REPORT OF THE
DEPARTMENT OF HIGHWAYS
AND TRANSPORTATION ON

THE FEASIBILITY AND DESIRABILITY OF LOCALLY SPONSORED BUS SERVICE IN NORTHERN VIRGINIA

TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA

Senate Document No. 8

COMMONWEALTH OF VIRGINIA
RICHMOND
1984

HIGHWAY AND TRANSPORTATION RESEARCH COUNCIL STAFF FOR THIS REPORT

Gary R. Allen, Senior Research Scientist - Project Director
Richard T. Shipe, Research Assistant

Technical Assistance From JHK and Associates
Richard C. Hawthorne, Senior Transportation Planner

MEMBERS OF SJR-20 TECHNICAL COMMITTEE

David W. Berg, Virginia Department of Highways & Transportation
J. Roderick Burfield, Washington Metropolitan Area Transit Authority
William C. Jeffrey, Virginia Department of Highways & Transportation
Stephen T. Roberts, Northern Virginia Transportation Commission
George V. Wickstrom, Metropolitan Washington Council of Governments

TABLE OF CONTENTS

SUMMARY
BUS SERVICE IN
NORTHERN VIRGINIA
(SJR-20)

Senate Joint Resolution 20, enacted by the 1983 Session of the General Assembly mandated that the Department of Highways and Transportation in collaboration with the Northern Virginia Transportation Commission (NVTC) conduct a study of passenger bus service in Northern Virginia focusing on the desirability and feasibility of providing service independently of the Washington Metropolitan Area Transit Authority (WMATA).

This report details the background and structure of public bus service supplied by WMATA, analyzes major Metrobus advantages and disadvantages in light of experiences outside Northern Virginia, and examines alternatives to WMATA as the sole provider of bus service in Northern Virginia.

Background and Structure of Bus Service (pp. 1-14)

The construction and operation of an integrated mass transportation system in the Washington Metropolitan Area has proven to be a difficult task and will continue to be for the foreseeable future. The administrative and financing structure of WMATA (the regional transit authority largely responsible for mass transportation policy) involves complex arrangements between the federal government, the states of Maryland and Virginia, the District of Columbia, and seven local governments. The General Manager of WMATA directs Metrobus and Metrorail activities under the guidance of the WMATA Board, composed of two members and two alternates each from the D.C. City Council, the Washington Suburban Transit Commission (Maryland) and the NVTC.

The most visible and important roles of NVTC are its involvement in Metrobus financing and allocating aid funds for mass transit in Northern Virginia. NVTC acts as a forum for forming consensus on Northern Virginia positions concerning WMATA activities. On issues that are isolated to Northern Virginia, the WMATA Board generally acquiesces to the policies transmitted by the NVTC members of the Board. Though all Northern Virginia jurisdictions are directly represented on NVTC they are represented on the WMATA Board only to the extent that the Virginia Board members represent the views of all the Northern Virginia jurisdictions as opposed to the views of the jurisdiction that elects them. On certain issues such as fares, situations may arise where NVTC representatives on the WMATA Board may be under pressure to vote what is best for their own jurisdiction rather than voting the consensus of NVTC. To the extent that parochial voting does occur, NVTC's role as a subregional policy body is less than optimal. While other transportation districts are not so constrained, the Virginia Transportation District Act prohibits NVTC from constructing

or operating transit facilities and entering into agreements with private companies for the operation of transit facilities. Furthermore, it is not specified that NVTC has the power to enter into agreements with cities or counties to provide transportation service.

Financing Metrobus is a complex two-tiered process involving both the WMATA Board and NVTC. The Board adopts a finance plan and formula which allocates a share of total Metrobus costs to Virginia and NVTC decides how each Northern Virginia jurisdiction will share in this cost. The current WMATA formula distributes variable cost to Virginia on the basis of Virginia's proportion of miles covered, hours behind the wheel, and weekday revenue miles. Fixed costs (overhead) for Northern Virginia are 29% of the administrative costs of Metrobus. The NVTC formula is very similar to WMATA's. Metrobus farebox revenues are accredited among the jurisdictions statistically by a survey sampling bus route ridership. The subsidy a locality pays is the accredited revenues minus the allocated costs. The subsidy is then covered by state aid, local fuel taxes, Federal operating assistance, and local general revenues.

The current governance structure is thus quite complex. It appears ill suited to addressing individual locality needs and provides significant impetus for the interest in local bus service provision. In addition, the complexity of the financing structure and the mechanics of the WMATA cost allocation process render it very difficult for localities to anticipate the impacts that service changes will have on their Metrobus subsidy requirements. Furthermore, because service reductions and cost reduction linkages are not directly proportional, actions of a single locality in the Northern Virginia Transportation District (NVTD) can affect the liability of all other jurisdictions. Bus transportation governance and financing arrangements which better address individual locality needs and reduce the uncertainty of local transit liability will be improvements to the current structure of bus transportation in Northern Virginia.

Metrobus Advantages and Disadvantages (pp 15-24)

From a service perspective, the most significant advantage of Metrobus service in Northern Virginia is transit coordination in terms of rail and bus interfacing and interjurisdictional scheduling and fares. Furthermore, staff expertise in planning, routing and general management and the existence of a well established infrastructure are positive aspects of WMATA as the regional bus service supplier. WMATA's major funding advantage is that 80% of rolling stock and capital facilities are funded by grants from the Urban Mass Transit Administration; thus, Northern Virginia bears only a relatively small portion of the cost of buses and garages.

Regarding service disadvantages, WMATA buses are typically not designed to serve as neighborhood circulators nor is the WMATA operation focused upon coordination with potential paratransit markets. Indeed, as noted earlier, the WMATA Board structure is not well suited for imparting locality needs and getting rapid implementation. Funding

disadvantages fall into three major categories: Labor costs; local budgetary control; and grant regulations. Labor protections stemming from the WMATA Compact, the 13(c) Labor Protection Clause of the Urban Mass Transportation Act, and protections and benefits guaranteed under union contracts are a major influence on the rising operating cost of Metrobus. Such cost increases are of significant concern to local jurisdictions. A second aspect of WMATA provision of bus service that has caused interest in local bus systems is that localities appear to have little control over their transit budgets. This concern can be traced to four sources: Linkages between service changes and cost changes are not directly proportional; the ability of a locality to unilaterally use the farebox as a budgetary control tool is limited; the ability of NVTC to exercise control on WMATA's administrative cost is, at best, indirect; and finally, the process of auditing and calculating amounts actually owed WMATA is cumbersome and typically takes two years. Concerning Federal grants, the fact that WMATA receives funds from the U. S. Department of Transportation brings into play Federal regulations which tend to increase costs.

A review of National and local experiences outside Northern Virginia adds perspective to the centralized regional service provided by WMATA. That review indicates that local jurisdictions can most likely provide peak service with lower operating cost than WMATA and that (as has been proven true in Kansas City) the regional system need not be a loser in the process, particularly if the focus is on services which are cross subsidized by other services or jurisdictions. The Tidewater experience shows that transportation district commissions can be quite successful and strong in a role of coordinating and brokering services that are both effective and low cost. The Kansas City experience suggests that moves on the part of Northern Virginia away from bus service that is totally regionally supplied to decentralized local service should be accompanied by an expanding coordinating role on the part of NVTC.

Evaluating WMATA Alternatives (pp. 25-36)

The evaluation of alternatives to WMATA as the sole provider of bus service in Northern Virginia is based upon the application of funding and service criteria. The funding criteria consist of operating cost minimization, capital cost minimization, and maximizing local budgetary control. The service criteria examine feeder/metrorail service, interjurisdictional service, circulator service, and paratransit service. Six provider groups are evaluated with WMATA serving as the baseline for comparison. In addition to WMATA as the most centralized type of provider, the following providers are evaluated in order from the most centralized to the least centralized: 1) NVTC including all labor protections of the Transportation District Act of 1964; 2) NVTC with the labor protection clauses removed; 3) WMATA in combination with local jurisdictions; 4) NVTC, without labor protections, in combination with local jurisdictions; and 5) solely local jurisdictions.

The evaluation shows that a largely regional or centralized bus system operated by WMATA is preferable to other alternatives only when judged against the capital cost criterion. Furthermore, bus service operated solely by NVTC offers no advantage over WMATA unless the labor provisions of the Transportation District Act of 1964 are relaxed and even then, the net gains from an NVTC regional operation appear to be quite uncertain. In this case, the benefits from operating cost reductions, local budgetary control, and improvement potentials in circulator and paratransit service may be totally offset by large start-up, learning, and capital costs that will likely be larger than what the region presently pays WMATA for its share of the 20% Federal match. With respect to operating cost, local budget control, circulator service provision, and paratransit coordination, the near term decentralization trend toward a WMATA/Local combination is not at all undesirable. It should, however, be accompanied by NVTC's active involvement in terms of preparing for spill-over cost impacts (As described in Chapter III) and realistically appraising the extent to which capital requirements might be expected to offset operating cost reductions. In the longer term, a decentralized NVTC/Local combination of service offers potential for meeting both local and regional needs at reasonable cost. The success of this alternative is not at all clear, however, and would require a great deal of planning and coordination by NVTC and localities in terms of the labor provisions of the Transportation District Act, estimating trade-offs between operating cost reductions and capital cost requirements, appraisal of private contracting for service, and the utilization of paratransit.

Recommendations
(pp. 39-40)

The findings and conclusions outlined on pp. 37-39 suggest the following recommendations for improving the structure of bus service in Northern Virginia.

Recommendation 1: Given that the trend toward decentralized bus service provision by WMATA/Localities is not undesirable and given the experience with such decentralization in other parts of the U. S., it is recommended that NVTC take an active role in this decentralization by developing a Bus Service Management Plan. This is not to suggest that NVTC should promote decentralization. Rather, such a Management Plan would examine feasible options for planning, routing, scheduling, establishing fare structures, operating, marketing and coordinating a diverse set of public transportation services responsive to the growing transportation needs of Northern Virginia. In developing this plan, NVTC would receive input from the Transportation Planning Board, localities, and WMATA necessary to take proper account of the tradeoffs between reductions in operating costs and increases in capital costs; closely monitor and avoid any undesirable impacts on interjurisdictional service; determine the likely spill-over costs among NVTD jurisdictions as the

trend progresses; and assure that paratransit and peak shedding are utilized to their maximum advantage. These activities will have as their goal the provision of bus transportation which is cost effective from a Northern Virginia regional perspective while meeting locality needs. The implementation of this recommendation should be greatly aided by utilizing "The Surface Transit Alternatives Study" sponsored by the Metropolitan Washington Council of Governments. Phase I of the study is complete and presents a methodology for evaluating the details of management, routing, and other aspects of proposals to substitute local for regional bus service.

Recommendation 2: Given that an NVTC/Local combination of service (without the labor protection clause of the Transportation District Act) appears to offer potential for effective bus transportation in Northern Virginia; given that the current labor protections and operating restrictions of the Transportation District Act of 1964 prohibit the feasibility and desirability of such service; and given that there appear to be no compelling reason for these statutory barriers to continue, it is recommended that, as part of the Bus Service Management Plan, NVTC make a determination of if and when it is appropriate for implementation of an NVTC/Local operation and inform the General Assembly thereof in order that it may consider the necessary legislative changes.

Chapter I

INTRODUCTION AND BACKGROUND ON PUBLIC TRANSPORTATION IN NORTHERN VIRGINIA

Since 1973, passenger bus service in Northern Virginia and between Northern Virginia and the District of Columbia has been provided almost entirely by the Washington Metropolitan Area Transit Authority (WMATA). In recent years several Northern Virginia localities have initiated local bus service or have adopted plans to establish such service, either to replace or to supplement WMATA bus service. While studies sponsored by two Northern Virginia localities have concluded that bus service in their jurisdiction could be improved and offered at lower cost locally than through WMATA, the scope of these reports was limited to the transit needs of the jurisdiction in question.

From the perspective of the individual localities, replacing or supplementing the WMATA system with local bus service may appear advantageous. Nevertheless, local sponsorship of bus service may not necessarily be the most effective way of meeting the public transportation needs of the Northern Virginia region. In light of the current trend toward local bus operations and the Commonwealth's financial interest in the region's public transportation, the 1983 General Assembly passed Senate Joint Resolution Number 20 (see Appendix A) mandating that the Virginia Department of Highways and Transportation (VDH&T) in collaboration with the Northern Virginia Transportation Commission (NVTC) conduct a study of passenger bus service in Northern Virginia. The resolution called for the study to examine the desirability and feasibility of providing cost-effective passenger bus service in Northern Virginia, independent of WMATA, by the local governments in the region or by NVTC in light of the present and planned metrorail system operated by WMATA. This report presents findings concerning the structure of public transportation in Northern Virginia and the trend toward locally sponsored bus service. In addition, recommendations are presented concerning the desirability of legislative changes and changes in the role of NVTC.

WMATA Brief History

The Washington Metropolitan Area Transit Authority (WMATA), created by an interstate compact (the Compact) between the District of Columbia, Maryland, and Virginia in 1966, is, in the language of the legislation, empowered to "plan, develop, finance, and cause to be operated improved transit facilities." Originally precluded from directly operating transit services, WMATA was given authority in 1972 to take over and operate the four major private bus companies which were providing service in the Washington area. WMATA consolidated these companies into a regional Metrobus system which provides most of the bus service in the metropolitan area. In 1976, WMATA initiated the operation of the gradually expanding Metrorail system which serves in tandem with Metrobus. Thus, the function of WMATA as originally defined in the Compact has expanded from that of mass transit

planning, financing, and construction to that of being the primary operator of rail and bus services in the Washington area.

Under the Compact, five Northern Virginia jurisdictions (City of Alexandria, Arlington County, City of Falls Church, Fairfax County, and Fairfax City), two suburban Maryland jurisdictions (Prince George's and Montgomery Counties), and the District of Columbia participate in WMATA. Two other Northern Virginia jurisdictions (Loudoun and Prince William Counties) are not affiliated with WMATA. Map 1 illustrates those jurisdictions that comprise the Washington Metropolitan Area.

WMATA Rail

Although only 43.5 miles of Metrorail are in operation as of July 1983, by 1986 the system will almost double to 76.4 miles. Map 2 depicts those lines now operating, those that are under construction, and those scheduled for construction at later dates. Although the planned 101-mile system is shown in Map 3 (Appendix B), uncertainty surrounds the initiation of construction and dates of completion. Part of the uncertainty stems from the fact that the Reagan Administration has committed itself to the completion of only 76.4 miles, and has been noncommittal on the issue of assuming the funding of the remaining planned mileage. An additional uncertainty is that Congress' long-range authorization of Metrorail construction funds is now considered insufficient to complete a 101-mile system.

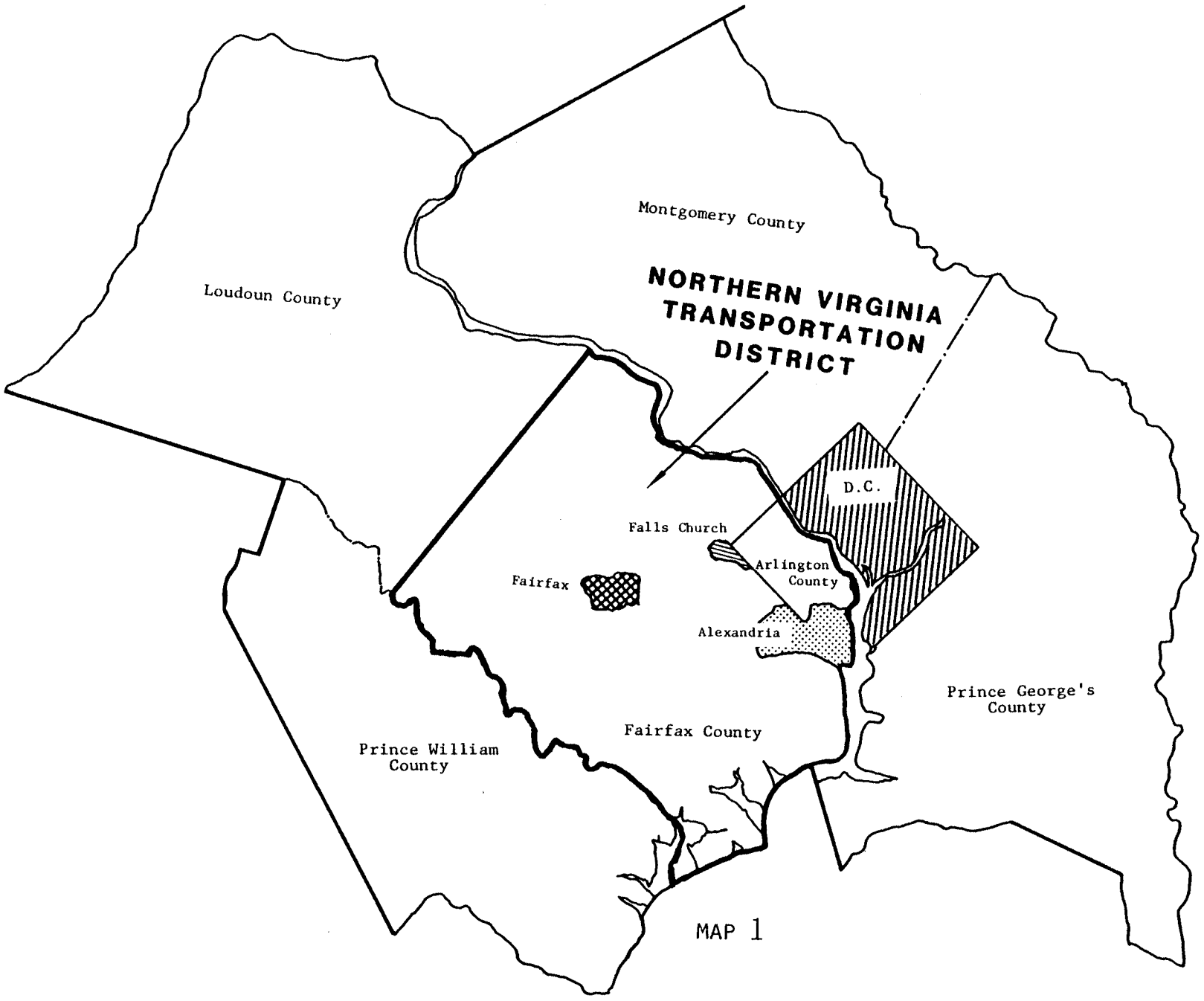
Metrorail sections in Northern Virginia are scheduled for completion by early 1984 (Huntington Line) and late 1986 (Vienna Line) with the exception of the construction in the 1990's of the Springfield spur located in the City of Alexandria and Fairfax County (see Maps 2 and 3). In 1987 there will be 18 Metrorail stations open in Northern Virginia. These stations will provide transportation to and from major employment and tourist areas in the District of Columbia (D.C.). Additionally, many work trips within Northern Virginia will be served by Metrorail.

WMATA Bus

Prior to the opening of the rail lines, the Metrobus system provided virtually all mass transportation service from Northern Virginia to D.C.; however, the opening of Metrorail in Virginia has resulted in virtually all Metrobuses being routed to Metrorail stations. The resulting role of Metrobus has become that of providing transportation from residential areas to Metrorail stations in addition to servicing interjurisdictional routes within Northern Virginia not covered by rail. In keeping with WMATA general policy, service between the rail and bus modes are not competitive. Thus, the systems are organized to be complementary in nature rather than alternatives.

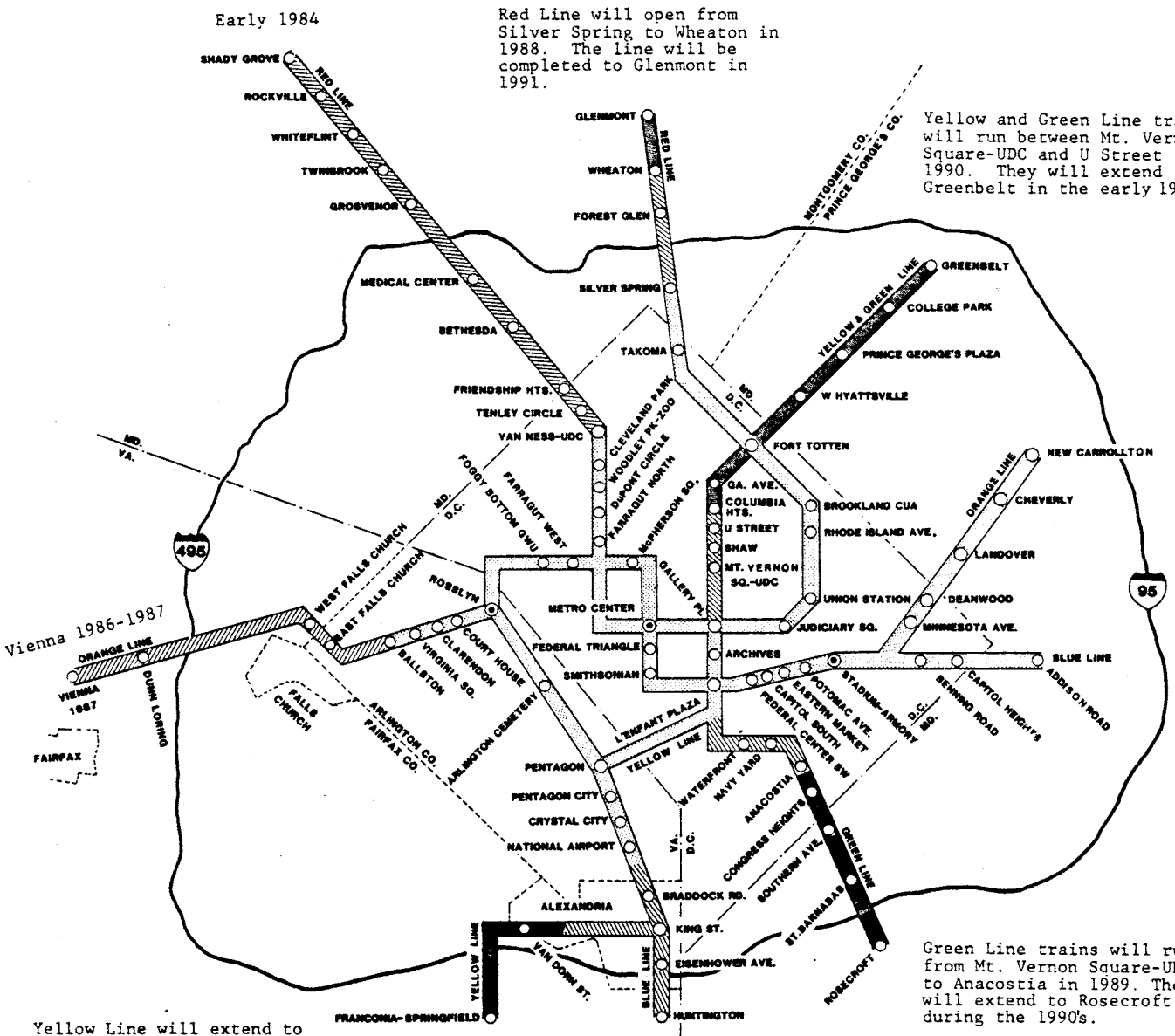
Non-auto trips between Northern Virginia and D.C. are mainly furnished by Metrorail, and commuters who reside in residential areas within walking distance use Metrorail directly. As Map 3 indicates,

METROPOLITAN WASHINGTON AREA



MAP 1

THE METRORAIL SYSTEM TENTATIVE OPENING DATES



MAP 2

those in the future who will be served by stations near or outside the Capital Beltway will be able to drive directly to and park near the appropriate station and the only Northern Virginia Metrobus service to D.C. will be provided via the Pentagon Metrobus terminal. WMATA service between Northern Virginia and Maryland is somewhat limited due to the radial nature of the Metrorail system; nevertheless, those who work near Metrorail stations in Maryland may use rail service in combination with a short walk or taxi service. Additionally, some stations in Montgomery County are serviced by a local bus operation which provides transportation from the station to the surrounding area.

By 1987, when the 18 Metrorail stations are open, service between jurisdictions in Northern Virginia will be provided directly by Metrorail, Metrobus, or a combination of the two. For example, a commuter living in Old Town Alexandria and working in Rosslyn would use the Metrobus to get to a rail station and then take the Metrorail; and someone wishing to commute from Annandale to Old Town Alexandria would probably travel there directly on a Metrobus.

Local Non-WMATA Service

Several of the Washington Metropolitan Area jurisdictions are either already providing, or actively planning for local service provision. Others are more satisfied with the current situation, and are not currently moving in the direction of local service.

Presently, Fairfax City sponsors bus service in addition to its WMATA bus service. Since 1978, the City has contracted with a private company to operate express bus service to D.C. This service coexists with Metrobus operations and the two are considered to be somewhat complementary as borne out by statistics which indicate that total ridership has increased as compared to when Metrobus operated the only service. In addition, Fairfax City and George Mason University jointly fund a small bus operation (City-University Energysaver, also known as CUE) which provides transit service between the University's Main and North Campuses as well as around the city. The buses for this system are owned and operated by the city. Any changes in the existing system would likely occur after the Vienna Rail Station opens in 1986.

Montgomery County, Maryland, owns and directly operates a bus system that provides a substantial level of service to its residents. This service, called Ride-On, was initiated in 1975 and has grown slowly into a system of 95 buses operating in two areas of the county. Since 1975, the system has replaced some Metrobus routes and has extended to areas previously without bus service.

Two localities, Fairfax County and the City of Alexandria, are actively involved in planning for the provision of some local bus service. Although the date for starting service is somewhat uncertain in Fairfax County, the system most likely will be operating by early 1986. As envisioned, 30 buses providing all feeder service to the Huntington Metrorail Station will replace approximately 20% of current

service provided by Metrobus. While the desire to cut their transit bill is clear, one cannot overlook the possibility that even if costs are approximately the same, local service will be maintained as a budgetary control measure over rapidly increasing Metrobus costs. The City of Alexandria is scheduled to begin operation of a local system in the spring of 1984. Consisting of 17 city-owned, 30-foot buses operated by city employees, the service will cover four basic routes and provide about 20% of total City bus service. In general, the service is designed to supplement existing service provided by WMATA. Local officials have worked closely with WMATA to ensure that the integrity of WMATA interjurisdictional service is maintained, and any resulting changes in Alexandria Metrobus routes bring about actual reductions in platform miles and platform hours charged to the city.

The two outer Northern Virginia counties, Loudoun and Prince William, have opted to stay out of WMATA. Loudoun County government does not sponsor any bus service into the inner Northern Virginia region or D.C. Prince William County is, however, planning to purchase 20 renovated buses with a $1.4 million grant received from the VDH&T. These buses will be leased to a private operator or operators and will provide service to and from the D.C. area. The County's financial involvement will be limited solely to providing the buses. Maintenance and operating cost will be the responsibility of the private operator(s).

Study Scope

This study is issue and policy oriented. Thus, its focus is not the details of local bus service implementation plans such as fares, routes, scheduling, or management arrangements. Another study, "The Surface Transit Alternatives Study," sponsored by the Washington Metropolitan Area Council of Governments, is, however, designed to enable local governments to examine the specifics of bus service provision. This report is arranged into five chapters. The present chapter has outlined the study mandate and provided background on public transportation service in Northern Virginia. Chapter II examines the complexities of the legislative, policy making, and funding arrangements which have arisen in the course of regional bus service provision by WMATA. Chapter III examines the major advantages and disadvantages of WMATA acting as the major bus service provider in the region and draws implications from experiences in other parts of the U. S. where regionally supplied (centrally supplied) service has been supplemented or replaced by locally supplied service. Chapter IV evaluates the desirability and feasibility of bus service provider structures other than or in addition to WMATA; and Chapter V summarizes major conclusions and offers recommendations concerning desirable roles for NVTC and localities to ensure the most cost-effective bus service for the Northern Virginia region.

Chapter II

LEGISLATIVE AND FINANCING STRUCTURE OF WMATA REGIONAL SERVICE

The construction and operation of an integrated mass transportation system in the Washington Metropolitan area has proven to be a difficult task and will continue to be for the foreseeable future. As the regional transit authority, WMATA, in collaboration with the Transportation Planning Board (the Metropolitan Planning Organization for the Metropolitan Washington Area), is responsible for designing and implementing mass transportation policy. The administration and financing of WMATA involves the federal government, the states of Maryland and Virginia, the District of Columbia, and seven local governments. This multijurisdictional undertaking has necessarily precipitated a number of complex governmental relationships and financing agreements. These arrangements are described in this Chapter to focus attention on the fact that any alternatives to WMATA regional service must necessarily deal within a very cumbersome legislative and financing structure and proposed solutions should be clear improvements to these constraints.

Administrative Structure and Policy Making

Figure 1 shows the WMATA organizational structure. Appointed by the WMATA Board, the General Manager of WMATA directs Metrobus and Metrorail activities and is responsible for implementing actions taken by the Board. The Board primarily sets policies on issues such as rail construction, fares, transit service, and financing. Although a policy board, they frequently become involved in management and technical decisions.

The Board is composed of 12 local officials of which six are principal members and six are alternates. Members are appointed, two principal members and two alternates each by the D. C. City Council, the Washington Suburban Transit Commission (WSTC), and the Northern Virginia Transportation Commission (NVTC). NVTC and WSTC are composed of local officials from Virginia and Maryland and act as funding conduits for WMATA operations. Board actions require a majority vote with at least one affirmative vote from each signatory of the WMATA compact (D.C., Maryland, and Virginia). Participation by localities in WMATA is voluntary; they may withdraw from the Compact with one year's notice, and local governments have only a moral obligation to meet the funding commitments made in agreements on Metrorail construction. Metrorail and Metrobus service agreements are negotiated annually between localities and WMATA under the parameters of the financing plans adopted by the WMATA Board. Given the complexities of the governmental and financial arrangements, there has been a remarkable degree of cooperation between the local governments since the Compact was signed.

WMATA ORGANIZATION

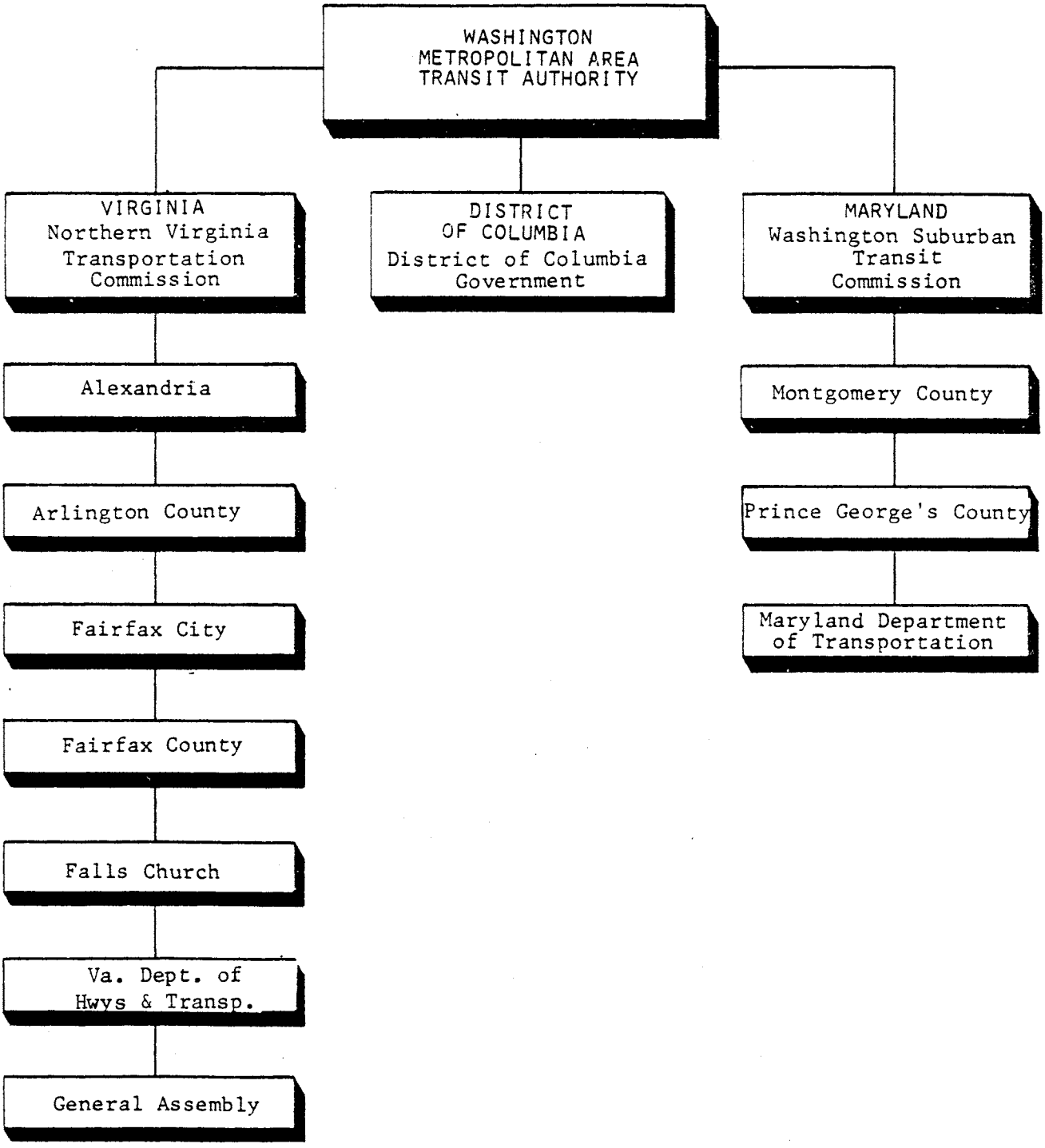


FIGURE 1

Role of NVTC: The principal source of NVTC's powers and functions is the Transportation District Act of 1964, as amended (See Appendix C). The Commission under this legislation is given the following major functions: (1) it shall collaborate and cooperate with an agency in the preparation of a transportation plan; (2) it shall, in cooperation with the governing bodies of the component governments embraced within the transportation district, formulate the tentative policy and decisions of the transportation district with respect to the planning, design, location, construction, operating and financing of transportation facilities, and (3) it shall make a determination of the equitable allocation among the component governments of the costs incurred by the transportation district in providing transportation facilities and the expenses and obligations from the operation thereof to be borne by each county and city.

While transportation districts are granted a number of powers under the Transportation District Act, some are not applicable to transportation districts like NVTC which are located within a metropolitan area that includes all or a portion of a state or states (including the District of Columbia) contiguous to Virginia. In particular, NVTC cannot prepare a transportation plan, nor construct or operate transit facilities. Other powers granted in the Act but not applicable to NVTC are the ability to enter into agreements or leases with private companies for the operation of transit facilities. Furthermore, it is not specified that NVTC has the power to enter into agreements or contracts with cities or counties to provide transportation service or facilities.

The Northern Virginia jurisdictions participating in WMATA form the Northern Virginia Transportation District (NVTD). NVTD is composed of five political jurisdictions--the Counties of Arlington and Fairfax, and the Cities of Alexandria, Falls Church, and Fairfax. The Northern Virginia Transportation Commission (NVTC) consists of 18 members. Twelve members are appointed by the jurisdictions from elected City and County Government officials. Five Commissioners are allocated to Fairfax County, three to Arlington County, two to the City of Alexandria, and one each to the cities of Fairfax and Falls Church. One member represents the VDH&T, and three members representing the House of Delegates are appointed by the Speaker of the House of Delegates, and two members representing the Senate are appointed by the Committee of Privileges and Elections of the Senate. Action by the Commission requires majority vote with at least one affirmative vote from three jurisdictions.

The Commission appoints the two principal and two alternate WMATA Board members to represent Northern Virginia. Traditionally, the two principal Board members are representatives from Arlington and Fairfax Counties and the two alternates from the City of Alexandria and Fairfax County. Commission appointments to the Board are made with the recommendation of the respective local governments.

NVTC acts as a vehicle for forming consensus on Virginia positions concerning WMATA activities. On WMATA issues that are primarily isolated to operations in NVTD, such as Metrobus routes in Northern

Virginia, the WMATA Board generally acquiesces to the policies adopted by the Commission as represented by Virginia Board members. On issues that involve all members of WMATA, such as Metrorail fares or Metrorail and Metrobus financing, the Commission attempts to form a subregional policy and recommends positions to be taken by the Virginia representatives on the Board.

Though all NVTD jurisdictions are directly represented on NVTC, they are only represented on the WMATA Board to the extent that the Virginia Board members represent the views of NVTD as opposed to the views of the jurisdiction that elects them. Understandably, parochial voting has been a criticism of the Board, and in fact, Board members may often be under pressure to vote for what is best for their home jurisdiction rather than voting the consensus of the Commission. Thus, on issues dealt with by the WMATA Board, to the extent that parochial voting does occur, NVTC's role as a subregional policy making body is less than optimal.

The most visible and probably the most important roles of NVTC are its involvement in Metrobus financing and allocating aid funds for mass transit in NVTD. These roles are dealt with in more detail in the next section of the report on the structure of financing Metrobus.

Metrobus Financing Structure

The financing of Metrobus in Northern Virginia is a complex two-tiered process involving both the WMATA Board and NVTC. The Board is responsible for adopting a Metrobus finance plan which allocates costs and revenues to each Compact signatory (Virginia, Maryland, and D.C.). NVTC is responsible for deciding how Virginia Metrobus cost will be suballocated to each jurisdiction. NVTC also apportions federal operating assistance, state aid, and revenues from the two percent local fuel sales tax to NVTD jurisdictions to assist in paying their mass transit costs (Metrorail, Metrobus, and recently, local bus costs).

Metrobus costs are allocated to the three WMATA Compact signatories by a formula that assigns a share of each component of Metrobus costs to each signatory. The current formula classifies Metrobus costs into four categories; platform mile costs (behind the wheel costs), platform hour costs, operating fixed cost, and nonfederal bus capital cost. In this scheme, expenditures that vary with platform miles, such as fuel costs, would fall into the first category while labor costs, certain administrative costs, and capital cost would fall respectively into the second, third, and fourth categories. Each signatory pays a share of each cost component in the following manner. (See Appendix D for more detail)

1. Each signatory pays a share of the total platform mile costs in proportion to their share of total Metrobus platform miles.

2. Platform hour costs are allocated by a method similar to platform mile costs.

3. Operating fixed costs are allocated on the basis of the FY 1975 distribution of peak buses. Virginia's share of this cost is 29.2188%.

4. Capital costs are allocated by the percentage of each signatory's weekday revenue miles. This cost is the 20% local share of Metrobus capital costs. UMTA pays the remaining 80% of capital costs and, generally, total Metrobus capital expenditures do not exceed the amount of which 80% can be financed with UMTA grants. If the amount of federal funds actually appropriated for this purpose falls below 80% of proposed capital expenditures, WMATA curtails planned spending until an 80% federal share is attained. In other words, usually the amount of the annual federal grant for Metrobus capital determines this component of Metrobus costs. The use of federal funds carries with it grant requirements which, as will be discussed in Chapter III, tend to drive up the cost of WMATA service.

After Virginia Metrobus costs have been determined, they are suballocated to each jurisdiction according to an NVTC approved formula. The current suballocation formula is identical to the WMATA formula except that operating fixed costs are suballocated on the basis of a weighted average of each jurisdiction's share of mileage and hourly costs. The suballocation formula is given in Appendix D.

Metrobus farebox revenues are accredited among the jurisdictions on the basis of fare levels and periodic ridership surveys. These surveys are usually conducted after each fare change. On a few routes the actual amount collected is known and accredited to jurisdictions, but for most routes a statistical estimate of passenger revenue is used.

The Metrobus subsidy each jurisdiction pays WMATA is simply the allocated costs minus accredited revenues. This subsidy is funded from two sources;

- $21.1 million in appropriated State Aid to Mass Transit. This money may be used to pay up to 50% of the administrative expenses incurred by NVTC (including WMATA administrative cost borne by Northern Virginia), up to 95% of non-federal capital outlays, up to 95% of nonpersonnel-related maintenance and fuel costs, and local payments of WMATA revenue bond debt service. Locally sponsored bus service may be supported through NVTC with these funds. The Virginia Department of Highways and Transportation Six Year Improvement plan shows that funding will remain roughly constant for the 1985-86 biennium. Funding for the 1987-90 period is also projected to remain at the current level.

- $4.7 million in Federal Operating Assistance. This aid can only be applied to Metrobus and Metrorail operating costs. This level of aid is equal to 80% of FY 1982 funding under the old Section 5 UMTA operating assistance program. This

money will now come out of the new Section 9 block grant program. The level of funding will probably remain constant through FY 1986.

- Approximately $8.0 million in revenue from the two percent regional fuel sales tax - These funds are available for WMATA revenue bond debt service and WMATA operating subsidies. This money is expected to remain fairly constant or to grow slowly over the next seven years.

Generally, NVTC develops an aid allocation formula that apportions a share of the total aid dollars to each jurisdiction. By including locally sponsored bus costs and/or subsidies in the formula, indirect aid can be provided for these operations though not a single dollar is actually earmarked for them. For example, each jurisdiction can be allocated a share of the aid funds equal to its share of total bus and rail costs, which would include both WMATA and locally sponsored service. Each jurisdiction's share of the funds would then be applied to their WMATA bill. The difference then is the amount paid out of local funds.

Funding Levels

Not only is the structure of financing WMATA bus service complex, the funding levels required for the regional system are significant and growing. Appendixes E and F provide detailed financial data on system wide and local funding requirements and their projected growth rates. Important highlights from that data are noted below.

WMATA Financing Data--NVTD Jurisdictions Only:

1. The Metrobus operating subsidy is the largest component of NVTD jurisdictional costs.

2. Relative to the operating subsidy, Metrobus capital costs are not a substantial burden. This is primarily due to the fact that 80% of capital costs are federally funded.

3. The NVTD's share of Metrorail capital costs represent a significant portion of the total Northern Virginia WMATA liability and will continue to be significant over the next ten years.

4. In FY 1983, total NVTC aid funds covered 44.4% of the jurisdictional Metrobus and Metrorail costs in NVTD. State aid alone covered over 25% of these costs.

5. Total NVTC aid funds are projected to remain at the current level (approximately $33 million) until FY 1987. After that, there may be a significant reduction if the federal operating assistance program is not renewed or replaced with a similar program.

6. During the next several fiscal years, the Metrorail and Metrobus operating deficits are forecast to increase sharply while NVTC aid funds may remain stable or decrease. Thus, locally raised revenues may be required to cover a steadily increasing share of jurisdictional cost.

7. WMATA cost as a share of local revenue in NVTD will increase, especially in FY 1987 when additional Metrorail stations open. When all WMATA-related expenditures are included, mass transit will consume approximately 10% of the local budgets by FY 1987. Operating and WMATA debt service cost alone will account for over 6% of local budgets. Another 4% will cover capital cost and local debt service costs.

Systemwide WMATA Financing Data:

1. Federal funding of Metrorail and Metrobus capital programs and the WMATA debt service cost is substantial. Under current federal programs, the Urban Mass Transportation Administration funds 80% of the capital costs and two-thirds of the Metrorail debt service costs.

2. The Metrobus operating subsidy presently accounts for roughly half of the total jurisdictional WMATA cost.

3. Metrobus operations, and to a lesser degree Metrorail operations, are labor intensive. (As will be emphasized in another section, high wages, restrictive work rules, and limitations on the employment of part-time workers contribute to making operating cost the major source of the local financial burden.)

4. Metrobus operating costs are forecast to grow steadily over the next five years while Metrorail operating cost will increase sharply in both dollar amounts and relative to Metrobus operating cost.

5. Until recently, Metrorail farebox revenue has covered approximately 60% of its operating cost. Metrobus farebox revenue has been covering only 40% of the operating cost. Farebox recovery rates in Northern Virginia are similar to the systemwide rates, however, NVTC has adopted a policy calling for Metrobus fares to increase over the next 10 years sufficiently for 60% of the operating cost to be covered by farebox revenue. (Financial forecasts used in this report assume fare increases consistent with past fare policies.)

Summarizing Issues Raised By The Current Legislative and Financing Structure

Clearly, the involvement of three states and seven local governments in the provision of bus service by a regional supplier in Northern Virginia has necessarily led to a complex governance structure. Nevertheless, there are at least three issues raised by this complexity which may point toward avenues for strengthening the structure of providing bus service in Northern Virginia. The first deals with the WMATA Board structure, its interaction with NVTC, and the extent to which the structure is conducive to addressing individual locality needs. Were demand for bus service solely interjurisdictional in nature a centralized decision-making body such as the WMATA Board would appear to be an appropriate policy making group able to best deal with coordinating interjurisdictional routes and fares. However, the structure within which NVTC and the WMATA Board must interact does not appear as conducive as might be desirable for addressing individual locality service needs. Since only two NVTD member jurisdictions are represented on the WMATA Board, even if parochial voting is exhibited by these members, there leaves little assurance that the needs and preferences of the other jurisdictions will be imparted to the Board. This, of course, makes independent fare philosophies very difficult to pursue.

The second issue relates to the allocation of costs. The complexity of formulas and the number of variables that comprise them render it very difficult for individual localities to accurately predict the impacts that service changes will have on their own bill from WMATA. Furthermore, the fact that the formulas are designed to allocate costs on the basis of a share of all NVTD service means that the actions of one locality can possibly affect the subsidy requirements of other NVTD jurisdictions even if the other jurisdictions experience no change in the level of bus service they are supplied.

The third issue is that since the Metrobus operating cost subsidy is the largest, most rapidly growing component of Northern Virginia jurisdictional WMATA costs, techniques of its reduction offer the most obvious avenue for dealing with the fact that transit is the most rapidly growing component of local budgets in Northern Virginia.

Chapter III

ANALYSIS OF PUBLIC TRANSPORTATION IN NORTHERN VIRGINIA

As a prerequisite to evaluating Metrobus alternatives, this chapter focuses on an analysis of public transportation in Northern Virginia. This analysis has two aspects: The first is an examination of the advantages and disadvantages of WMATA as the centralized bus service provider from the standpoints of service and funding; the second is the development of implications from experiences outside the Northern Virginia region where decentralized bus service provision has been implemented.

Metrobus Advantages

Service

Regional Coordination: The most significant advantage of existing Metrobus service in Northern Virginia is that supply by WMATA assures mass transit coordination from a regional perspective in terms of mode, interjurisdictional service, and planning. For example, WMATA policy clearly dictates that rail and bus service is to be complementary rather than competitive. However, were bus service to be locally provided, there is no assurance of such complementarity. Furthermore, coordination of schedules and transfers, and the provision of regional fares and a single boarding charge is well established under WMATA service as is the provision of service along major interjurisdictional routes such as Route 7 and Route 236. If each locality in the Metropolitan region provided service, such coordination would be difficult to maintain. Regarding planning, currently the Transportation Planning Board deals largely with WMATA regarding coordination between transit service and other alternatives; widespread provision of local service may necessitate a significant increase in the coordination activities of the Transportation Planning Board vis a vis the transit supply in the local jurisdictions comprising NVTC.

Staff Expertise: WMATA staff experience and expertise in mass transit planning, routing and general management cannot be overlooked as a second important advantage of the existing structure for providing service. The ability to obtain reasonably priced comparable expertise at the local level will be, at best, uncertain. A related advantage, although less well defined in terms of its impact on cost, is that a locality might not, at comparable service provision levels, be sufficiently large to capture any economies of scale in purchasing, management, or administration which are often available for large organizations. For example, maintenance facilities required may be more numerous under locally provided service than under the existing WMATA structure.

Funding

Federal Capital Assistance: WMATA's major funding advantage relates to rolling stock and capital facilities (such as buses and garages). Currently 80% of such capital investment is federally funded by grants from the Urban Mass Transportation Administration (UMTA). The result is that the Compact signatories bear only 20% of the cost of buses and garages. As will be discussed in more detail in Chapter IV, the requirements which must be met in order to obtain UMTA capital grants will most likely result in the buses and garages for locally sponsored systems being paid for with non-Federal funds borne largely by the local jurisdiction in question.

Metrobus Disadvantages

Service

Individual Locality Needs: Typically, WMATA buses are not designed to serve as neighborhood circulators, nor is the WMATA structure focused on coordination with potential paratransit markets and local programs designed to serve the elderly and handicapped. These limitations lend support for a localized service.

WMATA Board Structure: In a related kind of issue, the structure of the WMATA Board, consisting of two representatives from each signatory is not well suited, in the sense of being accountable, for imparting locality needs to WMATA. Even though, as noted earlier, there may be pressure to vote parochially, since only two of the NVTD localities have members on the Board, there is no assurance that all NVTD jurisdictions will have their preferences represented.

Funding

Labor Costs: Labor protections of various sorts can be cited as a major influence on the rising costs of Metrobus, largely because labor comprises a significant portion of the Metrobus operating budget. The concern over WMATA labor costs stems from three major sources: (1) the WMATA Compact; (2) the UMTA 13(c) Labor Protection Clause; and (3) protections and benefits guaranteed under union contracts. The Compact specifies in particular that WMATA must deal with accredited representatives of the employees (i.e., a union) in matters concerning wages, salaries, hours, etc., and that in any labor dispute (for example over wages) either party can force binding arbitration. With regard to 13(c) of the Urban Mass Transportation Assistance Act of 1964, as amended, since WMATA receives federal funds, it must guarantee that in the expenditure of those funds and the operation of its service, no employees will be made worse off with respect to wages, hours, working conditions, position, etc. The result of these protections in the context of labor cost is that WMATA has almost no leverage in cost containment because there is no alternative to either bargaining with the transit union or submitting to binding arbitration. Intensifying this labor cost pressure is the fact that until the signing of the most

recent labor contract (July 27, 1983) Metro employees have received quarterly cost-of-living adjustments matching the consumer price index. The result has been increases of up to 18% per year over these periods and a wage rate of $12.04 per hour (excluding overtime) for many drivers. In addition, certain union work rules place constraints on the ability of Metro to contain labor cost. For example, under the new contract, the ceiling on the use of part time labor will be raised from 10% to 15%; nevertheless, Metro is required to pay fringe benefits to part time employees as a result of the concession on part time labor.

Local Budgetary Control: A second aspect of Metrobus service provision which has caused localities to consider locally sponsored service relates to their perceived inability to have a significant impact on their payments to WMATA regardless of changes in service level. Put more simply, localities appear to have very little transit cost budgetary control. This concern over control has several aspects. The first deals with WMATA's cost structure and the allocation of costs described in Chapter II; the second is control over fares; the third is control over WMATA administrative costs; and the fourth is the current budgeting process.

While to some extent the cost allocation formulas are quite involved, their net result is that the portion of costs assigned to a locality is influenced not only by the total operating and capital cost of Metrobus during the year, but also a locality's share of output measures such as total platform hours of operation in Virginia and total platform miles of operation in Virginia. Local officials would like to see a direct relationship between changes in service provided and their bill. However, links between costs and service changes are not so direct and even with reductions in service level, a locality's cost may not fall significantly.

There are at least two reasons for this expectation. One is that operating fixed cost (a type of overhead) is typically a fairly constant portion (about 20%) of the WMATA operating budget and, of this, Northern Virginia is assigned about 30% annually (in 1983 this was $11.3 million). In other words, service reductions in one locality will have little, if any, impact on total operating fixed cost allocated to Northern Virginia unless the Metro cost allocation formula is changed. A second reason is that the remainder of Metrobus total cost is comprised largely of labor, fuel, maintenance, and debt service (a constant) and in the short run, these may adjust very slowly and slightly to incremental service cuts. In particular, in instances where the service reduction is largely for the off-peak period, significant cost reductions should not be expected because the major influence on labor cost (the biggest portion of operating cost) is peak labor requirements, not base period requirements.

The fact that the link between service reduction and cost reduction is not directly proportional has significant implications even for those NVTD localities that do not alter Metrobus service. If Locality A reduces service by 20% and the costs allocated to NVTD fall

by less than 20% (for the reasons just cited), the other localities can experience an increase in their Metrobus subsidy payment. Assume the five localities in NVTD receive 10 units of service the total cost of which is $50. If Locality A gets half the service, Locality B gets 1/5 of the service (2 units) and each of the others get 1/10 of the service (1 unit) each, their allocated cost will be $25, $10, $5, $5, and $5 respectively. Now, let Locality A reduce its Metrobus service by 20% (2 units) but assume that the cost allocated to NVTD falls by only 10% ($5). The result is that the $45 cost of the eight (8) units of service must be shared according to each locality's proportion of service. Locality A receives 3 units of service and pays 3/8 of $45 = $16.88. The other localities, however, find their costs to have risen: Locality B pays 2/8 of $45 = $11.25; Localities C, D, and E each pay 1/8 of $45 = $5.62.

In addition to the uncertainty that service reductions will in fact result in significant short run changes in costs allocated to a locality, the ability of a locality to unilaterally utilize the farebox to control its WMATA bill is severely limited. A regional fare change requires agreement on the part of the localities involved and the potential for significant philosophical differences on the farebox recovery rate can occur. Also, when service is reduced to a locality, its allocated farebox revenues could fall faster than costs, thereby precipitating an increase in what is owed WMATA. Furthermore, while cost containment is a policy of the WMATA Board and the FY 1983 budget has undergone line item scrutiny, the control the NVTC localities can exercise on WMATA administrative cost is at best indirect. Finally, the process of auditing and calculating actual amounts owed WMATA is cumbersome and typically takes two years. For example, in FY 1983, each NVTC locality signs a service agreement based upon estimated cost and service; in FY 1984, an audit determines whether the estimated amount was correct; and in FY 1985, the locality pays any additional amounts due or receives credit on overpayments.

Grant Regulations: In addition to the UMTA 13(c) regulations noted above, the fact that WMATA is funded partially from the Surface Transportation Assistance Act, brings into play several other federal regulations contained in the 1982 Act which tend to escalate costs above that level which might occur were a local bus system funded without federal funds. Among these are provisions for service for the elderly and handicapped, compliance with the Davis-Bacon Act requiring union wages to be paid on construction projects (such as garages) where federal funds are used, and the imposition of rather rigid requirements on purchasing American manufactured buses unless the inclusion will increase cost more than 10% and the cost of U. S. components is more than 50% of all the components of the vehicle.

National and Local Experience

National and local experience outside Northern Virginia can be a good indicator of how various services may succeed and the results

that might be expected for Northern Virginia. Since it is not possible to collect data to measure how alternatives to WMATA might fare, these other experiences provide a valuable source of information where local jurisdictions have left or have considered leaving a regional transit operation. As well, there is a movement towards utilizing private carriers under contract to provide transit service less expensively. A brief summary of such experiences is presented below along with their implications for Northern Virginia.

Kansas City

This bi-state area (Missouri and Kansas) is the location of a recent effort towards partial dissolution of a regional system. Essentially an affluent suburb, Johnson County, Kansas was displeased with the quality and cost of service provided by the Kansas City Area Transportation Authority (KCATA). Thus, it pulled out of the regional group and began operating its own service under contract with an existing private carrier. The service is primarily for work trips to the downtown. The county is now paying approximately half of what it previously paid KCATA for the same service. The central city (Kansas City) initially made it difficult for the private carrier's operation in terms of approval of routes, stop locations, etc. Over time, however, a more cooperative attitude prevailed.

Initially disturbed over the withdrawal by Johnson County, KCATA revised routes and schedules to account for the loss. To their pleasant surprise they discovered a decrease in average system cost. This was due to the removal of long distance, peak period commuter services which were expensive to provide compared to base day service in the more dense inner areas.

The results, a year later, are that Johnson County has less expensive and better service, and KCATA has a more efficient system. In this case, at least, it seems everyone is better off and the service is more rational. This experience points out several features of interest to Northern Virginia.

> It underscores the great expense of providing peak hour service and the work rule related reasons for the expense. In particular, the higher labor cost of peak hour service can be attributed to two factors. First, union employees are often paid spread premiums (additional hourly compensation for working a split shift, i.e., morning and evening rush hours) which result from peak service.
>
> Secondly, in addition to the high wages and spread premiums, it is often necessary to assign a worker during the morning or evening peak and pay a minimum guarantee for greater than actual time worked. This is due to union restrictions on part-time labor, limits on the maximum time lapse for a split shift and union rules forbidding management from assigning drivers to other tasks during nondriving

hours. Use of nonunion labor and relaxed work rules can help mitigate this situation.

It points out that the regional system and jurisdictions remaining with it do not have to be losers if certain portions of regional service are provided by others. The key issue is to focus on services which are essentially cross-subsidized by other services or jurisdictions. In general, it is likely that Northern Virginia peak period services are crosssubsidized, and the region and Northern Virginia could both be better off if Northern Virginia could provide those services less expensively.

Coordination among services is critical, and political friction needs to be overcome to achieve it. Currently, KCATA has realized the need to coordinate among services in the region, and is planning to perform route planning and scheduling for Johnson County on a contractual basis. It is evolving into a regional administrative and management role and has spun off service to several local private operators. This experience of KCATA suggests that any significant withdrawal of localities from the Metrobus system should be accompanied by an expanding coordination role on the part of NVTC.

Los Angeles

Several layers of bus transit service are available in the Los Angeles basin area. There are two large regional systems, several municipal systems, and private carriers. To some extent, state funding minimizes equity and allocation squabbles, yet coordination and the efficiency of a variety of providers are concerns. The Los Angeles County Transportation Commission (LACTC) staff lends technical support to local staff and helps with coordination issues.

Of interest to Northern Virginia is a study which examined privately and publicly operated commuter bus service in Southern California.[1] Its chief finding was that private companies on the average operate such express service at 50 percent of the cost of service operated by the Southern California Rapid Transit District (SCRTD) and Orange County Transit (the two public regional systems).

The cost reduction was attributed to controlling many of the same factors cited above as contributing to Metro's higher cost. The private carriers have:

- Lower wages and compensation;

---

1 Southern California Association of Governments, Commuter and Express Bus Service in the SCAG Region: A Policy Analysis of Public and Private Operations, February, 1982.

- Lower overhead expenses;
- Greater use of part-time drivers;
- Fewer non-revenue platform miles through use of commuter drivers;
- Flexible work rules for efficient personnel management;
- A better match between garage location and service area to help reduce deadheading.

Essentially, the role of the private carriers in Southern California is that of peak-shedding. Lower wages and the absence of labor restrictions permit private carriers to provide peak hour service at significant cost reductions. For Northern Virginia the implication is not necessarily that private carriers should be the service provider, but that local jurisdictions can most likely provide peak service with lower operating cost than WMATA. This expectation is due in large part to the fact that locally provided service would not utilize union labor and would be able to avoid the work rule restrictions which make the matching of pay hours and operating vehicle hours difficult.

Tidewater

Closer by, the Tidewater Transportation District Commission (TTDC) (metropolitan Norfolk) has been providing more localized services while retaining its regional nature. In many respects TTDC has become a broker, matching service types and modes with demand. The chief means to accomplish this is a focus on the relative costs of service alternatives. Substitute services for fixed route/fixed schedule services include bus pools and van pools (for peak period express), minibuses and jitneys (for low volume trunk services), and feeder or dial-a-ride services (for suburban and neighborhood circulation). The alternative which can provide effective service at the lowest cost is selected.

Several factors contribute to this approach at a regional level. Foremost is intense staff-level coordination between localities and TTDC. Secondly, the general manager has taken a strong yet cooperative approach with labor which has reduced work rule and other constraints on new and innovative services.

Work trip patterns in Northern Virginia are very scattered and not highly concentrated on relatively few routes. Many of the trips, therefore, cannot be served by rail because of location or by fixed route/fixed schedule bus because passenger revenue would cover only a small fraction of the cost due to low ridership. While Tidewater does not employ a commuter rail system, the potential applicability of the brokering concept, peak period shedding techniques, and the use of paratransit cannot be overlooked by NVTC.

Montgomery County "Ride-On"

Montgomery County, Maryland, began operation of a locally provided, fixed-route/fixed-schedule system in the Silver Spring area in 1975, using no Federal funds. Since then, the system has been incrementally expanded, with frequent experimentation on routings and service areas, and efforts to tailor services to the county user. While it replaced certain Metrobus service, it essentially is supplemental to Metrobus. The County has more Metrobus service now than it did before "Ride-On." The system uses medium-sized buses, and management and operators are county employees. The system has generally been successful, with some 95 buses now carrying about six million riders per year.

Some cost comparisons between Ride-On and WMATA may indicate the cost differences Northern Virginia jurisdictions might expect. The table below presents some estimated, unaudited data prepared by the respective staffs for FY 1983.

	Ride-On	WMATA
Cost per bus mile	$2.70	$4.02
Cost per platform hour	29.00	48.00
Driver wage rates (begin/top)	$7.45/$10.05	$9.04/$12.04
Part-time drivers as % of total	25%	10%

WMATA labor wage rates are 20 percent higher for both entry and top rates. The top rate is reached in 30 months at WMATA versus seven years at "Ride-On." This implies that the difference between the average wage paid per payroll hour by WMATA and "Ride-On" is significantly higher than 20 percent. Fringe benefits and work rules also differ markedly. In addition, WMATA labor generally receives a higher annual cost of living increase which results in a widening of the pay difference over time. Accentuating these labor cost differences are the effects of spread premiums and labor restrictions which tend to cause the amount of payroll hours needed to provide identical quantities of service to be higher for WMATA. A determination of the exact labor cost differences is beyond the scope of this report, but the basic figures and concepts clearly illustrate the potential for lowering operating cost for non-WMATA service in Northern Virginia.

Clearly a combination of locally provided service and WMATA service is workable given the prototype already in existence in Montgomery County. Although "Ride-On" has had growing pains, it appears to be filling a vital need in Montgomery County and has become well integrated into their transportation system.

Implications

An analysis of public transportation in Northern Virginia clearly shows that WMATA as the regional provider of bus service has the service advantages of regional coordination, staff experience, and route stability; and it has the funding advantage of financing capital equipment with federal grants covering 80% of buses and garages. Nevertheless, the service disadvantages of the difficulty of meeting individual locality needs and the funding disadvantages of the labor cost implications of the WMATA Compact, Federal grant requirements such as 13(c), and the union contract in force are significant. These disadvantages are exacerbated by the apparent lack of local transit cost budgetary control.

National and local experience outside Northern Virginia indicate that local jurisdictions can most likely provide peak service with lower operating cost than WMATA and that (as has been proven true in Kansas City) the regional system need not be a loser in the process, particularly if the focus is on services which are cross subsidized by other services or jurisdictions. The Tidewater experience shows that transportation district commissions can be quite successful and strong in a role of coordinating and brokering services that are both effective and low cost, and the Kansas City experience suggests that moves on the part of Northern Virginia away from bus service that is totally regionally supplied to decentralized local service should be accompanied by an expanding coordinating role on the part of NVTC.

Chapter IV

EXAMINING ALTERNATIVES TO WMATA AS THE SOLE PROVIDER OF BUS SERVICE IN NORTHERN VIRGINIA

Chapters II and III show that consideration of alternatives to the provision of bus service solely by WMATA is well founded and that this consideration stems from issues related to funding and issues related to service. By applying funding and service criteria, this chapter presents an evaluation of alternatives to Metrobus as the sole bus provider in Northern Virginia and provides answers to the following and other questions implicit in the SJR-20 mandate:

- Can local or NVTC service provision reduce operating and capital costs?
- Can non-WMATA alternatives offer local jurisdictions better control over their transportation budgets?
- Are there barriers to NVTC service?
- To what extent would alternative service providers be compatible with Metrorail, other bus, and paratransit or special services?
- How will bus services between the local jurisdictions be provided if the percentage of service directly provided by each jurisdiction grows?
- Will implementation of alternatives result in significant impacts on WMATA labor or on Maryland and D.C.?

Evaluation Criteria

The evaluation of Metrobus and its alternatives is based upon the application of funding and service criteria detailed below.

Funding involves several factors seen as very important to local governments:

- Operating Costs--All costs due to the actual operation of the bus service, including planning, management, operation, and maintenance. Labor costs constitute a major share of these costs.
- Capital Costs--The cost (to the local jurisdictions) of the capital equipment and facilities, including buses, other vehicles, administrative and maintenance space, and other equipment.
- Local Budgetary Control--The amount of control that the jurisdictions have over their transportation budgets, and

their ability to reasonably plan for annual expenditures. To some extent, control of routes, fares and schedules influence the degree of budgetary control.

Service provision factors relate to how efficiently each alternative provider can operate different types of service:

- Feeder/Metrorail Service--The provision of line-haul routes which serve trips to and from the metrorail stations. Also, how easily transfers, use of passenger facilities, and schedule coordination can be accomplished.

- Interjurisdictional Service--The planning and provision of routes which link one local jurisdiction with another, without unnecessary delays or costs in time to the passenger.

- Circulator Service--The provision of routes or services which allow for intrajurisdictional travel, in both peak and off-peak periods. This requires the ability to travel into local neighborhoods, and link local activity centers.

- Coordination With Paratransit and Special Programs--Paratransit usage offers significant potential for peak shedding and operating cost reductions in the context of high labor costs. It also has significant potential as a capital cost reduction technique where federal capital assistance may not be available or is insufficient. Coordination of special programs for the elderly and handicapped offer a potential to provide highly effective transportation for these groups.

Definition of Alternative Providers

The language of SJR 20 expressed a concern that local provision of bus service may not be the most efficient means of meeting public transportation needs and requested analysis of alternative systems. Northern Virginia service could be provided through the following groups or combinations of groups, which will be included as alternatives in the evaluation. These are listed from the most centralized to the least centralized.

1. WMATA, the current regional operator, could continue to provide the bus service. Because of the current plans for local service, a purely WMATA operation is unlikely (in fact Fairfax City is already operating its own services), and this alternative will be included as a "base case" for the analysis.

2. The Northern Virginia Transportation Commission could replace WMATA as the regional service provider. As with WMATA, NVTC only bus service in the region is unlikely. However, an evaluation of this alternative will aid in understanding the benefits and costs of NVTC participation in a system with NVTC and local service. Two variations of NVTC provision are

considered. One assumes the labor provisions of the Transportation District Act are removed. The second variation assumes they are not. This allows the cost implications of the 1964 Act provisions on labor to be assessed.

3. WMATA in combination with the local jurisdictions could provide services, with WMATA serving interjurisdictional routes, as well as providing other service types which the local jurisdictions did not choose to provide. This is the system which will be seen in the near future, as planned major local services begin in Alexandria and Fairfax County.

4. NVTC in combination with the local jurisdictions could provide bus service with NVTC operating the interjurisdictional service as well as other service not provided by the individual jurisdictions. In addition, NVTC could serve a strong role in marketing and coordinating paratransit.

5. Local jurisdictions could fully take over the Northern Virginia service, with no regional bus provider. There would probably be major changes from current Metrobus routes, with rail feeder and local circulation being of primary concern. Interjurisdictional services would be through coordination between adjoining jurisdictions.

One might suggest the Commonwealth of Virginia as a possible direct service provider in Northern Virginia; however, this is not a desirable option. Although the trend in Virginia is toward reasonable levels of state financial assistance to the local jurisdictions, there is an emphasis at all levels of government on local governments and regional groups deciding how to spend funds and provide services locally. Direct Virginia provision of bus services would certainly work against this strongly established philosophy. Additionally, Virginia operation of transit service would require the creation of a costly new operating department or group. The separation of the operators from those closest to the users, the local staffs and public officials, is also undesirable and would be strongly resisted by the local governments involved. Therefore, provision of service by Virginia will not be included among the alternatives to be analyzed.

A WMATA-NVTC-Local provider alternative is also not included. One purpose of involving NVTC in bus operations would be to remove local jurisdictions from the problems with WMATA. Northern Virginia service provided by three different groups would be duplicative, confusing, and inefficient. Therefore, this alternative is not considered desirable.

Evaluation Assumptions

In Northern Virginia and the Washington region in general, transportation system changes are made relatively slowly. This is due to the large financial commitments generally involved, as well as the time required to actually acquire equipment, build facilities, or hire

personnel. For example, Fairfax County plans for a three-year period between initial planning and actual implementation of its bus services. For this evaluation, therefore, it is assumed that large-scale restructuring of bus service will not be made before the Virginia portions of the initial 76 miles of Metrorail are operational, that is, no earlier than late 1986. This will include the Vienna Line stations, but not the Springfield-Franconia Line. Also, all appropriate bus services will be reoriented to rail feeder. This probably will require at least a five-year period so that the study horizon should be five to ten years. Similarly, the initial 76 miles of Metrorail are assumed to be complete, and WMATA will operate the rail system as it does currently. The local jurisdictions will continue to pay the same rail costs; thus, these costs will not be a factor in the analysis. Basic WMATA labor costs and work rules are assumed not to change. Some movement toward liberalization of the contract, which began with the most recent negotiation, may continue, but WMATA wage rates and work restrictions in relation to non-WMATA ones will likely remain high.

The Transportation District Act of 1964 is assumed amended to allow NVTC to directly operate or contract for bus service. This is an essential element without which NVTC is prohibited from service provision. It is important to note that this assumption is for evaluation purposes only to examine the possible benefits of making such a change; it does not constitute a recommendation.

As we noted in Chapter II, Federal assistance for bus operating and capital costs are not unconditional grants. The Recipient must adhere to a number of Federal requirements related to the spending of these funds. The most cost inflationary of these is the 13(c) labor protection provisions introduced earlier. The reader will recall that the high labor cost resulting from labor protections has provided much of the impetus towards non-WMATA alternatives. It is, therefore, logical to assume that local operations and the NVTC alternative without the labor protection provisions contained in the Transportation District Act of 1964 will not request Federal funds. However, it is also logical to assume that the NVTC alternative with labor protection will request Federal assistance. This assumption simply follows from the fact that with labor protection already present there would be no reason not to use Federal funds. It is further assumed that NVTC will continue to remain eligible and receive Federal funds for Metrorail capital and operations.

Regulation of public transportation in Northern Virginia has generally been minimal and the evaluation assumes it will likely continue to be. In the WMATA Compact, Maryland and D.C. gave their public transportation regulatory powers to the Washington Metropolitan Area Transit Commission (WMATC), but Virginia retained its power in the State Corporation Commission (SCC). Nevertheless, recent changes in legislation provide specific authority for Virginia municipalities to operate public transportation regulation free. Therefore, any bus service operated by a public agency, including NVTC, wholly within Virginia would not be subject to regulation. Bus services which travel between Virginia and another jurisdiction (such as D.C.), and are operated by a municipality or NVTC are similarly not regulated. Only if

the service were to be provided by a private operator, under contract to a local jurisdiction or NVTC, might WMATC have regulatory authority. In any case, this would probably not create insurmountable problems for any of the alternatives under evaluation.

Evaluation Results

Summary

The six alternatives chosen for evaluation offer the Northern Virginia region distinct tradeoffs in terms of funding attributes and service provision performance. Table 1 presents an evaluation matrix summarizing how each alternative performs, as compared to WMATA, against the funding and service provision criteria developed in the first section of this Chapter. The evaluation matrix is based upon a relative desirability scale ranging from -4 to +4 with WMATA centered on the scale at zero. Alternatives that are less desirable than WMATA when judged against a particular criterion are placed on the negative scale to the left of WMATA. More desirable alternatives are placed to the right of WMATA on the positive side of the scale. Thus, higher positive numbers reflect increasing desirability as compared to WMATA. Higher negative numbers, on the other hand, reflect increasingly less desirable alternatives.

The evaluation shows that only when judged against the capital cost criterion is a largely regional or centralized bus system operated by WMATA preferable to other alternatives. Furthermore, bus service operated solely by NVTC offers no advantage over WMATA unless the labor provisions of the Transportation District Act of 1964 are relaxed. Even then, the net gains from an NVTC regional operation appear to be quite uncertain, largely because the benefits from operating cost reductions, local budgetary control, and improvement potentials in circulator and paratransit service may be totally offset by large start-up, learning, and capital costs that will likely be larger than what the region presently pays WMATA for its share of the 20% Federal match. With respect to operating cost, local budget control, circulator service provision, and paratransit coordination, the near term decentralization trend toward a WMATA/Local combination is not at all undesirable. It should, however, be accompanied by NVTC's active involvement in terms of preparing for spill-over cost impacts (as described in Chapter III) and realistically appraising the extent to which capital requirements might be expected to offset operating cost reductions. In the longer term, a decentralized NVTC/Local combination of service offers even greater potential for meeting both local and regional needs at reasonable cost. The success of this decentralization will, however, require a great deal of planning and coordination by NVTC and localities in terms of the impact of the labor provisions of the Transportation District Act, realistic estimation of capital requirements, appraisal of private contracting for service, and the utilization of paratransit.

Potential impacts on WMATA of alternative service providers can be classified into impacts on the compact signatories and those on

Table 1

Evaluation Matrix

	Criteria	Evaluation Relative to WMATA: Less Desirable than WMATA -4	-3	-2	-1	Equal to WMATA 0	More Desirable than WMATA +1	+2	+3	+4
FUNDING	Operating Cost					NVTC*	WMATA/ LOCAL	NVTC	NVTC/ LOCAL	LOCAL
	Capital Cost	NVTC	LOCAL, and NVTC/LOCAL	NVTC*	WMATA/ LOCAL					
	Local Budget Control					N V T C*		NVTC and WMATA/LOCAL	NVTC/ LOCAL	LOCAL
SERVICE PROVISION	Feeder Service				LOCAL, WMATA/ LOCAL, NVTC/ LOCAL	NVTC* NVTC				
	Interjurisdictional Service	LOCAL			NVTC/ LOCAL, WMATA/ LOCAL	NVTC* NVTC				
	Circulator Service							NVTC* NVTC	WMATA/LOCAL NVTC/LOCAL	LOCAL
	Paratransit Coordination					NVTC* WMATA/LOCAL		NVTC	NVTC/LOCAL	LOCAL

Note: "NVTC*" denotes an operation where all labor provisions of the 1964 Transportation District Act apply. NVTC without asterisks denotes the removal of these provisions of the 1964 Act.

labor. In the event that Northern Virginia was no longer to receive any WMATA service, one should not necessarily conclude that D.C. and Maryland would suffer significantly from a cost standpoint. While in the short run some costs would remain relatively fixed, and thus pressure may mount to alter the WMATA cost allocation formula, there is real potential for the system peak-to-base service ratio to fall, precipitating a reduction in average operating costs and later a reduction in capital cost. This expectation stems from the fact that base ridership in D.C. is high and the shedding of Northern Virginia peak service (which is very costly) can result in the removal of some cross-subsidizing which most likely is operative.

In the case of a WMATA/Local service combination, as individual Northern Virginia localities substitute local for WMATA service, operating fixed cost spill-overs are likely to occur. In any locality that does not choose to move to local service provision, the share of the WMATA bill will rise, and this spill-over cost increase will likely result in pressure to alter the NVTC cost allocation mechanism.

In the case of labor, substitution of alternatives for WMATA service will come relatively slowly and most likely can be absorbed through the increase in the need for Metrorail employees or through attrition.

Technical Basis

The evaluation matrix presented in the previous section is based upon a technical appraisal of the likely performance of alternative providers of bus service when viewed from the standpoint of seven funding and service criteria. This section outlines the important aspects of that technical appraisal.

Operating Cost: The bus operating subsidy each locality pays is primarily a function of four variables: service levels, fare policy, federal and state operating assistance, and operating cost. The operating cost criterion is intended to rank alternatives by their potential to provide an identical amount of service (i.e., same routes, schedules, and fares) at the lowest operating cost.

Related to this criterion is the issue of state and federal operating assistance. State aid should not vary by alternative, but the $4.7 million in federal operating assistance apportioned to Northern Virginia may decrease under alternatives other than WMATA and NVTC with labor protection.(1) This money can be applied to either Metrobus or Metrorail subsidies or any other bus operation that meets 13(c) labor requirements (i.e., NVTC*). It is the responsibility of NVTC to earmark these funds and to suballocate them to localities. An optimistic assumption would be that the level of federal operating

(1) The NVTC alternative with labor protection will be denoted by "NVTC*," while NVTC without labor protection will be denoted NVTC with no asterisk.

assistance would remain constant and that these funds could always be applied to Metrorail liabilities if bus service was supplied by alternatives other than WMATA and NVTC*. A less optimistic assumption would be that these funds would be lower under the other alternatives. Regardless of which assumption is correct, it is reasonable to assume that a large portion of these funds would always be available for Metrorail operating cost. Any resulting decrease on the bus side would be very minor when viewed in relation to total bus operating cost in Northern Virginia. Therefore, federal and state operating assistance is not crucial to the ranking of alternatives.

Operating cost can generally be broken down into three cost components: administrative, fuel and materials, and nonadministrative labor (drivers, mechanics, maintenance workers, etc.). For large transit authorities with labor protection like WMATA, the share of total operating cost for each component is typically:

Administrative Cost	15-20%
Fuel and Materials	15-20%
Nonadministrative Labor	60-70%

Though these cost shares may be different for operations without labor protection, it provides a base from which to judge the potential for lower operating cost. For example, the potential for a system to reduce administrative cost by 35 percent would not be as important as being able to reduce nonadministrative labor cost by 35 percent.

It is reasonable to assume that administrative cost would not vary greatly between alternatives. It can be argued that a local or NVTC operation would be under closer scrutiny by localities than WMATA is, and thus, administrative cost could be prevented from becoming unnecessarily large. Alternatively, one could argue that there exist economies in administration, i.e., administrative cost per unit of service decreases with a larger operation. Both arguments are probably valid to an extent. Since administrative cost comprises a relatively small portion of total operating cost and there are countering arguments concerning what size operation is best in terms of administrative cost, it will suffice to judge these costs as roughly comparable in each alternative. Furthermore, there does not exist any compelling reason to believe that fuel and material cost would be different under alternative providers.

Thus, it is apparent that any substantial differences in operating cost must stem from differences in labor cost. As presented in Table 1, NVTC* ranks equal to WMATA while Local, NVTC, and NVTC/Local rank more desirable. It is the high labor cost attributable to labor protections that results in the ranking for WMATA and NVTC*. Under identical service, those alternatives not constrained by labor protection have the potential to provide the service with fewer labor hours and lower hourly compensation. The ranking for the WMATA/Local alternative reflects the weighted average of low local operating cost and high WMATA operating cost.

Capital Cost: In ranking alternatives according to the capital cost criterion, two aspects of capital cost should be considered, the initial cost of acquiring the necessary capital infrastructure (buses, maintenance facilities, office space, special equipment, etc.) and the annual cost of replacing depreciated capital. WMATA already possesses the necessary infrastructure and the local share of annual capital costs is only a small fraction of total capital cost. Funding from the Urban Mass Transportation Administration pays 80 percent of capital cost while localities pay the remaining 20 percent. As explained previously, these funds are not unconditional grants and in order to be eligible, a number of conditions, including labor protection, must be met.

As stated in the "assumptions section" it is assumed that Local, NVTC, and the NVTC/Local alternatives will not apply for federal capital funds since 13(c) would reduce or eliminate any operating cost advantage. Under these alternatives, localities would have to bear the full burden of capital cost (i.e., 100 percent). Since for the most part these providers would be starting from scratch, capital cost would be very high during the first few years, as the necessary infrastructure is funded. This is the major reason for their less desirable ranking under this criterion. In the long run, annual capital depreciation and additions to infrastructure (if needed) will be the main source of capital costs. At that point in time, the capital cost disadvantage will not be as great as in earlier years. The rankings for NVTC and NVTC* reflect the fact that NVTC has no experience in the provision of bus service and that their start-up and learning costs can be significant.

Nevertheless, there exist possibilities that may lessen the severity of the initial and long run capital cost disadvantages of those alternatives without federal capital assistance.

- Under the Local and NVTC/Local alternatives, existing local garage facilities may be available for limited use. This may help alleviate the initial capital cost requirements. Some capital savings could be made by purchasing smaller buses. In addition, gross capital cost should be lower than under WMATA or NVTC* since federal procurement requirements and other federal mandates would not apply. Generally, though, these savings would be small compared to overall capital cost.

- There is potential for negotiations between WMATA, localities and NVTC for purchasing or leasing WMATA facilities in Northern Virginia. It might be that the negotiations would include the completion of UMTA Section 15 reports by local or NVTC systems in return for favorable purchase or lease terms from WMATA. The filing of these forms would permit local or NVTC bus miles to be added to the regional totals, resulting in a larger apportionment of federal mass transportation aid. WMATA would benefit from this since it is the major recipient of these funds designated for the Washington Metropolitan Area.

- The Safe-Harbor leasing arrangement, provided for under the Economic Recovery Act of 1982, could reduce the capital cost of new vehicles or facilities. The Act provides for local agencies operating mass transit vehicles to sell the tax benefits associated with the vehicles to a private corporation for a negotiated amount. The company "leases back" the vehicles to the public agency, and uses the federal income tax deductions related to the depreciation on the vehicles. Typical arrangements have returned 10 to 25 percent of the cost of the vehicles to the jurisdictions. The vehicles must be new and paid for with local funds. However, Congress is considering eliminating this provision, and its continued availability to transit is uncertain.

- Local and NVTC operations may be able to justify and obtain larger amounts of state aid to assist in paying the high initial capital costs.

The WMATA/Local ranking reflects the average between high local capital cost and the low WMATA capital costs.

NVTC* would most likely apply for and receive federal capital assistance because it would be able to meet the labor provisions of 13(c). It ranks below WMATA since it is probable the level of federal assistance would be substantially less than 80 percent of the capital cost incurred during the first few years. After the necessary infrastructure is funded, the local share of capital costs would probably be more comparable to the WMATA alternative.

Local Budgetary Control: Local operations are ranked very high because local operation enables local governments to have direct control over three of the four variables mentioned earlier that determine local operating subsidies (fares, service, and operating cost). Under the Local alternative, jurisdictions would have the opportunity to set fares according to their individual philosophical views and budgetary conditions. Localities, though, would probably wish to coordinate fares and transfers with other bus service providers and with Metrorail. This flexibility would give localities one less constraint in deciding subsidy levels. For example, if a locality encountered severe budgetary problems and it desired to reduce its bus subsidy, the locality would have the choice of raising fares, reducing service, or a combination of both.

Local operations would have better control than WMATA over operating cost since non-union labor would be used. Also, local governments would have direct control over administrative costs and decisions concerning capital cost (i.e., what types of buses to buy, where to locate a garage, etc.).

Another very important advantage of local systems is the "internalization" of bus costs. In a WMATA or NVTC system there will always be problems concerning the allocation of costs. The methods used for allocating costs are often not very effective in allocating the actual cost of each jurisdiction's service. As discussed

previously, under the WMATA system, a locality may reduce some peak service but its allocated cost will not fall as much as the systemwide cost reduction. Problems of this type are avoided under local provision of service. Additionally, problems associated with the allocation of administrative and capital cost would not be present.

The remaining alternatives are ranked as less desirable than the Local alternative according to the degree each alternative permits localities to set desired fares, control administrative cost, control labor cost, influence capital decisions, and avoid cost allocation problems.

Feeder/Metrorail Coordination: All alternatives are roughly equivalent under this criterion because each provider has a strong incentive to be responsive to such demand. Lower rankings, though, are given to combination providers since a single operator would provide better coordination between bus and rail services (routes, schedules, fare structure, transfers, etc.). A single operator also prevents bus service from becoming confusing and inconvenient.

Interjurisdictional Bus Service: Under this criterion, single operators such as NVTC, NVTC*, and WMATA are considered preferable to other alternatives which involve more than one bus system. The presence of more than one operator may cause interjurisdictional bus trips to become extremely inconvenient and necessitate a high degree of coordination between operators.

The local alternative is much less desirable than WMATA since it would involve many operators. NVTC/Local and WMATA/Local options would have the ability to provide reasonably coordinated interjurisdictional service though not as effectively as a single provider.

Circulator Service: Currently there is not much demand for circulator service in Northern Virginia. In spite of this, localities appear to value the ability to provide this service. Local bus systems would be best suited for circulator service. Jurisdictions could use small buses which would be more appropriate and would probably have more success in marketing this type of service.

Coordination with Paratransit: Occasionally, there are opportunities to replace or supplement fixed route bus service with paratransit services such as bus pools, van pools, car pools, dial-a-ride, mini buses, and jitneys. The gains from such alternatives are derived from the use of low wage labor and low capital cost.

NVTC or NVTC/Local alternatives are best suited to provide the regional coordination and operation needed for the most effective and cost efficient use of paratransit. In such a scheme, NVTC would be able to act as a "broker" of transit services in a manner similar to TTDC in the Tidewater area. Though the opportunities for the use of paratransit are not currently extensive, it is likely that its potential and the desirability of having a brokering agency will grow in the future. In particular, the role of paratransit in peak-shedding

may be very useful in reducing the growth of bus subsidies while providing equivalent or better service.

NVTC and local operations are probably better suited for providing more effective and cost efficient service for the elderly and handicapped. Many forms of paratransit service such as dial-a-ride could be adapted to serve the needs of the elderly and handicapped.

Chapter V

FINDINGS AND RECOMMENDATIONS

The findings and conclusions which comprise the first section of this Chapter are based upon the most significant results from an examination of the legislative, financing, and policy making structure of WMATA regional bus service; an analysis of the major advantages and disadvantages of Metrobus service; a survey of experiences outside the Northern Virginia region where decentralized bus service provision has been substituted for formerly regionally supplied service; and an evaluation of alternatives to the provision of bus service solely by WMATA.

The second section of this Chapter offers recommendations for improving the structure of bus service in Northern Virginia.

Findings

Legislative, Financing, Policy Structure

1. Provision of bus service by WMATA in Northern Virginia has precipitated a complex governance structure involving two states, the District of Columbia, and seven local governments. This structure is not well suited to addressing individual locality needs and contributes significantly to the interest in local bus service provision. Bus service governance and financing arrangements which better address individual locality needs and reduce the uncertainty of the relationsip between levels of service and cost will be improvements to the current structure of bus transportation in Northern Virginia.

2. With respect to minimizing operating costs, increasing local budgetary control and improving circulator service and paratransit coordinator, the current near term decentralization trend toward a WMATA/Local combination of bus service provision is not undesirable. In the longer term, a decentralized NVTC/Local service combination offers potential for meeting both local and regional needs at reasonable cost (assuming relaxation of the labor provisions and operating restrictions of Transportation District Act). Experiences elsewhere in the country indicate, however, that successful decentralization trends require a well orchestrated plan among the regional and local parties involved. These findings suggest that if would be appropriate and desirable for NVTC to take an active role in preparing for a coordinated decentralized bus service structure in Northern Virginia. This would involve, among other things, realistic estimates of the extent to which capital costs requirements might be expected to erode savings in operation costs for local systems; appraisal of spillover cost effects on localities which, in the near term, do not offer local service; and appraisal of when or if NVTC should become a provider in the decentralization trend.

Advantages and Disadvantages of Metrobus

1. WMATA as the regional provider of bus service has the desirable aspects of staff experience, a well established infrastructure, interjurisdictional route stability, and the ability to finance most of its capital equipment with federal funds. Any alteration in the structure of bus transportation in Northern Virginia should incorporate these advantages to the maximum extent.

2. Labor protections stemming from the WMATA Compact, the UMTA 13(c) Labor Protection Clause, and benefits guaranteed WMATA employees under union contracts are major influences on the rising cost of Metrobus. To the extent that bus service can be provided without the necessity of such labor protections, operating cost containment can become a reality in Northern Virginia.

3. Because of the manner in which some WMATA fixed costs are allocated and because WMATA labor, fuel, and maintenance costs are likely to adjust very slowly, service reductions on the part of NVTD localities are not likely to result in proportionate reductions in cost. A structured process which leads to a better linkage between service level and cost changes will improve bus transportation decision making in Northern Virginia.

Experiences Outside Northern Virginia

1. Experiences in Kansas City, Los Angeles, and Montgomery County Maryland, indicate that NVTD jurisdictions can, through the use of non-union labor and flexible work rules, can probably provide peak period service at lower operating cost than WMATA. The provision of peak services at the local level could be a powerful method of cost containment for Northern Virginia.

2. The successful decentralization of bus service in Kansas City was accompanied by a very strong coordination between the localities involved and the former regional transit authority. The Tidewater Transportation District Commission has exhibited great success in a strong role of coordinating and brokering services that are effective and low cost. In tandem, these experiences are indicative of the role NVTC might pursue to improve public transportation in Northern Virginia.

Evaluation of Alternative Providers

1. A largely regional or centralized bus system operated by WMATA is preferable to other alternatives for providing bus service in Northern Virginia only when judged against minimization of local capital cost. Bus service operated solely by NVTC offers no potential for improvement over WMATA un-

less the labor protection provisions of the Transportation District Act of 1964 are relaxed in such a fashion that an NVTC operation can utilize low cost labor. Even then, any gains may be totally offset by start-up and learning costs and by capital costs that will likely be larger than what the region presently pays WMATA for its share of the 20% Federal Capital Assistance match. These findings suggest that centralized, regionally controlled bus service is no longer the most desirable structure for the Northern Virginia region.

2. With respect to minimizing operating cost, increasing local budgetary control, and improving circulator service and paratransit coordination, the current near term decentralization trend toward a WMATA/Local combination of bus service provision is not undesirable. In the longer term, a decentralized NVTC/Local service combination offers significant potential for meeting both local and regional needs at reasonable cost (assuming relaxation of the labor provisions and operating restrictions of the Transportation District Act). Experiences elsewhere in the country indicate, however, that successful decentralization requires a well orchestrated plan among the regional and local parties involved. These findings suggest that it would be appropriate and desirable for NVTC to take a very active and leading role in preparing for and planning a coordinated decentralized bus service structure in Northern Virginia. This would involve, among other things, realistic estimates of the extent to which capital cost requirements might be expected to erode savings in operating costs for local systems; appraisal of spill-over cost effects on localities which, in the near term do not offer local service; and appraisal of when NVTC should become a provider in the decentralization trend.

Recommendations

Senate Joint Resolution 20 called for a study to focus on public transportation in Northern Virginia with the objective of recommending a structure which will provide a system of bus transportation tailored to the needs of the Northern Virginia region which is effective, efficient and affordable. The following recommendations are directed toward that objective.

Recommendations 1: Given that the trend toward decentralized bus service provision by WMATA/Localities is not undesirable and given the experience with such decentralization in other parts of the U. S., it is recommended that NVTC take an active role in this decentralization by developing a Bus Service Management Plan. This is not to suggest that NVTC should promote decentralization. Rather, such a Management Plan would examine feasible options for planning, routing scheduling, establishing fare structures, operating, marketing and coordinating a diverse set of public transportation services responsive to the growing transportation needs of Northern Virginia. In developing this plan, NVTC would receive input from the Transportation Planning Board, localities, and WMATA necessary to take proper account of

the tradeoffs between reductions in operating costs and increases in capital costs; closely monitor and avoid any undesirable impact on interjurisdictional service; determine the likely spill-over costs among NVTD jurisdictions as the trend progresses; and assure that paratransit and peak shedding are utilized to their maximum advantage. These activities will have as their goal the provision of bus transportation which is cost effective from a Northern Virginia regional prospective while meeting locality needs. The implementation of this recommendation should be greatly aided by utilizing "The Surface transit Alternatives Study" sponsored by the Metropolitan Washington Council of Governments. Phase I of the study is complete and presents a methodology for evaluating the details of management, routing, and other aspects of proposals to substitute local for regional bus service.

Recommendations 2: Given that an NVTC/Local combination of service (without the labor protection clause of the Transportation District Act) appears to offer potential for effective bus transportation in Northern Virginia; given that the current labor protections and operating restrictions of the Transportation District Act of 1964 prohibit the feasibility and desirability of such service; and given that there appear to be no compelling reasons for these statutory barriers to continue, it is recommended that, as part of the Bus Service Management Plan, NTVC make a determination of if and when it is appropriate for implementation of an NVTC/Local operation and inform the General Assembly thereof in order that it may consider the necessary legislative changes.

APPENDIX A

SENATE JOINT RESOLUTION NO. 20

APPENDIX A

SENATE JOINT RESOLUTION NO. 20
1983 Session of the Virginia General Assembly

Whereas, regional passenger bus service in Northern Virginia and between Northern Virginia and the District of Columbia is presently provided almost entirely by the Washington Metropolitan Area Transit Authority (WMATA); and

WHEREAS, several local governments in Northern Virginia are considering or have adopted plans to establish their own local bus service, either to replace or to supplement service already provided by WMATA; and

WHEREAS, the Commonwealth of Virginia has a direct financial interest in the provision of adequate public transportation, at reasonable and affordable costs, in the Northern Virginia region; and

WHEREAS, the establishment of separate local bus systems by each of the several Northern Virginia jurisdictions may not in fact be the most effective way of meeting the public transportation needs of both the localities and the region; and

WHEREAS, the question of whether the public bus service currently provided in Northern Virginia by WMATA should be changed, supplemented, replaced or terminated should be thoroughly and independently evaluated, in the light of plans currently being developed by local governments and the present and planned completion dates of the Metro-Rail system in Northern Virginia; and

WHEREAS, there is also an immediate need for a careful, independent and objective study of the structure of public transportation in Northern Virginia, with the objective of recommending a structure which will make the most effective use of the present and planned Metro-Rail system, and which will provide a system of bus transportation, tailored to the needs of the Northern Virginia region, which is effective, efficient, and affordable; and

WHEREAS, the concerns of those who would be affected by any change in the current structure of public transit service in Northern Virginia, including those employed in providing such service, should be fully considered in any such study; now, therefore, be it

RESOLVED by the Senate of Virginia, the House of Delegates concurring, That the Virginia Department of Highways and Transportation in collaboration with the Northern Virginia Transportation Commission, is requested to study the legal, administrative and operational structure of public transportation in Northern Virginia, including plans currently being developed or implemented by local governments in the Northern Virginia region, the actual and planned completion of the Metro-Rail system, and the effect of any changes on employees providing transit services in the area, with the objective of recommending

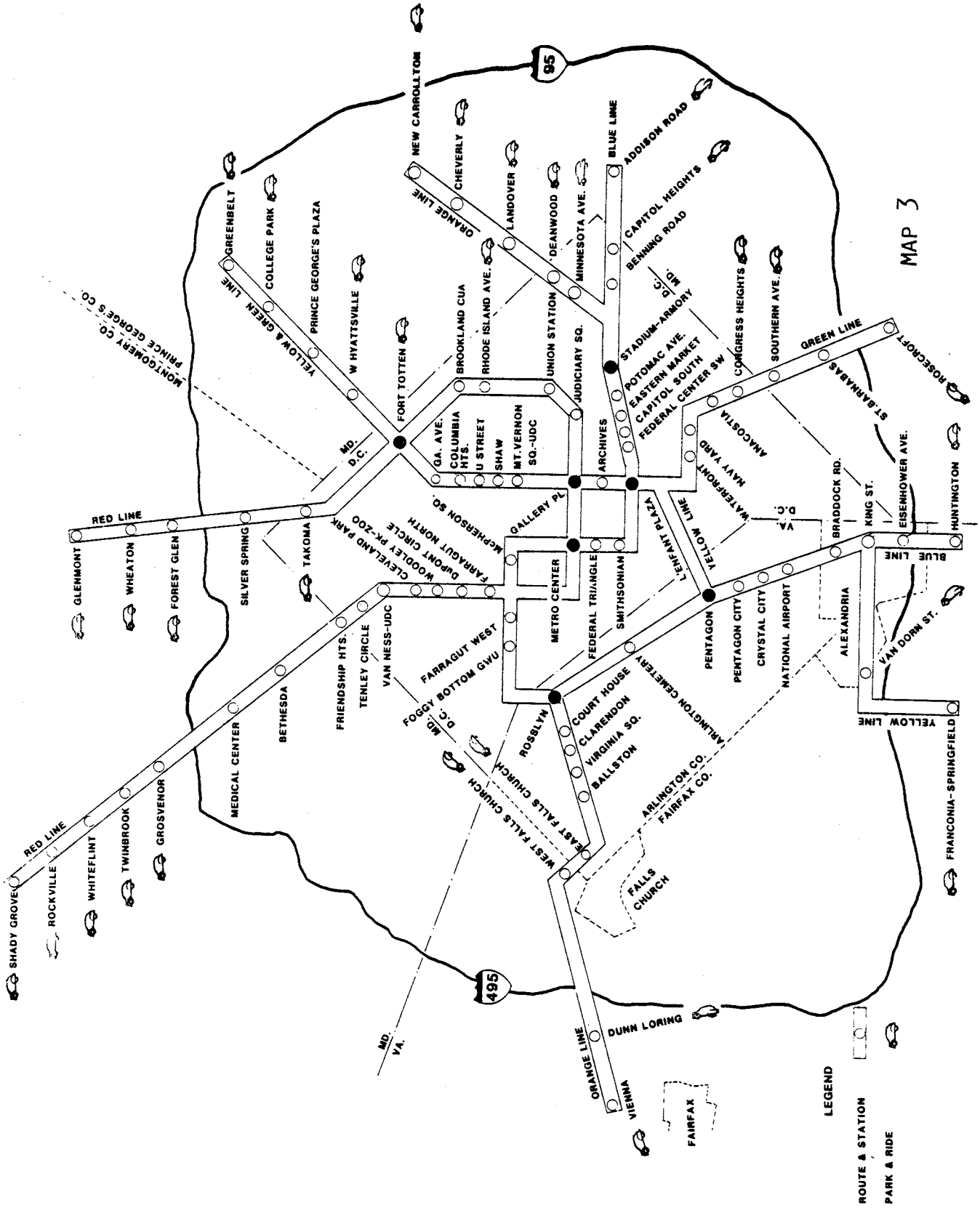
such changes as the Department may deem appropriate in order to provide a system or systems of public bus transportation which, in conjunction with the Metro-Rail system, will meet the public transportation needs of the residents of Northern Virginia in the most efficient and cost-effective way possible. In particular, the Department is requested to study the desirability and feasibility of the operation, independent of WMATA, or of contracting for the operation, of an efficient, low-cost passenger bus service in Northern Virginia, and between Northern Virginia and the District of Columbia, by the local governments in Northern Virginia, or by the Northern Virginia Transportation Commission. The Department is requested to report its findings and recommendations to the Governor and the General Assembly prior to the 1984 Regular Session of the General Assembly.

Patrons: Mitchell, Brault, Holland, E. M., Gartlan, Saslaw, Colgan, Waddell, and DuVal; Delegates: Andrews, Gordy, Rollins, Almand, Marshall, Watts, Keating, Cohen, Dillard, Parrish, Plum, McDiarmid, Callahan, Harris, Medico, Bagley, F. C., Stambaugh, Squyres, and Barry.

APPENDIX B

ADOPTED METRORAIL SYSTEM

ADOPTED 101 - MILE METRORAIL SYSTEM



APPENDIX C

EXCERPTS FROM TRANSPORTATION DISTRICT ACT

APPENDIX C

Selected Excerpts from the Transportation District Act of 1964

Title 15.1 Chapter 32 of the Code of Virginia

§ 15.1-1343. Declaration of policy. -- The development of transportation systems, composed of transit facilities, public highways, and other modes of transport is necessary for the orderly growth and development of the urban areas of the Commonwealth, for the safety, comfort, and convenience of its citizens and for the economical utilization of public funds. The provision of the necessary facilities and services cannot be achieved by the unilateral action of the counties and cities and the attainment thereof requires planning and action on a regional basis, conducted cooperatively and on a continuing basis between representatives of the affected political subdivision and the State Highway Commission. In those urban areas of the Commonwealth which are contiguous to other states, and together form a single metropolitan area, solutions must be jointly sought with the affected political subdivisions and highway departments of such other states. Such joint action should be conducted in a manner which preserves, to the extent the necessity for joint action permits, local autonomy over patterns of growth and development of each participating political jurisdiction. The requisite joint action may best be achieved through the device of a transportation district, having the powers, functions and duties hereinafter set forth in this chapter. In the provision of improved or expanded transit facilities, it is the policy of the Commonwealth to make use of private enterprise to the extent reasonably practicable.

§ 15.1-1357. Powers and functions generally. -- (a) Any other provision of law to the contrary notwithstanding, a commission shall, except as provided in subsection (b) herein, have the following powers and functions:

(1) The commission shall prepare the transportation plan for the transportation district and shall from time to time revise and amend said plan in accordance with the planning process and procedures specified in article 6 (§§ 15.1-1365, 15.1-1366) of this chapter;

(2) The commission may, when such a transportation plan is adopted in the manner set forth in article 6 hereof, construct or acquire, by purchase or lease, the transportation facilities specified in such transportation plan;

(3) The commission may enter into agreements or leases with private companies for the operation of its facilities, or may operate such facilities itself;

(4) The commission may enter into contracts or agreements with the counties and cities embraced within the transportation district, or with counties and cities which are adjoining the transportation district and within the same planning district, or with other commissions of adjoining transportation districts, to provide, or cause to be provided, transit facilities and service to such counties and cities, or to provide transit facilities, and other modes of transportation between adjoining transportation districts, and such contracts or agreements, together with any agreements or leases for the operation of such facilities, may be utilized by the transportation district to finance the construction and operation of transportation facilities and such contracts, agreements or leases shall insure to the benefit of any creditor of the transportation district.

Notwithstanding the above, however, the commission shall not have the power to regulate services provided by taxicabs, either within municipalities or across municipal boundaries, which regulation is expressly reserved to the municipalities within which taxicabs operate.

(b) When the transportation district is located within a metropolitan area, which includes all or a portion of a state or states contiguous to Virginia, the commission:

(1) Shall not prepare a transportation plan nor construct or operate transit facilities, but shall collaborate and cooperate in the manner specified in article 6 (§§ 15.1-1365, 15.1-1366) hereof with an agency in the preparation of a transportation plan for such metropolitan area and the revision and amendment thereof from time to time;

(2) Shall, in the manner specified in article 6 hereof, in cooperation with the governing bodies of the component governments embraced within the transportation district, formulate the tentative policy and decisions of the transportation district with respect to the planning, design, location, construction, operation and financing of transportation facilities;

(3) May, when a transportation plan applicable to such a transportation district is adopted, enter into contracts or agreements with an agency to contribute to the capital required for the construction and.or acquisition of transportation facilities and for meeting expenses and obligations in the operations of such facilities;

(4) May, when a transportation plan applicable to such transportation district is adopted, enter into contracts or agreements with the counties and cities embraced within the transportation district to provide or cause to be provided transportation facilities and service to such counties and cities;

(5) Notwithstanding any other provision herein to the contrary:

(i) May acquire land or any interest therein by purchase, lease, gift, condemnation or otherwise and provide parking facilities thereon for use in connection with any transportation service;

(ii) May acquire land or any interest therein by purchase, lease, gift, condemnation or otherwise in advance of need for sale or contribution to an agency, for use by that agency in connection with an adopted mass transit plan, and

(iii) May, in accordance with the terms of any grant from or loan by the United States of America or the Commonwealth of Virginia, or any agency or instrumentality thereof, or when necessary to preserve essential transportation service, acquire transit facilities or any carrier, which is subject to the jurisdiction of the Washington Metropolitan Area Transit Commission, by acquisition of the capital stock or transit facilities and other assets of any such carrier and shall provide for the performance of transportation by any such carrier or with such transit facilities by contract or lease; provided, that any such contract or lease shall be for a term of not in excess of one year, renewable for additional terms of similar duration, and, in order to assure acceptable fare levels, may provide for financial assistance by purchase of service, operating subsidies or otherwise; provided, further, that no such service will be rendered which will adversely affect transit service rendered by the transit facilities owned or controlled by the agency or any existing private transit or transportation company; and provided, further, that when notified by the agency that it is authorized to perform or cause to be performed transportation with motor vehicle facilities, the commission, upon request by the agency, shall transfer such capital stock or transit facilities to the agency at a price to be agreed upon

(c) Until such time as a commission enters into contracts or agreements with its component governments under the provisions of paragraphs (a)(4) and (b)(4) and is receiving revenues thereunder, adequate to meet the administrative expenses of the commission after paying or making provision for the payment of the obligations arising under said paragraphs, the administrative expenses shall be borne by the component governments in the manner herein set forth. The commission annually shall submit to the governing bodies of the component counties and cities a budget of its administrative requirements for the next ensuing year. The administrative expenses of the commission to the extent funds for such expenses are not provided from other sources, shall be allocated among the component governments on the basis of population as reflected by the latest population statistics of the Bureau of the Census; provided, however, upon the request of any component government, the commission shall make the allocation upon estimates of population prepared in a manner approved by the commission and by the governing body of the component government making such request. Such budget shall be limited solely to the administrative expenses of the commission and shall not include any funds for construction or acquisition of transportation facilities and/or the performing of transportation service. In addition, the commission annually shall submit to the governing bodies of the component counties and cities a budget of its other expenses and obligations for the ensuing year and such expenses and obligations shall be borne by the component counties and cities in accordance with prior arrangements made therefor.

(d) When a transportation plan has been adopted in the manner provided in § 15.1-1366(a)(4), the commission shall make a determination of the equitable allocation among the component governments of the costs incurred by the district in providing the transportation facilities proposed in such transportation plan and the expenses and obligations, if any, from the operation thereof to be borne by each county and city. In making such determinations, the commission shall take into consideration the cost of the facilities located within each county and city, the population of each county and city, the benefits to be derived by each county and city from the transportation service to be rendered by the proposed transportation facilities and all other factors which the commission determines to be relevant. Such determination, however, shall not create a commitment by the counties and cities and such commitments shall be created only under the contracts or agreements specified in paragraphs (a)(4) and (b)(4). (1964, c.631; 1970, c. 449; 1972, c. 791; 1974, cc. 161, 566; 1975, c. 6; 1976, c. 566; 1981, c. 444.)

§ 15.1-1357.2. Protection of employees of public transportation systems. -- In any county or city, the commission referred to in § 15.1-1357, in addition to other prohibitions, shall not operate any such transit facility, or otherwise provide or cause to be provided, any transportation services, unless fair and equitable arrangements have been made for the protection of employees of existing public transportation systems in the transportation district or in the metropolitan area in which the transportation district is located. Such protections shall include (1) assurances of employment to employees of such transportation systems to the fullest extent possible consistent with sound management, and priority of employment, or, if terminated or laid off, reemployment; (2) preservation of rights, privileges, and benefits (including continuation of pension rights and benefits) under existing collective bargaining agreements or otherwise; (3) continuation of collective bargaining rights; (4) protection of individual employees against a worsening of their positions with respect to their employment, to the extent provided by § 13(c) of the Urban Mass Transportation Act, as amended, 49 U.S.C. 1609 (c); and (5) paid training and retraining programs. Such protections shall be specified by the commission in any contract or lease for the acquisition of operation of any such transit facilities or services. The employees of any transit facility operated by the commission shall have the right, in the case of any labor dispute relating to the terms and conditions of their employment for the purpose of resolving such dispute, to submit the dispute to final and binding arbitration by an impartial umpire or board of arbitration acceptable to the parties.

§ 15.1-1358. Additional powers. -- Without in any manner limiting or restricting the general powers created by this chapter, the commission shall have power:

(a) To adopt and have a common seal and to alter the same at pleasure;

(b) To sue and be sued;

(c) To make rules and regulations for the conduct of its business;

(d) To make and enter into all contracts or agreements, as the commission may determine, which are necessary or incidental to the performance of its duties and to the execution of the powers granted under this chapter;

(e) To make application for and to accept loans and grants of money or materials or property at any time from the United States of America or the Commonwealth of Virginia or any agency or instrumentality thereof, for itself or as an agent on behalf of the component governments or any one or more of them; and in connection therewith to purchase or lease as lessor or lessee, any transit facilities required under the terms of any such grant made to enable the commission to exercise its powers under § 15.1-1357(b)(5);

(f) In the name of the commission, and on its behalf, to acquire, hold and dispose of its contract or other revenues;

(g) To exercise any power usually possessed by private corporations, including the right to expend, solely from funds provided under the authority of this chapter, such funds as may be considered by the commission to be advisable or necessary in the performance of its duties and functions;

(h) To employ engineers, attorneys, such other professional experts and consultants and such general and clerical employees as may be deemed necessary, and to prescribe their powers and duties and fix their compensation;

(i) To do and perform any acts and things authorized by this chapter under, through or by means of its own officers, agents and employees, or by contracts with any persons;

(j) To execute any and all instruments and do and perform any and all acts or things necessary, convenient or desirable for the purposes of the commission or to carry out the powers expressly given in this chapter, and

(k) To institute and prosecute any eminent domain proceedings to acquire any property authorized to be acquired under this title in accordance with the provisions of chapter 1.1 (§ 25-46.1 et seq.) of Title 25, subject to the approval of the State Corporation Commission, and of § 25-233 of the Code of Virginia.

§ 15.1-1365. Planning process. -- (a) In performing the duties imposed under § 15.1-1357 (a) and (b), the commission shall cooperate with the governing bodies of the counties and cities embraced within the transportation district and agencies thereof with the State Highway Commission, and with an agency of which members of the district commission are also members, to the end that the plans, decisions and policies for transportation shall be consistent with and shall foster

the development and implementation of the general plans and policies of the counties and cities for their orderly growth and development.

(b) It shall be the duty and responsibility of each member of the commission to serve as the liaison between the commission and the body by which he was appointed and those members of the commission who are also members of an agency shall provide liaison between the district commission and such agency,to the end that the district commission, its component governments, the State Highway Commission, and any such agency, shall be continuously, comprehensively, and mutually advised of plans, policies, and actions requiring consideration in the planning for transportation and in the development of planned transportation facilities.

(c) In order to assure that planning, policy and decision-making are consistent with the development plans for the orderly growth of the counties and cities and coordinated with the plans and programs of the State Highway Commission and are based on comprehensive data with respect to current and prospective local conditions, including, without limitation, land use, economic and population factors, the objectives for future urban development and future travel demands generated by such considerations, the commission is authorized to:

(1) Create, subject to their appointment, technical committees from the personnel of the agencies of the counties and cities and from the State Highway Commission concerned with planning, collection and analysis of data relevant to decision-making in the transportation planning process. Appointments to such technical committees, however, are to be made by the governing bodies of the counties and cities and by the State Highway Commission, as the case may be; or

(2) In the event the transportation district is located within an area which has an organized planning process created in conformance with the provisions of 23 U.S.C. 134, the commission is authorized to utilize the technical committees created for such planning process.

(d) The commission, on behalf of the counties and cities embraced within the transportation district, but only upon their direction, is authorized to enter into the written agreements specified in 23 U.S.C. 134 to assure conformance with the requirements of that law for continuous, comprehensive transportation planning. (1964, c. 631)

APPENDIX D

METROBUS COST ALLOCATION FORMULAS

APPENDIX D

METROBUS COST ALLOCATION FORMULAS

The formula for computing Virginia's share of Metrobus costs is given below:

$$VBC = \frac{VPH}{TPH} (PHC + \frac{VPM}{TPM} (PMC) + .292188 (OFC) + \frac{VRM}{TRM} (CC)$$

where,

VBC = total Virginia Metrobus cost
VPH = Virginia platform hours
TPH = total Metrobus platform hours
PHC = Metrobus platform hour cost
VPM = Virginia platform miles
TPM = total Metrobus platform miles
PMC = Metrobus platform mile cost
OFC = Metrobus operating fixed cost
VRM = Virginia weekday revenue miles
TRM = total Metrobus revenue miles
CC = Metrobus capital cost (net of federal aid)

After Virginia Metrobus costs have been determined, they are suballocated to each jurisdiction according to an NVTC approved formula. The current suballocation formula is identical to the WMATA formula except that operating fixed costs are suballocated on the basis of a weighted average of each jurisdiction's share of mileage and hourly costs. The suballocation formula is given below.

$$JBC = \frac{JPH}{TPH} (PHC) + \frac{JPM}{TPM} (PMC) + 1/2 \frac{JPM}{VPM} + \frac{JPH}{VPH}$$

$$(.29188) (OFC) + \frac{JRM}{TRM} (CC)$$

APPENDIX E

WMATA SYSTEMWIDE FINANCING DATA

Table E1
Summary of Estimated FY 1983 Budget
Washington Metropolitan Area Transit Authority
(In millions)

Metrobus Cost	
Operating cost	$208.4
Farebox revenue	- 83.5
Metrobus operating cost not covered by farebox revenue (1)	$124.9
Metrobus capital cost	$ 44.9
Federal grants	- 35.8
WMATA internally generated funds	2.5
Jurisdictional Metrobus capital cost (2)	$ 6.6
Total jurisdictional Metrobus cost net of farebox revenue, internally generated funds, and federal capital grants (1+2)	$131.5
Metrorail Cost	
Operating cost	$129.5
Farebox revenue	- 67.9
Operating cost capitalized and payed with federal capital grants	- 6.5
Jurisdictional Metrorail operating subsidy (3)	$ 55.1
Rail construction management cost	$ 17.8
Federal grants	- 16.9
Jurisdictional cost (4)	$ .8
Metrorail capital cost	$366.7
Federal grants	-296.3
Internally generated funds	- 28.3
Jurisdictional Metrorail capital cost (5)	$ 42.1
Metrorail debt service cost	$ 78.5
Federal share	- 51.5
Internally generated funds	- 1.0
Jurisdiction debt service cost (6)	$ 26.0
Total jurisdictional Metrorail cost net of farebox revenue, internally generated funds, federal capital grants, and federal Metrorail debt service aid (3+4+5+6)	$124.0
Total Jurisdictional WMATA Cost (1+2+3+4+5+6)	$255.5

Sources: (1) "WMATA Approved FY 1983 Budgets in Detail"
(2) "WMATA Midyear Budget Update: FY 1983"

Table E2
FY 1983 Distribution of WMATA Operating Costs

Metrobus Operating Cost			Amount[a]	Percentage
Total Personnel Costs			$164.5	79.0
Salaried Portion	($22.3)	(10.7%)		
Union Portion	($142.2)	(68.3%)		
Fuel, Materials, Other			43.9	21.0
TOTAL			$208.4	100.0

Metrorail Operating Cost				
Total Personnel Costs			$88.0	68.0
Salaried Portion	($28.5)	(22.0%)		
Union Portion	($59.5)	(46.0%)		
Fuel, Materials, Other			41.5	32.0
TOTAL			$129.5	100.0

[a]In millions

Source: "WMATA Approved FY 1983 Budgets in Detail"

Table E3

Distribution of WMATA Operating Cost Between Bus and Rail

	Fiscal Year						
	1981	1982	1983	1984[a]	1985[a]	1986[a]	1987[a]
Metrobus Operating Cost							
Amount[b]	$175.0	$197.1	$208.4	$234.0	$252.6	$274.8	$332.8
Percentage	66.0	64.0	61.7	56.2	52.9	49.0	51.0
Metrorail Operating Cost							
Amount[b]	$ 90.3	$110.0	$129.5	$182.3	$225.0	$286.4	$317.6
Percentage	34.0	36.0	38.3	43.8	47.1	51.0	49.0
Total Operating Cost							
Amount	$265.3	$307.1	$337.9	$416.3	$477.6	$561.2	$650.4
Percentage	100.0	100.0	100.0	100.0	100.0	100.0	100.0

[a]Forecast assumes adopted Metrorail construction schedule and projected Metrobus service levels. Replacement of Metrobus service with local bus operations would significantly change above data.

[b]In millions.

Source: "WMATA Approved FY 1983 Budgets in Detail"

Table E4

Farebox Revenue as a Percentage of Operating Cost

	1979	1980	1981	1982	1983
Metrobus	41.1%	39.8%	42.3%	38.3%	37.9%
Metrorail	--	--	60.8%	59.1%	52.4%

Source: "WMATA Approved FY 1983 Budgets in Detail"

APPENDIX F

NORTHERN VIRGINIA JURISDICTIONAL WMATA FINANCING DATA

Table F1

Summary of Estimated FY 1983 Metrobus and Metrorail Budget for Northern Virginia Transportation District Jurisdictions (In millions)

Metrobus Costs

Metrobus Operating Cost	$56.4
Farebox revenue	-21.8
Metrobus operating cost not covered by Farebox revenue (1)	$34.6
Non-federal Metrobus capital cost (2)	$ 2.1
NVTD Metrobus Cost (1+2)	$36.7

Metrorail Costs

Metrorail operating subsidy (3)	$14.2
Rail construction management cost (4)	$ .2
Metrorail capital cost (5)	$16.1
Metrorail debt service cost (6)	$ 7.1
NVTD Metrorail Cost (3+4+5+6)	$37.6
Total Metrobus and Metrorail cost (1+2+3+4+5+6)	$74.3

Distribution of Funds to Cover NVTD Metrobus and Metrorail Costs

NVTC Aid Funds		
State Appropriated Aid for Mass Transit	$20.3	27.3%
Local Fuel Sales Tax	7.9	10.6
Federal Operating Assistance	4.8	6.5
Subtotal	$33.0	44.4%
Local Funds	$41.3	55.6%
Total	$74.3	100.0%

Sources: (1) "WMATA Approved FY 1983 Budgets in Detail"
(2) "WMATA Midyear Budget Update: FY 1983"
(3) NVTC FY 1983 Aid Allocation Memorandums

Table F2

NVTC Aid 1976 - 1988
(In millions)

	Total	State Aid[a]	Local Fuel Sales Tax	Federal Operating Assistance
1976	$10.9	$ 8.3	$---	$2.6
1977	7.5	3.5	---	4.0
1978	18.9	14.9	---	4.0
1979	10.0	4.7	---	5.3
1980	20.5	14.4	---	6.1
1981	20.1	5.3	8.7	6.1
1982	31.8	16.3	9.5	5.0
1983	33.0	20.3	8.0	4.7
1984	33.8	21.1	8.0	4.7
1985	32.8	20.0	8.1	4.7
1986	33.0	20.0	8.3	4.7
1987	28.5	20.0	8.5	
1988	28.7	20.0	8.7	

[a]Forecast based on budget prepared by the Public Transportation Division of the Virginia Department of Highways and Transportation.

[b]Authorization for this federal program expires after FY 1986. It is impossible to predict whether it will be continued, terminated, or replaced with a similar program. Forecast for FY 1985 and FY 1986 assume funding equal to 80% of the FY 1982 appropriation. This is the amount appropriated in FY 1983 and FY 1984.

Source: NVTC and VDH&T

Table F-3

Forecast of WMATA Operating and WMATA Debt Service Costs and Funding Sources for NVTD Jurisdictions[a] (In millions)

	FY 1983	FY 1984	FY 1985	FY 1986	FY 1987	FY 1988	FY 1989	FY 1990
WMATA Operating and Debt Service Cost								
Metrobus: Operating Cost	$ 56.4	$ 66.0	$ 71.3	$ 77.5	$ 93.9	$ 106.0	$ 120.8	$ 135.0
Farebox Revenue	21.8	26.5	28.6	31.3	34.0	37.0	40.5	44.0
Operating Cost Not Covered by Farebox Revenue[b]	34.6	39.5	42.7	46.2	59.9	69.0	80.3	91.0
Metrorail Operating Subsidy	14.2	19.3	20.8	21.6	34.4	37.0	42.7	55.6
WMATA Debt Service Cost	7.1	7.4	7.4	7.4	7.4	7.4	7.4	7.4
Total Operating and WMATA Debt Service not Covered by Farebox Revenue	$ 55.9	$ 66.2	$ 70.9	$ 75.2	$ 101.7	$ 113.4	$ 130.4	$ 154.0
Funding Sources								
NVTC Aid: 2% Fuel Tax	$ 7.9	$ 8.0	$ 8.1	$ 8.3	$ 8.5	$ 8.7	$ 8.9	$ 9.0
State Aid[c]	20.3	21.1	20.0	20.0	20.0	20.0	20.0	20.0
Federal Operating Assistance[d]	4.7	4.7	4.7	4.7	(Forecasts not available)			
From Locally Raised Revenues	22.9	32.4	38.1	42.2	73.2	84.7	101.5	125.0
Total	$ 55.9	$ 66.2	$ 70.9	$ 75.2	$ 101.7	$ 113.4	$ 130.4	$ 154.0
Percent Covered from NVTC Aid	59.0%	51.0%	46.3%	43.9%	28.0%	25.3%	22.2%	18.8%
Percent Covered from Locally Raised Revenues	41.0%	49.0%	53.7%	56.1%	72.0%	74.7%	77.8%	81.2%
Percentage of Locally Raised Revenues Required for WMATA Operating and Debt Service Cost								
Funds Required For WMATA from Locally Raised Revenues	$ 22.9	$ 32.4	$ 38.1	$ 42.2	$ 73.2	$ 84.7	$ 101.5	$ 125.0
Total Locally Raised Revenue	$ 811.1	$ 882.7	$ 970.7	$ 1,076.0	$ 1,194.5	(Forecasts not available)		
Percent of Total[e]	2.82%	3.67%	3.93%	3.92%	6.13%			

[a] Forecast assumes adopted Metrorail construction schedule and projected Metrobus service levels. Replacement of Metrobus service with local bus operations would significantly change above data.

[b] Forecast of operating cost not covered by farebox revenues is sensitive to fare levels. The forecast assumes fares rise with expected CPI. NVTC jurisdictions have adopted a policy for increasing fare over the next ten years until 60% of the operating cost are covered by farebox revenues. To the extent that this policy is successful, actual figures will significantly lower from those forecasted above.

[c] Forecast based upon budget recommendation by the Public Transportation Division, Virginia Department of Highways and Transportation.

[d] Authorization for this Federal program expires after FY 1986. It is impossible to predict whether it will be continued, terminated, or replaced with a similar program. Forecast for FY 1985 and FY 1986 assume funding equal to 80% of the 1982 appropriation. This is equal to the amount actually appropriated for FY 1983 and FY 1984.

[e] Projected Metrobus and Metrorail capital cost are not included in the table above. Several NVTC jurisdictions also pay substantial debt service cost on local bonds issued to finance the local share of Metrobus and Metrorail capital cost. If these costs were included, the percentage of locally raised revenues committed to WMATA financing would be significantly higher and approach 10% in FY 1986 (as opposed to 5.6% in FY 1978).

Sources: (1) NVTC Memorandum on Metro Revenue (30 September 1982).

(2) Public Transportation Division, Virginia Department of Highways and Transportation.

Table F4
Estimated FY 1983 WMATA Cost and Funding
by NVTD Jurisdictions
(In millions)

	A	B	C	D	E	F
Metrobus operating subsidy	$ 7.10	$ 6.80	$.300	$.500	$20.4	
Metrobus capital cost	.40	.40	.025	.025	1.2	
Total Metrobus cost	$ 7.50	$ 7.20	$.325	$.500	$21.6	
Metrorail operating subsidy	$ 7.60	$ 1.75	$.140[a]	$.170	$ 4.6	
Metrorail construction management cost	$ .08	$ .05	$.001	$.001	$ .1	
Metrorail capital cost	$ 9.2	$ .70	.0	$.200	$ 6.0	
Metrorail debt service Cost	--	--	.--	.--	.-	$7.1
Total Metrorail Cost	$16.88	$ 2.50	$.141	$.371	$10.7	$7.1
Total WMATA Costs	$24.40	$ 9.70	$.466	$.900	$32.3	$7.1
NVTC Aid State Aid, Federal Operating Assistance, and Local Fuel Sales Tax	$ 8.80	$3.80	$.260	$.360	$12.5	$7.1
Amount Funded from Local Budgets	$15.60	$5.90	$.206	$.540	$19.8	0.0
Percent of WMATA Costs Covered by Source						
NVTC Aid	36.0%	39.0%	56.0%	40.0%	39.0%	
Local Budget	64.0%	61.0%	44.0%	60.0%	61.0%	

A=Arlington, B=Alexandria, C=Fairfax City, D=Falls Church, E=Fairfax County, F=NVTC.

[a]Fairfax City's Metrorail operating subsidy ($.14 million) is paid with NVTC Aid Funds. The City receives an additional $.12 million in allocated aid funds based upon its participation in Metrobus.

Source: NVTC 1983 Aid Allocation Memorandums.

APPENDIX G

COMMENTS ON THE REPORT BY LOCAL JURISDICTIONS IN THE NORTHERN VIRGINIA REGION

Northern Virginia Transportation Commission

Arlington Executive Building ■ 2009 North 14th Street ■ Suite 300 ■ Arlington, Virginia 22201 ■ (703) 524-3322

December 6, 1983

Mrs. Sally Hill Cooper, Director
Rail and Public Transportation
Virginia Department of Highways and Transportation
1221 East Broad Street
Richmond, Virginia 23219

Dear Mrs. Cooper:

At its regularly scheduled meeting, Thursday, December 1, 1983, the Northern Virginia Transportation Commission reviewed the study of bus service in Northern Virginia required by Senate Joint Resolution 20. Individual members and localities were encouraged to furnish further comments. NVTC concluded its review with adoption of the following statement:

> The study of Northern Virginia Bus Service mandated by Senate Joint Resolution 20 makes an excellent presentation of the current circumstances and opportunities to improve the delivery of this essential service to those citizens of the Commonwealth living and working in Northern Virginia.
>
> The Commission has concluded a recent period of review by adopting a mission statement which strengthens the process of planning and evaluating the key elements of transit service covered in the proposed Bus Management Plan.
>
> The Commission provides the forum for the difficult decisions which must be made to ensure that efficient public transportation is provided within severe constraints on public fiscal resources.

I would like to recognize the efforts of many people within the Department of Highways and Transportation, the Highway and Transportation Research Council as well as the project consultants, JHK and Associates, who were essential to this successful project.

With kindest regards.

Sincerely,

Stephen T. Roberts
Acting Executive Director

STR/j
Enclosure: NVTC Mission & Role Statement

Northern Virginia
Transportation Commission

Arlington Executive Building ■ 2009 North 14th Street ■ Suite 300 ■ Arlington, Virginia 22201 ■ (703) 524-3322

June 10, 1983

Mission and Role Statement

On October 1 and 2, 1982, the Northern Virginia Transportation Commission held a planning conference to discuss its goals and objectives and to chart a course for its future activities. At this conference, the Commissioners determined their top priority goal to be a better definition of NVTC's mission and role vis-a-vis local governments in Northern Virginia, the state government, and regional agencies. Following the planning conference the Commission established a committee of four of its members to work with the Executive Director to develop a mission and role statement. This statement which follows reflects the output of the planning conference with respect to other priority goals as well as other considerations of the Commission's Mission and Role Committee.

The principal source of NVTC's powers and functions is the Transportation District Act of 1964, as amended. The Commission under this legislation is given the following major functions: (1) it shall collaborate and cooperate with an agency in the preparation of a transportation plan; (2) it shall, in cooperation with the governing bodies of the component governments embraced within the transportation district, formulate the tentative policy and decisions of the transportation district with respect to the planning, design, location, construction, operation and financing of transportation facilities, and (3) it shall make a determination of the equitable allocation among the component governments of the costs incurred by the transportation district in providing transportation facilities and the expenses and obligations from the operation thereof to be borne by each county and city.

In developing this mission and role statement, the Commission was not constrained by existing legislative authority, but rather determined what it believes to be its appropriate role in transportation matters, recognizing that current legislation may have to be amended to conform to this role. This statement does, however, recognize the basic functions of local and state governments and the roles of regional agencies charged with planning, constructing and operating transportation facilities in the metropolitan Washington area.

Mission and Role of NVTC.

) Develop a plan for the provision of improved transportation in conjunction with the Virginia Department of Highways and Transportation, the traffic engineering and transportation planning department of local governments, the National Capital Region Transportation Planning Board, and the Washington Metropolitan Area Transit Authority, which better integrates and coordinates all transportation systems and plans (e.g. auto, train, bus, ridesharing, etc).

2) Develop an effective transportation systems management capacity in conjunction with the Virginia department of Highways and Transportation, the traffic engineering and transportation planning departments of local governments, the National Capital Region Transportation Planning Board, and the Washington Metropolitan Area Transit Authority to improve the management and coordination of existing systems in Northern Virginia.

3) Develop the capacity to define public transit markets and needs and match them with appropriate services.

4) Inform the public of the real costs and benefits of transportation system alternatives, both public and private, including a comparison of construction, operating and other costs.

5) Develop a sound financial plan for mass transit construction and operation.

6) Insure that adequate and regular financial support for transit costs is obtained from the state and other revenue sources.

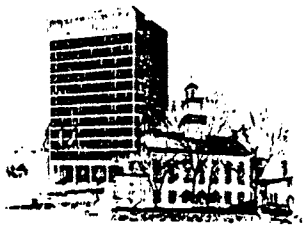
7) Receive and allocate federal and state transit assistance and revenues from any regional revenue sources dedicated to transit.

8) Facilitate the allocation among the component governments of the costs of providing and operating public transit facilities.

9) Coordinate all public mass transit service within the Northern Virginia Transportation District, including review of jurisdictional requests for state and federal transit assistance.

10) Formulate the tentative policy and decisions of the transportation district with respect to the planning, design, location, construction, operation and financing of mass transit facilities.

11) Undertake temporary, grant-funded programs and services dealing with public transit, transportation systems management, ride sharing and related activities of regional significance.



COMMONWEALTH OF VIRGINIA

COUNTY OF FAIRFAX

December 8, 1983

Mrs. Sally H. Cooper
Director of Public Transportation
Virginia Department of Highways
and Transportation
1221 East Broad Street
Richmond, Virginia 23219

Dear Mrs. Cooper:

The Board of Supervisors of Fairfax County has requested that I advise you that Fairfax County has reviewed the Northern Virginia Bus Study conducted as a result of SJR-20. The County offers the following policy-related and technical comments:

Policy-Related Comments

1. Fairfax County generally agrees with the findings presented in this study. The project team has developed a concise examination of the major issues associated with the provision of bus service in Northern Virginia.

2. The principal factor associated with the control of the public transportation system is who pays for the service. The financier of the bus service should have primary control over the establishment and operation of the service. Currently, passenger fares comprise the largest revenue source to pay for the operating cost of the bus system in Northern Virginia. Local jurisdictions are the major funding source for the remaining subsidy needs. Local jurisdictions are aided by the State and Federal governments in bearing transit costs. In order to effectively centralize the management of the transit system a common dedicated revenue source able to finance most transit costs would be most helpful.

3. At this time it is essential for NVTC to continue to conduct its mandated role of coordinating public transportation service in Northern Virginia. The evolution of NVTC's mandated role to accommodate new circumstances must continue to take place. As an example, NVTC recently took an active role in working with WMATA and local jurisdictions to develop the bus

adjustments associated with the opening of the Huntington Metrorail Line and the initiation of local bus service by the City of Alexandria. NVTC has often performed this coordination function with regard to service, fare, allocation, and budget issues in the past.

4. It is felt that at the present time NVTC can effectively conduct this coordination role within existing legislation. If it is determined at a later date that it would be beneficial for NVTC to be able to operate bus service two major changes must occur: (1) Current labor protections and operating restrictions of the Transportation District Act of 1964 must be removed, and (2) the composition of the NVTC governing board must be altered to reduce its size. Furthermore, if full centralization of management of the public transportation system becomes vested with NVTC, consideration should be given to establishing a dedicated regional funding source, capable of financing most transit costs.

5. Fairfax County welcomes the opportunity to work with NVTC, WMATA, and local jurisdictions to develop a Bus Service Coordination Plan for Northern Virginia that addresses the major issues associated with local provision of service.

Technical Comments

6. Two stated advantages of Metro's operation of bus service were staff's expertise and economies of scale. It should be noted that local jurisdictions have also developed internal transit, operations, maintenance and administrative skills that would be very beneficial to local jurisdictions who operate bus services. Furthermore, various economies of scale may be associated with local governments absorbing some of the bus operation functions. Local jurisdictions have considerable expertise and interest in providing services to the public, both directly and via contract with the private sector.

7. Quality of service should also be an evaluation criterion. It is anticipated that local jurisdictions would provide a high quality of service, particularly if transit funding is available.

8. The ratings of the WMATA/Local option which are included in the evaluation of alternatives in the study report are too low for the "Feeder Service" and "Interjurisdictional Service" criteria.

Mayor Russell of Fairfax City has asked that Fairfax City also be associated with the above comments. Fairfax County appreciates the opportunity to comment on this study of bus service in Northern Virginia and looks forward to continuing to work with NVTC, WMATA and other local jurisdictions in improving public transportation in the Washington Metropolitar Area.

Sincerely,

Robert L. Moore

for

Shiva K. Pant, Director
Office of Transportation

SKP/hh

cc: Mr. Stephen T. Roberts
Acting Executive Director
Northern Virginia Transportation Commission

Honorable John W. Russell
Mayor of the City of Fairfax

Mr. Denton U. Kent, Deputy County Executive
for Planning and Development