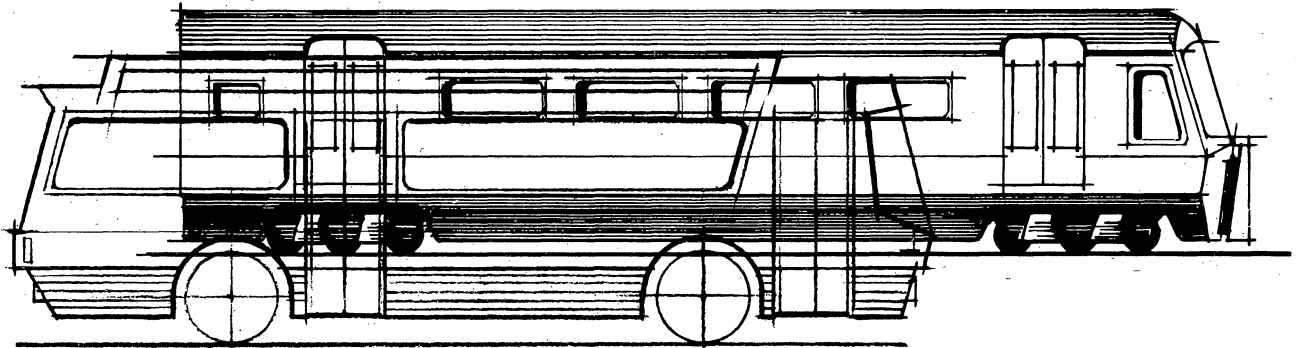
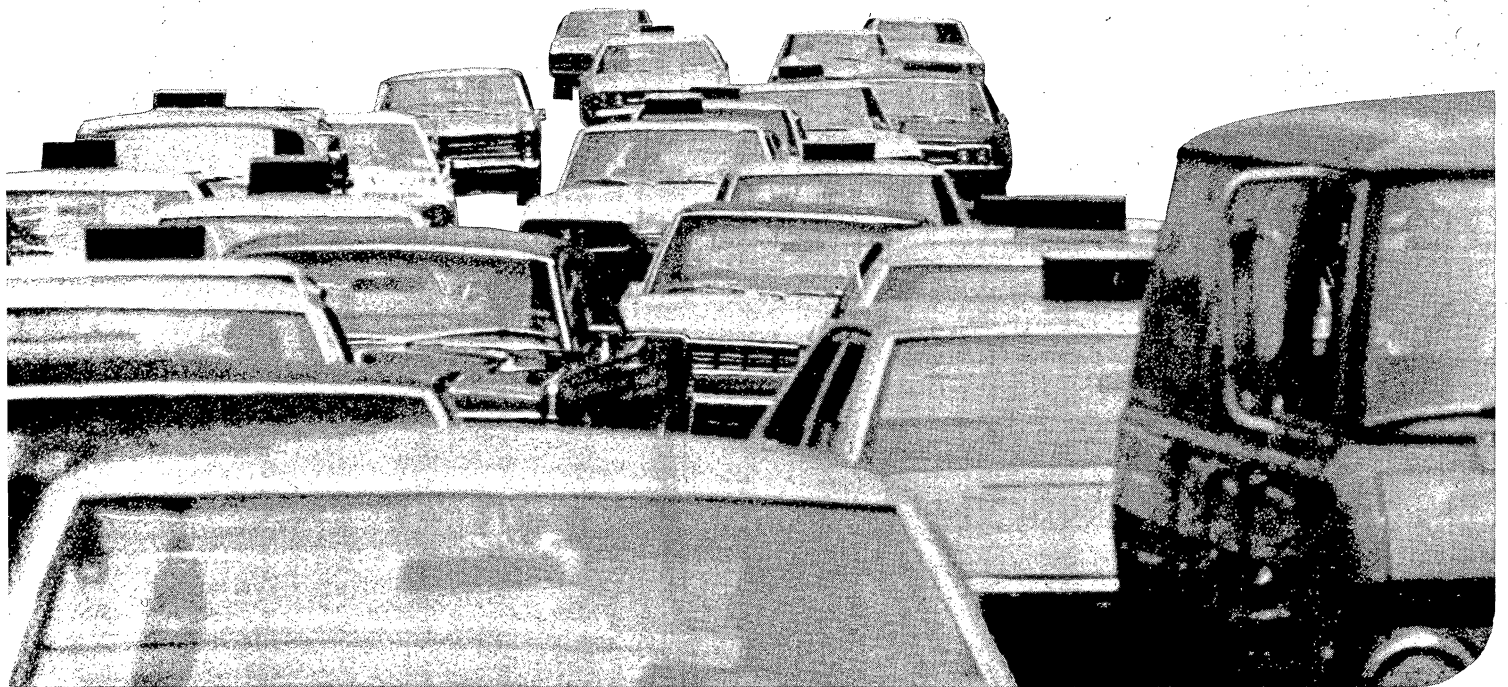


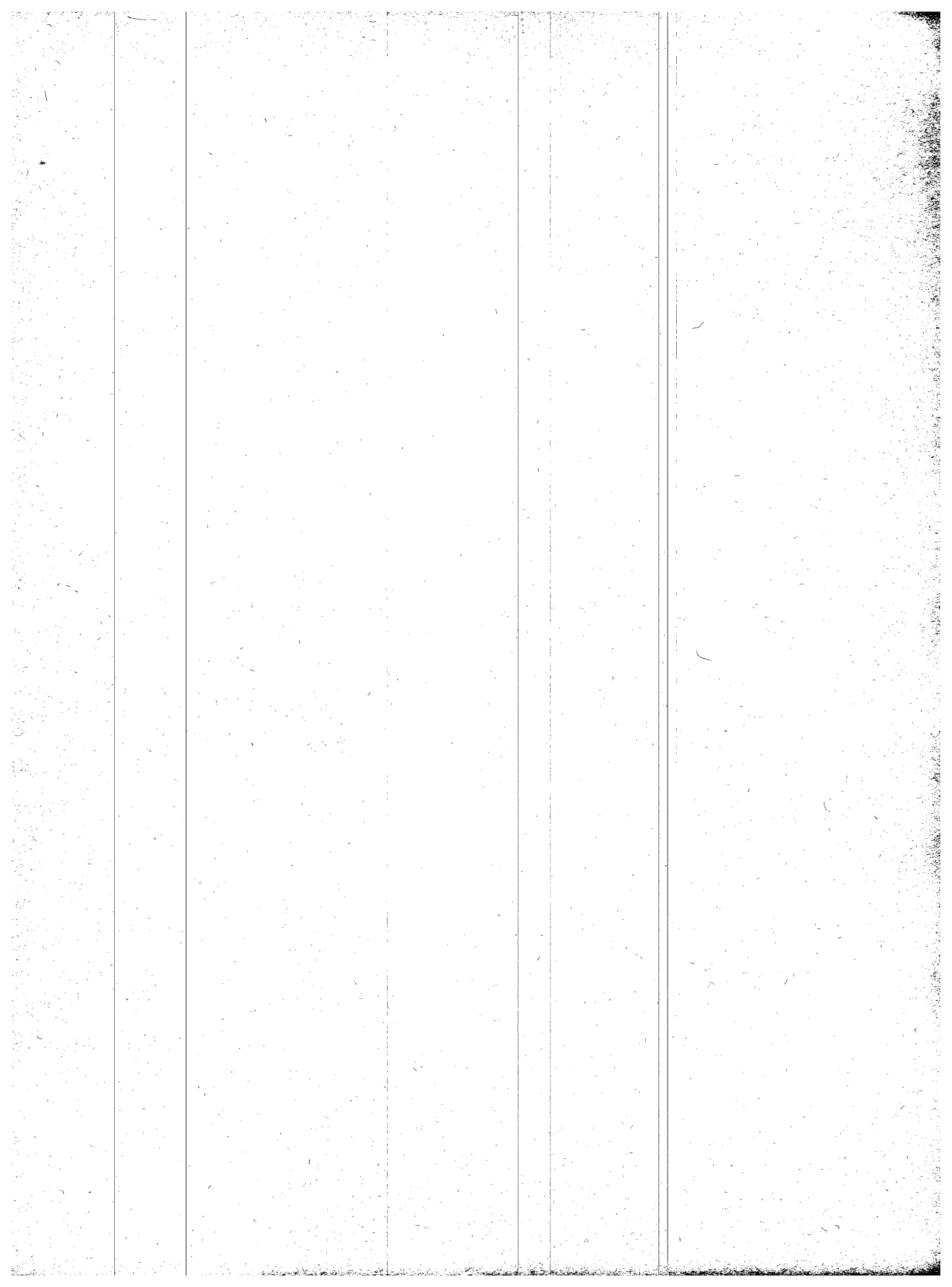
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Financing Mass Transportation

A POSITIVE APPROACH

**FINAL REPORT OF THE
GOVERNORS' SPECIAL COMMISSION
ON THE FINANCING OF
MASS TRANSPORTATION**

April 1972

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Letter of Transmittal

To: The Honorable William T. Cahill, Governor of the State of New Jersey
The Honorable Thomas J. Meskill, Governor of the State of Connecticut
The Honorable Nelson A. Rockefeller, Governor of the State of New York

From: David L. Yunich, Chairman of the Governors' Special Commission on Financing Mass Transportation.

On October, 1, 1970, the Governors of Connecticut, New Jersey and New York created the Governors' Special Commission on Financing Mass Transportation.

The Commission's purpose was to consider ways to assure mass transportation service at appropriate fare levels for all people on a regional basis.

Accordingly, the Commission directed its study within an area known as the Tri-State Metropolitan Region. This region encompasses an 8,677-square-mile area, including 22 counties, 6 planning regions, and 600 local governments in the States of Connecticut, New Jersey, and New York. It contains nearly 19 million people who live in 6.1 million dwelling units and who move about within the region for work, for shopping, for services, and for recreation.

The study was directed to long-range solutions for financing mass transit. Actions such as the recent settlement of the mass transit crisis in New York City and those being taken in Connecticut and New Jersey are only temporary and expedient solutions to their respective problems. However, the Commission believes that a long-range solution is possible for the entire region and urges strongly that governments at all levels—Local, State, and Federal—address themselves to these findings as quickly as possible to avoid the recurring crises.

In keeping with the Commission's charge, the scope of our study includes the following:

1. We have estimated the extent of the financial problem and we have projected probable future trends, including the revenue requirements of public and private entities providing mass transportation services.
2. We have assessed the nature and extent of existing public support programs benefiting transportation services in the region.
3. We have considered what we believe is the appropriate relative roles of local governments, state governments, and the Federal government.
4. We have evaluated various legal considera-

tions and other matters inherent in developing a comprehensive collaborative plan affecting both privately and publicly operated facilities.

5. We have examined several possible mechanisms for implementing suggested cooperative arrangements.

Throughout our deliberations and enquiries, the Commission held to a policy guideline which represented the thinking of the members. We are now submitting the report of the Governors' Special Commission on Financing Mass Transportation and our conclusions and recommendations are based on the following policy guideline:

This Commission believes that a comprehensive mass transportation system that provides reliable service will benefit all users in the Tri-State Metropolitan Region directly, and all others indirectly, since it is vital to the economy and the social life of the region.

All, therefore, have some responsibility for financing a mass transportation system.

Government—Local, State and Federal—must see that this responsibility is met equitably.

The deficit problem is huge. In the period, 1972 to 1985, the region will need \$13.6 billion to finance mass transit operating deficits. This means an average of \$1 billion annually will be required for operations alone. In the same period, the region will need at least \$7.3 billion to finance capital outlay. The Commission believes this money can be obtained to finance the system and that the region's mass transportation problems can be solved while keeping fares within the reach of all people.

The report contains many recommendations for your consideration. Following are some references to the major recommendations, each of which are set forth in great detail within the report. Since many of these proposals involve federal action, we urge that the three States make a concerted effort to bring the collective mass transit problems of the region before the Federal government at an early date:

1. The Commission recommends that each city in the region impose a mass transportation tax on all individuals who live or work in that city. Moreover, the imposition of such a tax must be contingent upon

a provision whereby the Federal government will grant a 100 per cent transportation income tax credit to all individuals paying the transportation tax.

2. The Commission recommends that the Federal government and each of the States should establish a General Transportation Fund and appropriate revenue sources should be credited to that Fund.

3. The Commission recommends that the States should have the right to use funds received from the Federal Transportation Fund for capital outlay and/or debt service on capital outlay.

4. The Commission recommends that the Federal share of capital projects that are part of a coordinated regional plan should be increased to 90 per cent.

5. The Commission recommends that all three states in the region should assume responsibility for maintaining the rights of way of mass transportation facilities.

6. The Commission recommends that a continuing Tri-State Mass Transportation Financing Advisory Panel should be created to study and make recommendations on problems relating to all aspects of financing public mass transportation services.

7. The Commission recommends that the transit user should pay a reasonable share of the mass transportation system's operating costs.

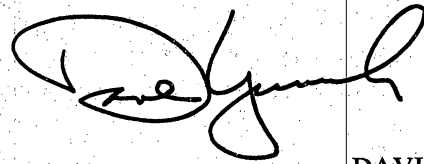
This report would not have been possible without the untiring effort of a very able staff. The Commission would like to express its thanks to the Study Director, Dr. Ernest Kurnow, Chairman of the Quantitative Analysis Departments of the Graduate School of Business and Administration and College of Business and Public Administration of New York University. We also thank his colleagues, Dr. Richard P. Brief, Professor of Business Statistics and Accounting at New York University, and Mrs. Regina Reibstein, formerly with the National Bureau of Economic Research and the New School of Social Research, and the other members of the staff. We also thank Mr. Rodney C. Campbell, formerly New York correspondent of the London *Sunday Times* and associate editor of *Time Magazine* for editing the final report.

We are grateful to Dr. J. Douglas Carroll, Jr., Executive Director of the Tri-State Regional Planning Commission, and his staff, for providing us with legis-

tical support, and needed information. We also appreciate the assistance extended us by the staffs of: the Departments of Transportation of Connecticut, New Jersey, and New York, the Offices of the Mayor and the Comptroller of the City of New York, the Port of New York Authority, the Metropolitan Transportation Authority and its constituent agencies, and by execu-

tives and staffs of commuter railroads and selected bus companies.

Finally, I wish to thank each member of the Commission for giving so freely of his time and effort in the making of the report. We all join in expressing our deep gratitude to the Governors for giving us this challenging assignment—in which we found ourselves becoming increasingly absorbed and involved.



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Conclusions and Recommendations

THE COMMISSION MAKES ITS RECOMMENDATIONS within the guidelines of this basic policy statement:

1.) A comprehensive mass transportation system providing reliable service, benefits all users directly and all others in the Tri-State Metropolitan region indirectly. It is vital to the economy and social life of the region. All, therefore, have some responsibility for financing such a system. Government—local, state, and federal—must see that this responsibility is met equitably.

2.) Mass transportation in the region, public and private, shows large deficits or inadequate earnings. Deficits are increasing rapidly. Increases in user fares can help. But fares cannot, as a practical matter, meet all these growing deficits and losses.

3.) Government support—local, state, and federal—must therefore be made available to mass transit if it is to survive. Jobs, incomes, the whole economic and social life of the region, depend upon planned and assured financial support of mass transit from government. Only this can keep mass transit healthy and growing to meet the service needs of the future.

4.) Mass transportation is a regional problem—and a regional opportunity. In order to provide maximum effectiveness at minimum cost to the user and the taxpayer, a method should be devised to coordinate growth and financial planning for all transit operations in the region.

5.) Both users and taxpayers have the right to demand that management and labor in all mass transit agencies work together purposefully to promote improved service and increased productivity.

6.) Every effort should be made to retain under private ownership those segments of the mass transportation industry that are still in private control.

CONCLUSIONS

1.) The gap between revenues from passenger fares and operating expenses, depreciation and debt service of mass transit operations in the Tri-State Metropolitan region increased from \$177 million in 1962-1963 to \$420 million in 1969-70.

2.) This represents an increase of some \$243 million in the deficit since 1963—and more than half of this increase has been recorded in the past two years.

3.) On the basis of available evidence, which we find to be broadly non-controversial, forecasts of the deficit for the period 1970-1985 indicate substantial further increases in the magnitude of the deficit. Before government subsidy, the estimated amount of additional revenues needed to cover net operating expenses (excluding debt service and depreciation) is expected to rise from approximately \$230 million in 1970 to \$530 million in 1975, \$1,000 million in 1980, and \$1,920 million in 1985.

4.) Capital outlay in the Tri-State Metropolitan region during the period studied by the Commission amounted to approximately \$1.3 billion. Most of these funds were supplied by governmental sources and by public authorities. As of now, all capital outlay is so financed, with the exception of capital expenditures by private bus companies. With the transit system unable

to generate sufficient funds from its own sources to cover operating expenses, funds for capital must, of necessity, be supplied by government if the transportation system is to survive.

5.) More than \$8 billion in capital expenditures is required by our mass transportation system in the coming 15 years.

RECOMMENDATIONS OF THE GOVERNORS' SPECIAL COMMISSION

If the major recommendations of the Governors' Special Commission on Financing Mass Transportation are adopted, adequate funds will be available to maintain reasonable fares, and to maintain and to improve the region's mass transportation system.

RECOMMENDATION: Each city in the region should impose a mass transportation tax on all individuals who live or work in the city, providing that the Federal government grants a 100 per cent transportation income tax credit to all individuals paying the transportation tax.

The merit of this plan is: a) the tax would not involve an addition to the overall tax burden on the individual since a 100 per cent income tax credit would be granted; and b) the proposal affects only future federal tax revenues and will not cost the Federal government anything today. Furthermore, the plan does not impose a continuing requirement for appropriations by Congress.

At \$25 per individual worker, the transportation tax would yield \$100 million per year in New York City alone. The tax would generate over \$200 million if levied on all of the region's 8.5 million employees.

In our densely-populated Tri-State Metropolitan region, the improvement of mass transportation is an absolute must. The provision of adequate financing is therefore imperative. It is essential for the Federal government, *now*, to reverse the imbalance in transportation financing, to define new priorities, and to provide new sources of revenue for financing mass transportation services.

i.) The Tri-State Metropolitan region of 22 counties accounts for a substantial portion of economic activity in the United States:

—22.5 per cent of all personal income originating in finance, real estate and insurance;

—18.6 per cent in service trades;

—17 per cent in transportation, communications and public utilities;

—15 per cent for wholesale and retail trade;

—13.1 per cent for manufacturing.

ii.) Although the Tri-State Metropolitan region contains only 0.25 per cent of the land area in the nation, it houses nearly one out of every ten of the population. More than 22 per cent of the population of large Standard Metropolitan Areas live in the region.

iii.) These unique density characteristics and the high level of economic activity interact. They make the region the major headquarters of private and public organizations in the United States.

iv.) Federal tax revenues are directly related to the economic well-being of a region. The services that government performs help determine the level of economic activity. It is incumbent on the Federal government to make available to the states and localities additional amounts of the funds it collects—in order to support the local and state functions which are essential to the regional and, hence, the national economy.

v.) But the federal expenditures on mass transportation and highways in the Tri-State Metropolitan region are only a fraction of the transportation taxes collected in the region by the Federal government. These expenditures amounted only to 75 per cent of receipts in 1967, 43 per cent in 1968, and 54 per cent in 1969.

vi.) To correct this existing imbalance, it is essential that there be a more direct relationship between federal taxes collected in the region and federal transportation assistance made available to the region.

RECOMMENDATION: The Federal government should establish a General Transportation Fund and appropriate sources of revenues, including all transportation related taxes, should be credited to the Fund.

Specific and general purpose grants should be made to the states from this fund.

This proposal is consistent with the specific plan of revenue sharing for transportation presently being considered by Congress and would permit greater flexibility in transportation planning and financing.

i.) It permits the Federal government to make general purpose grants as well as specific purpose grants.

ii.) It gives to the states the authority to allocate general purpose grants among the various modes of transportation according to a region's needs.

iii.) It also allows the Federal government to determine priorities with specific purpose grants, and therefore will enable the Federal government to meet the backlog that exists in mass transit capital needs as a result of the generally low priority that has been given to mass transit in the past.

iv.) General purpose grants do not require state or local matching funds.

The General Transportation Fund therefore provides a mechanism for taking a more balanced approach to financing transportation and it simplifies the problem of allocating funds among individual forms of transportation in order to maximize the effectiveness of the system as a whole within each region. Previous policy in this area has been more restrictive.

Since World War II, the Federal government has spent \$80 billion for transportation, with 75 per cent of this sum expended on highways, 24 per cent on aviation and 1 per cent on mass transit. Planners now generally agree that, in many instances, urban transportation needs can be met at a lower human and financial cost with a more balanced approach and a more careful investment mix. This mix would include the improvement of existing roads, the addition of express bus service and the improvement and expansion of rapid transit and commuter rail facilities. The establishment of the General Transportation Fund would go a long way towards remedying the imbalance that has existed in transportation financing.

RECOMMENDATION: Connecticut, New Jersey, and

New York should each establish a General Transportation Fund and appropriate sources of revenue, including all transportation-related taxes, should be credited to the Funds. This recommendation does not preclude the use of special taxes for mass transportation purposes. Expenditures on all forms of transportation should be made from these Funds.

The arguments for a State General Transportation Fund are similar to those made for the federal Fund.

RECOMMENDATION: The formula for distributing federal aid to the states for mass transit purposes should reflect more equitably the mass transit needs of the Tri-State Metropolitan region.

i.) Under the Urban Mass Transportation-Act of 1970, federal assistance to any one state is limited to 12½ per cent (in some cases, to 15 per cent).

ii.) This restriction is arbitrary because it bears no measurable relationship to the mass transit needs of a state.

iii.) Mass transit requirements depend on census population, transient population and population density, and based on these criteria, the Tri-State region should receive a larger share of federal aid which should be reflected in the allocation of specific and general purpose grants from the federal General Transportation Fund.

RECOMMENDATION: States should have the right to use federal funds for capital outlay and/or debt service on capital projects.

i.) Under existing rules, the states may use federal mass transit funds only for the capital investment costs of specific projects;

ii.) The Commission's proposal above would give the states the option of using federal funds either for capital investment costs and/or for debt service payments on capital projects;

iii.) The adoption of this recommendation would enable the region to meet, immediately, a substantial portion of the capital investment needed to fulfill high-priority programs.

iv.) More specifically, a guarantee of \$100 million per year for a period of 20 years would support an immediate outlay of \$1 billion if money is borrowed at 6 per cent interest.

v.) However, if the annual increases in operating costs of mass transportation continue, and if inflation is not held in check, then Congress may well have to face the necessity of committing federal funds to meet operating deficits of transit systems.

RECOMMENDATION: The federal share of capital projects in mass transportation that are part of a regional plan should be increased to 90 per cent from 66 2/3 per cent.

i.) This proposal will make federal participation in mass transit programs similar to its participation in interstate highway financing.

ii.) It will also help achieve a greater balance in the financing of all forms of transportation.

RECOMMENDATION: The three states in the region should assume responsibility for maintaining the rights of way of mass transportation facilities.

i.) Governments, at all levels, have traditionally assumed responsibility for maintaining the rights of way for some transportation systems, even though the practice is not universal.

ii.) State governments maintain state highways and interstate routes in their jurisdiction, and the Federal government maintains "rights of way" for air transportation.

iii.) In New Jersey and Connecticut, commuter railroads receive such support.

iv.) This proposal would extend similar rights to all mass transit facilities in the region.

v.) Legislation to this effect was introduced in the 1971 session of the New York State Legislature, but was not enacted. If enacted, over \$100 million in additional funds would be available to the mass transit system.

RECOMMENDATION: An equitable toll of 25 cents should be imposed on all free water crossings into

Manhattan, with the revenues earmarked for mass transportation.

This should encourage the use of mass transportation facilities, reduce automobile congestion and atmospheric pollution, and provide additional revenues of up to \$30 million per year for mass transportation.

RECOMMENDATION: In order to raise additional revenues for mass transit and to deter congestion and pollution, the Commission also recommends:

1.) Parking facilities not directly related to mass transit operations should be rendered more costly to users.

2.) Parking meter charges in the central business districts should be increased substantially.

3.) Parking fines should be increased and the regulations more vigorously enforced.

4.) The imposition of a surcharge on parking fees in the central business districts should be considered to assist mass transit.

RECOMMENDATION: All forms of federal assistance should be made to governmental entities, but funds may be redistributed to private firms when their operations form part of an integrated, regional transportation plan.

This proposal is consistent with the Commission's basic policy statement that private ownership of mass transit should be maintained.

RECOMMENDATION: The Federal government should establish a "Metrobank" which would borrow funds at interest rates available to federal organizations for the purpose of relending monies at low interest rates to states to improve mass transportation.

i.) The huge increase in borrowing by state and local governments has put an inordinate strain on their credit.

ii.) In some cases, the Metrobank plan would decrease the cost of borrowing in the region for mass transportation facilities.

RECOMMENDATION: States in the region should exempt private bus company operations from all state and local taxes except income taxes.

i.) Most rail transportation facilities are already exempt from these taxes because they are publicly owned or because they are exempt by special legislation.

ii.) The three states already give partial tax exemption to bus companies but additional action is required to meet the deteriorating profitability of these companies and improve service.

iii.) Thus, in 1969, only eleven of the 84 private bus companies in the region with annual revenues of over \$150,000, which account for 96 per cent of all bus revenues in the region, had operating ratios (costs to revenues) of less than .92. The elimination of these state and local taxes on the bus companies will increase the number of companies with operating ratios below .92 from 11 to 21. An operating ratio of .92 or less is the criterion used in the bus industry to determine whether financial performance is satisfactory.

RECOMMENDATION: Appropriate government agencies should give necessary support to privately-owned public transportation companies on their commuter or local operations. This should allow the carriers to recover the actual cost of such service plus a reasonable return on investment. The support would be granted only to those carriers that demonstrate need and request such assistance, and only to those carriers that operate services deemed essential to an integrated transportation plan.

i.) The appropriate governmental agency would determine whether the routes were essential to the integrated, regional service.

ii.) If these bus operations are to remain within the private sector, explicit government support may be required.

iii.) An increasing number of bus routes will be abandoned unless financial aid from government is forthcoming.

iv.) What is needed in many cases is an expansion of bus services, not a curtailment, because bus companies often provide the only form of mass transportation in outlying districts of the region.

RECOMMENDATION: Appropriate government agencies throughout the region should be authorized to ac-

quire, purchase, or rehabilitate facilities and equipment for use in mass transportation services, and to lease them to operators who form part of an integrated, regional plan.

i.) Having recognized that company profits may not be sufficient to warrant additional investment in equipment, all three states have taken various actions to provide capital equipment for private companies.

ii.) The leasing provision is superior to outright grants in the Commission's view.

RECOMMENDATION: All local governments should be responsible for financing the following related mass transit services:

1.) The cost of all social programs—such as reduced fares for school children or senior citizens.

2.) The cost of transportation for local government employees such as policemen and firemen.

3.) The cost of maintaining a well-trained, dedicated force of transit police.

i.) A transportation system is meant to move people dependably.

ii.) These related services should be a charge against the appropriate function of government.

RECOMMENDATION: Local governments should maintain local stations and transportation centers.

i.) The assumption by local governments of the job of maintaining station and related facilities is progressing throughout the region piecemeal.

ii.) Some facilities are maintained by local governments, others are sold, or leased, or maintained by the transportation agency without reimbursement.

iii.) The recommendation would fix the responsibility for maintaining mass transit facilities on a more consistent basis and provide for local control over essentially local facilities. It would also establish more uniform practices and standards throughout the region.

iv.) Attractive and well-maintained facilities should increase the demand for mass transit.

RECOMMENDATION: A continuing Tri-State Mass Transportation Financing Advisory Panel representing the three States in the region should be created to study

and make recommendations on problems relating to all aspects of financing public mass transportation services.

The Panel should consist of six members with two members appointed by the Governor of each state. The Panel would be associated with the Tri-State Regional Planning Commission and would not require a new staff. The duties and responsibilities of the Advisory Panel could well include:

i.) To develop, in conjunction with the Tri-State Regional Planning Commission, regular reports on current and prospective future financial data for public and private mass transit facilities and to report measures of the effectiveness of these services;

ii.) To consider existing or potential problems in financing mass transportation and to recommend possible solutions to these problems;

iii.) To initiate reports and/or recommendations to the governor(s) or to prepare such reports and/or recommendations on special request of the governor(s);

iv.) To undertake special studies as may be required to carry out the advisory function of the Panel;

v.) To observe and assess the techniques, quality, and effectiveness of both the managing and marketing functions of public mass transportation organizations as they relate to financing problems.

It is not the Commission's intention to establish another agency with planning responsibilities for the region's mass transit expansion and operating problems. Such responsibilities have been assigned to the Tri-State Regional Planning Commission and to existing transportation agencies and they would not be part of the duties and responsibilities of the proposed Panel. The Panel's only concern will be directed to questions relating to current and future problems of financing public transportation.

RECOMMENDATION: There is a need for specific reforms in the fare structure of commuter railroads and other mass transit facilities such as:

1.) The monthly commutation ticket should be the basic fare for commuter railroads.

2.) A preferentially lower fare should be charged during off-peak hours.

3.) A preferentially lower fare should be charged for travel in the reverse direction during peak hours.

4.) Fares for the occasional peak-hour rider should be raised to levels substantially above those charged to the regular commuters.

i.) The scale of commuter railroad operation is determined by peak hour traffic sustained on a routine basis.

ii.) A standard fare should be established for the routine commuter.

iii.) This standard fare on the commuter railroads should take the form of a monthly, or quarterly commutation ticket.

iv.) A substantially higher fare should be charged the occasional rider who travels in the peak flow direction during rush hours. This class of users is costly to serve and their use of the system delays and inconveniences the routine commuter. The higher fare is a charge for the maintenance of stand-by capacity.

v.) There should be limited provision made for multiple-ride tickets.

vi.) Since the demand during off-peak hours will be reflective of the prices charged, any incentive fare system, within limits, should increase the net revenues of the system.

RECOMMENDATION: While the Commission understands some of the difficulties involved, it recommends that the New York City Transit Authority consider promptly: a) a differential fare structure with respect to peak vs. off-peak fares and b) a zone fare system. Their use would be expected to yield increased revenues of upwards of \$50 million. They would also serve to allocate transit personnel, equipment, and other facilities much more effectively and would constitute a major move towards basing prices upon the services received.

RECOMMENDATION: In arriving at a general fare structure, the Commission recommends that the following criteria be considered:

1.) Fares should cover a reasonable portion of operating expenditures (excluding depreciation) of mass transportation.

2.) Fares should reflect the marginal or directly associated cost of providing service to different classes of users.

3.) Fares should not be so high as to discourage the use of mass transit facilities, particularly in competition with the automobile.

4.) Fares should not have an adverse effect on low income groups.

5.) The principle is that transportation services produce both direct and indirect benefits; the cost of operating the system must be shared by users of the service and other beneficiaries.¹

RECOMMENDATION: The Commission strongly urges appropriate transportation agencies to take cognizance of new methods and programs directed toward an increase in productivity. It also urges an improvement in the quality of service and in creative marketing.

The Commission is satisfied that if mass transit services can be made more efficient, attractive and reliable instead of; new riders can be attracted and deficits can be reduced.

¹ The Commission has carefully considered the "no fare" proposal and finds it unacceptable for the following reasons:

i.) it is equitable for the mass transit user to pay a fare, and the general public accepts this view;

ii.) a no-fare policy would lead to greater congestion on mass transit facilities during peak hours;

iii.) it would lead to a decrease of quality of service and safety;

iv.) it would tend to increase mass transportation costs because it would create pressure to expand existing facilities and services;

v. a no-fare system would increase the possibility of crime and vandalism;

vi.) higher-income riders might divert to automobiles or taxis, notwithstanding the relative increases in costs, just to avoid congestion in the subways;

vii.) a no-fare policy will not necessarily reverse the trend toward decentralization away from the central city and, if urban transportation becomes even less pleasurable, it may accelerate the decline of the central city;

viii.) civil service regulations and union contracts make it doubtful that all jobs associated with fare collection can be eliminated.

The Mass Transit Deficit

DURING THE PERIOD COVERED BY THIS study, the mass transit system experienced recurring financial crises. In response to these crises, various steps were taken to make the system more viable:

- 1.) existing and newly-created public authorities took over deficit-ridden operations;
- 2.) state and local governments and, more recently, the Federal government provided various types of financial aid;
- 3.) fares were increased;
- 4.) several unprofitable operations were discontinued.

However, these actions could not overcome the impact of the forces that have been adversely influencing mass transit for more than a decade.

One of the most important of these was the increasing competition of the automobile. This stemmed from growing incomes, the movement of population to the suburbs, the proliferation of suburban sites of employment, the decline of downtown shopping areas, and the deterioration of mass transit services themselves.

During the last three years, the already poor financial situation deteriorated even further because of the influence of newly-emerging forces. Among these were:

- 1.) inflation generally, but more particularly the rapidly mounting cost of labor;
- 2.) the downward trend in passengers on certain facilities resulting from fare increases which were expected to raise revenues by an amount greater than that actually realized;

- 3.) the slow-down in economic activity;
- 4.) the high cost of protection against crime.

As a result the gap between passenger revenues and operating costs and debt service of the mass transit system had grown to \$420 million by 1970 (Table II-1). This amount, shown in the table, represents an increase of \$243 million since 1963, with more than half the increase occurring over the last two years. The size of the deficit is still rising rapidly on the basis of the data now available for fiscal 1971 and 1972.¹

Mass transit operations in New York City (excluding private buses) accounted for about 85 per cent of the region's deficit. The remaining 15 per cent was mainly due to the LIRR and PATH, with New Jersey's commuter railroads accounting for about 2.5 per cent.

In 1963 the deficit was financed almost entirely from the general funds of state and local governments, with some contributions from surpluses of public authorities and public and private bus companies. The aid from all these sources increased markedly over the last decade.

By 1970 the deficit, even after these injections of funds, was almost \$90 million.

There was recourse to devices such as borrowing for current operations, postponement of payments to pension funds, and delay in payment of outstanding liabilities. Clearly, such methods of financing offer no long-run solution to the financial problems of the system.

¹ Estimates of deficits for these and future years are found in Chapter III.

TABLE VI-1
DEFICIT OF MASS TRANSIT, EXCLUDING SUBSIDIES
1969-70
(millions of dollars)*

	Erie Lacka- wanna Rail- road(a)	Penn- Central Northern N.J.(b)	Central Railroad of N.J.(c)	Reading Rail- road(d)	Port Authority Trans -Hudson (PATH)(e)	Long Island Rail- road(f)	Penn Central Harlem & Hud- son(g)	New Haven (West End)(h)	Staten Island Rapid Trans- sit(i)	New York City Trans- sit(j)	New York City Sur- face(k)	Man- hattan & Bronx Surface Trans- port- ation Auth.(l)	Private Bus Compan- ies(m)	Total
Revenues														
Passenger	10.4	8.9	4.0	.2	11.6	75.1	30.7	26.7	1.6	311.8	86.7	89.2	206.4	863.3
Other	.6	1.0	.1	-	-	12.7	-	-	2.0	8.5	.7	1.6	3.5	30.7
	11.0	9.9	4.1	.2	11.6	87.8	30.7	26.7	3.6	320.3	87.5	90.8	209.9	894.0
Expenses, excluding depreciation and debt service	15.5	11.7	8.0	.3	17.8	108.0	32.7	31.8	5.2	466.5	122.7	90.0	195.4	1105.6
Other Adjustments	-	-	-	-	-	-	-	-	.5(n)	3.1(o)	-	-	11.0(p)	16.9
										1.8(o)				
										.5(o)				
Deficit, before depreciation and debt service	4.5	1.8	3.9	.1	6.2	20.2	2.0	5.1	2.1	151.6	35.2	(.8)	(3.5)	228.5
Debt Service	-(q)	-(q)	-(q)	(q)	3.9	-(q)	-(q)	-(q)	.5	167.6	-(r)	-(r)	-(q)	172.0
Deficit, before depreciation	4.5	1.8	3.9	.1	10.1	20.2	2.0	5.1	2.6	319.2	35.2	(.8)	(3.5)	400.5
Depreciation	-(s)	-(s)	-(s)	(s)	2.1	4.1	-(q)	2.0	.2	(t)	(t)	-(t)	11.3	19.7
Deficit, after debt service and depreciation	4.5	1.8	3.9	.1	12.2	24.3	2.0	7.1	2.8	319.2	35.2	(.8)	7.8	420.1
Percent of Total	1.1	0.4	0.9	*	2.9	5.8	0.5	1.7	0.7	75.9	8.4	(0.2)	1.9	100.0

*does not add due to rounding

- (a) Appendix Table V-A.10 (1969)
(b) Appendix Table V-A.11 (1968)
(c) Appendix Table V-A.12 (1969)
(d) Appendix Table V-A.13 (1969)
(e) Appendix Table V-A.19 (1969)
(f) Appendix Table V-A.14 (1969) Exclusive of expenses of MTA
(g) Appendix Table V-A.16 (1968)
(h) Appendix Table V-A.17 (1971)
(i) Appendix Table V-A.18 (1969)
(j) Appendix Table V-A. 2 (1969-70)
(k) Appendix Table V-A. 4 (1969-70)
(l) Appendix Table V-A. 5 (1969-70)
(m) Appendix Table V-A.21 (1970) Excludes Port Authority expenses on bus terminal.
(n) Expenses of SIRT shown net of \$.5 million New York City subsidy (Appendix Table VI-A.9)

- (o) The \$1.8 million represents the amount which the City paid to the NYCTA for transportation of police and firemen on rapid transit and surface lines (Appendix Table V-A.1). This amount was shown as a reduction in expenses for rapid transit (Appendix Table V-A.2). Therefore, in order to avoid understating expenses, this amount must be added back to the expenses of rapid transit. \$3.1 million represents the amount paid by New York City for the purchase of railroad cars originally purchased by the Authority. This payment is, in effect, debt service (Appendix Table V-A1). The \$.5 million consists of \$.4 million and \$.1 million paid by New York City for transportation expenses incurred prior to the organization of the NYCTA (Appendix V-A.1).
(p) Aid from the City of New York that is included in revenues (Appendix Table VI-A.9).
(q) not available
(r) included in NYCTA—rapid transit
(s) depreciation not relevant to avoidable cost studies
(t) depreciation not recorded in accounts.

TABLE II-2
DEFICIT OF MASS TRANSIT, AFTER SUBSIDY
1969-70
(millions of dollars)

	Erie Lackawanna Railroad	Penn- Central North- N.J.	Central Rail- road- of N.J.	Read- ing Rail- road	Port Auth. Trans- Hudson (PATH)	Long Island Rail- road	Penn Central & Hud- son	New Haven (West End)	Staten Island Rapid Trans- sit	New York City Transit Auth. Rapid Transit	New York City Transit Auth. Sur- face	Man- hattan & Bronx Surface Trans- portation Auth.	Private Buses	Total	Percent of Total Deficit
Operating Deficit, After Debt Service and Depreciation	4.5	1.8	3.9	.1	12.2	24.3	2.0	7.1	2.8	319.2	35.2	(0.8)	7.8	420.1	100.0
Operating Subsidies															
States (a)															
New Jersey (b)	4.9	-(c)	4.4	.1	-	-	-	-	-	-	-	-	-	9.4	2.2
New York	-	-	-	-	-	2.3(e)	-	-	-	-	-	-	-	2.3	.5
Local Governments															
City of New York	-	-	-	-	-	-	-	-	1.2(g)	250.4(h)	25.0(i)	10.1(g)	11.0(g)	297.7	71.0
Other	-	-	-	-	-	9.3(d)	-	-	-	-	-	-	-	9.3	2.2
Port Authority of New York	-	-	-	-	10.1(f)	-	-	-	-	-	-	-	-	10.1	2.4
Metropolitan Trans- portation Authority	-	-	-	-	-	1.4(j)	-	-	-	-	-	-	-	1.4	.3
Operating Deficit, After Subsidies	<u>(0.4)</u>	<u>1.8</u>	<u>(.5)</u>	<u>*</u>	<u>2.1</u>	<u>11.3</u>	<u>2.0</u>	<u>7.1</u>	<u>1.6</u>	<u>68.8</u>	<u>10.2</u>	<u>(10.9)</u>	<u>(3.2)</u>	<u>89.9</u>	<u>21.4</u>
Percent of Total	(.5)	2.0	(.6)	*	2.3	12.7	2.2	7.9	1.8	76.5	11.3	(12.1)	(3.6)	100.0	-

(a) Tax Relief is excluded.

(b) Source: Appendix Table VI-A.2 (1969)

(c) In lieu of an operating subsidy, the State provides a capital subsidy for Penn Central. State's portion of capital projects initiated in the period, 1967-70, is \$5.9 million.

(d) Includes \$5.8 million in assessments against municipalities for station maintenance and \$3.5 million in aid from mortgage recording tax (Counties). Part of \$5.8 million provided by City of New York (Appendix Table V-A.3).

(e) Source Appendix Table VI-A.3

(f) Source Appendix Table VI-A.6

(g) Source Appendix Table VI-A.9

(h) Includes \$77.4 million (Appendix Table V-A.2) plus \$3.1 million for purchase of cars and \$1.8 million reimbursement for transportation of police and firemen. (Appendix Table V-A.1). Part of the latter figure should be allocated to Surface Transportation but no breakdown is given. This amount also includes \$167.6 million in debt service.

(i) Source Appendix Table V-A.4

(j) Net of \$2.3 million in state aid (See 1969 MTA Annual Report and Appendix Table V-A.15)

Table II-2 presents an analysis of the mass transit subsidy and the deficit after subsidy. Seventy-one per cent of the total subsidy in the region was provided by New York City. New Jersey, local governments in New York State, and the Port Authority each accounted for about 10 per cent of the subsidy.

After the subsidy, the deficit of New York City's facilities amounted to about 77 per cent of the total. New Jersey's railroads broke even after subsidy. The remaining deficit is due mainly to the LIRR and the New Haven (West End) commuter service.

Future Needs of the Mass Transit System

IMPORTANT STEPS HAVE ALREADY BEEN taken by all levels of government as well as by transit organizations to resolve the existing crises in financing mass transportation.¹ However, much more must be done now and in the future.

NATURE OF THE MASS TRANSIT DEFICIT

Chronic deficits characterize the mass transit industry in the region and the nation as a whole. The peaking problem which is discussed in more detail in Chapter IV is a major cause of the deficit situation. Resources which are fully utilized for four to six hours each working day during peak hours remain largely idle during other periods. Since these resources must be paid for on a full-time basis, cost behavior in the mass transit industry is unlike that in most other industries.

To make conditions worse, the peaks have become more accentuated over the past decade. The increase in automobile use resulting from improved economic conditions, better highways, the decentralization of residences and shopping, have reduced off-peak travel. Further declines in off-peak demand were caused by fare increases. And the advent of the five-day work week led to further concentration of traffic.

Another very important factor having an adverse effect on the mass transit industry is slow growth in productivity of both labor and capital. Since wage rates tend to rise by the same proportion in all sectors, the mass transit industry is therefore plagued by ever-increasing deficits. The lag in productivity is at least

partly the result of a variety of work rules relating to wage payments. These arrangements have increased operating costs and have retarded technological change.

There are indications that labor and management may begin to negotiate work rules that will improve productivity. The recent contracts between the United Transportation Union and the nation's railroads, and between the Transportation Workers Union and the MTA, and the organization of a joint labor-management team to examine work rules on the operations of the Central Railroad of New Jersey are encouraging.

Substantial cost savings are possible only by making the system more automated. However, the Commission is aware that investment in automated equipment must be gradual and that, in some cases, the cost of automation may be prohibitive. Automated systems require additional police protection and repairs as well as huge initial investment costs. In the short run, increased automation may not be economically feasible. However, new equipment and facilities should be designed to be compatible with an automated system.

Productivity also can be increased under existing conditions. The January 1971 report of S. D. Leidersdorf & Co. on the Long Island Railroad entitled, "Recommendations Designed to Safeguard Assets More Effectively, Improve Accounting Procedures, and Strengthen Control Over Operations," enumerated various measures that could be taken to increase productivity. The applicability of this report to other mass transit facilities should be investigated. The recent study of the New York City subway system is also rele-

¹ See Chapter VI.

vant to this subject.¹ In addition, many other recommendations relating to increasing productivity have been made in past studies and these should be analyzed and implemented when feasible.²

The Commission urges that appropriate transit organizations make every effort to slow down the rate of increase in operating deficits by improving labor productivity and the productivity of capital. At the same time, the Commission does not believe that the mass transit system can solve its financial problems internally. Thus, new facilities will improve service but will not decrease deficits.³ Even if all automobile users were diverted to mass transit for the journey to work, the mass transit deficit would not be materially decreased (Appendix Table III-A.5 and III-A.6).

FUTURE NEEDS

Even with improved productivity and efficiency, additional monies will be needed to maintain the mass transportation system of the region, to make modest improvements, and to make necessary additions to the services.

Operating Needs:

The future operating needs of the mass transportation system in the Tri-State Metropolitan region are presented in the table below. For the period 1972-1985, we will need more than \$13.590 billion to finance the operating deficits.

The Commission used the following procedures to estimate the operating deficits of mass transit operations:

1.) Revenues—before and after subsidies—and expenditures for each facility—all private bus opera-

TABLE III-1
TRI-STATE REGION
MASS TRANSIT SYSTEM
ESTIMATES OF OPERATING DEFICIT
1972-1985 (millions of dollars)

Year	Deficit Before Subsidy
1972	390
1973	430
1974	480
1975	530
1976	620
1977	710
1978	800
1979	900
1980	1,000
1981	1,180
1982	1,360
1983	1,540
1984	1,730
1985	1,920
TOTAL	13,590

tions were treated as a single facility—were first extrapolated for 1975, 1980 and 1985 on the assumption that their rate of growth would be the same as between 1968 (in 1970 dollars) and 1970. This is spelled out in Appendix Table III-A.1.

2.) Revenues and expenditures were also extrapolated on the assumption that the rate of growth would be the same as between 1963 (in 1970 dollars) and 1970. This is detailed in Appendix Table II-A.2.

3.) The deficits resulting from these two calculations were averaged and converted from constant 1970 dollars to current dollars on the assumption that prices would increase at 4 per cent per annum. The averaged figures are the basis for the estimates used above.

4.) Debt service charges and depreciation were excluded from the estimates. It is assumed that debt service costs on outstanding indebtedness have been built into the budgetary systems of the various agencies. The financing of new capital projects is to be taken up separately.

¹ R. Michael Robbins, Olof Kekonius, W. Howard Patterson, "Report of Panel Appointed to Study the Safety of Train Operations on the Subway System of the New York City Transit Authority," November 13, 1970.

² For example, numerous recommendations to secure economies in bus operations can be found in the literature on the industry. See Appendix B.

³ For example, the new Lindenwold line diverted substantial numbers from other forms of mass transit and the proposed Second Avenue Subway extension is expected to have a similar effect.

5.) In the short run, expenditures may be expected to grow at a rate close to the one for the period, 1968-1970. However, in the long run, the steps presently under way to improve the efficiency of mass transportation will tend to reduce the growth rate in expenditures below the 1968-1970 rate. The Federal government's recent moves to curb inflation and to tie wage increases more closely to productivity changes, will also tend to produce the same impact.

6.) Averaging the two rates of growth of 1968-1970 and 1963-1970 will yield forecasts, in our judgment, that will be in keeping with this assumed course of events.

Capital Outlay Needs:

The capital outlay needs of the mass transportation system for the period 1972-1985 is \$7.3 billion.

**TABLE III-2
TRI-STATE REGION
MASS TRANSIT SYSTEM
ESTIMATES OF CAPITAL OUTLAY
1972-1985 (millions of 1971 dollars)**

Year	Capital Outlay
1972	300
1973	300
1974	400
1975	400
1976	500
1977	500
1978	500
1979	600
1980	600
1981	600
1982	600
1983	600
1984	700
1985	700
TOTAL	7,300

These estimates are based on the region's capacity to plan and construct new capital facilities. It assumes a capital program starting with outlays of \$300 million (about twice the current expenditure) in 1972 and building up to an outlay of \$700 million by 1984.

MEETING FUTURE NEEDS

The Governors' Special Commission concludes that:

1.) If existing subsidies and funds continue to be made available for mass transportation, and

2.) If the recommendations of this report are adopted and put into effect, there will then be enough money to meet the estimated mass transit deficits of the Tri-State Metropolitan region for the next ten years. There will also be enough money available for capital outlays provided that the Commission's recommendations are put into effect, especially by the Federal government.

Operating Deficits:

If the Commission's recommendations are heeded and used, our region will move into the 1980s with only a reasonable adjustment in fares above their present level. Table III-3 on the following page and the Notes to Table III-3 provide support for this conclusion.

The estimates incorporate the effect of the emergency legislation recently enacted in New York State.¹ It can reasonably be assumed that this legislation, in addition to the fare increases instituted on bus lines in Connecticut and New Jersey, will be adequate to meet the deficit for 1972 and 1973 at which time some of the revenue recommendations made by the Commission must be adopted.

It is assumed that the federal transportation tax credit will not be authorized until 1974. This delay will result in deficits for the intervening years which can be met from loans mentioned in the footnote below. It is also assumed that the recommendation relating to the imposition of tolls on free river crossings will be adopted by 1974; those relating to a rational fare structure by 1975; and the recommendation relating to the maintenance of rights of way by 1976.

¹ Included in the calculations made in Table III-3 are: a) the 5-cent increase in fares on NYCTA operations; average increase of fare of up to 20 per cent on commuter lines; c) increase in tolls of TBTA to be shared by NYCTA and commuter lines and putting payments on a current basis. Not included are the loans of \$100 million each from New York City Sinking Funds and from New York State.

The adoption of these recommendations, together with a fare adjustment in 1979, provides a positive

approach to financing the operating deficit of mass transit for the next decade.

TABLE III-3
**ESTIMATE OF OPERATING DEFICITS AND
 SOURCES OF FUNDS FOR MEETING THESE DEFICITS
 MASS TRANSIT FACILITIES—TRI-STATE REGION**
 Fiscal Years, 1972 - 1981(a)
 (in millions of current dollars)

Year	Deficit Before Subsidies	SOURCES OF FUNDS TO MEET DEFICITS						Fare Increase	Total
		Existing Level of Subsidies	Maintenance of Right of Way	Bridge Toll Increases	Rational Fare Structure	Transportation Tax			
1972	390	140	-	70	-	-	60	270	
1973	430	140	-	80	-	-	120	340	
1974	480	140	-	120	-	100	120	480	
1975	530	140	-	120	50	100	120	530	
1976	620	140	150	130	50	100	120	690	
1977	710	140	160	130	60	100	120	710	
1978	800	140	170	140	70	120	120	760	
1979	900	140	180	140	70	140	240	910	
1980	1,000	140	200	150	70	280	240	1,080	
1981	<u>1,170</u>	<u>140</u>	<u>220</u>	<u>160</u>	<u>80</u>	<u>280</u>	<u>240</u>	<u>1,120</u>	
TOTAL	<u>7,030</u>	<u>1,400</u>	<u>1,080</u>	<u>1,240</u>	<u>450</u>	<u>1,220</u>	<u>1,500</u>	<u>6,890</u>	

(a) All Estimates Have Been Rounded Off To The Nearest \$10 Million.

NOTES TO TABLE III-3

Table III-3 is based on the following assumptions:

- 1.) The existing levels of subsidies to mass transportation have been built into the budgetary systems of the contributing agencies, and these funds will be forthcoming in the future.
- 2.) The cost of maintaining rights of way were estimated by extrapolating maintenance costs by the same procedure as total expenditures were estimated in Chapter III of this report. Legislation providing these funds will be enacted by 1975 and the money for meeting these costs will come from the general funds of the states.
- 3.) The \$70 million in 1972 consists of: \$25 million in increased tolls (one-half fiscal year); \$25 million from existing tolls (full year) which are now being used for mass transit purposes; and \$20 million in advance payments from existing tolls. In 1974, an additional \$25-\$30 million is expected from the imposition of tolls on free river crossings. Further increases in the yield in bridge tolls were estimated by projecting the estimate of current yield on the assumption of an approximate 50 per cent increase in traffic during the next ten years.

4.) The differential on-peak, off-peak, and zone fares will not be introduced in New York City until 1975. No funds from this source have been estimated for the years 1972-1974.

5.) Initially, it is assumed that New York City imposes the transportation tax in 1974—at the rate of \$25 per individual. When other larger localities in the region begin to impose the transportation tax, the yield is assumed to increase. In 1980, the tax is increased to \$50 per individual. If the transportation tax is in fact imposed even on only the 8,500,000 employees—not all income-earning individuals—everywhere in the region, more than \$200 million would be made available at once. The estimated yields therefore actually underestimate anticipated revenues from this source.

6.) The 1972 figure consists of \$40 million from recent 5-cent New York City subway fare increase and \$20 million from other recently proposed fare increases. Figure for 1972 is on a one-half year basis. It is assumed that fares will be increased again by the same amount in 1979.

Financing Capital Outlay:

Table III-4 below shows how the capital outlay needs of the Tri-State Metropolitan region will be met if the Commission's recommendations are adopted. This plan is based on the very important assumption that the Federal government modifies its present policies and increases its share of participation to 90 per cent of project costs in integrated, regional transportation programs. This allocation percentage was recommended by the Commission. This would bring the federal contribution to mass transportation into line with the 90 per cent contribution to interstate highways.

TABLE III-4
FINANCING OF THE \$7.3 BILLION
CAPITAL OUTLAY PROGRAM
THE TRI-STATE REGION
90 PERCENT FEDERAL
PARTICIPATION
(millions of 1971 dollars)

Year	Capital Outlay Estimates	State and		Federal Pay-as-you-go	Bonds
		Local	Pay-as-you-go		
1972	300	30	140	130	130
1973	300	30	130	140	140
1974	400	40	100	270	270
1975	400	40	70	290	290
1976	500	50	30	400	400
1977	500	50	—	450	450
1978	500	50	—	450	450
1979	600	60	—	540	540
1980	600	60	—	540	540
1981	600	60	—	540	540
1982	600	60	—	540	540
1983	600	60	—	540	540
1984	700	70	—	630	630
1985	700	70	—	630	630

Initially, it is assumed that the Federal government will divide its contribution between cash grants—pay-as-you-go—and debt service on bonds. These bonds would be issued by state governments and the debt service paid by the Federal government. The figure for federal bonds in table III-4 therefore represents the amount that may be borrowed under the assumed federal debt service payments. This method of financing capital outlay would give the region much more leverage, enabling the commitment of larger initial amounts of capital investment.

The use of federal funds to pay debt service on bonds is one of the key recommendations of the Commission.

Thus, the total federal contribution to mass transit capital programs in the region will consist of grants and debt service on federally-supported bonds. The detail is given below:

TABLE III-5
FINANCING OF THE \$7.3 BILLION
CAPITAL OUTLAY PROGRAM
THE TRI-STATE REGION
ANNUAL FEDERAL CONTRIBUTION
(millions of 1971 dollars)

Year	Pay-as-you-go	Debt Service On Federally- Supported Bonds	Federal Total Contribution
1973	130	20	150
1974	100	50	150
1975	70	80	150
1976	30	120	150
1977	—	150	150
1978	—	190	190
1979	—	240	240
1980	—	290	290
1981	—	340	340

In 1972 there would be an estimated capital outlay of \$300 million in 1971 dollars. State and local contributions from existing measures and additional measures recommended by the Commission would amount to \$30 million. The federal contribution for 1972 would break down to \$140 million in pay-as-you-go grants and \$130 million in federally-supported bonds.

By 1977, against the capital outlay estimate of \$500 million, there would be \$50 million in state and local contributions and \$450 million in one form or another of bonds to balance the account. Pay-as-you-go will have been phased out. By 1981, the capital outlay of \$600 million would be met by \$60 million in state and local bonds and \$540 million from bonds to be financed by federal debt service payments.

The proposed federal revenue-sharing program for the nation's mass transit system amounts to \$500 million for 1972. If this amount were to be increased by 50 per cent to \$750 million, and if the allocation to the region were to increase from 18.3 per cent, as under the formula proposed by President Nixon, to 20 per cent, the federal contributions recommended in Table III-5 would be met until 1977. The estimate of the federal contribution therefore seems reasonable to the Commission.

Increased federal contributions will be required in the latter part of the 1972-1981 period. If the region were to receive 20 per cent of the national totals, which is in line with population and other factors, the

maximum annual federal contribution to the whole country's mass transit needs would be \$3 billion. But—even at this level, the national cost of mass transportation would still fall far short of the monies currently invested in our highways.

The state and local share of capital project outlay can be met under existing and planned budgetary conditions for the next two years, even if there should be a delay in the enactment of the recommended Federal legislation. However, for the success of the complete program, the authorization of a transportation bond issue in New York State with at least \$1.25 billion available for mass transportation is essential. This bond issue, in conjunction with the enactment of a contemplated bond program in New Jersey, the monies derived from the utility tax in Connecticut, and the funds presently obligated by the City of New York and other localities, would then be sufficient to meet the state and local share of capital projects.

Basically, however, the challenge is overridingly for the Federal government to reverse the imbalance between the finances of highway and mass transportation.

If the Commission's recommendations are in fact adopted, the region's mass transit needs during the next decade can be met.

The problems of mass transportation *can* be solved.

The quality of the lives of 19 million people *can* be enhanced.

Mass Transit Today

THE TRI-STATE REGION encompasses an 8,677-square mile area, including 22 counties, six planning regions, and 600 local governments in the states of Connecticut, New Jersey, and New York.

The region contains nearly 19 million people who live in 6.1 million dwelling units. Seventy-five per cent of the population of New Jersey lives in the region, 67 per cent of the population of New York and 52 per cent of the population of Connecticut.

Urban development is spread unevenly over the land area of the region and almost one-half of the population lives in the central core of the region. This comprises five per cent of the land area. Almost one-quarter of the labor force, approximately 2 million people, travel each weekday to the 9-square mile area south of Central Park in Manhattan.

In spite of its diversity and number of political units and subdivisions, the parts of the region are economically interdependent. In spite of its recent, highly-publicized decline, Manhattan is still very much the major connecting link. Manhattan also provides the job opportunities that fuel the economic growth of the surrounding area.

On the other hand, Connecticut, New Jersey, and upstate New York counties provide New York City with its invaluable supply of labor and managerial talent, markets for its products, and important transportation routes to other markets elsewhere in the United States and the world.

MASS TRANSIT OPERATIONS¹

Mass transportation operations in the Tri-State Metropolitan region include these facilities:

1.) Urban rail rapid transit systems—the New York subways, the Port Authority Trans-Hudson tubes, the Staten Island Rapid Transit System, and the Newark City Subway in New Jersey. These facilities distribute suburban passengers within the core and provide transportation for in-city riders.

2.) Six commuter rail carriers—the Long Island Railroad, the Penn-Central, the New Haven Railroad (West End), the Penn-Central Harlem and Hudson Division, the Erie-Lackawanna, Penn-Central and Central Railroad of New Jersey. These facilities feed into the core of the region.

3.) Publicly- and privately-owned bus companies perform, in part, the same role as the commuter rail carriers and the in-city rail rapid transit system. They also serve as the major means of mass transportation between areas outside the core of the region.

These facilities in the year 1969-70 transported more than 2.7 billion passengers.

Rapid transit and buses each accounted for some 47 per cent of this staggering number of people. Commuter railroads serviced the remaining 6 per cent.

¹ Appendix Table IV-A.1

To provide the necessary services, the mass transit industry used more than 21,000 rapid transit and commuter railroad cars and buses. The industry currently employs approximately 77,000 people.

THE TRANSIT TRIP¹

On weekdays, slightly more than 70 per cent of transit trips in the urbanized area of the Tri-State region are still made by automobile. But most of these trips, in fact, 97 per cent of them, are made outside the central business districts of Manhattan, Brooklyn, and Newark.

Automobiles are primarily used for shopping, school transportation and social trips.

In Manhattan, the automobile accounts for approximately one in four of vehicular destinations. Trucks and taxis account for the remaining three-quarters of the trips.

For trips into and out of the central business area, automobiles account for 11 per cent of transit trips. Mass transportation in our region accounts for approximately 82 per cent of these trips.

A similarly-interesting pattern is revealed if trips destined for Manhattan are considered alone. Approximately 80 per cent of these trips are made by mass transit and 13 per cent by private automobile. In addition, however, only 5.5 per cent of trips in Manhattan are by private automobile originating outside the island; only 2.1 per cent originate in suburban areas.²

The major mass transit mode in and out of the central business district is rapid rail transit. The New York City subways account for 68.9 per cent of mass transit trips. PATH, SIRT and the Newark City Subway contribute an additional 3.3 per cent.

Buses make 20.5 per cent of the mass transit trips and the commuter railroads the remaining 7.3 per cent.

A significant proportion of subway riders also have automobiles at home. Approximately 41 per cent

of New York City residents and 90 per cent of suburban residents who ride the subway also own automobiles. A sizeable number of individuals use mass transportation for trips to work and use their cars for most if not all other purposes.

A common characteristic of mass transit trips is the concentration of peak-hour traffic. Sixty-four per cent of all mass transit trips originate during six hours of the week day: 7 A.M. to 10 A.M., and 4 P.M. to 7 P.M. But only 43 per cent of automobile and taxi trips originate during these peak hours.

The commuter railroads suffer through the most remarkable peak-hour concentration: 76 per cent of all week day trips originate during the six peak hours. The subways have a 67 per cent concentration and the buses 56 per cent. All this has a critically adverse effect on the cost structure of mass transportation.

This review of mass transit usage in the Tri-State Metropolitan region has disclosed three basic characteristics:

1.) Mass transportation plays an indispensable role in bringing people to and from work during peak hours. This peaking problem is a fundamental cause of the crisis in mass transportation financing, much as it is a fundamental cause of the misery of so many passengers.

2.) The use of mass transit during off-peak hours is considerably lower than the use of automobiles.

3.) The private automobile accounts for a relatively minor proportion of transit trips during peak hours. To get drivers "off the road" and into mass transit will therefore not solve the problems of financing in a single stroke even though it would reduce the traffic jams, cut down atmospheric pollution, and make urban living more enjoyable.

The Commission will now proceed to a detailed description of how the mass transit of the Tri-State Metropolitan region is organized.

THE ORGANIZATION OF MASS TRANSIT

Major progress has been made in recent years toward coordination of transportation planning and administration (Chart IV-1), page 52, Appendix A. The

¹ Appendix Tables IV-A.2 and IV-A.3

² Tri-State Regional Planning Commission, Regional Profile: Subway Riders and Manhattan Autos, September, 1971.

G-L boxes in the chart portray the Governors and Legislatures of the States of New Jersey, New York, and Connecticut. PUC stands for the Public Utility Commissions of New Jersey and Connecticut. Here is a break-down of the roles and missions of some of the other organizations decisively involved in our mass transportation today:

State Departments of Transportation (DOT):

The job of coordinating and developing a comprehensive and balanced transportation policy for highways, mass transit, marine and aviation facilities is now centralized in a Department of Transportation in each state.¹

In 1971, the New York Department of Transportation also took over the regulation of privately-owned public transit facilities. This had previously been a function of the Public Service Commission.

The Department's new duties with regard to mass transportation include regulation of bus and rail passenger fares and the inspection of public carriers.

In New Jersey and Connecticut, the Public Utility Commissions perform these functions.

New Jersey Commuter Operating Agency:

The Act creating the New Jersey Department of Transportation also set up a Commuter Operating Agency within the department. This agency consists of four members. These are the Commissioner and Assistant Commissioner of Transportation, the State Treasurer, and the President of the Board of Public Utility Commissioners.

This agency has the general supervisory authority to enter into contracts with railroads and bus companies on matters involving the expenditures of public monies. Categories of expenditure would include current operations, and capital outlay to conserve and improve passenger service. All requests for changes in subsidy agreements, fare increases, and service charges are made through this agency.

The Metropolitan Transportation Authority (MTA):

¹ Before 1966, the transportation functions in New Jersey were centralized in the Department of Highways. New York organized its department in 1967 and Connecticut established a similar agency in 1969.

The MTA was created by the New York State Legislature in 1965. It was originally named the Metropolitan Commuter Transportation Authority. Its mandate was to draw up and carry out a program to insure the continuance, further development and the improvement of commuter transportation in the 12-county metropolitan commuter district.²

The MTA's first major move was to purchase the Long Island Railroad in January 1966.

Effective March 1, 1968, the jurisdiction of the Authority was expanded. It now provides policy and operating direction for the following agencies:

1.) Long Island Railroad

2.) The New York City Transit Authority and its subsidiary, the Manhattan and Bronx Surface Transit Operating Authority.

These facilities, used by these agencies, are owned by the City of New York and include the subway system and all publicly-owned bus operations in the City.

3.) The Staten Island Rapid Transit Operating Authority. This facility was recently purchased by the City from the C & O - B & O Railroad.

4.) The West End Commuter Service of the New Haven (in cooperation with the Connecticut Transportation Authority).

5.) The Harlem and Hudson lines of the Penn-Central (contract pending).

6.) The Triborough Bridge and Tunnel Authority, which operates seven bridges, two tunnels, two public garages, a parking field, an airlines terminal building, and the New York Coliseum.

The MTA also has broad responsibility to operate general aviation airports in the suburban section of the region, to plan inter-modal transportation centers, and to develop two new bridges across Long Island Sound.

The members of the Board of the MTA are appointed by the Governor with the consent of the Senate for eight-year overlapping terms. Three of these members are recommended to the Governor by the Mayor of the City of New York. The same Board is also ex-officio the board of the authority's constituent agencies. MTA's Chairman also serves as Chief Exec-

² The counties in the New York portion of the region covered in this study.

utive Officer of all the agencies. This form of organization facilitates unified policy. Each constituent agency, however, is responsible for its own operations and management.

The Authority is required to establish fares, tolls, and other fees which are necessary to maintain the combined operations of the Authority and its subsidiary corporations on a self-sustaining basis. Operations are defined as self-sustaining when the Authority is able to pay from the funds available to it and its subsidiaries:

- 1.) the principal and interest on bonds, notes and other obligations, as they become due, together with the maintenance of proper reserves,
- 2.) the cost of keeping the property of the authority and its subsidiaries in good condition and repair, and
- 3.) the capital and operating expenses of the authority and its subsidiaries.

Connecticut Transportation Authority (CTA):

The Connecticut Transportation Authority was established in 1963 to provide for the preservation and improvement of essential railroad services either within Connecticut or originating or terminating in the State. In 1967, the Authority was given additional powers to support essential motor bus services threatened with interruption or cessation.

The CTA was incorporated into the Department of Transportation "to advise and assist the Commissioner in the performance of his functions and duties relating to planning, development and maintenance of adequate rail and motor carrier facilities in the State". The administrative functions related to the Department's program to preserve, support, and improve essential rail and public transportation services are now taken care of by the Bureau of Rail and Motor Carrier Services. This bureau also provides staff assistance to the CTA.

The Port of New York Authority (PA):

The Port Authority took over the bankrupt Hudson and Manhattan Railroad (the surviving company is Port Authority-Trans Hudson Corp.) in 1962. The legislation enacted in New Jersey and New York em-

powered the PA to proceed with this acquisition, modernization, and operation. It also protected the Port Authority's credit rating by including a covenant. This limited the amount that the PA may contribute to financing the deficits of any future railroad projects.

There has been—and there is—much dispute over the restrictive nature of this covenant. The critics of the Port Authority clearly feel there should be much greater participation by the profitable PA in mass transit operations.

In any event, although all issues relative to PA participation have not yet been resolved, the legislatures of New Jersey and New York have approved PA construction of access lines to Newark and John F. Kennedy International Airports. At the same time, the construction of an additional railroad tunnel under the Hudson River is under active consideration.

The City of New York (NYC):

The City of New York owns the properties managed by the New York City Transit Authority (NYCTA), the Manhattan and Bronx Surface Transit Operating Authority (MABSTOA), the Triborough Bridge and Tunnel Authority (TBTA) and the Staten Island Rapid Transit Operating Authority (SIRTOA).

The capital programs of these organizations are financed from the City's capital budget, aided by federal and state grants. Therefore, these agencies must have their capital outlay plans approved by the City Planning Commission, the Board of Estimate, the Office of the Mayor (the Transportation Administration serves as liaison), and by the City Council. Contracts for work on projects must be approved by the Transportation Administration and Comptroller and payments on contracts must be authorized by the Comptroller.

Private Bus Operations:

In 1969, there were 271 private bus companies operating in the region. Of these, 188 were in New Jersey, 57 in New York (including seven operating solely within New York City) and 26 in Connecticut.

These bus operations account for about 15 percent of the annual mass transit volume.

They are the only remaining privately-owned mass transit facilities in the Tri-State Metropolitan region.

The Tri-State Regional Planning Commission (TSRPC):

This Commission was established in 1971 by the legislative action of New Jersey, New York and Connecticut. It succeeds the Tri-State Transportation Commission, which was formed by the legislatures of these states in 1965. This in turn was preceded by the Tri-State Transportation Committee organized by the Governors of the three states.

Although it is not directly concerned with mass transit operations and financing, the TSRPC plays a coordinating role in regional planning. It has been designated as the official planning agency for the Tri-State region by several departments of the Federal government.

The Bureau of the Budget has designated the TSRPC as the metropolitan clearinghouse, in effect, with the responsibility of assuring that applications for federal assistance in 50 categories will be thoroughly reviewed. There must be a careful check for consistency with state, regional, and local plans before the federal grants are awarded.

In the year ending March 30, 1971, this Com-

mission reviewed grant applications for projects valued at more than \$1 billion in capital construction.

Approximately two-thirds of the cost of the Commission's planning work is financed by the Federal government. Highway planning aid is administered by the federal Department of Transportation, for example, and urban planning assistance by the federal Department of Housing and Urban Development.

The three states of the region pay an approximate share of total costs out of their own funds in these percentages: New Jersey, 15 per cent; New York, 15 per cent; Connecticut, 3 per cent.

Costs for the mass transit tests and demonstration work performed by the TSRPC are shared differently. The Federal government underwrites two-thirds of the cost, and in some cases up to 100 per cent. The states involved in the specific demonstration put up the remaining funds.

The Governors of the three states appoint commissioners of the TSRPC in accordance with the respective laws of the states. The federal representatives on the TSRPC are appointed by the appropriate official in the federal executive branch.

It is through the operations of such regional bodies that we move ahead rationally toward the re-ordering of our mass transportation system.

Financial Operations

THIS DETAILED DESCRIPTION of the actual, financial operations of the mass transportation system of the Tri-State Metropolitan region breaks down into three separate sections. These are:

- 1.) The operations of public transportation systems in New York City;
- 2.) The commuter railroads, Port Authority Trans-Hudson, and Staten Island Rapid Transit;
- 3.) The private bus operations.

THE NEW YORK CITY TRANSIT AUTHORITY (NYCTA) AND THE MANHATTAN AND BRONX SURFACE TRANSPORTATION OPERATING AUTHORITY (MABSTOA)

The New York City Transit Authority operates the subways and, along with its subsidiary MABSTOA, controls all publicly-owned buses in New York City. In 1969-1970, these facilities transported 70 per cent of all mass transit revenue passengers in the region. They accounted for approximately 61 per cent of all revenues and were responsible for 61 per cent of all operating expenditures. They contributed 50 per cent of the total investment in mass transit facilities.

The operating deficit of \$68 million represented about 62 per cent of the mass transit deficit in the region.

If this deficit is measured by limiting revenues to monies earned from the fare box, i.e. excluding aids

from governmental agencies and public authorities,¹ it rises to \$240 million or 70 per cent of the region's deficit, similarly computed.

In addition, if debt service is included as an expense, the expenditure-revenue gap becomes \$353 million or 84.1 per cent of the region's deficit (Appendix Table V-A-1).

The figures for the three deficits in 1962-63 were higher: 65.0, 72.0 and 97.5 per cent, respectively. This comparison reveals that the financial situation among the remaining mass transit facilities in the region is becoming more critical.

The excess of the cost of operations and debt service over fare-box revenues was met almost entirely in 1962-63 by appropriations from the General Fund of the City. However, in 1969-70 various bookkeeping devices were employed to help bridge about 28 per cent of the \$353 million deficit:

- 1.) \$44.0 million was borrowed from the City in the form of revenue anticipation notes.
 - 2.) The deficit was reduced \$11.7 million by increasing the amounts of money owed to the New York City retirement system.
 - 3.) The deficit was reduced \$42.7 million by increasing liabilities (Appendix Table V-A-6).
- The use of accounting procedures to reduce the deficit means that it is a matter of utmost urgency to find new sources of funds to finance the system.

¹ A detailed discussion of financial aid to mass transit by the City is found in Chapter VI.

Rapid Transit:

The subway system operated at a deficit throughout the entire period under consideration (Appendix Table V-A-2).

A sharp rise in the deficit in 1965-66 was caused by the January, 1966 transit strike. A marked improvement in 1966-67 was due to the fare increase and the lump-sum payment by the City of \$8.7 million for the transportation of policemen and firemen for the period 1961-67. However, the deficit exceeded \$65 million in each of the last two years and the combined deficit of \$135.9 million represented 47 per cent of the cumulative deficit over the eight fiscal years studied.

The effect of the 1966 and 1970 fare increases was more than fully dissipated by the cost spiral.

For the 1971 fiscal year, the deficit is estimated to be close to \$90 million.¹ For 1972, the deficit is expected to exceed \$147 million.

The deficit has continued to mount in spite of:

- 1.) the increasing contributions of the City for various services, from \$19.0 million in 1962-63 to \$77.4 million in 1969-70;
- 2.) the two fare increases during this period;
- 3.) the transfer of \$70.8 million of MABSTOA surpluses over the four year period, 1965-1969.

The rapid rise in the deficit during the last two years is attributable to several factors:

1.) Inflation generally. Operating expense per revenue vehicle hour increased from \$14.49 in 1962-63 to \$24.55 in 1969-70 (Appendix V-A-3). However, 46 per cent of this increase occurred during the last two years. The same picture emerges if operating expense per revenue passenger is used as a measure of cost; **passenger expense rose from 17¢ to 36¢, with 46 per cent of the increase taking place during the past two years.**

While the excess of expense over revenue per revenue vehicle hour was only \$2.25 in 1962-63, it

¹ For the fiscal year 1971 the City had a \$74 million surplus from the TBTA operations—a three-year accumulation—available to help finance the deficit. In addition, about \$16 million is expected to be available from the surplus of MABSTOA. However, windfalls of this nature will not occur the following year and various bookkeeping devices will again be resorted to in the absence of new sources for funds.

amounted to \$7.13 in 1969-70. Similarly, the difference between expense and revenue per revenue passenger increased from 2¢ to 11¢ over the same period.

2.) Growth in the cost of labor. Compensation of employees, including fringe benefits, increased from \$192.9 million in 1962-63 to \$394.3 million in 1969-70. While the average increase between the first five years of the period was \$22.3 million, the average increase per year during the last two years was \$45.1 million even though the number of employees remained fairly constant during the latter period.

3.) The high cost of crime protection. In 1962-63 the cost of transit police was \$8.7 million or 3.2 per cent of operating expense. **By 1969-70, \$58.2 million or 12.5 per cent of the cost of operations was spent for transit police. The cost of repairs due to vandalism adds \$2.5 million to the total cost.**

4.) Decline in number of revenue passengers. Although the fare in New York City is less than in 27 of the largest 45 cities in the United States, fare increases here have had the same depressive effect on ridership as elsewhere (Appendix Table V-A-23). The fare increases of 1966 and 1970, referred to earlier, decreased the number of passengers carried. The percentage decrease in regular passengers for the year before each fare increase and the year after is shown below:

TIME OF SERVICE	PERCENTAGE DECREASE	
	After July 1966 (from 15¢ to 20¢)	After Jan. 1970 (from 20¢ to 30¢)
Weekdays	1.9%	6.4%
Saturday	4.1	8.8
Sunday	1.0	8.5
All days	2.4	6.5

The decrease was much greater after the 1970 fare rise and generally had less of an effect on weekdays than weekends. The 10 cent increase in 1970, compared to the 5 cent increase in 1966, also contributed to the greater relative decline in 1970, although the increase in unemployment in the City also was partly responsible.

5.) Decline in productivity. New regulations, effective July, 1, 1968, permitted employees with 20 years

of service and aged 50 or over to retire on a pension equivalent to half the pay received in the last year of service. The new regulation has caused a large increase in retirements and a consequent influx of new employees with less experience in each grade of work in line of promotion.

The panel examining the safety record of the subways attributed this factor as the most important cause of the worsened breakdown record.

The panel also drew attention to the excessive amount of overtime which was, in part, an attempt to increase earnings of staff in their last year of service before retirement. The panel could find no other reason for "such a high general level of overtime in a service which is not short of staff."¹ Both of these findings suggest that productivity has declined.

NYCTA bus operations:

The bus operations of the NYCTA showed a profit from 1962-64 and in 1966-67 (Appendix Table V-A-4). However, for the other years the bus operations showed a deficit, even after including the payments made by the City.

The deficit for each of the past two years has exceeded \$10.5 million and their combined amount accounted for 95 per cent of the cumulative deficit for the entire period 1962-70.

For the current fiscal year the deficit is again expected to exceed \$10 million.

Buses account for about one-quarter of the passengers using the facilities of the NYCTA but account for only approximately one-eighth of the total deficit of the combined operation.

The factors causing the rapid rise in the deficit of the NYCTA bus operations are similar to those for the subway.

1.) Expense per revenue vehicle hour increased from \$8.07 in 1962-63 to \$13.94 in 1969-70. Approximately one-half of the \$5.87 increase occurred within the past two years (Appendix Table V-A-3).

2.) **The expense per revenue passenger increased**

from 15 cents in 1962-63 to 29 cents in 1969-70. Again, one-half of the increase occurred in the last two years.

3.) The gap between expense and revenue per revenue vehicle hour increased from zero to \$1.08 during the seven year interval.

4.) The gap between expense and revenue per revenue passenger increased from zero to 3 cents during the same interval.

5.) Compensation, including fringe benefits, increased from \$60.2 million to \$87.9 million during the 5 year period, 1963-1968, an average increase of \$5.5 million. Between 1968 and 1970, compensation rose to \$110 million, an average increase per year of \$11.0 million.

6.) The fare increases also have resulted in decreased ridership as shown below:

TIME OF SERVICE	PERCENTAGE DECREASE	
	July 1966 (15¢ to 20¢)	January 1970 (20¢ to 30¢)
Weekday	9.4	6.8
Saturday	11.6	9.9
Sunday	10.8	9.5
All Days	9.8	7.1

The relatively sharper decrease in 1966 compared to 1970 is not easily explained. It might reflect a change in the pattern of travel brought about by the increase in the incidence of crime and breakdowns on the subways, resulting in a more inelastic demand for bus travel in 1970.

MABSTOA:

During the period under consideration MABSTOA showed a cumulative profit of \$64 million (Appendix Table V-A-5). This operation would still show a profit even if \$52.1 million in services paid with general fund revenues by the City were deducted.

It is estimated that MABSTOA will also show a profit, roughly \$16 million, during the 1971 fiscal year. But its profit for fiscal 1972 is anticipated to be only \$5.5 million.

¹ Report of the Panel Appointed To Study The Safety Of Train Operations On The Subway System Of The New York City Transit Authority, November 13, 1970, pp. 34-38.

There are basically two reasons for the profitable performance of MABSTOA while the NYCTA buses and many of the private lines are showing losses on their operations:

1.) The preferred routes. MABSTOA was organized in 1962 to take over the routes of the Fifth Avenue Coach Company, Surface Transit Inc. and the New York City Omnibus Corporation. These routes cover the most heavily travelled areas of Manhattan and the Bronx.

2.) The pension benefits. The pension benefits of MABSTOA employees are not as costly as those of NYCTA. When MABSTOA was formed, the plan that existed prior to the take-over was continued and, therefore, MABSTOA employees are not members of the New York City Retirement System.

Thus, the cost of fringe benefits for MABSTOA employees represents only 8 per cent of total compensation while it accounts for more than 18 per cent of the compensation of NYCTA employees.

COMMUTER RAILROADS¹

The operations of six commuter railroads and two rapid transit facilities (PATH and SIRT) are considered in this section. In 1969, these mass transit operations generated approximately \$185 million in revenues and incurred about \$230 million in expenses, resulting in a deficit of roughly \$45 million dollars (Appendix Table V-A-9).

Comparing these figures to 1962, the revenues of commuter railroads increased from \$155 to \$185 million, or 19 per cent. Expenses increased from about \$175 to \$230 million, or 31 per cent. The deficit increased from about \$20 to \$45 million, or 125 per cent.

The data support the thesis that these mass transit operations are not self-supporting. Indeed, by taking operating performance between 1962 and 1969 as an indication of future trends (and more recent data

confirm this trend), the deficit of commuter railroads and rapid transit will become larger in future years. And these figures make no provisions for the debt service on the capital expenditures necessary to maintain and improve this service.

The eight facilities carried approximately 200 million passengers in 1969. Slightly less than 20 per cent of this amount is accounted for by New Jersey facilities. PATH accounts for 17 per cent of the volume and three facilities—Long Island Railroad, Penn-Central Harlem and Hudson Division and the New Haven Railroad—are responsible for 60 per cent of the traffic.

Daily week day traffic is about 700,000 riders.

The average ride generates about 95 cents in revenues, and costs \$1.18, resulting in a deficit of 23 cents per trip.

New Jersey:

In 1969 New Jersey's Commuter Railroads generated \$25 million in revenues and incurred costs of \$35 million, thereby sustaining a \$10 million deficit. Appendix Tables V-A-10 to V-A-13 give the results of operations for each of the facilities based in New Jersey over several years.

It is significant that for the period from, roughly, 1962 to 1969, the operations of these roads were stable and the deficits were relatively constant. When the results for 1970 become available, the situation may show deterioration.

Financial information for these facilities was obtained from special studies conducted for the Department of Transportation. The data are based on the avoidable cost concept under which costs and revenues are defined in terms of whether or not they would be avoidable with the abandonment of commuter service. Therefore, the deficit of commuter service is the amount that would be saved if the service were terminated.

No data were available for the Penn-Central's Northern New Jersey operations for 1969. The 1968 report was used.

New York:

The Long Island Railroad accounts for about fifty per cent of the revenues, expenses, and deficit of

¹ Also includes PATH and SIRT. The figures for the Reading Railroad's commuter operations in the region are included in the analysis. However, because its operations are insignificant in terms of the total operations, we do not count the Reading as a separate facility.

these commuter transit facilities. Appendix Table V-A-14 presents a ten-year statement of its operations.

The overall deficit of the railroad, including freight and passenger operations, is increasing at an exponential rate. From a profit before depreciation in 1962 of \$5.5 million, the road sustained a small loss by 1966 and experienced a deficit of \$7.0 million, \$8.3 million and \$20.1 million in 1967, 1968, and 1969, respectively. The estimated deficit in 1970 is \$29.5 million, with a \$47 million deficit budgeted for 1971.

Precisely how much freight operations contributed to this LIRR deficit is difficult to determine because of the problem of separating costs common to freight and passenger service. The fully allocated deficit of freight service is calculated by prorating common costs to freight and passenger after directly assigning costs and revenues that are solely related to each service.

This deficit amounted to \$2.2 million in 1962 and rose to an estimated \$8.2 million in 1969.

The deficit of the LIRR also can be analyzed after considering the financial support from the MTA (Appendix Table V-A-15). Initial aid of \$3.3 million in 1967 reduced the deficit to \$7.1 million. Increased support in 1969, amounting to \$16.3 million, kept the net deficit at approximately the same level.

However, \$3.3 million of this aid was not actually cash. It represents the result of an accounting entry which credits to income of the LIRR a fraction of the initial grant of \$65 million given to MTA by the State for the purchase of the line. Thus, after having been given \$65 million, MTA now plans to amortize this entire amount and to treat the amortization as income.

It is of interest to contrast this accounting method with the procedures used by PATH. From 1968-70, PATH received grants from the Federal Government of \$7.1 million and accounted for this grant by crediting a separate account which is deducted from the property accounts. The two different accounting techniques, in our judgment, represent extremes ranging from "ultra conservatism" (PATH) to "ultra liberalism" (MTA).

The causes of the LIRR's increasing deficit are varied. Aside from the supply and demand conditions which influence the financial operations of the indus-

try, several specific factors which have an adverse influence on the operations of the LIRR are:

- 1.) the much publicized weakness of the company's system of internal control;¹
- 2.) the increase in maintenance costs resulting from the introduction of new, more complex equipment;
- 3.) increased labor costs.

It is plain that the farebox will not be able to support the operations of the LIRR in the foreseeable future. The recent MTA request to the New York State Legislature for \$28 million in first instance appropriations, which falls \$36 million short of meeting the projected 1971-72 fifteen month deficit testifies to the deteriorating situation.²

The data for the Harlem and Hudson divisions of the Penn Central and the New Haven are taken from special studies and reports, available only in particular years. Thus Penn Central data are taken from information in the New York Public Service Commission Case 24917 and relate to 1968 operations.

The source of the New Haven figures is the New Haven Service Line Budget, year 1971.

Costs and revenues of these lines are not available annually, and for those years in which such figures are available, the methodology underlying the calculations is not consistent. Accordingly, the data on the operations of these facilities in Appendix Tables V-A-16 and V-A-17 provide only a rough estimate of the deficits.

SIRT and PATH:

The data for SIRT and PATH were taken from Interstate Commerce Commission Reports. Unfortunately, it is difficult to separate the freight and passenger operations for the SIRT because the method on which such separations were based until 1964—the full-allocated method—did not attempt to determine costs and revenues on a marginal, *i.e.*, causal basis.

After 1964, no information on the cost separations is available. To avoid this problem of allocation, the figures used after 1964 include costs and revenues of

¹ S. D. Leidersdorf and Co. Report to the New York State Comptroller, January 25, 1971.

² Letter to State Division of the Budget, January 11, 1971.

both freight and passenger services. Before 1965, we show the separate figures.

In the case of PATH, the allocation problem does not arise since PATH has only passenger service.

The operations of SIRT (Appendix Table V-A-18) were relatively stable over the period. The total deficit, after \$8 million in operating aid from New York City, amounted to \$11 million. Prior to 1970, operating aid from New York City was treated as a reduction in expenses rather than as miscellaneous income.

PATH's operations are summarized in Appendix Tables V-A-19 and V-A-20. Revenues provided only 27.4 per cent of total funds for the period 1962-70, with borrowings from the Port Authority accounting for over 66 per cent of total sources of funds. Expenditures were about equal for operations and capital.

The PATH deficit is also growing at a rapid rate. The deficit before depreciation climbed from \$2.3 million in 1963, the first full year of operation, to \$10.7 million in 1970. Though revenues increased 50 per cent in the period, operating expenses more than doubled.

The financial picture of commuter rail operations and rapid transit is clear. Mounting operating deficits on most of these facilities can be expected in the future.

PRIVATE BUS COMPANIES

Two hundred and seventy-one private bus companies operated in the region in 1969.

These mass transit operations generated \$206.4 million in revenues and incurred \$204.5 million in expenses to carry 554 million passengers in 1969.

Comparing these figures to 1963 operations, revenues increased about 27 per cent; expenses increased 30 per cent; number of passengers carried decreased 12 per cent; and net income in the industry fell from \$5.1 million to \$3.2 million (See Appendix Table V-A.21).

The private bus industry is highly concentrated, with the largest thirty-five companies, or 13 per cent

of all companies, accounting for more than 85 per cent of passenger revenues.

However, there is no evidence that the industry is characterized by economies of scale since larger Connecticut companies are no more profitable than the average company. Larger New Jersey companies are relatively less profitable and larger New York companies are relatively more profitable (Appendix Table V-A.22).

The data suggest that the financial condition of the private bus industry is deteriorating.

Despite numerous fare increases, the discontinuance of deficit-ridden routes, an increase in school bus contracts, the addition of special services such as those relating to race tracks, beaches, and other new traffic, tax relief, and other government financial assistance, the situation is not improving.

The data now available for 1970 and 1971 indicate that the trend toward unprofitable operations is accelerating.

Connecticut:

Buses carried 11 per cent of the total number of passengers in the region. Two companies, Connecticut Company, and Connecticut Railway and Lighting, accounted for more than 75 per cent of the total number of passengers transported annually in the Connecticut portion of the region. The net income of all 26 companies in the State was approximately \$1.2 million in 1969.

The seven bus companies with annual revenues above \$0.5 million were profitable. Connecticut Railway and Lighting incurred a deficit on operations, but this company received sufficient income from investments and other sources to make up the loss. Eight companies had losses in 1969, but most of them were small and provided only intra-city service.

Although it appears that the financial status of bus companies in Connecticut has improved, since total net income increased from \$0.6 million in 1963 to \$1.2 million in 1969, estimates for 1970 indicate a deficit of \$0.5 million.¹ Furthermore, during the 1963-69

¹ Connecticut Department of Transportation, Connecticut Master Transportation Plan (1971), p. 14.

period, several bus companies suspended operations, so the comparison is biased.

For companies other than Connecticut Company and Connecticut Railway and Lighting, approximately 40 per cent of the revenue is derived from special bus services such as charter and school contracts. This additional revenue offsets the losses on regular franchised service.

New Jersey:

Buses provided transportation for more than 50 percent of all bus riders in the region. Public Service Coordinated Transport accounts for more than 50 per cent of all passenger revenues in the State's portion of the region. There are 146 small bus companies (77 per cent of all companies) with annual revenues below \$0.15 million, which generate only 4.5 per cent of revenue.

Fifty-one companies had deficits in 1969. Seventeen of these had annual revenues over \$0.15 million. In all, bus companies incurred a deficit of about \$0.2 million.

Recent information indicates that the financial situation is worsening. The Public Service Coordinated Transport reported a \$3.2 million deficit in 1970 and, for the 3 months ending March 31, 1971, PSCT reported a \$1.8 million deficit.

New York:

One third of the 57 bus companies in the region were large or medium-sized, with annual revenues amounting to more than \$0.5 million. The largest seven

companies were in New York City. These companies carried two-thirds of the total number of passengers in the New York part of the region.

New York buses, in the aggregate, had a net income of \$2.2 million in 1969. Of the 20 companies with revenues above \$0.5 million, eight had deficits in 1969. Six of these, which are in New York City, cooperate in a mutual assistance program established by the City. All six were profitable, but three of them received funds from two of the more profitable bus companies.

Ten of the 16 medium-sized bus companies incurred deficits in 1969. Most of the 21 smallest enjoyed modest profits. Many of them derived a large share of their revenues from school contracts or contracts with industrial plants and institutions.

Many of the bus companies in the region are now experiencing financial difficulty. Costs continue to rise and passenger traffic is not improving. The decline in the downtown shopping area and the movement to the suburbs have increased the appeal of the private automobile. The problem of maintaining local service within many suburban centers is becoming more acute.

Recognizing the deteriorating situation, New Jersey has recently established a subsidy program for meeting operating deficits and capital outlay needs. New York and Connecticut, having previously relied mainly on tax relief, are now taking steps to provide subsidies for capital expenditures. New York also has provided funds for emergency repairs and maintenance (see Chapter VI). New York City's program has succeeded in the past. But it appears that a shortage of funds will soon cause difficulties.

Government Assistance for Mass Transportation

OUR SECOND DETAILED CHAPTER on financing mass transportation will examine the roles played by government to date, Federal, state and local. We will show how governments have provided aid for mass transit in the Tri-State Metropolitan region by:

- 1.) grants for capital outlay;
- 2.) subsidies to defray operating deficits;
- 3.) tax relief;
- 4.) the takeover of facilities by public authorities.

Virtually all of the specific programs we will discuss were developed during the last decade in response to emergency situations. To date, a permanent comprehensive coordinated system for ensuring adequate financing of mass transportation does not exist at any level of government. But because we are taking the positive approach, we will concentrate on the progress made as government responded to the crises in transportation financing.

FEDERAL PROGRAMS

In general, federal grants have been limited to monies for capital outlay, including funds for research and development and demonstration projects.

From 1961-64:

The participation of the Federal government in support of urban mass transportation began with the passage of the Housing Act of 1961. Through amend-

ments of the Housing Acts of 1949, 1954 and 1955, aid was provided under the following categories:

- 1.) Demonstration grants for experimentation and research in amounts not to exceed two-thirds of the project cost.
- 2.) Loans for facilities and equipment at low interest rates.

Mass transit programs had to be an integral part of an urban plan to qualify for aid, and funds were to be channeled through government agencies. In all, about \$43 million was appropriated by Congress to carry forth the purposes of this legislation.

The Highway Act of 1962 made no funds available for mass transit. But it did give recognition to the need for co-ordinating all modes of urban transportation—and to the desirability of spending highway funds only within the context of a comprehensive urban transport plan.

The Mass Transportation Act Of 1964 And Subsequent Amendments:

A major step in federal aid for mass transit was the passage of the Urban Mass Transportation Act of 1964. This act was subsequently amended and a major revision was made in 1970.

Under the Act, federal capital grants cannot exceed two-thirds of the net cost of a project. Net cost is defined as that part of the project cost which cannot be financed from passenger revenues.

Further, these revenues may not be used as match-

ing funds on the local level. And all federal funds disbursed must be channeled through public agencies only.

As in the Housing Act of 1961, the eligibility for aid is based on the existence of a unified urban transport plan. Where no such plan exists, emergency aid is available but with only one-half rather than two-thirds in federal funds.

In general, grants for each state are limited to 12½ per cent of the national total. However, this may be increased to 15 per cent in states where more than two-thirds of the maximum amount has been obligated.

The 1964 legislation authorized expenditures of \$375 million nationally for demonstration and capital grants through fiscal 1967.

The 1966 amendment authorized continued grant expenditures through fiscal 1969 at the annual rate of \$150 million. Authorizations were also included for planning, engineering, and design work; management training fellowships; and research grants to colleges and universities.

The 1970 amendments further extended available funds, authorizing expenditures of \$3.1 billion over a five-year period ending June 30, 1976, and making an expenditure commitment of \$10 billion over a 12-year period.

A significant feature of the 1970 Act is the request by Congress that the Secretary of Transportation study the feasibility of federal aid to help defray the operating costs of mass transportation companies. This would include the drafting of amendments to the 1964 Act that would be needed to implement the recommendations.

The Act also calls for submission by the Secretary of requests for funds for 1976-77 not later than February 1, 1972. A similar lead time is stipulated for requests for each of the fiscal years through 1982-83. The Secretary has started to implement this provision and has called for submission of plans from all states.

In addition, the Act encouraged programs to consider the transportation of elderly persons and to evaluate the ecological impact of proposed projects. It set standards for the relocation of displaced families. It called for the encouragement of industries adversely affected by reductions in the space program to compete

for contracts under programs financed under the Act.

President Nixon's Special Revenue-Sharing Program For Transportation:

The special plan of revenue-sharing for transportation proposed by President Nixon differs in four important ways from previous federal programs in this area:

- 1.) It permits the Federal government to make general purpose grants rather than to limit grants for specific projects.
- 2.) It gives to the states the authority to allocate funds to debt service or capital expenditures, whereas previous programs were restricted to capital outlay.
- 3.) No state or local matching funds are required.
- 4.) It provides for an automatic flow through of funds from the states to local governments.

This revenue-sharing proposal, if adopted, would permit greater flexibility in mass transportation planning and financing in the region. However, the proposal has two serious deficiencies. The amount of total assistance provided is less than required. The formula for allocating funds among states is based on several factors which produce allocations relatively more favorable to less urbanized areas. The recommendation of the Commission has sought to remedy these deficiencies.

The total proposed federal revenue-sharing programs for transportation for the first year of its operation calls for a total appropriation nationally of \$2.566 billion. It allocates \$2.041 billion to states on an unrestricted basis and \$525 million for mass transit capital expenditures.

The formula for allocating \$2.041 billion in unrestricted funds has four components, each being weighted to arrive at the allocation ratio for the state. The four components are: population, urban population, area, and star and postal route miles. Each is expressed as a function of totals for the United States and is then weighted.

The two components reflecting population would appear to favor states with large urban areas. However, transportation needs, and especially those for mass

transit, depend not only on census population, but also on total effective population, a figure which includes transients.

Furthermore, mass transit needs increase as population density increases and the formulas only indirectly take this factor into account. The other two components, area, and star and postal route miles, are practically nil in urban areas.

Appendix Table VI-A.12 shows the four components that enter into the allocation of the General Transportation Appropriation of \$2.041 billion for the states of New York, New Jersey and Connecticut and for the Tri-State region. The weighting factors are then applied to each percentage to arrive at the percentage of funds allocated to each state and to the region within each state. In each case, the final per cent allocated is considerably below the percentage for population.

Appendix Table VI-A.13 shows the two components that enter into the allocation of the Mass Transit Capital Appropriation of \$525 million for the States of New York, New Jersey and Connecticut and for the Tri-State region. The weighting factors are then applied to each percentage to arrive at the percentage of funds allocated to each state and to the region within each state. This formula produced allocations which are more favorable to New York and New Jersey. Connecticut fares approximately the same under both formulas.

Appendix Tables VI-A.10 and VI-A.11 take the results of these calculations and apply them to the two proposed transportation appropriations. The three states would receive 11.84 per cent or a total of \$304 million. The Tri-State region is allocated 8.52 per cent or \$219 million. These amounts fall far short of the funds needed.

There is merit to the revenue-sharing plan for transportation proposed by President Nixon. With an adjustment in the formulas to give increased weight to urban areas and with substantial increases in the funds provided by the Federal government, this program could play a significant role in financing the mass transportation needs in the region.

However, the traditional opposition by the Congress to the principles underlying revenue-sharing re-

mains a formidable obstacle to its implementation. This is evidenced by the absence of any Congressional action, to date, on this proposal.

Even though no action has been taken on this plan, it is nevertheless anticipated that the Federal government's role in financing mass transportation will increase in future years. However, actual federal support of mass transit during the period 1962-70 has been insignificant. Thus, of the \$588 million provided to the commuter railroads, PATH, and SIRT from 1962 to 1970, only 7.6% of this amount was supplied by the Federal government (See Appendix Table VI-A.1).

NEW JERSEY

The State of New Jersey has relied mainly on direct subsidies for operations and capital outlay. In addition, some tax relief has been given for mass transit. It has not used the public authority as an organizational mechanism (except for the Port Authority's take-over of PATH). The detailed description of State aids follows:

Subsidies For Current Operations:

The State has provided operating subsidies to commuter railroads since 1961. By the end of 1971, it is expected that subsidies will have amounted to \$87.4 million. (See Appendix Table VI-A.1.) The amount of the subsidy is equal to the loss from operations, calculated on an avoidable cost basis. Payment is made 18 months after the loss is actually incurred.

With the exception of the Penn-Central, all commuter roads receive a subsidy. New Jersey has agreed to make certain capital expenditures for the Penn-Central, in lieu of a subsidy.

In 1970, the State began to subsidize the operations of private bus companies in conjunction with the counties, the State providing 75 per cent of the funds and the county the remaining 25 per cent. In 1970, \$435.5 thousand was spent by the State and \$829.7 thousand has been committed for 1971.

This was an emergency program and was replaced by a more permanent program in June, 1971.

Under the new legislation, the State may make payments to enable a carrier to recover the actual cost of commuter or intercity operations plus a six per cent return on investment. The act appropriated \$2.5 million for this purpose and for capital outlay.

Subsidies for Capital Outlay:

The State has availed itself of the provisions of the Urban Mass Transit Act of 1964 and has been providing funds for capital projects of commuter railroads since 1965. The State contributed \$40.2 million under this program (see Appendix Table VI-A.1).

To date, the State has not provided any subsidies for the capital expenditures of bus companies. However, under the new law enacted in June, 1971, the State was authorized to acquire, purchase, or rehabilitate motor bus facilities and equipment for lease to carriers for operation in specified passenger services. As indicated earlier, funds for implementing this program were appropriated.

Tax Relief:

The State has made several forms of tax relief available to commuter railroads over the past 10 years:

1.) Waiving of taxes on improvements made pursuant to passenger service contracts with the State.

2.) Elimination of taxes on the main stem (roadbed not exceeding 100 feet in width) and tangible personal property (such as rolling stock) of the railroads, effective January 1, 1966. These actions reduced the property tax liability of passenger carrying railroads by about \$4.8 million in 1966.

3.) Revising the tax laws, effective in 1967, eliminating all taxes on facilities used in passenger service and assessing all other property at a standard rate of \$4.75 per \$100 of value. This reduced the property tax liability in 1967 by about 1.2 million.

Tax relief was made available to buses in 1959 when the rate of the State's gross receipts tax was reduced from 5 per cent to 3 per cent less the cost of New Jersey licenses and the New Jersey Motor Fuel Tax. More recently (1969), the Mercer County Improvement District permitted the use of County license

plates at no fee to the bus company. The savings amount to \$6,000 per annum.

Station Maintenance Program:

The State has given authorization to counties and municipalities to acquire, purchase, lease, maintain, and improve, and operate any transportation station, and to lease back space to the carriers. No estimates are available of the savings to the carriers resulting from this program.

Emergency Transportation Tax:

In 1961, the State enacted a law, the effect of which was to impose an income tax on New York residents employed in New Jersey and on New Jersey residents employed in New York. The tax was known as the commuter benefits tax because its revenues, although not ear-marked for transportation, were supposed to be used to help improve commuter transportation services.

The tax currently yields about \$13 million and exceeds the monies spent by the State for commuter transportation.

NEW YORK STATE

New York State has relied mainly on tax relief and the creation of public authorities as a means of support for mass transportation. It has been making use of direct subsidies only since 1967.

Tax Relief For Commuter Railroads:

New York State has granted tax relief to commuter railroads since 1954 when it enacted the Redevelopment Law granting property tax relief to the bankrupt Long Island Railroad. Presently, the Penn Central Railroad and the Erie-Lackawanna are the beneficiaries of property tax relief on all property used exclusively in passenger service. The other commuter lines are now exempt by virtue of their take-over by the Metropolitan Transit Authority.¹

¹ In 1959 the State repealed the special franchise tax on railroads. The localities affected under this act were reimbursed by the State for the loss of revenue over a five year period (1960-64 inclusive).

Tax Relief for Privately Owned Buses:

Since 1959, omnibus companies in the state have been taxed under the Corporate Franchise Tax which uses net income as a tax base and replaces a tax based on gross receipts. It is estimated that bus companies in 1969 saved approximately \$2.5 million through this arrangement.

Since 1959, buses have been partially exempt from the state's motor fuel taxes.

Buses in local transit pay a 3 cent per gallon tax on gasoline and diesel fuel and thus enjoy an exemption of 4 cents per gallon on gasoline and 6 cents per gallon on diesel fuel. Other buses enjoy only a 3 cent per gallon exemption on both gasoline and diesel fuel. The estimated savings resulting from this exemption were about \$1.4 million in 1969.

Ear-marked Taxes (Mortgage Recording Tax):

The rate of the mortgage recording tax, which had been 50 cents per hundred dollars of mortgage, was increased by 25 cents in 1969.² The revenue resulting from the increase is paid to transportation authorities in the counties where mortgages are recorded. If no such authorities exist in a county, the added tax is optional but, if imposed, the proceeds are to be credited by the State Comptroller to the Transportation Facilities Debt Fund.

This tax yielded \$7.7 million to the MTA in 1970.

Subsidies For Capital Outlay:

The State of New York has provided capital outlay for mass transit in a variety of ways:

1.) Funds for the purchase of the Long Island Railroad and New Haven Railroad.

2.) The Capital Facilities Bond Act of 1967 which authorizes the expenditure of \$2.5 billion for transportation, including highways. Under this act, after

² The increase, however, does not apply to the first \$10,000 of a mortgage when property is improved or to be improved for one or two-family residences or dwellings.

the deduction of federal funds, the State and local governments share in projects will be 75 per cent and 25 per cent, respectively. In March 1971, the Governor requested and the Legislature approved the authorization of an additional \$2.5 million bond issue with more than half of the funds to be allocated for mass transit. The proposal was defeated by the voters of the state in the November election.

Subsidies For Current Operations:

More recently, State funds have been provided for current operations as follows:

1.) Administrative expenses of the MTA are appropriated annually. MTA also receives support for LIRR.

2.) In 1970, the legislature voted a \$31 million grant to various mass transit facilities in the region for emergency and repair purposes.

The Use of First Instance Appropriations:

The State has appropriated funds to the MTA to serve as a reserve for debt service and in anticipation of station maintenance funds due to the MTA from various municipalities. Three years is generally allowed for the repayment of these first instance appropriations.

New York State Commuter Car Program:

In 1959 the States of New York and New Jersey authorized a Car Purchase program to be financed by the Port Authority. The Authority has purchased 387 rail passenger cars and 8 locomotives under this program which are now in use on the Long Island and Penn Central Railroads (New York).

The Authority is now in the process of purchasing 80 additional cars for the Hudson and Harlem Division of the Penn Central. The State of New Jersey has not exercised its option under the 1959 legislation.

The commuter car bonds are supported through rentals paid by the railroads. However, the State of New York has guaranteed the bonds as a result of a constitutional amendment enacted in 1961.

Station Maintenance Program:

A station maintenance program has been in existence in New York State since 1961. With the creation of the MTA, the program was modified. The MTA was authorized to assess local governments served by the LIRR for the equivalent of the cost of local station maintenance, use and operations in their respective jurisdictions. These funds were to be used to guarantee bonds for matching federal grants since fare-box revenues cannot be used for matching.

Unfortunately, the MTA has been forced to use the funds received for current operations. The State has had to appropriate funds to be used as a reserve for borrowed funds. Furthermore, the amounts of the assessments are being contested by local governments.

Recent Developments:

MTA has purchased transportation properties of the New Haven Railroad for \$7.2 million. It has agreed to lease the power transmission system with option to purchase. The Penn-Central will operate the New Haven divisions for \$100,000 a year under a service contract and the MTA will finance the deficit.

The State also is financing capital improvements on the Harlem and Hudson divisions of the Penn-Central and can be expected to assume responsibility for current operations in the near future.

During the 1971 session, legislation was introduced—but not enacted—to have the State appropriate \$85 million to defray the cost of maintaining rights of way of the City subway system and \$25 million for maintaining the rights of way of the Long Island Railroad and the three Westchester County commuter lines of the Penn-Central.

Similarly, legislation was not enacted which would have enabled the Triborough Bridge and Tunnel Authority to use additional revenues from any increase in tolls to defray the deficit of commuter railroads. A minimum of \$24 million would go to meet subway deficits.

In the 1972 session of the Legislature favorable action was taken on the latter proposal only.

Appendix Table VI-A.1 summarizes the financial

assistance given to commuter railroads and rapid transit in New York State.¹ Local governments in New York provided a total of \$51.0 million in operating subsidies (mortgage recording tax, station maintenance program, and New York City aid to SIRT) from 1962-70.

The State's subsidy of current operations amounted to \$15.8 million and capital grants by the state amounted to \$189.2 million during this period. These figures exclude the Commuter Car Program (Appendix Table VI-A.7). This is being financed by the MTA and Penn-Central with the State guaranteeing the Port Authority debt.

CONNECTICUT

The State of Connecticut provides financial assistance to mass transit in a variety of ways:

Tax Relief:

The following forms of tax relief are provided:

1.) **Buses:** Buses are given a 4-cent exemption on the 8-cent per gallon gasoline tax. They also receive a 50 per cent property tax exemption in towns and cities.

2.) **Railroad:** The New Haven Railroad had been exempt from all property and business taxes since 1961, amounting in recent years, to an estimated annual saving of over \$7 million.

Ear-marked taxes:

The 1965 Session of the General Assembly enacted a law establishing a public service tax fund consisting largely of business taxes received from telephone, electric, water, and gas utilities. The statute makes one-fifth of this fund available to the Bureau of Rail and Motor Carrier Services (originally to the CTA) to finance its program.

The law provides further that one-tenth of the public service tax fund may be used to support bonds.

¹ No estimate of the effect of tax relief is included nor are monies that have been appropriated but not expended.

Subsidies For Capital Outlay:

Bus Transit Program: One or more cities or towns were authorized in 1961 to establish a transit district to provide necessary assistance if a private carrier is unable to provide satisfactory service.

The Bureau of Rail and Motor Carrier Services has instituted a program to encourage the creation of such districts and to assist them in applying for capital grants for new buses, garage facilities, and other equipment made available under the Federal Urban Mass Transportation Act of 1970.

Such projects would be financed two-thirds by the Federal government, with sharing of local funds.

Take-over By Public Authorities:

The CTA was created originally to preserve essential rail services. The CTA recently leased at an annual rental of \$815 thousand the property of the Connecticut portion of the West End commuter service of the New Haven. It has assumed the responsibility for operation of that line jointly with the MTA.

Prior to this action, Connecticut contributed a total of approximately \$4.3 million for demonstration grants relating to the operations of the New Haven (See Appendix Table VI-A.1).

NEW YORK-NEW JERSEY

In 1962, the Port of New York Authority purchased the Hudson Tubes and has been financing its current operations. To date, the Port Authority has spent \$58.2 million to finance the current operations of PATH. It has expended an additional \$137.3 million on capital improvements (including the initial purchase price). This total amount of \$196 million represents one-third of all subsidies given to commuter railroads and PATH, and SIRT during the 1962-70 period.

The legislatures of New York and New Jersey authorized in 1971 the construction by the Port Authority of rail access roads to Newark and John F. Kennedy International Airports.

NEW YORK CITY

The City of New York has subsidized operations and capital expenditures of mass transit in a major way. (See Appendix Table VI-A.9).

Subsidies for Capital Outlay:

During the 8 years under consideration, the City spent \$778.7 million on capital projects of the NYCTA and MABSTOA.

In the same period it borrowed approximately \$700 million for mass transit purposes and paid out about \$1.0 billion in debt service.

Under existing legislation the City has been obligated since 1967 to provide \$100 million a year for five years for mass transit projects and substantial sums thereafter.

Subsidies for Current Operations:

The City has been making payments to the Transit Authority for various services. Over the years both the amounts paid for each service and the number of services have increased.

Originally, payments were limited to a partial reimbursement of the adult fare for each transportation ticket sold to school children after a deduction for absenteeism. Today, the payment covers the full adult fare with no deduction for absenteeism.

In 1966-67, the City began making payments for transportation of regular police and firemen. The amount of payment is not based on actual use of the service but is an agreed-upon figure.

In 1970, the City also started to reimburse the NYCTA because of the reduced fares paid by senior citizens.

Total payments for these various services amounted to \$46.1 million in 1969-70, having increased significantly from \$12.7 million in 1962-63.

The City makes similar payments to the private bus companies for the transportation of pupils and senior citizens. In 1969-70 these reimbursements amounted to \$11.2 million.

Tax Relief:

Since the City owns the property of the NYCTA, MABSTOA and SIRTOA, these facilities are exempt from taxation.

The City, however, guarantees a 7 per cent return on "equipment used and usable" to the six private bus companies. To accomplish this goal adjustments were made in the rate of the City's franchise tax. In addition, escrow funds are accumulated during years when returns exceed 7 per cent and are paid out when profits decline. Provisions are also made in franchise contracts for the transfer of funds from more profitable companies to less profitable companies.

Miscellaneous Methods of Assistance:

1.) The City has recently purchased revenue anticipation notes of the Transit Authority to enable the latter to finance its operating deficit. This was \$25 million in fiscal 1969 and \$44 million in 1970.

2.) An outright gift of materials and supplies to the NYCTA in fiscal 1965 valued at \$16.2 million.

3.) The transfer of surpluses of the TBTA to the NYCTA—\$74 million in 1970-71—a 3-year accumulation.

4.) The purchase of railroad cars originally bought by the NYCTA with borrowed funds. The annual payments are sufficient to cover the debt service of the NYCTA.

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APPENDIX TABLE III-A.1
TRI-STATE REGION
MASS TRANSIT OPERATING DEFICIT ^{a)}
FORECASTS 1975, 1980, 1985
(millions of dollars)

	Excluding Subsidies				Existing Subsidies Constant				Including Subsidies			
	1970(b)	1975	1980	1985	1970	1975	1980	1985	1970	1975	1980	1985
Revenues in Constant Dollars	894	970	1,040	1,130	1,033	1,110	1,180	1,270	1,033	1,230	1,420	1,650
Expenses in Constant Dollars (c)	1,123	1,460	1,880	2,460	1,123	1,460	1,880	2,460	1,123	1,460	1,880	2,460
Operating Deficit in Constant Dollars												
New York City	188	340	550	870	70	210	420	740	70	160	280	500
Rest of Region (d)	41	150	290	460	20	140	280	450	20	70	180	310
Total	229	490	840	1,330	90	350	700	1,190	90	230	460	810
Operating Deficit in Current Dollars												
New York City	188	420	820	1,570	70	260	590	1,330	70	200	430	900
Rest of Region (d)	41	180	420	830	20	170	390	810	20	80	250	560
Total	229	600	1,240	2,400	90	430	980	2,140	90	280	680	1,460

(a) Constant dollars in 1970 prices; current dollars assumes 4 percent annual rate of inflation
Forecasts assume annual rate of growth in revenues (excluding and including existing subsidies)
and expenditures equal to annual rate for period, 1968-1970.

(b) Actual data

(c) Excluding debt service and depreciation

(d) Includes private bus and operations in New York City

APPENDIX TABLE III-A.2

TRI-STATE REGION
MASS TRANSIT OPERATING DEFICIT ^(a)
FORECASTS 1975, 1980, 1985
(millions of dollars)

	Excluding Subsidies				Existing Subsidies Constant				Including Subsidies			
	1970(b)	1975	1980	1985	1970	1975	1980	1985	1970	1975	1980	1985
Revenues in Constant Dollars	894	930	950	970	1,033	1,070	1,090	1,110	1,033	1,170	1,250	1,370
Expenses in Constant Dollars(c)	1,123	1,300	1,470	1,770	1,123	1,300	1,470	1,770	1,123	1,300	1,470	1,770
Operating Deficit in Constant Dollars												
New York City	188	300	410	550	70	190	300	440	70	120	170	290
Rest of Region (d)	41	70	110	250	20	40	80	220	20	10	50	110
Total	229	370	520	800	90	230	380	660	90	130	220	400
Operating Deficit in Current Dollars												
New York City	188	370	610	990	70	230	450	790	70	150	250	520
Rest of Region	41	80	160	450	20	50	110	400	20	10	80	200
Total	229	450	770	1,440	90	280	560	1,190	90	160	330	720

(a) Constant dollars in 1970 prices; current dollars assumes 4 percent annual rate of inflation
Forecasts assume annual rate of growth in revenues (excluding and including existing subsidies)
and expenditures equal to annual rate for period, 1963-1970.

(b) Actual data

(c) Excluding debt service and depreciation

(d) Includes private bus operations in New York City

APPENDIX TABLE III-A.3

**TRI-STATE REGION
ESTIMATED CAPITAL NEEDS^{a)}
1971-1990**

(millions of 1970 dollars)

P E R I O D	AGGREGATE OUTLAY				AVERAGE OUTLAY PER YEAR			
	<u>New York</u>	<u>New Jersey</u>	<u>Connecticut</u>	<u>Total</u>	<u>New York</u>	<u>New Jersey</u>	<u>Connecticut</u>	<u>Total</u>
1971 - 73	\$ 3,574	\$ 448	\$ 88	\$ 4,110	\$1,191	\$149	\$30	\$1,370
1974 - 78	2,664	1,258	66	3,988	533	252	13	798
1979 - 90	<u>4,828</u>	<u>1,189</u>	<u>68</u>	<u>6,085</u>	<u>402</u>	<u>99</u>	<u>6</u>	<u>507</u>
TOTAL	<u>\$11,066</u>	<u>\$2,895</u>	<u>\$222</u>	<u>\$14,183</u>	<u>\$ 553</u>	<u>\$145</u>	<u>\$11</u>	<u>\$ 709</u>

SOURCE: Based on data gathered by the Tri-State Regional Planning Commission for the National "Needs Study"

- a) The Commission's estimates reflect the capacity of the region to construct needed facilities and the probable availability of funds. The estimates in this table do not.

APPENDIX TABLE III-A.4
TRI-STATE REGION
ESTIMATED CAPITAL NEEDS BY PURPOSE^{a)}
1971-90
(millions of 1970 dollars)

P U R P O S E	1971-73				1974-78				1979-90				T O T A L			
	N. Y.	N. J.	CONN.	TOTAL	N. Y.	N. J.	CONN.	TOTAL	N. Y.	N. J.	CONN.	TOTAL	N. Y.	N. J.	CONN.	TOTAL
Rapid Transit	2,870	23	-	2,893	1,010	324	-	1,334	2,210	583	-	2,793	6,090	930	-	7,020
Commuter Lines	540	319	83	942	541	198	28	767	252	128	42	422	1,333	645	153	2,131
Bus	164	92	5	261	155	66	13	234	279	154	13	446	598	312	31	941
Access--Airports	-	-	-	-	220	209	-	429	100	-	-	100	320	209	-	529
--New Jersey	-	-	-	-	213	314	-	527	63	64	-	127	276	378	-	654
Transportation Centers	-	14	-	14	186	30	25	241	249	35	13	297	435	79	38	592
Other	-	-	-	-	339	117	-	456	1,675	225	-	1,900	2,014	342	-	2,356
TOTAL	3,574	448	88	4,110	2,664	1,258	66	3,988	4,828	1,189	68	6,085	11,066	2,895	222	14,183

a) See footnote Appendix Table III-A.3

SOURCE: Based on data gathered by the Tri-State Regional Planning Commission

APPENDIX TABLE III-A.5
**ADDITIONAL PASSENGER REVENUE
 IF ALL COMMUTERS TO THE C. B. D.
 WERE TO USE MASS TRANSIT FACILITIES**
 (millions of dollars)

<u>Point of Origin</u>	<u>N. Y. C. Transit Facilities</u>	<u>Commuter Railroads and Buses</u>	<u>Total</u>
Nassau - Suffolk	1.8	10.8	12.6
Westchester - Upstate New York	0.5	8.1	8.6
Connecticut	(a)	0.7	0.7
New Jersey	1.1	9.0	10.1
New York City	<u>13.3</u>	<u>-</u>	<u>13.3</u>
T O T A L	<u>16.7</u>	<u>28.6</u>	<u>45.3</u>

(a) Less than \$.05 million

Source: Appendix Table VII-A.6

APPENDIX TABLE III-A.6
**COMPUTATION FOR ADDITIONAL PASSENGER REVENUES
 IF ALL AUTOMOBILE COMMUTERS TO THE C. B. D.
 WERE TO USE MASS TRANSIT FACILITIES**

(A) SUBWAYS AND BUSES IN NEW YORK CITY

<u>Point of Origin</u>	<u>Number of Passengers</u>	<u>Proportion Using N. Y. C. Transit</u>	<u>Two Transit Fares 240 Days</u>	<u>Increased Revenue To New York City Transit System (millions of dollars)</u>
New York City	77,825	1.1868 (a)	\$144	13.3
Nassau-Suffolk	19,023	.648	144	1.8
Westchester-Northern N. Y. S. Suburbs	12,359	.2755	144	0.5
New Jersey	21,538	.3344	144	1.1
Connecticut	1,184	.2994	144	(b)
TOTAL	<u>131,929</u>			<u>16.7</u>

(B) COMMUTER RAILROADS AND BUSES AND PATH

<u>Point of Origin</u>	<u>Number Of Passengers</u>	<u>(1.0+ Proportion Using more than one facility</u>	<u>X Average Fare (dollars)</u>	<u>X (2 X 240 days)</u>	<u>Increased Revenue To Railroads, PATH and Commuter Buses</u>
Nassau-Suffolk	19,023	1.0	1.18	480	10.8
Westchester-Nor. N.Y.S. Suburbs	12,359	1.0	1.36	480	8.1
New Jersey	21,538	1.3648	.64	480	9.0
Connecticut	1,184	1.0	1.28	480	0.7
TOTAL	<u>54,104</u>				<u>28.6</u>

(a) Adjusts for double fares

(b) Less than \$50,000.

APPENDIX TABLE IV-A.1

**SCOPE OF MASS TRANSIT OPERATIONS
TRI-STATE REGION 1969-70**

<u>F A C I L I T Y</u>	Number Of Cars Or Buses	Number Of Employees	<u>NUMBER OF PASSENGERS</u>	
			Av. - Weekday (in thousands)	Annual (in millions)
RAPID TRANSIT				
New York City Subways	6,919	34,839(a)	4,266	1,257.6
PATH	252	1,139	173	39.0
SIRT	48	346	18	4.8
Newark Subway	30	220	16	4.4
Total Rapid Transit	<u>7,249</u>	<u>36,544</u>	<u>4,473</u>	<u>1,305.8</u>
COMMUTER RAILROADS				
Connecticut - New York				
Penn Central - New Haven (West End)	430	1,300(c)	71	20.8
New Jersey				
Central Railroad of New Jersey	142	500(c)	25	6.3
Erie-Lackawanna	418	920(b)	64	15.9
Penn Central-Northern New Jersey (b)	184	800(c)	55	16.4
New York				
Long Island Railroad	1,332	7,233	255	70.1
Penn Central-Harlem and Hudson Division	287	1,200(c)	78	22.5
Total Commuter Railroads	<u>2,793</u>	<u>11,953</u>	<u>548</u>	<u>152.0</u>
BUSES				
Connecticut - Private	1,133	1,834	216	58.4
New Jersey - Private	3,669	8,884	1,002	270.5
New York				
Transit Authority	2,738	8,149	1,354	409.0
MABSTOA	1,957	6,321	1,006	372.5
Private - New York City	754	1,746	458	129.6
- Other Than New York City	929	1,993	194	52.4
Total Buses	<u>11,180</u>	<u>28,927</u>	<u>4,230</u>	<u>1,292.4</u>
TOTAL	<u>21,222</u>	<u>77,424</u>	<u>9,251</u>	<u>2,750.2</u>

(a) Includes 4,197 transit police

(b) Includes New York - Long Branch RR

(c) Estimated

Source: Various Reports of TSRPC

APPENDIX TABLE IV-A.2

^{a)} **TRIPS IN URBANIZED AREAS AND CENTRAL BUSINESS AREAS** ^{b)}
OF TRI-STATE REGION

1970
(thousands of trips)

<u>M O D E</u>	<u>Urbanized Areas</u>		<u>Central Business Areas</u>		C. B. D. as
	<u>Number</u>	Percent of <u>Total</u>	<u>Number</u>	Percent of <u>Total</u>	Percent of <u>Urbanized Area</u>
Rapid Transit	4,473	13.0	3,685	58.9	82.4
Bus	4,230	12.3	1,046	16.7	24.7
Commuter Railroad	548	1.6	374	6.0	68.2
Mass Transit	9,251	26.9	5,105	81.6	55.2
Taxi	927	2.7	389	6.2	42.0
Auto	24,076	70.2	696	11.1	2.9
Other	75	0.2	70	1.1	93.3
Total	<u>34,329</u>	<u>100.0</u>	<u>6,260</u>	<u>100.0</u>	<u>18.2</u>

a) Travel on different modes on a multi-modal trip have been recorded as separate trips

b) Central Business Districts of Manhattan, Brooklyn and Newark

Source: Expanded Home Interview Sample, 1963-64, Tri-State Transportation Committee. Estimates of under-reporting are 5 per cent for mass transit, about 20 per cent for autos.

APPENDIX TABLE IV-A.3

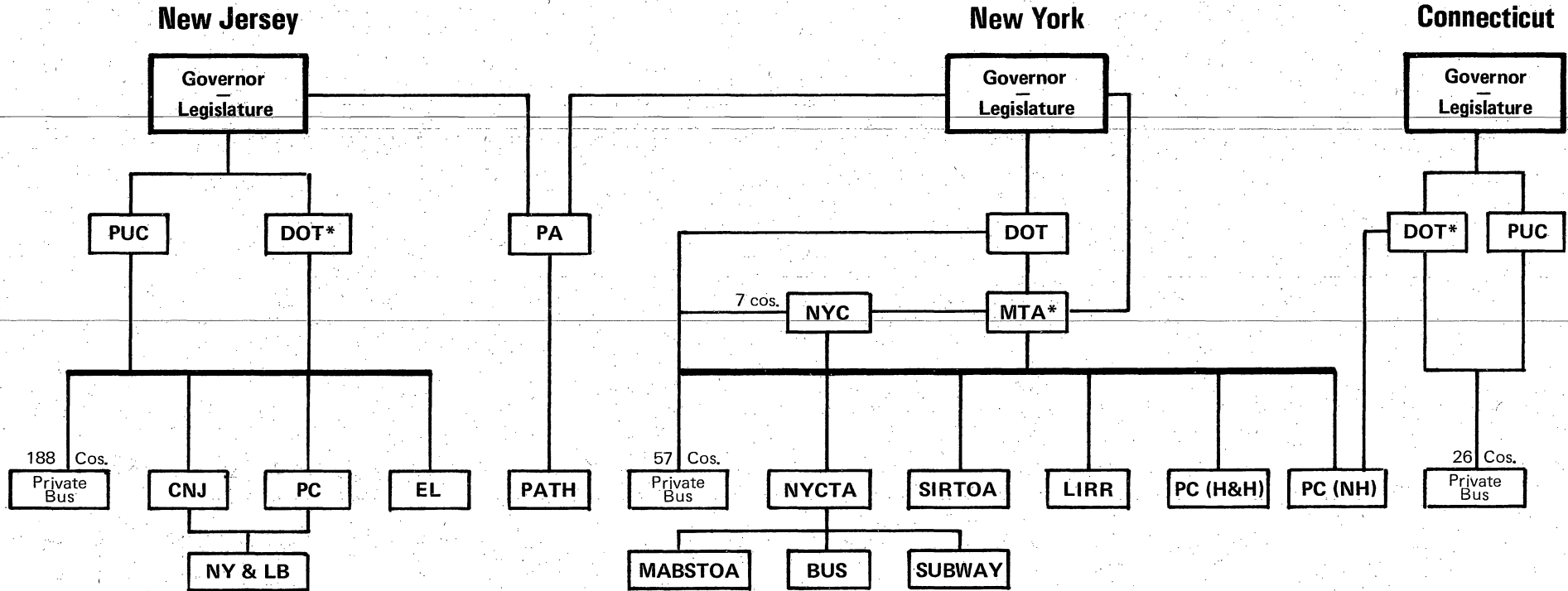
(a)
PERCENT DISTRIBUTION OF TRIPS BY HOUR OF DAY
TRI-STATE REGION
 (Time Of Origin)

Hour of Day	Rapid Transit	Commuter Railroad	Bus	Total Mass Transit	Auto Driver	Auto Passenger	Taxi	Total Highway
<u>PEAK HOURS</u>								
7AM - 10AM	33.2	37.3	29.5	31.8	19.8	17.2	16.8	19.0
4PM - 7PM	<u>33.7</u>	<u>39.5</u>	<u>26.9</u>	<u>31.1</u>	<u>24.4</u>	<u>24.5</u>	<u>21.2</u>	<u>24.4</u>
Total Peak Hours	66.9	76.8	56.4	62.9	44.2	41.7	38.0	43.4
12AM - 7AM	7.5	8.5	6.3	7.0	6.2	4.6	6.9	5.7
10AM - 4PM	18.5	18.7	29.4	22.7	32.0	27.6	32.6	30.8
7PM - 12AM	<u>7.1</u>	<u>6.0</u>	<u>7.9</u>	<u>7.4</u>	<u>17.6</u>	<u>26.1</u>	<u>21.5</u>	<u>20.1</u>
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>

(a) Travel on several different modes of a multimodal trip has been recorded as separate trips.

Source: Data compiled from results of Home Interview Survey - 1964, Conducted by Tri-State Regional Planning Commission. A trip is a one-way journey via one mode of transportation.

ORGANIZATION OF MASS TRANSIT



*Includes Commuter Operating Agency

*Also directs TBTA

*Includes CTA

- | | | | |
|---------|--|----------|---|
| CNJ | - Central RR of N. J. | NYLB | - New York and Long Branch RR |
| CTA | - Connecticut Transportation Authority | PA | - Port Authority |
| DOT | - Dept. of Transportation | PATH | - Port Authority Trans Hudson |
| EL | - Erie-Lackawanna RR | PC | - Penn Central - Northern New Jersey |
| LIRR | - Long Island Railroad | PC (H&H) | - Penn Central - Harlem & Hudson |
| MABSTOA | - Manhattan and Bronx Surface Transportation Operating Authority | PC (NH) | - Penn Central - New Haven (West End) |
| MTA | - Metropolitan Transportation Authority | PUC | - Public Utility Commission |
| NYCTA | - New York City Transit Authority | SIRTOA | - Staten Island Rapid Transit Operating Authority |
| | | TBTA | - Triborough Bridge and Tunnel Authority |

APPENDIX TABLE V-A.1
MASS TRANSIT DEFICIT
NEW YORK CITY OPERATIONS 1962-63 to 1969-70
(millions of dollars)

	<u>1962-3</u>	<u>1963-4</u>	<u>1964-5</u>	<u>1965-6</u>	<u>1966-7</u>	<u>1967-8</u>	<u>1968-9</u>	<u>1969-70</u>	<u>Total</u>	Percent of <u>Total</u>
Reported deficit or (surplus)										
Transit Authority	12.3	23.3	6.4	59.1	(0.3)	48.1	79.4	78.9	307.2	14.5
MABSTOA	<u>(1.3)</u>	<u>(4.2)</u>	<u>(4.9)</u>	<u>3.8</u>	<u>(17.6)</u>	<u>(14.4)</u>	<u>(6.4)</u>	<u>(10.9)</u>	<u>(55.9)</u>	<u>(2.6)</u>
Total Reported Deficit or (Surplus)	<u>11.0</u>	<u>19.1</u>	<u>1.5</u>	<u>62.9</u>	<u>(17.9)</u>	<u>33.7</u>	<u>73.0</u>	<u>68.0</u>	<u>251.3</u>	<u>11.9</u>
New York City reimbursements:										
Transit Authority										
Power plants	5.0	5.0	25.4						35.4	1.7
School program	12.7	20.0	20.0	19.7	27.9	26.9	29.1	36.5	192.8	9.0
Transit police	8.9	9.8	13.7	31.3	36.1	42.1	51.5	58.2	251.6	11.9
Transportation of police and firemen					11.9	2.9	5.3	1.8	21.9	1.0
Senior citizen program							7.7		7.7	.4
Materials and supplies			16.2						16.2	.8
Purchase of cars			<u>3.4</u>	<u>2.3</u>	<u>3.2</u>	<u>3.2</u>	<u>5.2</u>	<u>3.1</u>	<u>20.4</u>	<u>1.0</u>
Total New York City Reimbursement	<u>26.6</u>	<u>34.8</u>	<u>78.7</u>	<u>53.3</u>	<u>79.1</u>	<u>75.1</u>	<u>91.1</u>	<u>107.3</u>	<u>546.0</u>	<u>25.8</u>
MABSTOA										
School program	<u>4.0</u>	<u>5.2</u>	<u>5.4</u>	<u>4.3</u>	<u>6.6</u>	<u>6.9</u>	<u>6.6</u>	<u>10.1</u>	<u>49.1</u>	<u>2.3</u>
Debt Service:										
Interest	58.9	60.5	61.1	61.4	62.1	63.0	63.6	66.5	497.1	23.5
Principal repayment	34.0	45.9	72.1	76.5	56.2	100.0	70.5	72.9	528.1	25.0
Net additions to sinking funds	<u>29.6</u>	<u>21.8</u>	<u>2.9</u>	<u>(1.3)</u>	<u>34.3</u>	<u>6.5</u>	<u>30.5</u>	<u>28.2</u>	<u>152.5</u>	<u>7.2</u>
	<u>122.5</u>	<u>128.2</u>	<u>136.1</u>	<u>136.6</u>	<u>152.6</u>	<u>169.5</u>	<u>164.6</u>	<u>167.6</u>	<u>1177.7</u>	<u>55.7</u>
Miscellaneous Mass Transit - Expenditure (Other than TA or MABSTOA)										
SIRT	0.8	0.8	0.9	1.0	1.0	1.2	1.2	1.2	8.1	.4
School program (private buses)	5.1	11.8	6.4	6.3	8.6	8.1	8.5	11.0	65.8	3.1
"Old" Board of Transportation	0.5	0.3	0.5	0.4	0.4	0.4	0.4	0.4	3.3	.2
Operation of Miscellaneous Rev. Acts.	1.3	2.6	1.3	4.1	1.1	0.5	0.1	0.1	11.1	.5
Non-operating properties	<u>0.2</u>	<u>0.3</u>	<u>0.6</u>	<u>0.2</u>	<u>0.1</u>	<u>0.1</u>	<u>0.1</u>	*	1.6	.1
	<u>7.9</u>	<u>15.8</u>	<u>9.7</u>	<u>12.0</u>	<u>11.2</u>	<u>10.3</u>	<u>10.3</u>	<u>12.7</u>	<u>89.9</u>	<u>4.3</u>
Total - Mass Transit Deficit	<u>172.0</u>	<u>203.1</u>	<u>231.4</u>	<u>269.1</u>	<u>231.6</u>	<u>295.5</u>	<u>345.6</u>	<u>365.7</u>	<u>2114.0</u>	<u>100.0</u>

Source: Appendix Tables V-A.6 and V-A.7

APPENDIX TABLE V-A.2
NEW YORK CITY TRANSIT AUTHORITY*
STATEMENT OF OPERATIONS—RAPID TRANSIT
1962-63 to 1969-70
(millions of dollars)

	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	Total	Percent of Total
Revenue										
Net Passenger Revenue	200.3	201.7	199.8	189.7	251.3	254.3	258.5	311.8	1867.4	81.3
Advertising - Concessions	5.6	5.5	5.9	5.9	5.7	6.2	6.9	6.7	48.4	2.1
Interest	.8	.7	.5	.8	.2	.2	0.1	1.7	5.0	.2
Other (Rental and Miscellaneous)	.6	.6	.6	1.5	.7	.7	0.7	.1	5.5	.2
Total - Own Sources	207.2	208.5	206.7	197.9	258.0	261.4	266.2	320.3	1926.3	83.8
From City On Current Account										
Power Plants	5.0	5.0	25.4	-	-	-	-	-	35.4	1.5
Transit Police	8.7	9.5	13.4	30.8	35.8	42.2	51.5	58.2	250.1	10.9
School Fare Program	5.3	8.7	8.8	8.6	12.2	11.5	12.6	16.0	83.7	3.6
Transportation of Senior Citizens								3.2	3.2	.2
Total - City	19.0	23.2	47.6	39.4	48.0	53.7	64.1	77.4	372.4	16.2
Total Revenue	226.3	231.7	254.3	237.3	306.0	315.1	330.3	397.8	2298.8	100.0
Expenses										
Salaries and Wages	168.5	177.1	186.3	206.9	226.2	258.0	280.5	317.5	1821.0	70.2
Contributions to City Retirement	15.2	17.8	19.7	22.2	27.1	28.5	38.8	47.9	217.2	8.4
Social Security-Employer Contrib.	4.2	4.4	4.3	5.6	8.3	8.6	10.3	11.9	57.6	2.2
Health Insurance	5.0	5.7	6.0	7.7	8.7	9.2	12.9	17.0	72.2	2.8
Total Compensation	192.9	205.0	216.3	242.3	270.3	304.2	342.5	394.3	2167.8	83.6
Power Purchased	28.4	28.3	29.1	28.1	28.8	30.7	31.9	36.2	241.5	9.3
Materials and Supplies	11.7	13.1	11.8	12.6	14.6	15.3	15.8	18.4	113.3	4.4
Rental of Tires, Trucks and Other Equip.	1.4	1.5	1.3	1.4	1.4	1.5	1.6	2.1	12.2	.5
Prov. for Public Liability	2.9	2.9	2.9	3.0	2.9	2.5	2.5	2.5	22.1	.9
Prov. for Workmen's Compensation	.8	.8	.8	.8	.8	.8	.9	.9	6.6	.3
Contract Maintenance	3.5	3.1	2.7	1.6	2.6	3.0	-	4.2	20.7	.8
Interest Expense	-	-	-	-	-	-	.1	1.8	1.9	.1
Miscellaneous	1.9	2.3	2.6	2.7	2.5	2.5	6.1	2.8	23.4	.9
Adjustments	-	-	-	(1.7)	(8.7)	(5.1)	(4.9)	3.3	(17.1)	(.8)
Total Other Expenses	50.6	52.0	51.2	48.2	45.0	51.2	54.0	72.2	424.6	16.4
Total Expenses	243.5	257.0	267.6	290.5	315.3	355.4	396.5	466.5	2592.3	100.0
SURPLUS OR (DEFICIT)	(17.2)	(25.3)	(13.3)	(53.2)	(9.3)	(40.3)	(66.2)	(68.7)	(293.5)	-

*Does not add due to rounding

SOURCE: New York City Transit Authority, Annual Reports

APPENDIX TABLE V-A.3
NEW YORK CITY TRANSIT AUTHORITY
SELECTED OPERATING RATIOS OF RAPID TRANSIT AND SURFACE LINES
1962-63 to 1969-70
(in dollars)

<u>Ratio</u>	<u>1962-63</u>	<u>1963-64</u>	<u>1964-65</u>	<u>1965-66</u>	<u>1966-67</u>	<u>1967-68</u>	<u>1968-69</u>	<u>1969-70</u>
<u>Rapid Transit</u>								
Operating Expense/ Revenue Vehicle Hrs.	14.49	15.30	15.65	17.61	18.33	19.97	21.20	24.55
Passenger Revenue/ Revenue Vehicle Hrs.	12.24	12.50	12.20	12.02	15.32	14.93	14.50	17.42
Operating Expense/ Revenue Passengers	.17	.19	.20	.22	.24	.27	.30	.36
Passenger Revenue/ Revenue Passengers	.15	.15	.15	.15	.20	.20	.20	.25
<u>Surface</u>								
Operating Expense/ Revenue Vehicle Hrs.	8.07	8.49	8.84	9.56	9.75	11.03	12.09	13.94
Passenger Revenue/ Revenue Vehicle Hrs.	8.07	8.60	8.59	8.52	10.46	10.49	10.49	12.70
Operating Expense/ Revenue Passengers	.15	.16	.16	.18	.20	.22	.24	.29
Passenger Revenue/ Revenue Passengers	.15	.16	.16	.16	.21	.21	.21	.26

SOURCE: Appendix Tables V-A.2, V-A.4 and V-A.8

APPENDIX TABLE V-A.4
NEW YORK CITY TRANSIT AUTHORITY
STATEMENT OF OPERATIONS—SURFACE LINES*
1962-63 to 1969-70
(millions of dollars)

Revenue	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	Total	Percent of Total
Net Passenger Revenue	61.8	63.0	63.4	61.3	75.4	76.0	74.9	86.7	562.5	82.4
Advertising - Concessions	.3	.4	.6	.6	.7	.8	.6	.6	4.6	.7
Interest Income	.3	.2	.2	.3	.1	.1	-	.1	1.3	.2
Other (Rental and Miscellaneous)	.0	.1	.1	.1	.1	.1	.0	.0	.5	.1
Total - Own Sources	62.4	63.7	64.2	62.3	76.2	76.9	75.5	87.5	568.7	83.3
From City On Current Account										
Transit Police	.2	.2	.3	.5	-	-	-	-	1.2	.2
School Fare Program	6.8	11.1	11.2	11.1	15.7	15.4	16.5	20.5	108.3	15.9
Transportation of Senior Citizens	-	-	-	-	-	-	-	4.5	4.5	.7
Total City	7.0	11.3	11.5	11.6	15.7	15.4	16.5	25.0	114.0	16.7
Total Revenue	69.4	75.0	75.8	73.9	91.9	92.2	92.0	112.5	682.7	100.0
Expenses										
Salaries and Wages	52.7	55.5	58.7	61.9	66.7	76.0	81.1	90.1	542.7	76.6
Contribution to City Retire. System	4.7	5.5	6.2	6.6	6.8	6.8	9.3	11.9	57.8	8.2
Social Security - Employer Contrib.	1.3	1.3	1.4	1.7	2.4	2.5	3.1	3.3	17.0	2.4
Health Insurance	1.5	1.7	1.8	2.3	2.4	2.5	3.3	4.4	19.9	2.8
Total Compensation	60.2	64.1	68.1	72.4	78.3	87.9	96.8	109.8	637.6	90.0
Power Purchased	.4	.4	.4	.4	.4	.5	.5	.5	3.5	.5
Fuel for Buses	1.6	1.5	1.6	1.6	1.8	1.9	2.0	2.1	14.1	2.0
Materials and Supplies	2.6	3.1	2.7	2.7	3.3	3.5	3.6	4.3	25.8	3.6
Rental of Tires, Trucks & Other Equip.	.7	.7	.8	.7	.7	.8	.8	1.1	6.3	.9
Prov. for Public Liability	2.1	2.1	2.1	2.1	2.1	1.8	1.8	1.8	15.9	2.2
Prov. for Workmen's Compensation	.2	.2	.2	.2	.2	.2	.2	.3	1.7	.2
Contract Maintenance	.2	.3	.3	.3	.2	.4	-	.3	2.0	.3
Interest Expense	-	-	-	-	-	-	.0	.6	.6	.1
Miscellaneous	.5	.5	.6	.8	.8	.9	1.2	1.0	6.3	.9
Adjustments	-	-	-	-	(3.2)	(1.8)	(1.7)	1.1	(5.6)	(.8)
Total Other Expenses	8.4	8.9	8.8	8.9	6.4	8.1	8.4	12.9	70.8	10.0
Total Expenses	68.6	73.0	76.9	81.3	84.8	96.0	105.2	122.7	708.5	100.0
SURPLUS OR (DEFICIT)	.8	2.0	(1.1)	(7.4)	7.1	(3.8)	(13.1)	(10.2)	(25.8)	-

*Does not add due to rounding.

Source: New York City Transit Authority, Annual Reports

APPENDIX TABLE V-A.5
MABSTOA
STATEMENT OF SOURCES AND APPLICATIONS OF FUNDS
1962-63 to 1969-70
(millions of dollars)

	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	Total	Percent of Total
<u>SOURCES</u>										
Passenger revenue - net of school program	59.7	59.4	59.6	59.8	73.1	76.4	77.6	89.2	551.8	81.8
Interest income	0.3	0.5	0.8	0.6	0.8	1.5	0.6	0.6	5.7	0.8
Miscellaneous	0.3	0.5	1.0	0.9	1.1	1.3	1.0	1.0	7.1	1.1
Total - own sources	60.3	60.4	61.4	61.3	75.0	79.2	79.2	90.8	564.6	83.7
Reimbursement from City of New York School Program	4.0	5.2	5.4	4.3	6.6	6.9	6.6	10.1	52.1	7.8
Total	64.3	65.7	66.8	65.6	81.6	86.1	85.8	100.9	616.8	91.5
Revenue anticipation notes - City of N. Y.							7.0		7.0	1.0
Decrease in Cash balances				13.2		7.9	11.7	1.2	34.0	5.0
Decrease in other assets				0.1		0.2	0.5		0.8	0.1
Increase in Long-term debt payable to City of N. Y.				0.4	0.7	(0.3)	(0.3)	(0.3)	0.2	-
Increase in liabilities	3.3	2.0	1.3	1.4		0.6	1.4		10.0	1.5
Return of advances from pension funds					5.5				5.5	0.9
Total Sources	67.6	67.7	68.1	80.7	87.8	94.5	106.1	101.8	674.3	100.0
<u>APPLICATIONS</u>										
Salaries and Wages	47.8	47.2	47.8	47.7	50.5	57.8	61.6	69.6	430.0	63.7
Fringe benefits	3.2	2.7	3.2	3.9	4.6	4.9	5.8	6.2	34.5	5.2
Total compensation	51.0	49.9	51.0	51.6	55.1	62.7	67.4	75.8	464.5	68.9
Other expenses	12.0	11.5	10.9	10.1	8.9	9.0	12.0	14.2	88.6	13.1
Total expenses	63.0	61.4	61.9	61.7	64.0	71.7	79.4	90.0	553.1	82.0
Transfers to NYCTA				19.0	4.0	21.8	26.7		71.5	10.6
Increase in cash balances) 4.6	5.8	5.9		18.4				34.7	5.2
Increase in other assets		0.5	0.3		0.7	1.0		9.0*	11.5	1.7
Decrease in liabilities					0.7			2.8	3.5	0.5
Total Uses	67.6	67.7	68.1	80.7	87.8	94.5	106.1	101.1	674.3	100.0

Source: Annual Reports of MABSTOA.

* \$8.8 million represents increase in receivables from NYCTA.

APPENDIX TABLE V-A.6
NEW YORK CITY TRANSIT AUTHORITY
STATEMENT OF SOURCES AND APPLICATIONS OF FUNDS
1962-63 to 1969-70
(millions of dollars)

<u>SOURCES</u>	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	Total	Percent of Total
Passenger revenue (net of school and senior citizen program)	262.2	264.6	263.2	251.1	326.7	330.2	333.4	398.6	2430.0	69.3
Advertising and concessions	5.8	5.9	6.4	6.5	6.3	7.0	8.3	7.4	53.6	1.5
Interest income-investments	1.0	0.9	0.7	1.1	0.3	0.3	0.1	1.8	6.2	0.2
Interest income on bond issue (gross)	1.1	2.5							3.6	0.1
Other revenue	0.6	0.7	0.6	1.5	0.8	0.8		0.2	5.2	0.1
Total-own sources	270.7	274.6	270.9	260.2	334.1	338.3	341.8	408.0	2498.6	71.2
Reimbursement from City of New York										
Power plants	5.0	5.0	25.4						35.4	1.0
Transit Police	8.9	9.8	13.7	31.3	35.8	42.2	51.5	58.2	251.4	7.2
School program	12.1	19.8	20.1	19.7	27.9	26.9	29.1	36.5	192.1	5.5
Transportation of police and firemen					11.9	2.9	5.2	1.8	21.8	0.6
Senior citizen program								7.7	7.7	0.2
Material and supplies			16.2						16.2	0.5
Debt service			0.2						0.2	-
Railroad cars			3.2	2.3	3.2	3.2	5.2	3.1	20.2	0.6
Total NYC Reimbursement	26.0	34.6	78.8	53.3	78.8	75.2	91.0	107.3	545.0	15.6
Contribution by MABSTOA				19.0	4.0	21.8	26.0		70.8	2.0
Sale of Bonds - Fund Debt	50.9	38.3							89.2	2.5
Revenue Anticipation Notes - City of N.Y.							25.0	44.0	69.0	2.0
Increase in accruals to N.Y.C. Ret. System		16.9	25.9	(14.0)	3.9	2.7	13.8	11.7	60.9	1.8
Increase in other liabilities	3.2	3.5		22.5	12.9	6.2	10.0	42.7*	101.0	2.9
Decrease in cash balances	7.8	1.5		36.7		8.2		3.0	57.2	1.6
Decrease in other assets	5.8		2.0			5.4			13.2	0.4
Total Sources	364.4	369.5	377.6	377.7	432.8	457.8	511.0	616.7	3507.5	100.0
<u>APPLICATIONS</u>										
Wages and Salaries	221.2	232.6	245.0	268.8	292.9	333.9	361.6	407.6	2363.6	67.4
Fringe Benefits	31.9	36.5	39.4	45.9	55.7	58.1	77.7	96.5	441.4	12.6
Total Compensation	253.1	269.1	284.4	314.7	348.6	392.0	439.3	504.1	2805.3	80.0
Other Operating expenditure	59.0	60.9	60.0	57.1	63.3	66.3	67.7	80.7	515.0	14.7
Interest on funded debt (gross)	0.9	2.6							3.5	0.1
Total Expenses	313.0	332.6	344.4	371.8	411.9	458.3	507.0	584.8	3323.8	94.8
Prior year adjustments - pension liability other	(.6)	(7.1)		(7.7)		(4.0)		6.1	(12.7)	(.4)
Repayment of loan to City of New York	1.1								1.1	(.0)
Increase in bond funds	50.9	(4.3)	(13.9)	(22.5)	0.3	(0.5)	(0.3)	0.1	9.8	.3
Rapid Transit cars purchased from bond funds		42.0	17.1	22.0	0.1	0.9			82.1	2.3
Decrease in funded debt							1.5	22.6	40.7	1.2
Increase in cash balances			16.5		0.1				35.3	1.0
Increase in other assets		6.4		11.4	17.5				13.5	.4
Decrease in other liabilities			13.5						14.4	.4
Decrease in long-term debt				2.7	2.8	2.8	3.0	3.1	14.4	.4
Total Applications	364.4	369.6	377.6	377.7	432.7	457.5	511.2	616.7	3507.5	100.0

*Includes \$8.8 million increase in liability to MABSTOA

Source: Annual Reports and Special Compilations of New York City Transit Authority and MABSTOA; Annual Reports of the Comptroller of the City of New York.

APPENDIX TABLE V-A.7
CITY OF NEW YORK
SOURCES AND APPLICATIONS OF FUNDS^(a) FOR MASS TRANSPORTATION
1962-63 to 1969-70
(millions of dollars)

	1962-63	1963-64	1964-65	1965-66	1966-67	1967-68	1968-69	1969-70	Total	Percent of Total
SOURCES										
From City Budget For:										
Amortization of Corporate Stock	15.0	15.9	14.8	7.8	14.3	12.0	6.4	8.5	94.7	4.6
Redemption of Serial Bonds	33.1	34.7	42.1	49.3	56.2	63.0	70.5	68.8	417.7	20.3
Interest	58.9	60.5	61.1	61.4	62.1	63.0	63.6	66.5	497.1	24.2
"Old" Board of Transportation (spec. a/c)	0.4	0.3	(0.1)	(0.5)	0.3	0.3	0.1	(6.8)	(6.0)	(0.3)
Excess of Capital Expend. over Bond Issue	30.9	3.1			32.8		45.0		111.8	5.4
Transportation of Pupils (priv. bus cos.)	5.1	11.8	6.4	6.3	8.6	8.1	8.5	11.0	65.8	3.2
Total-City Budget	143.4	126.3	124.3	124.3	174.3	146.5	193.5	148.0	1181.1	57.4
Sale of Bonds										
Rapid Transit	68.4	54.5	98.4	73.6	82.6	78.2	81.6	120.5	657.8	32.0
Buses	6.0	15.0							21.0	1.0
BMT-IRT Pensions	3.9	4.0	3.9	4.0	3.9				19.7	1.0
Total sale of Bonds	78.3	73.5	102.3	77.6	86.5	78.2	81.6	120.5	698.5	34.0
Earnings of Sinking Fund	15.5	16.9	18.1	18.1	20.0	18.5	24.1	23.9	155.1	7.5
Receipts Attributable to "Old" Board of Transportation	0.1	*	0.6	0.9	0.1	0.1	0.3	7.2	9.3	0.5
Receipts from Miscellaneous Revenue Account:										
Transit Authority	1.3	2.7	1.7	4.1	1.1	0.4			11.3	0.5
"Old" Board of Transportation	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	1.5	0.1
Total Sources	238.8	219.6	247.2	225.2	282.2	243.9	300.3	299.7	2056.9	100.0
APPLICATIONS										
Interest:										
Rapid Transit and Buses	58.6	60.2	60.9	61.1	61.8	62.7	63.5	66.5	495.3	24.1
BMT-IRT Pensions	0.3	0.2	0.2	0.2	0.3	0.3	0.1	*	1.6	0.1
Redemption of Corporate Stock	1.0	11.2	30.0	27.1		37.0		4.2	110.5	5.4
Redemption of Serial Bonds:										
Rapid Transit and Buses	29.2	31.0	38.2	45.1	51.6	59.0	67.5	67.8	389.4	18.9
BMT-IRT Pensions	3.9	3.7	3.9	4.2	4.6	4.0	3.0	1.0	28.3	1.4
Capital Expenditures:										
Rapid Transit)	103.3	59.3	83.5	52.8	69.9	77.4	121.8	100.1	668.1	32.5
Buses) TA	5.5	9.9							15.4	0.7
Buses - MABSTOA	0.3	7.5	12.0	14.5	49.4	0.7	4.8	5.8	95.0	4.6
Board of Transportation	*	*	0.2						0.2	-
Increase in Sinking Fund Assets	29.6	21.7	2.9	(1.3)	34.3	(6.5)	30.5	28.2	139.4	6.8
Outflows Attributable to Non-operating Properties ^(b)	0.2	0.3	0.6	0.2	0.1	0.1	0.1	(*)	1.6	0.1
Pupil Transportation (priv. bus cos.)	5.1	11.8	6.4	6.3	8.6	8.1	8.5	11.0	65.8	3.2
Attributable to "Old" Board of Transportation	0.5	0.3	0.5	0.4	0.4	0.4	0.4	0.4	3.3	0.2
Excess of Bond Sales over Capital Expenditures			6.5	10.3		0.1		14.6	31.5	1.5
Increase in Miscellaneous Revenue Accounts	1.3	2.6	1.3	4.1	1.1	0.5	0.1	0.1	11.1	0.5
Total Applications	238.8	219.7	247.1	225.0	282.1	243.8	300.3	299.7	2056.5	100.0

(a) Other than operating funds of NYCTA, MABSTOA, and SIRT.
(b) Reflected in assets and liabilities of TA, but not in profit and loss.
* Less than \$50,000.

Source: Annual Reports of The Comptroller of the City of New York

APPENDIX TABLE V-A.8
NEW YORK CITY TRANSIT AUTHORITY
REVENUE PASSENGERS — REVENUE VEHICLE HOURS
(in millions)

<u>FISCAL YEAR</u>	<u>REVENUE PASSENGERS</u>			<u>MOTOR VEHICLE HOURS</u>		
	<u>Rapid Transit</u>	<u>Surface Lines</u>	<u>System</u>	<u>Rapid Transit</u>	<u>Surface Lines</u>	<u>System</u>
1963	1,362	457	1,820	16.8	8.5	25.3
1964	1,375	470	1,844(a)	16.8	8.6	25.4
1965	1,363	473	1,836(a)	17.1	8.7	25.8
1966	1,296	460	1,756(a)	16.5	8.5	25.0
1967	1,298	434	1,732	17.2	8.7	25.9
1968	1,303	435	1,738	17.8	8.7	26.5
1969	1,330	433	1,763	18.7	8.7	27.4
1970	1,307	430	1,737	19.0	8.8	27.8

(a) Includes World's Fare Passengers estimated at 9 million in 1964 and 20 million in 1965 and 1966.

Source: August issues of New York City Transit Authority, Transit Record (1963-70)

APPENDIX TABLE V-A.9
**COMMUTER RAILROADS AND RAPID TRANSIT
 REVENUES, EXPENSES, AND DEFICIT
 1969**
 (millions of dollars)

<u>NEW JERSEY</u>	<u>Revenues(a)</u>	<u>Expenses(b)</u>	<u>Deficit</u>
Erie Lackawanna RR	11.0	15.5	4.5
Penn Central RR (1968)	9.9	11.7	1.8
Central RR of New Jersey	4.1	8.0	3.9
Reading RR	.2	.3	.1
	<u>25.2</u>	<u>35.5</u>	<u>10.3</u>
<u>NEW YORK</u>			
Long Island RR (c)	87.9	108.0	20.1
Penn Central RR (1968)	30.7	32.7	2.0
Staten Island Rapid Transit(c)	3.6	5.2	1.6
	<u>122.2</u>	<u>145.9</u>	<u>23.7</u>
<u>NEW YORK-CONNECTICUT</u>			
New Haven RR (1971)	<u>26.7</u>	<u>31.8</u>	<u>5.1</u>
<u>NEW JERSEY-NEW YORK</u>			
Port Authority-Trans Hudson (PATH)	<u>11.6</u>	<u>17.9</u>	<u>6.3</u>
	<u>185.7</u>	<u>231.1</u>	<u>45.4</u>

(a) Excludes Subsidy Payments

(b) Excludes Depreciation And Imputed Interest on Capital, And Debt Service

(c) Freight And Passenger.

Source: Appendix Tables V-A.10 to V-A.20

APPENDIX TABLE V-A.10
ERIE-LACKAWANNA RAILROAD
AVOIDABLE COSTS AND REVENUES*
(millions of dollars)

	1963	1967	1968	1969	1970
Avoidable Revenues					
Passenger		9.1	9.5	10.4	
Other		.5	.5	.6	
	10.4	9.6	10.0	11.0	
 New Jersey Subsidy Payment	 2.4	 4.2	 4.2	 4.9	
 Total	 12.8	 13.8	 14.2	 16.0	
 Avoidable Expenses					
Maintenance of Way	2.5	2.7	2.8	2.8	
Maintenance of Equipment	5.3	4.3	4.5	4.6	
Traffic	.1	.1	.1	.1	
Transportation	8.0	6.2	6.6	7.0	
Miscellaneous	-	.2	.2	.3	
General	.3	.6	.5	.5	
Total Operating Expenses	16.2	14.1	14.6	15.3	
Property Taxes	.9	.1	.1	.1	
Sales Taxes		-	-	-	
Other	1.0	-	-	.1	
Total Expenses	18.1	14.2	14.7	15.5	
 Net Operating deficit before Subsidy	 7.6	 4.6	 4.7	 4.5	
 Net Operating deficit after Subsidy	 5.2	 .4	 .5	 (.4)	
 Interest on Salvage not included above		.3	.3	.3	

*does not add due to rounding

Source: 1963: E. Kurnow, R. Brief, I. Silberman, Transportation Financing in the Tri-State Region, TRI-STATE TRANSPORTATION COMMISSION, MARCH 1968
1967-69: L. E. Peabody and Associates, Inc., Avoidable Revenues and Expenses of the Erie Lackawanna Railway Company occasioned by New Jersey Suburban Passenger Operations, June 1968; June 1969; June 1970

APPENDIX TABLE V-A. 11
PENN CENTRAL COMPANY-NORTHERN NEW JERSEY PASSENGER OPERATION
AVOIDABLE COSTS AND REVENUES*
(millions of dollars)

	Contracted Service					Path Service		
	1965	1966	1967	1968	1969	1965	1966	1967
Avoidable Revenue								
Passenger	7.8	7.6	8.2	8.9		1.2	1.2	
Other	.9	.9	1.0	1.0		----	----	
	<hr/>	<hr/>	<hr/>	<hr/>		<hr/>	<hr/>	
New Jersey Subsidy Payment	8.7	8.5	9.2	9.9		1.2	1.2	
	1.7	---	---	---		---	---	
Total	<hr/>	<hr/>	<hr/>	<hr/>		<hr/>	<hr/>	
	10.4	8.5	9.2	9.9		1.2	1.2	
Avoidable Expenses								
Maintenance of Way	.5	.6	.6	.5		.1	.2	
Maintenance of Equipment	4.5	3.8	4.2	3.7		---	---	
Traffic	---	---	---	---		---	---	
Transportation	5.0	5.3	5.1	5.2		1.0	.6	
Miscellaneous	.1	.1	.1	.1		---	---	
Joint Facilities	1.5	1.6	1.6	1.7		1.0	1.0	
Supervisory Expenses	.3	.5	.5	.5		.1	.1	
	<hr/>	<hr/>	<hr/>	<hr/>		<hr/>	<hr/>	
Total Operating Expenses	12.0	11.8	12.0	11.7		2.2	1.9	
Property Taxes	.1	.1	---	---		---	---	
Total Expenses	<hr/>	<hr/>	<hr/>	<hr/>		<hr/>	<hr/>	
	12.1	11.9	12.0	11.7		2.2	1.9	
Net Operating Deficit before Subsidy	3.4	3.3	2.9	1.8		1.0	.7	
Net Operating Deficit after subsidy	1.7	3.3	2.9	1.8		1.0	.7	

*does not add due to rounding

Source: L. E. Peabody and Associates, Inc., Avoidable Revenues and Expenses of Penn Central Company Occasioned by Northern New Jersey Suburban Passenger Operations, March 1969, August 1969; August 1970, September 1970.

APPENDIX TABLE V-A. 12
CENTRAL RAILROAD OF NEW JERSEY
AVOIDABLE REVENUES AND EXPENSES*
(millions of dollars)

	1962	1965	1966	1967	1968	1969	1970
Avoidable Revenues							
Passenger	5.5	5.0	4.5	3.4	3.5	4.0	
Other	2.1	.8	.4	.1	.1	.1	
	<hr/> 7.6	<hr/> 5.8	<hr/> 4.9	<hr/> 3.5	<hr/> 3.6	<hr/> 4.1	
New Jersey Subsidy Payment	1.5	2.8	5.9	5.1	4.9	4.4	
Total	<hr/> 9.1	<hr/> 8.6	<hr/> 10.8	<hr/> 8.6	<hr/> 8.5	<hr/> 8.5	
Avoidable Expenses							
Maintenance of Way and Structures	.9	.4	.7	.7	.7	1.0	
Maintenance of Equipment	1.7	1.6	1.4	1.2	1.4	1.2	
Traffic	.1	.1	.1	.1	-	-	
Transportation	7.8	6.7	6.7	4.2	4.4	.5	
Miscellaneous General	-	-	-	-	-	-	
	<hr/> .5	<hr/> .1	<hr/> .2	<hr/> .2	<hr/> .2	<hr/> .1	
Total Operating Expenses	<hr/> 11.0	<hr/> 8.9	<hr/> 9.1	<hr/> 6.4	<hr/> 6.7	<hr/> 7.0	
Net Rents	.2	.1	.1	.5	.5	.5	
Property Taxes	.8	.6	.3	-	-	-	
Payroll Taxes	.8	.5	.6	.4	.5	.5	
Other	-	-	.1	-	.1	.1	
	<hr/> 12.8	<hr/> 10.1	<hr/> 10.1	<hr/> 7.3	<hr/> 7.8	<hr/> 8.0	
Net Operating Deficit before Subsidy	5.2	4.3	5.2	3.7	4.2	3.9	
Net Operating Deficit (surplus) after Subsidy	3.7	1.5	(.7)	(1.3)	(.7)	(.5)	
Interest on Salvage Value not included above	-	.3	.5	.4	.3	.3	

*does not add due to rounding

Source: 1962 Kurnow et al, op. cit. (Appendix Table V-A.10)
1965-1969 L. E. Peabody and Associates, Inc. Avoidable Revenues and Expenses of The Central Railway Company of New Jersey Occasioned by Passenger Operations, April 1967; June 1968; June 1969; June 1970.

APPENDIX TABLE V-A. 13
READING COMPANY'S PHILADELPHIA-JERSEY CITY PASSENGER OPERATION
AVOIDABLE REVENUES AND COSTS*
(millions of dollars)

	1962	1965	1966	1967	1968	1969	1970
Avoidable Revenues							
Passenger	.2	-	.2	.1	.2	.2	
Other	.1	-	-	-	-	-	
	.3	.3	.2	.2	.2	.2	
New Jersey Subsidy Payment	-	-	.1	.1	.1	-	
Total	.3	.3	.3	.2	.2	.2	
Avoidable Expenses							
Maintenance of Way and Structure	-	-	-	-	-	-	
Maintenance of Equipment	.1	.1	.1	.1	.1	.1	
Traffic	-	-	-	-	-	-	
Transportation	.3	.2	.2	.1	.1	.1	
Miscellaneous	-	.1	-	.1	.1	.1	
General	-	-	-	-	-	-	
Total Operating Expenses	.4	.4	.4	.4	.3	.3	
Net Rents	.1	(.1)	(.1)	(.1)	(.1)	(.1)	
Property Taxes	.1	-	-	-	-	-	
Payroll Taxes	-	-	-	-	-	-	
Total Expenses	.6	.3	.3	.2	.2	.2	
Net Operating Deficit before Subsidy	.3	.1	.1	-	-	-	
Net Operating Deficit (profit) after Subsidy	.3	-	-	-	(.1)	-	

*does not add due to rounding

Source: 1962: Kurnow et al, op. cit. (Appendix Table V-A. 10)
1965-1969: L. E. Peabody and Associates, Inc., Avoidable Revenue and Expenses of Reading Company's Philadelphia-Newark Passenger Operations, June 1967; June 1968; June 1969; June 1970

APPENDIX TABLE V-A. 14
THE LONG ISLAND RAILROAD COMPANY
REVENUES AND COSTS*
(millions of dollars)

	1962	1963	1964	1965	1966	1967	1968	1969	1970 (Est.)	1971 (Budg.)
Operating Revenues										
Passenger	60.0	68.4	66.5	66.9	67.6	68.6	73.5	75.1	82.7	83.9
Freight	10.7	10.1	9.3	9.4	8.8	8.9	9.2	9.1	10.4	11.5
Other	2.2	2.4	2.7	2.9	3.0	3.2	3.4	3.6	3.8	4.1
Total Revenues	72.9	74.9	78.5	79.1	79.4	80.8	86.1	87.9	97.0	99.6
Operating Expenses										
Maintenance of Way	8.6	9.8	11.7	10.6	11.4	11.7	10.8	13.4		
Maintenance of Equipment	14.0	15.1	15.7	15.6	16.9	19.3	22.0	22.0		
Traffic	.6	.7	.8	.8	.8	.8	.7	.7	n.a.	n.a.
Transportation	37.2	37.8	40.6	41.7	42.6	46.4	49.7	56.2		
Miscellaneous	.6	.7	.8	.8	1.0	1.1	1.4	1.4		
General	3.1	3.4	3.3	3.8	3.3	3.4	4.7	5.2		
Total Operating Expenses	64.1	67.5	72.8	73.2	75.9	82.8	89.3	101.9		
Net Operating Deficit (Income)	(8.8)	(7.4)	(5.7)	(5.9)	(3.4)	2.0	3.2	14.0		
Railway Tax Accruals										
Payroll	3.4	3.9	3.8	4.0	4.6	5.2	5.7	6.4		
Property	.4	.5	.5	.4	-	-	-	-	n.a.	n.a.
Net Rents	2.4	2.8	3.4	3.9	3.2	3.7	4.2	4.3		
Other Income and Deductions, Net	.3	.2	.2	.1	(.2)	(.5)	(.5)	(.5)		
Total Expenses	6.5	7.4	7.9	8.4	7.6	8.4	9.4	10.2		
Net Deficit (Income)	(2.3)	-	2.2	2.5	4.2	10.4	12.6	24.2	34.2	51.5
Depreciation Expenses (included above)	3.2	3.2	3.0	3.0	3.6	3.4	4.3	4.1	4.7	4.5
Net Deficit (Income) before Depreciation	(5.5)	(3.2)	(.8)	(.5)	.6	7.0	8.3	20.1	29.5	47.0
Solely Related Deficit (Income) of Freight before Depreciation	(.2)	(.2)	.4	.3	2.0	3.0	3.5	4.8	n.a.	n.a.
Net Deficit (Income) before Depreciation and solely related Freight Deficit (Income)	(5.3)	(3.0)	(1.2)	(.8)	1.4	4.0	4.8	15.3		
Common Costs Allocated to Freight Operations (before Depreciation)	2.4	2.4	2.8	2.5	2.5	2.8	3.1	3.4	n.a.	n.a.
Net Deficit (Income) before Depreciation and fully allocated deficit (Income) of Freight Operations	(7.7)	(5.4)	(4.0)	(3.3)	(1.1)	1.2	1.7	11.9		

*does not add due to rounding

Source: Annual Reports to the Interstate Commerce Commission.

APPENDIX TABLE V-A. 15
LONG ISLAND RAILROAD
ANALYSIS OF DEFICIT
1962-1971
(millions of dollars)

	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>
Net Operating Deficit (Income)	(2.3)	-	2.2	2.5	4.2	10.4	12.6	24.2	
Less: Financial Support by M.T.A.	<u>(2.3)</u>	<u>-</u>	<u>2.2</u>	<u>2.5</u>	<u>4.2</u>	<u>3.3</u> <u>7.1</u>	<u>5.3</u> <u>7.3</u>	<u>13.0</u> <u>11.2</u>	
Less: Amortization of Government Grants (a)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>4.2</u>	<u>3.3</u>	
Net Operating Deficit After Financial Support of M. T. A. and Amortization of Government Grant	<u>(2.3)</u>	<u>-</u>	<u>2.2</u>	<u>2.5</u>	<u>4.2</u>	<u>7.1</u>	<u>3.1</u>	<u>7.9</u>	

(a) The amortization of government grant does not involve any cash support for the LIRR.

Source: Metropolitan Transportation Authority Annual Reports

APPENDIX TABLE V-A. 16
PENN CENTRAL TRANSPORTATION COMPANY
NEW YORK STATE SUBURBAN SERVICE - HARLEM AND HUDSON LINES
ANALYSIS OF DEFICIT
 SELECTED YEARS
 (millions of dollars)

	<u>1962(a)</u>	<u>1968(b)</u>	<u>1971(c)</u>
Revenues	19.5	30.7	-
Expenses	25.0	32.7	-
Deficit	5.5	2.0	5.3

(a) Separable Suburban Costs (avoidable deficit).

(b) N. Y. P. S. C. Case 24917 Deficit calculated net of \$.2 million pass rider credit.

(c) N. Y. P. S. C. Case 24917 Based on constructive month survey.

Source: 1962: Kurnow et al, op. cit. (Appendix Table V-A. 10)
 1968, 1971 See notes (b) and (c)

APPENDIX TABLE V-A. 17

**NEW HAVEN RAILROAD
ANALYSIS OF DEFICIT**
SELECTED YEARS
(millions of dollars)

	<u>1962(a)</u>	<u>1967(b)</u>	<u>1971(c)</u>
Revenues	20.0	25.1	26.7
Expenses	22.0	28.7	31.8
Deficit	<u>2.0</u>	<u>3.6</u>	<u>5.1</u>

(a) Ford Edwards, Separable Suburban Costs. (avoidable deficit)

(b) L. E. Peabody & Associates, New Haven Railroad Commuter Service, Projection of Passenger Revenues and Expenses, 1966. Excludes Grand Central Net Income of \$3.8 million; excludes allowance for return of \$2.7 million and includes depreciation of \$2.0 million.

(c) Source: New Haven Line Service Budget, Year 1971.

Source:

1962: Kurnow et al, op.cit. (Appendix Table V-A. 10)
1967 and 1971: See notes (b) and (c)

APPENDIX TABLE V-A. 18
STATEN ISLAND RAPID TRANSIT COMPANY
REVENUES AND COSTS*
1962-1970
(millions of dollars)

	1962	1963	1964	1965	1966	1967	1968	1969	1970
Operating Income									
Passenger	1.2	1.3	1.3	1.6	1.6	1.6	1.6	1.6	1.1
Freight	2.1	1.8	1.8	1.7	1.7	1.6	1.7	2.0	1.9
Total Revenues	3.3	3.1	3.2	3.3	3.3	3.2	3.3	3.6	3.0
Operating Expenses	3.2	3.2	3.4	3.5	3.9	3.9	4.2	4.5	4.8
Other Income and Expenses	.6	.5	.7	1.0	1.0	.7	1.1	.9	1.7
New York City Subsidy Payment	- (a)	- (a)	- (a)	- (a)	- (a)	- (a)	- (a)	- (a)	(2.5)
Total Expenses	3.8	3.7	4.1	4.5	4.9	4.6	5.3	5.4	4.0
Deficit from Operations	.5	.6	.9	1.2	1.6	1.4	2.0	1.8	1.0
Deficit (Profit) of Freight Service (b)	(.2)	-	.3	- (c)	- (c)	- (c)	- (c)	- (c)	- (c)
Deficit of Passenger Service	.7	.6	1.2	- (c)	- (c)	- (c)	- (c)	- (c)	- (c)
Depreciation on Passenger Facilities	.1	.1	.1	.2(d)	.2(d)	.2(d)	.2(d)	.2(d)	.2(d)
Deficit of Passenger Service, Before Depreciation	.6	.5	1.1	1.0(d)	1.4(d)	1.2(d)	1.8(d)	1.6(d)	.8(d)

- (a) Not Disclosed Until 1970 - See Appendix Table V-A. 1
(b) Reported on a Fully Allocated Basis Until 1964
(c) Not Reported After 1964
(d) Freight And Passenger

*Does not add due to rounding.

Source: Annual Reports to The Interstate Commerce Commission

APPENDIX TABLE V-A.19
PORT AUTHORITY TRANS-HUDSON CORPORATION (PATH)
SOURCES AND USES OF FUNDS*
1962-1970
(millions of dollars)

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1962-70	Percent of total 1962-70
Sources of Funds											
Operating Revenues	2.8	8.1	8.1	7.6	7.9	9.3	10.8	11.6	12.1	78.3	27.4
Depreciation	-	-	.6	.8	.8	1.1	1.8	2.2	2.1	9.4	3.3
Federal Government Grants	-	-	-	-	-	-	4.2	1.6	1.3	7.1	2.5
Borrowings from Port Authority	1.0	16.7	5.3	28.3	12.4	23.1	57.8	13.1	31.2	189.0	66.2
Increase (Decrease) Current Liability	3.3	4.0	.9	.1	(.5)	.9	1.4	1.7	(9.8)	1.9	.6
Increase (Decrease) Other Liabilities	.1	(.1)	-	.5	-	-	-	(.5)	-	-	-
Total Sources of Funds	7.2	28.7	15.0	37.3	20.7	34.4	75.9	29.7	36.9	285.7	100.0
Uses of Funds											
Operating Expenses	3.9	10.2	11.9	13.5	13.9	16.0	18.9	20.0	21.0	129.3	45.3
Debt Service - Interest	-	.2	.2	.4	.9	1.2	2.8	3.9	3.9	13.4	4.7
Capital Outlay	.5	18.4	3.5	22.7	5.5	16.7	53.6	5.1	11.7	137.8	48.2
Increase (Decrease) in Current Assets	2.8	(.1)	(.9)	.3	.4	.4	-	.7	.3	3.9	1.4
Increase (Decrease) in Other Assets	-	-	-	.4	-	-	-	-	-	.4	.1
Other - Reversed Entry	-	-	.3	-	-	-	(.3)	-	-	-	-
Other - Debit, Reserve for Depreciation	-	-	-	-	-	-	.8	-	-	.8	.3
Total Uses of Funds	7.2	28.7	15.0	37.3	20.7	34.4	75.9	29.7	36.9	285.6	100.0

*does not add due to rounding

Source: Annual Reports to the Interstate Commerce Commission.

APPENDIX TABLE V-A. 20
PORT AUTHORITY TRANS-HUDSON CORPORATION (PATH)
ANALYSIS OF DEFICIT*
1962-1970
(millions of dollars)

	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1962-1970</u>
Operating Revenues	2.8	8.1	8.1	7.6	7.9	9.3	10.8	11.6	12.1	78.3
Operating Expenses, Including Depreciation	3.9	10.2	11.9	13.5	13.9	16.0	18.9	20.0	21.0	129.3
Debt Service	-	.2	.2	.4	.9	1.2	2.8	3.9	3.9	13.4
	3.9	10.4	12.1	13.9	14.8	17.2	21.7	23.9	24.9	142.7
Deficit, After Depreciation	1.1	2.3	4.0	6.3	6.9	7.9	10.9	12.3	12.8	64.4
Depreciation Expenses Included Above	-	-	.6	.8	.8	1.1	1.8	2.2	2.1	9.4
Deficit Before Depreciation	1.1	2.3	3.4	5.5	6.1	6.8	9.1	10.1	10.7	55.0

*does not add due to rounding.

Source: Appendix Table V-A. 19

APPENDIX TABLE V-A.21
PRIVATE BUS LINES IN TRI-STATE REGION
INCOME AND NUMBER OF PASSENGERS
1963-1969

(millions of dollars)

	<u>Connecticut</u>	<u>New Jersey</u>	<u>New York</u>	<u>Total</u>
<u>Operating Revenue</u>				
1963	15.6	105.9	41.4	162.9
1969	21.4	130.8	54.2	206.4
Percent Change	37.2	23.5	30.9	26.7
<u>Operating Expenses</u>				
1963	15.4	104.1	38.1	157.7
1969	20.4	132.1	52.1	204.5
Percent Change	32.5	26.9	36.7	29.7
<u>Non-Operating Income</u>				
1963	.5	.2	.3	-
1969	1.1	1.6	.8	3.5
<u>Deductions from Income</u>				
1963	.1	.5	.5	-
1969	.8	.6	.8	2.2
<u>Net Income (a)</u>				
1963	.6	1.5	3.1	5.1
1969	1.2	(.2)	2.2	3.2
Percent Change	100.0	-	(29.0)	(37.3)
<u>Number of Passengers</u>				
1963	66.1	358.5	205.8	630.4
1969	60.2	299.7	194.6	554.5
Percent Change	(8.9)	(16.4)	(5.4)	(12.0)

(a) Before Taxes

Source: Annual Reports of bus companies filed with State Public Service and Public Utility Commissions

APPENDIX TABLE V-A.22
PRIVATE BUSES IN TRI-STATE REGION
DISTRIBUTION OF PASSENGER REVENUE, NUMBER OF PASSENGERS AND NET INCOME
 BY SIZE OF REVENUE CLASS 1969

	PASSENGER REVENUES				NET INCOME(a)	NUMBER OF PASSENGERS
	REGULAR	CHARTER & SCHOOL	OTHER	TOTAL		
	(in thousands of dollars)					(in thousands)
BUSES WITH REVENUES OVER \$1 MILLION						
Connecticut (4 bus companies)	12 652.9	3 004.2	178.1	15 835.2	885.8	48 433.5
New Jersey(b) (16)	96 774.9	16 852.2	2 219.7	115 846.8	(526.3)	249 296.1
New York (15)	37 205.0	7 082.2	186.3	44 473.5	2 210.8	179 784.3(c)
Total (35)	<u>146 632.8</u>	<u>26 938.6</u>	<u>2 584.1</u>	<u>176 155.5</u>	<u>2 570.3</u>	<u>477 513.9</u>
BUSES WITH REVENUES \$500,000 - \$999,999						
Connecticut (3)	790.7	1 489.5	17.2	2 297.4	240.7	4 205.4
New Jersey (6)	2 261.4	1 331.7	203.2	3 796.3	(126.9)	6 565.5
New York (5)	1 672.1	1 693.2	23.8	3 389.1	(45.7)	4 757.9
Total (14)	<u>4 724.2</u>	<u>4 514.4</u>	<u>244.2</u>	<u>9 482.8</u>	<u>68.1</u>	<u>15 528.8</u>
BUSES WITH REVENUES \$250,000 - \$499,999						
Connecticut (5)	1 490.0	606.5	6.5	2 103.0	28.7	5 222.9
New Jersey (8)	1 927.3	830.4	84.5	2 842.2	94.0	9 906.0
New York (13)	2 153.8	2 180.0	19.3	4 353.1	(72.3)	7 514.3
Total (26)	<u>5 571.1</u>	<u>3 616.9</u>	<u>110.3</u>	<u>9 298.3</u>	<u>50.4</u>	<u>22 643.2</u>
BUSES WITH REVENUES \$150,000 - \$249,999						
Connecticut (1)	97.8	68.3	-	166.1	(22.7)	252.6
New Jersey (12)	1 802.9	352.1	176.7	2 331.7	39.9	8 031.1
New York (3)	363.2	286.0	11.2	660.5	(6.2)	976.9
Total (16)	<u>2 263.9</u>	<u>706.4</u>	<u>187.9</u>	<u>3 158.3</u>	<u>11.0</u>	<u>9 260.6</u>
BUSES WITH REVENUES UNDER \$150,000						
Connecticut (13)	534.0	392.8	40.1	966.9	31.2	2 134.6
New Jersey (146)	5 274.9	358.0	330.9	5 963.8	279.5	25 851.5
New York (21)	1 043.4	240.8	67.8	1 352.0	119.8	1 564.7(d)
Total (180)	<u>6 852.3</u>	<u>991.6</u>	<u>438.8</u>	<u>8 282.7</u>	<u>430.5</u>	<u>29 550.8</u>
ALL BUSES						
Connecticut (26)	15 565.4	5 561.3	241.9	21 368.6	1 163.7	60 249.0
New Jersey(188)	108 041.4	19 724.4	3 015.0	130 780.8	(239.8)	299 650.2
New York (57)	42 437.5	11 482.2	308.4	54 228.2	2 206.4	194 598.1
Total (271)	<u>166 044.3</u>	<u>36 767.9</u>	<u>3 565.3</u>	<u>206 377.6</u>	<u>3 130.3</u>	<u>554 497.3</u>

(a) Before income taxes

(b) Includes PSC Subway

(c) Does not include Liberty Coaches, information not available

(d) Incomplete, 10 companies reporting.

Source: Reports filed by bus companies with Public Utility or Public Service Commissions of the respective states.

APPENDIX TABLE V-A.23
ADULT TRANSIT FARES IN 45 LARGEST CITIES
 SEPTEMBER 1971

C I T I E S	AVERAGE FARES CITY POPULATION SIZE		
	Over One Million	500,000 - 1,000,000	250,000 - 500,000
Akron, Ohio	-	-	40
Atlanta, Georgia	-	40	-
Baltimore, Maryland	30	-	-
Birmingham, Alabama	-	-	30
Boston, Massachusetts	25/20	-	-
Buffalo, New York	-	35	-
Chicago, Illinois	45	-	-
Cincinnati, Ohio	-	45	-
Cleveland, Ohio	45*	-	-
Columbus, Ohio	-	40	-
Dallas, Texas	-	35	-
Denver, Colorado	-	35	-
Detroit, Michigan	40	-	-
Fort Worth, Texas	-	-	35
Houston, Texas	45	-	-
Indianapolis, Indiana	-	40	-
Jersey City/Newark, New Jersey	25	-	-
Kansas City, Missouri	-	50	-
Long Beach, California	-	30	-
Los Angeles, California	30	-	-
Louisville, Kentucky	-	40	-
Memphis, Tennessee	-	30	-
Miami, Florida	30	-	-
Milwaukee, Wisconsin	40	-	-
Minneapolis/St. Paul, Minnesota	25	-	-
New Orleans, Louisiana	-	15	-
New York, New York	30	-	-
Norfolk, Virginia	-	-	25
Oakland, California	25	-	-
Oklahoma City, Oklahoma	-	-	30
Omaha, Nebraska	-	-	40
Philadelphia, Pennsylvania	35	-	-
Phoenix, Arizona	-	-	30
Pittsburgh, Pennsylvania	40	-	-
Portland, Oregon	-	-	35
Providence, Rhode Island	-	35	-
Rochester, New York	-	25	-
St. Louis, Missouri	45	-	-
San Antonio, Texas	-	25	-
San Diego, California	-	40	-
San Francisco, California	-	25	-
Seattle, Washington	-	35	-
Toledo, Ohio	-	-	40
Washington, D. C.	40	-	-
Youngstown, Ohio	-	-	40

*bus fare; rapid transit fare is 50 cents.

APPENDIX TABLE VI-A.1
SOURCES OF AID TO COMMUTER RAILROADS AND RAPID TRANSIT *
1962-1970
(millions of dollars)

	Local Government	States				Federal Government				Port Authority (a)		
	<u>N.Y.</u>	<u>Conn.</u>	<u>N.J.</u>	<u>N.Y.</u>	<u>Total</u>	<u>Conn.</u>	<u>N.J.</u>	<u>N.Y.</u>	<u>Total</u>	<u>N.J.(c)</u>	<u>N.Y.(c)</u>	<u>Total</u>
Operating Subsidies	51.0(b)	4.3(d)	87.4	15.8	107.4	1.5(d)	-	1.5(d)	3.0	29.1	29.1	58.2
Percent of Totals -												
All Sources	23.2	1.9	39.8	7.2	48.9	.7	-	.7	1.4	13.3	13.3	26.5
Capital Grants	-	-	40.2	149.0	189.2	-	15.7	26.0	41.6	68.9	68.9	137.3
Percent of Totals -												
All Sources	-	-	10.9	40.4	51.3	-	4.3	7.0	11.3	18.7	18.7	37.4
Total Aid	51.0	4.3	127.6	164.8	296.6	1.5	15.7	27.5	44.6	98.0	98.0	196.0
Percent of Totals -												
All Sources	8.7	.7	21.7	28.0	50.4	.3	2.7	4.7	7.6	16.7	16.7	33.3

	Totals - All Sources			
	<u>Conn.</u>	<u>N.J.</u>	<u>N.Y.</u>	<u>Total</u>
Operating Subsidies	5.7	116.5	97.4	219.6
Percent of Total - All Sources	2.6	53.1	44.3	100.0
Capital Grants	-	124.8	243.9	368.6
Percent of Total - All Sources	-	33.8	66.2	100.0
Total Aid	5.7	241.3	341.2	588.2
Percent of Total - All Sources	1.0	41.0	58.0	100.0

- (a) Does not include New York State Commuter Car Program
(b) Excludes Station Maintenance and Rehabilitation except LIRR
(c) Expenditures for PATH divided evenly between N. Y. and N. J.
(d) Expenditures on New Haven RR divided evenly between N. Y. and Connecticut (Improvement)

*Does not add due to rounding.
Source: Appendix Tables VI-A.2 to VI-A.6

APPENDIX TABLE VI-A.2
STATE OF NEW JERSEY
AID TO COMMUTER RAILROADS*
1961-1971
(millions of dollars)

<u>Operating Subsidies</u>	<u>Central R.R. Co. of N. J.</u>	<u>Erie(a) Lackawanna</u>	<u>Penn-Reading Seashore Lines</u>	<u>Penn Central</u>	<u>Reading Company</u>	<u>(b) Totals</u>
1961	1.1	2.1	-	1.4	-(d)	4.6
1962	1.5	2.8	-	2.1	-(d)	6.4
1963	1.4	2.5	.2	1.8	-(d)	5.9
1964	1.4	2.4	.2	1.7	-(d)	5.7
1965	2.8	2.3	.2	1.7	-(d)	7.0
1966	5.9	2.4	.3	-	-(d)	8.6
1967	5.0	4.5	.2	-	.1	9.8
1968	4.9	4.2	.2	-	.1	9.4
1969	4.4	4.9	.2	-	.1	9.6
1970	4.6	5.2	.3	-	-	10.1
1971	4.3	4.8	.4	.7	-	10.2
Total	37.5	37.9	2.2	9.5	.3	87.4
Tax Relief	(c)	(c)	(c)	(c)	(c)	
<u>Capital Grants</u>						
Date Project Commenced or Application Filed:						
1965 - State Grants	3.0	-	-	-	-	3.0
1965 - Federal Grants	4.2	-	-	-	-	4.2
1967 - State Grants	-	-	-	4.7	-	4.7
1967 - Federal Grants	-	-	-	7.7	-	7.7
1969 - State Grants	1.4	27.0	.8	1.3(e)	-	30.5
1969 - Federal Grants	-	-	-	-	-	-
1970 - State Grants	.3	.4	-	1.3(e)	-	2.0
1970 - Federal Grants	-	-	-	-	-	-
Total	9.0	27.3	.8	15.0	-	52.1

(a) Includes New York and New Jersey Railroad.

(b) Excludes 1.0 Million Operating Subsidies for New York, Susquehanna and Western and Port Authority Ferry Corporation

(c) Amount of tax relief for commuter services cannot be determined due to problems of allocating total relief -

See note to table

(d) Less than \$50,000

(e) Includes New York and Long Branch Railroad

* Does not add due to rounding.

Source: Letter from the State of New Jersey, Department of Transportation, March 11, 1971.

APPENDIX TABLE VI-A.3
STATE OF NEW YORK
AID TO METROPOLITAN TRANSPORTATION AUTHORITY AND LONG ISLAND RAILROAD
 1966 - 1970
 (millions of dollars)

<u>OPERATIONS</u>	<u>Local Government(a)</u>	<u>Counties(b)</u>	<u>State</u>	<u>Federal</u>	<u>Totals</u>
1966	2.6	-	-	-	2.6
1967	7.2	-	5.0	-	12.2
1968	7.4	-	3.4	-	10.8
1969	5.8	3.5	2.3	-	11.6
1970	8.7	7.7	3.3	-	19.7
	<u>31.7</u>	<u>11.2</u>	<u>14.0</u>	<u>-</u>	<u>56.9</u>
 <u>CAPITAL GRANTS(d)</u>					
1966			71.8(c)	-	71.8
1967			1.7	-	1.7
1968			3.6	.8	4.4
1969			13.7	4.0	17.7
1970			58.7	17.6	76.3
			<u>149.5</u>	<u>22.4</u>	<u>171.9</u>

(a) Assessments against municipalities.

(b) Mortgage recording tax.

(c) Includes grant of \$65 million which was originally made available in the form of a loan to the MTA for the purchase of the Long Island Railroad.

(d) Except for (c), above, capital grants include grants for debt service reserve fund, working capital and capital improvements.

Source: Metropolitan Transportation Authority Annual Reports (1970 data obtained orally from Assistant Comptroller of MTA).

APPENDIX TABLE VI-A.4
METROPOLITAN TRANSPORTATION AUTHORITY
SOURCES AND USES OF FUNDS*
1966-1969
(millions of dollars)

	1966	1967	1968	1969	1966-1969
Sources of Funds					
Operating Revenues of LIRR	79.4	80.8	86.1	87.9	334.1
Miscellaneous Revenues of LIRR	.5	.8	1.0	.6	2.8
Assessments against Municipalities	2.6	7.2	7.4	5.8	23.0
Mortgage Recording Tax	-	-	-	3.5	3.5
Appropriated Funds of the State of New York	8.3	6.7	7.8	20.0	42.8
Increase (Decrease) in Long- Term Debt	(.8)	(.7)	3.9	59.0	61.4
Depreciation	3.7	3.5	4.3	4.1	15.6
Deferral of Revenue	-	-	.8	-	.8
Miscellaneous	.1	.1	.5	2.5	3.2
Interest Income of Authority	.3	.3	.3	-	1.0
Total Sources of Funds	94.0	98.7	112.2	183.3	488.3
Uses of Funds					
Costs and Expenses of LIRR	84.0	92.0	99.7	112.6	388.2
Financial Support for New Haven RR	-	1.5	1.5	-	3.0
Planning and other Expenses	1.4	1.6	1.7	2.0	6.7
Additions to Property Accounts					
Railroad	1.0	1.9	10.8	61.6	75.2
Republic Airport	-	-	-	6.5	6.5
Increase (Decrease) in Working Capital	2.7	1.7	(4.8)	(1.6)	(2.0)
Increase in Assessments against Municipalities	-	-	2.8	1.7	4.5
Debt Service Reserve Fund	5.0	-	-	-	5.0
Electrification Project Fund	-	-	.6	.6	1.2
Total Uses of Funds	94.0	98.7	112.2	183.3	488.3

*Does not add due to rounding.

Source: Metropolitan Transportation Authority Annual Reports

APPENDIX TABLE VI-A.5
AID TO NEW HAVEN RR
(millions of dollars)

	<u>Connecticut</u>	<u>New York</u>	<u>Federal Government</u>	<u>Total</u>
1965	.25	.25	1.0	1.5
1966	.50	.50	2.0	3.0
1967	1.50	1.50*	-	3.0
1968	1.50	1.50*	-	3.0
1969	-	-	-	-
1970	1.00	1.00*	-	2.0
1971	2.00	2.00*	-	4.0
	<hr/>	<hr/>	<hr/>	<hr/>
Total	6.75	6.75	3.0	16.5
	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>	<hr/> <hr/>

* Recorded in MTA Accounts

Source: Metropolitan Transportation Authority Annual Reports and Tri-State Transportation Commission, New Haven Railroad Commuter Service, May 1970. (1970 data obtained orally from the Assistant Comptroller of the MTA)

APPENDIX TABLE VI-A.6
PORT AUTHORITY OF NEW YORK
AID TO PORT AUTHORITY TRANS-HUDSON (PATH)*
1962-1970
(millions of dollars)

	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>1962-1970</u>
Aid to PATH:										
Borrowings from Port Authority	1.0	16.7	5.3	28.3	12.4	23.1	57.8	13.1	31.2	189.0
Federal Government Grants	-	-	-	-	-	-	4.2	1.6	1.3	7.1
Total	1.0	16.7	5.3	28.3	12.4	23.1	62.0	14.7	32.5	196.1
Uses:										
Deficit, before Depreciation	1.1	2.3	3.4	5.5	6.1	6.8	9.1	10.1	10.7	55.0
Capital Outlay	.5	18.4	3.5	22.7	5.5	16.7	53.6	5.1	11.7	137.8
Increase (Decrease) in Other Assets	(.6)	(4.0)	(1.5)	.1	.9	(.5)	(.9)	(.5)	10.1	3.2
Total	1.0	16.7	5.4	28.3	12.5	23.0	61.8	14.7	32.5	196.0

*Does not add due to rounding.

Source: Appendix Table V-A.19

APPENDIX TABLE VI-A.7
THE PORT OF NEW YORK AUTHORITY
NEW YORK STATE COMMUTER CAR PROGRAM
INVESTMENT, BORROWING AND DEBT REPAYMENT
(thousands of dollars)

	NEW YORK CENTRAL			LONG ISLAND RAILROAD (MTA)			TOTAL		
	Investment in Commuter Cars	Borrowing	Debt Repayment	Investment in Commuter Cars	Borrowing	Debt Repayment	Investment in Commuter Cars	Borrowing	Debt Repayment
1962	\$4,154	\$ -	\$-	\$1,690	\$5,475	\$ 600	\$5,844	\$5,475	\$ 600
1963	4,096	8,250	330	3,772	-	1,205	7,868	8,250	1,535
1964	(125)	6,000	330	-	-	1,210	(125)	6,000	1,540
1965	5,812	-	570	-	-	1,220	5,812	-	1,790
1966	313	-	570	-	-	1,240	313	-	1,810
1967	-	-	570	-	-	-	-	-	570
1968	-	-	570	2,650	32,500	-	2,650	32,500	570
1969	-	-	810	49,205	30,500	-	49,205	30,500	810
Total	\$14,250	\$14,250	\$3,750	\$57,317	\$68,475	\$5,475	\$71,567	\$82,725	\$9,225

Source: Appendix Table VI-A.8

APPENDIX TABLE VI-A.8
 THE PORT OF NEW YORK AUTHORITY
NEW YORK STATE COMMUTER CAR PROGRAM
SOURCES AND APPLICATION OF FUNDS*
 (thousand of dollars)

SOURCES	1962	1963	1964	1965	1966	1967	1968	1969
State Guaranteed Commuter Car Bonds	\$ -	\$ 7,920	\$ 5,670	\$ (570)	\$ (570)	\$ (570)(a)	\$ (570)	\$ (810)
New York Central	-	7,920	5,670	(570)	(570)	(570)(a)	(570)	(810)
Long Island Railroad (MTA)	(5,475) (600)	(1,205)	(1,210)	(1,220)	(1,240)	-	32,500	30,500
Debt Retired Through Income								
New York Central	-	330	330	570	570	570(a)	570	810
Long Island Railroad (MTA)	600	1,205	1,210	1,220	1,240	(5,475)(a)	-	-
Advance from New York State								
New York Central	4,154	(4,154)	-	-	-	-	-	-
Long Island Railroad (MTA)	-	-	-	-	-	-	-	-
Accounts Payable and Other Liabilities								
New York Central	211	(191)	404	(324)	(16)	249 (a)	256	(67)
Long Island Railroad (MTA)	1,663	(1,276)	(252)	(1)	4	(138)(a)	1,021	1,942
	<u>\$11,503</u>	<u>\$2,629</u>	<u>\$6,152</u>	<u>\$ (325)</u>	<u>\$ (12)</u>	<u>\$(5,364)</u>	<u>\$33,777</u>	<u>\$32,375</u>
USES								
Invested In Commuter Cars								
New York Central	4,154	4,096	(125)	5,812	313	-	-	-
Long Island Railroad (MTA)	1,690	3,772	-	-	-	(5,462)(a)	2,650	49,205
Invested In U. S. Government Securities								
New York Central	205	(195)	6,011	(5,695)	(326)	-	-	-
Long Island Railroad (MTA)	5,442	(5,053)	(245)	(6)	(5)	(133)(a)	30,862	(16,888)
Increase in Cash and Other Assets								
New York Central	5	4	518	(442)	(2)	250(a)	256	(67)
Long Island Railroad (MTA)	4	5	(7)	4	11	(17)(a)	9	125
	<u>\$11,503</u>	<u>\$ 2,629</u>	<u>\$6,152</u>	<u>\$ (327)</u>	<u>\$ (7)</u>	<u>\$(5,362)</u>	<u>\$33,777</u>	<u>\$32,375</u>

(a) Transferred to Metropolitan Transportation Authority
 * Does Not Add Due To Rounding.

Source: The Port of New York Authority Annual Reports

APPENDIX TABLE VI-A.9
NEW YORK CITY
AID TO RAPID TRANSIT
(millions of dollars)

	<u>1963</u>	<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>	<u>Total 1963-70</u>	<u>Percent of Total</u>
CURRENT OPERATIONS:										
Transit Authority	26.6	34.8	78.7	53.3	79.1	75.1	91.1	107.3	546.0	27.8
MABSTOA	4.0	5.2	5.4	4.3	6.6	6.9	6.6	10.1	49.1	2.5
SIRT	0.8	0.8	0.9	1.0	1.0	1.2	1.2	1.2	8.1	.4
Private Bus companies	5.1	11.8	6.4	6.3	8.6	8.1	8.5	11.0	65.8	3.4
Miscellaneous	2.0	3.2	2.4	4.7	1.6	1.0	0.6	0.5	16.0	.8
Total	<u>38.5</u>	<u>55.8</u>	<u>93.8</u>	<u>69.6</u>	<u>96.9</u>	<u>92.3</u>	<u>108.0</u>	<u>130.1</u>	<u>685.0</u>	<u>34.9</u>
Interest on Debt	<u>58.9</u>	<u>60.5</u>	<u>61.1</u>	<u>61.4</u>	<u>62.1</u>	<u>63.0</u>	<u>63.6</u>	<u>66.5</u>	<u>497.1</u>	<u>25.4</u>
Capital Outlay										
Transit Authority	108.8	69.2	83.5	52.8	69.9	77.4	121.8	100.1	683.5	34.8
MABSTOA	0.3	7.5	12.2	14.5	49.4	0.7	4.8	5.8	95.2	4.9
Total	<u>109.1</u>	<u>76.7</u>	<u>95.7</u>	<u>67.3</u>	<u>119.3</u>	<u>78.1</u>	<u>126.6</u>	<u>105.9</u>	<u>778.7</u>	<u>39.7</u>
TOTAL AIDS	<u>206.5</u>	<u>193.0</u>	<u>250.6</u>	<u>198.3</u>	<u>278.3</u>	<u>223.4</u>	<u>298.2</u>	<u>302.5</u>	<u>1960.8</u>	<u>100.0</u>

Source: Appendix Table V-A.7

APPENDIX TABLE VI-A.10

**PROPOSED FEDERAL REVENUE-SHARING PROGRAM FOR TRANSPORTATION
IMPLICATIONS FOR STATES**

(millions of dollars)

GENERAL TRANSPORTATION APPROPRIATION OF \$2,041

<u>State</u>	<u>Allocation To State</u>	<u>Percent Of \$2,041</u>
New York	123	6.04
New Jersey	46	2.25
Connecticut	17	.93
Totals	<u>188</u>	<u>9.22</u>

MASS TRANSIT CAPITAL APPROPRIATION OF \$525

<u>State</u>	<u>Allocation To State</u>	<u>Percent Of \$525</u>
New York	87	16.58
New Jersey	25	4.74
Connecticut	4	.85
Totals	<u>116</u>	<u>22.17</u>

TOTAL APPROPRIATION OF \$2,566

<u>State</u>	<u>Allocation To State</u>	<u>Percent Of \$2,566</u>
New York	210	8.18
New Jersey	71	2.76
Connecticut	23	.89
Totals	<u>304</u>	<u>11.84</u>

APPENDIX TABLE VI-A. 11

**PROPOSED FEDERAL REVENUE-SHARING PROGRAM FOR TRANSPORTATION
IMPLICATIONS FOR TRI-STATE REGION**

(millions of dollars)

GENERAL TRANSPORTATION APPROPRIATION OF \$2,041

<u>State</u>	<u>Allocation To Region</u>	<u>Percent Of \$2,041</u>
New York	79	3.86
New Jersey	34	1.69
Connecticut	10	.50
Totals	123	6.05

MASS TRANSIT CAPITAL APPROPRIATION OF \$525

<u>State</u>	<u>Allocation To Region</u>	<u>Percent Of \$525</u>
New York	73	13.90
New Jersey	21	3.97
Connecticut	2	.44
Totals	96	18.31

TOTAL APPROPRIATION OF \$2,566

<u>State</u>	<u>Allocation To Region</u>	<u>Percent Of \$2,566</u>
New York	152	5.92
New Jersey	55	2.14
Connecticut	12	.46
Totals	219	8.52

APPENDIX TABLE VI-A. 12
DERIVATION OF ALLOCATION
GENERAL TRANSPORTATION APPROPRIATION \$2,041

COMPONENT	STATES					REGION PORTION OF STATES				
	PERCENT OF UNITED STATES					PERCENT OF UNITED STATES				
	New York	New Jersey	Connecticut	Total	Weight	New York	New Jersey	Connecticut	Total	Weight
Population	8.95	3.53	1.49	13.97	.225	5.92	2.64	.78	9.34	.225
Urban Population	10.40	4.27	1.57	16.24	.315	7.75	3.40	.91	12.06	.315
Area	1.37	.22	.14	1.73	.180	.14	.07	.04	.25	.180
Star and Postal Route Miles	n/a	n/a	n/a	n/a	.180	n/a	n/a	n/a	n/a	.180
Percent Allocated (a)	6.04	2.25	.93	9.22		3.86	1.69	.50	6.05	

NOTE:(a) For purpose of estimating percent of total allocated, it is assumed that the contribution to the total amount of the star and postal route mile component of the formula is equal to the contribution of the area component.

APPENDIX TABLE VI-A.13
DERIVATION OF ALLOCATION
MASS TRANSIT CAPITAL APPROPRIATION OF \$525 MILLION

<u>COMPONENT</u>	<u>STATES</u>					<u>REGION PORTION OF STATES</u>				
	<u>PERCENT OF UNITED STATES</u>					<u>PERCENT OF UNITED STATES</u>				
	<u>New York</u>	<u>New Jersey</u>	<u>Connecticut</u>	<u>Total</u>	<u>Weight</u>	<u>New York</u>	<u>New Jersey</u>	<u>Connecticut</u>	<u>Total</u>	<u>Weight</u>
Population in Large SMSA	19.50	4.67	-	24.17	.80	17.37	4.67	-	22.04	.80
Population in Small SMSA	4.90	5.05	4.26	14.21	.20	-	1.19	2.25	3.44	.20
Percent Allocated	16.58	4.74	.85	22.17		13.90	3.97	.44	18.31	

Appendix B:

Recommendations to Increase the Efficiency of Bus Operations

The following recommendations relating to bus operations have been gathered from various sources. They are illustrative of the kind of actions required to increase productivity and to improve the quality of service of mass transit organizations.

1.) Equipment maintenance and purchasing should, whenever feasible, be centralized. Such centralization would be facilitated by encouraging bus operators to form associations for this purpose.

The centralization of the maintenance and purchasing functions, combined with computerized information systems for these activities, would be expected to reduce costs. However, there are numerous obstacles which could prevent such savings. Fragmentation of ownership would delay organizing the system. At the same time, it would be difficult to insure that any central organization would have sufficient authority to make effective decisions. Furthermore, the cost of centralization, including the impact on labor policy, may be too high to allow for widespread participation. These problems, combined with the uncertainty about future operations, would make efficient centralization difficult to achieve.

2.) Automated fare-counting devices.

On a centralized basis these devices would improve productivity. The machinery is too expensive for a small company to install but results in savings by reducing clerical work and opportunities for theft, if it is used by a number of companies.

3.) School, contract, charter, and regular passenger routes should be consolidated.

Government bodies can encourage a consolidation of services by awarding franchises and granting school contracts. The latter provide regular bus companies with significant revenues. For example, New York State spends \$140 million on transporting school children. This policy might actually reduce the cost of school contracts since bus companies engaged solely in school transportation under-utilize their equipment. With the addition of some special safety devices, regular buses can be used to transport school children.

4.) Competing bus routes should be consolidated.

The Commission did not undertake a detailed analysis of all bus routes in the region, but responses to a questionnaire indicated the existence of overlapping routes.

5.) Infrastructural improvements should be made to promote better conditions for bus operations and to encourage more people to use buses.

Faster service may be obtained through:

a.) use of reserve bus lanes, exclusive or preferential streets, or expressway ramps;

b.) use of parkways previously prohibited to buses;

c.) improvement of loading patterns;

d.) stricter enforcement of traffic laws and parking regulations;

e.) discouraging the use of cars for intra-urban travel by increasing existing tolls on bridges and tunnels, imposing tolls on toll-free bridges, prohibiting

parking in congested areas, and increasing parking fees;

f.) more buses and shorter headway spans;

g.) introduction of express bus service and special routes;

h.) widening streets, making streets one-way, or changing bus routes to roads parallel to congested arteries;

i.) construction of parking sites at bus terminals to be constructed on the periphery of the CBD or new parkways; and

j.) installation of devices which allow buses to control traffic signals.

Faster service will simultaneously increase the demand for bus transportation and increase the efficiency of operations. Some of these proposals, namely, those involving rerouting, would be opposed by local merchants who fear loss of trade from alterations in routes. Other proposals, like widening of streets, are costly to implement, and the automobile lobby would strongly object to increased tolls and parking restrictions. Also, more frequent bus service may give greater convenience, but the recent experiences in St. Louis and Sacramento demonstrated that the added revenue did not match the increased costs. The implementation of many of these proposals, however, would produce benefits which far exceed costs.

Another type of infrastructural change, as obvious as the proposal may be, deserves mention. Improved police protection and reductions in the crime rate would stimulate greater use of buses and mass transportation facilities in general.

6.) Schemes for the reciprocal acceptance of transfer fares should be adopted by companies with adjacent and overlapping costs.

The adoption of this proposal would probably reduce fares and thus increase patronage. Moreover, the replacement of the current method of collecting and counting transfers by a formula for equitably apportioning this revenue would save bookkeeping costs.

7.) Automated fare collection.

With the introduction of exact fares on many routes, automated fare collection would be preferred by passengers.

8.) There is a need for continuing studies on new routes and on the modification of existing routes.

9.) Information on bus routes and schedules should be widely disseminated.

10.) A campaign should be undertaken to educate the public on the economic and other advantages of mass transportation and to publicize the availability of these services.

Mass transit services are generally regarded as an inferior substitute to the private automobile. However, if people were to learn the actual cost of using the auto when compared to mass transit, and if at the same time mass transit were made more attractive, many might rationally decide to switch modes. Such costs include travel time and reliability, as well as the explicit costs of operating a motor vehicle. In this connection, it is important to stress the fact that, historically, there has been no effective pressure group for mass transit. It is incumbent upon government to explain the purpose and advantages of mass transit, and to provide a way for the public to make recommendations on improvements in service.

11.) Other Promotional Activities.

a.) Special programs, such as reduced fares during off-peak hours, and "specials" for shoppers, athletic events, and cultural activities should be used to increase the number of riders and make people "mass transit conscious."

b.) Bus drivers and all transit employees should be encouraged to be more courteous and should adopt "airline" mannerisms.

c.) Special bus routes should be instituted to provide door-to-door pickups.

Several cities in Connecticut provided this kind of service in the early sixties. At present, only one bus line maintains the service, which is intended primarily for the elderly and is subsidized by the community. A new demonstration project, called Dial-a-Bus, and based on this concept, will be undertaken this year in Haddonfield, New Jersey. Similar proposals are being studied in New York City.

