Chapter 6

Finance

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Summary

Exhibit 6-1 compares the key highway and transit statistics discussed in this chapter with the values shown in the last report. The first data column contains the values reported in the 1999 C&P report, which were based on 1997 data. Where the 1997 data have been revised, updated values are shown in the second column. The third column contains comparable values, based on 2000 data.

Exhibit 6-1

Comparison of Highway and Transit Finance Statistics with Those in the 1999 C&P Report

	1997 DATA		
STATISTIC	1999 REPORT	REVISED	2000 DATA
Total Funding for Highways (all govts.)	$106.5 bil	107.4 bil	$128.7 bil
Total Funding for Transit	$26.0 bil		$30.8 bil
Total Public Funding for Transit	$17.5 bil		$21.0 bil
Percent of Public Funding for Transit Funded by Federal Government	27%		25%
Total Highway Expenditures (all govts.)	$101.3 bil	$102.0 bil	$127.5 bil
Percent of Total Highway Expenditures Funded by Federal Government	20.8%		21.7%
Total Highway Capital Outlay (all govts.)	$48.7 bil	$48.4 bil	$64.6 bil
Percent of Total Highway Capital Outlay Funded by Federal Government	41.1%	41.6%	39.9%
Percent of Total Highway Capital Outlay Used for System Preservation	47.6%		52.0%
Total Transit Capital Outlay	$7.6 bil		$9.0 bil
Percent of Total Transit Capital Outlay Funded by Federal Government	54%		47%
Percent of Total Transit Capital Outlay Used for Rail	66%		63%
Total Highway-User Revenues (motor-fuel and vehicle taxes and tolls)	$89.9 bil		$100.6 bil
Highway-User Revenues used for roads	$64.7 bil	$66.3 bil	$81.0 bil
Total Transit Fares and Other System-Generated Revenue	$8.4 bil		$9.8 bil

Highways and Bridges

All levels of government generated $128.7 billion in 2000 to be used for highways and bridges. Of this total, $1.3 billion was placed in reserves for future expenditures, so cash outlays for highways and bridges in 2000 totaled $127.5 billion. Highway expenditures increased 25.0 percent between 1997 and 2000. Highway expenditures grew more quickly than inflation over this period, rising 14.4 percent in constant dollar terms (based on the FHWA Construction Bid Price Index for highway capital outlay, and the Consumer Price Index for all other types of highway expenditures). Since 1997, highway capital expenditures by all level of government grew 33.7 percent to $64.6 billion in 2000. The Federal government contributed $25.8 billion (39.9 percent) of total highway capital expenditures.

It is interesting to note that, despite the increases in Federal highway funding under the Transportation Equity Act for the 21st Century (TEA-21), the Federal share of highway funding has fallen from 1997 to 2000, as the combined capital spending of State and local governments has grown more quickly. The Federal share of highway capital outlay had ranged from 41 to 46 percent between 1987 and 1997. However, in 1998, the Federal share of highway capital outlay fell below 40 percent for the first time since 1959, and it has remained below that level ever since.

In 2000, 52.0 percent of highway capital outlay was used for system preservation, up from 47.6 percent in 1997. Highway user revenues (the total amount generated from motor-fuel taxes, motor-vehicle taxes and fees, and tolls) rose 11.9 percent from $89.9 billion in 1997 to $106 billion in 2000. Of this total, $81.0 billion (80.5 percent) was used for highway programs.

Transit

Transit is funded by Federal, State, and local governments, as well as with system generated revenues. Overall total transit funding increased by 18.7 percent between 1997 and 2000. Although Federal funding for transit increased to $5.3 billion in 2000, 10.9 percent higher than in 1997, Federal funds accounted for only 17 percent of total expenditures on transit in 2000, down from 18 percent in 1997. This decrease in the Federal share was driven by dramatically increased investments by State and local governments in transit, as well as increases in system-generated revenue. Between 1997 and 2000, States and local governments increased their funding in transit by 23.6 percent to $15.7 billion. In 2000, State governments provided 18 percent of total transit funding, and local governments provided 33 percent of total funding. System-generated revenue jumped by 16 percent to $9.8 billion in 2000, and accounted for 32 percent of total transit funding in 2000.

In areas with populations over 200,000, Federal funds may not be spent on operating expenses. This limitation means that a higher proportion of Federal funds are spent on capital investments, while State local and system-generated funds are more likely to be spent on operating expenses. Nevertheless, as local governments significantly increased their funding for capital investments between 1997 and 2000, the Federal share of total capital expenditures for transit fell from 54 percent in 1997 to 47 percent in 2000.

Highway and Bridge Finance

This section presents information on the revenue sources supporting public investment in highways and bridges, and on the types of investments that are being made by all levels of government. This is followed by a discussion of the current and historic roles of Federal, State, and local governments in highway funding. The section concludes with a more detailed analysis of capital expenditures.

Revenue Sources

Exhibit 6-2 shows that all levels of government generated $128.7 billion in 2000 to be used for highways and bridges. Actual cash expenditures for highway and bridge purposes totaled only $127.5 billion in 2000; the remaining $1.3 billion was placed in reserves by various governmental units for future expenditure on highways or bridges. The $3.3 billion shown as placed in reserves in the Federal column indicates that the cash balance of the Highway Account of the Federal Highway Trust Fund (HTF) grew by that amount during 2000.

Exhibit 6-2

Revenue Sources for Highways, 2000
(Billions of Dollars)

	FEDERAL	STATE	LOCAL	TOTAL	PERCENT
User Charges					
Motor-Fuel Taxes	$25.1	$28.7	$1.0	$54.8	42.5%
Motor-Vehicle Taxes and Fees	$4.6	$15.5	$0.7	$20.8	16.2%
Tolls	$0.0	$4.7	$0.7	$5.4	4.2%
Subtotal	**$29.7**	**$49.0**	**$2.3**	**$81.0**	**62.9%**
Other					
Property Taxes and Assessments	$0.0	$0.0	$6.4	$6.4	4.9%
General Fund Appropriations	$1.2	$4.1	$11.9	$17.2	13.4%
Other Taxes and Fees	$0.1	$2.4	$2.8	$5.4	4.2%
Investment Income and Other Receipts	$0.0	$2.7	$4.8	$7.5	5.8%
Bond Issue Proceeds	$0.0	$8.2	$3.1	$11.2	8.7%
Subtotal	**$1.4**	**$17.5**	**$28.9**	**$47.7**	**37.1%**
Total Revenues	**$31.1**	**$66.4**	**$31.3**	**$128.7**	**100.0%**
Funds Drawn from or (Placed in) Reserves	($3.3)	$0.6	$1.5	($1.3)	-1.0%
Total Expenditures Funded During 2000	**$27.7**	**$67.0**	**$32.7**	**$127.5**	**99.0%**

Source: Highway Statistics 2000, Table HF-10.

Highway-user charges, including motor-fuel taxes, motor-vehicle taxes and fees, and tolls were the source of 62.9 percent of the $128.7 billion of total revenues for highways and bridges in 2000. The remaining 37.1 percent of revenues came from a number of sources, including local property taxes and assessments, other dedicated taxes, general funds, bond issues, investment income, and other miscellaneous sources. Development fees and special district assessments are included under "Investment Income and Other Receipts" in Exhibit 6-2.

The degree to which highway programs are funded by highway-user charges differs widely among the different levels of government. At the Federal level, 95.6 percent of highway revenues came from motor-fuel and motor-vehicle taxes in 2000. The remainder came from general fund appropriations, timber sales, lease of Federal lands, oil and mineral royalties, and motor carrier fines and penalties.

Highway-user charges also provided the largest share, 75.5 percent, of highway revenues at the State level in 2000. Bond issue proceeds were another significant source of funding, providing 12.3 percent of highway funds at the State level. The remaining 14.0 percent of State highway funding came from general fund appropriations, other State taxes and fees, investment income, and other miscellaneous revenue sources.

Many States do not permit local governments to impose motor-fuel and motor-vehicle taxes, or they cap them at relatively low levels. Therefore, at the local government level, only 7.5 percent of highway funding was provided by highway-user charges in 2000. Local general funds, property taxes, and other taxes and fees were the source of 67.5 percent of local highway funding. Bond issue proceeds provided 9.8 percent of local highway funding, while investment income and miscellaneous receipts provided the remaining 14.0 percent.

Q. Were all revenues generated by motor-fuel taxes, motor-vehicle taxes and fees, and tools in 2000 used for highways?

A. No. The $81.0 billion identified as highway-user charges in Exhibit 6-2 represents only 80.5 percent of total highway-user revenues, defined as all revenues generated by motor-fuel taxes, motor–vehicle taxes, and tolls. Exhibit 6-3 shows that combined highway-user revenues collected in 2000 by all levels of government totaled $100.6 billion.

In 2000, $8.3 billion of highway-revenues was used for transit, and $11.3 billion was used for other purposes, such as ports, schools, collection costs, and general government activities. The $0.6 billion shown as Federal highway-user revenues used for other purposes includes fuel tax proceeds deposited into the Leaking Underground Storage Tank (LUST) fund, as well as the portion of gasohol tax receipts that is retained by the general fund for deficit reduction.

Exhibit 6-3

Disposition of Highway-User Revenue By Level of Government, 2000

	FEDERAL	STATE	LOCAL	TOTAL
Portion used for:				
Highways	$29.7	$49.0	$2.3	$81.0
Transit	$5.2	$2.1	$1.0	$8.3
Other	$0.6	$10.5	$0.2	$11.3
Total Collected	**$35.5**	**$61.6**	**$3.5**	**$100.6**

Source: Highway Statistics 2000, Table HF-10

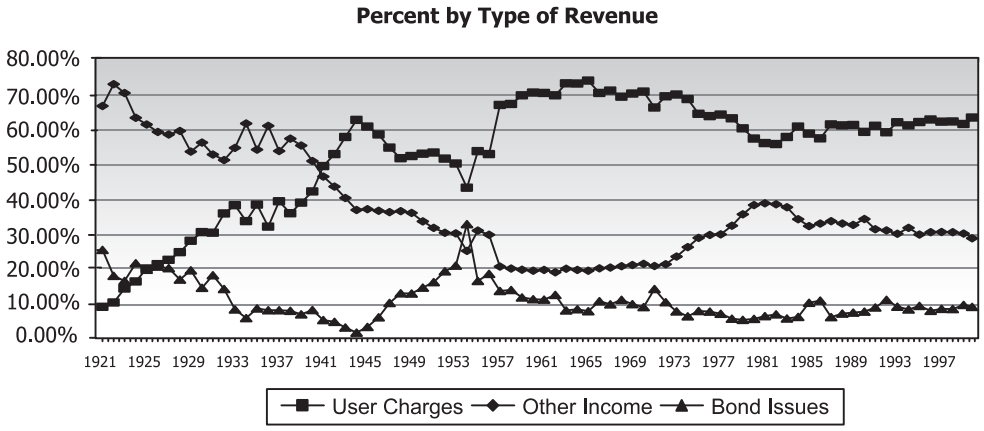
The $5.2 billion shown as Federal highway-user revenues used for transit includes $4.6 billion deposited into the Transit Account of the HTF, as well as $0.6 billion that was deposited in the Highway Account of the HTF that States elected to use for transit purposes. Flexible funding provisions that allow States to reprogram certain highway program funds for transit purposes are discussed in the Transit section of this chapter.

Historical Revenue Trends

Exhibits 6-4 and 6-5 show how highway revenue sources have varied over time. Exhibit 6-4 identifies the different sources of highway revenue since 1921 for all levels of government, combined. Exhibit 6-5 identifies the percentage of highway revenue derived from user charges by each level of government since 1957.

Exhibit 6-4

Highways Revenue Sources by Type, All Units of Government 1921-2000



Billions of Dollars

Year	USER CHARGES		OTHER CURRENT INCOME				Bond Issue Proceeds	Total
	Fuel and Vehicle Taxes	Tolls	Property Taxes	General Fund Approps.	Other Taxes and Fees	Investment Income and Other		
1921	$0.1	$0.0	$0.7	$0.1	$0.0	$0.1	$0.4	$1.4
1925	$0.4	$0.0	$0.9	$0.2	$0.0	$0.0	$0.4	$2.0
1929	$0.7	$0.0	$1.2	$0.2	$0.0	$0.0	$0.5	$2.7
1933	$0.7	$0.0	$0.6	$0.4	$0.0	$0.0	$0.2	$1.9
1937	$1.0	$0.0	$0.4	$1.0	$0.0	$0.0	$0.2	$2.7
1941	$1.2	$0.1	$0.4	$0.8	$0.0	$0.0	$0.1	$2.6
1945	$1.1	$0.1	$0.3	$0.4	$0.0	$0.0	$0.1	$1.9
1949	$2.1	$0.1	$0.4	$1.0	$0.0	$0.1	$0.5	$4.3
1953	$3.1	$0.2	$0.6	$1.2	$0.0	$0.2	$1.3	$6.5
1957	$5.6	$0.4	$0.8	$0.7	$0.0	$0.2	$1.2	$9.0
1961	$7.7	$0.5	$0.9	$1.0	$0.1	$0.3	$1.3	$11.8
1965	$9.8	$0.7	$1.1	$1.1	$0.2	$0.4	$1.1	$14.3
1969	$13.0	$0.9	$1.3	$1.9	$0.3	$0.6	$1.9	$19.9
1973	$17.0	$1.2	$1.5	$3.0	$0.4	$1.1	$2.0	$26.2
1977	$19.6	$1.4	$1.8	$5.4	$0.8	$1.8	$2.2	$33.0
1981	$21.8	$1.8	$2.5	$8.8	$1.4	$3.7	$2.6	$42.5
1985	$33.6	$2.2	$3.5	$9.9	$1.9	$4.3	$6.1	$61.4
1989	$41.4	$2.9	$4.3	$10.8	$2.9	$5.5	$5.2	$72.8
1993	$50.8	$3.6	$4.7	$10.6	$4.0	$6.8	$7.8	$88.4
1994	$51.5	$3.8	$4.8	$12.4	$4.3	$7.0	$7.3	$91.3
1995	$55.4	$3.9	$4.9	$13.2	$3.7	$6.6	$8.6	$96.3
1996	$59.7	$4.4	$5.1	$14.7	$4.0	$7.1	$7.8	$102.8
1997	$61.6	$4.7	$5.3	$15.1	$5.0	$7.0	$8.8	$107.4
1998	$64.3	$4.7	$5.8	$14.5	$5.1	$8.2	$9.0	$111.6
1999	$69.1	$5.1	$5.8	$17.2	$6.4	$6.8	$11.3	$121.7
2000	$75.6	$5.4	$6.4	$17.2	$5.4	$7.5	$11.2	$128.7

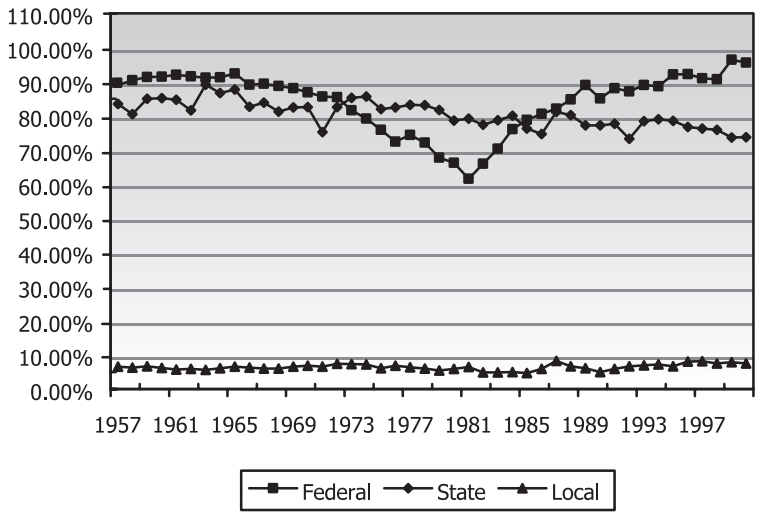
Sources: Highway Statistics Summary to 1995 Table HF-210; Highway Statistics Tables HF-10A and HF-10, various years.

Some of the variation in revenue sources shown in the graph portion of Exhibit 6-4 is caused by changes in the share of funding provided by each level of government over time; this topic will be discussed later in this chapter. In the early 1920s, when local government bore much of the responsibility for highway funding, property taxes were the primary source of revenues for highways. Property taxes have, however, become a much less significant source of revenue over time, and have dropped to an all-time low of 4.8 percent of total highway revenues in 1999. The share of total highway revenues generated by bond proceeds has fluctuated over time, reaching a high of 32.4 percent in 1954. Since that time, combined highway and bridge programs have become less dependent on debt financing; this share has not exceeded 11 percent of revenues since1971.

Since the passage of the Federal-Aid Highway Act of 1956 and the establishment of the Federal Highway Trust Fund, motor-fuel and vehicle tax receipts have consistently provided a majority of the combined revenues raised for highway and bridge programs by all levels of government.

Exhibit 6-5

Percent of Highway Revenue Derived From User Charges, for each Level of Government, 1957-2000



YEAR	FEDERAL	STATE	LOCAL	TOTAL
1957	89.0%	83.5%	6.5%	66.5%
1961	92.1%	84.7%	5.7%	69.9%
1965	92.4%	87.7%	6.5%	73.5%
1969	88.1%	82.5%	6.5%	69.8%
1973	81.6%	85.3%	7.3%	69.5%
1977	74.3%	83.2%	6.4%	63.8%
1981	61.5%	79.1%	6.4%	55.6%
1985	78.8%	76.2%	4.7%	58.3%
1989	89.0%	77.2%	6.1%	60.7%
1993	89.0%	78.5%	6.9%	61.6%
1994	88.7%	79.0%	7.3%	60.7%
1995	92.1%	78.5%	6.6%	61.6%
1996	92.2%	76.7%	8.0%	62.3%
1997	91.0%	76.3%	8.1%	61.7%
1998	90.7%	75.9%	7.5%	61.8%
1999	96.4%	73.6%	7.9%	61.0%
2000	95.6%	73.7%	7.5%	62.9%

Sources: Highway Statistics Summary to 1995 Table HF-210; Highway Statistics, various years Tables HF-10A and HF-10.

After peaking at an all time high of 73.5 percent of highway revenues in 1965, the share represented by highway user charges dropped to 55.2 percent in 1982. As shown in Exhibit 6-4, since that time, the percentage has rebounded and stabilized in a range of about 60 to 62 percent.

A corresponding pattern can be observed in the percentage of Federal highway revenue derived from highway user charges as shown by the Federal line in Exhibit 6-5. During the early years of the HTF, over 90 percent of highway revenues at the Federal level came from fuel and vehicle taxes. From the late 1960s to early 1980s, this percentage declined, to a low of 61.6 percent in 1981. During this period, Federal

motor-fuel taxes did not increase, and a growing percentage of Federal highway funding came from other sources. In 1981, general fund revenues of $2.6 billion provided 25.1 percent of total highway funding. Since 1981, Federal motor-fuel taxes have increased significantly, and Federal general fund revenues used for highways have declined. As a result, the portion of Federal highway revenue derived from highway user charges has increased, reaching an all time high of 96.4 percent in 1999.

Q. Why did the percentage of Federal revenue for highways derived from highway user charges increase sharply between 1998 and 1999?

A. In 1998, 4.8 percent of total Federal revenues for highways came from interest income credited to the Highway Account of the HTF based on its invested balance. Due to a legislative change, starting in Federal fiscal year 1999, the HTF no longer earns interest on its balances. With this revenue source eliminated, the Federal highway program now relies even more heavily on motor-fuel and motor-vehicle taxes for funding.

Exhibit 6-5 shows that the share of State government highway funding contributed by highway user charges has declined over time. From 1997 to 2000, the percentage dropped from 76.3 percent to 73.7 percent. Over the same period, States grew more reliant on debt financing, as bond proceeds grew from 10.2 percent to 12.3 percent.

Highway user charges have never been as significant a source of highway revenue at the local government level as at the Federal or State levels, for the reasons outlined earlier. In the early to middle 1990s, the share of local government highway funding derived from highway user charges rose, reaching a level of 8.1 percent in 1997. However, this pattern has reversed itself, and the share dropped to 7.5 percent in 2000.

Highway Expenditures

Exhibit 6-2 indicates that total expenditures for highways in 2000 equaled $127.5 billion, and identifies the portion of this total funded by each level of government. Exhibit 6-6 classifies this total by type of expenditure and by the level of government. The "Federal," "State," and "Local" columns in this table indicate which level of government made the direct expenditures, while the "Funded by…" columns indicate the level of government that provided the funding for those expenditures. (Note that all figures cited as "expenditures," "spending," or "outlays" in this report represent cash expenditures rather than authorizations or obligations).

While the Federal government funded $27.7 billion (21.7 percent) of total highway expenditures of $101.3 billion in 1997, the majority of the Federal government's contribution to highways consists of grants to State and local governments. Direct Federal spending on capital outlay, maintenance, administration, and research amounted to only $2.3 billion (1.8 percent). The remaining $25.4 billion was in the form of transfers to State and local governments.

State governments combined $24.4 billion of Federal funds with $52.1 billion of State funds and $1.3 billion of local funds to make direct expenditures of $77.9 billion (61.1 percent). Local governments combined $1.0 billion of Federal funds with $14.9 billion of State funds and $31.4 billion of local funds to make direct expenditures of $47.3 billion (37.1 percent).

Types of Highway Expenditures

Current highway expenditures can be divided into two broad categories: non-capital and capital. Non-capital highway expenditures include maintenance of highways, highway and traffic services, administration, highway law enforcement, highway safety, and interest on debt. Highway capital outlay consists of those expenditures associated with highway improvements, including land acquisition and other right-of-way costs; preliminary and construction engineering; new construction, reconstruction, resurfacing, rehabilitation, and restoration costs of roadways, bridges, and other structures; and installation of traffic service facilities such as guardrails, fencing, signs, and signals. Bond retirement is not part of current expenditures, but it is included in the figures cited for total highway expenditures in this report.

Exhibit 6-6

Direct Expenditures for Highways, by Expending Agencies and by Type
Billions of Dollars, 2000

	FEDERAL	STATE	LOCAL	TOTAL	PERCENT
CURRENT EXPENDITURES					
Capital Outlay					
Funded by Federal Government	$0.3	$24.4	$1.0	$25.8	20.2%
Funded by State or Local Govt's	$0.0	$23.2	$15.7	$38.9	30.5%
Subtotal	**$0.3**	**$47.6**	**$16.7**	**$64.6**	**50.7%**
Non-Capital Expenditures					
Maintenance	$0.2	$9.1	$14.9	$24.2	19.0%
Highway and Traffic Services	$0.0	$3.8	$2.9	$6.8	5.3%
Administration	$1.8	$5.5	$3.0	$10.3	8.1%
Highway Patrol and Safety	$0.0	$5.7	$5.0	$10.7	8.4%
Interest on Debt	$0.0	$3.0	$2.0	$5.1	4.0%
Subtotal	**$1.9**	**$27.2**	**$27.9**	**$57.1**	**44.8%**
Total, Current Expenditures	**$2.3**	**$74.8**	**$44.6**	**$121.7**	**95.5%**
Bond Retirement	**$0.0**	**$3.1**	**$2.7**	**$5.7**	**4.5%**
Total All Expenditures					
Funded by Federal Government	$2.3	$24.4	$1.0	$27.7	21.7%
Funded by State Governments	$0.0	$52.1	$14.9	$67.0	52.6%
Funded by Local Governments	$0.0	$1.3	$31.4	$32.7	25.7%
Grand Total	**$2.3**	**$77.9**	**$47.3**	**$127.5**	**100.0%**

Source: Highway Statistics 2000, Table HF-10.

As shown in Exhibit 6-6, all levels of government spent $64.6 billion on capital outlay in 2000, or 50.7 percent of total highway expenditures. Highway capital outlay expenditures are discussed in more detail later in this chapter.

Current non-capital expenditures consumed $57.1 billion (44.8 percent), while the remaining $5.7 billion (4.5 percent) went for bond redemption. Most Federal funding for highways goes for capital items. Non-capital expenditures are funded primarily by State and local governments. In 2000, State and local non-capital expenditures were close to equal, as State governments spent $27.2 billion while local governments spent $27.9 billion. The majority of maintenance expenditures occurred at the local government level, or $14.9 billion (61.6 percent) of the $24.2 billion total.

Historical Expenditure and Funding Trends

Exhibits 6-7 and 6-8 provide historical perspective for the 2000 values shown in Exhibit 6-6. Exhibit 6-7 shows how the composition of highway expenditures by all levels of government combined has changed over time. Exhibit 6-8 shows the amounts provided by each level of government to finance those expenditures and the share of funding provided by the Federal government for total highway expenditures and for highway capital outlay.

The increased Federal funding for highways available under the Transportation Equity Act for the 21st Century (TEA-21) contributed to a 25.0 percent increase (from $102.0 billion to $127.5 billion) in total highway spending by all levels of government between 1997 and 2000. Capital outlay by all levels of government increased by 33.7 percent from $48.4 billion to $64.6 billion.

Q. What basis is used for distinguishing between capital expenditures and maintenance expenditures?

A. The classification of the revenue and expenditure items in this report are based on definitions contained in "A Guide to Reporting Highway Statistics", the instructional manual for States providing financial data for the "Highway Statistics" publication. This manual indicates that the classification of highway construction and maintenance expenditures should be based on criteria provided in the American Association of State Highway and Transportation Officials publication "AASHTO Maintenance Manual – 1987".

Other definitions of maintenance are used by different organizations. Some resurfacing, restoration, and rehabilitation projects that meet this report's definition of capital outlay might be classified as maintenance activities in internal State or local accounting systems.

The percentage of total highway expenditures that went for capital outlay peaked at 61.3 percent in 1958. Subsequently, capital outlay's share of total spending gradually declined to a low of 43.8 percent in 1983. As shown in Exhibit 6-7, this share has climbed back up, reaching 50.7 percent in 2000. This was the first time this percentage had exceeded 50 percent since 1975.

Q. How are "Maintenance" and "Highway and Traffic Services" defined in this report?

A. Maintenance in this report includes routine and regular expenditures required to keep the highway surface, shoulders, roadsides, structures, and traffic control devices in usable condition. This includes spot patching and crack sealing of roadways and bridge decks, and the maintenance and repair of highway utilities and safety devices such as route markers, signs, guardrails, fence, signals, and highway lighting.

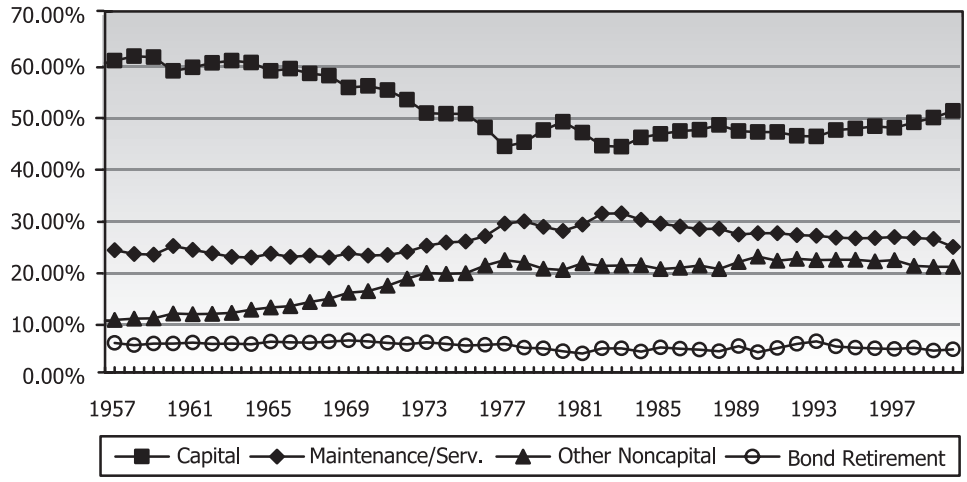
Highway and Traffic Services include activities designed to improve the operation and appearance of the roadway. This includes items such as the operation of traffic control systems, snow and ice removal, highway beautification, litter pickup, mowing, toll collection, and air quality monitoring.

Exhibit 6-8 shows that the portion of total highway funding provided by the Federal government rose from 20.8 to 21.7 percent from 1997 to 2000. It is interesting, however, to note that the Federal share of capital funding dropped from 41.6 to 39.9 percent over this same period. While Federal cash expenditures for capital purposes increased 28.3 percent from 1997 to 2000, State and local capital investment increased even faster (37.1 percent).

Exhibit 6-7

Expenditures for Highways by Type, All Units of Government 1957-2000

Percent by Type of Expenditure



Billions of Dollars

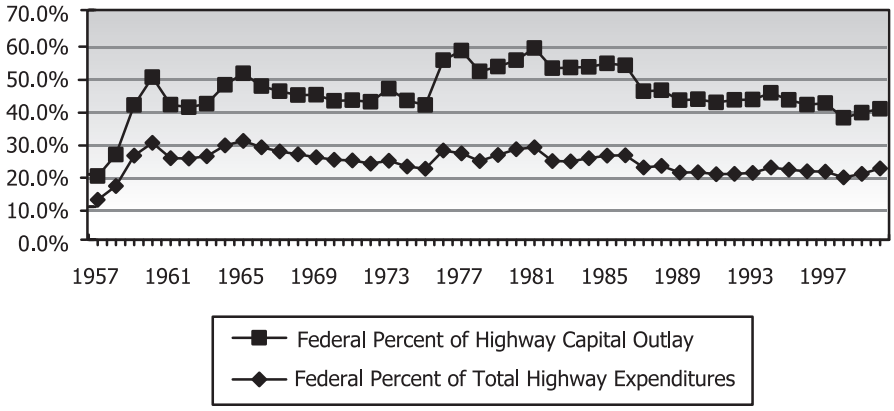
Year	Capital Outlay	Maintenance and Services	OTHER NON-CAPITAL				Debt Retirement	Total
			Administration	Highway Patrol & Safety	Interest On Debt	Total Other Non-Capital		
1957	$5.6	$2.2	$0.4	$0.3	$0.3	$0.9	$0.5	$9.3
1961	$6.8	$2.7	$0.5	$0.3	$0.4	$1.3	$0.7	$11.5
1965	$8.4	$3.3	$0.8	$0.5	$0.5	$1.8	$0.9	$14.3
1969	$10.4	$4.3	$1.1	$1.1	$0.7	$2.9	$1.2	$18.8
1973	$12.2	$5.9	$1.7	$1.9	$1.0	$4.7	$1.4	$24.2
1977	$13.1	$8.6	$2.4	$2.8	$1.3	$6.5	$1.6	$29.8
1981	$19.7	$12.2	$3.4	$3.9	$1.7	$9.0	$1.6	$42.4
1985	$26.6	$16.6	$4.2	$5.2	$2.1	$11.5	$2.8	$57.5
1989	$33.1	$19.0	$5.7	$6.6	$2.8	$15.2	$3.6	$70.9
1993	$39.5	$22.9	$7.9	$7.2	$3.7	$18.8	$5.2	$86.4
1994	$42.4	$23.6	$8.4	$7.7	$3.7	$19.7	$4.5	$90.2
1995	$44.2	$24.3	$8.4	$8.2	$3.8	$20.4	$4.5	$93.5
1996	$46.8	$25.6	$8.4	$8.9	$3.8	$21.1	$4.6	$98.1
1997	$48.4	$26.8	$8.3	$9.8	$4.2	$22.2	$4.6	$102.0
1998	$52.3	$28.2	$8.5	$9.4	$4.4	$22.3	$5.1	$108.0
1999	$57.2	$30.0	$9.0	$10.4	$4.4	$23.7	$4.9	$115.9
2000	$64.6	$31.0	$10.3	$10.7	$5.1	$26.1	$5.7	$127.5

Sources: Highway Statistics Summary to 1995 Table HF-210; Highway Statistics Tables HF-10A and HF-10, various years.

Exhibit 6-8

Funding for Highways by Level of Government, 1957-2000

Percent of Total Highway Expenditures and Highway Capital Outlay Funded by the Federal Government



Year	Funding for Total Highway Expenditures					Funding for Capital Outlay		
	Billions of Dollars				Percent	Billions of Dollars		Percent
	FEDERAL	STATE	LOCAL	TOTAL	Federal	FEDERAL	TOTAL	Federal
1957	$1.1	$6.1	$2.0	$9.3	12.2%	$1.1	$5.6	19.4%
1961	$2.9	$6.2	$2.4	$11.5	24.8%	$2.8	$6.8	41.1%
1965	$4.3	$7.3	$2.7	$14.3	30.1%	$4.2	$8.4	50.7%
1969	$4.7	$10.4	$3.7	$18.8	25.1%	$4.6	$10.4	44.2%
1973	$5.8	$13.8	$4.6	$24.2	24.1%	$5.6	$12.2	46.0%
1977	$7.8	$15.1	$6.9	$29.8	26.3%	$7.5	$13.1	57.6%
1981	$11.9	$20.1	$10.4	$42.4	28.1%	$11.5	$19.7	58.4%
1985	$14.7	$27.9	$14.9	$57.5	25.7%	$14.3	$26.6	53.8%
1989	$14.5	$36.4	$19.9	$70.9	20.5%	$14.1	$33.1	42.5%
1993	$17.6	$46.5	$22.3	$86.4	20.4%	$16.9	$39.5	42.7%
1994	$19.9	$45.1	$25.3	$90.2	22.0%	$19.0	$42.4	44.8%
1995	$19.9	$48.8	$24.7	$93.5	21.3%	$18.9	$44.2	42.6%
1996	$20.5	$51.5	$26.1	$98.1	20.9%	$19.3	$46.8	41.2%
1997	$21.2	$54.2	$26.6	$102.0	20.8%	$20.1	$48.4	41.6%
1998	$20.5	$59.7	$27.8	$108.0	19.0%	$19.4	$52.3	37.1%
1999	$23.3	$61.0	$31.7	$116.0	20.1%	$22.1	$57.2	38.7%
2000	$27.7	$67.0	$32.7	$127.5	21.7%	$25.8	$64.6	39.9%

Sources: Highway Statistics Summary to 1995 Table HF-210; Highway Statistics, various years, Tables HF-10A and HF-10.

Federal support for highways increased dramatically following the passage of the Federal-Aid Highway Act of 1956 and the establishment of the HTF. The Federal share of total funding peaked in 1965 at 30.1 percent. Since that time, the Federal percentage of total funding has gradually declined, but remained above 20.0 percent until 1998, when it dropped to 19.0 percent. Because TEA-21 was not enacted until late in Federal Fiscal Year 1998, the increased funding under the legislation did not translate immediately into increased cash outlays during that year. Because the Federal-aid highway program is a multiple-year reimbursable program, the impact of increases in obligation levels phases in gradually over a number of years. The Federal percentage of total funding rose in 1999 and 2000, as the increased obligation authority provided under TEA-21 began to translate into higher cash outlays.

Q. Do the relative Federal, State, and local shares of funding described in this chapter equate to a comparable relative degree of influence?

A. No. As discussed earlier, there are significant intergovernmental transfers of funds occurring from the Federal government to State and local governments, from State governments to local governments, and from local governments to State governments. Depending on the specific grant program involved, State and local recipients of transfer payments from other governments have a varying degree of autonomy and discretion in how they use the funds. The implication of this is that the relative degree of influence that each level of government has on what individual projects are funded and what types of highway expenditures are made is not necessarily consistent with the share of highway funding that each level of government provides.

The Federally-funded portion of capital outlay by all levels of government rose above 40 percent in 1959, peaking at 58.3 percent in 1981. From 1987 through 1997, the Federal share remained in a range of 41 to 46 percent. However, the Federal percentage of capital funding dropped to 37.1 percent in 1998, and has not risen back to the 40 percent level since then. The 1999 C&P report incorrectly predicted that the Federal share for 1999-2003 would return to a range of 41 to 46 percent, after declining in 1998. This did not occur due to the unexpectedly large increases in State and local capital investment since 1997 that were noted above.

Spending by all levels of government on maintenance and traffic services increased by 15.7 percent from 1997 to 2000, but declined as a percentage of total highway spending, since other types of expenditures grew even faster. As shown in Exhibit 6-7, maintenance and traffic services' share of total highway spending dropped to 24.3 percent, its lowest level since 1972. Spending on other non-capital expenditures include highway law enforcement and safety, administration and research, and interest payments also grew more slowly than overall highway spending from 1997 to 2000, falling from 21.8 percent of total spending to 20.5 percent.

The 1999 edition of this report noted that expenditures for highway law enforcement and safety grew more quickly than other spending categories from 1995 to 1997. This trend has not been maintained in subsequent years, as spending growth in this category was slower than overall highway spending growth from 1997 to 2000. The 1999 edition also noted that expenditures for administration and research remained relatively flat between 1994 and 1997. Since 1997, this trend has changed, and growth in this category kept pace with the overall growth in highway spending over this later period. The share of total spending devoted to debt service also remained relatively equal between 1997 and 2000.

Constant Dollar Expenditures

Highway expenditures grew more quickly than inflation between 1997 and 2000. As noted earlier, total highway expenditures increased 25.0 percent from $102.0 billion to $127.5 billion between 1997 and 2000, which equates to an average annual growth rate of 7.7 percent. Over the same period, it is estimated that highway construction costs increased at an annual rate of 3.7 percent, and other costs rose at an annual rate of 2.4 percent. In constant dollar terms, total highway expenditures grew by 14.4 percent between 1997 and 2000.

Q. What indices are used to convert current dollars to constant dollars in this report?

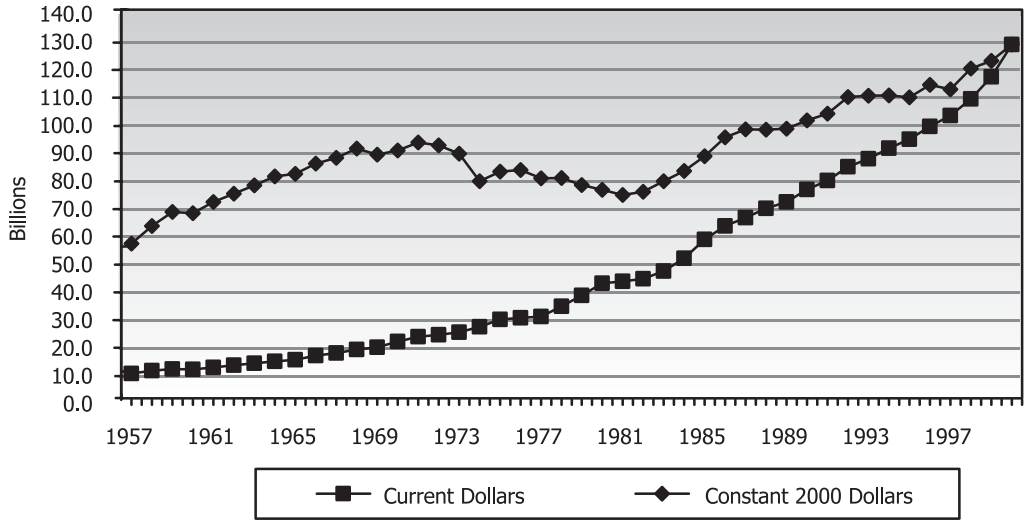
A. For captial outlay expenditures, the FHWA Construction Bid Price Index is used. For all other types of highway expenditures, the Consumer Price Index (CPI) is used.

Exhibit 6-9 shows that highway expenditures have grown in current dollar terms in each of the years from 1957 through 2000. In constant dollar terms, total highway expenditures by all levels of government reached a plateau in 1971. From 1972 to 1981, highway spending did not keep pace with inflation. Since 1981, constant dollar highway spending has increased, and by 1986 it had moved back above the 1971 level. Constant dollar spending reached an all time high in 2000.

Much of the increase in constant dollar spending since 1981 has been driven by highway capital outlay expenditures, which have grown more quickly than maintenance and other non-capital expenditures in both current and constant dollar terms. Over this 19-year period, highway capital outlay grew at an average annual rate of 6.5 percent from $19.0 billion to $64.6 billion. In constant dollar terms, this equates to a 112.3 percent increase. Over this same period, maintenance and traffic services grew by 34.5 percent in constant dollar terms, and other non-capital expenditures grew by 53.4 percent in constant dollars. Highway

Exhibit 6-9

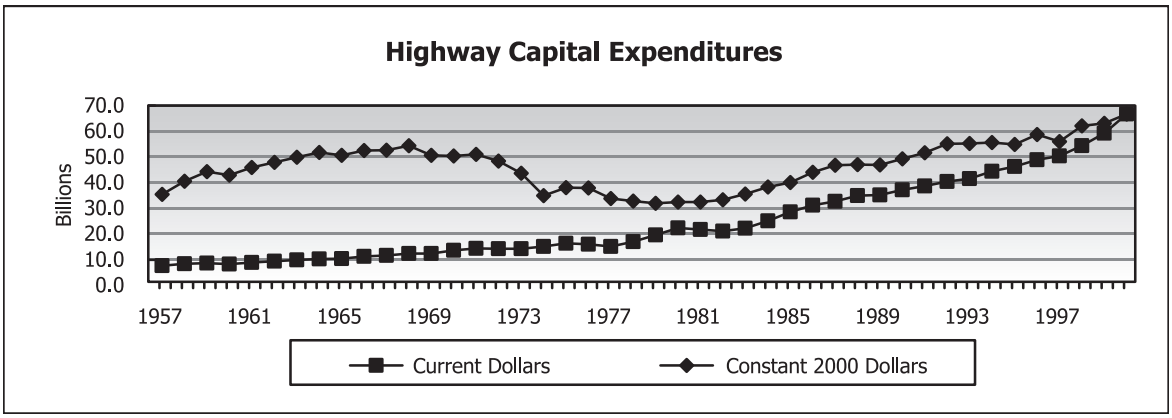
Total Highway Expenditures in Current and Constant 2000 Dollars, All Units of Government 1957-2000

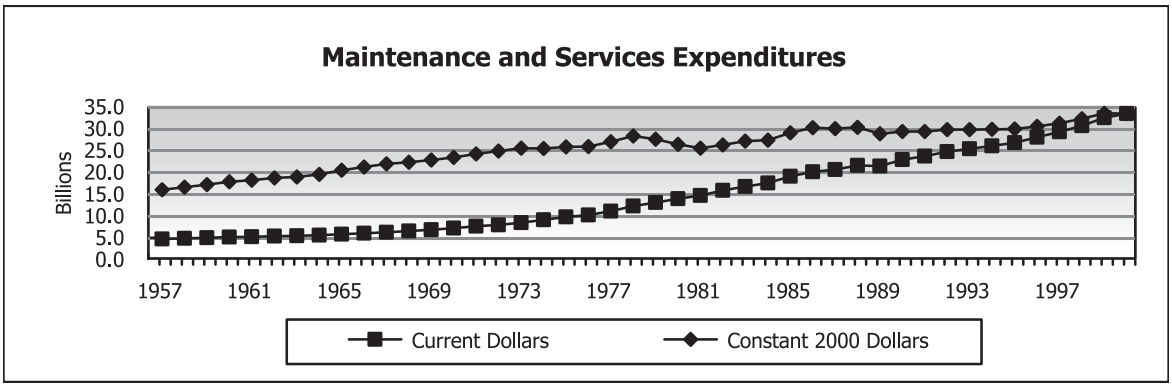


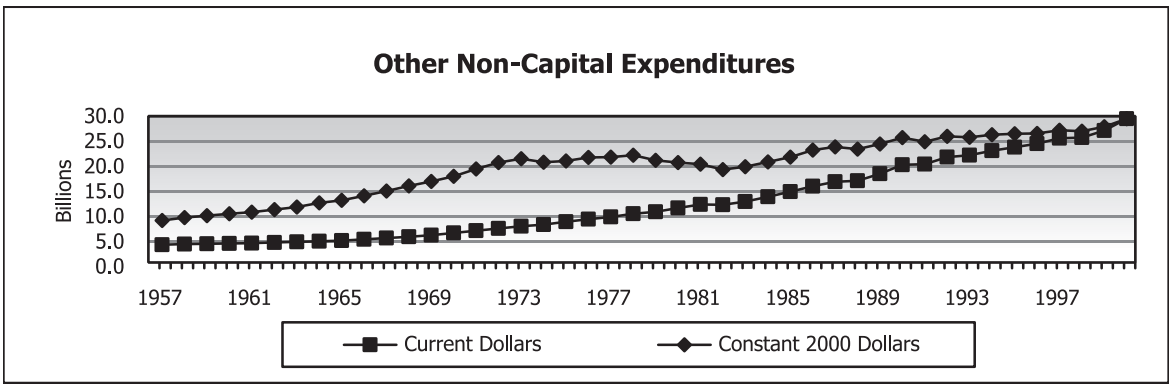
construction costs grew more slowly than the CPI during this period, so the purchasing power of funds used for capital outlay expenditures has not eroded as quickly. Highway construction costs grew at an average annual rate of 2.3 percent since 1981, compared to an average annual increase in the CPI of 3.4 percent. Exhibit 6-10 compares current dollar and constant dollar spending for capital outlay, maintenance and traffic services, and other non-capital expenditures (including highway law enforcement and safety, administration and research, and interest payments).

Exhibit 6-10

Highway Capital, Maintenance, and Other Non-Capital Expenditures in Current and Constant 2000 Dollars, All Units of Government 1957-2000







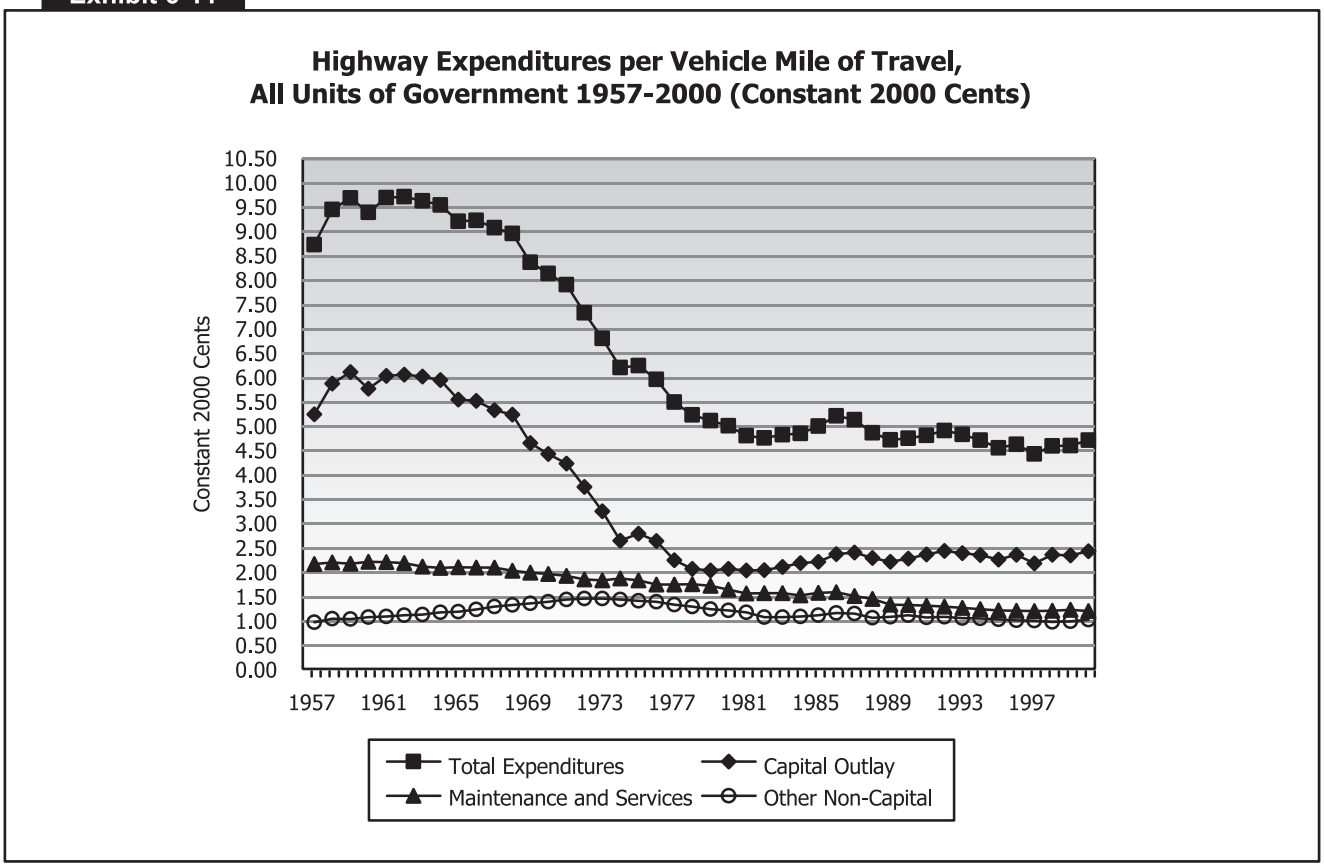
Constant Dollar Expenditures per VMT

While not all types of highway expenditures would necessarily be expected to grow in proportion to vehicle miles traveled (VMT), increases in VMT do increase the wear and tear on existing roads, leading to higher capital and maintenance costs. The addition of new lanes and roads to accommodate additional traffic results in one-time capital costs, as well as recurring costs for preservation and maintenance. Traffic supervision and safety costs are also related in part to traffic volume. As the highway system has grown and become more complex, the cost of administering the system has grown as well.

In current dollar terms, total expenditures per VMT have grown steadily over time. Between 1997 and 2000, expenditures per VMT rose from 4.0 cents to 4.6 cents. Expenditures per VMT in constant dollars also rose in this period, increasing 6.6 percent. This increase reversed the downward trend noted in the 1999 C&P report. During the 1960s and 1970s, total expenditures per VMT declined steadily in constant dollar terms, but the rate of decline slowed during the 1980s and 1990s.

Capital outlay per VMT increased 11.7 percent between 1997 and 2000 in constant dollar terms. The 2000 level of 2.35 cents per VMT was the second highest since 1976. As shown in Exhibit 6-11, over time, spending on maintenance and traffic services and other non-capital items has not kept pace with capital spending on a constant dollar per VMT basis.

Exhibit 6-11



Highway Capital Outlay Expenditures

State governments directly spent $47.6 billion on highway capital outlay in 2000. As discussed earlier in the chapter, and as shown in Exhibit 6-6, this figure includes the $24.4 billion received in grants from the Federal government for highways. Exhibit 6-12 shows how States applied this $47.6 billion to different functional systems and also includes an estimate of how the total $64.6 billion spent by all levels of government was applied. State government capital outlay is concentrated on the higher-order functional systems; local governments apply the larger part of their capital expenditures to lower-order systems.

Total highway capital expenditures by all levels of government amounted to $7,825 per lane-mile in 2000, or 2.3 cents per VMT. Capital outlay per lane-mile was highest for the higher-order functional systems and was higher on urban roads than rural roads. Capital outlay per VMT ranged from 3.3 cents on rural other principal arterials to 1.5 cents on urban minor arterials. On a cents-per-VMT basis, capital outlay for rural roads is about 9 percent higher than for urban roads.

Exhibit 6-12

Highway Capital Outlay by Functional System, 2000

FUNCTIONAL CLASS	Direct State Capital Outlay ($Billions)	Capital Outlay, all Jurisdictions TOTAL ($Billions)	PER LANE-MILE (Dollars)	PER VMT (Cents)
Rural Arterials and Collectors				
Interstate	$4.5	$4.5	$32,977	1.6
Other Principal Arterial	$8.1	$8.2	$32,210	3.3
Minor Arterial	$3.4	$3.8	$13,239	2.2
Major Collector	$2.9	$4.2	$4,813	2.0
Minor Collector	$0.5	$1.3	$2,396	2.2
Subtotal	**$19.3**	**$21.9**	**$10,471**	**2.3**
Urban Arterials and Collectors				
Interstate	$9.6	$9.6	$128,838	2.4
Other Freeway & Expressway	$3.7	$3.9	$92,774	2.2
Other Principal Arterial	$7.0	$8.7	$46,479	2.2
Minor Arterial	$2.4	$4.9	$21,253	1.5
Collector	$0.7	$2.6	$13,671	1.9
Subtotal	**$23.4**	**$29.7**	**$41,056**	**2.1**
Subtotal, Rural and Urban	**$42.7**	**$51.6**	**$18,320**	**2.1**
Rural and Urban Local	**$4.9**	**$13.0**	**$2,391**	**3.6**
Total, All Systems	**$47.6**	**$64.6**	**$7,825**	**2.3**
Funded by Federal Government	**$24.4**	**$25.8**	**$3,121**	**0.9**

Source: Highway Statistics 2000 and unpublished FHWA data.

Capital Outlay by Improvement Type

States provide the Federal Highway Administration with detailed data on what they spend on arterials and collectors, classifying expenditures on each functional system into 17 improvement types. For this report, these improvement types have been allocated among three groups: System Preservation, System Expansion, and System Enhancement.

Exhibit 6-13 shows the distribution of the $42.7 billion in State expenditures among these three categories. Detailed data on Federal Government and local expenditures is unavailable, so the combined $51.6 billion of capital outlay on arterials and collectors by all levels of government was classified based on the State expenditure patterns. Similarly, little information is available on the types of improvements being made by all levels of government on local functional system roads. To develop an estimate for the improvement type breakdown for the $64.6 billion invested on all systems in 2000, it was assumed that expenditure patterns were roughly equivalent to those observed for arterials and collectors.

In 2000, about $33.6 billion was spent on system preservation (51.9 percent of total capital outlay). As defined in this report, system preservation activities include capital improvements on existing roads and bridges that are designed to preserve the existing pavement and bridge infrastructure, but does not include routine maintenance.

About $12.2 billion (18.9 percent of total capital outlay) was spent on the construction of new roads and bridges in 2000. An additional $13.7 billion (21.2 percent) is estimated to have been used to add lanes to existing roads. Another $5.1 billion (7.9 percent) was spent on system enhancement, including safety enhancements, traffic operations improvements, and environmental enhancements.

Exhibit 6-14 examines how the share of capital outlay devoted to these major categories has changed over time. After declining between 1995 and 1997, the overall share of highway capital improvements going toward system preservation increased significantly from 1997 to 2000, reaching 52.0 percent. This represents a larger share than in 1995, and is significantly higher than the 44.7 percent reported for 1993. The share devoted to system enhancements was steady between 1997 and 2000, and remains higher than the 1993 level. Expenditures for new roads and bridges increased relative to other improvement expenditures between 1997 and 2000, from 15.6 percent of total expenditures to 18.9 percent. Other system

Q. How are System Preservation, System Expansion, and System Enhancement defined in this report?

A. System preservation consists of capital improvements on existing roads and bridges, intended to preserve the existing pavement and bridge infrastructure. This includes reconstruction, resurfacing, pavement restoration or rehabilitation, widening of narrow lanes or shoulders, bridge replacement, and bridge rehabilitation. Also included is the portion of widening projects estimated to be related to reconstructing or improving the existing lanes. System preservation does not include routine maintenance costs.

Note that system preservation as defined in this report does not include routine maintenance. As shown in Exhibit 6-6, an additional $24.2 billion was spent by all levels of government in 2000 on routine maintenance.

System Expansion includes the construction of new roads and new bridges, as well as those costs associated with adding lanes to existing roads. This includes all "New Construction," "New Bridge," "Major Widening," and most of the costs associated with "Reconstruction-Added Capacity," except for the portion of these expenditures estimated to be related to improving the existing lanes of a facility. As used in this report, "System Expansion" is the functional equivalent to "Capacity Expansion" used in some previous editions of the C&P report. The term was modified because some system preservation and system enhancement improvements may result in added capacity without the addition of new lanes.

System Enhancement includes safety enhancements, traffic operations improvements such as the installation of intelligent transportation systems, and environmental enhancements.

Exhibit 6-13

Highway Capital Outlay by Improvement Type, 2000 (Billions of Dollars)

	SYSTEM PRESERVATION	SYSTEM EXPANSION		SYSTEM ENHANCEMENT	TOTAL
		New Roads & Bridges	Existing Roads		
Direct State Expenditures on Arterials and Collectors					
Right-of Way		1.5	1.5		2.9
Engineering	3.3	1.1	1.1	0.5	5.9
New Construction		5.4			5.4
Relocation			0.6		0.6
Reconstruction-Added Capacity	1.6		3.7		5.3
Reconstruction-No Added Capacity	1.9				1.9
Major Widening			2.0		2.0
Minor Widening	0.7				0.7
Restoration & Rehabilitation	6.5				6.5
Resurfacing	3.1				3.1
New Bridge		0.9			0.9
Bridge Replacement	2.2				2.2
Major Bridge Rehabilitation	1.3				1.3
Minor Bridge Work	1.3				1.3
Safety				1.1	1.1
Traffic Management/Engineering				0.5	0.5
Environmental and Other				1.0	1.0
Total, State Arterials & Collectors	**22.0**	**8.8**	**8.8**	**3.1**	**42.7**
Total, Arterials and Collectors, All Jurisdictions (estimated)*					
Highways and Other	20.7	8.8	10.9	4.1	44.6
Bridge	6.1	0.9			7.0
Total, Arterials and Collectors	**26.8**	**9.8**	**10.9**	**4.1**	**51.6**
Total Capital Outlay on all Systems (estimated)*					
Highways and Other	25.9	11.1	13.7	5.1	55.8
Bridges	7.6	1.2			8.8
Total, All Systems	**33.6**	**12.2**	**13.7**	**5.1**	**64.6**
Percent of Total	**52.0%**	**18.9%**	**21.2%**	**7.9%**	**100.0%**

*Improvement type distribution was estimated based on State arterial and collector data.

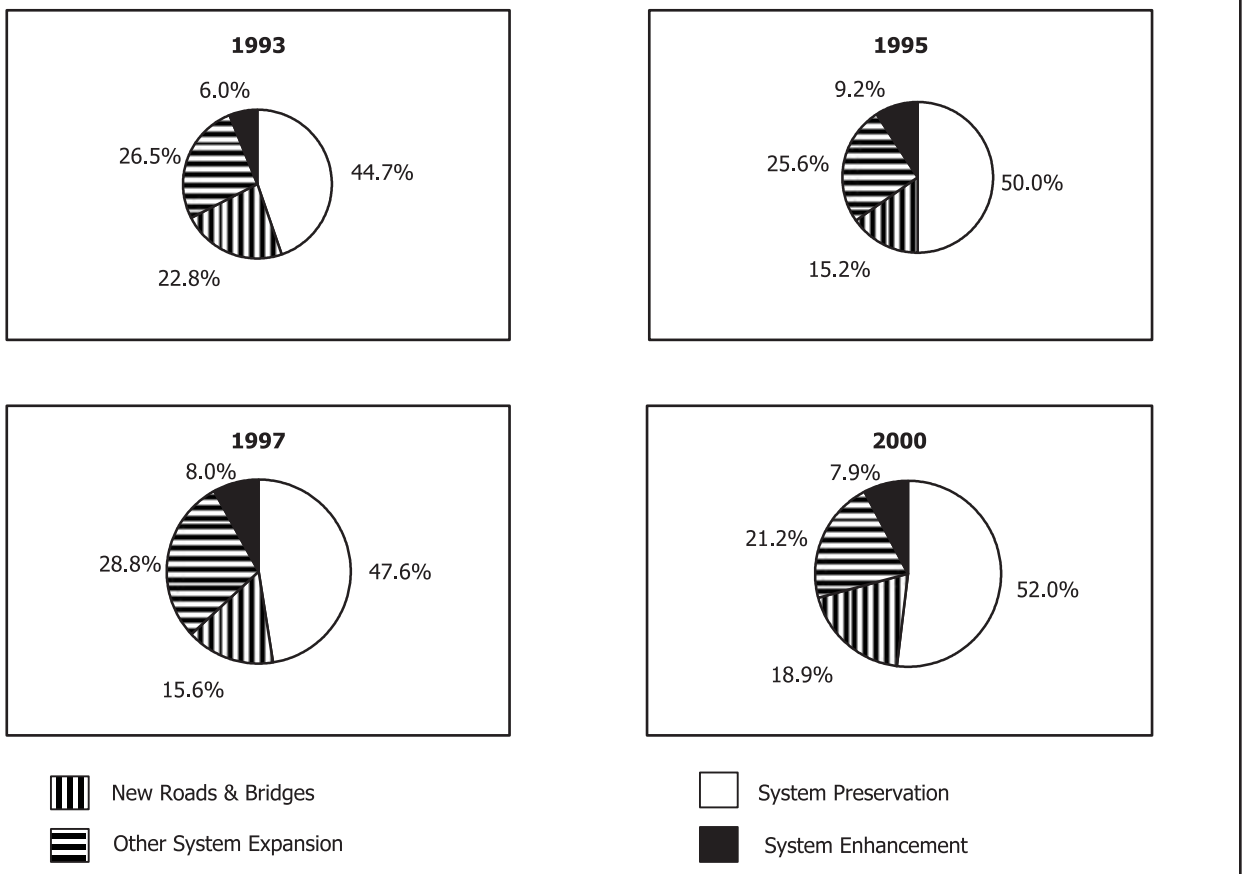
Sources: Highway Statistics 2000, Table SF-12A and unpublished FHWA data.

expansion decreased significantly, however (28.8 percent in 1997 versus 21.2 percent in 2000), resulting in a proportional decrease overall for system expansion outlays, compared to preservation and enhancements.

Exhibit 6-15 shows significant variations in the types of capital expenditures made by States on different functional systems. The portion of capital outlay devoted to system preservation ranges from 43.0 percent on urban other principal arterials to 72.9 percent on rural minor collectors. Overall, system preservation's share on arterials and collectors in rural areas (59.8 percent) was greater than in urban areas (46.1 percent).

Exhibit 6-14

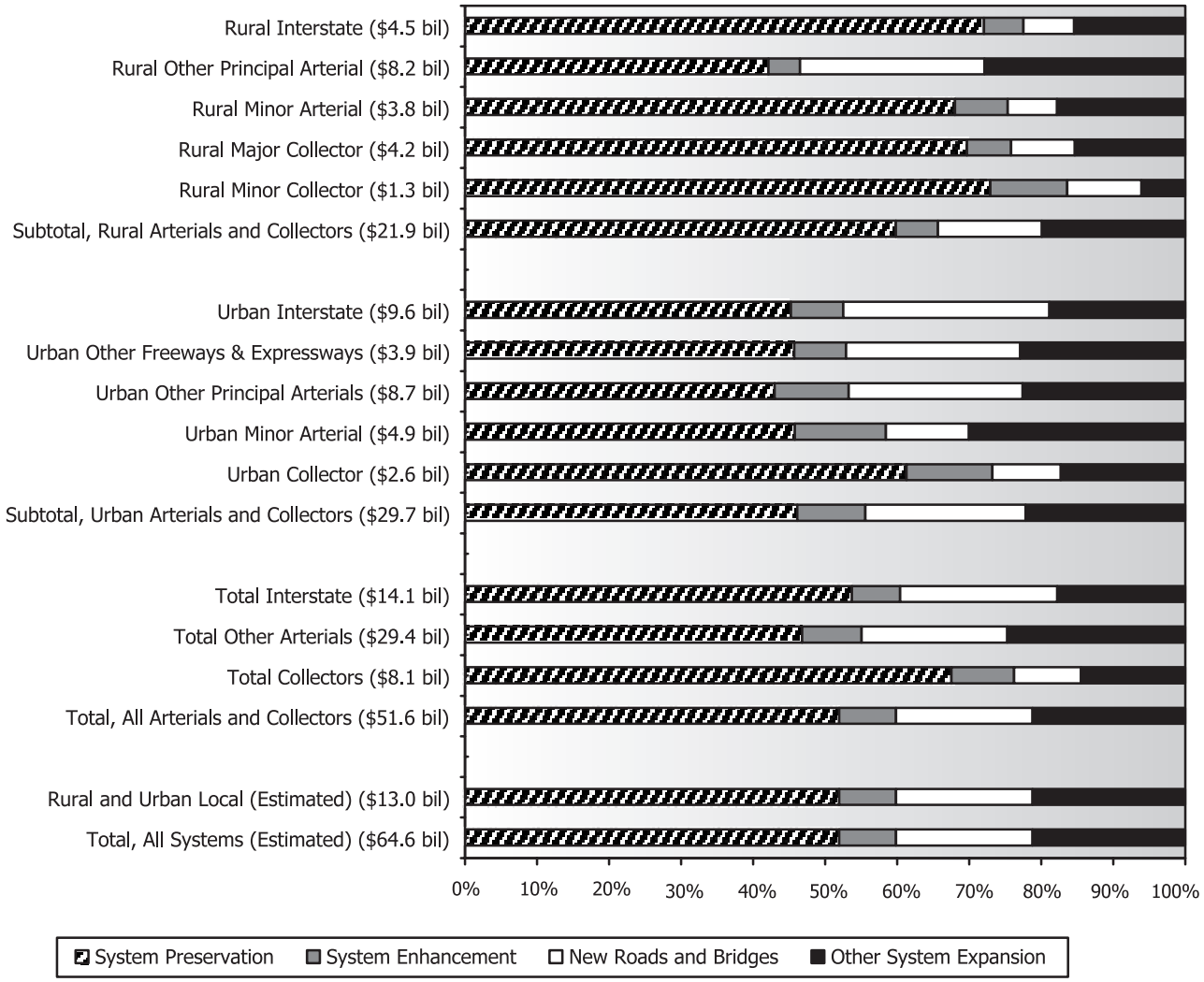
Distribution of Highway Capital Outlay
By Improvement Type, 1993, 1995, 1997 and 2000



System expansion expenditures also vary significantly by functional class. The portion of capital used for construction of new roads and bridges is highest on urban interstates, at 28.6 percent, while urban minor arterials have the largest share going to other system expansion improvements (30.0 percent). Rural other principal arterials have over 53 percent of capital investment devoted to system expansion. Total system expansion shares are lower on collectors (23.8 percent) than on interstates (39.6 percent) and other arterials (44.9 percent).

Exhibit 6-15

Distribution of Capital Outlay By Improvement Type and Functional System, 2000



Transit Funding

In 2000, $30.8 billion was available from all sources to finance public transit investment and operations. Public transit funding comes from two major sources: ***public funds*** allocated by Federal, State, and local governments and ***system generated revenues*** earned for the provision of transit services. Federal funding for transit includes fuel taxes dedicated to transit from the Mass Transit Account of the Highway Trust Fund and undedicated taxes allocated from Federal general fund appropriations such as personal and business income taxes. State and local governments also provide transit funding from their general fund appropriations as well as from fuel, income, sales, property, and other unspecified taxes, specific percentages of which are dedicated to transit *[See Exhibit 6-16]*. These percentages may vary considerably by type of tax and among taxing jurisdictions. Other public funds may also be provided from sources such as toll revenues and general transportation funds. System generated revenues are comprised principally of passenger fares, although additional revenues are also earned by transit systems for the provision of other services such as advertising and concessions, and from joint development fees. (See Exhibit 6-17 for a sources of total transit funding.)

Exhibit 6-16

Revenue Sources for Transit Financing 2000 (Millions of Dollars)

	FEDERAL	STATE	LOCAL	TOTAL	PERCENT
Public Funds	**$5,259**	**$5,419**	**$10,322**	**$20,999**	**68.1%**
General Fund	$999	$2,192	$2,322	$5,513	**17.9%**
Fuel Tax	$4,260	$395	$107	$4,762	**15.4%**
Income Tax		$152	$47	$198	**0.6%**
Sales Tax		$576	$4,209	$4,786	**15.5%**
Property Tax		$46	$522	$568	**1.8%**
Other Dedicated Taxes		$640	$392	$1,033	**3.3%**
Other Public Funds		$1,417	$2,722	$4,139	**13.4%**
System Generated Revenue				**$9,832**	**31.9%**
Passenger Fares				$7,811	25.3%
Other Revenue				$2,021	6.6%
Total All Sources				**$30,831**	**100.0%**

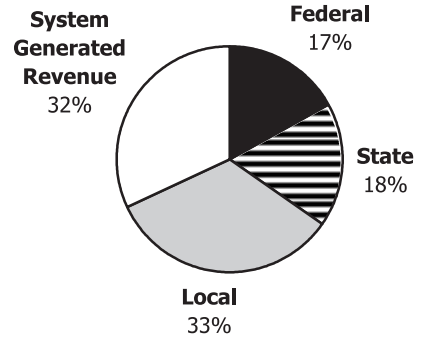
Source: National Transit Database.

Level and Composition of Public Funding

In 2000, public funds of $21.0 billion were available for transit and accounted for 68.1 percent of total transit funding. Of this amount, Federal funding was $5.3 billion and accounted for 25.0 percent of total public funds and 17 percent of all transit funding. State funding for transit was $5.4 billion and accounted for 25.8 percent of total public funds and 18 percent of all transit funding. Local jurisdictions provided the bulk of public transit funds, $10.3 billion in 2000, or 49.2 percent of total public funds and 33 percent of all transit funding.

Exhibit 6-17

Transit System Revenue Sources, 2000



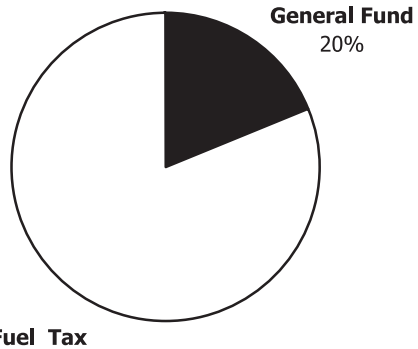
Source: National Transit Database.

Federal Funding

The fuel tax is the largest source of Federal funding for transit and accounts for 80.0 percent of total Federal funds. Allocations from the Federal general fund contribute the remaining 20.0 percent. *[See Exhibit 6-18]*.

Exhibit 6-18

Federal Sources of Transit Financing



Transit funding from Federal Motor Fuel Tax was introduced in 1983 through the dedication of one cent of the Federal motor fuel tax to a public transportation trust fund for capital projects. In 1990, the dedicated portion of the Federal fuel tax was increased to 1.5 cents, in 1995 to 2.0 cents, in 1997 to 2.85 cents, and in 1998 to 2.86 cents (retroactive to October 1, 1997) with the passage of the Transportation Equity Act for the 21st Century (TEA-21). Federal gasoline taxes have increased in current dollars from 4.0 cents per gallon in 1965 to 18.4 cents per gallon in 1995.

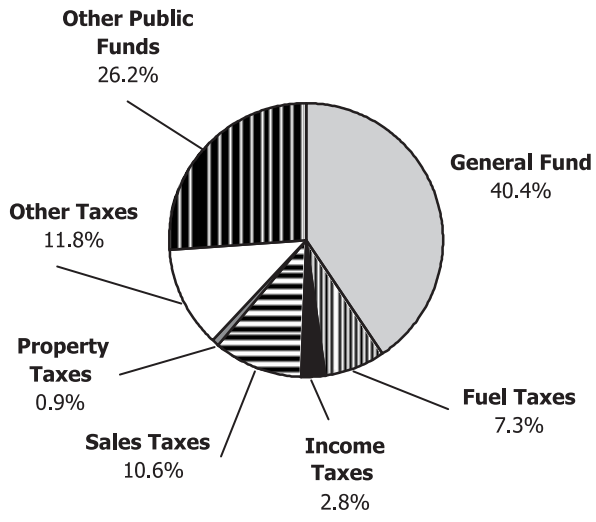
The first Federal tax on gasoline was implemented in 1932. States had been collecting taxes on gasoline since 1919, but Congress did not implement a Federal gasoline tax until it identified a general revenue shortfall in 1932. Between 1932 and 1956, receipts from the Federal gasoline tax continued to go to the general fund. Taxes on other motor fuels were added during this period. In 1956, motor fuel taxes were earmarked for the Federal Highway Trust Fund.

State and Local Funding

General funds and other dedicated public funds are important sources of transit funding at both the State and local levels. *[See Exhibits 6-19 and 6-20]*. In 2000, 40.4 percent of State funds and 22.5 percent of local funds came from general funds. Allocations from other public funds accounted for just over 26.0 percent of total State and local transit funding. Dedicated sales taxes are a major source of revenue at the local level and in 2000 accounted for 40.8 percent of total local transit public funding. They contributed a smaller share, 10.6 percent, to State transit funding. Dedicated income and property taxes provide more modest levels of funding at both the State and local levels. Dedicated income taxes are a more important source of transit funds at the State level, whereas dedicated property taxes are more important at the local level.

Exhibit 6-19

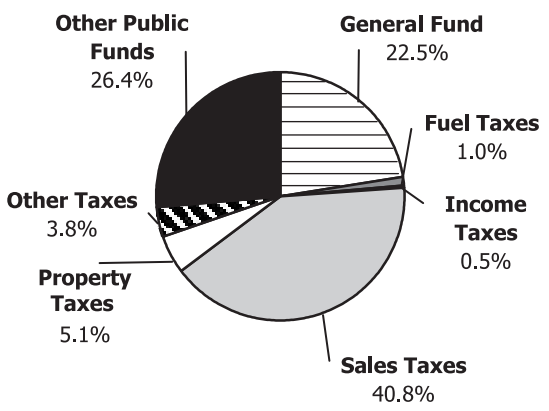
State Sources of Transit Financing, 2000



Source: National Transit Database.

Exhibit 6-20

Local Sources of Transit Finance, 2000



Source: National Transit Database.

Formula Grants Program

The Federal Transit Administration **(FTA) Formula Grants Program** is comprised of the **Urbanized Area Formula Program (Section 5307)**, the **Non-urbanized Area Formula Program Section (5311)**, and the **Elderly and Persons with Disabilities Formula Program Section (5310)**. It is the largest assistance program administered by FTA and totaled $3.3 billion in FY2001. Allocations are made according to population. The Urbanized Area Formula Program receives 91.23 percent of the funding available under the FTA Formula Grants program, the Non-urbanized Area Formula Program, 6.37 percent, and the Elderly and Persons with Disabilities Program, 2.40 percent. More than 90 percent of the funds allocated under the Urbanized Area Formula Program go to urbanized areas with populations of 200,000 or more. Non-urbanized areas are defined as rural areas and urban areas with populations under 50,000.

Level and Composition of System-Generated Funds

System generated funds were $9.8 billion in 2000 and provided 31.9 percent of total transit funding. Passenger fares contributed $7.8 billion, accounting for 79.4 percent of system-generated funds and 25.3 percent of total transit funds. These passenger figures do not include payments by State entities to transit systems to offset reduced transit fares for certain segments of the population such as students and the elderly. These payments are included in other revenues.

Trends in Public Funding

Prior to 1962, there was no Federal funding for public transit. State and local funding was limited, equal to about 16 percent of total current public funding in real terms. Public funding grew rapidly during the 1970s; at an average annual rate, Federal funding increased by 38.9 percent and State and local funding by 11.9 percent throughout the decade. Federal funding grew minimally during the 1980s, increasing at an average annual rate of 0.4 percent, while funding at the State and local levels continued to grow steadily at an average annual rate of 7.8 percent. Since 1990, Federal funding has increased at an average annual rate of 4.3 percent, more slowly than the 4.8 percent average annual increase in State and local funding. *[See Exhibit 6-21].*

Exhibit 6-21

Growth in Public Funding for Transit by Government Jurisdiction, 1960-2000

	Average Annual Growth Rate		
YEAR	FEDERAL	STATE AND LOCAL	TOTAL
1960-70	na	8.18%	9.04%
1970-80	38.87%	11.91%	17.18%
1980-90	0.45%	7.84%	5.30%
1990-2000	4.28%	4.83%	4.69%

Source: Congressional Budget Office/National Transit Database.

Flexible Funding

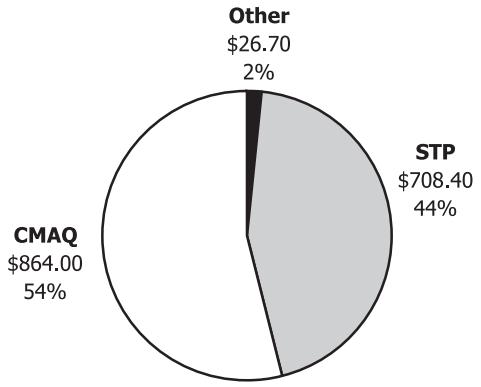
Since 1973, Federal surface transportation authorization statutes have contained flexible funding provisions that enable transfers from certain highway funds to transit programs and vice versa. In 1973, Congress began allowing local areas to exchange interstate transfer highway trust funds for transit funding from general revenues. Federal-aid highway dollars could be converted to transit grant purposes, with a higher local share. Flexible funding was implemented under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and continued by the Transportation Equity Act for the 21st Century (TEA-21). Transfers are subject to State, regional/local discretion, and priorities established through Statewide transportation planning processes. All States and territories within the U.S. participate in the flexible funding program, with the exceptions of Kansas, North Dakota, South Dakota, and Wyoming. *(See Exhibit 6-22).*

Flexible funds may be transferred from FHWA to FTA under the following programs:

- **Surface Transportation Program (STP):** STP is the largest flexible fund program. Flexible funds allocated from STP may be used for all transit projects eligible for funding under current FTA programs with the exclusion of operating assistance for Section 5307 and 5311 programs. *(See Exhibit 6-22).*
- **Congestion Mitigation and Air Quality Improvement Program (CMAQ):** Flexible funds from CMAQ funds are used to support transit projects to reduce vehicle emissions in areas that are not meeting air quality standards.
- **FHWA Other:** Flexible funds are allocated to FTA projects, earmarked under ISTEA and TEA-21 as innovative demonstration, congestion relief, and intermodel projects.

Exhibit 6-22

Sources of FHWA Flexible Fund Transfers to FTA, 2000
(Millions of Dollars)



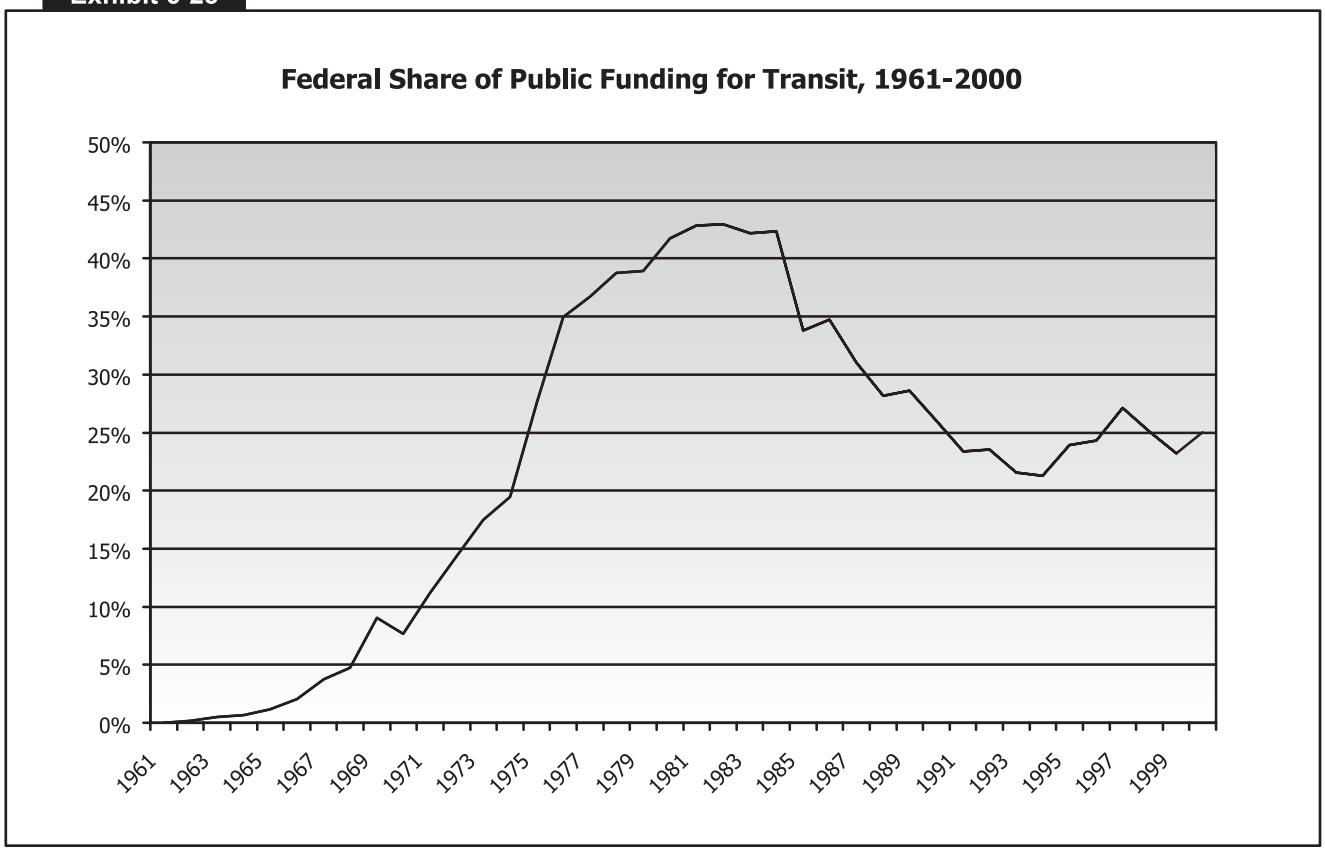
Source: Federal Transit Administrtion, Office of Resource Management and State Programs.

These flexible funds may be transferred to one or more of the following FTA programs.

- **Urbanized Area Formula Program (Section 5307).** Funds are allocated to urban areas for transit capital and planning costs as well as for operating assistance to urbanized areas with populations of less than 200,000.
- **Non-urbanized Area Formula Program (Section 5311).** Funds are allocated to support service to residents outside urban areas based on the size of States' non-urban populations.
- **Elderly and Persons with Disabilities Program (Section 5310).** Funds are allocated for the provision of specialized transit services for the elderly and disabled.
- **Metropolitan Planning Program (Section 5303)**
- **Interstate Substitute Program**

Federal funding as a percentage of total public funding for transit reached a peak of 43.0 percent in the early 1980s. *[See Exhibit 6-23]*. However, as growth in State and local funding for transit vastly exceeded the growth of Federal funding during the 1980s, by 1990, the share of total public transit funds provided by Federal funds had fallen to 26.0 percent. The share of Federal funding fell to a low of 21.3 percent in 1994, climbed to 27.1 percent in 1997, fall back to 23.2 percent in 1999, and increased again slightly to 25.0 percent in 2000.

Exhibit 6-23



Source: National Transit Database.

Funding in Current and Constant Dollars

Total public funding for transit in current dollars reached its highest level in current dollars of $21.0 million in 2000 *(See Exhibit 6-24)*.

Total Federal funding in constant dollars has grown more unevenly than in current dollars, although it has increased in most years *(See Exhibit 6-25)*. The largest decline in constant dollar funding occurred between 1980 and 1984, a period of rapid inflation when funding in current dollars increased.

The growth of State and local funding, which as previously mentioned has been considerably more rapid than the growth in Federal funding, has also been more erratic on a constant, as compared with a current, dollar basis *(See Exhibit 6-26)*.

Exhibit 6-24

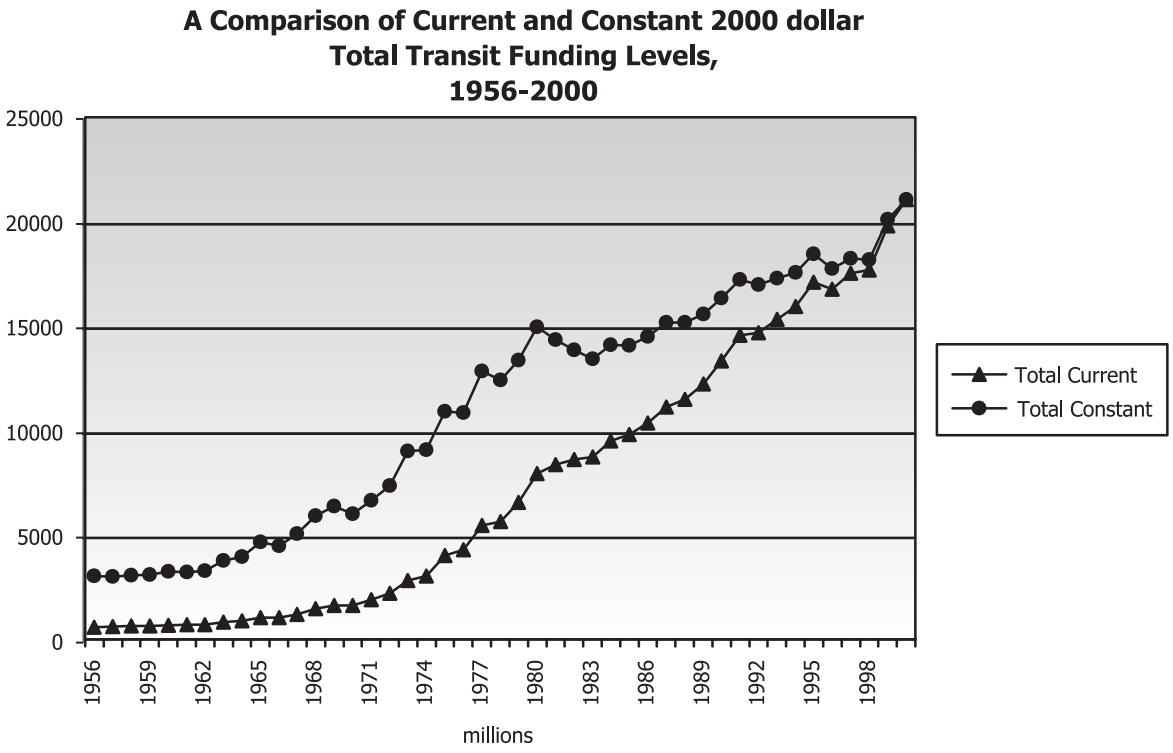
Public Funding for Transit by Government Jurisdiction
Selected Years, 1960-2000

YEAR	FEDERAL	STATE AND LOCAL	TOTAL	FEDERAL	STATE AND LOCAL	TOTAL	FEDERAL SHARE
	CURRENT DOLLARS			CONSTANT 2000 DOLLARS*			CURRENT DOLLARS
1960	$0	$683	**$683**	$0	$3,301	**$3,301**	0.0%
1970	$124	$1,499	**$1,623**	$465	$5,625	**$6,090**	7.6%
1980	$3,307	$4,617	**$7,924**	$6,314	$8,815	**$15,129**	41.7%
1990	$3,458	$9,823	**$13,281**	$4,296	$12,203	**$16,499**	26.0%
1991	$3,395	$11,116	**$14,511**	$4,060	$13,292	**$17,352**	23.4%
1992	$3,448	$11,195	**$14,643**	$4,018	$13,045	**$17,063**	23.5%
1993	$3,297	$11,991	**$15,287**	$3,752	$13,646	**$17,398**	21.6%
1994	$3,380	$12,522	**$15,902**	$3,765	$13,950	**$17,715**	21.3%
1995	$4,082	$12,971	**$17,053**	$4,450	$14,143	**$18,594**	23.9%
1996	$4,060	$12,643	**$16,703**	$4,340	$13,515	**$17,855**	24.3%
1997	$4,742	$12,728	**$17,470**	$4,972	$13,346	**$18,318**	27.1%
1998	$4,421	$13,200	**$17,620**	$4,571	$13,648	**$18,218**	25.1%
1999	$4,586	$15,166	**$19,752**	$4,681	$15,479	**$20,160**	23.2%
2000	$5,259	$15,739	**$20,999**	$5,259	$15,739	**$20,999**	25.0%

* Deflated with GDP Chained Price Index reported in The Budget of the US Government 2003.

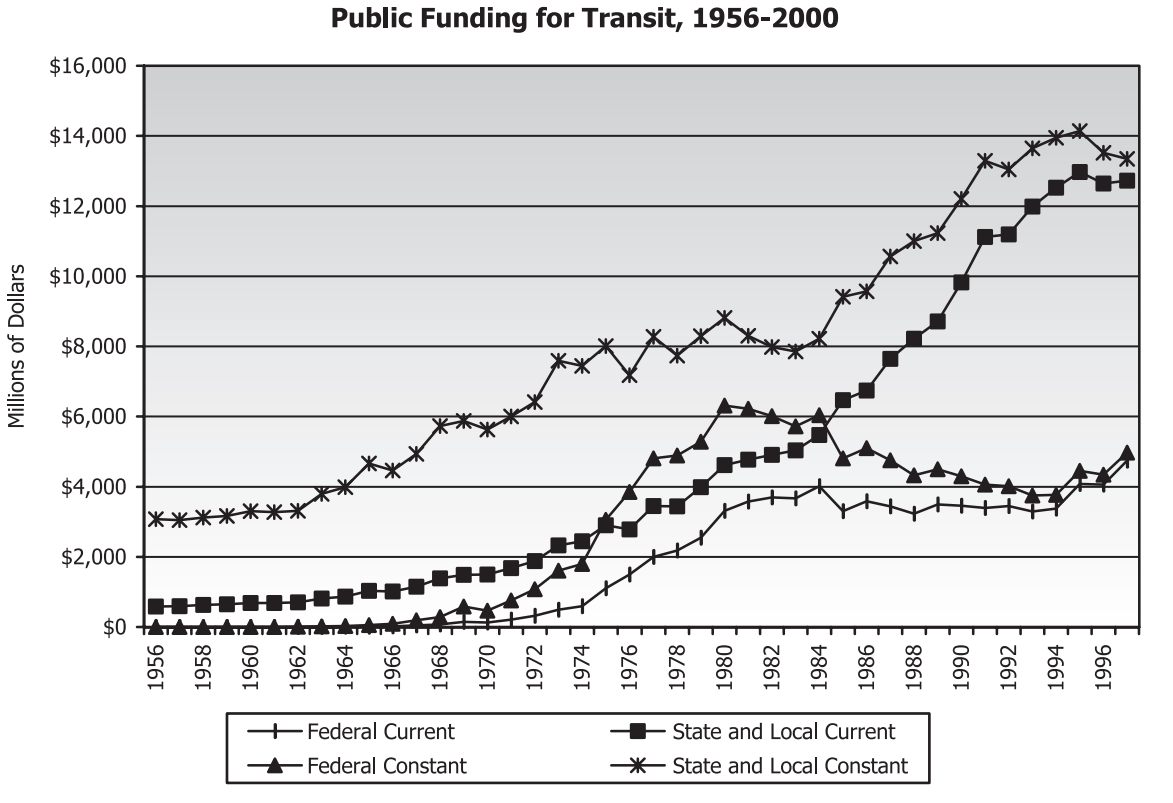
Source: National Transit Database/Office of Management and Budget.

Exhibit 6-25



Source: National Transit Database.

Exhibit 6-26



Sources: National Transit Database and Budget of the US Government, FY 2003.

Capital Funding and Expenditures

Transit operators generally use system generated revenue to fund operations. Therefore, funding for capital investments by transit operators in the U.S. comes principally from public sources. In 2000, 31.2 percent of total transit expenditures were for capital investment. Capital investments include the design and construction of New Starts and the modernization of existing fixed assets. Fixed assets include fixed guideway systems (e.g., rail tracks), terminals and stations as well as maintenance and administrative facilities. Capital investment expenditures also include the acquisition, renovation and repair of rolling stock, i.e., buses, rail cars, and locomotives, and service vehicles.

Capital investment funds for transit are also generated through the issuance of bonds. Certificates of participation (COPs) are tax-exempt bonds issued by State entities that are generally secured by revenues that are expected to be earned from the equipment that the COP funds are used to purchase. The U.S. Department of Transportation has three innovative financing programs to facilitate funding for transportation projects, including transit projects. These programs, the Transportation Infrastructure and Finance Innovation Act of 1998 (TIFIA), the State Infrastructure Bank (SIB) Pilot Program, and Grant Anticipation Revenue Vehicles (GARVEE bonds), which are discussed at the end of this chapter, contribute to the financing of transit capital investment.

In 2000, total capital expenditures on transit were $9.1 billion current dollars. *[See Exhibit 6-27]*. Federal funding for transit capital expenditures grew at an average annual rate of 5.0 percent between 1990-2000, while State funding grew by 4.2 percent and local funding by 11.7 percent. There is considerable variation among these three sources in the year-to-year changes of funding levels.

Over the decade, the share of Federal funds allocated to capital expenditures has declined substantially, from 58.1 percent in 1990 to 47.2 percent in 2000, while the share of local funds has increased from 27.7 percent to 45.7 percent in 1999, decreasing slightly to 42.0 percent in 2000. This shift reflects an increase in local support for transit projects. The share of capital funding from State sources has remained relatively constant, fluctuating between 10.2 percent in 1999 and 14.2 percent in 1990—with the exception of 1993, when the State share soared to 23.0 percent.

Exhibit 6-27

Sources of Funds for Transit Capital Expenditures, 1990-2000 (Millions of Dollars)

	1990	1991	1993	1995	1997	1999	2000	Average Annual Growth
Federal	$2,636	$2,545	$2,383	$3,314	$4,138	$3,726	$4,275	5.0%
Share	58.1%	49.9%	41.6%	47.3%	54.2%	44.1%	47.2%	
State	$645	$638	$1,317	$989	$1,007	$858	$973	4.2%
Share	14.2%	12.5%	23.0%	14.1%	13.2%	10.2%	10.7%	
Local	$1,255	$1,914	$2,033	$2,706	$2,492	$3,860	$3,808	11.7%
Share	27.7%	37.6%	35.5%	38.6%	32.6%	45.7%	42.0%	
Total	**$4,536**	**$5,097**	**$5,733**	**$7,008**	**$7,636**	**$8,443**	**$9,056**	**7.2%**

Source: National Transit Database.

A higher percentage of total transit capital expenditures is allocated to rail rather than to bus modes of transportation, and to investment in transit facilities rather than in rolling stock. *[See Exhibit 6-29].* In 2000, $5.7 billion, or 63.1 percent of total transit capital expenditures, was for capital investment in rail modes of transportation such as commuter rail, heavy rail, light rail, etc., $2.9 billion, or 32.1 percent, for capital investment in bus modes, and $0.4 billion, or 4.8 percent, for capital investment in other transit modes. With regard to investments in fixed assets, $5.3 billion, or 58.0 percent of total capital expenditures, was spent on investment in transit facilities, $2.8 billion, 31.4 percent of the total, on investment in rolling stock, and $1.0 billion, or 10.6 percent of the total on other capital.

New Starts

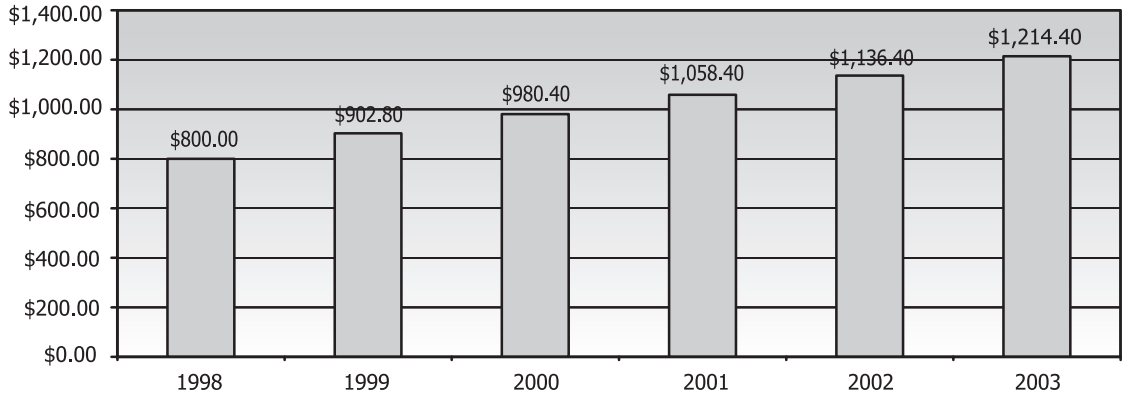
Section 49 USC 5309 provides for the allocation of funds for the construction of new fixed guideway systems, fixed guideway modernization and expansion, and bus capital requirements. Projects involving the construction of new fixed guideway systems are known as "New Starts."

In order to receive FTA capital investment funds for a New Starts project, the proposed project must emerge from the metropolitan and/or Statewide planning process. A rigorous series of planning and project development requirements must be completed in order to qualify for this funding. Local officials are required to analyze the benefits, costs, and other impacts with alternative transportation strategies before deciding upon a locally preferred alternative. Proposed projects are evaluated on the basis of expected mobility improvements, environmental benefits, operating efficiencies and cost-effectiveness. Initial planning efforts are not funded through the Section 5309 program, but may be funded through Section 5303 Metropolitan Planning or Section 5307 Urbanized Area Formula Grants programs.

Under current law, Federal funding may comprise up to 80.0 percent of a New Start funding requirement. The Administration is seeking a legislative change that would lower this share to no more than 50.0 percent, beginning in FY2004. Total Federal funding for New Starts authorized by TEA-21 from 1998 through 2003 is $6.1 billion. Annual funding for New Starts has increased from $800.0 million in 1998 and will reach $1.2 billion in 2003. *[See Exhibit 6-28].*

Exhibit 6-28

New Starts Funding, 1998-2001
(Millions of Dollars)



Source: FTA.

A higher percentage of capital expenditures for rail modes is for facilities, and a higher percentage of capital expenditures for bus modes is for rolling stock. In 2000, 68.0 percent of all expenditures for capital investment in rail was for facilities, while 54.0 percent of all expenditures for capital investment in bus was for rolling stock. *[See Exhibit 6-29]*. These differences, which have remained relatively constant in recent years, reflect the reliance of rail modes on separately constructed fixed guideway systems, whereas buses, vanpools, and demand response vehicles travel on roads.

Exhibit 6-29

Transit Capital Expenditures by Type of Expenditure, 2000 (Millions of Dollars)

	ROLLING STOCK	FACILITIES	OTHER CAPITAL	TOTAL EXPENDITURE	PERCENT
Rail	$1,098	$4,135	$487	**$5,717**	63%
Bus	$1,576	$885	$444	**$2,905**	32%
Other	$165	$234	$30	**$434**	5%
Total	**$2,840**	**$5,254**	**$961**	**$9,055**	**100%**
Percent	31%	58%	11%	**100%**	

Source: National Transit Database.

Operating Expenditures

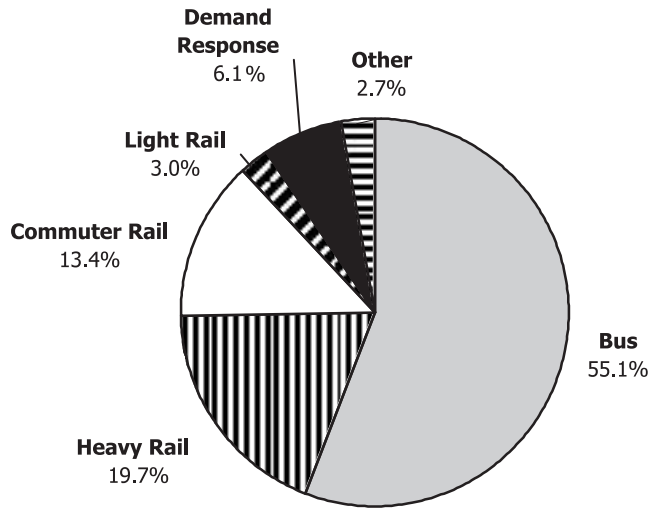
In 2000, operating expenditures, including purchased (contracted) transportation, were $20.0 billion and accounted for 68.8 percent of total transit expenditures. Transit operating expenditures include wages, salaries, fuel, spare parts, preventive maintenance, support services, and leases used in providing public transit service.

Operating Expenditures by Transit Mode

Buses account for the largest percentage of transit operating expenditures, $11.0 billion in 2000, or 55.1 percent of the operating expenditure total *(See Exhibits 6-30 and 6-31)*. Heavy rail accounted for $3.9 billion, 19.7 percent of the total, and commuter rail, $2.7 billion, 13.4 percent of the total. Operating expenditures for demand response vehicles have more than tripled over the past decade from $386.0 million in 1990 to $1.2 billion in 2000, reflecting increased services to the elderly and persons with disabilities pursuant to the Americans with Disabilities Act and new programs targeted toward the provision of services to these groups. These expenditures appear to be stabilizing, with a marginal decline from 1999 to 2000. In 2000, demand response systems accounted for 6.1 percent of total transit

Exhibit 6-30

Composition of Transit Operational Expenditures by Mode, 2000



Source: National Transit Database.

operating expenses. Light rail and other transit vehicles accounted for just under 3 percent each.

Exhibit 6-31

Mass Transit Operating Expenses by Mode
1988-2000
(Millions of Dollars)

YEAR	BUS	HEAVY RAIL	COMMUTER RAIL	LIGHT RAIL	DEMAND RESPONSE	OTHER	TOTAL
1988	$6,995	$3,524	$1,889	$197	$252	$261	**$13,118**
1989	$7,295	$3,704	$2,068	$209	$323	$284	**$13,883**
1990	$7,779	$3,825	$2,157	$236	$386	$323	**$14,706**
1991	$8,330	$3,841	$2,175	$290	$443	$325	**$15,404**
1992	$8,625	$3,555	$2,170	$307	$500	$342	**$15,499**
1993	$8,866	$3,669	$2,203	$314	$561	$358	**$15,971**
1994	$9,168	$3,786	$2,353	$412	$712	$401	**$16,832**
1995	$9,247	$3,523	$2,211	$375	$757	$415	**$16,528**
1996	$9,324	$3,402	$2,294	$440	$849	$440	**$16,748**
1997	$9,777	$3,474	$2,278	$471	$1,009	$454	**$17,462**
1998	$10,120	$3,530	$2,360	$493	$1,134	$498	**$18,135**
1999	$10,841	$3,693	$2,574	$536	$1,275	$540	**$19,460**
2000	$11,026	$3,931	$2,679	$592	$1,225	$549	**$20,003**
Average Annual Growth Rate	3.9%	0.9%	3.0%	9.6%	14.1%	6.4%	3.6%

Source: National Transit Database.

Operating Expenditures by Transit Operations

In 2000, $10.3 billion, or 51.6 percent, of transit operating expenses were for vehicle operations. *[See Exhibit 6-32]*. Expenditures on vehicle maintenance were $4.2 million or 20.9 percent of the total. Bus and rail operations have inherently different cost structures. While 68.4 percent of total operations expenditures for demand response transit and 56.6 percent of total operations expenditures for buses were spent for actual operation of the vehicles, only 40.0 percent of rail operations expenditures were spent on the operation of rail vehicles. A significantly higher percentage of expenditures for rail modes of transportation

Exhibit 6-32

Disbursements for Transit Operations - All Modes by Function, 2000
(Millions of Dollars)

MODE	VEHICLE OPERATIONS		VEHICLE MAINTENANCE		NON-VEHICLE MAINTENANCE		GENERAL ADMINISTRATION	
Bus	$6,243	56.6%	$2,420	22.0%	$482	4.4%	$1,882	17.1%
Heavy Rail	$1,620	41.2%	$733	18.7%	$999	25.4%	$579	14.7%
Commuter Rail	$1,031	38.5%	$646	24.1%	$493	18.4%	$510	19.0%
Light Rail	$247	41.7%	$142	24.0%	$99	16.8%	$104	17.5%
Demand Response	$838	68.4%	$144	11.8%	$26	2.1%	$217	17.7%
Other	$341	62.1%	$89	16.1%	$41	7.5%	$78	14.3%
Total	**$10,319**	**51.6%**	**$4,174**	**20.9%**	**$2,141**	**10.7%**	**$3,369**	**16.8%**

Source: National Transit Database.

are classified as non-vehicle maintenance for the repair and maintenance of fixed guideway systems.

Rural Transit

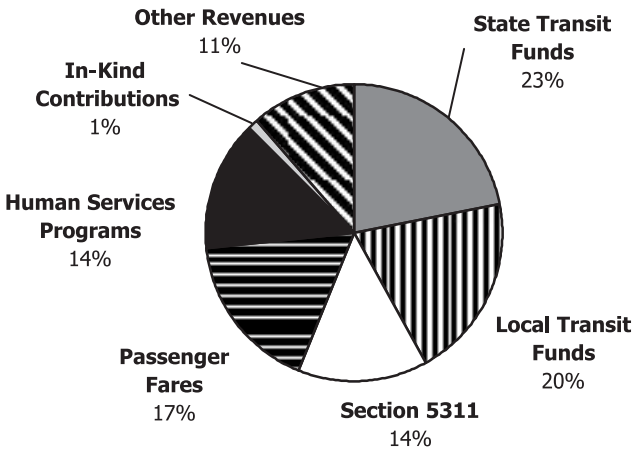
Since 1978, the Federal Government has contributed to the financing of transit in rural areas, i.e., areas with populations of less than 50,000. These rural areas are estimated to account for 36 percent of the U.S. population and 38 percent of the transit-dependent population.

Funding for rural transit is currently provided through Title 49 Section 5311, which, in 1994, replaced Section 18 of the Urban Mass Transit Act. Rural transit funding was increased substantially with passage of the Transportation Equity Act for the 21st Century (TEA-21). In FY 2000, Federal funding for transit under TEA-21 was $194 million. Federal funding for rural transit, will reach $240 million in 2003, the end of the TEA-21 authorization period. This is an 80 percent increase from the 1998 and a 266 percent increase from the 1991 levels. States may transfer additional funds to rural transit from highway projects, transit projects, or formula transit funds for small, urbanized areas.

On average, 14 percent of rural transit authorities' operating budgets comes from Section 5311 funds. *[See Exhibit 6-33]*. State and local governments cover 23.0 and 21 percent, respectively, of their rural operating budgets through a combination of dedicated State and local taxes, appropriations from State general revenues and allocations from other city and county funds. In 2000, total State and local contributions to rural transit operating budgets increased to a total of $431 million, up from $145 million in 1994. Human Services programs, including Medicaid, cover about 15 percent of rural operating budgets, and in-kind contributions and other revenues cover the remainder.

Exhibit 6-33

Sources of Rural Transit Operators Budget for Operating Expenditures, 2000



Source: Status of Rural Public Transportation, 2000, Community Transportation Association of America, April 2001.

Innovative Finance

TIFIA: The Transportation Infrastructure and Finance Innovation Act of 1998 (TIFIA) authorized the U.S. Department of Transportation to establish a new credit program offering eligible applicants the opportunity to compete for direct loans, loan guarantees, and lines of credit for up to one-third of the cost of large infrastructure construction projects of national or regional significance, provided that the borrower has a revenue stream, such as tolls or local sales taxes, which can be used to repay the debt issued by the project. To be eligible, a project must have eligible costs that total at least $100.0 million or alternatively equal 50.0 percent of a State's Federal-Aid Highway apportionments for the most recent fiscal year, whichever is less. This dollar threshold reflects congressional intent to assist major projects that can attract substantial private capital with limited Federal investment. Intelligent Transportation System (ITS) projects are subject to a lower threshold, a minimum of $30.0 million. As of September 2002, 11 projects totaling $15.7 billion had been selected to receive TIFIA credit assistance, with commitments totaling more than $3.7 billion. These funding requests are for three transit projects, five highway and bridge projects, two intermodal projects, and one passenger rail project.

State Infrastructure Banks: Section 350 of the National Highway System Designation Act of 1995 (P.L. 104-59) authorized the U.S. Department of Transportation to establish the State Infrastructure Bank (SIB) Pilot Program. This program provides increased financial flexibility for infrastructure projects by offering direct loans and other credit enhancement products such as loan guarantees. SIBs are capitalized with Federal and State funds. Some States augment these operating reserves through a variety of methods including special appropriations and debt issues. Each SIB operates as a revolving fund and can finance a wide variety of surface transportation projects. As loans are repaid, additional funds become available to new loan applicants. TEA-21 legislation, limited the use of TEA-21 funds for SIB capitalization purposes to four States: Rhode Island, Missouri, California, and Florida. Texas was added later. The remaining states that participate in the SIB program operate under the provisions of the National Highway System Act rules and may not capitalize SIBs with TEA-21 funds. However, existing SIB programs continue to offer loan products. As of June 2002, 32 SIBs had entered into 294 loan agreements for a total of $4.0 billion. Six of these states (Arizona, Florida, Missouri, Ohio, South Carolina and Texas) account for over 92 percent of SIB loans nationwide.

GARVEE: Grant Anticipation Revenue Vehicles (GARVEE bonds) are a variation of a Grant Anticipation Note (GAN). A GAN is a form of debt that pledges anticipated grant money as a repayment source. GARVEE bonds permit debt issuance expenses to be reimbursed with anticipated Federal funds. In addition to traditional debt service, principal and interest, expenses such as underwriting fees, bond insurance, and financial counsel are eligible for reimbursement. Debt instruments issued by special purpose non-profit corporations (classified as 63-20 corporations by the Internal Revenue Service) may be repaid with Federal-aid funds if the bonds are issued on behalf of the State and the proceeds are used for projects eligible under Title 23. As of July 2002, six states (Alabama, Arkansas, Arizona, Colorado, New Mexico and Ohio) had sold 14 GARVEE bond issues totaling $2.5 billion.