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## THE PORT OF NEW YORK AUTHORITY.

CREATED BY COMPACT BETWEEN THE STATES OF  
NEW YORK AND NEW JERSEY AND RATIFIED BY CONGRESS

---

### REPORT

WITH

## PLAN FOR THE COMPREHENSIVE DEVELOPMENT OF THE PORT OF NEW YORK

EUGENIUS H. OUTERBRIDGE,

Chairman

J. SPENCER SMITH,

Vice-Chairman

ALFRED E. SMITH

LEWIS H. POUNDS

DE WITT VAN BUSKIRK

FRANK R. FORD

DECEMBER TWENTY-FIRST, NINETEEN TWENTY-ONE

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ALBANY

J. B. LYON COMPANY, PRINTERS

1921

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## *Commissioners*

EUGENIUS H. OUTERBRIDGE,  
Chairman

J. SPENCER SMITH,  
Vice-Chairman

ALFRED E. SMITH

DE WITT VAN BUSKIRK

LEWIS H. POUNDS

FRANK R. FORD

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WILLIAM LEARY, Secretary

C. A. RUHLMANN, Assistant Secretary

## *Consultants*

GEORGE W. GOETHALS,  
Consulting Engineer

JULIUS HENRY COHEN,  
Counsel

## *Technical Advisory Board*

B. F. CRESSON, JR.,  
Chairman

GEORGE W. GOETHALS

FRANCIS LEE STUART,  
Vice-Chairman

MORRIS R. SHERRERD

NELSON P. LEWIS

C. A. RUHLMANN,  
Secretary

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## *Technical Staff*

B. F. CRESSON, JR.,  
Chief Engineer

J. E. RAMSEY,  
Chief Statistician

W. W. DRINKER,  
Terminal Engineer

H. C. BIXLER,  
Transportation Engineer

E. C. CHURCH,  
Transportation Engineer

J. A. JACKSON,  
Electrical Engineer

E. J. TSCHIMBKE, Chief Clerk

*Director, Bureau of Information*

E. H. PALMER

NEW YORK, December 21, 1921.

*To the Governor of the State of New York,*

*To the Governor of the State of New Jersey.*

SIRS.—The Port of New York Authority presents herein its report and recommendations complying with Chapter 203, Laws of 1921, State of New York; and Chapter 152, Laws of 1921, State of New Jersey.

The recommendations of the Port Authority are based upon two fundamental principles—the economic needs of commerce and the public policy of port development. The conclusions reached have been derived from an intensive study and review of the work of The New York–New Jersey Port and Harbor Development Commission during the years 1917 to 1920 inclusive (contained in the report submitted to the Legislature, dated December 16, 1920), and after extended conferences and discussions with substantially all of the public and private agencies engaged in the business of transportation, the conduct of commerce and industry, and in the supply of the people with the necessities of life, supplemented by much additional research by the Port Authority and its staff.

#### Organization.

Having taken the oath of office, the Commissioners met for organization on April 25, 1921, there being present Frank R. Ford, Eugenius H. Outerbridge, Lewis H. Pounds, Alfred E. Smith, J. Spencer Smith and DeWitt Van Buskirk, being all of the Commissioners.

The Commissioners organized by electing Eugenius H. Outerbridge, Chairman; J. Spencer Smith, Vice-Chairman, and appointed William Leary, Secretary; Carl A. Ruhlmann, Assistant Secretary, Julius Henry Cohen, Counsel; General George W. Goethals, Consulting Engineer, and B. F. Cresson, Jr., Chief Engineer. Appropriate sub-committees

were appointed to report on complete organization, by-laws, offices, budget, staff personnel, advisory council, public information, and on the procedure for public hearings and conferences required by the statutes. (Chapter 203, Laws of 1921, State of New York; and Chapter 152, Laws of 1921, State of New Jersey.)

#### Compact Executed.

On April 30th the compact between the two States establishing the Port District and creating The Port of New York Authority was formally signed in the great hall of the Chamber of Commerce of the State of New York, thus completing the legal steps necessary to effectuate the compact as a binding obligation between the two States and to establish The Port of New York Authority as a body corporate and politic. Subsequently this was ratified by Congress by the passage of the Edge-Ansorge joint resolution introduced by Senator Walter E. Edge in the Senate, and by Congressman Martin C. Ansorge in the House, both bodies voting unanimously for its passage.

On August 23d, President Harding approved the action of Congress, affixing his signature in the presence of a large company, with appropriate ceremonies to mark so important an occasion.

#### Completion of Staff Organization.

The Commissioners met on May 11th, as a body corporate and politic, and reaffirmed and adopted the elections, appointments and proceedings taken at the previous meeting. In accordance with the law the Commissioners proceeded to take over all of the property, data and materials formerly the property of the New York-New Jersey Port and Harbor Development Commission. The organization was rapidly completed in its several departments, such as the Engineering Staff, Statistical Department, Bureau of Information and clerical force. There was appointed to the Engineering and Statistical Staff W. W. Drinker, Terminal Engineer; J. E. Ramsey, Chief Statistician; H. C. Bixler,

Transportation Engineer; E. C. Church, Transportation Engineer; J. A. Jackson, Electrical Engineer, and to the Technical Advisory Board, Nelson P. Lewis, Morris R. Sherrerd and Francis Lee Stuart, well known and distinguished consulting engineers. Eric H. Palmer was appointed Director of the Bureau of Information and Edward J. Tschimbke, Chief Clerk.

#### Advisory Councils.

Immediate provision was made for the constitution of the Advisory Council from the Chambers of Commerce, Boards of Trade and Civic Societies, of which there were one hundred and three (103) within the Port District. The several agencies engaged in transportation, such as the twelve trunk line railroads, the steamship, lighterage, warehouse and trucking interests, and various specialized industries, were invited to organize cooperating committees in order that points of contact might be immediately established for the necessary conferences. The method of reaching and informing the public at large was more difficult. It was not possible to place in everyone's hands the analysis of existing conditions and how those affected their lives, or to present the subject so that they could adequately understand and approve any specific form of relief. The sociological aspect of this subject, however, is, perhaps, one of the most important. It was imperative that the public should understand its bearing on their business and living costs.

The Commissioners, therefore, decided to create an Advisory Council on Education to advise on the best methods of informing the public on this subject and to lend its active assistance. A small committee on plan and scope was first organized. A large group of representative citizens composed of men and women were invited to compose the Council. A large number of those invited accepted and the council has been of great assistance. Among other plans it has offered prizes for the best essay on the port problem and what it means to the people, to be competed for by scholars in the high schools in the Port District in both

States. The funds to provide such prizes have been subscribed or raised by the members of the Council.

#### Information of Public.

Provision was made for displaying the motion picture which had been prepared by the previous Bi-State Commission as a graphic illustration; first, of existing conditions; of the effect of these upon the cost of living, and then the plans suggested for relief, so as to visualize to the largest possible number of people what could not be brought home to them by pamphlet or report. Exhibitions, with explanatory addresses, have been given in theatres, schools, churches and halls before societies and gatherings of men and women at many points in both states, within and without the limits of the Port District.

#### Activities of Commissioners and Staff.

In order to be able to comply with the law requiring a comprehensive plan to be submitted to the Legislatures by January 1, 1922, the work of the Port Authority has been practically continuous.

In addition to the many stated meetings of the Commissioners there have been innumerable staff conferences, meetings with the Technical Advisory Board, with representatives of the railroads, steamship, lighterage, towing, warehouse and trucking interests; with the Advisory Council of Chambers of Commerce and the Advisory Council on Education; with the officials of many of the municipalities within the district; with the large specialized trade organizations and interests, such as grain and flour, produce and fruit, live stock, dressed meats and poultry, milk and dairy, wholesale grocers, sugar, fish, petroleum and coal; with department stores; the Shippers Conference, the United States Shipping Board, the Interstate Commerce Commissioners, the Transit Commission, and express company officials.

The Commissioners and the staff have made inspections of the whole port, accompanied on occasions by Gov. Nathan

L. Miller, members of Congress, members of the Legislatures of both States and by the United States Army engineers having to do with rivers and harbors. Inspections of railroad terminals and operations at classification yards and of express classification stations have been made.

Many public meetings and meetings of scientific and economic societies have been addressed by the Commissioners, counsel and members of the staff. At the request of periodicals and newspapers articles have been written for public information on the subject.

#### Particulars of Port District.

The Port District contains one hundred and five (105) organized municipalities. It embraces a population of about 8,000,000 people. It is served by twelve trunk line railroads, which bring to and take out of or through the port over 75,000,000 tons of freight per annum. An immense number of foreign and domestic steamships, not less than 8,000 in number, annually bring to or take from the port over 45,000,000 tons of freight per annum. There is an almost incalculable amount of local water-borne traffic within the port. There is the most prodigious manufacturing output in the world within a similar area, with a variety of products and commodities to be handled unprecedented anywhere else. There are over 4,000,000 tons of food stuffs alone annually required by the people of the Port District.

#### Waterways.

A very great increase is to be expected in the business carried on the New York State Barge Canal and the many communities along its route and in the West throughout the whole Great Lakes district will have a vital interest in the facilities to be created for transshipment at its seaport terminus.

The projected canal in New Jersey from the vicinity of South Amboy to the Delaware River, forming a part of the intracoastal waterway between Northern and Southern ports and the Great Lakes, when carried out

breaking bulk, and this necessitates tunnel connection between New Jersey and Long Island, and tunnel or bridge connections between other parts of the port;

Seventh — That there should be urged upon the Federal authorities improvement of channels so as to give access for that type of waterborne commerce adapted to the various forms of development which the respective shorefronts and adjacent lands of the port would best lend themselves to;

Eighth — Highways for motor truck traffic should be laid out so as to permit the most efficient inter-relation between terminals, piers and industrial establishments not equipped with railroad sidings and for the distribution of building materials and many other commodities which must be handled by trucks; these highways to connect with existing or projected bridges, tunnels and ferries.

Ninth — Definite methods for prompt relief must be devised that can be applied for the better coordination and operation of existing facilities while larger and more comprehensive plans for future development are being carried out.

#### Plans Invited and Studied.

The Commissioners have received and studied every plan that has been submitted, and have publicly invited the submission of plans and suggestions from anyone interested in this problem, and criticisms or suggestions relating to the plans promulgated by the previous Bi-State Commission. It is, perhaps, worthy of remark that only one plan taking in the whole district has been presented from any source outside the Commission's own organization. All of the plans (eleven in number), which have been otherwise suggested have been confined almost solely to the solution for Manhattan service alone. Several of the largest projects in this relation have been submitted only within the last month or six weeks. These entailed additional conferences, concentrated analysis, and day and night study by the staff and the Commissioners.

Late though it was, when these great projects were presented, the Commissioners felt that they should not reach their own conclusions until they had assembled and exhaustively studied every plan from whatsoever source it might appear, and until there had been applied to it the same measure of analysis and economic test that had been applied to the studies of the previous Bi-State Commission.

#### Port Area.

The Port of New York embraces the largest body of sheltered waters of any port in the world. Its shore lines measure about 800 miles with much of the adjacent land as yet undeveloped and available for industrial and commercial needs. Its natural advantages, therefore, for expansion and for the service of the commerce of the nation, are almost unlimited.

#### Principles of Remedies.

It is manifest, without argument, that only by a well devised and comprehensive plan can such a great expanse of natural advantages be properly developed and coordinated so that all portions may have their free opportunity, and also, that only by such means can there be avoided the mistakes of the past and be prevented the creation of new points of congestion that would occur again in the future by leaving the various districts unrelated.

If scientific knowledge, example and experience are not applied to the development of these natural resources, handicaps rather than advantages may result, and this has been so in the Port of New York. There is a widely held but mistaken view that water transportation is always the cheapest and that the existing system of car floatage and lighterage is, therefore, the best. It is true that long-haul traffic by water, with full loadings, is generally cheaper than rail transportation, especially when carrier and commodity are well adapted to each other. It is not true where commodities and cars have to be handled and rehandled

between classification yards and final destination, and where, through lack of consolidation and unified operation, light loading and duplication of effort and equipment are unavoidable. There are some exceptions in the case of certain bulk commodities, like coal and grain, but in the main, water service as now conducted, is one of the most expensive of the complex movements which compose the burden that commerce has to bear in this port and many other ports are not free from this difficulty.

#### The Port as a Whole.

The Port Authority had to consider the interests of the whole port, as well as the relations of each part. It had to suggest plans for prompt relief and project larger plans for future development as far ahead as the process of reasoning could foresee, so that each part of the port in the development of its local projects and its growth might properly coordinate them with the whole.

#### Crossing State Boundaries.

As the boundary between the two States must necessarily be crossed, it is essential that the crossing should be so located that the consent of municipalities will be readily secured and so that the assent of the States may likewise be obtained, and this would be most easily done through the adoption of the comprehensive plan.

#### The Comprehensive Plan.

The keystone to the arch of the structure which we term the "comprehensive plan" is the medium of connection between the two sides of the port. This keystone is, therefore, the necessary belt line connecting all of the nine railroads on the westerly side of the port, together with a tunnel under the bay and belt line to connect them with the three trunk lines on the easterly side of the port. In locating these there are two main factors to be considered i. e., the purely physical factor and the service factor. The

location of this belt line on the westerly side and of the tunnel was determined by many impelling reasons and only after very intensive study.

The chief reasons are:

(a) That in this location can be made the shortest connecting link between all of the railroads terminating on the west side of the port;

(b) That it lies adjacent to and easterly of the existing breakup and classification yards of each of those railroads, with which it can be readily connected;

(c) That the cars from trains broken up and classified in those yards will then continue to move to this shortest connecting belt line by the shortest and most direct route and in the right direction;

(d) Conversely, that the same principle applies to west-bound movements;

(e) The proposed tunnel from Greenville to Bay Ridge is the straightest, shortest and most direct course from that belt line to the easterly side of the port. It is the most favorable location for construction, for freedom from interference by moving craft during construction, for under-water depth below which any permanent structure must be built, for absence of curves and for easy grades.

Considered, therefore, merely from the physical aspect of tunnel construction alone, this location has the most advantages. Considered from the question of short connections and approaches, both the physical and operating elements make it the best.

It is by means of this same belt line that at appropriate locations there can be established suitable facilities for the consolidation of the car float and lighterage movement that must continue.

The belt line on the easterly side forming the through connection is an existing unit. Many other belt lines will be necessary to promote and serve industrial developments and water fronts. These form an essential part of the comprehensive plan and their location has been fully discussed

with and generally approved by the various localities to be served. They are located so as to co-relate their local improvements.

A full description of the routes and purposes of each of these belt lines will be found in the appendix identifying them with the map. It will be seen from the map of the comprehensive plan and from its accompanying descriptions that the plans conform to the fundamental principles previously enumerated, i. e., to permit of unification of railroad service, to bring cars from all railroads to all parts of the port, to permit of industrial development and to establish the most direct distribution of freight to its respective destinations and the most direct and economic interchange between rail and water-borne commerce, without previously breaking bulk.

#### Manhattan Service.

The insular position of the Borough of Manhattan, its intensively built up area, its peculiar topography with its greatest centers of congestion in its narrowest part, presented more involved problems and conditions peculiar to itself. The studies of traffic movements of the previous Bi-State Commission disclosed the fact that three-fourths of the local freight traffic of the twelve trunk line railroads was handled below 14th Street. Within these narrow confines are centered not only the great financial and administrative business offices, but also the great markets for food supplies, to which custom, for a century past, has drawn all those concerned with these enterprises. While it was early apparent that it was imperative to provide means by which the transportation of commodities originating in or destined to other sections of the port could be transported direct without passing through and congesting the streets of Manhattan, it is also certain that the customs and trade of a century cannot be ruthlessly uprooted and could not immediately be readjusted, even to a more economic situation, without disorganizing the services upon which the public must depend and without the destruction of much invested capital.

Manhattan's service also involves questions of important public policy affecting both New York and New Jersey, in relation to their respective water fronts on the Hudson river.

At present a large majority of the west water front of the Hudson river is occupied by terminal and float bridge yards of the New Jersey railroads, and a large part of the easterly side by the pier stations to which their floating equipment is brought for discharging and loading east and west-bound freight.

Operations as at present conducted bring to Manhattan quantities of freight not intended for consumption or use on the Island of Manhattan, thereby involving unnecessary congestion and long truck hauls. Similarly, large quantities of freight not originating in Manhattan are at present trucked to the receiving stations on Manhattan, intensifying those conditions. It is very difficult to determine and no one can safely forecast exactly what effect the diversion by more direct means of communication as outlined on this plan will have upon the tonnages remaining to be handled to and from Manhattan. The ideal condition would be to have only that which is necessary for consumption in or for shipment from Manhattan itself handled on the Island of Manhattan, and this ideal has been kept in view in a study of the comprehensive plan. Manhattan must continue to be supplied with all those things necessary to the support of its people and the maintenance of its business and home life, and until other and better means than now exist are provided the waterfronts of the Hudson river on both shores unavoidably will be compelled to furnish space for the needed rail terminals.

#### Public Policy and Economics.

Public policy, however, as well as sound economics, prescribe that the waterfront should be free for its natural and more normal uses by shipping. Highly specialized industries and services are located in that immediate neighborhood, such as refrigerated perishable products

including meat, fruits, vegetables, milk, dairy and poultry products, and there are strong reasons why these products should reach the warehouses furnished with cold storage without breaking bulk from the refrigerator car.

#### Freeing the Water Front for Steamers.

This section of water front has been and will continue increasingly to be in demand as the berthing place of the fast passenger liners plying to all parts of the world and for such coastwise shipping as brings perishable food products for the markets of Manhattan. The available space is none too large to be allocated solely as time goes on for those specific purposes.

On the other hand, the opposite shore front on the New Jersey side which can be furnished with immediate rail head connection for standard freight cars without breaking bulk offers facilities for heavy cargo loadings direct from rail to ship, which is impracticable on the corresponding opposite shore front of Manhattan. Therefore, impelling reasons require that any method devised for the service of local Manhattan freight should so far as possible free both these waterfronts for those respective purposes.

The Commissioners unanimously decided that the point for classification and dispatch of Manhattan freight from New Jersey should be west of the water front, and that necessarily means that its starting point should be west of the Bergen Hills. They have unanimously decided that the terminal stations on Manhattan Island should be *inland* from the water front, for the purposes of freeing that for steamship business, with access to the piers unimpeded by rail traffic destined for consumption on Manhattan or by freight originating on Manhattan for rail shipment via the New Jersey roads.

#### Railroad Operations on Manhattan.

The Commissioners have given the most exhaustive study to whether the transportation of freight between New Jersey and Manhattan should be on the water, above the water, or by tunnel under the water. This question had

to be considered coincidentally with the method of distribution to be employed after it reached Manhattan, and the Commissioners have unanimously decided that the connection should be by tunnel. The Commissioners have found that the amount of space that would be required on Manhattan Island to handle the number of standard freight cars that would have to be brought daily to and taken from the Island to accommodate even the present tonnages, would require so much land for tracks, yards, switching facilities, and supporting warehouse terminals, that it is economically impracticable to provide for the needs of the future by any system that has been presented or that they could devise, which entailed the operation of an all standard car freight service for inbound and outbound freight on this island without breaking bulk. The problem of west-bound loadings to destination, of room to make the necessary setups and load and dispatch cars within the necessary time, cannot be solved except at an expense which would put an excessive burden upon the commerce instead of reducing that now existing.

#### The System Recommended for Manhattan.

The Commissioners have found that the automatic electric system suggested by the former Bi-State Commission, with some important modifications, furnishes the best solution to meet all the complexities which exist or were developed in the discussions which have been held, and which seems to be the only one so far that will stand the test of economic proof. As designed, it can handle much more than the present normal traffic and can be expanded to meet future needs. While this is a novel system considered on so large a scale, it does not involve new or unsolved problems, either in construction or operation. Similar equipment and operations though on a smaller scale have been practically tested over a period of several years in England, and the London Post Office Department as the result of those practical tests is now installing a high speed underground automatic electric system for the distribution of its mail. The system proposed here is on a much larger

scale, but the principles have been established by experience and its feasibility has been confirmed by the most expert advisers in all its features.

It is true, as previously stated, that the carrying out of the comprehensive plan for sending direct to other parts of the port freight intended for them will have an as yet undetermined effect upon the freight destined to and from Manhattan alone, and it is also true that the installation of a complete new system such as the automatic electric will require radical changes in some existing customs of trade and methods of railway operation. Some of these factors are indeterminable at the moment by any exact science. It is considered, therefore, that the execution of the plan must be a process of evolution rather than one of revolution. Such a system would take several years to design, build and equip. Immediate relief in some degree must be provided.

#### **Prompt Relief.**

The Commission's plan for accomplishing this is shown in Exhibit "A" Plan for Present Relief, in the appendix. The only change this would require in the present New Jersey yards of the trunk lines is the provision of suitable platforms for making transfers between cars and trucks. It indicates terminals on Manhattan to be Union stations and they should, as soon as possible, be conducted as a unified operation.

#### **Improved Transportation Methods.**

Great changes in methods of transportation have already been forecast, are under serious consideration by the trunk lines, and to some extent are already being experimentally tried. This is especially true of container units. Great economies are expected from this system through saving in labor; preventing breakage and theft; through cost of equipment; through easy transfer of containers from car to float, terminal or truck chassis; by eliminating individual package handling, and by application of mechanical methods for handling containers.

#### **Adaptability of Recommended System.**

The automatic electric conveyor railroad is peculiarly well adapted to handle this type of transportation equipment. It has, nevertheless, been designed of standard gauge tracks and for a cross section of tunnels and underground work of size, curvature and grades to admit of standard freight cars being operated in it.

As approved by the Port Authority the terminals must be so constructed and the operations so arranged that those commodities requiring shipment in refrigerator cars can be brought without breaking bulk to the terminals in Manhattan. This has been determined to be feasible. The locations of the terminals suggested by the previous commission were made after an exhaustive study of the trucking to and from existing pier stations and with the view of zoning the Island so as to equalize, so far as practicable, the pick-ups and deliveries within each zone, and thus to shorten truck hauls, eliminate converging and conflicting truck routes, and to lessen congestion upon the streets. But they were tentative, and their exact locations can be altered if upon further study the diversion from Manhattan of freight destined to other parts of the port should make alterations in the locations of the Manhattan terminals desirable.

#### **Time for Accomplishment.**

It would take several years to design, construct and install the complete system. In the meantime prompt relief can be provided as above outlined and by consolidation of railroad car float and railroad lighterage service at appropriate points on the opposite side of the river; by unification of truck services and by the establishment on Manhattan of inland union terminals serving such consolidated and unified floating and truck operations, the inland terminals to be so designed and placed as to become the terminals of the automatic electric system when built and installed. Thus prompt relief can be obtained as part

of the evolutionary process of bringing about the ultimate completion of the whole, and this can be done without abruptly disorganizing the industries and services upon which the city necessarily depends and without the destruction of large invested capital.

#### Policy and Administration.

With a problem so immense and so complex; with the policies and interests of two States and so many municipalities involved; with Federal control of the navigable waters and dependence upon it for the development and maintenance of channels; with the trade of the nation as conducted through this, its chief gateway, at stake; with 8,000,000 people living within the Port District, directly affected in every element of their cost of living and facility of earning their livelihood; with natural advantages unparalleled, not heretofore developed as science and invention would have dictated because of diverse interests; with continuity of policy and purpose essential if any great comprehensive plan is to be achieved for the future; with elements available out of which to construct the greatest Port and the greatest business center in the world, it must be apparent that only through a coordinating agency, clothed with adequate powers and composed so as to permit of continuity of plan and purpose, can there be brought to fruition the great benefits that can be foreseen.

Until a plan is adopted the Commissioners can make no recommendations as to the sequence of work to be undertaken. This must be developed step by step, by subsequent study and negotiation to determine the economic possibilities.

#### Financial Methods.

Article VI of the compact reserves to every municipality exclusive control over its own properties and entire freedom in its local developments.

The Port Authority is given no power of eminent domain, but the adoption of the comprehensive plan will enable each municipality to plan its local developments so as to obtain additional advantages by coordinating them therewith.

The Port Authority cannot pledge the credit of either State or of any municipality as a means of securing funds to carry out any of the suggested works. It cannot levy taxes from any source. It must secure capital from investors on securities to be based on the properties it constructs, purchases or leases in carrying out its plans. The soundness of the enterprises must be proved by economic data, therefore the work can be undertaken only when investors have been satisfied that economic justification exists. The cost of service must necessarily provide for operation and maintenance and for interest upon and amortization of the bonds or other securities. Other ports in the United States and Canada have established similar organizations to The Port of New York Authority for the development and administration of their port affairs. Some of them have much greater powers than those vested in The Port of New York Authority by the compact between the States of New York and New Jersey. It is upon such a basis that the great port of Liverpool has been built up and that the Port of London is being entirely reorganized and immensely enlarged. The securities of the Mersey Docks and Harbour Board of Liverpool issued upon the credit of the works to be performed have met a ready market and are favored by investors as are those of the Port of London Authority. The improvements there are and will be here operated in the public interest and when the capital is amortized the improvements will be publicly owned in fee.

#### Maps and Plans.

There are included in this report, maps illustrating suggestions for prompt relief, suggesting highway routes for motor traffic and pictures of various municipal projects planned or already under construction, the availability and success of some of which will largely depend upon the comprehensive plan.

**Conclusion.**

In conclusion the Commissioners recommend the adoption by the two States of the comprehensive plan as shown upon map entitled " Comprehensive Plan " with its accompanying detailed description.

We have the honor to remain,

Respectfully,

The Port of  
New York Authority. { EUGENIUS H. OUTERBRIDGE,  
J. SPENCER SMITH,  
ALFRED E. SMITH,  
DE WITT VAN BUSKIRK,  
LEWIS H. POUNDS,  
FRANK R. FORD,  
*Commissioners.*

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**APPENDIX**

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## DESCRIPTION OF THE COMPREHENSIVE PLAN

Numbers have been placed on the map of the comprehensive plan to identify the various belt lines and marginal railroads. With the aid of these numbers the belt lines and marginal railroads may generally be described as follows:

**No. 1** — Middle belt line — the keystone of the arch of railroad terminal coordination within the Port District. It connects New Jersey and Staten Island and the railroads on the westerly side of the port with Brooklyn, Queens, the Bronx and the railroads on the easterly side of the port. This connection is the most direct, the shortest and the cheapest of any brought to the attention of the Commissioners for study or consideration. This line connects with the New York Central Railroad in the Bronx; with the New York, New Haven and Hartford Railroad in the Bronx; with the Long Island Railroad in Queens and Brooklyn; with the Baltimore and Ohio Railroad near Elizabethport and in Staten Island; with the Central Railroad Company of New Jersey at Elizabethport and at points in Newark and Jersey City; with the Pennsylvania Railroad in Newark and Jersey City; with the Lehigh Valley Railroad in Newark and Jersey City; with the Delaware, Lackawanna and Western Railroad in Jersey City and the Secaucus Meadows; with the Erie Railroad in Jersey City and the Secaucus Meadows; with the New York, Susquehanna and Western Railroad in West Hoboken; with the New York, Ontario & Western and the West Shore Railroads on the westerly side of the Palisades above the Weehawken tunnel.

Its length is approximately sixty-one and one-half miles, of which approximately fifty-one and one-half miles have already been built. Additional tracks to those already built will have to be added. There remains only approximately ten miles of entirely new line to be built. With the construction of the tunnel and approaches from Greenville to

Bay Ridge freight can commence to flow without the necessity of building any other trackage except short connections at the tunnel ends. To handle the full traffic that should traverse this middle belt line or utilize it for local service would require the improvement of existing tracks and additions to them.

The route of the Middle belt line is as follows: Commencing at the Hudson river at Spuyten Duyvel running easterly and southerly generally along the easterly side of the Harlem river, utilizing existing lines and improving and adding where necessary, to a connection with Hell Gate Bridge and the New Haven Railroad, a distance of approximately seven miles; thence continuing in a general southerly direction, utilizing existing lines and improving and adding where necessary, to a point near Bay Ridge, a distance of approximately eighteen and one-half miles; thence by a new two-track tunnel under New York bay in a northwesterly direction to a portal in the Greenville yard of the Pennsylvania Railroad in Jersey City, a distance of approximately five miles, to a connection with the tracks of the Pennsylvania and Lehigh Valley Railroads; thence in a generally northerly direction along the easterly side of Newark Bay and the Hackensack river at the westerly foot of the Palisades, utilizing existing tracks and improving and adding where necessary, making connections with the Jersey Central, Pennsylvania, Lehigh Valley, Delaware, Lackawanna & Western, Erie, New York, Susquehanna and Western, New York, Ontario and Western, and West Shore railroads, a distance of approximately ten miles. From the Greenville portal of the Bay tunnel and from the line along the easterly side of Newark Bay by the bridges of the Central Railroad of New Jersey (crossing the Hackensack and Passaic rivers) and of the Pennsylvania and Lehigh Valley Railroads (crossing Newark bay) to the line of the Central Railroad of New Jersey running along the westerly side of Newark Bay and thence southerly along this line to a connection with the Baltimore & Ohio Railroad south of Elizabethport,

utilizing existing lines and improving and adding where necessary, a distance of approximately twelve miles; thence in an easterly direction crossing the Arthur Kill, utilizing existing lines and improving and adding where necessary, along the northerly and easterly shores of Staten Island to the new city piers and to a connection, if the City of New York consent thereto, with the tunnel under the Narrows to Brooklyn provided for under legislation as a municipal project—a distance of approximately nine miles.

**No. 2**—A marginal railroad in the Bronx extending along the shore of the East river and Westchester creek connecting with the Middle belt line (No. 1), and with the New York, New Haven and Hartford Railroad in the vicinity of Westchester. This is a new line and will open up territory for commercial and industrial development. Its length is approximately eight miles.

**No. 3**—A marginal railroad in Queens and Brooklyn extending along Flushing creek, Flushing Bay, the East river and upper New York Bay. It connects with the Middle belt line (No. 1), by lines No. 4, No. 5, No. 6 and directly at the southerly end at Bay Ridge. It utilizes certain existing lines of the Brooklyn Eastern District, Jay Street, New York Dock and Bush Terminal companies. Existing lines will be utilized and improved and added to and new lines will be built where lines do not now exist. This railroad will open up territory for commercial and industrial development. It has a length of approximately nineteen and one-half miles, of which approximately four miles now exist and about fifteen and one-half miles will be new.

**No. 4**—An existing line to be improved and added to where necessary. It connects the Middle belt line (No. 1), with the marginal railroad No. 3 near its northeasterly end. It has a length of approximately two and one-half miles.

**No. 5**—An existing line to be improved and added to where necessary. It connects the Middle belt line (No. 1),

with the marginal railroad No. 3 in Long Island City. It has a length of approximately four miles.

**No. 6.**— A portion of this line exists and a portion is new. It connects the Middle belt line (No. 1), with the marginal railroad No. 3 in the Greenpoint section of Brooklyn. The existing portion to be improved and added to where necessary. It will open up territory for industrial development. It has a length of approximately four miles of which two miles now exist.

**No. 7.**— A marginal railroad surrounding the northerly and westerly shores of Jamaica Bay.—This line is new and connects with the Middle belt line (No. 1). It will open up territory for commercial and industrial development. It has a length of approximately twelve and one-half miles.

**No. 8.**— An existing line, to be improved and added to where necessary. It extends along the southeasterly shore of Staten Island. It connects with Middle belt line (No. 1), and will open up territory for commercial and industrial development. It has a length of approximately twelve miles.

**No. 9.**— A marginal railroad extending along the westerly shore of Staten Island and a branch connection with No. 8. This line is new and will open up territory for commercial and industrial development. It connects with the Middle belt line (No. 1) and with a branch from the Outer belt line (No. 15); with its branch it is about fifteen and one-quarter miles long.

**No. 10.**— This line is made up mostly of existing lines, to be improved and added to where necessary. It connects with the Middle belt line (No. 1) by way of marginal railroad No. 11. It extends along the southerly shore of Raritan bay and through the territory south of the Raritan river reaching New Brunswick. It will open up territory for commercial and industrial development. It has a length of approximately twenty-nine and one-half miles of which practically the entire length exists.

**No. 11.**— A marginal railroad extending from a connection with the proposed outer belt line (No. 15) near New Brunswick along the northerly shore of the Raritan river

to Perth Amboy, thence northerly along the westerly side of the Arthur Kill to a connection with the Middle belt line (No. 1) south of Elizabethport. The portion of this line which exists to be improved and added to where necessary. This line will open up territory for commercial and industrial development. It has a length of approximately fifteen and one-quarter miles, of which about nine and one-half miles now exist.

**No. 12.**— A marginal railroad extending along the easterly shore of Newark bay and the Hackensack river and connects with the Middle belt line (No. 1). This line which does not now exist will open up territory for commercial and industrial development. It has a length of approximately seven miles.

**No. 13.**— A marginal railroad extending along the westerly side of the Hudson river and the Upper New York bay. It is made up mostly of existing lines — the Erie Terminals, Jersey Junction, Hoboken Shore, and National Docks railroads. It is to be improved and added to where necessary. This line, connected with Middle belt line (No. 1), and operated as a belt line will serve the waterfront and open up territory for commercial and industrial development. It has a length of approximately sixteen and one-half miles of which about fifteen miles now exist.

**No. 14.**— A marginal railroad connecting with the Middle belt line (No. 1), and extending through the Hackensack and Secaucus Meadows. It will open up territory for commercial and industrial development. It is a new line and has a length of approximately twenty-three miles.

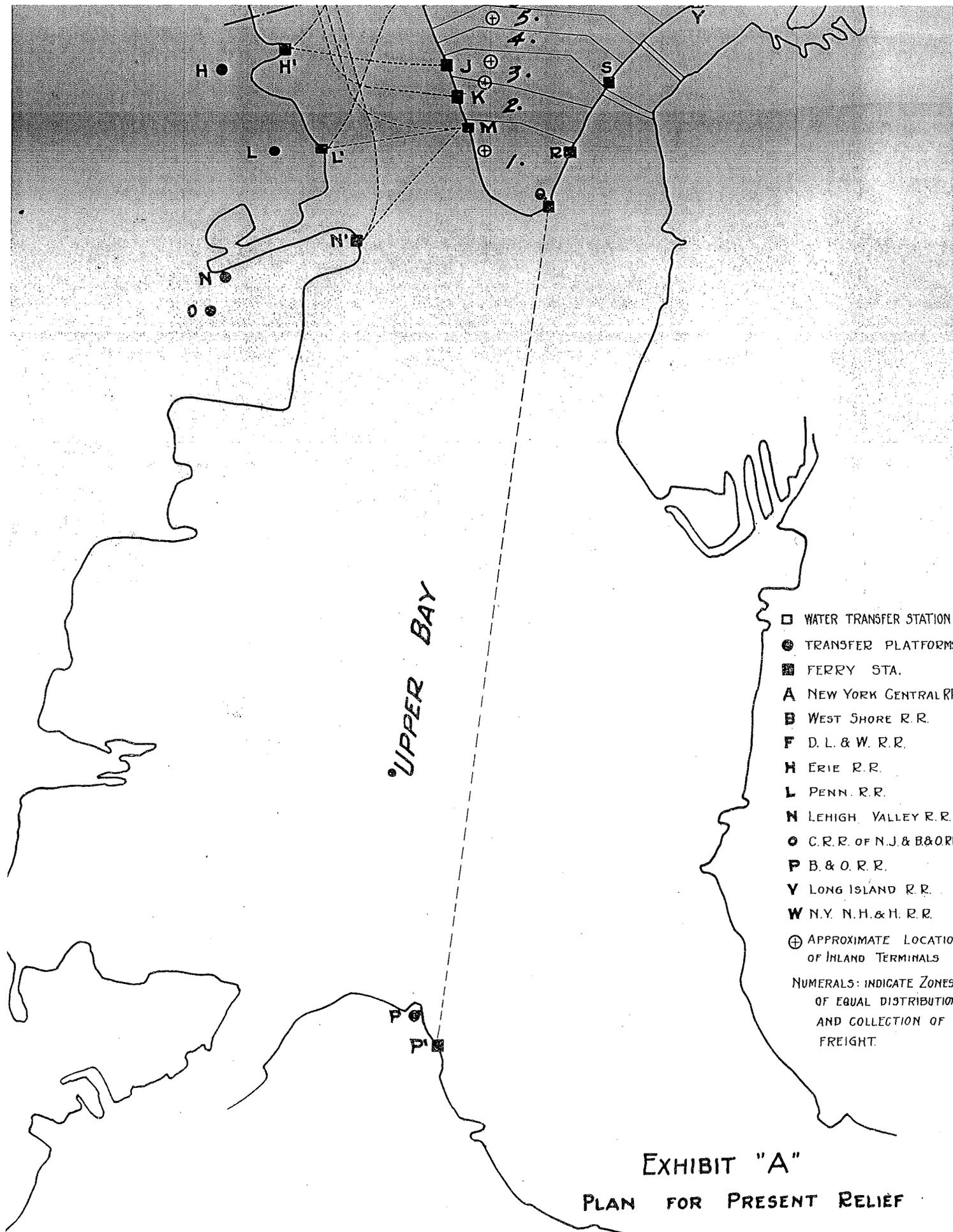
**No. 15.**— The outer belt line, extending around the westerly limits of the Port District beyond the congested section. Its northerly terminus is on the Hudson river at Piermont above the harbor congestion and it connects by marginal railroads at the southerly end with the harbor waters below the congested section. By spurs it connects with the Middle belt line (No. 1) on the westerly shore of Newark Bay and with the marginal railroad on the westerly

shore of Staten Island (No. 9). It will have great value in that it will afford military protection to the Port District. It will serve as an interchange between the railroads beyond the congestion and will open up territory for industrial development. It has a length of approximately seventy-one miles which is all new construction.

**No. 16.**— The automatic electric system for serving Manhattan Island. Its yards will connect with the Middle belt line and with all the railroads of the Port District. It is a standard gauge underground railroad deep enough in Manhattan to permit of two levels of rapid transit subways to pass over it. The only standard railroad cars that will be brought through to its Manhattan terminals will be those with perishables and food products in refrigerator cars. Cars with merchandise freight will be stopped at its yards. Freight from standard cars will be transferred on to wheeled containers, thence to special electrically propelled cars which will bear it to Manhattan. This freight will be kept "on wheels" between the door of the standard freight car at the transfer point and the tail board of the truck at the Manhattan terminal or the Store Door as may be elected by the shipper or consignee, thus eliminating all extra handling. Freight cars will thus be released more quickly from the terminals, thus effecting a material saving in the use of railroad equipment.

Union terminal stations located on Manhattan in zones of equal trucking distance, as to pick-ups and deliveries, will be served by this system. These terminals will contain storage space and space for other facilities. The automatic electric system will bring all the railroads of the port to Manhattan on equal terms as to time, service and cost.

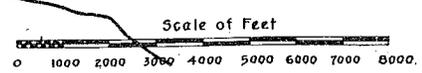
This system is described in full detail as to operation, capacity, cost, etc., in Chapter 14 of the report of the New York, New Jersey Port and Harbor Development Commission.

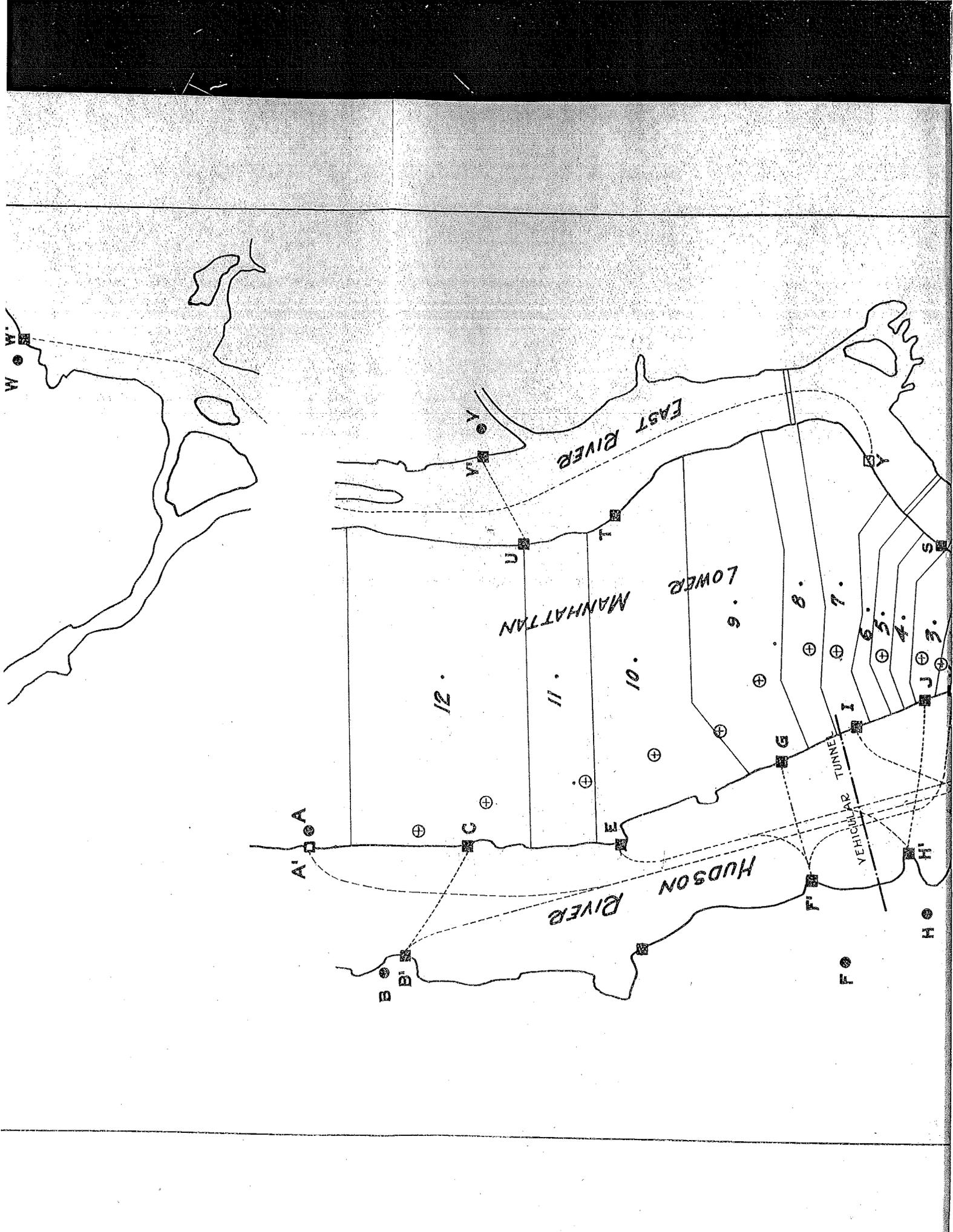


UPPER BAY

- WATER TRANSFER STATION
  - TRANSFER PLATFORM
  - FERRY STA.
  - A NEW YORK CENTRAL RR.
  - B WEST SHORE R. R.
  - F D. L. & W. R. R.
  - H ERIE R. R.
  - L PENN. R. R.
  - N LEHIGH VALLEY R. R.
  - C. R. R. OF N. J. & B. & O. R. R.
  - P B. & O. R. R.
  - Y LONG ISLAND R. R.
  - W N. Y. N. H. & H. R. R.
  - ⊕ APPROXIMATE LOCATION OF INLAND TERMINALS
- NUMERALS: INDICATE ZONES OF EQUAL DISTRIBUTION AND COLLECTION OF FREIGHT.

EXHIBIT "A"  
 PLAN FOR PRESENT RELIEF





## DESCRIPTION OF PLAN FOR PRESENT RELIEF

This plan calls for the establishment of a motor truck service between the railroads of the Port District and the Island of Manhattan.

This service, in order to avoid delays which make for the present high trucking costs, may properly be a service which utilizes the principle of the container and may either be performed by motor trucks with detachable bodies serving as containers or by motor trucks whose bodies carry containers. The container principle is to avoid all unnecessary handlings and to reduce to a minimum the loading and unloading time of the motor truck, leaving it free to perform the function for which it is designed—the rapid carrying of freight.

Such a service at present should utilize as far as possible the existing ferries in order to minimize length of haul under power. For the same reason the transfer points between freight car and motor truck should be as near to the ferries as possible.

The service divides itself naturally into two functions—the handling of such carload lot freight as is now handled at Manhattan's railroad pier stations and the handling of the less carload lot freight now handled at these piers and at local freight houses.

Part of the carload lot and less carload lot of freight can undoubtedly be delivered to or collected from the store door with no intermediate station between it and the freight car. This is the first and most economic function of the motor truck service.

The second is the handling of carload lot and less carload lot freight between the car and the merchant who does not desire store door delivery or whose business is of such a character as does not permit of it. For this class freight inland freight stations should be provided on Manhattan

where the shipper and consignee may deliver or collect their freight with vehicles of their own selection.

These freight stations would be union stations, served by all the railroads of the port district and should be located at such points as will minimize the truck mileage between the shipper or consignee and the freight station. This function will make for economies for all concerned.

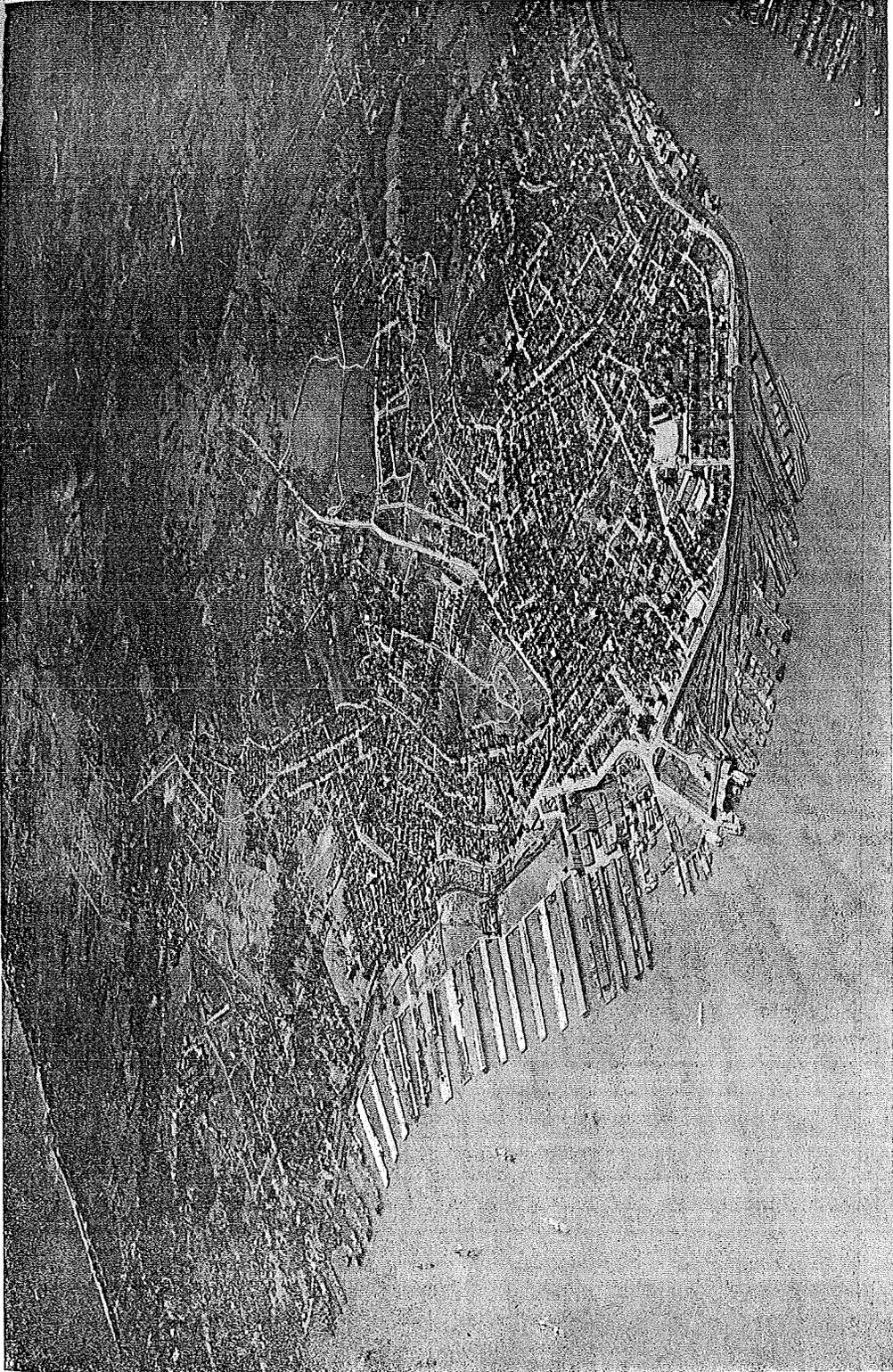
Exhibit "A" shows — tentative locations of suitable platforms for the transfer of freight between car and motor truck — existing ferry routes to be utilized — water routes to be utilized for the ferriage of motor trucks or containers by the railroads having no ferries available, and interior union freight stations located on the sites selected in the Bi-State Commission's report for the inland stations of the automatic electric system.

Exhibit "A" also designates by numbers and areas alternately shaded, the trucking zones in lower Manhattan arrived at in the studies of the Bi-State Commission. One day's trucking to and from each railroad pier and freight station on Manhattan was observed. The location of each pick-up and delivery was spotted on the map and from this spotting twelve zones were outlined, each containing equal numbers of pick-ups and deliveries. The sites for the automatic electric terminals were based as far as possible on this zoning.

This system as outlined will reduce the present use of Manhattan's streets and waterfront for freight purposes; will reduce congestion and will reduce existing costs. But as the tonnage of Manhattan grows, the cost of operating under the system will grow — the congestion of streets and waterfront will recur and a better system should supplant it.

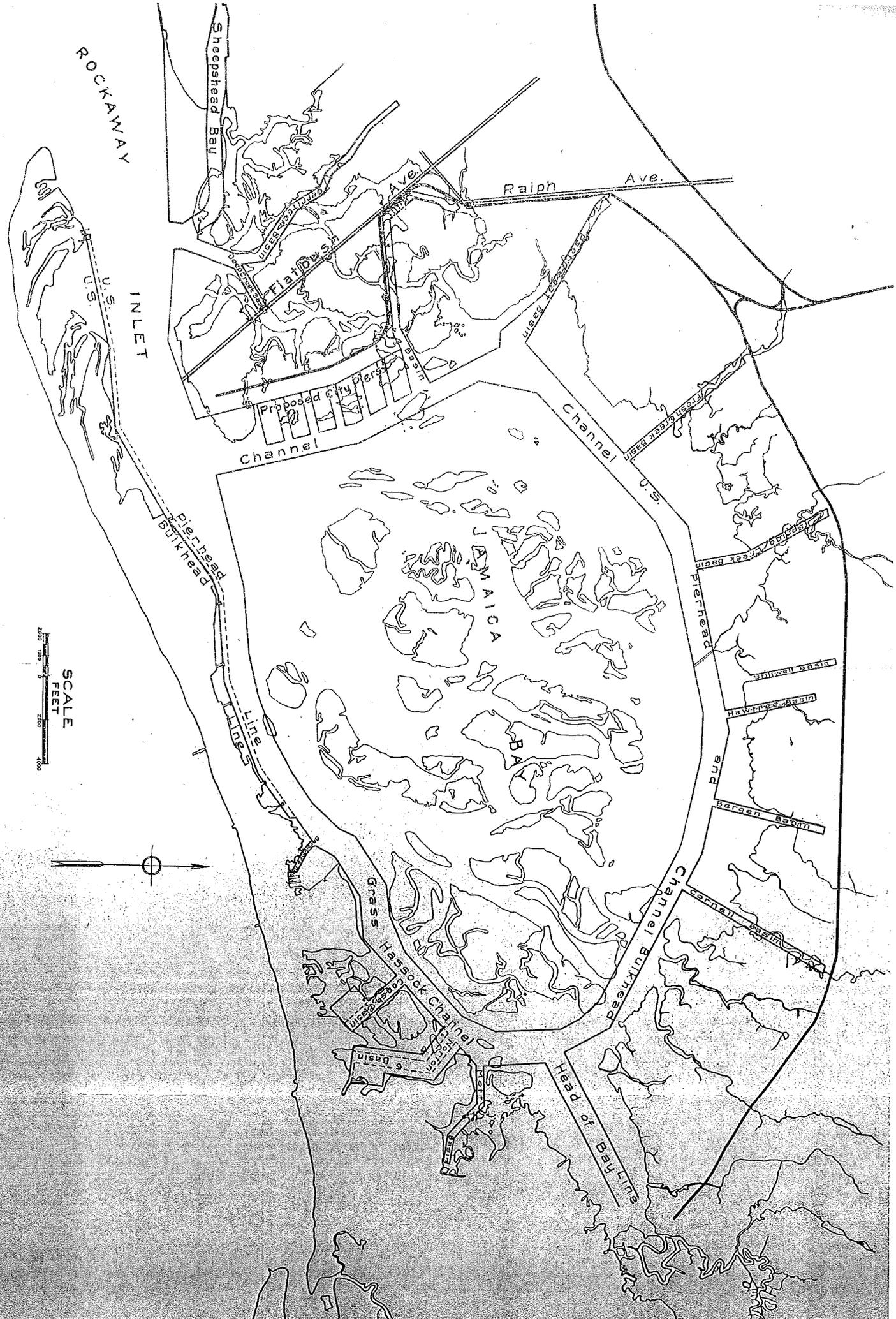
The automatic electric system offers a better and cheaper method between Manhattan and the railroads. As its tonnage expands its operating cost lessens. Its tunnels are far below the city's streets and its terminals are inland from the congested waterfront.

It will bring containers from a point which does not congest the waterfront of New Jersey by a route which does not congest the waterfront of either New York or New Jersey to points which will minimize the congestion on Manhattan's streets and waterfront. Store door delivery can be made from its stations with no extra handlings. It will utilize the trucks, containers and Manhattan terminals which serve for present relief. There is therefore no waste in the plan for present relief which serves merely as an evolutionary step of the final plan.

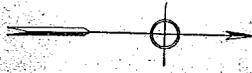


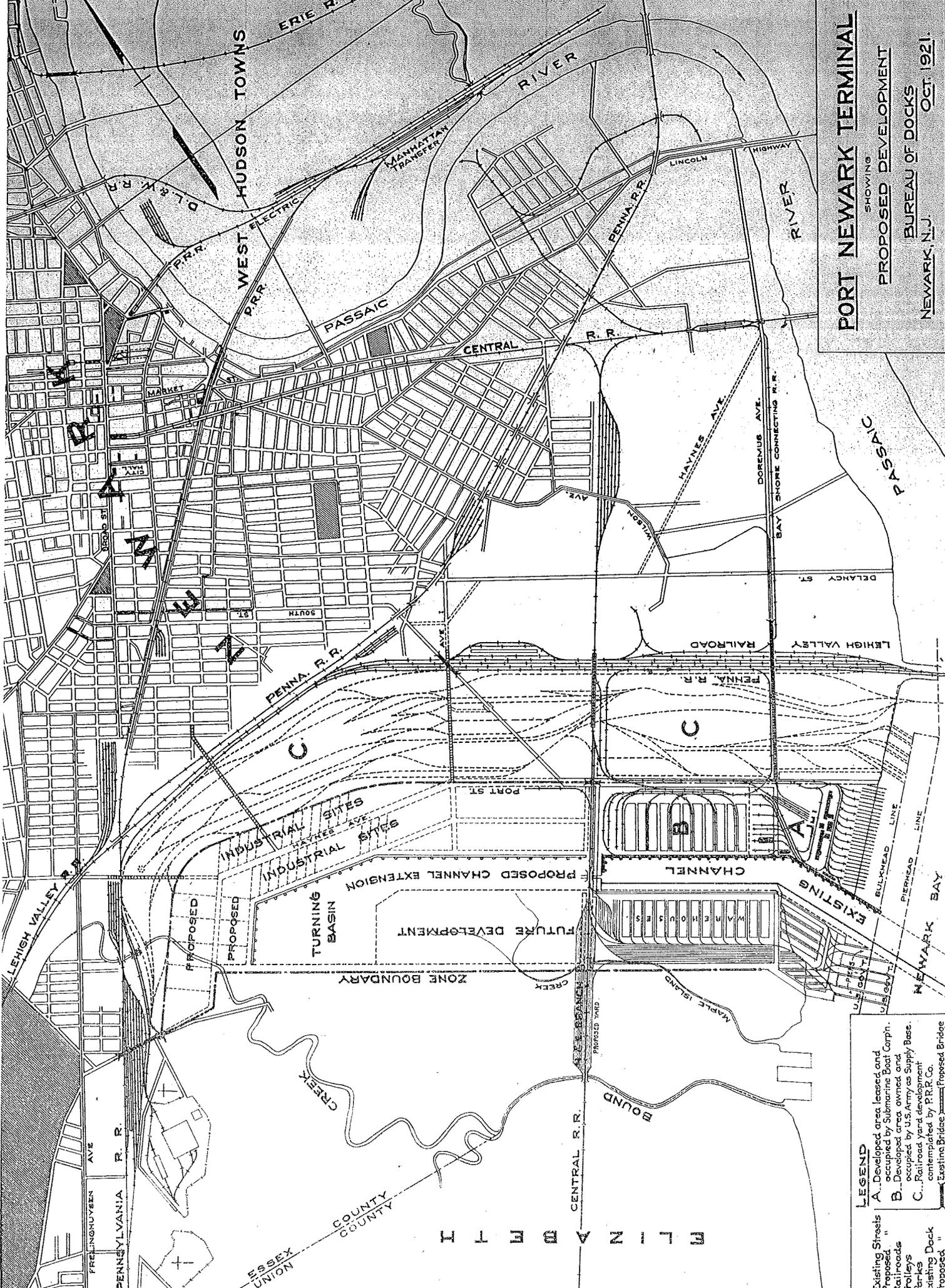
NEW YORK CITY'S PIER DEVELOPMENT AT STAPLETON, BOROUGH OF RICHMOND.

NEW YORK CITY'S PROPOSED DEVELOPMENT ON JAMAICA BAY.



SCALE  
FEET  
0 1000 2000 3000 4000



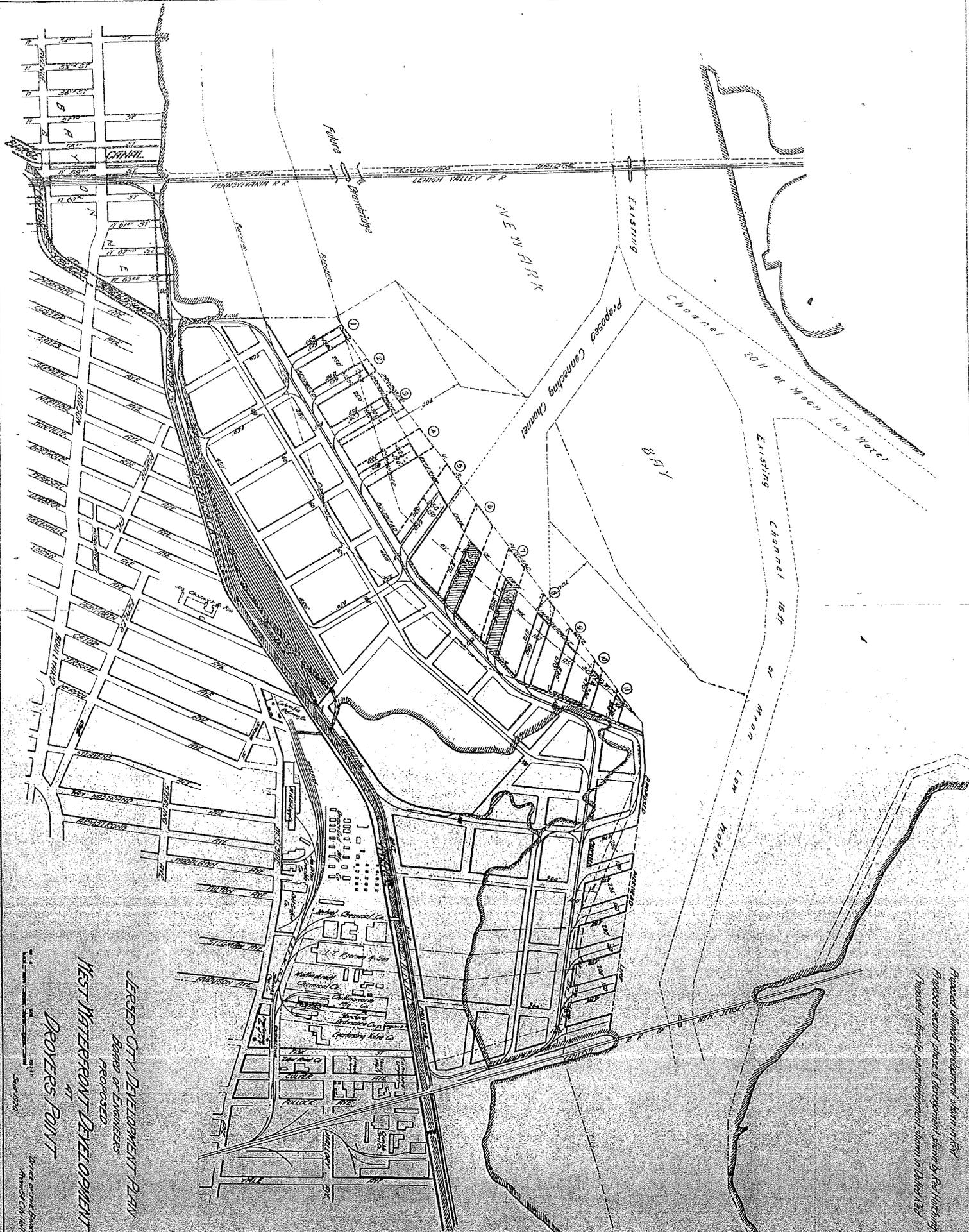


**PORT NEWARK TERMINAL**  
 SHOWING  
**PROPOSED DEVELOPMENT**  
 BUREAU OF DOCKS  
 NEWARK, N.J.      OCT. 1921.

**LEGEND**  
 A... Developed area leased, and occupied by Submarine Boat Corp.  
 B... Developed area owned and occupied by U.S. Army as Supply Base.  
 C... Railroad yard development contemplated by P.R.R. Co.  
 Existing Stressis  
 Proposed " "  
 Railroads  
 Trolleys  
 Parks  
 Existing Dock  
 Proposed " "

NEWARK'S PROPOSED DEVELOPMENT ON NEWARK BAY.

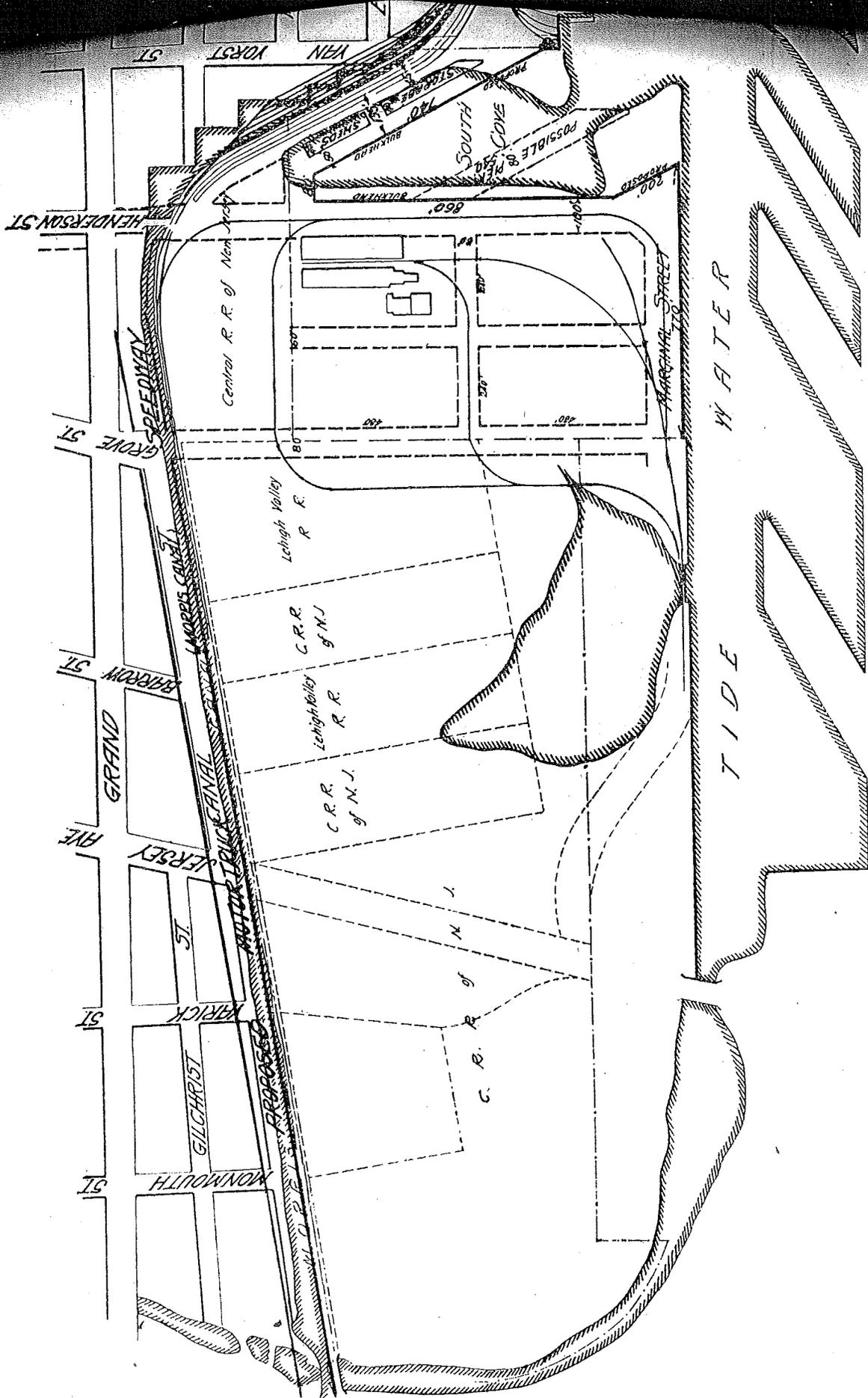
M L I N A D M T I

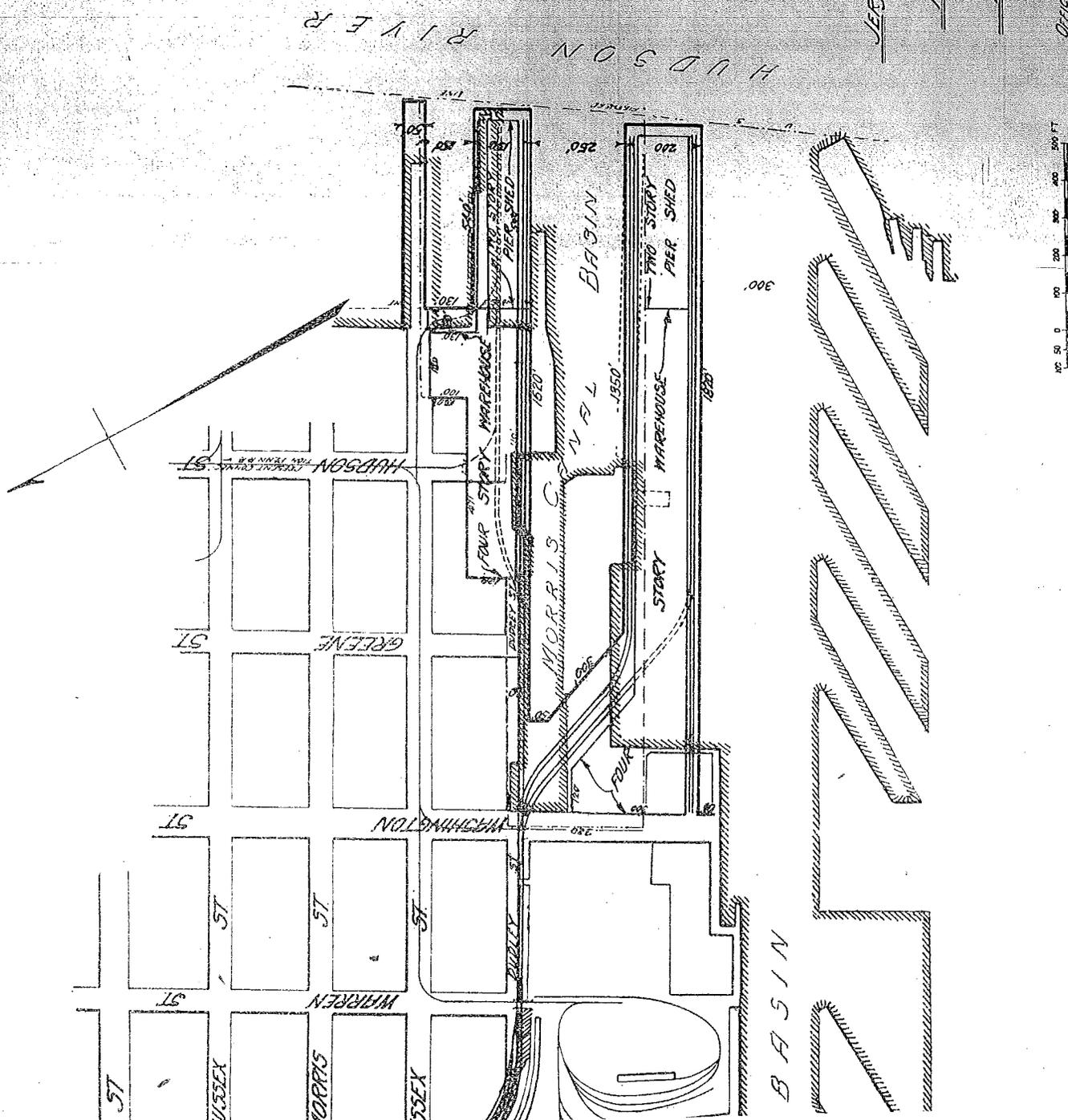


Proposed ultimate development shown in red  
Proposed second phase of development shown in blue  
Proposed ultimate first development shown in black/red

JERSEY CITY DEVELOPMENT PLAN  
Board of Engineers  
PROPOSED  
WEST WATERFRONT DEVELOPMENT  
AT  
DROYER'S POINT

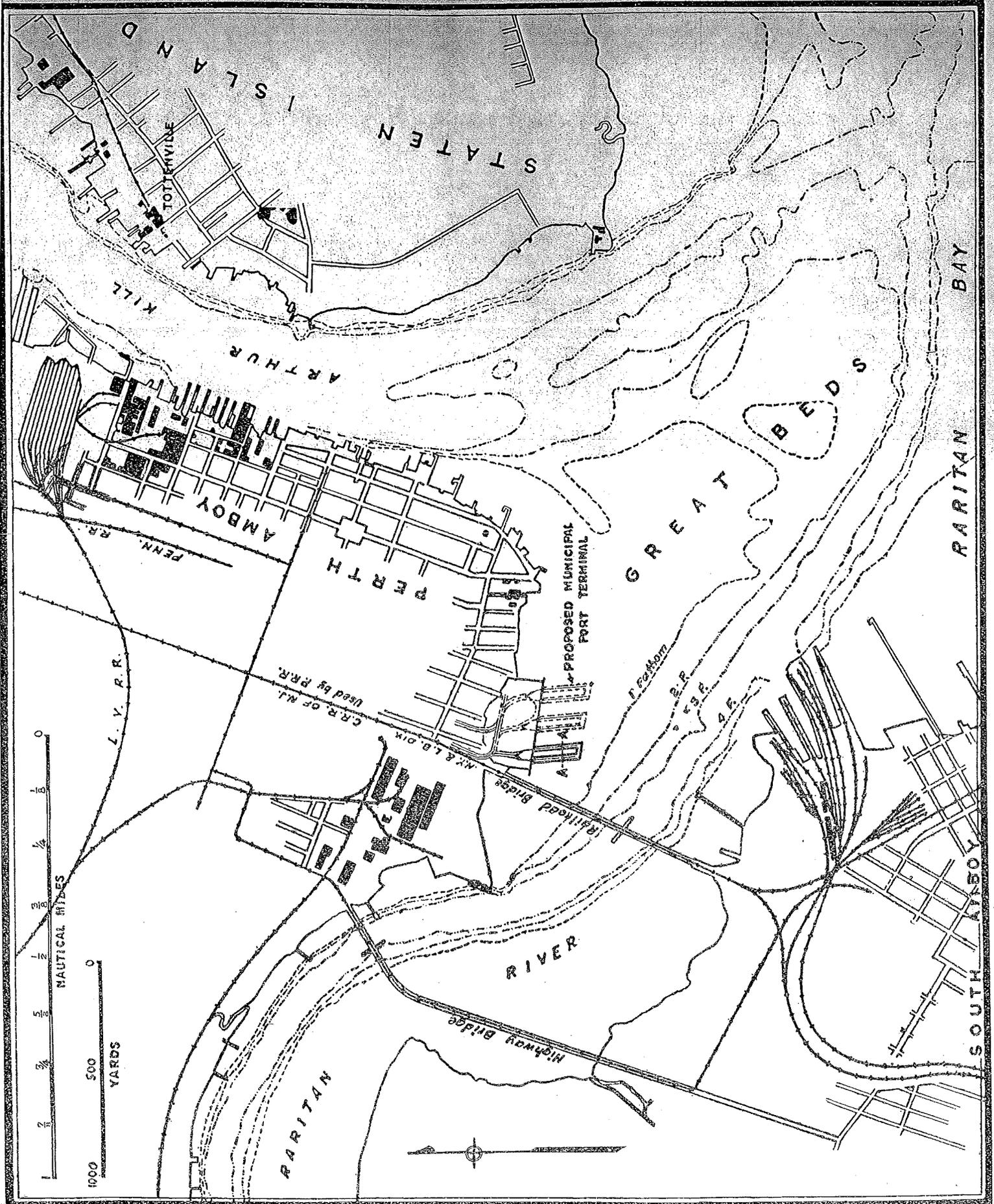
Scale 1/4" = 100'  
5-24-2020  
Office of the Engineer  
Newark, N.J.





JERSEY CITY DEVELOPMENT PLAN  
 BOARD OF ENGINEERS  
 PROPOSED DEVELOPMENT  
 OF  
 MORRIS CANAL BASIN  
 AND THE  
 SOUTH COVE  
 OFFICE OF THE BOARD  
 City Hall, N. J.  
 SCALE 1"=200'  
 May 19th 1920





## AN INCIDENT IN THE WORK OF THE PORT AUTHORITY

About the middle of October the country was suddenly threatened with an attempt to cause a total suspension of railroad transportation. Such an event would have created a peril to health and life as well as unparalleled economic disorder and loss.

It was at once apparent that unless complete plans were made for coordinating and regulating all the agencies of possible transportation, supply and demand; and all the Federal, State and Municipal powers necessary to help in carrying out such plans and have them directed from one coordinated source, inextricable confusion and much suffering would ensue. The staff of the Port Authority was exceptionally well qualified to devise such a plan and it appeared to the Commissioners that the Port Authority was the most appropriate organization existing at the moment to formulate such a working plan and bring together so many interests. While the plan was being developed the Governors of the two states expressed their approval and lent the most practical aid by authorizing the heads of all appropriate state departments, such as Bureau of Food and Markets of the Departments of Agriculture, Commissioners of Highways, Superintendents of Canals, Adjutants General of State Troops and Commanders of State Constabulary to cooperate with their respective powers. The General commanding the Department of the East, the Engineer Officers in charge of Rivers and Harbors, and the Health Commissioner of New York City, with all the emergency powers at his command, also lent their hearty cooperation and assistance, as did the Secretary of Commerce.

From these official elements and from the Staff of the Port Authority there was created a complete administrative

staff. The Statistical Division commenced gathering information of consumption needs and possible sources of supply. The wholesale dealers in all the necessities of life and all transportation agencies such as railroads, steamboat and barge owners, lighterage and towing companies, motor and team truck companies appointed cooperating committees with liaison officers to work under the direction of the administrative staff. Operating charts were prepared clearly displaying the functions of each department and of all units and in less than ten days all preparations were completed so that had the emergency developed on November 1st there would have immediately functioned the direction and the facilities necessary to provide for the needs and comfort of the people in the port district. The information gathered is being carefully tabulated, indexed and filed and the organization could be called together at any time on a few hours' notice.

## LAWS OF NEW YORK—BY AUTHORITY

### CHAPTER 203.

AN ACT to authorize the appointment of commissioners to "the port authority" established by the agreement or compact between the states of New York and New Jersey within the "port of New York," and making an appropriation therefor.

Became a law April 15, 1921, with the approval of the Governor. Passed, three-fifths being present.

*The People of the State of New York, represented in Senate and Assembly, do enact as follows:*

Section 1. The governor shall, by and with the advice and consent of the senate, appoint three commissioners to the port authority created by the agreement or compact between the states of New York and New Jersey entered into or about to be entered into under laws passed by the states of New York and New Jersey authorizing such agreement and compact. At least two of such commissioners shall be resident voters of the city of New York. One of such commissioners, when appointed, shall hold office until July first, nineteen hundred and twenty-four, another shall hold office until July first, nineteen hundred and twenty-six, and another shall hold office until July first, nineteen hundred and twenty-eight. Each commissioner shall hold office until his successor has been appointed or qualified.

At the expiration of the term of each commissioner and of each succeeding commissioner, the governor shall, by and with the advice and consent of the senate, appoint a successor, who shall hold office for a term of five years, or until his successor has been appointed and qualified. In the event of a vacancy occurring in the office of a commissioner by death, resignation or otherwise, the governor shall, by and with the advice and consent of the senate, appoint his successor, who shall hold office for the unexpired term. The three commissioners may be appointed by the governor before such agreement or compact shall

have been executed on behalf of the states of New York and New Jersey by the designated authorities authorized to execute the same. Any commissioner may be removed upon charges and after hearing by the governor. When the said agreement or compact shall have been executed, the commissioners shall have the powers and duties and be subject to the limitations provided for in the compact or agreement entered into between the two states, and together with three commissioners from the state of New Jersey shall form the "port authority."

§ 2. The commissioners of the port authority shall receive and take over, and the commissioners appointed pursuant to chapter four hundred and twenty-six of the laws of nineteen hundred and seventeen shall deliver thereto, furniture, fixtures, books, maps, plans, records, reports, pictures, sketches, films, and other papers and property of what kind soever pertaining or belonging to or in the custody of the members of the commission, appointed under chapter four hundred and twenty-six of the laws of nineteen hundred and seventeen of the state of New York and chapter one hundred and thirty of the laws of nineteen hundred and seventeen of the state of New Jersey, or in their possession or under their control, as such commissioners, or held by them, or for which they are responsible in their official capacity.

§ 3. The commissioners shall take up, study and consider the joint report of the New York, New Jersey port and harbor development commission, appointed under chapters four hundred and twenty-six of the laws of nineteen hundred and seventeen of the state of New York and one hundred and thirty of the laws of nineteen hundred and seventeen of the state of New Jersey, and more especially the recommendations therein contained, shall hold public hearings thereon, shall confer with the governing bodies of all of the municipalities within the port district and all dock, port, channel and improvement commissions and any other bodies having to do with port and harbor facilities, with the secretary of war, with the appropriate committees of congress, with the interstate

commerce commission, and any and all other federal authorities having jurisdiction in the premises, and shall, for the purposes of securing any information, create an advisory council of representatives of chambers of commerce, boards of trade and other civic bodies within the port district whose charters include consideration of the matters embraced in such joint report. The commissioners of the port authority shall also confer with the railroad, steamship, warehouse and other officials and until the said agreement or compact shall be authorized or executed by the states of New York and New Jersey, shall confer with such bodies, commissions and legislative committees as may exist or be created in New Jersey for the purpose of bringing about a joint policy between the two states for comprehensive development of the port.

§ 4. The commissioners shall report to the legislature on or before January first, nineteen hundred and twenty-two, the results of such study, investigation, hearings and conferences, and shall submit a "comprehensive plan for the development of the port district" based upon the results of such study, investigation, hearings and conferences, together with their recommendations for such legislation as they deem appropriate for the effectuation and consummation of such plan.

§ 5. The sum of one hundred thousand dollars (\$100,000), or so much thereof as may be necessary, is hereby appropriated out of any moneys in the state treasury not otherwise appropriated, for the expenses of the port authority. The moneys hereby appropriated shall be paid out by the state treasurer on the warrant of the comptroller upon vouchers audited by the chairman of the port authority.

§ 6. This act shall take effect immediately.

STATE OF NEW YORK, }  
Office of the Secretary of State. } ss:

I have compared the preceding with the original law on file in this office, and do hereby certify that the same is a correct transcript therefrom and of the whole of said original law.

JOHN J. LYONS  
Secretary of State

## LAWS OF 1921—NEW JERSEY

### CHAPTER 152

AN ACT appointing commissioners to "The Port Authority" established by the agreement or compact between the States of New York and New Jersey within the "Port of New York District," providing for the transfer of all maps, plans and other properties in the possession of the commission appointed under chapter 130 of the Laws of 1917, and making an appropriation for the expenses of said commission.

*Be it enacted by the Senate and General Assembly of the State of New Jersey:*

Commissioners named.

Title of Commission.

Terms of Office.

Appointing successors.

1. J. Spencer Smith, Frank R. Ford, and De Witt Van Buskirk, members of the New York, New Jersey Port and Harbor Development Commission, are hereby selected and appointed as commissioner to "The Port Authority" created by the agreement or compact between the States of New York and New Jersey, entered into or about to be entered into under laws passed by the States of New York and New Jersey authorizing such agreement or compact.

2. Said commissioners shall hold office for the following terms:

J. Spencer Smith until July first, one thousand nine hundred and twenty-three.

De Witt Van Buskirk until July first, one thousand nine hundred and twenty-four.

Frank R. Ford until July first, one thousand nine hundred and twenty-five.

Each commissioner shall hold office until his successor has been appointed or qualified.

3. At the expiration of the term of each commissioner and of each succeeding commissioner, the Governor shall, by and with the advice and consent of the Senate, appoint a successor, who shall hold office for a term of five years, or until his successor has been appointed and qualified.

4. In the event of a vacancy occurring in the office of a commissioner by death, resignation or otherwise, the Governor shall, by and with the advice and consent of the Senate, appoint his successor, who shall hold office for the unexpired term.

5. Any commissioner may be removed upon charges and after hearing by the Senate.

6. The commissioners shall have the powers and duties and be subject to the limitations provided for in the compact or agreement entered into between the two States, and together with three commissioners from the State of New York shall form "The Port Authority."

7. The commissioners of "The Port Authority" shall receive and take over the furniture, fixtures, books, maps, plans, records, reports, pictures, sketches, films, and other papers and property of what kind soever pertaining or belonging to or in the custody of the members of the commission appointed under chapter 130 of the Laws of 1917 of the State of New Jersey, or in their possession or under their control as such commissioners, or held by them, or for which they are responsible in their official capacity.

8. The commissioners of "The Port of Authority" shall take up, study and consider the joint report of the New York-New Jersey Port and Harbor Development Commission, appointed under said Chapter 426 of the Laws of 1917 of the State of New York and 130 of the Laws of 1917 of the State of New Jersey, and more especially the recommendations therein contained, shall hold public hearings thereon, shall confer with the governing bodies of all of the municipalities within the port district and all dock, port, channel and improvement commissions and any other bodies having to do with port and harbor facilities, with the Secretary of War, with the appropriate committees of Congress, with the Interstate Commerce Commission, and any and all other Federal authorities having jurisdiction in the premises, and shall, for the purpose of securing advice and information, create an advisory council of representatives of chambers of

Vacancies.

Powers and duties.

Taking over property, maps, records, etc.

Consideration of joint report.

Hearings and conferences.

Advisory council.

commerce, boards of trade and other civic bodies within the port district whose charters include consideration of the matters embraced in the said joint report. The said commissioners of "The Port Authority" shall also confer with railroad, steamship, warehouse and other officials.

Report to  
Legislature.

9. The commissioners of "The Port Authority" shall report to the Legislatures of the two States on or before January first, one thousand nine hundred and twenty-two, the results of such study, investigation, hearings and conferences, and shall submit a "Comprehensive Plan for the Development of the Port District," based upon the results of such study, investigation, hearings and conferences, together with their recommendations for such legislation as they deem appropriate for the effectuation and consummation of such plan.

Plan for de-  
veloping  
port.

Appropriation.

10. The sum of one hundred thousand dollars (\$100,000), or so much thereof as may be necessary, is hereby appropriated out of any moneys in the State treasury not otherwise appropriated, for the expenses of "The Port Authority." The moneys hereby appropriated shall be paid out by the State Treasurer on the warrant of the Comptroller of the Treasury, upon vouchers signed by the chairman of the said Port Authority.

Payments.

Repealer.

11. All acts and parts of acts inconsistent herewith are hereby repealed, and this act shall take effect immediately.

Passed, April 7, 1921.

## COMPACT BETWEEN THE STATES OF NEW YORK AND NEW JERSEY, 1921

For the Creation of the "Port of New York District" and the Establishment of the "Port of New York Authority" for the Comprehensive Development of the Port of New York

Entered into Pursuant to Chapter 154, Laws of New York, 1921; Chapter 151, Laws of New Jersey, 1921.

WHEREAS, In the year eighteen hundred and thirty-four the states of New York and New Jersey did enter into an agreement fixing and determining the rights and obligations of the two states in and about the waters between the two states, especially in and about the bay of New York and the Hudson river; and

WHEREAS, Since that time the commerce of the port of New York has greatly developed and increased and the territory in and around the port has become commercially one center or district; and

WHEREAS, It is confidently believed that a better co-ordination of the terminal, transportation and other facilities of commerce in, about and through the port of New York, will result in great economies, benefiting the nation, as well as the states of New York and New Jersey; and

WHEREAS, The future development of such terminal, transportation and other facilities of commerce will require the expenditure of large sums of money and the cordial co-operation of the states of New York and New Jersey in the encouragement of the investment of capital, and in the formulation and execution of the necessary physical plans; and

WHEREAS, Such result can best be accomplished through the co-operation of the two states by and through a joint or common agency.

Now, therefore, The said states of New Jersey and New York do supplement and amend the existing agreement of eighteen hundred and thirty-four in the following respects:

## ARTICLE I.

They agree to and pledge, each to the other, faithful co-operation in the future planning and development of the port of New York, holding in high trust for the benefit of the nation the special blessings and natural advantages thereof.

## ARTICLE II.

To that end the two states do agree that there shall be created and they do hereby create a district to be known as the "Port of New York District" (for brevity hereinafter referred to as "The District") which shall embrace the territory bounded and described as follows:

The district is included within the boundary lines located by connecting points of known latitude and longitude. The approximate courses and distances of the lines enclosing the district are recited in the description, but the district is determined by drawing lines through the points of known latitude and longitude. Beginning at a point A of latitude forty-one degrees and four minutes north and longitude seventy-three degrees and fifty-six minutes west, said point being about sixty-five hundredths of a mile west of the westerly bank of the Hudson river and about two and one-tenth miles northwest of the pier at Piermont, in the county of Rockland, state of New York; thence due south one and fifteen-hundredths miles more or less to a point B of latitude forty-one degrees and three minutes north and longitude seventy-three degrees and fifty-six minutes west; said point being about one and three-tenths miles northwest of the pier at Piermont, in the county of Rockland, state of New York; thence south fifty-six degrees and thirty-four minutes west six and twenty-six hundredths miles more or less to a point C of latitude forty-one degrees and no minutes north and longitude seventy-four degrees and two minutes west, said point being about seven-tenths of a mile north of the railroad station at Westwood, in the county of Bergen, state of New Jersey; thence south sixty-eight degrees and twenty-four minutes west nine and thirty-seven-

hundredths miles more or less to a point D of latitude forty degrees and fifty-seven minutes north and longitude seventy-four degrees and twelve minutes west, said point being about three miles northwest of the business center of the city of Paterson, in the county of Passaic, state of New Jersey; thence south forty-seven degrees and seventeen minutes west eleven and eighty-seven-hundredths miles more or less to a point E of latitude forty degrees and fifty minutes north and longitude seventy-four degrees and twenty-two minutes west, said point being about four and five-tenths miles west of the borough of Caldwell, in the county of Morris, state of New Jersey; thence due south nine and twenty-hundredths miles more or less to a point F of latitude forty degrees and forty-two minutes north and longitude seventy-four degrees and twenty-two minutes west, said point being about one and two-tenths miles southwest of the passenger station of the Delaware, Lackawanna and Western railroad in the city of Summit, in the county of Union, state of New Jersey; thence south forty-two degrees and twenty-four minutes west, seven and seventy-eight-hundredths miles more or less to a point G of latitude forty degrees and thirty-seven minutes north and longitude seventy-four degrees and twenty-eight minutes west, said point being about two and two-tenths miles west of the business center of the city of Plainfield, in the county of Somerset, state of New Jersey; thence due south twelve and sixty-five-hundredths miles more or less on a line passing about one mile west of the business center of the city of New Brunswick to a point H of latitude forty degrees and twenty-six minutes north and longitude seventy-four degrees and twenty-eight minutes west, said point being about four and five-tenths miles southwest of the city of New Brunswick, in the county of Middlesex, state of New Jersey; thence south seventy-seven degrees and forty-two minutes east ten and seventy-nine-hundredths miles more or less to a point I of latitude forty degrees and twenty-four minutes north and longitude seventy-four degrees and

sixteen minutes west, said point being about two miles southwest of the borough of Matawan, in the county of Middlesex, state of New Jersey; thence due east twenty-five and forty-eight-hundredths miles more or less, crossing the county of Monmouth, state of New Jersey, and passing about one and four-tenths miles south of the pier of the Central Railroad of New Jersey at Atlantic Highlands to a point J of latitude forty degrees and twenty-four minutes north and longitude seventy-three degrees and forty-seven minutes west, said point being in the Atlantic ocean; thence north eleven degrees fifty-eight minutes east twenty-one and sixteen-hundredths miles more or less to a point K, said point being about five miles east of the passenger station of the Long Island railroad at Jamaica and about one and three-tenths miles east of the boundary line of the city of New York, in the county of Nassau, state of New York; thence in a northeasterly direction passing about one-half mile west of New Hyde Park and about one and one-tenth miles east of the shore of Manhasset bay at Port Washington, crossing Long Island Sound to a point L, said point being the point of intersection of the boundary line between the states of New York and Connecticut and the meridian of seventy-three degrees, thirty-nine minutes and thirty seconds west longitude, said point being also about a mile northeast of the village of Port Chester; thence northwesterly along the boundary line between the states of New York and Connecticut to a point M, said point being the point of intersection between said boundary line between the states of New York and Connecticut and the parallel of forty-one degrees and four minutes north latitude, said point also being about four and five-tenths miles northeast of the business center of the city of White Plains; thence due west along said parallel, of forty-one degrees and four minutes north latitude, the line passing about two and one-half miles north of the business center of the city of White Plains and crossing the Hudson river to the point A, the place of beginning.

The boundaries of said district may be changed from time to time by the action of the legislature of either state concurred in by the legislature of the other.

### ARTICLE III.

There is hereby created "The Port of New York Authority" (for brevity hereinafter referred to as the "Port Authority"), which shall be a body corporate and politic, having the powers and jurisdiction hereinafter enumerated, and such other and additional powers as shall be conferred upon it by the legislature of either state concurred in by the legislature of the other, or by act or acts of congress, as hereinafter provided.

### ARTICLE IV.

The port authority shall consist of six commissioners—three resident voters from the state of New York, two of whom shall be resident voters of the city of New York, and three resident voters from the state of New Jersey, two of whom shall be resident voters within the New Jersey portion of the district, the New York members to be chosen by the state of New York and the New Jersey members by the state of New Jersey in the manner and for the terms fixed and determined from time to time by the legislature of each state respectively, except as herein provided.

Each commissioner may be removed or suspended from office as provided by the law of the state for which he shall be appointed.

### ARTICLE V.

The commissioners shall, for the purpose of doing business, constitute a board and may adopt suitable by-laws for its management.

### ARTICLE VI.

The port authority shall constitute a body, both corporate and politic, with full power and authority to purchase, construct, lease and/or operate any terminal or transportation facility within said district; and to make charges for

the use thereof; and for any of such purposes to own, hold, lease and/or operate real or personal property, to borrow money and secure the same by bonds or by mortgages upon any property held or to be held by it. No property now or hereafter vested in or held by either state, or by any county, city, borough, village, township or other municipality, shall be taken by the port authority, without the authority or consent of such state, county, city, borough, village, township or other municipality, nor shall anything herein impair or invalidate in any way any bonded indebtedness of such state, county, city, borough, village, township or other municipality, nor impair the provisions of law regulating the payment into sinking funds of revenues derived from municipal property, or dedicating the revenues derived from any municipal property to a specific purpose.

The powers granted in this article shall not be exercised by the port authority until the legislatures of both states shall have approved of a comprehensive plan for the development of the port as hereinafter provided.

#### ARTICLE VII.

The port authority shall have such additional powers and duties as may hereafter be delegated to or imposed upon it from time to time by the action of the legislature of either state concurred in by the legislature of the other. Unless and until otherwise provided, it shall make an annual report to the legislature of both states, setting forth in detail the operations and transactions conducted by it pursuant to this agreement and any legislation thereunder. The port authority shall not pledge the credit of either state except by and with the authority of the legislature thereof.

#### ARTICLE VIII.

Unless and until otherwise provided, all laws now or hereafter vesting jurisdiction or control in the public service commission, or the public utilities commission, or like body, within each state respectively, shall apply to railroads and to any transportation, terminal or other faci-

lity owned, operated, leased or constructed by the port authority, with the same force and effect as if such railroad, or transportation, terminal or other facility were owned, leased, operated or constructed by a private corporation.

#### ARTICLE IX.

Nothing contained in this agreement shall impair the powers of any municipality to develop or improve port and terminal facilities.

#### ARTICLE X.

The legislatures of the two states, prior to the signing of this agreement, or thereafter as soon as may be practicable, will adopt a plan or plans for the comprehensive development of the port of New York.

#### ARTICLE XI.

The port authority shall from time to time make plans for the development of said district, supplementary to or amendatory of any plan theretofore adopted, and when such plans are duly approved by the legislatures of the two states, they shall be binding upon both states with the same force and effect as if incorporated in this agreement.

#### ARTICLE XII.

The port authority may from time to time make recommendations to the legislatures of the two states or to the congress of the United States, based upon study and analysis, for the better conduct of the commerce passing in and through the port of New York, the increase and improvement of transportation and terminal facilities therein, and the more economical and expeditious handling of such commerce.

#### ARTICLE XIII.

The port authority may petition any interstate commerce commission (or like body), public service commission, public utilities commission (or like body), or any other federal, municipal, state or local authority, administrative, judicial or legislative, having jurisdiction in the premises, after

the adoption of the comprehensive plan as provided for in article X for the adoption and execution of any physical improvement, change in method, rate of transportation, system of handling freight, warehousing, docking, lighter-ing or transfer of freight, which, in the opinion of the port authority, may be designed to improve or better the handling of commerce in and through said district, or improve terminal and transportation facilities therein. It may intervene in any proceeding affecting the commerce of the port.

#### ARTICLE XIV.

The port authority shall elect from its number a chairman, vice-chairman, and may appoint such officers and employees as it may require for the performance of its duties, and shall fix and determine their qualifications and duties.

#### ARTICLE XV.

Unless and until the revenues from operations conducted by the port authority are adequate to meet all expenditures, the legislatures of the two states shall appropriate, in equal amounts, annually, for the salaries, office and other administrative expenses, such sum or sums as shall be recommended by the port authority and approved by the governors of the two states, but each state obligates itself hereunder only to the extent of one hundred thousand dollars in any one year.

#### ARTICLE XVI.

Unless and until otherwise determined by the action of the legislatures of the two states, no action of the port authority shall be binding unless taken at a meeting at which at least two members from each state are present and unless four votes are cast therefor, two from each state. Each state reserves the right hereafter to provide by law for the exercise of a veto power by the governor thereof over any action of any commissioner appointed therefrom.

#### ARTICLE XVII.

Unless and until otherwise determined by the action of the legislatures of the two states, the port authority shall not incur any obligations for salaries, office or other administrative expenses, within the provisions of article XV, prior to the making of appropriations adequate to meet the same.

#### ARTICLE XVIII.

The port authority is hereby authorized to make suitable rules and regulations not inconsistent with the constitution of the United States or of either state, and subject to the exercise of the power of congress, for the improvement of the conduct of navigation and commerce, which, when concurred in or authorized by the legislatures of both states, shall be binding and effective upon all persons and corporations affected thereby.

#### ARTICLE XIX.

The two states shall provide penalties for violations of any order, rule or regulation of the port authority, and for the manner of enforcing the same.

#### ARTICLE XX.

The territorial or boundary lines established by the agreement of eighteen hundred and thirty-four, or the jurisdiction of the two states established thereby, shall not be changed except as herein specifically modified.

#### ARTICLE XXI.

Either state may by its legislature withdraw from this agreement in the event that a plan for the comprehensive development of the port shall not have been adopted by both states on or prior to July first, nineteen hundred and twenty-three; and when such withdrawal shall have been communicated to the governor of the other state by the state so withdrawing, this agreement shall be thereby abrogated.

## ARTICLE XXII.

Definitions. The following words as herein used shall have the following meaning: "Transportation facility" shall include railroads, steam or electric, motor truck or other street or highway vehicles, tunnels, bridges, boats, ferries, car-floats, lighters, tugs, floating elevators, barges, scows or harbor craft of any kind, air craft suitable for harbor service and every kind of transportation facility now in use or hereafter designed for use for the transportation or carriage of persons or property. "Terminal facility" shall include wharves, piers, slips, ferries, docks, dry docks, bulkheads, dock-walls, basins, car-floats, float-bridges, grain or other storage elevators, warehouses, cold storage, tracks, yards, sheds, switches, connections, overhead appliances, and every kind of terminal or storage facility now in use or hereafter designed for use for the handling, storage, loading or unloading of freight at steamship, railroad or freight terminals. "Railroads" shall include railways, extensions thereof, tunnels, subways, bridges, elevated structures, tracks, poles, wires, conduits, power houses, substations, lines for the transmission of power, car-barns, shops, yards, sidings, turn-outs, switches, stations and approaches thereto, cars and motive equipment. "Facility" shall include all works, buildings, structures, appliances and appurtenances necessary and convenient for the proper construction, equipment, maintenance and operation of such facility or facilities or any one or more of them. "Real property" shall include land under water, as well as uplands, and all property either now commonly or legally defined as real property or which may hereafter be so defined. "Personal property" shall include choses in action and all other property now commonly or legally defined as personal property or which may hereafter be so defined. "To lease" shall include to rent or to hire. "Rule or regulation," until and unless otherwise determined by the legislatures of both states, shall mean any rule or regulation not inconsistent with

the constitution of the United States or of either state, and, subject to the exercise of the power of congress, for the improvement of the conduct of navigation and commerce within the district, and shall include charges, rates, rentals or tolls fixed or established by the port authority; and until otherwise determined as aforesaid, shall not include matters relating to harbor or river pollution. Wherever action by the legislature of either state is herein referred to, it shall mean an act of the legislature duly adopted in accordance with the provisions of the constitution of the state.

Plural or singular. The singular wherever used herein shall include the plural.

Consent, approval or recommendation of municipality; how given. Wherever herein the consent, approval or recommendation of a "municipality" is required, the word "municipality" shall be taken to include any city or incorporated village within the port district, and in addition in the state of New Jersey any borough, town, township or any municipality governed by an improvement commission within the district. Such consent, approval or recommendation wherever required in the case of the city of New York shall be deemed to have been given or made whenever the board of estimate and apportionment of said city or any body hereafter succeeding to its duties shall by majority vote pass a resolution expressing such consent, approval or recommendation; and in the case of any municipality now or hereafter governed by a commission, whenever the commission thereof shall by a majority vote pass such a resolution; and in all other cases whenever the body authorized to grant consent to the use of the streets or highways of such municipality shall by a majority vote pass such a resolution.

IN WITNESS WHEREOF we have hereunto set our hands and seals under Chapter 154 of the Laws of 1921 of the State of New York and Chapter 151 of the Laws of

1921 of the State of New Jersey, this thirtieth day of April, 1921.

WILLIAM R. WILLCOX	(L. S.)
EUGENIUS H. OUTERBRIDGE	(L. S.)
CHARLES D. NEWTON	(L. S.)
J. SPENCER SMITH	(L. S.)
DEWITT VAN BUSKIRK	(L. S.)
FRANK R. FORD,	(L. S.)
THOMAS F. MCCRAN	(L. S.)

IN THE PRESENCE OF:

NATHAN L. MILLER	CLARENCE E. CASE
WALTER E. EDGE	D. P. KINGSLEY
ALFRED E. SMITH	IRVING T. BUSH
CHARLES S. WHITMAN	ARTHUR N. PIERSON
WILLIAM M. CALDER	JULIUS HENRY COHEN
LEWIS H. POUNDS	

in whose presence Messrs. Willcox, Outerbridge, Smith, Van Buskirk, Ford and McCran signed in the Great Hall of the Chamber of Commerce in the City of New York on the thirtieth day of April, 1921. Attorney General Newton being at that time absent from the City, he signed on the sixth day of May, 1921, at the Chamber, in the presence of:—

WILLIAM LEARY

CHAS. T. GWYNNE