



# REPORT

ON

# JAMAICA BAY IMPROVEMENT

DEPARTMENT OF DOCKS AND FERRIES,  
PIER "A," NORTH RIVER,  
NEW YORK, April 20, 1910.

Hon. WILLIAM J. GAYNOR,

*Mayor, and Chairman of the Commissioners of the Sinking Fund.*

SIR—Under date of February 25, 1910, the Board of Estimate and Apportionment of The City of New York passed the following resolution:

*Resolved*, That the Board of Estimate and Apportionment hereby recommend to the Commissioner of Docks that he cause to be prepared and submitted to the Commissioners of the Sinking Fund at as early a date as may be practicable, a plan or plans for the improvement and development of the water front of Jamaica Bay, in the Boroughs of Brooklyn and Queens, preliminary to the construction of a new harbor and a complete dock system in the said bay, the aggregate estimated cost of which pre-

liminary development shall not exceed one million dollars (\$1,000,000); the plan or plans submitted to be in accordance with the suggestions contained in the unanimous report of the Jamaica Bay Improvement Commission presented to this Board February 18, 1910; and provided further that the plan or plans when presented by the Commissioner of Docks to the Commissioners of the Sinking Fund shall specify the several purposes for which the said sum of one million dollars (\$1,000,000), if appropriated, is to be expended, with the estimated cost thereof in detail."

Pursuant to the above resolution, I submit the following brief, specific report, together with a supplementary general discussion of the Jamaica Bay Improvement:

Chapter 568 of the Laws of New York, 1909, reads as follows:

"Section 1. To the end that The City of New York may co-operate with the federal government in the creation of a new harbor in and about Jamaica Bay, including the making of channels, basins, slips and other necessary adjuncts, through the excavation of the soil or lands under water, and otherwise, intended for the advancement of the commercial interests of the city, state and nation, there is hereby granted for the purposes specified in this act, to The City of New York such right, title and interest as the State of New York may have in or to the land under water in Jamaica Bay and Rockaway Inlet and the tributaries thereto \* \* \*. This grant shall become operative upon the United States Government making its first appropriation for the creation of the new harbor mentioned in this act, or upon The City of New York appropriating or setting aside a sum not less than one million dollars for the same purpose."

The pending River and Harbor Bill contains a clause reading as follows:

"Improving Jamaica Bay, New York, and entrance thereto, in accordance with the report submitted in House Document numbered fourteen hundred and eighty-eight,

Sixtieth Congress, Second Session, two hundred and fifty thousand five hundred dollars; Provided, That no part of this amount shall be expended until the Secretary of War is satisfied that The City of New York is prepared to undertake its part of the general plan for the improvement of Jamaica Bay, as outlined in the report cited above."

Under date of February 23, 1909, Col. D. W. Lockwood, of the United States Corps of Engineers, reported to the Chief of Engineers at Washington (on prospective national co-operation), as follows:

"The ultimate cost to the United States of the plan proposed for adoption will be as follows:

(a) Main channel .....	\$4,720,000
(b) Dredging the 18-foot entrance channel.	250,500
(c) Widening and deepening this channel..	1,016,500
(d) East jetty .....	724,500
(e) West jetty .....	589,500
(f) Contingencies .....	129,050
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Total .....	\$7,430,050

"The cost of annual maintenance of the 30-foot entrance channel is estimated at \$55,600. It is to be noted that items (d) and (e) may not be necessary."

In order that the City may avail of the co-operation of the State and National governments, I recommend that the contemplated appropriation of one million dollars (\$1,000,000) by the City be promptly made; I recommend the adoption of the bulkhead and pierhead lines, as described in the majority and minority reports of the Jamaica Bay Improvement Commission under date of December 27, 1909; I recommend that the appropriation be expended as follows:

(A) For the construction of a section of bulkhead, sand dyke or rip-rap retaining wall intended to retain dredged material to be taken from the main channel or entrance channel. Such structure or structures to be located along a section or sections of the proposed bulk-

head line, between Spring Creek Basin and the termination of the bulkhead at the point of Barren Island; precise location to be determined upon in consultation with the engineers of the United States Army, the object being to provide a cheap and convenient wall behind which the fill can be most advantageously pumped. The expenditure not to exceed \$100,000.

(B). That an amount not to exceed \$150,000 be expended for dredging in the main channel between Spring Creek Basin and the southeasterly point of Barren Island, whenever a legislative contract can be secured from Congress, through which provision shall be made for New York to be re-imbursed by appropriations made after the work shall have been done by the City and the money earned. If the City shall now proceed to dig this channel without such express authority, it would probably not be re-imbursed for the work by the United States and the procedure outlined is probably the only way in which reimbursement can be brought about. To accomplish this, however, the City should promptly authorize this contingent expenditure. The Chief of Engineers of the United States Army has already reported in favor of reimbursing the City for such dredging to the extent of eight cents per cubic yard. The probable cost will approximate ten cents per cubic yard.

These two prospective appropriations aggregate the amount which the United States Government at present contemplates expending for dredging the entrance channel, and the City as an evidence of its good faith, and in order to stimulate the National Government to further co-operation, in accordance with the recommendations of its engineers, should be prepared promptly to undertake specific improvements at least to this extent.

(C) That the balance of the million-dollar expenditure contemplated by the City should be devoted to the acquisition of lands needed for filling purposes, wherever such lands can be advantageously secured. The precise location of such acquisitions to be determined upon in the

future by the Commissioner of Docks acting co-ordinately with the Sinking Fund Commission.

While the initial appropriation of one million dollars is too small to permit of any assignment of it for the development of the channel in front of the Borough of Queens, it should, as a matter of course, be the policy of the City to continue the main channel in front of the Borough of Queens to Cornell's Creek and beyond around the whole interior of the bay as rapidly as the additional bulkhead lines can be adopted and the finances of the City shall permit. After work shall have been begun, appropriations by the City for dredging this channel may presumably be considered as advance payments to be returned to the City in large part by the National Government.

The above recommendations are based upon the desirability of the City's acquiring all the riparian lands it can now afford while values are comparatively low, and at the same time undertaking or holding itself ready to undertake necessary specific improvements which shall commit the United States Government and the State of New York to co-operation in the enterprise.

Bulkheads constructed in the above manner in shallow water or on marsh upland can be provided very cheaply and will answer all present purposes for retaining fill. Provision for the more expensive permanent bulkhead can advantageously be deferred until such time as the City can more conveniently undertake the work, and when a more permanent structure shall be needed for commercial purposes. Short temporary piers for present commercial needs can at intervals be extended outward from such a bulkhead, and channels dredged to them from the main channel. The rough uses to which most of this riparian district will first be put will not require large expenditure. The permanent improvements may be considered as distinct and separate from provision for the initial opportunities to land coarse freights.

Any intensive improvement at any one place will immediately increase land values in that locality, even before it shall have been undertaken, so that the City will be working in the interest of land speculators and against its own interest by making such local intensive improvements until it shall have adopted

a general improvement plan and *policy*. This phase of the subject I have considered in the general discussion appended.

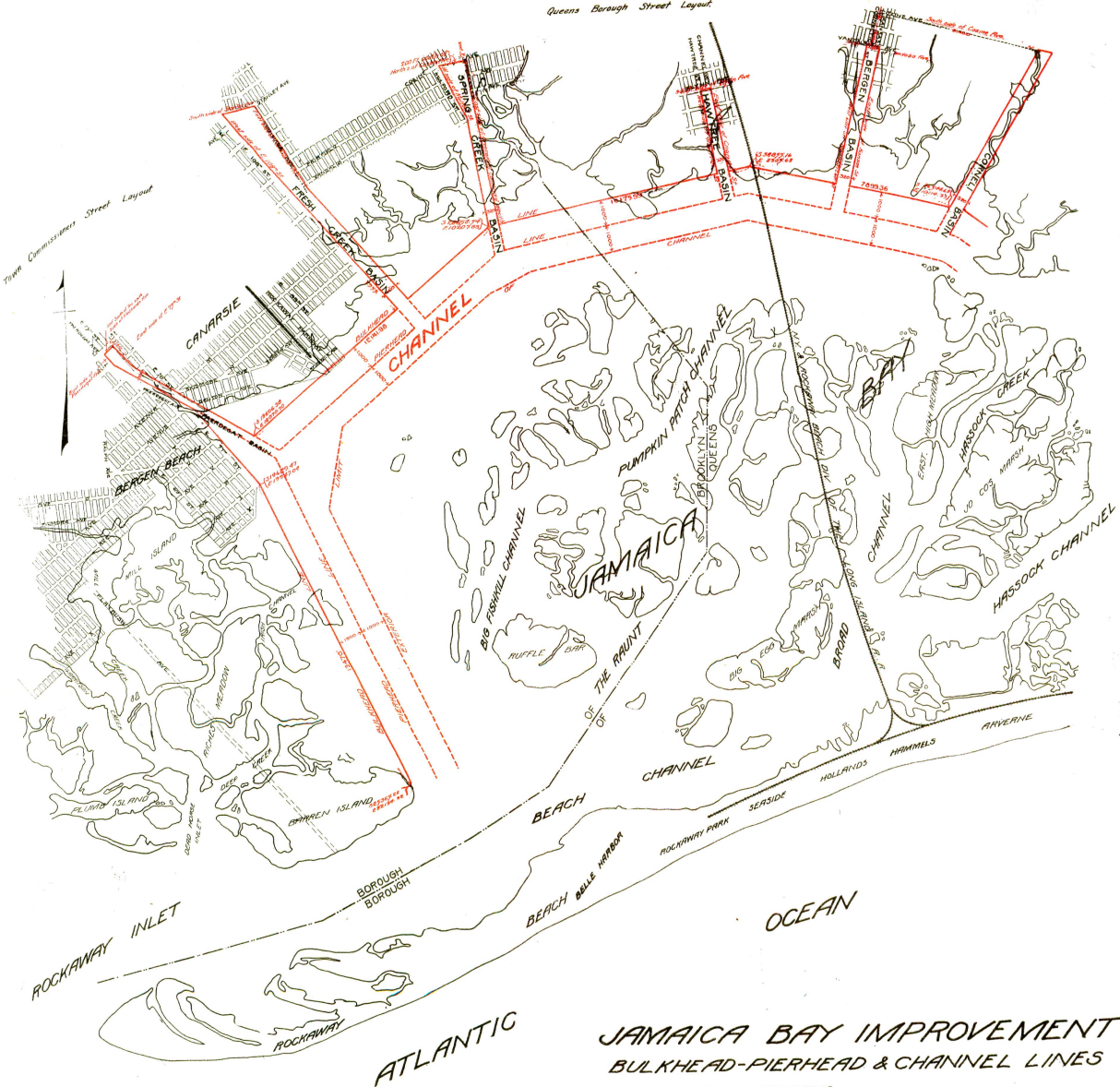
Respectfully submitted,

CALVIN TOMKINS,

*Commissioner of Docks.*

Queens Borough Street Layout

Tram Commissioners Street Layout



**JAMAICA BAY IMPROVEMENT  
BULKHEAD-PIERHEAD & CHANNEL LINES**

CALVIN TOMKINS  
COMMISSIONER OF DOCKS

NOTE: The City of New York has no responsibility for the accuracy of the information shown on this map. It is the responsibility of the user to verify the accuracy of the information shown on this map. The City of New York is not responsible for any errors or omissions on this map.





## GENERAL DISCUSSION OF PROPOSED JAMAICA BAY IMPROVEMENT

DEPARTMENT OF DOCKS AND FERRIES, }  
PIER "A," NORTH RIVER, }  
NEW YORK, April 20, 1910. }

*Hon.* WILLIAM J. GAYNOR,

*Mayor, and Chairman of the Commissioners of the Sinking Fund:*

SIR—“Jamaica Bay occupies the major portion of the southeastern quarter of Greater New York. It has a water surface of 16,170 acres, or  $25\frac{1}{4}$  square miles and is surrounded on three sides by low marshes which aggregate 8,500 acres. In addition to this there are 4,200 acres of marsh land lying in the Bay, but isolated from the main body; so that, all told, Jamaica Bay, with its adjacent marsh lands, which in time of excessive flood tides are completely overflowed, covers a territory 28,870 acres in extent. This is equivalent to  $45\frac{1}{2}$  square miles.”

This vast basin within the City boundaries comprises a waste district of marsh land and shallow water. Already the growth of the City is impinging upon its confines and improved transit facilities will soon make it as accessible from City Hall as the rest of Queens, The Bronx and Staten Island. It affords unique opportunities for commercial, industrial and recreative uses, and the City should, without delay, impose upon it a comprehensive development plan which shall compel the realization of the best uses to which its natural advantages can be put. The control which the City already has over riparian lands—which indirectly and in part extends to private back lands—and the willingness of both the State and National governments to co-operate, are added reasons why the City should act without delay to provide such a plan before land values shall have unduly increased as a consequence of unrelated, sporadic, speculative; private enterprises.

There is real danger that the very magnitude of the project and the remoteness, of its ulterior consequences may engender shallow criticism on the ground of impracticability and absence of immediate results. The enterprise is at present in more danger from the enthusiastic claims of its advocates, however well founded, than from any definite opposition.

#### PRACTICABILITY.

The project must be developed without undue hardship to the present generation of citizens, or any severe strain upon the City's finances, which shall tend to retard other needed improvements. It should be made to pay for itself and promptly recoup initial expenditures, and this is entirely practicable as was the case with the Municipal dock system in Manhattan. Its future advantages and profitableness will be great, but the fact that if properly developed it will tend to relieve congested living conditions in Manhattan and substitute an orderly and economic industrial opportunity for laborers, factory hands, artisans, manufacturers and commercial corporations, must of necessity be slowly appreciated.

The importance and practical character of the improvement have been vouched for by the engineers of the United States Army, ex-Comptroller Grout, Nelson P. Lewis Chief Engineer of the Board of Estimate and Apportionment, Irving T. Bush, President of the Bush Terminal Company, the Jamaica Bay Improvement Commission and many private investors, who in anticipation of the future, have recently acquired real estate in this locality.

The ports of Antwerp, Manchester, Liverpool and Hamburg have been developed in the face of natural adverse conditions much more difficult to adapt to modern commercial needs than are those existing at Jamaica Bay. From information which I have received, I am led to believe that it may ultimately be possible to provide an entrance channel of sufficient draft to admit any ship. The practicability, however, of maintaining a deep draft entrance channel has not as yet been fully demonstrated; and since the City contemplates large expenditures conjointly with the National Government for the furtherance of the general project, it should, co-ordinately with the Government, make a careful technical study of the littoral conditions along the ocean

front. Provided the City shall do its part, the United States Engineers are prepared to commit the general Government to the construction and maintenance of a channel of 18 feet draft at low water (22 feet at high water), which channel will admit the passage of canal, sound and river craft and much of the present ocean tonnage now coming to the Port. This channel, and the railroad terminal, which will be its natural adjunct, will inherently warrant the necessary expenditure by the City for the initial improvements, regardless of the future possibilities of maintaining a deeper entrance channel.

The Jamaica Bay district is as adaptable for railway terminal and industrial purposes as for a frontal harbor for the Port, and the essential point at present to keep in mind is the desirability of imposing upon this whole district a comprehensive development plan which shall best adapt it to both of these uses. Such a plan necessarily includes provision for an adequate street and park system back of the riparian lands as well as for the planning of the terminal waterfront.

The following quotation from a report of the Board of Trade and Transportation of this City is pertinent:

“ We have no doubt that some measure of the development of Jamaica Bay as now being planned, and the expense thereof, will be warranted by the necessities of the Port of New York when all other places more convenient to the commerce of the port, as it exists, have been fully utilized. Even the fullest development of Jamaica Bay, as planned, and the expenses thereof would be warranted, in time if possible but not probable conditions, now many years remote, shall necessitate the transfer of any large part of our ocean shipping from the present harbor to Jamaica Bay, and the development of Jamaica Bay shall be so planned and carried out as to enable it to give such ocean shipping better accommodation than will forever be had in and along the wider bay and rivers of New York harbor. We do not anticipate that such conditions will exist in the present generation, if indeed in the next. But wisdom and a proper exercise of foresight demands that Jamaica Bay be regarded as a possible alternative or auxil-

inary harbor for the Port of New York one or two generations hence, and to this end the possibilities of its development should have thorough investigation."

The first practical effect of providing a moderate depth channel and rail facilities will be to accelerate the building up of this part of the City, as a consequence of the availability of cheap building materials, coal and other supplies constituting the raw materials for manufactures. The improvement of Newtown and Gowanus Creeks many years since subserved an identical purpose.

As the sand fill takes place along the bay front, the City will begin to grow from the bay inland as well as from within outward, and the demand for further improvements will become insistent from both sides. As local manufactures increase, the opportunities for establishing a commercial center will become more and more apparent, and the 150 additional miles of harbor waterfront here available can be developed in such a manner as to be of incalculable benefit to the City.

#### CO-ORDINATE PROJECTS.

Coincidentally with the development of Jamaica Bay, a waterway connecting it with Flushing Bay and with Newtown Creek should be planned; also the improvement of the waterway between Spuyten Duyvil, Bronx Kills and Flushing Bay by the United States Government; and the possibility of rectifying and utilizing Coney Island Creek as a canal spanned by permanent bridges capable of passing barges underneath; also canal connection with Great South Bay. The execution of these several projects are matters with which the City need not now concern itself; but investigation of their practicability and future public use should receive careful attention.

It is to be remembered that the marsh lands of the Hackensack and Passaic Valleys in New Jersey constitute an analogous opportunity to that which New York possesses in the Jamaica Bay lands. These New Jersey districts are not as accessible by water, but are favored with rail facilities which at present and possibly in the future New York may not enjoy. The State of New Jersey and its municipalities are contemplating a comprehensive improvement of these valley lands for industrial pur-

poses, and this in itself constitutes one of the strongest reasons why the City and State of New York should plan to make the most of local opportunities.

### COMMISSION'S REPORT.

The able majority and minority reports of the Jamaica Bay Improvement Commission deserve the highest commendation. The Commission is to be congratulated upon the submission of two precise, logical reports in preference to having attempted the reconciliation of opposite views by illogical concessions. Both reports advocate the same ultimate improvement. The majority report recommends the connection of the 18-foot main channel with the shore in front of and on either side of Fresh Creek Basin, and local intensive improvement at Fresh Creek Basin. The minority report contemplates no intensive development at any one point at present, but simply the continuation of the channel dredging, and bulkheading. The object of the majority report is to make the improvement available where most useful and as soon as possible; but by so doing the effect will be to immediately increase land values to the detriment of the City in the acquisition of additional lands. The object of the minority report evidently is, to construct the channel along the bay front and by not indicating the precise points for local intensive improvement to keep down the values of the back lands along the shore, necessary for the fill, until the City shall find itself in a position to acquire such lands.

### CITY POLICY AND POTENTIAL CONTROL.

It would seem to me that as a consequence of the policy which it may adopt, the City can avail itself of both the practical and farsighted suggestions embodied in each report. This can best be accomplished by assessing the cost of improvements upon all lands benefited, under the same method now availed of for street opening proceedings. I believe that section 970 of the Charter makes this procedure available for dock as well as for street improvements; but if there shall be any doubt, enabling legislation should promptly be obtained to make it possible. Under this procedure the City could lay out for separate condemnation areas the private land required for the majority's plan, and separately

the several additional tracts needed for successive steps, and then make condemnation on the street opening plan, to be wholly or partly defrayed by assessment for benefit on lands beneficially affected. The City could proceed at once to acquire lands now wanted, and more deliberately the remainder more remotely needed. This would, on the one hand, safeguard the City against the demands of owners desiring prompt action in their own interest at the City's expense; and without prejudice to the City's interest would permit consecutive improvements to be made without the disadvantage which would follow from increase of land values dependent upon such improvements. Finally, the unimproved character of the whole of the Jamaica Bay district leaves this plan no hardship but rather a benefit to the great mass of private owners concerned—who might be ruined by a moderate assessment on unmarketable lands, but who should be more than pleased to pay liberally to continue an improvement, the beginning of which had already enhanced the value of their property. One-third of such assessment might be made a charge on the City at large leaving two-thirds to be borne by the locality immediately benefited.

The fact that the City now controls most of the riparian lands virtually places it in a position of great power over the privately owned back lands, since these lands can only be reclaimed by pumping sand from the bay or basin fronts. The sand dredged from the outside channel to the bulkhead line will be required to fill the strip of bay front property over which the City should always retain control. The private back lands beyond, must also be filled by pumping from the water front. Sand fill for this purpose can be dredged from other parts of the bay or conveyed from ocean and harbor dredgings, in dump scows, to pockets along the bulkhead line and pumped for a distance of nearly a mile back, as is now done at Newark, N. J., Rotterdam, and elsewhere.

Provision for canals and basins extending from the bulkhead line inshore may be necessary at more frequent intervals than those noted in the Commission's report; and it may also be necessary to extend the penetration of such canals further inland, in order to utilize them for bringing sand fill in dump scows to be pumped laterally over back lands to be reclaimed, and which

cannot be otherwise reached. This is especially true of the marsh lands back of the Barren Island district, the fill for which can either be taken through a system of canals opening into Sheeps-head Bay or into the interior of Jamaica Bay. All of the land in the bay section is low-lying and no excess fill can be obtained from the uplands. What is necessary for grading purposes must be dredged and pumped as above noted. This command over the supply of dredged material to be utilized for fill gives the City large control over back lands as well as front lands.

Changes in the land condemnation laws of the City are essential to the proper conduct of this great enterprise. The procedure of excess condemnation can also be advantageously resorted to, if made available by the Legislature. Under this process, land taken at its value before improvement shall have been made, may be leased or sold at a higher subsequent value after the City shall have brought such lands to grade and planned a proper street and park system. The entire plan for gradients should now be provided.

The public spirit already shown by the Jamaica Bay Improvement Association warrants the hope that that organization may, as an incorporated membership body, itself acquire lands at present low prices in advance of the City's needs, and turn them over to the City subsequently at cost plus carrying charges and interest, whenever the City may be ready to take them. This suggestion will, of course, draw criticism; but, nevertheless, in my judgment, a pilot corporation of this character could be of the greatest assistance to the City in securing the property it will eventually need. At the worst, such a corporation could sink no lower than the level of the intelligent speculator.

#### PROMPT ACQUISITION OF LANDS.

In any event, the City should promptly acquire all the land it can now obtain cheaply, wherever it is needed for the improvement. This policy of rapid acquisition will become of the first importance in case the principle of beneficial assessment above referred to shall not be availed of, in which contingency the recommendations of the minority report of the Jamaica Bay Improvement Commission merit special consideration.

The appropriate opportunity for private enterprise and speculation will be found in the best development of the back lands under a proper street system, based upon the correct organization of the waterfront for commerce. If the comparatively small area of waterfront lands is not properly organized for community uses, the value of all the back lands on Long Island will be adversely affected.

#### CITY RETAIN CONTROL.

The City should ultimately expect to retain control for waterfront terminal purposes, over a strip of land as wide as that shown in color in the Commission's report, Plate No. 5; that is of sufficient width for receiving all of the dredged material taken from the preliminary channel, the full 1,000-foot channel and the excavation between the bulkhead and pierhead lines. This strip should be planned by experts, after careful examination, for dockfront, railroad and warehouse purposes. I shall expect to submit such a tentative plan for consideration at some future date. The waterfront development at the Bush terminal, below Thirty-ninth street, South Brooklyn, will serve as an example of what may here be planned for on a much larger scale. Adequate provision for factories and tenements on the back lands should also be made.

#### STREETS AND SEWERAGE.

The street system of Brooklyn and Queens should not at present be extended beyond the limits of lands whose natural grade corresponds to the minimum future elevation which shall be required above tide water; and those streets which will lead to the waterfront should be so laid out that their projections shall be normal to the bulkhead line.

The Metropolitan Sewerage Commission, if continued, and the Board of Estimate and Apportionment, acting through its Chief Engineer, should as promptly as may be report upon a sewer and grade plan for this entire district which shall provide for the sanitary treatment of local sewage. These bodies, acting in concert with the Borough Presidents and the Commissioner of Docks, should also provide some *immediate* sewer relief, even if of a temporary character, in order that the back street system may be promptly secured and made to articulate properly with the frontal system of streets.



## RAILROADS, GRADIENTS AND FACTORIES.

Railroad connections are of the greatest importance now, and I recommend that provision should ultimately be made for a municipal terminal railroad generally paralleling the bulkhead lines along the bay, such railroad to be used by all roads coming to the Port of New York. It is desirable that the Bay itself should not be crossed by more than one line of railroad. Trackage rather than truckage should be depended upon for local interchange of commodities to as great an extent as possible.

At present, the Pennsylvania Railroad Company enjoys peculiar advantages for reaching this locality and if its policy shall be a broad and liberal one—permitting access to other roads over its tracks—there is no reason why another connecting railroad line should now be contemplated. Otherwise, the City should plan for access by tunnel or surface roads from the Bay Ridge and Newtown Creek Sections. In addition to a municipal terminal road, with sidings and spurs to the docks, ample acreage should be secured for several railroad yards.

The question of railroad gradients should be carefully considered in advance. In the terminal section along the bay front, tracks must of necessity be located on the level of the docks. The question of elevating or depressing tracks, or of providing exclusive railroad avenues of approach farther back, should now receive careful consideration.

The back land will be valuable just about in proportion as its available factory sites shall be adequately connected with the terminal improvements in front. At the Bush terminal, factories are provided immediately back of the warehouses, from every floor of which railroad and steamship rates are made to all parts of the world.

Mr. James J. Hill has recently stated that “congestion of freight is not caused by too few cars. What causes a flood is backing up of water. More equipment would only make more congestion. What the country needs is additional terminal facilities and track sidings.” The Jamaica Bay district affords the best future opportunity for the establishment of such a railroad terminal on a large scale within the Port of New York.

## FREE PORT.

I would call attention to the opportunity here afforded for establishing a Free Port for manufacture and shipping, such as is provided in several German cities. I quote the following by Desmond Fitzgerald, from the report of the Metropolitan Improvement Commission of Massachusetts:

“Free ports are found in several continental cities, notably Hamburg and Bremen. In Hamburg, particularly, the free port has done much to add to the wealth and prosperity of that wonderful port.

“Let us consider for a moment the physical characteristics of a free port in Boston Harbor, and the advantages which it might possibly bring to the Metropolitan District. Whatever its size, it would be surrounded by a fence or other barrier. Inside of that barrier customs would be unknown, although the free port would always be under strict customs supervision. The area might contain docks, warehouses, manufactories, a power house, railway tracks and other accessories, such as rooms for the display of foreign goods. Here our merchants would examine the goods of foreign manufacture as freely as by making a trip abroad, and order their importations. Raw materials brought in free could be manufactured and turned into merchandise for any port, foreign or domestic, and customs collected at the port of entry. The free port would be to all intents and purposes a little foreign nation. Factories would be situated favorably for receiving coal and for securing other benefits resulting from a position on salt water. A little industrial community would be formed where every modern invention could be brought to bear in the interests of economy and the saving of time. Long hauls by teams through busy city streets would be saved, and handling of raw materials and goods reduced to a minimum.

“Before a free port could be established in Boston, federal legislation would be necessary. It may be argued that laws now in force permit, by a system of drawbacks, the practical benefits to be secured by a free port, but a

study of the subject will show that this is not the case. The present system is a chain of obstacles instead of inducements to the transaction of business; the laws as now formed practically require the bringing of suits to determine the amounts of the drawbacks."

The above suggestions are as applicable to New York as to Boston.

#### PORT ESSENTIALS.

In this connection it may be of interest to quote from a recent report of the Montreal Harbor Commission, after a systematic study had been made of port conditions in this country and abroad:

(1) "The ports that are doing the biggest business, and doing it efficiently, are the ports that have kept their facilities ahead of actual requirements.

(2) "The ports that have remained stationary or lost in prestige have been those that neglected to provide facilities before business was forced to seek elsewhere the same facilities provided by rival terminals.

(3) "Unity of authority, concentration of business, depth of water areas, and facilities for despatch of business are the prominent characteristics of successful port administration.

(4) "The necessity of providing large and convenient storage areas where cargo may be collected and cared for.

(5) "The lowest cost of handling cargo from the hold of the ship to consignee and vice versa, was found to be in a port where one authority controlled the entire operation, and where the transit sheds were three to five stories high."

With the growth of intercourse between nations that is so rapidly making the earth a single commercial state, New York's position as the world metropolis must make her ever more definitely the focus toward and whence go all lines of trade, and also the international storage center where the world's resources are gathered. For many years London docks have fixed the staple for great classes of goods and added to the basis of her finances.

Jamaica Bay affords the natural opportunity for New York to serve a like purpose on a larger scale.

## BARGE TRAFFIC.

Provision should also be made for the barge trade of the Hudson River, Long Island Sound, the Inter-costal and Erie Canals, which will ultimately develop to large proportions in this locality. Some European ports, notably Rotterdam, Amsterdam and Hamburg, depend very largely on barges for the transfer of their freight. As the traffic of the railways of the country increases, waterways will undoubtedly be resorted to for relief in handling coarse freights. Especially will the railway lines leading to this port find their terminal approaches congested more and more, so that it will become ever increasingly important for them to eliminate cars by the utilization of barges.

## PARKS, INTERIOR AND ELSEWHERE.

The United States Engineers lay great stress upon the importance of maintaining the tidal prism of the bay in order to provide a sufficient scour on the ebb tide to keep the entrance channel free. For this reason they will probably not permit the interior of the bay to be greatly encroached upon by the building up of artificial islands. The existing low-lying islands within the bay can probably be regulated, raised and utilized for park purposes for several generations to come.

Mr. H. A. Caparn has prepared a plan for parking these islands. In this connection it is desirable that, in consultation with the United States Engineers, a plan for the ultimate development of the interior of the bay should be worked out. Private owners of these islands should be liberally dealt with in acquiring their holdings, but it is distinctly undesirable that they should be permitted to fill or improve their own lands for private purposes which almost of necessity must be out of keeping with a general scheme for a provisional park development for the interior of the bay. There will be plenty of time to consider the adaption of the interior section to its final uses. In the meantime, it probably affords the cheapest and best opportunity about New York for the acquisition of cheap lands for recreation purposes, and sites for City institutions.

In addition to such a system of island parks, there should ultimately be provided an ocean park on Rockaway Beach, and a system of small inland playground parks for the industrial section.

Canal basins, dredged for the purpose of bringing fill in dump scows to be pumped on back lands, after having served this purpose, and the added preliminary purpose of bringing in building materials and other coarse freights, could ultimately be filled and converted into park areas.

#### FUTURE IMPORTANCE.

The natural advantages of the Port of New York, and the relative cheapness of approach by way of the Hudson and Mohawk Valleys, are so exceptional that the railways of the country have for many years imposed a differential freight rate against New York and in favor of other seaboard cities, for the express purpose of counterbalancing such disadvantages and to obtain what the railroads consider to be a proper division of traffic. The competition of the Canadian railway and canal systems has recently disturbed this balance in favor of Montreal, Portland and Boston. The completion of the Erie Canal improvements will bring still further disintegration of rates to the advantage of New York; and finally, if the Erie Canal improvements shall be supplemented by adequate terminal facilities at New York and Buffalo, the permanent supremacy and prosperity of this Port will have become established, since the water rate will keep down rail discrimination. The Jamaica Bay improvements, while not proximately involved, will ultimately become a very great, and possibly a controlling factor in the future development of the Port, and for this reason they now merit the most careful attention.

#### COMPREHENSIVE PLAN.

In planning for the future growth and development of the Port of New York, we cannot plan too comprehensively. The natural forces underlying the City's growth will continue to work out their results with accelerating speed. Heretofore, the policy of the City has been, not to plan with sufficient

foresight. As a consequence, we are, in many directions, suffering the consequences of our failure to anticipate conditions now only too unfortunately apparent.

This tentative official discussion is submitted for the purpose of drawing out criticism and counter suggestion and is not presented as any conclusive study of this vast enterprise, the real significance of which must of necessity be only partially appreciated at its inception.

Respectfully submitted,

CALVIN TOMKINS,

*Commissioner of Docks.*