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THE PRESIDENT HAS SEEN . . .

DEPARTMENT OF TRANSPORTATION



SECRETARY'S DECISION  
ON A GRANT REQUEST  
FROM THE ST. LOUIS  
METROPOLITAN AREA  
AIRPORT AUTHORITY

WASHINGTON, D.C.

SEPTEMBER 1, 1976

## TABLE OF CONTENTS

	<u>Page</u>
<u>PART ONE: SUMMARY AND DECISION</u>	
INTRODUCTION	1
A. The Issue	1
B. Background	1
C. The Decision Process	3
THE DECISION	5
SUMMARY OF FINDINGS AND CONCLUSIONS	9
<u>PART TWO: ANALYSIS</u>	
I. Legal Framework	18
A. Legal Basis for My Authority	18
B. Considerations Mandated by Statute	19
C. Right of a State to Prevent Approval	23
D. Acquisition of Land for Future Airport Development	26
E. Requirements of NEPA	29
II. Policy Framework	32
A. Transportation Development	32
B. Environmental Protection	33
C. Resource Allocation	34
D. Minimizing Dislocation	35
E. Federal-State-Local Relations and Community Participation	35
F. Decision Making	36
G. Conclusion	36
III. The Columbia-Waterloo Proposal	37
A. Estimates of Capacity	37
B. Demand Estimates	38
C. Delays	39
D. Cost of Construction	41
E. Feasibility	42
F. Conclusions	42

	<u>Page</u>
IV. The Alternative of Lambert	43
A. Potential Improvements to Lambert's Capacity and Access	43
B. Demand Estimates	45
C. Delays	47
D. Cost of Construction	48
E. Feasibility	50
F. Conclusions	50
V. Alternative Sites	52
VI. Cost Comparisons	54
A. Cash Costs	54
B. Time "Costs" and Their Treatment	57
VII. Environmental Issues	60
A. Noise	60
B. Air Quality	64
C. Energy	68
VIII. Employment, Business and Growth	69
A. Introduction	69
B. Direct Employment	70
C. Airport-Related Employment	71
D. Indirect Employment	72
E. Construction Jobs	73
F. General Growth Effect	73
G. Conclusion	74
IX. Institutional and Financing Questions	75
A. Future Availability of Columbia- Waterloo	75
B. Effect on Financing Improvements at Lambert	76
X. General Aviation and Safety	79
A. General Aviation	79
B. Safety	80
XI. Local Views	82

	<u>Page</u>
XII. Effect of Deferring a Final Decision	84
XIII. Conclusion	85
APPENDIX A. Legal Opinion of Counsel	A-1
APPENDIX B. Value of Time: Some Caveats	B-1
APPENDIX C. Air Quality Submissions	C-1

## INTRODUCTION

### A. The Issue

The basic issue before me is whether to approve an application submitted by the St. Louis Metropolitan Area Airport Authority, an authority created by the Illinois legislature, for a grant of Federal funds for land acquisition of an airport site in the area of Columbia-Waterloo, Illinois. The grant would be made pursuant to the Airport and Airway Development Act of 1970, as amended, most recently by the Airport and Airway Development Act Amendments of 1976 (the 1970 Act, as amended, is referred to hereafter as the "Airport Act"). A commitment of Federal funds for site acquisition would be the first in an expected series of steps toward the development of a new major air carrier airport at this location to serve the St. Louis metropolitan area. The seriousness of this decision is increased by the recognition that, if built, the new airport will ultimately replace Lambert-St. Louis International Airport as the major air carrier airport for the St. Louis metropolitan area.

There is considerable local opposition to approval of this grant, particularly from Missouri representatives. Missourians, of course, comprise 80% of the population of the St. Louis area. Arguments have been made that the existing Lambert-St. Louis International Airport, located in St. Louis County, Missouri, can be modernized to serve air carrier airport needs of the St. Louis metropolitan area for the foreseeable future, or that another site in Missouri would be preferable to Columbia-Waterloo.

It has been my hope that agreement would be reached in the St. Louis metropolitan area on a new or upgraded airport. However, such agreement has not occurred and consequently I have decided I must now act on the application before me.

### B. Background

The eventual need for a significant increase in commercial airport capacity to serve the St. Louis metropolitan area has been under discussion for many years. A number of studies in the late 1960's concluded that during the 1980's the present capacity of Lambert Airport would be inadequate to handle the airline traffic for the St. Louis area without intolerable delays, and that a new air carrier airport would be necessary. In 1968, the FAA officially recognized the requirement for a new airport by including it in the National Airport System Plan (NASP).

In 1970, the Illinois legislature created the St. Louis Metropolitan Area Airport Authority (hereinafter "SMAAA" or the "Illinois Authority") to undertake needed airport development. Later that year the

SMAAA announced that the Columbia-Waterloo site in Illinois was the preferred location for the new airport. At that time, the City of St. Louis, Missouri, supported this site. In January 1972, the State of Illinois applied for Federal funds to begin land acquisition near Columbia-Waterloo. This application included an environmental assessment for the proposed site. A draft Environmental Impact Statement (EIS) was subsequently circulated for comment, pursuant to the requirements of the National Environmental Policy Act of 1969 (NEPA).

During this period, the State of Missouri studied alternative sites located in Missouri. In February 1972, the State of Missouri created the Missouri-St. Louis Metropolitan Airport Authority (hereinafter the "Missouri Authority") to deal with the problem further. In March 1972, while the Illinois project application was pending, former Secretary of Transportation John A. Volpe, pursuant to section 16(f) of the Airport Act, advised local authorities that an additional large airport was required for the St. Louis area and directed his Regional Representative to bring together the interested jurisdictions to agree upon a site. An agreement was not reached.

On January 20, 1975, former Secretary of Transportation Claude S. Brinegar issued a statement concluding that the aviation forecasts for the St. Louis area were down from earlier projections and that Lambert might therefore technically be capable of meeting the area's aviation needs into the mid-1990's. He suggested that the EIS submitted for the Illinois site would have to be revised to reflect the changed forecast, but because a new airport would ultimately be needed for the St. Louis area and Columbia-Waterloo is the most likely site, it would be prudent to "land bank" the Illinois site.

In 1974, Federal funds were awarded under the FAA's Planning Grant Program to the St. Louis Airport Authority (the operator of Lambert Airport) and the Missouri Authority to conduct a master planning study of Lambert Airport to determine its potential to meet the region's future air carrier airport needs. Phases A and B of this study, by the Ralph M. Parsons Company/Gruen Associates, were completed in January 1975 (the so-called "RMP Report")<sup>1/</sup> and concluded that Lambert could be expanded to meet the region's air carrier airport needs until at least 1995. The FAA has expressed serious reservations regarding this conclusion primarily because of its reliance on future air traffic control technology advances, which may or may not occur.

<sup>1/</sup> The Ralph M. Parsons Company/Gruen Associates, Lambert-St. Louis International Airport 1975-1995. Report of Findings. Phase A, Airport Requirements; Phase B, Development of Alternatives, January 17, 1975.

In order to develop an overall analysis of the St. Louis airport question, comparing in particular the alternatives of transferring to Columbia-Waterloo or remaining at an expanded Lambert, DOT commissioned a study by Peat, Marwick, Mitchell and Company (PMM)<sup>2/</sup> which was completed in November 1975. The study concluded that (1) delaying construction and operation of Columbia-Waterloo and remaining at an improved Lambert would result in lower economic costs compared to earlier construction and operation at Columbia-Waterloo, and (2) the "most likely" level of operations could be accommodated at an improved Lambert, but with increasing congestion over time.

### C. The Decision Process

Because of the difficulty in making the decision on the Illinois application for site acquisition funds and because of its significant impact on the St. Louis region, I decided that it was in the public interest that elected officials and citizens representing various interest groups be given a final opportunity to make clear their positions and to present their cases to me directly. I did this also because, as Justice Felix Frankfurter once advised President Franklin Roosevelt, government is essentially an educational process both for the public and their elected and appointed officials. Therefore, I held a public hearing in St. Louis on January 13, 1976.<sup>3/</sup> Representatives of State and local government, the business community, civic groups and other elected officials and interested citizens addressed a series of relevant issues set forth in the Department of Transportation Issue Paper.<sup>4/</sup> This issue paper outlined the aeronautical, economic, environmental, social, transportation and institutional considerations that would have to be evaluated in reaching a decision, and the relevant factual information as I then understood it.

Written presentations were submitted to the public docket, which remained open until January 30, 1976. Each side was then given until February 9, 1976, to respond to the written submission of the opposing side. After February 9, I received correspondence on

<sup>2/</sup> Peat, Marwick, Mitchell & Co., Report of the St. Louis Airport Investigation - Phase II, Report No. DOT-40176-8, November 1975 (hereinafter "PMM Report - Phase II").

<sup>3/</sup> A written transcript of that hearing is part of the official docket on this matter: Transcript of Public Hearing on St. Louis Airport Matter, January 13, 1976 (hereinafter "Transcript of Public Hearing, January 13, 1976").

<sup>4/</sup> Department of Transportation, "Issue Paper: Request From St. Louis Metropolitan Area Airport Authority for Federal Grant Assistance to Acquire Land for Airport in Columbia-Waterloo Area, in Illinois", November 28, 1975 (Department of Transportation).

this matter, which is part of the public file. The recent amendments to the Airport Act were not signed into law until July 12, 1976, and appropriations therefor were not signed into law until August 12, 1976.

Today's decision is based entirely on reports and information listed in the issue paper, the January 13 public hearing, my subsequent review of the transcript, written materials submitted for the record, relevant statutes including the recent amendments to the Airport Act, and the EIS.

The aeronautical, economic, environmental, social and institutional aspects of this decision are complex and controversial. In addition to the dilemma of evaluating each of these aspects of the decision, determining their relative importance presents an even more difficult challenge. In this document, I attempt to explain my evaluation of the most important issues and the reasons for my decision. As I have stated before, I firmly believe that political public servants, especially those serving by Presidential appointment and Senatorial confirmation, have a duty to express in writing their reasons for taking major actions. In this way, the public can judge the fairness and objectivity of such actions. It should also make it easier for the Congress and the courts to review such actions.

#### THE DECISION

After careful consideration, I have decided for the reasons set forth in this document to approve the application from the St. Louis Metropolitan Area Airport Authority for a grant for land acquisition for a new major air carrier airport at the Columbia-Waterloo site. This approval, however, is subject to the following conditions:

- (1) Any master planning grant for Columbia-Waterloo must be structured for commencement of air carrier operations not before January 1, 1992, unless a joint authority representing both Illinois and Missouri equally is developed, in which case such operations could commence as early as 1987, or even sooner if the joint authority so desires;
- (2) Priority in the filling of jobs at the Columbia-Waterloo Airport must be given to persons, if any, who lose jobs at Lambert as a result of the transfer of air carrier operations to Columbia-Waterloo;
- (3) Legal arrangements must be made to assure that construction and building trade employees from Missouri are given reasonably equal opportunities for employment in the development and construction of Columbia-Waterloo;
- (4) The farmland to be acquired at Columbia-Waterloo must have a delayed acquisition date or be rented to the current owners for continued farming use, if the current owners so desire, until such time as it is actually necessary to begin physical development work, and displacement of farming activities must be kept to a minimum consistent with the development and later operation of the airport;
- (5) The Authority must include in its purchase agreement in connection with farmlands acquired for the new site, for those farmers who desire it, the right of reversion to the current owners at the price of acquisition, plus interest at 5% or the fair market value, whichever is lower, in the event that -- because of circumstances not now foreseen -- the land is not subsequently used for airport purposes;
- (6) Satisfactory assurances must be given that land in the vicinity of the airport will be utilized for purposes compatible with the estimated level of future airport noise;
- (7) The contractors and labor unions which will be utilized in the development and construction of Columbia-Waterloo must effectuate, in a legally binding document, the commitment they have already given for a no-strike guarantee in the construction of the new airport and related facilities of the Authority, even if the then current labor agreements have expired;

- (8) The Authority must effectuate its commitment, in a legally binding document, that it would "assume any outstanding debt obligations for Lambert improvements being supported by the airlines which the airlines will continue to support";
- (9) The Authority must give assurances that it intends to comply fully with section 30 of the Airport Act, relating to equal opportunities for minorities and women in activities financed from grants under the Act, and any regulations issued thereunder;
- (10) The Authority must file a letter with the Administrator of the FAA within ninety days hereof, or any extended time given by said Administrator, stating that it accepts the pertinent conditions set forth above as terms of this grant.

In addition, I have instructed the FAA Administrator, working with other Federal agencies as appropriate, to take the following actions:

- (1) To assist the Lambert authorities and local government and others to identify in greater detail the specific jobs that are likely to be lost and businesses that are likely to be adversely affected by the transfer of operations, and to develop plans for actions to provide substitute employment and business opportunities to the maximum extent feasible;
- (2) To cooperate with the Lambert authorities, including encouragement of the submission of a grant application, in proceeding with planning and development actions necessary and appropriate for Lambert's continued operation as a major air carrier airport until the date of transfer of air carrier operations to Columbia-Waterloo;
- (3) To cooperate with the Lambert Authority in making sure that Lambert, if the Authority so desires, can serve the needs of general aviation extremely well whenever the air carrier operations are transferred to Columbia-Waterloo;
- (4) To ensure complete compliance with the requirements of Federal statutes relating to relocation assistance and equal opportunity for minorities and women in both employment and contracting.

My approval of the grant application has been made subject to the above explicit conditions in order to protect the viability of Lambert Airport as an air carrier airport until the air carrier operations are transferred to Columbia-Waterloo, and thereafter as a general aviation airport if the Lambert Authority so desires; to ease individual and community transition problems; and to compel, or

at least encourage as vigorously as possible, development of a bi-state authority that represents equally the interests of both States, thereby helping to assure that Missouri will participate actively in the development of the new airport at Columbia-Waterloo. The decision reflects my firm conviction that the great St. Louis metropolitan area -- with St. Louis, Missouri, the hub of a vital commercial and cultural center and national resource -- is entitled to have a superior, modern airport to serve its needs in the 1990's and thereafter; and I cannot find that Lambert could be improved, modernized and developed sufficiently to meet that need, nor can I find that any site in Missouri exists which will serve the needs of the St. Louis metropolitan area as well as the Columbia-Waterloo site. I have also found that the environmental advantages of noise reduction of the Columbia-Waterloo alternative are a compelling argument for developing a new airport. I have been greatly influenced by Missouri's claim that Lambert plays an important social and economic role in the City and County of St. Louis. The conditions imposed on the grant are to meet those concerns to the extent possible, but yet not deny the City and County the advantages of a new and modern major air carrier airport which will serve the needs of the region and the interstate and foreign air system into the 1990's and beyond.

I believe that the most desirable outcome of this issue, from the local as well as the Federal viewpoint, would be local agreement for the operation of the new airport by a joint authority representing both States equally. Accordingly, my decision includes an incentive to help obtain this objective. Specifically, any master planning grant for Columbia-Waterloo must be structured toward the commencement of air carrier operations not until January 1, 1992, unless a joint authority is developed, in which case operations could commence as early as 1987, or even sooner if the joint authority so desires. Inasmuch as the Authority has stated its view that operations should commence in 1987, it would be in its interest to seek bistate agreement, in order to permit it to commence operations at that date or earlier, rather than to wait until 1992 as it would otherwise have to do under this decision. Similarly, I believe it is in Missouri's interest, now that land acquisition will commence for a new airport, to reach agreement on a method for participating in the ownership and operation of that airport. Specifying that operations at the new airport will not commence before 1987, and possibly not before 1992, will also serve to ensure that necessary improvements to Lambert are made to keep it operating effectively as an air carrier airport until the specified date of transfer.

My decision also includes conditions designed to minimize any unavoidable adverse impact of the transfer of operations to the communities around Lambert, as well as the communities in the Columbia-Waterloo vicinity.

Now that I have approved conditionally the SMAAA application, it is my deep hope that the responsible leaders of the region will set aside their past differences and take steps to ensure a

regional approach to provide for the future aviation needs of the St. Louis area. I personally remain ready and willing to support further efforts to bring about such a joint approach. Hopefully this decision will mark the end of wasteful competition and lack of resolution in planning the area's aviation needs and the beginning of an era of regional cooperation which serves the aviation needs of the citizens of both Illinois and Missouri, as well as the Nation.

This decision and the Environmental Impact Statement (EIS) will be deposited with the Council on Environmental Quality, and Federal officials shall not commence any action hereunder until after 30 days from the date of deposit. The FAA Administrator will implement normal FAA procedures to effectuate my decision, including the various conditions set forth herein.

## SUMMARY OF FINDINGS AND CONCLUSIONS

In arriving at this decision, I have reviewed the following issues:

- the Secretary's legal authority;
- relevant policy considerations;
- the likely aviation capacity of Columbia-Waterloo and Lambert, if improved;
- the likely aviation demand and resulting air traffic delays at the two airports;
- the likely costs of continuing air carrier operations at Lambert at least to the year 2000, compared to transferring operations to Columbia-Waterloo;
- comparisons between Lambert and Columbia-Waterloo with respect to impacts on the environment, on employment and business, on general aviation, and on safety;
- the possibility that some other site either in Missouri or in Illinois might be available and preferable to Columbia-Waterloo;
- the likely effect a grant to Columbia-Waterloo would have on the ability to finance improvements at Lambert;
- what effect a decision to deny the application, with an indication that within three years the issue of the adequacy of Lambert would be reviewed, would have on the continued viability of Lambert and the long-range business and transportation activities of the St. Louis metropolitan area; and
- the views of the population and groups affected.

My findings and conclusions on these matters, which are detailed in the subsequent sections of this document, are summarized below.

### Legal Authority

After reviewing the various applicable statutes, I have concluded that I am not required by law to reject the Illinois Authority's grant application. Instead, the matter is within my discretion, to be exercised pursuant to the Airport Act and other relevant statutes. With respect to significant specific legal issues which have been raised:

- While I must give fair consideration to the views of the localities involved, there does not appear to be any legal basis for the claim that I am required by law to disapprove the Illinois application merely because of Missouri State and local opposition.
- I am authorized to make grants for the acquisition of land for airport development even if the actual construction will not commence for some years into the future.
- The process which has been followed in arriving at this decision fully complies with the provisions and spirit of the National Environmental Policy Act and exceeds its procedural requirements.

#### Major Policy Considerations

The key policy considerations which have influenced my decision, not all supporting any one position, include the following:

- It is my responsibility and policy to encourage and foster the development of civil aeronautics and national and international air commerce, and an airport and airway system adequate to those purposes;
- It is the Department's policy to reduce transportation's adverse impacts on the quality of the human environment, and to protect and enhance that environment where possible;
- Wherever possible, a Federal official should attempt to avoid or minimize social and economic dislocations by his decisions;
- Recognizing that society in general, and the Federal Government in particular, has limited resources, it is our policy to husband those resources carefully, and only expend Federal funds where the benefits can reasonably be expected to exceed the costs;
- Public officials should, whenever possible, decide controversial issues which they face rather than delay or temporize; and
- The views of State and local governments and the affected public must be given considerable weight in arriving at a decision on a matter such as this.

#### Columbia-Waterloo Airport Construction and Capacity

I have concluded that it is feasible to construct the proposed air carrier airport at the Columbia-Waterloo site. No difficulties have been identified that would prevent completion of the project.

A reasonable basis for comparing aviation capacity to demand is the hourly capacity under Instrument Flight Rules (IFR). In the absence of advances in air traffic control technology that would increase capacity, the IFR capacity of the proposed airport at Columbia-Waterloo should be approximately 104 operations per hour. Improvements in air traffic control technology could increase this estimate. Also, should it become necessary, additional runways can be readily constructed at Columbia-Waterloo to meet higher-than-expected levels of demand.

#### Lambert Airport Improvements and Capacity

Although this judgment cannot be definitive at this time, I have concluded that from an engineering viewpoint, the proposed improvements to Lambert appear to be feasible. This judgment does not extend to advances in air traffic control technology now in research and development.

As to the operational capacity that these improvements would provide, disagreements regarding the estimates are not major except with respect to the treatment of the advances in air traffic control technology. If one assumes that there are not any technical advances in air traffic control technology that would increase capacity, I find that a capacity of 67 operations per hour in 1998 is an acceptable estimate. At the other extreme, if all of the elements of the "fourth generation" of air traffic control systems now in the research stage of development are successfully implemented at Lambert, IFR capacity at Lambert could increase to as much as 85 operations per hour. In light of these estimates, I believe that 67 IFR operations per hour represents a likely minimum estimate of future capacity, and 85 IFR operations per hour a likely maximum estimate.

#### Demand and Delay

There is considerably more uncertainty in projecting demand than capacity. Nevertheless, based on PMM's "most likely" estimates of demand, which I find reasonable and generally consistent with national projections accepted by this Department, it appears that peak hour air carrier and commuter operations alone will approximate the conservative estimate of Lambert's peak hour capacity in the early 1990's. Thus, the total peak hour demand (including general aviation and military) will considerably exceed this capacity at that time.

As demand approaches capacity, PMM's estimate of average delay could approach six minutes, and there will be substantial peak hour congestion. Average delays of six minutes approximate the level now obtained at the Nation's most congested airports. Moreover, PMM's delay estimating methodology likely understates delay. Advances in air traffic control technology could reduce these levels of delay, but Lambert would still be marginal at best.

Compared to Lambert, Columbia-Waterloo would provide air service with considerably less delay, estimated by PMM at a 1.3-minute average delay for 1998. Should demand exceed the most likely forecast, Columbia-Waterloo can readily be expanded to meet any anticipated level of demand with relatively low delays -- even in the absence of improvements in air traffic control technology.

Thus, considerations of aviation delay argue strongly in favor of approving the grant for land acquisition for a new airport. However, these forecasts of demand suggest that the delay would not be unacceptable at Lambert until the early 1990's.

#### Cash and Time Costs

There is also considerable uncertainty and disagreement about the capital costs of making the necessary improvements at Lambert (ranging from \$149 million to \$219 million), the costs of the related highway access improvements (\$10 million to \$130 million), and the costs of constructing Waterloo and providing access to it (\$324 million to \$602 million or more). The participants further disagree in their comparisons of the continued operating costs of access to the two alternative airports (e.g., auto operating costs).

After evaluating the competing claims of the various proponents on this matter, I find that the cost of constructing a new airport at Columbia-Waterloo and the additional operating costs of ground travel to this more distant location for most airport users in the area, weigh against an early transfer of operations to Columbia-Waterloo, although perhaps not to the extent suggested by the PMM analysis.

With respect to time, the average access time for the airport user of Columbia-Waterloo will be greater than for Lambert. As mentioned previously, however, aviation delay will be greater at Lambert than Columbia-Waterloo. The combined "dollar value" of the two time components favors Lambert, although the extent depends upon the valuation placed on access time versus aircraft delay time.

However, I do not believe that the "value of time" argument captures fully the problems associated with long and frequent aircraft delays. From an aviation viewpoint, I believe we should seek to avoid aircraft delays averaging as high as six minutes -- an

average level which would involve very substantial delays and congestion during the peak hours, levels now experienced only at the most congested U.S. airports.

#### Environmental Impacts

Continuation of air carrier operations at Lambert will impose a noise impact on substantially more people than transferring operations to Columbia-Waterloo. In 1988, under conservative assumptions including the quieting of current noisy aircraft -- the so-called "retrofit" program -- approximately 110,000 people would be within the noise impacted NEF 30 and NEF 40 contours if Lambert is continued as the air carrier airport. This compares to about 49,000 for the Columbia-Waterloo alternative (almost all are persons in the Lambert area, who would be impacted by continued non-air carrier operations at Lambert). This is an important environmental consideration arguing in favor of the early transfer of operations to Columbia-Waterloo.

With respect to air quality, the major air pollutants resulting from airport-related operations are carbon monoxide (CO) and oxidants. CO emittents remain in the atmosphere for a relatively short duration, so their effect is likely to be more localized than the effect of oxidants. A significantly greater amount of CO emissions resulting from the Lambert alternative, compared to those resulting from the Columbia-Waterloo alternative, would occur near populated areas. Moreover, these areas near Lambert generally have poorer ambient air quality with respect to CO than the areas near Columbia-Waterloo. Therefore, the adverse effect of CO emissions would be substantially more severe at Lambert than at Columbia-Waterloo.

However, because oxidants are formed from a chemical reaction between other emittents in the atmosphere, their adverse impact depends on the total amounts of relevant pollutants emitted, and not where they are emitted. Because of more lengthy automobile trips, the Columbia-Waterloo alternative is somewhat more adverse with respect to oxidants than Lambert. Thus, I do not find the question of air quality to weigh strongly in favor of either alternative.

#### Employment, Business and Growth

While the question of potential jobs created and jobs lost has been a major and understandably emotional issue in this controversy, I find that the data do not support claims of major effect that have been made on both sides of the issue. With respect to the "direct" jobs now at Lambert Airport (approximately 5,200, which will increase somewhat with time), most jobs would be relocated to Columbia-Waterloo if air carrier operations were transferred there and few, if any, employees would lose their jobs.

The 33,000 "airport-related" employees consist primarily of the 30,000 employees of McDonnell-Douglas, who would not be affected by the transfer of air carrier operations. Of the other 3,000 airport-related employees, most would continue to be employed at Lambert or would transfer to Columbia-Waterloo; probably less than 1,000 would actually lose their present employment in the years ahead if aircraft operations were transferred to Columbia-Waterloo. There would also be a smaller adverse effect on "indirect" employment.

These losses of employment are relatively small, even when measured against employment in the immediate vicinity of Lambert (and much smaller relative to total metropolitan area employment); and a somewhat greater number of jobs are expected to be created at, or in the vicinity of, Columbia-Waterloo. Nevertheless, any loss in employment is an important consideration.

On balance, therefore, I believe that the loss of employment and business which would result from a transfer is an adverse consequence, which is not outweighed by the fact that an equivalent (or somewhat greater) number of new jobs would be created around Columbia-Waterloo. Accordingly, I have carefully structured my decision with conditions designed to eliminate, or at least to minimize, this disbenefit by reducing the loss of employment and by assisting in planning designed to help create new jobs in the Lambert area.

#### General Aviation

If air carrier operations were transferred to Columbia-Waterloo, Lambert could constitute a major general aviation facility. On the other hand, if air carrier operations continue at Lambert at estimated future levels, GA operations at Lambert would be reduced (or would "have to be reduced", depending upon one's viewpoint), and most GA operations transferred to other locations considered less desirable by GA. While I am unable to conclude that there would necessarily be a shortage of GA facilities in absolute terms in the entire St. Louis metropolitan region, the necessity of transferring GA operations to locations less desirable to GA than Lambert does represent a disadvantage if Lambert continues as the major regional air carrier airport.

#### Safety

Although Columbia-Waterloo would provide a margin of safety over the Lambert alternative, Lambert is today an entirely safe facility and would continue to be an entirely safe facility for the future if improved as recommended in the Master Plan.

#### Other Alternatives

After considering the long history of site selection efforts and the various studies and data relative to possible airport sites

in the St. Louis area, I cannot accept the State of Missouri's contention that there may be a site in Missouri for a new airport to serve the St. Louis metropolitan region which would be equal or preferable to the Columbia-Waterloo site. The other sites studied all have disadvantages when compared to Columbia-Waterloo.

#### Future Availability of Columbia-Waterloo

Inasmuch as I have concluded that a new air carrier airport will be needed for the St. Louis metropolitan area by the early 1990's and possibly before, and I have no reason to believe that a better site exists in Missouri than Columbia-Waterloo, I believe it would be desirable to acquire the site for the Columbia-Waterloo airport now. Site acquisition, planning and development of a major new airport is generally expected to take 10-12 years or more. Thus, the development cycle, if begun now, would coincide roughly with the likely date of need. Even if the need were not expected to occur until a later date, I believe it would be prudent to acquire the land now in order to minimize the risk of losing the site to incompatible development or having incompatible development occur around the site.

#### Financing Improvements at Lambert

Proponents of Columbia-Waterloo argue that designation of that site as a future airport, and subsequent steps to develop it, will facilitate financing of any necessary improvements at Lambert in the interim. Opponents of Columbia-Waterloo argue the reverse -- that such designation would make more difficult the financing of improvements at Lambert.

After reviewing the supporting arguments, including the opinions of bond counsels, I have concluded that moving forward with Columbia-Waterloo will make somewhat more difficult the financing of improvements at Lambert. However, it is not clear that approval or denial of the Illinois request will have a major effect on Lambert's financing capabilities, and I, therefore, do not judge this question to be of a definitive nature. I have, however, provided that the Illinois Authority will have to undertake certain obligations with respect to Lambert's financial liability, which ought to mitigate even further any financing problem at Lambert.

#### Local Views

The views of the affected citizens must be given considerable weight in the decision. In the St. Louis situation, a substantial majority of the Missourians -- who constitute approximately 80% of the metropolitan population and a majority of those affected -- support continuation of Lambert as the regional air carrier airport. This has weighed heavily in my consideration of

this matter. However, it has not outweighed the aviation, the national and foreign commerce, and the environmental considerations which are the foundation of my decision to approve Columbia-Waterloo. Moreover, my decision includes conditions to mitigate those effects of the transfer which appear to have been of greatest local concern.<sup>5/</sup>

#### Effect of Deferring a Final Decision

It has been argued that there is no need to make a decision on approving the grant for land acquisition at this time. The argument is made that Lambert can handle estimated aviation demand through the early 1990's, that airport development takes approximately 10 years, and that this therefore allows several years in which to reach firmer conclusions regarding such matters as future aviation demand and technological developments before a final decision is made. I believe, however, that such deferral, after the many years of study and analysis which have gone into this question, would not be worth any possible additional degree of certainty which could be gained, and it would create needless additional uncertainties regarding the future availability of the Columbia-Waterloo site and the surrounding land development. Moreover, it would place Lambert in a financial "limbo", unable to obtain financing during the period until a final decision, because of its uncertain future.

In summary, there is general agreement that aviation capacity in the St. Louis region will need to be expanded if future demand is to be met. After careful evaluation, I have concluded that Lambert, even if improved, will not provide sufficient capacity. With respect to a new site, Columbia-Waterloo provides a superior location, and I have found no valid support for the contention that an equal or better site exists elsewhere. Shifting air carrier operations to Columbia-Waterloo would also provide significant environmental advantages, particularly with respect to noise.

While I am troubled by the opposition of Missourians to the proposed new airport at Columbia-Waterloo, I have given their views and opposition the most careful consideration, and my

<sup>5/</sup> In this connection, I cannot disapprove a grant for a new airport simply because it is located outside the central city of the metropolitan region or outside of the political boundaries of the city or State where the present airport is located. I note that of the Nation's 20 busiest air carrier airports, only 8 are located entirely in the central city of the metropolitan area served, and 2 are partially located in such

decision includes specific conditions to deal with the concerns which they have expressed, particularly regarding possible adverse employment and business effects in Missouri of the shift in air carrier operations to Columbia-Waterloo.

#### 5/ Continued

cities. Of the other ten, six (including Lambert) are located outside the central city but in the same State, while four are located in different States: the two airports serving Washington, D.C. (both located in Virginia), the new airport serving Cincinnati, Ohio (located in Kentucky), and one of the three airports serving New York City (located in Newark, New Jersey).

...the Secretary of the Department of Transportation ...

PART TWO:

ANALYSIS

...the Secretary of the Department of Transportation ...

A. Legal basis for the Secretary's Authority

Generally, section 2(b)(1) of the Department of Transportation Act of 1966, 49 U.S.C. 1551(b)(1) (1970), vests in the Secretary the responsibility to assure the coordinated, effective administration of the transportation program of the Federal Government. To fulfill this responsibility, the Secretary is authorized to provide general leadership in the transportation service and to provide general supervision, control, and direction of transportation activities. It is the Secretary's authority to decide this issue - whether to approve the Secretary's application for a Federal grant to acquire land for a new airport at Columbia-Warwick that will serve the St. Louis District metropolitan area. It is derived from the Airport and Airway Development Act of 1970, 49 U.S.C. 1701 (1970) and 1702 (1970). This authority is granted by Public Law 91-251, 87 Stat. 577 (July 17, 1973). The Act prescribes Federal airport development policy, authorizes Federal funding for airport planning and development, and establishes certain procedures and substantive tests to which the Secretary must adhere.

...the Secretary of the Department of Transportation ...

Effect of the Secretary's Authority

...the Secretary of the Department of Transportation ...

Continued

...the Secretary of the Department of Transportation ...

...the Secretary of the Department of Transportation ...

## I. LEGAL FRAMEWORK

Arising from my review of the Illinois application and the public hearing on January 13 are several questions of law and of public policy inherent in the statutory mandate, which are as follows:

1. What is the legal basis for my authority to decide whether to approve the Illinois application for Federal grant funds to acquire land for a new airport?
2. In reaching a decision on whether to approve a grant based on the Illinois application, what factors must I consider?
3. Can I approve a grant based on the Illinois application if the State of Missouri and the majority of local communities and air travelers in Missouri oppose moving the principal air carrier service to Illinois?
4. Can I approve the acquisition of land for the Illinois site even though the airport may not be needed until sometime in the future (in the range of 15 to 25 years or more) with the result that actual construction of the airport may not begin within the next 5 to 15 years?
5. Have the requirements of the National Environmental Policy Act of 1969 (NEPA) -- that an environmental impact statement and review process be completed before any major Federal action with a significant effect on the human environment is taken -- been satisfied?

Each of these issues is addressed below.

### A. Legal Basis for the Secretary's Authority

Generally, section 2(b)(1) of the Department of Transportation Act of 1966, 49 U.S.C. 1651(b)(1) (1970), vests in the Secretary the responsibility "to assure the coordinated, effective administration of the transportation programs of the Federal Government, to facilitate the development and improvement of coordinated transportation service..., and to provide general leadership in the identification and solution of transportation problems." More specifically, the Secretary's authority to decide this issue -- whether to approve the SMAAA application for a Federal grant to acquire land for a new airport at Columbia-Waterloo that will serve the St. Louis bistate metropolitan area -- is derived from the Airport and Airway Development Act of 1970, 49 U.S.C. 1701 et seq (1970) (Supp. IV, 1974), as amended by Public Law 94-353, 90 Stat. 871 (July 12, 1976). This Act prescribes Federal airport development policy, authorizes Federal funding for airport planning and development, and establishes certain procedures and substantive tests to which the Secretary must adhere.

Section 14 authorizes the Secretary to approve grants for airport development "In order to bring about ... the establishment of a nationwide system of public airports adequate to meet the present and future needs of civil aeronautics...." Section 16(a)-(e) authorizes public agencies to submit project applications to the Secretary for Federal grant funds for airport development and establishes the legal requirements that must be satisfied before he may approve the applications.<sup>6/</sup>

### B. Considerations Mandated by Statute

The airport development program is a Federal grant program that is designed to serve both national and local objectives, and the process by which grants are made reflects both Federal and local interests. Not only does the Airport Act establish the procedure and the substantive requirements that a local applicant must satisfy, but it also mandates many of the policies that the Department should advance, the legal requirements that the Secretary must meet, and the factors he must consider in deciding whether to approve the application.

In authorizing airport funding, the Airport Act declares that "substantial expansion and improvement of the airport and airway system is required to meet the demands of interstate commerce, the postal service, and the national defense..." and that the present "system is [sic] inadequate to meet the current and projected growth in aviation." It follows that I should consider the national interests that would be served by the proposed Illinois airport -- interests that include adequate capacity to meet anticipated growth in interstate air travel in a safe and efficient manner (section 2).

The Act requires the Department to formulate a national transportation policy and to coordinate the development of airports and airways with that policy (section 3(a)(1) and (2)). In the policy section which follows, I will outline the policy framework within which I approach this decision, consistent with policy guidelines set forth in the

<sup>6/</sup> General authority to carry out the functions vested in the Secretary by the Airport Act, except for sections 3 (transportation policy) and 4 (cost allocation study) 49 C.F.R. section 1.47(g)(1), has been delegated to the Federal Aviation Administrator. However, delegations to Administrators are concurrent rather than exclusive. As Secretary of Transportation, I have the inherent power, unless denied me by specific statutory prescription, to exercise my powers concurrently with those to whom responsibility has been delegated. In addition, former Secretary Brinegar, by a memorandum of September 23, 1974, explicitly reserved to the Secretary the decision on the pending Illinois application, and it is this reserved authority that I intend to exercise.

Statement of National Transportation Policy, which was issued on September 17, 1975.<sup>7/</sup>

The Airport Act also directs the Department to prepare and publish a national airport system plan (NASP), setting forth for at least a 10-year period the "type and estimated cost of airport development . . . necessary to provide a system of public airports adequate to anticipate and meet future needs," taking into consideration "forecasted technological developments in aeronautics" and in competing transportation modes (section 12(a) and (b)). Federal assistance under the Act must be in "conformity with the national airport system plan," (section 14(a))<sup>8/</sup> which is "updated on a continuous basis."<sup>9/</sup>

If the Federal Aviation Administrator determines, in accordance with the NASP criteria, that additional airport capacity is needed in the St. Louis metropolitan area, then as the most appropriate solution to this need is developed -- whether a new airport or improvements to Lambert -- these changes would be simultaneously included in the NASP. The FAA views the NASP as a flexible set of criteria rather than a fixed plan, and consequently the NASP is amended as airport need is determined.

<sup>7/</sup> Department of Transportation, A Statement of National Transportation Policy by the Secretary of Transportation (Government Printing Office), 1975. .

<sup>8/</sup> Section 16(a) also provides that "No project application shall propose airport development other than that included in the then current revision of the national airport system plan...."

<sup>9/</sup> "1972 National Airport System Plan," the only published NASP, Volume AAS (section 3, paragraph 8, at page 5). As the FAA determines that changes are needed in the NASP, the changes are inserted in the plan. "National airport systems planning is conducted on a continuous basis; that is, airports and/or locations are reviewed and planned throughout each year. As soon as the planning for any airport is completed, the official NASP case files will be updated and the NASP ADP (Automatic Data Processing) files will be updated at regular intervals" (Section 19, at 15). The inclusion of a project in the NASP may be accomplished at any time and concurrently with the approval of the project application.

The Airport and Airway Development Act Amendments of 1976, which revise the NASP requirements, were enacted on July 12, 1976 (see sections 4 and 8(a)). These revisions tend to make the NASP a more effective instrument for airport planning, but the changes do not have any substantial effect on the evaluation of this project application. See also H.R. Rep. No. 594, 94th Cong., 2d Sess., at 37-38, and S. Rep. No. 643, 94th Cong., 2d Sess., at 5-6.

In approving a project application the Secretary must also be satisfied that "fair consideration has been given to the interests of communities in or near which the project may be located" (section 16(c)(3)). The interests of those communities that would seem to be most relevant are those of State and local governments, the residents and businesses located in neighborhoods surrounding either airport site, and organizations concerned with airport development. One factor of great concern is the way in which the development and operation of an airport would affect those living in proximity to the flight path, although it would also seem appropriate to consider the interest of air travelers who live in the metropolitan area and whose convenience of access would be affected by the decision.<sup>10/</sup>

The requirement of "fair consideration" does not enable any group affected by the project to prevent its approval. Giving fair consideration involves listening to the views of those affected, considering these views and the reasons underlying them rationally and fairly, and then deciding the issue not by referendum, but after weighing the substantive merits of the conflicting interests and recommendations. Even if a large number of affected persons and local groups in Missouri protest the Illinois application for substantial and meritorious reasons, the community or State still does not have the power to prevent approval of the project because the Secretary retains a broader responsibility to consider and balance the safety, economic, social, environmental and technological considerations and interests from an international, national and regional, as well as local, perspective.

By holding the Public Hearing of January 13 and by examining carefully the project application, the position papers of the affected parties, the studies submitted, and impact statements, I believe I have given thorough and fair consideration to the interests of nearby communities. This written opinion explains the interests and policies that were considered, how they were reconciled or compared, and the reasons for my decision. Although not legally compelled -- since it has been held that the statute only requires consideration -- a written opinion, in my judgment, completes the process of fair consideration by making clear to the public, and especially to the concerned communities, how their interests were considered and evaluated in reaching a decision.<sup>11/</sup>

The Airport Act declares that "the protection and enhancement of the natural resources and the quality of environment. . . ." is a national policy and requires the Secretary to consult with other Federal

<sup>10/</sup> It would be appropriate to consider also the interests of air travelers from other cities but in the context of the Federal interest in interstate and foreign travel.

<sup>11/</sup> See Citizens Airport Committee of Chesterfield County v. Volpe, 351 F.Supp 52, 28 (E.D.Va. 1972).

agencies on factors adversely affecting the environment. The Secretary may not authorize a project that has an adverse effect on the environment unless he makes a written finding, following a complete review, "that no feasible and prudent alternative exists and that all possible steps have been taken to minimize such adverse effect" (section 16(C)). He also must be satisfied that the project is reasonably consistent with local plans "for the development of the area in which the airport is located" (section 16(c)(1)(A)). Before final approval of a project application, the Governor of the State in which the project is located must certify that the project will be located, designed, constructed, and operated so as to comply with applicable air and water quality standards (section 16(e)(1)). Pursuant to these provisions and the requirements of the National Environmental Policy Act of 1969 (NEPA),<sup>12/</sup> I have considered and compared significant environmental factors such as noise impact on the surrounding communities; air quality (the pollution effect of aircraft and ground transportation); community disruption, land use and development planning; and energy conservation (from reduced aircraft delay time and from convenient access by surface transportation).

Finally, in addition to the considerations prescribed by the Airport Act,<sup>13/</sup> there are broad, inherent powers and obligations in the administration of a Federal grant program. I am expected to manage Federal resources efficiently and in a cost-effective manner, considering the inflationary impact of proposed Federal actions. Effective program management requires that appropriate timetables for project completion be established and that Federal priorities and objectives -- from equal employment opportunity to coordinated transportation planning -- be monitored. Not only must I adhere to the letter of the specific prescriptions of the Act, but I must advance the spirit of the Act and accept the mantle of responsibility proffered by other Federal laws, including the Federal Aviation Act of 1958, as amended, 49 U.S.C. 1301 *et seq.*, and the Department of Transportation Act of 1966, 49 U.S.C. 1651 *et seq.*, in seeking to anticipate

<sup>12/</sup> 42 U.S.C. 4331 *et seq.* (1970). For a "major federal action significantly affecting the quality of the human environment", NEPA requires that an environmental impact statement be prepared (section 102(2)(C)). Thus, NEPA makes "environmental protection a part of the mandate of every federal agency and department", and requires the decision maker to undertake a "rather finely tuned and systematic balancing analysis", weighing the adverse effects on the environment against the benefits to be derived from the Federal action. Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d, 1109, 1112, 1113 (D.C. Cir. 1971).

<sup>13/</sup> Other conditions of grant approval for airport development projects are contained in subsections 16(a); (b); (c)(1)(B)(C)(D) and (E); (c)(2); and (d); and section 18.

and meet aviation needs of the future in a safe, efficient, technologically advanced and environmentally sound manner.

C. Right of a State Other Than the Applicant to Prevent Approval of a Project for a New Airport in an Adjacent State That Would Serve the Entire Bistate Metropolitan Area

The State of Missouri contends that the Secretary may not "approve a site contrary to the wishes of most of the population and air travelers in a metropolitan area."<sup>14/</sup> Missouri contends that not only must I give the interests of those communities near the project "fair consideration" under 16(c)(3) but also I am bound by their preferences under 16(f)(1) which establishes a procedure for site selection by the Secretary of Transportation in metropolitan areas.

Section 16(f)(1) provides, in part:

"Whenever the Secretary determines (a) that a metropolitan area comprised of more than one unit of State or local government is in need of an additional airport to adequately meet the air transportation needs of such area, and (B) that an additional airport for such area is consistent with the national airport system plan prepared by the Secretary, he shall notify, in writing, the governing authorities of the area concerned of the need for such additional airport and request such authorities to confer, agree upon a site for the location of such additional airport, and notify the Secretary of their selection. In order to facilitate the selection of a site for an additional airport under the preceding sentence, the Secretary shall exercise such of his authority under this part as he may deem appropriate to carry out the provisions of this paragraph. . . ."

Section 16(f)(1) was not intended to diminish the Secretary's responsibility to approve an otherwise valid project application submitted by a sponsoring public agency for an airport within its jurisdiction. The legislative history makes clear that this section refers to the Secretary's authority to make a site selection in the absence of a willing local sponsor. In fact, it was intended to address a situation that had developed in the New York metropolitan area, where no local sponsor had proposed to develop an airport precisely because local jurisdictions were not in agreement. When on his own initiative the Secretary determines, consistent with the National Airport System Plan, that a metropolitan area comprised of more than one unit of State or local government is in need of an additional airport, he must notify the governing authorities of that need and request such authorities to confer, agree upon a site for the location of such

<sup>14/</sup> Missouri Position Paper on the St. Louis Airport Matter, Presented to the Honorable William T. Coleman, Jr., Secretary, Department of Transportation (St. Louis), January 13, 1976; Section 3, p. 5 (hereinafter "Missouri Position Paper").

additional airport, and then notify the Secretary of their selection. By contrast, Congress did not intend that the Secretary submit a proposed project for a new airport by a local sponsor to all the local governing authorities in a metropolitan area for their approval prior to his decision. The debates in Congress on this section were concerned with whether the Secretary should have the additional power to compel a jurisdiction to accept an airport within its political boundaries even though it had not applied for the project assistance and opposed having the airport constructed. The Congress did not intend to affect his preexisting authority to approve project applications; it rejected an expansion of that authority to enable him to compel a jurisdiction to build an airport at a site that he would select unilaterally. It expanded the Secretary's powers only by establishing a process of facilitation, one of the objects of which would be to encourage an appropriate public agency to select a new site.

Illinois had filed a project application under section 16(a) prior to and independently of the determination by former Secretary John A. Volpe, under section 16(f)(1), that an airport was needed in the St. Louis metropolitan region, and his subsequent invitation to governing authorities to discuss and attempt to agree upon a site. Secretary Volpe's attempt to reconcile the competing parties did not nullify Illinois' separate and distinct application pending under 16(a)-(e). Section 16(f)(1) would not prevent the Secretary from approving a project application for a new airport initiated by a public agency in the State in which the airport is to be located. The site selection was made by the local sponsor, not by the Secretary. Having made the site selection, that local sponsor -- chartered by and with the support of the State in which the airport would be located -- is now exercising the right to apply for an airport development grant under the terms of 16(a)-(e). To interpret section 16(f)(1) as the State of Missouri argues would lead to the impractical result of potentially tying up every decision regarding the development of an additional airport in a metropolitan area with the obligation that all local jurisdictions agree. This would slow down the process of creating a viable airport and airways system contrary to the purpose of the Act. It could undermine the Department's ability to meet the future demands of interstate and foreign commerce and to ensure the safe and efficient use of navigable airspace. It would frustrate the efforts of a willing local sponsor to perform its functions under the Act. It would unduly shift the powers of any community within a metropolitan area or any State in which part of a metropolitan area is located from the right of "fair consideration" to a power to veto Federal approval of an otherwise valid application presented by an authorized local sponsor. This argument is especially potent when it is realized that the valid application has been submitted by the authorized agency of another State. It is, in fact, directly contrary to the original purpose of section 16(f)(1).

Even if section 16(f)(1) did apply to preexisting project applications where the site selection was made by a local sponsor -- and we believe it does not -- the fact remains that 16(f)(1) does not explicitly provide any veto power for a "governing authority" and is

silent on its face with respect to what action may be taken if agreement is not reached and also silent with respect to what action may be taken on a valid application from a local sponsor.

That section 16(f)(1) was not intended to prevent the Secretary from approving a valid application by a local sponsor in a metropolitan area is apparent when it is compared to section 16(f)(2) which provides:

"In the case of a proposed new airport serving any area, which does not include a metropolitan area, the Secretary shall not approve any airport development project with respect to any proposed airport site not approved by the community or communities in which the airport is proposed to be located." (emphasis added)

Section 16(f)(2) clearly does prohibit Secretarial approval of a project for a proposed airport site in an area "which does not include a metropolitan area" where the communities, in which the proposed airport would be located, have not approved the site. If the Congress had intended a similar veto in a metropolitan area, it would have been equally as explicit in section 16(f)(1). But the difference between subsections (f)(1) and (2) represents a difference in public policy. In addition to the obvious complexity of reaching agreement among the multitude of jurisdictions in a metropolitan area, airports in metropolitan areas are often an integral part of complex interstate and foreign traffic and air navigation patterns; whereas a local community airport, serving primarily local and regional needs, may overwhelm a small community that should have some say about whether it desires air service at all.<sup>15/</sup>

<sup>15/</sup> Assuming, arguendo, that section 16(f)(1) is applicable and that the Secretary must make every effort to facilitate agreement among the "governing authorities", his authority under this section includes the right to exercise other authority under section 16. There is an important proviso in section 16(f)(1) which states:

"In order to facilitate the selection of a site for an additional airport . . . , the Secretary shall exercise such of his authority under this part as he may deem appropriate to carry out the provisions of this paragraph."

It is not as though past and present Secretaries have not made every reasonable effort to facilitate agreement -- years have passed since Secretary Volpe first directed that the jurisdictions get together to select a site. In the absence of agreement, after a good faith and substantial effort at facilitation, the Secretary would then rely on the preexisting application of a local sponsor and exercise his authority under section 16(a)-(e) in acting on that application. The conditional nature of this decision is an expression of my continuing commitment to the process of facilitation toward the objective of a bistate authority that represents both States and which has the support of all the governing jurisdictions affected.

In summary, Congress did not intend that the views of Missouriians be ignored. Their interests must receive "fair consideration" under section 16(c)(3). There does not appear to be any legal basis, however, for their claim that the opposition of State and local officials requires that I disapprove the project.<sup>16/</sup>

#### D. Acquisition of Land for Future Airport Development

Acquisition of land for future airport development is specifically authorized by section 1711(2) of the Airport Act.<sup>17/</sup> The Act permits advance purchase of land for future development when it is "necessary to permit" any work involved in "constructing . . . a public airport or portion thereof" (section 11(2)). This provision suggests that the purchase of land for future development may be authorized if it is predicated on a reasonable probability at the time of the project application that an airport will be necessary within a reasonably foreseeable time and that it is prudent to purchase land for its future construction.

The Act does not specify the precise standard of reasonable probability. It is clear, however, from section 11(2) of the Act that the Department has discretion and flexibility in funding the acquisition of land for future airport development. Subsections (2)(A) and (B) explicitly authorize the purchase of land for future development in addition to the acquisition of land for present need. Since the Department is required to anticipate airport needs for at least a ten-year period under the NASP and is authorized to fund acquisition of land for future development, it follows that we have substantial flexibility to provide grants for the acquisition of land for future airport development even though the need is not immediate. However, this discretion is not unlimited. The acquisition of land that only possibly, rather than probably, may be needed someday would not be consistent with the requirement that the land be "necessary to permit" airport development or with the general Department policy that Federal resources for airport development be allocated efficiently. Land acquisition for an airport that is intended to be completed at a date in the foreseeable future, within a reasonable range of time, possibly even 15-25 years or more after acquisition, may be eligible for funding under section 14, if there is a reasonable probability that the airport will be needed and constructed.

<sup>16/</sup> Because of the substantial interest in section 16(f)(1), a separate memorandum prepared by the Office of General Counsel detailing the legislative history is appended to this decision.

<sup>17/</sup> The FAA has implemented this authority with the internal policy guidance appearing in section 99.b. of FAA Order 5100.17, which prescribes specific considerations and requirements for acquisition of land for future airport development and which defines "future development" as "the development of a facility more than five years after acquisition."

The extent to which the facts warrant acquisition of land for future development is a question of degree concerning which the Secretary has substantial discretion. In exercising that discretion, I am concerned with such considerations as:

1. The probability or certainty that the proposed airport will be needed, which may be ascertained by evaluating such factors as the projections of needed capacity and passenger growth, the estimated time of need and its proximity, and the likely effect of new technologies on capacity;<sup>18/</sup>
2. Whether the proposed airport is the best available solution to the projected need or whether there are better alternatives (other new sites or possible improvements to existing airports);
3. The probability that if the land is not acquired, it will be subject to rising land cost that will exceed unreasonably the rate of inflation generally, or it will be developed for other purposes and therefore not available for airport construction at the time it will be needed, or that the land around the airport will be encroached upon by incompatible uses;
4. Cost-benefits of present versus future acquisition and of this project in comparison to other applications;
5. The likelihood that the land can be used productively during the interim period after acquisition but prior to construction.

Federal funds may be granted for the acquisition of land for future use on the basis of these considerations.<sup>19/</sup> The Act does not establish a time frame in which the airport construction must begin or be completed. The Secretary's discretion to approve acquisition for future use is constrained, however, by a provision in the Act which prohibits approval unless "the project will be completed without undue delay" (section 16(c)(1)(C)).

<sup>18/</sup> See FAA Order 5100.17, Section 99.b.

<sup>19/</sup> The acquisition of land for future use, which is authorized under the Act, should be distinguished from the practice of "land banking" which may imply a broader, more general power to finance the reservation or set-aside of land for airport development. While this matter was pending, the Department requested Congressional authorization to conduct studies on land financing options, including land banking. Section 26 of the 1976 Amendments, in pertinent part, provide that the Secretary shall conduct studies on

The term "undue delay" does not suggest a specific period of time, nor does the legislative history provide any guidance from which it may be inferred that Congress intended all airports to be built within a specific time.

The phrase "undue delay" refers to actions which are postponed, hindered or prolonged in an unreasonable, unnecessary or inefficient manner. A delay is unacceptable if it is an inefficient use of limited Federal funds for which there is substantial competition among deserving applicants. Whether the plans described in an application for an airport development project would result in undue delay is a matter to be decided in each case on the facts of that case. Section 16(c)(1)(C) requires the Secretary to determine whether a project will be completed in a time frame that is appropriate in meeting future airport demands. If a project, for example, did not include a sufficient resource commitment or a timetable adequate to enable completion on time for use anticipated by the NASP, he might disapprove the particular application or seek to amend it to remove the cause of delay. New airport development and construction generally require approximately ten years, and consequently, when there is a pressing need for expansion, it is important that delays inherent in the project proposal be identified and removed. The rationale that underlies the removal of delays also supports the early anticipation of future needs and advance planning. In other words, rather than postponing acquisition, it may better serve the cause of completion without "undue delay"

19/ Continued

- "(1) the feasibility, practicability, and cost of land bank planning and development for future and existing airports, to be carried out through Federal, State, or local government action; and
- "(2) the establishment of new major public airports in the United States, including (A) identifying potential locations, (B) evaluating such locations, and (C) investigating alternative methods of financing the land acquisition and development costs necessary for such establishment...."

This provision authorizes the Secretary to conduct a full-scale study to determine the wisdom of establishing an extensive and long-range grant program aimed solely at land banking and as of yet unestablished forms of financing land acquisition. Under the Act, a project sponsor may acquire land in anticipation of future development. For reasons of departmental policy and not because of legal constraints, this type of acquisition has been handled on a case-by-case basis, depending on the availability of funds and the importance of the proposed project in comparison to other demands on available resources.

to acquire now, thus making more likely expedited completion of the airport by the time it will be needed. The emphasis is on completion, not commencement of construction. A project that is planned to meet a need in 25 years after the land is acquired is not per se unduly delayed if it is completed 25 years later.

If advance acquisition will assure preservation of needed land near an urban area, prevent development incompatible with airport use, and enable the eventual construction of an airport capable of serving high-density traffic as a significant hub of interstate commerce, a fairly long period between acquisition and construction would not be inconsistent with the Act's purpose.

E. Requirements of NEPA

A complete and legally supportable environmental impact statement is required under NEPA before the approval of the Illinois application for a Federal grant to acquire land. A legally supportable final EIS must be substantively complete -- that is, without any substantial omissions or inaccuracies -- and it must have been developed in accordance with the required procedures, which include adequate opportunity for public and agency comment and appropriate analysis of that comment.

When Illinois applied for Federal funds in 1972, a draft EIS was prepared and circulated. The draft considered the effect on the environment in Illinois of airport construction, airline operations and surface transportation to and from the airport, and properly considered several alternative sites in Missouri including possible improvements at Lambert. The EIS showed that, under the forecasted level of air travel, the Lambert Airport would become incapable of handling the increased traffic as early as about 1980, and the area would suffer a significant and undesirable increase in noise and air pollution. The draft EIS also indicated that land around the Illinois site would be substantially less impacted by the proposed Illinois airport and was therefore a more environmentally desirable location.

Subsequent to the circulation of the draft, a report co-sponsored by the City of St. Louis and the Missouri-St. Louis Metropolitan Airport Authority (the RMP, or "Parsons", Report) released the evaluation of new studies which forecasted a significantly lower rate of increase in air traffic demand in the St. Louis region. It concluded that Lambert's capacity would be adequate to meet the future demand, and it concluded that noise and air pollution would not differ substantially between the Illinois or Missouri sites. At about the same time, the Department authorized Peat, Marwick, Mitchell and Company to conduct forecasts of traffic and capacity and to analyze environmental and economic considerations involved in transferring air carrier service to the Illinois site at various future dates.

The FAA has now completed a final EIS, which includes a discussion of the data used in the Parsons report, and the new information contained in the PMM study financed by the Department.

Although there is significant new information that is relevant to this decision and that was not included in the draft EIS, there has been the opportunity for complete review and comment on this significant new information by relevant Federal, State and local agencies and interested members of the public. These comments have been analyzed carefully and are reflected in the final EIS.

In advance of the public hearing on January 13, I made available to the public and to the participants at the hearing all of the relevant documents, the original EIS, the subsequent DOT and Parsons reports, and twenty-one other documents discussing the issues. I also widely distributed an "Issue Paper", outlining the significant new information and areas of material disagreement of the various interests. The hearing was held in St. Louis so that all interested parties could more easily attend.

Subsequent to the hearing, we consulted with and obtained comments on this new information from Federal agencies which commented substantively on the draft EIS and have "jurisdiction by law or special expertise with respect to any environmental impact involved" (NEPA, section 102(2)(C)). These comments have been reviewed and are reflected in the final EIS.<sup>20/</sup>

<sup>20/</sup> While NEPA does not require formal public hearings, it does envision public comment during the decision-making process. "[T]he precise procedural steps to be adopted are better left to the agency, which should be in a better position than the Court to determine whether solution of the problems faced with respect to a specific major Federal action can better be achieved through a hearing or by informal acceptance of relevant data." Hanly v. Kliendienst, 471 F. 2d 823, 836 (2nd Cir. 1971).

Although significant new information is subject to the review and comment requirement, the CEQ Guidelines and the applicable administrative order [DOT Order 5610.1B and FAA Order 5050.2A] are not inflexible. All envision a process whereby an EIS draft or final can be amended or supplemented in an appropriate instance. [CEQ Guidelines, 40 C.F.R. 1500.11(b); DOT Order 5610.1B, para. 9(h); FAA Order 5050.2A, para. 61(b)8]. Because the new data were made available to State and local officials and the public prior to the public hearing of January 13 and indeed were in large part the subject addressed at that hearing, and because the comments of relevant Federal agencies were obtained and reviewed, it was not necessary to recirculate the final EIS as a second draft. Such a recirculation would have duplicated the review process already completed, delayed further the decision-making process, and wasted Federal, State and local resources in repetitious staff work.

The final EIS represents a complete and thorough review of all the relevant environmental information. By commissioning special studies and making them public, by preparing an issue paper for wide distribution and comment, by personally conducting a public hearing, and by reviewing information submitted to the hearing docket, I have adopted a process that complies fully with the provisions and spirit of NEPA and exceeds its procedural requirements.

## II. POLICY FRAMEWORK

Having concluded that I am not bound by statute to reject the Authority's grant application, I now turn to the question of whether I should approve the Authority's application. Thus, considerations of public policy become quite relevant. These include considerations of transportation development, environmental protection, Federal resource allocation, social, economic and political considerations, and community participation.

These policy considerations do not uniformly support a particular decision. This is not surprising because in our pluralistic society, mixed economy, and complex system of Federal, State and local governments, we appropriately have multiple goals. These goals often conflict, particularly when applied to specific situations. A goal of greater energy self-sufficiency may conflict with a goal of environmental protection and enhancement. The goal of improved transportation safety may conflict with the goal of avoiding consumer price increases. "Attempts to optimize in one area may have adverse consequences for another, or may be too costly in terms of the actual benefits."<sup>21/</sup>

The decision maker must evaluate the effects of the decision at hand in light of the relevant policies, and weigh and balance the effects against one another. Moreover, that evaluation must often -- as in this case -- take place within the context of opposing claims, conflicting data, and the always uncertain estimates of future events.

This has been the task at hand, and it is by going through this evaluation that I have come to my decision. It therefore behooves me to set forth explicitly the key policy considerations which have influenced my decision.

### A. Transportation Development

It is my responsibility, as Secretary of Transportation, to help maintain and improve the Nation's transportation system. The United States enjoys the highest degree of personal mobility of any nation of the world. This mobility has contributed not only to personal satisfaction and greater human contact, but also to the Nation's business and economic development. The Department of Transportation Act of 1966 recognizes this interaction by stating that "the general welfare, the economic growth and stability of the Nation and its security require the development of national transportation policies and programs conducive to the provision of fast, safe, efficient, and convenient transportation...."<sup>22/</sup>

<sup>21/</sup> DOT, A Statement of National Transportation Policy, p. 33.

<sup>22/</sup> DOT Act, 49 U.S.C., Sec. 1651 (1970).

More specifically, with respect to aviation and airports, under the Federal Aviation Act I am instructed to "encourage and foster the development of civil aeronautics and air commerce in the United States and abroad."<sup>23/</sup> In enacting the Airport and Airway Development Act of 1970, the Congress found that a "substantial expansion and improvement of the airport and airway system is required to meet the demands of interstate commerce, the postal service, and the national defense."<sup>24/</sup> In that same statute, the Congress authorized the Department to make grants to local sponsors for airport acquisition and development in order to bring about "the establishment of a nationwide system of public airports adequate to meet the present and future needs of civil aeronautics...."<sup>25/</sup>

### B. Environmental Protection

As Secretary of Transportation, I cannot be concerned about transportation alone, but must share in the responsibility for advancing other national policies and goals. One such goal of major importance is the protection and enhancement of the environment. In the National Environmental Policy Act of 1969 (NEPA), the Congress declared a national policy of encouraging a "productive and enjoyable harmony between man and his environment" and stated that "each person should enjoy a healthful environment and that each person has a responsibility to contribute to the preservation and enhancement of the environment."<sup>26/</sup> With respect to noise, Congress has found that "noise presents a growing danger to the health and welfare of the Nation's population" and that "the major sources of noise include transportation vehicles and equipment"; Congress has declared it to be the policy of the United States "to promote an environment for all Americans free from noise that jeopardizes their health or welfare."<sup>27/</sup> Moreover, in the Airport

<sup>23/</sup> Federal Aviation Act, 49 U.S.C., Sec. 1346 (1970).

<sup>24/</sup> 49 U.S.C., Sec. 1701 (1970).

<sup>25/</sup> 49 U.S.C., Sec. 1714(a) (1970).

<sup>26/</sup> 42 U.S.C., Secs. 4321, 4331(c) (1970).

<sup>27/</sup> Noise Control Act of 1972, 42 U.S.C., Sec. 4901 (Supp. IV, 1974).

Act itself, the Congress expressed strong concern that airport development be undertaken only with most careful consideration to its impact on the environment, stating that airport projects authorized pursuant to that Act "shall provide for the protection and enhancement of the natural resources and the quality of environment of the Nation."<sup>28/</sup>

It has been an essential thrust of the Department, since its establishment in 1967, "to reduce transportation's adverse impacts on the quality of the human environment and to protect and enhance that environment where possible."<sup>29/</sup> With respect to aviation noise, I have stated that it is our policy to "move toward the goal of confining severe aircraft noise exposure levels around U.S. airports to the areas included in the airport boundary."<sup>30/</sup> Of course, these environmental goals and values are not absolutes, any more than mobility is an absolute, overriding objective. Each must be balanced against the other.

#### C. Resource Allocation

In this balancing process, we must recognize that society in general, and the Federal Government in particular, has limited resources. Accordingly, we need to "improve the process by which the comparative effectiveness of Federal expenditures is judged and seek a more rational allocation of Federal resources on the basis of a clear definition of national, State and local interests."<sup>31/</sup> Moreover, within limited Federal resources, transportation "must compete with other important national priorities for finite tax resources. This competition puts a practical limit on what can be accomplished with Federal, State or local expenditures and opens public debate on the relative merits of transportation programs"<sup>32/</sup> and projects.

In considering how to improve transportation capacity in the face of limited resources, we are paying greater attention to the possibility of making better use of existing facilities, particularly for the shorter term, as compared to making major investments in new facilities to meet less certain longer-term needs. Our approach to conserving and allocating resources "requires an improved capability to plan comprehensively, to compare benefits and costs and to monitor the performance of the system, making

<sup>28/</sup> 49 U.S.C., Sec. 1716(c)(4) (1970).

<sup>29/</sup> DOT, A Statement of National Transportation Policy, p. 36.

<sup>30/</sup> Ibid., p. 37.

<sup>31/</sup> Ibid., p. 23.

<sup>32/</sup> Ibid.

adjustments in policy and programs as required to achieve the desired objectives."<sup>33/</sup>

These resource allocation policies bear directly on the two major alternatives at issue in the St. Louis Airport situation. These policies require that we consider the costs and the benefits of the alternatives carefully, and the risks and uncertainties involved in the various courses of action, in full recognition of resource limitations.

#### D. Minimizing Dislocation

Because of the complexity of our society, many Federal decisions involving major construction projects will have associated with them certain unavoidable adverse impacts. These impacts may be of economic or social character. Recognizing this potential for some limited dislocation or harm associated with a decision which on the whole is judged to be in the best interest of the public, a Federal officer must, wherever possible, structure his actions in a way to avoid or minimize these dislocations. Federal planning assistance to impacted areas is one approach to alleviate the problems occasioned by Federal actions.

#### E. Federal-State-Local Relations and Community Participation

The foregoing policy directions must be considered within the context of a proper regard for the appropriate roles of the Federal Government and the States and localities, and a proper respect for the views of the affected public. Formalized processes of intergovernmental review, now required in most Federal grant-in-aid programs (including the airport grant program), are intended to assure that local governments have an opportunity to express their views regarding possible Federal actions affecting their responsibilities, activities, and constituencies. Public hearings have also been a part of the Department's programs for many years. Their purpose, of course, is to provide an opportunity for citizen involvement and input into governmental decisions which affect them. The process of preparing environmental impact statements, required by NEPA, and circulating the statements in draft form for public and governmental comment, is a similar vehicle for public participation in Federal Government decisions.

As noted in Section I of this document, "Legal Framework", the Airport Act itself requires the opportunity for public hearings for major projects (section 16(d)(1)); states that a project may be approved by the Secretary only if he is satisfied that it is reasonably consistent with the development plans of local planning agencies (section 16(c)(1)(A)); and precludes project approval unless the Secretary "is satisfied that fair consideration has

<sup>33/</sup> Ibid.

been given to the interest of communities in or near which the project may be located" (section 16(c)(3)).

The purpose of all of these procedures obviously is not simply to obtain views and then to disregard them. Clearly, the views of affected State and local governments, and citizens, must be given weight in the decision. Just as NEPA's apparent procedural requirements are intended to accomplish a substantive objective, and must be so interpreted,<sup>34/</sup> so the procedural requirements for public hearings and "fair consideration" of local views mean that these views must be given considerable importance in arriving at a decision.

#### F. Decision Making

Political public servants have the responsibility to implement decision-making processes that are legitimate both in fact and in perception. Interested parties must be provided meaningful opportunities for participation in the collection of relevant facts and their analysis. While careful consideration must be given to all views, once the facts are known and analyzed and the policy options spelled out, it is the responsibility of the decision maker then to make his judgment. To delay only increases the uncertainty of the future. The uncertainty occasioned by delay, in and of itself, can often have severe adverse effects. This is not in the interests of the involved parties or the public. Having made his decision, the responsible official is, in my judgment, obligated then to explain the reasoning that supports the decision. For in this way, we minimize the possibility of capricious behavior and ensure the legitimacy of the decision-making process.

#### G. Conclusion

These, then, are major policy considerations that have to be weighed in the context of the specific facts of the St. Louis situation, and the alternatives involved. We must recognize that different people will give different weights to the various policy considerations. Some will weigh aviation development more highly than others; some will weigh resource conservation or environmental protection more highly; and so on. I have made every effort to weigh these policies and address the issues objectively, rationally and openly.

<sup>34/</sup> E.g., Calvert Cliffs' Coordinating Committee v. AEC, 449 F.2d 1109, 1112, 1113 (D.C. Cir. 1971).

### III. THE COLUMBIA-WATERLOO PROPOSAL

The application for a grant for Federal funds for acquisition of a site in Columbia-Waterloo, Illinois, represents the first in a number of steps to develop a major new air carrier airport at this location. The proposed airport at Columbia-Waterloo, Illinois, is to be built by the Illinois-chartered St. Louis Metropolitan Area Airport Authority on 18,650 acres of land situated approximately 19 miles southeast of the St. Louis central business district and 32 miles from the center of population. The airport will initially have a pair of principal runways (a crosswind runway included in the original plans is not to be built at this time). The airport can be expanded further to include four additional runways should that become necessary. The airport's facilities will include a passenger terminal, an aircraft apron for passenger servicing and loading, ground transportation service facilities, aircraft maintenance and service areas, support facilities, and facilities for air cargo and mail and executive aircraft service.

#### A. Estimates of Capacity

Of crucial importance to a judgment of the future viability of an airport is its projected capacity -- the number of aircraft operations per hour that can be conducted in accordance with the procedures specified by the FAA. PMM (in its "Phase II" report) has estimated the hourly runway capacity of the proposed Columbia-Waterloo airport assuming two major parallel runways in operation. This estimate, shown below in Table 1, also assumes installation of the Category II instrument landing system<sup>35/</sup> at Columbia-Waterloo but does not assume the implementation of improvements in air traffic control technology, currently under research and development by FAA. IFR (Instrument Flight Rules) capacity is employed herein as it determines the airport's capacity under adverse weather conditions.<sup>36/</sup>

Table 1

#### IFR Capacity at Columbia-Waterloo

	<u>1998</u>
Operations/Hour PMM	104

<sup>35/</sup> A Category II instrument landing system permits operations in weather conditions down to 100-foot ceiling and 1/4-mile visibility.

<sup>36/</sup> IFR conditions occur in the St. Louis area 9% of the time, and other restrictive aviation conditions occur an additional 9% of the time.

Of course, additional capacity could be developed at Columbia-Waterloo, if needed, by simply building more runways for which space is available. Also, this estimate of capacity is conservative as it does ignore possible increases due to potential improvements in air traffic control technology.

#### B. Demand Estimates

Forecasts of future aviation activity in the St. Louis area are also essential to a judgment of the need for a new airport, as future capacity must be compared to these forecasts. Because of changing economic conditions, the increasing costs of energy, and other factors, pre-1974 forecasts of aviation activity are now believed to be unduly optimistic. I have, therefore, not used earlier forecasts and have instead relied on the recent forecasts of PMM and the Ralph M. Parsons Company (RMP),<sup>37/</sup> which are in reasonable agreement and are consistent with national forecasts accepted by this Department.

Speas Associates, under contract to the Illinois Authority, has argued<sup>38/</sup> that the PMM and RMP forecasts are low because of inaccurate assumptions concerning connection factors and the rate of conversion of airline fleets to widebody aircraft.

The PMM "most likely" estimates are set forth below.

Table 2

Projected Aviation Demand at Columbia-Waterloo  
(PMM Estimates)

	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
Total Operations/ Year	307,618	332,255	362,735	393,215
Peak Hour Operations (IFR):				
Scheduled Air Carrier and Air Cargo Only	--	59	64	69
Total: Includes Air Carrier, Air Cargo, Commuters, Military, General Aviation	--	74	80	85

<sup>37/</sup> RMP, op. cit.

<sup>38/</sup> St. Louis Metropolitan Area Airport Authority, "Written Presentation to Secretary of Transportation in Connection With Public Hearing Held January 13, 1976...." (St. Louis Metropolitan Area Airport Authority), January 30, 1976, pp. 2-6 (hereinafter "Illinois Authority Presentation").

In order to suggest the range of uncertainty in their forecasts, PMM also estimated high and low forecasts in addition to the most likely result.<sup>39/</sup> These forecasts vary as much as 30% from the most likely forecast. Throughout this evaluation the most likely forecasts have been used, although the uncertainties in anyone's ability to predict those future needs must be considered and the attendant risks assessed.

Recognizing the uncertainty of these forecasts, the PMM total peak hour operation forecasts of 85 in the year 2000 is compared to the projected IFR capacity of Columbia-Waterloo of 104 operations per hour in 1998. Thus, it is apparent that the total expected peak hour demand can readily be accommodated at the Columbia-Waterloo site through the year 2000 and well beyond.

#### C. Delays

Delay refers to aircraft time used in excess of the normal operating time, and is often used as an overall measure to indicate the adequacy with which a given airport meets the aviation needs of a region. The average delay at an airport depends primarily upon the ratio of demand to capacity and increases rapidly as this ratio approaches unity. Sources of delay include adverse weather conditions, enroute airway congestion, and airport gate congestion. Both runway and airport gate congestion depend specifically upon the design of the airport and thus different airports in the same metropolitan area can experience different levels of delay.

Delays impact aviation activity in several ways. First, as delays increase at an airport, airline passengers must allow increasing amounts of time for uncertainty in departure and arrival times at that airport. For travelers with important appointments, this could mean taking earlier flights or leaving the night before an appointment. Second, as delays at a particular airport increase, passengers begin missing connecting flights. The entire airline system could be affected as prudent individuals begin to plan their flights to avoid congested airports. Third, in response to increasing delays at an airport, airlines will begin to reroute flights and transfer connections to other less congested airports, the result being reduced service at the congested airport. For example, if congestion were to become substantial at the St. Louis airport, Kansas City International Airport could assume an increased hub transfer role, possibly reducing St. Louis' role in the national aviation system.

<sup>39/</sup> Peat, Marwick, Mitchell & Co., St. Louis Aviation Forecast Study, Report No. DOT-40176-1,2, September 1974 (hereinafter "PMM Forecast Study").

The level of delay being experienced at airports today varies considerably. The FAA has recently reported airline-collected delay data for 1973,<sup>40/</sup> which shows the average delay per scheduled air carrier operation in the United States was 3.3 minutes, ranging from a low of about 0.6 minutes at Tucson International and El Paso International Airports to a high of 7.0 minutes at Chicago's O'Hare International Airport, an airport considered to be severely and undesirably congested at this time. In 1973, the average delay at Lambert was reported by American Airlines, the only airline reporting at that airport, to be 1.7 minutes.<sup>41/</sup>

Using their forecasts of air carrier operations and airport capacity, PMM has estimated aircraft delays at Columbia-Waterloo through 1998. Again, these calculations of delay are based upon PMM's most likely estimates of demand, as well as its projections of capacity, which are conservative as they assume no technological advances in air traffic control technology that increase capacity. These results are shown below in Table 3.

Table 3

## Average Aircraft Delay at Columbia-Waterloo (Minutes)

<u>1988</u>	<u>1993</u>	<u>1998</u>
0.7	1.0	1.3

Several important points must be borne in mind when interpreting these results.

First, this calculation of aircraft delay considers only runway-related delays. This includes delays due to adverse weather conditions in the vicinity of the airport as well as enroute delays caused by congestion at Columbia-Waterloo. It does not include delay due to airport gate congestion, adverse weather conditions away from Columbia-Waterloo, or enroute delays due to congestion at other airports. The Illinois Authority believes that, as a consequence, the PMM methodology gives a measure of aircraft delay that accounts for roughly two-thirds of the total delay. Consistent with this viewpoint, the FAA estimates that, on

<sup>40/</sup> Department of Transportation, Federal Aviation Administration, Airline Delay Data 1970-1974, February 1975.

<sup>41/</sup> These airline reports of delay are quite approximate and different airlines have different methods of reporting. For example, at O'Hare, the two reporting airlines, American and United, gave average delays of 4.6 minutes and 8.4 minutes which, when weighted by their respective number of operations, gives an average delay of 7.0 minutes per operation.

the average across the United States, runway-related delay accounts for approximately 65% of the total delay (although the variation from airport to airport is considerable). Airport gate congestion contributes typically 10% to the total delay. Thus, on this basis, the actual total delay experienced at Columbia-Waterloo would likely be 50% higher than the calculated values and thus, for example, average over 1.5 minutes by 1993 (rather than 1.0 as shown in Table 3).

Second, these aircraft delay values represent average delays. Individual aircraft delays will vary from nearly zero to many times the average value. For example, PMM estimates that 1.1% of the operations will be delayed over 30 minutes in 1998.

Third, because average aircraft delay depends to a large extent on the ratio of demand to capacity, both of which have uncertainty associated with their forecasts, there is necessarily uncertainty in these forecasts of delay -- especially as one moves further out in time. Moreover, as demand increases in relation to capacity, delays increase more than proportionately.

Fourth, these projections of delay assume no advances in air traffic control technology that will increase capacity and thereby reduce delays. The FAA is attempting to reduce congestion at our major airports, and does have ongoing research and development programs which, if fully successful and deployed in the field, will considerably increase airport capacity. However, the FAA does not believe that the development of these new technologies has progressed to a point where they can be relied upon in making today's airport decisions.

In assessing these forecasts of delay at Columbia-Waterloo, I conclude that Columbia-Waterloo will experience delays in the future that are well below today's national average. In this regard, Columbia-Waterloo would offer a superior level of aviation service.

#### D. Cost of Construction

The estimates of construction costs for Columbia-Waterloo vary considerably depending upon the source and the assumptions, such as those affecting the size of the airport. PMM estimates and those in the Missouri Position Paper were based on the description of the facility in the 1972 draft EIS and included a crosswind runway and a relatively large passenger terminal. As a result of currently lower aviation forecasts, the Illinois Authority has revised its preliminary airport development plan to exclude the crosswind runway and has scaled down the size of the terminal.

The costs estimated to construct the airport, including off-airport highway access construction, are shown below.

Table 4

Estimated Costs of Construction: Columbia-Waterloo  
(1974 Dollars, in Millions)

	<u>Airport</u>	<u>Highway</u>	<u>Total</u>
<u>Illinois Authority</u> (2 runways, small terminal)	\$292.7	\$31.4	\$324.1
<u>PMM</u> (3 runways, large terminal)	\$432.2	\$19.0	\$451.2
<u>Missouri Position Paper</u> (3 runways, large terminal) <sup>42/</sup>	\$471.1	\$131.1-\$598.8	\$602.2-\$1,069.9

Cost comparisons are discussed in more detail in Section VI.

#### E. Feasibility

No questions have been raised regarding the engineering feasibility of constructing an air carrier airport at the Columbia-Waterloo site, and I do not consider this to be an issue of contention.

#### F. Conclusions

I conclude from the information available to me that it is feasible to construct the proposed air carrier airport at the Columbia-Waterloo site, at a likely cost (including related highway construction) being bracketed by estimates of \$325 million and \$600 million. The proposed airport will have sufficient capacity to meet expected demand through the year 2000 and well beyond, with a minimal level of delay. In the event that demand exceeds the most likely forecast, the proposed airport either will have sufficient capacity or can readily be expanded to meet that demand.

<sup>42/</sup> Missouri Position Paper, Section 4, p. 10. The high estimate of \$598.8 million for off-airport road and bridge construction includes \$467.7 million for unspecified additional roads and bridges not on the current regional highway plan.

#### IV. THE ALTERNATIVE OF LAMBERT

In evaluating the Authority's grant application, I must, as a matter of sound public policy, consider the other available alternatives. This section deals with the alternative of improving the present air carrier airport, Lambert-St. Louis International Airport, located approximately 15 miles from the central business district of St. Louis and 10 miles from the center of population.

In evaluating Lambert, it must be recognized that the time required to plan and construct a new air carrier airport is estimated as being ten years. Furthermore, the airlines have recently entered into lease and use agreements with the St. Louis Airport Authority to remain at Lambert through 1987. As a practical matter, therefore, I must conclude at the start that Lambert will continue to be the area's air carrier airport until at least 1987. Thus, the question to be addressed in assessing Lambert as an alternative is whether Lambert can be expanded to meet the air carrier airport needs of the area beyond 1987.

Below are discussed potential improvements to Lambert, the projected demand for air carrier facilities in the St. Louis region, the resulting delays that will be experienced at Lambert if it continues to serve as the major air carrier airport, the costs and feasibility of these improvements, and my conclusions as to Lambert's future viability as the air carrier airport for the St. Louis region.

#### A. Potential Improvements to Lambert's Capacity and Access

RMP, under contract to the St. Louis Airport Authority and the Missouri-St. Louis Metropolitan Airport Authority, has developed a plan to improve Lambert-St. Louis International Airport to meet the air carrier airport needs of the St. Louis region through the year 1995. This master planning activity has been financed in part through a planning grant from the FAA under the provisions of the Airport Act.

Lambert's capacity is to be increased in this Lambert Master Plan by the adoption of a dual-lane runway system with high speed taxiway exits from the landing runway, a two-lane taxiway system, Category II instrument landing system, and various new air traffic control technologies now under research and development by the FAA. A crosswind runway will be retained. Additional terminal facilities are also planned to provide additional aircraft parking positions and the capability to handle projected increases in passenger activity. Passenger parking facilities are to be expanded and increased ground access will be provided by a new on-airport access and circulation system and additional off-airport highway capacity on I-70 and the Innerbelt Freeway.

Based upon the developments outlined in the Parsons Master Plan, and including anticipated improvements in air traffic control technology, Parsons has estimated Lambert's future capacity. PMM has independently estimated the capacity of Lambert assuming the airfield improvements specified in the Parsons Master Plan were carried out. However, in contrast to the Parsons approach, PMM did not assume that the new air traffic control technologies under research and development by the FAA would be available for use at Lambert, thus making the PMM capacity estimate conservative.

The Illinois Authority has also set forth capacity figures for Lambert which include a measure of service, i.e., a "maximum acceptable" runway delay averaging 4 minutes during the peak hour.

The Parsons, PMM and Illinois Authority capacity estimates are set forth below in Table 5 (the Illinois Authority estimates are identified as the Speas Forecast).

Table 5

	<u>IFR Capacity at Lambert: Operations/Hour</u>				
	<u>1980</u>	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>1998</u>
Parsons Master Plan*	65	79	82	85	--
PMM**	--	--	--	--	67
Speas Forecast**	--	62	62	61	--

\*Assumes significant advances in air traffic control technology.

\*\*Assumes no significant advances in air traffic control technology that increase capacity.

In assessing these capacity estimates, it is clear that the results can vary substantially depending upon the level of technological development assumed. However, PMM's estimated capacity of 67 operations per hour in 1998 compares closely with Parsons' projection of 65 operations per hour in 1980 when the impact of the assumed new technologies is limited. As mentioned in the earlier section on Columbia-Waterloo, it is the policy of the FAA not to include potential technological advances in air traffic control in estimating future airport capacity for today's airport decisions. If one adopts this conservative approach, I conclude that the range of predictions of future IFR capacity becomes rather small and that the PMM projection of 67 IFR operations per hour in 1998 is an acceptable estimate of Lambert's minimum future capacity. The comparable figure for the revised Columbia-Waterloo proposal is 104 operations per hour.

The proponents of Lambert have taken issue with the FAA policy of not including potential technological advances in air traffic control in estimating future airport capacity for today's decisions. They

believe such a policy leads to unreasonably conservative estimates of capacity, especially when the time horizon for planning exceeds FAA's best estimate of when the new air traffic control technology will become available. It is also argued that the necessity of increasing capacity at the Nation's more congested airports is so pressing that there is little doubt that these capacity-increasing advances in air traffic control technology will be realized.

Clearly, as one attempts to extend the time for which predictions are made, the likelihood of technological advances which increase capacity becomes greater. While we cannot easily predict what specific technological improvements will have taken place by 1988, the history of aviation in the United States suggests that it is highly likely that there will be significant improvements by that time. Consequently, we must view the predicted capacity of 67 IFR operations per hour as a lower limit.

However, to develop a quantitative estimate of the impact of these advances on airport capacity is exceedingly difficult and uncertain. First, one must estimate the likelihood that current research programs will be both successfully completed and implemented in the field. Second, one must determine when implementation will take place. Third, having determined if and when a particular improvement will be implemented, one must estimate the extent to which it will increase capacity. Nonetheless, while recognizing this inherent uncertainty, it is important to assess the possible impact of improvements in air traffic control technology since it does have a direct bearing on the issue of Lambert's future viability. Therefore, I accept RMP's estimate of Lambert's future capacity of 85 IFR operations per hour, assuming successful deployment of the so-called "fourth generation"<sup>43/</sup> of air traffic control systems, as a reasonable estimate of the maximum future capacity of Lambert.

#### B. Demand Estimates

To assess Lambert's ability to meet the region's future aviation needs, forecasts of aviation activity in the St. Louis area are essential. Table 6 gives forecasts of future aviation activity for Lambert. The small differences between these forecasts and those given in Table 2 for Columbia-Waterloo are due to differences in military and general aviation operations.

The difference in the PMM and RMP estimates of total operations per year -- a difference which is not unreasonable in such forecasting efforts -- is due to PMM's higher level of scheduled air

<sup>43/</sup> The "fourth generation" of air traffic control systems includes the advanced metering and spacing system, the wake vortex avoidance system, the discrete address beacon system, the microwave landing system, airport surface traffic control, area navigation, and high speed exits.

carrier operations, higher level of general aviation and lower level of commuter operations. The differences between these two forecasts and that of Speas were discussed in Section III.B.

Table 6

Projected Aviation Demand at Lambert

	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>2000</u>
<b>Total Operations/Year</b>				
PMM	422,200	423,200	431,750	440,300
RMP	349,900	363,900	396,900	--
Speas	465,850	480,200	497,900	515,900
<b>Peak Hour Operations (IFR)</b>				
<b>Scheduled Air Carrier and Air Cargo Only</b>				
PMM	54	59	64	69
RMP	54	56	59	-
<b>Total: Includes Air Carrier, Air Cargo, Commuters, Military, General Aviation</b>				
PMM	88	88	89	91
RMP	79	82	90	-

The peak hour operations forecasts (e.g., 89 operations per hour in 1995 according to PMM), which represent the highest level of activity expected, are compared with the projections of capacity in Table 7 below. This comparison shows clearly that if there are no advances in air traffic control technology that increase capacity, Lambert -- even if improved -- will be inadequate to the aviation needs of the St. Louis metropolitan area. Moreover, if we examine the potential impact of improvements in air traffic control technology, it still appears that Lambert will not have adequate IFR capacity to serve the estimated peak hour demand sometime in the early 1990's. Even before that time, the lowest estimate of demand (RMP) equals the highest estimate of capacity (also RMP).

Table 7  
(Drawn from Tables 5 and 6)

Comparison of IFR Capacity and Total Peak Hour Demand

	<u>1985</u>	<u>1990</u>	<u>1995</u>	<u>1998</u>
<b>Capacity</b>				
RMP*	79	82	85	--
Speas**	62	62	61	--
PMM**	--	--	--	67
<b>Demand</b>				
RMP	79	82	90	--
PMM	88	88	89	90

\* Assumes significant advances in air traffic control technology.  
\*\* Assumes no advances in air traffic control technology that increase capacity.

Consequently, if air carrier service remains at Lambert beyond the early 1990's, the quality of aviation service afforded the citizens of the St. Louis region will in all probability decline -- in the form of more frequent and substantial aircraft delays and a lower frequency of flights. The status of the St. Louis air carrier airport in the national aviation system could be reduced.

It has been suggested that this shortage of capacity could be eliminated by reducing the general aviation demand under IFR conditions. As scheduled air carrier operations at an airport increase, general aviation traffic has been observed to decrease naturally. And, if an airport authority chooses, it can reduce general aviation operations by means of increased landing fees, providing non-conflicting landing schemes, etc. However, experience shows that one should expect that some minimum amount of general aviation traffic (typically corporate aircraft and nonscheduled air taxi) will remain even during peak hour operation conditions. Thus, while some reductions in general aviation demand might be possible, it would appear unlikely that Lambert's inadequate capacity could be completely solved by reducing general aviation traffic.

Finally, if the actual activity exceeds the most likely forecast, the delays will become even larger and the potential problem of inadequate capacity at Lambert will be realized even sooner.

### C. Delays

Using their forecasts of air carrier operations and airport capacity, PMM has estimated aircraft delays at Lambert through 1998. These calculations of delay, shown below in Table 8, are based upon PMM's projections of capacity (which assume no technological advances) and the most likely estimates of total demand.

Table 8

Average Aircraft Delay at Lambert (Minutes)

<u>1973</u>	<u>1988</u>	<u>1993</u>	<u>1998</u>
1.8	3.0	4.1	6.1

These results are to be compared with PMM's estimate of delay at Columbia-Waterloo given in Table 3. For example, the estimated delay at Columbia-Waterloo in 1998 is 1.3 minutes (compared to 6.1 minutes at Lambert) indicating that, in the absence of improvements in technology, Lambert would be a substantially more congested airport than Columbia-Waterloo.

Once again, it is important to bear in mind that these values are average values for delay. For example, PMM estimates that 7.6% of the operations at Lambert would be delayed over 30 minutes in 1998. Also, recall that in Section III, I indicated that these calculations, for methodological reasons, likely underestimate total delay by as much as 50%. Moreover, if "high" aviation forecasts are realized rather than the "most likely" forecast, PMM estimates that the average delay in 1998 would be 17.9 minutes rather than 6.1 minutes. An average delay of 17.9 minutes could not be tolerated, of course, and is of theoretical interest only. Long before this level of delay is reached, the number of flights into St. Louis would have to be reduced -- for example, by diverting flights elsewhere.

On the other hand, realization of "low" aviation forecasts would lead to a lower average delay at an expanded Lambert. Also, PMM and Parsons estimate that if the "fourth generation" of air traffic control systems were developed and put into operation at Lambert, the average aircraft delay would be substantially reduced.

In assessing these forecasts of delay at Lambert, I conclude that Lambert, even if expanded, will experience increasing delays in the future, the extent of the increase being uncertain. Under the most likely forecast of demand, the delays do not become unacceptably high until the early 1990's. If traffic exceeds the most likely level, unacceptable levels of delay will occur sooner. Beyond the early 1990's, our ability to forecast becomes increasingly uncertain although the predicted trends suggest continued unacceptable congestion unless major improvement in air traffic control technology are achieved and installed at Lambert. Only if the most optimistic predictions for improvements in air traffic control are realized at Lambert will the delays there be near the level being experienced today.

D. Cost of Construction

The cost of expanding Lambert through 1995 as described in the Parsons Master Plan has been estimated by RMP, PMM and by a group

of consultants on behalf of the Illinois Authority. The construction costs are shown in Table 9 below.

Table 9

Costs of Construction: Lambert Field  
(1974 Dollars, in Millions)

	<u>Airport</u>	<u>Highways*</u>	<u>Total</u>
Parsons Master Plan	148.7	--	--
PMM	159.7	9.5	169.2
Illinois Authority	219.1	129.6	348.7

\*The Parsons Master Plan did not estimate the cost of off-airport highway improvements. The Federal Highway Administration, in response to a request from the FAA, estimated the cost of the additional highway work needed to serve Lambert-generated traffic to be \$75 million.

The Illinois Authority's estimate is based upon analysis by their consultants, Thompson Associates and Horner & Shifrin, who contend that the RMP Phase A and B Reports omitted certain necessary improvements and undersized others, with the result that PMM's cost estimates are in error. Horner & Shifrin conclude that the aggregate effect of these omissions and understatements is the understatement of Lambert capital costs by \$59.4 million, with the biggest variances in airfield, terminals, aprons and parking costs.<sup>44/</sup>

The Illinois Authority, using analyses conducted by their consultants, Crawford and Associates and Voorhees and Associates, has argued that the PMM report "did not accurately estimate the timing of the expansion or the amount of additional regional highway facilities necessary to satisfy airway demand without a reduction of level of service below a 'C' level."<sup>45/</sup> Due primarily to a more extensive highway expansion, the Crawford and Voorhees estimate of the total costs for off-airport highway expansion to handle additional Lambert Airport traffic through the year 2000 is \$129.6 million compared to only \$9.5 million in the PMM estimate.

<sup>44/</sup> Illinois Authority Presentation, pp. 45-7.

<sup>45/</sup> A "C" level of service is defined as a situation with a stable, restricted flow of traffic and a relatively satisfactory operating speed. Below this level of service, there is unstable flow which may cause substantial drops in operating speeds, comfort and convenience.

### E. Feasibility

The engineering feasibility of certain aspects of the Parsons Master Plan has been challenged. Specifically, questions have been raised concerning the proposed on-airport access system and the installation of a Category II instrument landing system. With regard to the proposed on-airport roadway access system, the Illinois Authority's consultant, Crawford and Associates, argues that the proposed highway system is too complicated to be built as shown in the Parsons Master Plan. Crawford believes "at least two of the proposed ramps to be substantially in excess of 6% grade" (an accepted maximum design standard), there appear to be "at least three areas with weaving lanes of inadequate length", and there are five locations with "difficult if not unsurmountable 'signing' problems."<sup>46/</sup> The original on-airport access proposed in the Parsons Master Plan was determined by the Federal Highway Administration to have significant deficiencies, and the cost was estimated to be about \$40 million rather than \$12 million as estimated by RMP. Parsons has subsequently modified the access road plan and the FHWA now considers it to have only minor problems, although the FHWA has not reviewed the revised cost estimate of \$18.8 million.

With regard to the Category II instrument landing system, the original RMP plans were analyzed by the FAA, which found that they would have required significant re-profiling of the ground in the approach zones (including major roadway relocation). Also, because of the surrounding terrain and buildings, the instrument landing system may not have functioned to its maximum capability. Accordingly, in a revision to the RMP plans, the length of Runway 12L/30R was reduced and the runway was relocated 150 feet south of its original location. FAA's analysis of this revision indicates that the ILS equipment proposed for Runway 12L would in all probability function within tolerances (this finding is still subject to actual field testing).

### F. Conclusions

I conclude from the information available to me that it is feasible to expand Lambert as proposed in the revised Parsons Master Plan. There do not appear to be any engineering difficulties that would preclude the proposed improvements. Estimates of the total cost of airport construction and off-airport highway

<sup>46/</sup> St. Louis Metropolitan Area Airport Authority, "Memorandum to Secretary of Transportation in Response to 'Missouri's Post-Hearing Summary on the St. Louis Airport Matter' Relating to Public Hearing Held January 13, 1976....", February 9, 1976 (St. Louis Metropolitan Area Airport Authority), p. 8.

improvements range from a low of about \$150 million to a high of \$350 million. I believe the actual cost is bracketed by these estimates.

Thus, from an engineering viewpoint, it appears possible to increase Lambert's capacity to meet the most likely expected demand through the early 1990's without incurring unacceptably high delays. Beyond the early 1990's, our ability to forecast demand, air traffic control technology, etc., becomes increasingly uncertain. Nevertheless, in the absence of development and implementation of new technological advances that significantly improve capacity, the most likely forecasts suggest that beyond the early 1990's Lambert will be unable to meet demand without unacceptably high delays or a reduced level of service. Even with significant increases in capacity as a result of technological advances, Lambert will not provide a superior level of service nor could unacceptably high delays be avoided if high growth forecasts were realized.

## V. ALTERNATIVE SITES

In considering the decision before me, I am aware of the fact that alternatives to Columbia-Waterloo, other than improvement to Lambert, also have been considered. In fact, several site selection studies have evaluated numerous sites for a new air carrier airport in the St. Louis area, as discussed below.

In 1969, a report entitled "Major Airport Site Survey -- St. Louis Metropolitan Area" was prepared for the Airport Commission of the City of St. Louis (which operates Lambert Airport) by Horner and Shifrin, Inc., consulting engineers. It analyzed 12 sites, 6 in Missouri and 6 in Illinois. These sites were evaluated in terms of environmental impacts, airspace clearance, accessibility, terrain and land cost. As a result of this evaluation, the report recommended "that the Columbia site be selected as the most favorable site...." (page 65 of the report). The report further stated that if the Columbia site is not selected, then a site at Cedar Hill, Missouri, should be considered as the second choice, and Foristell, Missouri, as third (page 66). However, the report noted that these two sites are considerably further than Columbia-Waterloo from the center of trip origins in the region as well as from the Central Business District (CBD) (page 60).

Approximately a year later, in October 1970, R. Dixon Speas Associates, Inc., concluded its "Site Selection Study: Second Air Carrier Airport for the St. Louis Metropolitan Region", which had been prepared for the State of Illinois. This report evaluated 18 sites, 9 in Missouri and 9 in Illinois. It recommended Columbia-Waterloo as the best site and stated that if engineering studies should reveal Columbia-Waterloo to be unsuitable, then a site east of Edwardsville in Madison County, Illinois, and a site at the southern boundary of Madison County would be the next best alternatives (page 10-1).

In 1971, the Northrop Airport Development Corporation conducted a study for the State of Missouri and issued its report in August, entitled "Site Survey Study for a New St. Louis Regional Airport." It evaluated 10 sites in Missouri, plus Columbia-Waterloo. The report essentially eliminated 6 of the sites as undesirable, and ranked 3 as the best: Columbia-Waterloo, St. Charles-Smartt, Missouri, and Dardenne, Missouri (pages 36-37). Preliminary environmental impact statements for the latter two were also done for the State of Missouri in 1971, by the firm of Ryckman/Edgerley/Tomlinson and Associates.

The statement for St. Charles-Smartt points out that the site is an ancestral rest, refuge and feeding area for waterfowl and is rated "most important" (0 rating) by the Missouri Conservation Commission (page 32 of the report). It indicates that there would be an "inestimable loss of natural wetland habitat" if the site

were utilized (page 47). The site would also have "one of the highest potential hazards of bird strike by aircraft in the United States" and "the possibility of in-flight disaster in areas of large bird flocks such as Smartt Field is viewed as a high risk situation" (page 48).

An airport at that site would also create an adverse noise impact on Pere Marquette State Park, the largest State Park in Illinois, on Alton Lake Pool Area, and on the Mark Twain National Wildlife Refuge (pages 49-50).

The Dardenne site, compared to Columbia-Waterloo, is farther from the CBD and the center of trip origins (Horner and Shifrin, exhibit 13), and has a greater adverse noise impact (Northrop, page S-14).

### Conclusion

Based on the long history of site selection efforts and on my review of previous studies and the arguments and data that have been presented, I cannot accept the contention that there are sites equal or superior to Columbia-Waterloo as a location for a new regional airport, and none have been presented to FAA. Among its other attributes, the Columbia-Waterloo site is at a relatively close location for a major new airport, it is environmentally desirable (discussed further in Section VII), and can easily be developed for a major airport if acquired. In light of the considerable study and searching for a new airport site that have gone on in the St. Louis area over the years, I do not find convincing Missouri's argument that an equal or better site may exist in Missouri.

## VI. COST COMPARISONS

Economic analysis is an important aspect of the evaluation of alternative solutions to the air carrier airport needs of the St. Louis region. Because Federal financial resources are limited, I must carefully consider the costs of the alternatives to minimize the possibility of an unnecessary expenditure of the taxpayers' funds. The competition for our limited tax resources is intense and, as a public servant, I have an obligation to ensure that these resources are used wisely and in a cost-effective manner.

In making public investment decisions, however, the term "costs" is not simply a matter of the direct expenditure of funds. There are other costs in the sense of damages, adverse effects, or impacts regarding which we would be willing to pay money to avoid. Two such non-cash "costs" of major relevance to the St. Louis issue are the costs, or value, of time and noise.

Below is a comparison of cash costs of developing and operating Columbia-Waterloo versus continuation of air carrier operations at Lambert. This is followed by a discussion of time costs and their treatment. In Section VII, "Environmental Issues", the cost of noise is discussed.

### A. Cash Costs

There are several factors contributing to the cost of an airport. Among those contributing to the cash costs of an airport (e.g., costs which lead to a direct expenditure of funds) are airport construction costs, off-airport highway access construction costs, aircraft delay costs, and passenger access costs. Aircraft delay costs refer to the additional operating costs incurred by the airlines while aircraft are delayed as a consequence of airport congestion. Passenger access cost is the out-of-pocket cost incurred by passengers in getting to and from the airport.

To compare the costs of continued operation at Lambert with those associated with a transfer to Columbia-Waterloo, PMM has estimated the total cash cost of transferring from Lambert to Columbia-Waterloo at various alternative dates in the future (i.e., 1985, 1990, 1995, and 2000). The PMM study assumes that the facilities at Lambert required under each alternative are constructed so that adequate capacity, over time, is provided to handle the most likely forecast of demand up to the assumed time of transfer. The facilities requirements for Lambert are taken from the Parsons Master Plan. The basic assumptions regarding airfield construction of Columbia-Waterloo are that, under all alternatives, the three-runway configuration proposed in the Draft EIS will be constructed to go into operation at the transfer year and no further airfield construction will be assumed through the

year 2000. After air carrier operations are transferred to Columbia-Waterloo, the analysis assumes that Lambert remains in service as a general aviation airport.

PMM has also estimated the time costs of airport access and aircraft delay, and this is discussed in subsection B.

The PMM results for the cash costs for the alternative transfer dates are shown below in Table 10, along with their "present value."<sup>47/</sup>

Table 10

#### PMM Cash Cost Estimates (Millions)

	1985	Date of Transfer		2000
		1990	1995	
Airport Construction	\$421.61	\$438.64	\$426.32	\$375.79
Airport/Aircraft Operations	157.66	188.51	237.58	329.55
Highway Construction	19.00	19.00	19.00	19.00
(Subtotal)	(598.27)	(646.15)	(682.90)	(724.34)
Airport Access Travel	831.80	721.60	590.60	436.70
Total Cash Costs	\$1430.1	\$1367.8	\$1273.50	\$1161.04
Present Value	\$417.42	\$354.77	\$304.49	\$269.04

Both the total cash costs and their present values show that a later transfer date entails lower cash costs than an earlier transfer date. The analysis shows that:

- Airport cash construction costs increase slightly as the transfer date is delayed, since a later transfer date requires the expenditure of funds both to expand Lambert and to construct the new airport; however, inclusion of a credit for the residual value of Columbia-Waterloo after the year 2000 causes the airport

<sup>47/</sup> "Present Value" is a concept used by economists and businessmen to compare costs incurred in different time periods. The present value is the amount of money necessary to invest today (at a given interest rate; taken here to be the standard Federal Government discount rate of 10%) in order to have a specific sum of money available at a given date in the future.

construction costs for the later transfer years to decrease slightly.

- . A later transfer date causes aircraft operations costs to increase because of the growing cost of delays at an increasingly congested Lambert.
- . Highway construction costs do not vary with transfer date, in this PMM estimate, as the additional highway improvements needed to serve the airport-generated traffic do not change with the transfer date.
- . The dominant contribution to the cash costs estimates is that of airport access travel; because average trip length to the Columbia-Waterloo airport is roughly 19 miles greater than that for Lambert, a later transfer date reduces the total miles traveled to and from the airport, thus reducing access costs.

If one were to ignore access costs, the earlier transfer date would require the least cash cost. However, this is not a reasonable basis for comparing the various alternatives inasmuch as the cash cost of access is a real one which must be considered.

Although PMM did not examine transfer dates after the year 2000, the nature of the analysis suggests that as the transfer date is delayed further, aircraft delay costs grow disproportionately larger and larger until eventually it would be more costly to remain at Lambert. The date at which this would occur, if ever, is unknown -- except, of course, that it is after 2000.

As discussed in Section IV, the Illinois Authority believes that the cost of Lambert, included in the above table, has been understated by as much as \$200 million, primarily because of PMM's low estimate of the cost of off-airport highway construction. Furthermore, the PMM analysis assumes for each alternative that the expansion of Lambert, as described in the Parsons Master Plan, will continue until the date of transfer. This assumption has been criticized as being unrealistic in that expenditures for the improvement of Lambert would more likely be reduced in the face of an imminent transfer, thus reducing the overall cost of transfer to Columbia-Waterloo. This is especially important for the early transfer dates where the present value of the costs of the Lambert expansion have a relatively larger impact on the cost comparison.

The Illinois Authority has also argued in its written presentation that the PMM estimates of the costs of developing Columbia-Waterloo are overstated by \$139.5 million. Specifically, the costs of the airfield and terminal building are claimed to be much less than PMM indicates. While the claims regarding the airfield costs have merit inasmuch as PMM assumed a three-runway configuration

(as originally planned) when only two runways are now believed to be needed, the arguments for the lower costs quoted by the Illinois Authority for the terminal seem only in part valid (the area allocated per gate appears low). In any event, if one were only to reduce the cost estimate for developing Columbia-Waterloo by \$139.5 million, it would still follow that a later transfer date has a lower total cost and present value cost than an earlier transfer date.

With respect to aircraft delay cash costs included in Table 10, Speas Associates, a consultant to the Illinois Authority, believes the PMM aircraft delay costs are understated and that a more accurate calculation would increase the total cost of aircraft delays and enhance the advantage of Columbia-Waterloo in this regard. Regarding passenger access costs, the Illinois Authority has argued that, primarily because of different assumptions with respect to the relocation of employees' residences, the access costs for Columbia-Waterloo are overstated by PMM.

Inclusion of these revised aircraft delay and passenger access costs developed by the Illinois Authority and its consultants, along with their revised airport and highway construction costs, noted earlier, would make the total cash cost of an early transfer to Columbia-Waterloo less than that for a later transfer. However, I am not persuaded that the extent of these revisions in costs is justified -- especially with respect to the reduced cost of constructing Columbia-Waterloo and the increased cost of off-airport highway access. The different assumptions used in estimating aircraft delay and passenger access costs further complicate the comparison.

#### Conclusion

My evaluation of the information on cash costs leads me to conclude that consideration of cash costs, especially those related to access costs, favors a later transfer from Lambert to Columbia-Waterloo rather than an earlier one, although the PMM estimates appear to exaggerate Lambert's advantage. Thus, in my judgment, continued operations at Lambert in the near future are supported by considerations of cash costs.

#### B. Time "Costs" and Their Treatment

One of the major areas of discussion relates to the question of time savings and delays. Inasmuch as Lambert is closer than Columbia-Waterloo for most air travelers leaving from or arriving in the St. Louis area, a considerable amount of airport access time would be saved by continuing operations at Lambert. In addition, there are considerations of time for airport employees to get to the airport, which -- initially at least -- would also be shorter to Lambert. On the other hand, as noted earlier, aircraft

delays would be greater at Lambert than at Columbia-Waterloo, which would represent a savings in time in the non-access portion of the trip if Columbia-Waterloo were developed.

Time savings such as these are traditionally considered as important components of transportation project analysis. In analyzing the desirability of undertaking transportation improvements, the amount of time which would be saved by the improvement is considered as a benefit, to be weighed (together with any other benefits) against the costs of constructing and operating the project (and any other "costs" or "disbenefits"). I believe this is entirely appropriate.

The difficult question is how to value such time savings and delays, and how to weigh them.

In the case of the St. Louis Airport alternatives, there is considerable disagreement on the value and weight to be given to various kinds of time savings and delays. Moreover, which values (if any) are attached to these savings and delays can greatly affect the outcome of the analysis. For example, in the PMM analysis, the present value of transferring air carrier operations to Columbia-Waterloo in the year 2000 (including capital and operating costs, access costs, and an average value of time of \$4 per hour) was estimated at \$391 million, compared to \$603 million for a transfer in 1985. In other words, the later transfer involved \$212 million lower costs. Of this \$212 million advantage for the later transfer, \$76 million -- more than one-third of the total -- resulted from values attributed to airport access time savings.

However, if air passenger delay were valued at \$10 or \$12.50 an hour, as some argue it should be, it would reduce by about 20% the \$212 million cost advantage, mentioned above, for the transfer in the year 2000. On the other hand, if \$10 or \$12.50 an hour were used as the value for both air passenger delay and ground access time, it would increase the \$212 million advantage shown by the later year.

It should be noted that transportation analysts and economists have developed various estimates of the "value of time", measured in dollars. I believe that it is appropriate to consider such estimates of the value of time saved in evaluating transportation projects, but that great care must be taken in doing so, for several reasons, which are discussed in Appendix B.

### Conclusions

In conclusion, access time considerations favor Lambert, while aircraft time delay considerations favor Columbia-Waterloo. The combined "dollar value" of the two favors Lambert,

although the extent depends upon the valuation placed on access time versus aircraft delay time.

However, after considering the data in light of the caveats discussed in Appendix B, I do not believe that the "value of time" argument captures fully the problems associated with long and frequent aircraft delays. From an aviation viewpoint, I believe we should seek to avoid aircraft delays averaging as high as six minutes -- an average level which would involve very substantial delays and congestion during the peak hours, levels now experienced only at the most congested U.S. airports.

## VII. ENVIRONMENTAL ISSUES

In this section, the environmental issues of noise and air quality are discussed, and some data on energy summarized.

### A. Noise

Noise is generally considered to be the principal adverse environmental impact of aviation. It is a major problem, affecting millions of people annually, which the Department has a statutory responsibility to address.<sup>48/</sup> As indicated in Section II, it is the Department's policy to move toward the goal of confining severe aircraft noise exposure levels around U.S. airports to areas included in the airport boundary.

In discussing this issue below, noise impacts around the two airports are set forth in terms of Noise Exposure Forecasts (NEF). This concept describes the cumulative noise impact of all aircraft operations at a given airport in a 24-hour period. The NEF descriptor accounts for the number and type of aircraft operations, their loudness, corrections for irritating whines, and penalties for nighttime events (when loud noises are most disturbing).

Generally, in areas where NEF is less than 30, essentially no noise complaints are expected, although noise may interfere with community activities. In the NEF 30-40 range, individuals may complain and group action is possible. The Department of Housing and Urban Development (HUD) exercises discretion in guaranteeing mortgages or otherwise assisting new residential construction or major renovation of residential property in the NEF 30-40 zone, and generally requires noise alleviation measures if it is to provide such a guarantee or assistance.

Above NEF 40, repeated vigorous individual complaints regarding noise are expected and group action is probable. HUD does not guarantee mortgages or provide other assistance for new residential construction or major renovation within the NEF 40 zone (except with the approval of the Secretary of HUD).

1. Columbia-Waterloo Alternative. With respect to noise impact, the Columbia-Waterloo site is a highly desirable alternative. This is not to say that there will be no noise impact from the airport -- any airport will have some impact. However, the site location away from major population centers, and the substantial acreage that would be acquired for Columbia-Waterloo, result in a relatively minor noise impact in terms of the total number of people affected. (Of course, a "minor" noise impact, in terms of the total number of people

<sup>48/</sup> Section 611, Federal Aviation Act of 1958, as amended, 49 U.S.C. Sec. 1431 (1970).

affected, is not necessarily minor for any single impacted individual.) The NEF 40 contour will be confined entirely to the airport boundary. Only about 2,000 people will be located within the NEF 30 boundary through the year 1998 (based on 1970 population levels).

In evaluating the Columbia-Waterloo alternative, however, it must be recognized that certain noise-producing aviation activities will continue at Lambert even if the Columbia-Waterloo site is developed and air carrier operations transferred there. The Missouri Air National Guard is expected to continue utilizing Lambert; McDonnell-Douglas will continue its activities at Lambert, which also create substantial noise; and general aviation operations will continue there. In all, it is estimated that for such remaining activities in 1988, based on 1970 population levels and other assumptions in the PMM study, about 46,800 people around Lambert will be within the NEF 30 contour, including approximately 3,200 people within the NEF 40 contour. It is reasonable to assume that the actual numbers will be somewhat higher than the foregoing, in view of the likelihood of population increases as growth and development continue in some of the noise-impacted areas around Lambert. The other assumptions in the PMM study were (a) the promulgation of a regulation, now under consideration, to require modification of existing older, noisy aircraft engines in order to reduce their noise levels (the so-called "retrofit" regulation); and (b) that there would not be any net noise impact from the use of the crosswind runway at Lambert.

Thus, without considering population increases around Lambert, total population within the NEF 30 contour in 1988 at Columbia-Waterloo and Lambert combined -- if Columbia-Waterloo is acquired and developed -- will be about 49,000, including about 3,200 people within the NEF 40 contour.

2. The Lambert Alternative. If Columbia-Waterloo is not developed, and air carrier operations continue at Lambert, the number of persons impacted by high noise levels will be substantially greater. Again utilizing 1970 population levels, and the same assumptions as above regarding aircraft retrofit and the crosswind runway at Lambert, the number of persons within the NEF 30 contour in 1988 will be about 110,000, including about 9,200 people within the NEF 40 contour. These estimates do not include the impact of added general aviation operations at other general aviation airports, as they become displaced from Lambert; however, these effects are not likely to be great.

3. Comparison. In sum, the populations impacted by noise in 1988 by the Columbia-Waterloo and the Lambert alternatives, together with the current situation at Lambert, compare as follows (utilizing the same three assumptions):

Table 11

Noise-Impacted Population

	1988		
	<u>Lambert in 1974</u>	<u>Lambert Alternative</u>	<u>Columbia-Waterloo Alternative</u>
<u>NEF 40 Contour</u>			
<u>Around Lambert</u>	7,700	9,200	3,200
<u>Around Columbia- Waterloo</u>	-	-	-
(Subtotal)	<u>(7,700)</u>	<u>(9,200)</u>	<u>(3,200)</u>
<u>NEF 30 Contour</u>			
<u>Around Lambert</u>	77,000	100,800	43,600
<u>Around Columbia- Waterloo</u>	-	-	2,200
(Subtotal)	<u>(77,000)</u>	<u>(100,800)</u>	<u>(45,800)</u>
<u>Total, NEF 30 and NEF 40 Contours</u>	84,700	110,000	49,000

Thus, it is clear that continuation of air carrier operations at Lambert will result in substantially greater noise impact compared to transferring operations to Columbia-Waterloo. Moreover, the Illinois Authority argues that the foregoing three major assumptions (regarding retrofit, the crosswind runway, and utilizing the 1970 population) result in a substantial underestimate of the noise impact of the Lambert alternative. I agree that it is unlikely that there will be no increase in population in the affected areas; by 1998, the noise-impacted population in the Lambert alternative may therefore be as much as 35% greater than indicated above, on this basis alone. If the retrofit regulation is not promulgated, there would be a further increase of more than 20% in the affected population.

On the other hand, the Columbia-Waterloo alternative also includes that part of the population around Lambert which will be impacted by continuation of non-carrier operations at Lambert. A population increase around Lambert might also increase these numbers. Moreover, it is likely that some population increase would occur around the Columbia-Waterloo site if airport construction begins there. Thus, the noise-impacted population projections around Columbia-Waterloo may also be viewed as somewhat low.

4. The "Cost" of Noise. Another major point of disagreement in the material submitted for the docket relates to the likely costs, or the negative "value", that should be attributed to these noise

impacts. The DOT Issue Paper on the St. Louis question stated that the noise reduction benefits of transferring operations to Columbia-Waterloo, in terms of increasing property values around Lambert, would range between \$20 million and \$90 million, based on studies of sales prices of noise-impacted houses in other cities, but that "it is unlikely that increases in property values represent the full benefit of noise reduction to the affected individuals."<sup>49/</sup> The discussion earlier in this section suggests that the number of people who will be noise-impacted by the Lambert alternative is likely to be higher than the population estimates upon which the foregoing total property value estimates were made.

In addition to the larger number of people that will likely be noise-impacted, the Illinois Authority asserts that the studies upon which the above property damage estimates are based grossly underestimate the noise damages around Lambert for other reasons as well. With respect to property, their presentation states that: "Property damage is appropriately measured in inverse condemnation proceedings, which measure the diminution of value resulting from the noise impact."<sup>50/</sup> These costs are estimated by the Authority at \$504 million, based on its estimates of the future population which will be affected. In addition, the Authority estimates that damage to people from the Lambert alternative, beyond the damage to their property value, would be approximately \$777 million, based on relevant court decisions.

I agree with the Illinois Authority that court awards are one appropriate indicator of damage. However, as with estimates of the value of time (discussed in Section VI and Appendix B of this document) care must be utilized in taking values obtained in one context or one geographic location and applying them elsewhere. This is particularly true with respect to noise, the impact of which is highly subjective.

In the case of Lambert Airport, an important consideration is that the people directly affected by the noise have not given any substantial indication that, from the subjective viewpoint, they consider noise as serious a problem as the objective measurements would seem to indicate it is. Moreover, the communities around Lambert have indicated quite clearly that, whatever problem airport noise might be, they wish to retain air carrier operations at Lambert. Clearly, their perception of considerations

<sup>49/</sup> DOT Issue Paper, Attachment 1, p. 17.

<sup>50/</sup> Illinois Authority Presentation, p. 88.

relating to jobs, business and air service weighs more heavily at this time in their views than does the impact of noise.<sup>51/</sup>

5. Conclusions. Under the most conservative assumption, the number of noise-impacted people (those living within the NEF 30 and NEF 40 contours) would be about one-half for the Columbia-Waterloo alternative, compared to the Lambert alternative (e.g., in 1988, 49,000 vs. 110,000). Under population assumptions I consider more probable, the greater number of people impacted by the Lambert alternative may well be substantially higher. Judgments as to the "cost" that this noise imposes range from a low of \$20 million to a high in excess of \$1 billion.

On balance, I conclude that the noise issue weighs heavily in favor of the Columbia-Waterloo alternative. While I recognize that it is a subjective matter, nevertheless I strongly believe that as a matter of public policy we should endeavor to minimize the adverse noise impacts of airports by confining severe aircraft noise to the extent possible to the areas included in the airport boundaries. In addition, I have a statutory obligation under the Airport Act and under the National Environmental Policy Act of 1969 to reduce transportation's adverse impacts on the quality of the human environment and to protect and enhance that environment where possible.

#### B. Air Quality

1. Estimating Difficulties. The effect on air quality of the two major alternatives is considerably more difficult to estimate and evaluate than the noise effects of the alternatives. While polluting emissions from aircraft, ground vehicles and other emitting sources can be measured or estimated, calculating the effects of these emissions on air quality -- and, more importantly, their effects on people -- is not a simple matter, for several reasons.

To begin with, some emissions (e.g., carbon monoxide -- CO) apparently remain in the atmosphere for a relatively short duration of time, so their effect is likely to be more short-lived and of a more localized nature, compared to other emissions.

Secondly, for emissions which can remain in the atmosphere for a considerable period of time (e.g., hydrocarbons -- HC), their

<sup>51/</sup> E.g., see Transcript of Public Hearing, January 13, 1976, pp. 180, 203, 213-4.

concentration in various areas, and therefore their effect, will depend to a considerable extent upon meteorological conditions.

Thirdly, some emissions combine in the atmosphere with other substances to create harmful pollutants (e.g., HC and nitrogen oxides -- NOx -- combine under the influence of sunlight to create harmful oxidants). These chemical reactions may occur at some distance from the point of emission, because of the transport of emissions prior to and during the reactions, and because of the long reaction time for some pollutants.

Fourthly, the effect of an increment of pollutants depends in part upon the existing ambient air quality level. Some slight degradation of air quality in a pristine area, for example, would not normally create pollutant concentrations which would have adverse health effects (although it might be objectionable for other reasons), whereas the same increment of pollution in an area with existing poor ambient air quality may increase concentrations to levels at which adverse public health effects are known to occur.

As a final point regarding the complications of estimating the magnitude of air quality impacts, our primary concern must be the effect of air pollution on people. Thus, it is important to compare the geographic proximity of populations to the areas in which air quality may be adversely impacted by the alternatives under consideration.

With these points in mind, I have examined information with respect to the air quality effects of the Columbia-Waterloo and Lambert alternatives, including information submitted in:

- the Draft Environmental Impact Assessment (EIA), prepared by Parsons/Gruen as part of the Lambert Master Planning effort;
- the PMM Phase II Report;
- the Illinois sponsor's submission of January 30, 1976.

Relevant portions of these documents are summarized in Appendix C.

2. Comparison. The differing analytical approaches set forth in the three presentations in Appendix C are illustrative of the complexities involved in arriving at firm quantitative conclusions on this matter. Nevertheless, without attempting to resolve detailed technical points, several significant items can be noted and conclusions drawn.

To begin with, there are several areas of agreement. First, all three reports note -- in some cases with caveats -- that continued aircraft operations at Lambert will have some degree of adverse air quality impacts, one reason being that there are already high

ambient pollution levels near Lambert. Secondly, the two reports which compare the Lambert and Columbia-Waterloo alternatives (the PMM report and the Applicant's presentation) conclude that the air quality effects of the Lambert alternative will be more adverse than the air quality effects of the Columbia-Waterloo alternative. The two reports note that the Columbia-Waterloo area has lower ambient air pollution levels than the Lambert area, although no actual air quality measurements are cited. (However, given the general nature of oxidant concentrations measured in other urban areas, it would not be unusual to find high oxidant concentrations at the periphery of an urban area.)

It should also be noted that whatever degradation of air quality does occur in the vicinity of Lambert will take place in a relatively populated urban area, whereas any degradation that occurs in the Columbia-Waterloo area will occur primarily in a sparsely populated area. The surface travel generated by the Columbia-Waterloo alternative may, however, degrade air quality in some populated areas.

Table 12 below, drawn from the PMM report, may be used to examine further the air quality degradation resulting from the two airport alternatives. In doing so, however, it should be noted that neither tons of emissions annually for the two alternatives (the unit of measurement in the table) nor density of emissions (the unit of measurement favored by the Illinois Authority) is a fully satisfactory basis for comparison between Lambert and Columbia-Waterloo alternatives with respect to all pollutants. As noted earlier, what we are concerned with primarily is the air quality impact on people. Thus, our interest is the concentration of pollution at the point of reception by people, not the density at the point of emission. In the case of oxidants, the concentration may not even directly reflect the emission densities of the two precursors, HC and NOx. Unfortunately, in the absence of a rather complex study of the various points of emissions for the two alternatives (including ground access trips over their entire length) in relation to dispersion and chemical reaction under estimated meteorological conditions, no definitive conclusions can be drawn. Nevertheless, the following table is instructive, as discussed below.

Table 12  
Airport-Related Air Pollution in 1988  
(Tons/Year)

	<u>CO</u>	<u>HC</u>	<u>NOx</u>
<u>Lambert Alternative</u>			
Aircraft	5,027	1,093	2,894
Ground Vehicles	1,153	211	304
Total	6,180	1,304	3,198
<u>Waterloo Alternative</u>			
Aircraft (Waterloo)	4,502	975	2,783
Aircraft (Lambert)	525	118	111
Ground Vehicles	3,129	566	816
Total	8,156	1,659	3,710

Specifically, it can be noted that the major source of emissions, as set forth in the table, is aircraft. In the case of Lambert, the pollution from aircraft will be emitted near populated areas with relatively high ambient pollution levels. In the case of Columbia-Waterloo, the pollution from aircraft will be emitted near now sparsely populated areas with low ambient pollution levels. With respect to emissions from ground access vehicles, in the case of Lambert these emissions once again will occur primarily in the populated areas of the St. Louis region. In the case of Columbia-Waterloo, on the other hand, a significant percent of the ground access emissions will occur in sparsely populated areas, although there will be increases in the already polluted I-70 and East St. Louis areas. Thus, almost all of the emissions in the Lambert alternative occur in relatively populated, higher pollution areas, while it appears that less than one-third of the emissions in the Columbia-Waterloo alternative will occur in such kinds of areas. The result is that emissions of CO, HC and NOx, each, near populated areas are likely to be more than twice as high under the Lambert alternative than under the Columbia-Waterloo alternative.

While emissions of the relatively inert pollutants (e.g., CO) can be widely dispersed by weather and meteorological conditions, they are denser closer to the source of emissions. Thus, the above data illustrates the point that the Lambert alternative is likely to result in increments of CO close to populated areas in amounts more than twice as great as the increments from the Columbia-Waterloo alternative near populated areas. Moreover, these greater increments of CO in the case of Lambert will be added to areas of already relatively high ambient pollution levels.

With respect to oxidants, however, their concentrations near populated areas depends not only on location and amount of HC and NOx emissions, but also on meteorological factors. Under current state-of-the-art in air quality analysis with respect to urban areas with oxidant problems, the best measure of relative overall impact of HC and NOx emissions is total amount of these emissions, rather than the location of emission within the urban area. (Some air quality simulation models for estimating oxidant concentrations exist, but they are still primarily in a research stage.) Thus, the greater volume of HC and NOx emissions from the Columbia-Waterloo alternative (+27% for HC and +16% for NOx), would be expected to have more adverse impacts on oxidant levels in the St. Louis region than would emissions resulting from the Lambert alternative.

With respect to the relationship between these emissions and violations of Federal ambient air quality standards, as noted in the Illinois presentation, ambient standards were violated on numerous occasions in the St. Louis area according to 1973 EPA reports. Emissions from the airports do exacerbate these violations and will tend to delay and make more difficult attainment of the standards.

3. Conclusion. The Lambert alternative will have substantially more adverse CO effects on the population than the Waterloo alternative, while the Waterloo alternative will have somewhat more adverse oxidant effects. Within the context of the total amount of emissions in the St. Louis region, the amount of emissions caused by either of the alternatives is small.

#### C. Energy

Speas has made estimates (which FAA approximately confirms) that the annual fuel consumption in 1998 for automobile access would be 15 million gallons of gasoline and 1.3 million gallons of diesel fuel greater for the Waterloo alternative than for Lambert. However, the annual consumption of jet fuel is estimated to be 27.3 million gallons less at Columbia-Waterloo than Lambert, because of lesser delays at Columbia-Waterloo. Thus, the net effect of the Columbia-Waterloo alternative would be an annual savings of approximately 11 million gallons of fuel in 1988.

### VIII. EMPLOYMENT, BUSINESS AND GROWTH

#### A. Introduction

Another issue which prompted a great deal of interest and concern relates to the subject of jobs, businesses and growth. A considerable amount of the testimony at the public hearing which I conducted in St. Louis on January 13, 1976, touched on these questions.

For example, some speakers from Missouri asserted that Lambert Airport is "the most important asset in St. Louis County";<sup>52/</sup> that construction of Columbia-Waterloo would result in "a mass exodus from our cities" in Missouri;<sup>53/</sup> that it would lead to decay and losses that would be "enormous in investment, in jobs, in tax revenues, in benefits for small nearby businesses" and hotels;<sup>54/</sup> and that jobs attributable to Lambert represent "a way of life for an estimated 200,000 people in this metropolitan area."<sup>55/</sup>

On the other hand, some speakers from Illinois asserted that the area around Lambert "would not suffer" if Columbia-Waterloo is developed;<sup>56/</sup> that construction of Columbia-Waterloo "will provide for approximately 40,000 jobs in construction and related areas for many years to come";<sup>57/</sup> and that such jobs "would easily and accessibly meet the needs of minority employees who reside predominantly in the central core areas of East St. Louis"<sup>58/</sup> where unemployment is high.

Such suggestions of major loss of jobs in Missouri and major gains in Illinois, if Columbia-Waterloo is built, seem to be overstated, as discussed below.

There are three types of employment (and employing businesses) which can be attributed to Lambert -- direct employment, airport-related employment and indirect employment. Each of these is discussed and quantified below, and the effect on each of a transfer of airline operations to Columbia-Waterloo is discussed. The effect of the decision on construction employment is also discussed, as is the question of whether a more generalized growth-inducing effect can be expected.

<sup>52/</sup> Transcript of Hearings, January 13, 1976, p. 180.

<sup>53/</sup> Ibid., p. 206.      <sup>54/</sup> Ibid., p. 243.      <sup>55/</sup> Ibid., p. 234.

<sup>56/</sup> Ibid., p. 17.      <sup>57/</sup> Ibid., p. 70.      <sup>58/</sup> Ibid., p. 72.

## B. Direct Employment

In its Draft Environmental Impact Assessment Report (DEIAR) for Lambert, the Ralph M. Parsons Company has summarized direct employment at Lambert, in 1971, as follows:<sup>59/</sup>

Table 13

### Employment at Lambert in 1971

Organization or Function	Employment, 1971
Airport Management	170
Terminal Complex	
Airlines	1,816
Air Cargo Handlers	181
Aircraft Fueling	72
Ground Transportation	266
Automobile Parking	90
Concessions	341
Skycaps	35
Federal Aviation Administration	180
Other Federal Agencies	
U. S. Post Office	155
National Weather Service	50
Other	192
Ozark Airlines Headquarters	700
Air Taxi and Fixed Base Operators	75
General Aviation	333
Military	519
Total	5,175

RMP estimates that this employment would increase to 8,900 by 1995 if air carrier operations are continued at Lambert, assuming normal productivity trends<sup>60/</sup> (or to 10,655, assuming no increase in productivity).<sup>61/</sup> PMM states that if air carrier operations are transferred to Columbia-Waterloo, most of these jobs would simply be relocated from Lambert to Columbia-Waterloo, and "little or no unemployment would result from a transfer."<sup>62/</sup> PMM states that the employees either would commute from their current residences to their relocated jobs at Columbia-Waterloo, or would relocate their residences to the vicinity of the new airport.<sup>63/</sup>

<sup>59/</sup> Derived from RMP, DEIAR, p. 3.10-147.

<sup>60/</sup> Ibid., p. 3.10-148. <sup>61/</sup> Ibid., p. 3.10-147.

<sup>62/</sup> PMM - Phase II, p. X-12.

<sup>63/</sup> Ibid.

In this connection, for the 70% of direct employees who live within 5 miles of Lambert, the distance to Columbia-Waterloo would add about 60 miles to their daily round-trip commute. PMM further estimates that, as a general aviation airport only, Lambert would employ 2,300 persons in 1998,<sup>64/</sup> and the two airports (Lambert and Columbia-Waterloo) combined would employ about 500 people more in 1998 than Lambert would if it were continued as the single air carrier airport for the region.<sup>65/</sup>

## C. Airport-Related Employment

This term includes employment and facilities which depend upon the airport entirely or to a considerable extent for their economic function. RMP estimated, in January 1975, that airport-related employment at Lambert amounted to 33,000 jobs,<sup>66/</sup> of which about 30,000 were employed by McDonnell-Douglas.<sup>67/</sup> The other approximately 3,000 employees were at such facilities as hotels, motels, restaurants, off-airport freight forwarders, auto rental agencies, and similar airport-dependent establishments.<sup>68/</sup> PMM states that:

"As long as Lambert remains in existence as an aviation facility, McDonnell-Douglas employment and a substantial portion of other employment (not related to air carrier operations) in trades and services would probably remain. Establishments particularly dependent upon air carrier activity at Lambert, such as automobile rental facilities, flight insurance, etc., would relocate in whole or in part to the Waterloo vicinity and tend to take an equivalent number of employees with them--in the same way as direct employment.

"Some businesses, such as hotels, motels, and restaurants which rely on passenger traffic activity at Lambert, could suffer serious consequences and contribute to unemployment in the Lambert vicinity."<sup>69/</sup>

With respect to hotel employment, PMM -- referring to a draft, unpublished report prepared for the Missouri-St. Louis Metropolitan Airport Authority by Burns and McDonnell -- states that, considering assumed break-even points, five airport motels (The

<sup>64/</sup> Ibid., p. X-11. <sup>65/</sup> Ibid., p. X-4.

<sup>66/</sup> RMP, DEIAR, p. 3.10-148.

<sup>67/</sup> PMM - Phase II, p. X-15.

<sup>68/</sup> Ibid.

<sup>69/</sup> Ibid., pp. X-15 - X-16.

Master Hosts, Northwest Airport Inn, Ramada Inn, Royale Inn and Sheraton Inn) "are extremely vulnerable if the average daily room demand decreases by 10%."<sup>70/</sup>

Thus, in reviewing the total of approximately 33,000 airport-related jobs, the 30,000 jobs at McDonnell-Douglas would remain at Lambert if air carrier operations transfer to Columbia-Waterloo; with respect to the other 3,000 airport-related jobs, some would remain in the vicinity of Lambert, a portion would transfer to Columbia-Waterloo, and a portion would be lost (perhaps in the range of 1,000) although perhaps as many would be created in the vicinity of Columbia-Waterloo as would be lost at Lambert. One thousand jobs represents about one-tenth of one percent of the metropolitan area employment, three-tenths of one percent of St. Louis County employment, and seven-tenths of one percent of employment within a five-mile radius of Lambert.<sup>71/</sup>

#### D. Indirect Employment

Indirect, or induced, employment results from the multiplier effect of the movement of the stream of income from direct and airport-related employees. For example, Lambert employees buy food and clothes with their income, and this generates employment in food and clothing retail firms, wholesale firms, etc. RMP states that, based on input-output analysis of the St. Louis region, each of the direct and the airport-related employees gives rise to an additional 1.08 jobs, on the average.<sup>72/</sup> PMM utilizes a similar multiplier.<sup>73/</sup>

However, in evaluating the effect on indirect employment of a transfer of air carrier operations to Columbia-Waterloo, one cannot simply apply this multiplier to the transferred jobs. For those employees whose jobs are transferred to Columbia-Waterloo or its vicinity, but who commute to their new jobs and do not change their place of residence, the manner in which their income flows into the economy is not likely to be changed significantly. Thus, the change in location of their jobs would not be expected to have any appreciable effect on indirect employment. For those employees who do change residence, over time, as a result of a shift in their jobs to Columbia-Waterloo, the distribution of their income stream will be significantly affected. Even in this case, however, inasmuch as the total

<sup>70/</sup> Ibid., pp. X-16 - X-17.

<sup>71/</sup> RMP, DEIAR, Appendix C.1, p. 98.

<sup>72/</sup> RMP, DEIAR, p. 3.10-149.

<sup>73/</sup> PMM - Phase II, pp. X-12, 13.

expenditures from an individual's disposable income is spent in many parts of the region, the location of expenditure of not all of the increase is likely to be affected by a change in residence to the Columbia-Waterloo area.

Finally, for those employees who lose their jobs, any net loss in personal expenditures (e.g., loss in disposable income from salary less unemployment compensation or other sources) will have a full multiplier effect, just as the creation of new jobs (and therefore new income) at Columbia-Waterloo (as distinguished from the transfer there of an existing Lambert job) would have a full multiplier effect.

#### E. Construction Jobs

In addition to the categories of employment discussed above, construction employment would also be affected by the decision. If improvements are made to Lambert in accordance with the draft Master Plan, there would be an average of about 500 construction workers involved over a 5-10 year period.<sup>74/</sup> Construction of a new airport at Columbia-Waterloo, on the other hand, would require an average of about 1,800 construction workers over about a 5-8 year period.<sup>75/</sup> In either case, there would be an indirect employment effect of these construction jobs.

It should be noted, however, that the construction workers in either case would come much more widely from the metropolitan area than employees of Lambert or airport-related employees, and their employment is therefore not likely to have a major impact on the economy of the airport vicinity.

#### F. General Growth Effect

There was also a question as to whether construction of Columbia-Waterloo would have a major, generalized growth-inducing effect on the Columbia-Waterloo area, or a disruptive effect on the Lambert area.

As indicated above, the amount of employment, beyond direct airport employment, relocating to Columbia-Waterloo if it is constructed, is likely to be quite small. Some of these airport-related employees, as well as the direct employees whose jobs are transferred to Columbia-Waterloo, are likely gradually to seek residences closer to Columbia-Waterloo, and this will gradually have some growth-inducing effect on that area. However, in terms of total regional population, the numbers affected by the development of Columbia-Waterloo would be quite small. As PMM concludes, "Although the environs of the two sites would undoubtedly be affected to some extent, transfer would have little impact on land

<sup>74/</sup> DOT Issue Paper, p. 15.

<sup>75/</sup> Ibid.

use and community development in the two central cities of St. Louis and East St. Louis, and a moderate, but temporary, effect on economic dispersion and distribution trends in the region."<sup>76/</sup> This moderate effect would be counter to the current trend of westward expansion of the St. Louis metropolitan area.

#### G. Conclusion

It must be recognized that some employees at and near Lambert would undoubtedly lose jobs as a result of construction of Columbia-Waterloo, although the number can reasonably be expected to be relatively small (e.g., 1,000-1,5000) even when measured against employment in the vicinity of Lambert, and that some businesses (primarily hotels and restaurants) would suffer losses. While the losses would be relatively small and occur sufficiently in the future to permit adequate planning for community and individual adjustments, any loss in employment -- even in the future -- is an important consideration. This consideration therefore weighs against approval of a new airport at Columbia-Waterloo and warrants attention to assure mitigating steps to minimize this adverse effect of developing the new airport.

<sup>76/</sup> PMM - Phase II, p. X-7.

#### IX. INSTITUTIONAL AND FINANCING QUESTIONS

Two basic institutional/financial questions have arisen in connection with consideration of the Columbia-Waterloo and Lambert alternatives, as follows:

- o What would the effect be on the availability of the Columbia-Waterloo site for a future airport and of a sponsor if the current grant request is rejected?
- o What would the effect be on the ability to finance various levels of improvements at Lambert if the current Columbia-Waterloo grant application is approved?

Each of these questions is discussed below.

##### A. Future Availability of Columbia-Waterloo

Opponents of the Columbia-Waterloo application have argued, *inter alia*, that even if there were some possibility of a future need for an airport at Columbia-Waterloo, there would be no need for the Federal Government to provide a grant now for the acquisition of land at that site, for two reasons. First, the argument runs, the land at the Columbia-Waterloo site will be just as available in the future as it is now, because there is no great development pressure there and because the present farm owners have indicated a strong desire to retain the land in its present farm use. Secondly, the argument is made that even if it were desirable to acquire the land now for possible future airport use, the State of Illinois could accomplish that without Federal grant funds or any other Federal action.<sup>77/</sup>

Proponents of the grant, on the other hand, argue that it is "highly unlikely that an airport could ultimately be developed at the site unless the land is acquired now."<sup>78/</sup> In support of this position, they point out that (1) the number of farms and acres farmed have declined in St. Clair and Monroe Counties in recent years; (2) the Southwestern Illinois Metropolitan and Regional Planning Commission projects a doubling of Monroe County's population and a 30% increase in St. Clair's population during the next 25 years, with Columbia and Waterloo expected to receive the bulk of that growth; and (3) because of these matters and the complexities of local planning and zoning, "if the site is not acquired now

<sup>77/</sup> E.g., see Missouri Position Paper, Section 9, p. 25.

<sup>78/</sup> "Memorandum to Secretary of Transportation in Response to 'Missouri's Post-Hearing Summary on the St. Louis Airport Matter'", February 9, 1976, p. 29.

neither local nor regional development will likely be consistent with further development of an airport at the C/W site."<sup>79/</sup>

Moreover, proponents of Columbia-Waterloo argue that in the face of the money, effort and time which the State of Illinois has already expended in the Columbia-Waterloo application, it is unreasonable to expect the State to spend further money for land acquisition without Federal approval, and -- in any event -- they might have legal difficulties in acquiring the land in the absence of Federal approval or "site designation."

#### Conclusion

Inasmuch as I have concluded that a new air carrier airport will be needed for the St. Louis metropolitan area by the early 1990's and possibly before (see Section IV above), and I have no reason to believe that a better site exists than Columbia-Waterloo (see Section V above), I believe it would be desirable to acquire the site for the Columbia-Waterloo airport now. Site acquisition, planning and development of a major new airport is generally expected to take 10-12 years or more. Thus, the development cycle, if begun now, would coincide roughly with the likely date of need. Even if the need were not expected to occur until a later date, I believe it would be prudent to acquire the land now in order to minimize the risk of losing the site to incompatible development or having incompatible development occur around the site.

#### B. Effect on Financing Improvements at Lambert

The City of St. Louis Airport Authority has, at this time, authorization from the voters to sell a maximum of \$200 million of revenue bonds to improve Lambert. These bonds are payable solely from net revenues from the airport facilities. Thus the St. Louis Authority's ability to issue long term revenue bonds for Lambert is necessarily dependent on the confidence that a potential bondholder has in the reliability and dependability of the pledged future revenues.

Within a short period of time, the airport management plans to sell approximately \$11 million in bonds to finance the current airport improvement program. Discussions with airport management indicate no reluctance to embark on capital improvement programs, provided that airline support can be obtained to assure revenues sufficient to repay the bonded indebtedness. At present, the airlines have entered into lease and use agreements with the Lambert Authority through 1987 that assures revenues to repay a portion of the current expansion program. In addition, the airlines have

<sup>79/</sup> Ibid., p. 30.

stated their desire to remain at Lambert beyond 1987 for as long as it is feasible.<sup>80/</sup>

With regard to financing of the Lambert expansion described in the Lambert Master Plan, preliminary indications are that it will be financed through government assistance, tenant financing, surplus operating cash and revenue bonds. With respect to the latter, plans are to offer bond issues for \$47 million in 1979, \$33 million in 1982 and \$16 million in 1988. These bonds would be offered at 8 percent interest rate and a 30-year repayment schedule beginning two years after the issue has been assumed. Whether airline support will be obtainable to assure revenues sufficient to repay these bonds is uncertain. If this preliminary financial plan is to be realized, an agreement with the airlines which covers the 30-year period of indebtedness would appear to be required.

Supporters of Lambert argue that if the Federal Government were to approve the application for funds to acquire the Columbia-Waterloo site, it would preclude the St. Louis Airport Authority's ability to sell revenue bonds to finance further expansion. They argue that the possibility of a new airport would raise doubts in the minds of potential investors about sufficient revenues continuing to be generated at Lambert to pay off the principal and interest on their bonds. Goldman, Sachs and Company has stated that unless responsibility for the bonds was assumed by another party, either landbanking or designation of the Columbia-Waterloo site would make sale of revenue bonds to expand Lambert very difficult if not impossible.<sup>81/</sup>

On the other hand, proponents of acquisition of the Columbia-Waterloo site claim that since the Illinois Authority has stated its willingness to assume any outstanding debt obligations for Lambert improvements being supported by the airlines which the airlines will continue to support, the salability of revenue bonds for expansion of Lambert will be enhanced by designation or acquisition of Columbia-Waterloo. Salomon Brothers, financial advisers to the Illinois Authority, in support of this claim, stated, "...designation and acquisition of a new airport site and planning with respect thereto

<sup>80/</sup> Transcript of Hearings, January 13, 1976, p. 214, Statement of John Reagan, Chairman, Airline Negotiating Committee for Lambert Airport.

<sup>81/</sup> Letter from Mr. David C. Clapp (Vice President, Municipal Bond Department, Goldman, Sachs & Co.) to Mr. Donald G. Aubuchon (Manager of Finances, Lambert-St. Louis International Airport), December 15, 1975.

could permit the issuance of long-term bonds [for Lambert] not otherwise practical...."<sup>82/</sup>

### Conclusion

I believe that the financing of Lambert's expansion through the sale of revenue bonds will depend largely upon potential investors' belief in the long-term viability of Lambert and the likelihood that future revenues will be adequate to pay off the debt obligation. Only in the financial marketplace will this question be settled. While the extent of the influence is difficult to ascertain, I also believe acquisition of the Columbia-Waterloo site must necessarily affect investors' perception of Lambert's long-term viability and might somewhat undermine the ability of the St. Louis Airport Authority to finance future improvement of Lambert. This does not mean I have concluded that, in the absence of acquisition, the revenue bonds could be sold. The willingness of the Illinois Authority to assume any outstanding debt obligations for Lambert improvements being supported by the airlines, which the airlines will continue to support, might mitigate against the financing difficulties of the St. Louis Airport Authority, and I have made such assumption a condition of the grant.

<sup>82/</sup> Illinois Authority Presentation, Appendix 1 (letter from Salomon Brothers to the St. Louis Metropolitan Area Airport Authority).

## X. GENERAL AVIATION AND SAFETY

Two other issues which have been raised are discussed below:  
(a) the effect of the alternatives on general aviation and  
(b) safety.

### A. General Aviation

In order for Lambert to continue as the only air carrier airport for the St. Louis area and to accommodate expected future levels of air carrier activity, there would have to be a substantial reduction in general aviation activities there. There were approximately 130,000 GA operations at Lambert in 1973. It has been variously estimated that if GA activity at Lambert were unconstrained in future years, the number would grow to 250,000 or 350,000 annually. However, if Lambert continues as the air carrier airport for the region, it is likely that there would not be capacity there for more than 80,000-100,000 GA operations annually.

Proponents of Lambert argue that if that airport is continued as the regional air carrier airport, GA operations at Lambert will be constrained naturally by the preference of many GA operators not to fly into a busy commercial airport. They point out that GA operations at Lambert constitute a significantly higher percentage of total operations at the airport than at other major airports, and that the actual and natural trend at Lambert has been for a decrease in the number of GA operations (e.g., from 192,000 in 1960 to 130,000 in 1973). Moreover, they assert that there is substantial GA capacity available elsewhere in the St. Louis area, and that all GA traffic can be adequately handled in the future with a relatively modest expenditure of funds for added GA capacity at one or more of the existing GA airports.<sup>83/</sup>

On the other hand, proponents of Columbia-Waterloo argue that (1) the amount of GA activity which would naturally prefer to utilize Lambert would be higher than estimated by Lambert proponents; (2) many would continue to prefer it even in the face of its continued use as the region's air carrier airport; (3) there will be a general shortage of GA capacity in the St. Louis area in the future, in any event; and (4) therefore any reduction in Lambert's capability to handle GA operations will result in a further shortage of GA capacity in the region.<sup>84/</sup>

<sup>83/</sup> Missouri Position Paper, Section 9, pp. 11-13.

<sup>84/</sup> Illinois Authority Presentation, pp. 38-41.

### Conclusion

After reviewing the data and arguments, it is not clear to me that adequate GA capacity will be unavailable in the St. Louis region in the future. What is more likely is that the capacity will not be as available in locations, including Lambert, most desired by those utilizing general aviation. Even if the Lambert proponents are correct in stating that as air carrier operations at Lambert increase, GA operations there will "naturally" decrease, this does not mean that such decrease is not a "cost" to general aviation. There is general agreement that if air carrier operations were to transfer to Columbia-Waterloo, there would be a preference for an increasing number of GA operations at Lambert. Thus, the fact that GA operators will shift their operations to other airports if air carrier operations continue and grow at Lambert means that continued air carrier operations at Lambert are adding some burden, or cost, to general aviation.

Thus, the impact on general aviation is a consideration favoring the Columbia-Waterloo alternative, which I must properly weigh in my decision.

### B. Safety

The DOT Issue Paper stated that:

"If Lambert is continued as the air carrier airport into the 1990's, improved pursuant to the Master Plan, it will fully meet FAA air safety standards. However, a new airport at Waterloo would provide a further margin of safety compared to continued operations at Lambert."<sup>85/</sup>

The Illinois Authority, while agreeing that FAA would not permit continued operations at Lambert unless established safety standards are met, goes on to say that "the recent rash of 'near misses' throughout the country indicate operations undertaken within current 'margins of safety' are not entirely riskless. The fact remains that certain physical aspects of Lambert Field [the bowl-shaped terrain of the runways and the close spacing of parallel runways] - which will not be altered by improvements - present safety problems.... Finally, any proposal which calls for pushing an airport to the very limits of its capacity increases the stress upon air traffic controllers and the risk of human error."<sup>86/</sup>

<sup>85/</sup> DOT Issue Paper, p. 13.

<sup>86/</sup> Illinois Authority Presentation, p. 41.

The Missouri side, on the other hand, states that the safety question "is a bogus issue" and that the "more relevant issue is whether the convenient airport [Lambert] will provide a wholly adequate margin of safety."<sup>87/</sup> The Missouri side notes that FAA has recognized that Lambert will provide an adequate margin of safety; and states that the margin of safety at Lambert will increase, pointing out that DOT has indicated that improved air traffic control techniques in the future will improve aviation safety.

### Conclusion

Aviation safety is, of course, a major responsibility of DOT. Thus, any safety increment must be valued, and the added margin of safety which Columbia-Waterloo would provide certainly weighs in favor of that alternative. However, because Lambert will fully meet safety standards, I do not consider the added margin of safety at Columbia-Waterloo to be a major consideration.

<sup>87/</sup> Missouri Position Paper, Section 9, p. 10.

## XI. LOCAL VIEWS

As indicated earlier (Section II.D.), I must give considerable weight to the views of the affected communities and elected officials representing them (although I reject the proposition, advanced in the Missouri position paper, that I am precluded from approving a project contrary to the wishes of a large percentage of the population of one State, when the airport is to be located in an adjacent State).<sup>88/</sup> I do believe that the views of the affected population, on both sides of the river, must be taken into consideration, and if the views of a heavy preponderance of the population weigh in one particular direction, that is an important consideration.

On the basis of the public hearing and the material submitted for the record, it is clear that there is substantial opposition to the Columbia-Waterloo application from the Missouri portion of the St. Louis metropolitan area. Elected officials widely representing the Missouri portion of the metropolitan area spoke against the Columbia-Waterloo application at the hearing (or submitted material for the record), as did representatives of various groups in the area. The only groups representing Missourians which spoke in favor of acquiring the Columbia-Waterloo site were two groups which include representatives from both States: The Regional Commerce and Growth Association and the Illinois-Missouri Progressive Airport Creation Taskforce (IMPACT), although the former argued for maintaining air carrier operations at Lambert for as long as possible.

On the other hand, it is clear that there is substantial support for the application from the Illinois side of the metropolitan area. Again, elected local officials and members of the State legislature widely representative of the local area spoke in favor of the application (or submitted material for the record), as did representatives of various groups in the area. However, there was also opposition to the application expressed by several representatives of farming interests and the farm-owners and other residents of the affected area in Illinois.

In balancing these views of the local population, it is quite important to note that almost 80% of the population of the St. Louis metropolitan area lives in the Missouri portion of the area, and the majority of the affected population is in Missouri. Thus, the apparent widespread opposition to the Columbia-Waterloo application from the Missouri side means that a heavy preponderance of the local opinion opposes the application. Because of the population distribution in the metropolitan area, it would be unfair to accord the views of all of the affected population in Illinois equal weight with

<sup>88/</sup> A discussion of this point is given in Section I, "Legal Framework."

the views of all of the affected population in Missouri, with the latter representing approximately 80% of the total population. Their views must be much more heavily weighted in my consideration of this matter than the views of the smaller portion of the population living in Illinois.

## Conclusion

In short, the views of the affected population must be an important consideration in my decision. The fact that the great preponderance of local views have been expressed in opposition to the Columbia-Waterloo application is a factor that has weighed heavily in my consideration of this matter. However, it has not outweighed the other considerations, discussed in the earlier sections of this document, which support the decision to approve the grant for Columbia-Waterloo. Moreover, my decision includes conditions to mitigate the effects of the transfer which appear to have been of greatest local concern.

### XII. EFFECT OF DEFERRING A FINAL DECISION

It has been argued that there is no need to make a decision on approving the grant for land acquisition at this time. The argument is made that Lambert can handle estimated aviation demand through the early 1990's, that airport development takes approximately 10 years, and this therefore allows several years in which to reach firmer conclusions regarding such matters as future aviation demand and technological developments before a final decision is made.

I believe, however, that the years of study and analysis have resulted in sufficient information to be able to make this decision today with a reasonable degree of certainty regarding its positive impacts in the future. Any additional facts to be gained by delaying this decision would not be worth the difficulties, uncertainties and dislocations caused by the delay itself. Among these potentially adverse effects are, of course, the uncertainties associated with future financing of Lambert improvements and the future availability of the Columbia-Waterloo site.

I would not hold this view so firmly if it were not for my conviction that Lambert Airport cannot be expanded to meet the future aviation needs of the metropolitan area. Thus, to delay further this decision while Missouri studies alternatives to the Columbia-Waterloo proposal would, in my opinion, have detrimental effects on the region.

In my opinion, the St. Louis metropolitan area deserves an opportunity to remain a great city, with a bright outlook for financial, cultural and social expansion. It has been a hub for transportation activity in the past and should not be denied the chance to retain that position in the future. To continue to delay this decision, to procrastinate in the development of adequate facilities, or to foster dissension rather than provide a means for solidarity, would be most undesirable.

### XIII. CONCLUSION

What has made this decision particularly difficult and complex has been its uniqueness as an issue of Federal/multi-state relationships. In my view, the problems and priorities of an interstate metropolitan area can be addressed most effectively through interstate and local cooperation, with Federal support and participation.

In this case, eight years of effort have failed to produce the agreement necessary to meet local requirements, and the responsible Federal official has been forced, under his statutory mandate and his assessment of the public interest to make a decision that inevitably involves a choice between two jurisdictions. Failure to decide at all would ultimately penalize all the people and their official representatives by foreclosing Federal grant assistance and creating a climate of uncertainty that would deter financing and private investment.

Even though airports in metropolitan areas serve as integral links in a network of interstate and international commerce, they nonetheless are and should remain instruments of local purpose. The selection of sites should be coordinated with local, State and regional land use planning, integrated with metropolitan transportation systems, and reflect the balanced judgments of the community about convenience of access, rational land use and environmental protection.

Unlike the situation in most urban areas today, where site selection for a new airport would be the responsibility of a single airport sponsor, the application of the SMAAA required me to consider the arguments of two competing claimants each seeking to define the local requirements in its own way and proposing different solutions to the area's future transportation needs. However much I would have preferred to wait for local consensus on the matter, I must face the fact that indecision would deny the Illinois Authority its right to a fair evaluation and disposition of its application. That application represents a forward-looking State and local initiative which exercises rights and powers available under Federal law to apply for financial assistance. Furthermore, delay would deny to the people of the area -- because of the interminable stalemate of unresolved jurisdictional differences -- their right to a decision that anticipates the needs of the future, ensures a continuing vital role for the area in the interstate system of air commerce, and reduces adverse environmental impacts.

Moreover, I cannot neglect the basic Federal interest that seeks to preserve and promote the safety and quality of air service. Nor can I avoid my statutory duty to minimize the adverse environmental effects of transportation services. I must recognize the consequences of Federal action for the economic well being of the Nation and the region, as they are reflected in employment

opportunities, commercial vitality, and responsiveness to the consumer. Our interest here transcends that of any one locality or State, and seeks to apply both regional and national concerns after listening and giving fair consideration to local concerns and priorities. True federalism balances genuine respect for local priorities with the diligent pursuit of national interests.

In my evaluation I have considered controversial questions that are not easily reconciled; their value for present and for future metropolitan residents and air travelers must be weighed and compared. Such judgments are inevitably based on projections of varying precision and recommendations that reflect the views of specific interests and localities.

Recognizing the strongly held convictions, the heated controversy, and the substantial implications of my decision for the convenience and commerce of the citizens of the St. Louis area, I have sought to define the issues, produce the analysis, listen to the people, and make the decision on the merits and on the public record, explaining as completely as possible how I have reached my conclusions.

My greatest concern is that people who disagree with my decision may think that the democratic process has failed, their views were not heard. Only the future will determine whether my decision today is right, but I sincerely hope that those present will confirm that it was made openly, fairly and rationally, that it is consistent with my statutory mandate and the broader public interest to the extent that the analytical tools at hand provide me with the wisdom to define that elusive goal. That is one reason why I have taken so long and explained in such detail my reasons, for the people have a right to know and judge the integrity of the decision-making process, the efficacy of the analysis and rationale, and the soundness of the legal and public policy foundation. My decision is also rightfully subject to judicial and Congressional review.

Three considerations have been especially troublesome. First, many Missourians and their elected representatives have opposed the Columbia-Waterloo site. I have sought to meet their legitimate concerns by placing conditions on the grant that will benefit Missourians by providing them a fair share of the jobs created and, I hope, bringing about their early equal participation in a bistate authority. Second, I recognize that the new airport will not be as near for many citizens who live west and north of St. Louis. Ultimately, the reduced delay time will partially compensate for the increased access time. The St. Louis city center will benefit from the stimulus to growth eastward, and patterns of development in the future may reduce average access times. Third, Lambert Airport remains completely safe and currently provides convenient service which it likely can continue to do for approximately another ten years. Because of the decade of lead time

required in planning and constructing an airport, we cannot fix with precision the time when Lambert's capacity will have been exceeded but neither can we neglect the need to anticipate and to plan, recognizing that time will not necessarily leave available sites undeveloped. The conditions I have placed on this grant are intended to encourage a decision on the ultimate transfer of air carrier operations by a duly constituted bistate authority that equally represents the interests of both States. The conditions also are designed to ensure the continuation of Lambert as a modern general aviation airport, if the Lambert Authority so desires.

Columbia-Waterloo will offer many advantages as a site for a new airport. As presently planned, it will meet the expected capacity requirements of the 1990's and beyond, and its capacity may be expanded easily to meet further increases in the levels of air traffic. More importantly, the new airport will avoid the projected airport delays at Lambert, delays that could exceed those experienced at the most congested airports in the United States.

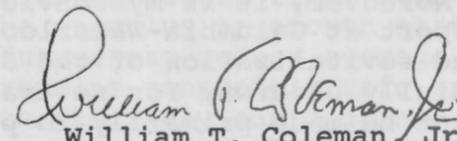
A major determinant in my decision is the fact that Columbia-Waterloo will have substantially less adverse environmental consequences in terms of noise than would an expanded Lambert alternative, or even the present operation of Lambert. Since the advent of the jet, aircraft noise has become an increasingly serious environmental problem. Although the Federal Government will take all steps that are technologically feasible and economically reasonable to reduce aircraft noise at its source in accordance with our statutory mandate, these steps are not sufficient. Rational land use planning, compatible zoning, housing insulation, and, most importantly, appropriate airport site location are absolutely essential if we are to seek and attain an environment free of excessive aircraft noise. The planners who designed and constructed airports before the jet age simply did not have to contend with the noise problem we know today. In many areas in the country there simply are not adequate alternatives for airports located in congested urban areas. The St. Louis area is fortunate in that the land is available which will meet its needs effectively without having a significant noise impact on many residents in the surrounding community. It would border on negligence for me to ignore this alternative when so many other communities throughout the country are calling for Federal action on airport noise.

A decision to transfer air services inevitably will result in some relocation of employment opportunities. I have carefully designed conditions in this decision to ensure that such dislocation is minimized. Moreover, it is my conviction that the development of a new airport at Columbia-Waterloo will enhance the innovative and dedicated revitalization of the St. Louis center which has been successfully underway for several years. While transportation decisions must be made primarily to promote safe, efficient and

competitive transportation services for the American people, we can no longer make such decisions in a vacuum. Transportation policies must serve broader goals of our society, promoting economic development and a better environment, providing jobs and equal employment opportunities, and ensuring rational growth patterns. It is my judgment, based upon the available evidence, that the new airport at Columbia-Waterloo will provide not only substantial transportation benefits for air travelers in the metropolitan area but will serve the long-term economic, social and environmental interests of the community and the region, assisting measurably in the restoration of St. Louis to its historic prominence as a transportation gateway to the West and helping to capitalize on the substantial but underutilized human potential that exists in the areas of southern Illinois within the metropolitan area.

I strongly urge the responsible leadership of the metropolitan area to set aside their past differences and take steps to seek regional solutions to the needs of aviation in the St. Louis area and to integrate air services with a metropolitan surface transportation system that will provide fast and convenient access to the new airport for all its prospective users. I support fully any reasonable effort to bring about such a joint approach. I hope this decision will mark the end of wasteful competition and lack of resolution in planning for the area's aviation needs and, instead, mark the beginning of a new era of regional cooperation to serve the transportation needs of the citizens of both Missouri and Illinois, as well as the Nation.

Having analyzed the record on this matter, and for the reasons summarized in this document, I have decided to approve the application of the St. Louis Metropolitan Area Airport Authority for a grant of Federal funds to help acquire a site for a major air carrier airport at Columbia-Waterloo, Illinois, but only with the conditions set forth herein, which conditions, in my judgment, fully protect the economic, political, social and transportation interests, and provide for the legitimate concerns of those who live in the City and metropolitan area of St. Louis.

  
 William T. Coleman, Jr.  
 Secretary of Transportation  
 Washington, D. C.

September 1, 1976.

LEGAL MEMORANDUM

Question

If an authorized public agency voluntarily and independently selects a site for an additional airport to be located within its jurisdiction but to serve a metropolitan area extending beyond its jurisdiction, and if it submits an application to the Department for federal funds to acquire land for the airport, must the Secretary pursuant to Section 16(f)(1) of the Airport and Airway Development Act of 1970, as amended ("the Act"), 49 U. S. C. 1716(f)(1) disapprove the proposed project because of opposition by a state or local governing authority in the metropolitan area?

Conclusion

Under Section 16(f)(1), the Secretary may not select a site for an additional airport in a metropolitan area on his own initiative in the absence of an application by a willing local sponsor, and then require a jurisdiction to sponsor a project which it does not wish to undertake. Section 16(f)(1) does not, however, prevent the Secretary from approving a project submitted by an authorized agency located in a metropolitan area which does desire to construct and operate an airport within its jurisdiction even though other governing authorities in the area oppose its development.

Background

In 1968, the FAA recognized, in the National Airport Plan, the need for additional commercial aviation capacity beyond that provided by Lambert Field in order to serve adequately the St. Louis metropolitan area in the foreseeable future. In January 1972, the Illinois-chartered St. Louis Metropolitan Area Airport Authority (SMAAA) applied to the Department for federal funds to begin land acquisition for a new airport to be located in the State of Illinois and to serve the entire St. Louis metropolitan area. The State of Missouri, Missouri officials, and residents in the St. Louis area vigorously opposed the location of a new commercial airport to serve the St. Louis metropolitan area at the proposed Illinois site or at any other location outside of Missouri. In March 1972, while the Illinois project application was pending, former Secretary of Transportation John A. Volpe advised local authorities that an additional large airport was required for the St. Louis area; he directed his Regional Representative to bring together representatives of the interested jurisdictions to agree upon a site. An agreement was not reached.

On January 13, 1976, Secretary of Transportation William T. Coleman, Jr. held a public hearing in St. Louis to determine whether the Illinois application for project assistance should be approved. Arising from the Secretary's review of the Illinois application and his public hearing on the St. Louis airport is a question of law: Whether a governing authority in a bi-state metropolitan area may prevent federal approval of an otherwise valid application for a project for new airport development in that metropolitan area.

#### Relevant Statutory Provisions

The relevant provisions of the Act are

1. Section 16(f)(1), which provides, in part, that:

Whenever the Secretary determines (A) that a metropolitan area comprised of more than one unit of state or local government is in need of an additional airport to adequately meet the air transportation needs of such area, and (B) that an additional airport for such area is consistent with the national airport system plan prepared by the Secretary, he shall notify, in writing, the governing authorities of the area concerned of the need for such additional airport and request such authorities to confer, agree upon a site for the location of such additional airport, and notify the Secretary of their selection. In order to facilitate the selection of a site for an additional airport under the preceding sentence, the Secretary shall exercise such of his authority under this part as he may deem appropriate to carry out the provisions of this paragraph.

2. Section 16(f)(2), which provides that:

In the case of a proposed new airport serving any area, which does not include a metropolitan area, the Secretary shall not approve any airport development project with respect to any proposed airport site not approved by the community or communities in which the airport is proposed to be located.

3. Section 16(c)(3) provides that:

No airport development project may be approved by the Secretary unless he is satisfied that fair consideration has been given to the interest of communities in or near which the project may be located.

#### Discussion

1. On its face, section 16(f)(1) does not prohibit the Secretary from approving an application from a public agency chartered by the state in which a proposed new airport is to be located nor does it provide that the opposition of any other governing authority within the metropolitan area, particularly one located in an adjacent state, requires the Secretary to disapprove the application.

Section 16(f)(1) is silent on the authority of the Secretary to act in the absence of a joint selection by the governing authorities of the area. More importantly, section 16(f)(1) is silent on the authority of the Secretary to approve an otherwise valid project application submitted by a public agency chartered by the state in which the proposed airport would be located after a site selection has been made--not by the Secretary--but by the local public agency.

That section 16(f)(1) was not intended to prevent the Secretary from approving a valid application by a local sponsor in a bi-state metropolitan area is apparent when it is compared to section 16(f)(2). The latter clearly does prohibit approval by the Secretary of a project for a proposed airport site in an area "which does not include a metropolitan area" where the communities in which the proposed airport would be located have not approved the site. If the Congress had intended a similar veto in a metropolitan area, it could have been equally as explicit in section 16(f)(1). The myriad jurisdictions and governing authorities in a metropolitan area would make such a veto an invitation to interminable delay and bureaucratic ensnarement contrary to the entire thrust of the Act, which is to anticipate and respond to the increasing demand for air travel in a safe and efficient manner. Unlike airports in a small community, metropolitan airports are often an integral part of complex interstate and international traffic patterns, necessitating a significant role for the federal government in establishing priorities in safety, alleviation of congestion and control of air navigation. In explaining that the special purpose of the section 16(f)(2) veto was to protect small communities, Mr. Staggers, who was Chairman of the House Committee on Interstate and Foreign Commerce that reported out the bill, stated:

"In the case of airports not meant to serve metropolitan areas, a provision was added to protect the small local community from being overrun and even gobbled up by an airport project. For such nonmetropolitan airport the local government at the proposed site may have an actual veto power to protect it against the pressures of state and other echelons of government concerned." 115 Cong. Rec. 10630. (emphasis added)

This veto provision was not explicitly incorporated in section 16(f)(1) nor would the reason that underlies it--that air service to small local communities is essentially a local issue--apply to large metropolitan airports that serve predominately interstate and foreign commerce. Nor would the veto--which would usually involve only a single jurisdiction in which a proposed community airport would be located--work effectively in a metropolitan area where there are a multitude of governing authorities, any one of which could act contrary to the interests of the other jurisdictions as well as the national interest.

The difference between the language in section 16(f)(1) and (2) demonstrates that section 16(f)(1) is not concerned with project applications. Section 16(f)(2) refers to "a proposed new airport" and restricts Secretarial approval of "any airport development project." (emphasis added). It thus applies to projects proposed in the ordinary manner by an appropriate sponsor. The operative clause of section 16(f)(1) is "whenever the Secretary determines." The absence of any reference to a project application, in contrast to the explicit reference in section 16(f)(2), indicates that Congress did not intend to cover project applications, but intended section 16(f)(1) to apply only to sites suggested by the Secretary.

The explicit differences between sections 16(f)(1) and (2) are founded on sound principles of public policy and federalism.

2. Section 16(f)(1) authorizes the Secretary to exercise other preexisting authority under the Act to facilitate the selection of a site for an additional airport in a metropolitan area.

Section 16(f)(1) specifically provides that:

"In order to facilitate the selection of a site for an additional airport . . . , the Secretary shall exercise such of his authority under this part as he may deem appropriate to carry out the provisions of this paragraph."

If after a sustained and good faith effort to facilitate agreement among the governing authorities--in this instance an effort first initiated in March 1972 under Secretary Volpe, pursued by Secretary Brinegar, and culminating in public hearings in January 1976 conducted by Secretary Coleman--there still is not unanimity on an appropriate site, the Secretary is authorized, if not directed, by the above proviso to exercise his authority under other sections of the Act. This authority includes the power to approve an application independently submitted by an authorized public agency for federal funds to acquire land for a new airport.

3. The legislative history supports the interpretation that section 16(f)(1) does not diminish the power the Secretary has always had under the Act to approve otherwise valid project applications submitted by a sponsoring public agency for a new airport in a metropolitan area.

The legislative history confirms that the purpose of section 16(f)(1) is to create additional authority for the Secretary to initiate a site selection process in the absence of a willing local sponsor. When the Secretary determines, consistent with the National Airport System Plan, that a metropolitan area comprised of more than one unit of state or local government is in need of an additional airport, he may notify the governing authorities of that need and request such authorities to confer, agree upon a site for the location of such additional airport, and notify the Secretary of their selection. Congress did not intend that the Secretary submit a proposed project for a new airport by a local sponsor to all the local governing authorities in a metropolitan area for their approval prior to his decision. The debates in Congress on this section were concerned with whether the Secretary should have the additional power to compel a jurisdiction to accept an airport within its political boundaries even though it had not applied for project assistance and opposed having the airport constructed. Although ambiguous in places, the legislative history supports this conclusion and is discussed more fully in the following section.

SMAAA had filed a project application under section 16(a) prior to and independently of Secretary Volpe's determination under section 16(f)(1) that an airport was needed in the St. Louis metropolitan region and his subsequent invitation to governing authorities to discuss and attempt to agree upon a site. Secretary Volpe's attempt to reconcile the competing parties did not nullify Illinois' separate distinct application pending under 16(a)-(e).

Section 16(f)(1) would not prevent the Secretary from approving a project application for a new airport initiated by a public agency in the state in which the airport is to be located. The site selection was made by the local sponsor, not the Secretary. Having made a site selection, that local sponsor is now exercising the right to apply for an airport development grant under the terms of section 16(a)-(e). If section 16(f)(1) allowed any affected governing authority or combination of jurisdictions to disapprove an application to fund an additional airport in a metropolitan area, then the development of a viable airport and airways system would be impeded, if not prevented, contrary to the purpose of the Act. A veto would frustrate the efforts of a willing local sponsor to perform its functions under the Act. It could undermine the Department's ability to meet the future demands of interstate commerce and to ensure the safe and efficient use of navigable airspace. It would unduly shift the powers of any community within a metropolitan area or any state in which part of a metropolitan area is located from the right of "fair consideration" to a power to veto the Secretary's approval of an otherwise valid application presented by an authorized local sponsor.

In short, the entire thrust of section 16(f)(1) is directed at the situation in which there is not any public agency which comes forward with an application. Nothing in the entire detailed debate on this question indicates any intention to deprive the Secretary of his authority (indeed, his obligation) to act upon a project application duly presented to him--an authority that he has inherited from the inception of the airport grant-in-aid program in 1946. The Secretary's obligation is particularly potent where the applicant is chartered by the state in which the airport will be located and has the full support of that state.

This is not to say, of course, that in acting upon an application, the Secretary must act favorably upon the application presented to him. Where the application seeks to establish a new airport for a metropolitan area, the Secretary must take into account the entire range of pertinent factors, including the need for and suitability of the particular location advocated in the application, in relation to the needs and interests of the entire area to be served by the proposed airport. The Secretary, of course, would not approve an application for a second major air carrier airport in a metropolitan area if the one already there could serve the present and future major air carrier needs of the region as well.

4. Although the State of Missouri or other governing authorities within the metropolitan area cannot veto an application submitted by a public agency, the Secretary cannot ignore the views of Missouri and other affected communities; he may not approve a project application for new airport development in a metropolitan area unless he is satisfied that "fair consideration has been given to the interests of communities in or near which the project may be located."

Section 16(c)(3) requires that before approving an application, the Secretary be satisfied that "fair consideration" has been given to the interests of communities affected. The interests that would appear to be most relevant to the Secretary's consideration are those of state and local governments, the residents and businesses located in neighborhoods surrounding either airport site, and community organizations concerned with airport development and its effects. The requirement of "fair consideration" does not enable any group affected by the project to prevent its approval. Fair consideration involves listening to the views of those affected, rationally considering these views and the reasons underlying them, and then deciding the issue not by referendum, but after having weighed the substantive merits of the conflicting interests and recommendations. Clearly the right to fair consideration does not empower a single community or state to prevent approval of a project application. There remains in the Secretary a broader statutory responsibility to consider and balance the safety, economic, social, environmental, and technological considerations and interests from a national and regional, as well as local perspective, and to act upon a valid application that satisfies the requirements of the Act. See Citizens Airport Committee of Chesterfield County v. Volpe 351 F. Supp. 52, 58 (E.D. Va. 1972).

#### Legislative History

Because there has been substantial reference to and interest in the legislative history of section 16(f)(1), it is useful to examine carefully the context from which 16(f)(1) evolved.

The Federal Airport Act of 1946, Pub. L. 79-377, 60 Stat. 171, (repealed 1970), provided for approval of airport development projects by the

Administrator of Civil Aeronautics. <sup>1/</sup> The 1946 Act addressed goals and established grant procedures similar to those found in the present Act. There was not any requirement, either legislatively or by administrative practice, that the Administrator be bound by the views of affected local governing authorities. The Administrator had substantial discretion in approving or rejecting any properly submitted project application. In 1961, Congress amended the Federal Airport Act in section 4(3), Pub. L. 87-255, 75 Stat. 525 (repealed 1970), with the provision that was reenacted as section 16(c)(3). This required that "fair consideration" be given to the interests of the communities involved. But otherwise the Administrator continued to retain full discretion to approve or reject an airport development project voluntarily proposed by a qualified sponsor.

The House and the Senate Reports on the Act, H. R. Rep. No. 601, 91st Cong., 2d Sess., and S. Rep. No. 565, 91st Cong., 2d Sess., the Congressional debates and letters to members of Congress from the Secretary of Transportation do not demonstrate any intent to change the traditional process of approving project applications submitted to the Secretary. The 1970 legislation was enacted because of the need to expand and improve the nation's airport and airway system in a timely manner to meet the increasing use of air travel between cities and to prevent the delays and safety hazards inherent in aviation congestion. See, for instance, the House Report, at pages 3-6. If the Congress had intended to enable every jurisdiction within a metropolitan area to veto an application for additional airport development, with the consequent delay or permanent denial that this might entail, it would have said so explicitly, since this would have been incompatible with the purpose of the Act and a substantial incursion on the traditional system of project approval. The Congressional debates on section 16(f)(1) were not concerned with the process of project approval by the Secretary, but with whether the Secretary's then existing powers should be expanded by authorizing him to determine the site for an additional airport in a metropolitan area on his own initiative in the absence of a determination

<sup>1/</sup> This authority was transferred to the Administrator of the FAA section 1402(b)(1) of the Federal Aviation Act of 1958, Pub. L. 85-726, 72 Stat. 731, 806, and then to the Secretary of Transportation by section 6(c)(1) of the DOT Act of 1966, 49 U. S. C. 1655(c).

by a willing local sponsor, and then to coerce a jurisdiction into sponsoring a project that it did not wish to undertake. When the Congress denied the Secretary this new power, it did not suggest that every project application for such additional airports should be filtered through the section 16(f)(1) process. <sup>2/</sup>

<sup>2/</sup> Support for this interpretation of 16(f)(1) is found in H. R. Rep. 594, 94th Cong., 2d Sess. to accompany H. R. 9771, the Airport and Airway Development Act Amendments of 1975. Section 21(a) of this bill proposed that

"No airport layout plan or airport development project for any new air carrier airport to serve the greater St. Louis, Missouri, area may be approved by the Secretary of Transportation under the Airport and Airway Development Act of 1970, on or before September 30, 1978, unless the Governors of the States of Illinois and Missouri have certified that such layout plan or development project is reasonably consistent with local, regional and statewide planning for the area surrounding such airport."

The House Committee Report discusses the significance and purpose of this proposed amendment. Since Illinois and Missouri disputed "the selection of a site for a second air carrier airport to serve the metropolitan area of St. Louis, Missouri," Section 21 would have required agreement by both Governors of the States "as a condition of approval by the Secretary of Transportation of any such plan or project until September 30, 1978." (House Report, p. 50).

The House Committee on Interstate and Foreign Commerce obviously believed that there was not any provision in the Act that would require the agreement of the Governors prior to a decision of the Secretary to approve the project application of a voluntary sponsor. Otherwise, its attempt to subject the Secretary's approval power for the specific site to a narrow set of conditions would have been superfluous. The House Committee

The earliest version of Title II of the Act, H. R. 14465, 91st Cong., 2d Sess., contained a section 16(e)(1) which permitted the Secretary, upon determining that an additional airport was needed in a metropolitan area, to request the governing authorities jointly to select a site for the airport. If the governing authorities did not notify the Secretary of an agreement within three years, the Secretary then would have been able to select a site and "accept project applications under this part for the

2/ recommended the requirement of prior agreement by the Governors because it believed that this protection was not provided in the Act:

It is anticipated that this provision will provide a period of time—until September 30, 1978—in which the two states and the involved local governmental bodies will have an opportunity to work together and jointly resolve the location of a new airport, if it is determined that one is needed." (id at 50).

If the House Committee believed that section 16(f)(1) gave the State of Missouri the power to block the SMAAA's project application, it would not have proposed section 21(a). The section was deleted on the floor of Congress without any debate on the merits. Cong. Rec. H13014, (daily ed., December 18, 1975). In the absence of such a site-specific amendment, there is not any provision in the present Act that would condition the approval of a project by the Secretary on the approval of the local or statewide governing authorities.

construction of such additional airport." Any other site in the area would then be ineligible for funding. 116 Cong. Rec. 33295-6 (1969). This proposed and later amended section clearly would have authorized site selection by the Secretary independent of any sponsor's project application, although it would not have permitted the Secretary to compel a jurisdiction to undertake a project. 3/

3/ The text of section 16(e)(1) when originally proposed in H. R. 14465 read as follows:

"(e) Airport Site Section --

"(1) Whenever the Secretary determines (A) that a metropolitan area comprised of more than one unit of state or local government is in need of an additional airport to adequately meet the air transportation needs of such area, and (b) that an additional airport for such area is consistent with the national airport system plan prepared by the Secretary, he shall notify, in writing, the governing authorities of the area concerned of the need for such additional airport and request such authorities to confer, agree upon a site for the location of such additional airport, and notify the Secretary of their selection. If, within three years after the written notification by the Secretary referred to in the preceding sentence, he has not received notification from the governing authorities concerned of the selection of a site for the additional airport, he shall, after notice and opportunity for a hearing, select a site for such additional airport with respect to which the Secretary will accept project applications under this part for the construction of such additional airport. Unless the Secretary, after notice and opportunity for hearing shall modify any site selection made by him under this section, no other site in such area shall be eligible for assistance under this part for the construction of an additional airport in such area. For the purposes of this subsection, the term "metropolitan area" means a standard metropolitan statistical area as established by the Bureau of the Budget, subject however to such modifications and extensions as the Secretary may determine to be appropriate for the purposes of this subsection." (emphasis added.)

Underlined are those sentences that were deleted by amendments sponsored by Mr. Frelinghuysen in the House of Representatives, 115 Cong. Rec. 33301, (1970) and Senators Williams and Case in the Senate, 116 Cong. Rec. 4868.(1969). The language of the present Act was substituted.

During the hearings before the House Committee on Interstate and Foreign Commerce on H. R. 12374 and H. R. 12780, 91st Cong., 1st Sess., from which H. R. 14465 was derived and reported out as a clean bill, Mr. Murphy of New York explained the significance of a provision which he had independently introduced that session as section 9 of H. R. 13227, and which with inconsequential changes was subsequently inserted as section 16(e)(1) in H. R. 14465:

"On the question of additional airport construction, where it becomes a political problem, I believe it is necessary to increase the power of the Secretary of Transportation to break the impasse and effect construction of needed airports.

"Where state or local officials fail to act, this power is justified by the interstate and foreign characteristics of the airway and airport problem" (emphasis added.)

Hearings on H. R. 12374 and H. R. 12780 Before The House Committee on Interstate and Foreign Commerce 91 Cong., 1st. Sess, ser. 23, pt. 2, at 583 (1969).

Mr. Murphy proposed an extension of the Secretary's power to initiate a site selection where state or local officials fail to act—specifically where the Port Authority of New York--and its members the states of New York and New Jersey—failed to select a site, submit an application or propose an airport that was badly needed.

New York wanted a fourth jetport to be located in New Jersey, but the Port of New York Authority was unable to sponsor one because the State of New Jersey could veto Port Authority action. Therefore, a third part like the Secretary was needed to select the site.

Mr. Murphy was not concerned with the Secretary's authority to approve a project application initiated by a sponsor. If two competing localities both wanted an airport, they both could submit an application and the Secretary would decide as he always had. The difficulty only arose when there was not any local sponsor that was capable of selecting a site because none of the jurisdictions wanted an airport on its territory. This was a failure that the Secretary could not remedy under the 1946 Act. Hence Murphy concluded at the hearings,

"If the political forces in those areas fail to use the Federal revenues that are specifically available for airports then the Secretary should act to protect the people's interest."  
id. at 584.

On the floor of Congress, Mr. Murphy again explained how his proposed section would work.

"Our airports and airways are inadequate because of failure of the Federal, State, and city political machinery to act.

"On the question of additional airport construction, I believe it is necessary to increase the power of the Secretary of Transportation to effect construction of needed airports when State or local areas fail to act . . . .

"My section of the bill will empower the Secretary to convene a conference of State, city and local officials in an area where he has made a determination that an additional airport is needed. The authorization is justified by the national character of the airport and airway problem.

"The power of the Secretary to act in the absence of local action should provide the leverage to break the types of deadlocks that are stalling badly needed airport construction in New York and elsewhere." (emphasis added) 115 Cong. Rec. 33268 (1969).

It was Mr. Murphy's intent that section 16(e)(1) be applied only to instances in which the Secretary determined the need for an airport project at a specific location, in the absence of a project application or sponsor. The machinery of the Act dealt competently and satisfactorily with all other new airport development contingencies. Mr. Murphy was partly unsuccessful in seeking the enactment of his proposal to expand the Secretary's power. An amendment by Mr. Frelinghuysen struck the ultimate authority of the Secretary to make his own site selection if his process of reconciliation failed. Mr. Murphy was successful, however, to the extent that the Secretary was given additional authority to initiate a site selection process.

In the Senate, Senator Tydings introduced section 206(g)(1) of S. 3108, the Senate counterpart to H. R. 14465, containing language identical to section 16(e)(1). He addressed the same problems as Mr. Murphy did, indicating that safe, uncongested, "adequate major regional airport terminals are a fundamental necessity," 116 Cong. Rec. 5641. He was concerned with the problem posed by communities that did not wish to locate airports within their jurisdiction.

Airports, he recognized, are frequently perceived to be undesirable by those living in the vicinity.

"They are not popular in the heavily populated areas; indeed, they are not popular in many of the sparsely populated areas of our country." 116 Cong. Rec. 5041.

Thus he stated, it is difficult

"for local political leaders to accept a desirable site because of the political pressures from their constituents in that area.

.....

"But we cannot afford continued location delays because of the subjective pressure arising out of political opposition in the various location possibilities." (emphasis added) 116 Cong. Rec. 5041

Senator Tydings assumed that section 206(g)(1) would only supplement the existing powers and rights of the Secretary. Thus he spoke repeatedly of supplying the "machinery, when all else fails, to overcome the political objections of the site location." 116 Cong. Rec. 5041. Only when all other procedures under the Act were unsuccessful was section 206(g)(1) to be invoked by the Secretary. The Secretary could have approved a project initiated by a local sponsor without resorting to his powers under section 206(g)(1).

Like Mr. Murphy, Senator Tydings intended to confer additional authority on the Secretary, and not to diminish his existing authority. He noted that his "amendment would have offered an alternative or a way to break the logjam" caused by political opposition to airport sites. 116 Cong. Rec. 5041. A "logjam" did not exist where there was pending a voluntarily proposed project application under the existing statutory provisions. That the members of Congress were aware of this is confirmed by the remarks of Senator Case:

"The Senator [Mr. Javits] can argue that the Secretary has the right now to establish priorities because he has the right of granting or refusing applications for use of funds. So be it. To that extent my colleague from New Jersey and I are quite content to leave the matter where it stands under the law and in absence of any such provision here." 116 Cong. Rec. 5036.

The intent of the sponsor is entitled to weight where the statute is ambiguous. See cases collected in Sands, Sutherland Statutory Construction, section 48.12. As the Supreme Court has said, "It is the sponsors [of a provision] that we look to when the meaning of the statutory words is in doubt." Schwegmann Bros. v. Calvert Distillers Corp., 341 U.S. 384, 394-5(1951). See, NLRB v. Fruit and Vegetable Packers and Warehousemen, Local 760, 377 U.S. 58 (1964); National Woodwork Manufacturers Assn. v. NLRB, 386 U.S. 612. (1967)

The amendments to sections 16(e)(1) and 206(g)(1) modified the proposal to expand the Secretary's power but did not extend the coverage of these sections to curtail other powers of the Secretary under the Act. Mr. Frelinghuysen and Senators Williams and Case, the sponsors of the prevailing amendments intended to prevent only one type of Secretarial action--that which might give a state no alternative but to become the passive recipient of a site selection imposed unilaterally by the Secretary. They sought to limit his powers to that of mediator or facilitator, but they did not intend to limit him where his decision-making powers had been invoked by a willing public agency pursuing its statutory entitlement.

Mr. Frelinghuysen stated that under his amendment "The Secretary is directed to help facilitate a decision." 115 Cong. Rec. 33278. He then explained, that without this amendment, section 16(e)(1) "would give the Secretary of Transportation the right to choose a site and impose it on our state." 115 Cong. Rec. 33279. Mr. Frelinghuysen opposed section 16(e)(1) because he believed it would have imposed on an unwilling state the responsibilities of constructing and operating an airport. When a project has been selected and submitted by a local sponsor with the support of the state in which the airport would be built, the Secretary's approval or rejection of it would not be unilateral or "absolute," and would not be an attempt to "ram a site location down our throats." 115 Cong. Rec. 33279.

The same concerns in almost the same language are voiced by Senators Case and Williams, 116 Cong. Rec. 4868-70. Senator Williams protested that the Secretary should not be permitted to "interfere with the basic responsibility--or transfer that basic responsibility away from the governing local authorities." 116 Cong. Rec. 4869 (See also Mr. Frelinghuysen's remarks, 115 Cong. Rec. 33302), and that, the Secretary

"should not be given the absolute authority to locate that facility on his own." 116 Cong. Rec. 4869. Senator Case similarly argued that the Williams-Case amendment, in distinction to section 206(g)(1),

"recognizes that the Federal Government's role in the orderly expansion of our national airport system is that of partner with the States, not of a dominating figure." 116 Cong. Rec. 4869.

Although the views of the sponsors are very important, courts also consider statements made by other legislators when there is a consensus. See cases collected in Sands, Supra, section 48.13. The Congressional debates indicate agreement that the purpose and effect of section 16(e)(1) and section 206(g)(1) was to permit the Secretary, if he chose, to force an airport on the unwilling State of New Jersey. In this context, the debate on 16(e)(1) and 206(g)(1) focused almost without exception on states rights: the responsibilities and prerogatives of states and localities to veto projects that would be forced on their soil, would intrude on their environment, or would have to be funded, maintained and operated by an unwilling local public agency. The opposition sought to prevent the Secretary of Transportation from exercising absolute authority to select a site undesired by the jurisdiction in which the airport would be located. See, for instance, the comments of Congressmen Hunt (115 Cong. Rec. 33278, 33303), Frelinghuysen (*id.*, at 33278-9, 33302), Howard (*id.*, 33279), Sandman (*id.*, at 33303), Governor Cahill (*id.*, at 33302), and Senators Case (116 Cong. Rec. 4868-9, 5039), Williams (*id.*, at 4869-70, 5044-5), Cotton (*id.*, at 5045), Javits (*id.*, at 5035, 5040), and Goodell (*id.*, at 5043).

Secretary of Transportation John A. Volpe opposed sections 16(e)(1) and 206(g)(1) because he believed, as the New Jersey Congressional delegation argued, that a non-voluntary project, in the absence of a willing public agency sponsor, could not function properly.

Secretary Volpe wrote to Congress opposing this section in part because:

"If the Secretary were to select an airport under this authority, the section does not require a sponsor to actually proceed with the development of the new airport. Basically, the Secretary would be selecting the site because local communities fail to agree on a site. This failure to agree and lack of local consensus may well continue into the developmental phase and effectively pre-

vent action by any local public agency to sponsor the project to develop an airport on the site the Secretary selects. While the dispute continues, and if no sponsor comes forward, section 206(g)(1) would block any new airport development in the metropolitan area on another site" (emphasis added). (Letter of Secretary Volpe to Senator Case at 116 Cong. Rec. 4869-70)."

Secretary Volpe continued to argue against the section as amended by stating that "it confers no authority on the Secretary which he could not and would not exercise in any event. He has in the past and would continue to use his existing powers to facilitate the establishment of needed airports." *id.*

Thus, the committee reports, the remarks of members of Congress in floor debate and the contemporaneous position of the executive branch all confirm the interpretation that section 16(f)(1) was not intended to diminish the already existing powers of the Secretary to approve a valid project application for new airport development in a metropolitan area. Nothing in the Airport and Airway Development Act Amendments of 1976, Pub. L. 94-353, 90 Stat. 871 (July 12, 1976), has any bearing on section 16(f). That proposition is confirmed by the legislative history of the 1976 amendments. During the March Senate debate on S. 3015, the Senate version of the 1976 Amendments, Senator Eagleton put a question to Senator Cannon, the floor manager, with respect to section 8(a) of the Bill:

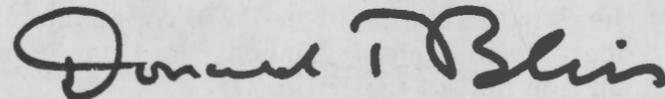
Mr. EAGLETON. Section 8(a) of the bill before us authorizes the Secretary of Transportation to "prescribe standards for airport site selection."

I think the distinction between setting standards and actually selecting sites is clear, but I would like the assurance of Senator Cannon that nothing in this section in any way changes or modifies section 16(f) of the 1970 act which makes clear the Secretary must have the agreement of all the jurisdictions affected before he can select a site for a new airport. The Secretary of Transportation cannot impose the site without that local agreement.

Mr. CANNON. The Senator is correct. There is nothing in this bill which would modify section 16(f) of the 1970 act and the Senator is correct that section 16(f) does require the local jurisdictions to agree. The Secretary of Transportation has no authority to impose a site against the wishes of local offices and citizens. 122 Cong. Rec. 54364 (daily ed., March 25, 1976).

Senator Cannon's answer is in agreement with our interpretation of section 16(f)(1). The exchange, intended to provide assurances that 16(f)(1) would not be vitiated by the Amendments, is entirely consistent with the earlier legislative history. Although the Secretary may not impose an airport location on an unwilling sponsor or community under 16(f)(1), he also may not select an airport site for a sponsor. His power with respect to site selection is either negative (he may refuse to fund a proposed project) or hortatory (he may urge or suggest a site to local officials).

The Secretary's approval of an eligible sponsor's project application does not constitute site selection by the Secretary, and the agreement of all affected jurisdictions is therefore not necessary. Site selection in that sense occurs only when, without the submission of a project application by a sponsor, the Secretary, on his own initiative, proposes that an airport is or will be needed at a given location. Since Senators Eagleton and Cannon were discussing site selection, and the Secretary is not selecting a site in the St. Louis metropolitan area, but only ruling on a sponsor's application, the above quoted colloquy does not affect the disposition of the question posed in this memorandum.



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APPENDIX B

Value of Time: Some Caveats

To begin with, of course, time is not an economic commodity in the same sense that -- for example -- capital construction equipment is. Work time saved can often be put to use in an economically productive way, but not in every case, and time saved in non-work situations (e.g., in recreational travel or commuting daily to and from work) is generally not then spent in an economically productive way. Thus, the "dollar value" of time saved is not quite the equivalent of the dollar value of avoiding the actual expenditure of resources for airport improvement and construction. When there is time saved, there "is not money left unspent as there is when one does not buy fuel, oil, or tires..."<sup>1/</sup>

Secondly, the value that should be placed on time saved is not simple to determine objectively. Some studies have assumed that time saved should be valued at the hourly wage rate of the person involved. Other studies have attempted to determine how much travelers themselves are willing to pay to save time, for example, by traveling on a faster toll road rather than on a slower, toll-free road. However, considerable care must be taken in applying the conclusions of these studies to other situations. For example, the data which form the basis for the time value estimates used in the PMM analysis of St. Louis airport alternatives were drawn from a study of commuting motorists;<sup>2/</sup> however, they have been applied in the St. Louis discussion to all airport access time values (adjusted for differing income levels), most of which are not for commuters. As another example, some analysts have concluded that drivers who take trips infrequently (e.g., less often than once a month) will value factors other than time savings more highly than will frequent travelers, and that, for those who travel less than once a month, "there is no reason to believe that the benefits of time saved are the same, on the average, as for those who take such trips more frequently."<sup>3/</sup> Nevertheless, the PMM analysis for St. Louis assumes the same value of time for the infrequent (less than once a month) traveler as for the more frequent traveler.

<sup>1/</sup> Robley Winfrey and Carl Zellner, Summary and Evaluation of Economic Consequences of Highway Improvements, National Cooperative Highway Research Program Report 122 (Highway Research Board), 1971, p. 66.

<sup>2/</sup> Thomas C. Thomas and Gordon I. Thompson, "The Value of Time for Commuting Motorists as a Function of Their Income Level and Amount of Time Saved", Highway Research Record 314 (Highway Research Board), 1970, pp. 1-19.

<sup>3/</sup> Thomas C. Thomas and Gordon I. Thompson, The Value of Time Saved by Trip Purpose (Stanford Research Institute), 1970, p. 49.

Thirdly, there is a question as to the validity of taking time value estimates drawn from studies of automobile travel and using the same values for air travel, where market and other studies of air travel have traditionally used substantially higher time values.

Finally, there is also a substantial question as to the validity of assuming that the value of time delays is no greater than the value of the same time for a planned, undelayed trip. Using the same value completely discounts the annoyance factor of delay and the probability that passengers will leave earlier for an air trip (and thereby add to total trip time) in order to avoid missing an appointment or connection where there is a likelihood of delay.

Despite all of the foregoing caveats, I believe that estimates of both access and non-access time savings and delays are appropriate considerations, and that it is proper to consider various dollar "proxies" for the value of time. It is particularly important to keep the foregoing caveats in mind, however, because -- as noted earlier -- in some of the comparisons between the Lambert and Columbia-Waterloo alternatives, the dollar "value" of time has been a large element in the total cost comparison.

## APPENDIX C

### Air Quality Submissions

Below is a summary of the relevant portions of:

- the Draft Environmental Impact Assessment (EIA) Report on Lambert, 1975-1995, prepared by Parsons/Gruen for the two Missouri airport authorities (January 1975), as part of the Lambert Master Planning effort;
- the PMM Phase II Report; and
- the Illinois sponsor's submission of January 30, 1976.

Parsons/Gruen Report. This report includes sections on the existing environment around Lambert with respect to air quality (Section 3.1) and a section regarding the air quality impact of the Master Plan proposals (Section 4.1).

The report identifies the estimated current emissions for the various sources of air pollution related to the airport (pp. 3.1-1 to 3.1-9). These include aircraft operations, auxiliary units, engine run-up testing, ground service vehicles, aircraft fueling, terminal heating and air conditioning, and ground access vehicles. The major emissions are identified as CO, HC and NOx. In estimating ground access vehicle emissions, the report appears to include emissions generated only in and near the airport (p. 3.1-5). Based on a dispersion model, the report then estimates the concentrations of CO, HC and NOx resulting from the airport, at several locations. No attempt is made to estimate the effect of the airport on oxidant concentrations. It concludes that, in 1974, the main problem is HC; and that the emissions from the airport itself do not exceed Federal standards,<sup>1/</sup> although the airport contribution is significant in light of the high HC levels in the St. Louis region, especially in the I-70 corridor (p. 3.1-15). The report also notes that there are high CO concentrations in the I-70 corridor adjacent to the airport. Nevertheless, the report states that in comparison to total emissions for the St. Louis region, the contribution of the airport is "very small" -- e.g., 0.5% for NOx, 0.6% for HC, and 0.1% for CO (p. 3.1-9).

The report similarly makes estimates for 1985 and 1995, based on estimated traffic and estimated emission factors for those years.

<sup>1/</sup> It should be noted that the national ambient air quality standard for HC is the only standard not specifically related to health effects, but is a guide as to the levels of HC allowable without violations of the oxidant standard occurring.

With respect to aircraft emission factors, the report estimates that, based on current regulations, aircraft emissions are expected to remain essentially unchanged through 1985, but be reduced by 75% by 1995 (p. 4.1-1). This section of the report concludes (p. 4.1-10):

"Due to the high hydrocarbon levels currently experienced in the St. Louis region, hydrocarbon emissions from Lambert-St. Louis International Airport exert a significant localized impact on the air quality of the area surrounding the Airport. The situation will improve in future years, but will remain severe until at least 1990, when the effects of pollution controls installed on jet engines newly manufactured in 1979 will significantly be felt.

"Conservative emission factors were employed, and it is possible that actual determinations of pollutants emitted will reveal lower values."

The summary conclusion of the report, with respect to air quality, is that one possible adverse impact of Lambert is "air pollution levels which exceed existing standards" (p. 1.0-2).

PMM Study. The PMM Phase II report estimates tons per year of CO, HC and NOx emitted for the two alternatives, for 1988, 1993 and 1998. These estimates are summarized in a table (on page VIII-12), the 1988 column of which is set forth below (the difference in the table between the two alternatives is greatest in 1988):

Airport-Related Air Pollution in 1988  
(Tons/Year)

	CO	HC	NOx
<u>Lambert Alternative</u>			
Aircraft	5,027	1,093	2,894
Ground Vehicles	1,153	211	304
Total	6,180	1,304	3,198
<u>Waterloo Alternative</u>			
Aircraft (Waterloo)	4,502	975	2,783
Aircraft (Lambert)	525	118	111
Ground Vehicles	3,129	566	816
Total	8,156	1,659	3,710

The report states (p. VIII-13) that, as illustrated in the table:

"...Lambert generates somewhat higher pollution levels from aircraft than Waterloo, but Waterloo would definitely exceed Lambert in ground-vehicle-generated pollution. When taken overall, Waterloo

would have a somewhat greater air pollution impact on the St. Louis region than Lambert. However, the Waterloo site is remote from present urban development and, therefore, has lower ambient background air pollution levels."

"Again, because of high ambient pollution background levels, the Lambert area will be affected more than the Waterloo area."

However, the report goes on to say that ground access trips to Columbia-Waterloo will also traverse high pollution areas, including the I-70 corridor and East St. Louis, and have an adverse impact on them, and if statutory automobile emission standards are not fully implemented, the Waterloo alternative "could have a significant adverse air pollution impact on the region" (p. VIII-14).

The PMM report also includes the results of a dispersion analysis with respect to CO concentrations along the I-70 corridor south of Lambert, for the year 1995. The conclusion of this analysis (p. VIII-27) is that:

"Projected ambient concentrations along I-70 are significantly higher for the alternative simulating air carrier operations remaining at Lambert. However, none of the projected concentrations in the area approach the levels of the national ambient air quality standards...."

"...CO concentrations decrease rapidly with distance, south of I-70 for both alternatives."

"...with no air carrier operations at the Airport, CO concentrations are not much higher than background in the study area except along the I-70 right-of-way."

As with the Parsons/Gruen report, the PMM study made no attempt to estimate the effect of the airport alternatives on oxidant concentrations.

Illinois Authority's Presentation. The presentation by the Illinois Authority states (pp. 81-86) that:

-- the ambient air quality in the vicinity of Lambert is in violation of several Federal air quality standards, including CO and oxidants, according to a 1973 report by the U. S. Environmental Protection Agency (EPA);

-- increases in air traffic and ground access traffic, that would result from implementation of the Master Plan, would exacerbate this problem;

- a recent study by Argonne National Laboratories "provides compelling evidence that large airports in close proximity to urbanized areas will cause air quality violations";
- rather than focusing on total tons of emissions for Lambert versus Columbia-Waterloo, as the PMM analysis does, the more relevant criterion is emission density (i.e., tons of emissions per square mile), and, under this criterion, density levels at Lambert are six times greater than at Columbia-Waterloo.

The conclusion of the presentation with respect to air quality is that the air quality impact of the Lambert alternative is substantially greater than of the Columbia-Waterloo alternative, because the emissions from Lambert will be in areas with already poor ambient air quality, while the emissions around Columbia-Waterloo will occur in a rural area well downwind from the "heavily developed and polluting St. Louis areas."

As a result, the Applicant states that the Lambert alternative "would be virtually certain to violate existing Federal environmental laws with respect to . . . air pollution" and that, under the provisions of section 16(c)(4) of the Airport Act, the Lambert alternative "cannot be approved by the Secretary."