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NEED FOR AN EXPANDED AIRPORT PROGRAM IN THE UNITED STATES

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THIS article is intended to point out the urgent need for an adequate system of landing facilities in the United States. Airports and landing strips are needed to strengthen the national economy. The users of private and business airplanes need an airport system that will ultimately parallel the system of public roads; places to land near most of the 17,118 incorporated cities and towns in the 48 states.

As you probably know, there are only approximately 2,500 publicly owned landing places in the present system of civil airports. The published list of 6,977 airports in the 1955 Statistical Handbook of Civil Aviation also includes the privately owned and military airports which are limited or restricted. About half of the publicly owned 2,500 have received financial assistance under the provisions of the Federal Airport Act of 1946. The 500-odd public airports that serve the scheduled air carriers have been given prior attention in each year's Federal aid allocations because they have had to meet the requirements of steadily growing airline traffic. Since 1954, however, the rapid acceleration in general aviation aircraft utilization has shown the need for an expanded airport program with increasing attention to the requirements of general aviation.

Plant dispersion to strengthen the Nation's mobilization base is a factor in the rapid acceptance of the business airplane as essential equipment by many technical specialists and corporations. Since 1950 the Secretary of Defense has urged the armed forces to spread procurement contracts as widely as possible, even though it would require more use of negotiated business and a curtailment of formal advertising. It has been considered necessary to integrate procurement with mobilization planning. Over the long view smart procurement demands that the wheels be kept turning in the plants of the planned suppliers whenever possible. There are cases where an order must be divided between several plants and this requires a lot of shuttling back and forth by technical people having responsibility for the order. The airplane saves travel time and helps expedite production.

Throughout all industry the private and business airplane is coming into use for contact trips to sources of raw materials, to component suppliers, and to buying and selling markets. That is why the users of general aviation aircraft want public airports and landing strips at

additional thousands of the Nation's incorporated places—all having some connection with raw materials, manufacturing, buying and selling. That is why the Aircraft Owners and Pilots Association (55,000 members), the large number of companies in the National Business Aircraft Association, the fixed-base service operators in the National Aviation Trades Association, and other general aviation elements are seeking the necessary local support for many new landing facility projects.

A wave of alarm moved over this country two years ago when officials of our municipalities read Senate Document No. 95, the report of the Airport Panel of the Transportation Council of the Department of Commerce on the growth of the United States Airport System. That report revealed that we had in this country only 150 airports (an average of about 3 to each State) with paved runways of 5,000 feet or longer. There were 579 airports with runways between 3,500 and 5,000 feet in length and all other civil airports were reported to have runways less than 3,500 feet long. These facts were early called to the attention of Congressional leaders by the 12,000 member American Municipal Association.

In his remarks before a Senate Aviation Subcommittee, an AMA spokesman said:

"We have in the United States 17,118 incorporated places (populated by 96,062,627 persons), a large percentage of which are industrial, agricultural and commercial centers playing an important part in the national economy. It should be possible to reach these places at air-age speeds in any emergency as well as under modern business conditions. We could face a situation where the products of our farms and factories are needed quickly at unexpected locations to feed or equip dispersed multitudes forced from some of our cities by atomic attack. We could need air speed service in relocating the salvaged machinery of bombed-out factories. We have talked with pride about our national economy and work force being the first line of defense and yet with only 150 airports capable of accommodating our best load carrying transport aircraft we are not prepared to strengthen and sustain our economy. We need action now to broaden the airport base of that means of air transportation that cannot be slowed down by broken rails or highways; a means of transport that is 5 to 8 times as fast as highway transportation."

In a report to President Eisenhower on Federal-city relations, in which is outlined the multiple pressures which have come to bear on cities since World War II, the National Institute of Municipal Law Officers strongly urged a greater Federal responsibility and financial participation in an expanded airport program. These officials said:

"While airports are a great public benefit to the city they serve, their major benefit is to the Nation. Their service is essentially a national one, as the pace of the Nation is geared to transportation.

"The shift of population from the rural to the urban areas where nearly 100 million of our population now reside; the advent of motor vehicles with their repercussion on traffic, parking, and

crippling impact on local transit systems; the aviation industry with its rapidly growing need for sites and installations in or near the cities; inflation and its spiral of rising costs making carefully prepared budgets little more than mingled guess and hope; the cost of operating the Federal Government and financing national defense, presently taking from the taxpayers of the cities many times the amount collected for local government.

"All of these things have put the cities in economic waters well over their heads. They will continue to put forth their mightiest efforts to adjust their economies to the new multiple burdens. This, however, will not suffice.

"The Federal Government must continue a course of intelligent cooperation with the cities. If the cities fail for any reason, the cost and loss will be national."

During the decade of the 1950's we have seen a notable advance in all forms of civil aviation. The increasing traffic handled by our airlines and their confidence in the future, as evidenced by substantial commitments for new equipment, is a source of national pride. The rapidly increasing use of general aviation aircraft is also a gratifying surprise. This growth makes necessary an entirely new look at our civil airport development program. Where we have been giving attention to the airports serving our airlines, we must now broaden the program to facilitate the operation of aircraft to many hundreds of airports that do not expect any form of scheduled airline service in our time. These smaller places have need for adequate landing places for private and business aircraft, just as they have need for the Federal-aid State and local roads that are being improved and expanded every year. The airlines are entitled to credit for selling the idea of time-saving air travel to the public and are reaping a good return in traffic volume. However, the personnel of commercial and industrial organizations now want the advantages of air-speed movement of persons and things to literally thousands of places not served by scheduled air carriers. They also have need for an increasing amount of flexible air transportation that can only be provided by privately owned airplanes. That is why approximately 6,000 corporations in the United States today use about 20,000 aircraft as business equipment.

Just as the private automobile, company service car and light utility truck have become standard business equipment for use on our public roads to places an hour's drive from factories, shops and stores, the utility airplane is growing in use for distances up to 1,000 miles from mines, oil wells, factories and distribution centers. Business and private aircraft play an important part in the maintenance and servicing of farm implements, mining and drilling machinery, automotive equipment, electronic devices, telephone lines and pipelines, water and rail equipment, chemical plants, food machinery, business machines, and all types of manufacturing plants including munitions. The sales and distribution executives, whose business it is to have food, clothing, building materials and other merchandise where the public wants to find them for sale, now travel quickly by business aircraft.

There is little reliable information today about private and business aircraft movements beyond the 180 airports having CAA operated towers. The Aircraft Owners and Pilots Association has plans for an airport division that will build up from year to year the data needed in planning for an adequate system of public airports. The National Business Aircraft Association is gathering information from members about the number of additional trips aircraft would have made last year if landing strips had been available at the proposed destination. In asking its members—"What would you like to see the Department of Commerce do to assist in providing as soon as possible a system of public airports to meet the requirements of the users of aircraft in commerce and industry?" the NBAA got such replies as the following:

"Establish better liaison with city and county governments to point out growing need for better airports."

"We need more 3,500 foot paved single strips in small towns."

"Lengthen and/or improve at least one runway of existing airports in towns off the scheduled airways, but in which there is industrial growth."

"Lay out long sod strips, maintained by State Highway departments paralleling a major road intersection at each town of 10,000 population or more."

"Permit airport operators to install 122.8 M.C. at airports catering to business aircraft so that orders for ground transportation could be placed while in flight. One of our greatest problems is the time lost in obtaining ground transportation upon reaching our airport destination."

"Amend the Airport Act to parallel the Public Roads Act in making facilities free of tolls or landing fees for private and business conveyances below a certain weight. At Federally aided airports establish reasonable maximum charges for ground rental of property to be used for aviation related purposes. This would encourage many fixed base operators to improve the available service to aircraft users."

For convenience in the study of requirements at airports serving air carriers, the CAA has used a "hub" classification based upon enplaned airline passengers.

The following sample list shows how business and private aviation (civil itinerant and local civil) grows to provide flexible air transportation in typical cities of three airline hub classifications.

<i>Aircraft Operations 1955</i>				
<i>Airport</i>	<i>City Population 1950 Census</i>	<i>Air Carrier</i>	<i>Civil Itinerant</i>	<i>Local Civil</i>
(1) LARGE HUBS				
Buffalo, N. Y.	580,132	50,193	17,074	4,174
Houston, Texas	596,163	54,432	52,621	6,829
St. Louis, Mo.	856,796	81,479	39,116	5,538
Washington, D. D.	802,178	176,820	26,617	1,580

Aircraft Operations 1955

Airport	City Population 1950 Census	Air Carrier	Civil Itinerant	Local Civil
(2) MEDIUM HUBS				
Columbus, Ohio	375,901	47,455	41,011	22,310
El Paso, Texas	130,485	27,018	37,247	74,299
Memphis, Tenn.	396,000	45,304	37,230	29,990
Oklahoma City, Okla.	243,504	33,832	34,507	34,347
(3) SMALL HUBS				
Amarillo, Texas	74,246	20,969	18,379	8,334
Columbia, S. C.	86,914	19,395	17,500	16,680
Evansville, Ind.	128,636	18,358	16,585	7,896
Rochester, Minn.	29,885	21,213	16,816	11,462

The CAA officials charged with the responsibility of approving requests for Federal aid often compare a proposed landing facility's estimated potential with actual performance at an airport serving a similar community. Using a population unit of 10,000 people, the CAA planning staff has found that the average "balanced" class city enplanes 150 percent more passengers than the average "industrial" class city; the average "institutional" class city 370 percent more and the average "marketing" class city 375 percent more passengers than the average industrial class city. These percentages provide a rough indication of the relative volume of private and business aircraft traffic to be expected at cities in the classes indicated. However, the rapidly growing use of aircraft in industry for contact with branch plants and component manufacturers may put the "industrial" class city ahead in general aviation activity.

Airport planners now realize that airline statistics alone do not tell the air traffic story. The following figures show an estimate for 1955 of the passengers in and out of a sample list of airports—for both *airline and general aviation itinerant aircraft*:

Airport	City Popul'n (1950 Census)	Airline		Gen'l Aviation (Itinerant)	
		Aircraft Opera- tions	Passen- gers in and out	Aircraft Opera- tions	Passen- gers in and out
Allentown, Pa.	106,756	9,996	52,500	26,224	65,560
Asheville, N. C.	53,000	10,153	46,600	12,180	30,450
Austin, Tex.	132,459	16,504	118,270	25,652	64,100
Bakersfield, Cal.	34,784	5,743	32,300	32,615	81,530
Baton Rouge, La.	125,629	15,296	68,450	21,669	54,170
Billings, Mont.	31,834	14,413	92,862	20,769	51,920
Charleston, S. C.	70,174	15,429	79,434	12,215	30,530
Chattanooga, Tenn.	131,041	27,158	138,500	21,067	52,600
Colo. Spgs., Colo.	45,472	17,766	73,200	10,038	30,090
Daytona Beach, Fla.	30,187	12,033	56,100	15,157	37,890
Evansville, Ind.	128,636	18,358	138,190	16,585	41,460
Flint, Mich.	163,143	12,613	53,600	31,785	79,460
Fort Wayne, Ind.	133,607	15,293	76,660	30,798	76,900
Grand Rapids, Mich.	176,515	18,684	164,710	19,923	49,800

Work has started on a comprehensive aviation facilities plan for the next 20 years. President Eisenhower has pointed out that we have congestion in the airspace today because airports, navigation aids, air traffic control devices and communications systems do not meet the requirements of growing civil and military air traffic. A Special Assistant to the President has been sworn in to lead in the formulation of a plan to reduce congestion in the airspace. His work will have special interest to the Director of the Budget, who has the responsibility for reviewing the programs of the Federal agencies concerned with aviation matters.

The users of private and business aircraft believe that unlimited possibilities in the greater use of airspace would open up if air traffic did not converge on so few airports at such a wide range of speeds. The navigation of airplanes over land has been aided by radio installations that project fixed positions and tend to channelize air traffic, crowding it into narrow lanes, concentrating it into small areas, all necessitating control measures to separate it in the interest of safety. It now appears that air traffic control measures have virtually reached their capacity, calling for something far different and far more effective. The complexity of the traffic on our highways—private, business, bus, truck, and military—give some idea of what the problem will be on the airways. There is one big difference in the fact that airplanes cannot stop and wait. However, it is possible that *those using public terminals* may have to be capable of operating at some standard lower speed, just as high powered automobiles are required to move at low speeds in congested areas and school zones. The traffic control problem is a difficult one.

One group of private and business aircraft users studying the air traffic control problem believe the "area or random" distribution of air traffic merits a closer look. They see the area distribution method with some means on the aircraft for warning against potential collision, as a way to get increased usability of the airspace. They visualize the lower several thousand feet of airspace as uncontrolled, except in the airport approach area. They stress the need for many secondary airports and landing strips to offer a wider selection of landing places. The Minneapolis-St. Paul area is used as an illustration of a community with a wide selection of landing places.

A quarter of a billion dollars in Federal aid for civil airports has been made available by the 84th Congress. The Federal aid program for 1956 exceeds in matching funds for airport development the total made available in any single year since Congress passed the Federal Airport Act of 1946. The following figures show the funds appropriated by Congress, or available for obligation, to implement the Federal Airport Act:

\$45,000,000	for fiscal 1947
32,500,000	for fiscal 1948
40,000,000	for fiscal 1949
39,500,000	for fiscal 1950
24,200,000	for fiscal 1951
18,700,000	for fiscal 1952
14,321,154	for fiscal 1953
None	for fiscal 1954
22,000,000	for fiscal 1955
62,500,000	for fiscal 1956

Under the provisions of Public Law 211, passed last July to amend the Federal Airport Act of 1946, the sponsors of public airports may plan to receive in aid during each of the next three fiscal years \$63,000,000 less certain administrative expenses.

A greatly expanded system of public landing places is expected to keep step with the airway traffic control improvements now being planned. Counties, towns, and cities are seeing more clearly the connection between community growth and air transportation in all its forms. They are making aeronautical-economic studies to provide needed facts for planning new airport construction or landing strip improvements. From such study reports they get an estimate of the volume of traffic that a landing place will attract and the effect of that air traffic on local commerce, industry, and the general welfare.

The recent National Airport Plan prepared by CAA and based upon a projection of civil aviation needs up to the year 1960 shows 1,309 general aviation airports and 617 air commerce airports in need of improvements.

Public Law 211 will make possible important work under the plan. The great majority of the 422 airports on the Federal aid allocation list this year are in the Air Commerce Airport category. CAA has pointed out that it is a responsibility of the users of business and private aircraft to urge the public owners of general aviation airports to proceed with needed improvements, asking for Federal aid when they need it. There is little doubt that future annual Airport Plans will include thousands of additional community landing strips. It may well be that the decade of the 1960's will be the decade of *general aviation's* greatest advance.