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Preliminary Draft

FINANCING THE CONSTRUCTION OF ATLANTA'S RAPID TRANSIT SYSTEM

Prepared for
Metropolitan Atlanta Rapid Transit Authority

July 31, 1967

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FINANCING THE CONSTRUCTION OF ATLANTA'S RAPID TRANSIT SYSTEM

The capital costs of Metropolitan Atlanta's rapid transit system clearly must be financed by funds obtained from sources beyond the fare box. The system can generate enough operating revenues to cover operating expenses and maintenance and to finance the purchase of the basic rolling stock and operating equipment. For the capital costs of the system, however -- the tracks, bridges, stations and other elements of the fixed investment -- rapid transit in Metropolitan Atlanta must look to the local governments of the area and to Federal and state sources.

This is, of course, normal. Rapid transit systems are basically public enterprises operating public facilities comparable to streets and schools and performing essential public services. Although they are unlike streets and schools in that they produce operating revenues, few systems are able to spin off enough net returns to make any substantial contribution to basic costs of the fixed investments. Some systems do better than others but all share the characteristic of being public service enterprises that require direct public support if they are to meet public needs.

The legislation that set up Metropolitan Atlanta's system authorizes the local governments to make funds available for capital costs in two ways. One is to utilize the bonding capacity of each jurisdiction, if such capacity is available, for the issuance of general obligation bonds whose proceeds would be turned over directly to the Metropolitan Atlanta Rapid Transit Authority (MARTA) for land acquisition and construction costs. The other provides for stipulated payments from the local governments to the Authority to cover the costs of servicing bonds which MARTA itself would issue. The MARTA bonds would be generally classed as revenue bonds because their security would be revenues pledged from local governments.

In the following section, all aspects of the local financing of the capital costs of Metropolitan Atlanta's rapid transit system will be explored. The underlying premise to be reiterated is that the public nature of the rapid transit enterprise calls for the public assumption of responsibility for paying for the fixed investment. This premise has already been clearly recognized locally and indeed was assumed in the creation of MARTA and in the legislation providing for MARTA's support and operations.

Questions and Principles

Three key questions need to be particularly highlighted in this analysis:

> To what extent can the local area count on financial help from Federal and state sources to supplement the funds that must be made available from the local government?
>
> After the local share is determined, how should this burden be allocated among the several governmental jurisdictions within the metropolitan area?
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> After this allocation is made on a fair and equitable basis, what would be the potential impact of this new expenditure commitment upon the local governments and taxpayers?

Each of these questions involves different kinds of considerations. The potential availability of Federal and state funds involves policy assumptions that are not subject to precise corroboration. Allocating the local share among the different governmental jurisdictions -- Fulton, DeKalb, Clayton, Gwinnett and later Cobb counties (with a possible break-out of the City of Atlanta from the counties in which it is located) -- calls for devising a formula that considers both benefits from the transit system and financial capabilities. Analyzing the impact of rapid transit financing upon the budgets of the different local governments calls for evaluation of the practical problems of accommodating additional costs within governmental structures that are already under financial pressure.

Specific answers to each of these questions will be provided later in this section. First there might be an exploration of principles involved in order to get a general perspective for the subsequent analysis.

Federal and State Assistance. All of the major rapid transit systems in the United States built up to the present time -- in New York, Chicago, Philadelphia, Boston and Cleveland -- have been preponderantly financed from local revenue sources, both public and private. It has only been in recent years that the Federal government has developed a program of assistance in this field and the amount of Federal money involved to date has been relatively small. The most recent rapid transit system to get under construction -- the Bay Area Rapid Transit system (BART) in San Francisco -- is being almost completely financed from state and local sources, with the current flow of Federal funds representing a small fraction of the total costs (which may reach one billion dollars). The states have assumed new responsibilities for rapid transit financing where local systems exist, but again the share of the costs from this source so far is small. The primary responsibility clearly rest with the local area.

On the other hand, virtually all urban governments in the U.S. are badly in need of money. The financial plight of American cities has reached a point of national crisis. Urban populations are growing rapidly, demands for urban services are mounting, critical urban problems are multiplying -- and all of these factors are creating unprecedented needs for additional revenues in the face of limited availability of funds. Although existing sources are producing sharp increases in revenues each year, demands are outrunning revenue supplies in most local governments. Even as new local revenue sources are developed, there has been increasing need to turn to the Federal and state governments for help.

It can be taken as a basic assumption that Metropolitan Atlanta's rapid transit system must -- and will -- get some aid from both Federal and state sources. The primary responsibility for financing this system, however, cannot be shifted away from the local governments. In developing a financial plan for the Metropolitan Atlanta system, the approach must be to make the most realistic possible estimate of funds that can be expected from Federal and state sources and then to test the feasibility of producing the remaining funds from the local sources.

It can be anticipated that the amount available from the Federal government for rapid transit purposes in the immediate future will be limited. Despite talk of potentially massive Federal outlays for this purpose, there is no evidence that such funds are imminent. The pressure of the Viet Nam war and the rising demands for Federal funds for other urgent urban problems make it unreasonable to assume any large scale availability of funds. Because of its head start in rapid transit planning, Metropolitan Atlanta is assured of its share of the funds that do become available but these funds will supplement what is raised locally rather than represent the basic share -- at least in the immediate future.

As to assistance from the state, the people of Georgia in November 1966 approved a constitutional amendment declaring public transportation to be an "essential governmental function and a public purpose for which the power of taxation of the state may be exercised and its public funds expended". The amendment also provided, however, that the State of Georgia shall not provide more than 10 percent of the total cost of a public transportation system, either directly or indirectly. Subsequently, the General Assembly made an appropriation to the Metropolitan Atlanta system even before the total cost had been determined and before local financing for building the system had been assured.

For purposes of planning, it is reasonable to assume that the State of Georgia will contribute 10 percent of the capital costs of Metropolitan Atlanta's system. It is quite possible, of course, that the legislature will not approve contributions in this magnitude. On the other hand, there is no sound basis for assuming that the legislature will not do so. Preliminary financial planning should take the maximum state contribution as a premise.

Allocation Among Local Jurisdictions. Determining the proportion of the local share of MARTA's capital costs that should be allocated to each of the participating local governments is an important matter. Ultimately, of course, the people in each jurisdiction must decide by vote whether or not these funds will be made available. However, a formula must be devised for making a fair and equitable allocation on the basis of which this decision might be made.

The objective should be so far as possible to base each jurisdiction's share on the benefits that the system will provide. It is not difficult to identify the overall kinds of benefits that such a system might produce; the problem is to determine how these benefits might be distributed and measured geographically throughout the metropolitan area. Up to now, no rapid transit system has been able to define these benefits in any precise way on an area-by-area basis.

The evidence of the overall value of rapid transit to a metropolitan area is unmistakable. The costs of moving people by transit is considerably less than by expressway. Reduction of highway and street traffic through provision of transit facilities saves time for individuals and businesses and means heavy savings in public costs for maintenance of transportation facilities. New tax values are created along rapid transit rights-of-way (in Toronto, for example, approximately two-thirds of the net increase in taxable valuations over the past ten years have been created on properties directly served by the new rapid transit system). Valuable land is preserved that would otherwise be taken for expressways. The availability of jobs to the local population is increased and wider choices of employment are permitted. The destructive and costly effects of continued urban sprawl are lessened as close-in densities are increased. In short, overall efficiency of the metropolitan area is improved and each jurisdiction shares in the benefits and advantages.

Setting each jurisdiction's specific share of the benefits, however, is not subject to easy measurement. There are different transit mileages in each area, different patronage levels, different initial costs, different impacts in terms of both savings and tax values, different effects on area growth. It can be argued that each benefit to a jurisdiction can be offset by a liability. The transit system may generate large new tax values along its rights-of-way in the central city but at the same time make possible a diffusion of employment centers and population to other areas. The system may accelerate growth in suburban areas but this can create vast new demands for public services and facilities as well as new tax values. A rapid transit system can take property off the tax rolls as well as add tax values, and it can potentially blight the neighborhood as well as create substantial new environments.

The simple fact is that rapid transit benefits the metropolitan region as a whole. A fast-growing region the size of Metropolitan Atlanta will not be able to function efficiently without a balanced transportation system that includes rapid transit. Practically speaking, it will be impossible to build the streets and highways that can accommodate Metropolitan Atlanta's future vehicular traffic. All forecasts of Metropolitan Atlanta's future employment and population levels assume an efficient system of local circulation and the absence of this system (which necessarily includes rapid transit) will simply mean that anticipated growth levels will not be reached. The effects of a circulation breakdown upon the economy of a particular jurisdiction can mean sharp losses in public revenues in relation to demands for public services.

The tight internal linkages within the metropolitan area must be particularly recognized. The efficient operation of Downtown Atlanta, for example, has a direct importance to all parts of the metropolitan region. The functions of this central business district in one way or another have a critical bearing upon every major industrial investment in the entire region, and these industrial investments in turn support widely scattered commercial and residential investments. Similarly but on a different scale, Emory University, Conley Depot, Peachtree Industrial Boulevard, Lockheed Aircraft, the Atlanta Municipal Airport, the Farmer's Market, Georgia Tech and other major enterprises and institutions have regional significance regardless of their locations.

A rapid transit system accentuates and increases the efficiency of the internal linkages in a metropolitan area. A formula to allocate the costs of such a system within the area, therefore, must be based upon some common-sense indexes that measure each jurisdiction's relative size and function in the region and its proportion of the region's wealth and its relative pattern of growth. The benefits of a rapid transit system will be reflected in each jurisdiction's participation in the area's overall economic and land use development.

With these types of relative measures, a fair and equitable formula for allocating rapid transit costs can be devised. The basic assumption must be that the transit system will help make possible the full realization of the entire area's potential. The growth and well-being of each jurisdiction will be the best measure of its share of the benefits that the system produces.

Local Fiscal Capabilities. As a part of this analysis of capital costs financing, a comprehensive study was made of the fiscal problems of the local governments of Metropolitan Atlanta. The purpose was to determine the potential impact of adding the burden of the new rapid transit system to the complex of public services and facilities which the local governments already carry. This fiscal study involved forecasts of operating revenues and expenditures for each local government, analyses of capital fund requirements and projections of economic indexes on the basis of which the availability of funds for capital purposes might be estimated.

This study showed that every local government in Metropolitan Atlanta is already under financial pressure. Like municipal and urban county governments elsewhere, they are hard pressed to meet both operational and capital needs from existing sources of revenue. Demands for new services and facilities have been growing faster than new revenues have been produced, despite large increases in the latter.

The prospects are for even greater financial stringency in the future. If no additional revenue sources are opened up, the major local governments in Metropolitan Atlanta face deficit situations in both operating and capital budgets. This is true despite optimistic forecasts of future revenues from existing sources reflecting extremely favorable growth prospects for the area. The outlying areas will demand the full range of municipal services as population and employment expand; the close-in areas will need increased expenditures for rehabilitation and redevelopment as well as for the solution of pressing social problems.

It can be assumed, however, that new sources of revenue will be made available to meet the needs that have already been projected without rapid transit. Although efforts to get a local sales tax option failed in the 1967 General Assembly, there is general optimism that either this or the payroll tax will receive favorable legislative attention in the near future and that local voters will approve one of the new tax measures. It is also likely that the major governments will in addition have to increase property taxes to meet gross future needs.

Within the framework of expanded future budgets, the local governments can accommodate the additional costs of financing rapid transit if a sufficiently high priority is placed on the transit function. Assuming that additional funds are forthcoming anyway, money will be available for rapid transit if the people decide that they want it. Local voters have already demonstrated their approval of the proposition that rapid transit is essential, through establishment of MARTA and favorable votes on participation in MARTA's program. It is reasonable to anticipate that this favorable opinion will be expressed again when issues of financing the system are brought to the voters for consideration.

Basic Premises of Analysis

This financial analysis is concerned only with the areas embraced by the four counties of Fulton, DeKalb, Clayton and Gwinnett (including the City of Atlanta). It does not cover Cobb County which is not presently participating in the MARTA program.

In analyzing the financial impact upon the respective local governments of building the rapid transit system in Metropolitan Atlanta and in evaluating their capacities to undertake the program, three basic premises have been established:

1. That the major share of the financial responsibility involved in building the system will be assumed by the local governments, with a minimum dependence upon financial help from the outside;

2. That the minimum target will be the construction of a 30-mile system capable of achieving the major part of the goals set for rapid transit in the area;

3. That a policy and program will be adopted that will provide for an extension of this basic system to 52 miles later if and when additional funds become available from non-local sources.

Each of these premises is regarded as highly important. The first premise -- that the local governments will commit themselves to move ahead with a rapid transit system for which they would pick up the major part of the financial tab -- is both reasonable and necessary. It is not possible to predict with accuracy how much Federal money might become available, and the state funds are limited to a fraction of the total cost. It is hypothetically possible that two-thirds of the cost of Atlanta's rapid transit system could eventually be paid for by Federal funds but there are grave uncertainties as to when such funds might be made available if at all. Moreover, under present regulations Federal funds can be committed for only two years at a time. It would therefore seem imperative, if Metropolitan Atlanta wants a rapid transit system, that a local decision be made to shoulder the main burden locally. This means taking some reasonable assumption about the availability of Federal and state funds but at the same time assuring the construction of the system through a heavy local commitment.

This is the way in which the operating rapid transit systems in other big U.S. cities have been built. On the other hand, the existence of the Federal program is itself testimony to a clear recognition that new rapid transit systems ar [illegible] ot likely to be b[illegible] without [illegible] the costs being shared at the Feder[illegible] 1. The burde[illegible] the loc[illegible] ernments is too great on top of mounti[illegible] for a whole r[illegible] of othe[illegible] vices and facilities. Clearly new s[illegible] will be n[illegible] if [illegible] ernments are to meet their fut[illegible] rom rapid tra[illegible] t [illegible], an impossible situation. [illegible] y growing m[illegible] ita[illegible] Atlanta has vast economic resources that c[illegible] tapped for [illegible] pur[illegible]. Rapid transit simply must be given the ne[illegible] ry priori[illegible] he list [illegible] ssential facilities.

It would [illegible] nrealistic [illegible] oach Atl[illegible] transit financing problem under any other assu[illegible] e hop[illegible] large-scale Federal funds might eventually be made ava[illegible] or thi[illegible], but to plan on this basis would invite disappointment and even d[illegible] if this hope were not realized -- and would also represent a denial [illegible] igh priority that th[illegible] public has already put upon rapid transit through [illegible] pproval of the MARTA program so far.

The second premise -- a commitment from the beginning to a full-scale basic system -- would also appear both reasonable and necessary. The engineers have designed a 30-mile system that covers the heart of the metropolitan area in which are located the greatest concentrations of people and jobs, the highest densities of development, and the corridors of heaviest traffic congestion. An initial commitment to a system of less capabilities would not move the area toward a head-on confrontation with the basic problem.

As already described in this report, the 30-mile system would extend between Brookhaven on the north and the Tri-Cities on the south, Decatur on the east and Lynhurst Drive on the west, with spurs off to the northwest and northeast. This basic system would not reach into the suburban areas of Clayton and Gwinnett counties. As a result, it would not be proposed that these two counties assume any share of the local costs of the 30-mile system until and unless extensions are made from it into these outlying counties.

The basic 30-mile system will cost approximately $332,000,000, assuming that construction gets underway in 1969. It is projected to take nine years to complete which would carry the construction period through 1977.

The third premise, which relates to future expansions of the system as additional non-local funds become available, calls for a flexible future policy. The key factor is the future availability of Federal funds. If the decision is made to move ahead with the 30-mile system assuming minimum Federal participation, another decision can be made later to go to the 52-mile system (which would push rapid transit lines into Clayton and Gwinnett counties) if sufficient Federal funds become available to match expanded local funds. Later, if and when Cobb County decides to participate in the program, the decision can be made to go to the 63-mile five-county system as further funds become available.

As noted earlier in this report, the 52-mile system would cost $479,000,000 and would take 12 years to build with completion scheduled by the end of 1980. The addition of Federal money beyond that available for the 30-mile system, plus the participation of Clayton and Gwinnett, would result in only a slight increase in cost for the larger system to the residents of the close-in counties, Fulton and DeKalb. (The 52-mile system, of course, would include extensions to the basic system within the two counties as well as extensions outward to the suburbs.)

To summarize the foregoing, this analysis of financing will be concerned basically with two rapid transit systems:

> The basic 30-mile system which will cost $332,000,000, operate only in Fulton and DeKalb counties, take nine years to build, and be financed on the assumption of minimum Federal and state assistance.
>
> The overall 52-mile system which will cost $479,000,000, extend out into Clayton and Gwinnett counties, take 12 years to build, and be undertaken beyond the 30-mile system as more Federal money becomes available to match state and local funds.

Allocation of Local Costs

The determination of a formula [illegible] might be recommended for allocating the local share of the capital costs of the Metropolitan Atlanta rapid transit system among the local jurisdictions has involved a major research effort. Methods used in other metropolitan areas have been studied. A wide variety of factors relating to potential benefits of rapid transit to different parts of the metropolitan area have been explored.

The basic conclusion has already been stated -- that the entire metropolitan area benefits from development of rapid transit and that it is substantially impossible to match up costs and benefits for any particular area in any precise sense. It is possible, however -- and necessary -- to identify general indexes that would guarantee a fair and equitable allocation of the local burden. These indexes must take into account three essential factors -- relative intensity of useage, relative capacity to pay, and relative economic development impact.

Three sets of measurements -- population, property tax digest and employment -- would most clearly reflect these basic considerations. None of these factors by itself would provide the basis for a fair and equitable cost distribution, and the absence of any would prejudice the fairness of the allocation formula. These three elements have the additional merit of being simple and measurable by basic data that can be readily obtained and well documented and authenticated from official sources.

Two additional considerations must be introduced to assure the fairness and equity of a final allocation formula utilizing these factors. One is the importance of taking future as well as present patterns into account. This can be accomplished by getting two sets of figures for each element -- a figure for the present (using 1965 as the base year for which data can be verified) and a projected figure for a future year. Inasmuch as official forecasts have been made of both population and employment for the year 1983 by the Atlanta Region Metropolitan Planning Commission (in connection with the Atlanta Area Transportation Study), this year can be used for the future date (by which time, incidentally, the rapid transit system would be in operation). The property tax digests utilizing in part these population and employment figures can be projected for the same year. All three elements can therefore be put into the formula with well documented present and future components.

The other consideration involves the use of common sense and good judgement in assigning different degrees of importance to each of the basic factors. This is done by giving a different weight to each element in the allocation formula. It was determined that employment should be given the greatest weight (3) because it most nearly reflects the economic strength of the various jurisdictions. Employment means investments, payrolls, purchases and sales, and the employment index is a fair measure of economic activity. Apart from the convenience factor, the greatest "benefit" derived by a local government from an efficient transit system would come from the maintenance and expansion of its economy. The area with the heaviest employment would have the most to gain from the system and would generate the largest capacity to finance it.

The property tax digest -- the assessed value of property put on a comparable basis at 100 percent of market value in each jurisdiction -- would be given the next highest weight (2). The property tax digest also reflects ability to pay on the part of the governments and in addition helps to measure the potential impact of the system on physical growth. Each of the county governments in Metropolitan Atlanta rely heavily upon the property tax and all are now required to maintain their assessments at roughly 40 percent of market value.

In the formula, population would carry the basic weight of one (1). Although transit patronage would bear some direct relationship to population, a formula giving a heavier weight to population would penalize outlying areas whose level of transit ridership would probably not carry the same relationship to population as patronage levels in the close-in areas where densities near the transit corridor will be more intense.

In Table 1, following, these three basic factors are set forth in statistical form in terms of percent distributions among each of the four counties participating in the MARTA program. These percent distributions are shown for a present (1965) and a future year (1983). The composite index that combines all of these factors at the assigned weights becomes the proposed allocation formula, which is also shown in terms of the percentage share of total capital cost that would be allocated to each jurisdiction.

Table 1. ELEMENTS IN RECOMMENDED COST ALLOCATION FORMULA FOR MARTA CONSTRUCTION: PERCENT DISTRIBUTION OF POPULATION, PROPERTY TAX DIGEST, AND EMPLOYMENT, 1965 and 1983

	Population (1)		Tax Digest (2)		Employment (3)		Proposed
	Actual	Projected	Actual	Projected	Actual	Projected	Allocation
County	1965	1983	1965	1983	1965	1983	Formula
Fulton	57.1%	50.5%	63.1%	56.1%	78.8%	72.6%	66.7%
DeKalb	31.1	34.2	28.4	31.7	15.3	19.2	24.1
Clayton	6.7	9.0	5.6	7.8	4.1	5.3	5.9
Gwinnett	5.1	6.3	2.9	4.4	1.8	2.9	3.3
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Notes: Relative weights used in arriving at formula are shown in parentheses. Both 1965 and 1983 figures are weighted accordingly. The property tax digests were put on a comparable basis for each jurisdiction (100% of market value).

The basic figures used in deriving the percent distributions shown in Table 1 are set forth in Chart 1. Each figure has been calculated on the basis of extensive research utilizing all available data from official sources. It was necessary, however, to use independent judgment in arriving at each figure, particularly the forecasts for future years, and the responsibility for the figures rests solely with the consultant. All of the data used can be documented and the methods can be easily tested and evaluated.

In allocating the costs of the basic 30-mile system which would lie entirely within the boundaries of Fulton and DeKalb counties, it would seem reasonable to limit the local responsibility for this system to these two jurisdictions. As soon as the decision is made to extend the system to its full length of 52 miles, the participation of Clayton and Gwinnett counties would be assumed and presumably they would be asked to pay the shares of the total system called for in the formula shown in Table 1, including their pro rata parts of the 30-mile basic system whose construction would get underway before their financial involvement.

The breakdown of financial responsibility between Fulton and DeKalb counties in connection with the 30-mile basic system, based upon the same factors set forth in Table 1, would be as follows:

Fulton County	73.5%
DeKalb County	26.5
	100.0%

Clearly there is room for differences of opinion about the elements selected for inclusion in the allocation formula and about the relative weights assigned to each. There might also be questions as to the base figures themselves. On balance, however, the formula would appear to be fair and equitable, and the underlying statistics have been derived objectively on the basis of full research. Although some obvious additional elements might be considered for inclusion -- such as, for example, projected patronage levels used by the engineers in station location, mileage or linear feet of track built in different jurisdictions, and potential land development prospects along transit rights-of-way -- the measurement of these elements is likely to be highly speculative. After considering them, it was determined that a simpler and more easily documented set of measurements would be more satisfactory.

Financing the Basic System

As already noted, the 30-mile basic system proposed as the minimum construction program for Metropolitan Atlanta would cost an estimated $332,000,000 to build. The full capital cost of this system must come from provided funds -- that is, funds not generated from the operation of the rapid transit system itself. Although, as noted earlier in this report, the projected rapid transit system would operate with net revenues after the early years, the funds generated by the fare box would not be capable of underwriting even a small part of the basic capital cost. They would be needed to underwrite the purchase and provide for the replacement of rolling stock and to maintain and improve the physical system.

. Federal Funds. The first assumption to make in developing a financial plan for meeting the capital costs of Metropolitan Atlanta's rapid transit system is to make a specific estimate of the availability of Federal funds. The current Federal appropriation supporting mass transportation planning and programming throughout the United States is for $175,000,000 per year, effective through the fiscal year ending June 30, 1968. There is a 12½ percent ceiling on what any one state might receive out of this appropriation. If MARTA operations were now underway, it might be expected that a large part of Georgia's share -- perhaps as much as $20,000,000 -- might be available from Federal sources.

It has been estimated that Federal appropriations for mass transportation will have to reach the level of at least $500,000,000 per year to provide any substantial assistance to the cities and metropolitan areas that are building or expanding their mass transit systems. The intense fiscal pressures caused by the Viet Nam war and other heavy demands upon the Federal treasury, however, has resulted in a deferral of any programming at this level. It is hopefully anticipated that funds made available by Congress for mass transportation for the two fiscal years beginning July 1, 1968, and extending through June 30, 1970, would be in the range of $200,000,000, or year. Prospects appear fairly optimistic at this stage.

Using this estimate it might reasonably be assumed that MARTA would be in a position to request and receive as much as $25,000,000 per year in the calendar years 1969 and 1970 from Federal sources, if voter approval has been given in the meantime and local funds committed. This would mean that a basic $50,000,000 in Federal funds might be counted on as a minimum.

How much more Federal money might subsequently be made available is of course speculative. It would be reasonable to assume, however, that at least an additional $50,000,000 might be forthcoming following the initial allotments in the 1969 and 1970 fiscal years. Even if Viet Nam or other international crises remain, it is not unreasonable to expect that the present level of appropriations for mass transportation will continue. If the international situation clears up, there could be a sharp increase in Federal funds for mass transportation in line with current thinking. In short, there is probably little chance that current levels of appropriation will be cut back and there is a good chance that large outlays might become available.

In light of these considerations, it would appear reasonable to anticipate that at least another $50,000,000 might be obtained from Federal sources for MARTA's basic 30-mile system. As a conservative approach, the availability of $100,000,000 in Federal funds might be taken as a given for local fiscal planning. This would provide considerably less than the hypothetical two-thirds of total cost that the Federal government might be expected to provide, but it would be a substantial contribution. The heavy burden would fall upon the local area, which is a realistic basis for sound planning.

State Funds. Another important assumption relates to the availability of state funds. As already noted, mass transportation has already been declared to be a public purpose in Georgia for which state funds might be made available, although not more than 10 percent of the cost of a local rapid transit system might be borne by the state. The General Assembly earlier in 1967 appropriated a sum of $500,000 as a contribution against the planning and other pre-operating expenses of MARTA.

The subsequent availability of the state money, of course, rests entirely with the legislature. It might be reasonable to expect, however, that the legislature will see fit to contribute the full 10 percent of the cost of Metropolitan Atlanta's rapid transit system if and when it is approved by the voters. The precise way in which these state funds might be made available is not yet clear -- through direct appropriations, through the channels of some existing authority, or in part through the donation of state-owned lands for transit rights-of-way -- but the strong public sentiment behind rapid transit in Atlanta should assure the state's maximum participation. For purposes of fiscal planning, therefore, it might be assumed that as much as $33,000,000 will be made available against the total capital cost of the 30-mile basic system in Metropolitan Atlanta.

Assuming that Federal and state funds are made available as indicated, the local share of the basic system would be approximately $199,000,000 and the distribution of capital costs by sources would be as follows:

	Amount	Percent
Local	$199,000,000	59.9%
State	33,000,000	10.0
Federal	100,000,000	30.1
	$332,000,000	100.0%

For planning purposes, it might be assumed that the Federal funds would be made available in four consecutive annual payments of $25,000,000 each. It might also be assumed that the state's contribution would also be made available on a uniform basis, with the availability of these funds extending over the 9-year period of construction. In the case of both state and Federal funds, of course, the pattern of availability may be different from that indicated here, but these might be taken as reasonable assumptions.

Issuance of Local Bonds. Local funds would be made available in the form of bonds issued as appropriate to meet the projected drawdown schedule of construction costs set up by the engineers. As provided in the MARTA act these local bonds might be of two kinds -- bonds issued by MARTA itself based upon the local governments' underwriting the payment of principal and interest, and general obligation (GO) bonds issued by the local governments against their own bonding capacities with the proceeds turned over to MARTA in lump form. In either case, the funds would be made available to MARTA under agreements with the local government setting the relative shares of MARTA's total obligations to be assumed by each government, the ceilings upon local obligations that might be stipulated, and other terms and conditions providing for maximum flexibility while protecting the interests of local taxpayers.

The final scheduling of local bond issues for the rapid transit system, of course, will undoubtedly be quite different from any preliminary fiscal planning that might be done. The timing and dimensions of each issue (either of MARTA's bonds or of GO bonds issued for rapid transit by the governments directly) will involve many factors including the current status of the bond market, the scheduling of other local government issues and obligations, the actual amounts made available by state and Federal government at any one time, and possible variations in the drawdown schedule.

For preliminary planning purposes, however, the schedule of local bond fund needs related to fund availability from other sources can be set up as follows for the projected 30-mile basic system:

Table 2. POTENTIAL SOURCES OF CAPITAL FUNDS FOR THE 30-MILE RAPID TRANSIT SYSTEM (000,000)

	Drawdown 1/ (cumul.)	Availability of Funds				
		Federal	State	Local 2/	Total	Cumulative
1969	$ 25	$ 25	$ 4	$ 25	$ 54	$ 54
1970	54	25	4		29	83
1971	102	25	4	35	64	147
1972	158	25	4		29	176
1973	207		4	50	54	230
1974	258		4		4	234
1975	298		4	50	54	288
1976	320		4	30	34	322
1977	332		1	9	10	332
		$100	$33	$199	$332	

1/ Preliminary schedule of needs for land purchase and construction established by the engineers.

2/ MARTA revenue bonds supported by local government underwriting or general obligation bonds of local governments issued for rapid transit purposes.

It is noted that the above schedule of fund availability, as preliminary set forth, does not directly match the schedule of fund needs. This is simply because both sets of figures are necessarily tentative and preliminary. Both will be altered in the course of time. The development of such a preliminary table is necessary, however, in order to set the general dimensions of the financial impact of MARTA operations upon the local governments. Bond issues are tentatively sized and spaced to meet anticipated conditions in the bond market as well as provide the funds as needed. In practice, there may be more issues of smaller sizes or fewer issues of larger sizes than indicated in this preliminary table.

These projected local bond issues must then be translated into terms of annual carrying charges for which the obligation would fall upon the local governments under the sharing formula discussed earlier. It is assumed that the local bonds (either MARTA revenue bonds or GO bonds of the local governments) would be 30-year issues. Despite contractual agreements with the local governments under which MARTA's issues would be underwritten with pledges of property tax levies to support the obligation, it is anticipated that MARTA's revenue bonds would carry a somewhat higher interest rate than general obligation bonds issued directly by the local governments. Bond counsel agrees that a spread of perhaps one-half of one percent should reasonably be assumed.

The annual cost of carrying rapid transit bonds issued at the local level are shown in Table 3 on the following page. Revenue bonds issued by MARTA and guaranteed for payment by local government contracts carry a four and one-half percent interest rate, and general obligation (GO) bonds issued for rapid transit purposes by the local governments are shown at four percent.

Table 3. ANNUAL CARRYING CHARGES OF RAPID TRANSIT BONDS, ALTERNATIVE METHODS, METROPOLITAN ATLANTA

	Principal Amount Of Bonds	Annual Costs 1/ MARTA Issues	Annual Costs 1/ GO Issues
1969	$25,000,000	$ 1,825,000	$ 1,715,000
1970		1,825,000	1,715,000
1971	35,000,000	4,380,000	4,116,000
1972		4,380,000	4,116,000
1973	50,000,000	8,030,000	7,546,000
1974		7,725,000	7,264,000
1975	50,000,000	11,375,000	10,694,000
1976	30,000,000	13,138,000	12,357,000
1977	9,000,000	13,795,000	12,974,000
1978		13,185,000	12,407,000
1979		13,185,000	12,407,000
1980		12,575,000	11,844,000
1981		12,209,000	11,505,000
1982		12,099,000	11,404,000

(Then level payments until bonds are retired)

1/ Amortization (principal and interest) charges of all outstanding bonds for rapid transit under the two alternative methods of financing MARTA's capital costs.

It is noted that the annual cost of servicing these bonds drops off after 1977 (the date of the last issue) and declines to a level amount in 1982. This is because a 20 percent sinking fund reserve is provided for over the first five years of each issue, and at the end of five years each issue then carries a level payment to maturity. In effect, six years of payments are made in the first five years of each issue, and the amortization period is actually 29 instead of 30 years. The level payments after 1982 would continue through 1997 at which time they would drop off as the 1969 issue is retired and so on until all issues are paid off.

Impact On Local Governments

Clearly the assumption of an additional $199,000,000 worth of rapid transit bonds by the local governments would be an additional heavy burden. Even with amortization payments spread over 30 years, the charges would represent substantial additions to the costs of the government whose financial burdens are already substantial. Under the assumptions used in this analysis, the full responsibility for financing the capital costs of the 30-mile basic system would fall upon Fulton and DeKalb counties, with Clayton and Gwinnett taking up their share of the cost only if the system is extended outward to its full 52 miles.

At the same time, the facts are equally clear that the Metropolitan Atlanta area has a flourishing and expanding economy capable of supporting the full range of necessary public services and facilities in the years ahead. Local taxpayers on the whole are not over burdened by local taxes and service charges -- indeed the aggregate tax load carried by local taxpayers in Metropolitan Atlanta is considerably less than comparable loads in most other major metropolitan areas. The demand for local government services are sharply rising on both a per capita and an overall basis as Metropolitan Atlanta grows larger, but income and wealth are clearly growing at a commensurate rate.

Local Fiscal Prospects

A great deal of research has been undertaken to determine the future prospects for local government finance in the Metropolitan Atlanta area.

Forecasts have been made of future operating and capital needs of the local governments and of future revenues from all existing sources. In addition, potential new revenue sources have been thoroughly researched. (The detailed findings of these studies are transmitted separately in a technical document.)

All local governments face a cost-revenue squeeze in the future. The range of public services being offered is constantly widening and the unit costs of providing these services is constantly rising. In Metropolitan Atlanta, the upward spiral of local government costs in part reflects the area's emergence as a major urban center where public service costs are generally higher because both the quality and quantity of local public services are clearly superior.

The financial problems of the City of Atlanta are particularly acute. The heavy burdens of central city problems coupled with the less than proportional increase in revenue from existing sources have resulted in real difficulties. Atlanta is not unlike other major cities in this regard, however. The spill-over of population and industry into outlying areas, the growing obsolescence of parts of the central core, the increased congestion of the central city activity and the growing demands for a level of high quality service commensurate with big city status have all been important factors in Atlanta's financial difficulties.

Local counties have been also impacted, however, and prospects are for much more serious financial pressures in the future. Although most of Fulton County's urban development is within the city limits of Atlanta, a vast expansion of outlying population is forecast with a predictable increase in demand for services and facilities. The costs of providing county-wide services such as health, welfare, and court activities are far out-running the growth trend in revenues. DeKalb County is basically a "municipal county" providing the full range of city services, and there is no question about the need for future tax increases and new sources of revenue if first-class public services are to be provided. The outlying counties of Clayton and Gwinnett face the same financial pressures that have already beset fast growing suburban counties in other large metropolitan areas.

It is a fact of simple arithmetic that the local governments in Metropolitan Atlanta will need increases in existing tax rates (which means primarily the property tax) or completely new sources of revenue or both in the years ahead. This is by no means a unique situation -- every other major urban area in the nation faces, has faced, or will face the same financial problems. Most large urban centers have already added sales or payroll taxes and some have also added income taxes to their revenue sources. Efforts to get a sales tax for local governments in Georgia failed at the last session of the General Assembly but there will continue to be persistent pressures from the state's cities and urban counties.

The local situation is by no means as bleak as is often stated, however. Although tax increases and new revenue sources are both indicated, two favorable factors are obviously present, both of which have already been mentioned but need reiterating: 1) the area is rapidly increasing its income and wealth and hence its capacity to pay for expanded and improved public services; and 2) the present tax burden in the area is clearly not high compared with the tax load in other major urban centers. The local area has undoubtedly reached its limits in certain types of levies but not in others. If the people of the area want more and better local government services, they can clearly afford them.

Reliance on Property Tax

It would appear logical -- and it is hereby recommended -- that the local governments' support of MARTA's rapid transit system be achieved through an increase of the tax on property. There are three basic reasons for this recommendation:

1. The property tax is already available as a source. No additional legislation would be required to tap it for rapid transit financing. It is quite possible that the local governments will succeed in their efforts to get additional sources of revenue in the days ahead -- a sales tax, a payroll tax, an income tax or some other new source -- but the prospects at the moment are speculative and the need for a definite financial plan for rapid transit is immediate.

2. Moreover, if new sources of revenue are made available to the local governments, the proceeds will be needed for other purposes quite apart from rapid transit -- expanded current operations of the governments and of the school systems. As already noted, studies demonstrate the need for new sources of revenue whether or not property tax rates are raised for rapid transit or other pruposes.

   The property tax is not unduly burdensome on local taxpayers in Metropolitan Atlanta. Indeed the evidence is clear that the local property tax could be substantially raised and still be safely within the margin of reasonableness and economic feasibility.

   The governments of Metropolitan Atlanta in the aggregate have one of the lowest effective taxes on property of any local governments in major metropolitan areas in the United States. Local taxpayers pay considerably less on their property than taxpayers in major areas elsewhere. In short, there is excess capacity in this local revenue source at the present time.

3. Any payments made by local governments to MARTA under contract to underwrite the authority's bond issues must be based upon a specific millage rate — against local property if the MARTA bonds are to find a ready and acceptable market when offered for sale. Bond counsel agree that this pledge of a property tax levy is essential to assure the proper market reception of these bonds at a money-saving interest rate. General obligation bonds issued by local governments in behalf of MARTA, of course, would also be retired by property tax levies.

All local governments in Metropolitan Atlanta have good bond ratings based upon the strength of the economy and sound fiscal management. Supported by a specific millage rate on property, new bonds issued for rapid transit should enjoy favorable market acceptance which can result in savings of thousands and even millions of dollars in interest over the period of long-term financing.

It is patently unreasonable to anticipate that the local governments can support the additional obligation of underwriting the capital cost of rapid transit from their current budgets without some increases in taxes for that purpose. New sources of revenue are needed even without rapid transit, as already indicated. There will also be pressures for additional property tax increases without rapid transit. The fact remains, however, that the property tax is the most likely source of funds for underwriting the cost of rapid transit -- it is, as noted, an available source and one with additional capacities to produce.

The decision, of course, is the people's. The law establishing MARTA and authorizing the participation of local governments in the financing of the rapid transit system clearly states that any proposed financing that would result in the levy of a new or increased tax on property must be submitted to a referendum of all qualified voters to determine "whether or not the local government should so obligate itself to the extent of the dollar amount or amounts involved therein". The necessity of getting voter approval for such tax raises is regarded as highly desirable because it enables the people to determine the level of priority that they would put upon rapid transit vis-a-vis other types of public services.

Some question might be raised as to whether or not the property tax is regressive -- that is, falling with disapportionate burden upon persons with limited ability to pay. The point is arguable. In general, most taxes are regressive except the carefully graduated income tax and this source is not likely to become available for rapid transit financing in Atlanta in the near future. With the protection of the $2,000 homestead exemption, the obvious correlation between income and property values (including rentals) and the high proportion of all property taxes paid by nonresidential properties, the property tax is considerably less regressive on individuals than most forms of levy.

The point about Metropolitan Atlanta's relatively low property tax burden at the present time should be stressed. In 1964-65, Metropolitan Atlanta ranked 33rd out of the 38 largest metropolitan areas in the nation in per capita revenue to local governments from property sources. Atlanta's per capita load was only 74 percent as great as the median for all the areas. Property revenue as a percent of revenue from local sources and from all sources was lower in Metropolitan Atlanta than the overall median.

These points are shown in the following table:

Table 4. ATLANTA COMPARED WITH OTHER METROPOLITAN AREAS ON PROPERTY TAX PAYMENTS, 1964-65

	Metropolitan Atlanta 1/	38 Largest Metropolitan Areas (Median)
Per capita revenues to local governments from property sources	$95.52	$129.94
Property revenue as percent of revenue from local sources	59.6%	67.3%
Property revenue as percent of revenue from all sources	43.7%	48.6%

1/ All local governments in Metropolitan Atlanta combined.

Financing rapid transit through the property tax would involve a straightforward set of operations. The local governments would execute contracts with MARTA under which MARTA would agree to perform the functions of operating a rapid transit system and the governments would obligate themselves to underwrite the capital costs of the system under specified conditions and specified ceilings. As already described, one method of financing would be the issuance of general obligation bonds by the local governments with the payment of the proceeds to the authority, such bonds being supported by property tax levies within the constitional limitations established for such bonds. The alternative method would be the levy of specific millage rates to produce periodic payments to MARTA for the retirement of the principal of and interest on any revenue bond obligations issued by the authority for the purpose of financing the cost of the rapid transit system.

It is recognized, of course, that the property tax already carries the main burden of local government financing in Metropolitan Atlanta (as in most local governments). Approximately three-fourths of the local government revenues of the two central counties -- Fulton and DeKalb -- are derived from property tax receipts. (The City of Atlanta relies upon property taxes for only about one-fourth of its revenue, being forced to develop a wide range of additional sources to meet municipal obligations.) The property tax is a dependable and fast-growing revenue source and it will continue to be the mainstay of county government financing.

Under recent court rulings, counties in Georgia are required to carry all of their property taxes assessments at approximately 40 percent of market value. Fulton County has just completed the reevaluation of its assessment rolls to meet this requirement, with an accompanying downward adjustment in the tax rate (millage rate). DeKalb County has made no adjustment as yet and has advised that such an adjustment may not be necessary inasmuch as assessments are already fairly close to the 40 percent level. (Some estimates indicate that DeKalb County's assessment levels are closer to 50 percent of market value than 40 percent and some downward adjustment may subsequently be necessary, with an upward adjustment in millage.) Both Clayton and Gwinnett counties already carry their assessments at the 40 percent level.

Financing the Basic System

As already stated, it is recommended that the basic 30-mile system be financed entirely by Fulton and DeKalb counties until the subsequent decision is made to extend the system out to its full 52-mile length. If and when the full extension is undertaken, it is recommended that Clayton and Gwinnett counties participate in the financing under arrangements that would enable them to pick up their pro rata share of the overall system, including the 36-mile basic program.

The recommended formula under which the capital cost of this basic system would be allocated between the two county governments has already been given. It is possible that an alternative formula might be considered that would break out the City of Atlanta as a separate jurisdiction for financing purposes, but it would appear more reasonable to proceed on the county basis. The rapid transit system clearly will extend beyond municipal boundaries and its implications will be felt over a broad area. It should be emphasized, of course, that residents of the City of Atlanta are also residents of both Fulton and DeKalb counties and they would pay their proportionate share of county levies. Under a system of financing that utilizes the county property tax, the large commercial and industrial installations in the City of Atlanta would carry a major share of the overall burden.

As already noted, it is assumed that the local share of financing MARTA's capital costs on the 30-mile system would be $199,000,000, plus interest. Under the recommended formula, Fulton County would pay approximately three-fourths of this amount and DeKalb County would pay one-fourth.

The following table shows these relative shares of capital costs under the two methods of financing:

	Share of Capital Costs	Amount Of Capital Costs (Principal)
Fulton County	73.5%	$146,265,000
DeKalb County	26.5	52,735,000
Total	100.0%	$199,000,000

A more detailed analysis will now be made of the year-by-year impact of rapid transit financing upon the two governments. This analysis will cover three alternative programs -- the financing of the system through the issuance of bonds by the authority based upon payments from the local governments for bond amortization, the issuance of general obligation bonds by the governments themselves with proceeds paid over to MARTA, and a mixed system in which both methods might be employed.

Issuance of Bonds by MARTA

The method of contracting between the local governments and MARTA to produce funds with which the authority can meet annual carrying charges on its capital bond issues involves a straightforward procedure. To effectuate this plan, voters would be asked to authorize the levying of the necessary tax (millage) rates with ceilings as to both rates and the total amounts of funds to be raised. No local bond capacities would be involved inasmuch as the bonds would be issued by MARTA rather than the local governments. The tax rate would be applied against the net rather than the gross tax digest, which means that it would be applicable to a taxpayer's assessment after deduction of the homestead exemption of $2,000.

Table 5, following, breaks down the share of MARTA's projected carrying charges (based upon the tentative schedule of bond issues set forth earlier) that would be indicated for each of the two central counties in connection with the 30-mile system:

Table 5. INDICATED COUNTY SHARES OF MARTA BOND CARRYING CHARGES, 30-MILE SYSTEM
(in thousands of dollars)

Year	Indicated Shares: Fulton County	Indicated Shares: DeKalb County	Total Annual Cost
1969	$ 1,341	$ 484	$ 1,825
1970	1,341	484	1,825
1971	3,219	1,161	4,380
1972	3,219	1,161	4,380
1973	5,902	2,128	8,030
1974	5,678	2,047	7,725
1975	8,361	3,014	11,375
1976	9,656	3,482	13,138
1977	10,139	3,656	13,795
1978	9,691	3,494	13,185
1979	9,691	3,494	13,185
1980	9.243	3,332	12,575
1981	8,974	3,235	12,209
1982	8,893	3,206	12,099

(These level annual payments to the complete retirement of bond issues beginning in 1997).

As noted, relatively small payments would be required in the early years of construction of the transit system. MARTA's bond issues could be modest because of the initial availability of sizable Federal funds under the given assumption. Subsequently, however, the impact upon the local governments would be more substantial.

Following is the schedule of millage rates that would need to be levied against the net property digests in each county in order to meet the indicated payments set forth in Table 5, above:

	Fulton	DeKalb
1969	.7	.4
1970	.7	.4
1971	1.6	.9
1972	1.5	.9
1973	2.6	1.5
1974	2.4	1.3
1975	3.3	1.8
1976	3.6	1.9
1977	3.6	1.9
1978	3.2	1.7
1979	3.0	1.6
1980	2.7	1.4
1981	2.5	1.2
1982	2.4	1.1
1983	2.2	1.1

It is possible and it would be desirable to reschedule these levies to provide more substantial payments in the earlier years and lower payments during the peak years between 1975 and 1978. It is recommended that an alternative schedule of taxes might be considered, which would make possible a ceiling of only three mills in Fulton County in the peak years and a ceiling of 1.6 mills in DeKalb County. This revised schedule would produce more funds in the earlier years than would be needed if the MARTA bond program set forth herein is followed. However, this bond program could be revised to make use of the available funds in the early years and advance purchases of land with these additional funds could well save a substantial amount of money in face of rising land values in the area.

The recommended schedule of county payments and millage rates for MARTA bond financing is set forth below in Table 6. The peak year payments would be substantially reduced under this schedule and the peak impact upon local taxpayers would be corrospondingly less.

Table 6. RECOMMENDED COUNTY PAYMENTS AND MILLAGE RATES, MARTA BOND ALTERNATIVES

	Millage Rates		Dollar Amounts (000)	
	Fulton County	DeKalb County	Fulton County	DeKalb County
1969	1.5	1.0	$2,783	$1,081
1970	1.5	1.0	2,925	1,158
1971	2.0	1.1	4,098	1,367
1972	2.0	1.1	4,324	1,489
1973	2.5	1.4	5,698	2,054
1974	2.5	1.4	6,015	2,169
1975	3.0	1.6	7,629	2,751
1976	3.0	1.6	8,064	2,907
1977	3.0	1.6	8,526	3,074
1978	3.0	1.6	9,033	3,257
1979	3.0	1.5	9,576	3,453
1980	2.5	1.3	8,459	3,048
1981	2.5	1.2	8,973	3,235
1982	2.3	1.1	8,893	3,206
1983	2.2	1.1	8,893	3,206

(These level annual payments to the complete retirement of bond issues beginning in 1997)

This schedule of financing would not involve heavy burdens upon the individual taxpayer (although most taxpayers probably would argue that all additional taxes are burdensome). In the first two years of MARTA's construction, the owner of a $20,000 house in Fulton County would pay only $9.00 a year and the comparable property owner in DeKalb County would pay only $6.00 (assuming that DeKalb's rate assessment is also 40 percent of market value, as in Fulton). In the years of peak tax impact (1975-79), the burden upon the average home owner in each county would still be modest, as shown in the following schedule:

	Fulton	DeKalb
Maximum millage needed for MARTA bond financing	3.0	1.6
Years of maximum	1975-79	1975-79
Annual cost of maximum millage to owner of home with market value of:		
$15,000	$12.00	$ 6.40
$20,000	$18.00	$ 9.60
$25,000	$24.00	$12.80

In Chart II, later, the impact of these millage rates upon a wider variety of property owners is shown compared with the similar impact of rapid transit financing under alternative systems. Commercial and industrial properties, of course, would pay a large part of the total bill. Under the schedule of payments set forth above, most home owners in Fulton County would pay substantially less than one-tenth of one percent of the market value of their property for the construction of the rapid transit system each year, and the tax bite in DeKalb County would be about half that rate. This would be true in the peak years when the millages levied for support of rapid transit would be at their maximum.

Financing by GO Bonds

The process of issuing general obligation bonds which are retired by levies against assessed property is the conventional method of raising capital funds by local governments. In Georgia a vote of the people is required on all general obligation bond issues. Counties operate under a constitutional limitation that places a ceiling upon the amount of GO bonds outstanding at seven percent of the gross property digest (calculated without deductions for homestead exemptions).

There would be an obvious advantage to the use of GO bonds by Fulton and DeKalb counties in meeting the counties' obligations for MARTA's capital cost. These bonds, based upon the full faith and credit of local governments, usually carry a lower interest rate than bonds issued by special authorities. Bond counsel estimates that the savings from going on GO bond route rather than the MARTA channels might be as much as one-half of one percent on the interest charge, which could mean a saving of as much as $15,000,000 over the years on the projected issues of $199,000.000. (The 30-year GO bonds are estimated to have a potential interest rate of four percent compared with a four and one-half percent estimate for the MARTA issues).

On the other hand, there are some obvious disadvantages to the GO method for rapid transit financing:

1. The GO bonds issued by local governments for rapid transit would have to be charged up against the bond capacities of each government. This simply means that rapid transit would be competing directly with streets, schools, parks, water, sewer and other public needs for capital funds.

   Although both Fulton and DeKalb counties have excess capacities at the present time, both have backlogs of capital needs. The amounts of capacity available for rapid transit will not be large enough to cover the projected requirements, as discussed later.

2. It would be difficult to schedule the issuance of GO bonds to meet the requirements of the MARTA drawdown schedule. Rapid transit bond needs would have to be considered as part of larger public issues covering a variety of other local government needs. There is an understandable reluctance of government leaders to go to the people with proposals for GO bond issues too frequently.

   Moreover, it would be difficult if not impossible to make a commitment with MARTA ahead of time that voters at a future date will approve GO bond issues for rapid transit. In light of the size of rapid transit requirements, it would not be impossible to meet all of these needs through a single GO bond issue, and this would require subsequent votes by the people for which no prior commitment could be made in the MARTA contract.

MARTA does not, of course, have taxing power of its own. If it were able to levy its own tax on property within the rapid transit district, its bond issues would have the status of GO bonds. This is a method utilized in San Francisco for the Bay Area Rapid Transit System. Locally, if GO bonds are issued, they must be issues of the local government.

As already noted, there is not in prospect a sufficient bonding capacity in Fulton and DeKalb counties to meet the full requirements of these jurisdictions for MARTA's capital financing, assuming that the present level of assessments is held at 40 percent of market value. Both counties have substantial unused capacities, however, and at least part of the rapid transit needs could be met from this source.

Unused Bond Capacities. With its property assessments now pegged at 40 percent of market value, Fulton County has a bonding capacity, over and above outstanding issues, totaling more than $80,000,000. The combination of annual bond retirements and increased value in the tax digest will add capacity at a rate of about $3,000,000 per year, which means an additional $30,000,000 in capacity over the next 10 years (during the time that MARTA would be needing funds for construction purposes). However, Fulton County has a range of capital improvement needs that must be met by additional GO bond issues in the immediate future. It might be reasonable to expect that as much as $60,000,000 or $70,000,000 could be made available from Fulton's bond capacity for rapid transit purposes over the next decade, which would represent about one-half of the county's potential obligation to MARTA.

DeKalb County has unused bonding capacity of about $30,000,000 and it annually is increasing by about $2,500,000, which would add another $25,000,000 over the next ten years. DeKalb also has a range of pressing capital improvement needs coming up in the near future. It is possible that as much as $25,000,000 could be made available for rapid transit purposes, which again would give about one-half the amount that MARTA would need from this county.

It is possible that the courts, ruling on cases now before them, might hold that all property in Georgia must go on the assessment rolls at 100 percent of market value, as specifically stipulated in the state constitution. If this happens, the bonding capacities of Fulton and DeKalb counties would be more than doubled and there would be ample capacities for fully financing rapid transit as well as meeting other capital improvement needs.

As already noted, GO bond financing can save money through a reduction in the interest rate. However, the millage levied for the servicing of GO bonds is applied against the gross rather than the net digest -- and this means that the homestead exemption is not applicable. The owner of a low or modestly priced house might pay more tax on his gross assessment with a lower millage rate than he would if the homestead exemption applied but the millage rate was higher. Commercial properties, on the other hand, would benefit more from the lower millage rate made possible under GO financing than MARTA financing because no homestead exemption is involved either way.

In Table 7, on the next page the county payments and millage rates are set forth that would be recommended if GO bond financing is utilized for rapid transit. Again it is suggested that higher tax rates be established in the earlier years than actually required, in order to reduce the peak loads at later years.

Table 7. RECOMMENDED COUNTY PAYMENTS AND MILLAGE RATES, GOVERNMENT OBLIGATION BOND ALTERNATIVE

	Millage Rates		Dollar Amounts (000)	
	Fulton County	DeKalb County	Fulton County	DeKalb County
1969	1.5	1.0	$3,015	$1,230
1970	1.5	1.0	3,162	1,312
1971	2.0	1.1	4,420	1,545
1972	2.0	1.1	4,654	1,653
1973	2.5	1.4	6,120	2,260
1974	2.5	1.4	6,448	2,416
1975	2.5	1.3	6,800	2,452
1976	2.5	1.3	7,170	2,585
1977	2.5	1.3	7,568	2,729
1978	2.5	1.3	8,000	2,884
1979	2.4	1.2	8,124	2,929
1980	2.3	1.1	8,234	2,968
1981	2.1	1.0	7,959	2,870
1982	2.0	1.0	8,026	2,894
1983	1.9	.9	8,076	2,912

(The level annual payments to the complete retirement of bond issues beginning in 1997)

It is to be noted that the peak millage requirements under GO financing would be substantially lower than in the case of government payments to underwrite MARTA bond issues. This is true because the overall financing cost is lower and the gross rather than the net digest is used as basis for the calculations. The lower interest charges are by all odds the most important factor in this lower impact, the difference between gross and net digest being relatively small. As already mentioned, however, the reduced millage rate does not necessarily produce a lower tax for the residential taxpayer because the homestead exemption is not applicable. Following are representative figures on the tax impact of the maximum millage under GO bond financing, and these figures might be compared with the earlier figures for servicing MARTA revenue bonds:

	Fulton	DeKalb
Maximum millage needed for GO Bond financing	2.5	1.4
Years of maximum	1973-78	1973-74
Annual cost of maximum millage to owner of loan with market value of:		
$15.00	$15.00	$ 8.40
20.00	$20.00	$11.20
25.00	$25.00	$14.00

The projected gross and net tax digests/used as a basis for all of the foregoing calculations are shown in Chart 2.

Combination of Approaches

There is no reason, of course, why both methods of financing might not be employed by the local governments in meeting their obligations to MARTA for constructing the rapid transit system -- the collection of property taxes to support the issuance of MARTA bonds plus the issuance of general obligation bonds by the governments themselves.

The act establishing MARTA clearly recognized this possibility, as follows:

> "A local government may elect any method provided in this section to finance the participation required of it in whole or in part, and the election of one method shall not preclude the election of another method with respect thereto or with respect to any additional or supplementary participation determined to be necessary."

As a purely practical matter, there would be a number of distinct advantages to both Fulton and DeKalb counties in employing both methods. It would make possible the use of available GO bond capacity with the consequent saving in interest charges but it would not demand too much of that capacity in competition with other capital improvement needs. It would give each government greater flexibility in handling their finance programs. Items for rapid transit could be included within the schedule of purposes for larger GO bond issues when the timing of these issues fits into the MARTA drawdown schedule. If by chance a GO bond issue fails (or voter approval is not received for the mass transit item), the county would be in a position to utilize its alternate authority to levy a millage rate for underwriting bonds issued by MARTA itself. Both the governments and MARTA would be in a better position to take advantage of favorable conditions in the bond market for either type of issue.

Moreover, this type of flexible financing policy might be easier to explain to the public and to obtain public approval. The proposition to be submitted at a public referendum could stipulate a maximum dollar commitment for rapid transit, such funds to be obtained either through general obligation bonds or through a millage rate pledge to underwrite MARTA bonds, and a ceiling could be established on the millage rate that might be levied for this purpose. The people would, of course, retain the right to vote on the GO bonds but the initial approval of the proposition by public referendum would give government leaders the discretion as to which route to follow in meeting the MARTA commitments.

Another particularly important advantage would be the opportunity offered to obtain some if not a substantial amount of the funds needed without an increase in the current tax rate. Upon approval of the voters, GO bonds are frequently issued without incurring a tax raise simply because the retirement of outstanding issues and the increase in the property tax digest makes it possible to absorb additional service charges within the existing rates.

It is possible that a substantial amount of both governments' commitments to MARTA might be met with little or no tax raise under such favorable circumstances. For example, Fulton County's share of the $25,000,000 tentatively scheduled as needed by MARTA from the local governments in 1969 would call for an annual servicing charge on GO bonds during the first five years (when sinking funds are built up) of about $1,261,000. This would represent only .6 of a mill on the gross tax digest, which might well be absorbed within the current bond servicing millage in that year. DeKalb's share of the same issue would cost $455,000 per year in the first five years, which would represent only .3 of a mill in 1969 and less thereafter as the tax digest increases.

Again, in 1971, Fulton's share of the $35,000,000 MARTA requirement could be handled through a GO bond which would represent only one mill on the 1971 digest, and DeKalb's share in the same issue would represent only .5 of a mill. Depending on other financial transactions at the time, these charges might well be covered all or in part by bond levies already outstanding.

It is strongly recommended that MARTA in turn propose to the local governments that both methods of financing be used in meeting the financial commitments for rapid transit. This recommendation is a corollary to the earlier one that the property tax should be the exclusive source of funds for this purpose.

It is not possible, of course, to make any precise estimate of the tax rate implications of a combination approach. Certainly the tax impact would be less than that shown for the MARTA bond route, and it could be even less than that shown for GO bond financing.

A Note On Atlanta. There does not appear to be any advantage in breaking out the City of Atlanta as a separate jurisdiction for purposes of financing rapid transit. Inasmuch as Atlanta lies almost completely within Fulton County, it would fully participate in the financial program. Atlanta's property taxpayers now account for slightly more than 80 percent of all property taxes collected by Fulton County, and this general ratio is likely to hold in the future.

The point should be added that Atlanta's financial condition is considerably more difficult than that of the two counties. It has a heavy backlog of capital improvement needs and it faces recurring deficits on an operating basis unless new sources of revenue are made available.

There is no doubt that the City of Atlanta would carry its full share of rapid transit financing under the county finance plans. The City of Atlanta's tax base will account for about 60 percent of the total cost.

Prospects for Full System

The full 52-mile system that the engineers have designed would cost $479,000,000 and take 12 years to build (with completion set for 1981). It would reach deep into Clayton and Gwinnett counties and would also have a considerably broader coverage of the Atlanta-Fulton-DeKalb area.

Assuming that the 30-mile system is well underway with $100,000,000 in Federal funds available, the question is how much additional Federal money would be required to move directly into the 52-mile program without greatly increasing the local outlay (in total or on an annual basis). If in 1972 or 1973 it would become clear that another $50,000,000 in Federal funds would be made available, this would not be enough to support the 52-mile total system without a heavy increase in the local load. With the Federal government at $150,000,000 and the state at $48,000,000 (10 percent of the total), the local share would be $281,000,000, which is considered to be above the local area's reasonable capacity based on conservative forecasts and assumptions.

If in 1972 or 1973 it becomes clear that as much as $200,000,000 in total Federal funds might be made available -- an additional $100,000 over and above the same amount already made available for the 30-mile system -- the local share would not be much greater for the 52-mile system than for the 30-mile system. Here is the overall breakdown:

	Amount (000,000)	Percent
Local	$231	48.2%
State	48	10.0
Federal	200	41.8
	$479	100.0%

This is not an improbable assumption if Federal funds ever do break loose on a larger scale than at present. Indeed, as mentioned earlier, it is presently estimated in Washington that $500,000,000 a year will be needed on a regular basis to meet U.S. metropolitan transit needs rather than the $200,000,000 level currently projected for the 1969 and 1970 fiscal years. MARTA's share in 1973 and thereafter could run as high as $50,000,000 or $60,000,000 a year.

The availability of $200,000,000 in Federal funds could swing the 52-mile system with an overall outlay for the two central governments only slightly higher than the 30-mile requirement. The point is that all four county governments would now share the totals, with the following distribution of the burden based on the formula presented earlier:

	30-Mile System (000,000)	52-Mile System (000,000)
Fulton County	$146.3	$154.1
DeKalb County	52.7	55.7
Clayton County		13.6
Gwinnett County		7.6
	$199.0	$231.0

It is assumed on a preliminary basis that the 51-mile system would call for at least seven MARTA bond issues compared with the six that might be scheduled for the 30-mile system. The carrying charges will be higher, of course, but four governments will be sharing the costs.

In Table 8, the bond issue and carrying charge schedules of the two systems are compared. (The MARTA bond schedule is used as a base.)

Table 8. COMPARISON OF LOCAL COSTS, 30-MILE AND 52-MILE SYSTEMS IN SEQUENCE (000)

	Bond Issues		Carrying Changes	
	30-Mile	52-Mile	30-Mile	51-Mile
1969	$ 25,000	$ 25,000	$ 1,825	$ 1,825
1970			1,825	1,825
1971	35,000	35,000	4,380	4,380
1972			4,380	4,380
1973	50,000	40,000	8,030	6,995
1974			7,725	6,995
1975	50,000	40,000	11,375	9,915
1976	30,000		13,138	9,488
1977	9,000	40,000	13,795	12,408
1978			13,185	11,920
1979		30,000	13,185	14,110
1980		21,000	12,575	15,155
1981			12,209	15,155
1982			12,099	15,155
1983			12,099	14,667 1/
et seq	$199,000	$231,000		

1/ Drops to $14,301,000 in 1984 and levels off at $14,045,000 in 1985

The reason for the lower local requirements for the 52-mile system in the 1973-76 period, of course, is the projected availability of $100,000,000 more in Federal money. This fact, plus the sharing of the local cost by four instead of two governments, would produce an actually lower demand upon Fulton and DeKalb for the larger system in a number of years.

Table 9. COMPARATIVE MILLAGE RATES NEEDED TO SUPPORT 30-MILE AND 52-MILE SYSTEMS

	30-Mile System 1/		52-Mile System 1/			
	Fulton	DeKalb	Fulton	DeKalb	Clayton	Gwinnett
1969	1.5	1.0	1.5	1.0		
1970	1.5	1.0	1.5	1.0		
1971	2.0	1.1	2.0	1.1		
1972	2.0	1.1	2.0	1.1		
1973	2.5	1.4	2.0	1.1	1.5	1.5
1974	2.5	1.4	2.0	1.1	1.5	1.5
1975	3.0	1.6	2.5	1.4	1.5	1.5
1976	3.0	1.6	2.5	1.4	1.5	1.5
1977	3.0	1.6	3.0	1.6	1.5	1.5
1978	3.0	1.6	3.0	1.6	1.5	1.5
1979	3.0	1.5	2.8	1.4	1.5	1.5
1980	2.5	1.3	2.8	1.4	1.5	1.5
1981	2.5	1.2	2.6	1.3	1.5	1.5
1982	2.3	1.1	2.4	1.2	1.5	1.5
1983 et seq	2.2	1.1	2.3	1.1	1.5	1.5

1/ From Table 6. Assumes $100,000,000 in Federal and $33,000,000 in state funds.
2/ Assumes $200,000,000 in Federal and $48,000,000 in state funds.

All of the indicated millage rates (or their equivalents) will drop after 1983 -- for all governments. Estimates are not available, however, because tax digests have not been forecasted beyond that year. Bond service charges will remain constant and property digests will continue to rise, however.

A Note on Clayton and Gwinnett. Until the decision is made to go to the 52-mile system, Clayton and Gwinnett counties would not be involved. In order to keep a ceiling on the cost of the system to these governments even after they are brought into the picture (assumed to be in 1973), their participation is calculated in a lower rate up to 1983 than their ultimate share of the total cost would indicate. This simply means a deferral of the main impact on these outlying governments until the system is actually in operation -- and their tax base more able to handle the burden. Even so, the peak impact would never exceed the 1.5 mills shown in Table 9.

Curtailment of Federal Funds. Consideration should be given to the effects of a possible curtailment of Federal funds beyond the first two years of the MARTA construction program in 1969 and 1970. The question is what would happen if the second $50,000,000 does not become available?

The answer is that a decision can be made (presumably in 1970 when the facts are known) to build a smaller system than the 30-mile system, if it is assumed that the ceiling on local funds should be held at the previously established levels. The engineers have designed a 21-mile "operational" system that can operate without loss at the fare box and still provide full-scale transit service in the heart of the metropolitan area. This system would cost $276,000,000 and would take approximately the same amount of local funds as the 30-mile system:

	Amount (000,000)	Percent
Local	$199	72.1%
State	27	10.0
Federal	50	17.9
	$276	100.0%

From the engineering standpoint, the 21-mile operational system could be built in six years instead of eight. However, the local financing would have to extend over the eight-year period to stay within the same annual outlays.

The possibility of this 21-mile operational system is mentioned because it would provide a reasonable option for public decision if Federal funds are curtailed. The 21-mile system would itself be a massive operation capable of making a major impact upon the area's circulation problems.