

**REPORT OF THE
VIRGINIA DEPARTMENT OF RAIL AND
PUBLIC TRANSPORTATION**

**DISTRIBUTION OF STATE
AND FEDERAL AID TO
MASS TRANSIT PROGRAMS**

**TO THE GOVERNOR AND
THE GENERAL ASSEMBLY OF VIRGINIA**



HOUSE DOCUMENT NO. 52

**COMMONWEALTH OF VIRGINIA
RICHMOND
2000**



COMMONWEALTH of VIRGINIA

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The Honorable James S. Gilmore, III
Members, Virginia General Assembly

Dear Governor Gilmore and General Assembly Members:

House Joint Resolution Number 720 of the 1999 Virginia Acts of Assembly requests the Virginia Department of Rail and Public Transportation to conduct a study of the distribution of state and federal aid to mass transit programs and to recommend such legislative and other changes as may appear necessary and desirable.

I am pleased to present the findings of this study which indicate that the State Aid to Public Transportation Program is providing the Commonwealth's localities a valuable resource for improving mobility, reducing traffic congestion and enhancing economic development and can continue to do so within the existing basic statutory authority.

Opportunities for improving the state aid distribution process have been identified including changes that can be made administratively and changes that require legislative action. Suggested Appropriations Act language is provided for those changes that require legislative action.

As always, let me know if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Leo J. Bevon".

Leo J. Bevon

Enclosure

PREFACE

House Joint Resolution Number 720 of the 1999 Virginia Acts of Assembly requests the Virginia Department of Rail and Public Transportation to conduct a study of the distribution of state and federal aid to mass transit programs and to recommend such legislative and other changes as may appear necessary and desirable.

This report was prepared by the Public Transportation Division of the Virginia Department of Rail and Public Transportation, which administers federal and state aid to mass transit for the Commonwealth Transportation Board. It contains findings and recommendations developed through research and discussions with many of the operators of public transportation in Virginia.

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EXECUTIVE SUMMARY

Local revenues support a larger share of the costs of providing public transportation services in Virginia than either federal revenues or state revenues. Federal and state funds represent large shares of the financial support for public transportation but localities bear most of the responsibility for developing and operating transit services in Virginia. This is very different from the funding of highways, aviation and ports.

During the late 1980's and early 1990's federal support for mass transit was reduced and state support for transit increased very little. Local governments were forced to reduce transit services or to expend more of their local general revenues in order to maintain their transit services. The passage of the federal Transportation Equity Act for the 21st Century (TEA 21) in 1998 and a change in the Commonwealth Transportation Trust Fund formula, also in 1998, have increased the levels of federal and state funding in Virginia and allowed transit systems to begin a slow recovery from the funding shortages of the previous decade. At the same time public transportation systems are being called on more and more to address issues such as traffic congestion, air pollution, and welfare reform. The increases realized in federal and state funding for transit fall far short of what is needed to maintain and improve Virginia's transit systems and localities continue to feel the pressure for greater investment in transit.

This has resulted in a call to examine the formulas that allocate federal and state financial assistance to public transportation to ensure that these important resources are distributed in a fair and equitable manner.

The formulas used for the apportionment of federal transit funds are the result of decades of political negotiations and compromise by Congress. The formulas that apportion the large federal transit funding programs are extremely complex and use many tiers, sub-divisions of tiers and multiple formulas at the sub-tier level. These formulas have been fine-tuned by Congress over the years to produce negotiated results and do not offer a good example for Virginia to emulate. It appears that in designing these formulas, more attention has been paid to how much funding they produce for certain recipients than the public policies that the formulas serve. The federal transit apportionment formulas that work the best in Virginia are the ones that allow the state the greatest flexibility in allocating the funds to recipients. Virginia's interest in the federal transit program apportionment formulas should focus on how much assistance they produce for our transit operators, especially those in nonurbanized and small urbanized areas.

The formula currently used in the distribution of state funds is relatively straightforward, verifiable and serves an intrinsic public policy. This policy is that the Commonwealth will participate in the public transportation expenses of localities based on the amount of financial investment undertaken by the locality and in a manner that treats all localities across the state the same. Other options for state distribution formulas were examined but none were found to be superior to the current formula. It

is recognized, however, that not all localities in Virginia are equally able to afford the public transportation services that they need. In the interest of equity, the current formula can be improved by taking into account the ability of the local jurisdictions to afford public transportation services as well as their actual levels of investment. It is proposed to apply fiscal stress index factors to the distribution formula for state public transportation operating assistance beginning in Fiscal Year 2002. These factors will be based upon the "Composite Fiscal Stress Index Scores" for localities as developed by the Commission on Local Government and published in their annual report. It is proposed to implement this change in Fiscal Year 2002 in order to allow time for the localities and transit community to review and discuss this change.

It is proposed to allow the Commonwealth Transportation Board to hold harmless any public transportation system from a decrease in state formula assistance funding below their prior fiscal year (FY01) level that results from the proposed change to the formula.

It is also proposed to allow the Commonwealth Transportation Board to hold harmless any public transportation system from a decrease in state funding that may result in a year when the levels of service provided by the transit system did not decrease but their operating expenses decreased or remained stable. This is a potential occurrence in a year when other transit systems have large increases in operating expenses and state revenues do not increase at a rate equal to or greater than operating expenses. Such an occurrence would unfairly penalize a transit system for being efficient.

Finally, it is proposed to simplify the current eligibility formula that allows a maximum state share of 95% for fuel, tires, and maintenance parts and supplies, 80% for ridesharing expenses and 50% for administrative expenses to a single, consistent maximum state share of 95% for all three categories of eligible expenses.

These proposed changes do not alter the total amount of state aid for public transportation to be provided and do not impact in any way funding for highways, ports, or aviation. These changes are intended to provide a more equitable, less complicated distribution methodology for state aid to public transportation. It is proposed to accomplish these changes through Appropriations Act language

INTRODUCTION

Today in Virginia, there are forty public transportation systems in operation. They range in size and scope from a two-bus program for a town in Southwestern Virginia to the Washington Metropolitan Area Transit Authority that operates over 500 subway cars and buses in Northern Virginia. It is estimated that about \$294 million in federal and state revenues will be invested in these public transportation systems in Fiscal Year 2000. Most of that sum, \$173M in federal and state transit appropriations, is provided under a variety of funding formulas. It is these formulas and especially the formulas that are used to distribute state aid to public transportation that will be examined in this report.

FEDERAL TRANSIT FUNDING FORMULAS

This year, \$148M in federal funds will be invested in public transportation in Virginia. These funds will come to Virginia from no fewer than 14 different federal programs – each with a different set of rules and regulations that govern how, where, and for what the funds can be spent. All of these programs are identified and briefly described in pages 3 through 8 of Appendix B of this report.

This report will review three of these federal funding programs - the Federal Transit Administration (FTA) Sections 5307, 5309, and 5310 programs. These three federal programs provide stable annual appropriations that support most of Virginia's public transit programs. Each of these three federal programs uses at least one formula for the distribution of funds to grantees.

FTA Section 5309 Fixed Guideway Modernization Program Apportionment Formula

The purpose of this FTA funding program is to support the upkeep and revitalization of this nation's fixed guideway transit services. The term "fixed guideway" includes transit modes such as commuter rail (example: Virginia Railway Express), heavy rail (example: Metrorail in Northern Virginia), light rail (example: the system proposed in Hampton Roads), passenger ferryboats operated by transit systems (example: Hampton Roads Transit passenger ferry service), and other modes.

This program is notable for two reasons. First, the Washington Metropolitan Area Transit Authority (WMATA) and the Transportation District Commission of Hampton Roads receive annual allocations under the program (\$46M for Metrorail and \$1M for passenger ferry service respectively for FY00). Second, it is the most convoluted and confusing of all of the FTA formulas.

The annual appropriation for the FTA Section 5309 Fixed Guideway Modernization Program is first divided into seven tiers in the following sums: \$497.7M into Tier 1; \$70.0M into Tier 2; \$5.7M into Tier 3; \$186.6M into Tier 4; \$70.0M in Tier 5;

\$50.0M into Tier 6; and the remaining amount into Tier 7 (\$93M in FY00). The amounts allocated to the first six tiers remain constant throughout the authorization period while the amount allocated to Tier 7 varies each year depending upon the total appropriation for the program.

The Tier 1 funds are divided up in set amounts among eleven specified transit systems: Baltimore; Boston; Chicago; Cleveland; New Orleans; New York; NE New Jersey; Philadelphia; Pittsburgh; San Francisco; and SW Connecticut. The amounts allocated under Tier 1 for each of the eleven systems remain constant throughout the authorization period.

Half of the funds allocated to Tier 2 go to the eleven systems listed in Tier 1 and the other half goes to all other urbanized areas with fixed guideway systems that have been in operation at least seven years. A formula first used in Fiscal Year 1997 divides the funds among the transit systems using fixed guideway revenue vehicle miles and fixed guideway route miles as factors.

The Tier 3 funds are divided among Pittsburgh (61.76%), Cleveland (10.73%), New Orleans (5.79%), and the remaining funds (21.72%) is divided among all other urbanized areas with fixed guideway systems that have been in operation at least seven years using the "1997 formula" described in Tier 2.

The Tier 4 funds are divided among all urbanized areas with fixed guideway using the "1997 formula" described in Tier 2.

In Tier 5 the eleven areas described in Tier 1 receive 65% of the funds and the remaining 35% goes to all other urbanized areas with fixed guideway systems that have been in operation at least seven years. A formula described under a different FTA program, the FTA Urbanized Area Formula Program - Fixed Guideway Tier, divides the funds among the transit systems. This formula is slightly different from the "1997 formula" and uses fixed guideway passenger miles, fixed guideway revenue vehicle miles and fixed guideway route miles as factors. This formula is described later in this report.

In Tier 6 the eleven areas described in Tier 1 receive 60% of the funds and the remaining 40% goes to all other urbanized areas with fixed guideway systems. Data for segments of the fixed guideway systems that have been in operation less than seven years are dropped from the formula. The most current version of the FTA Urbanized Area Formula Program - Fixed Guideway Tier formula is used to distribute the funds.

In Tier 7 the eleven areas described in Tier 1 receive 50% of the funds and the remaining 50% goes to all other urbanized areas with fixed guideway systems. Data for segments of the fixed guideway systems that have been in operation less than seven years are dropped from the formula. The most current version of the FTA Urbanized Area Formula Program - Fixed Guideway Tier formula is used to distribute the funds.

The FTA Section 5309 Fixed Guideway Modernization Program Apportionment Formula is the result of decades of political negotiation and compromise among federal legislators that represent areas with fixed guideway transit systems. This report will not attempt to describe the history or the rationale of this apportionment formula. It is suggested that this formula does not provide an example that Virginia should attempt to emulate.

FTA Section 5307 Urbanized Area Formula Program Apportionment Formula

The FTA Section 5307 Program provides funding for transit systems in the urbanized areas of Virginia. This program is the core federal funding program for Virginia's urbanized areas and provides the annual grants that support transit operating and capital expenses. The term "urbanized area" comes from the United States Census Bureau definitions and refers to a metropolitan area where the central city or town has a population of 50,000 or greater. There are eleven urbanized areas in Virginia. These urbanized areas are listed below and in Table 1 of this report.

The annual allocation of FTA Section 5307 Program funds is divided first into an allotment for small urbanized areas (those with populations between 50,000 and 200,000) and an allotment for large urbanized areas (those with populations greater than 200,000). The nation's small urbanized areas share 9.32% of the annual allocation of FTA Section 5307 Program funds and the large urbanized areas receive 90.68%.

FTA Section 5307 Program for Large Urbanized Areas - The FTA Section 5307 program for large urbanized areas (populations greater than 200,000) supports the routine capital projects of the nation's largest transit systems. Operating assistance is no longer allowed but the definition of eligible capital projects has been expanded to allow federal support of maintenance expenses. The FTA Section 5307 funds for large urbanized areas are distributed in a manner only slightly less complicated than the FTA Section 5309 Fixed Guideway Modernization Program Apportionment Formula. First, the annual apportionment for large urbanized areas (90.68% of the total Section 5307 apportionment) is divided into two tiers. A "Fixed Guideway" tier receives 33.29% of the large urbanized area apportionment and a "Bus" tier receives the remaining 66.71%.

The "Fixed Guideway" tier is divided up among only those transit systems in large urbanized areas that operate fixed guideway transit service. The same definition of "fixed guideway transit" is used for this program as for the Section 5309 program. Each urbanized area with a population over 750,000 that is served by commuter rail is guaranteed a minimum allocation of 0.75% of the "Fixed Guideway" tier.

The "Fixed Guideway" tier is divided into two parts. The first part receives 95.61% of the funds for the tier. These funds are apportioned among the urbanized areas with fixed guideway transit using operations data. Sixty percent of the money is distributed

on the basis of each urbanized area's fixed guideway revenue vehicle miles expressed as a percentage of the national total of fixed guideway revenue vehicle miles. Forty percent of the money is distributed on the basis of each urbanized area's fixed guideway route miles expressed as a percentage of the national total of fixed guideway route miles.

The second portion of the "Fixed Guideway" tier is called the "Incentive Portion" and it receives 4.39% of the funds. These funds are apportioned on the basis of a factor calculated for each urbanized area that is then expressed as a percentage of the national total of these factors. The factor is calculated by multiplying fixed guideway passenger miles times fixed guideway passenger miles divided by operating costs.

The "Bus" tier also is divided into two parts. The first part receives 90.8% of the funds for the tier. These funds then are subdivided into an allocation for urbanized areas with population over 1,000,000 that receive 73.39% of the funds for the first part of the "Bus" tier, and an allocation for urbanized areas with population less than 1,000,000 that receive 26.61%. In Virginia, the Hampton Roads urbanized area and the Northern Virginia portion of the Washington D.C. urbanized area fall into the category of areas with population over 1,000,000. The Richmond urbanized area falls into the category of areas with population between 200,000 and 1,000,000. These funds are apportioned among the large urbanized areas within the two categories using population and operations data. Fifty percent of the money is distributed on the basis of each urbanized area's bus revenue vehicle miles expressed as a percentage of the national total. Twenty five percent of the money is distributed on the basis of each urbanized area's population expressed as a percentage of the national total population for their category of urbanized area. The remaining twenty five percent of the money is distributed on the basis of each urbanized area's population/population density factor expressed as a percentage of the national total of the population/population density factors for their category of urbanized area. The population/population density factor for an urbanized area is calculated by multiplying the population times the number of inhabitants per square mile for the urbanized area.

The second portion of the "Bus" tier is called the "Incentive Portion" and it receives 9.2% of the funds. These funds are apportioned on the basis of a factor calculated for each urbanized area that is then expressed as a percentage of the national total of these factors. The factor is calculated by multiplying bus passenger miles times bus passenger miles divided by operating costs.

FTA Section 5307 Program for Small Urbanized Areas – The Section 5307 funds are apportioned among the small urbanized areas using population data. One half of the money is distributed on the basis of each urbanized area's population expressed as a percentage of the national total population for small urbanized areas. The second half of the money is distributed on the basis of each urbanized area's population/population density factor expressed as a percentage of the national total of the population/population density factors for all small urbanized areas. The

population/population density factor for an urbanized area is calculated by multiplying the population times the number of inhabitants per square mile for the urbanized area. The population data are included for all jurisdictions contained in the urbanized area regardless of whether or not they are served by public transportation.

The net result of this formula is an annual allocation of FTA Section 5307 funds for each of the nation's small urbanized areas. These allocations are grouped together and provided as a lump sum for each state, referred to as the Governors' Apportionments. The states may allocate these funds among the small urbanized areas as they see fit and the funds may be used to support capital and/or operating expenses for the transit programs.

It is significant that the federal regulations allow the states flexibility to use a different distribution of FTA Section 5307 funds for small urbanized area than is provided under the federal formula. This flexibility was requested by the states (including Virginia) and reflects the inadequacy of the federal formula to match the funding needs of small urbanized areas. This has been true for Virginia.

The levels of transit service that are provided in Virginia's small urbanized areas do not bear a direct relationship to the populations or population densities of the urbanized areas. In some of the larger urbanized areas of this category, transit services are provided only in the central city and only minimal levels of service are operated. In other compact urbanized areas transit service is provided more extensively and at greater service levels. In Virginia's small urbanized areas, the size of the transit programs and the levels of service operated are related as much to the policies and priorities of the local governments as they are to local demographics.

Virginia's FTA Section 5307 funds are distributed each year by the Department of Rail and Public Transportation (DRPT) in a collaborative process with the small urbanized area transit operators. A division of the funds for operating grants is proposed by DRPT and discussed at an annual meeting of the grantees. A distribution methodology roughly based on the state formula assistance methodology currently is being used to divide up the Section 5307 operating funds. Priorities for capital projects also are discussed at the annual meeting. Recommendations on which capital projects to fund are made by DRPT to the Commonwealth Transportation Board at a later date.

The amount of FTA Section 5307 funds that Virginia receives each year under the Governor's apportionment is not large enough to fully support the operating and capital assistance needs of Virginia's small urbanized areas. Operating grants are lower than they would be if sufficient funds were available. Capital grants are restricted to revenue vehicle replacement only in most years. Occasionally, additional federal revenues become available to support capital projects. Federal operating grants for these areas are never at their full allowable levels. The distribution process used by DRPT at least has allowed the transit programs in Virginia's small urbanized areas to receive relatively equal levels of federal financial support for operating expenses over

the years. It also has ensured that only the top priority capital projects receive federal financial support each year. Under the FTA population-based federal formula, the Charlottesville and Lynchburg areas would not have sufficient funds to sustain their existing transit services while other areas would receive more than they need.

Table 1 shows the allocation of FTA Section 5307 funds for Virginia in FY99 using the federal formula and how the funds actually were distributed as grants.

Table 1 - FY99 Governor's Apportionment of FTA Section 5307 Funds

<u>Small Urbanized Area</u>	<u>Allocation Under FTA Formula</u>	<u>Actual Allocation by DRPT</u>	<u>Operating Assistance</u>	<u>Capital Assistance</u>
Bristol	\$143,411	\$78,495	\$78,495	
Charlottesville *	\$667,960	\$1,099,869	\$642,869	\$457,000
Danville	\$379,321	\$259,840	\$199,840	\$60,000
Fredericksburg	\$445,333	\$120,094	\$120,094	
Kingsport **	\$27,075	\$0	\$0	
Lynchburg	\$635,465	\$812,239	\$812,239	
Petersburg ***	\$805,595	\$805,595	\$577,595	\$228,000
Roanoke	<u>\$1,541,233</u>	<u>\$1,469,261</u>	<u>\$986,261</u>	<u>\$483,000</u>
Total:	\$4,645,393	\$4,645,393	\$3,417,393	\$1,228,000

* Two transit systems receive FTA Section 5307 Funds in Charlottesville - Charlottesville Transit Service and JAUNT, Inc.

** There is no transit program in the area of Virginia near Kingsport, Tennessee.

*** The Petersburg urbanized area is designated as a Transportation Management Area and this designation exempts their FTA Section 5307 allocation from amendment by the state.

FTA Section 5311 Nonurbanized Area Formula Program Apportionment Formula

The FTA Section 5311 Program provides funding for transit systems in the nonurbanized areas of Virginia. This is the principal federal funding program for Virginia's nonurbanized areas and provides the annual grants that support transit operating and capital expenses. The term "nonurbanized area" comes from the United States Census Bureau definitions and refers to all cities, towns and counties with populations less than 50,000. There are 17 public transit systems in nonurbanized areas of Virginia that receive federal assistance under the FTA Section 5311 program. These systems are listed in Table 2 of this report.

The FTA Section 5311 Nonurbanized Area Formula Program apportionment comes to Virginia as a lump sum. The annual national apportionment for the program is divided up among the states based upon each state's nonurbanized area population expressed as a percentage of the total national nonurbanized area population.

The FTA Section 5311 Program is administered for Virginia by DRPT, which actually applies for and receives the federal grant. Grants are awarded each year to sub-

recipients based upon the applications submitted by the nonurbanized area transit operators. Each transit system receives the same level of federal participation in their operating expenses that are carefully reviewed by DRPT. Requests for capital assistance also are carefully reviewed and prioritized by DRPT, which submits its recommendations for operating and capital grants to the Commonwealth Transportation Board for approval. Virginia's annual allocation of Section 5311 funds is not sufficient to meet all operating and capital needs and capital projects often are postponed until supplemental federal assistance is received. No formulas are used in the distribution of FTA Section 5311. The FTA Section 5311 Program grants awarded to sub-recipients for FY00 are shown below.

Table 2 - Virginia's FY99 Apportionment of FTA Section 5311 Funds

<u>Nonurbanized Area Recipient</u>	<u>Total Section 5311 Grants</u>	<u>Operating Assistance</u>	<u>Capital Assistance</u>
Bay Transit - Gloucester County	\$185,398	\$185,398	\$0
Blacksburg Transit	\$928,215	\$928,215	\$0
CVT (CPAC) Cumberland Co.	\$118,500	\$118,500	\$0
District III Governmental Cooperative	\$309,693	\$309,693	\$0
Eastern Shore - Star Transit	\$159,594	\$123,514	\$36,080
Farmville Area Bus	\$89,900	\$89,900	\$0
Four County Transit (AASC)	\$37,500	\$37,500	\$0
Graham Transit - Town of Bluefield	\$59,475	\$59,475	\$0
Greene County Transit	\$183,775	\$118,575	\$65,200
Harrisonburg Bus Service	\$471,250	\$471,250	\$0
James City County Transit	\$33,685	\$33,685	\$0
JAUNT, Inc.	\$484,081	\$484,081	\$0
Loudoun County Transportation Association	\$708,177	\$355,175	\$353,002
Mtn. Empire Older Ctzns. (Wise Co.)	\$206,901	\$206,901	\$0
RADAR (UHSTS) Roanoke Co.	\$43,968	\$43,968	\$0
Staunton (CATS)	\$60,584	\$60,584	\$0
Winchester Transit Service	<u>\$353,450</u>	<u>\$193,450</u>	<u>\$160,000</u>
Totals:	\$4,434,146	\$3,819,864	\$614,282

RECOMMENDATIONS REGARDING FEDERAL FORMULAS

The formulas used for the apportionment of federal transit funds are the result of decades of political negotiations and compromise by Congress. The formulas that apportion the large federal transit funding programs are extremely complex and use many tiers, sub-divisions of tiers and multiple formulas at the sub-tier level. These formulas have been fine-tuned by Congress over the years to produce negotiated results and do not offer a good example for Virginia to emulate. It appears that in designing these formulas, more attention has been paid to how much funding they produce for certain recipients than the public policies that the formulas serve. The federal transit apportionment formulas that work the best in Virginia are the ones that allow the state the greatest flexibility in allocating the funds to recipients. Virginia's interest in the federal transit program apportionment formulas should focus on how much assistance

they produce for our transit operators, especially those in nonurbanized and small urbanized areas.

STATE TRANSIT FUNDING FORMULAS

In Fiscal Year 2000, about \$96M has been provided from the Commonwealth Mass Transit Fund to support public transportation services in Virginia. Other state funds are provided from a variety of state sources, but the principal funding source for public transportation is the Commonwealth Mass Transit Fund. The revenues of the Commonwealth Mass Transit Fund support Virginia's State Aid to Public Transportation Program and formulas are used to divide the funds among funding programs and among recipients. Appendix B provides detailed information on all of the sources and uses of state funds for transit in FY00 on pages 9 through 18.

The Commonwealth Mass Transit Fund is established in §58.1-638 of the Code of Virginia. Under this section of the code, 14.7% of the Commonwealth Transportation Trust Fund is set aside for transit and the guidelines for Virginia's State Aid to Public Transportation Program are set out.

Virginia's State Aid to Public Transportation Program

Under the provisions of §58.1-638 of the Code of Virginia, the annual appropriations from the Commonwealth Mass Transit Fund are divided into three subprograms. These three subprograms are the Formula Assistance Program, which receives 73.5% of the funds; the Capital Assistance Program, which receives 25% of the funds; and the Special Projects Program, which receives 1.5% of the funds. The Code language also directs how the funds in each subprogram are to be allocated to projects, who may receive funding under the programs, and what the eligible expenses and maximum state participation levels are for each program.

The State Formula Assistance Program - This program provides financial support for certain expenses contained in transit operating budgets. State Formula Assistance grants are made each year in a two step process. In the first step the funds are divided up among the transit systems. The results of the first step are called the "Preliminary Formula Assistance Allocations". In the second step, the proposed operating budget for each transit system is examined to determine the largest amount of money that a transit system can receive and still remain in compliance with the state rules. The second step is called the "Maximum Eligibility Calculation". The actual formula assistance grant is the lessor of these two numbers.

To determine the Preliminary Formula Assistance allocations, the annual allocation for the program is divided up among Virginia's transit systems based on each system's percentage share of the statewide total of all transit systems operating expenses. The operating expenses for the most recent fiscal year that has been completed and audited are used to distribute formula assistance. The calculations of the Preliminary Formula Assistance Allocations for the current fiscal year, FY00, are shown in Table 3.

Table 3 - Preliminary Formula Assistance Allocations for FY00

Total Formula Assistance Allocation in FY00: \$70,699,800

Recipient	Total	Percent	Fiscal Year
	Operating Expenses	of State Total	2000 State Financial Assistance
Bay Transit - Gloucester County	\$188,314	0.06%	\$43,400
Blacksburg Transit	\$1,967,278	0.64%	\$453,600
Bristol City Bus	\$276,870	0.09%	\$63,800
Buchanan County Transportation	\$215,610	0.07%	\$49,700
Central Virginia Transit - Cumberland Co.	\$222,057	0.07%	\$51,200
Charlottesville Transit Service	\$1,670,212	0.54%	\$385,100
Danville Transit	\$668,129	0.22%	\$154,100
Dickenson County Transportation	\$29,711	0.01%	\$6,900
District III Governmental Cooperative	\$725,748	0.24%	\$167,400
Eastern Shore - Star Transit	\$242,154	0.08%	\$55,800
Farmville Area Bus	\$238,536	0.08%	\$55,000
Four County Transit (AASC)	\$78,000	0.03%	\$18,000
Fredericksburg (FRED)	\$450,618	0.15%	\$103,900
Graham Transit - Town of Bluefield	\$67,972	0.02%	\$15,700
Greater Lynchburg Transit Company	\$2,529,429	0.82%	\$583,200
Greater Richmond Transit Company	\$22,452,185	7.32%	\$5,177,100
Greater Roanoke Transit Company	\$3,806,517	1.24%	\$877,700
Greene County Transit	\$262,809	0.09%	\$60,600
Harrisonburg Bus Service	\$1,446,992	0.47%	\$333,700
James City County Transit	\$846,993	0.28%	\$195,300
JAUNT, Inc. - Charlottesville Area	\$1,725,836	0.56%	\$397,900
Loudoun County Department of Transportation	\$760,087	0.25%	\$175,300
Loudoun County Transportation Association	\$617,264	0.20%	\$142,300
Mountain Empire Older Citizens - Wise Co. Area	\$497,683	0.16%	\$114,800
Northern Virginia Transportation Commission*	\$198,566,802	64.76%	\$45,786,100
Petersburg Area Transit	\$1,000,482	0.33%	\$230,700
Potomac & Rappahannock Transportation Comm.	\$6,176,974	2.01%	\$1,424,300
RADAR (UHSTS) - Roanoke Co.	\$91,479	0.03%	\$21,100
Russell County Transportation	\$127,543	0.04%	\$29,400
Staunton (CATS)	\$176,182	0.06%	\$40,600
Tazewell County Transportation	\$41,485	0.01%	\$9,600
Transportation District Comm. Of Hampton Roads**	\$39,541,677	12.90%	\$9,117,600
Virginia Railway Express (NVTCP/PRTC)	\$18,469,683	6.02%	\$4,258,800
Winchester Transit Service	\$434,066	0.14%	\$100,100
STATEWIDE TOTALS:			\$306,613,377 100.00% \$70,699,800

* The operational and financial data for NVTCP include data for the WMATA Metrorail and Metrobus, Fairfax Connector, Alexandria DASH, City of Fairfax CUE, and Arlington ART transit systems.

** The operational and financial data for the Transportation District Commission of Hampton Roads include data for the former Tidewater Regional Transit and PENTRAN transit systems.

The second step of the formula allocation process involves calculating the amount of money that each transit system is eligible to receive under three categories of operating expense. This step of the process is a holdover from the early days of the state aid to

mass transit program. In the early to mid 1970's, the state aid to mass transit program consisted of line item appropriations for the administrative expenses of the transportation district commissions that had been formed to operate public transportation and line item appropriations for capital assistance. Over time, the language of the appropriations bills evolved to require a least a dollar for dollar (50%) local match for the administrative expenses and to allow the same level of state participation in transit capital projects that was allowed for urban highway projects (95%). The state level of participation for urban highway projects subsequently was increased to 98% but the maximum state share for transit capital remained at 95%. In the late 1970's state aid for ridesharing programs was established and the state share was set at 80%. In the 1983 a new category of eligible expenses was created and state participation in the costs of fuel, lubricants, tires, and maintenance parts and supplies was allowed. The intent of this new category of eligible expenses, referred to by the acronym FTM, was to allow state participation in all operating expenses except the salaries and wages of bus drivers and mechanics. These individuals often are represented by labor unions and for this reason, the Commonwealth declined to participate in the costs of their wages.

When the formula assistance program was created in 1987, the appropriations act language that referred to all of these different categories and participation ratios was transplanted into the code language that created the Mass Transit Fund. As a result of this, the following "Maximum Eligibility Calculation" is performed each year for each transit system.

Each transit system's operating budget for the coming year is divided into four categories of expenses. These categories are administrative expenses, rideshare program expenses (if the transit system also operates a ridesharing program), fuel, lubricants, tires, and maintenance parts and supplies (FTM) expenses, and all other expenses - the ineligible expenses. Next the total amount of operating revenue and any federal aid that may be received by the transit property in the coming year for operating related expenses is determined and referred to simply as "revenue". In the third step, the amount of "revenue" is compared to the ineligible expenses to determine how much of the "revenue" is left over after paying for all of the ineligible expenses. This sum is referred to as "surplus revenue" in the maximum eligibility calculation. In the fourth step, any "surplus revenue" from the third step is applied to the administrative expenses to determine how much of these expenses will require state/local subsidy. The amount of administrative expenses not covered by "surplus revenue" is eligible for state participation at a state share of 50%. If the "surplus revenues" were sufficient to cover all of the administrative expenses, there is no state participation in administrative expenses and any "surplus revenues" that remain after covering administrative expenses are applied to ridesharing expenses or FTM expenses if the transit property does not operate a ridesharing program. After consuming all of the "surplus revenues" any remaining ridesharing expenses are eligible for state participation and 80% and FTM expenses are eligible for state participation at 95%. The result of this calculation is a determination of the amount the transit system is eligible to receive in each category of

expense which total to the transit system's maximum eligibility for state formula assistance. The sum represents the largest amount of state assistance that the transit system can receive and still remain in compliance with the state rules.

The maximum eligibility calculation for each transit system is compared to its preliminary formula assistance allocation as determined in the first step of the process. In most cases, the transit system's maximum eligibility is greater than its preliminary formula assistance allocation and their preliminary formula assistance allocation becomes the actual grant. However in several cases the transit system is restricted by the maximum eligibility calculation to a grant less than its preliminary formula assistance allocation. The most notable example of this is the Virginia Railway Express, which each year receives hundreds of thousands of dollars less than its preliminary formula assistance allocation would provide. This results primarily from a high level of fare revenues (70% of operating costs) by the commuter rail service.

The sums of preliminary formula assistance allocations that are not passed on as formula grants, referred to as "surplus formula assistance", are transferred and added to the total allocation for the state capital assistance program for distribution as capital grants.

The State Capital Assistance Program - This program provides financial support for the capital costs of public transportation such as buying buses, building transit operations facilities, and even constructing rail systems. No formula is used to divide up the funds but the underlying principal for the method of awarding grants is the same as that for the state formula assistance program. This underlying principal or intrinsic policy is that the state will participate in the public transportation expenses of localities based on the amount of investment undertaken by the locality and in a manner that treats all localities across the state the same.

Each year all public transportation systems submit applications for state capital assistance to DRPT. These applications show what projects the transit systems propose to undertake, why they are needed and how much they are expected to cost. The applications also indicate whether the transit system expects to receive federal aid for the project from any source. The proposed projects are evaluated by DRPT for eligibility, justification, and reasonableness of the cost estimate. The projects recommended for approval are listed in an annual program and the amount of non-federal money required for each project is determined. The total amount of non-federal money for all projects is determined from this list and this number is compared to the total amount of money available for the year as state capital assistance. The total amount of capital assistance available each year is the sum of 25% of the annual Commonwealth Mass Transit Fund appropriation plus any "surplus formula assistance" funds carried over from the formula assistance program.

The total amount of capital assistance available for the year is divided by the total amount of non-federal money required for all projects in the annual program. This

ratio, rounded down to the nearest whole percent, becomes the state matching ratio for the state transit capital assistance grants for that year.

The result of this procedure is a list of capital grants where the state participation ratio is the same for all of the grants. The maximum allowable state participation ratio for capital projects is 95%. The actual state participation ratio for transit capital projects has been far less than the maximum over the past ten years as shown in Table 4.

Table 4 - State Participation Ratios in Transit Capital Projects

FY91	FY92	FY93	FY94	FY95	FY96	FY97	FY98	FY99	FY00
50%	50%	50%	37%	30%	30%	42%	34%	40%	43%

The State Special Projects Program - This program receives 1.5% of the annual Commonwealth Mass Transit Fund appropriation and provides financial assistance for a variety of special projects each year in the field of public transportation. The grants under this program support transit demonstration projects and training projects at a state participation level of 95%, transportation demand management projects at a state participation level of 80%, and transit operations and technical studies at a state participation level of 50%.

Each year public transportation systems submit applications for special project assistance to DRPT. These applications show what projects the transit systems propose to undertake, why they are needed and how much they are expected to cost. The applications also indicate whether the transit system expects to receive federal aid for the project from any source. The proposed projects are evaluated by DRPT for eligibility, justification, and reasonableness of the cost estimate. The appropriate state share for the projects recommended for approval is determined and the projects are prioritized. These projects are listed in an annual program and presented to the Commonwealth Transportation Board for approval. The number and size of the grants recommended for approval is limited by the amount of funds available for the year. No formula is used in the awarding of grants under the special projects program.

The benefits of this relatively small program (\$1.4M in FY00) are considerable. Demonstration grants have enabled the start up of five new small transit systems in the last three years and allowed six other transit systems to try out service expansions. Transit interns have been placed in transit properties who have gone on to become assistants and even general managers of transit systems. Transit development plans and transit facility feasibility studies have been conducted that will guide the improvement and expansion of transit services in many communities. Transportation demand management and congestion mitigation initiatives have been undertaken to help alleviate traffic congestion in the I-95 mixing bowl area in Northern Virginia, the I-64 corridor in Hampton Roads, in the Richmond area and other areas of the Commonwealth.

Other Sources and Programs of State Funding for Public Transportation Program

In Fiscal Year 2000 there were six other sources utilized to provide state funding for public transportation projects. These included \$33.9M in Northern Virginia Transportation District Program Bonds that will be used to support transit capital projects for Metrorail, the Potomac and Rappahannock Transportation District Commission, and the Dulles Corridor Rapid Transit Project.

State revenues totaling \$4.2M from the Dulles Toll Road in Northern Virginia also were programmed to support transit service in the corridor.

State highway funds totaling \$3.5M were programmed by several jurisdictions to support transit projects. This included state matching funds for federal Regional Surface Transportation Program funds that are programmed by the Metropolitan Planning Organizations in Virginia's large urbanized areas.

A new funding program entitled the Commonwealth Transit Capital Fund was created in FY00 and appropriated \$5.0M. These funds are awarded by the Commonwealth Transportation Board and are used to support federally funded, high priority public transportation improvements. The state participation ratio in these projects is 80%. In FY00 the projects included \$1.0M for suburban transit in the Richmond area (this project was specified in the 1999 Appropriations Act), \$2.0M for the Dulles Corridor Rapid Transit Project, \$1.5M for improvements to support high speed rail service in the I-95 corridor, and \$0.5 for improvements to Richmond's Main Street Station.

The Transportation Efficiency Improvement Fund (TEIF) program receives \$1.9M annually and serves as the principal funding program for Virginia's independent ridesharing and transportation demand management agencies located across the state. Special projects undertaken by transit properties in the area of transportation demand management also are supported. These funds support 80% of project expenses and grants are awarded on a discretionary basis. The same process is used in awarding grants as for the State Special Projects Program. The two funding programs are closely coordinated.

Finally, Oil Overcharge Settlement Funds (\$0.8M) received by Virginia were appropriated to support the purchase of paratransit vehicles used in the support of rural public transportation and the transportation of the elderly, disabled or economically disadvantaged. Grants are awarded on a discretionary basis and support 95% of the cost of equipment. The Oil Overcharge Settlement Funds come from the federal government and by federal regulation, must be used for projects that reduce energy consumption.

None of these programs or funding sources involves the use of formulas. Therefore, these programs and sources will not be analyzed further in this report.

Concerns Expressed Regarding the State Transit Funding Formula and Responses

In the years since the current State Aid to Public Transportation Program was created, there have been numerous discussions among the transit community regarding the adequacy and fairness of the state transit funding formula. Most of these discussions have concluded that the principal shortcoming of the state aid to public transportation program is that not enough money goes into the program. However, other points have been raised that pertain to the formula itself. These are reviewed below.

- **The state matching ratio for capital projects is unpredictable and in general too low.**

Response: This is a valid concern and a shortcoming of the state aid to public transportation program. The low match ratio and the fluctuations in the match ratio have been the result of the entry of very large public transportation capital projects into the program. It is expected that with the completion of the 103 mile Metrorail System and the establishment of the Commonwealth Transit Capital Fund, there is the opportunity for the state matching ratio for capital projects to stabilize and slowly improve. The Governor's Innovative Progress Program for Improving Transportation in Virginia also should help by providing funding for large high priority transit projects such as high speed rail service in the I-95 corridor and the Dulles Corridor Rapid Transit Project outside of the routine state aid to public transportation program.

- **The state distribution process for formula assistance should be simple and easy to understand – the current process is too complicated.**

Response: We agree with this statement and have included a recommendation in this report for simplifying the process.

- **The current state distribution process for formula assistance rewards inefficiency.**

Response: This is a perception sometimes voiced by individuals that are not familiar with the local transit operating budget development process. The statement is true in theory but in reality the dynamics of the local budgeting process produce different results. A higher operating budget will produce more state aid but at a cost of far more local money than will be gained in state funds. Success in transit operating budget development is gauged by how little local money is required – not by how much state aid is earned. Inefficiency in transit operations produces a much greater cost to local governments than a gain in state funding. By using operating costs as its basis, the current distribution process enjoys the benefit of the great pressure that local governments place on their transit operators to hold down their costs. So in reality, no transit operators are lured towards inefficiency by the state funding formula. In addition, the distribution process is based on total operating costs and not operating

deficits (operating costs less revenue collected). Therefore an increase in operating revenues will decrease the amount of local funding and in most cases, it will not affect state funding. This encourages revenue efficiency.

- **The current state distribution process for formula assistance penalizes operating efficiency.**

Response: In some cases this is true. A transit operator who holds down operating costs without reducing the levels of transit service operated can wind up receiving less state formula assistance in a year when state revenue growth is slow and other transit systems operating expenses increase. In addition, a transit system with a high revenue recovery can find its formula assistance grant restricted by the maximum eligibility calculation. Recommendations are included in this report for addressing these situations.

- **The distribution process for state formula assistance should provide stable and reliable grants.**

Response: This is a valid statement and in the early years of the state aid to public transportation program instability was a problem. The growth of the state aid program was restricted to less than 2% per year and transit operating costs increased at a higher rate. This resulted in instability and sometimes reductions in formula assistance grants. With the change made in 1998 to the funding formula for the Commonwealth Mass Transit Fund, the state transit assistance program should grow with the economy and state formula assistance grants should become more stable and reliable. The recommendations mentioned above also will ensure stability in formula assistance grants.

- **The current distribution process for state formula assistance is not equitable.**

Response: The current distribution process has its shortcomings but it treats everyone the same. Is it equitable to treat everyone exactly the same? This issue will be examined in the next section of this report.

- **Other distribution criteria should be examined for dividing up state formula assistance.**

Response: Agree. An examination of other distribution criteria and the implications of using those criteria are provided in the next section of this report.

OPTIONS FOR CHANGING THE STATE DISTRIBUTION FORMULA

Four options are examined for changing the distribution of state formula assistance. These options include a market based approach using service area population, a service consumption based approach using ridership, a service output based approach using the sum of service revenue miles plus revenue hours, and a modification to the current, needs based approach using operating expenses. Each option is examined in terms of the public policy implicit in the approach, the accuracy and verifiability of the criteria used, the stability and reliability of the approach, the ability of each approach to accommodate growth or change, the influence of the approach on cost efficiency and service effectiveness and the net change in grants that would result in the new approach. The advantages and disadvantages of each approach will be examined and a recommendation is provided regarding each approach.

Option 1 – Market Based Distribution Using Population Data

This option would support the supposition that the state should invest in public transportation programs based on the markets that they serve. The result of this process will be a uniform state dollars per capita distribution based solely on the size of the transit market. In this example public transportation markets are defined as total population. This is similar to the distribution of federal transit funds under the FTA Section 5311 program and the FTA Section 5307 program for small urbanized areas. The example shown below differs from the federal formulas in that it includes the population for only those jurisdictions that receive public transportation service. In this example the entire population for a jurisdiction is included if a transit system provides service in the jurisdiction.

Accuracy and Verifiability - The accuracy of population data is subject to the data collection methods used by the United States Census Bureau. Only Census Bureau data would be used so no annual verification of the data is required.

Stability and Reliability – A state aid distribution based on population would be very stable. Changes in the distribution criteria for all systems would occur only once every ten years when a new census is conducted. Only the addition of new transit systems, the expansion of transit services into new jurisdictions and the termination of existing transit program would impact the distribution criteria.

Ability to Accommodate Growth or Change – The expansion of transit service to serve new jurisdictions would be the only type of change that would be accommodated under this distribution process. Increases or decreases in the levels of transit service provided within existing service areas and changes in the type of transit service provided would not change state funding.

Influence on Service Effectiveness or Efficiency – The allocation of state funds to transit properties under a population based distribution process would not be influenced

by changes in the cost of transit service or how well the service is utilized. Therefore this approach to state aid distribution would produce no influence on transit service effectiveness or efficiency.

Net Change in Distribution – Table 5 demonstrates a distribution of state transit formula assistance for Fiscal Year 2002 using service area population as the distribution criteria. A comparison to the formula assistance grant for the current year (FY00) is shown. In order to best show the impacts of this distribution method, NO ADJUSTMENTS ARE MADE FOR MAXIMUM ELIGIBILITY.

The net changes from the current distribution to the distribution methodology of Option 1 are extensive. In many cases the FY02 Formula Grants shown far exceed the total operating budgets of the recipients.

Advantages – The advantages of this option for a state aid distribution methodology are its simplicity and stability and reliability. No annual verification of data is required.

Disadvantages – The disadvantages of this option are numerous. The premise of this option - that there should be a uniform state dollars per capita distribution based on the size of the transit market is flawed. Public transportation programs serve different public purposes in different markets. In some markets, transit supports basic mobility for the transportation disadvantaged while in other markets, an equal or greater purpose of the transit program is to provide for the mass movement of people through areas of heavy traffic congestion. The appropriate type, frequency, and cost of public transportation service and the corresponding appropriate levels of public investment vary considerably from one market to another.

The validity of this option relies on an accurate determination and measurement of the transit service area. The simplistic approach shown in Table 5 has several shortcomings. For example, in Table 5 only the populations for the local jurisdictions of the Northern Virginia Transportation Commission are included in the calculation. Yet the transit services in Northern Virginia actually serve a much larger market that includes the District of Columbia, parts of Maryland and several other jurisdictions in Virginia. In other examples on Table 5, transit service is provided only in a very small portion of the jurisdiction and using the entire jurisdiction population is an overstatement of the transit market. There also is an issue of overlapping service areas. In Virginia, twelve transit services currently operate in jurisdictions served by more than one transit program. An example of this on Table 5 is the Virginia Railway Express in Northern Virginia where the populations for jurisdictions are included that also appear for other transit systems. A more consistent population based distribution either would provide no separate grant for the Virginia Railway Express or would allow the multiple transit systems in Northern Virginia each to claim the population of all jurisdictions that it serves.

Finally, the state aid distribution shown in this option does not respond to changes in types or levels of transit service within existing service areas. This would inhibit the growth of transit service in Virginia.

Table 5 - Option 1 - Market Based Distribution Using Population (\$ in 1,000's)

<i>Estimated Formula Assistance Allocation in FY02: \$74,970</i>					
Recipient	Service Area Pop. (1,000's)	Percent of State Total	FY02	Actual	Change from FY00 to FY02
			State Formula Grant Option 1	FY00 State Formula Grant	
Bay Transit - Gloucester County	53.0	0.75%	\$565	\$43	\$522
Blacksburg Transit	76.6	1.09%	\$816	\$454	\$362
Bristol City Bus	18.4	0.26%	\$196	\$64	\$132
Buchanan County Transportation	31.3	0.44%	\$334	\$50	\$284
Central Virginia Transit - Cumberland Co.	29.5	0.42%	\$314	\$51	\$263
Charlottesville Transit Service	40.0	0.57%	\$426	\$385	\$41
Danville Transit	53.1	0.75%	\$566	\$154	\$412
Dickenson County Transportation	17.6	0.25%	\$188	\$7	\$181
District III Governmental Cooperative	156.1	2.22%	\$1,664	\$167	\$1,497
Eastern Shore - Star Transit	45.7	0.65%	\$487	\$56	\$431
Farmville Area Bus	17.3	0.25%	\$184	\$55	\$129
Four County Transit (AASC)	123.6	1.76%	\$1,317	\$18	\$1,299
Fredericksburg (FRED)	101.8	1.45%	\$1,085	\$104	\$981
Graham Transit - Town of Bluefield	6.5	0.09%	\$69	\$16	\$53
Greater Lynchburg Transit Company	66.1	0.94%	\$705	\$583	\$122
Greater Richmond Transit Company	688.3	9.79%	\$7,336	\$5,177	\$2,159
Greater Roanoke Transit Company	122.3	1.74%	\$1,304	\$878	\$426
Greene County Transit	13.5	0.19%	\$144	\$61	\$83
Harrisonburg Bus Service	34.0	0.48%	\$362	\$334	\$28
James City County Transit	43.2	0.61%	\$460	\$195	\$265
JAUNT, Inc. - Charlottesville Area	169.5	2.41%	\$1,807	\$398	\$1,409
Loudoun County Department of Transportation	123.8	1.76%	\$1,319	\$175	\$1,144
Loudoun County Transportation Association	240.5	3.42%	\$2,563	\$142	\$2,421
Mountain Empire Older Citizens - Wise Co. Area	91.5	1.30%	\$975	\$115	\$860
Northern Virginia Transportation Commission	1,247.5	17.74%	\$13,296	\$45,786	-\$32,490
Petersburg Area Transit	37.0	0.53%	\$394	\$231	\$163
Potomac & Rappahannock Transportation Comm.	300.1	4.27%	\$3,199	\$1,424	\$1,775
RADAR (UHSTS) - Roanoke Co.	108.0	1.53%	\$1,151	\$21	\$1,130
Russell County Transportation	28.7	0.41%	\$306	\$29	\$277
Staunton (CATS)	98.8	1.40%	\$1,053	\$41	\$1,012
Tazewell County Transportation	46.0	0.65%	\$490	\$10	\$480
Transportation District Comm. Of Hampton Roads	1,343.3	19.10%	\$14,317	\$9,118	\$5,199
Virginia Railway Express (NVTC/PRTC)	1,439.4	20.46%	\$15,342	\$4,259	\$11,083
Winchester Transit Service	22.0	0.31%	\$234	\$100	\$134
STATEWIDE TOTALS*:	7,034.0	100.00%	\$74,968	\$70,701	\$4,267

* The populations of nine jurisdictions in Virginia appear more than once in this table due to overlapping service areas of transit systems.

Recommendation – A state dollars per capita distribution fails to recognize that different markets warrant different levels of investment depending on the purpose that the public transportation program is designed to achieve. In addition, an accurate definition of each transit system’s service area and a counting of the population within the service area are very difficult to achieve. The disadvantages noted above combined with the experience of the state with the federal transit funding formula and the inordinate redistribution shown in Table 5 present serious shortcomings of a population based distribution of state transit formula assistance.

Option 2 - Service Consumption Based Distribution Using Ridership Data

This option supports the premise that the state should invest in public transportation programs based on the level of consumption that their services receive. It presumes that the cost of providing transit service to each transit rider should be relatively consistent across the state and therefore it is fair to award state aid to transit systems based on the transit systems number of riders each year. The result of this process will be a uniform state dollars per transit rider distribution based on the number of passenger trips reported by the transit systems each year.

Transit systems in urbanized areas that receive federal aid are required to submit reports of operational and financial data each year to the Federal Transit Administration. All transit systems in Virginia that receive state aid report operational and financial data each year to DRPT. The reports submitted to DRPT have been designed to pull directly from the federal reports in order to minimize the duplication of effort. One of the operational data items included in both reports is annual unlinked passenger trips. Each time a person boards a transit vehicle it is counted as an unlinked passenger trip.

Accuracy and Verifiability - The accuracy of ridership data varies by transit property. Under federal guidelines, actual counts are done on a sampling basis and depending on the size of the urbanized area may be conducted annually, once every three years or once every five years. Only the largest urbanized areas are required to have their operational data reports audited. In practice, most transit systems estimate ridership using sampling methods and formulas and do not actually count every rider. The accuracy of the unlinked passenger trip data that is submitted to DRPT and FTA is dependent on the quality of the sampling work and the careful application of formulas. The data can be verified by DRPT and FTA only to the extent that it appears reasonable based on other operational criteria and previous reports of the transit property. This data as shown in Table 6 has not been audited and should not be presumed to be completely accurate.

Stability and Reliability – State funding distributed under this approach would be subject to fluctuations. Changes in the distribution criteria for all systems would occur annually. The addition of new transit systems, the expansion of existing transit services and the termination of existing transit systems would impact the distribution criteria.

Changes in local demographics and local economic conditions could have substantial impacts on state funding. In addition, changes in fare policies cause fluctuations in ridership and would produce changes in state funding.

Ability to Accommodate Growth or Change - The impacts of a change in ridership would be realized two years later. Data from one year is used the next year to determine the allocation for the following year. Changes in state funding would respond only to changes in the levels of consumption and would not respond to changes in the types or levels of service provided. Special accommodations would have to be made for new transit systems until a ridership base is established.

Influence on Service Effectiveness or Efficiency - A ridership based distribution process would encourage service effectiveness (riders per revenue service mile or hour) but likely would have no influence on transit service efficiency (operating cost per mile or hour).

Net Change in Distribution - A distribution of state transit formula assistance for Fiscal Year 2002 using ridership as the distribution criteria is shown in Table 6. A comparison to the formula assistance grant for the current year (FY00) is shown. In order to show the impacts of this distribution method, NO ADJUSTMENTS ARE MADE FOR MAXIMUM ELIGIBILITY.

The net changes from the current distribution to the distribution methodology of Option 2 are significant. Of the 34 state aid recipients listed, 27 would see a decrease in state aid and 7 would see an increase. This distribution approach favors transit systems that operate traditional fixed route in compact service areas with high population densities. It is very unfavorable for transit systems that operate in markets that are difficult and costly to serve such as demand response systems, systems in rural areas, systems that operate long haul commuter services and even systems that serve suburban areas.

Advantages - The advantages of this Option for a state aid distribution methodology are it's simplicity and that the distribution of state transit funding would be related to transit service.

Disadvantages - There are several disadvantages of this option. A uniform state dollars per rider distribution does not recognize that the length of the typical transit trip can differ considerably and that the type of transit service provided and the associated cost of providing the trip differ considerably among Virginia's transit systems.

This option places demand response systems and rural systems at a great disadvantage and would discourage the growth of transit in rural areas. This option also places long haul commuter programs and suburban services at a disadvantage and would counter efforts to reduce traffic congestion.

Table 6 - Option 2 - Service Based Distribution Using Ridership (\$ in 1,000's)

Estimated Formula Assistance Allocation in FY02: \$74,970

Recipient	1998 Ridership (1,000's)	Percent of State Total	Actual		Change from FY00 to FY02
			FY02 State Formula Grant Option 2	FY00 State Formula Grant	
Bay Transit - Gloucester County	10.0	0.01%	\$5	\$43	-\$38
Blacksburg Transit	1,773.4	1.24%	\$930	\$454	\$476
Bristol City Bus	37.7	0.03%	\$20	\$64	-\$44
Buchanan County Transportation	20.8	0.01%	\$11	\$50	-\$39
Central Virginia Transit - Cumberland Co.	33.9	0.02%	\$18	\$51	-\$33
Charlottesville Transit Service	673.8	0.47%	\$353	\$385	-\$32
Danville Transit	231.7	0.16%	\$122	\$154	-\$32
Dickenson County Transportation	3.4	0.00%	\$2	\$7	-\$5
District III Governmental Cooperative	121.7	0.09%	\$64	\$167	-\$103
Eastern Shore - Star Transit	25.9	0.02%	\$14	\$56	-\$42
Farmville Area Bus	58.7	0.04%	\$31	\$55	-\$24
Four County Transit (AASC)	10.0	0.01%	\$5	\$18	-\$13
Fredericksburg (FRED)	99.2	0.07%	\$52	\$104	-\$52
Graham Transit - Town of Bluefield	13.8	0.01%	\$7	\$16	-\$9
Greater Lynchburg Transit Company	1,910.9	1.34%	\$1,002	\$583	\$419
Greater Richmond Transit Company	15,787.1	11.04%	\$8,279	\$5,177	\$3,102
Greater Roanoke Transit Company	1,839.4	1.29%	\$965	\$878	\$87
Greene County Transit	59.4	0.04%	\$31	\$61	-\$30
Harrisonburg Bus Service	1,329.2	0.93%	\$697	\$334	\$363
James City County Transit	71.2	0.05%	\$37	\$195	-\$158
JAUNT, Inc. - Charlottesville Area	224.6	0.16%	\$118	\$398	-\$280
Loudoun County Department of Transportation	48.5	0.03%	\$25	\$175	-\$150
Loudoun County Transportation Association	142.4	0.10%	\$75	\$142	-\$67
Mountain Empire Older Citizens - Wise Co. Area	112.5	0.08%	\$59	\$115	-\$56
Northern Virginia Transportation Commission*	97,120.2	67.93%	\$50,930	\$45,786	\$5,144
Petersburg Area Transit	780.6	0.55%	\$409	\$231	\$178
Potomac & Rappahannock Transportation Comm.	935.8	0.65%	\$491	\$1,424	-\$933
RADAR (UHSTS) - Roanoke Co.	7.9	0.01%	\$4	\$21	-\$17
Russell County Transportation	23.0	0.02%	\$12	\$29	-\$17
Staunton (CATS)	48.4	0.03%	\$25	\$41	-\$16
Tazewell County Transportation	3.7	0.00%	\$2	\$10	-\$8
Transportation District Comm. Of Hampton Roads**	17,306.7	12.11%	\$9,076	\$9,118	-\$42
Virginia Railway Express (NVTC/PRTC)	1,933.5	1.35%	\$1,014	\$4,259	-\$3,245
Winchester Transit Service	163.5	0.11%	\$86	\$100	-\$14
STATEWIDE TOTALS:	142,962.5	100.00%	\$74,971	\$70,701	\$4,270

* The operational and financial data for NVTC include data for the WMATA Metrorail and Metrobus, Fairfax Connector, Alexandria DASH, City of Fairfax CUE, and Arlington ART transit systems.

** The operational and financial data for the Transportation District Commission of Hampton Roads include data for the former Tidewater Regional Transit and PENTRAN transit systems.

Finally, this approach to state aid distribution would create the framework for a very destructive economic scenario for transit systems. For example, if a local industry that is served by transit closed and transit ridership dropped, the local government that funds the transit system immediately would feel the economic pressure of reduced fare income. By itself, this often is enough to force service reductions or fare increases – both of which also reduce ridership. Under this state aid distribution approach, the local government also would be hit with a reduction in state support responding to the declines in ridership. The transit system quickly would find itself in a downward economic spiral that would be very destructive to the transit program.

Recommendation – A state dollars per transit rider distribution fails to recognize that different types of transit service are consumed by the riders and these different types of service warrant different levels of investment. In addition such a distribution process places certain important types of public transportation at a disadvantage and creates a dangerous economic scenario for transit systems when there is a downturn in the local economy. The disadvantages noted above combined with the considerable redistribution shown in Table 5 do not support a ridership based distribution of state transit formula assistance.

Option 3 – Service Output Based Distribution Using the Sum of Service Revenue Miles Plus Revenue Hours

This option supports the supposition that the state should invest in public transportation programs based on the amount of public transportation service that each transit system produces. This option presumes that the cost of providing each mile or hour of transit service should be relatively consistent across the state and therefore it is fair to award state aid to transit systems based on the units of service that they produce each year. The result of this process will be a uniform state dollars per hour and mile of revenue service. Revenue miles and revenue hours of service are two data items that are included in the reports of operational and financial data submitted by transit systems each year. The number of miles of service criteria favors transit systems that operate longer routes at higher speeds such as express commuter service. The number of hours of service criteria favors transit systems that operate a higher number of routes and more hours per day and weekends. Adding the two criteria together reduces the advantage that any one type of transit service would enjoy under the distribution process.

Accuracy and Verifiability - The accuracy of revenue miles and revenue hours data is dependent on the quality of the records kept and the application of formulas by the transit properties. The data is verified by DRPT and FTA only to the extent that it appears reasonable based on other operational criteria and previous reports of the transit property. This data as shown in Table 7 has not been audited and should not be presumed to be completely accurate.

Stability and Reliability - The stability and reliability of state funding under this approach is reasonable and less subject to fluctuations than ridership data. Minor changes in the distribution criteria for all systems would occur annually. The addition of new transit systems, the expansion or termination of existing transit services would impact the distribution criteria.

Ability to Accommodate Growth or Change - Changes in state funding would trail changes in transit services by two years - data from one year is used the next year to determine the allocation for the following year. All expansions of transit service would be accommodated under this distribution process. Special accommodations would have to be made for new transit systems until a service output data base is established.

Influence on Service Effectiveness or Efficiency - A distribution process based on service output encourages the provision of additional service. The amount of state funds received would not be changed by fluctuations in service consumption or by changes in the cost of services. Therefore a state aid distribution process based on service output likely would not directly influence effectiveness or efficiency.

Net Change in Distribution - Table 7 illustrates a distribution of state transit formula assistance for Fiscal Year 2002 using the sum of service revenue miles plus revenue hours as the distribution criteria. A comparison to the formula assistance grant for the current year (FY00) is shown. In order to show the impacts of this distribution method, NO ADJUSTMENTS ARE MADE FOR MAXIMUM ELIGIBILITY.

The net changes from the current distribution to the distribution methodology of Option 3 are significant. Of the 34 state aid recipients listed, 2 would see a decrease in state aid and 32 would see an increase. This distribution approach is unfavorable for rail transit services in Northern Virginia and for VRE. Rail transit services typically have a much higher unit cost of production than bus transit. This is due to the higher skill levels and associated wages for rail operators and mechanics, the cost of station attendants, prevailing wage rates in Northern Virginia, and other reasons.

Advantages - The advantages of this option for a state aid distribution methodology are its stability and the direct relationship between state transit funding and levels of transit service.

Disadvantages - A uniform state dollars per revenue mile or hour distribution does not recognize that the type of transit service provided and the associated cost of providing a mile or hour of service differ considerably among Virginia's transit systems. An hour of service where 25 people are transported in a mini-bus would receive the same level of state financial support as an hour of rail transit service where 10,000 people are transported.

Another disadvantage of this approach is that it is difficult to verify the data reported by transit properties and reporting errors are common for these data items.

Table 7 - Option 3 - Service Output Based Distribution Using the Sum of Service Revenue Miles Plus Revenue Hours (\$ in 1,000's)

<i>Estimated Formula Assistance Allocation in FY02: \$74,970</i>					
<u>Recipient</u>	1998		FY02	Actual	Change from FY00 to FY02
	Rev. Mi.	Plus Percent of State	State Formula Grant	State Formula Grant	
	(1,000's)	Total	Option 3	Grant	
Bay Transit - Gloucester County	90	0.13%	\$101	\$43	\$58
Blacksburg Transit	646	0.96%	\$723	\$454	\$269
Bristol City Bus	103	0.15%	\$115	\$64	\$51
Buchanan County Transportation	237	0.35%	\$265	\$50	\$215
Central Virginia Transit - Cumberland Co.	214	0.32%	\$239	\$51	\$188
Charlottesville Transit Service	515	0.77%	\$576	\$385	\$191
Danville Transit	334	0.50%	\$374	\$154	\$220
Dickenson County Transportation	42	0.06%	\$47	\$7	\$40
District III Governmental Cooperative	433	0.65%	\$485	\$167	\$318
Eastern Shore - Star Transit	270	0.40%	\$302	\$56	\$246
Farmville Area Bus	95	0.14%	\$106	\$55	\$51
Four County Transit (AASC)	90	0.13%	\$100	\$18	\$82
Fredericksburg (FRED)	153	0.23%	\$171	\$104	\$67
Graham Transit - Town of Bluefield	59	0.09%	\$66	\$16	\$50
Greater Lynchburg Transit Company	961	1.43%	\$1,075	\$583	\$492
Greater Richmond Transit Company	6,032	9.00%	\$6,748	\$5,177	\$1,571
Greater Roanoke Transit Company	1,282	1.91%	\$1,434	\$878	\$556
Greene County Transit	204	0.30%	\$228	\$61	\$167
Harrisonburg Bus Service	594	0.89%	\$665	\$334	\$331
James City County Transit	181	0.27%	\$202	\$195	\$7
JAUNT, Inc. - Charlottesville Area	1,530	2.28%	\$1,712	\$398	\$1,314
Loudoun County Department of Transportation	411	0.61%	\$460	\$175	\$285
Loudoun County Transportation Association	238	0.36%	\$266	\$142	\$124
Mountain Empire Older Citizens - Wise Co. Area	649	0.97%	\$726	\$115	\$611
Northern Virginia Transportation Commission*	35,320	52.70%	\$39,510	\$45,786	-\$6,276
Petersburg Area Transit	381	0.57%	\$427	\$231	\$196
Potomac & Rappahannock Transportation Comm.	1,493	2.23%	\$1,670	\$1,424	\$246
RADAR (UHSTS) - Roanoke Co.	66	0.10%	\$74	\$21	\$53
Russell County Transportation	78	0.12%	\$87	\$29	\$58
Staunton (CATS)	270	0.40%	\$302	\$41	\$261
Tazewell County Transportation	26	0.04%	\$29	\$10	\$19
Transportation District Comm. Of Hampton Roads**	12,744	19.02%	\$14,256	\$9,118	\$5,138
Virginia Railway Express (NVTC/PRTC)	1,078	1.61%	\$1,206	\$4,259	-\$3,053
Winchester Transit Service	200	0.30%	\$223	\$100	\$123
STATEWIDE TOTALS:	67,020	100.00%	\$74,970	\$70,701	\$4,269

* The operational and financial data for NVTC include data for the WMATA Metrorail and Metrobus, Fairfax Connector, Alexandria DASH, City of Fairfax CUE, and Arlington ART transit systems.

** The operational and financial data for the Transportation District Commission of Hampton Roads include data for the former Tidewater Regional Transit and PENTRAN transit systems.

Recommendation – A service output based distribution offers stability and has advantages over a population or service consumption based process. However this approach treats each mile or hour of service operated in Virginia as equal when in reality there are great differences in service characteristics. The failure of this distribution approach to recognize that different types of transit service warrant different levels of investment is a serious shortcoming.

Option 4 – Local Investment Based Distribution Using Operating Costs Adjusted by Composite Fiscal Stress Factors

This option is a variation of the current state formula assistance distribution process that is described on page 10 of this report. This option offers the supposition that the state should invest in public transportation programs uniformly according to the amount of local investment that is made in public transportation services while recognizing and taking into account that all localities are not equally available to afford the transit services that they need. This option presumes that local governments will initiate public transportation systems and will determine the appropriate types and levels of service for their communities. Under this option a consistent ratio of state dollars per dollar of investment is produced. However, the expenses incurred in fiscally stressed localities are inflated in order to encourage transit services in those communities.

Each year, the Commission on Local Government for the Commonwealth of Virginia produces a document entitled the “Report on the Comparative Revenue Capacity, Revenue Effort, and Fiscal Stress of Virginia’s Counties and Cities”. This report examines the comparative fiscal condition of Virginia’s counties and cities. Included in this report is a listing of the composite fiscal stress index scores for each county and city in the Commonwealth. These composite index scores are useful in identifying the standing of a particular jurisdiction in relationship to all other jurisdictions in the Commonwealth. These scores are used in numerous state funding programs for Virginia which are not related to transportation.

In this proposed distribution option, a composite fiscal stress factor is calculated for each transit property. This factor is calculated by determining the average of the composite fiscal stress index scores for all of the jurisdictions served by the transit property and dividing this average by 100. The calculation of composite fiscal stress factors is shown in Appendix D. Data was taken from the 1996/97 report of the Commission on Local Government. This factor is then multiplied times the actual operating expenses for the transit property to produce an “Adjusted Operating Expense” number. These calculations are shown in Table 8. The current state formula assistance distribution process is followed then using the adjusted operating expenses.

Accuracy and Verifiability – Operating expenses are the most accurate of all data items reported by transit properties. Operating expenses are verified each year by audits of the local transit systems. The data as shown in Table 8 has been audited and should be presumed to be accurate.

Table 8 - Adjustment of Operating Expenses by Composite Fiscal Stress Factors

Recipient	FY98 Total Operating Expenses	Composite Fiscal Stress Index Factor	Adjusted FY98 Total Operating Expenses
Bay Transit - Gloucester County	\$188,314	1.61	\$303,186
Blacksburg Transit	\$1,967,278	1.67	\$3,285,354
Bristol City Bus	\$276,870	1.78	\$492,829
Buchanan County Transportation	\$215,610	1.76	\$379,474
Central Virginia Transit - Cumberland Co.	\$222,057	1.66	\$368,615
Charlottesville Transit Service	\$1,670,212	1.77	\$2,956,275
Danville Transit	\$668,129	1.73	\$1,155,863
Dickenson County Transportation	\$29,711	1.73	\$51,400
District III Governmental Cooperative	\$725,748	1.70	\$1,233,772
Eastern Shore - Star Transit	\$242,154	1.72	\$416,505
Farmville Area Bus	\$238,536	1.69	\$403,126
Four County Transit (AASC)	\$78,000	1.71	\$133,380
Fredericksburg (FRED)	\$450,618	1.65	\$743,520
Graham Transit - Town of Bluefield	\$67,972	1.64	\$111,474
Greater Lynchburg Transit Company	\$2,529,429	1.78	\$4,502,384
Greater Richmond Transit Company	\$22,452,185	1.64	\$36,821,583
Greater Roanoke Transit Company	\$3,806,517	1.75	\$6,661,405
Greene County Transit	\$262,809	1.62	\$425,751
Harrisonburg Bus Service	\$1,446,992	1.72	\$2,488,826
James City County Transit	\$846,993	1.56	\$1,321,309
JAUNT, Inc. - Charlottesville Area	\$1,725,836	1.61	\$2,778,596
Loudoun County Department of Transportation	\$760,087	1.38	\$1,048,920
Loudoun County Transportation Association	\$617,264	1.53	\$944,414
Mountain Empire Older Citizens - Wise Co. Area	\$497,683	1.71	\$851,038
Northern Virginia Transportation Commission*	\$198,566,802	1.50	\$297,850,203
Petersburg Area Transit	\$1,000,482	1.84	\$1,840,887
Potomac & Rappahannock Transportation Comm.	\$6,176,974	1.61	\$9,944,928
RADAR (UHSTS) - Roanoke Co.	\$91,479	1.72	\$157,344
Russell County Transportation	\$127,543	1.68	\$214,272
Staunton (CATS)	\$176,182	1.69	\$297,748
Tazewell County Transportation	\$41,485	1.67	\$69,280
Transportation District Comm. Of Hampton Roads**	\$39,541,677	1.76	\$69,593,352
Virginia Railway Express (NVTC/PRTC)	\$18,469,683	1.59	\$29,366,796
Winchester Transit Service	<u>\$434,066</u>	1.69	<u>\$733,572</u>
STATEWIDE TOTALS:	\$306,613,377		\$479,947,377

* The operational and financial data for NVTC include data for the WMATA Metrorail and Metrobus, Fairfax Connector, Alexandria DASH, City of Fairfax CUE, and Arlington ART transit systems.

** The operational and financial data for the Transportation District Commission of Hampton Roads include data for the former Tidewater Regional Transit and PENTRAN transit systems.

Stability and Reliability – State funding distributed under this approach is subject to annual fluctuations. Minor changes in the distribution criteria for all systems would

occur annually. The addition of new transit systems, the expansion or termination of existing transit services would impact the distribution criteria.

Ability to Accommodate Growth or Change - Changes in state funding would trail changes in transit services by two years - data from one year is used the next year to determine the allocation for the following year. All expansions of transit service would be accommodated under this distribution process. Special accommodations are made for new transit services until an actual operating expense data base is established.

Influence on Service Effectiveness or Efficiency - A distribution process based on local investment tends to encourage the provision of additional service. A dollars per unit of investment based distribution does not directly influence effectiveness. However, such a distribution indirectly would encourage service effectiveness (riders per revenue service mile or hour since greater consumption would produce savings to the operator with no reduction in state aid. This distribution approach can have a negative influence on service efficiency. Cost reductions that are achieved with no service reductions will result in reduced state aid under the current process.

Net Change in Distribution - Table 9 demonstrates a distribution of state transit formula assistance for Fiscal Year 2002 using the operating expenses that are adjusted by composite fiscal stress factors. A comparison to the formula assistance grant for the current year (FY00) is shown. In order to show the impacts of this distribution method, NO ADJUSTMENTS ARE MADE FOR MAXIMUM ELIGIBILITY.

The net changes from the current distribution to the distribution methodology of Option 4 are significant. Of the 34 state aid recipients listed, 1 would see a small decrease in state aid and 33 would see an increase. This distribution approach is favorable for transit services in areas that are fiscally stressed and slightly unfavorable for the more affluent jurisdictions such as those in Northern Virginia.

Advantages - The advantages of this Option for a state aid distribution methodology are its recognition of local governments' ability to afford transit services and the direct relationship between transit funding and levels of transit service.

By using the actual costs of transit services, this option automatically takes into account the differences in types and levels of transit service as well as differences in prevailing wage rates and costs of living.

This option is directly responsive to growth and changes in types of service.

This option uses the most accurate and easy to verify distribution criteria.

Disadvantages - A transit system that holds down costs while maintaining or increasing levels of service may wind up receiving less state assistance from one year to another. This is a potential "efficiency penalty" of a local investment based distribution process.

Table 9 - Option 4 - Local Investment Based Distribution Using Operating Costs Adjusted by Composite Fiscal Stress Factors (\$ in 1,000's)

Recipient	Estimated Formula Assistance Allocation in FY02: \$74,970				
	Adjusted FY98 Total Operating Expenses	Percent of State Total	FY02 State Formula Grant Option 4	Actual FY00 Formula Grant	Change from FY00 to FY02
Bay Transit - Gloucester County	\$303	0.06%	\$47	\$43	\$4
Blacksburg Transit	\$3,285	0.68%	\$513	\$454	\$59
Bristol City Bus	\$493	0.10%	\$77	\$64	\$13
Buchanan County Transportation	\$380	0.08%	\$59	\$50	\$9
Central Virginia Transit - Cumberland Co.	\$369	0.08%	\$58	\$51	\$7
Charlottesville Transit Service	\$2,956	0.62%	\$462	\$385	\$77
Danville Transit	\$1,156	0.24%	\$181	\$154	\$27
Dickenson County Transportation	\$51	0.01%	\$8	\$7	\$1
District III Governmental Cooperative	\$1,234	0.26%	\$193	\$167	\$26
Eastern Shore - Star Transit	\$417	0.09%	\$65	\$56	\$9
Farmville Area Bus	\$403	0.08%	\$63	\$55	\$8
Four County Transit (AASC)	\$133	0.03%	\$21	\$18	\$3
Fredericksburg (FRED)	\$744	0.15%	\$116	\$104	\$12
Graham Transit - Town of Bluefield	\$112	0.02%	\$17	\$16	\$1
Greater Lynchburg Transit Company	\$4,502	0.94%	\$703	\$583	\$120
Greater Richmond Transit Company	\$36,822	7.67%	\$5,752	\$5,177	\$575
Greater Roanoke Transit Company	\$6,661	1.39%	\$1,041	\$878	\$163
Greene County Transit	\$426	0.09%	\$67	\$61	\$6
Harrisonburg Bus Service	\$2,489	0.52%	\$389	\$334	\$55
James City County Transit	\$1,321	0.28%	\$206	\$195	\$11
JAUNT, Inc. - Charlottesville Area	\$2,779	0.58%	\$434	\$398	\$36
Loudoun County Department of Transportation	\$1,049	0.22%	\$164	\$175	-\$11
Loudoun County Transportation Association	\$944	0.20%	\$148	\$142	\$6
Mountain Empire Older Citizens - Wise Co. Area	\$851	0.18%	\$133	\$115	\$18
Northern Virginia Transportation Commission*	\$297,850	62.06%	\$46,526	\$45,786	\$740
Petersburg Area Transit	\$1,841	0.38%	\$288	\$231	\$57
Potomac & Rappahannock Transportation Comm.	\$9,945	2.07%	\$1,553	\$1,424	\$129
RADAR (UHSTS) - Roanoke Co.	\$157	0.03%	\$25	\$21	\$4
Russell County Transportation	\$214	0.04%	\$33	\$29	\$4
Staunton (CATS)	\$298	0.06%	\$47	\$41	\$6
Tazewell County Transportation	\$69	0.01%	\$11	\$10	\$1
Transportation District Comm. Of Hampton Roads**	\$69,593	14.50%	\$10,871	\$9,118	\$1,753
Virginia Railway Express (NVTC/PRTC)	\$29,367	6.12%	\$4,587	\$4,259	\$328
Winchester Transit Service	\$734	0.15%	\$115	\$100	\$15
STATEWIDE TOTALS:	\$479,948	100.00%	\$74,973	\$70,701	\$4,272

* The operational and financial data for NVTC include data for the WMATA Metrorail and Metrobus, Fairfax Connector, Alexandria DASH, City of Fairfax CUE, and Arlington ART transit systems.

** The operational and financial data for the Transportation District Commission of Hampton Roads include data for the former Tidewater Regional Transit and PENTRAN transit systems.

Recommendation - A local investment based distribution process is directly related to the provision of transit services and fully takes into account the different types of transit service that are operated in Virginia. This process also takes into account regional differences in prevailing wage rates and costs of living. Adjusting the distribution to account for the fiscal stress of the jurisdictions that are supporting the public transportation programs appears to be reasonable and equitable.

SUMMARY AND RECOMMENDATIONS

Summary

The formulas used for the apportionment of federal transit funds do not offer a good example for Virginia. The federal formulas that work the best in Virginia are the ones that allow the states the greatest flexibility in allocating funds to recipients. Virginia's interest in the federal transit program apportionment formulas should focus on how much financial assistance they produce for Virginia's public transportation operators.

Most of the concerns that have been expressed by Virginia's transit operators can be addressed with some minor revisions to the state funding formula. The concerns that have been expressed regarding the inadequacy of state funding - especially for transit capital projects - can not be addressed with formula changes. It is expected that the Governor's Innovative Progress Program for Improving Transportation in Virginia will provide additional support for transit capital projects. The recommendations listed below address all of the other concerns expressed.

The four options reviewed for distributing state formula assistance produced wide ranging results and some of these options presented very significant disadvantages. All of the options reviewed in this report provide state aid allocations that are equal in terms of state dollars provided per unit of distribution criteria. While these three approaches to state aid distribution provide equal per unit allocations, they are not equitable to the jurisdictions that operate transit services. They fail to recognize that the size, scope and cost of properly designed and well run local public transportation systems will vary considerably from one jurisdiction to another. The cost of these public transportation services on a per capita, per passenger trip, and per unit of service output will d

The market based distribution provides a uniform state dollars per capita allocation. By using service area population, the market based distribution would provide stable funding for Virginia's transit systems but would produce grants that bore no relationships to the types or levels of transit services that are provided. This type of distribution process would not accommodate growth in transit services and great disruption of current funding levels would result. In addition, obtaining reasonable and accurate measurements of populations served by the transit programs would be very difficult and overlapping service areas would further complicate the process.

The service consumption based distribution provides uniform state dollars per passenger trip and state dollars per unit of service produced. This transit ridership based distribution option provided some connection between state funding and the actual transit services provided and offered a simple formula that would tend to encourage service effectiveness. However, this approach to state aid distribution also would produce grants that bore no direct relationships to the types of transit services that are provided and would place transit programs that serve difficult markets such as those in rural areas and suburban services at a disadvantage. In addition, this approach to state aid distribution would create the framework for a downward economic spiral scenario for transit systems when the local economic situation takes a downturn. Reductions in ridership that result from the downturn would create financial hardships for the local governments which then would be compounded by reductions in state aid. The accuracy of transit ridership data is questionable for some of Virginia's transit systems and it is not easily verifiable for any transit system.

The service output based distribution provides uniform state dollars per unit of service produced. This provides a better connection between state funding and the actual transit services provided and offered fairly stable grants. However the accuracy of this data often is questionable and it is verifiable only in general terms. This approach was very unfavorable to rail transit systems which have a higher cost per mile or hour of service than bus transit systems but also carry far more people per hour.

The final option examined in this report is a modification of the existing state formula assistance distribution process. Operating expenses are used as the criteria for distributing state aid but they are adjusted by fiscal stress factors derived from a report produced by the Virginia Commission on Local Government. This option uses the most accurate and verifiable distribution criteria and provides the best connection between state funding and the actual transit services provided. This option also was the most responsive to changes and growth in transit services. Changes to the process are needed to remove an "efficiency penalty" that may occur in certain circumstances.

Options not examined in this report were formulas that combined criteria. Such a formula might include any or all of the criteria described in the four options. These were not examined because of the accuracy and verifiability of much of the data and the complexities of such formulas. More importantly, they were not examined in recognition that such a formula would have to be engineered to produce acceptable results. If the federal transit funding formulas are any example, the value of such a formula likely would not lie in the principals or policies that it serves but rather in the cleverness of its engineering.

House Joint Resolution Number 720 stated that the formulas which have been used in the past to distribute state and federal aid have created inequity by funneling vastly greater sums to some regions and localities than to others. The four distribution options reviewed in this report also have equity implications. The market based distribution

option examined in this report would create funding inequities in terms of levels of state aid received compared to levels of transit service provided. The service consumption based, and service outputs based distributions would create funding inequities by favoring certain types transit service and placing transit services in markets that are difficult to serve at a disadvantage. The local investment based distribution process treats all types of public transit service the same. It provides funding that is directly matched to levels of service provided so it treats large and small jurisdictions equally. Finally, by adjusting the distribution criteria using local financial stress factors, this option recognizes that all jurisdictions are not equally able to afford the public transportation services that they need. The local investment based distribution process described in this report is the most reasonable, fair and equitable of the four options examined.

Table 10 shows local investment levels in public transportation for Fiscal Year 2000. Column B of Table 10 shows the total amount of local revenues expended in support of public transportation for each of our state aid recipients. These numbers include operating revenues and all local jurisdiction contributions to public transportation in FY00. They do not include regional gas tax revenues, urban highway funds, or any other type of state revenue under the control of local governments. Column C shows how the local investment of each transit property compares with other transit properties as a percentage of the statewide total. Column E shows the local investment in public transportation divided by the service area population for the transit system. The same population estimates are shown that were used for the market based distribution option in this report. These numbers represent total local investment per capita per year based on FY00 spending. Column F shows the preliminary formula assistance percentages that were used in the FY00 distribution process. A comparison of the percentages of state formula assistance received and the percentages of local investment show a close correlation. The differences are due to the inclusion of local investment in transit capital projects in the numbers of Column B and the impacts of farebox revenues and federal assistance in transit operating budgets.

Recommendations

Based on the concerns regarding the current state aid distribution process that have been expressed in the past and the examination of the advantages, disadvantages and equity implications of the four state aid distribution options reviewed in this report, the following changes are recommended to the state formula assistance distribution process.

- **Beginning in Fiscal Year 2002, composite fiscal stress factors should be applied to operating expenses under the current state distribution process.** These factors should be developed from the latest report of the Commission on Local Government. An illustration of the results of this procedure are shown on Table 9 of this report.

Table 10 - Local Investment in Public Transportation

	Column B	Col. C	Col. D	Column E	Column F
	FY00 Total	Percent of	Service	FY00 Local	Percent of
	Local	State	Area	Investment	State
	Investment	Total	Pop.	Per Capita	Assistance
<u>Column A - State Aid Recipients</u>					Received
					FY00
Bay Transit - Gloucester County	\$192	0.08%	53.0	\$3.61	0.06%
Blacksburg Transit	\$1,404	0.60%	76.6	\$18.33	0.64%
Bristol City Bus	\$231	0.10%	18.4	\$12.56	0.09%
Buchanan County Transportation	\$339	0.14%	31.3	\$10.83	0.07%
Central Virginia Transit - Cumberland Co.	\$90	0.04%	29.5	\$3.05	0.07%
Charlottesville Transit Service	\$1,163	0.50%	40.0	\$29.08	0.54%
Danville Transit	\$413	0.18%	53.1	\$7.78	0.22%
Dickenson County Transportation	\$32	0.01%	17.6	\$1.80	0.01%
District III Governmental Cooperative	\$184	0.08%	156.1	\$1.18	0.24%
Eastern Shore - Star Transit	\$129	0.05%	45.7	\$2.82	0.08%
Farmville Area Bus	\$110	0.05%	17.3	\$6.38	0.08%
Four County Transit (AASC)	\$23	0.01%	123.6	\$0.19	0.03%
Fredericksburg (FRED)	\$494	0.21%	101.8	\$4.85	0.15%
Graham Transit - Town of Bluefield	\$49	0.02%	6.5	\$7.58	0.02%
Greater Lynchburg Transit Company	\$1,771	0.76%	66.1	\$26.79	0.82%
Greater Richmond Transit Company	\$19,386	8.27%	688.3	\$28.16	7.32%
Greater Roanoke Transit Company	\$2,629	1.12%	122.3	\$21.49	1.24%
Greene County Transit	\$105	0.04%	13.5	\$7.80	0.09%
Harrisonburg Bus Service	\$1,009	0.43%	34.0	\$29.67	0.47%
James City County Transit	\$470	0.20%	43.2	\$10.88	0.28%
JAUNT, Inc. - Charlottesville Area	\$1,127	0.48%	169.5	\$6.65	0.56%
Loudoun County Department of Transportation	\$871	0.37%	123.8	\$7.03	0.25%
Loudoun County Transportation Association	\$445	0.19%	240.5	\$1.85	0.20%
Mountain Empire Older Citizens - Wise Co. Area	\$129	0.05%	91.5	\$1.41	0.16%
Northern Virginia Transportation Commission*	\$157,078	66.99%	1,247.5	\$125.91	64.76%
Petersburg Area Transit	\$501	0.21%	37.0	\$13.54	0.34%
Potomac & Rappahannock Transportation Comm.	\$7,647	3.26%	300.1	\$25.48	2.01%
RADAR (UHSTS) - Roanoke Co.	\$36	0.02%	108.0	\$0.33	0.03%
Russell County Transportation	\$116	0.05%	28.7	\$4.03	0.04%
Staunton (CATS)	\$232	0.10%	98.8	\$2.35	0.06%
Tazewell County Transportation	\$30	0.01%	46.0	\$0.66	0.01%
Transportation District Comm. Of Hampton Roads**	\$26,982	11.51%	1,343.3	\$20.09	12.90%
Virginia Railway Express (NVTC/PRTC)	\$8,864	3.78%	1,439.4	\$6.16	6.02%
Winchester Transit Service	\$192	0.08%	22.0	\$8.73	0.14%
STATEWIDE TOTALS:	\$234,471	100.00%	7,034.0		100.00%

* The operational and financial data for NVTC include data for the WMATA Metrorail and Metrobus, Fairfax Connector, Alexandria DASH, City of Fairfax CUE, and Arlington ART transit systems.

** The operational and financial data for the Transportation District Commission of Hampton Roads include data for the former Tidewater Regional Transit and PENTRAN transit systems.

- **Beginning in Fiscal Year 2002, a hold harmless provision should be applied to any transit system that would receive less funding than in the prior fiscal year solely as the result of applying composite fiscal stress factors.** This likely will be necessary for very few transit properties and can be accomplished with little disruption to the distribution process.
- **Beginning in Fiscal Year 2002, a hold harmless provision should be applied to eliminate the “efficiency penalty” that can occur under current procedures.** Any transit system that holds operating expenses constant or decreases operating expenses without reducing service levels will receive at least as much state funding as they did in the prior year. This likely will be necessary for very few transit properties and can be accomplished with little disruption to the distribution process.
- **Beginning in Fiscal Year 2002, simplify the state aid eligibility calculation by applying a single state participation rate for all categories of eligible expense.** The current participation rate for the largest category of eligible expense (fuel, tires, and maintenance parts and supplies - 95%) will be applied to all categories of eligible expense.

It is proposed to make all of these changes through appropriations act language which the Department of Rail and Public Transportation will submit to the 2001 session of the Virginia General Assembly. These proposed changes will be presented to Virginia’s public transportation operators and fully debated and discussed prior to their submission by DRPT.

APPENDIX A

GENERAL ASSEMBLY OF VIRGINIA – 1999 SESSION

HOUSE JOINT RESOLUTION NO. 720

Requesting the Department of Rail and Public Transportation to study the distribution of state and federal aid to mass transit programs.

Agreed to by the House of Delegates, February 25, 1999

Agreed to by the Senate, February 23, 1999

WHEREAS, for many regions of the Commonwealth, increased mass transit is a vital component of a balanced transportation improvement strategy; and

WHEREAS, at some times of day in some regions, increased availability and use of mass transit offers the only realistic solution to ever increasing traffic congestion; and

WHEREAS, recently enacted federal legislation has made available to Virginia considerably increased funds that are either targeted specifically for mass transit programs or to broad-based transportation improvement programs that could have significant mass transport components; and

WHEREAS, historically, Virginia's mass transit program has not only been generally inadequate, but the formulas used for distributing state and federal aid to regional and local mass transit programs have compounded inadequacy with inequity, by funneling vastly greater sums to some regions and localities than to others; and

WHEREAS, the availability of increased funds to support mass transit programs in Virginia provides an important opportunity to use these increased funds to reduce interregional and other inequities in the formulas used to distribute state and federal aid to regional and local mass transit programs; now, therefore, be it

RESOLVED by the House of Delegates, the Senate concurring, That the Department of Rail and Public Transportation be requested to study the distribution of state and federal aid to mass transit programs and recommend to the Governor and General Assembly such legislative and other changes as may appear necessary and desirable. All agencies of the Commonwealth shall provide assistance to the Department for this study, upon request.

The Department shall complete its work in time to submit its findings and recommendations to the Governor and the 2000 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

APPENDIX B

Public Transportation Funding in Virginia

This document is an eighteen page report prepared by the Virginia Department of Rail and Public Transportation. This report provides an estimate of all federal, state, and local revenues that will be used to support public transportation in Virginia in Fiscal Year 2000. A brief description is provided for each funding source or program and references are provided to the Commonwealth Transportation Board Six Year Improvement Program for Fiscal Year 1999-2000. Federal and state funding details are provided for each public transportation system in the Six Year Improvement Program.

A copy of this report can be obtained by contacting Charles M. Badger at the Department of Rail and Public Transportation, 1401 East Broad Street, Richmond, Virginia 23219, phone number (804) 786-8135, e-mail badger_cm@drpt.state.va.us.

APPENDIX C
Calculation of Service Area Populations

Public Transportation Systems	Total	Population Data for the Localities in the Public Transportation Systems Service Areas - 1,000's								
		Essex Co.	Gloucester Co.	Lancaster Co.						
Bay Transit - Gloucester County	53.01	8.69	33.42	10.90						
Blacksburg Transit	76.60	Montgomery Co.								
Bristol City Bus	18.43	Bristol								
Buchanan County Transportation	31.33	Buchanan Co.								
Central Va. Transit	29.49	Amelia Co.	Buckingham Co.	Cumberland Co.						
		8.79	12.87	7.83						
Charlottesville Transit Service	40.00	Charlottesville								
Danville Transit	53.06	Danville								
Dickenson County Transportation	17.62	Dickenson Co.								
District III Governmental Cooperative	156.14	Bland Co.	Carroll Co.	Grayson Co.	Smyth Co.	Washington Co.	Wythe Co.	Bristol	Galax	
		6.51	26.59	16.20	33.37	48.00	25.47	18.43	6.67	
Eastern Shore - Star Transit	45.66	Accomac Co.	Northampton Co.							
		32.60	13.06							
Farmville Area Bus	17.32	Prince Edward Co.								
Four County Transit (AASC)	123.58	Buchanan Co.	Dickenson Co.	Russell Co.	Tazewell Co.					
		31.33	17.62	28.67	45.96					
Fredericksburg (FRED)	101.83	Spottsylvania Co.	Fredericksburg							
		79.88	21.95							
Graham Transit - Town of Bluefield	6.51	Bland Co.								
Greater Lynchburg Transit Company	66.05	Lynchburg								
Greater Richmond Transit Company	688.29	Chesterfield Co.	Henrico Co.	City of Richmond						
		250.00	235.23	203.06						
Greater Roanoke Transit Company	122.30	Roanoke	Salem							
		97.30	25.00							
Greene County Transit	13.50	Greene Co.								
Harrisonburg Bus Service	34.00	Harrisonburg								
James City County Transit	43.18	James City Co.								

APPENDIX C
Calculation of Service Area Populations

Public Transportation Systems	Total	Population Data for the Localities in the Public Transportation Systems Service Areas - 1,000's						
		Albemarle Co.	Fluvanna Co.	Louisa Co.	Nelson Co.	Charlottesville		
JAUNT, Inc.	169.46	77.00	16.06	23.00	13.40	40.00		
Loudoun Co. Dept. of Transportation	123.78	Loudoun Co.						
Loudoun Co. Transportation Association	240.54	Clarke Co.	Culpeper Co.	Fauquier Co.	Loudoun Co.	Orange Co.		
Mtn. Empire Older Ctzns. (Wise Co.)	91.52	Lee Co.	Scott Co.	Wise Co.	Norton			
Northern Virginia Transp. Comm.	1,247.51	Arlington Co.	Fairfax Co.	Alexandria	Fairfax City	Falls Church		
Petersburg Area Transit	37.03	Petersburg						
Potomac Rappahannock Transp. Comm.	300.11	Prince William Co.	Manassas	Manassas Park				
RADAR - Roanoke Co.	107.95	Alleghany Co.	Roanoke Co.	Clifton Forge	Covington			
Russell County Transportation	28.67	Russell Co.						
Staunton (CATS)	97.78	Augusta Co.	Staunton	Waynesboro				
Tazewell County Transportation	45.96	Tazewell Co.						
Transp. District Comm. of Hampton Roads	1,343.30	Chesapeake	Hampton	Newport News	Norfolk	Portsmouth	Suffolk	Va. Beach
Virginia Railway Express (NVTC/PRTC)	1,439.37	Fairfax Co.	Prince William Co.	Stafford Co.	Alexandria	Fredericksburg	Manassas	Manassas Park
Winchester Transit Service	21.95	Winchester						

APPENDIX D
Calculation of Fiscal Stress Index Scores 1996/97

Public Transportation Systems	Average	Composite Fiscal Stress Index Scores for the Localities in the Public Transportation Systems Service Areas								
		Essex Co.	Gloucester Co.	Lancaster Co.						
Bay Transit - Gloucester County	161.04	163.35	162.61	157.17						
Blacksburg Transit	166.54	Montgomery Co.								
Bristol City Bus	177.65	Bristol								
Buchanan County Transportation	176.01	Buchanan Co.								
		Amelia Co.	Buckingham Co.	Cumberland Co.						
Central Va. Transit	165.82	164.99	166.64	165.83						
Charlottesville Transit Service	176.87	Charlottesville								
Danville Transit	173.33	Danville								
Dickenson County Transportation	172.98	Dickenson Co.								
		Bland Co.	Carroll Co.	Grayson Co.	Smyth Co.	Washington Co.	Wythe Co.	Bristol	Galax	
District III Governmental Cooperative	169.63	163.61	166.72	168.77	168.69	163.90	167.04	177.65	180.62	
		Accomac Co.	Northampton Co.							
Eastern Shore - Star Transit	172.03	172.46	171.59							
Farmville Area Bus	168.53	Prince Edward Co.								
		Buchanan Co.	Dickenson Co.	Russell Co.	Tazewell Co.					
Four County Transit (AASC)	170.84	176.01	172.98	167.88	166.50					
		Spottsylvania Co.	Fredericksburg							
Fredericksburg (FRED)	164.64	155.92	173.36							
Graham Transit - Town of Bluefield	163.61	Bland Co.								
Greater Lynchburg Transit Company	178.15	Lynchburg								
		Chesterfield Co.	Henrico Co.	City of Richmond						
Greater Richmond Transit Company	164.27	153.84	158.54	180.44						
		Roanoke	Salem							
Greater Roanoke Transit Company	175.46	180.27	170.65							
Greene County Transit	161.98	Greene Co.								
Harrisonburg Bus Service	171.70	Harrisonburg								
James City County Transit	155.99	James City Co.								

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Calculation of Fiscal Stress Index Scores 1996/97

Public Transportation Systems	Average	Composite Fiscal Stress Index Scores for the Localities in the Public Transportation Systems Service Areas						
		Albemarle Co.	Fluvanna Co.	Louisa Co.	Nelson Co.	Charlottesville		
JAUNT, Inc.	160.64	153.64	158.79	154.57	159.32	176.87		
Loudoun Co. Dept. of Transportation	138.39	Loudoun Co.						
Loudoun Co. Transportation Association	153.39	Clarke Co.	Culpeper Co.	Fauquier Co.	Loudoun Co.	Orange Co.		
Mtn. Empire Older Ctzns. (Wise Co.)	171.14	Lee Co.	Scott Co.	Wise Co.	Norton			
Northern Virginia Transp. Comm.	149.78	Arlington Co.	Fairfax Co.	Alexandria	Fairfax City	Falls Church		
Petersburg Area Transit	183.88	Petersburg						
Potomac Rappahannock Transp. Comm.	161.49	Prince William Co.	Manassas	Manassas Park				
RADAR - Roanoke Co.	172.26	Alleghany Co.	Roanoke Co.	Clifton Forge	Covington			
Russell County Transportation	167.88	Russell Co.						
Staunton (CATS)	169.00	Augusta Co.	Staunton	Waynesboro				
Tazewell County Transportation	166.50	Tazewell Co.						
Transp. District Comm. of Hampton Roads	176.17	Chesapeake	Hampton	Newport News	Norfolk	Portsmouth	Suffolk	Va. Beach
Virginia Railway Express (NVTC/PRTC)	159.11	Fairfax Co.	Prince William Co.	Stafford Co.	Alexandria	Fredericksburg	Manassas	Manassas Park
Winchester Transit Service	169.27	Winchester						