

TECHNICAL
ASSISTANCE REPORT

**THE GEOGRAPHIC DISTRIBUTION
OF HIGHWAY MAINTENANCE
AND OPERATIONS FUND AND
TRANSPORTATION TRUST FUND
REVENUES AND ALLOCATIONS
IN VIRGINIA:
FY 94 AND FY 95 UPDATE**



CHERIE A. KYTE
Transportation Research Associate



TECHNICAL ASSISTANCE REPORT

**THE GEOGRAPHIC DISTRIBUTION OF HIGHWAY MAINTENANCE AND
OPERATIONS FUND AND TRANSPORTATION TRUST FUND REVENUES AND
ALLOCATIONS IN VIRGINIA: FY 94 AND FY 95 UPDATE**

**Cherie A. Kyte
Transportation Research Associate**

(The opinions, findings, and conclusions expressed in this
report are those of the author and not necessarily
those of the sponsoring agencies.)

Virginia Transportation Research Council
(A Cooperative Organization Sponsored Jointly by the
Virginia Department of Transportation and the University of Virginia)

Charlottesville, Virginia

February 1995
VTRC 95-TAR8

FOREWORD

This report is intended to serve as an update to *The Geographic Distribution of HMOF and TTF Revenues and Allocations in Virginia from FY 88 through FY 92* (Report Number VTRC 93-TAR5) and its 1993 update (VTRC 94-TAR3). The reader is encouraged to review both of these reports, as they contain detailed descriptions of both the subject matter and the methodology employed to estimate the distribution of transportation revenues.

The purpose of this study was to estimate the geographic distribution of transportation allocations and revenues for FY 94 and FY 95. The study also examined the distribution of allocations and revenues among the construction districts of Virginia over an 8-year period, FY 88 through FY 95.

EXECUTIVE SUMMARY

The geographic distribution of transportation allocations and revenues is an important element in gaining an understanding of transportation finance in Virginia. This report presents estimates of the distribution of transportation allocation revenues to the nine construction districts in Virginia from FY 88 through FY 95.

The average ratio of allocation to revenue shares by construction district over the period FY 88 through FY 95 was as follows:

District	Allocation/Revenue Ratio
Bristol	1.29
Culpeper	0.91
Fredericksburg	0.88
Lynchburg	1.03
Northern Virginia	1.01
Richmond	0.84
Salem	0.88
Staunton	0.85
Suffolk	1.18

The ratios may be viewed as the return on each dollar of transportation revenues generated in each construction district. For example, the 8-year average in Bristol can be interpreted as a return of approximately \$1.29 for each dollar Bristol deposited in the HMOF and TTF during that period. Similarly, an average 8-year ratio of 0.84 in Richmond represents a return of about \$0.84 for each dollar contributed by Richmond over that time period.

An examination of the 8-year ratios revealed the following important points:

- ▶ For FY 88 through FY 95, six districts received a dollar-for-dollar return on their transportation investment: Culpeper, Fredericksburg, Lynchburg, Northern Virginia, Salem, and Staunton all had ratios within a reasonable range of 1.¹
- ▶ Bristol and Suffolk, with 8-year average ratios significantly greater than 1, were net recipients of transportation funds.
- ▶ Richmond, the district with a ratio significantly less than 1, was a net donor.

A return is considered to be within a "reasonable" range of 1 if it falls within the interval 0.85 to 1.15.

TECHNICAL ASSISTANCE REPORT

THE GEOGRAPHIC DISTRIBUTION OF HIGHWAY MAINTENANCE OPERATIONS FUND AND TRANSPORTATION TRUST FUND REVENUES AND ALLOCATIONS IN VIRGINIA: FY 94 AND FY 95 UPDATES

Cherie Kyte
Transportation Research Associate

INTRODUCTION

The Commonwealth of Virginia has developed an extensive transportation network, which travelers in Virginia support through a package of taxes and user fees. As with any investment, the investors expect an adequate return; that is, the level of mobility must be commensurate with the travelers' level of support. For example, travelers in a particular region, such as Northern Virginia, expect that the Commonwealth will invest approximately \$1 in roads and other transportation facilities in the area for every \$1 of taxes and user fees collected in that area.

The Virginia Department of Transportation (VDOT) invests transportation resources on a statewide basis. VDOT strives to ensure a "fair return" of transportation resources to the regions from which revenues are collected. For example, VDOT utilizes construction allocation formulae to distribute construction funding equitably. However, given that VDOT is providing a statewide system, it is not governed by providing a strictly dollar-for-dollar return. As a result, the "dollar return" of transportation revenues to different regions of the Commonwealth can only be estimated.

In order to address this issue, the Virginia Transportation Research Council (VTRC) conducted a study in 1992. The study estimated the distribution of transportation allocations and revenues to the nine construction districts in the state. The study encompassed FY 88 through FY 92 and examined the distribution in VDOT's four primary activities: construction, maintenance, administration, and nonhighway (mass transit, ports, and airports). The results of the study indicated that, on average, most construction districts received a dollar-for-dollar return on their investment. In addition, trends identified in the study gave an excellent picture of transportation finance in Virginia. The study was updated in 1993 with similar results.

PURPOSE AND SCOPE

The purpose of this study was to update the efforts described in two previous reports:
The Geographic Distribution of HMOF and TTF Revenues and Allocations in Virginia from FY

88 through FY 92, and the FY 93 Update. The FY 94 and FY 95 updates presented in this report consist of detailed estimates of the geographic distribution of transportation revenues and allocations from FY 88 through FY 95. This report also presents an analysis of the trends in transportation finance over this 8-year period.

METHODOLOGY

For the most part, the estimation methodology described in *The Geographic Distribution of HMOF and TTF Revenues and Allocations in Virginia from FY 88 through FY 92* was utilized to derive the estimates for FY 94 and FY 95.² In some cases, the methodologies were adapted due to changes in accounting methods.

Allocations

The information on VDOT allocations used in this study can be found in *Changing the Way We Do Business: 1993-94 Budget and 1993-94 Budget Supplement* and *Moving Virginia Forward Fiscal Year 1994-95 Annual Budget and Annual Budget Supplement*. The Budget Supplement is more immediately useful, as it presents allocations for each construction district. Every transportation program is presented in summarized form in a table entitled "Geographic Distribution of Allocated Funds." However, there are some exceptions, and these cases must be individually addressed for FY 94 and FY 95. These cases required the use of the *Budget*, the *Supplement*, and calls to VDOT personnel in order to determine *actual* allocations. The *Budget* was used to obtain information on unallocated balances and to clarify additional items such as the origin of HMOF and TTF revenues.

FY 94

Access Roads/Other Construction

The first problematic program category was "Access Roads/Other Construction." The line item is presented in the *Supplement's* Geographic Allocation table as a total of many smaller items such as demonstration projects, access roads, etc. The *Budget Supplement* was consulted in order to break down the total into more detail. The *Supplement* (Highway System Acquisition and Construction) provides a detailed breakdown for Access Roads/Other Construction. For the line Access Roads/Other Construction, the amounts for Industrial Access Roads, Public Lands,

The analysis was updated by employing budget data for FY 94 and FY 95. However, since FY 94 and FY 95 population figures were not available at the time of the study, FY 93 figures were used.

Surface Transportation Program-Enhancements, and Surface Transportation Program-Safety were totaled and then allocated among the districts by multiplying the total by each district's share of total population.

The totals for the other types of access roads, such as Recreational Access, Airport Access, Bicentennial and Cultural Access, and Airport Access Roads, were allocated by multiplying each total by each district's share of the program type.

Revenue Sharing-State and Revenue Sharing-Local

These totals are displayed in the *Budget Supplement*. Both items were allocated among the districts geographically according to each district's share of the program.

Demonstration Projects

Each year, federal aid to Virginia includes a number of demonstration projects targeted for specific localities. Therefore, these funds were distributed according to each district's actual demonstration project allocation. The projects were matched with districts through contacts with VDOT personnel.

Debt Service

The total, displayed in the *Budget Supplement's* geographic allocation chart, was allocated across the districts according to each district's share of the Route 58 program.

Toll Facilities Revolving Fund

This category includes pass-through funds, i.e., acquisition and construction, debt service, maintenance, and operation. The total for Toll Facilities Revolving Account, which is not a pass through fund, was already allocated among the districts in the "Geographic Allocation Table" in the *Supplement*.

Mass Transit Fund

The total for the Mass Transit Fund is displayed in the *Budget Supplement*. The total was allocated according to each district's share in the Department of Rail and Public Transportation Budget.

Other Transportation Modes

The total for Other Transportation Modes is also displayed in the *Supplement* and includes subtotals for airports and ports. The airport total was divided by nine and distributed equally among the districts under the assumption that each district benefits equally from the

operation of the airports. The port total was allocated to the Suffolk district as all ports are in the Tidewater area of Virginia.

FY 95

All of the items described for FY 94 are similar for FY 95; i.e., the same allocation mechanisms were used. In addition, several new mechanisms were necessary.

IVHS Projects

These projects became more significant in FY 95, so they were separated from demonstration projects and treated as a new line item in the FY 95 allocation analysis. As with demonstration projects, the totals for each project are presented in the *Budget Supplement* for FY 95. These totals were allocated to the districts based on which project belonged to which district.

Other Demonstration Projects

There were a number of relatively small demonstration projects in FY 95 that were presented in the *Supplement* under the heading "Other Demonstration Projects." There were nine such projects, and all but five could be allocated directly to the districts. Bridge Management System, SHRP Work Zone Safety Devices, and Corridor Safety Improvement Program were allocated by using the Administration/Supervision Shares. The Highway Bridge Construction Project benefits each district equally, so the total for the project was divided by nine. The All Weather Pavement Marking Project was split between the NOVA and Lynchburg districts based on actual allocations.

Revenues

Revenues are distributed geographically based on the historical data and statistical models described in *The Geographic Distribution of HMOF and TTF Revenues and Allocations in Virginia from FY 88 through FY 92*.

RESULTS AND DISCUSSION

Geographic Distribution of Transportation Allocations

Table 1 presents the allocation shares, by activity, for each district during the period FY 88 through FY 95. During this 8-year period, allocations to each activity for most districts were relatively stable in the maintenance, administration, and nonhighway activities. Variations in the total allocation shares seem to be primarily driven by fluctuations in the construction allocation

Table 1
Allocation Shares by District FY 88 - FY 95

	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	8-YR AV
Bristol									
All Activities	9.1%	8.6%	9.4%	9.5%	8.8%	8.6%	8.5%	7.9%	8.80%
Construction	8.7%	8.0%	9.6%	9.2%	7.9%	7.9%	7.8%	7.9%	8.38%
Maintenance	11.3%	10.8%	10.6%	11.3%	11.2%	10.6%	9.8%	9.5%	10.47%
Administration	8.9%	9.2%	9.3%	9.0%	8.5%	8.5%	8.1%	7.7%	8.49%
Non-Highway	1.4%	1.7%	1.9%	1.8%	2.0%	1.7%	0.4%	1.8%	1.60%
Culpeper									
All Activities	5.2%	4.7%	5.2%	5.0%	5.0%	4.9%	5.1%	4.8%	5.01%
Construction	4.3%	4.1%	5.0%	4.5%	3.9%	4.4%	4.2%	4.3%	4.37%
Maintenance	7.1%	5.8%	5.7%	5.7%	6.6%	5.6%	6.6%	6.1%	6.04%
Administration	6.1%	6.2%	6.7%	6.6%	6.4%	6.2%	6.2%	5.3%	6.23%
Non-Highway	1.6%	2.0%	2.0%	2.0%	2.2%	2.2%	0.9%	2.3%	1.93%
Fredericksburg									
All Activities	6.1%	5.2%	5.8%	5.3%	4.9%	5.1%	5.0%	4.9%	5.14%
Construction	6.7%	5.2%	6.5%	5.1%	4.5%	4.7%	4.5%	5.0%	5.04%
Maintenance	5.8%	5.8%	5.5%	5.9%	5.6%	5.8%	5.8%	5.3%	5.64%
Administration	6.6%	6.4%	6.7%	6.4%	6.3%	6.3%	6.2%	5.9%	6.30%
Non-Highway	1.3%	1.4%	1.6%	1.4%	1.6%	1.3%	0.0%	1.5%	1.24%
Lynchburg									
All Activities	6.5%	6.4%	6.9%	6.6%	6.4%	6.6%	6.6%	6.3%	6.56%
Construction	5.9%	5.7%	6.5%	6.0%	5.4%	6.1%	5.9%	5.9%	5.98%
Maintenance	7.9%	8.0%	7.8%	7.8%	7.8%	7.4%	7.6%	7.5%	7.67%
Administration	8.0%	8.0%	8.5%	7.7%	7.7%	8.3%	8.0%	7.5%	7.95%
Non-Highway	2.4%	2.1%	2.5%	2.3%	2.3%	2.6%	1.2%	2.6%	2.26%
Northern Virginia									
All Activities	17.3%	17.3%	18.4%	20.1%	27.3%	24.0%	22.9%	22.6%	22.56%
Construction	14.6%	14.5%	16.4%	20.5%	35.3%	28.2%	27.3%	27.8%	25.91%
Maintenance	13.7%	14.7%	14.9%	14.6%	14.8%	15.6%	14.9%	15.3%	14.99%
Administration	20.2%	20.0%	18.7%	19.2%	20.2%	20.5%	21.5%	18.1%	19.70%
Non-Highway	56.4%	54.2%	52.3%	52.3%	52.5%	53.7%	50.6%	51.2%	52.09%
Richmond									
All Activities	14.1%	15.0%	13.3%	13.2%	12.0%	13.1%	13.2%	13.5%	13.05%
Construction	15.3%	16.8%	13.1%	12.6%	10.5%	12.0%	12.5%	12.6%	12.21%
Maintenance	13.7%	13.9%	14.3%	14.7%	14.0%	15.2%	14.9%	14.5%	14.61%
Administration	14.7%	14.5%	14.7%	15.0%	14.8%	14.7%	14.3%	24.0%	16.23%
Non-Highway	6.3%	6.4%	6.7%	7.2%	7.2%	5.0%	3.5%	4.9%	5.75%
Salem									
All Activities	9.3%	9.1%	9.6%	9.3%	8.7%	9.1%	8.9%	8.7%	9.03%
Construction	8.7%	8.6%	9.4%	8.6%	7.8%	8.5%	8.5%	8.6%	8.54%
Maintenance	11.5%	10.9%	10.9%	11.0%	10.4%	10.7%	10.2%	10.2%	10.55%
Administration	9.9%	10.1%	10.3%	10.0%	10.0%	9.7%	9.5%	8.7%	9.71%
Non-Highway	2.3%	3.0%	2.6%	2.7%	2.6%	2.9%	1.6%	3.0%	2.57%
Staunton									
All Activities	7.3%	7.2%	7.8%	7.2%	6.8%	6.8%	6.6%	7.0%	7.03%
Construction	6.4%	6.1%	6.8%	6.1%	5.5%	5.6%	5.5%	5.6%	5.85%
Maintenance	9.9%	9.8%	10.0%	9.3%	9.0%	8.9%	8.3%	10.0%	9.26%
Administration	7.6%	8.4%	8.1%	7.8%	7.6%	7.4%	7.5%	6.8%	7.54%
Non-Highway	1.4%	1.6%	1.8%	1.6%	1.8%	1.7%	0.4%	1.9%	1.53%
Suffolk									
All Activities	25.1%	26.3%	23.7%	23.7%	20.1%	21.8%	23.2%	21.3%	22.30%
Construction	29.4%	31.0%	26.8%	27.5%	19.2%	22.7%	23.9%	22.5%	23.75%
Maintenance	19.2%	20.2%	20.4%	19.7%	20.6%	20.4%	21.9%	21.7%	20.78%
Administration	18.0%	17.3%	17.0%	18.3%	18.5%	18.5%	18.7%	16.1%	17.86%
Non-Highway	27.0%	27.8%	28.5%	28.6%	27.9%	28.9%	41.5%	30.8%	31.04%

shares. Some districts are experiencing changes in the nonhighway activity allocations. These districts include Suffolk, Lynchburg, and Bristol. These changes also contribute to the fluctuations in total allocation shares.

Geographic Distribution of Transportation Revenues

The distribution of transportation revenues collected from each district is displayed in Table 2. The table presents results over the 8-year period for each VDOT activity and the overall program. In general, the revenue shares are stable, reflecting the relatively stable set of user fees and taxes used to fund the transportation program.

Comparisons of Allocations and Revenue Shares

Table 3 displays the ratios of the estimated allocation share/revenue share for each of VDOT's four major activities and for the aggregate transportation program in each construction district from FY 88 through FY 95, an 8-year average. These ratios can be interpreted as the return on each dollar of transportation revenue raised in each district. To illustrate, Bristol receives a return of approximately \$1.29 for each dollar of revenue the district contributes to the transportation program over the 8-year period from FY 88 through FY 95.

Over the 8-year period, FY 88 through FY 95, Culpeper, Fredericksburg, Lynchburg, Northern Virginia, Salem, and Staunton received *approximately* a dollar-for-dollar return for the entire transportation program. Bristol and Suffolk were the net recipients of transportation funds over this period, while the remaining district of Richmond was a net donor of funds. It appears that urban districts such as Northern Virginia received greater returns for construction than for maintenance whereas rural districts like Bristol tended to receive greater returns for maintenance.

Obviously, the dollar-for-dollar return varies from year to year in each district. These variations are caused primarily by variations in the interstate program. This is most evident in the Lynchburg District, which is the sole district without an interstate facility. The return to this district varied by only 9 cents over the 8-year period. Conversely, the return to Northern Virginia varied by 45 cents over the 8-year period.

Table 3 also illustrates that the dollar return to a district in one year may be a misleading indicator of the district's financial status. For example, in FY 90, the dollar return to Staunton was 0.94, whereas in FY 94 the return was 0.78. The 8-year average return for Staunton was 0.90. Using a yearly return as an indicator of a particular region's financial status may lead one to conclude that the region is either a gross donor or a gross recipient. The average figure is the more accurate tool for describing an area's financial status.

**Table 2
Revenue Shares by District FY 88 - FY 95**

	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	8-YR AV
Bristol									
All Activities	6.7%	6.8%	6.7%	6.8%	6.8%	7.0%	7.0%	6.9%	6.82%
HMOF	7.2%	7.3%	7.3%	7.4%	7.4%	7.6%	6.7%	6.7%	7.28%
TTF	5.6%	5.2%	5.2%	5.2%	5.1%	5.2%	7.6%	7.6%	5.58%
Construction	6.4%	6.5%	6.3%	6.4%	6.3%	6.7%	5.1%	5.1%	6.25%
Non-Highway	6.2%	6.0%	6.0%	6.0%	6.0%	6.0%	5.9%	5.8%	6.00%
Culpeper									
All Activities	5.4%	5.5%	5.5%	5.5%	5.5%	5.5%	5.6%	5.5%	5.48%
HMOF	5.6%	5.8%	5.8%	5.9%	5.9%	5.9%	5.4%	5.4%	5.74%
TTF	4.8%	4.5%	4.6%	4.6%	4.5%	4.6%	5.9%	5.8%	4.78%
Construction	5.2%	5.3%	5.2%	5.3%	5.2%	5.4%	4.6%	4.6%	5.17%
Non-Highway	5.1%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.04%
Fredericksburg									
All Activities	5.7%	5.9%	5.9%	6.0%	6.0%	6.1%	6.1%	6.0%	5.96%
HMOF	6.1%	6.3%	6.3%	6.4%	6.5%	6.5%	5.9%	5.9%	6.29%
TTF	5.0%	4.7%	4.8%	4.7%	4.7%	4.9%	6.5%	6.5%	5.05%
Construction	5.5%	5.7%	5.6%	5.6%	5.6%	5.9%	4.9%	4.9%	5.55%
Non-Highway	5.4%	5.3%	5.3%	5.4%	5.4%	5.5%	5.5%	5.5%	5.39%
Lynchburg									
All Activities	6.4%	6.4%	6.3%	6.3%	6.3%	6.4%	6.4%	6.3%	6.37%
HMOF	6.7%	6.8%	6.7%	6.7%	6.8%	6.8%	6.3%	6.2%	6.67%
TTF	5.7%	5.3%	5.3%	5.2%	5.2%	5.4%	6.8%	6.7%	5.56%
Construction	6.2%	6.2%	6.0%	6.0%	6.0%	6.3%	5.4%	5.3%	6.02%
Non-Highway	6.1%	5.9%	5.8%	5.8%	5.8%	5.9%	5.9%	5.8%	5.87%
Northern Virginia									
All Activities	20.9%	20.9%	21.4%	21.3%	21.3%	20.7%	20.9%	21.5%	21.05%
HMOF	19.1%	19.0%	19.3%	18.9%	18.9%	18.5%	21.7%	22.1%	19.35%
TTF	24.7%	26.6%	27.0%	27.5%	27.7%	27.2%	18.5%	18.8%	25.60%
Construction	22.0%	21.9%	23.0%	22.9%	23.0%	21.6%	27.5%	28.0%	23.14%
Non-Highway	22.6%	23.6%	24.2%	24.3%	24.4%	24.2%	24.4%	24.8%	23.96%
Richmond									
All Activities	16.2%	16.1%	16.0%	16.0%	16.0%	15.9%	16.0%	15.9%	16.01%
HMOF	16.0%	15.9%	15.8%	15.8%	15.9%	15.8%	15.9%	15.9%	15.89%
TTF	16.5%	16.7%	16.4%	16.3%	16.3%	16.2%	15.8%	15.8%	16.30%
Construction	16.3%	16.2%	16.1%	16.1%	16.1%	15.9%	16.1%	16.0%	16.10%
Non-Highway	16.3%	16.4%	16.2%	16.1%	16.1%	16.1%	16.0%	15.9%	16.17%
Salem									
All Activities	10.5%	10.4%	9.9%	10.4%	10.2%	10.6%	10.6%	10.4%	10.35%
HMOF	10.8%	10.8%	10.3%	10.9%	10.6%	10.9%	10.4%	10.3%	10.66%
TTF	9.7%	9.3%	9.0%	9.2%	9.0%	9.4%	10.9%	10.9%	9.51%
Construction	10.2%	10.2%	9.7%	10.1%	9.9%	10.4%	9.4%	9.3%	9.97%
Non-Highway	10.1%	9.9%	9.5%	9.8%	9.6%	10.0%	9.9%	9.8%	9.82%
Staunton									
All Activities	8.3%	8.3%	8.2%	8.3%	8.3%	8.4%	8.4%	8.3%	8.31%
HMOF	8.8%	8.8%	8.7%	8.8%	8.8%	8.9%	8.2%	8.1%	8.72%
TTF	7.2%	6.9%	6.9%	6.8%	6.8%	6.8%	9.0%	8.9%	7.21%
Construction	8.0%	8.1%	7.9%	7.9%	7.9%	8.2%	6.7%	6.7%	7.80%
Non-Highway	7.8%	7.7%	7.6%	7.6%	7.5%	7.5%	7.5%	7.5%	7.60%
Suffolk									
All Activities	20.0%	19.8%	20.0%	19.5%	19.7%	19.4%	19.4%	19.5%	19.70%
HMOF	19.6%	19.5%	19.7%	19.1%	19.4%	19.1%	19.5%	19.5%	19.41%
TTF	20.8%	20.8%	20.8%	20.5%	20.7%	20.3%	19.1%	19.1%	20.42%
Construction	20.2%	20.0%	20.3%	19.8%	20.0%	19.5%	20.3%	20.2%	20.00%
Non-Highway	20.3%	20.3%	20.4%	20.0%	20.2%	19.9%	19.9%	19.8%	20.13%

Table 3
Ratio of Allocation to Revenue Shares by District FY 88 - FY 95

	FY 88	FY 89	FY 90	FY 91	FY 92	FY 93	FY 94	FY 95	8-YR AV
Bristol									
All Activities	1.35	1.28	1.41	1.40	1.30	1.23	1.21	1.16	1.29
Construction	1.35	1.23	1.53	1.44	1.25	1.17	1.17	1.18	1.29
Maintenance	1.56	1.49	1.45	1.53	1.50	1.39	1.28	1.25	1.43
Administration	1.22	1.26	1.28	1.21	1.14	1.11	1.58	1.51	1.29
Non-Highway	0.22	0.28	0.32	0.30	0.34	0.28	0.06	0.31	0.26
Culpeper									
All Activities	0.97	0.86	0.95	0.91	0.92	0.88	0.93	0.88	0.91
Construction	0.83	0.78	0.96	0.86	0.74	0.81	0.78	0.80	0.82
Maintenance	1.26	1.01	0.98	0.97	1.12	0.96	1.12	1.04	1.06
Administration	1.08	1.08	1.16	1.12	1.10	1.05	1.35	1.16	1.14
Non-Highway	0.32	0.39	0.41	0.40	0.43	0.44	0.17	0.46	0.38
Fredericksburg									
All Activities	1.06	0.89	0.98	0.89	0.82	0.83	0.82	0.80	0.88
Construction	1.22	0.92	1.16	0.91	0.81	0.78	0.76	0.84	0.92
Maintenance	0.95	0.92	0.87	0.91	0.87	0.88	0.89	0.82	0.89
Administration	1.08	1.02	1.06	1.00	0.97	0.97	1.27	1.19	1.07
Non-Highway	0.24	0.26	0.29	0.26	0.30	0.25	0.00	0.27	0.23
Lynchburg									
All Activities	1.01	1.01	1.09	1.05	1.01	1.03	1.02	1.00	1.03
Construction	0.95	0.92	1.08	1.00	0.90	0.98	0.94	0.95	0.97
Maintenance	1.17	1.19	1.17	1.17	1.16	1.09	1.13	1.11	1.15
Administration	1.19	1.18	1.27	1.14	1.14	1.23	1.50	1.42	1.26
Non-Highway	0.39	0.36	0.44	0.40	0.40	0.44	0.21	0.46	0.39
Northern Virginia									
All Activities	0.83	0.83	0.86	0.95	1.28	1.16	1.10	1.05	1.01
Construction	0.67	0.66	0.71	0.89	1.53	1.30	1.26	1.26	1.04
Maintenance	0.71	0.77	0.77	0.77	0.78	0.84	0.81	0.81	0.78
Administration	1.06	1.05	0.97	1.01	1.07	1.11	0.78	0.65	0.96
Non-Highway	2.50	2.30	2.16	2.15	2.15	2.22	2.07	2.07	2.20
Richmond									
All Activities	0.87	0.93	0.83	0.83	0.75	0.82	0.82	0.85	0.84
Construction	0.94	1.03	0.82	0.78	0.65	0.76	0.78	0.79	0.82
Maintenance	0.85	0.87	0.91	0.93	0.88	0.96	0.94	0.92	0.91
Administration	0.92	0.91	0.93	0.94	0.93	0.93	0.89	1.50	0.99
Non-Highway	0.38	0.39	0.42	0.44	0.45	0.31	0.22	0.31	0.36
Salem									
All Activities	0.89	0.88	0.96	0.89	0.85	0.87	0.84	0.83	0.88
Construction	0.85	0.84	0.97	0.85	0.79	0.82	0.81	0.83	0.85
Maintenance	1.06	1.02	1.06	1.01	0.98	0.97	0.93	0.93	1.00
Administration	0.92	0.93	1.00	0.93	0.94	0.89	1.01	0.94	0.95
Non-Highway	0.23	0.30	0.28	0.28	0.27	0.30	0.16	0.30	0.26
Staunton									
All Activities	0.88	0.87	0.94	0.88	0.82	0.81	0.78	0.84	0.85
Construction	0.79	0.76	0.86	0.78	0.70	0.69	0.68	0.69	0.74
Maintenance	1.13	1.12	1.14	1.06	1.02	1.00	0.93	1.13	1.06
Administration	0.86	0.96	0.92	0.89	0.86	0.83	1.11	1.02	0.93
Non-Highway	0.17	0.21	0.24	0.21	0.23	0.23	0.05	0.25	0.20
Suffolk									
All Activities	1.26	1.33	1.18	1.21	1.02	1.12	1.19	1.10	1.18
Construction	1.46	1.55	1.32	1.39	0.96	1.16	1.22	1.15	1.28
Maintenance	0.98	1.04	1.03	1.03	1.07	1.07	1.15	1.13	1.06
Administration	0.92	0.89	0.86	0.96	0.96	0.97	0.92	0.80	0.91
Non-Highway	1.33	1.37	1.40	1.43	1.38	1.45	2.09	1.56	1.50

CONCLUSIONS

This study found that, on average, most VDOT construction districts received approximately a dollar-for-dollar return on their transportation investment from FY 88 through FY 95. This dollar return varied from year-to year among some districts' activities as allocations of funds changed to meet state transportation needs. The distribution of revenue shares accounts for relatively little of the variation in dollar returns as there is a stable structure of user fees and taxes in the Commonwealth.

The study results show that some districts are net recipients for some activities and net donors for others. It can be seen that urban districts tend to be net recipients of funds for construction and net donors for maintenance whereas rural districts tend to be net recipients for maintenance and net donors for construction.

Due to the year-to-year variation in the dollar returns, the average figure is most reflective of the state of each district's financial position.

REFERENCES

1. *Changing the Way We Do Business: 1993-94 Budget*. Virginia Department of Transportation, June 1993.
2. *Changing the Way We Do Business: Supplement 1993-94 Budget*. Virginia Department of Transportation, September 1993.
3. *Moving Virginia Forward: Annual Budget*. Virginia Department of Transportation, June 1994.
4. *Moving Virginia Forward: Fiscal Year 1994-95 Annual Budget Supplement*. Virginia Department of Transportation, November 1994.
5. Smith, Brian L. *The Geographic Distribution of HMOF and TTF Revenues and Allocations in Virginia: FY 93 Update*. Virginia Transportation Research Council, November 1993.
6. Zagardo, Janice Turtora. *The Geographic Distribution of HMOF and TTF Revenues and Allocations in Virginia From FY 88 Through FY 92*. Virginia Transportation Research Council, May 1993.