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Growth And Use Of Washington Area Airports

B-159719

Federal Aviation Administration
Department of Transportation

**BY THE COMPTROLLER GENERAL
OF THE UNITED STATES**

B-159719

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AUG. 18, 1971

FILE COPY - COMP GEN



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

B-159719

Dear Senator Spong:

This is our report on the growth and use of Washington area airports made pursuant to your request of April 26, 1971, and subsequent discussions with your office.

The report which is summarized in the digest includes historical data relative to the growth and evolution of Washington National and Dulles International Airports, a discussion of recent efforts by the Federal Aviation Administration to balance service at National and Dulles, and an analysis of other selected aspects of area airport traffic. We plan to furnish you with a report at a later date in response to your question concerning the legal status and jurisdiction over improvements made by the air carriers at National in the event the airports are sold.

We plan to make no further distribution of this report unless copies are specifically requested, and then we shall make distribution only after your agreement has been obtained or public announcement has been made by you concerning the contents of the report. We did not obtain comments from Department of Transportation officials on this report. This fact should be taken into consideration in any use made of the information presented.

We trust the information furnished will serve your purposes.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "R. F. Keller".

Acting Comptroller General
of the United States

The Honorable William B. Spong, Jr.
United States Senate

D I G E S T

WHY THE REVIEW WAS MADE

At the request of Senator William B. Spong, Jr., the General Accounting Office (GAO) examined into selected aspects of the management and use of Washington National and Dulles International Airports. GAO also compared the flight service available at the three airports in the Washington area--National, Dulles, and Friendship Airports.

National and Dulles Airports, owned by the Federal Government, are managed and operated by the Federal Aviation Administration (FAA), Department of Transportation.

Friendship Airport, owned by the city of Baltimore, is operated by the city's Department of Aviation.

GAO did not obtain written comments on the matters discussed in this report, from the Department or FAA.

FINDINGS AND CONCLUSIONS

National Airport development

National, opened for commercial air service in 1941, has become one of the busiest airports in the United States. National originally was constructed for the use of low-speed propeller aircraft but since 1966 has been used by multiengine jets.

Restrictions were placed on the use of jets, some directed at making National principally a short-haul airport--limiting service to cities within 650 miles. (See p. 10.)

Because of the scheduling practices of the airlines, however, substantial long-haul service is now provided at National. Nineteen cities outside the 650-mile limit have direct service from the Washington area only from National, and several cities beyond 650 miles have nonstop service only from National. (See p. 32 and app. II and III.)

In June 1967 the Civil Aeronautics Board (CAB) began an investigation to determine whether certificates of air carriers authorized to serve Washington area airports should be revised or suspended. The principal reason for this study was the need to relieve serious passenger traffic congestion in National's terminal and parking lots and on National's access roads.

In April 1970, acting on information furnished by the Department, CAB discontinued its investigation and stated that the need for the investigation no longer existed. (See p. 11.)

Use of stretch jets

In April 1970 air carriers were allowed to use a stretch version of the Boeing 727 at National, to temporarily alleviate conditions generated by an air traffic controllers' "slowdown" in effect at that time.

After the slowdown had been concluded, however, the air carriers were allowed to continue using the stretch jet at National. FAA planned to study the effects that the use of stretch jets would have on the future growth of Friendship and Dulles. (See p. 14.)

In February 1971 the Administrator of FAA concluded that the use of the stretch jet had no impact on conditions at National or on the growth and use of Dulles. The Administrator pointed out, however, that the general decline in operations at the airports in 1970 made it difficult to identify trends. (See p. 14.)

In March 1971 the Secretary of Transportation imposed a freeze on the number of stretch jet operations at National at levels existing at that time (78 flights daily) until facts warranted a change of this policy.

An FAA official stated that the limitation had been relaxed to 84 daily operations at the request of the CAB Chairman, because retention of the 78 daily operations limitation would have worked a hardship on the air carriers that already had scheduled crews, maintenance, and aircraft for the summer traffic.

Modernization of National Airport

In September 1968 a firm of architects employed by FAA to study the scope of future activity at National reported that the airport should be modernized and expanded to accommodate 16 million passengers annually by 1980. (See p. 15.)

FAA's 1972 budget submission to the Office of Management and Budget included a request for \$26 million to cover the Government's share of a major modernization of National. FAA estimated the total cost of modernization to be \$157 million. It was anticipated that the air carriers and concessionaires would provide \$79 million and \$52 million, respectively.

Although the President's budget for fiscal year 1972 included only \$2 million for runway and apron improvements, an FAA official advised us that FAA planned to seek financial participation by the air carriers during fiscal year 1972 to initiate construction of the planned modernization of National without Federal assistance. (See p. 16.)

Dulles International Airport development

Dulles was opened in 1962. During its early years growth was below expectations.

After FAA's 1966 decision to allow jets into National, the air carriers began increasing scheduled jet service into National. Currently the majority of jet service for the area is furnished at National.

The result is that National is used at virtually maximum allowable levels, whereas use of Dulles continues to be at a minimum much of the time. (See p. 18.)

Air carriers' schedules have resulted in high use of Dulles during certain peak hours, virtual nonuse at other times, and fairly uniform use of National throughout the day. (See p. 24.)

Expansion of Dulles

In late 1969 FAA forecast an accelerated increase in the use of Dulles. FAA predicted that if this increase were achieved, the terminal facilities would have to be expanded before 1974.

The President's budget for fiscal year 1972 contains \$14.7 million for the expansion of the Dulles terminal and \$2.8 million for the expansion of the mobile lounge fleet. (See p. 27.)

Because the use of Dulles has declined significantly since late 1969 and because in the past FAA has tended to overestimate the growth in the use of Dulles, the planned expansion of the Dulles terminal facilities seems to be questionable. It appears that the expansion merely would serve to accommodate the air carriers in their practice of scheduling most of their service during a limited peak period during the day. (See p. 27.)

Concern over imbalance in use of airports

The National Capital Planning Commission, responsible for developing and adopting a comprehensive plan for the District of Columbia, became concerned in 1966 when FAA decided to allow jet service at National. At that time and again in May 1970, the Commission recommended that FAA study the future role of National as an air terminal in the Washington area and suspend further construction at the airport until study results were available.

The Commission advised GAO that it was studying long-range needs for air transportation and terminal facilities in the Washington area but that this study would not be completed until June 1973. (See p. 29.)

In April 1969 the Administrator began a study to determine alternatives for increasing utilization of Dulles. The study was directed toward methods to transfer a portion of National's traffic to Dulles. (See p. 29.)

The study which was completed in September 1969 indicates that FAA could take action to create a better balance in the use of the area's airports. GAO found no indication, however, that such action had been planned. (See n. 30.)

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ABBREVIATIONS

CAB	Civil Aeronautics Board
FAA	Federal Aviation Administration
GAO	General Accounting Office

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CHAPTER 1

INTRODUCTION

Washington National and Dulles International Airports are owned by the Federal Government and are managed and operated by the Federal Aviation Administration, Department of Transportation. In January 1959 the Administrator of FAA delegated to the Director of FAA's Bureau of National Capital Airports the responsibility for planning, directing and supervising the engineering, management, operation, and maintenance of National and Dulles.

The Bureau responsibilities included negotiating contracts with the air carriers and other commercial enterprises regarding charges and operating standards and procedures for service, facilities, equipment, and other resources, to render necessary air transportation services to the public at the airports and to obtain appropriate reimbursement for facilities and services furnished by the Government.

In February 1971 the Administrator abolished the Bureau and delegated the above responsibilities for the two airports to the Manager of National who reports to FAA's Director of Airports Service.

Friendship Airport is owned by the city of Baltimore and is operated by the city's Department of Aviation. The Director of the Department of Aviation acts as Manager of the airport. The Director performs functions at Friendship similar to the functions performed by FAA's airport manager of National and Dulles.

At the request of Senator Spong, we examined into selected aspects of the management and use of National and Dulles Airports. Particular emphasis was placed on the growth and evolution of the airports, recent efforts by FAA to balance service at the airports, and an analysis of selected aspects of area airport traffic.

National was opened to commercial traffic in June 1941. It is situated on about 850 acres of land and includes three

runways, two major passenger terminal areas (main terminal and north terminal), and various other facilities. The principal runway is 6,870 feet long and 200 feet wide. Of the other two runways, one is 5,212 feet long and 200 feet wide and the other is 4,724 feet long and 150 feet wide. On the basis of FAA standards, these runways can handle 60 flights an hour under instrument landing conditions.

The passenger terminals having 46 loading positions were constructed on the basis of the finger-design concept. Passengers at National walk from the terminals to the loading position to board aircraft. As of May 1971, 12 air carriers served National.

Construction of Dulles was completed in 1962. The airport is situated on 10,000 acres of land and includes two parallel north-south runways, each of which is 11,500 feet long and 150 feet wide, and a third diagonal runway 10,000 feet long and 150 feet wide. On the basis of FAA standards, these runways can handle 95 flights an hour under instrument landing conditions.

The Dulles terminal building was designed around the mobile lounge, a new concept in airport development for holding and moving passengers between the terminal and the aircraft. The building is rectangular (600 feet long and 150 feet wide) and is designed to accommodate future expansion. The terminal contains 24 gates for moving passengers into and out of mobile lounges and presently is operating with a complement of 23 mobile lounges. The terminal contains also 10 gates where air carriers may load and unload passengers at the terminal without using mobile lounges. As of May 1971, 13 air carriers were serving Dulles Airport.

Friendship Airport was opened to commercial traffic in 1950. It is situated on about 3,200 acres of land and includes three runways. One of the runways is 9,500 feet long and 150 feet wide, one is 9,450 feet long and 200 feet wide, and the remaining one is 6,000 feet long and 150 feet wide. On the basis of FAA standards, these runways can handle 30 flights an hour under instrument landing conditions.

The Friendship passenger terminal was also constructed on the finger-design concept and includes 32 gate positions. As of May 1971, 10 air carriers served Friendship.

CHAPTER 2

MANAGEMENT AND UTILIZATION OF NATIONAL AND DULLES

In 1941 National was opened for commercial air service. Since its opening National has become one of the busiest air carrier airports in the United States. Because of the continued growth in commercial aviation, the possible future need for additional airport facilities was brought to the attention of the Congress in the late 1940's by an official of the Civil Aeronautics Administration.

In 1950 the Congress passed legislation authorizing construction of an additional airport (Dulles) in the Washington area. In Senate Report 1720, dated February 10, 1950, concerning proposed legislation for the new airport, the Senate Committee on Interstate and Foreign Commerce stated:

"Since the Washington National Airport is, to all intents and purposes, saturated by existing traffic, it will obviously be impossible for that airport to handle the 40 percent increase in air-carrier movements which will occur between now and 1955.

"It has been found that Washington National Airport itself cannot be expanded because further construction would encroach on the channel of the Potomac River."

In congressional hearings and debates that followed, it was also brought out that the runways at National would not be of sufficient length and strength to sustain four-engine jet aircraft that were to be available for commercial service before 1960.

Although the construction of Dulles was authorized in 1950, it was not until 1957 that definitive planning for the airport began. In January 1957 a special Subcommittee of the Senate Committee on Appropriations held hearings concerning additional airport facilities in the Washington area. In justifying the need for an additional airport in Washington, capable of handling jet aircraft, Government officials testified that National could not handle the volume of

traffic expected in the Washington area in the late 1950's and early 1960's and that National could not handle four-engine jet aircraft. Also the president of the Air Transport Association stated during these hearings that:

"The debate over the last few years has settled, it seems to me, the issue of whether Washington needs a second airport [Dulles]. The fine installation at Washington National Airport is now being used to capacity. If any of you gentlemen are air travelers--and I know that you are--you have sensed the fact not only through statistics, but through your own experience. There is a limit to the capacity of Washington National Airport, and that capacity has just about been reached."

On the basis of these and subsequent hearings concerning the need for an additional airport in the Washington area, funds were made available for construction of Dulles.

NATIONAL AIRPORT

As originally constructed, National was intended to serve low-speed propeller aircraft in commercial service in the early 1940's. After 1960, however, the air carriers began introducing lightweight and mediumweight multiengine jet aircraft into commercial service and FAA began to reassess National's ability to accommodate volume operations of the new jets.

In May 1963 FAA issued an advisory circular entitled "Jet Policy for Washington National Airport." The circular concluded that National was capable of handling occasional jet operations of executive or general aviation character but was incapable of safely accommodating volume jet operations or scheduled jet operations requiring access to the airport terminal for passenger handling purposes. Therefore operations at National were limited to selected jet aircraft and classes of general aviation service that utilized the airport's general aviation ground service facilities.

In July 1965, however, the Director of the Bureau recommended that the Deputy Administrator, FAA, consider

revising its policy at National to allow admission of commercial jets. The Director stated, in part, that:

"There is increasing pressure from individual Air Carriers to remove the jet restriction. The present jet policy is restricting the airlines using WNA [National] and connecting cities to piston aircraft only. United Air Lines now at Midway desires Chicago-Washington-LaGuardia service with Caravelles. American Air Lines and Braniff are introducing BAC 111 in their fleets this fall. There appears to be no question that all carriers using WNA are eager for modifications or lifting entirely the jet restriction.

"The jet ban at Washington National has become an artificial and unreal basis for allocating Air Carrier traffic between WNA on one hand, and Friendship and Dulles on the other. We have always underestimated the capacity of Washington National, each year's estimate of the saturation level is exceeded by the year's actual traffic. Therefore, an unqualified removal of the restriction could create practical problems which make it necessary to establish certain restrictions."

In April 1966 FAA revised its policy and allowed the air carriers to provide jet service at National, subject to the following restrictions.

1. The largest jet that may serve the airport is Boeing's three-engine 727-100--this plane accommodates from 93 to 105 passengers, depending on the seating arrangements.
2. The scheduled jet aircraft operations at the airport are limited to the hours between 7 a.m. and 10 p.m.
3. The maximum scheduled nonstop distance of jet flights serving the airport is limited to 650 miles. Seven cities, referred to as grandfather cities--Memphis, Tennessee; Minneapolis, Minnesota; St. Louis, Missouri; and Miami, West Palm Beach, Orlando, and Tampa, Florida--were exempted from this distance limitation.

The restrictions were designed primarily to limit (1) the noise pollution on affected citizens and (2) any adverse affect on the growth of Dulles. In September 1966 FAA limited also air carriers' operations--takeoffs or landings--at National to 40 an hour, to obtain some control over congestion and delays.

In June 1967 the Civil Aeronautics Board instituted an investigation to determine whether certificates of air carriers authorized to serve Washington, D.C., and Baltimore, Maryland, should be revised or suspended to require that certain services or classes of services be removed from National and provided at one of the other Washington area airports. The principal reason for the investigation was the need to relieve serious passenger traffic congestion in National's terminal and parking lots and on National's access roads.

Between July and December 1967, informal efforts were made by the CAB examiner assigned to the investigation to achieve a voluntary solution to the problem. Also information pertinent to the investigation was obtained from air carriers, Government agencies, and civic parties.

In a February 1968 letter to the CAB examiner, the Assistant General Counsel for Litigation, FAA, requested that no further prehearing conferences or procedural steps be scheduled until the Department had an opportunity to file a statement of its position by late May or early June 1968. The letter stated that the delay was necessary to allow for completion of certain FAA studies relative to flight delays and air travel demand at the three area airports and completion of studies concerning access to, and modernization of, National.

We were advised by FAA and CAB officials that, after the February 1968 letter, further informal discussions relative to the investigation were held with the Department but that a formal statement of position was not received from the Department until April 1970.

In April 1970 the Department supported a motion placed before CAB by American Airlines in March 1970 to dismiss CAB's investigation on the basis that congestion at National

had been reduced. Data furnished by the Department to the CAB indicated that, by the end of 1970, the terminal passenger capacity at National would be increased by 60 percent and that, between 1967 and 1969, passenger traffic had increased by only 9 percent.

The Department also pointed out that the 40 per hour flight limitation imposed at National had also resulted in relieving congestion. Acting on the information furnished by the Department, CAB dismissed its investigation on April 27, 1970, and stated that the need for its investigation no longer existed.

Admission of stretch jets

While the American Airlines motion to dismiss the investigation was under consideration by CAB, FAA was considering admitting Boeing 727-200 stretch jets into National Airport. The 727-200 is a larger version of the 727-100 and carries about 30 more passengers.

In January 1970 the Bureau completed a report on the use of the 727-200 jets at National and furnished it to the Administrator. This report concluded that the 727-200 jets could not be employed profitably at National without materially altering the prospects for growth at Dulles and Friendship Airports. The report indicated that, on the basis of calendar year 1969 aircraft passenger load factors (56 percent of seats occupied) and the number of flights then scheduled into National, the annual increase in passengers at National could amount to as much as 3.4 million if all 727-100's serving National were replaced with 727-200's.

In its report the Bureau further refined its estimates to determine the probable short-term effect of the introduction of the 727-200 jet on passenger traffic at National and estimated that, by mid-1971, seven of the air carriers would use the 727-200 jets on 134, or about 30 percent, of their daily flights serving National. According to the Bureau these flights would probably increase passenger traffic at National by about a million a year. The report stated that much of this potential gain would be generated by diversion of passengers from flights serving Dulles and Friendship.

The Bureau pointed out that the Department's support of the motion to dismiss the CAB investigation would be difficult to sustain in the face of a decision to admit 727-200's into National that could increase passenger levels at the airport by an additional 30 percent in the short term and produce a substantially greater increase in the future.

On April 9, 1970, after receiving the Bureau report and 2 weeks before CAB withdrew its investigation, the FAA Administrator announced his decision to admit 727-200 aircraft into National to temporarily alleviate conditions

generated by an air traffic controllers' slowdown in effect at that time. The slowdown was concluded on April 15, 1970. The Administrator, however, decided to continue admitting the 727-200's into National and to study the effects that it would have on the future development of Dulles and Friendship.

On May 20, 1970, in response to a request of the Special Assistant to the Secretary of Transportation for a full report on the use of stretch jets at National, the Administrator advised the Secretary of Transportation that:

"Traffic and economic analyses conducted by the Office of Aviation Economics and the Bureau of National Capital Airports, independently, clearly indicate that the unrestricted admission of the 727-200 to National would have a serious impact on both the traffic and economic growth of Dulles and Friendship Airports. For this reason, we believe that the admission of the aircraft to National should be conditioned on an effective Interline Agreement among the airlines that would assure the continuation of the normal growth patterns at the other area airports. Such an agreement would of course be subject to Civil Aeronautics Board approval."

As of June 1, 1971, an effective interline agreement between the air carriers had not been negotiated.

In February 1971 FAA completed a report analyzing the effects of Boeing 727-200 operations at National. On the basis of the report, the FAA Administrator concluded that the admission of 727-200 aircraft into National had no impact on conditions at that airport or on the growth and utilization of Dulles. In a letter transmitting the report to the Senate Commerce Committee, however, the Administrator pointed out that the general decline in air carrier operations and reductions in passengers transported at the airports in 1970 obscured the identification of meaningful trends.

Also, on March 16, 1971, the Secretary of Transportation advised Senator Spong that:

"As you know, the FAA is presently involved in an in-depth analysis of flight operations at both Washington National and Dulles before as well as since the introduction of stretch jets at National. The preliminary review, which was submitted to you last month is essentially inconclusive as to the effect of stretch jet operations at National either on the problems of ground congestion there or on the level of operations at Dulles. Part of the reason for the inconclusiveness of the data submitted in that preliminary report is that during the period of stretch jet operation at National there was a decline in aviation activity generally.

"In view of your continued concern with this matter, and in light of the fact that actual experience has not yet provided the answers to your questions, I am taking appropriate action to impose a freeze on the number of stretch jet operations at National at the present level until the facts warrant a change one way or the other."

An FAA official advised us that, at the time that the Secretary made this statement, there were 78 daily operations of the 727-200 at National but that the Secretary subsequently increased the limitation to 84 daily operations which constitutes the current level of 727-200 operations at the airport. He stated that the limitation had been increased at the request of the CAB Chairman to accommodate the 1971 summer scheduling planned by the air carriers and that the CAB Chairman had made the request because the retention of the limitation of 78 daily operations would have worked a hardship on the air carriers that already had scheduled crews, maintenance, and aircraft for the summer traffic.

Modernization plans

In May 1966 FAA awarded a contract to a firm of architects to (1) estimate the scope of future activity at

National, (2) establish a program necessary to satisfy this activity, (3) develop master plan approaches fitted to the program, and (4) recommend the direction to be taken. In September 1968 the firm submitted its report to FAA in which it concluded that the airport should be modernized and expanded to accommodate 16 million passengers annually by 1980.

The architects advised FAA:

"This study has been made with full recognition of the great importance of direct and convenient access to the capital city on the one hand, and the existence of some local pressure to eliminate air activity at the airport on the other. Due to its close-in location, Washington National is better able to support its metropolitan area than any other major airport. The nuisance imposed on the metropolitan area by the airport is overshadowed by that superior service offered to the area and to the eastern United States. The location is consistent with the role of Washington National as the airport for short haul access to the District. In our opinion, this function must be maintained, and the facilities to support same must be up-graded to be consistent with the demands on the airport."

FAA's 1972 budget submission to the Office of Management and Budget included a request for \$26 million to cover the Government's share of a major modernization of National. The proposed modernization is based on a modified version of a plan proposed by the firm of architects and includes, among other things, expanding the main terminal, expanding the north terminal area, and adding passenger loading fingers and passenger waiting rooms. FAA estimated the total cost of the modernization to be \$157 million, of which it anticipated that the air carriers and concessionaires would provide \$79 million and \$52 million, respectively.

The President's budget for fiscal year 1972 includes about \$2 million for FAA for runway and apron improvements at National but does not include the \$26 million for the Federal share of the proposed modernization of National.

An FAA official advised us that FAA planned to seek financial participation by the air carriers during fiscal year 1972, to initiate the modernization of National without Federal assistance.

Federal Highway Administration plans provide for initiating construction during fiscal year 1972 to upgrade U.S. Route 1 in the vicinity of Crystal Plaza, Virginia, to an eight-lane spur from Interstate Route 95 at a cost of about \$9 million. Although this spur would connect with an overpass leading from Route 1 to National Airport and would provide some benefit to users of the airport, the primary purpose of the spur, according to Federal Highway Administration officials, is to serve increased traffic in the Crystal Plaza area. There is no apparent connection between the funds requested for the spur and the planned modernization of National.

DULLES INTERNATIONAL AIRPORT

In 1962 Dulles was opened to commercial service and began to share with Friendship Airport near Baltimore, Maryland, the jet aircraft service provided by the air carriers to the area. Dulles provides primarily long-haul domestic and international service; Friendship provides both short-haul domestic service and long-haul domestic and international service. Neither Dulles nor Friendship has placed any restrictions (other than instrument landing capacity) on the number of flight operations an hour or on the hours during which flights may be scheduled.

During Dulles' early years the growth in its use appeared promising, although below expectations. After FAA's decision in 1966 to open National to jet aircraft, however, the air carriers steadily increased jet service for the area at National. Currently the majority of jet service for the area is furnished at National. This has resulted in the use of National at virtually maximum allowable levels, whereas Dulles has continued to be substantially underutilized.

The following table compares the actual air carrier operations and related passenger traffic at National and Dulles for each calendar year since 1964.

<u>Calendar year</u>	<u>Air carrier operations</u>		<u>Passenger traffic</u>	
	<u>National</u>	<u>Dulles</u>	<u>National</u>	<u>Dulles</u>
----- (thousands) -----				
1964	210.7	28.2	5,993.9	782.3
1965	220.1	32.6	6,726.4	946.6
1966	216.6	37.1	7,665.9	1,106.3
1967	238.5	51.0	9,126.6	1,476.4
1968	235.0	58.9	9,672.6	1,661.4
1969	221.8	63.4	9,905.1	2,010.9
1970	212.3	62.1	9,400.1	1,981.0

Using available data we compared the hourly use of the two airports. The table and photographs on the following pages show the variations in the use of the airport facilities during peak and nonpeak periods of the day.

Average Hourly Aircraft Operations
and Passenger Traffic

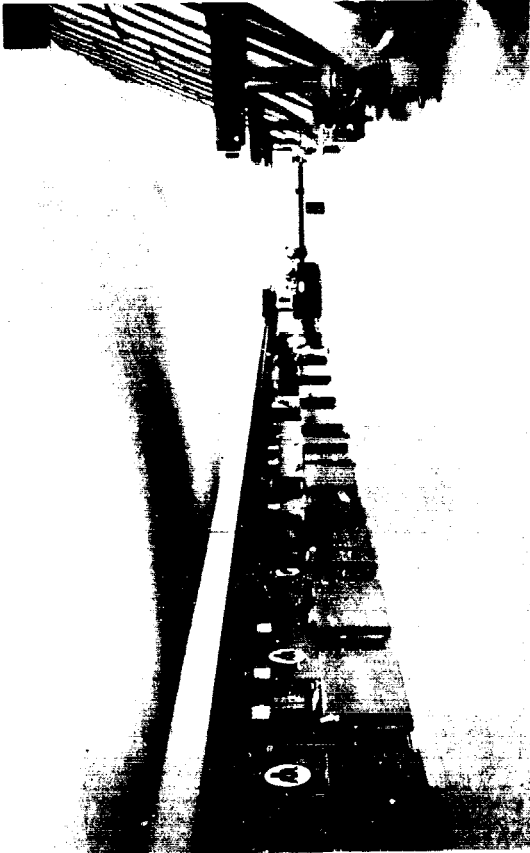
Dulles

Hour ending	84 days tested (note a)		2-week test period in June 1970		January 1971
	Operations an hour	Passengers an hour	Operations an hour	Passengers an hour	Operations an hour
8 a.m.	1	18	1	47	-
9 a.m.	7	294	9	434	6
10 a.m.	5	224	11	304	11
11 a.m.	2	87		137	6
12 m.	7	232		390	9
1 p.m.	8	302		286	8
2 p.m.	3	111	3	97	3
3 p.m.	5	199	7	303	7
4 p.m.	7	353	9	272	11
5 p.m.	13	806	10	651	12
6 p.m.	17	1,135	19	1,258	16
7 p.m.	16	751	21	877	15
8 p.m.	9	456	14	649	11
9 p.m.	9	345	9	309	8
10 p.m.	6	240	13	454	8

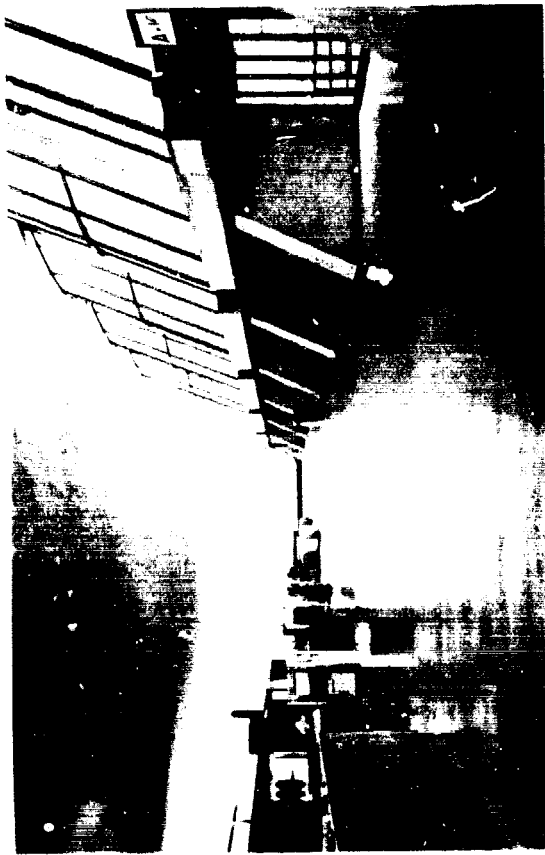
National

8 a.m.	29	944	38	1,016	25
9 a.m.	35	1,256	3	1,642	32
10 a.m.	41	1,637	40	1,794	36
11 a.m.	41	1,570	41	1,739	35
12 m.	41	1,641	39	1,807	34
1 p.m.	38	1,617	38	2,019	39
2 p.m.	36	1,361	41	1,692	33
3 p.m.	39	1,636	41	1,874	37
4 p.m.	35	1,671	43	2,225	36
5 p.m.	42	2,352	47	2,498	38
6 p.m.	44	1,861	44	2,432	41
7 p.m.	42	2,187	42	2,782	44
8 p.m.	41	1,972	43	2,395	37
9 p.m.	41	1,910	42	2,048	38
10 p.m.	41	1,695	31	1,835	38

^aThe periods tested were a week each month covering Dulles operations in calendar year 1969 and a week each month covering National operations in calendar year 1968.



Ticket counter--facing west



Mobile lounge loading position--facing east

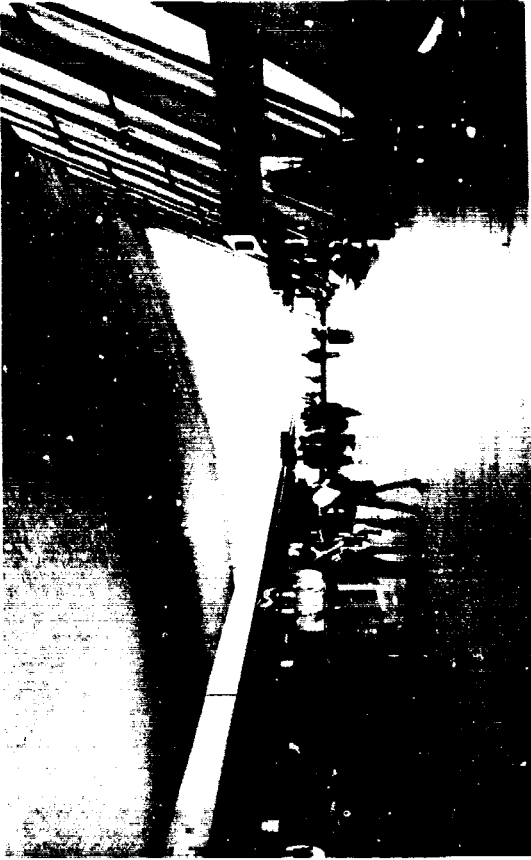


Aircraft parking ramp--facing east

The photographs on this page were taken at Dulles on a Wednesday in June 1971 around 12:45 p.m. The situations in the pictures are representative of typical non-peak-hour conditions at the airport and of existing conditions at the same time in areas of the terminal and landing field not shown. When the pictures were taken, there were very few passengers in the terminal and there was only one aircraft on the parking ramp.



Mobile lounge loading positions—facing east

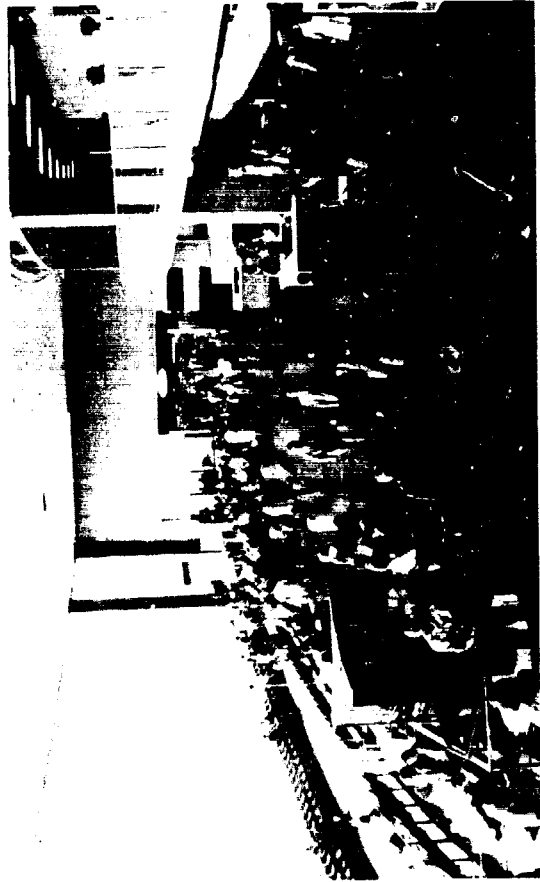


Ticket counters—facing west

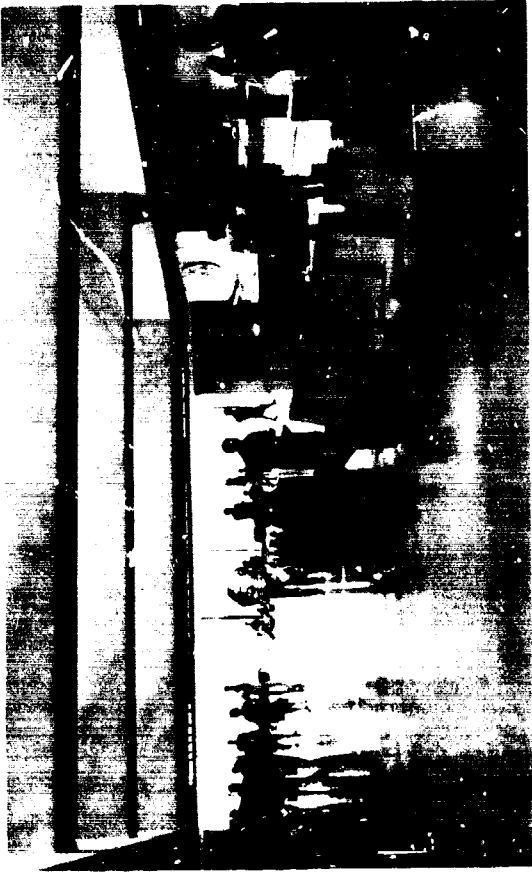
The photographs on this page were taken at Dulles on a Wednesday in June 1971 around 5:45 p.m. The situations in the pictures are representative of typical peak-hour conditions at the airport and of existing conditions at the same time in areas of the terminal and landing field not shown. When the pictures were taken, there was a heavy flow of passenger traffic through the terminal and there were seven aircraft on the parking ramp deplaning passengers and awaiting enplaning passengers.



Aircraft parking ramp—facing east



Main terminal concourse



South terminal concourse



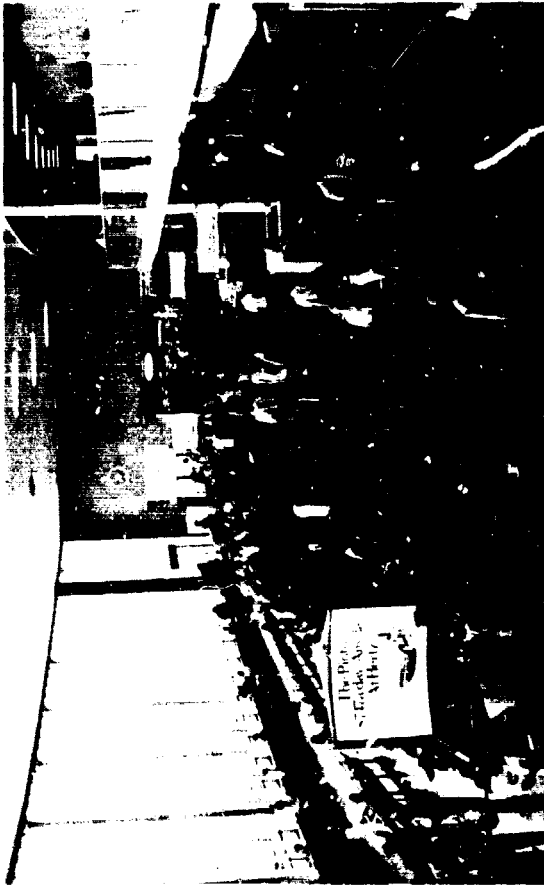
Airfield-facing north from the main terminal

The photographs on this page were taken at National on a Wednesday in June 1971 around 12:30 p.m. The situations in the pictures are representative of the normal flow of aircraft and passenger traffic during regular nonpeak service hours at the airport and of existing conditions at the same time in terminal areas and landing field areas not shown. At the time the photographs were taken, there was moderate to heavy passenger traffic in most terminals and there were 11 aircraft enplaning and deplaning passengers or preparing for takeoff in the northern sector of the airfield.

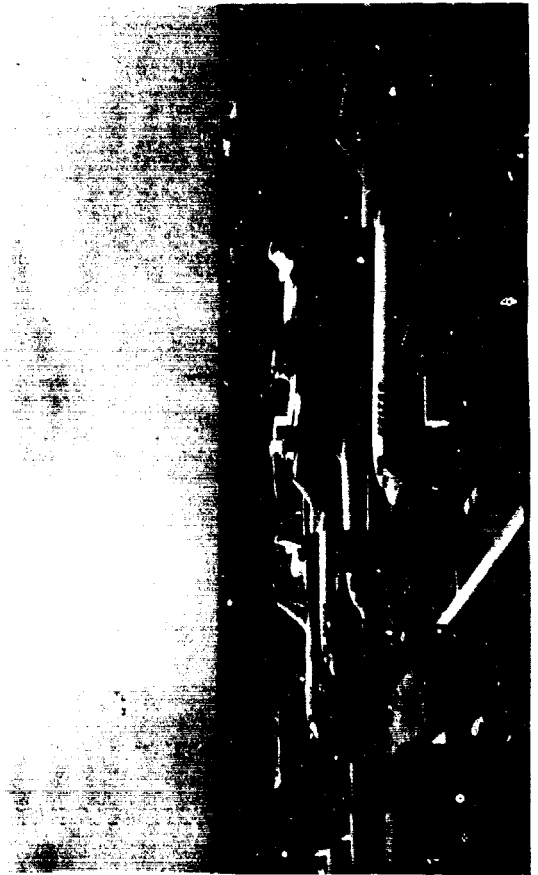


North terminal concourse

The photographs on this page were taken at National on a Wednesday in June 1971 around 5:30 p.m. The situations in the pictures are representative of the peak traffic conditions at the airport and of existing traffic conditions at the same time in terminal areas and landing field areas not shown. When the photographs were taken, all terminal areas were heavily congested with passengers and there were 13 aircraft in the north area of the landing field.



Main terminal concourse



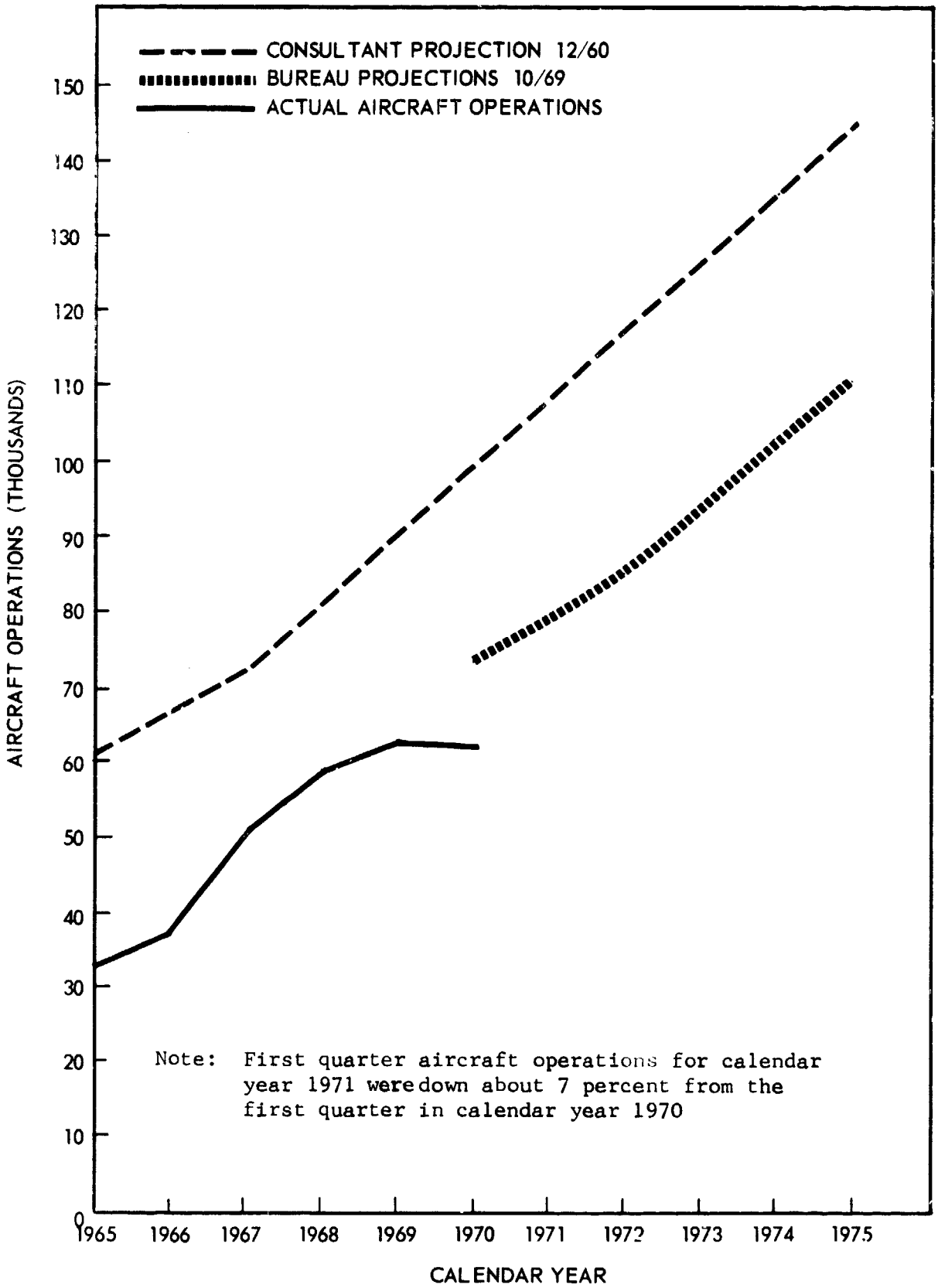
Airfield—facing north from the main terminal

As indicated by the table and photographs, the air carriers' scheduling practices have resulted in high use of Dulles during certain peak hours and virtual nonuse at other times, compared with fairly uniform use of National throughout the day.

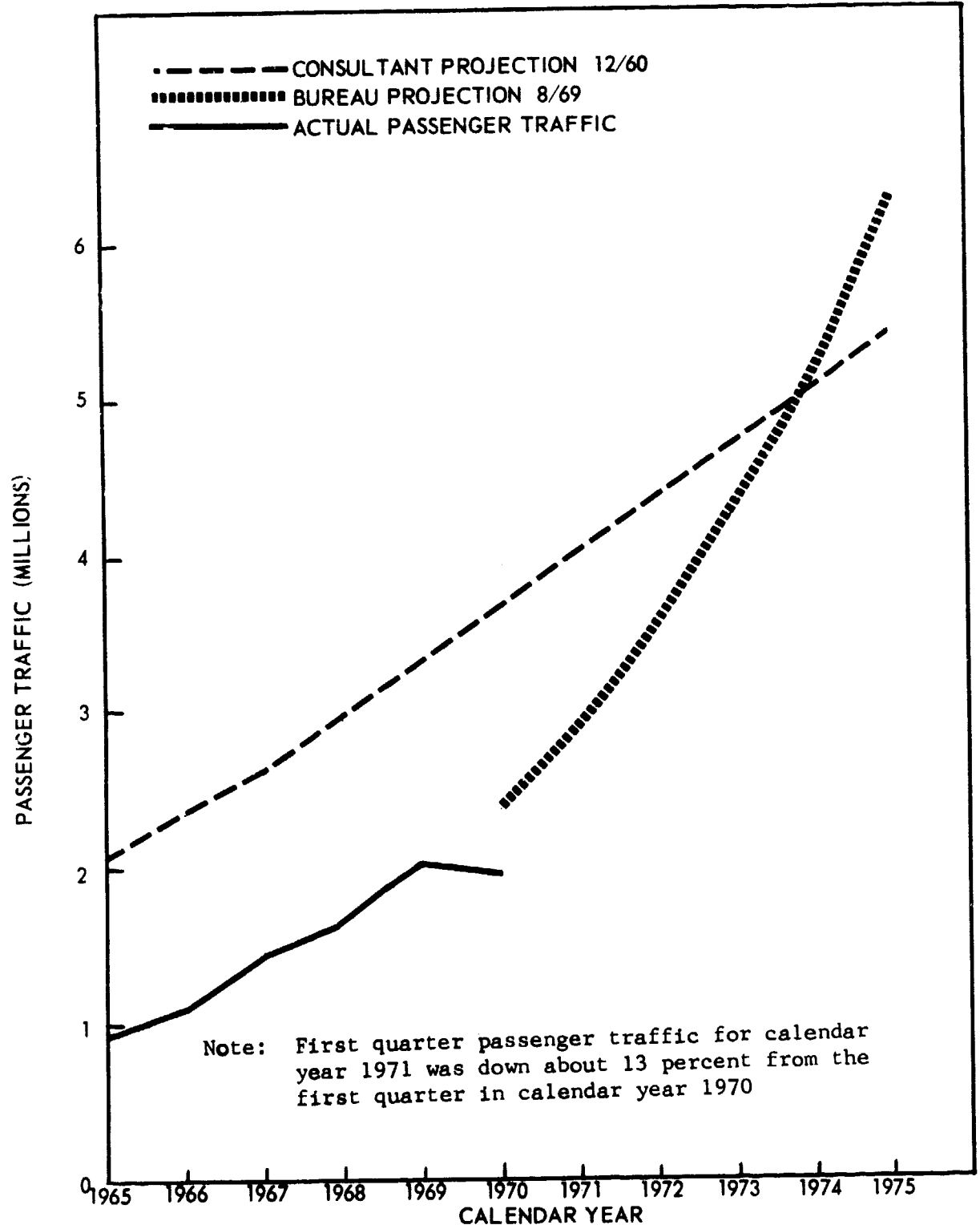
The Dulles terminal facility is designed to handle 1,600 passengers an hour expeditiously. According to FAA this design capacity has been exceeded on occasion because the air carriers have scheduled flights at Dulles to maximize the services furnished during peak hours of the day--4 to 8 p.m.--when passenger demand is the greatest. The accentuated peak traffic conditions could be overcome by persuading the air carriers to revise their flight schedules to provide for a more even flow of traffic throughout the day.

In late 1969 FAA forecast an accelerating increase in the use of Dulles and indicated that, if this increase were achieved, the terminal facilities would have to be expanded before 1974. Comparisons of estimates of growth in passenger traffic and aircraft operations at Dulles with actual experience are shown in the graphs on the following two pages.

PROJECTION OF DULLES INTERNATIONAL AIRPORT AIRCRAFT OPERATIONS



PROJECTIONS OF DULLES INTERNATIONAL AIRPORT PASSENGER TRAFFIC



During the fiscal year 1971 appropriation hearing before the Subcommittee on Transportation, House Committee on Appropriations, FAA officials indicated that they planned to expand the Dulles terminal. They stated that, as presently envisioned, the terminal would be extended 320 feet to the west at a cost of about \$14 million. The FAA officials indicated that the expansion was required because the growth of Dulles was accelerating and would reach the design capacity of the existing terminal facility (4 million passengers annually--1,600 passengers an hour) by 1973.

The President's budget for fiscal year 1972 contains \$14.7 million for the expansion of the terminal and \$2.8 million for expansion of the mobile lounge fleet, based on the anticipated inadequacy of the facility by 1973.

The tendency to overestimate the growth in the use of Dulles in past projections, as shown by the foregoing graphs, raises a question of whether the need for expansion of the facilities really is critical at this time or whether such an expansion merely would serve to accommodate the air carriers in their practice of scheduling most of their service during a limited peak period during the day. Also, since August 1969, air travel generally has declined and the use of Dulles has declined also. It seems that these facts should be considered in connection with the planned expansion.

CHAPTER 3

CONCERN OVER IMBALANCE IN USE OF AIRPORTS

NATIONAL CAPITAL PLANNING COMMISSION

The National Capital Planning Commission, a Federal agency, is responsible for developing and adopting a comprehensive plan for the District of Columbia, including recommendations or proposals for Federal and District developments or projects in the National Capital area. One of the Commission's responsibilities is to make recommendations for transportation and related terminal facilities, including airports.

The Commission became concerned when FAA revised its policy in 1966 to allow commercial jet service at National. At that time the Commission recommended that FAA make a detailed study of the future role of National as an air terminal in the Washington area and suspend further construction at the airport until study results were available. Again, in 1968 when FAA began to consider the architects' proposal for expansion of National to accommodate 16 million passengers (see p. 16), the Commission urged FAA to defer expansion until a comprehensive plan covering the Washington area's future air traffic needs was available.

In January 1970 the Commission released an information report entitled "The Air Revolution and the National Capital Region." The report deals primarily with the increases in major commercial air traffic expected by 1990 and the changes needed in the Washington metropolitan area to accommodate the expected increases by use of an integrated system of air service for the Washington area.

The report points out that the physical facilities at National are obsolete and are being further constrained each year by increased high-rise construction in Virginia, which limits both access to and expansion of the airport's facilities. The report also indicates that Dulles Airport is threatened by the encroachment of new urban development and could become obsolescent if corrective action is not taken to limit further private construction in the area of the airport.

In May 1970 the Commission's Director of Long Range Planning and Regional Affairs advised the Senate Subcommittee on Business and Commerce, Committee on the District of Columbia, that:

"*** growth by accretion at National has proceeded for a number of years. Until a detailed study of air facility needs in the Washington/Baltimore Bi-region is undertaken no reasonable assessment of National's future role can be made except on an 'ad hoc' basis. This is hardly an acceptable procedure for such a major terminal facility.

"It is strongly suggested that a moratorium be placed on any expansion, in service and facilities, at National until an Air Facilities Study for the Washington/Baltimore Bi-region is available to provide guidance for any improvements at the Washington National Airport."

We were advised by the Commission that it was studying long-range needs for air transportation and terminal facilities in the Washington area but that the study would not be completed until June 1973.

DEPARTMENT OF TRANSPORTATION

In April 1969 the Under Secretary of Transportation requested the Administrator, FAA, to study possible alternatives for expanding utilization of Dulles. The Under Secretary suggested that the study consider the establishment of a private corporation or a regional airport authority to manage the Washington area airports and methods that could be used to effect a transfer of part of National's traffic to Dulles. He suggested also that, among other things, consideration be given to:

1. Precluding the operation of new airbuses with larger passenger capacities at National Airport.
2. Reducing the limitation on flight operations an hour at National in effect at June 1, 1969 (40 an hour).

3. Imposing a lower mileage radius below the 650-mile limitation for flight operations serving National.

On May 16, 1969, the FAA Administrator advised the Under Secretary regarding the preclusion of airbuses that:

"Jet aircraft authorized to operate at Washington National Airport have been limited to the smaller two and three engine models. This limitation has been in force since the inception of jet operations at the airport in April of 1966 and was widely publicized to all carriers using the airport. In concert with other restrictions, this policy acts to hold passenger flow through the airport in check while also contributing to the noise abatement effort.

"Under the policy, two or three engine aircraft larger than the Boeing 727-100 (basic 727) are not permitted to operate in commercial service at National. This restriction has been maintained despite extensive efforts by the carriers, principally American Airlines, to gain approval for use of the 727-200 (stretch 727).

"Each of the major manufacturers (Boeing, Lockheed, and McDonnell Douglas) has been informed of our aircraft size limitations and that such limitations would preclude use of airbus type aircraft at National."

The Administrator formed a task force to consider the other suggestions of the Under Secretary relative to restrictions at National. The task force study which was completed in September 1969 concluded, among other things, that air traffic congestion in the technical sense was not a problem at National but that the congestion problem related to handling people, principally, to inadequacies in parking and roads and to crowding within the terminal area.

The task force stated that the FAA could divert traffic from National through economic manipulation and/or regulation but that there would be no assurance that the traffic which left National would be transferred to Dulles. The task

force indicated that traffic diverted from National could (1) go to Dulles, (2) go to Friendship, or (3) be taken from the metropolitan area. It concluded also that such a diversion could result in a significant curtailment of short-haul service at National, loss of passengers to other modes of travel, and loss of revenue.

With regard to the reduction in the number of hourly air carrier operations suggested by the Under Secretary, the task force advised that:

"Any reduction in the 40 slots available would almost certainly be distributed among all the carriers on a similar basis, and would affect the local service carrier and the short-haul, commuter carrier at least as much as the longer-haul carrier. Some of the short-haul operations that would thus be lost to DCA [National] would almost certainly shift to Baltimore, some would probably shift to Dulles, but a larger percentage could simply disappear from the air transportation market. Many passengers currently using DCA to fly distances of less than 250 miles would undoubtedly resort to other means of travel rather than suffer the extra ground travel time of approximately 30 minutes to either BAL [Friendship] or IAD [Dulles].

"Needless to say, airline opposition to any reduction in available slots would be vigorous and would probably be buttressed by considerable Congressional support and pressure from the flying public in other cities served by Washington National. On the other hand such a reduction, depending on its extent, would be applauded by Congressional critics of the airport and those in the community who wish to see its operations curtailed. Despite anticipated airline opposition, a straight reduction in available slots is probably the most equitable means for all airlines of tightening the restrictions currently in effect at Washington National Airport."

In considering the suggestion that flight operations serving National be reduced to an operating radius below

650 miles, the task force considered principally a 50-mile radius reduction and the elimination of the rule exempting the grandfather cities from the 650-mile limitation. The task force concluded that elimination of the rule exempting grandfather cities from the 650-mile rule would affect 50 flights daily out of National, of which 25 would go to Baltimore, 15 would go to Dulles, and the remaining 10 would stay at National by scheduling one intermediate stop within the distance limitation.

In assessing the 50-mile perimeter reduction, the task force stated that it would be impossible to measure the effect of the reduction on operations or passengers due to the many scheduling possibilities available to air carriers. As a result, the perimeter reduction was considered in conjunction with other restrictive actions, including the elimination of the rule exempting grandfather cities from the 650-mile perimeter restriction. The task force estimated that, in addition to the 40 flights that would leave National by eliminating the rule exempting grandfather cities, 54 more operations could be moved from National by implementing a 50-mile reduction in the perimeter and that, of these flights, 32 would go to Dulles and 22 would go to Friendship.

Although the task force conclusions make it apparent that FAA could take actions to achieve greater balance in the use of the area's three airports, we found no indication that such action had been planned.

COMPARISON OF SELECTED LONG-HAUL SERVICE AT WASHINGTON AREA AIRPORTS

As of April 1, 1970, there were 61 daily nonstop flights scheduled between Chicago and the Washington area airports; of these flights, 40 operated in or out of National.

On May 1, 1971 (13 months later), 65 daily nonstop flights were scheduled between Chicago and Washington area airports. Of these flights, 45--or 69.2 percent--operated between Chicago and National, 15--or 23.1 percent--operated between Chicago and Friendship, and five--or 7.7 percent--operated between Chicago and Dulles. Of the 45 flights at National, 19--or 42 percent--used Boeing 727-200's. The

increase of five flights at National from April 1970 to May 1971 and the substitution of the larger 727-200's resulted in a projected annual increase of 369,015 seats for flights between National and Chicago.

Of the flights between National and Chicago, 10 originated or terminated at Chicago and the remaining 35 flights originated or terminated at points beyond Chicago. Appendix I presents data on the changes in service between Chicago and each of the Washington area airports from April 1, 1970, to May 1, 1971.

Appendix II presents a comparison of selected current long-haul direct service from National to cities outside the 650-mile limit having service to the same cities from other Washington area airports.

Although the 650-mile maximum limitation on nonstop flights between National and other airports was intended to encourage the use of National for short-haul service, appendix II shows that, because of the scheduling practices of the air carriers, substantial long-haul service is provided at National. Nineteen cities outside the 650-mile limit have direct service from the Washington area only from National. For example, one round trip daily from National is the only direct service available between the Washington area and El Paso, Texas.

Also most of the direct service available to a number of other distant cities is provided through National, usually by way of Chicago. Six direct flights are scheduled daily between Albuquerque, New Mexico, and the Washington area, five of which originate or terminate at National, four of the five going by way of Chicago and one by way of St. Louis, Missouri, a grandfather city. Six direct flights are scheduled daily between Omaha and the Washington area, five of which, going by way of Chicago, originate or terminate at National.

Four direct flights are scheduled between Tucson, Arizona, and the Washington area, three of which, going by way of Chicago, originate or terminate at National. Of the nine flights between Phoenix, Arizona, and the Washington area, five originate or terminate at National, including four

which operate through Chicago. Of the 10 direct flights daily between Oklahoma City and the Washington area, six operate to or from National, including four which operate through Chicago.

We also compared the nonstop service provided by the air carriers between the Washington area and the cities exempted from the 650-mile limit. This comparison which is presented in appendix III shows that National is the primary Washington area airport from which such service is available. For example, the carriers offer nonstop service to Orlando, Tampa, and West Palm Beach, Florida, only through National.

APPENDIXES

COMPARISON OF EQUIPMENT
AND SEATING CAPACITY FOR NONSTOP
CHICAGO SERVICE AT WASHINGTON
AREA AIRPORTS
APRIL 1, 1970, AND MAY 1, 1971

	<u>April 1, 1970</u>	<u>May 1, 1971 (note a)</u>	<u>Differ- ence</u>
Daily flights	61	65	+4
Daily passenger seats available	6,261	6,921	+660
Projected annual passen- ger seats available	<u>2,285,265</u>	<u>2,526,165</u>	<u>+240,900</u>

CHICAGO-NATIONAL

<u>Aircraft</u>	<u>April 1, 1970</u>	<u>May 1, 1971 (note a)</u>	<u>Differ- ence</u>
<u>Daily flights</u>			
B727-200	-	19	+19
B727-100	34	20	-14
B737	<u>6</u>	<u>6</u>	<u>-</u>
Total	<u>40</u>	<u>45</u>	<u>+5</u>
<u>Daily passenger seats available</u>			
B727-200	..	2,337	+2,337
B727-100	3,201	1,875	-1,326
B737	<u>546</u>	<u>546</u>	<u>-</u>
Total	<u>3,747</u>	<u>4,758</u>	<u>+1,011</u>
<u>Projected annual passenger seats available</u>			
	<u>1,367,655</u>	<u>1,736,670</u>	<u>+369,015</u>

APPENDIX I

CHICAGO-FRIENDSHIP

<u>Aircraft</u>	<u>April 1,</u> <u>1970</u>	<u>May 1, 1971</u> <u>(note a)</u>	<u>Differ-</u> <u>ence</u>
<u>Daily flights</u>			
DC8S	2	-	-2
DC8F	2	-	-2
B707	3	1	-2
B720	4	2	-2
B727-200	2	7	+5
B727-100	4	4	-
B737	-	1	+1
Total	<u>17</u>	<u>15</u>	<u>-2</u>
<u>Daily passenger seats available</u>			
DC8S	396	-	-396
DC8F	262	-	-262
B707	397	132	-265
B720	460	230	-230
B727-200	246	861	+615
B727-100	372	372	-
B737	-	91	+91
Total	<u>2,133</u>	<u>1,686</u>	<u>-447</u>
<u>Projected annual passenger seats available</u>			
	<u>778,545</u>	<u>615,390</u>	<u>-163,155</u>

CHICAGO-DULLES

<u>Aircraft</u>	<u>April 1, 1970</u>	<u>May 1, 1971 (note a)</u>	<u>Differ- ence</u>
<u>Daily flights</u>			
B727-100	4	5	+1
<u>Daily passenger seats available</u>			
B727-100	381	477	+96
<u>Projected annual passenger seats available</u>			
	139,065	174,105	+35,040

^aThe projections of annual seating capacity are based upon actual seating capacity for equipment in use as of May 1, 1971. Data on equipment in use and on seating capacity were provided by FAA officials.

SCHEDULE OF DAILY WASHINGTON NATIONAL DIRECT SERVICE
TO AND FROM CITIES BEYOND THE 650-MILE LIMIT
COMPARED WITH SIMILAR DULLES AND FRIENDSHIP SERVICE
AS OF MAY 1, 1971

Name of city	Washington National									
	Service through Chicago		Service through grandfather cities		Service through other cities within 650-mile limit		Total flights		Stretch 727's	
	One stop	Two or more stops	One stop	Two or more stops	One stop	Two or more stops	One stop	Two or more stops	One stop	Two or more stops
Albuquerque, N. Mex.	4	-	-	1	-	-	4	1	-	-
Alexandria, La.	-	-	-	-	-	1	-	1	-	-
Baton Rouge, La.	-	-	-	-	-	-	-	3	-	-
Billings, Mont.	-	-	-	3	-	-	-	-	-	-
Bismark, N. Dak.	-	-	2	2	-	-	2	2	-	1
Boise, Idaho	1	-	-	-	-	-	1	-	-	-
Butte, Mont.	-	-	-	1	-	-	-	1	-	-
Dallas-Ft. Worth, Tex.	1	4	4	2	1	1	6	7	-	4
Daytona Beach, Fla.	-	-	-	-	4	-	4	-	-	-
Denver, Colo.	1	1	1	-	-	-	2	1	1	1
Des Moines, Iowa	2	-	-	-	-	-	2	-	-	-
El Paso, Tex.	1	1	-	-	-	-	1	1	-	-
Fargo, N. Dak.	-	-	2	-	-	-	2	-	1	-
Ft. Lauderdale, Fla.	-	-	2	-	-	-	2	-	-	-
Ft. Myers, Fla.	-	-	-	1	-	-	-	2	-	-
Helena, Mont.	-	-	-	2	-	-	-	2	-	-
Houston, Tex.	-	-	-	1	3	-	3	1	-	-
Jackson-Vicksburg, Miss.	-	-	-	-	1	-	1	-	-	-
Kansas City, Mo.	4	-	4	-	1	-	9	-	3	-
Las Vegas, Nev.	2	-	-	1	-	-	2	1	1	-
Lincoln, Nebr.	1	1	-	-	-	-	1	1	1	-
Little Rock, Ark.	-	-	1	-	-	-	1	-	1	-
Los Angeles, Calif.	-	3	-	2	-	-	-	5	-	3
Madison, Wis.	-	-	-	-	2	-	2	-	-	-
Melbourne, Fla.	-	-	-	1	1	-	1	1	-	-
Memphis, Tenn.	-	-	-	-	7	-	7	-	3	-
Minneapolis, Minn.	2	-	-	-	1	2	3	2	3	2
Missoula, Mont.	-	-	-	1	-	-	-	1	-	-
Moline, Ill.	2	-	-	-	-	-	2	-	1	-
Oklahoma City, Okla.	3	1	-	-	-	2	3	3	1	3
Omaha, Nebr.	4	1	-	-	-	-	4	1	-	1
Orlando, Fla.	-	-	-	-	4	-	4	-	1	-
Phoenix, Ariz.	1	3	-	-	-	1	1	4	1	1
Portland, Oreg.	-	-	-	2	-	-	-	2	-	1
Reno, Nev.	-	1	-	-	-	-	-	1	-	-
Rochester, Minn.	-	-	-	-	-	1	-	1	-	1
Salt Lake City, Utah	2	-	-	-	-	-	2	-	-	-
San Diego, Calif.	-	-	-	2	-	-	-	2	-	2
San Francisco, Calif.	-	2	-	2	-	2	-	6	-	4
Sarasota, Fla.	-	-	2	1	-	-	2	1	-	1
Seattle, Wash.	-	-	1	2	-	-	1	2	1	-
Shreveport, La.	-	-	-	-	-	1	-	1	-	-
Spokane, Wash.	-	1	-	3	-	-	-	4	-	1
St. Louis, Mo.	1	-	-	-	-	-	-	-	1	-
Tallahassee, Fla.	-	-	-	-	1	-	1	-	-	-
Tampa, Fla.	-	-	2	-	2	-	4	-	2	-
Titusville, Fla.	-	-	2	-	-	1	2	1	-	-
Tucson, Ariz.	2	1	-	-	-	-	2	1	-	1
Tulsa, Okla.	1	-	-	-	2	-	3	-	2	-
West Palm Beach, Fla.	-	-	1	-	-	-	1	-	-	-

Note: This schedule includes flights to or from all cities outside the 650-mile limit, which have service from National by way of a nonstop flight to or from a grandfather city or one city inside the 650-mile limit. It excludes flights which stop more than once between National and the 650-mile limit.

One-stop service for National indicates that the city is (1) the first stop after or last stop before a grandfather city or (2) a city within the 650-mile limit. Flights serving cities beyond the first stop are included in the "two or more stops" column. Flights serving more than one city outside the 650-mile limit are included in the appropriate category for each city served.

<u>Dulles</u>		<u>Friendship</u>		<u>Total Dulles and Friendship</u>	<u>Total flights, National, Dulles and Friendship</u>
<u>Nonstop service</u>	<u>One or more stops</u>	<u>Nonstop service</u>	<u>One or more stops</u>		
-	-	-	1	1	6
-	-	-	-	-	1
-	-	-	-	-	1
-	-	-	-	-	3
-	-	-	-	-	4
-	1	-	-	1	2
-	-	-	-	-	1
14	1	4	3	22	35
-	-	-	-	-	4
8	2	3	2	15	16
-	-	-	1	1	3
-	-	-	-	-	2
-	-	-	-	-	2
-	-	4	-	4	6
-	-	-	3	3	4
-	-	-	-	-	2
2	-	5	3	10	14
-	-	-	-	-	1
2	-	2	3	7	16
-	-	-	4	4	7
-	-	-	-	-	2
-	-	-	1	1	2
14	2	7	4	27	32
-	-	-	-	-	2
-	-	-	-	-	2
-	1	-	4	5	12
-	2	-	1	3	8
-	-	-	-	-	1
-	2	-	-	2	4
-	2	-	2	4	10
-	-	-	1	1	6
-	-	-	4	4	8
2	1	-	1	4	9
-	2	-	4	6	8
-	-	-	-	-	1
-	-	-	-	-	1
-	5	-	-	5	7
4	-	-	-	4	6
8	3	4	9	24	30
1	-	-	3	4	7
2	-	2	1	5	8
-	-	-	1	1	2
-	-	-	-	-	4
-	1	2	6	9	10
-	-	-	1	1	2
-	-	-	3	3	7
-	-	-	-	-	3
-	1	-	-	1	4
2	-	-	2	4	7
-	-	-	-	-	1

32 additional flights which fly nonstop to or from a grandfather city and which terminate or serve more than one grandfather city are presented in appendix III. Three flights presented above, which serve both National and Friendship, are presented as service furnished to or from both airports and are presented also in appendix III.

For this schedule we used flight schedule data prepared by the Bureau from general schedules effective April 25, 1971, and filed by the air carriers with the CAB. In comparing the Bureau data with the "Official Airline Guide" for May 1, 1971, a standard reference of the Air Traffic Conference of America, we found 23 additional flights which were recorded on one list and not on the other. We were advised by representatives of the air carriers that all 23 flights were in service on May 1, 1971.

COMPARISON OF DAILY NONSTOP WASHINGTON
AREA AIRPORT SERVICE TO AND FROM CITIES OUTSIDE
THE 650-MILE LIMIT AS OF MAY 1, 1971

City	<u>National</u>		<u>Dulles</u>		<u>Friendship</u>	
	<u>Number of flights</u>	<u>Avail-able seats</u>	<u>Number of flights</u>	<u>Avail-able seats</u>	<u>Number of flights</u>	<u>Avail-able seats</u>
Minneapolis, Minn.	9	907	-	-	-	-
Memphis, Tenn.	6	650	-	-	-	-
St. Louis, Mo.	12	1,186	-	-	2	186
Orlando, Fla.	5	523	-	-	-	-
Tampa, Fla.	4	440	-	-	-	-
West Palm Beach, Fla.	2	212	-	-	-	-
Miami, Fla.	<u>16</u>	<u>1,680</u>	-	-	<u>4</u>	<u>442</u>
	<u>54</u>	<u>5,598</u>			<u>6</u>	<u>628</u>

Note: The numbers of flights and aircraft seating capacity were computed on the basis of data furnished by FAA officials.