Major Regional Airports

for the New Jersey – New York – Connecticut Metropolitan Area

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The Regional Airport Plan

This Bulletin presents some of the results of a two-year program of work to produce a plan for a system of airports in the Region. It is concerned with the findings in relation to transport and supplementary major airports. A subsequent Bulletin will deal with secondary and local airports.

The original Regional Plan contemplated a 40-year period and, published in 1929, called for 33 airfields in the Region. In 1940 a revision of the airport system was published as Bulletin Number 49 and included 44 landing fields. Already more than 60 airfields are in existence.

To carry forward the present program as suggested by the Civil Aeronautics Administration, the Regional Plan Association organized the Regional Airport Conference. The RPA served as a clearing house for the collection and analysis of data, including field work; for the study of airline, CAA, state and local requirements, and for the presentation of the results.

Regional and state representatives constituted a Steering Committee for the Conference. The technical work was done by regional groups under the direction of C. Earl Morrow, Chief Planning Engineer of the Regional Plan Association; Walter P. Hedden, Director, Department of Port Development, Port of New York Authority; and William E. Cullinan, Jr., Superintendent, Airports Branch, Civil Aeronautics Administration. The complete personnel of the Conference is given on the last page of this Bulletin.

Special acknowledgement is hereby made to the U.S. Navy which furnished a blimp from the Lakehurst Station from which to photograph and make studies of the sites from the air.

Figures 1, 2, 3, 4, 5 were prepared by Port of New York Authority.

Cover: Aero Digest — New York

AIR TRANSPORTATION REQUIRES A REGIONAL AIRPORT SYSTEM

BECAUSE the airplane can serve the New York Metropolitan Region only to the extent that it has available places for landing and taking off, the Region's present lack of adequate airports threatens to restrict the number of plane passengers and air cargo tonnage that can be flown into the port of New York.

The Federal Government, recognizing that air terminal facilities must keep pace with the increasing number of flights, has authorized in the Federal Airport Act annual appropriations over a period of seven fiscal years amounting in the aggregate to $500,000,000, the grants generally to be made on the basis of a Federal share of 50 per cent.

Under the Act, airport aid is limited to the developments included in the National Airports Plan formulated by the Civil Aeronautics Administrator. To make a comprehensive plan, required from larger metropolitan areas for inclusion in the National Plan, the Regional Airport Conference was organized for the New Jersey-New York-Connecticut Metropolitan Region at the request of the CAA.

Plan Already in Use

Work began in 1944. The purpose of the program was to determine the relative need for all types of airports in various sections of the Region and make a tentative selection of sites that would meet this need.

The Regional Airport Plan evolved from this work and presented here in part, already has been used by the CAA in making up a three-year program of airports in the Metropolitan Region to which the provisions of the Federal Airport Act will apply.

As a basis for the Regional Airports Plan, estimates of air traffic have been made for five, 10 and 15 years in the future. Whether the volume of traffic reaches the estimated figures in the time allowed will depend partly on indeterminate factors such as national and international policies, and, of course, on the provision of adequate airport facilities. The validity of the conclusions arrived at will not be affected if the estimated volume of traffic has not been reached in the precise time indicated.

1. TRANSPORT LANDINGS

Regional Classification

LANDING fields have been divided into the following four classes, according to their importance in the regional transportation system: A. Transport; B. Supplementary Major; C. Secondary; and D. Local. This does not completely coincide with the ratings of the Civil Aeronautics Administration since the latter are based largely upon the size of planes that the airport can accommodate rather than the facilities needed on the site. Some of the airports developed during the war, for example, are larger than peacetime conditions require.

Table I shows the dominant functions of the regional airport types and their approximate relation to the CAA ratings. The functions indicated are the ultimate uses rather than the immediate uses which developers and operators of the airports should also consider. A major port, for example, may serve activities assigned to secondary or local ports, such as instruction and personal flying, until its major functions have absorbed most of its capacity.

Airline Airport Requirements

The provision of facilities for airline needs is one of the primary concerns of a plan for a metropolitan airports system, and it is vital that transport fields have first claim to suitable landing area available close to the *metropolitan center* as well as to the approach and maneuvering space in the air. In order to determine airline airport requirements, estimates of future transport service have been made as explained below.

Landing facilities near the *metropolitan center* are required for both domestic and foreign transport. The New York Region's share of the national totals has been used as a basis for estimates of the Region's airport needs.

United States Domestic Air Passenger Traffic

The trend of domestic revenue air passenger miles between 1930 and 1945 was constantly upward, as Figure 1 shows. An immediate accelerated rate of growth is expected to 1950, with the 3.5 billion passenger miles for 1945 rising to 19.8 by that date, followed by a less rapid growth to 1960, by which time a total of 33.5 billion passenger miles per year is anticipated (see Figure 1 and Table II, Column 2).

The ground activity that has to be provided for is a function of the length of haul and the number of passengers per plane as well as the total passenger

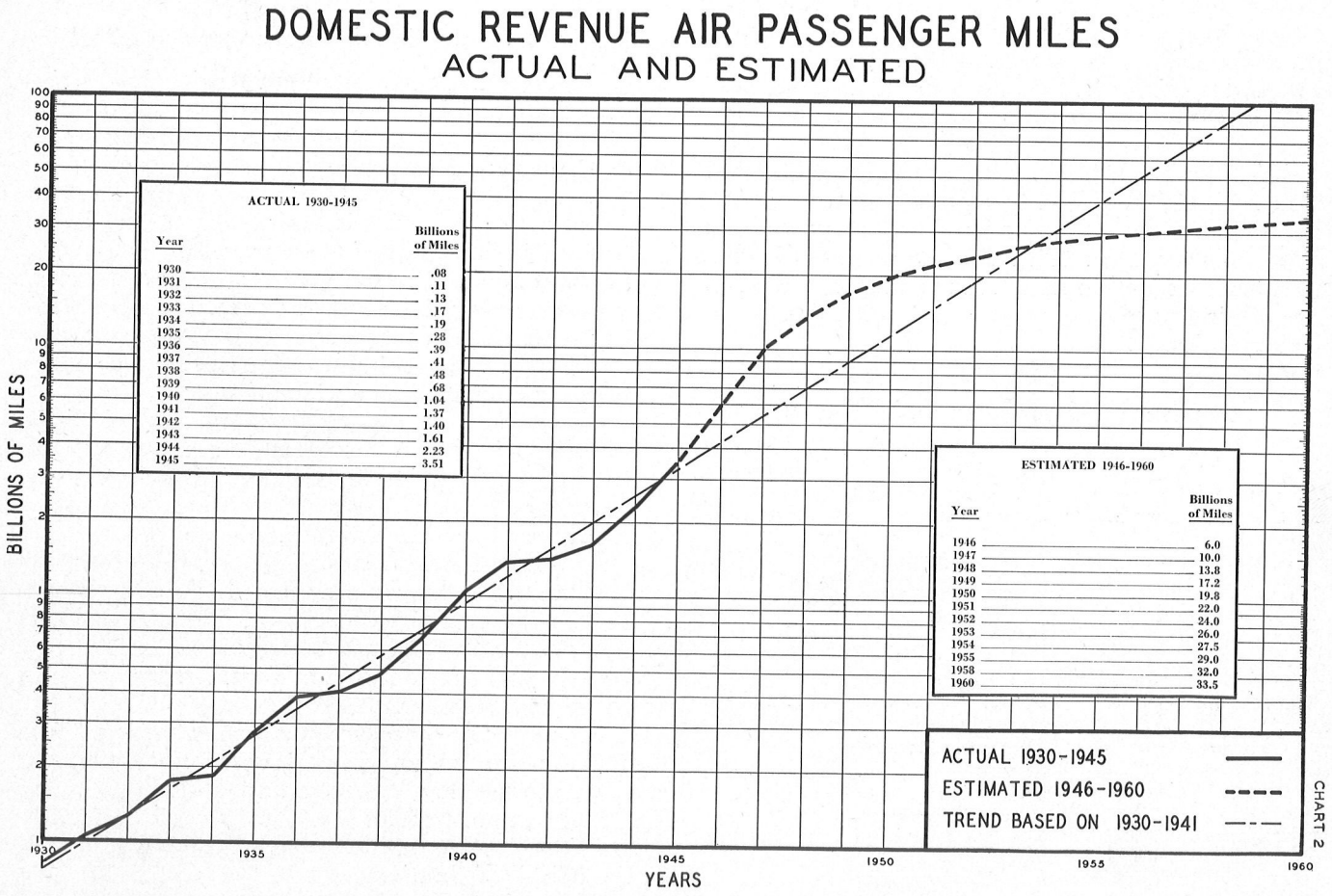


Figure 1

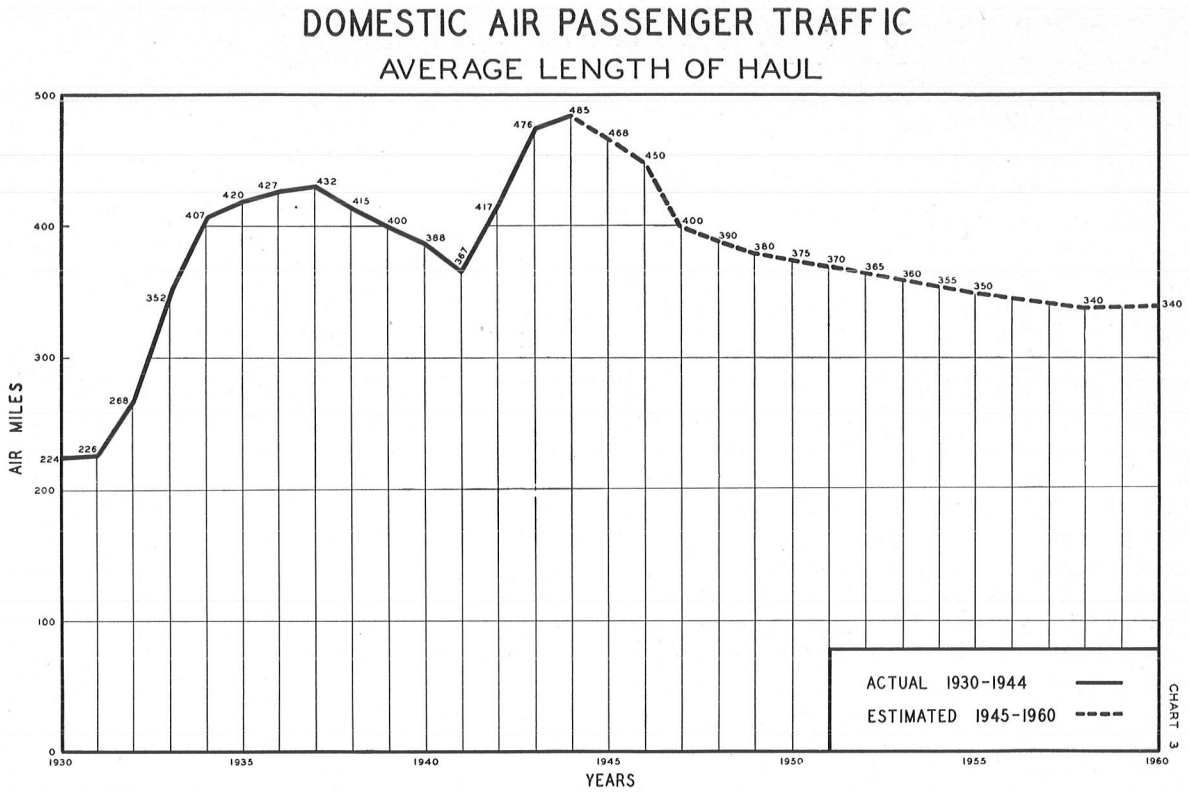


Figure 2

miles. Ordinarily, for a given number of passenger miles the shorter the length of haul the more landings and take-offs. In 1930 the average haul was only 224 miles. It increased to 432 miles in 1937, decreased to 367 in 1941, and rose again to an average of 485 miles in 1944. As indicated in Figure 2 and in Table II, Column 3, it is expected to drop to 400 in 1947 and to continue more slowly downward to about 340 by 1960. With the improvement of airport facilities and approach roads and the increased use of air transportation, the shorter haul will become profitable.

TABLE I

Regional Classification of Airports

	Dominant Function	*CAA Rating (ordinarily)*
A. Transport	Trunkline Transport	IV and up
B. Supplementary Major	Supplementary Trunkline Transport Alternate Bad-weather Landing for Trunk-line Transport Feeder Service Cargo Terminal Itinerant Terminal	IV and III
C. Secondary	Feeder Service Cargo Station Taxi and Charter Service Instruction Personal Flying	III and II
D. Local	Personal Flying Instruction Taxi and Charter Service	II and I

Regional Domestic Air Passenger Potential

The New York Metropolitan Region has a high potential for future airport expansion. It now provides about 18 per cent of the total United States domestic air passenger traffic, 19 per cent of the domestic air mail, and 22 per cent of the domestic air express. Air service is rapidly expanding in the Region, as the result of more travel on established lines and the inauguration of new routes and service to places newly linked to this area. It will expand still further when pending proposals for new services to points as yet untapped or having only infrequent or circuitous service are adopted.

Within the past two years several new air lines, including Northwest, Northeast, Pennsylvania Central and National, have been certificated into the New York Region. Direct service has been established to Milwaukee, Minneapolis and Seattle.

Several other applications for certificates are before the Civil Aeronautics Board, among them a direct route between New York, Cincinnati, Tulsa and Oklahoma City, and an additional direct route from New York to Atlanta, Birmingham, Chattanooga and New Orleans.

In addition, there are a number of small and medium-size communities having no direct air service to the New York district for which proposals are now in prospect for non-trunkline service. There are 40 such communities in New England and 80 in the Middle Atlantic States.

The estimated passenger potential for the New

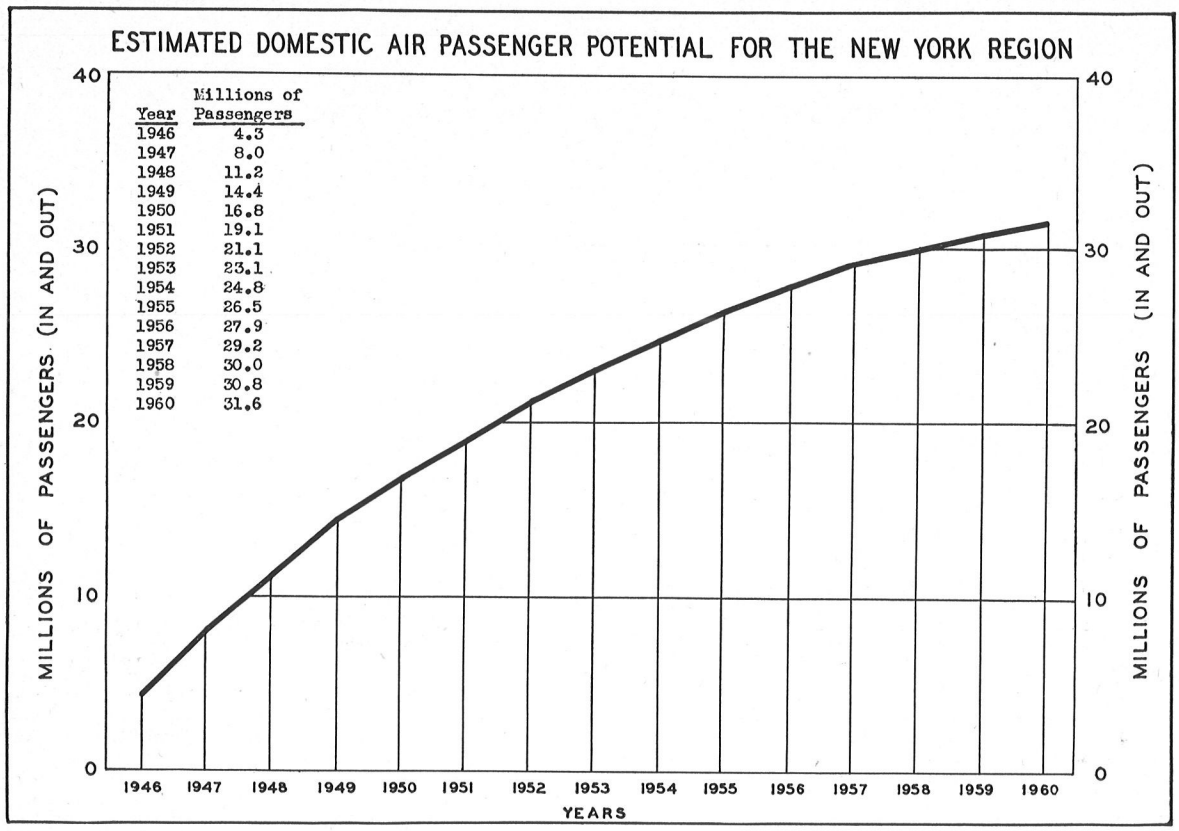


Figure 3

York Metropolitan Region has been projected to 1960 on the assumption that 16 per cent of the domestic passenger movement of the United States will be in and out of the Region. As indicated in Figure 3, the regional total is expected to reach 4.3 millions of passengers by 1946 and 31.6 millions by 1960 (see also Table II, Column 6). The question arises whether the present terminals can service this increased traffic with existing or expanded facilities, and what if any facilities may be needed beyond this date.

Present and Potential Uses of Three Existing Fields

The airport problem of the New York Region is not one of inter-airport competition. The pressure on the Region's airports has had considerable publicity and is generally known. LaGuardia, with a rate capacity of 400 scheduled arrivals and departures per day, is faced with a demand for 700, and the lines operating out of Newark are taxing the capacity of the accommodations now available there. The problem is rather one of finding adequate space reasonably close to the centers where air traffic originates to serve the air-traffic potential that is here and demanding accommodation. The immediate solution is to expand Newark and Idlewild as dual-runway airports as promptly as possible. The next step is to expand Idlewild *beyond* the dual-runway stage if that is operationally and economically practicable; or alternatively, to develop another — a fourth major air terminal port in the Region.

Domestic Traffic In and Out of New York

Air passengers on domestic air lines entering and leaving the New York Region in 1946 will total more than 4,000,000. By 1950 it is estimated that this figure will be almost 17,000,000; by 1955 about 26,500,000; and by 1960 about 32,000,000. Even with a generous allowance for the constantly increasing capacity of domestic commercial aircraft, this traffic will mean 53 plane movements per peak hour in the Region by 1946; 169 plane movements per peak hour by 1950: 279 plane movements per peak hour by 1955; and over 300 plane movements per peak hour by 1960. (Complete figures for estimated peak-hour movements in the Region are listed in Table II, Column 12.)

These figures indicate that the scheduled domestic trunk-line air passenger services operating in the New York Region will exceed the capacities of LaGuardia, Newark and Idlewild as single-runway airports by 1948. If either Idlewild or Newark were available as a dual-runway* airport by 1949 the resulting increased capacity would be adequate to

* Dual runways more than double the capacity of an airport, since arrivals and departures can be separated and thereby handled more quickly. There is some difference of opinion, however, as to how much the capacity is increased. The assumption that it might be as much as tripled represents a conservative estimate from the point of view of the need for additional facilities in the New York Region.

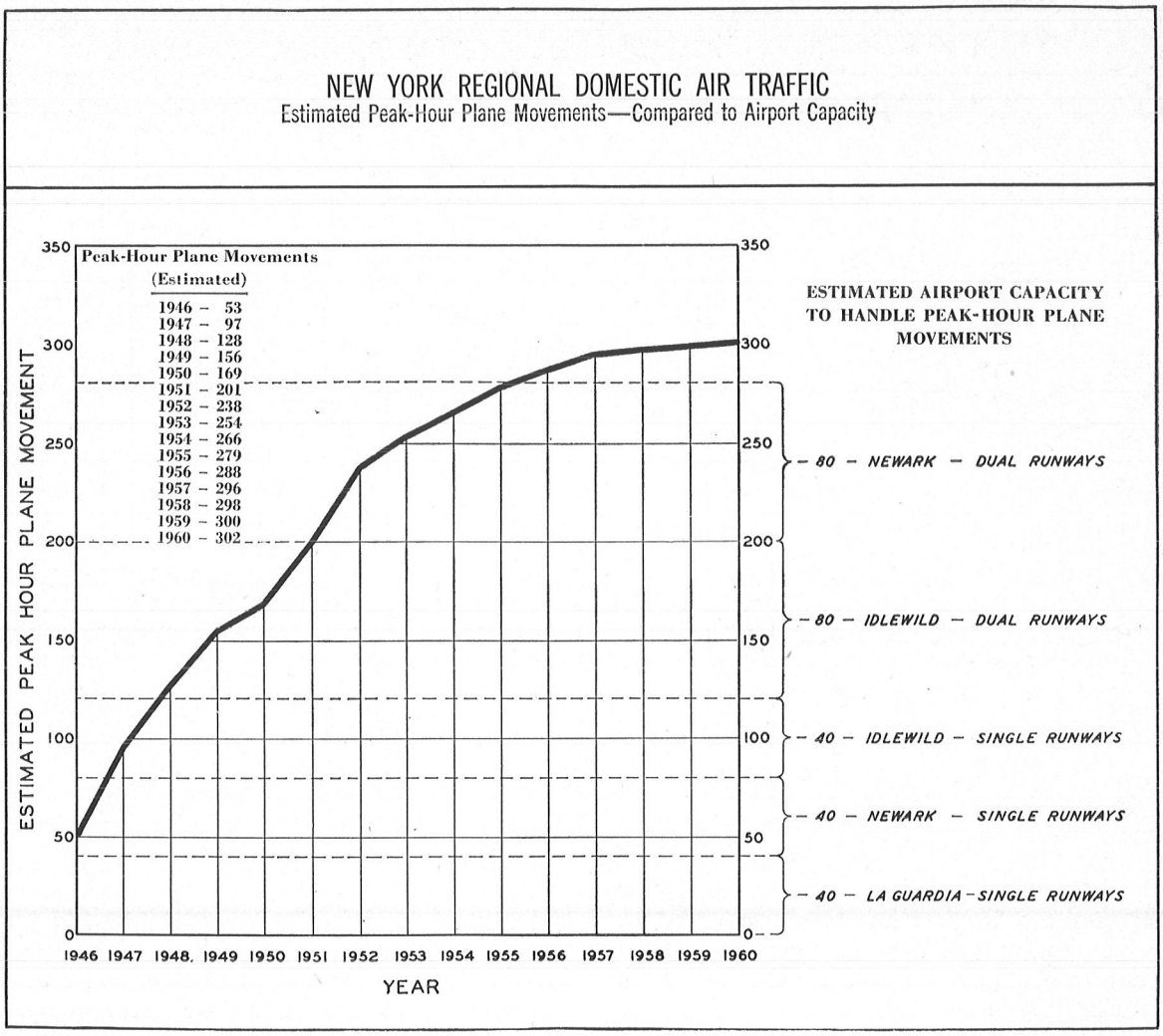


Figure 4

meet the increased demand only until 1950. Dual runways at both Idlewild and Newark, together with the present single runways at LaGuardia, would meet the indicated requirements for this type of traffic only through 1955.

By 1956, therefore, airport capacity will be needed in the New York Region beyond that afforded by dual runways at Newark and Idlewild and single runways at LaGuardia to take care of scheduled domestic trunkline passenger services alone. Figure 4 presents a graphic comparison of airport capacity with estimated peak-hour movements.

In addition, there are rapidly increasing non-trunkline air services, and all-cargo operations are already developing and likely to develop on both a scheduled common carrier and on a contract carrier basis. There is also a growing demand on the part of industry for accommodation at major air terminals for large company-owned planes which require the use of an airport of Class IV or larger.

Cargo is expected to increase tremendously in the future but since the passenger and his baggage produce a higher income per ton-mile it will be literally crowded out of the peak hour at the terminal airports and eventually perhaps moved to freight ports where there are special facilities for cargo handling. There is a weight carrying capacity in the passenger plane beyond its full passenger load which can continue to carry cargo of special types, such as air mail.

International Traffic Through Port of New York

Actually, additional airport capacity may be required two or three years sooner to take care of the added loads of steadily growing international air traffic. About 49 per cent of the overseas passenger traffic originates in New York and New Jersey, 41 per cent of the overseas mail, and about 50 per cent of the international air express originates in the metropolitan area.

Three overseas routes across the North Atlantic and four Latin American routes have been certificated. Several foreign flag lines have begun service, including the Dutch and British, and the Swedish, French and Norwegian lines are preparing to start service shortly.

Applications for certificates are before the Civil

Aeronautics Board for an overseas route to West and South Africa, a direct route to the Orient via Canada and Alaska, and additional routes from the Canal Zone and the west and north coasts of South America. The British Overseas Air Company has been trying desperately to find a base in the New York Region.

A Fourth Transport Landing

The need for a fourth landing for airline transport by 1956 or sooner poses the problem of finding an adequate site. A landing for itinerant planes is also needed near the heart of the Metropolitan Region. The practical possibilities for such landing areas appear to be limited to the Hackensack Meadows.

The only site susceptible to development of a Class IV landing is in the northerly part of the Meadows, in Bergen County. In certain sections of this district foundation conditions are relatively good and obstructions are comparatively few. The Air Traffic Control Division of the Civil Aeronautics Administration has reported that such an airport is not considered practicable from a traffic control aspect, since it is at the busiest airways intersection in the country and instrument approaches would conflict with those of LaGuardia and Newark Airports.

However, in view of the definite need and the absence of other sites near the center of the Region an airport is suggested in this area since it would be justified on the basis of contact weather operation only provided there is regional control of central major ports. From records of weather conditions over a period of five to seven years at Newark, Floyd Bennett and LaGuardia Airports it was determined that from 79 to 83 per cent of the time the weather was suitable for contact flying, from 12 to 15 per cent it was adapted to instrument operation, and from 4 to 6 per cent of the time operations would be closed down. There is also the possibility that with the expected improvement in instrument landing methods and equipment it may be feasible to have instrument landing at this site by the time the airport is constructed.

A longer period of time is required to effect an instrument landing than a contact landing. This may always be the case. At present about fifteen minutes are needed to make an instrument landing compared with one minute for contact landing. Experiments are under way which are expected to develop an instrument landing taking only two minutes. Even if that possibility is realized instrument weather will require twice the landing facilities that contact operations need. Assuming this, as many instrument runways at "stand-by" airports will be required for scheduled service as there are in the central transport landings.

Assuming a fourth transport landing in the Upper Hackensack Meadows operating only in contact weather, there would be needed additional "stand-by" facilities equivalent to double the capacity of that port.

Consideration is being given to the possibility of segregating traffic coming to the central ports according to the direction of approach and departure. In this way LaGuardia Airport would handle traffic to and from the northeast; Idlewild Airport would handle traffic from overseas and from the south; Newark Airport would service the southwest; and the new Meadows port would service the west and northwest. If such an arrangement proves feasible from the point of view of operation the resulting

TABLE II

Estimated Domestic Air Passenger Potential for the New York Region

			Air Passenger Potential In and Out Together						*Regional Plane Movements Per Peak Hour*		
	Domestic Air Passenger Miles	*Average Haul*	*United States*	*N. Y. Region*		*Average Seats per Plane*	*Load Factor from Regional Passengers*	*Seats per Plane from Regional Passengers*		*% of*	
Year	*(Billions)*	*(Miles)*	*(Millions)*	*% of US*	*Amount (Millions)*				*Per Day (Average)*	*Avge. Day*	*No.*
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
1946	6.0	450	26.6	16	4.3	30	75	22.5	526	10	53
1947	10.0	400	50.0	16	8.0	35	65	22.7	966	10	97
1948	13.8	390	70.0	16	11.2	37	65	24.0	1,280	10	128
1949	17.2	380	90.6	16	14.4	39	65	25.3	1,560	10	156
1950	19.8	375	105.0	16	16.8	42	65	27.3	1,690	10	169
1951	22.0	370	119.0	16	19.1	44	65	28.6	1,830	11	201
1952	24.0	365	131.6	16	21.1	45	65	29.2	1,980	12	238
1953	26.0	360	144.4	16	23.1	46	65	29.9	2,120	12	254
1954	27.5	355	155.0	16	24.8	47	65	30.6	2,220	12	266
1955	29.0	350	165.8	16	26.5	48	65	31.2	2,320	12	279
1956	30.0	345	174.0	16	27.9	49	65	31.8	2,400	12	288
1957	31.0	340	182.5	16	29.2	50	65	32.5	2,460	12	296
1958	32.0	340	188.2	16	30.0	51	65	33.1	2,480	12	298
1959	32.8	340	193.0	16	30.8	52	65	33.8	2,500	12	300
1960	33.5	340	197.2	16	31.6	53	65	34.4	2,510	12	302

traffic pattern would probably permit instrument landing at the Meadows port.

The present Teterboro Airport would be absorbed by the fourth transport landing.

The proposed Metropolitan Airport at Secaucus is recommended as an itinerant plane terminal for the Region. It would be operated only in contact weather.

Floyd Bennett Field in Brooklyn is to be utilized on an emergency basis for civil flying until Idlewild Airport can be made ready. Its nearness to the latter and the difficulties in reaching Manhattan make it less suitable for a permanent major civil airport than the proposed Hackensack Meadows port.

Alternative to Fourth Central Port

In view of the absence of other near-in sites, the alternative to the Upper Hackensack Meadows port would be one of the supplementary major airports described below. It is possible to run an air shuttle service to the proposed central itinerant port at Secaucus which would take passengers to and from Manhattan. The loss of time required to make the change would be made up by reason of the nearness of the Secaucus port to the center of Manhattan. Transfer passengers would take off from the supplementary major airport where they came in or else shuttle to a major transport landing by air or highway. In instrument weather the shuttle service would be suspended. This means that the supplementary major port used as a transfer station should have express highway access to Manhattan.

Advantages of Regional Operation

State, county and municipal boundary lines are an anachronism in the air age. Airport development and the utilization of airports in the New York Region must be on a basis of close cooperation between the various governmental agencies involved. The three million people living in Northern New Jersey will benefit greatly from the development of Idlewild as an international airport. Some sections of Bergen and Rockland Counties will find LaGuardia Airport conveniently accessible for domestic flights by way of the George Washington, Triboro and Whitestone Bridges, particularly with the completion of the Cross Bronx and Harlem River Expressways. New Yorkers on the west side of Manhattan, on the other hand, will find Newark Airport and the other airports in New Jersey closer as to time than the New York airports, and the completion in the next five years of the new Trans-Meadows Highway will make this link still more effective.

Special Functions of Transport Fields

With a regional agency operating the airports, specialization in services for which the major ports are best adapted would, of course, be greatly facilitated: Idlewild as the center of the international service and for long-haul domestic service; Newark and LaGuardia, which are closer to the business and residential centers, for intermediate and shorter domestic routes. Without taking into consideration the international services, the domestic passengers alone will furnish enough business to keep LaGuardia, Newark and Idlewild busy and will force the fullest potential development of Newark as a dual-runway field and Idlewild as a dual or triple-runway field within the next few years.

In the complete regional pattern of development for regular air bases, both for scheduled transport service and for non-trunkline feeder services, the Westchester County Airport at Rye, New York, and other Class III and IV airports at Caldwell, Linden, Morristown and Teterboro, New Jersey, and possibly some of the Long Islands fields in Nassau County, will have to be taken into consideration.

Technical problems such as airway radio beams, instrument landing controls, elimination of hazard from tall buildings, and alternative stand-by landing arrangements during local bad weather require cooperative action between the CAA and the various governmental bodies engaged in development and operation of airports.

Ground Facilities

Ground facilities for the servicing and repair of planes and the ground handling of passengers, mail and cargo, which are fully as important as the actual runways, will also require close cooperation. A rational development of these facilities cannot possibly be realized under restrictive state and municipal controls. The air lines are faced with a gigantic problem in the speedy and economical transfer of passengers and freight from point of origin to and from the airports. Terminal facilities for busses handling passengers, development of mass transportation by rapid transit for airport employees, as well as visitors, and facilities for sorting and dispatch of air freight through clearing stations and local pickup and delivery truck service must be considered from a regional standpoint.

For Manhattan alone the air lines are thinking in terms of at least three bus dispatching stations — on the East side, on the West Side, and Downtown. These must give ready access via tunnels and bridges and arterial highways to airports in both New York and New Jersey.

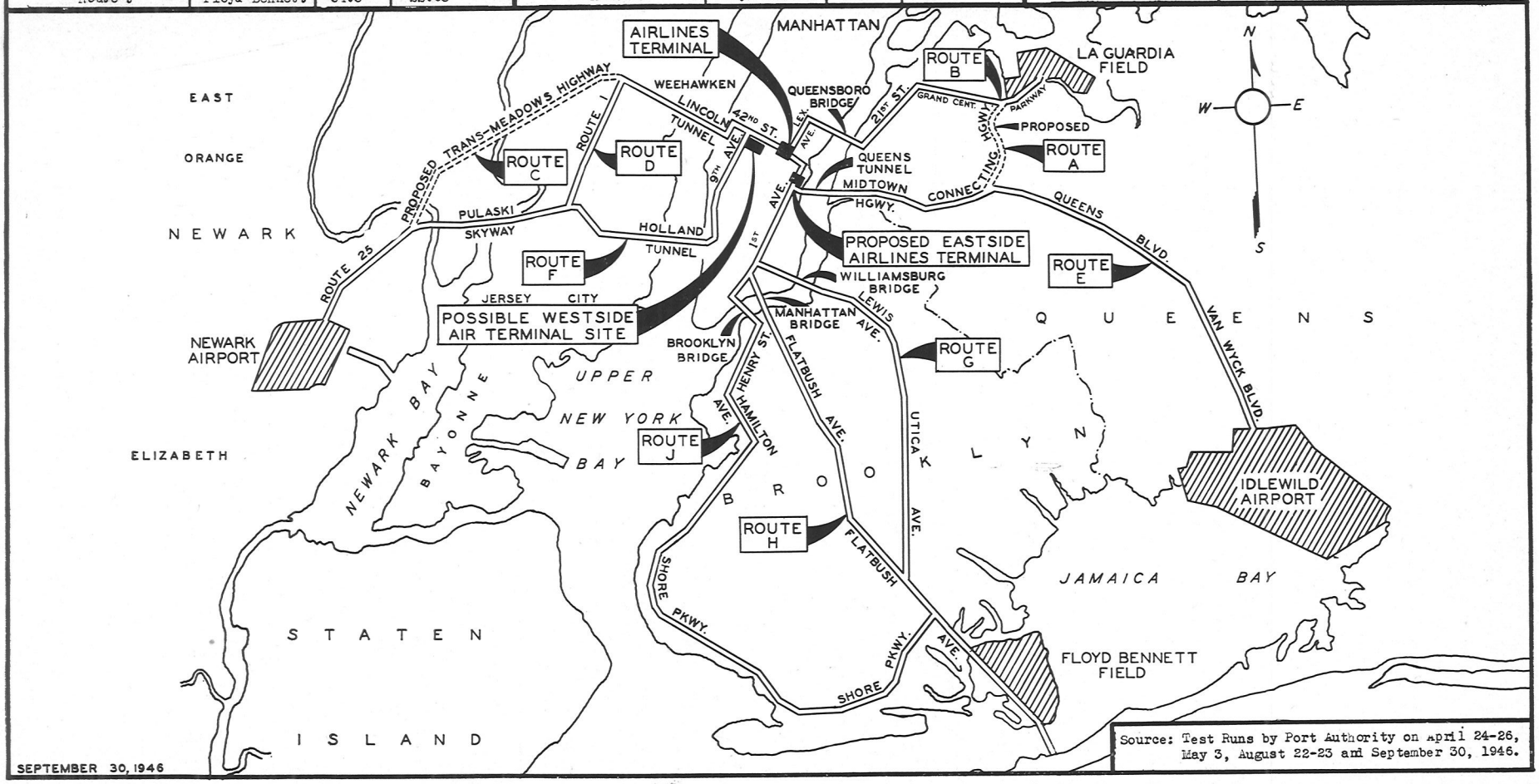
A comparison of time and distances from Newark, LaGuardia, Idlewild and Floyd Bennett Airports to present, proposed and possible air terminals in Manhattan is shown in Figure 5. These are based on actual test runs on the existing highways. Estimates are included indicating the extent to which the projected highway improvements in Queens and in the Hackensack Meadows will shorten the trips to LaGuardia and Newark airports respectively. The time required to reach Floyd Bennett Field is a handicap in its temporary use as a major transport landing.

TRAVEL TIME AND DISTANCE
BETWEEN
MIDTOWN MANHATTAN AND NEWARK, LA GUARDIA, IDLEWILD AND FLOYD BENNETT AIRPORTS

From Airlines Terminal Via	To Airport	Time Minutes	Distance Miles
Route A	LaGuardia	20.5	8.93
Route B	LaGuardia	29.0	8.15
Route C	Newark	31.1	12.97
Route D	Newark	34.7	14.22
Route E	Idlewild	38.0	15.10
Route F	Newark	44.7	13.47
Route G	Floyd Bennett	53.5	15.03
Route H	Floyd Bennett	53.8	14.04
Route J	Floyd Bennett	54.3	22.08

From Possible West Side Air Terminal Site Via	To Airport	Time Minutes	Distance Miles
Route C	Newark	21.9	12.10
Route D	Newark	25.5	13.35
Route A	LaGuardia	30.0	9.82
Route F	Newark	35.5	12.60
Route B	LaGuardia	38.2	9.02
Route E	Idlewild	47.2	15.97
Route G	Floyd Bennett	63.0	15.92
Route H	Floyd Bennett	63.3	14.93
Route J	Floyd Bennett	63.8	22.97

From Proposed East Side Airlines Terminal Via	To Airport	Time Minutes	Distance Miles
Route A	LaGuardia	14.7	8.15
Route B	LaGuardia	29.2	8.55
Route E	Idlewild	34.8	15.35
Route C	Newark	36.9	13.75
Route D	Newark	40.5	15.00
Route G	Floyd Bennett	47.7	14.25
Route H	Floyd Bennett	48.0	13.26
Route J	Floyd Bennett	48.5	21.30
Route F	Newark	50.5	14.25



Source: Test Runs by Port Authority on April 24-26, May 3, August 22-23 and September 30, 1946.

SEPTEMBER 30, 1946

Figure 5

Terminals for Air Freight

The most serious problem facing the air lines in the handling of freight is the development of terminals accessible to business districts which will serve as collection points for local pickup and delivery trucks, as well as public stations at which shippers and receivers can pick up and deliver in their own truck equipment. Just as the Railway Express Agency has developed regional sorting stations in Manhattan, Bronx, Queens and New Jersey, so will the air lines have to have facilities of this type at strategic locations to serve all of the cargo airports. This same pattern is being developed for railroad and truck merchandise freight through the Port of New York Authority's Union Terminal Freight Station No. 1 at 15th Street and 8th Avenue and Union Freight Station No. 2 at Spring Street and Washington, both in Manhattan, and Union Terminal No. 3 in Newark, the latter two of which are now under construction. A logical development will be to concentrate air freight also in these terminals.

Coordination of Finances

Financial coordination is essential to maintenance of the New York Region's position as a world aviation center. The tendency for each separately financed airport to strive for the most profitable type of business for itself will undermine efficiency of air operations due to the fact that various airports are more and more tending to take on special functions or types of service, such as international, long distance domestic, short haul, feeder and cargo.

This will result in failure to obtain the maximum number of flights at these terminal airports. Furthermore, if the entire system were administered as a unit it would be possible to allocate functions based upon metropolitan needs and ability of each airport to perform best a particular function regardless of income, since all income would flow into a common treasury for the benefit of all.

Finally, it should be pointed out that a piecemeal, uncoordinated program, individually sponsored by scores of county, municipal, and other public agencies, each without regard to the other, would be practically a hopeless undertaking when it came to negotiating with the air lines and the Federal Government in the matter of a regional development of airports and ground handling of facilities.

Since expected air traffic will be greater than can be accommodated in the Region's centrally located airports and air space, it is imperative that an integrated major airport system be developed, and this can best be accomplished by a regional agency serving the needs of the three states involved.

2. SUPPLEMENTARY MAJOR AIRPORTS

Principal Factors in Selection of Sites

Of the various functional factors that enter into the determination of the supplementary major airports, their relation to the trunkline transport landings is of first importance. As indicated above, combination passenger and cargo planes will tend to utilize all the peak-hour capacity at the major transport landings. In time, even some of the trunkline passenger movement may be serviced by the supplementary major ports. This would be more appropriate for passengers originating in, or destined for, the Region rather than for through passengers, especially where the airports are in districts of passenger origin. The probability that a port may become a feeder-line stop is also a factor in its classification.

Other considerations beyond purely functional factors enter, such as the extent to which a field is already developed, the lack of more favorably located sites, its relation to the express highway system and the general pattern of present and probable future development.

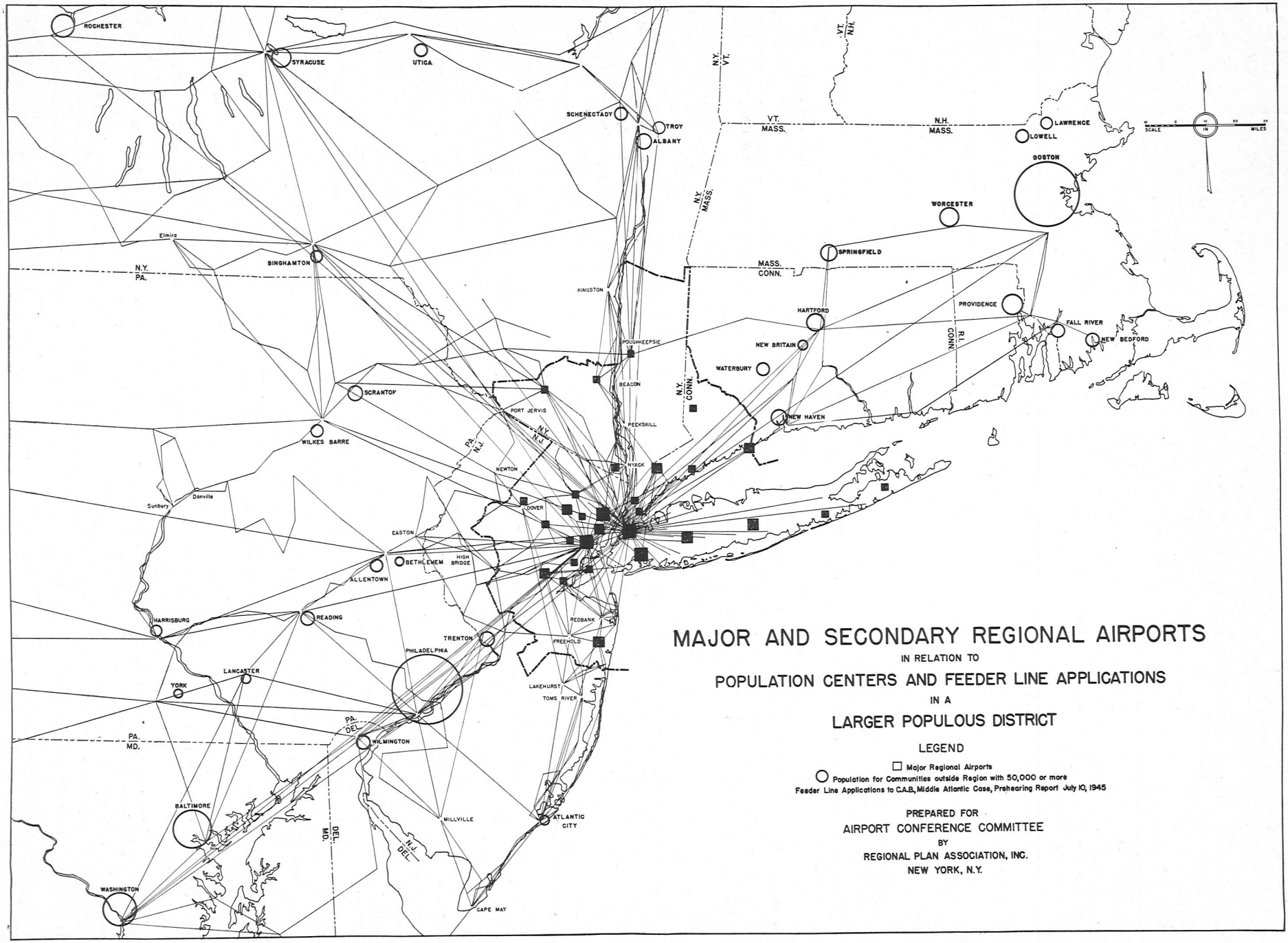
Not all the details that entered into the classification of the supplementary major ports can be described here, but some of the principal considerations are outlined.

Population

In the outlying sections of the Region and beyond, where communities are to a great extent self-contained, population is a fairly good index of the justification for the establishment of feeder lines centering on the Port of New York. On the map in Figure 6 areas of circles show the relative size of the population centers of over 50,000 in a district surrounding the Region, extending to Rochester, N. Y., and Concord, N. H., on the north and Washington, D. C., on the south. Most of these can be regarded as potential stops on a feeder-line system.

Applications for Routes

An indication of the current trend of thinking about feeder lines is shown in Figure 6, where the actual applications that have been made to the Civil Aeronautics Board are plotted. The lines tend to cluster into definite directions forming a star pattern. One line extends along the Atlantic shore in New Jersey, one in the direction of Philadelphia, one in the direction of Allentown and Harrisburg, one through Port Jervis, one along the Hudson River, and one towards Boston. While not a criterion for the location of feeder stops within the Region, they tend to substantiate the selection of supplementary major and secondary airports shown in Figure 6.



MAJOR AND SECONDARY REGIONAL AIRPORTS

IN RELATION TO

POPULATION CENTERS AND FEEDER LINE APPLICATIONS

IN A

LARGER POPULOUS DISTRICT

LEGEND

□ Major Regional Airports

○ Population for Communities outside Region with 50,000 or more

Feeder Line Applications to C.A.B., Middle Atlantic Case, Prehearing Report July 10, 1945

PREPARED FOR

AIRPORT CONFERENCE COMMITTEE

BY

REGIONAL PLAN ASSOCIATION, INC.

NEW YORK, N.Y.

Figure 6

TABLE III

Data for Statistical Areas Around Supplementary Major Airports

Areas are circles of five-mile radii from centers of airports, with overlaps eliminated. Special employment consists of workers in printing, machinery manufacture and apparel (1940)

Key No.	*Airport*	*Approximate Location*	*1940 Population*	*Gross 1944 Postal Receipts*	*Ratio P.O. Receipts to population*	*Special Employment*	*Present CAA Class*
B-1	Schlossbach	Asbury Park	56,579	$ 478,552	8.5	577	I
B-2	Hadley	So. Plainfield	65,590	1,594,373	24.3	3,305	II
B-3	Metropolitan	Secaucus	471,584	2,974,583	6.3	18,533	
B-4	Caldwell-Wright	Caldwell	43,720	212,783	4.9	330	IV
B-5	Westchester	Rye Lake	85,400	1,343,524	15.7	1,430	IV
B-6	Bridgeport	Bridgeport	121,049	1,826,555	15.0	1,859	IV
B-7	Grumann	Bethpage	74,090	696,054	9.4	Airplane Factory	IV
B-8	MacArthur	Ronkonkoma	39,650	35,455	0.9	——	IV

Commercial Activity Producing Air Cargo

Within the Metropolitan Region population is not a sufficient indication of air-service potential, since many communities are practically the "dormitories" of central commercial districts. Accordingly, the gross postal receipts were used as an index of a community's commercial activity, and its employment in industries that produce air cargo was used as an additional rating factor. Three special industries for which employment figures are available in the United States Census account for 57.3 per cent of air cargo.* These are printing, machinery manufacture and apparel.

These data were used to rate the various communities as to their probable air transportation needs. The nearest airports that could be used or developed for the communities of highest rating were selected. Finally, statistical areas within five miles of the centers of these airports were investigated for the additional potential traffic. These are recorded in Table III for the eight supplementary major ports. Potentials beyond the five mile area were considered in rating the ports.

Of interest in this table is the column showing the ratio between gross postal receipts and population. This varies from 0.9 for the area within five miles of MacArthur Airport to 24.3 for the corresponding statistical area about Hadley Field. Five of the airports have CAA Class IV rating, one has a Class II rating, one has a Class I rating and one has not been completed so that it does not have a rating at present.

Relation to Railroads

In general, the extent to which air service can shorten the time required by other forms of transportation will be a measure of its possible use between two points. Thus the communities near the center of the Region with frequent and speedy rail service are not as good prospects for air service to central ports as the ones farther out with less convenient rail connections. Figure 7 shows graphically the commuting time on the passenger rail lines converging on the center of the Region. This represents the shortest rail time derived from schedules at the rush hour. While the time shown is only an approximate indication of the total rail service, the map delineates in a broad way the areas where the airplane might eventually supplement rail service. For example, where the fastest commuter train takes an hour to make the trip the other train and highway access will require longer. With airports close to points of origin and destination or transfer the operation of airplanes may be economically feasible.

Mass transportation whether by rail or motor vehicle is not successful as a means of getting the airplane passenger to and from the airport. This is clearly indicated in the results of a questionnaire sent to the principal transit companies throughout the country by the American Transit Association. From more than 100 replies as analyzed by the Urban Transportation Committee of the American Institute of Planners, there is "overwhelming evidence of the fact that the people who ride airplanes are not prospective customers for mass transit to the airport." They prefer the limousine service, taxicabs or private cars. Some of the reasons given are: they are able to meet the irregular schedules of the planes; the taxi and private car take the passenger and his baggage from his doorstep directly to the airport; "transportation by taxicabs is more in keeping with the dignity of airline travel"; "if the air passenger is a local resident, usually his family or friends take him to the airport because of the novelty of the trip"; where the airport is isolated from other activity mass transit cannot economically meet the needs; "on-call" service cannot be operated by transit companies.

Some of these reasons may be of a temporary character and may tend to be less operative with the increase of air travel, but there are certain elements

* Air Freight. Illinois Central System, Research and Development Bureau. Place of publication and date not given. Probably published around 1943.

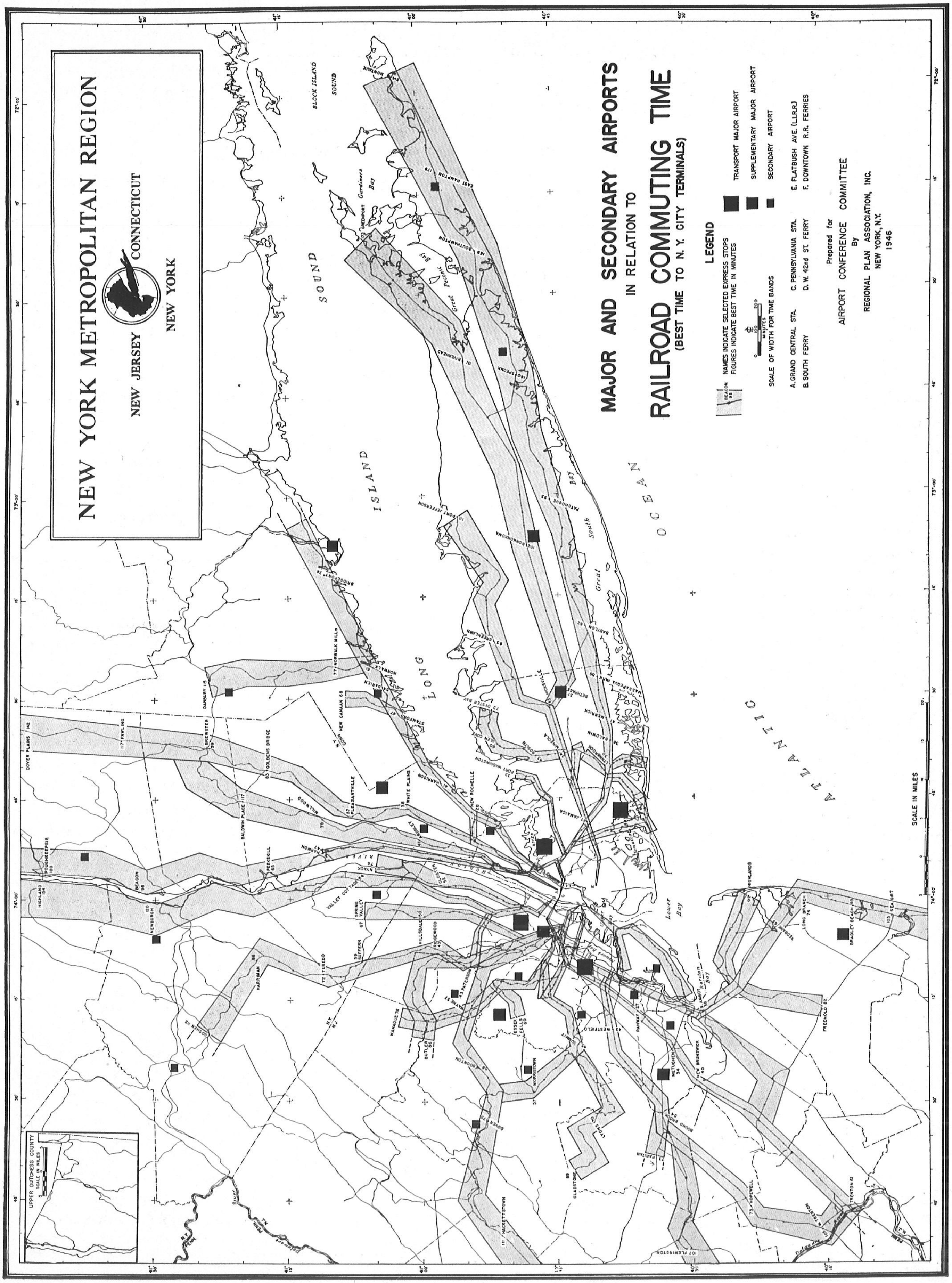

NEW YORK METROPOLITAN REGION
NEW JERSEY
CONNECTICUT
NEW YORK
MAJOR AND SECONDARY AIRPORTS
IN RELATION TO
RAILROAD COMMUTING TIME
(BEST TIME TO N.Y. CITY TERMINALS)
LEGEND
NAMES INDICATE SELECTED EXPRESS STOPS
FIGURES INDICATE BEST TIME IN MINUTES
SCALE OF WIDTH FOR TIME BANDS
TRANSPORT MAJOR AIRPORT
SUPPLEMENTARY MAJOR AIRPORT
SECONDARY AIRPORT
A. GRAND CENTRAL STA.
B. SOUTH FERRY
C. PENNSYLVANIA STA.
D. W. 42nd ST. FERRY
E. FLATBUSH AVE. (L.I.R.R.)
F. DOWNTOWN R.R. FERRIES
Prepared for
AIRPORT CONFERENCE COMMITTEE
By
REGIONAL PLAN ASSOCIATION, INC.
NEW YORK, N.Y.
1946
LONG ISLAND SOUND
ATLANTIC OCEAN
SCALE IN MILES
UPPER DUTCHESS COUNTY

Figure 7

of convenience and amenity in the personal conveyance that will persist in the face of the most improved type of mass transit service.

Relation to Highways

The highway is the most important ground facility related to the airport. As time is a ruling factor in ground connections for major airports the highways leading to commercial centers must be expressways. Figure 8 is a map of the expressway system of the Region, showing its relation to major airports. As can be seen from the map, some of the expressways are completed, some are now roads to be improved as expressways or express routes scheduled for early construction, and some are proposed future routes.

The routes are also classified according to whether they accommodate mixed traffic or merely light passenger vehicles. As far as the plane passengers are concerned the parkway limited to light passenger vehicles is sufficient. For cargo or for busses serving employees at the airport the mixed traffic expressway is needed. The Westchester Airport, for example, is adequately connected with the center of the Region by parkways but not by a mixed traffic expressway.

Principal Ultimate Functions

In view of the rapidly changing techniques of instrument landing the plan as it relates to the "standby" airports for alternate landing in bad weather may require early revision. In addition to the airports designated in the list below as alternate bad weather landings the Mercer Airport near Trenton (outside the Region) and the two secondary airports at Morristown and Poughkeepsie are also suggested for this purpose.

Following are the principal ultimate uses which are contemplated for the eight supplementary major airports.

Summary of Ultimate Uses

B-1. Schlossbach — Existing Class I, to be expanded to Class III or IV.
- Location: Neptune Township, Monmouth County.
- Use: Probable feeder-line stop, plane taxi to major transport terminals, alternate landing for trunkline transport planes in non-contact weather, passenger and cargo service for summer visitors at seashore.
- Remarks: The Redbank Airport, 8 miles to the north, is a Class II but cannot readily be expanded.

B-2. Hadley — Existing Class II, to be expanded to Class III.
- Location: South Plainfield, Middlesex County.
- Use: Probable feeder-line stop, plane taxi to major transport terminals, passenger and cargo service to a commercially active population, business planes for company executives. According to the CAA Traffic Control Division, instrument landing would not be justified at this field as it would interfere with that of Newark Airport.

B-3. Metropolitan — Under construction, Class II
- Location: Secaucus, Hudson County
- Use: Transient planes, either cargo, passenger or personal, visiting New York Region from all over country. Possible shuttle service from outlying supplementary transport landings.
- Remarks: Time to center of Manhattan would be less than from transport landings of Idlewild, LaGuardia or Newark.

B-4. Caldwell-Wright — Existing Class IV.
- Location: Caldwell Township, Essex County, about 8 miles from center of Paterson.
- Use: Probable feeder-line stop, plane taxi service to major transport landings, passenger and cargo service to industrial area of Paterson, Passaic and Clifton.
- Remarks: Murchio Airport, a Class II about 5 miles from center of Paterson cannot readily be expanded. A secondary airport is proposed in Bloomfield the site for which can provide only a Class II airport. The largest planes serving the high potential of air traffic in the Bloomfield area could use the Caldwell-Wright port.

B-5. Westchester — Existing Class IV
- Location: Town of Harrison, Westchester County.
- Use: Probable feeder-line stop or limited trunkline stop, plane taxi service to trunkline transport landings, cargo and passenger service to an area of concentrated high incomes. Instrument landing at this airport would be difficult to operate, according to the Traffic Control Division of the CAA, because of its nearness to LaGuardia Airport.

B-6. Bridgeport — Existing Class IV
- Location: Stratford, Fairfield County.
- Use: Probable feeder-line stop, alternate transport landing in non-contact weather, plane taxi to transport terminals, passenger and cargo service to a highly active commercial area.

B-7. Grumman — Existing Class IV
- Location: Bethpage, Nassau County
- Use: Probable seasonal feeder-line service, passenger and cargo service to industries.

B-8. MacArthur — Existing Class IV
- Location: Ronkonkoma, Suffolk County
- Use: Alternate transport landing in non-contact weather, possible overseas terminal landing.

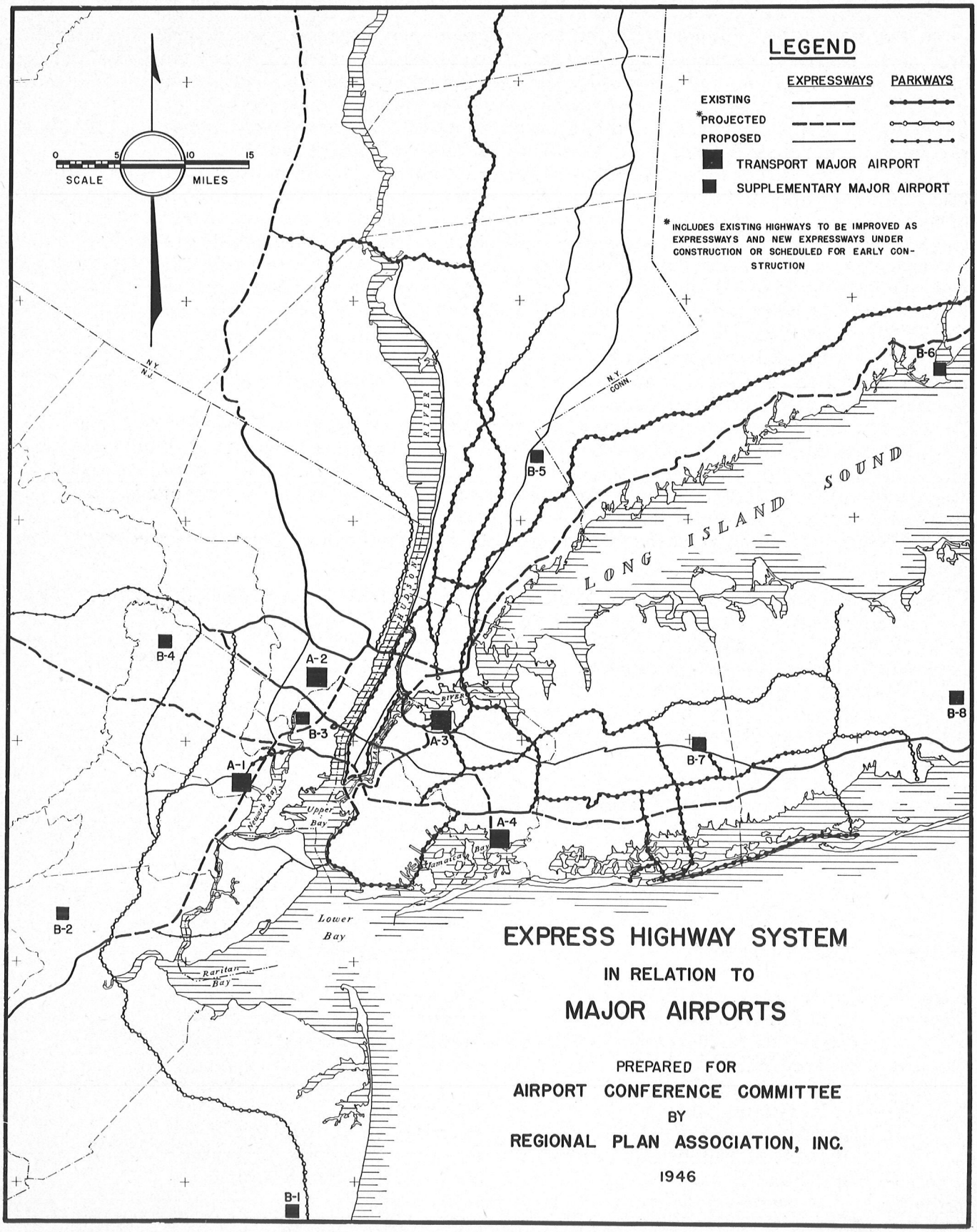

LEGEND
EXPRESSWAYS
PARKWAYS
EXISTING
*PROJECTED
PROPOSED
TRANSPORT MAJOR AIRPORT
SUPPLEMENTARY MAJOR AIRPORT
*INCLUDES EXISTING HIGHWAYS TO BE IMPROVED AS EXPRESSWAYS AND NEW EXPRESSWAYS UNDER CONSTRUCTION OR SCHEDULED FOR EARLY CONSTRUCTION
0 5 10 15
SCALE MILES
N.Y. N.J.
N.Y. CONN.
HUDSON RIVER
LONG ISLAND SOUND
B-1
B-2
B-3
B-4
B-5
B-6
B-7
B-8
A-1
A-2
A-3
A-4
Lower Bay
Upper Bay
Newark Bay
Jamaica Bay
Raritan Bay
EXPRESS HIGHWAY SYSTEM
IN RELATION TO
MAJOR AIRPORTS
PREPARED FOR
AIRPORT CONFERENCE COMMITTEE
BY
REGIONAL PLAN ASSOCIATION, INC.
1946

Figure 8

ORGANIZATION AND PROCEDURE IN MAKING THE PLAN

On April 18, 1944, William A. M. Burden, Assistant Secretary of Commerce, attended a meeting of the Board of Directors of the Regional Plan Association at which representatives of the Port of New York Authority were present. He spoke of the program of the Civil Aeronautics Authority which included the preparation of a National Airports Plan and its submission to Congress in the following fall as a basis for requesting Federal appropriation for airport construction. Legislation for this program has since been enacted, known as the Federal Airport Act.

The National Airports Plan is largely based on state plans, but in metropolitan areas the grants are conditioned upon the making of special studies that relate the airports to the complicated phases of metropolitan development. The Association agreed to sponsor the organization of an Airport Conference consisting of state, county and regional representatives to make such a study.

The organization of the Conference was largely completed by September 22, 1944, at which time the first of a series of meetings was held. Its personnel consists of representatives of the departments concerned with aviation in the states of New York, New Jersey and Connecticut and the City of New York; officially appointed representatives of 17 of the counties immediately surrounding New York City; members of the staffs of the Civil Aeronautics Administration, the Port of New York Authority and the Regional Plan Association. Mr. Paul Windels, President of the Association, presided at the Conference meetings.

The representatives of departments concerned with aviation of New York City and of the three states acted as advisers to the technical work. County representatives furnished sectional information of various types and in some cases organized county committees or clubs. Essex, Westchester, Passaic, Rockland and Middlesex are among the most active. Union County is the only one in the Region that failed to have representatives on the Conference Committee.

Participants in the work of the Conference and the organizations they represented were as follows:

Civil Aeronautics Administration: William E. Cullinan; Eric von Hausswolff; Albert Wessel; Thomas Kuhn; E. Fletcher Ingals; Joseph W. Mott, Jr.; W. A. Simpson.
Port of New York Authority: Walter P. Hedden; James Buckley; George McGuire.
New York City Planning Commission: Lawrence M. Orton
New York City Airport Authority: T. C. Burks; J. F. Weathers.
New York State Department of Commerce: J. Harold DeNike; William Murray
New Jersey State Department of Economic Development: T. Ledyard Blakeman; Robert Burlingham
New Jersey State Department of Aviation: Robert L. Copsey; Nelson Hill
Connecticut Department of Aeronautics: Kenneth Ringrose
Regional Plan Association: Paul Windels; C. McKim Norton; Frederick P. Clark; C. Earl Morrow; George A. Schiller

Representatives of the counties were as follows:

NEW YORK STATE

Dutchess — Albert Richards

Nassau — Raymond W. Houston
Orange — E. Maltby Shipp
Charles A. Finch
Putnam — Harvey Wiley Corbett
Rockland — Calvin T. Allison
Suffolk — W. Kingsland Macy
Joseph Kelly
Edgar A. Hazleton
Ulster — Harry Snyder
Westchester — Gustavus T. Kirby

NEW JERSEY

Bergen — Frank Leers
Rudolph Gagg
Essex — Curtis Colwell
Hudson — Frank J. Radigan
Middlesex — Leon A. Campbell
Peter M. Kroeger
Samuel D. Wiley
Monmouth — Otis R. Seaman
Morris — F. T. Rubidge
Passaic — Frederick J. Wright
Somerset — Oscar Smith, Jr.

CONNECTICUT (Fairfield County)

W. Parker Seeley; John G. White; Daniel F. B. Hickey

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