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REPORT
of the
North Jersey Transit Commission
to the
Senate and General Assembly
of the
State of New Jersey



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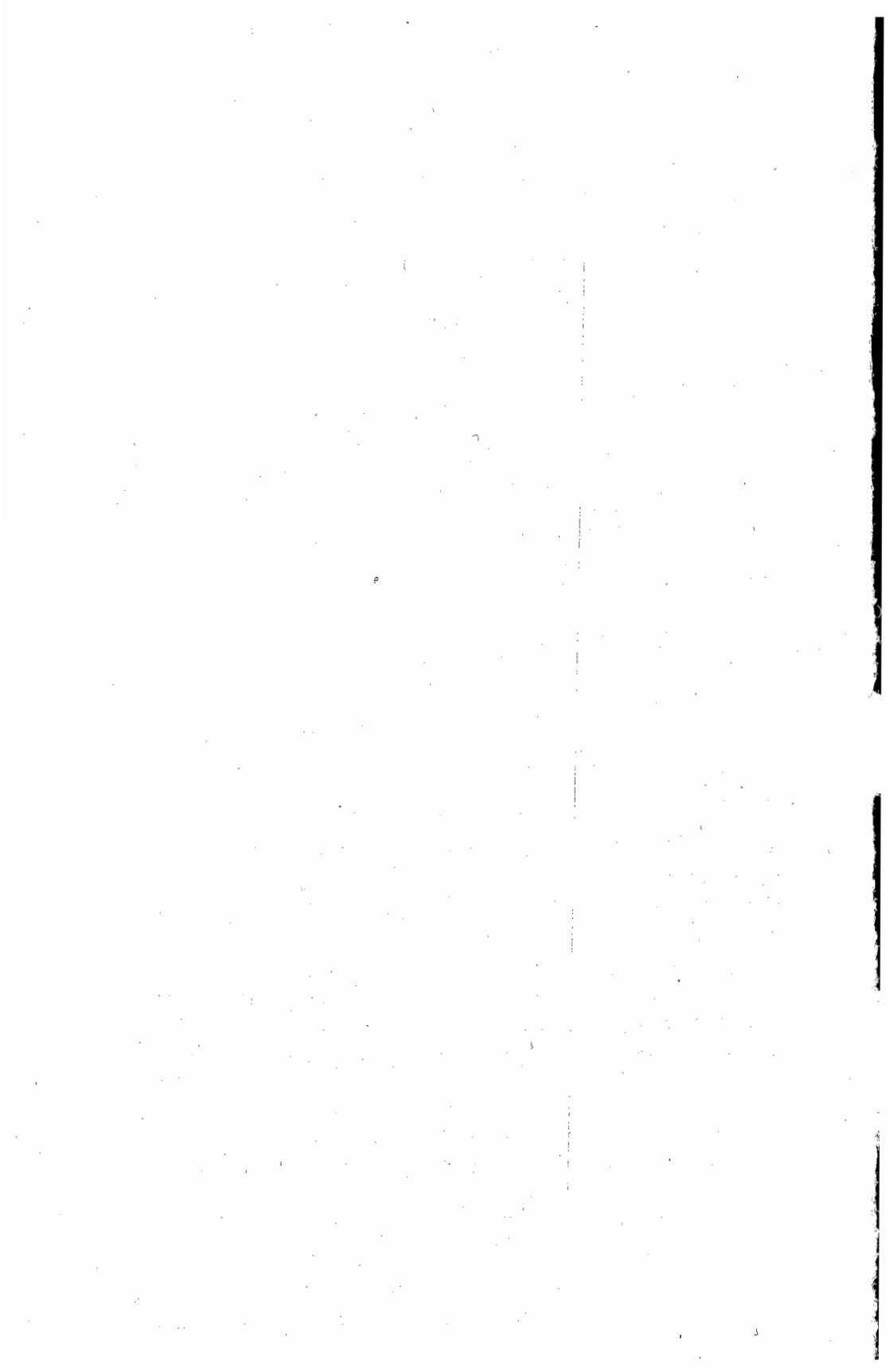


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*To the Senate and General Assembly
of the State of New Jersey,
Through His Excellency,*

MORGAN F. LARSON, *Governor:*

Pursuant to the provisions of Chapter 157 of the laws of 1926, the North Jersey Transit Commission transmits herewith a report of its activities during the calendar year 1928, together with definite recommendations for legislative action on the part of your body looking to the creation of a commission with power not simply to study, negotiate, report and recommend, but to act.

If the recommendations submitted herewith applied to rapid transit alone, they would be embodied, in compliance with section 4 of the act under whose authority this report is submitted, in the form of legislative bills. Because, however, of facts which have forced themselves on the attention of the commission at every step in its studies of the physical, legal and financial phases of rapid transit construction, these recommendations cover a much wider field than that which the commission has had either the authority or the financial means to study in detail. For this reason, while the recommendations with reference to rapid transit are definite, those which deal with the closely related subjects of water supply, sewerage and sewage disposal, meadows reclamation, and subdivision control are necessarily tentative. Because all of these problems are inextricably bound up together in one major problem—that of the proper development of the North Jersey area for urban utilization—the definite recommendations with reference to rapid transit and the tentative proposals for the related regional activities are submitted together as parts of one whole. We cannot urge too strongly that the entire subject of regional government, including not only those phases which are stressed herein, but such others as may be closely related, be referred to a commission with a definite mandate that they draft the necessary legislation for submission to your body in time for action at the legislative session of 1930.

The definite recommendations submitted in Chapter III of this report may be summarized briefly as follows:

(1) A North Jersey Metropolitan District should be created comprising, if not the entire area now included in the North Jersey Transit District, then at least so much of that area as is comprised roughly within the New Jersey sector of the Port of New York Dis-

tract. Needless to say, however, if the latter alternative is adopted, then boundaries should be so drawn as to follow the boundary lines between existing units of local government, instead of the straight lines connecting points of known latitude and longitude which bound the Port District.

(2) This metropolitan district should be governed by an elective commission to the end that it may exercise those powers which the courts of this state have held to be legislative; the power to issue bonds, to levy taxes, to levy special assessments, and to establish, after due public notice and hearing, special taxing districts and local improvement districts. Such district commission should also have the power of eminent domain and subpoena.

(3) To this district, the state should delegate those powers of a regional nature which it has not hitherto delegated to any municipality, but which it has exercised, if at all, through the creation of administrative arms of the state government itself. In short, the powers of local self-government now exercised by the municipalities within the boundaries of the proposed metropolitan district would not be reduced in any way by the creation of that district. On the other hand, greater powers of regional self-government than that district itself or any part of it has hitherto exercised, would be conferred on the district as a whole. Hand in hand with the delegation to the district of the powers hitherto retained by the state would go also a more direct financial responsibility for its own improvements, coupled with a plan of financing whose flexibility, adequacy and fairness has already been amply tested in the hands of the municipalities themselves.

(4) Supplementing the general powers briefly outlined above, certain powers analogous to those which the state has already delegated to municipalities should be conferred on the district commission. We refer not only to the rights to negotiate both with private corporations and with other governmental agencies which have already been conferred on this commission, but also to the power to enter into contracts without which the right to negotiate must remain barren of major results. At one step these supplemental powers would pave the way for progress in the solution both of intrastate and interstate phases of rapid transit and other problems of a regional character. With reference to rapid transit alone, for example, this commission, armed simply with the right to negotiate, but without the power to contract, has struggled vainly to find the answers to two major questions. What responsibility will the City of New York

assume for the construction and financing of the interstate section of the proposed comprehensive rapid transit system? To what compensation will the existing privately owned railways be entitled for the use of trackage rights along certain of their rights of way, and what contributions should the railways make toward the actual costs of the structures necessary for the handling of rapid transit? Until these questions can be answered definitely in contracts reduced to dollars and cents, the plan for a comprehensive system of regional rapid transit must remain in the realm of speculation. While the work of this commission is an essential preliminary to the actual realization, no amount of negotiation can achieve a transit system unless it is supported by the power to contract, and buttressed by the power to finance.

So much for the definite recommendations outlined in Chapter III of this report.

Growing Emphasis on Regional Nature of Other Problems

A brief summary of the history of this commission and of the general developments in public opinion, in legislation and in accomplishment which have occurred during the same period, will be helpful in bringing into clear relief the factors which have contributed to the formulation of these proposals.

The original Transit Commission was established by Chapter 104 of the laws of 1922. The immediate cause of its foundation was a gathering of representatives of municipalities at Paterson, New Jersey, some months before, to discuss the problem of commuter traffic and to consider means for the improvement of service between New York City and communities of northern New Jersey. A committee formed as a result of this meeting first waited upon the Port of New York Authority, at that time less than a year old, in an effort to enlist that body in a study and solution of the vexing problem. The Port Authority was unwilling to enter the field of passenger transit, feeling that its energies would for some time to come be fully occupied with the freight problem under the comprehensive plan. Failing in this effort, the committee applied to the Legislature of the State of New Jersey and the act above referred to was passed on the last day of the session of 1922. The preamble of the act, incidentally, recited the fact that the comprehensive plan of the Port Authority did not relate to passenger transit.

At that time the regional nature of many problems of the metropolitan district was not widely recognized. After years of effort, the

first major public improvement of a regional nature to be undertaken in the counties of northern New Jersey—the Passaic Valley Sewer—was still uncompleted. The Port of New York Authority, as has been pointed out, had just been created, but its position in public opinion was still clouded by a deep suspicion of this so-called “super government”. The North Jersey District Water Supply Commission had signed a contract with the City of Newark alone, of the eight municipalities which have since entered into contractual relations with it. The Committee on Regional Plan of New York and Its Environs had only recently embarked on its fruitful work. After some sixteen years of preliminary study the Interstate Bridge and Tunnel Commission had just been clothed with power to act.

In the interim, the Passaic Valley outfall sewer has been placed in operation, and the demands on it are already overtaking its capacity. The Holland Vehicular Tunnels have been opened to a volume of traffic in excess of all estimates, and the State of New Jersey and the City of New York have expended, and are expending, millions in the avenues of approach to them. The Port of New York Authority has completed and placed in operation two vehicular bridges connecting the two states and is pushing the work on two more. Its position as an effective agency of interstate cooperation has been definitely established in the public mind, and its securities are in demand by investors. The reservoirs and aqueducts of the North Jersey District Water Supply Commission are well on the way toward completion, and for a time the fear of water shortage has been definitely pushed into the background for the municipalities it is designed to serve. The labors of the Committee on Regional Plan have emphasized the regional nature of many problems and the need for comprehensive planning, and have laid firm foundations in public opinion on both sides of the Hudson River for bodies with regional powers. Not least among the direct results of the labors of that unofficial body, when considered from the standpoint of rapid transit in North Jersey, is the development of a planning commission for New York City, which is at this time in process of creation. For the first time, in the great city across the river, it seems probable that there will be a single body charged with the duty of comprehensive planning with which North Jersey can negotiate with reference to problems of an interstate nature.

The Previous Studies of This Commission

During the period in which this process of evolution has gone on in the fields of public opinion, legislation, finance and accomplish-

ment, the North Jersey Transit Commission has been actively engaged at the task assigned to it—that of studying the legal financial and engineering aspects of a plan for rapid transit between the communities in the nine counties included in the North Jersey Transit District, as well as between such communities and the City of New York. That task, in the extent of the area affected, in the magnitude of the expenditures required, and in the complexity of the legal and financial problems both of an intrastate and an interstate character, is second to none.

Within the narrow limits imposed on its activities by the small amounts appropriated to it in the early years of its existence, the commission applied itself to delimiting in broad outline the scope of the problem. As the amounts available for the prosecution of the studies increased, more detailed studies were undertaken. The first of this latter series was the census of commuters which was undertaken in 1924 with the cooperation of the railways. The results of that study disclosed new facts of overwhelming importance to transit engineers and city planners throughout the entire region bordering on the waters of New York harbor. The methods developed at that time have since been adopted by the Suburban Transit Engineering Board for use in its analysis of the problems of suburban rapid transit in the New York region as a whole.

The next step in the investigations of the commission involved the development of tentative plans for a system of interstate and intrastate rapid transit designed to meet the definite need whose existence the traffic census had for the first time established on a firm basis of observed facts. This physical plan and the accompanying cost estimates brought into clear relief the magnitude of the financial problems involved and the scope and complexity of the legal questions created. As the logical next step in its investigation of the problem as a whole, the commission then concentrated its attention on these phases.

Subsequent to the submission of the reports embodying the results of these studies, the commission has applied itself to an analysis of the more exclusively intrastate units of the original comprehensive plan. The first fruits of these studies—estimates of costs of construction, of costs of operation, and of potential passenger traffic on a number of alternative routes between Newark and Paterson—are submitted in Chapter I of this report.

In short, the commission has hitherto endeavored to present in some detail the results of its investigation of specific phases of the

intricate problem assigned to it for solution. Such conclusions as were drawn were submitted in tentative form for discussion and criticism, rather than as recommendations for immediate action. In a sense, the general tenor of those successive reports may be paraphrased as follows: Here are the facts disclosed by our study of one phase of the problem. They would seem to lead quite logically to this conclusion. There are other phases, however, which we have not yet explored. What their bearing may be on the final conclusions, we are unable to predict. Pending our further studies along those lines, we lay before you, and the people of the state whom you represent, the results of our work, in the hopes that it may be submitted to full and searching criticism.

Growth of Public Interest in Rapid Transit Problems

For a time, that criticism was not forthcoming from any quarter in the volume which, in our judgment, the importance of the problem warranted. More recently, both favorable and unfavorable criticism has been directed at our work. This fact has been a source of gratification to the members of your commission, because it indicates that the subject of rapid transit is beginning to attract the attention which its importance warrants.

The criticisms themselves may be classified roughly into three major categories. First, certain individuals who have failed to view the problem with a proper sense of proportion, have been disturbed not only by the magnitude of the estimated sums required for the construction of a comprehensive system of interstate and intrastate transit, but even by the size of the appropriations which your body has deemed it wise to make from year to year for the purpose of conducting the preliminary studies.¹ Opinions like these are not unnatural to honest minds confronted for the first time by a scheme of this magnitude but the public interest requires that such objections be frankly dealt with.

Therefore, we present in Chapter II of this report certain facts and figures concerning the amounts which have recently been, or are at present in the course of being, expended within the boundaries of the North Jersey Transit District for regional improvements of other types. They indicate clearly that North Jersey is no longer a loose aggregation of urban, suburban and rural units, but that it has attained the stature of a metropolitan area of the first magnitude.

¹A complete summary of the amounts appropriated to this commission, and of the expenditures incurred thereunder, is presented in an appendix to this report.

Next, other individuals whose interests would have been promoted by the immediate construction of certain sections of the suggested comprehensive system have been grievously disappointed because this body has not hitherto provided the desired facilities. With certain allowances, we can understand this attitude, and with certain qualifications, we can even sympathize with it. We are compelled to add, however, that if the critics of this type will analyze carefully the limited scope of the powers conferred on this body by the enabling legislation, and will take pains to study the results of our previously published analysis of the legal and financial aspects of the general problem, they will know why immediate action by this or any other body, other than a private corporation, is quite impossible in the present state of our laws, and why, furthermore, action by a private corporation, while not outside the realms of possibility, is quite improbable. We believe that they will best serve their own interests by assisting in the formation of a regional body of the type proposed herein with power to act.²

Finally there has been the constructive criticism directed both at the soundness of our judgment as to the relative importance of the specific phases of the problem which we have selected for study, and at the tentative conclusions we have based on those studies. We have been deeply grateful for criticism of this character, and we hope that its influence is apparent in the recommendations made herein. We hope, furthermore, that it may be directed in a most searching manner at these recommendations themselves, to the end that an effective agency may be created for the onerous and complicated duties which must devolve on it.

The recommendations outlined in this preliminary summary, together with our reasons for submitting them, are presented in some detail in the chapters which follow.

² The texts of the enabling acts and joint resolutions under which this commission has operated will be found in the appendix to this report.

CHAPTER I

INTERSTATE AND INTRASTATE TRANSIT

Interstate Transit

This commission outlined in its 1926 report a proposed interstate system with full connections through Manhattan. These studies have been made available to the Suburban Transit Engineering Board; and until the work in their hands of coordinating the views of the diverse localities and interests affected shall have been completed the commission has nothing further to report as to this phase of its work.

The commission, however, has been charged with the duty of recommending such form of interstate treaty or compact as would most effectively tend to the carrying out of the rapid transit plan. Since the establishment of the commission, the Port of New York Authority has, by action of the two states creating it, completed two interstate bridges and has two others now actively under way. The success of these undertakings has been such as to demonstrate that in the Port of New York Authority there is in existence an efficient bi-state agency for the construction of great public works.

Moreover, the existing compact between the states, if broadly construed, is drawn so as to include passenger transit facilities within the scope of the work of the Port of New York Authority. With such an agency existing, it is, in the opinion of this commission, inadvisable to consider the establishment of another interstate agency, and it would, therefore, recommend, in accordance with the legislative mandate, that at such time as the interstate rapid transit plan shall have been agreed upon by the two states the execution of it be entrusted to the Port of New York Authority under enabling legislation.

Intrastate Transit—Newark-Paterson Line and Extensions

Turning to the subject of intrastate transit, it will be well briefly to note the factors which have demanded the commission's consideration in arriving at the concrete recommendations appearing in the concluding portion of this chapter, to wit, the early construction of a short interval service line between Newark and Paterson.

Whether regarded from the standpoint of population, area, wealth, number and variety of its industrial plants, the City of Newark is today the natural focus about which North Jersey devel-

opment must center. Second only to New York City in population and in industrial and financial standing, it has already become in itself a center of substantial attractive force and in bringing to itself residents from surrounding territory has shown on a smaller scale and independently of its larger neighbor that drawing power which has so long been characteristic of Manhattan Island. To increase that tendency by coordinating the development of adjacent territory with that of Newark would seem to be the first step toward the creation of a regional autonomy which would make of North Jersey an economic aggregation capable of vying on terms of comparative equality with the New York sectors of the metropolitan region.

Two objections to this assumption may be met with: first, that by such centralization a repetition of the difficulties from which New York City is now suffering will be brought about—so that the tendency toward decentralization, now so generally advocated, will be checked; and, second, that the adoption of Newark as the focal center will tend to its aggrandizement, to the detriment of the surrounding areas.

It is a truism that decentralization is brought about by setting up new centers of attraction. As to the first of these objections, then, it must be borne in mind that the establishment of a center like Newark as a focus of cohesion is in itself a step toward decentralization as opposed to the drawing power of New York. It seems obvious that the long established trends toward New York coupled with the community jealousies (the natural outgrowth of the lack of interdependence hitherto among New Jersey municipalities) will tend surely to check over-centralization, and that a balance between old and new centers will ultimately be reached.

Again it must be remembered that the area thus primarily affected is only that to the west of the Hackensack River, for the tendency of the communities on the Palisades Ridge is definitely towards Manhattan, so much so indeed that the commission has felt that pending the solution of the Hackensack Meadows problem, this section will probably find the answer to its transit needs in the development of the interstate system now in the hands of the Suburban Board. The frequent and convenient ferry service, supplementing trolleys and other local facilities, has established to a far greater degree than elsewhere the travel trend toward New York and made the necessity for intercommunication between the towns themselves less pressing. Moreover, the existence of a traffic artery like the Hudson County Boulevard has made possible the development of a bus system largely

free from the traffic delays so frequently encountered in this type of transit. It is true, however, that the growing congestion of the boulevard tends to decrease the efficiency of this system, and that increasing patronage of the Hudson and Manhattan line at Journal Square has brought about a rush hour condition at that point which has been relieved, but not cured, by provision for loading and unloading buses outside the usual traffic lanes made possible by the Journal Square improvement. But the great proportion of this rush hour traffic is bound either to or from New York and the establishment of an interstate system will almost automatically bring about a solution. Until this interstate facility is available, it may reasonably be doubted whether the creation of a purely New Jersey system on this axis, obviously an ultimate necessity, would have any result other than to increase the already intolerable congestion at certain hours on the tube trains.

While the Pennsylvania electric service to Park Place from Journal Square affords short interval service from the Palisade section to Newark and in that respect puts those portions of Hudson County served by that facility into easy contact with Newark, there has been only a slow and sound growth in the Newark traffic trend, and everything points to the probability that the pull of New York and the rivalries of New Jersey communities will healthfully retard any tendency to over-centralization from a transit system focused initially on Newark.

Let us now consider the second objection: the possibly injurious effect of an intercity transit system upon the larger communities thus brought into closer touch with the new center. The fears of merchants, that the easier availability of the larger city will be detrimental to them, are natural, but do not stand up under analysis, nor under the test of the experience of other places. Trade depends on population, and variety of purchasing demand comes only by increased population, and only by this demand are merchants enabled to carry lines of goods in quality and quantity comparable to those carried by the great metropolitan shops.

The fear of convenient access to Newark involves, then, the admission that local needs presently demanding satisfaction cannot be locally satisfied. Today North Jersey residents whose special requirements are not met by local stores do such shopping mostly in New York. Increased opportunity to shop in Newark will no more tend to the decrease of local sales than does the opportunity, today existing, to do so in New York. In certain North Jersey shopping

districts the merchants have encouraged the establishment of bus lines to sections where no transportation existed, and their sales have benefited. A North Jersey transit system will continue the same trade influence in a better organized way.

For, we firmly believe, the actual establishment of proper transit facilities will tend to the great increase in population and purchasing power of the communities served, and that not only will the volume of sales of those commodities now dealt in be greatly increased, but that new demands for new commodities will occur in sufficient volume to justify their introduction locally and that less and less occasion will arise for those journeys abroad, whether, as in the past to New York, or, as is feared, in the future to Newark.

Perhaps no better illustration of this fact can be given than by the City of Newark itself. With the opening of the Hudson and Manhattan system an easy short interval service was afforded from Park Place, Newark, to what was then the heart of the New York retail section. At the time Newark had no great department stores. The principal merchants offered facilities limited as to the number and extent of lines, the quality of the goods and the convenience and accessibility of the stores themselves. If easy communication with larger centers hurts local trade, with the initiation of the tube service these retail conditions should, at best, have continued as they were; at worst have greatly deteriorated.

What do the facts show? That the Bamberger store was soon rebuilt on much larger lines on a new site; that within some ten years that building's capacity was doubled. In the meantime, the store was intensively using its earlier plant, and it is now in the process of more than redoubling the doubled plant. The Goerke Company has substituted for a miscellaneous group of old buildings, a large modern building with overflow space in adjoining structures. The Kresge Company, as successor to an old-established firm, has erected on Broad Street a mammoth building for department store activities, and Hahne & Company has largely increased its facilities. In addition, there have been similar expansions in other establishments, the creation of large specialty houses of one kind or another, the building of great structures for piano manufacturers and merchants, the erection of eighteen and twenty story office buildings, new central garages, new hotels.

It is, moreover, interesting to note that, in a number of the more essentially residential communities, specialty shops are arising and increasing in size and in variety of commodities offered, carrying on

advertising campaigns and generally expanding in activity so as properly to be classed as department stores. And these developments have taken place in spite of greater accessibility whether by motor or train to New York City and in spite of the fact that in many instances the enlarged shopping facilities of Newark are within twenty to twenty-five minutes of the houses served by bus and trolley.

It is for these and similar reasons that the commission has come to the conclusion that the initial focussing of transit lines on Newark will not have the results so feared in certain outlying sections. The necessity in northern New Jersey for a rapid transit system is urgent. It is only logical to focus its beginnings on an existing economic center. Good judgment points to the selection of the Newark metropolis for that purpose. That the adoption of so sound a principle can be followed by adverse effects elsewhere is unthinkable. In regional development no community can benefit without all communities participating.

For reasons above expressed, leaving out of present consideration the Palisade municipalities and adopting Newark as the objective of initial transit lines from communities west of the Hackensack River, the commission has concentrated on a part of its proposed general system and planned a transit link which can, through Newark, by direct communication tie together the City of Paterson and certain other Passaic County municipalities, or the City of Hackensack and eventually more distant Bergen County boroughs, with such points as Elizabeth, Hillside, Irvington, Maplewood, Hilton, Springfield, Westfield and Plainfield, Millburn and Summit. As a first step in such a programme we are herein submitting a somewhat detailed study of lines from Paterson to Newark with estimates of costs and potential traffic, and average fares to be charged.

Such a line being only part of a larger plan, does not constitute a system and as travel on facilities of this kind is apt to develop peak-load conditions in one direction at rush hours, it is advisable that its continuance beyond its principal objective be considered from the standpoint of operation as well as of the wider question of regional expansion, to afford a counter traffic movement over part of the line during the same hours.

These requirements would be well met by a line running through Broad (or Washington) Street, Newark, to Hayes Circle. Bearing to the south at this point, its extension would tap the populous Wee-quahic section of the city, and beyond the city line, would afford relief to Hillside and the North Broad Street section of Elizabeth, now

served, except for buses and trolleys, only by the infrequent trains of the Lehigh Valley Railroad.

From Hayes Circle, another leg bearing to the west, up Clinton Avenue to and along Springfield Avenue, Irvington, to its junction with Millburn Avenue, Maplewood, would serve a very large population, both within Newark and in the town of Irvington and the Hilton section of the township of Maplewood, communities which in spite of the absence of all transit facilities other than trolleys and buses have been growing at an abnormal rate since the last census. Were the two suggested extensions built and proper high speed interval service provided, there is little doubt of a still more rapid increase in population.

At the junction of Springfield and Millburn Avenues, a second natural forking of the last mentioned line is indicated, the first leg leading through Springfield to Westfield and Plainfield, the second through Millburn to Summit. Of these ultimate extensions, the former would reasonably be the earlier built, since Springfield is wholly lacking in rail service while the Westfield and Plainfield services tend, almost inevitably, through Elizabeth to New York. It must be borne in mind, however, that these extensions will involve greater trunk line capacity through the heart of Newark than is shown by present estimates.

Such a system as that above outlined is by no means a comprehensive solution of the intrastate transit problem nor does the commission so consider it, but it seems well within the realm of possibility and to present no insuperable engineering or financial obstacles. Without, however, a detailed study of the incidence and destination of the traffic along existing routes, similar to that presented herein for the Newark-Paterson line; without a careful engineering study of possibilities of limiting the amount of subway construction needed; without an investigation into the availability of public thoroughfares for transit use and a detailed estimate of construction and equipment costs, of operating expenses and of potential operating revenues, any definite conclusions would be but guesses. That such studies should at once be undertaken and prosecuted to completion as rapidly as possible is the earnest belief of the commission, and it cannot be urged too strongly that sufficient appropriation to that end be made. Delay in the making of studies so essential in character can lead to nothing but greater expense later.

In this connection, it may well be pointed out that the large expense of transit lines through our urban sections arises from neg-





lecting transit until it is practically impossible to supply safe and speedy service, satisfactory to the communities through which the lines pass, without recourse, in a constantly increasing degree, to subway construction. Where only subways will serve and such transportation facilities can be indefinitely postponed, where the question is not, "Can we get along without them?" but "Are they worth the price?" then the question of cost of subways may well be a ground for non-action. It is the view of the commission, however, that some transit system such as that outlined above, is an essential to the full realization of North Jersey's potentialities; that its construction today will require subways through certain portions and that its postponement will daily increase the proportion of that type of construction and that whether subway or other construction is indicated it will never be built more cheaply than today.

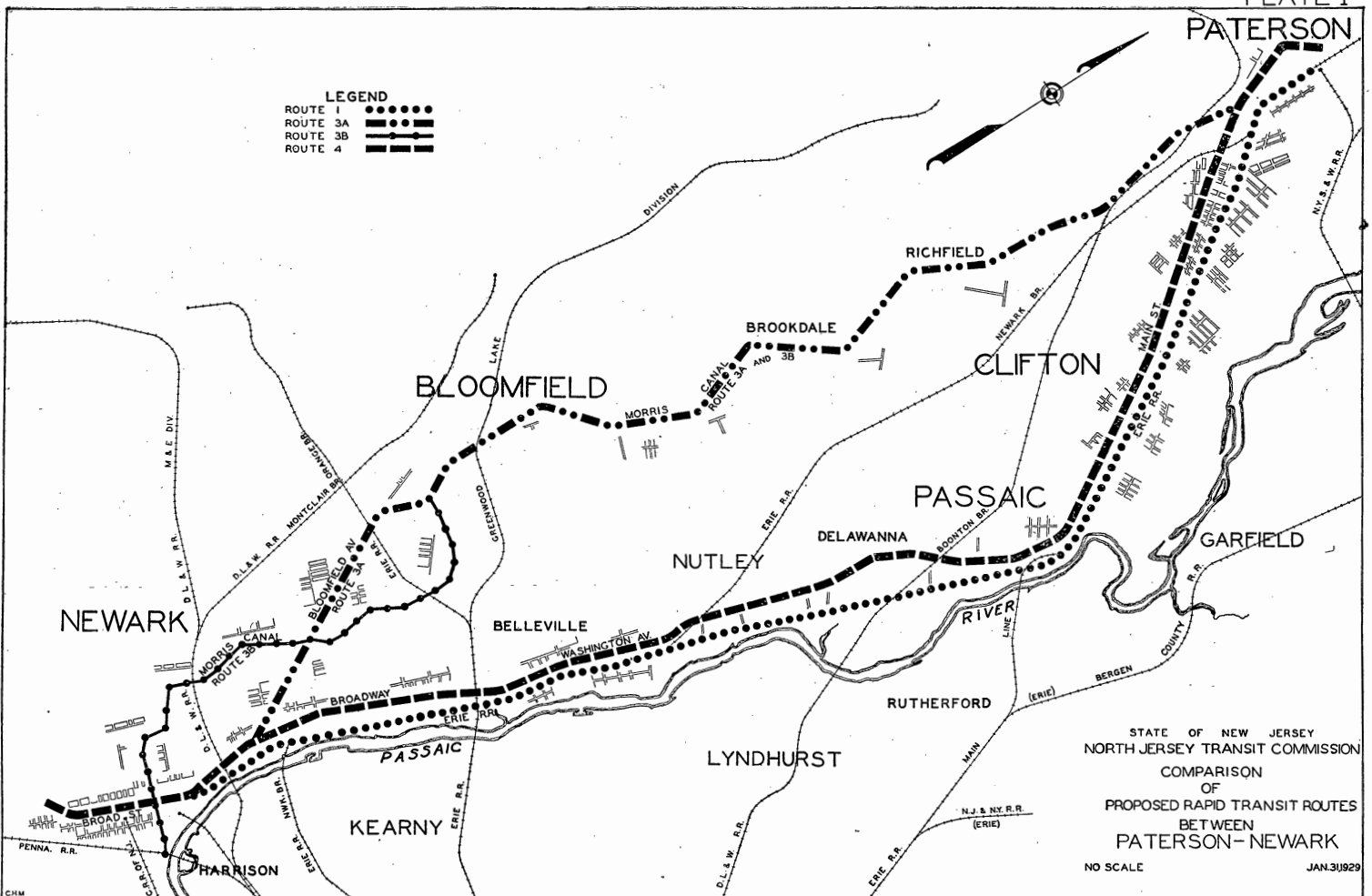
It is equally obvious that in such communities as Newark now is and others shortly will be, mass transportation cannot effectually continue wholly by surface facilities. Temporary relief may in some instances be gained by street widenings, but these too are daily growing more costly, so that a few years ago Newark expended approximately a million and a quarter of dollars to straighten a single short crossing at Market and Washington Streets, and has now under consideration the widening of about a half a mile of Mulberry Street at an estimated cost, as shown by the appropriation figures of the proposed ordinance, of \$3,800,000. While these instances are in neither case ones where subway construction would have solved the problem, the costs are such as to make the estimated figures of from five to six million dollars per mile for subways no longer as appalling as they have been considered.

While on the subject of rapid transit costs, it is interesting to note that subway construction, planned to remove trolleys from the streets, will bring about all the advantages of street widenings to a greater extent than merely the space occupied by the trolley right of way. This is self-evident. The delays incident to the stopping of trolleys, reflect themselves in crowded districts for hundreds of feet; the permanent occupancy of the roadway by safety isles has a hampering influence on traffic movement far beyond their immediate area; the slowing up due to embarking and debarking passengers also creates immeasurable delays to say nothing of the danger to life and limb. These are all elements but slightly altered by widenings, and wholly obviated by subways. And it is our belief, that as subway construction is essentially a very efficient method of street widening, the

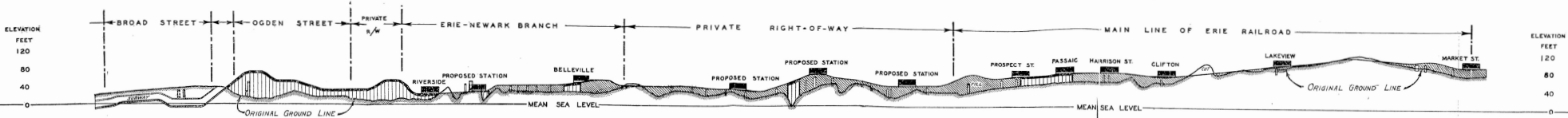
PATERSON

LEGEND

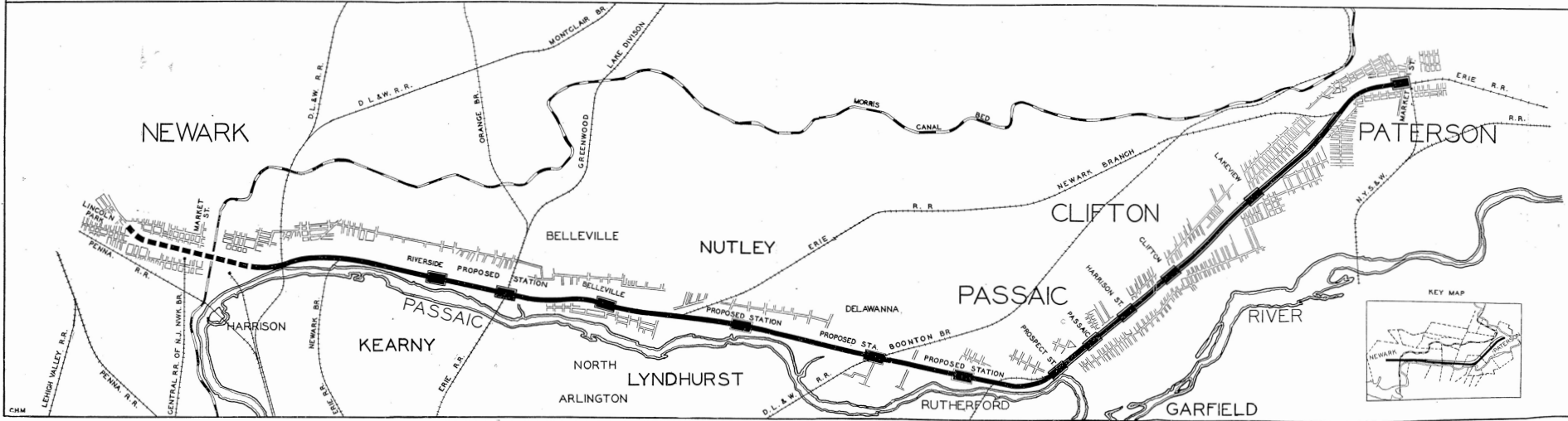
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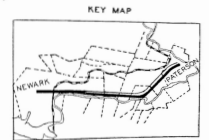
STATE OF NEW JERSEY
 NORTH JERSEY TRANSIT COMMISSION
 COMPARISON
 OF
 PROPOSED RAPID TRANSIT ROUTES
 BETWEEN
 PATERSON-NEWARK
 NO SCALE JAN. 31/929



PROFILE



- LEGEND**
- PROPOSED RAPID TRANSIT ROUTE
 - PROPOSED SUBWAY
 - PROPOSED STEAM TRACKS
 - PRESENT AND PROPOSED STATIONS



STATE OF NEW JERSEY
 NORTH JERSEY TRANSIT COMMISSION
 PROPOSED RAPID TRANSIT ROUTE
 PATERSON-PASSAIC
 NEWARK

ROUTE - I

NO SCALE

OCT. 30, 1928

principle of benefit assessment, so commonly employed in street widenings, might with equal propriety and legality, under enabling statutes, be applied to subway building.

Studies of Alternate Routes

We well appreciate the fact that extended subway construction can only be undertaken when the need for it is generally realized. For that reason, in addition to the economic factors later referred to, a Newark-Paterson line commends itself favorably to the commission. Especially is this true of route No. 1, below, in which the total subway amounts to but 1.4 miles. On none of the proposed routes does such mileage exceed 2.5. (See plate I.)

The determining factor, however, leading to this recommendation grows out of the fact that no convenient rail service between Passaic and Bergen Counties and Newark presently exists. Of the steam lines entering Newark, the Pennsylvania, New Jersey Central and Lackawanna have stations convenient to the city's business center. The Pennsylvania-Hudson and Manhattan joint electric service—the only rapid transit facility now in New Jersey—connects the heart of Newark with Hudson County and the downtown and midtown sections of Manhattan. The Erie Railroad, on the other hand, while one of the most important commuting lines to New York, has no conveniently located station in Newark, though upon it the residents of Passaic and Bergen Counties must almost entirely rely. As a result some 560,000 persons, a population considerably in excess of the population of Newark, are substantially cut off from communication with the state's metropolis and inevitably directed toward New York City.

In considering the question, then, of connecting these two sections, the commission has studied no less than eleven distinct lines. Of these studies, four only, as typical, are submitted in this report.

Routes

Route No. 1 shown on plate II utilizes the right of way of the Main Line of the Erie Railroad between Market Street, Paterson, and Passaic, also a part of the Newark branch of the Erie between Nutley and Fourth Avenue, Newark. From Fourth Avenue where the route follows Ogden Street to Lombardy Place an elevated struc-

ture is proposed which enters a two track subway under Broad Street extending to Lincoln Park.¹

Route 3A shown on plate III starting in a subway from the vicinity of the City Hall in Paterson, follows Main Street in subway coming to the surface in the vicinity of the Lackawanna station and swings into the Morris Canal bed and follows that to Bloomfield. The proposed route leaves the canal bed and passes into and follows Bloomfield Avenue on an elevated structure to Broad Street, Newark, where the line enters subway similar to route 1 and continues under Broad Street to the vicinity of Lincoln Park, from where it may be extended to the south to Elizabeth, Plainfield, Irvington and Summit.

Route 3B shown on plate IV leaving Paterson follows the same course as described for route 3A as far as Bloomfield where instead of using an elevated structure on Bloomfield Avenue the canal bed is followed through Newark and the rapid transit route planned in conjunction with the proposal of the City of Newark to construct a high speed trolley line in the canal bed from the Bloomfield-Newark city line to the Pennsylvania Railroad station in Newark.

Attention is called to the fact that route 3B follows the bed of the Morris Canal primarily for the reason that a right of way now exists for which negotiations might be entered into with the municipalities which have purchased the portions of the canal lying within their respective boundaries. Obviously the course of the canal makes a line of excessive curvature. Attempt has been made to straighten the line somewhat and still use as much of the canal right of way as possible. The accompanying table shows a comparison of the canal route 3B if an attempt were made to straighten it. For purposes of high speed operation it is essential that the length of the total curvature be reduced to the absolute minimum. Conversely it is desirable to have as much of the route on tangent as possible.

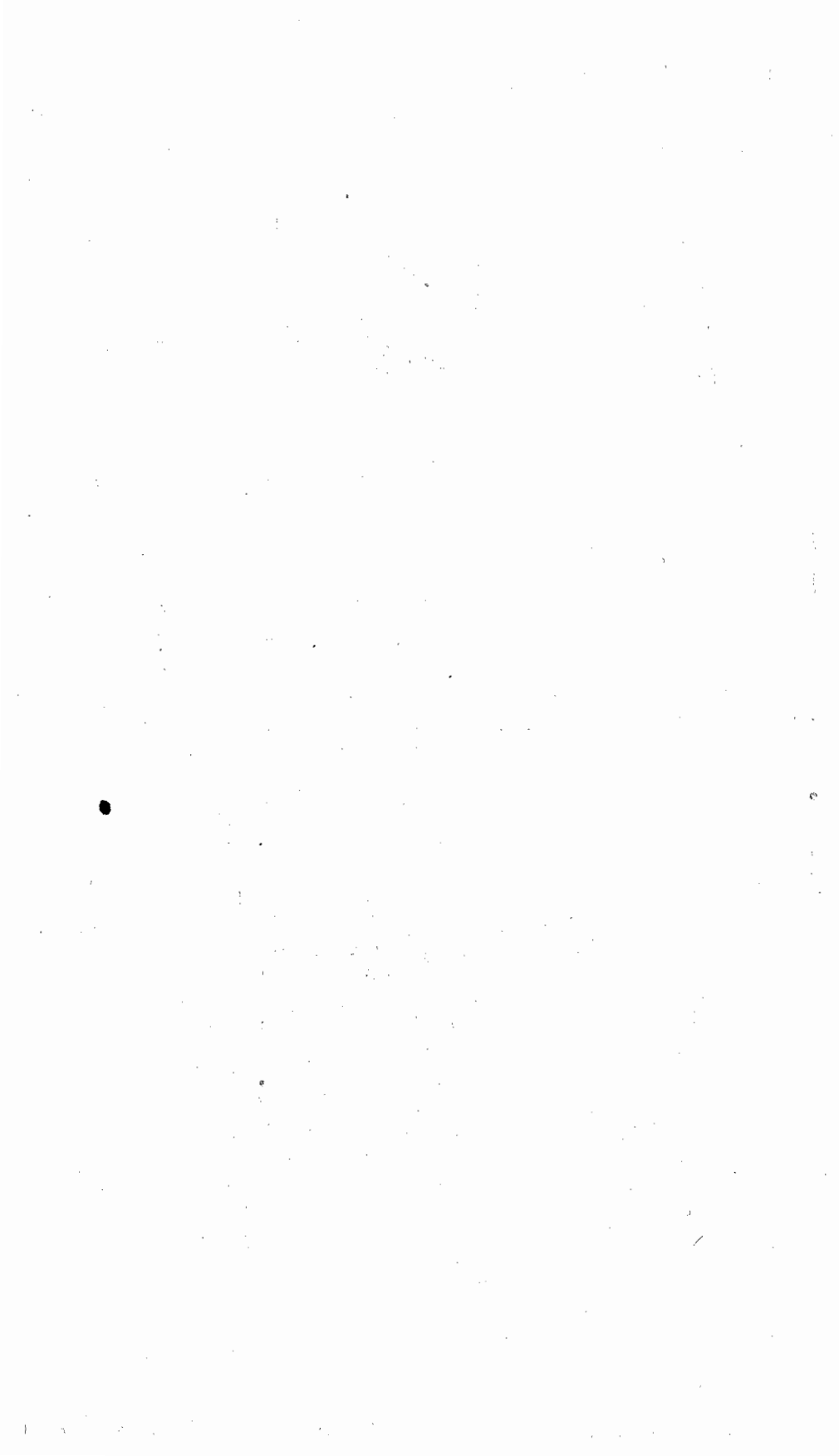
	Line in Present Canal Bed	Canal Line Straightened
Total length on tangents.....	7.9 miles	10.1 miles
Total length on curves.....	6.9	4.3
Total.....	14.8	14.4

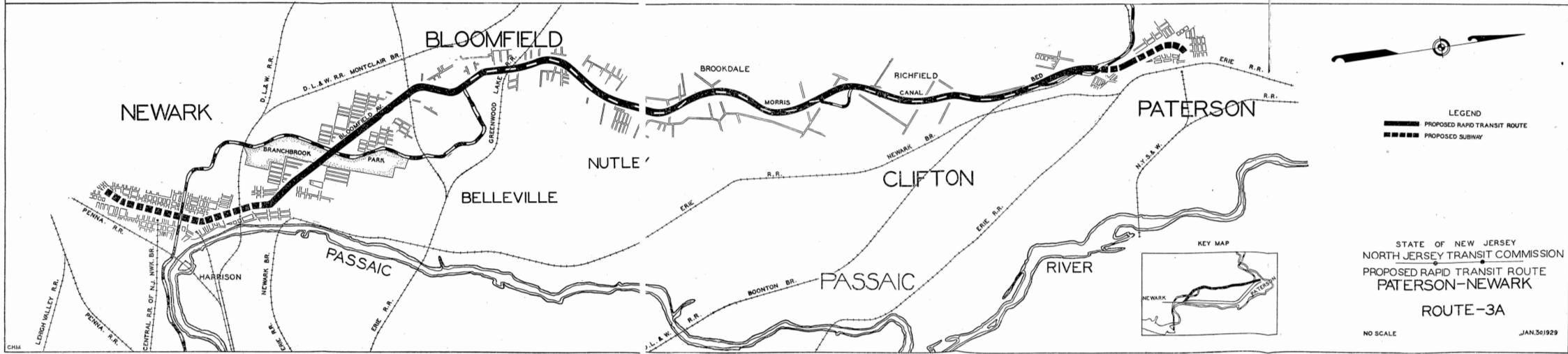
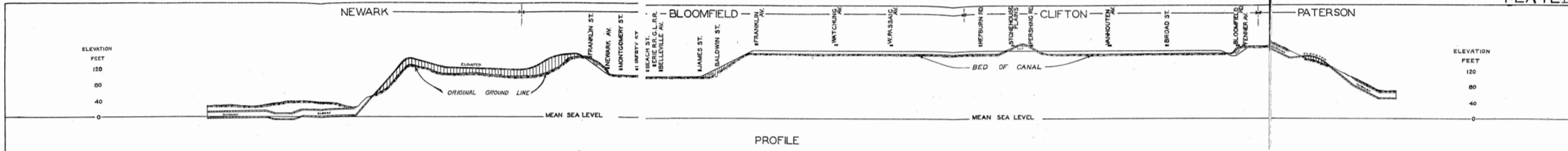
¹ It is with much regret that the commission report that, at a conference with executives of the Erie Railroad Company held on the twenty-second day of January, 1929, and after engineering portions of its report had been drawn, the executives of the company stated that they did not see their way clear to permit the utilization of the Erie rights of way in the manner provided for route No. 1. The reasons assigned for this position were:

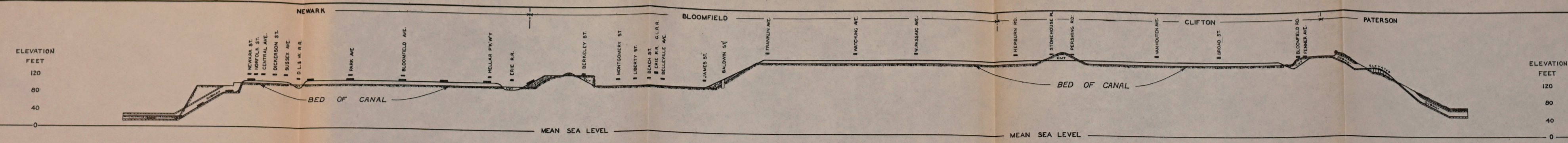
(1) The anticipated increased utilization by the railroad company of the right of way for strictly trunk line requirements; (2) the extreme narrowness of certain sections of the right of way; (3) the difficulty and expense of obtaining lands for widening purposes.

Whether this position would have been as definitely taken, had the commission been in a position to contract as well as to negotiate, may be open to question and it may well be that negotiations along these lines can subsequently be reopened.

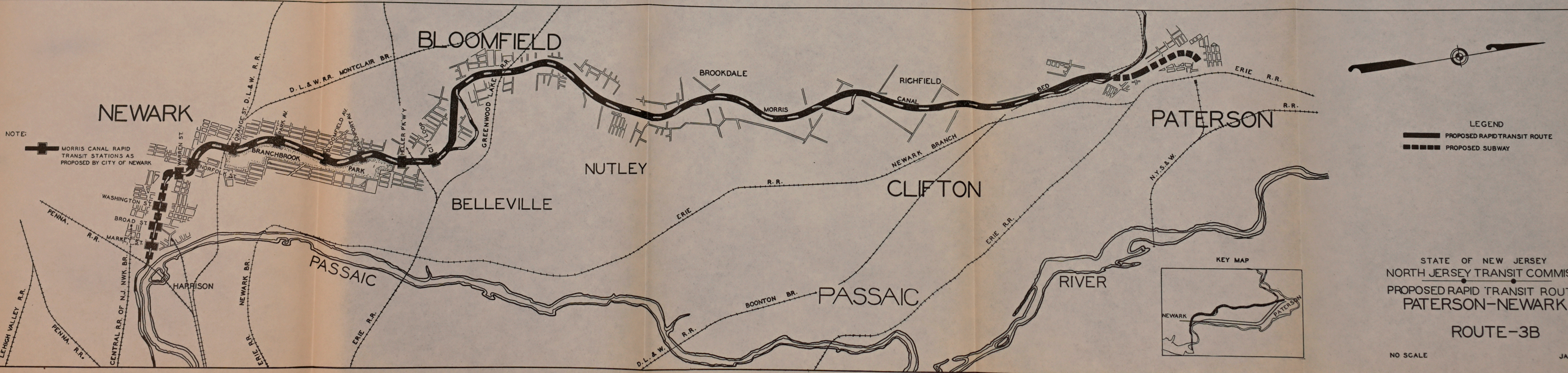
The commission especially regrets this outcome of the negotiations because route No. 1 lent itself admirably to an extension across the Passaic River to Hackensack and Bergen County municipalities. Of the four routes here submitted the only one which has similar capabilities is the elevated route No. 4.

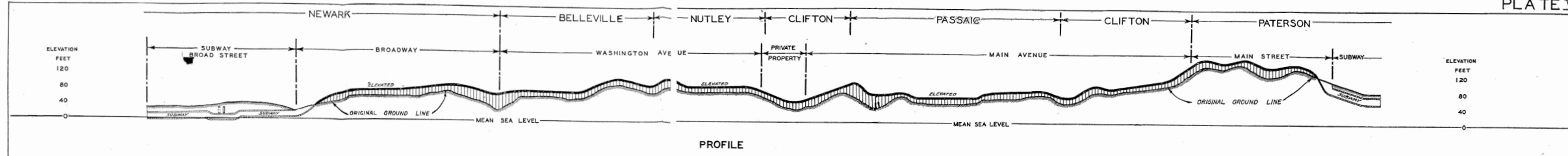




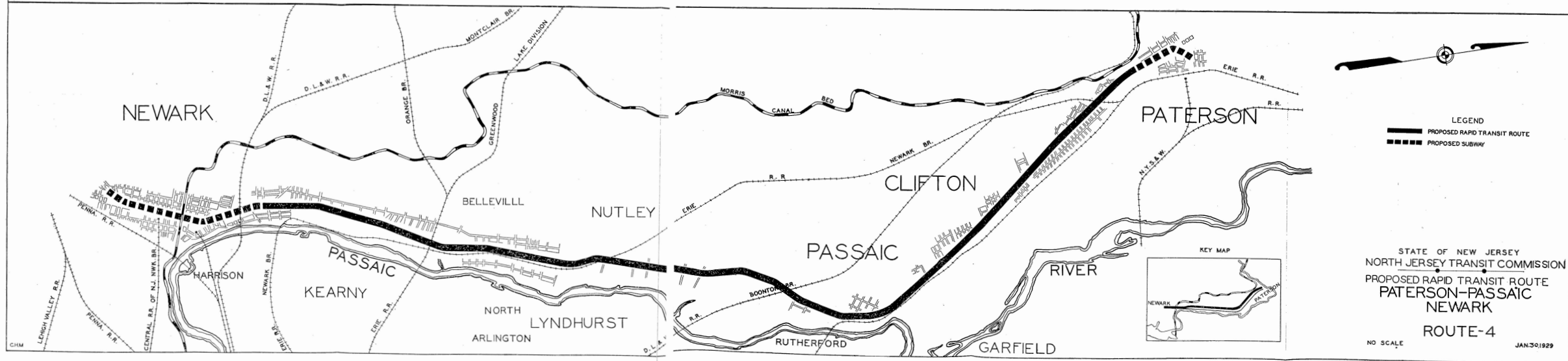


PROFILE





PROFILE



STATE OF NEW JERSEY
 NORTH JERSEY TRANSIT COMMISSION
 PROPOSED RAPID TRANSIT ROUTE
 PATERSON-PASSAIC
 NEWARK
 ROUTE-4
 NO SCALE
 JAN. 30, 1929

In order to straighten the line it would be necessary to deviate from the canal bed. If the line were straightened, only 5.2 miles, as compared with 11.4 miles if it were not straightened, would utilize the present canal right of way. The remainder of the route would necessarily have to be purchased as private right of way.

The disadvantage of curvature is at least fourfold; it increases the length of the run, it diminishes the speed, two factors adding to the time element, it causes greater wear upon the rolling stock adding to the expense of operation, and it is a decided element of discomfort to the rider.

Route 4 shown on plate V follows very closely and more or less parallels route No. 1, the principal difference between the two being that No. 4 is an elevated structure along the principal streets and No. 1 follows the Erie Railroad right of way.

Starting in Paterson as do routes 3A and 3B from the vicinity of the City Hall, No. 4 instead of swinging over to the canal bed continues as an elevated structure along the present trolley route on Main Street, Paterson and Passaic, and Washington Avenue in Newark and as in route 3A enters subway under Broad Street, Newark, just north of the Lackawanna station and continues under Broad Street to Lincoln Park, from which point it may be extended at a later date.

Broad Street Subway

The subway section through Broad Street, Newark, is planned in all these routes as a two track line for rapid transit purposes. However, provision is made for two additional tracks of sufficient size to accommodate the large Public Service Coordinated Transport Company's trolley cars should it be considered advisable to route the trolley cars on Broad Street through the subway. All estimates of cost of construction and operation for the rapid transit project are based upon a two track rapid transit line.

The necessity for the study of as many lines as the commission's engineers have tentatively laid out, may not at first appear. We believe, however, that the great variance among the lines here presented regarding such matters as cost of construction, cost of right of way, population to be served, anticipated patronage and potentialities of development, is sufficient reason for these numerous studies. Let us briefly consider some of these factors. Turning, for instance, to the underlying problem of costs, whether of construction or of right of way acquisition: the first may be approxi-

mated within reasonable limits of error by purely engineering methods; the second is necessarily more in the realm of uncertainty since acquisitions of property for such purposes frequently depend upon the whims of commissions and juries in condemnation proceedings, if private lands be taken. In those instances where existing rights of way of railroad companies are involved the question becomes one of negotiation and contract with the railroad company. Attempts at such negotiation by a body clad with the limited power of this commission, which is incapable of entering into contract relations, necessarily prove barren of result.

A second factor is that of anticipated patronage, and for this factor very insufficient data are at present available. The commission has endeavored to ascertain the gross amount of passenger traffic presently originating along the four different lines here submitted. Without the far more detailed analysis of the incidence and destination of this traffic the figures reported upon must be conjectural. On the other hand a thorough analysis of this traffic would involve the introduction and adaptation of the methods which the commission used in its traffic count of 1924. Owing to the large number of individual units, to the frequent brevity of the individual ride, to the relative inconvenience of the facility used, and to the complexity of the question of origin and destination, such a traffic count is far more difficult than the one already made. The commission has therefore been unable to enter into this important but costly undertaking.

The figures here submitted we sincerely believe to err, if at all, on the side of conservatism and to indicate a safe basis for computing operating revenue.

Closely connected with the problem of immediate traffic is the secondary one of probable development along the lines suggested should they actually be constructed. It is clear that assuming substantially the same running time between the termini of the lines the through traffic figures will be substantially the same. The type of intermediate territory varies largely and becomes an important factor in determining the ultimate choice. Thus route No. 1 using the Newark and Main Line branches of the Erie Railroad runs through a property already to a large extent developed and on account of its proximity to the Passaic River capable of future expansion along a considerable portion of the route only to the west. In marked contrast with this are the proposed Morris Canal routes, 3A and 3B, which after leaving the confines of Newark run through lands mainly suited for suburban development and now only sparsely laid out.

The proposed elevated route No. 4 might be considered as a mean between routes 1 and 3. In determining, then, which of the four should eventually be selected, regard must be had to conditions of present and anticipated development which can be best decided at such time as actual construction work is about to be undertaken. We here wish merely to stress the fact that in determining the potentiality of the line serious thought must be given to the question not only of present available traffic, but of the ultimate development of further traffic along the line, since upon the volume of traffic will very largely depend the size of the fare which in turn has a direct bearing in bringing about either a decrease in patronage or a constantly increasing one.

How greatly these questions of population to be served and of potential development affect the problem, a moment's consideration of the results of our studies, later presented in somewhat greater detail, will show. If we assume, in estimating population, those living within a mile of the proposed line as directly served and those within two miles as indirectly served we find as of 1928, the following figures:

POPULATION (1928 ESTIMATE)

	Route 1	Route 3A	Route 3B	Route 4
Directly served	392,800	321,600	339,200	384,000
Indirectly served	347,600	365,000	357,500	353,300
Total.....	740,400	686,600	696,700	737,300

Traffic

A study of the travel habits of this population, however, indicates the following astounding differences in anticipated utilization, according as one or the other of the four proposed lines is actually constructed:

ESTIMATED POTENTIAL TRAFFIC

	1928	1933	1938
Route 1	21,500,000	32,000,000	52,000,000
Route 3A	25,300,000	37,000,000	60,000,000
Route 3B	16,200,000	24,000,000	39,000,000
Route 4	39,000,000	58,000,000	94,000,000

This estimate of potential traffic on the proposed transit line is based upon present travel habits and is only a small percentage of the

total annual traffic now moving on trolleys and buses in the same territory. These percentages are as follows:

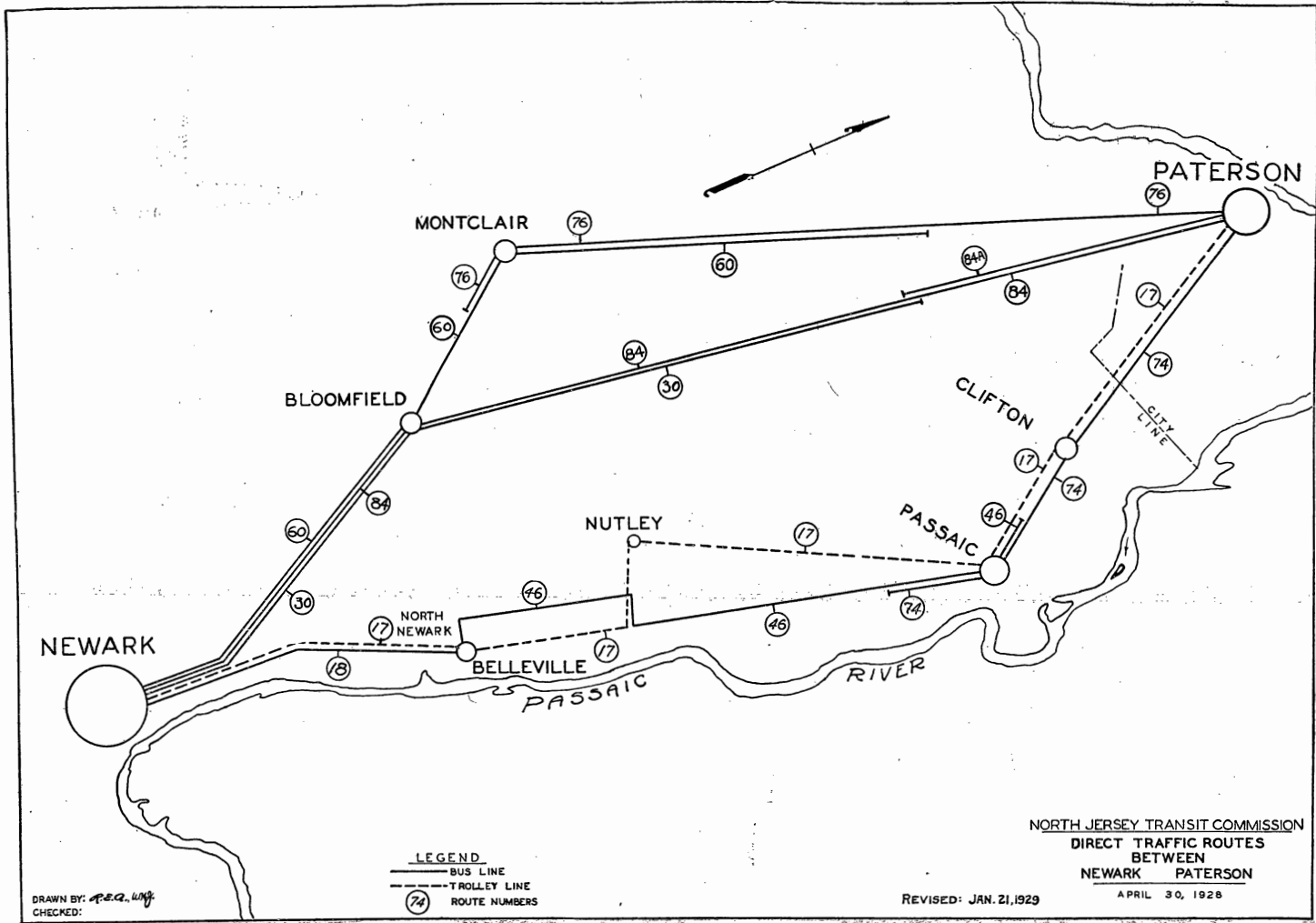
	Total Traffic Moving in Territory	Potential Traffic 1928	Relation of Potential to Total Traffic
Route 1	155,000,000	21,500,000	13.9
Route 3A	155,000,000	25,300,000	16.3
Route 3B	155,000,000	16,200,000	10.5
Route 4	155,000,000	39,000,000	25.2

In all the network of trolley and bus routes in this territory there are only two direct routes, by which it is possible to make the trip between Paterson and Newark without one or more transfers. One of these is a de luxe bus service, the other a trolley line. There are, however, three additional combinations of bus routes, making a total of five transportation lines, directly connecting the two centers.

Of these five existing routes, only two approximately parallel the proposed rapid transit routes 1 and 4. One is the direct trolley line shown as No. 17 on the accompanying sketch, plate VI, and the other line composed of three bus routes shown as Nos. 18, 46 and 74. Of the three remaining routes, two approximately parallel transit routes Nos. 3A and 3B, and are shown on plate VI as de luxe bus route No. 84 and combination bus routes Nos. 30 and 84A. The remaining route is the combination of bus routes Nos. 60 and 78 operating from Newark through Bloomfield, Montclair and Paterson. In 1928 the annual traffic moving within the territory to be served by the proposed rapid transit routes and now carried on these five major bus and trolley routes, was estimated to be 41,000,000. No traffic figures are available showing the number of passengers who now ride from Paterson or Passaic through to Newark or vice versa. It probably is a very small number.

In addition to these five routes there are a number (see plate VII) of shorter routes paralleling for some distance one or more of the proposed transit lines. Most of them are one and two fare zone lines handling local passengers originating in their own particular territory. During 1928 it is estimated that these lines carried a total of 114,000,000 passengers.

Of the total passengers (155,000,000) referred to above (41,000,000 on direct routes and 114,000,000 on the short lines), the buses and trolleys will doubtless continue to handle a large part. With the inauguration of a high speed electric service on one of the proposed transit routes it is estimated that from 16,200,000 to 39,000,000 passengers—depending upon which route is selected—



DRAWN BY: P.E.G. W.J.F.
 CHECKED:

LEGEND
 ——— BUS LINE
 - - - - TROLLEY LINE
 (74) ROUTE NUMBERS

REVISED: JAN. 21, 1929

NORTH JERSEY TRANSIT COMMISSION
 DIRECT TRAFFIC ROUTES
 BETWEEN
 NEWARK PATERSON

APRIL 30, 1928

PLATE VI



would be available as potential traffic were the route open to traffic today.

As it will certainly be no earlier than 1933 before any such a line can be placed in operation, assuming that the traffic continues to grow as in the past, these figures will be approximately 24,000,000 and 58,000,000 passengers respectively by that time. Accepting the rate of growth of passenger traffic in this territory as the criterion and leaving out of account any additional traffic which the transit line itself might generate in an additional five years (say 1938 or 1940), these figures will have grown to 39,000,000 and 94,000,000 passengers respectively.

Grade Crossing Elimination

To operate rapid transit trains successfully it is essential that all grade crossings be eliminated and that tracks be provided for the exclusive use of this class of service.

On route No. 1, which follows the main line of the Erie Railroad between Paterson and Passaic, two extra tracks for a rapid transit service are proposed. On the four track line thus created the two inside tracks would be utilized for rapid transit purposes.

Through Passaic the two track main line of the Erie Railroad, although occupying its own right of way, runs through what, in effect, is the center of Main Street and crosses all streets at grade. To eliminate these numerous crossings it will be necessary to elevate the present tracks and construct two additional inside tracks, making a four track elevated structure through the center of the city. This structure would be designed of reenforced concrete and given architectural treatment to bring it in harmony with other developments through the center of the city. The depression of the railroad tracks through the center of the city has also been given consideration, but too large an additional expense would be created thereby to justify the recommendation.

Between Passaic and Belleville the two rapid transit tracks will utilize a private right of way. Through this open country these tracks might readily occupy a central portion of a super-highway serving as an extension to State Highway No. 21, which now terminates at the Belleville Pike in Belleville. Here again grade crossings would be eliminated, not only for the rapid transit tracks, but for the super-highway as well.

On routes 3A and 3B which follow the bed of the Morris Canal between Paterson and Bloomfield, all crossings will be eliminated.

On route 3A following Bloomfield Avenue from Bloomfield the cost estimates are based on a single column elevated structure placed between the trolley tracks and serving to separate vehicular traffic.

Route 3B from Bloomfield follows the Morris Canal in conjunction with the canal trolley subway now being undertaken by the City of Newark. All plans proposed by the city also provide for elimination of grade crossings and inasmuch as the proposed rapid transit route follows the same course and same grade, all street crossings will be obviated.

Route 4 along Main Street between Paterson and Passaic and Washington Avenue through Belleville to Newark is an elevated structure throughout, a large portion being of the single column, solid deck type, so constructed as to reduce to a minimum the noise of train operation. Where the single column structure is used it is placed in the center of the street, separating the trolley tracks and tending to divide and give direction to vehicular traffic.

Cost of Construction

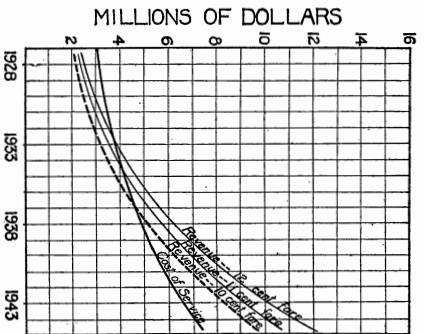
A statement of the estimates of the costs of construction, estimates of costs of real estate which must be acquired for right of way, as well as estimates of the costs of equipment for the routes described above is given in the accompanying table.

ESTIMATED COSTS				
	Route 1	Route 3A	Route 3B	Route 4
Construction	\$22,900,000	\$20,700,000	\$14,400,000	\$34,600,000
Real Estate.....	4,800,000	900,000	5,200,000	50,000
Sub Total.....	<u>\$27,700,000</u>	<u>\$21,600,000</u>	<u>\$19,600,000</u>	<u>\$34,650,000</u>
Equipment	5,400,000	5,800,000	4,400,000	7,900,000
Total.....	<u>\$33,100,000</u>	<u>\$27,400,000</u>	<u>\$24,000,000</u>	<u>\$42,550,000</u>
Cost of two additional tracks in Newark for trolley operation	\$10,900,000*	\$ 7,700,000	\$ 4,700,000†	\$ 7,700,000

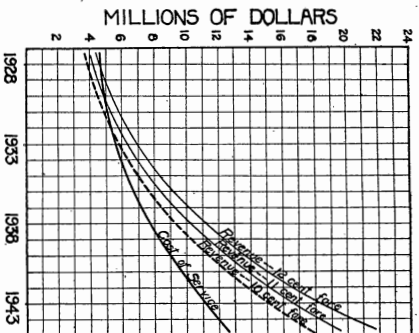
In all of the foregoing estimates, allowance has been made for overhead, interest during construction and the like. The construction item includes right of way with rails and stations but does not include electric equipment, signal and other operating devices, and the like,

* This represents the additional cost of a modified route 1 to provide for two additional tracks in Newark from Fourth Avenue to Lincoln Park.

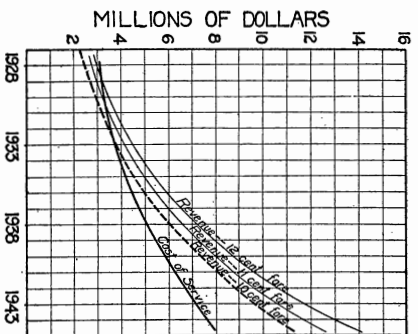
† Estimated cost by City of Newark of canal rapid transit exclusive of Pennsylvania Railroad station subway.



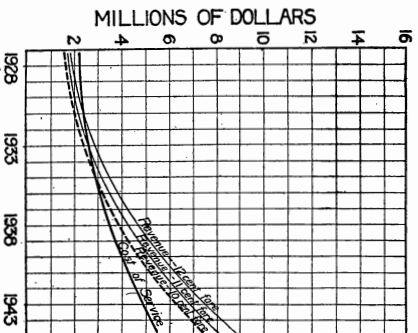
LINE 1



LINE 4



LINE 3A



LINE 3B

which, together with rolling stock are included in the general item "equipment."

The operation of gas electric cars on such a line was also investigated but in addition to questions of ventilation in the subway sections it was not found to offer economies sufficient to justify its recommendation as a method of operation.

Cost of Operation

Based upon the construction and equipment costs already given and assuming an annual traffic the first year of operation as has been indicated, the following table gives the estimated cost per passenger required to meet all fixed and operating charges.

COST PER PASSENGER

(Year 1933)

	Route 1	Route 3A	Route 3B	Route 4
Fixed Charges	6.0	4.6	5.6	4.6
Operating Expense	5.2	5.2	5.2	5.2
Taxes	0.4	0.3	0.4	0.2
Total.....	11.6	10.1	11.2	10.0

After the first five years of operation or by 1938 if traffic continues to grow as estimated above then the charges become

COST PER PASSENGER

(Year 1938)

	Route 1	Route 3A	Route 3B	Route 4
Fixed Charges	3.9	3.0	3.7	3.0
Operating Expense	5.2	5.2	5.2	5.1
Taxes	0.2	0.2	0.2	0.2
Total.....	9.3	8.4	9.1	8.3

While the cost to construct the several lines shows a spread of from \$19,000,000 to \$34,650,000 without equipment, or from \$24,000,000 to \$42,550,000 with equipment (routes 3B and 4), studies of anticipated traffic would indicate that an average charge of ten cents per person would, in 1933, cover the fixed charges and operating expenses on the more costly route 4, while 11.2 cents per passenger would be required were route 3B, the least costly of the four, actually to be constructed. Comparisons of anticipated revenues and operating expenses are shown graphically for all the routes on plate VIII.

It might thus be assumed that route 4, as serving a greater number at a lower per capita cost, is actually the less expensive line, despite the much greater capital outlay involved in its initial construction. While this conclusion would seem to be fortified by estimates of growth in patronage showing passenger costs in 1938 as 8.3 cents on route 4 and as 9.1 cents on route 3B, it must be remembered that these figures are based, first, on conditions of population and travel habit at present existing and secondly upon the assumption that the use will continue to increase in the future at the existing rate of increase. But when we consider that much of route 4 is through territory already well developed while much of route 3B is through undeveloped acreage, it may well be that this factor of increased use, attributable to the new line itself, will be the weightiest of all and so increase the patronage of the line as to make it the least expensive in passenger cost, instead of the second most expensive.

As is apparent from the analysis immediately preceding, the question of available traffic is of equal importance to, if not of greater importance than, the question of capital outlay. Certainly in the absence of traffic, no capital outlay would be justified; while when traffic is abundant outlays which seem staggering in amounts may wisely be made.

In submitting its estimates of the costs of constructing the several lines, the commission is under no illusions that it has finished its task with reference to them. Much more detailed studies will be required before a definite decision can be reached regarding which one of the several alternative routes should be selected for actual construction. A premature decision on this point—a decision arrived at and broadcast too far in advance of the creation of a body with power to build—might have untoward effects in stimulating speculation along the route selected. For this and other reasons, the commission has deemed it wise not to make a definite selection at this time.

CHAPTER II

REGIONAL PROBLEMS AND PAROCHIAL LAWS

Ever since the intensive studies of the legal phases of rapid transit construction which this commission conducted in 1926, it has been apparent to its members that the major obstacles in the way of rapid transit construction are neither physical nor financial, but that they arise out of the state of our laws. Strange to say, the chief difficulties lie not in the interstate aspects of the situation, involved as those are, but in our present statutory provisions governing inter-municipal and inter-county activities.

The situation is well summed up in the following paragraph quoted from the report submitted to your body at its session of 1927:

"A study of the portions of this report dealing with the physical and financial aspects of the transit situation shows that no type of agency now in existence, except that of a state authority, financed by general state tax or by state bond issue, similar to the existing Highway Commission, can bring to the problem powers adequate for its solution. And yet the problem, despite its magnitude and the large territory involved, is essentially a district problem, in which other portions of the state have naturally either no interest at all or, if we bear in mind the rapidly growing Camden metropolitan section, at best so slight an interest, as to make the proposal of a statewide authority, supported by the contribution of the whole state, whether in the form of direct tax or of bonds, one which must seem obnoxious to the voters of those parts and therefore, quite naturally and properly one which, except under unusual conditions, would scarcely receive the support of the senators and assemblymen from those counties."¹

Our studies from 1922 down to date prove that an effective need for interstate and intrastate rapid transit facilities exists; that there are no unusual physical obstacles in the way of construction; that the volume of traffic which may logically be expected to follow such construction will prove ample for the financial support of expenditures for both construction and operation; and that the attendant enhancements in land values along the proposed lines, will provide a supplementary source which may equitably be drawn on for the purpose of meeting a share of the construction costs. In short, the conditions which stand in the way of a prompt initiation of a transit project, whether interstate or intrastate, grow out of the fact that New Jersey, unlike her sister states—New York, Massachusetts, Pennsylvania, Maryland, Ohio, Illinois, Colorado and California, to mention only a few outstanding examples—has not hitherto developed an efficient,

¹ Report of the North Jersey Transit Commission to the Senate and General Assembly of the State of New Jersey, 1927, p. 124.

and at the same time equitable, means for handling problems which concern more than one municipality or county.

Previous Examples of Inadequate Regional Powers

The North Jersey Transit District, with its nine counties and 265 municipalities, is, however, merely one outstanding example of the complexities introduced by the present state of our laws. It is possible to cite a number of projects which have been carried out within the boundaries of that district which afford ample proof of the hampering effects of the existing laws.

In 1902, the legislature created a body with broad powers of financing for the purpose of correcting the intolerable conditions of pollution along the lower valley of the Passaic River. The courts declared the financial provisions of the act unconstitutional. An amendatory act was passed in 1907. Further delays arose because of litigation over the interstate problems involved in the plan for discharging the effluent into the waters of New York Bay. Those questions disposed of, fifteen of the twenty municipalities in the drainage area, in 1911, authorized the sewerage commission to proceed. In the following year, the work was begun, and a sewer smaller in capacity than that which had been designed to meet the needs in 1902 was finally placed in operation in 1924.

In 1906, the problems involved in the provision of a direct connection for vehicular traffic between New York and New Jersey resulted in the creation of commissions by the legislative bodies of both states with instructions to negotiate with one another and to submit the necessary physical and financial plans. The natural reluctance of the southern part of this state to provide funds even for the preliminary studies essential to a project which was looked on as a concern only of the northern region, resulted in delays until 1917, when the counties of Bergen, Essex and Hudson made the necessary appropriations for cooperation with the commission authorized to act for the State of New York. Because of the pure coincidence that a demand developed at about the same time in the southern part of the state for a bridge connection with Philadelphia, the state again assumed not only the burden of the preliminary studies of both projects, but also their direct financing. Thereafter, progress was rapid. Ground for the vehicular tunnels connecting New York City with the northern part of New Jersey was broken in 1920, and the tunnels were opened to traffic in 1927, twenty-one years after the first commissions were appointed for the purpose.

In 1907, the realization that problems of water supply were assuming a regional rather than a purely local character led to the creation by the legislature of a commission with state wide powers in that field. Here again the courts intervened to declare the financial provisions of the enabling legislation unconstitutional. After the lapse of nine years, the legislature authorized the creation of two commissions—one for the northern and another for the southern sections of the state—but limited the financial authority of both commissions to that which had been worked out for use in connection with the Passaic Valley Sewer. In other words the initiative and the power to finance rested solely with the municipalities concerned, and the commission in effect could act only as the agent of one or more municipalities. Because the need for action was urgent, and because the City of Newark was financially capable of financing a large project without aid from any other municipality, the North Jersey District Water Supply Commission came into being in 1916, originally as the agent solely of the City of Newark. Since that time, other cities have joined in the project and the first publicly owned regional water supply system in the state is well on the way toward completion, twenty-two years after the need was first recognized in the acts of the legislature.

These three examples are sufficient to illustrate the nature of the legal and financial problems which confront the North Jersey Transit Commission. The devices finally resorted to for meeting the costs of these projects, furthermore, seem to be quite inapplicable in the financing of rapid transit lines. It is certainly improbable that the State of New Jersey would issue its own bonds to meet the costs of constructing the tunnels necessary for the interstate connections as it did in the case of the vehicular tunnels, or that it would allow its credit to be used in connection with any part of such a line. No amount of effort on our part, on the other hand, has been able to devise a plan under which the other method of financing—that of contracting with the municipalities concerned—could be adapted for use in apportioning costs of construction. The quantity of water supplied and the volume of effluent removed provide objective bases of measurement for the allocation of costs of water supply and of sewerage. It is difficult if not impossible to establish a comparable basis for the apportionment of costs in transit projects. Furthermore, the obstinacy of a recalcitrant municipality, located in a key position along either an interstate or an intrastate unit in the comprehensive transit system, would be immeasurably more disrupting both to physical and financial plans than it proved to be even in the case of the Passaic

Valley Sewer. In short, the financial methods based on compromise which were worked out after decades of trial and error in the three types of projects just cited are still quite inadequate for the purpose of rapid transit finance.

Evidence of Regional Needs

The demands for regional projects of one kind or another have been so insistent that a number of undertakings have been carried out in spite of the clumsy instruments available. In some cases, the financing has been carried out by the state direct; in others, by the state acting in cooperation with the adjoining State of New York; in some cases by administrative arms of the state financed by contract with municipalities; in some cases by municipalities cooperating with one another without the intervention of a state body; and in some cases by the counties.

The following table, by no means comprehensive, indicates the nature and the volume of the projects affecting more than one municipality in the nine counties included in the North Jersey Transit District which have been completed, which are in process of construction, or which have been definitely recommended.

	Completed	In Progress	Recommended
Interstate bridges	\$18,000,000	\$ 76,000,000	\$15,000,000
Interstate tunnels	48,000,000		
Interstate parks	18,000,000		
State Highways—			
Ordinary	40,000,000		25,000,000
Holland Tunnel approaches.....		30,000,000	
Water Supply		26,500,000	46,000,000
Passaic Valley Sewer.....	21,200,000		
Joint Outlet Sewers.....	800,000	3,000,000	
County Park Systems—			
Essex	13,000,000	2,000,000	
Hudson	5,800,000		
Union	4,000,000		
Passaic		2,500,000	
Totals.....	\$168,800,000	\$140,000,000	\$86,000,000

This grand total of \$394,800,000 of a list which is admittedly incomplete will give a conservative idea of the magnitude and the variety of the regional problems which have arisen for solution in the nine counties of the North Jersey Transit District, the greater part of them within the past decade. In the case of the estimated expenditures for highways, for example, it would be possible to

increase the figures considerably without straining the truth, since the estimates compiled by the Bureau of Public Roads of the United States Department of Agriculture indicate that more than a quarter of a billion dollars has been expended on the state highway system and on its connecting county and township feeders by the state and local governments in New Jersey since 1921.

Nor can any thoughtful person hold for a moment that the above list represents the sum total of the regional expenditures which will be needed. Already, plans for additional vehicular tunnels to connect with New York City are being broached, with all the inevitable expenditures for approaches which that step will involve. New facilities for the disposal of domestic and industrial wastes are becoming increasingly necessary with every year that passes. In several sections of the nine northeastern counties, population is already reaching the limits of the developed and immediately available water supplies. The importance of the problem of meadows reclamation has already been recognized by the legislature in its creation of a commission to study the physical, financial and legal factors involved. In short, it is not unreasonable to assume that the expenditures within the next decade and a half for projects which are still to be initiated will far exceed those listed in the table above.

In the present state of case and statute law, and of administrative procedure and organization, there would seem to be only two alternatives open to the financing of regional projects of any nature. Under the first, the state at large assumes the burden of financing. This method is simple and efficient, but for all types of projects save those included in the state wide highway system, it is inequitable because it imposes burdens on sections of the state which receive no direct benefit from the expenditures. Under the second, the state assumes no part of the burden, the costs being apportioned by agreement among the municipalities which lie wholly or in part within the area to be served by the new improvements. To the extent that the boundaries of the local units of government affected conform with those of the section for whose benefit the work is undertaken, that method is a distinct advance toward a fair distribution of costs. On the other hand, unless one municipality within that area is in position to assume the leadership and the major part of the burden, as Newark happened to be in connection with the Wanaque water supply development, the method is unduly cumbersome, and may easily lead to loss of efficiency in physical and financial planning, if not to serious inequalities in the apportionment of costs.

This generalization is equally true whether it is limited to the problem of rapid transit financing alone, or whether it is applied to regional projects in general. The time is fast approaching, therefore, when the state can no longer escape the necessity for a critical examination of its existing law in the light of the regional character of the major problems which confront not only the northeastern section of the state, but also comparable regions in the southwestern section.

The Interrelations Between Regional Projects

In the foregoing analysis, we have dealt simply with the volume and the variety of the regional problems which confront the northeastern section of the state, and the inadequate methods provided in existing laws for their solution. An equally important part of the subject remains to be considered—the manner in which the needs for the several major types of regional improvements are intimately associated with one another.

In order to illustrate the manner in which adequate planning for rapid transit is inextricably bound up with a number of other regional problems, it is necessary to cite here only a few of the perplexing questions which have arisen in the course of our work.

The Hackensack Meadows

Consider for a moment the tidal marshes lying along the Hackensack River. During the three centuries which have elapsed since the first permanent white settlement was established on New York harbor, the population of the region has grown to almost ten millions. Except along their fringes, however, where reclamation has resulted as a by product of the dumping of industrial and domestic wastes, the meadows throughout the greater part of their area lie much as they did when the first white man allowed his astonished gaze to sweep over their shimmering expanse. Lying as they do in a broad belt in the very heart of New Jersey's sector of the metropolitan region, their twenty-six thousand acres distributed in hundreds of individual ownerships, in fourteen municipalities, and in two counties, the Hackensack Meadows have been a challenge to dreamers and an enigma to doers throughout their history.

Every transit line designed to provide either intrastate connection between the populous New Jersey centers which they separate, or interstate connections between the regions west of the Passaic

River and east of the Hudson, must cross them. In designing their proposed rapid transit lines, are the engineers of the commission to assume that the undeveloped areas will always remain undeveloped? Are they to assume that fringe development is to proceed at the same rate as in the past, or that economic factors will force an acceleration of that rate? Are they to assume that the dreams of centuries which have finally been crystallized into detailed plans by the labors of the Meadows Reclamation Commission, and of the Committee on Regional Plan will shortly develop into action?

The choice among these widely varying assumptions must profoundly affect the physical design of the proposed construction. The easy assumption is that the meadows will remain in their present state forever. On the basis of that premise, no allowance need be made in the plans for avoiding future grade crossings or of providing additional local stations as time passes. In that event, a comparatively simple and inexpensive structure will prove adequate for the maintenance of high speed schedules under any conditions of traffic density that may reasonably be anticipated. If, however, a continuance of fringe development is to be assumed, allowances must be made in the original design looking both to the avoidance of future complications due to grade crossings and to the provision of local stations without interfering with the essential high speed through schedules.

By what means of forecasting, on the other hand, short of resort to clairvoyance, shall the engineers estimate the revolutionary effects on design which would result if the third assumption should prove to be the valid one? Suppose that some such plan for comprehensive meadows reclamation as that evolved by the bodies cited above were to be adopted. The time required for its effectuation would be little if any longer than that required for the construction of the first units in the interstate rapid transit system. By a combination of relatively inexpensive filling and dredging, the otherwise incomparable accessibility to rail and water-borne freight facilities which the meadows now possess can be made available for business, industries, warehouses, and residences. At one stroke, the broad expanses which are now merely distances to be traversed would be converted into a new delivery section in the mass transportation of workers. From beyond the Passaic River on the west, and the Hudson River on the east, new streams of traffic would converge on the meadows to create new peaks of traffic density at points where no provisions had been made for them under the designs prepared in accordance with either

of the first two assumptions. In short, an error of judgment on the part of the designing engineers in the selection of the basic assumptions as to the future development of the meadow area would inevitably lead to expenditures either for unneeded rapid transit facilities within the meadows themselves, or for inadequate facilities on either side.

If the engineering phases of meadows reclamation themselves presented any elements of outstanding difficulty, our engineers might be warranted in eliminating the third assumption from their calculations. As a matter of fact, however, the technique and the processes required for the purely physical side of the improvement are simple, and—as has already been stated—relatively inexpensive. The obstacles which stand in the way of a comprehensive reclamation project in that area exist solely in the statutes. On a smaller scale, San Francisco, Los Angeles, Galveston and New Orleans—to mention only four examples—have developed a system of legal and administrative machinery adequate to the purpose. What they have proven to be legally and financially feasible on a small scale, North Jersey can do on a large scale. With the growing emphasis on the need for regional planning in the minds not only of the technical experts, but in those of the general public as well; and with the growing intensity of the economic pressure which is inexorably working for meadows reclamation, it is inevitable that steps will soon be taken to bring the existing laws into harmony with changed conditions.

The changes in those laws which will be required for meadows reclamation are almost identical in their provisions for regional administration and for financing with those which we believe to be essential to rapid transit development. This fact, coupled with the further fact which has just been emphasized—namely, that no adequate plan for rapid transit can be formulated unless it is closely coupled with the plan for meadow development—points logically to the conclusion that the planning, construction and administration of both major improvements be coordinated in the hands of one regional governing body.

That meadows reclamation will create new problems not only for the engineers who plan transit lines, but also for those concerned with water supply and with sewerage, is so obvious that it hardly needs to be stated here in order to bring it to the attention of the reader. Are those matters problems which can be handled by the municipalities involved acting singly? Hardly. On the contrary, they will require for their solution a careful consideration, not only

of intermunicipal and intercounty interests, but even of interstate interests. With respect to sewerage alone, the problem must ultimately rival in size and complexity that which required under existing laws twenty-two years for a partial solution in the Passaic Valley. A problem similar in scope will also arise in connection with water. Can the Wanaque system now under construction, the Jersey City system, the Newark system or either of the two privately owned regional systems which approach the meadows from the north, or all of them together, provide the amount of water necessary for domestic and industrial uses which will inevitably be demanded by any comprehensive development of the meadows area? Here again, meadows reclamation will bring in its train a related problem of the first magnitude.

Perhaps no clearer picture of the essential unity of those related problems can be given than was presented at a recent meeting of the Meadows Reclamation Commission at the City Hall in Newark. Representatives of the Board of Commerce and Navigation, of the Board of Conservation and Development, of the North Jersey District Water Supply Commission, of the North Jersey Transit Commission, of the Passaic Valley Sewerage Commission, of the Port of New York Authority, and of a number of individual municipalities directly concerned, were in attendance; as well as representatives of civic organizations such as the Committee on Regional Plan of New York and Its Environs, and Chambers of Commerce. The discussion indicated clearly that all of those present realized clearly the interdependence of their interests and activities.

It is not necessary, however, to base the case for the close relationship between rapid transit, water supply, sewage disposal and other related regional problems on the assumption that the meadows will be reclaimed. The meadows might lie fallow forever without affecting the validity of the basic premise that coordinated planning in regional activities is essential to the proper development of the nine northern counties.

Regional Problems in Bergen County

Let us take, for example, the portion of Bergen County which was selected for analysis in connection with our studies in the means of financing. In the prosecution of that study, which was described in detail in our 1927 report, we analyzed the factors affecting the present and probable future values of some two thousand individual parcels of property lying in thirty odd municipalities. In addition to the thir-

teen variables affecting the values of each separate parcel which we took into account, there were a number of other factors which we had to class with the imponderables so far as that immediate study was concerned.

Chief among the factors in this group which must have an important bearing on future developments are these: The street plans in the great majority of the municipalities studied were full of dead ends and bottlenecks. The water supply in a few of the towns considered was drawn from wells; in the greater number, the supply came from the mains of the Hackensack Water Company. There was no comprehensive sewage disposal system, although the need had become manifest.

The effects of increasing population in this section of the North Jersey Transit District under present conditions are and must continue to be somewhat unfortunate. A considerable number of the new subdivisions which came under our observation are not only increasing the pressure on the existing through highway system, but they are also creating new obstacles to the development of such a system because their own street layout does not conform to any master plan. The same factors which are increasing the demands on the existing water supply are also exerting pressure on the watersheds, and in the absence of unified control, must eventually bring about such conditions of pollution that more remote sources will have to be drawn on for an adequate supply of potable water. The piecemeal development of sewerage is tending to create distinct nuisances in certain areas, which will inevitably affect adversely the desirability even of those areas which are at present growing rapidly.

Any plan for a system of rapid transit must take into account estimates of future growth. If the other factors which limit that growth are effectively controlled, it is possible to make reasonably accurate forecasts of future expansion. If, on the other hand, those limiting factors are not controlled, the estimates become little more than guesses. Premature highway congestion, deterioration of water supply in quality or quantity, and the haphazard creation of nuisances due to inadequate sewerage, all of which may follow uncoordinated growth, can invalidate the most carefully made estimates. Whether the financial structure for rapid transit is to be based solely on fares, or whether it be designed to rest in part also on benefit assessments, the entire plan of financing may prove unsound unless all the factors essential to urban land utilization are considered together. Here again, the need for unified planning and control is obvious.

These statements are not to be interpreted as reflecting in any way either on the municipal officials in the area under discussion, or on the individual subdividers or other agencies concerned. In a number of instances, the localized plans of the political units and of the private developers were well conceived. In this, as in other lines of human endeavor, however, no amount of brilliant individual play can take the place of teamwork. Throughout the entire region, there is a need for an effective agency through which team work can be developed.

Regional Problems Along Morris Canal

In connection with the studies of the Newark-Paterson line, the results of which are summarized in Chapter I of this report, we again encountered imponderable factors of a serious nature in connection with the suggested canal route. For several miles of its course through Bloomfield and Clifton that route is flanked on one or both sides by undeveloped acreage. Although we have not conducted detailed investigations in those fields, we are inclined to believe that the section presents no unusual features as regards either sewerage or water supply. Existing trunk water mains and outfall sewers possibly could be made to serve the acreage that would be opened for development by the proposed line. The only new facilities of that character which would then be required immediately would be the necessary laterals. In short, the limitations on future growth imposed by the existing sewer and water systems are common to the municipalities in that portion of the transit district as a whole, and their expansion to meet increased demands would not be localized within the boundaries of the present undeveloped areas. So far as those two factors alone are concerned, our engineers therefore would be warranted in assuming that the raw lands there can be utilized in an intensive manner for urban purposes.

Unfortunately, those raw lands are held in a number of separate ownerships which are irregular in shape and size. That fact, coupled with the broken topography of the section, makes it quite impossible to predict the street plan which, under existing conditions, will grow up to serve the tracts now in acreage. The extent to which the eventual plan provides easy and direct access to the stations on the suggested transit line must affect profoundly the area and the population which that line can be made to serve. The essential here to the adequate planning for a transit line is the development of a master street plan, and of subdivision control.

We believe that these instances indicate clearly two things with reference to intercounty and intermunicipal problems: the fact that planning for transit, highways, sewers, water supply and meadows reclamation must of necessity be coordinated if serious errors and the consequent waste of public funds are to be avoided; and that the legal obstacles which have in the past hampered and delayed regional water supply and sewerage projects are identical with those which now stand in the way of meadows reclamation and transit development.

The Complexities of the Interstate Situation

Up to this point, we have stressed the intermunicipal and intercounty aspects of some of the major regional problems which today confront northeastern New Jersey. We shall now turn our attention to the interstate phases of three of those problems—sewerage, water supply and transit.

If proof were necessary of the statement that the problems of sewerage and water supply in northeastern New Jersey have interstate ramifications of a far reaching character, it would be necessary only to turn to legislative acts, to reports by commissions and to court records. Take for example the New York Bay Pollution Commission, an official body which labored unsuccessfully from 1903 to 1906 to bring about concerted action between the states of New York and New Jersey for the creation of an interstate sewer compact. Take the extended litigation between those states which arose in 1908 on the plans for discharging the sewage from the Passaic Valley into the waters of New York harbor, and which led finally to an inconclusive compromise under which the Passaic Valley sewer now operates. Consider also the more recent, but still unsuccessful, efforts to formulate interstate compacts with reference to future water supply.

The questions which led to the extended negotiations or the long drawn out litigation in those fields are still unanswered. Furthermore, they are becoming increasingly acute.

With reference to transit, the official records do not yet bristle with legislation and court decisions. Our own experience, however, in the course of our negotiations affords ample evidence of the complexities involved in the interstate situation. When the North Jersey Transit Commission was created, four bodies existed in New York City directly concerned with rapid transit: the Board of Estimate and Apportionment, which is the chief governing body of that city; the

New York State Transit Commission, which subject to certain powers vested in the Board of Estimate and Apportionment, had broad powers to supervise that city's transit system, and to plan and construct new extensions; and the two operating companies, which, under contract with the city, actually provided the rapid transit service. Subsequently, the number of transit agencies was increased to five, when the powers to plan and construct new lines which had formerly been exercised by the Transit Commission, were vested in a new agency—the Board of Transportation. No one of these bodies can give a final answer on any point affecting interstate transit lines without obtaining the consent of one or more of the others.

The officials with whom we conferred seemed to be in accord with one another on only three points raised by our proposals. There was substantial agreement among them that all of the present stub ends on the existing north and south lines in Manhattan would soon be required for extensions into the outlying boroughs to the north and east; that the limited number of available north and south streets in Manhattan which had not yet been used for subway purposes would eventually be needed for their own lines; and that the extension to New Jersey of the existing western stub ends on their east and west lines might result in subjecting their entire rate structure for rapid transit within the city to regulation by the Interstate Commerce Commission. We do not consider that these preliminary answers to our questions are in any way final, and we are confident that a feasible solution of the physical connection with Manhattan Island can be worked out. The difficulties which have stood in the way of formulating a definite plan seem to arise in part out of our own limited powers to negotiate, unsupported by any supplementary powers to enter into contracts; in part also out of the wide differences of opinion among New York City's several overlapping transit agencies on matters of purely local concern. The causes of those difficulties can all be eliminated, or are already in process of being eliminated, as will be pointed out below.

A further, and quite unanticipated complication arose, when Westchester County also created an independent commission to devise means for obtaining access to New York City through its own transit lines. That commission, in its efforts to avoid the necessity of stub end terminal operation, proposed the extension of its lines into New Jersey, the purpose of this recommendation being the laudable one of providing peak loads in both directions in the expensive sections of the subway through the heart of Manhattan Island. The distribution

of the terminals of the commuting railways along the Hudson River water front opposite Manhattan, had made it possible for our engineers to provide in their plans for peaks in both directions by means of the proposed interstate loop, without resort to extensions into Westchester County. The injection of the Westchester proposals into the situation served, however, to increase still further the already overwhelming difficulties involved in our negotiations with the overlapping agencies in New York City. Manifestly, when the region north of New York City which also desired access to Manhattan Island, suggested physical connections with our lines, the field within which negotiations on our part were necessary was extended.

Factors which are Tending to Simplify the Interstate Situation

Since the creation of the North Jersey Transit Commission, three movements have been initiated which are tending to simplify the interstate situation. The first of these is the formation of the Suburban Transit Engineering Board of the Metropolitan District, which came into being as a result of the joint efforts of this commission and of the Port of New York Authority. The following public bodies and private agencies are represented on it: The North Jersey Transit Commission; the Port of New York Authority; the Board of Transportation of New York City; the boards of supervisors of Nassau, Suffolk and Westchester Counties in New York; and the trunk line carriers of Long Island, Westchester County and North Jersey. The board is studying, among other things, the common problems created by the needs of the three outlying sectors of the New York Metropolitan District for direct rapid transit connection with Manhattan Island. The extent to which the North Jersey Transit Commission has contributed its funds to the support of the board's activities is indicated by the financial statement which appears in the appendix to this report.

A second ameliorating factor has been introduced as the result of the success of two interstate agencies in the construction of bridges and tunnels connecting the two states. It is obvious that those bridges and tunnels alone would have been quite useless, if other governmental agencies on both sides had not constructed the necessary approaches. Taking the Holland Tunnels as an example, the City of New York provided the necessary avenues of access at the eastern portals, defraying the costs of extending or widening Canal Street, Sixth Avenue and Church Street in part by special assessments, in part by taxation on the city at large. In New Jersey, on the other

hand, the state government relieved the municipalities of all responsibility for providing access to the western portals, and assumed the entire burden of constructing the approaches out of its own funds. If, now, those tunnels, together with the approaches in New York City, and from Jersey City to Elizabeth in this state, had all been conceived of as one project to be financed by the same agency and in the same manner throughout, the complications would have been enormously increased.

A rapid transit line is merely a highly specialized form of public highway. A highway of this character, designed to connect New Jersey with the lower part of Manhattan Island, like any other highway, would of necessity consist of three parts—a tunnel under the river, and the approaches to the tunnel on either side. Assuming public ownership, as in the case of the Holland Tunnels and the connecting highways, can not the cost of financing be broken up into three parts; the tunnel proper to be constructed by an interstate agency financed in part by cash advances from the governmental units concerned on either side the river, in part by bonds issued against the earnings of the tunnel; the connecting lines on either side to be constructed at the expense of the governmental units on each side of the river?

There was necessity for coordinated planning before the site and the design of the Holland Tunnels were selected. There would be even greater necessity for coordinated planning in the case of rapid transit lines. Fortunately, a body adequate to those needs in New York City, and for cooperation with similar bodies in other municipalities and in other states, is now being proposed. This constitutes the third factor which must play a large part in the final solution of the problem.

A carefully drawn measure which provides for the creation of a planning commission with broad powers not only in the formulation, but also in the preservation, of a master plan to guide the future growth of New York City, has been laid before the Board of Estimate and Apportionment. All of the essential elements in urban land utilization—among them street plan, water supply, sewerage and sewage disposal, and rapid transit—are eventually to be drawn within the scope of the master plan. Furthermore—and this matter is of especial interest to northern New Jersey—the proposed planning commission is to be empowered to negotiate with any and all governmental units in the New York metropolitan region, to the end that it may develop its own plan as logical parts of a larger regional plan.

It is true that no legislative action had been taken on this measure at the time this report was prepared. On the other hand, the bill was drafted by an attorney retained by the city government for the purpose; its provisions were drafted with full knowledge not only of the manifest need for coordinated planning, but also of the comparable statutes already in force elsewhere in the state of New York; and finally, it has the whole hearted support of a large number of influential civic associations. It is a reasonable assumption, therefore, that the New York City Planning Commission, clothed with broad powers of control over new developments within that city, and charged with the duty to cooperate with neighboring sections of the metropolitan area, is destined soon to come into being.

It is evident from the foregoing pages that a number of the pieces in the intricate picture puzzle presented by the New York Metropolitan Area are beginning to fall into place. Representatives of all the outlying sectors which have common interests in obtaining rapid transit access to Manhattan Island have been brought together under official auspices into one body—the Suburban Transit Engineering Board—which is busily engaged in formulating plans for a joint delivery system in New York City for all suburban lines. By the time those plans are ready for submission, that board, beyond any reasonable doubt, will find one single body—the New York City Planning Commission—authorized to negotiate with it in behalf of New York City, in place of the five separate overlapping agencies with whom we have had to deal in the past. New York City has ample means to finance its part of such a system, and it has the same interest in financing it which has led it in the past to open new streets, to widen old streets, and to plan elevated highways for the accommodation of the immense volume of regional and interstate vehicular traffic which converges on it. Finally, the Port of New York Authority has demonstrated its capacity to finance the necessary interstate connections by the methods it has developed for use in connection with its four vehicular bridges. That part of the picture puzzle which extends from the western shores of the Hudson River to the eastern limits of the metropolitan area is beginning to take on a semblance of order. The only major part which still remains in utter confusion is the jumble created by the nine counties and 260-odd municipalities in the North Jersey Transit District. Before the puzzle can be solved completely, one single body with power to plan, contract and finance in matters of regional concern must be created in the metropolitan area of northern New Jersey. As we view the

situation, the march of events has definitely shifted the emphasis from the interstate aspects of the problem to the purely intrastate phases involved in regional organization in New Jersey.

As long as the New Jersey sector of the New York Metropolitan Area is broken up into an uncoordinated mass of counties and municipalities, it is, and must continue to be, at a disadvantage in dealing with New York City in matters of regional concern. As soon, however, as the three millions of population residing in that area unite for regional purposes only into a metropolitan district, backed by their billions of taxable resources, that disadvantage will disappear. When that time comes, the legally constituted representatives of the New Jersey region will sit down as equals with those of New York City in all negotiations concerning regional matters in the interstate field.

CHAPTER III

A NORTH JERSEY METROPOLITAN DISTRICT

In the preceding chapter, we analyzed first the several costs in time, money, efficiency and equity which are inherent in the existing legal machinery under which nearly all projects affecting more than one municipality or county in northeastern New Jersey have hitherto been carried out. Next, we took up the facts which point inescapably to the conclusions that the legal remedies which are essential to the adequate administration of rapid transit are equally essential for other major regional projects, such as sewerage, water supply and meadows reclamation; and that the preparation of well grounded physical plans for any one of the four types of major projects cited requires effective coordination with all of the others. These facts in conjunction have led us to the further conclusion that the interests of northeastern New Jersey require the creation of a metropolitan district which shall have financial autonomy and ample authority to construct and manage all projects which are purely regional in their nature. When finally we approached the problem from the standpoint of the interstate phases involved, and analyzed the steps toward coordinated regional organization which have been taken in other parts of the larger interstate metropolitan area of which northeastern New Jersey is such an important part, the facts again pointed to the need for a definite regional body in northeastern New Jersey with power to negotiate and contract on regional matters of interstate concern.

It is therefore with a sense of pleasure that the North Jersey Transit Commission learns of the introduction into the current legislature of the state of a joint resolution for the appointment of a commission to study and recommend the methods for district organization. Such action by the legislature is in a large way anticipatory of the recommendations which this commission had already determined to make as a result of its protracted studies in its own field. We have no desire to encroach on the subject assigned to the new commission. In view of the fact, however, that our own studies have been supported out of appropriations made by your body, we should consider ourselves remiss in the discharge of our obligations if we did not present herein at least the major outlines of the work we have done in the specific field of district organization for rapid transit, as well as in the broader sphere of district organization as a whole, of which the narrower field assigned to us is an integral part.

Boundary of Proposed District

With reference to the area to be included in the proposed district, there are good grounds for the argument that the boundaries of the existing North Jersey Transit District, which include all of the counties of Essex, Hudson, Passaic, Union, Bergen, Middlesex, Monmouth, Morris and Somerset, should form the boundaries of the proposed metropolitan district. The work of this commission in connection with its traffic census of 1924, the studies of the Committee on Regional Plan of New York City and Its Environs, and the investigations carried on by the committee which set up the boundaries of the New York metropolitan area for the Bureau of the Census of the Federal Government, all prove conclusively that the web of economic forces which binds this area into one homogeneous regional unit extends out into all of the counties named.

On the other hand, the statistics with a bearing on the matter have been collected largely under a plan in which the counties were used as units. There can be no doubt that there are within the outlying counties certain townships which are today, and which may continue for some time to be, distinctly outside the zone of influence of the metropolitan forces which have brought the region into being. Whether or not the interests of those marginal townships, as well as of the region as whole, can best be served by their inclusion in, or by their exclusion from, the proposed metropolitan district, can only be determined by a more detailed study of the specific problems confronting those townships than we have had an opportunity to make. In conducting such a study, however, care should be taken lest the narrowing of the district boundaries should lead to the exclusion of units of local government which will benefit directly as a result of regional activities, and which should therefore in all justice be included.

There is already in existence a metropolitan district—that of the Port of New York Authority—which includes all or part of each of the nine counties included in the North Jersey Transit District. Unfortunately for the purposes of a metropolitan district such as that which we have in mind, that district is bounded by straight lines connecting points of known latitude and longitude. If, however, those straight line boundaries were modified so as to include within their limits every unit of local government other than a county which is included in whole or in part in the New Jersey sector of the present Port of New York District, the resultant figure would include the smallest area which should be considered in the creation of the new

metropolitan district. Should valid reasons be discovered for excluding some of the marginal townships which are included in the existing North Jersey Transit District, then the best possible location for the boundaries would no doubt be found to follow along the boundaries of existing municipal units somewhere between the existing nine county boundaries and the extended Port District boundaries just outlined.

District Organization

In our search for a form of district organization suitable to the needs of northeastern New Jersey, we have examined the governmental forms devised to meet similar needs in other sections of the country. The report submitted to your body in 1927 analyzed at some length certain of those governmental forms, and drew some definite conclusions with reference to them. We feel that it will not be amiss at this point, however, to summarize briefly the characteristics of some of the forms discussed at that time, and of certain others which we had already dismissed from consideration when that report was prepared. Our purpose is simply to give a birdseye view of the major alternatives from which other sections of the country have made their choice when confronted by analogous problems.

Many of the early attempts in this country to set up governmental units adequate to meet the needs of economic areas which had expanded beyond the boundaries of the central municipality were based on consolidation. Within reasonable limits, that method is both effective and desirable. When applied to extensive economic regions, however—regions composed of a large number of independent municipal units with widely diversified needs and standards of administration—it results in unwieldy and inelastic bodies which succeed in solving certain major problems only at the expense of raising up a new host of difficulties which they are not equipped to meet. There can be no doubt that the remedy of consolidation, if applied throughout a district so extended, and so diverse in its local problems, as northeastern New Jersey is, would be worse than the disease it was designed to cure.

Another form of regional organization which avoids the evils of over extended consolidation has been applied to the solution of the common problems which affect the City of Boston and a number of the other municipalities in that vicinity. In that case, metropolitan district commissions have been set up as administrative arms of the state. The operations of those commissions in the provision of

regional water supply, sewerage, parks and parkways—and to a more limited extent, rapid transit—are financed by the issue of bonds authorized by the state legislature, and supported by the full faith and credit of the state. The sums in excess of the revenues of the districts which are required for the retirement of the bonds and the interest thereon, and for the expenses of administering the districts, are levied in the form of taxes on the districts themselves. The plan has worked efficiently. On the other hand, it places in the hands of the state legislature the control over certain matters which are primarily of local concern. Furthermore, the fundamental differences between the constitution of New Jersey and that of Massachusetts would make the adoption of the plan in this state impossible without constitutional amendment.

In a number of states, regional bodies with financial autonomy have been created for the purpose of administering a single regional function without regard to municipal or county lines. Flood control, sewerage, water supply and park systems have been the most common purposes for which agencies of this type have been established, but districts for the provision of transit facilities are not unknown. In a few instances, closely related matters, such as water supply, sewerage and flood control, have been assigned to one single commission. Whether those commissions are elective or appointive, they are usually authorized to issue bonds on the faith and credit of the district, and to levy taxes or assessments for the support and retirement of those bonds. When the districts are so extensive as to include a number of municipalities, or to cross county lines, their taxes and assessments are usually made collectible through the same agencies which collect taxes and assessments for the local government within the district. Regional bodies of this type have proven their value in the solution of major problems in a number of states.

During the past two decades, a great deal of work has been done in this country looking to the reorganization and simplification of state and municipal governments. The purposes, among others, have been to reduce to one the number of governmental agencies which are concerned with any given function, or with closely related functions; to eliminate all overlapping authority; to establish definite lines of responsibility for every task; and to set up an administrative mechanism which will permit of coordinated effort and cooperation with a minimum of friction. That tendency has recently manifested itself also in the proposals for regional governing bodies.

One example of this newer type of regional government whose

development this commission has watched closely is that which is now in process of creation in the area of which Pittsburgh, Pennsylvania, is the center. That section is confronted by problems of a regional nature including water supply, sewerage, through highways, parks, rapid transit, and flood control. Instead of setting up a separate agency for each of these purposes, the present plan calls for a single agency which will handle all such matters as concern directly two or more of the 120-odd municipalities which are included within the district boundaries. In all matters of purely local concern, however, all of the existing local units will continue under their present names and forms of government, and with their present boundaries and powers.

Because the boundaries of the region are coterminous with those of Allegheny County in which the constituent municipalities are located, the new regional government is to exercise the functions of the present county government as well as the regional functions which are to be delegated to it by the new charter. With the exception of the control over county functions, we believe that the Pittsburgh plan of regional government is the one which is most readily adaptable to the solution of the problem which confronts northeastern New Jersey.

It would be superfluous to repeat in detail at this point all of the factors which have been considered in arriving at the conclusion that a regional governing body, vested with financial autonomy, should be created by act of the legislature. Those matters were discussed at length in our report submitted during the legislative session of 1927.¹ Our studies at that time were made with reference simply to a regional body for purposes of rapid transit alone. The analyses and conclusions apply with equal force, however, to the more comprehensive metropolitan body which is here under discussion. The essential characteristics of such a governmental agency, in order to bring it within the principles established by the constitution of the state, as interpreted in the decisions handed down by our courts thereunder, would seem to be these: that the boundaries of the district should be coterminous with the outer boundaries of the taxing districts included within it; and that the legislative governing body of the district should be elected by the voters of the district.

District Powers

In the delegation of powers to the proposed metropolitan district, the most scrupulous care should be exercised in order to avoid

¹ Report of the North Jersey Transit Commission to the Senate and General Assembly of the State of New Jersey, 1927; p. 124 ff.

encroachments on the powers of those municipalities and counties which are to be included in it. The sole purpose in the establishment of such a district should be the creation of a body capable of handling those matters which no single municipality or county within the district can handle on its own account. The functions which have already been abundantly stressed in the foregoing pages—regional water supply and sewerage, intermunicipal and intercounty meadows reclamation, and intrastate and interstate rapid transit—are typical examples.

Whether or not the metropolitan district government should be given powers at least of an advisory nature over major street and boulevard plans, land platting and major park systems is a question which deserves close study. The State Highway Commission has done much in the past and will undoubtedly do more in the future to provide highways suitable for the dense streams of traffic which originate and terminate outside the boundaries of the proposed district. That is, and must continue to be, a state function, administered and financed direct by the state government itself. Between super highways of that type on the one hand and the municipal and county highways on the other, there may exist a need for an intra-regional system. Under conditions of perfect cooperation, such a system could no doubt be created simply by bringing the plans of the several counties and municipalities into harmony with one another. However, since voluntary cooperation sometimes breaks down even with the best of intentions among all concerned, there are good grounds for the belief that the metropolitan government should be invested at least with limited powers over subdivision control, and analogous matters in so far as a major thoroughfare plan would be affected thereby.

A grant of powers to do certain things is, of course, useless unless that grant includes the power to finance the things to be done. In other words, the proposed metropolitan district will be helpless to carry out and administer regional projects of any kind unless it is clothed with financial autonomy. It must have the right to issue bonds, to levy taxes and special assessments, and to establish rates for the use of its utilities.

Regional Bonds

The question of regional bonds is a delicate one, largely because of certain provisions in the New York Banking Law which affect the saleability of New Jersey's county and municipal bonds. A detailed

study of this phase of the problem was included in our report submitted in 1927.² That study worked out the amount of borrowing power which could be allocated to the district without conflicting with the existing laws in New Jersey which govern municipal and county indebtedness, and without affecting the credit of the counties and municipalities within the district under the provisions of the New York law. Since that time, the New York law has been substantially amended, and a new study will be necessary before the extent of the borrowing power which can be made available for district purposes can be ascertained.

Leaving this specific point aside, there are however certain general principles which are already well established in the laws of the state relative to county and municipal indebtedness and which should be made applicable to the bonds of the district. All bonds issued by the district, whether they are to be retired out of general taxes, special assessments or utility earnings, should be supported by the full faith and credit of the district as a whole; they should be issued only in serial form; and their term should be rigidly limited. Temporary improvement notes or bonds similar to those now used by counties and cities should be permitted subject to the same safeguards which the existing laws now provide in the case of the units of local government.

Regional Taxes

In the matter of taxes, similarly, the general principles already applied by existing laws to municipalities, should be extended also to the proposed metropolitan district. The district governing body should have the right to levy taxes for its expenses of maintenance and operation after the adoption of a budget; it should have the right to determine the proportions in which debt charges were to be supported by general taxes, special assessments and utility earnings; it should be compelled to make provision in its general tax levies for all deficiencies in the amounts available for debt charges which might arise because of failure to collect any anticipated revenues from utility earnings or special assessments. The tax levies should be extended on the same rolls, and by the same authorities who now extend other general property taxes. The taxes should be collected on the same bills and at the same time as other taxes, and the full amounts of the levies should be paid over by the local governments for the use of the

² Ibid; pp. 47-50 and pp. 248-254.

district on the same day and in the same manner as state and county taxes are so paid over.

Special Taxing Districts

In a district so extended and so varied in its needs as the proposed metropolitan district, it is inevitable that projects which are of primary necessity in one part of the region will be of absolutely no value to another. For this reason, it would be highly desirable to include among the powers of the district that of setting up special districts within which the burdens for special projects would be localized. The Boston metropolitan districts above referred to, and the sanitary districts in Westchester County are special districts of that type, their boundaries being established with an eye on economic considerations, and without regard to the boundaries of any existing political units of local government. The extension and collection of the taxes levied on these special districts by the officials of the permanent taxing districts which are included in whole or in part within them has created no unusual difficulties of any character. Whether or not districts of that type can be set up in this state, after due notice and hearing, is, perhaps, a debatable question. The advantages of flexibility and of fairness in the distribution of financial burdens which the plan offers, and the general satisfaction which has followed its use in other states, entitle it to serious consideration if the legislation for the proposed metropolitan district is drawn.

Because of the legal obstacles which may stand in the way of including this among the powers to be conferred on the regional governing body, and because also of the difficulties which may arise in attempting to use the ordinary methods of levying special assessments in connection with major improvements so extended in scope as those which would be carried out by that body, this commission has been much interested in a type of levy which has come to be known as a "special assessment tax". In one form or another it has been used and sustained by the courts in several states, but it seems to have reached its highest degree of development in California's Acquisition and Improvement Act of 1925. That law provides that the costs of an improvement may be met in whole or in part by the issuance of bonds for a term of years not to exceed thirty; and that the annual requirements for the retirement of, and the interest on, those bonds shall be met "by the levy of special assessment taxes upon the lands within the assessment district, in accordance with the provisions of this act, according to the assessed value of said lands, exclusive of

the improvements thereon". It further provides that "if, in the judgment of the legislative body conducting the proceeding, varying benefits to be derived by the different parcels of land lying within the assessment district so require, the said district may be divided into zones according to benefits. Said district may be divided into as many zones—up to the total number of parcels of land in the district—as may be deemed necessary, and each zone shall be composed of and include all the lands within the district which will be benefited in like measure. Said legislative body shall also determine the percentage of the sum to be raised each year by the levy and collection of said special assessment taxes in said district for the payments on the principal and interest of the bonds, which will be raised from the lands in each zone." Ample provision is also made for public hearings, at which all persons who object to the improvement itself, to the extent of the assessment district, to the zones (if any) into which said district is to be divided, or to the percentages to be raised from each of said zones, or to any or all of the foregoing, may appear and be heard.³

Special Assessments

The difficulties of predicting accurately in advance the amount of benefit which will accrue to any given parcel of land as a result of the construction and operation of a rapid transit line, for example, is amply illustrated by the studies conducted by this commission during 1926 relative to the changes in land values in Jersey City which followed the construction of the Hudson and Manhattan Railroad. These studies were reported in some detail in our report of 1927.⁴ That astounding enhancements in land values, attributable primarily to the construction of that line, did occur, the evidence there submitted proves clearly. On the other hand, it is doubtful whether any man could have been found in 1910 who could have foreseen even with approximate accuracy the amazing changes which have occurred. If, on the other hand, that project had been a public one to be financed by special assessments, and if a man had been found with sufficient prevision in 1910 to prepare an accurate roll in proportion to the benefits which have since followed as a result of that construction, it is doubtful whether the roll could have been sustained at that time. The largest of those enhancements in land value did not

³ California Statutes 1925, p. 849; amended statutes 1927, chaps. 732, 858, 870.

⁴ Report of the North Jersey Transit Commission to the Senate and General Assembly of the State of New Jersey, 1927, pp. 81-89.

begin to show themselves clearly either to the land owners themselves or to the outside speculators until several years had elapsed, and the economic forces set in motion by that rapid transit line have not yet, after the lapse of seventeen years, ceased to create further enhancements.

Other facts which militate against the successful use of the usual type of special assessment procedure were developed also by the study of land values in Bergen County with reference to transportation lines.⁵ The influence of a transportation line on the value of the lands in the area served by it, will be governed not alone by the proximity of the stations to the lands in question, but by a large number of independent variables. The effect of the latter may be to cause the actual enhancements which could not have occurred without the construction of the transportation line in question to distribute themselves in a manner varying widely from any that could have been predicted in advance.

Under the "special assessment tax" above described the necessity for attempting to estimate in advance all the probable enhancements throughout an extended district is avoided. Throughout the life of the improvement bonds, actual enhancements in land values, as soon as they make their appearance on the successive annual assessment rolls prepared for the levy of general taxes, will result immediately in increasing the levies on those properties which have enhanced in value at a rate in excess of the average for the benefit district as a whole. Because the aggregate amount to be levied against such a district as a whole is fixed in advance, increased levies against the properties which have achieved a substantial enhancement in value must be accompanied by corresponding decreases in the levies on those which have been enhanced less than the average. The net result of the plan is to adjust the successive annual levies throughout the life of the improvement bonds as nearly as may be in proportion to the tangible benefits which have been conferred by the improvement, up to the time when each such levy is to be made.

The special assessment procedure outlined in the existing Act Concerning Municipalities,⁶ is a highly useful one, and we believe it should be made available for use by the metropolitan district in connection with its major improvements. For the reasons just outlined, however, provisions for the use of the "special assessment tax" should also be included in the grant of powers. The district governing body

⁵ Ibid, pp. 89-109 and 145-167.

⁶ N. J. P. L. 1917, Chap. 152, as amended.

should have the right in each case to exercise its discretion in choosing the method which it considers best adapted to the purpose of apportioning the assessments as nearly as may be in proportion to benefits. We believe, furthermore, that the special assessment tax districts could be used as effective substitutes for the special taxing districts whose desirability was stressed above; and that the doubt which has been cast on the constitutionality of the latter could in no way be construed as applying to special assessment districts created for the purpose of making assessments in proportion to benefits.

Powers to Negotiate and Contract

The nature of many of the functions which would be delegated to the proposed metropolitan district governing body is such that they are closely interrelated with the functions of municipalities and counties within the district itself, with those of interstate agencies such as the Port of New York Authority, and with governmental units in other states. In order to expedite the consummation of projects which clearly affect the interests of others, the district governing body should be given the right to negotiate with the other agencies affected and to enter into contracts with them. It should also be vested with powers of eminent domain and subpoena.

So far as municipalities are concerned, for example, there is no reason why cooperative projects such as the joint outlet sewers which have been constructed by cities in Essex and Union Counties should not be carried out in the future in the same manner. The district, however, should have the right to insist that the improvement conform to the master plan for the region as a whole. When all the municipalities concerned in a given undertaking are in complete accord on physical plan and on the proportions in which they will extend their credit, there would seem to be no valid reason, furthermore, why the district government should not be permitted to serve the cooperating communities as agent, in the same manner as that in which the existing state agencies have served them in regional matters. Both of these plans would help to conserve the necessarily limited borrowing capacity of the district, and would husband its resources for those projects which can be carried out effectively only by the district governing body direct, or in cooperation with interstate agencies.

Reference has already been made in Chapter II to the development of the Port of New York Authority as an effective agency for constructing projects of an interstate nature, and to the movement

in New York for a coordinated city planning commission with a definite mandate to negotiate with analogous bodies in other municipalities and in other states. The right to negotiate and to contract with agencies in those fields is, of course, a basic essential in the powers to be delegated to the district governing body.

The right of the Port of New York Authority to enter into contracts with units of government smaller than the two states which are parties to the interstate compact which brought that body into being is at least foreshadowed in the present terms of the compact. The amendments required to make that right definite and clear cut, if such should be deemed necessary, would hardly be matters of extreme difficulty.

Conclusions

With a district governing body in New Jersey empowered to participate with New York City in advancing small percentages of the estimated costs of constructing the interstate bridge or tunnel connections for rapid transit lines, and with a Port Authority authorized to finance the remainder of such costs by its own bonds supported solely by tolls, one of the greatest problems in the provision of the much needed interstate rapid transit system would be greatly simplified. So far as rapid transit is concerned, this commission has become convinced that a regional body with taxing and bonding powers, working in close cooperation with the City of New York and the Port of New York Authority, offers the only means by which the proposed interstate lines will ever be built.

For reasons which have already been sufficiently stressed in the preceding chapter, the commission feels also that the intrastate situation requires the close coordination of physical planning for all regional projects, and that such coordination can be obtained only by the creation of a metropolitan district with powers such as those outlined in this chapter.

We have pursued this subject as far as we were able within the limits of the funds provided and of the legislation creating this commission. The studies have progressed to a stage where, if the Legislature so decides, they can rest until it sees fit to authorize the creation of a district and the machinery for district governing body, without serious consequences to the future of the undertaking.

So far as the present commissioners are concerned we feel that we can now appropriately be released from further service. However we repeat with all emphasis possible that provision for the carrying

on of the studies and for the custody of the accumulated data and maps should be made either by the continuation of this commission under a new personnel, by the creation of a new interim body or by some other way that the Legislature may direct.

Respectfully submitted,

NORTH JERSEY TRANSIT COMMISSION.

BERTRAM H. SAUNDERS, *Chairman*,
WALTER M. DEAR, *Vice-Chairman*,
H. HATCHER, *Secretary*,
JAMES W. COSTELLO, *Commissioner*,
ARCHIBALD M. COX, *Commissioner*,
WILLIAM F. HOFFMANN, *Commissioner*,
J. J. MANTELL, *Commissioner*.

APPENDIX I

CHAPTER 104, LAWS OF 1922

An Act to establish a commission to study and report upon plans for providing a comprehensive scheme of rapid passenger transit between the several communities in the counties of Bergen, Essex, Hudson, Middlesex, Morris, Passaic and Union, as well as between such communities and the city of New York, and making an appropriation for the expense of said commission.

WHEREAS, By act of the Legislature entitled "An act to authorize a commission to enter into compact or agreement with the State of New York for the development of the port of New York," passed April seventh, one thousand nine hundred and twenty-one, a commission now exists for the development of a comprehensive plan for the development of said port; and

WHEREAS, Said comprehensive plan in its consideration of transportation problems does not include the problem of passenger traffic in the territory covered by said port development plan; and

WHEREAS, Said problem of passenger traffic should be considered in cooperation with the port development commission so as to develop an efficient system of rapid passenger transit between the New Jersey municipalities lying within the territory covered by said port development plan and between said respective municipalities and the city of New York;

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. The Governor shall appoint seven commissioners who shall have power to study and report upon the best plan or plans to be followed in providing a comprehensive scheme of rapid passenger transit between the several communities in the counties of Bergen, Essex, Hudson, Middlesex, Morris, Passaic and Union, as well as between such communities and the city of New York. All of the commissioners shall be residents of the aforesaid counties. Not more than two commissioners shall be residents of any one of such counties. Before making its report the commission shall make a thorough study of rapid transit conditions in the aforesaid area, and shall take and employ such professional skill and assistance as it may need for the effective working out of a comprehensive and adequate

plan of rapid transit to facilitate and provide intercommunication between the different communities in the aforesaid counties as well as between such communities and the city of New York.

2. The commissioners appointed pursuant to the provisions of this act shall be paid the necessary expenses incurred in the performance of their duties, but shall serve without compensation. They shall select one of their number as chairman, and may employ a secretary and such other assistants as are needed in the performance of their duties. The sum of five thousand dollars (\$5,000), or so much thereof as may be necessary, is hereby appropriated out of any moneys in the State treasury not otherwise appropriated. The moneys hereby appropriated shall be paid out by the State Treasurer upon warrant of the Comptroller, upon vouchers signed by the chairman of said commission.

3. This act shall take effect immediately.

Approved March 11, 1922.

APPENDIX II

JOINT RESOLUTION NO. 3, LAWS OF 1924

Joint Resolution continuing the North Jersey Transit Commission, appointed pursuant to the provisions of chapter 104 of the Laws of 1922 and making an appropriation for the expenses of said commission.

WHEREAS, The growing problem of passenger congestion on the commuting lines operating into New York City from the northern counties of New Jersey is one of the most important now facing our State for solution, both from the standpoint of the health, comfort and convenience of citizens of this State daily using such lines and from the standpoint of the development of the wealth and resources of that portion of the State; and

WHEREAS, By chapter 104 of the Laws of 1922, a commission was established for the purpose of studying and reporting a comprehensive plan for the relief of this condition; and

WHEREAS, Said commission has never received any appropriation from the State with which to carry on the duties imposed upon it and has now presented to the Senate and General Assembly of the State of New Jersey through His Excellency, George S. Silzer, Governor of the State of New Jersey, a report setting forth tentatively suggestions for the solution of this problem and urging an appropriation sufficient to engage the necessary engineering and other expert opinion;

BE IT RESOLVED *by the Senate and General Assembly of the State of New Jersey:*

1. That the commission appointed pursuant to the provisions of chapter 104 of the Laws of 1922 be and the same is hereby continued and directed to complete its investigations and to embody its recommendations for a comprehensive and adequate plan of rapid transit as in said chapter 104 of the Laws of 1922 provided in a report to be submitted to the legislative session of 1925.

2. For the purpose of employing such professional skill and assistance as it may need for the effective working out of said plan and of meeting the reasonable expenses of said commission in the performance of its duties, there is hereby appropriated, when approved by the appropriation committee, the sum of twenty-five thousand

dollars, which sum shall be disbursed by the State Treasurer upon warrant of the Comptroller after approval of bills of said commission.

3. This joint resolution shall take effect immediately.

Approved March 8, 1924.

APPENDIX III

JOINT RESOLUTION NO. 3, LAWS OF 1925

Joint Resolution continuing the North Jersey Transit Commission, appointed pursuant to the provisions of chapter 104 of the Laws of 1922, extending its jurisdiction and making an appropriation for the expenses of said commission.

WHEREAS, By joint resolution entitled "Joint resolution continuing the North Jersey Transit Commission, appointed pursuant to the provisions of chapter 104 of the Laws of 1922 and making an appropriation for the expenses of said commission," approved March eighth, one thousand nine hundred and twenty-four, the North Jersey Transit Commission was continued and directed to complete its investigations and embody its recommendations for a comprehensive and adequate plan of rapid transit in a report to be submitted to the legislative session of one thousand nine hundred and twenty-five; and

WHEREAS, Owing to the shortness of time and to the complexity of the problem to be studied said commission has been unable to recommend such a comprehensive and adequate plan of rapid transit, as appears by its report submitted to this Legislature; and

WHEREAS, The studies of said commission have shown that properly to investigate the transit situation and to recommend a comprehensive and adequate plan of rapid transit in the seven counties mentioned in chapter 104 of the Laws of 1922, it is necessary to extend its studies into the counties of Monmouth and Somerset;

BE IT RESOLVED *by the Senate and General Assembly of the State of New Jersey:*

1. That the jurisdiction of the commission appointed pursuant to the provisions of chapter 104 of the Laws of 1922 be, and the same is extended so as to cover such portions of the counties of Monmouth and Somerset as in the judgment of the said Commission should be studied to make possible the recommendations of a comprehensive and adequate plan of rapid transit in the counties mentioned and described in chapter 104 of the Laws of 1922.

2. That the said commission be and the same is hereby continued and directed to complete its investigations and to embody its recommendations for a comprehensive and adequate plan of rapid transit as in said chapter 104 of the Laws of 1922 provided in a report

to be submitted to the legislative session of one thousand nine hundred and twenty-six.

3. For the purpose of employing such professional skill and assistance as it may need for the effective working out of said plan and of meeting the reasonable expenses of said commission in the performance of its duties, there is hereby appropriated, when approved by the appropriation committee, the sum of fifty thousand dollars, which sum shall be disbursed by the State Treasurer upon warrant of the Comptroller after approval of bills of said commission.

4. This joint resolution shall take effect immediately.

Approved March 6, 1925.

APPENDIX IV

CHAPTER 157, LAWS OF 1926

An Act to establish a commission to study and negotiate in regard to and report upon the legal, financial and interstate aspects of a plan for rapid transit between the several communities within the counties of Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Union, Monmouth and Somerset, as well as between such communities and the city of New York, and making an appropriation for the expenses of such commission.

WHEREAS, The commission appointed pursuant to the provisions of chapter 104, of the Laws of 1922, and of Joint Resolution number three of the Legislative session of one thousand nine hundred and twenty-five, has reported to the Legislature of this State a comprehensive plan of rapid transit to facilitate and provide intercommunication between the different communities in the counties mentioned in said act and resolution, as well as between such communities and the city of New York; and

WHEREAS, Such comprehensive plan provides for the operation of rapid transit trains between New Jersey and the borough of Manhattan in the city, county and State of New York; and

WHEREAS, To make such comprehensive plan effective so far as it relates to the portion of said proposed rapid transit system lying within the State of New York, the consent of the appropriate authorities of the State of New York is required; and

WHEREAS, Said proposed rapid transit system contemplates the utilization in part of existing rights of way of railroads operating within this State;

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. There is hereby established a commission to be known as the North Jersey Transit Commission, to consist of seven (7) members to be appointed by the Governor by and with the consent of the Senate. Of the commissioners first appointed, three shall be appointed for a term of one year, two for a term of two years, and two for a term of three years; thereafter said commissioners shall be appointed for a term of three years. Said commissioners shall serve until their successors shall have been appointed and shall qualify, and shall be

residents of the counties of Bergen, Essex, Hudson, Middlesex, Morris, Passaic, Union, Monmouth or Somerset, but not more than two of said commissioners shall be residents of any one of such counties.

2. Said commission shall study and negotiate in regard to and report upon the legal, financial and interstate aspects of a plan for rapid transit between the several communities within the counties mentioned in section one hereof, as well as between such communities and the city of New York, and to that end is hereby authorized and directed to negotiate with any body or bodies now existing or hereafter created in the State of New York authorized to study and report upon or to regulate or to construct passenger transit facilities lying wholly or partly within the city of New York in the State of New York, in respect of any rights or privileges within said city and State of New York which shall be necessary to or appropriate for the effective carrying out of such rapid transit plan; and to recommend to succeeding Legislatures such form of interstate treaty or compact as in the opinion of said commission will, under existing conditions, most effectively tend to the carrying out of said plan of rapid transit.

3. Said commission is further authorized and directed to negotiate with the several railroads, parts of the existing rights of way of which may be included in said rapid transit plan, and with operating companies and to report the terms upon which said rights of way may be used in the carrying out of said rapid transit plan; and to report terms and plans for the operation thereof; and to study and recommend alternative routes in the event that satisfactory terms for said rights of way or any of them cannot be obtained.

4. Said commission shall report upon these subjects to succeeding Legislatures embodying such recommendations as far as practicable in the form of legislative bills.

5. The commissioners appointed pursuant to the provisions of this act shall be paid the necessary expenses incurred in the performance of their duties, but shall serve without compensation. They shall select one of their number as chairman, and may employ a secretary, and such engineering, legal and clerical skill and assistance as they may need for the carrying out of the provisions of this act. There is hereby appropriated the sum of one hundred thousand dollars for the expenses in any annual or supplemental appropriation bill.

6. This act shall take effect immediately.

Approved March 26, 1926.

APPENDIX V

CHAPTER 277, LAWS OF 1927

An Act authorizing and directing the Port of New York Authority to take up and study the interstate suburban passenger problem within the Port of New York District and to recommend to the States of New York and New Jersey such amendments or supplements to the comprehensive plan for the development of the Port of New York as will facilitate travel between various parts of the port district, together with a legal plan for financing the same; and making an appropriation therefor.

BE IT ENACTED *by the Senate and General Assembly of the State of New Jersey:*

1. Under and pursuant to the provisions of the compact entered into on April thirtieth, one thousand nine hundred and twenty-one, between the States of New York and New Jersey, consented to by the Congress of the United States by Public Resolution No. 17, Sixty-seventh Congress (Senate Joint Resolution No. 88), by which the Port of New York Authority were created, and especially Articles VII and XI thereof. The Port of New York Authority is hereby authorized and directed to make such plans for the development of said district supplementary to or amendatory of the comprehensive plan heretofore adopted by the Legislatures of the two States by chapter forty-three, Laws of New York, one thousand nine hundred and twenty-two, and chapter nine, Laws of New Jersey, one thousand nine hundred and twenty-two, consented to and approved by the Congress of the United States by Public Resolution No. 66, Sixty-seventh Congress (House Joint Resolution No. 337), as will provide adequate interstate and suburban transportation facilities for passengers traveling to and from one State to the other within the said district, and from one part of the said district to another, sometimes referred to as commuter or suburban passenger traffic, to the end that travel between the various parts of the port district may be made more convenient, practicable and economical for those residing in one region in the port district and doing business in another region thereof.

To that end, the Port of New York Authority shall avail itself of and consider the plans, studies, reports and data prepared by the New York State Suburban Passenger Transit Commission, the Westchester County Transit Commission, Transit Commission State of

New York, North Jersey Transit Commission, Regional Plan of New York and Its Environs, and any other agencies having dealt with the matter, and shall employ such engineering and other skill in addition to its present staff as may be required for the purpose, and shall, after such study, make a report to the Legislatures of the two States, in which shall be submitted such amendments to the existing comprehensive plan for the development of the transportation facilities of the district or such additional or supplementary legislation as may be necessary to effectuate a comprehensive interstate and suburban passenger transportation system for the Port of New York district. The Port of New York Authority shall also submit, as a part of its report a legal plan for the financing of the said improvements through the Port of New York Authority as the corporate municipal instrumentality of the two States or otherwise; provided, however, that nothing herein contained shall be in any way construed to affect the power now granted by law to the North Jersey Transit Commission.

2. For the preliminary work necessary the sum of fifty thousand dollars (\$50,000) or so much thereof as may be necessary, is hereby appropriated out of any moneys in the State treasury not otherwise appropriated when the same shall be included in any annual or supplemental appropriation bill. 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 The Port of New York Authority. The said sum shall be paid back to the State after the repayment or satisfaction of any loans from or debts incurred by the Port of New York Authority on its own bonds or other obligations, pursuant to such legislative authority as may be given for the effectuation of the plan so to be recommended.

3. This act shall take effect immediately.

Approved March 29, 1927.

APPENDIX VI

APPROPRIATIONS AND AGGREGATE ANNUAL EXPENDITURES OF THE NORTH JERSEY TRANSIT COMMISSION, 1922-1928

Fiscal Year	Character of Appropriation	Amount of Appropriation	Expenditures	Unexpended Balance
1922-1923	\$5,000 recommended but not made available.....
1923-1924	No appropriation.....
1924-1925	Regular appropriation, session of 1924	\$ 25,000.00		
	Supplementary session, 1925.....	10,000.00		
		\$ 35,000.00	\$ 34,930.49	\$ 69.51
1925-1926	Regular appropriation—1925.....	40,000.00		
	State House Commission.....	1,991.96		
		\$ 41,991.96	41,991.96
1926-1927	Regular appropriation, session of 1926.....	100,000.00	99,067.28	932.72
1927-1928	Regular appropriation, session of 1927	40,000.00	39,992.89	7.11
	Total to July 1, 1928.....	\$216,991.96	\$215,982.62	\$1,009.34

As has previously been pointed out, the act of 1922 purported to appropriate \$5,000, but this sum was never made available for expenditure by the commission.

The expenditures, summarized by major classes, are indicated in appendix VII.

APPENDIX VII

SUMMARY OF EXPENDITURES: NORTH JERSEY TRANSIT COMMISSION, 1925-1928

	1925	1926	1927	1928	Total
SALARIES—					
Legal		\$ 200.00	\$ 4,999.92	\$ 2,500.00	\$ 7,699.92
Engineering	\$16,584.27	24,126.89	33,136.44	22,250.71	96,098.31
Publicity	1,800.00			4,550.00	6,350.00
Financial and Assessment.....		3,129.00	14,437.70	385.00	17,951.70
Clerical	7,111.34	6,799.84	3,319.64	2,297.30	19,528.12
Sub Total	\$25,495.61	\$34,255.73	\$55,893.70	\$31,983.01	\$147,628.05
RENT (Including Janitor Service).....	1,030.50	1,072.50	3,900.00	3,900.00	9,903.00
OFFICE SUPPLIES AND EQUIPMENT.....	7,165.24	2,603.95	7,051.82	1,247.36	18,068.37
PUBLICITY SUPPLIES AND EXPENSE.....				538.35	538.35
PRINTING AND MAILING REPORTS.....	538.30	3,058.96	3,214.49	219.00	7,030.75
MISCELLANEOUS EXPENSE (Including Petty Cash and Ex- pense Vouchers)	700.84	1,000.82	1,208.05	905.17	3,814.88
CONTRACT WITH NATIONAL INSTITUTE OF PUBLIC ADMINISTRATON OF NEW YORK.....			1,299.22		1,299.22
CONTRACT WITH THE PORT OF NEW YORK AUTHOR- ITY			26,500.00	1,200.00	27,700.00
Grand Total.....	\$34,930.49	\$41,991.96	\$99,067.28	\$39,992.89	\$215,982.62

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