircraft in deadhead service.

‘(e) Authority to waive 225-mile zone provisions.—

‘(1) In general.— If the Administrator determines that Canada or Mexico has entered into a qualified agreement —

‘(A) the Administrator shall publish a notice of such determination in the Federal Register, and

‘(B) effective with respect to transportation beginning after the date specified in such notice, to the extent provided in the agreement, the term “225-mile zone” shall not include part or all of the country with respect to which such determination is made.

‘(2) Termination of waiver.— If a determination was made under paragraph (1) with respect to any country and the Administrator subsequently determines that the agreement is no longer in effect or that the agreement is no longer a qualified agreement—

‘(A) the Administrator shall publish a notice of such determination in the Federal Register, and

‘(B) subparagraph (B) of paragraph (1) shall cease to apply

with respect to transportation beginning after the date specified in such notice.

‘(3) Qualified agreement.— For purposes of this subsection, the term “qualified agreement” means an agreement between the United States and Canada or Mexico (as the case may be)—

‘(A) setting forth that portion of such country which is not to be treated as within the 225-mile zone, and

‘(B) providing that the tax or fee imposed by such country on transportation described in subparagraph (A) will be at a level which the Administrator determines to be appropriate.

‘(4) Requirement that agreement be submitted to Congress.— No notice may be published under paragraph (1)(A) with respect to any qualified agreement before the date 90 days after the date on which a copy of such agreement was furnished to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate.

‘Section 45307. Special rules

‘(a) Payments made outside the United States for prepaid orders.— If the payment upon which a fee is imposed by section 45305 is made outside the United States for a prepaid order, exchange order, or similar order, the person furnishing the initial transportation pursuant to such order shall collect the amount of the fee.

‘(b) Fee deducted upon refunds.— Every person who refunds any amount with respect to a ticket or order which was purchased without payment of the fee imposed by section 45305 shall deduct from the amount refundable, to the extent available, any fee due under such section as a result of the use of a portion of the transportation purchased in connection with such ticket or order, and shall report to the Administrator the amount of any such fee remaining uncollected.

‘(c) Payment of fee.— Where any fee imposed by section 45305 is not paid at the time payment for transportation is made, then, under regulations prescribed by the Administrator, to the extent that such fee is not collected under any other provision of this subchapter, such fee shall be paid by the carrier providing the initial segment of such transportation which begins or ends in the United States.

‘(d) Application of fee.— The fee imposed by section 45305 shall apply to any amount paid within the United States for transportation of any person by air unless the fee-payer establishes, pursuant to regulations prescribed by the Administrator at the time of payment for the transportation, that the transportation is not transportation in respect of which fee is imposed by section 45305.

‘(e) Round trips.— In applying this subchapter to a round trip, such round trip shall be considered to consist of transportation from the point of departure to the destination, and of separate transportation thereafter.

‘(f) Transportation outside the northern portion of the Western Hemisphere.— In applying this chapter to transportation any part of which is outside the northern portion of the Western Hemisphere, if the route of such transportation leaves and reenters the northern portion of the Western Hemisphere, such transportation shall be considered to consist of transportation to a point outside such northern portion, and of separate transportation thereafter. For purposes of this subsection, the term “northern portion of the Western Hemisphere” means the area lying west of the 30th meridian west of Greenwich, east of the international dateline, and north of the Equator, but not including any country of South America.

‘Sec. 45308. Imposition of property transportation fee

‘(a) In general.— There is hereby imposed upon the amount paid within or without the United States for the leviable transportation (as defined in section 45309) of property a fee equal to 6.25 percent of the amount so paid for such transportation. The fee imposed by this subsection shall apply only to amounts paid to a person engaged in the business of transporting property by air for hire.

‘(b) By whom paid.

‘(1) In general.— Except as provided by paragraph (2), the fee imposed by subsection (a) shall be paid by the person making the payment subject to fee.

‘(2) Payments made outside the United States.— If a payment subject to fee under subsection (a) is made outside the United States and the person making such payment does not pay such fee—

‘(A) shall be paid by the person to whom the property is delivered in the United States by the person furnishing the last segment of the leviable transportation in respect of which such fee is imposed, and

‘(B) shall be collected by the person furnishing the last segment of such leviable transportation.

‘(c) Determination of amounts paid in certain cases.— For purposes of this section, in any case in which a person engaged in the business of transporting property by air for hire and one or more other persons not so engaged jointly provide services which include leviable transportation of property, and the person so engaged receives, for the furnishing of such leviable transportation, a portion of the receipts from the joint providing of such services, the amount paid for the leviable transportation shall be treated as being the sum of (1) the portion of the receipts so received, and (2) any

expenses incurred by any of the persons not so engaged which are properly attributable to such leviable transportation and which are taken into account in determining the portion of the receipts so received.

‘(d) Termination.— The fee imposed by subsection (a) shall apply with respect to transportation beginning after February 1, 1999, and before July 1, 2000.

‘(e) Collection system.— No later than January 31, 1999, the PBO-ATS shall have in place a system for the collection of fees established under this section.

‘Sec. 45309. Definition of leviable transportation, etc.

‘(a) In general.— For purposes of this section and section 45308, except as provided in subsection (b), the term “leviable transportation” means transportation by air which begins and ends in the United States.

‘(b) Exceptions.— For purposes of this part, the term “leviable transportation” does not include —

‘(1) that portion of any transportation which meets the requirements of paragraphs (1), (2), (3), and (4) of section 45306(b), or

‘(2) under regulations prescribed by the Administrator, transportation of property in the course of exportation (including shipment to a possession of the United States) by continuous movement, and in due course so exported.

‘(c) Excess baggage of passengers.— For purposes of this part, the term “property” does not include excess baggage accompanying a passenger traveling on an aircraft operated on an established line.

‘(d) Transportation.— For purposes of this part, the term “transportation” includes layover or waiting time and movement of the aircraft in deadhead service.

‘Sec. 45310. Small aircraft on nonestablished lines

‘The fees imposed by sections 45305 and 45308 shall not apply to transportation by an aircraft having a maximum certificated takeoff weight of 6,000 pounds or less, except when such aircraft is operated on an established line. For purposes of the preceding sentence, the term “maximum certificated takeoff weight” means the maximum such weight contained in the type certificate or airworthiness certificate.

'Sec. 45311. Transportation by air for other members of affiliated group

'(a) General rule.— Under regulations prescribed by the Administrator, if

—
aircraft, and

'(1) one member of an affiliated group is the owner or lessee of an

'(2) such aircraft is not available for hire by persons who are not members of such group, no fee shall be imposed under section 45305 or 45308 upon any payment received by one member of the affiliated group from another member of such group for services furnished to such other member in connection with the use of such aircraft.

'(b) Affiliated group.— For purposes of subsection (a), the term "affiliated group" has the meaning assigned to such term by section 1504(a) of title 26, United States Code, except that all corporations shall be treated as includible corporations (without any exclusion under section 1504(b) of title 26, United States Code).

'Sec. 45312. Cases Where Persons Receiving Payment Must Collect Fee

'Except as otherwise provided in section 45307(a), every person receiving any payment for facilities or services on which a fee is imposed upon the payor thereof under this chapter shall collect the amount of the fee from the person making such payment.'

SEC. D. TICKETING AND ADVERTISING PENALTY

Chapter 463 is amended by adding at the end the following:

'Sec. 46317. Penalty for offenses relating to certain airline tickets and advertising.

'(a) Tickets.— In the case of transportation by air all of which is leviable transportation (as defined in section 45306 of this title), the ticket for such transportation shall show the total of —

'(1) the amount paid for such transportation, and

'(2) the fees imposed by subsections (a) and (b) of section 45305 of this title.

'(b) Advertising.— In the case of transportation by air all of which is leviable transportation (as defined in section 45306) or would be leviable transportation if section 45306 did not include subsection (b) thereof, any advertising made by or on behalf of any person furnishing such transportation (or offering to arrange such transportation) which states the cost of such transportation shall —

'(1) state such cost as the total of

'(A) the amount to be paid for such transportation, and

'(B) the fees imposed by sections 45305(a), (b), and (c), and

'(2) if any such advertising states separately the amount to be paid for such transportation or the amount of such fees, shall state such total at least as prominently as the more prominently stated of the amount to be paid for such transportation or the amount of such fees and shall describe such fees substantially as: "user fees to pay for airport construction and airway safety and operations."

'(c) Penalty.— Any person who violates any provision of subsection (a) or (b) is, for each violation, guilty of a misdemeanor, and upon conviction thereof shall be fined not more than \$100.'

SEC. E. FUNDS TO SUPPORT FAA PROGRAMS BEGINNING JULY 2001

Chapter 453 of title 49, United States Code, is further amended by inserting at the end the following:

`Sec. 45313. Funds to Support PBO-ATS and AIP

`(a) In general.— Not later than July 1, 1999, the Administrator shall develop an initial proposed fee schedule to pay all the costs of providing the programs and activities (including capital investment) of the PBO-ATS, as established under sections 44611 of this title, and to fully support airport-related programs authorized under section 48402 . In developing the proposal, the Administrator may utilize the services of experts and consultants, and may contract on a sole source basis, notwithstanding any other provision of law to the contrary, to develop air traffic system user fees, which must be based on cost accounting data. The Administrator shall cause a copy of the proposed fee system to be published in the Federal Register as a Notice of Proposed Rulemaking. The Administrator must issue a final rule under this section, after public comment and hearing, and consultation with the MAC established under section 106(p) of this title, by March 1, 2000, and such fee schedule shall take effect no later than July 1, 2000. The PBO-ATS Board, established under section 44612 of this title, must approve any proposed fee schedule or system under this section prior to issuance of a final rule. On March 1, 2000, the Administrator shall transmit copies of the proposed final rule to the Committee on Commerce, Science, and Transportation of the Senate, and the Committee on Transportation and Infrastructure of the House of Representatives for review. Section 106(f)(3)(B) of this title is not applicable to any rulemaking undertaken under this subsection.

`(b) Requirements.— To the maximum extent feasible, a fee system developed under this section, must—

`(1) be based upon the costs of providing services to users based upon the best available data derived from the cost accounting system; and

‘(2) differentiate between the provision of services related to the landing and takeoff of aircraft and the provision of services related to handling aircraft in flight.

`(c) Considerations.— To the maximum extent feasible, in developing a fee system under this section, the Administrator must also consider—

`(1) the impact on air fares (including low-fare, high-frequency service), service, and competition;

`(2) the existing contributions provided by individual air carriers toward funding of the Administration and the air traffic system;

`(3) the promotion of fair and competitive practices;

`(4) the unique circumstances associated with interisland air carrier service in Hawaii and rural air service in Alaska;

`(5) the impact on service to small communities;

`(6) the impact on services provided by regional air carriers;

`(7) the use of congestion and peak-period pricing;

‘(8) the costs of providing services at different size terminals, to different size aircraft, and at different times of day; and

‘(9) the ease of administration of such fees.

`(d) Limitations.—

`(1) Certain users.— Fees may be imposed under this section on any user of air traffic control services not subject to taxes under section 4261 of title 26, so long as any such fees are not inconsistent with international agreements.

`(2) General aviation aircraft.— No fee may be imposed under this section on aircraft that are not used in the business of providing transportation of persons or property for compensation or hire by air.

‘(3) On-demand and air taxi operators.— No fee may be imposed under this section on aircraft that are used exclusively for on-demand and air taxi operations under 14 CFR 135 (as of September 30, 1998).

(e) Consultation with Management Advisory Council.— In developing proposals under subsection (a) of this section, the Administrator shall consult with the Management Advisory Council established under section 106(p) and, to the maximum extent possible, seek to develop a consensus.

(f) Termination.— Fees imposed under this section (except under subsection (g)) shall terminate 3 years after going into effect or until replaced by a replacement fee system established under subsection (g), but any amounts collected shall remain available until expended.

(g) Additional system proposals.— After the initial fee system has been imposed under this section, the PBO-ATS Board may propose a replacement fee system. The Administrator shall cause a copy of the proposed replacement fee system to be printed in the Federal Register in the form of a Notice of Proposed Rulemaking. Any final rule setting forth a replacement fee system must be developed in consultation with the Management Advisory Council established under section 106(p) of this title and approved by the PBO-ATS Board after public comment and hearing. Copies of any proposed final rule must be transmitted to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of Representatives. The proposed replacement fee system shall take effect upon the termination of the fee system it replaces or four months after copies of the proposed final rule have been transmitted to Congress, whichever is later. Section 106(f)(3)(B) of this title is not applicable to any rulemaking undertaken under this subsection.

(h) Policy for imposition of fees, charges and practices.— The fees, charges and related practices established pursuant to this section shall conform to the following policies:

(1) Fees, charges and practices shall not unreasonably restrain competition by, for example, being unfair, unreasonable, unjustly discriminatory among current or potential users of the air traffic system, or unreasonably disadvantaging new entrants.

(2) Fees or charges shall be consistent with all obligations of the United States Government under international agreements.

(3) Fees or charges shall be maintained at a level sufficient to assure the satisfaction of all obligations incurred by the PBO-ATS (or the Administration, as the case may be), including those that are held by the United States.

(4) Fees or charges need not be based solely on costs if the PBO-ATS determines that public interest or safety would be better served by not doing so.

‘Sec. 45314. Non-applicability of certain laws

The provisions of the Independent Offices Appropriation Act, as amended (31 U.S.C. 9701), are not applicable to the imposition of any fees under this chapter.’

‘Sec. 45315. Implementation of PBO-ATS funding proposal

‘(a) In General.— Subject to subsection (b), the Administrator shall implement the proposed PBO-ATS funding system/schedule under section 45313 of this title.

‘(b) Congressional Disapproval.—

‘(1) The Administrator may not implement any proposed PBO-ATS funding system/schedule if a joint resolution is enacted, in accordance with the provisions of section 45316, disapproving such funding proposal before the earlier of—

‘(A) the end of the 60-day period beginning on the date on which the Administrator of the FAA transmits such system/schedule; or

‘(B) the adjournment of Congress sine die for the session during which such report is transmitted.

‘(2) For purposes of paragraph (1) of this subsection and subsections (a) and (c) of section 45316, the days on which either House of Congress is not in session because of an adjournment of more than three days to a day certain shall be excluded in the computation of a period.

‘(c) Exception.— Any PBO-ATS funding proposal submitted to Congress by the Administrator of the FAA under section 45313(g) of this title shall only be subject to congressional disapproval under this section and section 45316, if the Administrator of the FAA determines that such proposal would—

‘(1) increase any existing fees or charges by an amount that would exceed cost-of-living adjustments determined under section 1(f)(3) of title 26, United States Code for the time period the existing fees or charges had been in effect, or

‘(2) cause the annual aggregate payment of fees or charges by one or more individual payors to increase by 10 percent or more over the last calendar year of the existing fees or charges.

‘Sec. 45316. Congressional consideration of PBO-ATS funding proposal

‘(a) Terms of the Resolution.— For purposes of section 45315, the term “joint resolution” means only a joint resolution which is introduced within the 10-day period beginning on the date on which the Administrator of the FAA transmits the report to the Congress under section 45313, and—

‘(1) which does not have a preamble;

‘(2) the matter after the resolving clause of which is as follows: “That Congress disapproves the PBO-ATS funding proposal submitted by the Administrator of the FAA on - - -”, the blank space being filled in with the appropriate date; and

‘(3) the title of which is as follows: “Joint resolution disapproving the PBO-ATS funding proposal submitted by the Administrator of the FAA.”.

‘(b) Referral.— A resolution described in subsection (a) that is introduced in the House of Representatives shall be referred to the Committee on Transportation and Infrastructure of the House of Representatives. A resolution described in subsection (a) introduced in the Senate shall be referred to the Committee on Commerce, Science, and Transportation of the Senate.

‘(c) Discharge.— If the committee to which a resolution described in subsection (a) is referred has not reported such resolution (or an identical resolution) by the end of the 30-day period beginning on the date on which the Administrator of the FAA transmits the PBO-ATS funding proposal under section 45313, such committee shall be, at the end of such period, discharged from further consideration of such resolution, and such resolution shall be placed on the appropriate calendar of the House involved.

‘(d) Consideration.—

‘(1) On or after the third day after the date on which the committee to which such a resolution is referred has reported, or has been discharged (under subsection (c)) from further consideration of, such a resolution, it is in order (even though a previous motion to the same effect has been disagreed to) for any Member of the respective House to move to proceed to the consideration of the resolution. A Member may make the motion only on the day after the calendar day on which the Member announces to the House concerned the Member’s intention to make the motion, except that, in the case of the House of Representatives, the motion may be made without such prior announcement if the motion is made by direction of the committee to which the resolution was referred. All points of order against the resolution (and against consideration of the resolution) are waived. The motion is highly privileged in the House of Representatives and is privileged in the Senate and is not

debatable. The motion is not subject to amendment, or to a motion to postpone, or to a motion to proceed to the consideration of other business. A motion to reconsider the vote by which the motion is agreed to or disagreed to shall not be in order. If a motion to proceed to the consideration of the resolution is agreed to, the respective House shall immediately proceed to consideration of the joint resolution without intervening motion, order, or other business, and the resolution shall remain the unfinished business of the respective House until disposed of.

‘(2) Debate on the resolution, and on all debatable motions and appeals in connection therewith, shall be limited to not more than 2 hours, which shall be divided equally between those favoring and those opposing the resolution. An amendment to the resolution is not in order. A motion further to limit debate is in order and not debatable. A motion to postpone, or a motion to proceed to the consideration of other business, or a motion to recommit the resolution is not in order. A motion to reconsider the vote by which the resolution is agreed to or disagreed to is not in order.

‘(3) Immediately following the conclusion of the debate on a resolution described in subsection (a) and a single quorum call at the conclusion of the debate if requested in accordance with the rules of the appropriate House, the vote on final passage of the resolution shall occur.

‘(4) Appeals from the decisions of the Chair relating to the application of the rules of the Senate or the House of Representatives, as the case may be, to the procedure relating to a resolution described in subsection (a) shall be decided without debate.

‘(e) Consideration by Other House.—

‘(1) If, before the passage by one House of a resolution of that House described in subsection (a), that House receives from the other House a resolution described in subsection (a), then the following procedures shall apply:

‘(A) The resolution of the other House shall not be referred to a committee and may not be considered in the House receiving it except in the case of final passage as provided in subparagraph (B)(ii).

‘(B) With respect to a resolution described in subsection (a) of the House receiving the resolution—

‘(i) the procedure in that House shall be the same as if no resolution had been received from the other House; but

‘(ii) the vote on final passage shall be on the resolution of the other House.

‘(2) Upon disposition of the resolution received from the other House, it shall no longer be in order to consider the resolution that originated in

the receiving House.

‘(f) Rules of the Senate and House.— This section is enacted by Congress—

‘(1) as an exercise of the rulemaking power of the Senate and House of Representatives, respectively, and as such it is deemed a part of the rules of each House, respectively, but applicable only with respect to the procedure to be followed in that House in the case of a resolution described in subsection (a), and it supersedes other rules only to the extent that it is inconsistent with such rules; and

‘(2) with full recognition of the constitutional right of either House to change the rules (so far as relating to the procedure of that House) at any time, in the same manner, and to the same extent as in the case of any other rule of that House.

SEC. F. MODIFICATION OF CURRENT FUNDING SYSTEM FOR FAA.

(a) PASSENGER TICKET TAX.— Clause (ii) of section 4261(h)(1)(A) of title 26, United States Code, is amended by striking “September 30, 2007” and inserting “January 31, 1999”.

(b) CARGO WAYBILL TAX.— Clause (ii) of section 4271(d)(1)(A) of title 26, United States Code, is amended by striking “September 30, 2007” and inserting “January 31, 1999”.

(c) ON-DEMAND AND AIR TAXI OPERATORS.— Section 6427(l)(2)(B) of title 26, United States Code, is amended by inserting “(except for such fuel use after June 30, 2000, by on-demand, air taxis or charters operating under 14 CFR 135)” after “section 4041(c)(1)”.

SEC. G. EXTENSION OF AIRPORT AND AIRWAY TRUST FUND EXPENDITURES.

(a) EXTENSION OF EXPENDITURE AUTHORITY.— Paragraph (1) of section 9502(d) of the Internal Revenue Code of 1986 is amended by striking ‘October 1, 1996’ and inserting ‘October 1, 2002’.

(b) EXTENSION OF TRUST FUND PURPOSES.— Subparagraph (A) of section 9502(d)(1) of such Code is amended by inserting before the semicolon at the end ‘or the Aviation System Improvement Act’.

SEC. H. TRANSFERS TO THE AIR TRAFFIC PERFORMANCE FUND

Part C of Subtitle VII is amended by adding the following new chapter at the end:

‘CHAPTER 483 — TRANSFERS TO THE AIR TRAFFIC PERFORMANCE FUND

‘48301. Transfers to the Air Traffic Performance Fund.

‘48302. Transfer of amounts.

‘48303. Management of funds.

‘Sec. 48301. Transfers to the Air Traffic Performance Fund

‘There are hereby appropriated to the Air Traffic Performance Fund (as established under section 45303(c)(1)) amounts equivalent to—

‘(1) the taxes received in the Treasury under—

‘(A) subsections (c) and (e) of section 4041 of title 26, United States Code (relating to aviation fuels),

‘(B) sections 4261 and 4271 of title 26, United States Code (relating to transportation by air),

‘(C) section 4081 of title 26, United States Code (relating to gasoline) with respect to aviation gasoline, and

‘(D) section 4091 of title 26, United States Code (relating to aviation fuel) , and

‘(2) the amounts determined by the Secretary of the Treasury to be equivalent to the amounts of civil penalties collected under section 47107(n) of title 49, United States Code.

‘There shall not be taken into account under paragraph (1) so much of the taxes imposed by sections 4081 and 4091 of title 26, United States Code, as are determined at the rates specified in sections 4081(a)(2)(B) or 4091(b)(2) of title 26, United States Code.’.

‘Sec. 48302. Transfer of amounts

‘The amounts appropriated by any section of this chapter to the Air Traffic Performance Fund established by section 45303(c)(1) shall be transferred at least monthly from the general fund of the Treasury to such Air Traffic Performance Fund on the basis of estimates made by the Secretary of the Treasury of the amounts referred to in such section. Proper adjustments shall be made in the amounts subsequently transferred to the extent prior estimates were in excess of or less than the amounts required to be transferred.

‘Sec. 48303. Management of funds

‘(a) Report.— The Administrator shall be responsible for managing the Air Traffic Performance Fund established by section 45303(c)(1), and, after consultation with the PBO-ATS Board, to report to the Congress each year

‘(1) on the financial condition and the results of the operations of such Trust Fund during the preceding fiscal year and

‘(2) on its expected condition and operations during the next 5 fiscal years. Such report shall be printed as a House document of the session of the Congress to which the report is made.

‘(b) Investment.—

‘(1) In general.— The Administrator shall invest such portion of the Air Traffic Performance Fund established by section 45303(c)(1) as is not, in his or her judgment, required to meet current withdrawals. Such investments may be made only in interest-bearing obligations of the United States. For such purpose, such obligations may be acquired —

‘(A) on original issue at the issue price, or

‘(B) by purchase of outstanding obligations at the market price.

‘(2) Sale of obligations.— Any obligation acquired by the Air Traffic Performance Fund established by section 45303(c)(1) may be sold by the Administrator at the market price.

‘(3) Interest on certain proceeds.— The interest on, and the proceeds from the sale or redemption of, any obligations held in the Air Traffic Performance Fund established by section 45303(c)(1) shall be credited to and form a part of such Trust Fund.’.

Sec. I. TERMINATION OF TRANSFERS TO TRUST FUND

Section 9502 of title 26, United States Code, is amended by striking subsection (b) and redesignating subsections (c), (d), and (e) as (b), (c), and (d), respectively.

SEC. J. TRANSFERS FROM THE AIRPORT AND AIRWAY TRUST FUND

Section 9502(d) of the Trust Fund Code of 1981 (Expenditures from Airport and Airway Trust Fund) is amended by the addition of new paragraph (6) as follows:

‘(6) Transfers from the Airport and Airway Trust Fund related to certain air traffic transition costs.— The Secretary of the Treasury shall pay from the Airport and

Airway Trust Fund to the Air Traffic Performance Fund amounts equivalent to the unexpended balance of appropriations available on October 1, 1998, for airport planning and development and noise compatibility and programs, for operation and maintenance of air traffic control, air navigation, communications, or supporting services, and for development or construction of air traffic control, air navigation, or communications facilities (and related research, engineering and development) for the air traffic and airway system by the Federal Aviation Administration. Such amounts shall be transferred on October 1, 1998 and on the basis of estimates by the Secretary of Treasury. Such balances received by the Air Traffic Performance Fund will be used only for the purposes for which they were appropriated, when held in the Airport and Airway Trust Fund.’

SEC. K. BUDGET TREATMENT

(a) Any transfer under section 9502(d) of the Trust Fund code of 1981, as amended by Section J of this Act, shall be exempt from the requirements of section 251 of the Balanced Budget and Emergency Deficit Control Act of 1985.

(b) Notwithstanding any other provision of law, so long as the receipts and disbursements of the Air Traffic Performance Fund established under section 45303(c)(1) do not result in an increase in the deficit, as determined by the Congressional Budget Office for the period ending with fiscal year 2002, such receipts and disbursements shall not be taken into account for purposes of any budget enforcement procedures under the Balanced Budget and Emergency Deficit Control Act of 1985 except for purposes of section 605(b) of the Congressional Budget Act of 1974.

(c) Section 255(g)(1)(A) of the Balanced Budget and Emergency Deficit Control Act of 1985 is amended by inserting after “Appropriations for the District of Columbia (to the extent they are appropriations of locally raised funds);” the following:

“Air Traffic Performance Fund;”.

(d) Notwithstanding any other provision of law, the receipts and disbursements of the PBO-ATS that are directly related to indebtedness incurred under section 44615 (as established by this Act), except for repayment of such debt, shall not be counted as new budget authority, outlays, receipts, or deficit or surplus for purposes of—

(1) the budget of the United States Government as submitted by the President;

(2) the congressional budget; or

(3) the Balanced Budget and Emergency Deficit Control Act of 1985.

SEC. L. DISCRETIONARY SPENDING LIMITS.

Upon enactment of this Act, the discretionary spending limits set forth in section 601(a)(2) of the Congressional Budget Act of 1974 (2 U.S.C. 665(a)(2)) (as adjusted in conformance with section 251 of the Balanced Budget and Emergency Deficit Control Act of 1985) for fiscal years 1999 through 2002 are reduced by the following amounts:

(a) For fiscal year 1999, for the discretionary category: \$9,172,000,000 in new budget authority and \$8,234,000,000 in outlays.

(b) For fiscal year 2000; for the discretionary category: \$9,623,000,000 in new budget authority and \$9,047,000,000 in outlays.

(c) For fiscal year 2001, for the discretionary category: \$9,978,000,000 in new budget authority and \$9,665,000,000 in outlays.

(d) For fiscal year 2002; for the discretionary category: \$10,161,000,000 in new budget authority and \$10,107,000,000 in outlays.

SEC. M. OUTLAY LIMITS ON FAA EXPENDITURES

Part C of Subtitle VII is amended by adding the following new chapter at the end:

'CHAPTER 484 — AVIATION PROGRAM AUTHORIZATIONS

'48401. Air Traffic Services.

'48402. Airport planning and development and noise compatibility planning and programs.

'48403. Unavailability of funds.

'48404. Aviation Safety.

'48405. Aviation Security.

'48406. Administrative and other expenses.

'48407. Office of Commercial Space Transportation.

'48408. Military and public use of the air traffic system.

'Sec. 48401. Air Traffic Services; research, engineering and development

'(a) General Authorization of Expenditures.— Not more than a total of the following amounts may be outlaid by the Administrator (acting on behalf of the PBO-ATS established under section 44611 of this title) out of monies made available under section 45303 to operate, acquire, establish, and improve air navigation facilities and equipment under Chapter 445 (except for sections 44504, 44507, and 44512) of this title:

'(1) \$6,718,000,000 for fiscal year 1999;

'(2) \$7,390,000,000 for fiscal year 2000;

'(3) \$7,932,000,000 for fiscal year 2001; and

'(4) \$8,334,000,000 for fiscal year 2002.

'(b) Availability of Amounts.— Amounts authorized under this section remain available until expended.

'Sec. 48402. Airport planning and development and noise compatibility planning and programs

'The total amounts which shall be provided after September 30, 1998, by the Administrator, out of monies made available under section 45303, to make grants for airport planning and airport development under section 47104 of this title, airport noise compatibility planning under section 47505(a)(2) of this title, and carrying out noise compatibility programs under section 47504(c) of this title shall be \$2,000,000,000 for fiscal year 1999, \$4,000,000,000 for fiscal years ending before October 1, 2000, \$6,000,000,000 for fiscal years ending before October 1, 2001, and \$8,000,000,000 for fiscal years ending before October 1, 2002.

'Sec. 48403. Unavailability of funds

'Notwithstanding any other provision of law, none of the monies or funds made available to the Administrator under section 45303(c)(1) may be outlayed by the Administrator on the cost of administration or to carry out duties or obligations under Chapters 441, 447, 449, or 701 of this title.

'Sec. 48404. Aviation Safety

'(a) Authorization of Appropriations.— Not more than a total of the following amounts may be appropriated to the Administrator under Chapters 441 and 447, and sections 44504, 44507, and 44512, of this title:

'(1) \$700,000,000 for fiscal year 1999;

'(2) \$750,000,000 for fiscal year 2000;

'(3) \$800,000,000 for fiscal year 2001; and

'(4) \$850,000,000 for fiscal year 2002.

'(b) Availability of Amounts.— Amounts authorized under this section remain available until expended.

'Sec. 48405. Aviation Security

'(a) Authorization of Appropriations.— Not more than a total of the following amounts may be appropriated to the Administrator under Chapters 449 of this title:

- '(1) \$200,000,000 for fiscal year 1999;
- '(2) \$200,000,000 for fiscal year 2000;
- '(3) \$250,000,000 for fiscal year 2001; and
- '(4) \$250,000,000 for fiscal year 2002.

'(b) Availability of Amounts.— Amounts authorized under this section remain available until expended.

'Sec. 48406. Administrative and other expenses

'(a) Authorization of Appropriations.— Not more than a total of the following amounts may be appropriated to the Administrator for administrative expenses, including GSA rent and Staff Offices, under this title (and not otherwise funded under this chapter or reimbursed by the PBO-ATS pursuant to section 106(r)(4)) :

- '(1) \$200,000,000 for fiscal year 1999;
- '(2) \$200,000,000 for fiscal year 2000;
- '(3) \$200,000,000 for fiscal year 2001; and
- '(4) \$200,000,000 for fiscal year 2002.

'(b) Availability of Amounts.— Amounts authorized under this section remain available until expended.

'Sec. 48407. Office of Commercial Space Transportation

'(a) Authorization of Appropriations.— Not more than a total of the following amounts may be appropriated to the Administrator under Chapters 701 of this title:

- (1) \$7,000,000 for fiscal year 1999;
- (2) \$8,000,000 for fiscal year 2000;
- (3) \$8,500,000 for fiscal year 2001; and

(4) \$9,000,000 for fiscal year 2002.

‘(b) Availability of Amounts.— Amounts authorized under this section remain available until expended.

‘Sec. 48408. Military and public use of the air traffic system

‘(a) Authorization of Appropriations.— The following amounts are appropriated to the Air Traffic Performance Fund (established under section 45303(c)(1) of this title) to pay the costs of the use of the air traffic system by military and other public aircraft:

- (1) \$600,000,000 for fiscal year 1999;
- (2) \$600,000,000 for fiscal year 2000;
- (3) \$600,000,000 for fiscal year 2001; and
- (4) \$600,000,000 for fiscal year 2002.

‘(b) Availability of Amounts.— Amounts authorized under this section remain available until expended.

SEC. N. CONSOLIDATION OF FACILITIES.

The Administrator, with the approval of the PBO-ATS Board as necessary, shall consolidate the nine regions of the Administration into three regions.

SEC. O. MULTIYEAR APPROPRIATIONS.

Chapter 482 is amended by—

(1) in the chapter heading, striking “FOR AIRPORT AND AIRWAY TRUST FUND FACILITIES” after “APPROPRIATIONS”;

(2) in subsection (a), striking “for which amounts are to be appropriated from the Airport and Airway Trust Fund established under 9502 of the Internal Revenue Code of 1986” and inserting in the same place “under sections 48404-48408 of this title”; and

(3) in subsection (b), striking “from the Airport and Airway Trust Fund” and inserting in the same place “under sections 48404-48408 of this title”.

SEC. P. MANAGEMENT ADVISORY COUNCIL

Subparagraph (c) of section 106(p)(2) is amended by striking “the President by and with the advice and consent of the Senate” and inserting “the Administrator” after “appointed by”.

SECTION-BY-SECTION ANALYSIS OF DRAFT LEGISLATION

Section 1. Short title; table of contents

Section 1 cites the title of the bill as the “Aviation System Performance Improvement Act”. This section also contains a table of contents for the bill.

Section 2. Amendments to title 49, United States Code

Section 2 provides that, unless otherwise provided, references in the bill to sections or provisions in the law are considered to be sections or provisions of title 49, United States Code.

Section 3. Applicability

Section 3 provides that the Act will only apply to fiscal years beginning after September 30, 1998.

Section 4. Definitions

Section 4 defines the terms “Administration”, “Administrator”, and “Secretary” for the purposes of the Act.

Section 5. Effective date

Section 5 establishes that, unless otherwise specified in the Act, the provisions of the Act will take effect 30 days after enactment of the legislation.

Section 6. Findings

Section 6 sets forth a series of findings establishing the general basis for enactment of provisions contained in the Act. The findings recognize, for example, the unique character of the FAA’s programs and activities and the critical need for reform of its funding system.

Section 7. Purposes

Section 7 sets forth 11 critical purposes underpinning the Act.

Section A. Establishment of the Performance Based Organization for the Air Traffic System

Section A establishes, within the FAA, the Performance Based Organization for the Air Traffic System (hereinafter PBO-ATS). The PBO-ATS is the key part of the governance recommendations made by the NCARC. By establishing the PBO-ATS, a governing Board, and the position of Chief Operating Officer (COO), the NCARC is proposing a bold, new course for management of the air traffic system in the United States. These new entities and positions will provide a more effective and comprehensive approach to overseeing and managing the complex and rapidly changing needs of the air traffic system.

The concept of a PBO, which is run on a day-to-day basis by a COO, came out of the Administration's National Performance Review. The proposal to have a governing board stems from concerns that there are currently too many actors playing a role in the oversight and running of the intensely operational air traffic system, which includes the development of capital infrastructure. Authority is too dispersed and accountability lacking under the current system. The public interest-oriented Board will provide a more singular and coherent measure of oversight than the current system.

The new section 44611 of title 49 specifies the operational authorities and responsibilities of the PBO-ATS over the movement of aircraft in U.S. airspace. Related authority, such as research and development authority in support of air traffic management, is also authorized.

The new section 44612 of title 49 establishes the functions and makeup of the Board that would oversee the PBO-ATS as a whole. In particular, the Board is responsible for the core areas of cost-based user fee determination, the annual budget, the issuance of indebtedness, and appointment of the Chief Operating Officer. The makeup of the Board is directed both toward accountability for the public goals of aviation safety and efficient operation of the system and the goal of closer accountability to the needs of those users that rely most on air traffic services. There would be seven Board members, including the FAA Administrator, who would serve as chairperson. Other than the Administrator, Board members would be appointed by the President with the advice and consent of the Senate. None of these members would serve as representatives of segments of the aviation community.

The new section 44613 of title 49 establishes the broad authorities of the Chief Operating Officer (COO) to manage the day-to-day operations of the PBO-ATS.

The new section 44614 of title 49 requires the PBO-ATS to establish a performance management system which links employee compensation and reward to performance. The system would both maintain individual accountability and strengthen the PBO-ATS's effectiveness in certain specified ways.

The new section 44615 of title 49 authorizes the PBO-ATS, beginning in July 2000, when new cost-based user fees go into effect, to borrow from the U.S. Treasury, or to enter private financial markets to sell bonds or other obligations, to raise capital for development of air traffic facilities and equipment. One of the primary purposes for creation of the PBO-ATS is to provide a means of raising needed capital without affecting the federal deficit. The FAA's existing air traffic facilities require modernization, and the newest technologies coming online may justify further, cost-beneficial investment that is not now even contemplated.

Section 106 of title 49 is amended so that the PBO-ATS will act through the Administrator as may be necessary to carry out the decisions of the governing Board. Also, the PBO-ATS and the Administrator would enter into a Memorandum of Understanding to clearly define the lines of authority and responsibility separating the PBO-ATS from the remainder of the FAA.

Section B. Air Traffic Performance Fund

Section B gives a name to the account that was established in the Federal Aviation Reauthorization Act of 1996. This account is a key component of the new funding system for the FAA and its PBO-ATS. The PBO-ATS, including related research and development, and the Airport Improvement Program (AIP) will be funded through this account, which acts as a revolving fund since the Administrator can spend from the account subject only to the amount of money deposited into the account and congressional limits. Because all aviation-related fees will be deposited into the new trust fund, there will now actually be a link between revenues that come from the users of the system and the expenditures on that system. This section also makes clear that all fees would be credited as "offsetting collections" ensuring appropriate budget treatment. This type of scoring is consistent with the scoring of other fees, such as the customs user fees authorized under 19 U.S.C. 58c(f).

Section C. Funds to support FAA programs through June 2000

This section sets forth the basis for funding the FAA through the end of June 2000, at which time there would be a transition to a cost-based user fee structure (as described in Section E of this Act). The language for new sections 45305 through 45312 of title 49 is taken almost word-for-word from the sections of the Internal Revenue Code (title 26, United States Code) that establish the vast majority of the existing financing for the Airport and Airway Trust Fund. In essence, the existing ticket tax, flight segment charge, cargo waybill tax, and international arrival and departure taxes are temporarily converted into an identical set of fees. The existing fuel taxes would remain part of the Internal Revenue Code. Nevertheless, all aviation-derived fees and taxes would flow into the new Air Traffic Performance Fund (see Section H of this Act). These fees would expire at the time when new cost-based user fees go into effect in July 2000. Because all fees flow directly to the Air Traffic Performance Fund, from which the Administrator may spend as needed (subject to congressional authorization), spending would be directly linked to contributions from users.

The purely technical conversion of the “taxes” into “fees” is consistent with the historical uses of such receipts, as well as the Constitutional definition of “revenues”. Because the receipts from the current aviation taxes are credited to the Airport and Airway Trust Fund, these monies are ostensibly dedicated to support the programs of the FAA and, thus, are not “revenues” to support government generally. Therefore, there is no clear reason why such user charges must be in the Internal Revenue Code, which exists to raise revenues to support the government generally. Placing the current user charges in title 49 of the United States Code also makes for an easier transition to the cost-based user charges that will eventually replace the current structure. Any argument that an ad valorem user charge (such as for 10 percent of the price of a ticket) is by definition a tax (and therefore must be in the Internal Revenue Code) is unsupported by precedent. There already is at least one ad valorem user fee as in the case of a customs user fee (see 19 U.S.C. 58c(f)). Furthermore, there is no Constitutional requirement that user charges be based directly or indirectly on the costs of the services provided.

Section D. Ticketing and advertising

Section D also is language taken from the Internal Revenue Code and relates to what must appear on an airline ticket and in any advertising related to airfares.

Section E. Funds to support FAA programs beginning in July 2000

This section sets forth the basis on which the PBO-ATS and AIP would be financed beyond FY 2000. This section mandates that the establishment of fees be undertaken using a public process (Notice of Proposed Rulemaking) to permit the input of direct users and other interested parties. In addition, the Management Advisory Council would still retain its role in providing counsel on the development of any such fees. Any funding proposals would be subject to the possibility of disapproval by Congress through an expedited legislative process, similar to the one used for consideration of military base closures. Other statutory limits and considerations are mandated by this section on the imposition of user fees. For example, the fees could not discriminate against similarly situated users. The precise nature and structure of the fees would be subject to the approval of the PBO-ATS Board. Although the fees are to be based on the costs of services provided, there are very few limits on how they may be tailored. For example, it is theoretically possible for the fees to be based, in part or in whole, on the price of a ticket or the purchase of fuel. As previously mentioned, such ad valorem fees are permissible and already exist.

In the case of noncommercial aviation, general aviation excise taxes levied on aviation fuels would continue at their current levels (which now include the former deficit reduction tax of \$0.043 per gallon). In addition, Federal Aviation Regulation Part 135 on-demand, air taxi operators would not pay any of the new cost-based fees, but would instead pay at a fuel tax rate to be determined. Furthermore, the aviation excise taxes on general aviation could be reevaluated by Congress based on an accurate analysis of the costs of providing air traffic control (ATC) and related services to them. This

process mirrors the current treatment of general aviation.

Section F. Modification of current funding system for FAA

Section F amends the termination dates of the existing statutory provisions relating to the ticket tax, the international arrival and departure taxes, and the cargo waybill tax. The termination dates have been changed to match the dates when taxes are converted into fees. Also, this section applies the existing fuel taxes to Part 135 on-demand and air taxi operators, beginning in July 2000 when cost-based fees take effect.

Section G. Extension of Airport and Airway Trust Fund expenditures

Section G extends through FY 2002 the authority for expenditure of funds from the Airport and Airway Trust Fund. This allows the expenditure of amounts already obligated under the old funding system. Even though Section J provides for the transfer of the bulk of the Airport and Airway Trust Fund to the new Air Traffic Performance Fund, this section is necessary to continue expenditures on safety, security, and administrative obligations made before the changes proposed in this Act.

Section H. Transfers to the Air Traffic Performance Fund

Section H establishes provisions requiring the Secretary of the Treasury to credit to the new Air Traffic Performance Fund any funds deposited into the general fund of the Treasury pursuant to the old aviation excise tax structure. This means that any monies paid to the government under the old system, but after the conversion of most taxes to fees, goes into the new Air Traffic Performance Fund. Because the general aviation fuel taxes would remain, this section also ensures that the monies contributed by those users goes into the new Air Traffic Performance Fund and thereby receives appropriate budget treatment.

This section also requires the Administrator to invest any monies (in the new Air Traffic Performance Fund) in Treasury certificates so that interest may be earned on unexpended balances.

Section I. Termination of transfers to trust fund

Section I terminates the old system of crediting to the Airport and Airway Trust Fund monies that had been received in the Treasury as aviation excise taxes. This is done to conform with the changes made by Section H so that any residual tax receipts are credited to only one Trust Fund.

Section J. Transfers from the Airport and Airway Trust Fund

Section J essentially transfers existing balances from the Airport and Airway Trust Fund to the new Air Traffic Performance Fund. The PBO-ATS will be largely self-supporting from its new user fee system (except for the general fund contribution for

government use of the ATC system). However, a transition of funding will be provided to ensure that PBO-ATS is fully capable of undertaking its responsibilities immediately. The estimated “obligated but unexpended balance” of appropriations on October 1, 1998 would be transferred on a one-time basis to the new Air Traffic Performance Fund.

Section K. Budget treatment

Section K exempts the contingent appropriation of amounts from the Airport and Airway Trust Fund to the new Air Traffic Performance Fund authorized by Section J. So long as the balanced budget agreement is not adversely impacted by revenues and spending associated with the Air Traffic Performance Fund, the such revenues and spending would not be subject to most budget restrictions. This section also exempts the Air Traffic Performance Fund from sequestration under the Balanced Budget and Emergency Deficit Control Act of 1985. In addition, this section gives an even greater level of budget protection to any spending associated with borrowed monies.

Section L. Discretionary spending limits

Section L adjusts the “domestic discretionary caps” in the Budget Enforcement Act to reflect moving most of the FAA’s spending, including the PBO-ATS, from the discretionary part of the budget to the mandatory part. This provision, in essence, requires a one-time waiver of the pay-as-you-go restrictions that apply to increases in mandatory spending.

Section M. Outlay limits on FAA expenditures

Section M authorizes FAA spending along its new lines of business (LOB) budgeting structure. This section also provides limits on spending out of the Air Traffic Performance Fund so total federal deficit spending prior to FY 2002 will not increase. This section also authorizes appropriations out of the general fund of the Treasury for the following FAA programs or activities: safety, security, administrative and other expenses, the Office of Commercial Space Transportation, and government use of the air traffic system (which is a mandatory appropriation of \$600 million each fiscal year through FY 2002).

Section N. Consolidation of facilities

Section N requires the FAA to consolidate its nine regions into three.

Section O. Multiyear appropriations

To conform existing law with the new funding system, section O amends the current requirement that authorizations and appropriations for the FAA be done on a multiyear basis. The new language would require that the parts of the FAA’s budget supported by the general fund would be funded on a multiyear basis.

Section P. Management Advisory Council

Section P modifies the requirement that members of the MAC must be appointed by the President and approved by the Senate. Instead, the members of the MAC would be appointed by the Administrator. This is to reflect the role of the new PBO-ATS Board, the members of which must now be confirmed by the Senate. However, the MAC continues to have a vital role in providing needed industry input into the deliberation and decisions at the FAA.

ATTACHMENT 2: BACKGROUND ON THE COMMISSION

The Congress created the Commission after congressional and industry debates on several aviation issues for which there was no consensus. The FAA argued that its needs would not be met if federal budget trends continued. Most of the aviation industry argued that the aviation taxes should be dedicated for FAA programs. Some airlines argued that a new revenue system should be developed to better reflect the costs imposed on the aviation system by its users. Other airlines felt that the ticket tax was fair, easy to implement, and thus should not be altered. It was clear that the industry would not come to a consensus on these issues on their own. The Congress created this Commission, which includes representatives from the various segments the aviation community, as well as individuals outside of aviation, to discuss and identify problems in the aviation system and to provide recommendations on improving the current situation.

The Federal Aviation Reauthorization Act of 1996 created the Commission with two task forces: the Aviation Funding Task Force and the Safety Task Force. This report covers the findings and recommendations of the Commission's funding task force. In general, the Commission's funding task force was created to make recommendations on the FAA's needs, the revenues needed to support the FAA, potential cost savings, and ways to improve the FAA's attempts to modernize its equipment. The legislation specifically states that the Commission's report shall include a draft bill containing the changes in law necessary to implement its recommendations.

The Commission is comprised of 21 members: 13 appointed by the Secretary of Transportation, 2 appointed by the Speaker of the House of Representatives, 2 appointed by the Minority Leader of the House of Representatives, 2 appointed by the Majority Leader of the Senate, and 2 by the Minority Leader of the Senate. Commission members are experts in a variety of subjects including aircraft manufacturing, airline operations, airport management, financial management, general aviation services, and overall aviation industry issues. All Commission members are part of the funding task force. In addition to the 21 Commissioners, the Executive Branch provided representatives from relevant departments and agencies to attend and, in some cases, participate in the Commission meetings.

Former U.S. Representative Norman Y. Mineta was appointed the Chair of the Commission and convened the first meeting on April 28, 1997. This meeting was the first in a series of Commission briefings. Over the course of several meetings, the Commissioners were briefed by the Department of Transportation (DOT), the FAA, industry officials, and others on a variety of topics, including: the FAA's budget process, concerns of various congressional committees, the FAA's needs, airline concerns, airport needs, general aviation needs and concerns, the views of air traffic controllers, reviews by the General Accounting Office, concerns of the U.S. military, the experience of NavCanada (the recently privatized air traffic control system in Canada), and the

implementation of performance fees by the Food and Drug Administration. The Commission also held a public hearing on May 28, 1997, which included witnesses from many aviation interest groups. (A complete list of the witnesses is in Attachment 5.) Along with the briefings, the Commissioners met at length to discuss various aviation issues and to discuss potential recommendations.

As the Commission debated various aviation financial issues, the Congress also debated and acted upon aviation revenue issues as part of a larger multiyear budget agreement. The congressional debate and action underscored for the Commission the very serious flaws in the budget process for aviation.

ATTACHMENT 3: LIST OF COMMISSIONERS

Appointments to the National Civil Aviation Review Commission:

Chair:

Norman Y. Mineta, San Jose, CA: Sr. Vice President Lockheed Martin IMS; Member, U.S. House of Representatives 1974-1995; Chair, House Public Works and Transportation Committee 1992-1994; Chair, House Aviation Subcommittee 1981-1988; Mayor, San Jose, CA 1971-1974.

Vice-Chair:

Stephen H. Kaplan, Denver, Colorado: Partner in the firm of Cutler & Stanfield; General Counsel, US Department of Transportation, 1993-1995; City Attorney, Denver, Colorado.

Commissioners:

William Bacon, Rapid City, SD: Director, Rapid City Regional Airport; US Army Aviator 1969-1989.

Charles M. Barclay, Washington D.C.: President, American Association of Airport Executives; Staff member, Aviation Subcommittee of the US Senate Committee on Commerce Science and Transportation, 1977-1983; Member, 1993 Airline Commission.

Linda Barker, Sioux Falls, SD: Owner and Vice President of Business Aviation, Sioux Falls, SD. Member of South Dakota House of Representatives 1992-98.

Robert A. Davis, Seattle: Boeing Corporate Vice President of Engineering and Technology; Member, NASA Advisory Council; Fellow, American Institute for Aeronautics and Astronautics.

Sylvia A. de Leon, Washington, DC: Partner in the firm of Akin, Gump, Strauss, Hauer & Feld; Member, Board of Directors, Amtrak, the National Passenger Railroad Corporation, 1993-Present; Coordinator of Transportation Issues, Clinton-Gore Presidential Transition, 1992.

Robert H. Frenzel, Upper Marlboro, MD: Vice President, United Parcel Service; Chairman, Transportation Infrastructure Task Force, US Chamber of Commerce; J.D. 1981, De Paul University, Chicago, Illinois; has been with UPS since 1976.

Angela Gittens, Atlanta, GA (Acting for Bill Campbell, Mayor of Atlanta): Aviation General Manager, Hartsfield Atlanta International Airport; Member of FAA Research

Engineering Advisory Committee.

Leonard L. Griggs, Jr., St. Louis, MO: Director, Lambert Field-St. Louis International Airport both currently and 1977-1987; FAA Assistant Administrator for Airports 1989-1993.

Mary Kay Hanke, Washington, DC: International Vice President, Association of Flight Attendants, AFL-CIO; flight attendant, United Airlines.

Richard B. Hirst, Minneapolis, MN: Senior Vice President, Northwest Airlines; Vice President and General Counsel, Continental Airlines 1985-90; Associate Professor, University of Puget Sound Law School 1979-83; Staff Member, Civil Aeronautics Board, 1977-1979.

Michael L. Lexton, New York, NY: Managing Director, Lehman Brothers, Manager of the Airport and Transportation Finance Group.

Frederick D. McClure, Dallas, TX: Senior Vice President, Public Strategies Inc.; Assistant to President Bush for Legislative Affairs 1989-1992; Government Affairs Staff Vice President, Texas Air Corporation, 1986-1989.

John O'Brien, Herndon, VA: Director, Engineering and Air Safety Department, Air Line Pilots Association, Int'l; Member of the Board, RTCA 1991 to present; Member of the Board of Governors, Flight Safety Foundation 1992 to present.

Carol O' Cleireacain, Ph.D., New York, NY: economic consultant; Visiting Fellow, The Brookings Institution; Budget Director of the City of New York, 1993; Finance Commissioner of the City of New York, 1990-1993; Chief Economist, AFSCME Council 37, 1976-1989.

John O'Connor, Philadelphia, PA: President, Day and Zimmerman Infrastructure, Inc.; Governor, Airport Consultants Council 1989-90.

Revius O. Ortique, Jr., New Orleans, LA: New Orleans Aviation Board; Retired Supreme Court Justice of LA; Past President, National Bar Association; Past President, National Legal Aid and Defender Association; Has served on four Presidential Boards or Commissions; member of LA Ethics Board; Board of Trustees- Dillard University.

Sen. Larry Pressler Washington DC: President, Pressler & Associates; Lawyer-Investment Banker; Member and Chairman of US Senate Committee on Commerce, Science, and Transportation 1979-1996.

Richard E. Smith, West Point, MS: Director, Golden Triangle Regional Airport; President, Southeastern Airport Managers Assoc./ SEC, 1985, President, Air Force Association 1994-1996.

D. Scott Yohe, Washington DC: Senior Vice President, Government Affairs, Delta Air Lines, Inc.; with Delta Air Lines since 1978.

ATTACHMENT 4: ROSTER OF COMMISSION STAFF

Commission Staff

David Traynham, Executive Director, (U.S. House Aviation Subcommittee)

Paul Feldman, Deputy Director, (FAA Deputy Administrator's Office)

(In alphabetical order)

Zakiya Arrington (Summer Hire)

Linda Brown (FAA, Office of Financial Services)

Adria Garvin (FAA, Regulation and Certification Office)

Randy Fiertz (Coopers & Lybrand)

David Knorr (FAA, System Development Office)

John Hennigan (FAA, Office of Policy and Plans)

Charles Huettner (On detail to NASA from FAA)

Denise Hursey (FAA, Air Traffic Service)

Catherine Lang (FAA, Airport Planning and Programming Office)

Thomas Lintner (FAA, Air Traffic Service)

Steven McBrien (MITRE Corporation)

Donna McLean (U.S. House Aviation Subcommittee)

Sandy McRae (FAA, Flight Standards)

Ava Mims (FAA, Regulation and Certification Office)

Charles Monico (FAA, Office of Policy and Plans)

Michael Reynolds (U.S. Senate Aviation Subcommittee)

Steve Springmann (FAA, Air Traffic Service Office)

Eric Stults (Department of Transportation Budget Office)

Zelma Thomas (FAA, Human Resources Division)

Margie Tower (Hired for term of Commission, Aircraft Operations, Airports, and Public Administration background)

ATTACHMENT 5:

AGENCY LIAISONS TO THE COMMISSION

Agency Liaisons to the Commission

Mr. Frank Kruesi
Assistant Secretary for Transportation Policy
Department of Transportation

Mr. Charles A. Hunnicutt
Assistant Secretary for Aviation and International Affairs
Department of Transportation

Ms. Nancy McFadden
General Counsel
Department of Transportation

Ms. Jackie Lowey
Deputy Chief of Staff
Department of Transportation

Mr. Monte R. Belger
Associate Administrator for Air Traffic Services
Federal Aviation Administration

Mr. Guy S. Gardner
Associate Administrator for Regulation and Certification
Federal Aviation Administration

Mr. Michael Deich
Associate Director for General Government and Finance
Office of Management and Budget

Ms. Dorothy Robyn
Special Assistant to the President for Economic Policy
National Economic Council

Mr. Mozelle W. Thompson
Principal Deputy Assistant Secretary
Governmental Financial Policy
Department of Treasury

Mr. Frank J. Colson
Executive Director
Department of Defense Policy Board on Federal Aviation

ATTACHMENT 6:
LEGISLATION CREATING THE COMMISSION

PUBLIC LAW 104-264-OCT. 9, 1996 110 STAT. 3213

Public Law 104-264
104th Congress
An Act

To amend title 49, United States Code, to reauthorize programs of the Federal Aviation Administration, and for other purposes.
Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) SHORT TITLE.—This Act may be cited as the “Federal Aviation Reauthorization Act of 1996”.

(b) TABLE OF CONTENTS

Sec. 1. Short title; table of contents.
Sec. 2. Amendments to title 49, United States Code.
Sec. 3. Applicability.

TITLE I—AIRPORT AND AIRWAY IMPROVEMENTS

Subtitle A—Reauthorization of FAA Programs

Sec. 101. Airport improvement program.
Sec. 102. Airway facilities improvement program.
Sec. 103. FAA operations.

Subtitle B - Airport Development Financing

Sec. 121. Apportionments.
Sec. 122. Discretionary fund.
Sec. 123. Use of apportioned amounts.
Sec. 124. Designating current and former military airports.
Sec. 125. Period of applicability of amendments.

Subtitle C—Airport Improvement Program Modifications

Sec. 141. Intermodal planning.
Sec. 142. Pavement maintenance program.
Sec. 143. Access to airports by intercity buses.
Sec. 144. Cost reimbursement for project~ commenced prior to grant award.
Sec. 145. Selection of projects for grants from discretionary fund.
Sec. 146. Small airport fund.
Sec. 147. State block ~rant program.
Sec. 148. Innovative financing techniques.

Sec. 149, Pilot program on private ownership of airports.

TITLE 11—FAA REFORM

Sec., 201. Short title.

Sec. 202. Definitions.

Sec, 203. Effective date.

Subtitle A—General Provisions

Sec. 221. Findings.

Sec. 222. Purposes

Sec. 223. Regulation of civilian air transportation and related services by the Federal Aviation Administration and Department of Transportation.

Sec, 224, Regulations.

Sec. 225, Personnel and services.

Sec, 226. Contracts.

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Sec. 227. Facilities.

Sec. 228. Property.

Sec. 229. Transfers of funds from other Federal agencies.

Sec. 230. Management Advisory Council.

Subtitle B—Federal Aviation Administration Streamlining Programs

Sec. 251. Review of acquisition management system.

Sec. 252. Air traffic control modernization reviews.

Sec. 253. Federal Aviation Administration personnel management system.

Sec. 254. Conforming amendment.

Subtitle C—System To Fund Certain Federal Aviation Administration Functions

Sec. 271. Findings.

Sec. 272. Purposes.

Sec. 273. User fee for various Federal Aviation Administration services.

Sec. 274. Independent assessment of FAA financial requirements; establishment of National Civil Aviation Review Commission.

Sec. 275, Procedure for consideration of certain funding proposals.

Sec. 276. Administrative provisions.

Sec. 277 Advance appropriations for Airport and Airway Trust Fund activities.

Sec. 278 Rural Air Service Survival Act.

TITLE 111—AVIATION SECURITY

Sec. 301. Report including proposed legislation on funding for airport security.

Sec. 302. Certification of screening companies.

Sec. 303. Weapons and explosive detection study.

Sec. 304. Requirement for criminal history records checks.

Sec. 305, Interim deployment of commercially available explosive detection equipment.

Sec. 306. Audit of performance of background checks for certain personnel.

- Sec. 307. Passenger profiling.
- Sec. 308. Authority to use certain funds for airport security programs and activities.
- Sec. 309. Development of aviation security liaison agreement.
- Sec. 310. Regular joint threat assessments..
- Sec. 311. Baggage match report.
- Sec. 312. Enhanced security programs.
- Sec. 313. Report on air cargo.
- Sec. 314. Sense of the Senate regarding acts of international terrorism.

TITLE IV—AVIATION SAFETY

- Sec. 401. Elimination of dual mandate.
- Sec. 402. Protection of voluntarily submitted information.
- Sec. 403. Supplemental type certificates.
- Sec. 404. Certification of small airports.
- Sec. 405. Authorization for State-specific safety measures.
- Sec. 406. Aircraft engine standards.
- Sec. 407. Accident and safety data classification;; report on effects of publication and automated surveillance targeting systems.

TITLE V—PILOT RECORD SHARING

- Sec. 501. Short title.
- Sec 502. Employment investigations of pilot applicants.
- Sec. 503. Studies of minimum standards for pilot qualifications and of pay for training.

TITLE VI—CHILD PILOT SAFETY

- Sec. 601. Short title.
- Sec. 602. Child pilot safety.

TITLE VII—FAMILY ASSISTANCE

- Sec 701 Short title.
- Sec 702 Assistance by National Transportation Safety Board to &mikes of passengers involved in aircraft accidents.
- Sec. 703. Air carrier plans to address needs of families of passengers involved in aircraft accidents.
- Sec 704 Establishment of task force.
- Sec 705 Limitation on statutory construction.

TITLE VIII—AIRPORT REVENUE PROTECTION

- Sec. 801. Short title.
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- Sec. 802. Findings; purpose.
- Sec. 803. Definitions.
- Sec. 804. Restriction on use of airport revenues
- Sec. 805. Regulations, audits and accountability.
- Sec. 806. Conforming amendments to the Internal Revenue Code of 1986.

TITLE IX—METROPOLITAN WASHINGTON AIRPORTS

- Sec. 901. Short title.
- Sec. 902. Use of leased property.
- Sec. 903. Board of Directors.
- Sec. 904. Termination of Board of Review.
- Sec. 905. Limitations.
- Sec. 906. Use of Dulles Airport Access Highway.
- Sec. 907. Effect of judicial order.
- Sec. 908. Amendment of lease.
- Sec. 909. Sense of the Senate.

TITLE X—EXTENSION OF AIRPORT AND AIRWAY TRUST FUND EXPENDITURES

- Sec. 1001. Extension of Airport and Airway Trust Fund expenditures.

TITLE XI—FAA RESEARCH, ENGINEERING, AND DEVELOPMENT

- Sec. 1101. Short title.
- Sec. 1102. Authorization of appropriations.
- Sec. 1103. Research priorities.
- Sec. 1104. Research advisory committee.
- Sec. 1105. National aviation research plan.

TITLE XII—MISCELLANEOUS PROVISIONS

- Sec. 1201. Purchase of housing units.
- Sec. 1202. Clarification of passenger facility revenues as constituting trust
- Sec. 1203. Authority to close airport located near closed or realigned military
- Sec. 1204. Gadsden Air Depot, Alabama.
- Sec. 1205. Regulations affecting intrastate aviation in Alaska.
- Sec. 1206. Westchester County Airport, New York.
- Sec. 1207. Bedford Airport, Pennsylvania.
- Sec. 1208. Worcester Municipal Airport, Massachusetts.
- Sec. 1209. Central Florida Airport, Sanford, Florida.
- Sec. 1210. Aircraft Noise Ombudsman.
- Sec. 1211. Special rule for privately owned reliever airports.
- Sec. 1212. Sense of the Senate regarding the funding of the Federal As
Administration.
- Sec. 1213. Rural air fare study.
- Sec. 1214. Carriage of candidates in State and local elections.
- Sec. 1215. Special flight rules in the vicinity of Grand Canyon National Park.
- Sec. 1216. Transfer of air traffic control tower; closing of flight service station
- Sec. 1217. Location of Doppler radar stations, New York.
- Sec. 1218. Train whistle requirements.
- Sec. 1219. Increased fees.
- Sec. 1220. Structures interfering with air commerce.
- Sec. 1221. Hawaii cargo,

Sec. 1222. Limitation on authority of States to regulate gambling devices on v,
Sec. 1223. Clarifying amendment.

SEC. 2. AMENDMENTS TO TITLE 49, UNITED STATES CODE.

Except as otherwise specifically provided, whenever in this Act an amendment or repeal is expressed in terms of an amendment to, or repeal of, a section or other provision of law, the reference shall be considered to be made to a section or other provision of title 49, United States Code.

SEC. S. APPLICABILITY.

(a) IN GENERAL.—Except as otherwise specifically provided, this Act and the amendments made by this Act apply only to fiscal years beginning after September 30, 1996.

(b) LIMITATION ON STATUTORY CONSTRUCTION.—Nothing in this Act or any amendment made by this Act shall be construed as
10 STAT.3240 PUBLIC LAW 104-264 - OCT. 9, 1996

“(1) Air traffic control and related services provided to aircraft other than military and civilian aircraft of the United States government or of a foreign government that neither take off from, nor land in, the United States.

“(2) Services (other than air traffic control services) provided to a foreign government.

(b) LIMITATIONS.—

(1) AUTHORIZATION AND IMPACT CONSIDERATIONS.—In establishing fees under subsection (a), the Administrator—

“(A) is authorized to recover in fiscal year 1997 \$100,000,000 and

“(B) shall ensure that each of the fees required by subsection (a) is directly related to the Administration’s costs of providing the service rendered. Services for which costs may be recovered include the costs of air traffic control, navigation, weather services, training and emergency services which are available to facilitate safe transportation over the United States, and other services provided by the Administrator or by programs financed by the Administrator to flights that neither take off nor land in the United States. Federal Register,

“(2) PUBLICATION; COMMENT.—The Administrator shall publish in the Federal Register an initial fee schedule and associated collection process as an interim final rule, pursuant to which public comment will be sought and a final rule issued.

“(c) USE OF EXPERTS AND CONSULTANTS.—In developing the system, the Administrator may consult with such nongovernmental experts as the Administrator may employ and the Administrator may utilize the services of experts and consultants under section 3109 of title 5 without regard to the limitation imposed by the last sentence of

section 3109(b)) of such title, and may contract on a sole source basis, notwithstanding any other provision of law to the contrary. Notwithstanding any other provision of law to the contrary, the Administrator may retain such experts under a contract awarded on a basis other than a competitive basis and without regard to any such provisions requiring competitive bidding or precluding sole source contract authority.”.

(b) CONFORMING AMENDMENT.—The table of sections for chapter 453 is amended by striking the item relating to section 45301 and inserting the following:

“45301. General provisions”.

SEC. 274. INDEPENDENT ASSESSMENT OF FAA FINANCIAL REQUIREMENTS; ESTABLISHMENT OF NATIONAL CIVIL AVIATION REVIEW COMMISSION.

(a) INDEPENDENT ASSESSMENT.—

(1) INITIATION.—Not later than 30 days after the date of the enactment of this Act, the Administrator shall contract with an entity independent of the Administration and the Department of Transportation to conduct a complete independent assessment of the financial requirements of the Administration through the year 2002.

(2) ASSESSMENT CRITERIA.—The Administrator shall provide to the independent entity estimates of the financial requirements of the Administration for the period described in paragraph (1), using as a base the fiscal year 1997 appropriation levels established by Congress. The independent assess

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ment shall be based on an objective analysis of agency funding needs.

(3) CERTAIN FACTORS TO BE TAKEN INTO ACCOUNT.—The independent assessment shall take into account all relevant factors, including—

(A) anticipated air traffic forecasts;

(B) other workload measures

(C) estimated productivity gains, if any, which contribute to budgetary requirements;

(D) the need for programs, and

(E) the need to provide for continued improvements in all facets of aviation safety, along with operational improvements in air traffic control.

(4) COST ALLOCATION.—The independent assessment shall also assess the costs to the Administration occasioned by the provision of services to each segment of the aviation system.

(5) DEADLINE.—The independent assessment shall be completed no later than 90 days after the contract is awarded and shall be submitted to the Commission established under subsection (b), the Secretary, the Secretary of the Treasury the Committee on Commerce, Science, and Transportation and the Committee on Finance of the Senate, and the Committee on Transportation and Infrastructure and the Committee on Ways and Means of the House of Representatives.

(b) NATIONAL CIVIL AVIATION REVIEW COMMISSION.—

(1) ESTABLISHMENT.—There is established a commission to be known as the National Civil Aviation Review Commission (hereinafter in this section referred to as the “Commission”).

(2) MEMBERSHIP - The Commission shall consist of 21 members to be appointed as follows:

(A) 13 members to be appointed by the Secretary, in consultation with the Secretary of the Treasury, from among individuals who have expertise in the aviation industry and who are able, collectively, to represent a balanced view of the issues important to general aviation, major air carriers, air cargo carriers, regional air carriers business aviation, airports, aircraft manufacturers, the financial community, aviation industry workers, and airline passengers. At least one member appointed under this subparagraph shall have detailed knowledge of the congressional budgetary process.

(B) Two members appointed by the Speaker of the House of Representatives

(C) Two members appointed by the minority leader of the House of Representatives.

(D) Two members appointed by the majority leader of the Senate.

(E) Two members appointed by the minority leader of the Senate.

(3) TASK FORCES.—The Commission shall establish an aviation funding task force and an aviation safety task force to carry out the responsibilities of the Commission under this subsection.

(4) FIRST MEETING.—The Commission may conduct its first meeting as soon as a majority of the members of the Commission are appointed.

(5) HEARINGS AND CONSULTATION.—

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(A) HEARINGS.—The Commission shall take such testimony and solicit and receive such comments from the public and other interested parties as it considers appropriate, shall conduct 2 public hearings after affording adequate notice to the public thereof, and may conduct such additional hearings as may be necessary.

(B) CONSULTATION.—The Commission shall consult on a regular and frequent basis with the Secretary, the Secretary of the Treasury, the Committee on Commerce, Science, and Transportation and the Committee on Finance of the Senate, and the Committee on Transportation and Infrastructure and the Committee on Ways and Means of the House of Representatives.

(C) FACA NOT TO APPLY.—The Commission shall not be considered an advisory committee for purposes of the Federal Advisory Committee Act (5 U.S.C. App.).

(6) DUTIES OF AVIATION FUNDING TASK FORCE.—

(A) REPORT TO SECRETARY.—

(i) IN GENERAL.—The aviation funding task force established pursuant to paragraph (3) shall submit a report setting forth a comprehensive analysis of the Administration's budgetary requirements through fiscal year 2002, based upon the independent assessment under subsection (a), that analyzes alternative financing and funding means for meeting the needs of the aviation system through the year 2002. The task force shall submit a preliminary report of that analysis to the Secretary not later than 6 months after the independent assessment is completed under subsection (a). The Secretary shall provide comments on the preliminary report to the task force within 30 days after receiving the report. The task force shall issue a final report of such comprehensive analysis within 30 days after receiving the Secretary's comments on its preliminary report.

(ii) CONTENTS.—The report submitted by the aviation funding task force under clause (i)

(I) shall consider the independent assessment under subsection (a);

(II) shall consider estimated cost savings, if any, resulting from the procurement and personnel reforms included in this Act or in sections 347 and 348 of Public Law 104-50, and additional financial initiatives

(III) shall include specific recommendations to Congress on

how the Administration can reduce costs, raise additional revenue for the support of agency operations, and accelerate modernization efforts, and

(IV) include a draft bill containing the changes in law necessary to implement its recommendations.

(B) RECOMMENDATIONS. - The aviation funding task force shall make such recommendations under subparagraph (A)(ii)(III) as the task force deems appropriate. Those recommendations may include—

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(i) proposals for off-budget treatment of the Airport and Airway Trust Fund;

(ii) alternative financing and funding proposals, including linked financing proposals

(iii) modifications to existing levels of Airport and Airways Trust Fund receipts and taxes for each type of tax;

(iv) establishment of a cost-based user fee system based on, but not limited to, criteria under subparagraph (F) and methods to ensure that costs are borne by users on a fair and equitable basis

(v) methods to ensure that funds collected from the aviation community are able to meet the needs of the agency

(vi) methods to ensure that funds collected from the aviation community and passengers are used to support the aviation system;

(vii) means of meeting the airport infrastructure needs for large, medium, and small airports, and

(viii) any other matter the task force deems appropriate to address the funding and needs of the Administration and the aviation system.

(C) ADDITIONAL RECOMMENDATIONS.—The aviation funding task force report may also make recommendations concerning—

(i) means of improving productivity by expanding and accelerating the use of automation and other technology;

(ii) means of contracting out services consistent with this Act, other applicable law, and safety and national defense needs;

(iii) methods to accelerate air traffic control modernization and improvements in aviation safety and safety services

(iv) the elimination of unneeded programs; and

(v) a limited innovative program based on funding mechanisms such as loan guarantees, financial partnerships with for-profit private sector entities, government-sponsored enterprises, and revolving loan funds as a means of funding specific facilities and equipment projects, and to provide limited additional funding alternatives for airport capacity development.

(D) IMPACT ASSESSMENT FOR RECOMMENDATIONS.—For each recommendation contained in the aviation funding task force's report, the report shall include a full analysis and assessment of the impact implementation of the recommendation would have on—

(i) safety;

(ii) administrative costs

(iii) the congressional budget process;

(iv) the economics of the industry (including the proportionate share of all users)

(v) the ability of the Administration to utilize the sums collected; and

(vi) the funding needs of the Administration.

(E) TRUST FUND TAX RECOMMENDATIONS.—If the task force's report includes a recommendation that the existing

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Airport and Airways Trust Fund tax structure be modified the report shall—

(i) state the specific rates for each group affected by the proposed modifications;

(ii) consider the impact such modifications shall have on specific users and the public (including passengers); and

(iii) state the basis for the recommendations.

(F) FEE SYSTEM RECOMMENDATIONS.—If the task force's report includes a recommendation that a fee system be established, including an air traffic control performance based user fee system, the report shall consider—

(i) the impact such a recommendation would have on passengers, air fares (including low-fare, high frequency service), service, and competition

(ii) existing contributions provided by individual air carriers toward funding the Administration and the air traffic control system through contributions to the Airport and Airways Trust Fund

(iii) continuing the promotion of fair and competitive practices

(iv) the unique circumstances associated with inter island air carrier service in Hawaii and rural air service in Alaska

(v) the impact such a recommendation would have on service to small communities

(vi) the impact such a recommendation would have on services provided by regional air carriers;

(vii) alternative methodologies for calculating fees so as to achieve a fair and reasonable distribution of costs of service among users

(viii) the usefulness of phased-in approaches to implementing such a financing system;

(ix) means of assuring the provision of general fund contributions, as appropriate, toward the support of the Administration; and

(x) the provision of incentives to encourage greater efficiency in the provision of air traffic services by the Administration and greater efficiency in the use of air traffic services by aircraft operators.

(7) DUTIES OF AVIATION SAFETY TASK FORCE.—

(A) REPORT TO ADMINISTRATOR.—Not later than 1 year after the date of the enactment of this Act, the aviation safety task force established pursuant to paragraph (3) shall submit to the Administrator a report setting forth a comprehensive analysis of aviation safety in the United States and emerging trends in the safety of particular sectors of the aviation industry.

(B) CONTENTS.—The report to be submitted under subparagraph (A) shall include an assessment of—

(i) the adequacy of staffing and training resources for safety personnel of the Administration, including safety inspectors

(ii) the Administration's processes for ensuring the public safety from fraudulent parts in civil aviation and the extent to which use of suspected unapproved

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parts requires additional oversight or enforcement action, and

(iii) the ability of the Administration to anticipate changes in the aviation industry and to develop policies and actions to ensure the highest level of aviation safety in the 21st century.

(8) ACCESS TO DOCUMENTS AND STAFF.—The Administration may give the Commission appropriate access to relevant documents and personnel of the Administration, and the Administrator shall make available, consistent with the authority to withhold commercial and other proprietary information under section 552 of title 5, United States Code (commonly known as the "Freedom of Information Act"), cost data associated with the acquisition and operation of air traffic service systems. Any member of the Commission who receives commercial or other proprietary data from the Administrator shall be subject to the provisions of section 1905 of title 18, United States Code, pertaining to unauthorized disclosure of such information.

(9) TRAVEL AND PER DIEM.—Each member of the Commission shall be paid actual travel expenses, and per diem in lieu of subsistence expenses when away from his or her usual place of residence, in accordance with section 5703 of title 5, United States Code.

(10) DETAIL OF PERSONNEL FROM THE ADMINISTRATION.— The Administrator shall make available to the Commission such staff, information, and administrative services and assistance as may reasonably be required to enable the Commission to carry out its responsibilities under this subsection.

(11) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated such sums as may be necessary to carry out the provisions of this subsection.

(c) REPORTS TO CONGRESS.—

(1) REPORT BY THE SECRETARY BASED ON FINAL REPORT OF AVIATION FUNDING TASK FORCE.—

(A) CONSIDERATION OF TASK FORCE'S PRELIMINARY REPORT.— Not later than 30 days after receiving the preliminary report of the aviation funding task force, the Secretary, in consultation with the Secretary of the Treasury, shall furnish

comments on the report to the task force.

(B) REPORT TO CONGRESS.—Not later than 30 days after receiving the final report of the aviation funding task force, and in no event more than 1 year after the date of the enactment of this Act, the Secretary, after consulting the Secretary of the Treasury, shall transmit a report to the Committee on Commerce, Science, and Transportation and the Committee on Finance of the Senate, and the Committee on Transportation and Infrastructure and the Committee on Ways and Means of the House of Representatives. Such report shall be based upon the final report of the task force and shall contain the Secretary's recommendations for funding the needs of the aviation system through the year 2002.

(C) CONTENTS.—The Secretary shall include in the report to Congress under subparagraph (B):

(i) a copy of the final report of the task force; and

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(ii) a draft bill containing the changes in law necessary to implement the Secretary's recommendations.

(D) PUBLICATION.—The Secretary shall cause a copy of the report to be printed in the Federal Register upon its transmittal to Congress under subparagraph (B).

(2) REPORT BY THE ADMINISTRATOR BASED ON FINAL REPORT OF AVIATION SAFETY TASK FORCE.—Not later than 30 days after receiving the report of the aviation safety task force, the Administrator shall transmit the report to Congress, together with the Administrator's recommendations for improving aviation safety in the United States.

(d) GAO AUDIT OF COST ALLOCATION.—The Comptroller General shall conduct an assessment of the manner in which costs for air traffic control services are allocated between the Administration and the Department of Defense. The Comptroller General shall report the results of the assessment, together with any recommendations the Comptroller General may have for reallocation of costs and for opportunities to increase the efficiency of air traffic control services provided by the Administration and by the Department of Defense, to the Commission, the Administrator, the Secretary of Defense, the Committee on Transportation and Infrastructure of the House of Representatives, and the Committee on Commerce, Science, and Transportation of the Senate not later than 180 days after the date of the enactment of this Act.

(e) GAO ASSESSMENT.—Not later than 180 days after the date of the enactment of this Act, the Comptroller General shall transmit to the Commission and

Congress an independent assessment of airport development needs.

SEC.276. PROCEDURE FOR CONSIDERATION OF CERTAIN FUNDING PROPOSALS.

(a) IN GENERAL.—Chapter 481 is amended by adding at the end the following:

“§ 48111. Funding proposals

‘(a) INTRODUCTION IN THE SENATE.—Within 15 days (not counting any day on which the Senate is not in session) after a funding proposal is submitted to the Senate by the Secretary of Transportation under section 274(c) of the Air Traffic Management System Performance Improvement Act of 1996, an implementing bill with respect to such funding proposal shall be introduced in the Senate by the majority leader of the Senate, for himself and the minority leader of the Senate, or by Members of the Senate designated by the majority leader and minority leader of the Senate.

“(b) CONSIDERATION IN THE SENATE.—An implementing bill introduced in the Senate under subsection (a) shall be referred to the Committee on Commerce, Science, and Transportation. The Committee on Commerce, Science, and Transportation shall report the bill with its recommendations within 60 days following the date of introduction of the bill. Upon the resorting of the bill by the Committee on Commerce, Science, and Transportation, the reported bill shall be referred sequentially to the Committee on Finance for a period of 60 legislative days.

“(c) DEFINITIONS.—For purposes of this section, the following definitions apply:

“(1) IMPLEMENTING BILL.—The term ‘implementing bill’ means only a bill of the Senate which is introduced as provided

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in subsection (a) with respect to one or more Federal Aviation Administration funding proposals which contain changes IN existing laws or new statutory authority required to implement such funding proposal or proposals.

“(2) FUNDING PROPOSAL.—The term ‘funding proposal’ means a proposal to provide interim or permanent funding for operations of the Federal Aviation Administration.

“(d) RULES OF THE SENATE.—The provisions of this section are enacted—

“(1) as an exercise of the rulemaking power of the Senate and as such they are deemed a part of the rules of the Senate and they supersede other rules only to the extent that they are inconsistent therewith; and

“(2) with full recognition of the constitutional right of the Senate to change the rules (so far as relating to the procedure of the Senate) at any time, in the same manner and to the same extent as in the case of any other rule of the Senate.”.

(b) CLERICAL AMENDMENT.—The table of sections for chapter 481 is amended by adding at the end thereof the following:

“48111. Funding proposals.”.

SEC. 276. ADMINISTRATIVE PROVISIONS.

(a) IN GENERAL.—Chapter 453 is amended—

(1) by redesignating section 45303 as section 45304; a

(2) by inserting after section 45302 the following:

“§ 45303. Administrative provisions

“(a) FEES PAYABLE TO ADMINISTRATOR.—All fees imposed and amounts collected under this chapter for services performed, or materials furnished, by the Federal Aviation Administration are payable to the Administrator of the Federal Aviation Administration.

“(b) REFUNDS.—The Administrator may refund any fee paid by mistake or any amount paid in excess of that required.

“(c) RECEIPTS CREDITED TO ACCOUNT.—Notwithstanding section 3302 of title 31, all fees and amounts collected by the Administration, except insurance premiums and other fees charged for the provision of insurance and deposited in the Aviation Insurance Revolving Fund and interest earned on investments of such Fund, and except amounts which on September 30, 1996, are required to be credited to the general fund of the Treasury (whether imposed under this section or not:

“(1) shall be credited to a separate account established in the Treasury and made available for Administration activities

“(2) shall be available immediately for expenditure but only for congressionally authorized and intended purposes, and

“(3) shall remain available until expended.

“(d) ANNUAL BUDGET REPORT BY ADMINISTRATOR.—The Administrator shall, on the same day each year as the President submits the annual budget to Congress, provide to the Committee on Commerce, Science, and Transportation of the Senate and the Committee on Transportation and Infrastructure of the House of

Representatives—

“(1) a list of fee collections by the Administration during the preceding fiscal year;
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“(2) a list of activities by the Administration during the preceding fiscal year that were supported by fee expenditures and appropriations;

“(3) budget plans for significant programs, projects, and activities of the Administration, including out-year funding estimates

“(4) any proposed disposition of surplus fees by the Administration, and

“(5) such other information as those committees consider necessary.

‘(e) DEVELOPMENT OF COST ACCOUNTING SYSTEM.—The Administration shall develop a cost accounting system that adequately and accurately reflects the investments, operating and overhead costs, revenues, and other financial measurement and reporting aspects of its operations.

(f) COMPENSATION TO CARRIERS FOR ACTING AS COLLECTION AGENTS.—The Administration shall prescribe regulations to ensure that any air carrier required, pursuant to the Air Traffic Management System Performance Improvement Act of 1996 or any amendments made by that Act, to collect a fee imposed on another party by the Administrator may collect from SUCH other party an additional uniform amount that the Administrator determines reflects the necessary and reasonable expenses (net of interest accruing to the carrier after collection and before remittance) incurred in collecting and handling the fee.”

(b) CONFORMING AMENDMENT.—The table of sections for chapter 453 is amended by striking the item relating to section 45303 and inserting the following: “45303. Administrative provisions. “45304. Maximum fees for private person services.”.

SEC. 277. ADVANCE APPROPRIATIONS FOR AIRPORT AND AIRWAY TRUST FUND ACTIVITIES.

(a) IN GENERAL.—Part C of subtitle VII is amended by adding at the end the following:

CHAPTER 482—ADVANCE APPROPRIATIONS FOR AIRPORT AND AIRWAY TRUST FACILITIES

“Se C.
“48201. Advance appropriations.

“§ 48201. Advance appropriations

(a) MULTIYEAR AUTHORIZATIONS.—Beginning with fiscal year 1999, any authorization of appropriations for an activity for which amounts are to be appropriated from the Airport and Airway Trust Fund established under section 9502 of the Internal Revenue Code of 1986 shall provide funds for a period of not less than 3 fiscal years unless the activity for which appropriations are authorized is to be concluded before the end of that period.

“(b) MULTIYEAR APPROPRIATIONS.—Beginning with fiscal year 1999, amounts appropriated from the Airport and Airway Trust Fund shall be appropriated for periods of 3 fiscal years rather than annually.”.

(b) CONFORMING AMENDMENT.—The analysis for subtitle VII is amended by inserting after the item relating to chapter 481 the following:

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“482. ADVANCE APPROPRIATIONS FOR AIRPORT AND AIRWAY TRUST FACILITIES 48201.n.

SEC. 278. RURAL AIR SERVICE SURVIVAL ACT.

(a) SHORT TITLE. - This section may be cited as the “Rural Air Service Survival Act”.

(b) FINDINGS.—Congress finds that—

(1) air service in rural areas is essential to a national and international transportation network;

(2) the rural air service infrastructure supports the safe operation of all air travel;

(3) rural air service creates economic benefits for all air carriers by making the national aviation system available to passengers from rural areas

(4) rural air service has suffered since deregulation;

(5) the essential air service program under the Department of Transportation—

(A) provides essential airline access to rural and isolated rural communities throughout the Nation

(B) is necessary for the economic growth and development of rural communities;

(C) is a critical component of the national and international transportation system of the United States; and

(D) has endured serious funding cuts in recent years; and

(6) a reliable source of funding must be established to maintain air service in rural areas and the essential air service program

(c) ESSENTIAL AIR SERVICE AUTHORIZATION. - Section 41742 is amended to read as follows:

“§ 41742. Essential air service authorization

“(a) IN GENERAL. - Out of the amounts received by the Federal Aviation Administration credited to the account established under section 45303 of this title or otherwise provided to the Administration, the sum of \$50,000,000 is authorized and shall be made available immediately for obligation and expenditure to carry out the essential air service program under this subchapter for each fiscal year.

“(b) FUNDING FOR SMALL COMMUNITY AIR SERVICE.—Notwith standing any other provision of law, moneys credited to the account established under section 45303(a) of this title, including the funds derived from fees imposed under the authority contained in section 45301(a) of this title, shall be used to carry out the essential air service program under this subchapter. Notwithstanding section 47114(g) of this title any amounts from those fees that are not obligated or expended at the end of the fiscal year for the purpose of funding the essential air service program under this subchapter shall be made available to the Administration for use in improving rural air safety under subchapter I of chapter 471 of this title and shall be used exclusively for projects at rural airports under this subchapter.

“(c) SPECIAL RULE FOR FISCAL YEAR 1997.—Notwithstanding subsections (a) and (b), in fiscal year 1997, amounts in excess of \$75,000,000 that are collected in fees pursuant to section 45301(a)(1) of this title shall be available for the essential air service program under this subchapter, in addition to amounts specifically provided for in appropriations Acts.”.

ATTACHMENT 7: WITNESSES AT THE PUBLIC HEARING ON FUNDING THE FAA

Witness List

Aviation Finance Public Hearing

May 28th, 1997

National Civil Aviation Review Commission

Commerce Dept. Auditorium

Agenda

General Aviation

Panel: Aircraft Owners and Pilots Association	Phil Boyer, President
General Aviation Manufacturers Association	Ed Bolen, President
National Business Aircraft Association	Doug Mahin, Raytheon
National Air Transportation Association	John W. Olcott, President
	Michael J. Pittard, Chairman

Labor

Panel: National Association of Air Traffic Specialists	Gary D. Simms, Executive Director
Professional Airway Systems Specialists	Jack Johnson, President

Air Carriers

Panel 1:	
Coalition for FAA Fair Funding	Elliott Seiden, Northwest Airlines
Southwest Airlines	Herb Kelleher, Founder, C.E.O.
Air Transport Association of America	Ed Merlis, V.P. Govt. Affairs

Panel 2:	
National Air Carriers Association	Edward J. Driscoll, President
Air Carriers Association of America	Ed Faberman, Exec. Director
Regional Airline Association	Walt Coleman, President
Airline/FAA CDM	Michael Wambsganss V.P. Metron
	Kevin Kollmann, U.S. Air Airlines

Airline Dispatchers Federation

Chris Pear, United Airlines
Michael Nadon, President
Giles Okeefe,
Regulatory Affairs

Airports/State & Local Government

Mobile Airport Authority

Bay Haas, Executive
Director

National Association of State Aviation Officials

Henry Ogrodzinski,
President

Airports Council International—North America
Solberg Airport

David Plavin, President
Thor Solberg, Owner

ATTACHMENT 8: WITNESSES AT THE PUBLIC HEARING ON FUNDING THE FAA

Witness List

Aviation Safety Public Hearing
October 8th, 1997
Rayburn House Office Building
Rm. 2167

Agenda

9:30 am Opening Remarks

Panel 1:

Air Transportation Association	Al Prest Vice, President, Operations
Alaskan Airlines	Terry Clark, Director, Flight Safety
Air Line Pilots Association	David Haase, Executive Central Air Safety Chair
Northwest Airlines	Gary Clemmer, Managing Director, Quality Assurance

Panel 2:

Collaborative Decision Making Team	Rick Falcone Manager, Technical Operations, American Airlines
Airline Dispatchers Federation	Chris Pear, Manager, Flight Dispatch, United Airlines
(No organization affiliation)	William Leber, Director, Legislative Affairs
	Gail Dunham, family member of United Airlines Flight #585 accident victim

Lunch

Panel 3:

Professional Airways Systems Specialists	Michael Fanfalone, President
Transportation Trades Dept. AFL-CIO	Edward Wytkind, Executive Director
Allied Pilots Association	Mike Cronin, Chairman, Legislative Affairs
Professional Pilots Federation	Bert Yetman, President
Professional Aviation Maintenance Association	John Lewis, Operations Manager

Panel 4:

Aircraft Rescue Fire Fighting

Working Group
Aircraft Technical Publishers
(No organization affiliation)

Bill Stewart, Fire Training Captain,
Metropolitan Washington
Airports Authority
Carol Daniels, President and C.E.O.
Captain R. Michael Baiada

ATTACHMENT 9: COMMISSION MEETING AGENDAS

Commission Meeting Agendas:

Monday, April 28th

- 3:30 Welcome by Chairman Norman Mineta
Self-Introduction of Commissioners
Vice-chair selection
- 4:15 Welcoming remarks, Secretary Rodney Slater
- 4:30 Travel Briefing

Tuesday, April 29th

- 8:45 Federal Budget Process
Presentation by Jack Basso, Deputy Assistant Secretary for Budget, DOT

Overview of federal budget process and aviation revenues and spending. Explanation of different types of spending and why they matter including their implications for budget scoring. Status of aviation trust fund. Impact of balanced budget for aviation spending and discussion of the budget reconciliation process.

- 10:00 FAA Budget and Issues
Presentation by Monte Belger, Acting Deputy Administrator, FAA

Overview of Federal Aviation Administration Budget. Trends in major accounts. Projected issues and problems if no changes are made to current financing situation.

- 1:00 Congressional Perspectives on FAA Budget
Presentations by Rich Efford, House Appropriations Committee; David Schaffer, House Transportation Committee; Ann Hodges, Senate Commerce Committee; Dan Corbett, Senate Environment and Public Works Committee; Norah Moseley, House Ways and Means Committee; and Lori Peterson, Senate Finance Committee.

Congressional views on the aviation budget and financing and potential changes.

- 2:45 FAA Costs
Presentations by Richard Golaszewski, Gellman Research Associates; Dr. Jack Fearnside, MITRE Corporation; Morgan Kinghorn, Coopers and Lybrand.

Discussion of allocating costs to users of FAA services, cost allocation models and cost accounting system, and potential cost savings in FAA budget and hurdles to

achieving them.

4:30 Commission Business and Next Steps
Thursday, May 15th

8:45 Administrative Matters.

9:00 Status of Air Traffic Control Modernization;
Presentations by Dennis DeGaetano, FAA Deputy Associate Administrator for Research and Acquisitions; John S. Kern, Vice President of Aircraft Operations and Chief Safety Officer, Northwest Airlines & Member of FAA Free Flight Steering Committee.

Issues Associated with Advancing the Schedule of Modernization; Issues Associated with Free Flight.

10:45 Potential for Improving Productivity at the FAA.

Presentations by Jack Fearnside, MITRE Corporation; Bob Levin, U.S. General Accounting Office; Ron Morgan, FAA Air Traffic Service; Michael Conner, National Air Traffic Controllers Association.

1:15 Overview of Airport Capital Requirements and Financial Investment.

Presentation by Susan Kurland, FAA Associate Administrator for Airports.

2:00 Airport Capital Needs and Finance Issues.

Presentations by Gerald Dillingham, U.S. General Accounting Office; David Plavin, Airports Council International; Tom Browne, Air Transport Association; Will Plentl, Director of Aviation, State of North Carolina.

3:30- 4:45 Perspectives from the Financial Community on Meeting Airport Capital Needs.

Presentations by Richard de Neufville, Professor/Chair, Technology and Policy Program, Massachusetts Institute of Technology; William Reed, Booz, Allen, & Hamilton; Andrea Bozzo, Fitch Investor Services; Robert Aaronson, Airport Group International.

Friday, May 16th

8:30 Conceptual Issues and Economic Principles Associated with User Fees; International Approaches; Potential Methods to Charge Users.

Presentations by Richard Mudge, Apogee Research; Tim Hannegan, U.S. General Accounting Office.

10:00 Real Life Experience with User Fees.

Presentations by John W. Crichton, Chairman of the Board, NavCanada;

Discussion of Food and Drug Administration Performance Fees

Paul Coppinger, Associate Commissioner for Planning & Evaluation, Food and Drug Administration; Matthew B. Van Hook, Assistant General Counsel, Pharmaceutical Research & Manufacturers of America.

11:15 Administration Overview on Balanced Budget Agreement and User Fees.

Presentation by Michael Diech, Associate Director for General Government and Finance, Office of Management and Budget.

Wednesday, May 28th

Public Hearing on Funding the Aviation System

9:30 Opening Remarks

9:45 General Aviation Panel

11:30 Labor

1:15 Air Carriers

3:45 Airports / State & Local Government

Thursday, May 29th

8:30 Presentation on the Military's Role in the Civil Aviation System by Mr. Frank J. Colson, Executive Director of DoD Policy Board on Federal Aviation and DoD Liaison to the Commission.

9:30 Discussion Among Commission Members about Future Treatment of Aviation Revenues and Programs in the Federal Budget Process and Whether the Commission Should Communicate to Congressional Leaders About Resolving This Issue in the Budget Reconciliation Legislation Now Being Developed.

1:00 Discussion by Commissioners Chip Barclay and Sylvia de Leon on the Baliles Commission Recommendation to Create a Federal Corporation for Air Traffic Control.

1:30 Discussion Among Commission Members about Near, Medium, and Long Term Goals for Improving the Performance of the Federal Aviation Administration with respect to the User/Customers;

How should the user/customers' role in the decision-making process be strengthened?

What are the public interest considerations that must be preserved if governance were changed to strengthen the user/customers' role?

Should different agency functions have different forms of user/customer governance relationships?

What should the FAA decision-making structure look like one year, five years, and ten years from now?

To what extent should different decision-making processes replace the current degree of Congressional/Executive Branch involvement in agency funding and investment decisions?

Tuesday, June 3

9:00 Appropriate Level of General Fund Support for the FAA

Should there be general fund support? If so, what proportion of the federal aviation system should be supported by the general fund? Should the general fund support be phased out over a period of time given the overall budget constraints on discretionary spending? Should any general fund support be linked to particular aviation programs?

1:00 Issues Associated with Allocation of FAA Costs Among Users

Should the cost allocation analysis by GRA Research be accepted as an interim basis for determining the percentage of costs the user categories impose on the aviation system and determining revenue needs from each? If not, what analysis should be used or what changes to GRA assumptions need to be made? If so, should Ramsey pricing or proportional use be used to allocate the common and fixed costs among the categories of users?

Wednesday, June 4

Guest "Commissioners": John Olcott, NBAA
Phil Boyer, AOPA
James Coyne, NATA

Ed Bolen, GAMA

9:00 Role General Aviation and Air Taxes Should Play in a Future Financing System

By what method should general aviation and air taxes contribute revenue to the aviation system? Should general aviation and air taxes pay a different share of the total aviation revenue than they do today? Should business general aviation be differentiated from other general aviation for purposes of revenue generation?

Tuesday, June 10

9:00 Update on Budget Reconciliation Actions;
Discussion and Approval of Future Schedule;
General Discussion of Overall Goals of the Commission in light of Reconciliation Actions.

10:30 Discussion of Financial Requirements and Future Governance.

Discussion with FAA officials:

Monte Belger, Acting Deputy Administrator;
George Donohue, Associate Administrator for Research and Acquisitions;
Cathal 'Irish' Flynn, Associate Administrator for Civil Aviation Security;
Peggy Gilligan, Deputy Associate Administrator for Regulation and Certification;
Ruth Leverenz, Director, Office of Financial Services (Budget).

1:00 Continue Discussion of Financial Requirements and Governance (with FAA Officials).

3:00 Conclude on Financial Requirements and Governance (without FAA Officials).

4:00 Commission Member Bob Frenzel on Cost Allocation Issue.

Wednesday, June 11th

9:00 Continued discussion with FAA officials

Thursday, June 26th

9:00 Presentation by DoD Liaison Frank Colson on FAA Financing and Governance.

10:00 Discussions/Decisions on Airport Improvement Program and Passenger Facility Charge Options.

1:00 Continuation and Conclusion of AIP/PFC Discussions.

2:15 Presentation and Explanation of Air Carrier Financing Options.

Friday, June 27th

9:00 Break Up into Four Small Groups to Discuss Comprehensive Conceptual Package for Resolution of Financing Issues.

10:45 Small Groups Report Back on Reaction to Comprehensive Conceptual Package.

Tuesday, July 15th

1:00 Meeting of the Airport Funding Task Force

Wednesday, July 16th

9 am Discussion of Old Business

11 am Borrowing Authority
Presentation by Mozelle Thompson, Department of Treasury

1:15 Airport/Airline Task Force Update

2:30 Innovate Finance/Innovative Management Options
Presentation by John Hennigan, FAA Office of Aviation Policy and Plans

Tuesday, July 29th

9:00-4:00 Review and Discussion of draft one of the Preliminary Report on Finance.

Wednesday, August 13th

9:00-5:00 Review and discussion of draft two of the Preliminary Report on Finance.

Thursday, August 14th

9:00-5:00 Continued review and discussion of draft two of the Preliminary Report on Finance.

Monday, August 25th

Commissioners Travel to Boeing Facilities in Seattle.

Tuesday, August 26th

7:30 Commissioners and staff travel to Everett Facility

8:30-10:00 Boeing briefing on Aviation Safety Data/Accident Rate/ Trends
Presentation by Ron Robinson

10:15-12:00 Tour Boeing 777 Line

1:00-2:00 Safety and National Airspace System of the Future Presentation by David
Allen

2:00-2:30 Travel to Tramco Facility

2:30-3:00 Repair Station Certification Issues Aircraft Maintenance Unapproved Parts
Presentation by Bill Ashworth

3:15-5:00 Tour Tramco Facility

5:00-8:30 Dinner Meeting at Salty's Restaurant

Wednesday, August 27th

9:00-10:45 Review Draft Finance Report

10:45-12:00 777 Certification Process Presentation by FAA/Boeing Lars Anderseon
and Ron Wojnar

12:00-1:00 Working Lunch- Video on EPGWS (Enhanced Ground Proximity Warning
System)
Presentation by Don Bateman

1:00-1:30 Travel to Air Route Traffic Control Center in Auburn

1:30-4:00 Overview/Tour Air Traffic Control Facility
Overview/Tour of DSR (Display System Replacement)

Tuesday, September 9th

9:00-11:00 Overview of Regulation and Certification
Inspector Training and Staffing

Presentations by FAA: Aircraft Certification Service; Flight Standards Service

11:00-12:15 National Transportation Safety Board (Most Wanted) Roles/Relationship NTSB/FAA Panel

1:15-2:30 FAA/NASA Safety Research (Charlie Huettner-NASA, Chris Seher-FAA)

2:45-4:00 JAA/ICAO-International Agreements- AVR
(Margaret Gilligan and Beth Erickson- FAA)

4:00-5:00 Commissioner Discussion

Wednesday, September 10th

9:00-10:15 Flight Safety Foundation
Industry Panel by Stuart Matthews

10:30-11:30 GAIN Briefing- Including Data Protection
Presentation by Chris Hart, Office of Aviation Safety

12:30-1:15 Tour NASDAC Facility

1:30-2:30 Risk Management
Presentations by M. Rioux, Air Transport Association and Beth Erickson,
FAA

Wednesday, September 24th

8:30-10:30 NTSB Lab Tours

11:00-12:30 Air Traffic Issues/ Runway Incursion Overview
Presentation by Monte Belger, FAA

1:30-3:30 Suspected Unapproved Parts (SUPs)
Presentation by Ken Reilly, Manager FAA SUPs office

Industry Panel on SUPs
National Air Transportation Association, Joe Hertzler;
Aeronautical Repair Station Association, Marshall Filler;
Inspector General Office, Harry Schaefer;

3:45-5:00 Commissioner Discussions
Finance Report Public Relations Strategy

Safety Draft Report

Thursday, September 25th

9:00-12:00 Commissioner Discussion of Draft Safety Report

Tuesday, October 7th

9:00-10:15 Review Safety Report Draft II

10:30-11:45 Designee/Delegation Program
Presentation by Frank Paskiewicz, FAA Manager, Production and
Airworthiness Certification Division
Dick Gordon, FAA, Deputy, Flight Standards Service

Organizational Delegation Authority (ODA)
Presentation by Web Heath, Manager, Technical Liaison
Industry Regulatory Affairs, Boeing

1:00-2:00 American Airlines Aviation Safety Analysis Program (ASAP)
Presentations by Tommy McFall, Managing Director Safety Environment;
Scott Griffith, Captain, Managing Director, Flight Operations Safety

2:15-4:15 Safety Intervention Strategy
Presentation by Mike Rioux, Sr VP, Operations and Safety, Air Transport
Association; Peggy Gilligan-FAA Regulation and Certification

4:15-5:00 Commissioner Discussion

Thursday, October 30th

9:00-10:00 Old Business

10:00-11:45 Discussion with NTSB on Accident Investigation Procedures.
Speaker: Jim Hall

1:00-5:00 Discussion of Safety Draft Report Revisions

Friday, October 31st

9:00-12:00 Discussion of Safety Draft Report Revisions

ATTACHMENT 10: COMMISSION LETTER SENT TO
CONGRESSIONAL LEADERSHIP REGARDING BUDGET TREATMENT OF
AVIATION TAXES AND PROGRAMS

The Honorable

Newt Gingrich, Speaker, United States House of Representatives
Richard Gephardt, Minority Leader, United States House of Representatives
Trent Lott, Majority Leader, United States Senate
Thomas Daschle, Minority Leader, United States Senate
Franklin Raines, Director, Office of Management and Budget
Rodney Slater, Secretary of Transportation

Dear _____:

On behalf of the entire National Civil Aviation Review Commission (NCARC), I write to seek your firm commitment for ensuring that aviation revenues and spending are given budgetary treatment and scoring this year in budget reconciliation appropriate to the Federal Aviation Administration's (FAA) unique operational, safety, and airport capital development mission.

When the NCARC was created by Congress and the Administration, the Commission was mandated in no uncertain terms to provide you with recommendations meeting the following objectives: increasing productivity at the agency and reducing user costs; ensuring an equitable, efficient and flexible revenue structure; linking operational and capital investments to performance-based goals and evaluations; and making certain that FAA has the resources it needs to perform its critical safety, security, and operational activities and to continue investing in airport capital development. We are committed to meeting your mandate, but it has become clear that the current budget treatment of aviation revenues and spending, if left unchanged by budget reconciliation, will make virtually impossible any meaningful implementation of our financial reform and performance improvement recommendations.

The success of our efforts hinges, therefore, on providing aviation's infrastructure with a dedicated, stable, and adequate source of funding. Specifically, the key ingredient is some type of stand-alone budget formulation connecting revenues, which increase with air travel growth, with the spending and investment to meet that growth. We have enclosed a proposed legislative concept to achieve that objective. (Nothing in this letter presumes any decision regarding the status of the general fund share of funding the aviation program.)

Without providing the type of budget treatment recommended in this concept, the Commission cannot achieve the objectives of the enabling legislation. This failure will only lead to a crisis in the future of safety, delays, bottlenecks and air traffic gridlock. At that point, it will take more time and resources (measured in years and billions of dollars) to fix than if we succeed with our mandate now. We look forward to working

with you on this alternative which we believe is the linchpin for ensuring the success of the Commission.

Sincerely,

Norman Y. Mineta
Chair, NCARC

Enclosure

COLLOQUY ON BUDGET TREATMENT FROM SENATE

REVENUE RECONCILIATION ACT OF 1997 (Senate - June 27, 1997)

AVIATION EXCISE TAX

Mr. McCAIN. Mr. President, I rise to express my concern about actions taken in the reconciliation bills by the Senate Finance and the House Ways and Means Committees to modify the current aviation excise tax structure. Although somewhat different from each other, both of the proposed modifications would increase taxes on airline passengers, and represent significant changes in aviation policy.

Last year, Commerce Committee members worked closely with members of the Ways and Means and Finance Committees, during consideration of the Federal Aviation Reauthorization Act of 1996, to establish the National Civil Aviation Review Commission. The members of this Commission have dedicated themselves to developing a consensus within the aviation industry regarding the appropriate financing mechanism for the Federal Aviation Administration [FAA], and the important safety programs it oversees. Together, the committees empaneled the Commission to consider substantive policy changes to the aviation excise tax formula, and I believe that the Commission should be given every opportunity to do so. The reconciliation bill should not make substantive changes to the tax formula without the benefit of the Commission's work.

Mr. LOTT. Mr. President, I would like to agree with the distinguished chairman of the Commerce Committee, of which I am a member. The work of the National Civil Aviation Review Commission could result in a unique opportunity for an often divided aviation industry to reach a consensus on important funding issues. Congress should not force its will on the industry prematurely.

The Commission is in the process of developing legislative recommendations, and plans to complete its work soon. Unfortunately, the reconciliation process is moving faster than the ability of the Commission to reach a comprehensive solution. The Commission recently wrote to the leadership of both the Senate and House on this issue. We should ensure that the reconciliation bill, or budget rules, do not foreclose the ability to consider the commission recommendations in the future. At that time, we will have a full and fair debate on the recommendations themselves.

Mr. McCAIN. I thank the distinguished majority leader for his insight. I plan to continue to work with him and other members of the Commerce Committee to see that the budget reconciliation bill does not foreclose the opportunity for Congress to implement the Commission recommendations in the future. We must continue our efforts to ensure an adequate and stable funding source for the FAA and the safety programs it oversees.

Mr. DASCHLE. Mr. President, I would like to join my distinguished colleagues, the majority leader, the chairman and ranking member of the Commerce Committee, and the chairman and ranking member of the subcommittee, in expressing concern about the reconciliation bill preempting the work of the National Civil Aviation Review Commission. I appointed two of its members, and I would not like to see its important work undermined before it has had an opportunity to achieve a consensus to a very important issue. I believe that after the recommendations of the Commission have been submitted to Congress, we must give them every consideration.

Mr. HOLLINGS. Mr. President, I, too, would like to join my distinguished colleagues in this discussion. The leadership of the Commerce Committee worked very hard in the Senate and during the Senate-House conference to create this Commission. Congress even provided a substantial appropriation to fund its activities. The work of the Commission is extremely important. I know that my colleagues share my concern that aviation monies are not being used for aviation purposes, and we need to work to correct that. During our Commerce Committee markup recently, I expressed my desire to treat the Airport and Airways Trust Fund differently, and many members indicated that we needed to do something different for aviation.

Mr. GORTON. Mr. President, as chairman of the Aviation Subcommittee, I would like to associate myself with the remarks of the distinguished chairman and ranking member of the Commerce Committee, as well as with those of the majority and minority leaders. An efficient FAA will be crucial if our country is to maintain its role as the world leader in the aeronautical and aerospace industries. The FAA must have adequate resources to transform itself into an efficient and productive agency. The anticipated work of the Commission should provide the Congress with valuable guidance in that respect. The proposed changes to the aviation excise taxes in the reconciliation bill should not be a signal to the commission that its ongoing work is meaningless. I intend to work with the leadership of the Commerce Committee and Senate to ensure that the future recommendations of the Commission are not prejudiced by any actions taken in this reconciliation bill.

Mr. FORD. Mr. President, I would like to add to the thoughtful remarks of my distinguished colleagues. We started the debate over how to fund the FAA last Congress when we first proposed a fee system. Senator McCain and I worked very hard on the bill and the entire committee agreed that we needed a Commission to provide a blueprint for how to fund the FAA. The FAA bill last year restructured the agency and gave the FAA the ability to do some creative things. Now the Commission must give us their best advice on how to meet the needs of the FAA, or how to cut spending. Those are the dilemmas facing the Commission. I know all of us share a desire to ensure that the work of the Commission is debated and fully aired.

Mr. McCAIN. I would like to thank the distinguished gentlemen for their remarks. The safety of the flying public and the health of an essential, vital industry are at stake. We must give the Commission a chance to fulfill its statutory mandate.

ATTACHMENT 12: SELECTED REFERENCE
MATERIALS REVIEWED BY THE COMMISSIONERS

“1995 Federal Aviation Administration Annual Report.” Spring 1996. Federal Aviation Administration.

“1996 Federal Aviation Administration Strategic Plan.” January 25, 1996. Federal Aviation Administration.

“Air Traffic Control—Status of FAA’s Modernization Program.” May 1995. U.S. General Accounting Office.

“Airport Development Needs—Estimating Future Costs.” April 1997. U.S. General Accounting Office.

Allen, D. August 26, 1997. “Review of Communication Navigation Surveillance/Air Traffic Management Efforts.” Boeing Company.

Alterman, S. September 24, 1997. “Enhance Collision Avoidance System (ECAS) Project Status.” Cargo Airline Association.

Ashworth, B. August 26, 1997. “Executive Summary, 1997: Maintenance, Repair and Overhaul Group.” BF Goodrich Aerospace.

Basehore, M. 1997. “National Aging Aircraft Research Program.” Federal Aviation Administration (Hughes Technical Center).

Basso, J. April 28, 1997. “FAA Budget and Budget Scoring.” Office of the Secretary of Transportation.

Belger, M. April 29, 1997. “Briefing for the National Civil Aviation Review Commission.” Federal Aviation Administration.

Belger, M. September 24, 1997. “Air Traffic Services Staffing/Training/Aviation Safety.” Federal Aviation Administration.

Browne, T.J. May 15, 1997. “Remarks by Thomas Browne to the NCARC.” Air Transport Association of America.

Browne, T.J. May 15, 1997. “ATA White Paper: Airport Capital Requirements.” Air Transport Association.

“Budget in Brief— FY1998.” 1997. Federal Aviation Administration.

Browne, T.J. May 15, 1997. “Airport Capital Needs and Available Resources.” Air

Transport Association of America.

Colson, F.J. June 26, 1997. "DOD Thoughts on FAA Governance and Financial Reform." U.S. Department of Defense.

Colson, F.J. May 29, 1997. "Department of Defense Policy Board on Federal Aviation Presentation." U.S. Department of Defense.

Crichton, J. May 16, 1997. "Serving a World in Motion." NavCanada.

Crichton, J. May 16, 1997. "Remarks by John W. Crichton, Chairman of the Board NavCanada." NavCanada.

De Gaetano, D. May 15, 1997. "NAS Modernization ." Office of Acquisition and Research, Federal Aviation Administration.

De Neufville, R. May 15, 1997. "Efficiency and Public Interest in Airport Financing—an International Perspective on U.S. Success, with Suggestions for Improvement." Technology and Policy Program, MIT.

Dillingham, Gerald. May 15, 1997. "Airport Development Needs: Estimating Future Costs." U.S. General Accounting Office.

Erickson, E. September 10, 1997. "Overview of Aircraft Certification Service Safety Analysis Team." Federal Aviation Administration.

Erickson, E. September 9, 1997. "Aircraft Certification: Staffing, Training, and Related Budget Resources." Federal Aviation Administration.

"FAA Aviation Forecasts, Fiscal Years 1997-2008." March 1997. Office of Aviation Policy and Plans, Federal Aviation Administration.

"FAA Comments on Coopers & Lybrand Independent Financial Report." February 27, 1997. Associate Administrator for Administration, Federal Aviation Administration.

"FAA Independent Financial Assessment." February 28, 1997. Coopers and Lybrand L.L.P.

Fearnsides, J. J. May 15, 1997 "Air Traffic Controller Productivity." MITRE.

Fearnsides, J.J. April 29, 1997. "Introduction to FAA Financial Reform Issues." MITRE.

Filler, M. September 25, 1997. "Testimony of ARSA on the FAA's Suspected Unapproved Parts Program." Aeronautical Repair Station Association.

"Final Report of RTCA Task Force 3 — Free Flight Implementation." October 26, 1995.

RTCA, Inc.

“Final Report to President Clinton.” February 12, 1997. White House Commission on Aviation Safety and Security.

“Free Flight Action Plan.” August 15, 1996. RTCA, Inc.

Gilligan, M.; Erickson, E.; Bauerline, J. September 10, 1997. “Briefing on FAA International Activities.” Federal Aviation Administration

Gilligan, M. September 9, 1997. “Briefing for NCARC on the Regulation and Certification Organization.” Federal Aviation Administration.

Golaszewski, R. April 29, 1997. “Cost Allocation and Financing Briefing to National Civil Aviation Review Commission.” Gellman Research Associates, Inc.

Golaszewski, R. February 3, 1997. “User Fee Presentation Attachments.” Gellman Research Associates, Inc.

Golaszewski, R. April 7, 1997. “GRA Completes FAA Cost Allocation Study.” (Fact Sheet) Gellman Research Associates, Inc.

Griffith, S. October 2, 1997. “Aviation Safety Action Partnership (ASAP) Program.” American Airlines.

Griggs, L. and Gittens, A. June 9, 1997. “Supplemental Information to NCARC Staff Paper Airport Development Needs and Financing Options”.

Hart, C. June 1997. “The Global Analysis and Information Network (GAIN): Worldwide Sharing, Analysis, and Dissemination of Aviation Safety Information.” Office of Systems Safety. Federal Aviation Administration.

Hart, C. September 10, 1997. “Global Analysis and Information Network (GAIN).” Federal Aviation Administration.

Heath, W. October 7, 1997. “ARAC Delegation.” Aviation Rulemaking Advisory Committee.

Hertzler, J. September 24, 1997. “Unapproved Parts and General Aviation.” National Air Transportation Association.

Huettner, C. H. and Seher, C. September 9, 1997. “Aviation Safety Research.” Aeronautics and Space Transportation Technology.

“History of Most Wanted Safety Recommendations.” May 1997. National Transportation Safety Board.

"Industry Input Data Sheet Printout (Matrix on Safety Recommendations)" January 1997. Gore Commission staff.

Kern, J.S. May 15, 1997 "A Free Flight Air Traffic Management System." Aircraft Operations, Northwest Airlines.

Kurland, S. May 15, 1997 "Airport Capital Requirements." Federal Aviation Administration.

Kurland, S. May 15, 1997 "Airport Improvement Program and PFCs." Federal Aviation Administration.

Levin, B. May 15, 1997 "Relationship Between FAA's Productivity and its Organizational Culture." U.S. General Accounting Office.

Macedo, M. August 13, 1997. "Briefing Memorandum on the Enhanced Ground Proximity Warning System (EGPWS) Notice of Proposed Rulemaking." Federal Aviation Administration.

Matthews, S. September 10, 1997. "An Overview of the Flight Safety Foundation." Flight Safety Foundation.

Mc Fall, T. October 7, 1997. "Family of Safety Programs." American Airlines.

Mc Kenna, J. August 27, 1997. "Display System Replacement Status." Federal Aviation Administration.

Mc Nally, M. May 15, 1997 "Air Traffic Controller Productivity." National Air Traffic Controller Association.

Morgan, R.E. May 15, 1997 "Productivity, Getting the Job Done." Air Traffic Control, Federal Aviation Administration.

"Most Wanted Transportation Safety Improvements." May 1997. National Transportation Safety Board.

Mudge, R. May 16, 1997. "Economic Principles Associated with User Fees." Apogee Research, Inc.

"Organizational Transformation at the FAA." May 9, 1997. Arthur Andersen & Co.

Ott, J. August 18, 1997. "Intense Scrutiny Shapes New Direction of FAA ..." (Several articles in issue) Aviation Week and Space Technology. pp. 37-62.

Paskieicz, F. and Gordon, D. October 1, 1997. "AVR Designees and Delegations." Federal Aviation Administration.

“Performance Based Organizations—a Conversion Guide.” April 1997. National Performance Review.

Plavin, D.Z. May 15, 1997. “1996 U.S. Airport Capital Development Needs Survey and Financing Issues.” Airports Council International—North America and American Association of Airport Executives.

Reed, W. May 15, 1997. “Funding Capital Requirements of U.S. Airports.” Booz, Allen, and Hamilton.

Reilly, K. September 24, 1997 “SUP Program: Where Are We Today?” Federal Aviation Administration.

Rioux, M. and Gilligan, M. October 7, 1997. “Integrated Safety Strategy Team.” Air Transport Association; Federal Aviation Administration.

Rioux, M. September 10, 1997. “Safety Briefing to NCARC.” Air Transport Association.

Robinson, R. August 27, 1997. “Aviation Safety: Perspectives and Status.” Boeing Company.

Sachrey, M. September 10, 1997. “Safety Performance Analysis System.” Federal Aviation Administration.

Sachrey, M. September 10, 1997. “Flight Standards Service Initiative Process.” Federal Aviation Administration.

Sachrey, M. September 10, 1997. “Inspector Staffing and Training.” Federal Aviation Administration.

Schaefer, H. September 25, 1997. “Overview of Suspected Unapproved Parts Investigations.” Department of Transportation, Office of the Inspector General.

Staff, National Civil Aviation Review Commission. White Papers: Budget Treatment Issues for FAA Funding Options; Cost Allocation; Financing the FAA: Comparisons of Existing and Alternative Systems to Provide Funding for Development and Operation of the National Airspace System.

Staff, National Civil Aviation Review Commission. White Papers: FAA Financial Requirements; Potential Cost Savings Ideas for FAA and Users; Airport Development Needs and Financing Options.

“Statistical Summary of Commercial Jet Airplane Accidents 1959-1996.” June 12, 1997. Boeing Commercial Airplane Group.

Sweedler, B. September 9, 1997. “Safety Recommendations.” National Transportation Safety Board.

Thomas, D. September 9, 1997. “Accident Investigation: Safety Recommendation Responsibilities.” Federal Aviation Administration.

Van Hook, M.B. May 16, 1997. “Industry Perspectives on FDA User Fees.” Pharmaceutical Research and Manufacturers of America.

Wojnar, R. and Andersen, L. August 26, 1997. “Model 777 Certification Process.” Joint Presentation: Federal Aviation Administration and Boeing Company.

ATTACHMENT 13: SPECIAL ACKNOWLEDGEMENTS

Special Acknowledgments:

We would like to thank the following people for their assistance to the Commission.

Mr. Preston Atkins, Department of the Treasury
Ms. Sharon Barkeloo, Office of Management and Budget
Mr. Jonathan Ball, Office of Management and Budget
Mr. Peter J. Basso, Office of the Secretary of Transportation
Mr. Jack Bennett, Office of the Secretary of Transportation
Ms. Michelle Brune, Federal Aviation Administration
Ms. Brannen Chamberlain, Lockheed-Martin
Mr. Giovanni Carnaroli, Federal Aviation Administration
Ms. Rochelle Claypoole, Federal Aviation Administration
Ms. Marion Dittman, Federal Aviation Administration
Ms. Arlene Draper, Federal Aviation Administration
Mr. Robert Fenton, TRW
Mr. Gerald G. Froelke, Federal Aviation Administration
Mr. David Hempe, Federal Aviation Administration
Dr. Jonathan Hoffman, MITRE
Mr. Tom Herlihy, Office of the Secretary of Transportation
Ms. Elena Loboda, Federal Aviation Administration
Ms. Jacquelyn Lowey, Office of the Secretary of Transportation
Ms. Louise Maillett, Federal Aviation Administration
Mr. Bob Matthews, Federal Aviation Administration
Ms. Michelle Nadeau, TRW
Ms. Mary Catherine Nee, MITRE
Ms. Beverly Pheto, Office of the Secretary of Transportation
Mr. Tom Toula, Federal Aviation Administration
Dr. William Trigeiro, MITRE
Ms. Catherine Vass, TASC Graphics, Department of Transportation