

REGIONAL PLAN BULLETIN

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Progress in Transportation and Public Services Provides the Basis for a Post-War Program

Rail Transportation . . . Grade Crossing Eliminations . . . Port Developments . . .
The Regional Airport System . . . Water Supply . . . Sewage
and Refuse Disposal . . . Public Housing

The Port of New York requires a series of terminals—rail, water and air—and the progress on the development of these and the approaches serving them during the past five years, 1937-1941, and the relation of these to the proposals incorporated in the Graphic Regional Plan are summarized in the first part of this Bulletin. The latter part is devoted to a similar review of new developments in public health services and in public housing.¹

With the exception of "defense" housing and some terminal improvements essential to the war effort, little immediate progress is likely to be made in these types of construction. After the war there must be a renewed effort in these fields to catch up with current needs and to provide for a shift to a more normal program of employment. Now, therefore, is an appropriate time to review what exists today and to point out some of the most urgent needs.

Expansion of the railroad system in the Region is still largely in the planning stage. The outstanding physical developments are the completion of the West Side Railroad Improvement in Manhattan and striking advances in the elimination of railroad-highway grade crossings in both New York and New Jersey. The airport system is being steadily improved to meet greatly increased demands for air transport and the development of new landing fields has been accentuated by the war.

In the field of other public services steady progress has been made on the purification of the waters of the harbor through the construction of sewage treatment plants, notably in New York City but also in New Jersey. Public housing, a new development within the

period under review, has made remarkable progress, but at the present time is limited to such projects as are essential for housing industrial workers in those districts where war industries have greatly increased the concentration of population.

RAIL TRANSPORTATION

New trends in freight and passenger transportation are chiefly responsible for lack of development of new rail facilities proposed in the Regional Plan. The Plan aims at a program to integrate all media of transportation into a coordinated system eliminating duplication of service and its accompanying waste.

Conditions caused by new modes of transport call for the establishment of new methods to handle the mounting flow of traffic. The Association and other interested agencies have given study to the problem and prepared plans to meet changed conditions.

In addition, recent activity has taken place on three specific railroad proposals incorporated in the Regional Plan, on an unprecedented number of railroad grade crossing eliminations throughout the Region and on city rapid transit lines which have been extended and brought into a unified system.

Terminals for New Modes of Transportation

Modern highways have opened new lines of communication in competition with the railroads, particularly those terminating in New Jersey. Much of the Jersey railroad freight is still ferried from rail terminals to piers throughout the harbor and many passengers still use ferries to cross the Hudson River to Manhattan. Motor trucks, buses and subways distribute other loads to convenient destinations. Street congestion resulting from the increasing use of buses and trucks is approaching a point where the convenience

¹ For similar reviews for earlier years, see FROM PLAN TO REALITY (1933), pp. 84-93, 97-101, and FROM PLAN TO REALITY, TWO (1938), Chapters IV and VIII, published by the Regional Plan Association, Inc.

of this mode of transportation is being rapidly offset by numerous delays.

During 1939 the Port of New York Authority began to formulate a program for establishing union terminals for truck freight, and negotiations with motor truck operators were under way by the end of the year. On February 5, 1942, plans for a \$2,000,000 terminal (see Figure 1) were completed and the Port of New York Authority urged its construction as a war-time emergency measure to expedite truck shipments and to relieve street congestion by elimination of part-load trucking. At a hearing held February 24, 1942, this project was endorsed in principle by trucking, civic and business interests, who urged its immediate construction.

Construction and operation of a union bus terminal at 42nd Street and Ninth Avenue were approved on January 15, 1941, by the City Planning Commission. The plans of a \$4,000,000 structure were approved by the Board of Estimate on January 23rd of that year. These included a tunnel to connect the terminal with the Manhattan approach to the Lincoln Tunnel. The Association had made studies of this problem in 1939 and recommended a terminal at a site one block further east, with an off-street approach above ground instead of in a tunnel.

Trunk Railroad Lines

Advancement of the trunk line railroad features of the Regional Plan has occurred on the following two proposals:

Greenville-Bay Ridge Freight Tunnel.—This is the keystone of the Comprehensive Railroad Plan for the Port of New York (Connecting Line No. 12) which would link the important railroads on the west side of the harbor with Brooklyn, thence via the New York Connecting Railroad with The Bronx and railroads of New England. The importance of the proposal has been recognized for a long time but its failure to advance beyond the plan stage has been principally due to the difficulty of getting an agreement with the railroad companies for its use which would permit self-liquidating financing.

A report by the Port of New York Authority filed with the New York State Legislature during 1938 showed that a one-track tunnel with a capacity of 5,000 freight cars daily could be built for \$57,000,000. To make the tunnel self-supporting the operation of 1,400,000 cars annually would be necessary. Under conditions existing at that time inadequate traffic made the project economically impractical. The most recent prospect for action is the effort by the Port of New York Authority to

finance the project as a national defense measure with non-interest bearing federal funds to be repaid from future earnings.

West Side Freight Line, Borough of Manhattan.—The depressed section of the relocation of the New York Central Railroad tracks (Connecting Line No. 18) on the west side of Manhattan between 30th Street and 60th Street yards and the covering of the tracks through Riverside Park were completed during 1937. Construction of a spur to the stockyards at West 41st Street was completed during 1938, and the reconstruction of the 30th Street Yards in 1941. These are part of the West Side Improvement and their completion has done much to rehabilitate the west side of Manhattan, to facilitate movement of railroad freight and to release street surface for vehicular movement. The entire project included removal of 105 grade crossings.

Railroad Grade Crossing Eliminations

Elimination of many dangerous railroad grade crossings throughout the Region is necessary for public safety and also for the expeditious movement of vehicular traffic. The ground work for a program to achieve this end in the New York sector of the Region was provided by the state constitutional amendment of 1925 and its subsequent revision of 1927. Having failed to accomplish its objective, the amendment was again revised in 1938 and approved in the general election of that year. This segregated \$50,000,000 from a total of \$170,000,000 for New York City use and also removed certain obstacles which had hindered the elimination of grade crossings in both the city and rest of the state.

Elimination of railroad grade crossings in New Jersey has been considerably advanced with the aid of Federal funds. Under jurisdiction of the Board of Public Utility Commissioners, construction of the various projects has been undertaken by the State Highway Department.

New York City.—Through the Transit Commission, the State of New York, in the latter part of 1939, started work on an extensive program of railroad grade intersection removals within the City of New York. In Staten Island the Great Kills-Huguenot, Richmond Valley, and Tottenville grade elimination projects were completed during 1940. The balance of the program for this part of the city, calling for complete grade eliminations between Grant City and New Dorp, Oakland Heights and Bay Terrace, is under construction, but completion of the latter section has been deferred until after the war.

In Brooklyn and Queens the Atlantic Avenue project extending from East New York to Dunton involves the elimination of 20 grade intersections of the Long Island Railroad. This project is about five miles long and places the railroad tracks underground with a modern highway above. It is to be completed as rapidly as delivery of materials permits.

On June 20, 1940, construction of railroad overpasses at Linden Boulevard and the Belt Parkway in the Aqueduct section of Queens were completed. Contracts for the elimination of all grade crossings along the Old Southern Branch of the Long Island Railroad from Jamaica to the city line at Rosedale have been cancelled due to shortages of materials.

On the Rockaway peninsula a project involving elimination of 39 crossings of the Long Island Railroad on the 5.5-mile section from the City line at Far Rockaway to Rockaway Park has been completed. The two-track railroad has been elevated on a viaduct designed for either Long Island Railroad or City Subway



Courtesy, New York Central System

REBUILT 30TH STREET RAILROAD YARDS OF NEW YORK
CENTRAL RAILROAD

A part of the completed West Side Improvement.

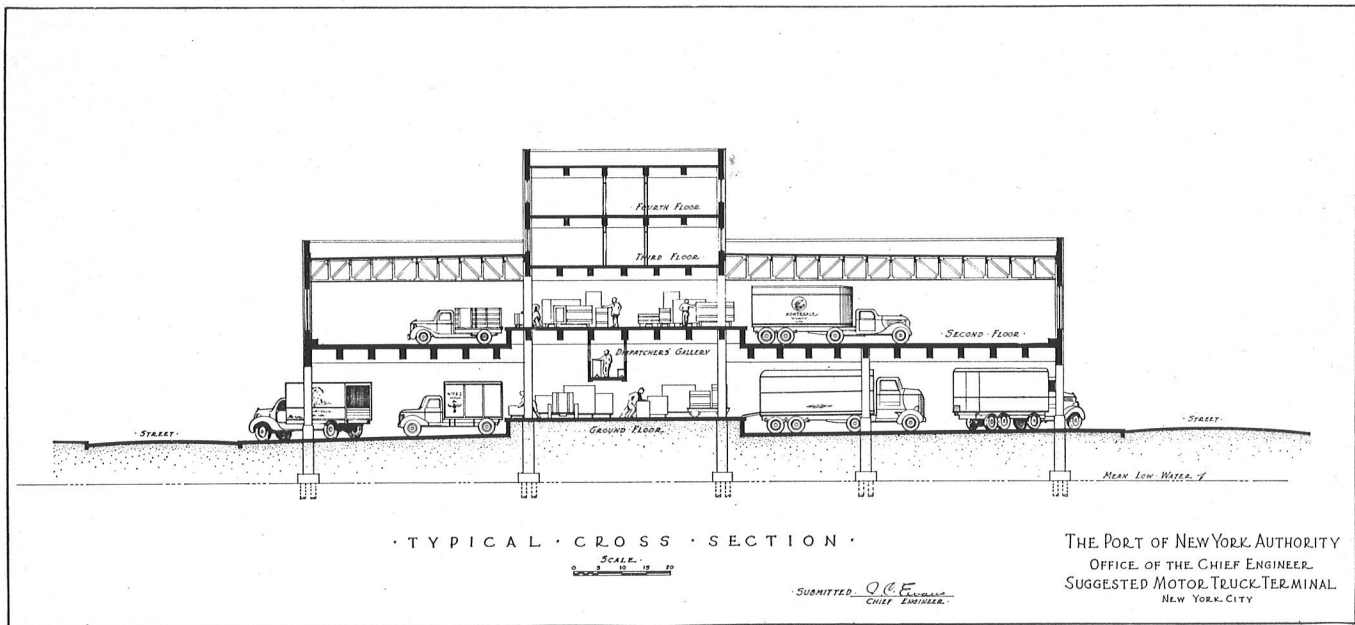


FIGURE 1

Courtesy, Port of New York Authority

rolling stock. About 1.7 miles from Hammels to Rockaway Park were placed in operation during the early part of 1941.

Other less important projects for New York City in the Transit Commission program include grade separations at Long Island City, Maspeth, VanDine Avenue, 105th Street and Little Neck Road. Construction of these is planned as part of a post-war program. Their completion will make New York City 100 per cent free of railroad grade crossings.

In the Environs.—In New York counties of the Region outside of New York City the Public Service Commission through the Department of Public Works has completed a total of 23 railroad grade eliminations during the past four years. The Commission has ordered elimination of 57 additional grade crossings which are distributed as indicated in the accompanying table. Construction on these projects will proceed as priorities of materials permit.

GRADE CROSSING ELIMINATION PROJECTS IN THE
ENVIRONS OF NEW YORK

County	Completed 1937-1941	Under construction	Future program
NEW YORK STATE			
Nassau	7	4	34
Orange (part of)	6	....	....
Rockland	1	....	2
Suffolk	5	....	8
Westchester	4	3	13
Total New York State	23	7	57
NEW JERSEY			
Bergen	5	....	1
Essex	2	....	....
Hudson	2	....	....
Middlesex	12	1	6
Monmouth (part of) . . .	1	....	....
Morris	3	1	....
Passaic	1	1	1
Union	17	....	2
Total New Jersey . . .	43	3	10
CONNECTICUT			
Fairfield (part of) . . .	2	....	....
Total for Environs . . .	68	10	67

In New Jersey counties of the Region a total of 43 railroad grade crossings have been eliminated since the report of progress four years ago and three additional projects are under construction. The largest project involved removal of 14 street intersections of the Central Railroad of New Jersey within the City of Elizabeth. Elimination of ten more grade crossings has been ordered by the Board of Public Utility Commissioners. As in the case of proposed projects in New York State, completion of these hinge on their relation to National defense.

Railroad grade crossing eliminations in the Connecticut section of the Region have been limited to construction of two projects in the Town of Wilton. There are no projects under way or contemplated for future construction.

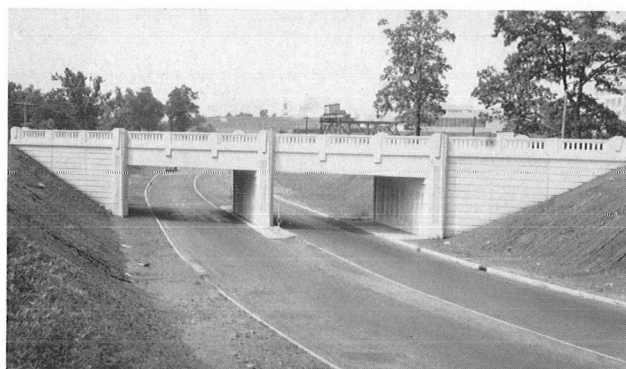
Suburban Rapid Transit

For the past decade, daily rail commutation between New Jersey and New York has failed to hold its own against the convenience of passenger car and bus transportation. To counteract this trend an interesting innovation, combining rail service of the New York, Susquehanna & Western Railroad from Paterson to the Susquehanna transfer at North Bergen with bus connections to Manhattan via the Lincoln Tunnel, went into operation during 1939. Modern streamlined Diesel powered trains and a trainside bus transfer enables a time saving which reduces the trip to 30 minutes whereas formerly 60 minutes were spent to reach Times Square.

The Association holds that neither bus nor private passenger car is the solution for peak-hour mass transportation of people. A coordinated system of suburban rapid transit, along with a better urban distribution to serve the suburban areas of New Jersey, Long Island and Westchester County, is still needed. Such a system was incorporated in the Regional Plan and



Courtesy, New York Transit Commission



Courtesy, Board of Public Utility Commissioners

TYPICAL ELIMINATION OF RAILROAD GRADE CROSSINGS

View at left shows section of Long Island Railroad tracks looking east from Beach 108th Street, Rockaway Park, New York City. View at right shows Erie Railroad tracks crossing over Mill Street, Belleville, New Jersey.

developments toward its realization reported in previous reports of progress. More recent activity on rapid transit in New Jersey is as follows:

Pursuant to direction of the State Legislature in 1938, continued and extended study was given to the problem of northern New Jersey rapid transit by the Port of New York Authority. Surveys of railroad and ferry passenger traffic have been completed and conclusions drawn. Definite physical and financial plans have been formulated, including means of effectuating an initial step of the proposed system. In addition, drafts of legislation to permit operation and maintenance by or under the Port Authority were prepared.

Pending conferences with a special legislative committee to advise on legislative policy, complete financial plans have been withheld.

City Rapid Transit

Maximum efficiency in mass movement of passengers within the City of New York is assured by the recent unification of all the city's subway lines. Ownership of the I.R.T. and B.-M.T. subway and elevated lines was taken over during 1940 enabling the city to coordinate operation of all rapid transit lines within its borders.

Operation of the Ninth Avenue and Second Avenue elevated lines above 60th Street was discontinued and the structures demolished. The two-mile Sixth Avenue line of the Independent System was placed in service December 15, 1940, and the Fulton Street line, now under construction, is scheduled for operation in 1943.

Demolition and removal of the Broadway elevated structure spur from Havemeyer Street to Kent Avenue and a similar fate of the Fulton Street line between Brooklyn Bridge and Rockaway Avenue were the first physical steps to rid Brooklyn of outmoded transit facilities.

Demolition and removal of the elevated structure in Park Row from Brooklyn Bridge to Chatham Square was authorized on April 20, 1941, by the State Legislature.

On May 15, 1941, the four and one half mile Dyre Avenue-180th Street section of the old New York, Westchester & Boston Railroad in The Bronx was placed in operation as part of the City's rapid transit system. In the studies of the Regional Plan, the Westchester & Boston line was a part of a proposed regional suburban rapid transit system. After operation of the railroad was terminated in 1937, the Association was active with other groups to keep the right-of-way for rail use rather than have it abandoned or used for other purposes.

PORT DEVELOPMENTS

Although world wide shipping schedules have been realigned since the outbreak of hostilities, New York Harbor is playing an important role in our national policy of "Arsenal of Democracy."

During May, 1940, New York City's newest pier, Number 64, located at the foot of West 24th Street, was taken over by the Panama Line to assist in carrying out the "Lend-Lease" policy. Enlargement of the Brooklyn Navy Yard, the development of new naval repair facilities and supply depot in Upper Bay and conversion of the country's first "free port" at Stapleton, Staten Island,¹ into an army supply depot are some of the principal results on the harbor of our military effort.

Other activities during the past four years pertaining to marine transport and facilities conceived for a more efficient transfer and distribution of water-borne cargoes are discussed below.

Channel Improvements

Shifting sands, river silt and the accumulation of harbor wastes require perennial attention to maintain adequate channel depths. Deepening and maintaining navigable waterways throughout the United States is largely carried out by the Federal Government with direct responsibility of the work under the United States Army Engineer Corps.

During the past four years, dredging operations have been continued along main ship channels of New York Harbor. These include deepening the 2,000-foot Hudson River Channel to 45 feet south from 54th Street to the harbor entrance, and Buttermilk and Red Hook channels between Brooklyn and Governors Island to 35 and 40 feet, respectively. Projects have been under way on other less important waterways, including Kill Van Kull, Arthur Kill, Newtown Creek, Harlem River Ship Canal, Coney Island Creek, and Bronx River.

Funds for improvements on minor channels have been proposed by the Rivers and Harbors Committee of Congress in

¹ This activity has been temporarily transferred to five piers on the west side of Manhattan.

1941. Projects in New York State include Jamaica Bay, Jones Inlet, Lake Montauk, and Northport, Peconic and Larchmont harbors. Shark River and the Intercoastal Waterway have been selected in New Jersey for improvement along with annual maintenance of the Passaic River. Work is to proceed at such time as will not materially interfere with national defense.

Naval Drydock and Supply Base

In keeping with a national policy of providing repair facilities at strategic locations in ports throughout the country, the United States Navy Department, after considering the merits of available locations in the New York Harbor, selected a site for such use in Upper Bay offshore of Bayonne.

Advantages for large-scale port development in this area of the New York Harbor were pointed out on the Graphic Plan. The soundness of the Association's attitude in opposing a Battery-Brooklyn Bridge on the grounds that adequate defense of the harbor required that no obstructive crossing be built seaward of naval repair bases is recognized in the selection of this location.

In the last report of progress, plans for the development of a large rail-marine terminal at this location were described. The project was completed in January, 1939, and was operated for commercial shipping until March, 1941, when the Federal District Court in Newark ordered Bayonne City officials to turn the terminal over to the Navy Department for the sum of \$2,837,000.

Since that time the original area has been enlarged, contracts have been signed and work started on the construction of a graving dock which is designed to accommodate the largest naval vessels afloat or projected. In addition to docking and repair facilities, development of the remainder of the site as a naval supply depot has also been started.

Wholesale Food Markets

A general picture of the movement of food supplies to the Port of New York and its subsequent distribution to points throughout the Region was presented in the Regional Survey.¹ Within the past few years there has been active study given by local, state and federal agencies to the improvement and relocation of the wholesale food markets in New York City, all of which are of regional importance. A summary of these developments is given below.

Primary Produce Terminal.—In 1938 the New York City Department of Markets proposed a public, union produce terminal on Manhattan to replace the privately-owned Washington market and to expedite the transfer and distribution of produce. At the request of the Mayor, the United States Secretary of Agriculture appointed a committee to investigate, in cooperation with state and local agencies, the problem and its solution.

A Special Report² on this subject was published by the United States Department of Agriculture in 1940, which recommended that "a new, complete, modern wholesale fruit and vegetable market be constructed." After reviewing available sites, the conclusion was reached that "the new market be built at the western end of Long Island on some site between the

Williamsburg Bridge and the Queensboro Bridge. . . Other uses should be found for the present Washington Street market area and the produce piers, so that dealers can dispose of their property in this location on some equitable basis and move into the new market."

In June, 1940, after ascertaining the reaction of the trade to the Department of Agriculture Plan, the Mayor requested the Port of New York Authority to develop a plan for utilizing the city-owned waterfront in lower Manhattan. Such a plan, now known as the Hedden-Morgan Plan, was developed in cooperation with representatives from the Department of Markets, Department of Docks, Borough President of Manhattan, and trade advisers and submitted October 15, 1940.¹ It covered six blocks along the Hudson River waterfront between Jay and Lighthouse streets, utilizing Piers 22 to 29 inclusive. The proposed new improvements were confined to the piers and West Street, leaving the existing market facilities along Washington and adjacent streets to take care of retail sales.

The New York State Department of Agriculture and Markets has continued its studies of the New York City market problem and has stressed the regional and national aspects of any new produce terminal. It has urged the selection of a site on Long Island accessible to water, rail, trucking, and rapid transit routes, but free of the congestion which exists in Southern Manhattan. The creation of a Market Authority, which would coordinate city, state, regional, and Federal interests was proposed to finance, construct and operate such a terminal.

Both plans were estimated to be self-supporting. Savings on the produce handling costs under both the Federal and state plans were estimated at \$8,500,000. The estimated savings on the Hedden-Morgan Plan, originally set by its proponents at \$6,000,000, were later increased to \$9,000,000 on a basis of additional information.

It now appears that the war will postpone any immediate construction of a produce terminal and give time to select the best plan as a post-war project.

Brooklyn Secondary Market.—The expansion of the Brooklyn Navy Yard required the removal in 1941 of the farmers produce market on Wallabout Canal. A substitute site was selected in Canarsie near Jamaica Bay. It was necessary to establish temporary quarters there, and the first group of permanent structures was scheduled for completion in July, 1942.

Poultry Terminal.—In 1940 the Board of Estimate of New York City adopted a plan for a wholesale, live poultry terminal on Newtown Creek at the edge of Long Island City. This would concentrate at one point live-poultry activities, now carried on at several different sites. The construction of the terminal was started in 1941 and is now completed.

THE REGIONAL AIRPORT SYSTEM

An achievement of historic character in the exploits of aviation was marked with the arrival of the Dixie Clipper at LaGuardia Field on February 9, 1941, after pioneering a new route from Lisbon which linked four continents and set an all-high, non-stop distance record for commercial aviation.

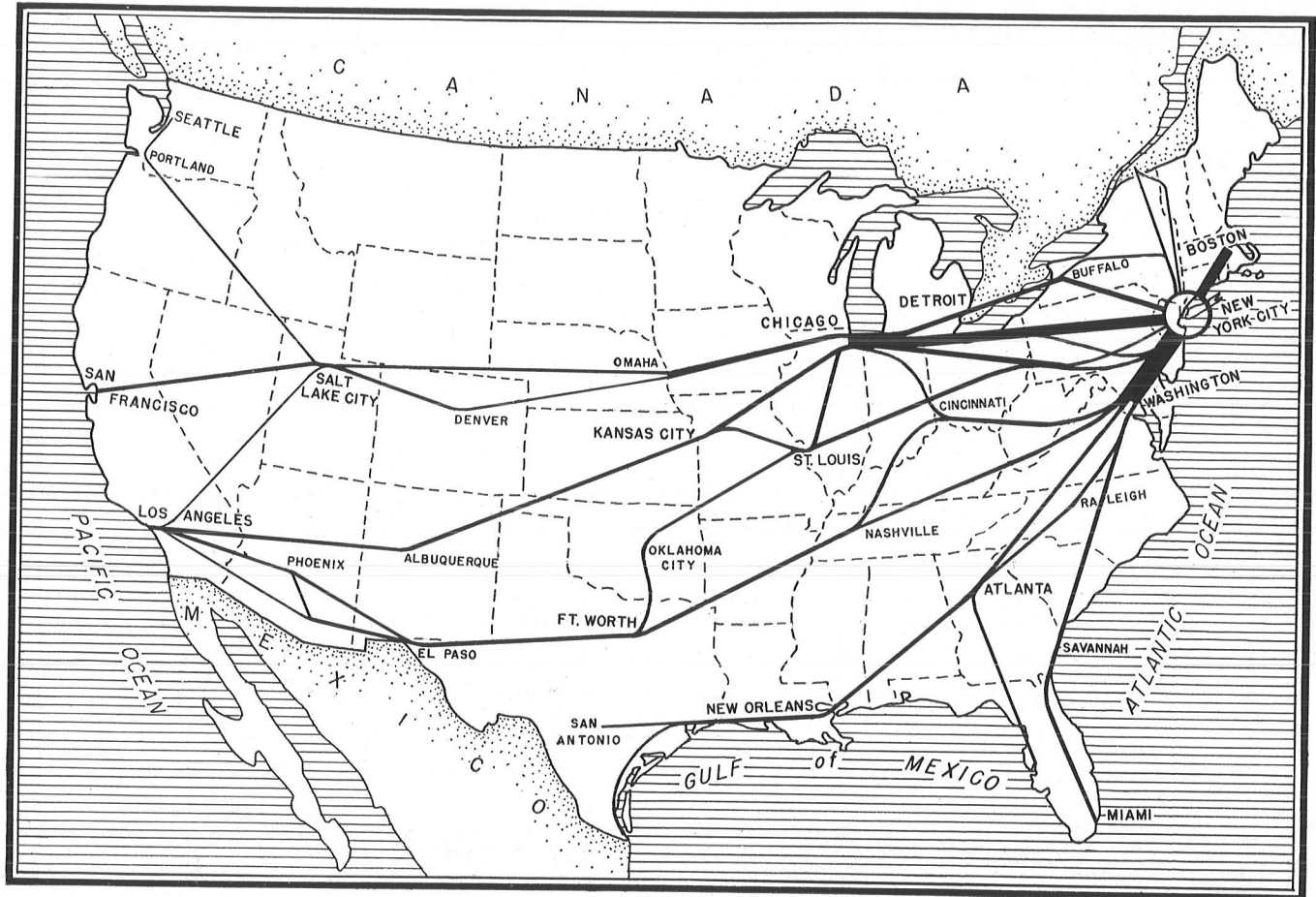
More important, from a planning viewpoint, than daring attempts to join the ends of the earth in a "web of air" is the rapid expansion of air traffic and its obvious future growth. Not only has the total number of air passengers in the Nation surged ahead from 8,661 in 1927² to some 4,500,000 in 1941, but the volume of mail

¹ Regional Survey, Volume III, PHYSICAL CONDITIONS AND PUBLIC SERVICES, pages 125-133.

² THE WHOLESALE FRUIT AND VEGETABLE MARKETS OF NEW YORK CITY, U. S. Department of Agriculture, April, 1940.

¹ "New York City Union Freight and Vegetable Terminal," the Port of New York Authority, Development and Operations Department.

² Earliest date statistics are available.



Redrawn from 1940 Annual Report of Port of New York Authority

FIGURE 2

DIRECTIONAL FLOW OF 335 REGULARLY SCHEDULED FLIGHTS CONNECTING THE PORT OF NEW YORK WITH THE ENTIRE UNITED STATES
The relative frequency of service is proportionate to the thickness of lines.

and freight carried by plane has correspondingly increased. More than 22,700 tons of mail were flown throughout the nation during 1941 contrasted with 533 tons in 1927, while air express has grown from 23 tons in 1927 to 11,250 tons in 1941.

Directional flow of commercial air traffic entering the New York metropolis in relation to that of other principal cities in the United States is pictured on the map in Figure 2. As in the case of all other trans-continental and transatlantic lines of communication, the Port of New York is the principal focal point of the world's air transportation.

Evolution of Regional System

The Association's studies of air transportation as it affects the Region have centered principally on the location of airport sites and their proper correlation with other means of communication and types of land use. When the Graphic Plan was published in 1929 the nucleus for a regional airport system had already

been established. Additional sites were proposed at that time to form a comprehensive system. Progress toward realization of the proposed system has been reported as of 1932 and 1936.

During 1940 the staff of the Association classified the regional system according to standards set up by the Civil Aeronautic Administration as a guide to future airport requirements. Briefly, the proposed system calls for four major transport terminals spaced closely around the central commercial area of the Region and a series of 17 secondary ports located in suburban areas or near satellite centers to serve training or lesser commercial needs. In addition, 25 ports are distributed throughout the Region to serve local flying interests and also supply emergency landings. The latter classification includes military ports which prohibit commercial or private flying. The proposed system is the result of a series of consultations with official agencies and representatives of the major air transportation companies.

Transport Terminals

Developments during the past four years on the transport terminals in the airport system are as follows:

LaGuardia Field.—Exceeded only by Washington National Airport, this is the largest project of its kind in the world and serves as a terminal for domestic and transoceanic planes. It provides facilities for both land and sea planes. Opened on December 1, 1939, it supplies a thoroughly integrated service for all phases of air transport. With constantly mounting schedules and ever increasing patronage, present facilities have about

program to improve landing and take-off facilities was undertaken. New drainage facilities have been installed, runways lengthened and permanent pavement installed.

Floyd Bennett Field.—This was purchased by the Federal Government and commissioned as a naval air station June 2, 1941. Along with this action all private flying is prohibited. Its return to civil use after the war is not expected.

Proposed Idlewild Airport.—To supply the ultimate needs of commercial air transport in the metropolitan area a site in the southeast corner of Queens is proposed to be developed as a major terminal to replace Floyd Bennett Field. Under the defense program the site is being developed for immediate military use. The New York City Planning Commission has made studies



Courtesy, American Airlines, Inc.

ADMINISTRATION BUILDING, LA GUARDIA FIELD

Landings and take-offs are supervised with timetable precision from the control tower where directions are radio-phoned to pilots.

reached their capacity. The field's average of 283 scheduled flights a day is rated the biggest in the country.

Present plans of the City of New York contemplate adding 335 acres to the present site of 500 acres. Over five miles of new parallel runways will be installed; existing runways lengthened and five new hangars constructed. Completion of this expansion is planned to accommodate over double the present volume of traffic.

Newark Airport.—Previous to the opening of LaGuardia Field this was for more than ten years the principal commercial air center in the New York Region. Operations were curtailed June 1, 1940, when the four major air lines moved their terminals to New York's municipal airport. A year later (June 1, 1941) full services were resumed with a total of 52 passenger flights on weekdays and 42 on Sundays. The Civil Aeronautics Authority designated this as a co-terminal with LaGuardia Field. On April 22, 1942, it was announced that the city had leased most of Newark Airport to the War Department but that commercial airlines would continue to use the field.

Principal developments of the port include a new administration building and six new hangars. At the time of reopening, a

of the location and has made recommendations regarding highway approaches to Manhattan.

Secondary Airports

Laid out to meet the needs of civil aviation with an intended stand-by military value, six secondary sites of the proposed regional airport system, because of their strategic locations, have been selected by Federal authorities as part of the national defense program. Three of these are existing fields in New Jersey and three involve new fields in New York State. Funds for the development of the new sites and improvement of existing fields have been provided by Congress and construction of several of these are under way at present, with development of the remainder scheduled for the immediate future.

Under this program local agencies provide the land and buildings while Federal funds supply field improvements, runways, navigation aids, and other facilities. All of these sites are designed to meet standards set up by the Civil Aeronautics Authority and construction work is handled by the Army Engineers Corps.

Despite the fact that increasing military demands earmark these for immediate military services, they are ultimately intended for civil use. Their development carries out a substantial number of the proposed secondary airports of the regional system and represents a permanent contribution to aviation in general which will have a constantly increasing worth when normal conditions return. Because of the military value of detailed information concerning development of these projected airports, description of their facilities and location has been omitted, as in the case of all other airports in the Region.

Recent developments on other secondary airports¹ of the regional system consisted principally of extension and paving of runways or enlargement of the fields. Improved facilities have been provided at:

Caldwell-Wright Airport, Caldwell, N. J.
Bendix Airport, Bendix, N. J.
Christy Airport, New City, N. Y.
Bridgeport Airport, Stratford, Conn.
Roosevelt Field, Mineola, L. I.
East Hampton Airport, Wainscott Station, L. I.
Islip Airport, Islip, L. I.

Local Airports¹

Of the 45 airports and seaplane landings of local importance distributed throughout the Region, only 25 land ports and five marine landings are called for in the regional airport system including three proposed new sites. Many of the existing facilities are poorly located with regard to their function in the coordinated airport system and are of various sizes, shapes and conditions of ownership. Most of the operators have been reluctant to construct permanent improvements and changes in number and location are frequent. Under these conditions it is difficult to justify their present or future utility.

A serious problem confronting outlying localities in the Region is that of ownership, operation and maintenance of airports. The Association believes that permanency is a fundamental essential to a well organized system and a policy of ownership, whether private or public should assure that end. The Association will cooperate with local committees which are responsible for shaping policies so as to coordinate the needs of

¹ Civilian use of these has been curtailed as a war measure. As of March 5, 1942, there were 23 designated airplane and seaplane landings in the Region open to other than air-carrier or Government aircraft.



Courtesy, American Airlines, Inc.

TYPICAL SCENE OF AIR-FREIGHT LOADING

At the New York metropolitan air terminals annual express tonnage has grown to more than 2,700 tons in 1940, as contrasted with 47 tons in 1930.

the locality with the development of the Region as a whole.

Excluding military and naval airfields, nine airports and three seaplane bases of the regional system serving local interests have been additionally improved during the past four years. These are as follows:

Westfield Airport, Rahway, N. J.
Somerset Hills Airport, Basking Ridge, N. J.
Stewart Field, Newburgh, N. Y.
Reynolds Central Westchester Airport, Pleasantville, N. Y.
Lime Ridge Airport, Beekman, N. Y.
Westchester Airport, Armonk, N. Y.
Wall Street Skyport, Manhattan, N. Y.
Midtown Skyport, Manhattan, N. Y.
Edco Seaplane Anchorage, Queens, N. Y.
Flushing Airport, Queens, N. Y.
Grumman Airport, Farmingdale, L. I.

PUBLIC HEALTH SERVICES

Unusual activity marks the past four years progress in development of public services related to the protection and advancement of public health. Reflecting the impetus of Federal aid, the two major regional problems of water supply and sanitation have been attacked with greater results than in any similar period

heretofore. The scope of this report does not permit recording the many community disposal plants and water works which have been completed in the period.

With the flow of Federal funds to non-defense projects stopped and with the national psychology shifted from domestic pursuits to total war production there has already resulted a marked ebb in the construction of these facilities. It will take several years for completion of projects now under way and it is hoped that Federal control of materials will be such as to permit completion of these essential services.

Water Supply

For many years the metropolitan areas of Northern New Jersey and New York, together containing over three fourths of the total population of the Region, have been almost constantly confronted with the problem of water supply. The rapidity of growth has caused existing sources to be inadequate in quantity or unsuitable in quality.

The regional aspect of the problem is demonstrated by the fact that adequate sources are to be found only at considerable distance outside of the areas concerned. Conservation of existing supplies and coordination of plans to develop new supplies are the chief concerns of planning in the interest of efficient use and just distribution of water resources.

Developments of major water supply facilities since the report of progress four years ago are as follows:

New York City.—Limitations of existing water supplies have long been recognized by the city. Fortunately, intervening years have cleared legal and budgetary hurdles so that in January, 1937, construction was started on a vast program to divert 540 million gallons of water daily from the tributaries of the Delaware and Hudson rivers into the city's distribution system. Principal elements of the project are three dams and reservoirs on Rondout Creek, Neversink River and East Branch, interconnecting tunnels, and an 85-mile pressure tunnel leading to Hillview Reservoir at the northern boundary of the city.

Construction of the first stage of the project includes the Neversink and Rondout reservoirs, a short connecting tunnel and the main Delaware Aqueduct. Work has progressed on the tunnel to about 75 per cent of completion. Surface and control works along the tunnel are more than half complete. The section of the tunnel leading from Kensico Reservoir to the city will be available by the middle of 1942 to carry a larger volume of existing stored waters at Kensico to meet the anticipated emergency of peak-summer consumption.

Completion of Rondout Reservoir and the aqueduct is expected by 1944, making 100 million gallons of water available daily with the possibility that some additional water may be drawn from the Neversink Reservoir. Exploratory caissons at the site of the latter have been completed and considerable earth moved preliminary to constructing the dam itself.

The second stage of the program includes construction of

the reservoir on the East Branch and building a 26-mile connecting tunnel to bring water from it to Rondout Reservoir. This stage is designed to supply the city with additional water to the extent of 370 million gallons daily.

Northern New Jersey.—Early studies and negotiations for providing additional water supply to metropolitan New Jersey were pointed out in the report of progress four years ago. Late in 1937 the North Jersey District Water Supply and the State Water Policy commissions advocated the linking of existing systems operating to capacity with those having surplus storage facilities to stave off an imminent shortage. This was put forth as a temporary remedy with the urgency of a new major source of supply stressed.

During 1939, comprehensive legislation for providing a new major water supply system and for eventual unified control of existing sources of supply by a state authority was introduced in the State Legislature. Indorsed by Governor Moore, the proposal would divert from 150,000,000 to 230,000,000 gallons daily from the Delaware River through an aqueduct following the old Raritan Canal from Raven Rock across the state to Bound Brook. A reservoir would be constructed near Bound Brook and a connection established with the Wanaque system in the metropolitan area. As in the case of earlier proposals no definite action was taken on the plan.

A report by a six-member committee was sent to the New Jersey Legislature on November 10, 1941, stressing the need of a new state water supply and the conservation of existing municipal and privately-owned supplies. It suggested that the State Water Policy Commission, North Jersey District Water Supply Commission, Newark's water supply and the Passaic Valley Water Commission ultimately be brought under a single authority. The total cost of the project would be about \$190,000,000, most of this being for part payment of existing supplies and \$41,000,000 for a new supply.

The report recommends Governor Moore's proposal of three years ago and urges interconnection of existing supplies to safeguard all communities in time of drought. The report carries a recommendation of the WPA that \$45,000,000 be spent for compensating reservoirs along the upper Delaware.

On January 7, 1942, Governor Charles Edison appointed a 12-man board known as Governor's Emergency Water Supply Commission. The commission has begun to study ways and means to prevent a water shortage in metropolitan New Jersey.

Sewage Disposal

Uncontrolled discharge of municipal wastes into the nearest water course has for a long time been one of the most vital matters confronting the Port of New York. Establishment of the Interstate Sanitation Commission in 1936 reflects the importance of regional regulation and control of the problem. Since that time, constant vigilance over the condition of metropolitan waterways has been maintained, and repeated efforts made by the Commission to bring about correction of contamination at its source. Despite efforts to clean up New York Harbor, periodic inspection by the commission discovered 21 separate sources of varying intensity polluting the waters of the harbor in 1941.

Connecticut's ratification, during 1941, of the pact formerly limited to New Jersey and New York, increased the geographical control of the commission and

brought its program of pollution abatement a step closer to realization. Its control now extends from Sandy Hook up the Hudson River to above Bear Mountain Bridge, on the Atlantic shore to Fire Island Inlet, on Long Island Sound to Port Jefferson, and on the Connecticut shore to New Haven.

New York City.—Encouraging progress to free the harbor of pollution has taken place during the past four years, due principally to the efforts of the City of New York.¹ The effect of plants now in operation is becoming apparent in improved conditions in the boundary waters of the city, particularly in Shellbank Creek, Flushing Bay, Jamaica Bay, Harlem River, and East River.



Courtesy, Department of Public Works, New York City

JAMAICA SEWAGE TREATMENT WORKS
Aerial view of plant under construction.

The most significant advance toward abatement of pollution in the New York harbor has been the formulation and start of construction on a comprehensive program for the proper disposal of the city's wastes. The Department of Public Works has planned a total of 18 modern plants at strategic locations throughout the city to provide adequate sewage treatment facilities. These are distributed in the various boroughs as follows: two in Manhattan, two in The Bronx, five in Brooklyn, four in Queens, and five in Richmond.

The first plant of the comprehensive scheme to go into operation was the Coney Island works completed in 1935. Extension of this to double its capacity, from 35 to 70 million gallons daily, has been substantially completed. Additional flows, formerly entering Paerdegat Basin to the extent of 30 million gallons daily, were diverted to this plant during June, 1941, through a six-foot diameter trunk sewer constructed by the Borough of Brooklyn. The plant furnishes treatment by the chemical precipitation process together with chlorination during the summer months, and plain sedimentation during winter months.

Construction of Wards Island (197 million gallons daily), Tallmans Island (40 million gallons daily), and Bowery Bay (40 million gallons daily) works, together with their intercepting sewers, were well along at the time of the last report of progress four years ago. These were placed in operation in October, 1937, April, 1939, and November, 1939, respectively. Originally going into operation as a sedimentation plant, facili-

ties have been added to the Bowery Bay plant to extend the degree of treatment to include secondary treatment by the activated sludge process. The other two plants were the first in New York City to process final treatment by the activated sludge method.

Construction of an activated sludge plant with a capacity of 65 million gallons daily along the north shore of Jamaica Bay south of Aqueduct in Queens, to serve the southeastern section of Queens, is at present about 90 per cent completed. Useable portions of the old screening plant in operation at this location will be incorporated in the new works which are scheduled for operation in the latter part of 1942.

Settling, aeration, and sludge digestion tanks at the 60-million gallons daily capacity activated sludge plant in the 26th Ward are under construction. This replaces the old screening plant located along the north shore of Jamaica Bay east of Canarsie and will serve the East New York section of Brooklyn. Construction is being pushed, subject to priorities.

A new plant located at Harts Island, with a capacity of 1.5 million gallons daily and with two pumping stations, is substantially completed. This is of the plain sedimentation type with chlorination. Flow from nearby City Island will be pumped to the plant through a force main laid at the bottom of the channel. Institutional flow on Harts Island will also be pumped to the plant. While not large in relation to New York City's other plants, it will afford protection to the newly developed parks at Orchard Beach and Pelham Bay.

The design program of the Department of Public Works is being continued on new projects of the city-wide scheme, which include a 160-million gallons daily sedimentation plant in the Owls Head section of Brooklyn; the first stage of a 280-million gallons daily treatment works on Newtown Creek to serve portions of Brooklyn and Queens; a 160-million gallons daily activated sludge plant at Hunts Point in the Bronx; a 15-million gallons daily chemical treatment plant to serve the Rockaways; a plant to serve the upper west side of Manhattan; and also a project at Port Richmond in Staten Island.

Up to the present time the City has spent about \$60,000,000 on the plants now in operation or under construction. In the work done so far, the City has been aided by Federal grants of \$11,000,000. The completed program with facilities to accommodate immediate flows is estimated at a total of \$178,000,000.

In the Environs.—In the last report of progress a procedure, as set forth by the Port Raritan District Commission, to relieve pollution of the Raritan River was described. This involved the provision of individual sewage treatment facilities by municipalities located in the Raritan valley. Further progress has been made in that area as well as other parts of the environs.

Stimulated by PWA grants and loans, 14 communities placed works in operation to handle a combined total of 30 million gallons daily. Individual plants vary in size from 0.6 to 10 million gallons daily and employ processes varying from plain sedimentation to complete treatment.

A survey of pollution in the Raritan River completed in December, 1941, showed that industrial wastes dumped into the river each day had jumped more than 50 per cent in the last four years. According to this survey by the New Jersey Department of Health, the average yearly flow of the Raritan just below its junction with Millstone River at Manville in Middlesex County was 700 million gallons daily while the summer daily average was 400 million gallons. This average dropped to about 37 million gallons daily last summer when it was observed that 23 million gallons of industrial and three million gallons of sanitary wastes were discharged into the river daily just about the head of tidewater at New Brunswick.

¹ The following summary of New York City projects is based on a paper presented by Irving V. A. Huie, Commissioner of Public Works, before the Metropolitan Section, American Society of Civil Engineers, May 21, 1941.

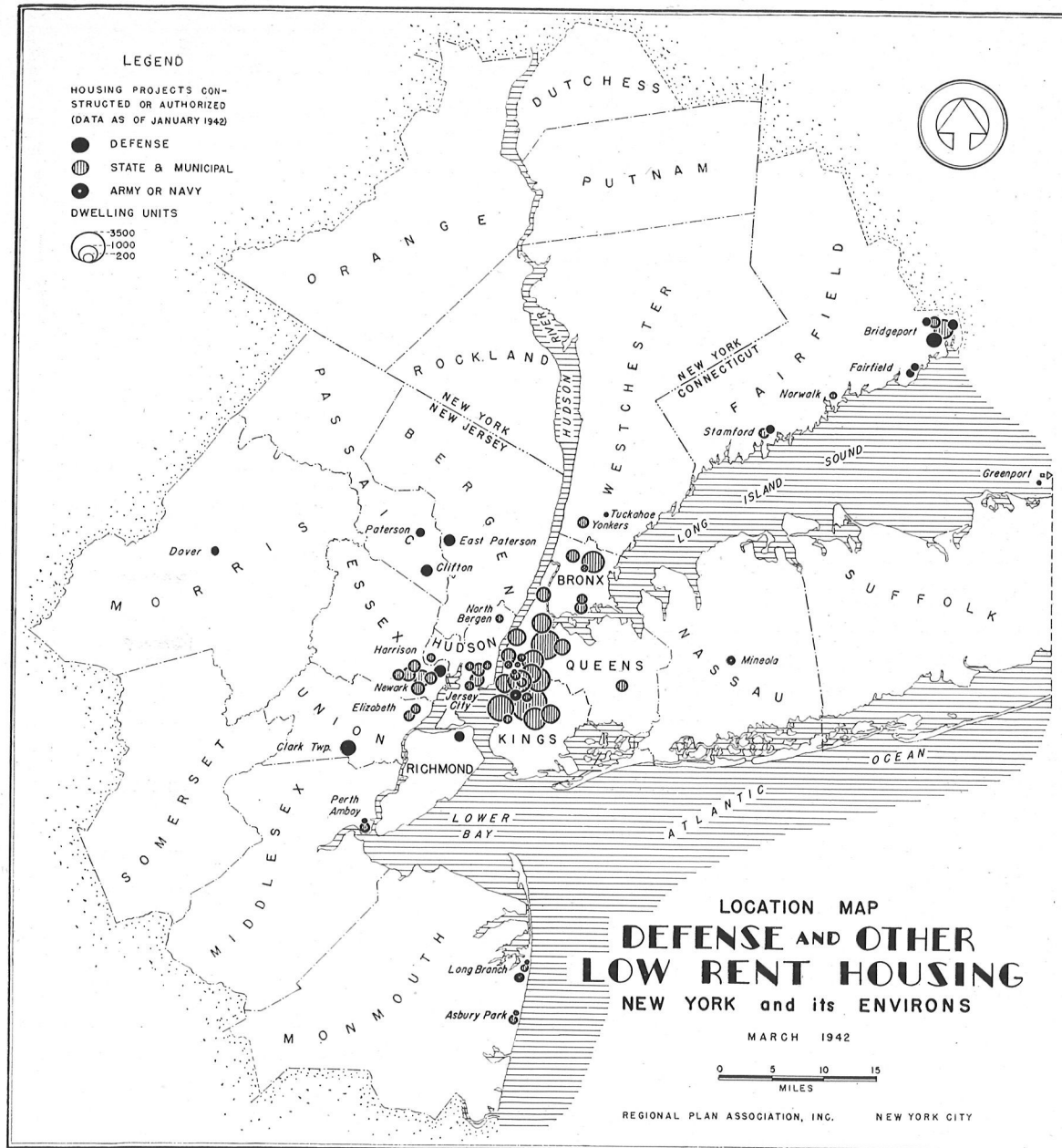


FIGURE 3

As a result of the survey the New Jersey Department of Health has laid down a policy of strict enforcement of health laws and regulations to stop pollution in the Raritan River Valley. So far, municipalities and industries have spent \$5,500,000 to construct treatment plants and it is estimated that at least \$1,500,000 more will be necessary for additional works to take care of industrial wastes.

In Bergen County a study of sanitary sewer requirements by the Planning Board points out that the coverage of a sewer system should be larger than the single municipality and recommends joint action preferably by groups of municipalities lying within a natural drainage basin.

Recognition of the advisability of joint treatment has since evidenced itself in the construction of several plants to serve two or more communities. Rutherford, East Rutherford and Carlstadt completed a jointly operated plant as did Hackensack

and Maywood. Also, existing facilities have been enlarged at the jointly owned Dumont-Bergenfield works. A plan for a sewage treatment works along with an intercepting sewer to serve seven communities along the Overpeck Creek has been completed and at present is awaiting financial arrangements.

Pursuant to orders of the Interstate Sanitation Commission, officials of the City of Elizabeth have completed facilities for the treatment of seven million gallons of sewage which for years had discharged into the waters of Kill Van Kull. On November 30, 1941, this flow was diverted to the Joint Meeting treatment plant at Amboy Avenue, Elizabeth.

In a separate order, officials of the City of Elizabeth have been directed to undertake treatment at an early date to care for all additional sewage now being discharged by the municipality into the waters adjacent to the city.

Continued improvements and extensions to the county sewage

system in Westchester have taken place since the progress four years ago. Among the more important are the construction of trunk sewers, intercepting local River outfall sewers in the Villages of Hastings Ferry, also in the southern and central parts of new two-mile trunk sewer extends the county system residential area in the City of Rye and improvement facilities in the Villages of Mamaroneck and Larchmont have been made.

Refuse Disposal

New York City's experience with "land filling" of refuse coupled with refinements in the method indicates that this method is reasonably satisfactory if carefully supervised and controlled. About one third of the city's refuse (9,000,000 cubic yards) is disposed of in this fashion with a result that many acres of marshland are being reclaimed for park purposes. This method of disposing of sanitation wastes has been employed to advantage primarily at Soundview Park in The Bronx, Marine Park in Richmond and Spring Creek Park along the north shore of Jamaica Bay.

PUBLIC HOUSING

Low rent housing under public control began with limited dividend projects under the New York State Board of Housing in the twenties; then followed Federal stimulation and the establishment and operation of local housing authorities in the thirties; and finally in the emergency, the Federal government began constructing defense and war housing directly through a number of its own agencies. While there was some overlapping in point of time the three periods are fairly distinct. A picture of the total progress to date is presented in Figure 3.

Of the 73 projects in the Region occupied, under construction or approved for construction, 35 are in New York State (including 31 in New York City); 28 in New Jersey; and 10 in Connecticut. The number of dwelling units in the 73 projects is 43,019 and the total cost, \$202,883,000.

Since 1937, the time interval emphasized in this report, a total of 60 projects are recorded, 28 of which are in New Jersey, 22 in New York and ten in Connecticut. Two thirds of the total number of dwelling units are in New York State, 96 per cent of these being in New York City. A summary by counties is presented in the accompanying table which gives the number of projects, number of dwelling units, total cost and unit cost. Of the 60 projects, 14 are for industrial workers, two for Army personnel and one for the Navy.

Of the 21 counties of the Region, projects have been constructed in all but five—Somerset County in New Jersey and Dutchess, Orange, Putnam and Rockland in New York State. In number of projects Fairfield County leads with ten, then New York County with eight, followed by Essex and Hudson with seven each.

The location and type of structures is of interest in the evolution of public housing as reflecting the general policies and conditions of the times. The limited dividend houses erected under the supervision of the New York State Housing Board were of the six-story apartment type constructed about a central court on part of a city block. They were different from most private buildings of the day in that they offered more light, air and open space than the great majority of contemporary struc-

CORRECTION

In the table on page 12, entitled "its Environs, 1937-1941" there are replaced as follows:

	1937-1941
Unit cost	
Bronx County	
Total, New York City	\$4,537.831
Nassau County	
Total, New York State	4,765.50
Total, New York Region	5,277.44
	5,399.552
	4,942.95
	4,825.49
	4,482.66
	4,974.61
	0
	4,772.05
	\$5,088.373

"Total cost" figures include only those figures were available, as noted in

NEW YORK				
Bronx	1	400	14,550,173	4,785.32
Kings	6	10,470 ⁴	55,570,008 ^{5,6}	6,144.407
New York	8	8,623 ⁸	30,819,782	6,782.529
Queens	2	3,597	16,445,000	4,571.86
Richmond	1	346	2,282,000	6,595.37
Total, New York City	18	23,436	\$119,666,963	\$6,673.741 ¹⁰
Dutchess (Part of)	0	0	0	0
Nassau	1	200	845,000	4,425.00
Orange (Part of)	0	0	0	0
Putnam	0	0	0	0
Rockland	0	0	0	0
Suffolk	1	50	not available	
Westchester	2	610	3,632,000	5,954.08
Total, New York State, except New York City	4	860	\$ 4,477,000	\$5,527.16 ¹¹
Total, New York State	22	24,296	\$124,143,963	\$6,624.19 ¹²
Total, New York Region	60	36,991	\$184,576,547	\$5,945.64 ¹³

¹ Computed on 3,941 units.

² Computed on 1,792 units.

³ Computed on 8,362 units.

⁴ Construction of 1,424 of these units delayed because of war.

⁵ Figures for Williamsburg Houses do not include legal fee.

⁶ Figures for Fort Green Houses estimated.

⁷ Figured on 9,044 units.

⁸ Construction of 5,103 of these units delayed because of war.

⁹ Figured on 4,544 units.

¹⁰ Figured on 17,931 units.

¹¹ Figured on 810 units.

¹² Figured on 18,741 units.

¹³ Figured on 31,044 units.

tures. These were mostly located in the older sections of Manhattan and Brooklyn.

Then followed larger projects with Federal assistance but still under state control of investment return: Knickerbocker Village in Manhattan, Hillside Houses in The Bronx and Boulevard Gardens in Queens. These were built in the middle thirties. The creation of a Federal housing agency brought with it the idea of slum clearance as a major objective of housing. Williamsburg Houses in Brooklyn was followed by projects in Newark, Jersey City, Bridgeport, Asbury Park and other outlying centers as well as additional projects in New York City.

War priorities have dried up all activity on housing for normal civilian use, replacing it by construction of units for war industry workers and military personnel. Homes for industrial employees have been located away from New York City where local facilities were not able to absorb the increase in population.

Housing with some degree of Federal participation is being thought of as part of a post-war program to ease the transition from wartime to peacetime industrial production. Slum clearance and the rehabilitation of blighted areas appears to be a logical objective for such a program.