

Our Nation's Highways



U.S. Department
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Administration**

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*Selected Facts
and Figures*



The information in this publication provides a condensed overview of facts and figures about our Nation's highways. It is considered to be of interest to the average citizen. Except where noted, the Federal Highway Administration is the source of the data provided by the States. Unless otherwise stated, we have used 1996 data. For more detailed data on many of the subjects covered, refer to the publication series, *Highway Statistics*, published annually by the Office of Highway Information Management, Federal Highway Administration.

Data for this booklet, the *Highway Statistics* series, and many other publications may also be viewed and downloaded at our website:

<http://www.fhwa.dot.gov/ohim>

You can download files with the raw data used to create each of the tables, graphs, charts, etc. in each section of this document by clicking on the pertinent section listed below:

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American's motor vehicle travel in 1996 reached 2.5 trillion vehicle-miles, an average of 11,807 miles per vehicle per year. Automobiles are responsible for 59.1 percent of this travel.

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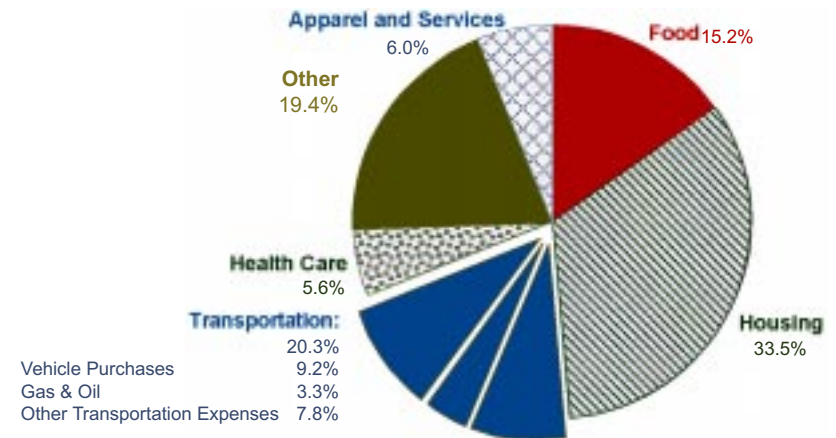
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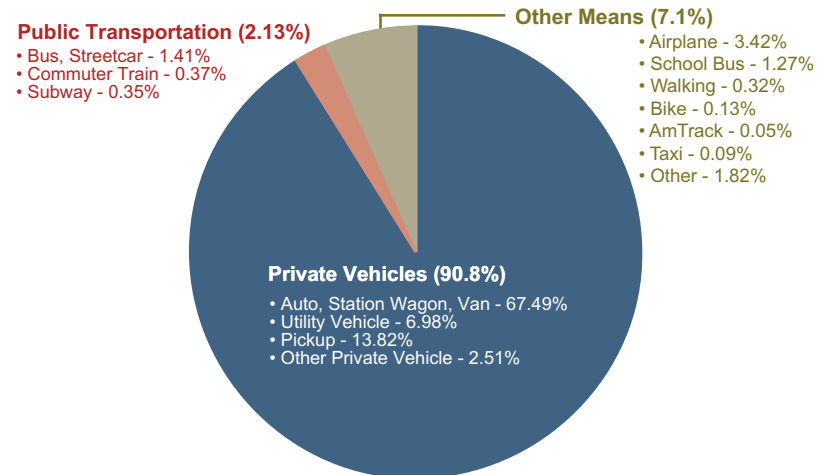
Transportation Expenditures at the Household Level



SOURCE: U.S. Bureau of Labor Statistics, *Consumer Expenditures Survey: Results from 4th Quarter, 1995*.

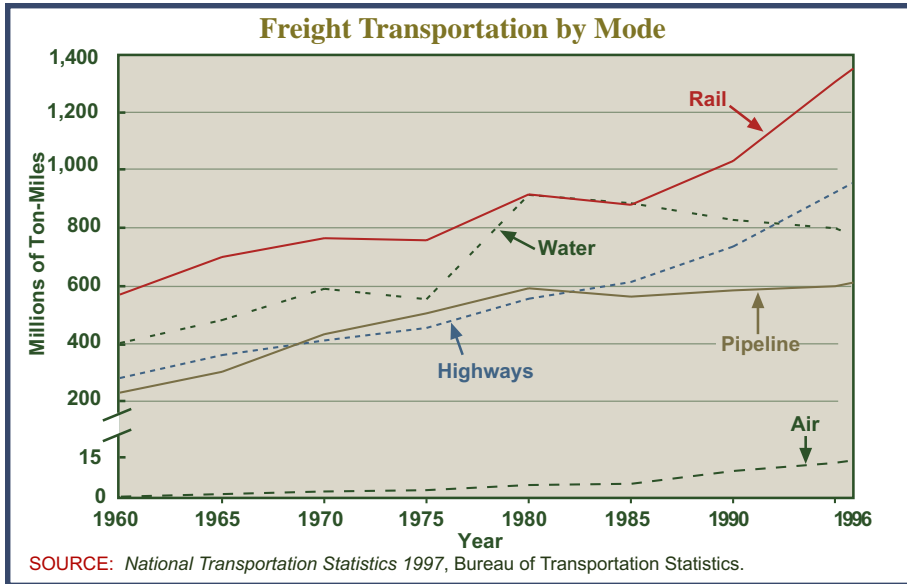
After housing (33.5 percent), transportation (20.3 percent) accounts for the largest single household expenditure, and 62 percent of transportation expenditures at the household level are for personal vehicles, gas, and oil.

Personal Travel by Mode of Transportation

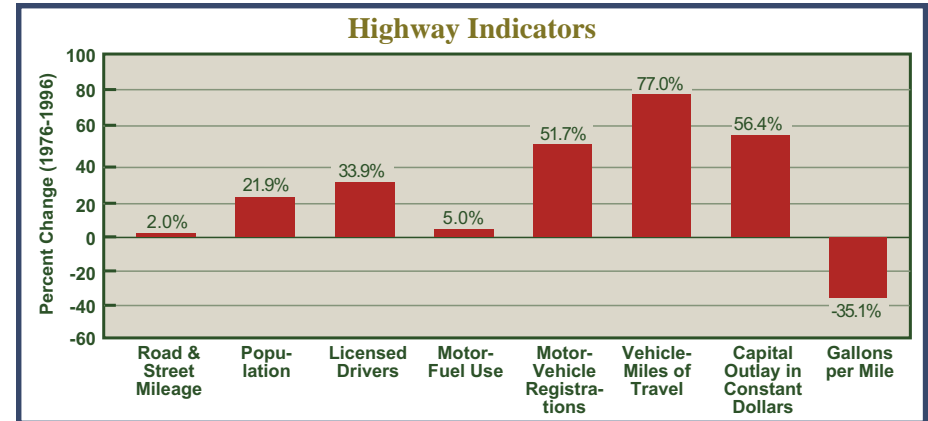
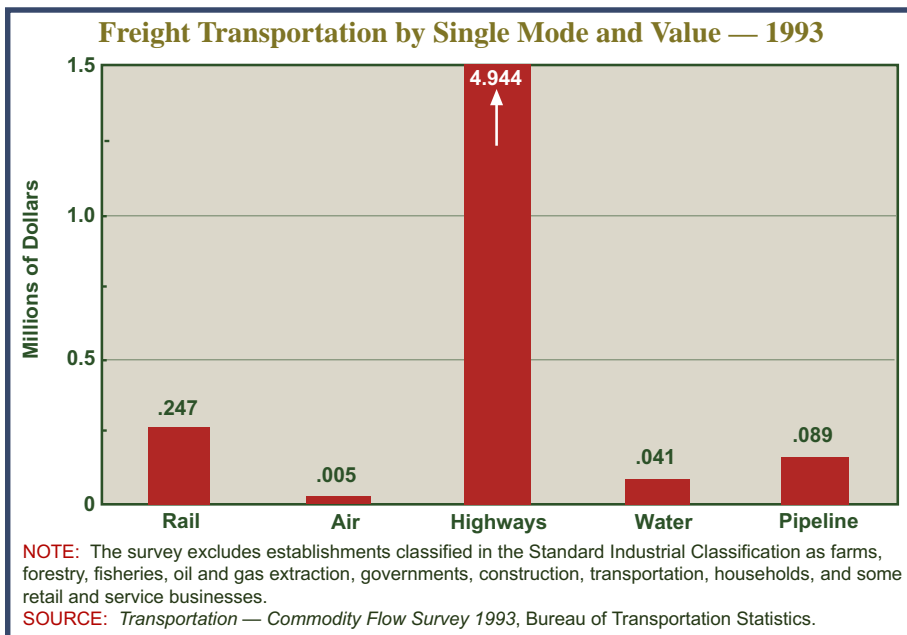


SOURCE: Federal Highway Administration, *1995 Nationwide Personal Transportation Survey*.

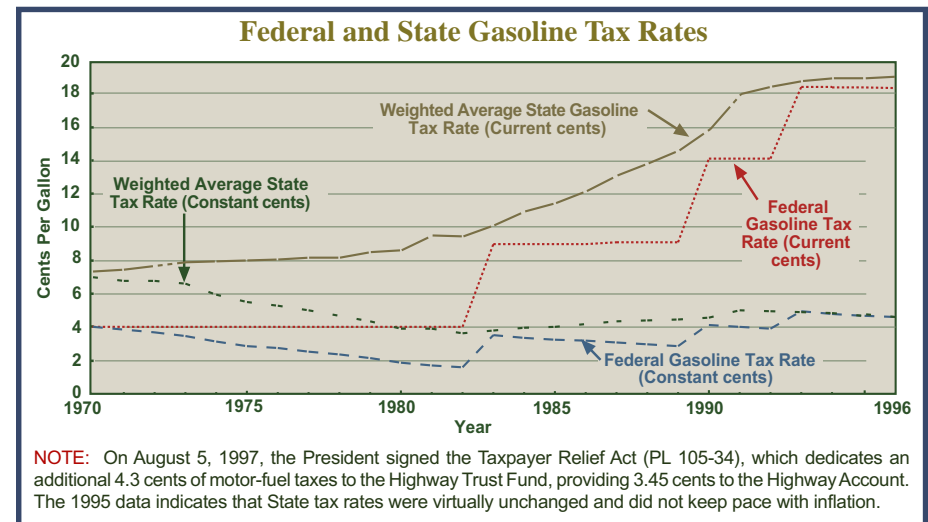
The personal motor vehicle (automobile, light truck, van, and motorcycle) is the predominant form of personal transportation. Privately owned vehicles are used for 90.8 percent of all personal travel. When school bus (1.3%), bus/streetcar (1.4%), and taxi (.09%) are added to the Private Vehicle portion, we find that almost 94 percent of personal transportation is served by highways.



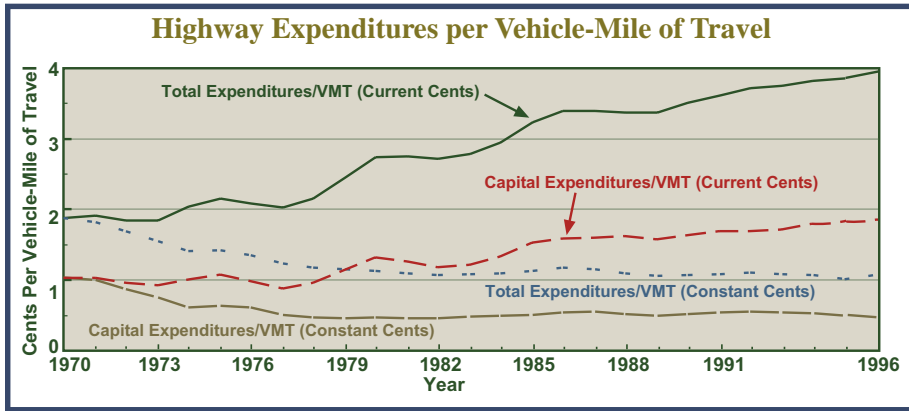
The Nation's highway system carried 25 percent of the total revenue ton-miles of freight in 1995, compared to 19 percent in 1960. More significant is that almost ninety-three percent of the total dollars of freight in 1993 was transported across these same highways. The amount of total revenue ton-miles of freight carried across highways has increased from 285 billion in 1969 to 921 billion in 1995—a 223 percent increase.



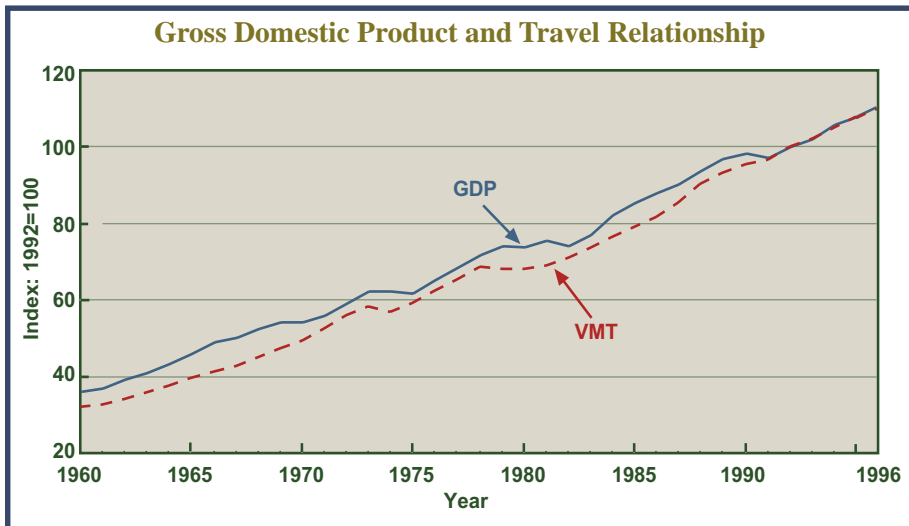
Road and street mileage only increased 2.0 percent since 1976, but the number of vehicles using those roads and streets has increased 51.7 percent and vehicle-miles of travel increased by 77.0 percent. Highway capital outlay expressed in constant 1987 dollars has only increased by 56.4 percent while the percent change from 1976 to 1996 for gallons of motor fuel per mile has decreased by 35.1 percent.



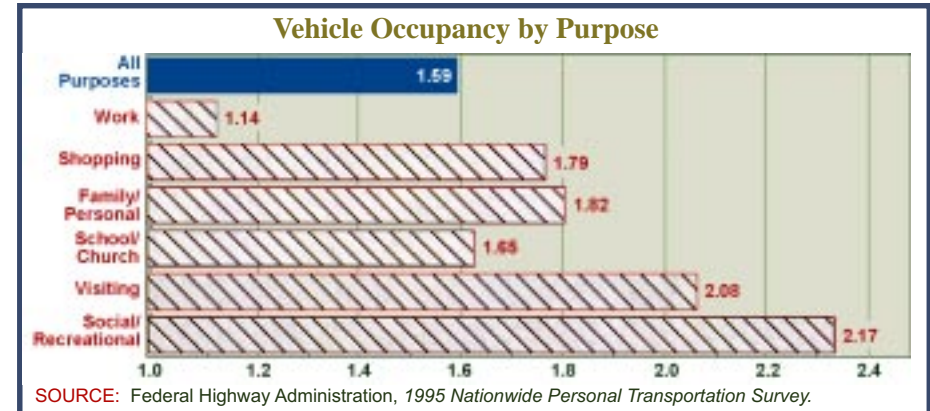
Despite increases in State motor-fuel tax rates during the 1980's, the weighted average gasoline tax rate expressed in constant 1970 cents decreased by 34 percent from 7.02 cents per gallon in 1970 to 4.62 cents per gallon in 1996. Over the same 1970 to 1996 period, the Federal gasoline tax rate expressed in constant 1970 cents increased by 13 percent, from 4.00 cents per gallon to 4.53 cents per gallon as the rate increased from 4.00 cents per gallon to 18.3 cents per gallon. The Federal tax on gasoline included 6.8 cents for deficit reduction and 0.1 cent for the Leaking Underground Storage Tank (LUST) Trust Fund. In October 1995, the amount for deficit reduction decreased to 4.3 cents per gallon. In January 1996, the LUST Trust Fund tax expired and the Federal tax rate dropped to 18.3 cents. In October 1997, the LUST Trust Fund tax was restored and 18.3 cents was directed entirely to transportation purposes. State tax rates for 1996 were virtually unchanged.



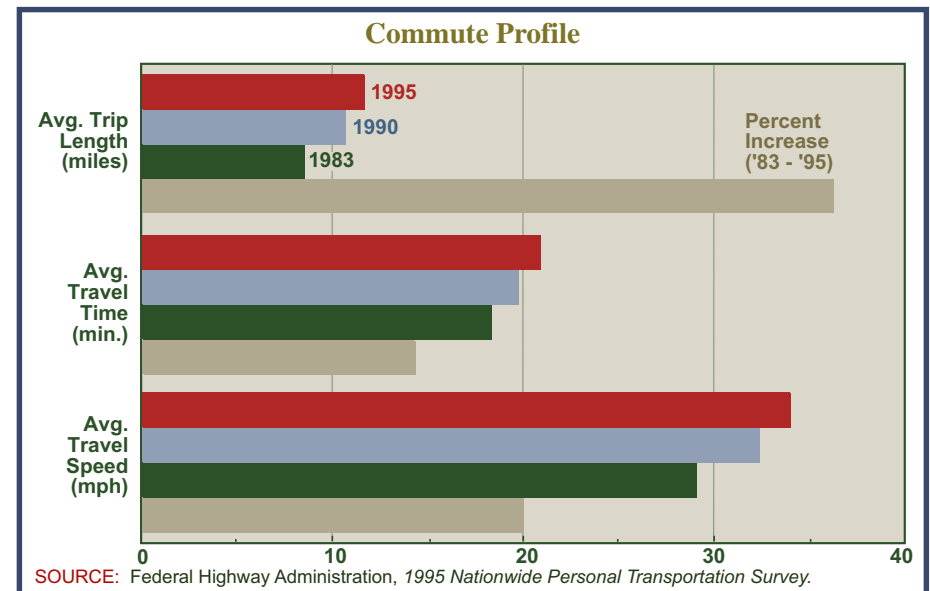
In 1996, highway capital expenditures were 1.87 cents per vehicle-mile of travel (VMT) as compared to 1.04 cents per VMT in 1970 — an 80 percent increase. After accounting for inflation, however, 1996 capital expenditures were only 0.54 cents per VMT, a 48 percent decrease from 1970's capital expenditures. In 1996, total highway expenditures were 3.95 cents per VMT as compared to 1.88 cents per VMT in 1970 — a 110 percent increase. After adjusting for inflation, total 1996 highway expenditures were only 1.06 cents per VMT, a 44-percent decrease from 1970's total highway expenditures. In effect, 1996's highway expenditures by all units of government, with inflation removed, were about 56 percent of what they were 26 years ago for each vehicle-mile of travel.



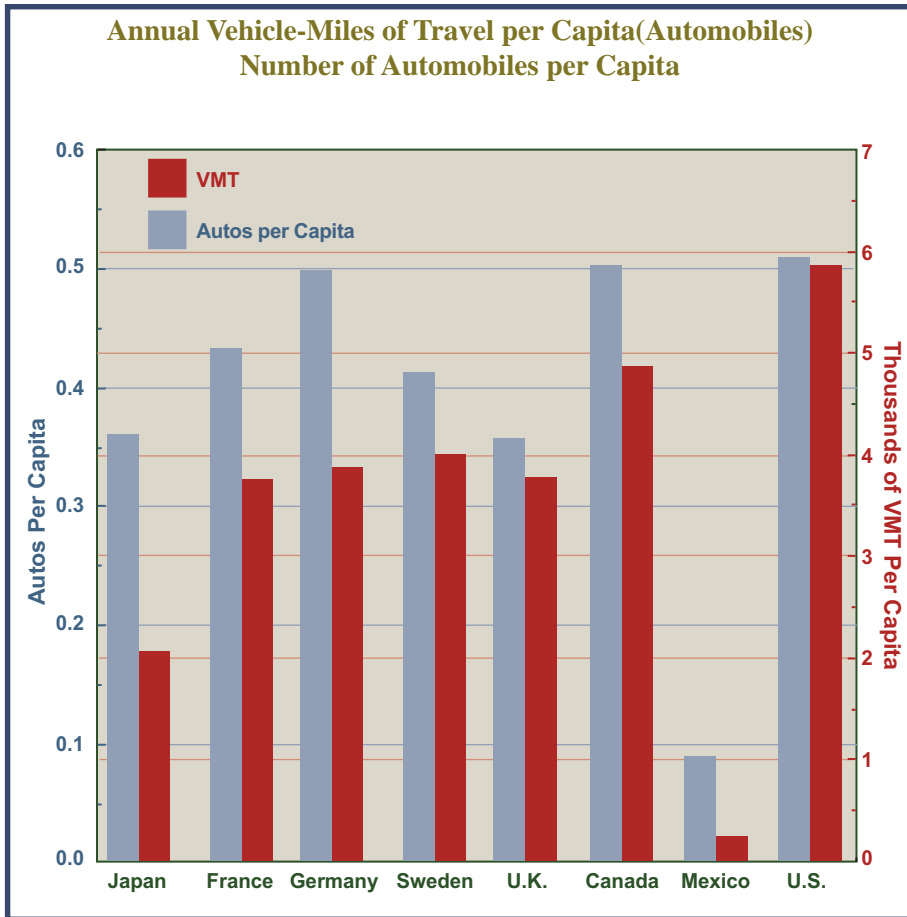
There is a strong relationship between the Nation's economy and travel on the Nation's highway system. Since the 1960's, growth in the Gross Domestic Product (GDP) and vehicle-miles of travel (VMT) reflect strikingly similar patterns, including the period of energy disruptions during the 1970s.



Average private vehicle occupancy is 1.59 person miles of travel per vehicle-mile. As expected, the highest occupancy rates are for social and recreational activities and the lowest rates are for travel to and from work. The survey participants listed their most common reasons for not carpooling to work: no one to carpool with, working irregular or unusual hours, needing their own car before, during, or after work.

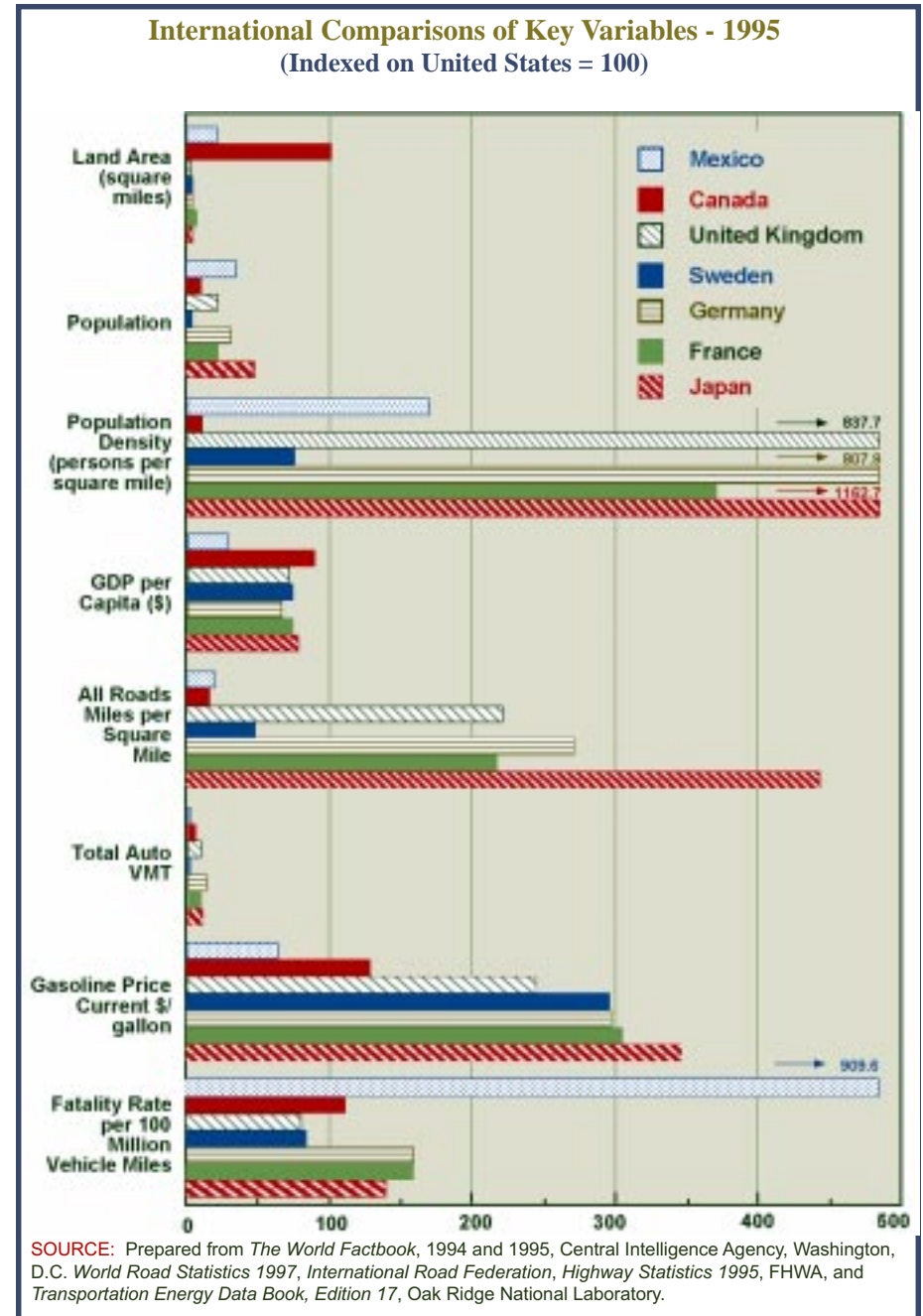


The 1995 Nationwide Personal Transportation Survey (NPTS) data show a continuation of the increase in commute trip length without a corresponding increase in travel time. While commuting trips are 37 percent longer in miles since 1983, travel time increased only by 14 percent. The three reasons most often cited for this situation are the continued decentralization of metropolitan areas, expansion of the peak travel period, and the shift from transit and carpool to single-occupant vehicles. All three factors would contribute to commuters being able to travel longer distances and make those trips at a greater speed than in the past.



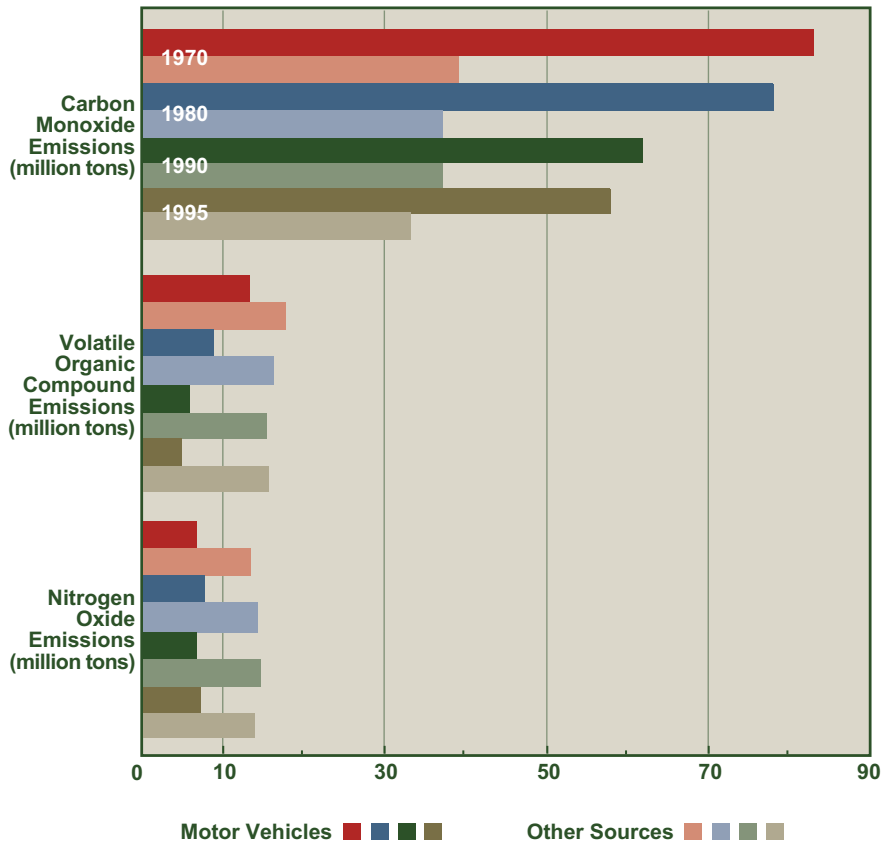
Americans own more vehicles and travel far more than the citizens of other countries. Only in the U.S. and Canada is the automobile ownership per capita over 50 percent, with Germany, France, and Sweden close behind at over 40 percent. Annual vehicle-miles for automobiles follow a more pronounced pattern with per capita mileage for the U.S. exceeding 5,800 and for Canada exceeding 4,800. Sweden, Germany, the U.K., and France follow each with between 3,000 and 4,000 per capita miles.

Land area, population and the resulting population density, as well the prosperity of the countries as shown in the gross domestic product (GDP), provide a frame of reference and an explanation for various transportation indicators. The highest vehicle-miles per capita is associated with the large land areas, high GDP, and low gasoline prices of the U.S. and Canada. The amount of roadway per land area is highest for small, populous and prosperous Japan; but gasoline prices are high and vehicle-miles traveled per capita are moderate there. Mexico's low GDP overrides all other factors to create a less developed transportation infrastructure and less travel, but, unfortunately, a very high fatality rate.



SOURCE: Prepared from *The World Factbook*, 1994 and 1995, Central Intelligence Agency, Washington, D.C. *World Road Statistics 1997*, International Road Federation, *Highway Statistics 1995*, FHWA, and *Transportation Energy Data Book, Edition 17*, Oak Ridge National Laboratory.

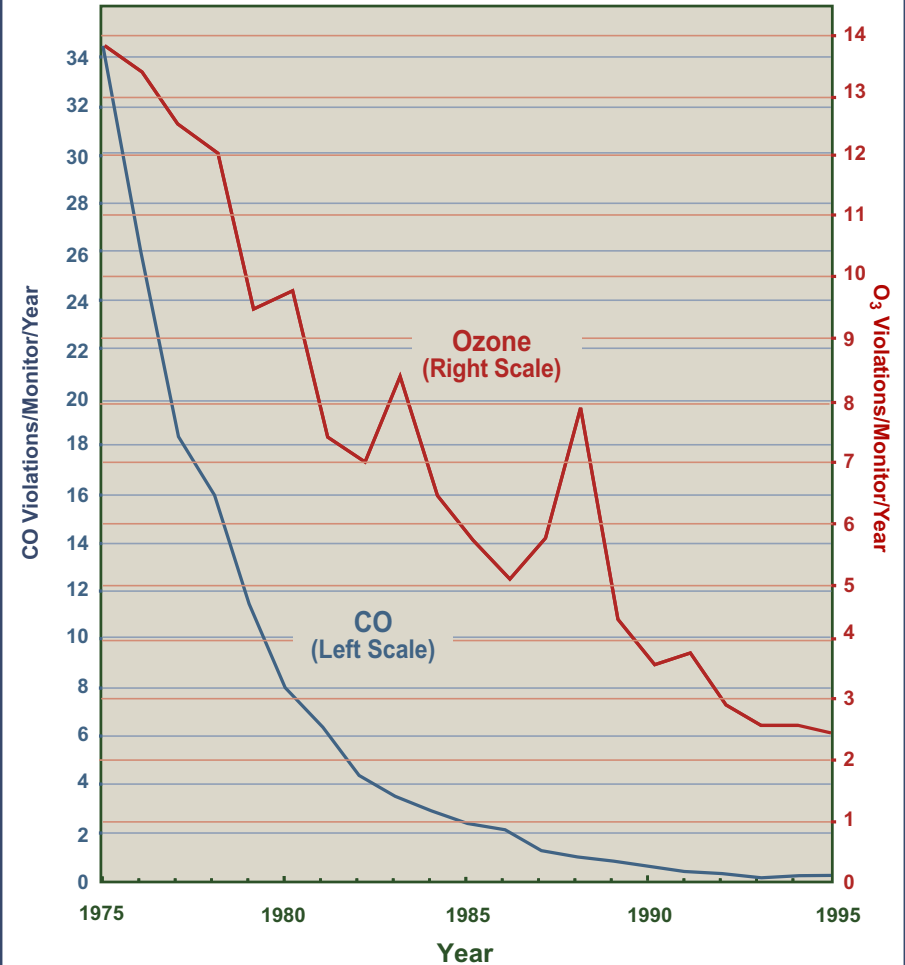
National Emission Trends



SOURCE: Environmental Protection Agency's "National Air Pollutant Emission Trends, 1990-1995," Office of Air Quality Planning and Standards, Research Triangle Park, NC, October 1996, Publication No. 454/R-96-007, Tables A-1, A-2, and A-3.

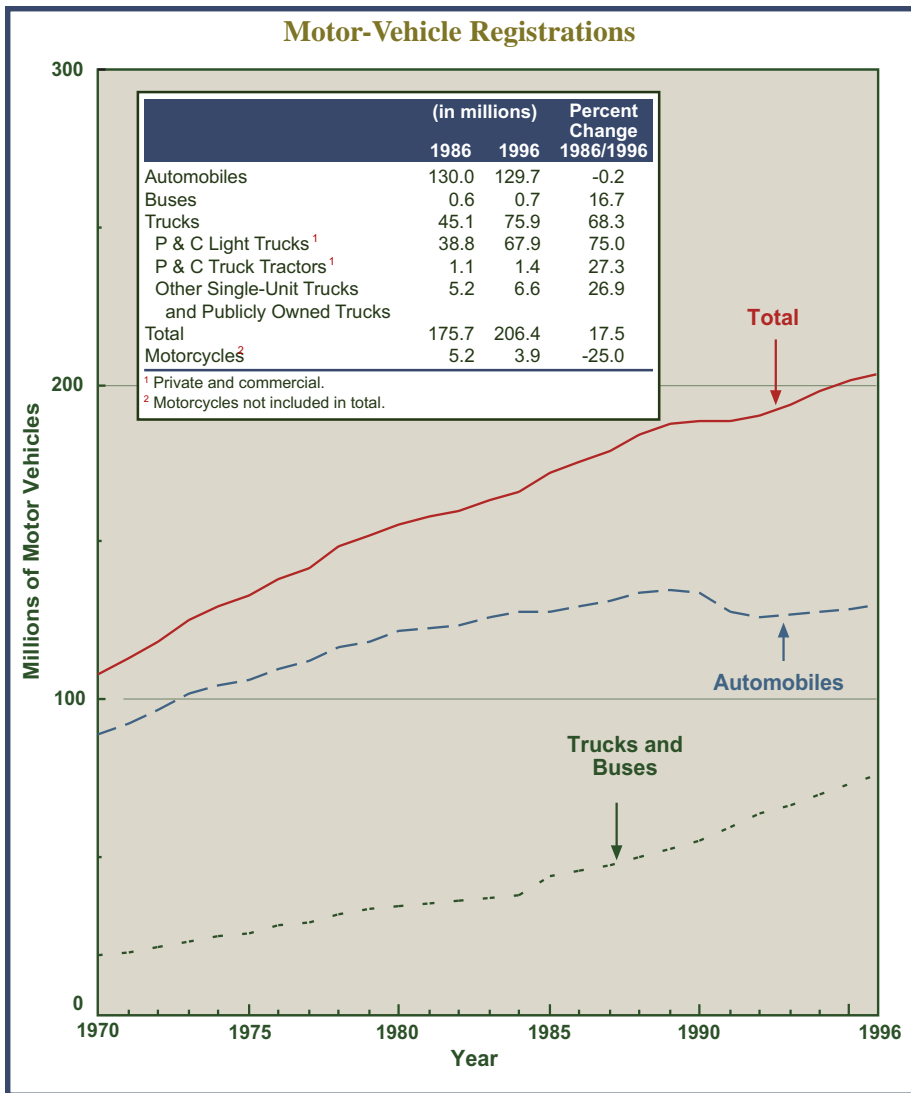
Most of the reduction in emissions can be attributed to reduction from motor vehicles. Emissions controls for cars and trucks have significantly reduced their emissions of CO and volatile organic compounds (VOC, a primary ingredient of ozone) since 1970 even though travel more than doubled over the past 25 years. Emissions of these pollutants from other sources have fallen only slightly. At the same time, motor vehicle NOx emissions—which contribute to ozone have held at about 1970 levels, while those from all other sources have increased slightly.

Air Quality Trends

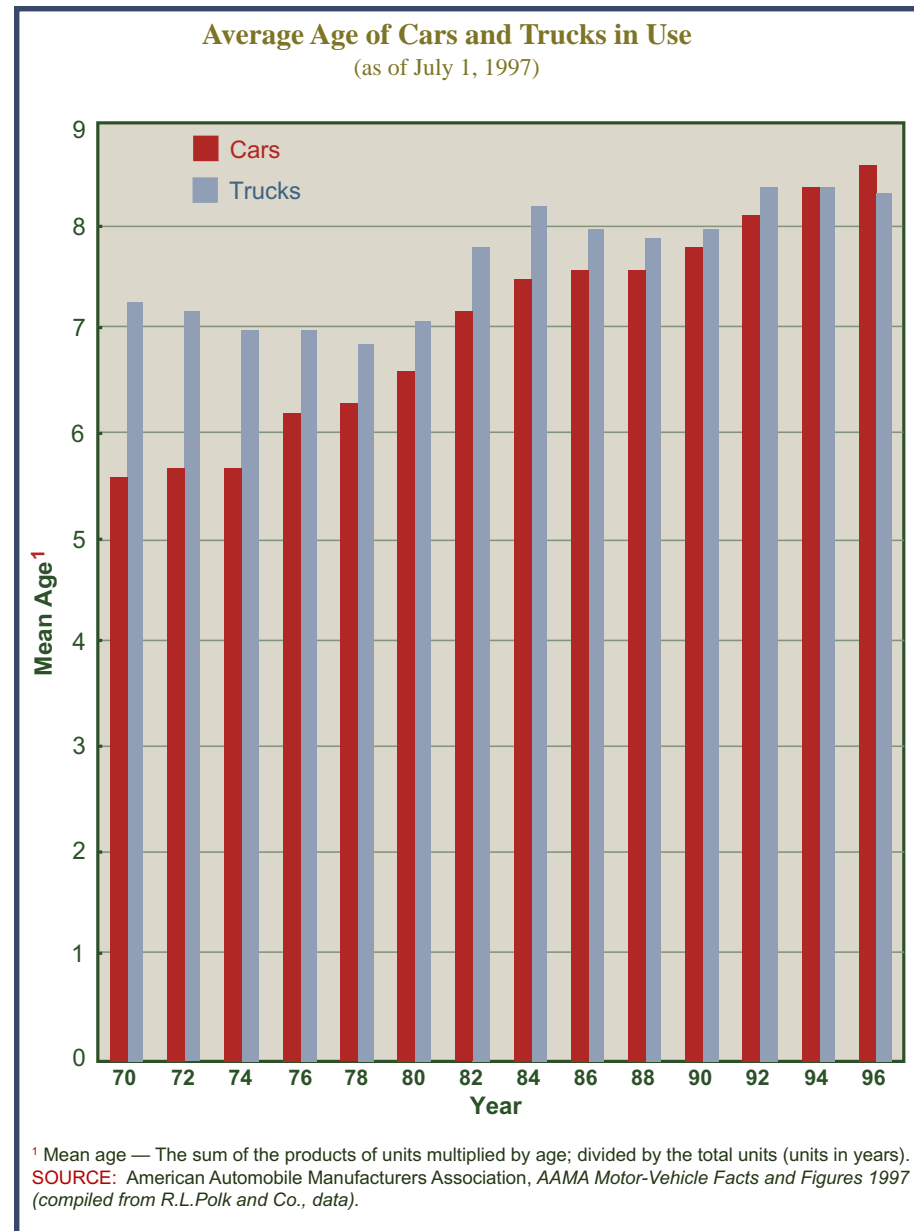


SOURCE: Tabulated from Environmental Protection Agency's Aerometric Information Retrieval database. Violation readings for ozone and carbon monoxide include only those recorded at monitors reporting throughout the 20-year period covered by the figure.

Residents of the Nation's urban area are breathing easier these days. Atmospheric levels of ozone and carbon monoxide (CO) have declined consistently for two decades. Violations of the National Standards for Carbon Monoxide have been virtually eliminated. Controlling ground-level ozone (or "smog") has proven more challenging, but violations of the Federal 1-hour ozone standard have also been sharply reduced.













The number of registered motor vehicles continues to increase steadily. However, automobile registrations have decreased slightly (-0.2 percent or 0.3 million vehicles) since 1986 while truck registrations have increased significantly (68.3 percent of 30.8 million vehicles). Light single-unit trucks have seen a phenomenal growth in popularity and now account for 32.9 percent of total registered motor vehicles. In addition, prior to 1985, automobile registrations included personal passenger vans, passenger minivans, and utility-type vehicles. However, beginning with the 1985 data, these vehicles are included with truck registrations. Reference *Highway Statistics Summary to 1995* for corrections or revisions made to previous published data.



¹ Mean age — The sum of the products of units multiplied by age; divided by the total units (units in years).
SOURCE: American Automobile Manufacturers Association, *AAMA Motor-Vehicle Facts and Figures 1997* (compiled from R.L.Polk and Co., data).

The trend of keeping cars and trucks for longer periods of time has gradually increased since 1988. The average age of a passenger car in use in 1996 was 8.6 years compared to 6.6 in 1980. The same trend holds true with truck use—the average age of a truck in 1996 was 8.3 years compared to 7.1 in 1980.

Cost of Owning and Operating Automobiles, Vans, and Light Trucks - 1996

	Cents Per Mile ¹		
	Size	Cost ²	Characteristics ³
	Subcompact	32.0	4 cylinder Avg MPG-33
	Compact	35.8	4 cylinder Avg MPG-28
	Intermediate	44.3	6 cylinder Avg MPG-20
	Full-size Vehicle	46.3	6 cylinder Avg MPG-19
	Compact Pickup	31.3	4 cylinder Avg MPG-19
	Full-size Pickup	39.9	8 cylinder Avg MPG-13
	Compact Utility	40.7	4 cylinder Avg MPG-22.5
	Full-size Utility	45.4	8 cylinder Avg MPG-12.8
	Mini-Van	40.0	6 cylinder Avg MPG-18.5
	Full-Size Van	48.9	6 cylinder Avg MPG-12.4

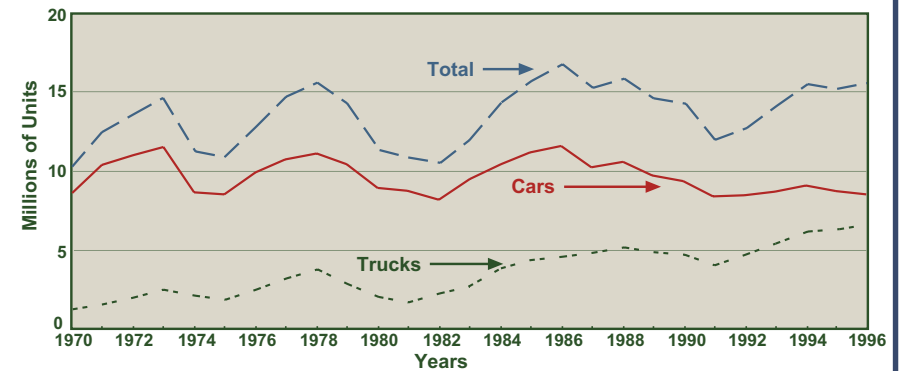
¹ Includes depreciation, financing, insurance, registration fees, taxes, fuel maintenance, and repairs.

² Total costs over 5 years, based on 70,000 miles.

³ Average MPG reflects city, excluding highway.

SOURCE: Federal Highway Administration estimates based on the 1996 editions of *The Complete Small Truck Guide* and *The Complete Car Cost Guide*, from IntelliChoice, Inc., and sales figures from *Automotive News*.

Motor-Vehicle Retail Sales

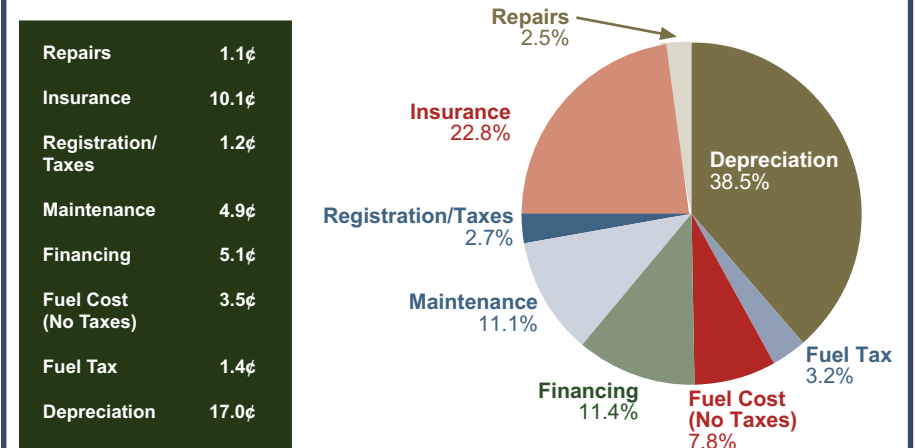


SOURCE: American Automobile Manufacturers Association, *Motor-Vehicle Facts and Figures 1996*.

After a slight drop in 1991, total motor-vehicle retail sales are steadily increasing—15,457,000 units for 1996. The all-time high was set in 1986—16,322,000 units. We are still seeing a decline in retail sales of automobiles—55 percent of total sales in 1996 compared to 76 percent in 1976. Popularity of the light trucks as personal vehicles continues to increase—retail sales of trucks for 1996 (6,930,000 units).

Ownership and Operating Costs By Category-Intermediate Size Vehicle—1996

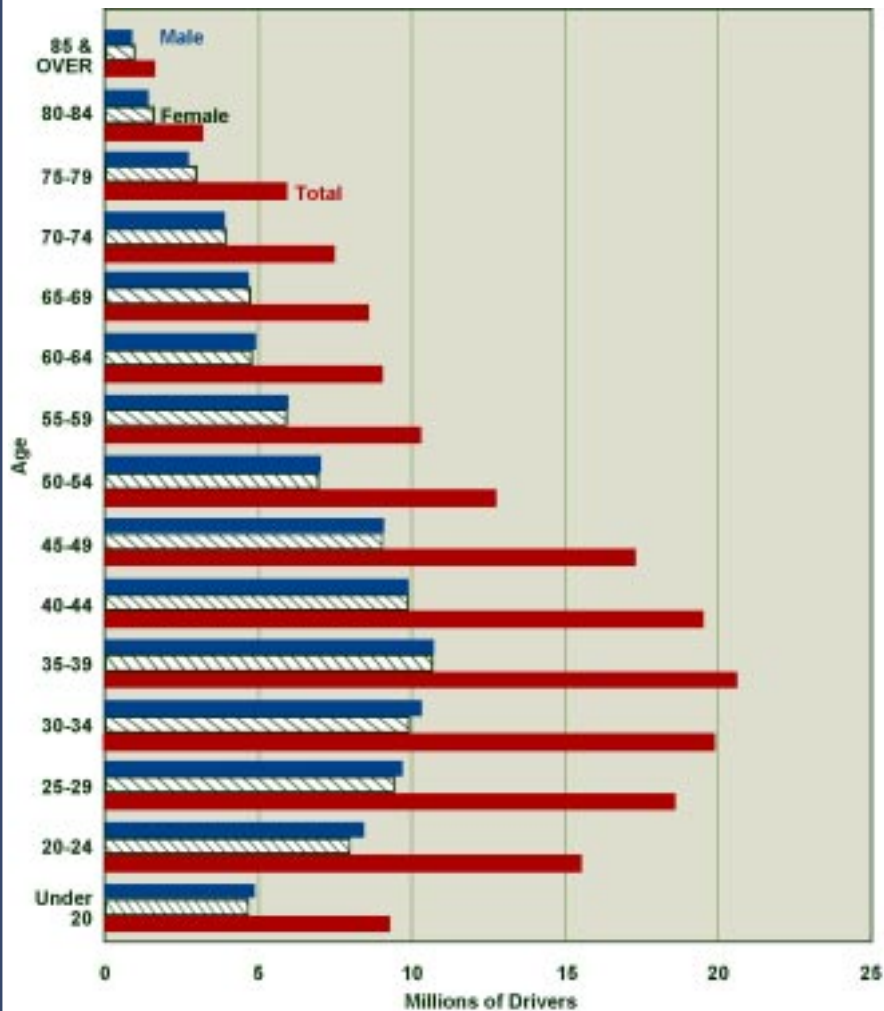
(Based on Average Cost of 44.3 Cents Per Mile)



SOURCE: Federal Highway Administration estimates based on the 1996 editions of *The Complete Small Truck Guide* and *The Complete Car Cost Guide*, from IntelliChoice, Inc., and sales figures from *Automotive News*.

The Federal Highway Administration estimates that combined Federal and State motor-fuel taxes currently account for only 3.2 percent of the cost per mile of owning and operating an automobile compared to 4.2 percent in 1994 and 5.1 percent in 1991.

Licensed Drivers By Age and Sex

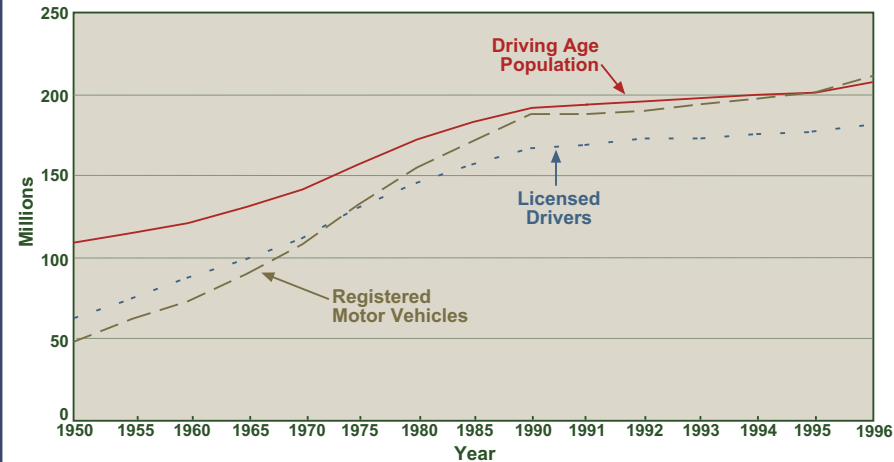


There were 179,539,340 licensed drivers in the United States in 1996. That is an increase of 34 percent since 1976 and a 14-percent increase over 1986. As the average age of the licensed driver shifts upward, we see that 35-39 year-olds contain the largest share of drivers. There are slightly fewer young drivers—under 20—in 1990 (9,249,000) compared to 1996 (9,234,000).

The number of age 70 and over drivers holding a valid license has continued to increase—7.2 million in 1976 compared to 17.1 million in 1996.

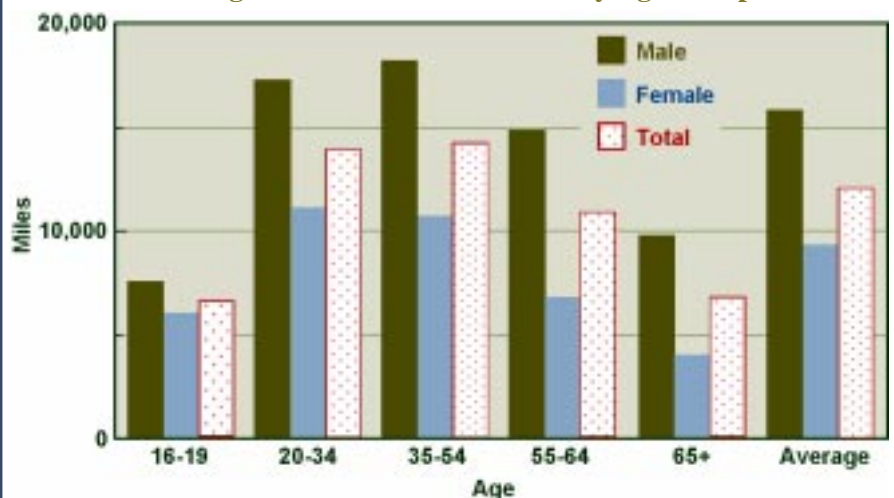
While the number of female drivers increased 45 percent since 1976, the number of male drivers only increased 25 percent.

Licensed Drivers, Population, and Motor Vehicles



In 1996, 88 percent of the driving age population was licensed to drive a motor vehicle. Compared to 1950, which was 57 percent, this is an increase of 117 million drivers on our highways in the past 36 years. In 1975, the number of registered vehicles surpassed the number of licensed drivers—that trend has continued to this day. In fact, registered vehicles have now surpassed the driving age population by 2,578,000 vehicles.

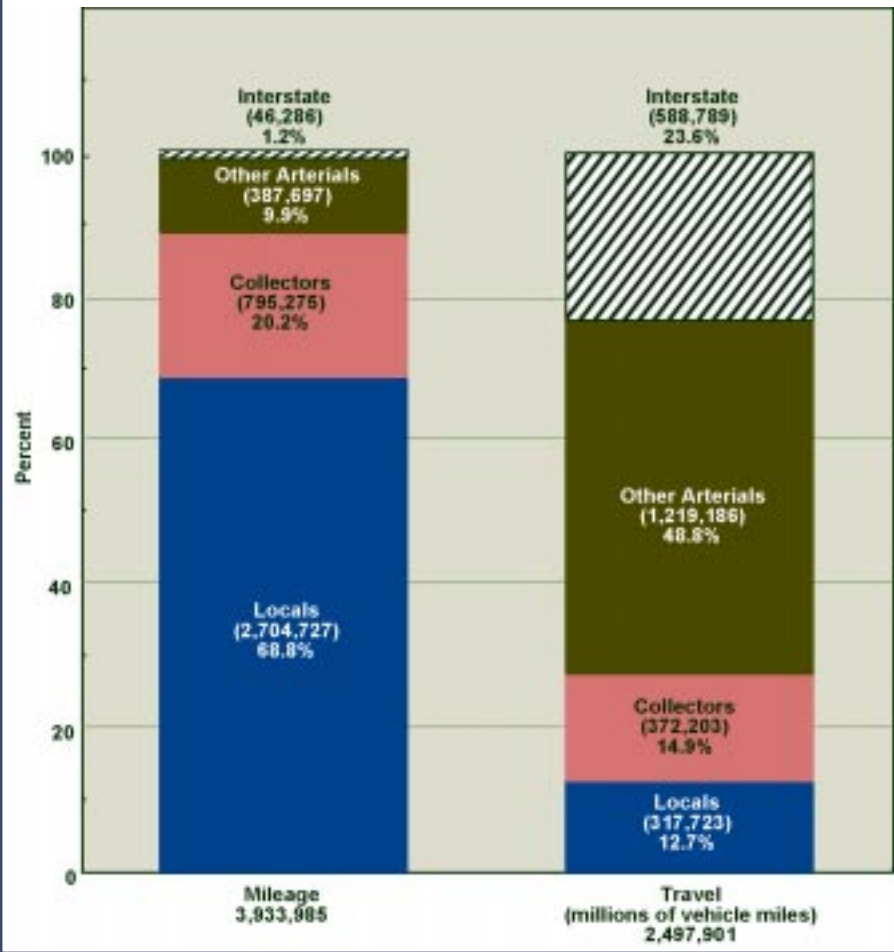
Average Annual Miles Per Driver by Age Group



SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.

Despite significant increases in women's driving, men still average 6,428 miles more per year than women. The disparity is closing for younger drivers, and it is expected that this gap will close considerably in the future.

Total Road Mileage and Travel by Functional System - 1996

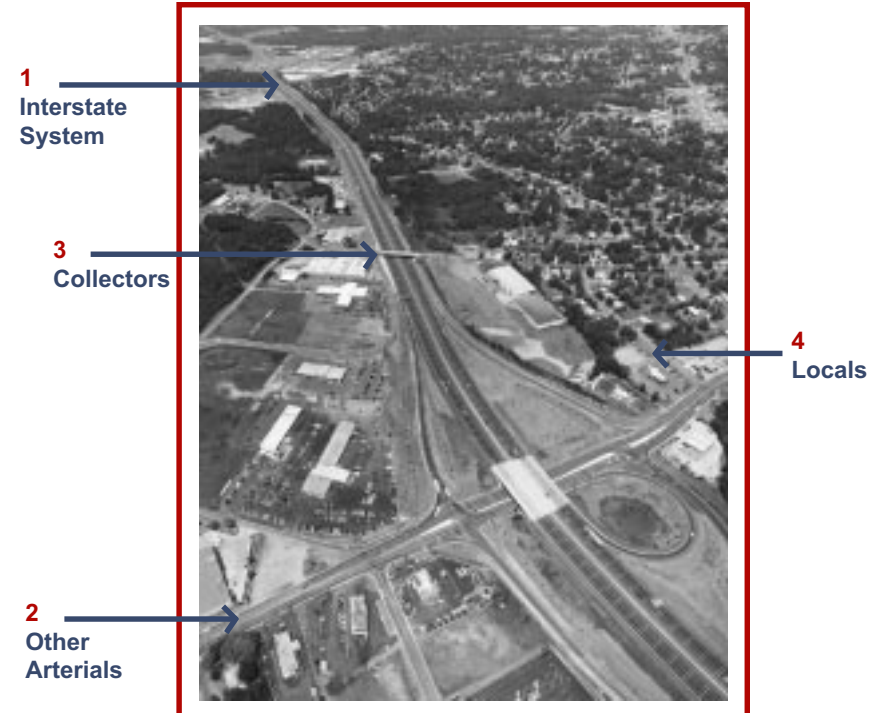


Roads and streets are grouped into functional systems according to the type of service they provide. The arterial system (including the Interstate System) accounts for about 11.1 percent of the Nation's total road and street mileage but carries 72.4 percent of total travel.

The Interstate System accounts for only 1.2 percent of the Nation's total miles of roadway; however, 23.6 percent of total travel occurs on this system. Conversely, local functional system roads account for 68.8 percent of the Nation's total road and street mileage but serves only 12.7 percent of total travel.

Functional Classification

- 1 Interstate System** — The Interstate System consists of all presently designated freeway routes meeting the Interstate geometric and construction standards for future traffic, except for portions in Alaska and Puerto Rico. The Interstate System is the highest classification of arterial roads and streets and provides the highest level of mobility, at the highest speed, for a long uninterrupted distance.
- 2 Other Arterials** — These consist of limited-access freeways, multi-lane highways, and other important highways supplementing the Interstate System that connect, as directly as practicable, the Nation's principal urbanized areas, cities, and industrial centers; serve the national defense; and connect at suitable border points with routes of continental importance.
- 3 Collectors** — The collectors provide both land access service and traffic circulation within residential neighborhoods, commercial and industrial areas, and downtown city centers. Collectors connect local roads and streets with arterials and provide less mobility than arterials at lower speeds and for a shorter distance.
- 4 Locals** — The local roads and streets provide a high level of access to abutting land but limited mobility.



Jurisdictional Control of U.S. Roads and Streets

Jurisdiction	Rural Mileage	Percent	Urban Mileage	Percent	Total Mileage	Percent
State	693,141	22.4	113,199	13.6	806,340	20.5
Local	2,238,308	72.2	718,950	86.2	2,957,258	75.2
Federal	168,913	5.4	1,474	0.2	170,387	4.3
Total	3,100,362	100.0	833,623	100.0	3,933,985	100.0

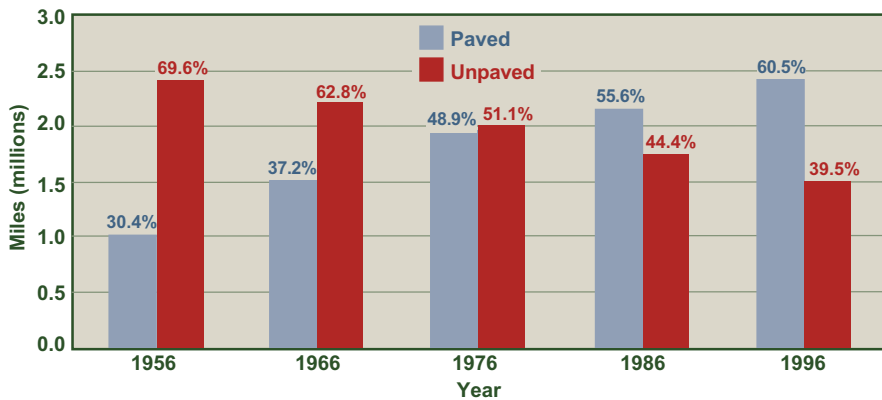
The vast majority (75.2 percent) of the Nation’s roadways are under the jurisdiction of local governments (town, city, county). Only 4.3 percent are under the jurisdiction of the Federal Government which includes roads in national forests and parks and on military and Indian reservations. The rest of the roadways (representing 20.5 percent of the total 3,933,985 miles and including the entire Interstate System) are controlled and maintained by the State governments.

Functional Systems Mileage

Functional System	Rural	% Change 1986-1996	Urban	% Change 1986-1996	Total	% Change 1986-1996	% of Total Mileage
Interstate	32,920	0.2%	13,366	19.5%	46,286	5.1%	1.2%
Other Freeways/ Expressways	--	--	9,070	23.3%	9,070	23.3%	0.2%
Other Principal Arterial	98,232	17.2%	53,220	5.2%	151,452	14.8%	3.8%
Minor Arterial	137,652	-7.0%	89,523	19.6%	227,175	2.0%	5.8%
Major Collector	432,890	-0.1%	--	--	432,890	-0.1%	11.0%
Minor Collector	273,876	-7.5%	--	--	273,876	-7.5%	7.0%
Collector	--	--	88,509	17.4%	88,509	17.4%	2.2%
Local	2,124,792	-3.0%	579,935	19.3%	2,704,727	1.0%	68.8%
Total	3,100,362	-2.6%	833,623	18.1%	3,933,985	1.2%	100.0%

Roads and streets are grouped into functional systems according to the type of service they provide, and to some extent, on how much traffic the facility carries. Although functional classification may change over time to better describe the changing role that a particular road or street may be playing, the total mileage changes only slightly over time. Except for the other principal arterial system, the rural systems actually decreased in mileage due to the expansion of urban boundaries and functional reclassification.

Road and Street Mileage by Surface Type



Currently, about 60.5 percent of all roads and streets are paved, compared with about 30.4 percent in 1956. The total paved mileage has increased 140 percent since 1956, but the total road and street mileage has increased by only 18 percent. Nearly all of the unpaved mileage is on lightly travelled rural roads.

Annual Vehicle-Miles of Travel

(Millions)

Functional System	Rural	% Change 1986-1996	Urban	% Change 1986-1996	Total	% Change 1986-1996	% of Total Mileage
Interstate	233,593	46.5%	355,196	53.1%	588,789	50.4%	23.6%
Other Freeways/ Expressways	--	--	158,233	50.0%	158,233	50.0%	6.3%
Other Principal Arterial	221,730	48.4%	380,320	32.2%	602,050	37.7%	24.1%
Minor Arterial	158,245	12.5%	300,658	44.0%	458,903	31.3%	18.4%
Major Collector	191,654	16.3%	--	--	191,654	16.3%	7.7%
Minor Collector	50,577	17.3%	--	--	50,577	17.3%	2.0%
Collector	--	--	129,972	44.5%	129,972	44.5%	5.2%
Local	108,156	19.9%	209,567	28.4%	317,723	25.4%	12.7%
Total	963,955	28.9%	1,533,946	41.1%	2,497,901	36.1%	100.0%

Total mileage has increased only 1.1 percent since 1986, while travel has increased 36.1 percent during the same time period. The urban travel increase of 41.1 percent has outpaced the rural 28.9 percent increase due to the Nation’s continued growth in urbanization and expanded urban boundaries, which involves the transfer of heavily travelled rural facilities to urban. The urban Interstate system has had the greatest travel growth (53.1 percent) during the 1986 to 1996 time period.

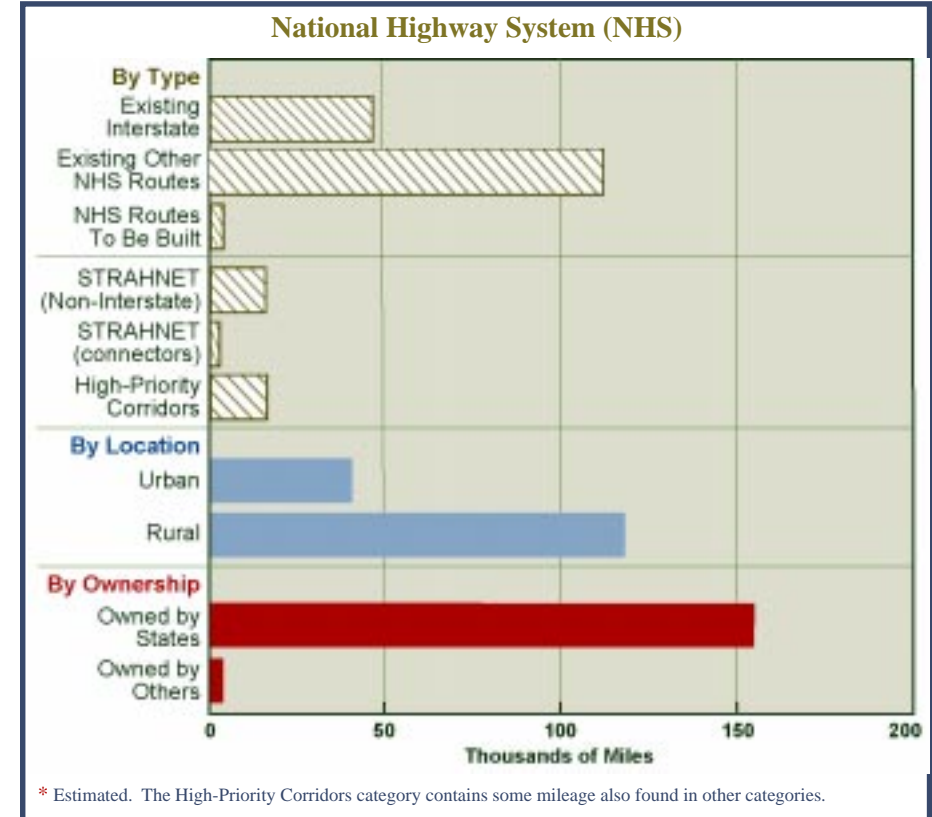
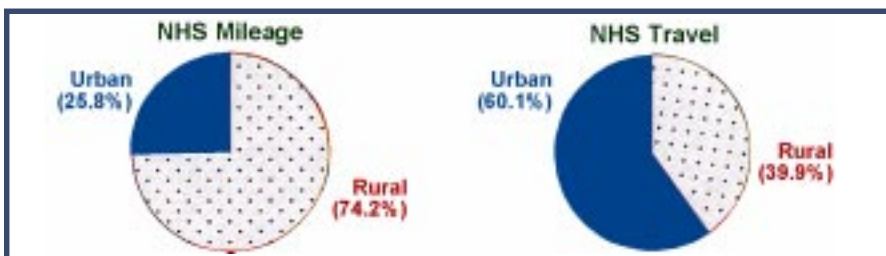
National Highway System			
NHS Mileage			
	Rural	Urban	Total
Interstate	32,920	13,366	46,286
Other NHS	84,892	27,700	112,592
Total NHS	117,812	41,066	158,878
NHS Percent of Total Mileage			
	Rural	Urban	Total
Interstate	0.8	0.3	1.2
Other NHS	2.2	0.7	2.9
Total NHS	3.0	1.0	4.0
NHS Travel (millions)			
	Rural	Urban	Total
Interstate	233,593	355,196	588,789
Other NHS	198,672	297,126	495,798
Total NHS	432,265	652,322	1,084,587
NHS Percent of Total Travel			
	Rural	Urban	Total
Interstate	9.4	14.2	23.6
Other NHS	8.0	11.9	19.8
Total NHS	17.3	26.1	43.4

The National Highway System (NHS) is the network of nationally significant highways approved by Congress as required by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. It includes the Interstate System and over 100,000 miles of arterial and other roads. Designation of the Interstate System was completed on November 28, 1995, when President Clinton signed the National Highway System Designation Act of 1995 (Public Law 104-59).

The NHS represents only about 4% of the Nation's total public road mileage and 6% of its lane miles, but carries over 43% of the travel. Approximately 79% of the Combination Truck Travel is on the NHS (as represented by the entire Principal Arterial System).

Although there is about three times as much NHS mileage in rural areas than there is in urban, the NHS percentages of the total U.S. mileage in rural and urban areas, respectively, are similar.

A majority of the travel on the NHS takes place in urban areas even though more mileage exists in the rural areas.



Of the 158,878 NHS miles, 29 percent is made up of the Interstate System (IS). The NHS encompasses all of the Strategic Highway Network (STRAHNET) (about one fourth of which is on the IS), and other highways. As shown on the following page, 2,032 miles of intermodal connectors have been NHS designated.

Traffic Lanes and Access Control for the NHS (Rural and Urban Miles)				
Category	Interstate*	Other NHS	Total NHS	% in Category
<=3 lanes (includes 1-way streets)	1,080	69,684	70,764	44.5
>=4 lanes (undivided)	770	9,419	10,189	6.4
>=4 lanes (divided-no access control)	34	15,027	15,061	9.5
>=4 lanes (divided-partial access control)	140	8,277	8,417	5.3
>=4 lanes (divided-full access control)	44,262	10,185	54,447	34.3
Total	46,286	112,592	158,878	100.0

* Includes Alaska and Puerto Rico, which account for much of the non-freeway and less than 4-lane mileage.

Intermodal Facility Connections

(Approved and Proposed)

Facility Type	Number of Facilities	Associated Mileage
Airport	228	401
Intercity Bus	99	63
Ferry	59	293
Truck/Pipeline	61	112
Multipurpose	43	35
Port	247	378
Truck/Rail	211	336
Amtrak	71	80
Public Transit	388	334
TOTALS	1,407	2,032

As defined by ISTEA, the NHS includes highways that provide connections to major intermodal terminals. Section 101 of the National Highway System Designation Act of 1995 required the Secretary of Transportation to submit NHS connections to "...major ports, airports, international border crossings, public transportation facilities, interstate bus terminals, and rail and other intermodal transportation facilities."

Public transit facilities have the most NHS connections with high associated mileage while airport facilities have a substantially fewer number of connections but have the most associated mileage.

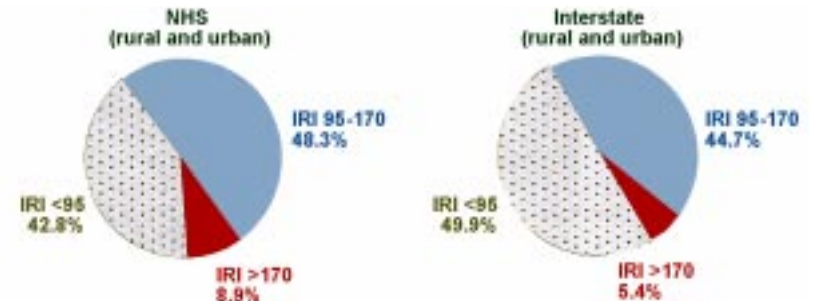
Other Characteristics

Characteristics	Number	Mileage
Bridges	126,910	
Railroad Crossings ¹	3,004	
Border Crossings		
Canada	32	
Mexico	21	
Full Access Control		
Interstate ²		44,262
Other		10,185

¹ The number of NHS railroad crossings in an estimate based on expanded HPMS sample data.
² The interstate mileage does not include some mileage subject to full access control — notably designated Interstate mileage in Alaska and Puerto Rico.

The FHWA estimates that the NHS contains the following number of bridges, railroad crossings, major border crossings with Canada and Mexico, and full access control mileage.

Pavement Surface Condition of the NHS and Interstate System



The preservation of the Nation's highways is a priority at all levels of government. Although pavement conditions and trends vary significantly among the States, average conditions on the Nation's arterial systems appear to have stabilized, or perhaps even improved, in recent years. This has diminished a continuous downward trend in physical condition that was evident in the 1970's and early 1980's. This is due primarily to increased attention and fiscal resources assigned to the preservation of pavement during the mid to late 1980's.

The International Roughness Index (IRI), an objective instrument-based rating system, has been used as an indicator of pavement surface condition and therefore rideability. Pavements with IRI<170 are considered to have an acceptable ride quality, while those with an IRI<95 are considered to have a good or very good ride quality.

Bridge Conditions

(as of December 31, 1996)

	National Highway System ¹		Other Federal-Aid Highways ²		Non-Federal-Aid Highways ³		Total Highways	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Structurally Deficient	9,690	7.6	22,597	13.2	69,231	24.4	101,518	17.4
Functionally Obsolete	23,230	18.2	24,025	14.1	33,953	12.0	81,208	14.0
All Other Bridges	94,816	74.2	124,334	72.7	179,987	63.6	399,137	68.6
Total Bridges in Inventory	127,736	100.0	170,956	100.0	283,171	100.0	581,863	100.0

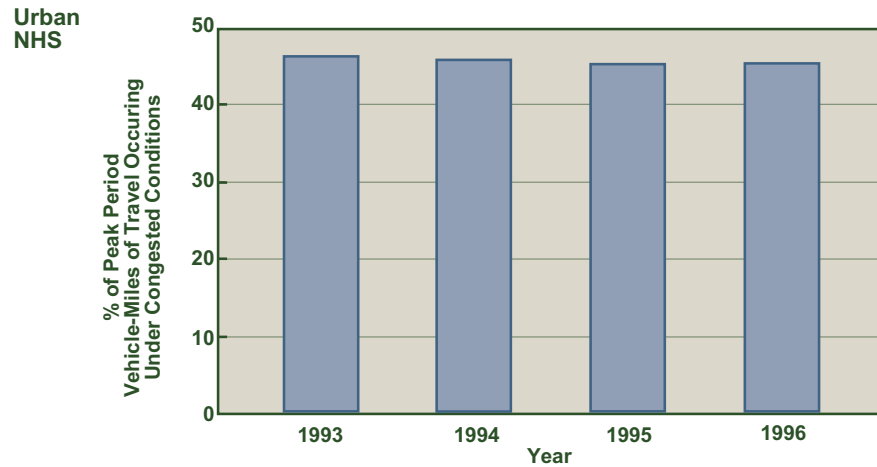
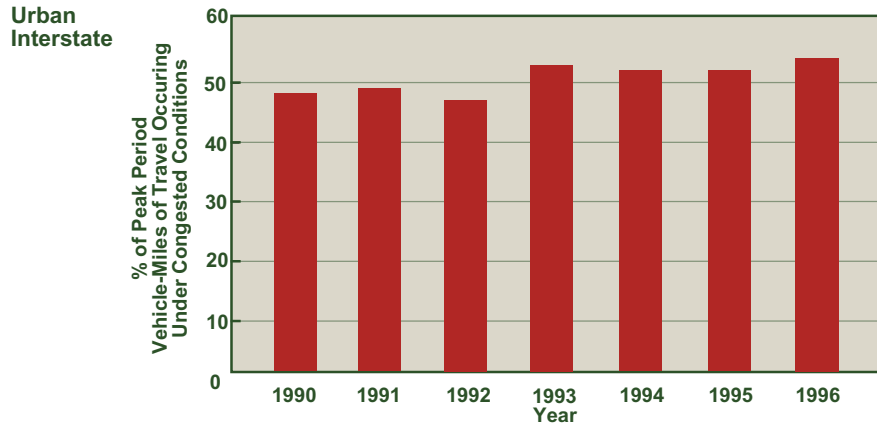
¹ Includes all Interstate and other principal arterials.
² Includes all other highways except minor collectors and local roads and streets.
³ Includes rural minor collectors and local roads and streets.
SOURCE: Federal Highway Administration, Office of Engineering, National Bridge Inventory Data.

Thirty-one percent of the Nation's estimated 581,863 bridges are structurally deficient or functionally obsolete. Twenty-six percent of the 127,736 bridges on the NHS (Interstate and all other principal arterials) are structurally deficient or functionally obsolete.

A *structurally deficient* bridge is closed or restricted to light vehicles only because of deteriorated structural components. Structurally deficient bridges are not necessarily unsafe. Strict observance of signs limiting traffic or speed on bridges will generally provide adequate safeguards for those using the bridges.

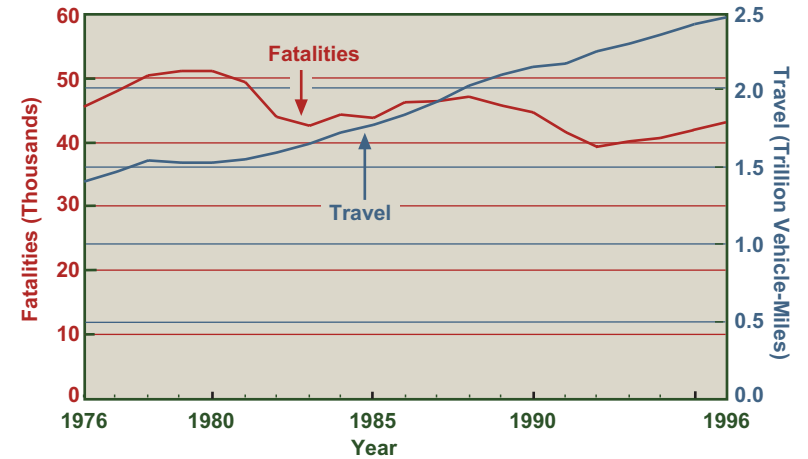
A *functionally obsolete* bridge is one that cannot safely service the volume or type of traffic using it. These bridges are not unsafe for all vehicles, but have older design features that prevent them from accommodating current traffic volumes and modern vehicle sizes and weights.

Travel Congestion on the Urban Interstate System and Urban NHS



Travel congestion on the urban Interstate System and urban NHS appears to have stabilized at a level of about 54 percent and 45 percent, respectively. The trend for the periods shown reflect the updated HPMS capacity calculation procedures. The measure of congestion used in this analysis is called the Volume/Service Flow (V/SF) Ratio. As this ratio gets larger, traffic slows and eventually stops as the theoretical value of 1.00 is approached (the volume of traffic = service flow capability of the facility). A V/SF ratio of greater than or equal to 0.80 was used here to indicate congestion.

Motor-Vehicle Fatalities and Travel

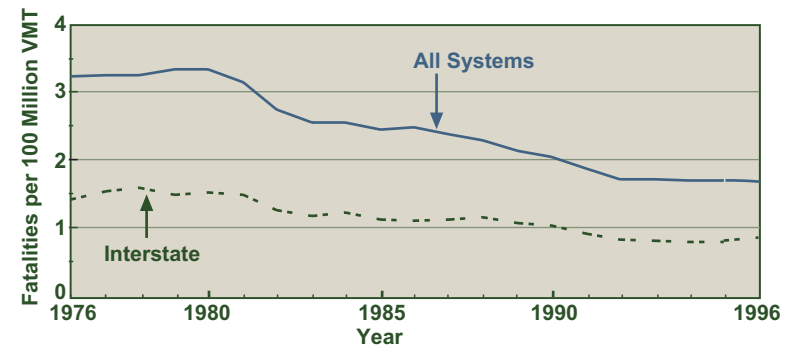


SOURCE: National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*.

Overall, fatalities decreased from 1976 to a low of 39,230 in 1992. However, over the past 4 years the number of fatalities has risen slightly.

Of the 41,907 1996 fatalities, 5,231 (or 12.5 percent) occurred on the Interstate System. An estimated 40.9 percent of highway fatalities in 1996 were alcohol-related.

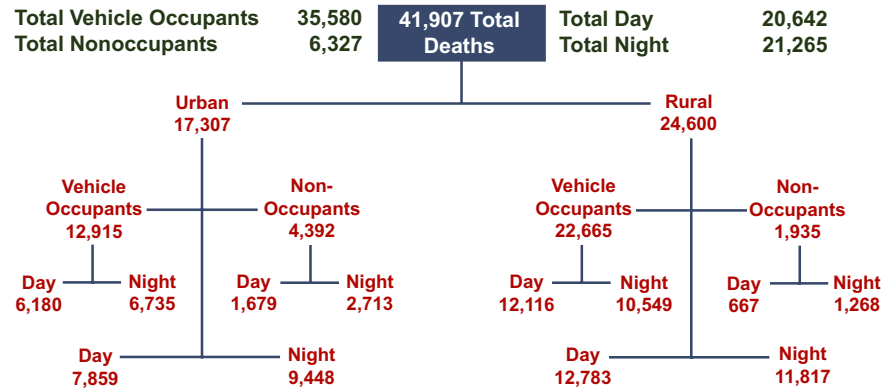
Fatality Rates



SOURCE: National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*.

The fatality rate — fatalities per 100 million vehicle-miles of travel (VMT) — on all highway systems continues to decline. In 1996, the fatality rate reached 1.69, a 48-percent decrease from 1976. The decrease in the fatality rate occurred despite a 77-percent increase in highway travel and a 48-percent increase in motor-vehicle registrations during the 1976 to 1996 time period. The fatality rate (0.90) on the Interstate System is about one-half the rate on all highway systems.

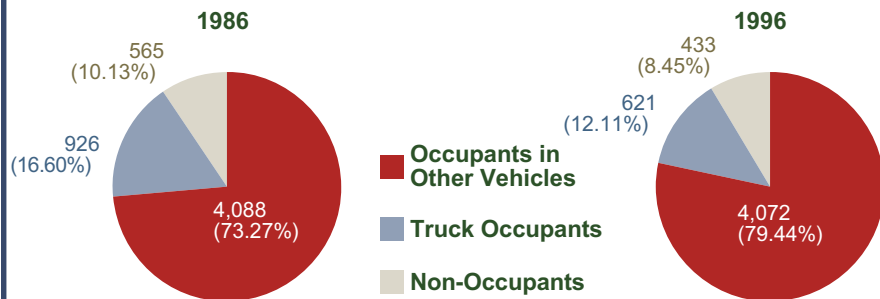
Principal Classes of Motor-Vehicle Deaths



SOURCE: National Highway Traffic Safety Administration, *Fatality Analysis Reporting System*.

In 1996, 59 percent of motor-vehicle deaths occurred in places classified as rural. In urban areas, nearly one-third of the victims were nonoccupants; in rural areas, the victims were mostly occupants of motor vehicles. Fifty-one percent of all deaths occurred in nighttime crashes.

Fatalities Involving Medium/Heavy Trucks¹



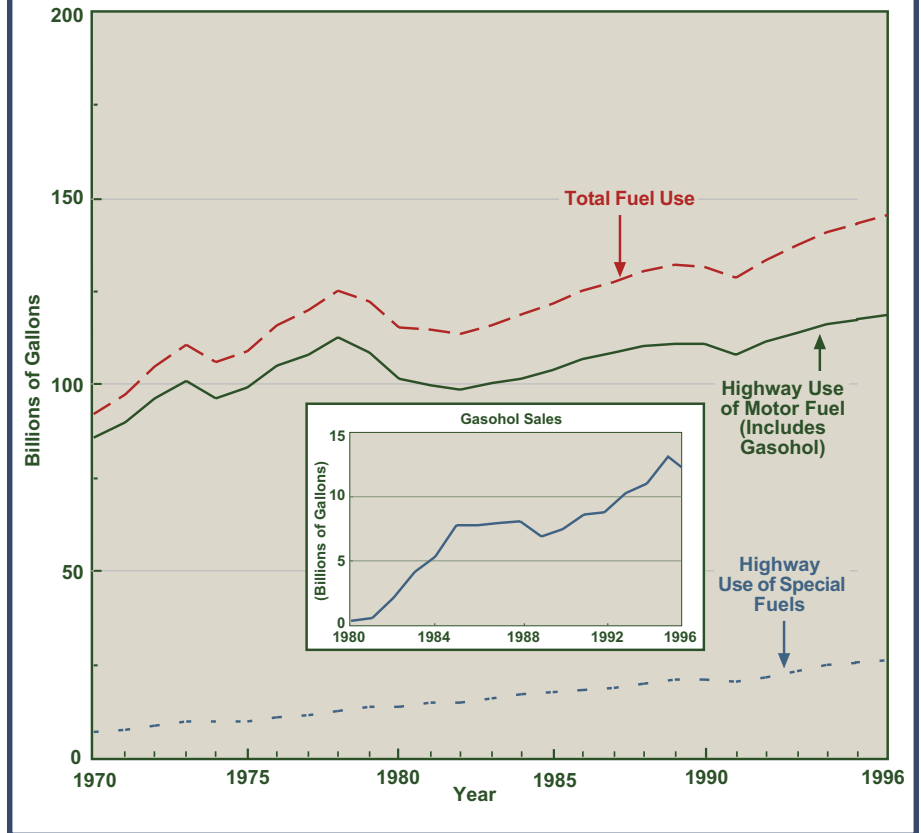
¹ Medium/Heavy Truck—Single-unit truck with gross vehicle weight greater than 10,000 lbs., tractor-trailer combination, truck with cargo trailer(s), or truck-tractor pulling no trailer.

SOURCE: National Highway Traffic Safety Administration, *Traffic Safety Facts 1996*.

There were 5,126 fatalities in crashes involving medium and heavy trucks in 1996. Occupants in other vehicles accounted for 4,072 or 79 percent of the fatalities involving medium and heavy trucks.

There were 453 less fatalities involving medium and heavy trucks from 1986 to 1996. Occupants in other vehicles showed a decrease of 16 of the fatalities involving medium and heavy trucks while the non-occupant fatalities decreased by 132 over that same period of time.

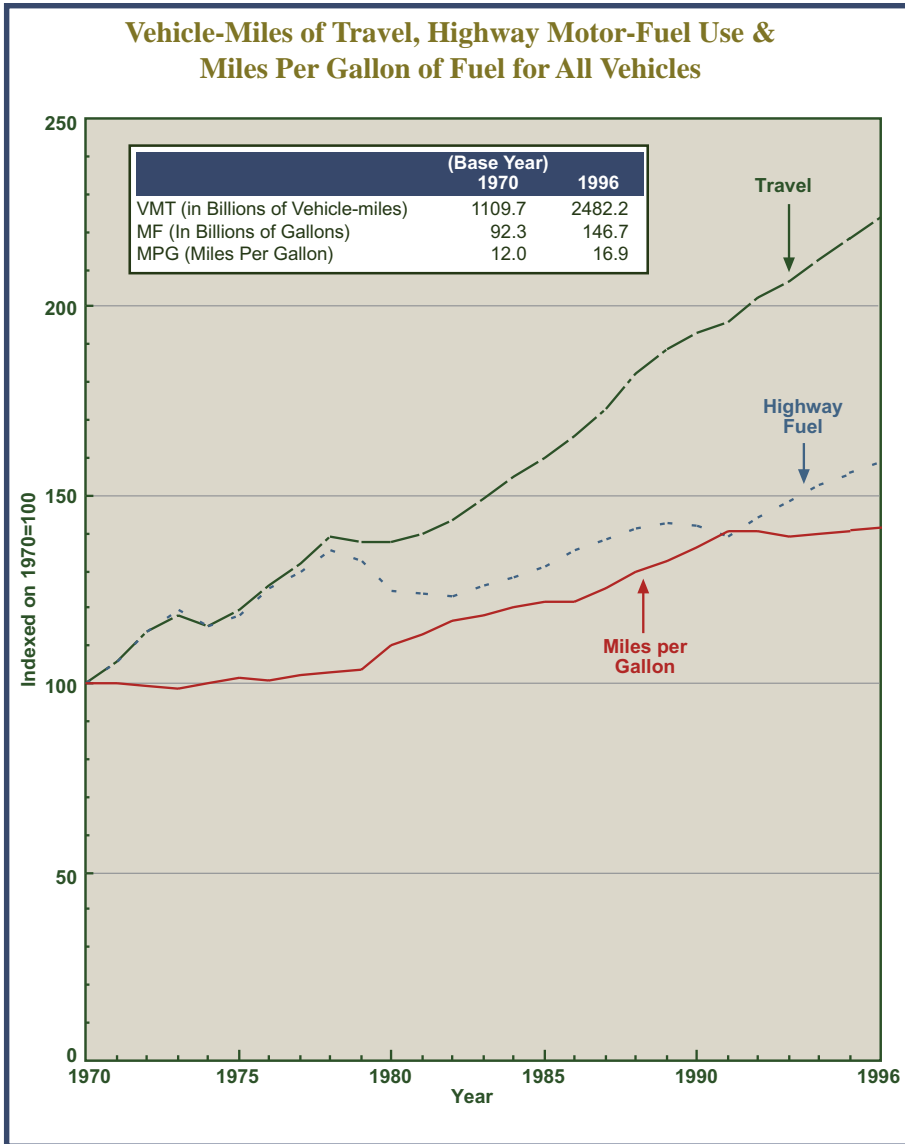
Highway Fuel Use



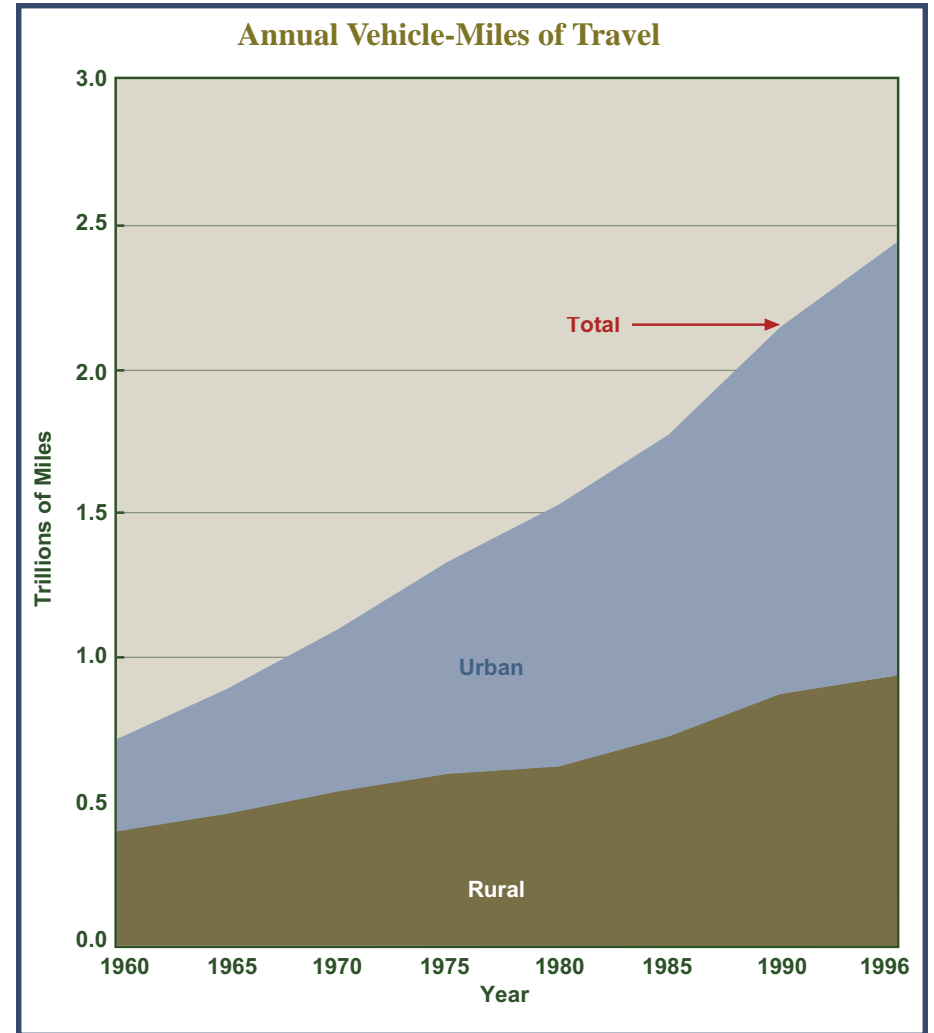
From 1970 to 1996, highway fuel consumption increased 59 percent to 146.7 billion gallons. The highway use of motor fuel, which includes gasohol, is predominately by automobiles while the highway use of diesel fuel is predominately by trucks.

During this period, the highway use of motor fuel increased 39.6 percent from 85.6 to 119.5 billion gallons. As population and the number of automobiles increased, the highway use of motor fuel increased overall through the 1980's and into the 1990's despite improved automotive fuel economy.

Gasohol was originally defined to be a blend of 90 percent gasoline and 10 percent fuel alcohol. This definition was expanded in 1993 to include blends varying from 5.7 to 10 percent alcohol. The lower-alcohol blends are often used as "clean air fuel" to reduce carbon monoxide emissions.

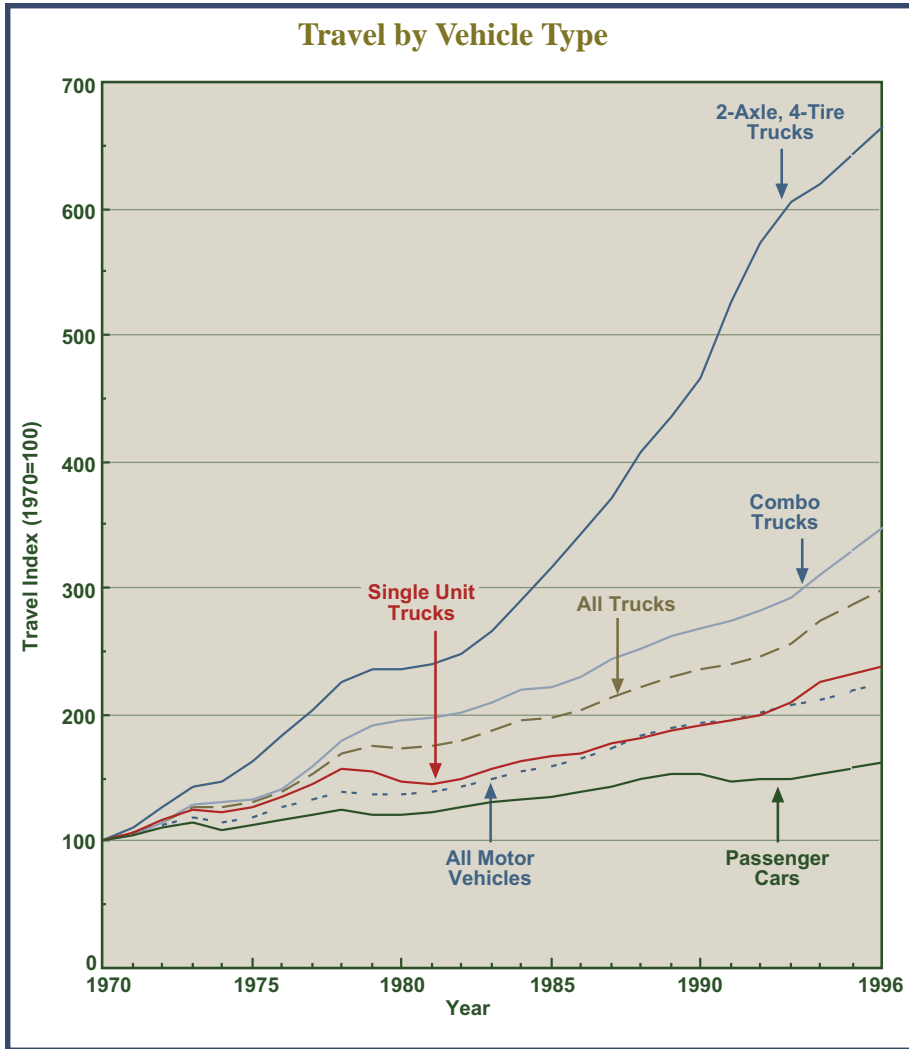


Indices for vehicle-miles of travel, highway fuel use, and average vehicle fuel economy (miles per gallon) have increased significantly through the last decade. Average fuel economy for all vehicles has increased from 12.0 miles per gallon (mpg) in 1970 to 16.9 in 1996, a 41 percent increase. This improved fuel efficiency made it possible to have a 124 percent increase in vehicle-miles of travel with only a 59 percent increase in fuel use.

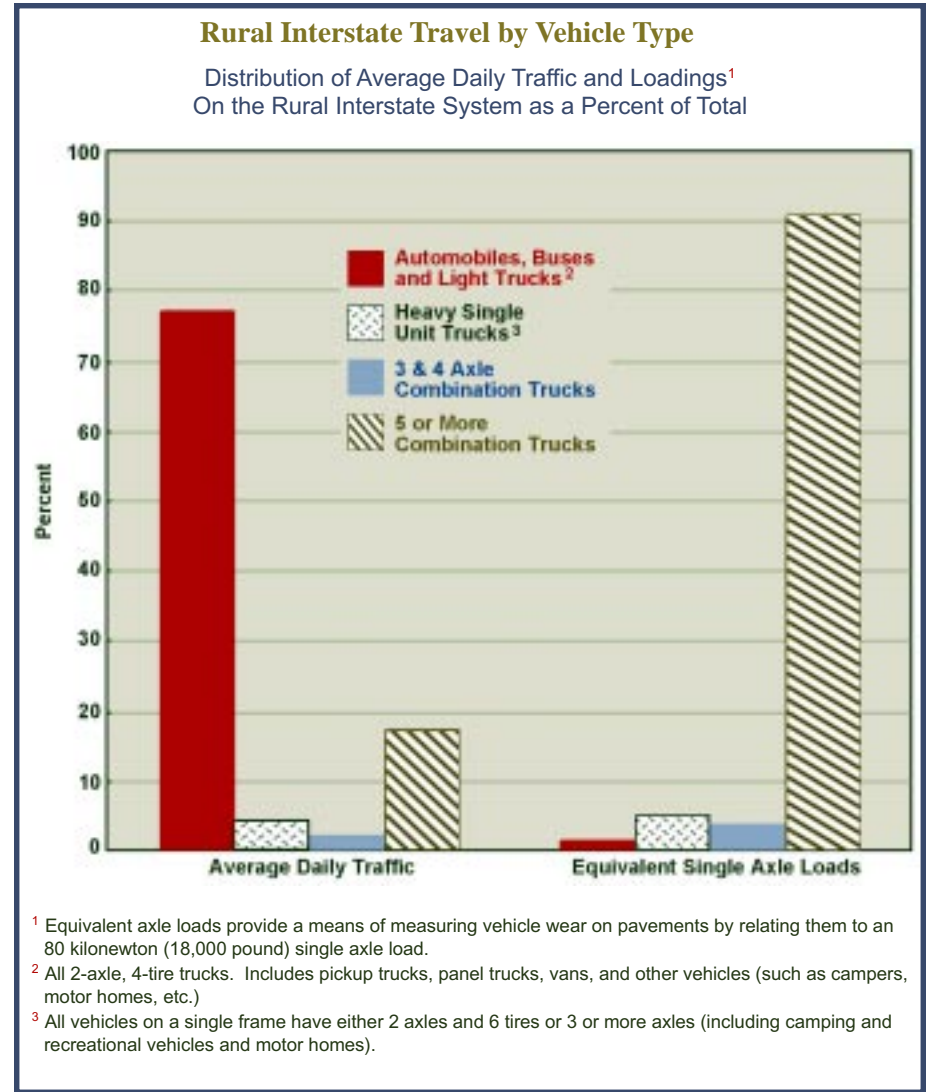


Annual travel on the Nation's highways reached an estimated 2.5 trillion vehicle-miles in 1996, or about three times the level in 1960. Travel grew about 47 percent during the 1960's, another 38 percent in the 1970's, and another 37 percent in the 1980's.

Annual travel on roads and streets in urban areas accounted for 1.5 trillion vehicle-miles in 1996 or 61 percent of total travel compared to 44 percent in 1960. Compared to the urban travel growth of 45 percent in the 1980's, rural travel grew 27 percent. Much of the urban travel growth can be attributed to expanding urban boundaries.

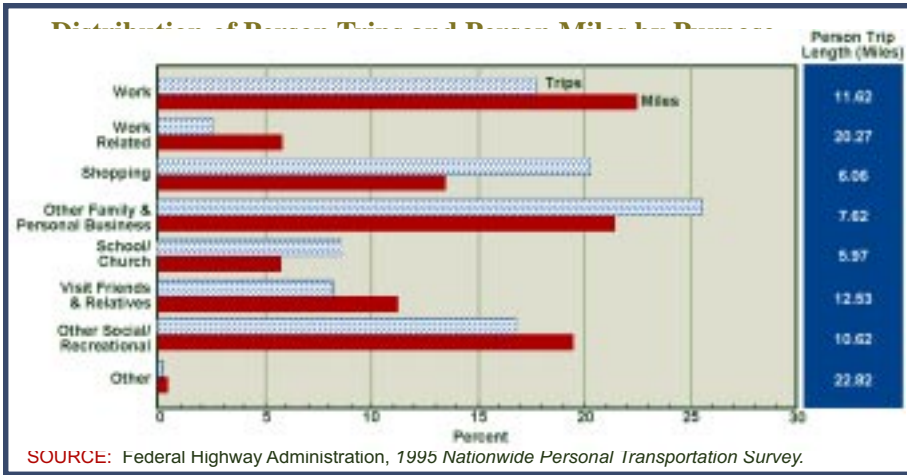


Travel by all motor vehicles has increased by 124 percent compared to 1970. Truck travel has increased 194 percent since 1970. This includes travel by combination trucks and single-unit trucks. Combination truck travel is up over 238 percent and now accounts for 4.8 percent of total annual vehicle-miles of travel versus 3.2 percent in 1970. The most dramatic increase in travel has been by other 2-axle, 4-tire vehicles with an increase of 561 percent since 1970. This rapid increase is due to the popularity of minivans, pickups and sport/utility vehicles. The percentage of annual travel by passenger cars in relation to travel by all vehicles has decreased from 82.6 percent in 1970 to 59.1 percent in 1996.

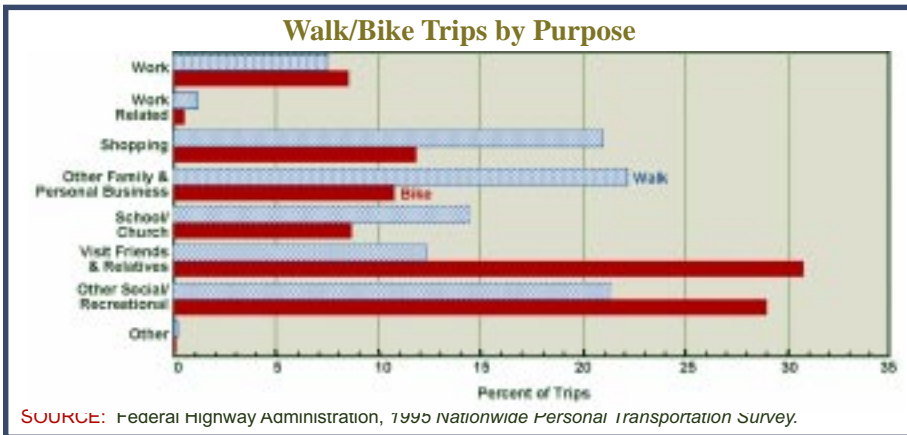


¹ Equivalent axle loads provide a means of measuring vehicle wear on pavements by relating them to an 80 kilonewton (18,000 pound) single axle load.
² All 2-axle, 4-tire trucks. Includes pickup trucks, panel trucks, vans, and other vehicles (such as campers, motor homes, etc.)
³ All vehicles on a single frame have either 2 axles and 6 tires or 3 or more axles (including camping and recreational vehicles and motor homes).

On rural Interstate routes in 1996, combination trucks with 5 or more axles accounted for 17 percent of average daily traffic but 91 percent of equivalent axle loads. All other vehicles accounted for 83 percent of average daily traffic but only 9 percent of traffic loads. From 1986 to 1996, traffic on rural Interstate routes increased by 47 percent and equivalent axle loads increased by 55 percent.



The 1995 NPTS data provides information on the reasons for travel. Family and personal business, which includes shopping and services such as haircuts, car repair and banking, account for 46 percent of all person trips and about 35 percent of person miles. Social and recreational trips, which include visiting friends and relatives, attending movies and parties, and participating in sports, comprise 25 percent of all trips and account for 31 percent of all miles. Trips to work and for work-related purposes, such as attending a meeting, constitute 20 percent of person trips and 28 percent of person miles. The average person trip length, encompassing all trip purposes is 9.1 miles, and the average commute to work is 11.6 miles.



The data from the 1995 NPTS shows that there are approximately 56 million daily walk trips in the U.S. Shopping and other family and personal business trips, which are usually the shortest trips, account for just over 43 percent of all walk trips. Visiting and other social and recreational activities share another 34 percent, and the remainder are for going to school, church or work.

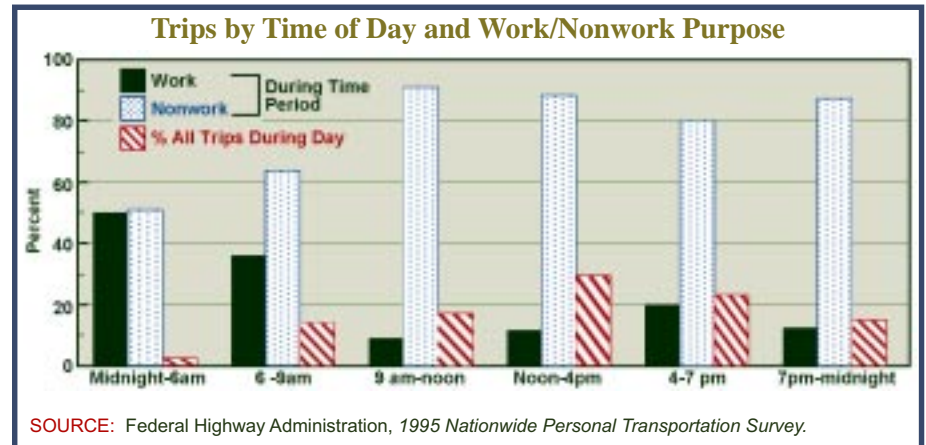
The majority of bike trips, 60 percent, are for a combination of visiting friends and relatives and other social and recreational activities. Another 12 percent are for shopping and 11 percent for other family and personal business. Only 8 percent are for travel to and from work, which is not surprising given increasing work trip lengths and weather considerations.

Travel for Work

Mode	Worktrip Length by Mode Average Length in Miles			Worktrip Length by Mode Average Time in Minutes		
	Male	Female	All	Male	Female	All
POV	13.49	9.58	11.84	22.09	17.40	20.10
Public Transportation	14.10	11.47	12.88	43.41	40.38	41.95
Walk	0.81	0.66	0.74	10.86	10.87	10.86
All Modes	13.28	9.35	11.60	22.44	18.22	20.65

SOURCE: Federal Highway Administration, 1995 Nationwide Personal Transportation Survey.

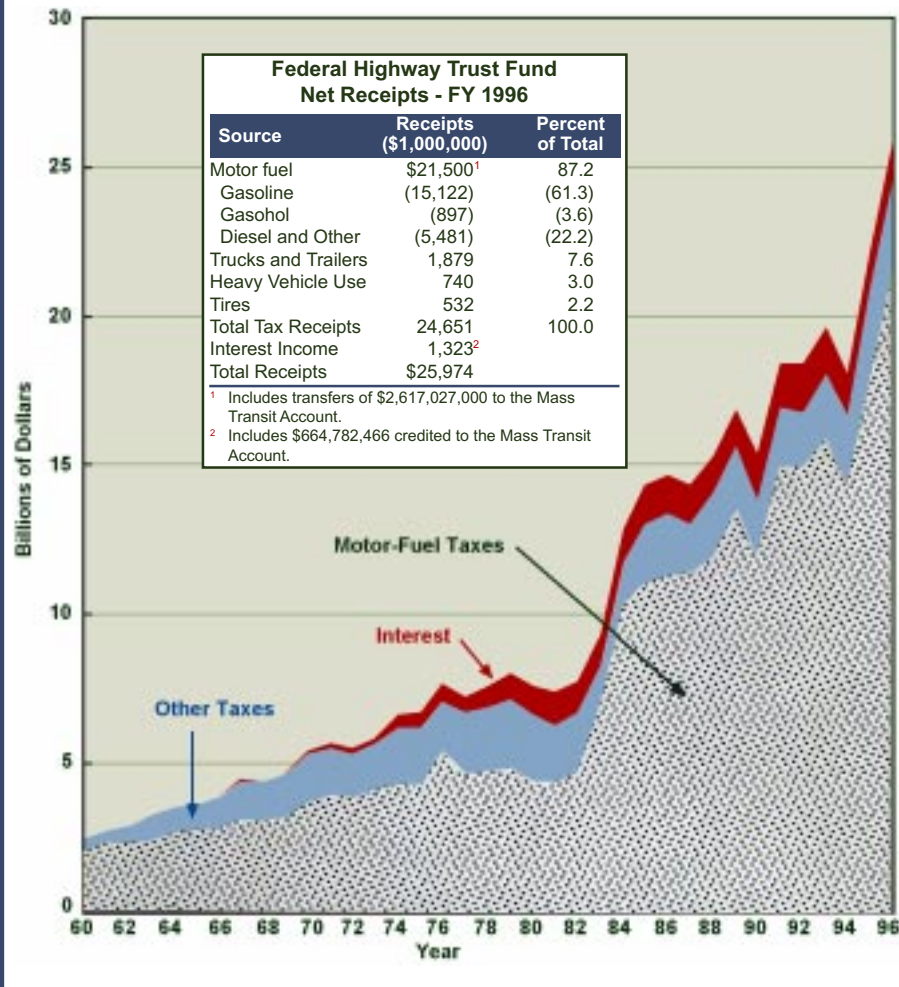
Although work travel is not the most prevalent travel in our very mobile society, and over the years its share of travel has decreased slightly, its impact on the economy is very important and its predictable concentrations at certain times of the day are important. More than 90 percent of work trips take place in privately owned vehicles (POVs) (increasingly this is in single-occupant vehicles instead of car pooling and transit). Somewhat more than 3 percent take place on transit and another 2 percent are walk trips. They average 12 miles in POVs and 13 miles on transit; walk trips average less than a mile. The preference for the POV is clearly linked to the travel times for these modes. While the average travel time for the POV is 20.1 minutes at an average speed of 35 mph, that for public transit is 42.0 (average speed of 18 mph). The overall average travel time is 20.7 minutes with an average speed of 33.7 mph.



There is a general perception that most trips during the traditional “rush hour” are for work. Data from the 1995 NPTS show that the share of trips for work does not support this perception. Only 36 percent of all trips starting between 6 AM and 9 AM are for work, and this share drops to 20 percent in the 4 PM-7 PM time period.

Note that the NPTS defines a trip as travel from one address to another. Those incidental trips we make on the way to work are classified as their own purposes.

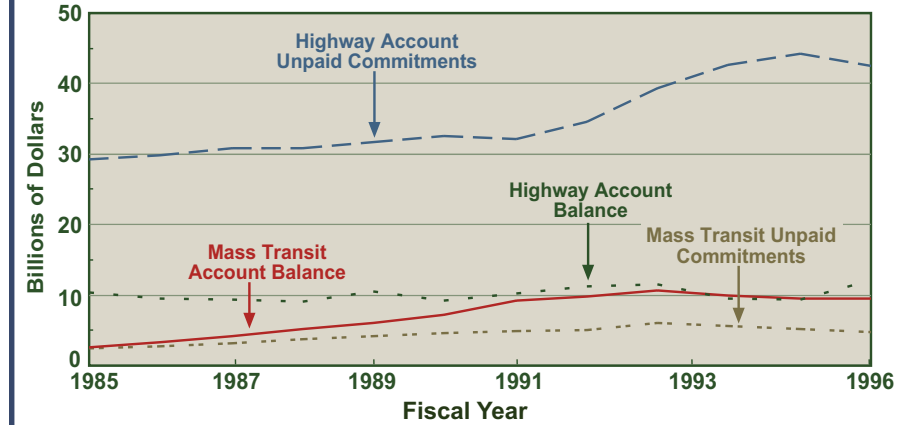
Federal Highway Trust Fund Receipts



Most receipts from the Federal taxation of motor fuel, along with a number of other highway-related taxes are deposited in the Federal Highway Trust Fund. The Trust Fund is made up of two accounts—highway and mass transit—and is dedicated for the funding of Federal surface transportation programs. In this way, taxes on highway users are used to fund highway facilities. The Trust Fund has provided a stable funding source for highway programs since it was established in 1956.

Motor-fuel tax receipts accounted for \$21.500 billion in Fiscal Year (FY) 1996 or 87.2 percent of all Trust Fund tax receipts. Other taxes accounted for \$3.151 billion. The balance in the Trust Fund earned interest income of \$1.323 billion.

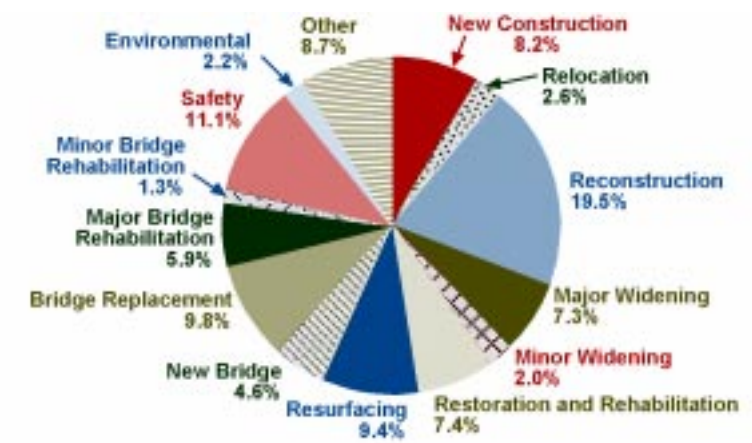
Federal Highway Trust Fund Balance and Commitments



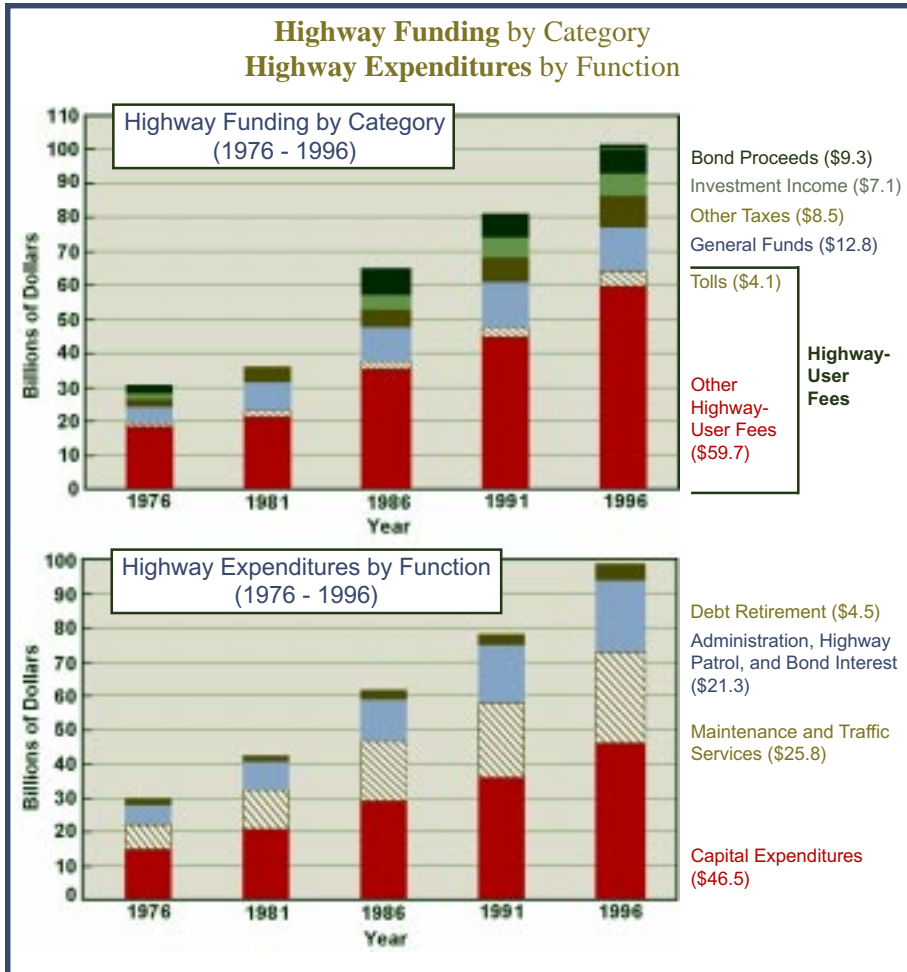
NOTE: The Highway Trust Fund was established July 1, 1956; the Mass Transit Account was established April 1, 1983.

The balance in the Highway Trust Fund has grown from \$9.581 billion at the end of FY 1983 to \$21.642 billion at the end of FY 1996. At the end of FY 1996, the Highway Account held a balance of \$12.118 billion and had unpaid commitments of \$42.452 billion. Funds for highway projects are committed when the project is initiated and are paid out as the project progresses. Because construction projects are long term in nature, the highway-user tax revenues can be committed to projects in advance of actual tax collection.

Federal-Aid Highway Obligations by Type of Improvement 1990-1996

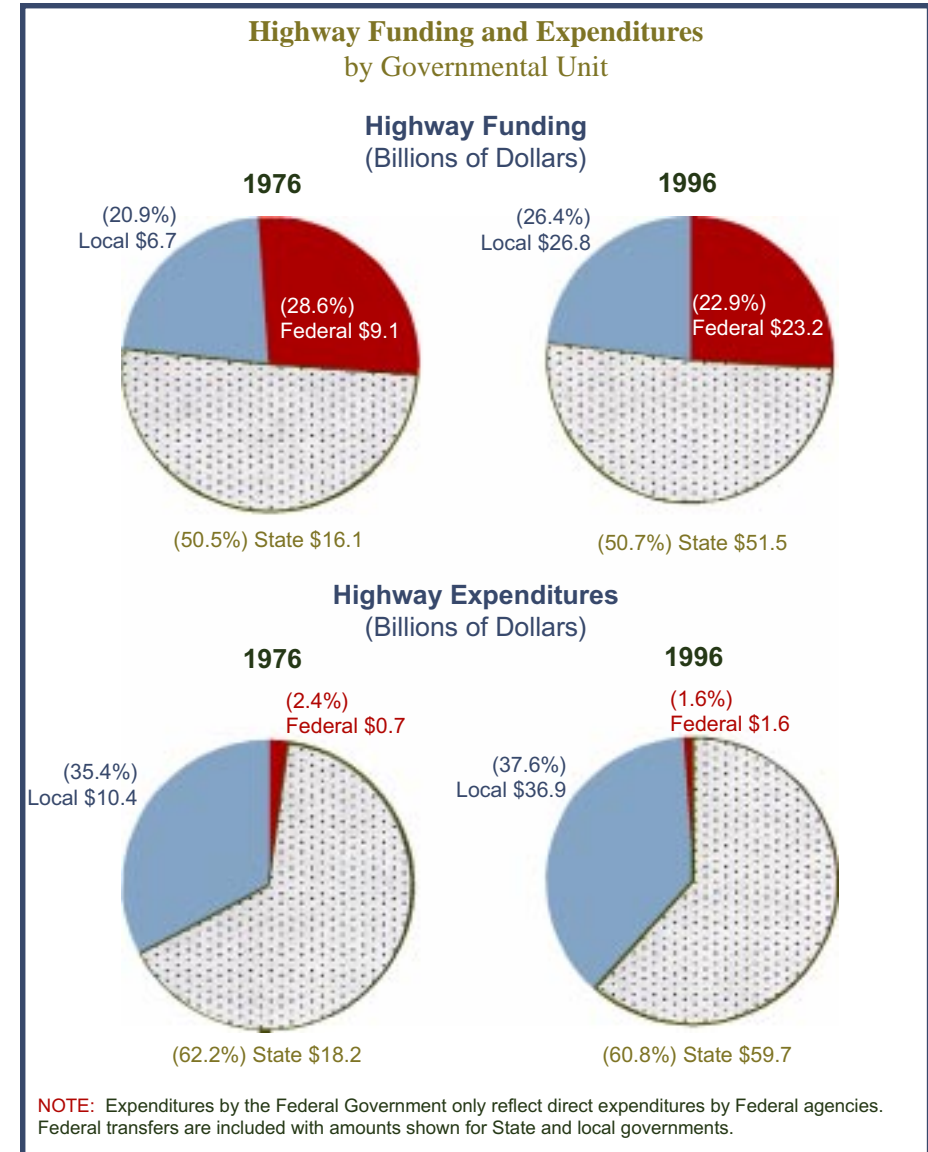


Obligations of Federal-aid highway funds totaled \$129.0 billion for the 7-year period 1990 through 1996—an average of \$18.4 billion per year. Reconstruction work represents the largest portion of obligations during the period.



Total highway funding by all units of government reached \$101.5 billion in 1996—a 218-percent increase compared to 1976. At 62.9 percent, highway-user fees make up the largest share of revenues used to fund highways. When compared to the 65.2 percent in 1976, the present shares has slightly decreased. The General Fund share of highway funding has decreased from 15.2 percent in 1976 to 12.6 percent in 1996. Other taxes, investment income and bond proceeds account for 24.5 percent of the total highway funding as compared to 19.6 percent in 1976.

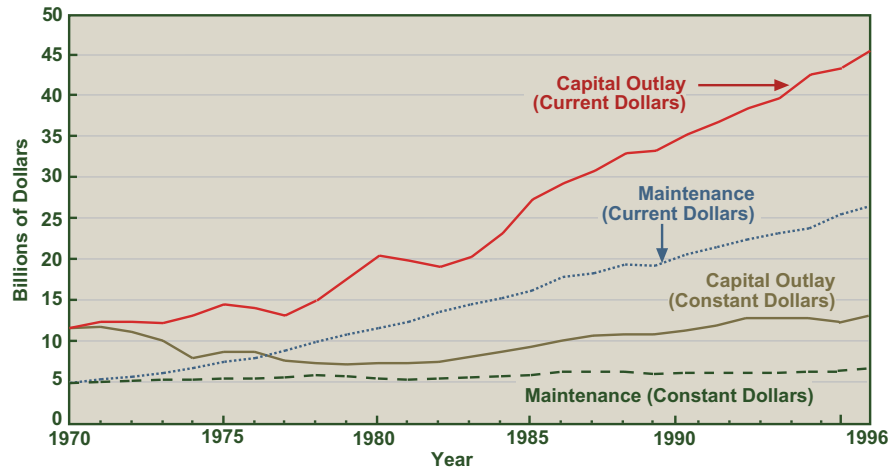
Capital expenditures currently account for 47.4 percent of highway expenditures compared to 47.5 percent in 1976; maintenance accounts for 26.3 percent compared to 26.4 percent in 1976. Expenditures for administration, highway patrol, and bond interest also account for an increasing share of total expenditures—21.7 percent in 1996 versus 20.7 percent in 1976.



State governments account for the largest shares of highway funding and highway expenditures, but the shares attributed to local units of government have increased significantly since 1976. Local governments now account for 26.4 percent of total highway funding and 37.6 percent of total highway expenditures compared to 20.9 percent and 35.4 percent, respectively, in 1976. Highway funding by the Federal Government has increased 154.3 percent compared to 1976; however, the relative share of Federal funding to total highway funding has decreased from 28.6 percent in 1976 to 22.9 percent in 1996.

Highway Capital Expenditures and Maintenance Expenditures

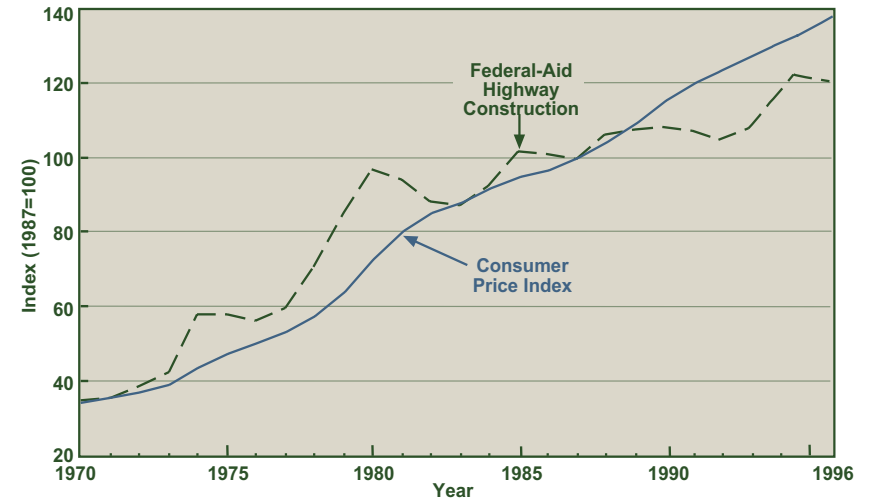
by All Units of Government¹



¹ Capital Expenditures include construction, engineering, and right-of-way.

Highway capital expenditures increased 302 percent from 1970 to 1996. Adjusted for inflation, 1996 capital expenditures (expressed in constant 1987 dollars) were only 17 percent above the 1970 level. Expenditures for highway maintenance in 1996 increased 447 percent compared to 1970. After accounting for inflation, 1996 maintenance expenditures were 35 percent above the 1970 level.

Highway Construction Price Trends and the Consumer Price Index



Apportionment of Federal Funds Administered by the Federal Highway Administration¹ for FY 1995, 1996, and 1997²

(in Millions of Dollars)

Selected Programs	1995	1996	1997
Interstate Construction ³	1061	0	0
Interstate Maintenance	2775	2405	2761
Interstate Substitute (Highway)	231	0	0
Reimbursement for non-Federally aided Interstate Segments	0	1651	1896
National Highway System	3344	2909	3345
Surface Transportation Program	3869	3375	3875
Congestion Mitigation and Air Quality Improvement	975	850	975
Bridge Replacement and Rehabilitation	2549	2200	2536
P.L. 104-59 Restoration Funds ⁴	0	267	155
Metropolitan Planning	139	137	157
Donor State Bonus	495	429	493
90% of Payment Adjustments	0	138	1682
Apportionment Adjustment	905	811	931
Minimum Allocation	1427	502	603
Highway Safety (FHWA and NHTSA)	182	152	157
Total⁵	17,952	15,826	19,566

¹ Apportioned pursuant to the Intermodal Surface Transportation Efficiency Act of 1991 and the National Highway System Designation Act of 1995. Does not include funds from the Mass Transit Account of the Highway Trust Fund or the National Recreational Trails Trust Fund.

² Fiscal year starts October 1 and ends September 30.

³ Interstate construction funds are made available 1 year in advance of the year for which they are apportioned.

⁴ Section 203 of the National Highway System (NHS) Designation Act of 1995 rescinded some unobligated balances remaining from the authorizations under previous highway authorization acts. It also made reductions in authorized amounts for several programs. These funds are apportioned to the States based on percentages specified in section 202 of the NHS Designation Act.

⁵ Does not include funds from the following programs: emergency relief, Federal lands highway programs, mandated projects, national magnetic levitation development, high-speed ground transportation development, and intelligent vehicle-highway system, among others. These funds are allocated from the Highway Trust Fund.

Federal Highway-User Fees¹

User Fee Type	Rate on October 1, 1997
Motor Fuels	
Gasoline	18.4 cents per gallon
Gasohol	
Made with 10% Ethanol	13.0 cents per gallon
Made with 10% Methanol	12.4 cents per gallon
Diesel Fuel	24.4 cents per gallon
Liquefied Petroleum Gases	13.6 cents per gallon
Tires	0 - 40 pounds, no tax Over 40 - 70 pounds, 15 cents per pound in excess of 40 Over 70 - 90 pounds, \$4.50 plus 30 cents per pound in excess of 70 Over 90 pounds, \$10.50 plus 50 cents per pound in excess of 90
Truck and Trailer Sales	12 percent of retailer's sales price for trucks over 33,000 pounds Gross vehicle weight (GVW) and trailers over 26,000 pounds GVW
Heavy Vehicle Use	Annual Tax: Trucks 55,000 - 75,000 pounds GVW, \$100 plus \$22 for each 1,000 pounds (or fraction thereof) in excess of 55,000 pounds Trucks over 75,000 pounds GVW, \$550

¹ See tables FE-101A, FE-101B, and FE-21B in *Highway Statistics 1995* for a more complete description of Federal highway-user fees.

Using Data for Comparisons

Even when data are consistently collected and reported, users need to recognize that highway statistical information is not necessarily comparable across all States. For many of the data items reported in Highway Statistics, a user should not expect to find consistency among all States, due to many State-to-State differences. When making State level comparisons, it is inappropriate to use these statistics without recognizing those differences that impact comparability.

Use of reported State maintenance expenditures provides a clear example. Maintenance expenditures per mile can vary between States depending upon a number of factors including differences such as climate and geography, how each State defines maintenance versus capital expenditures, traffic intensity and percent trucks, degree of urbanization, types of pavement being maintained, and the level of system responsibility retained by the State versus that given to other levels of government. It would be inappropriate, therefore, when using data from Highway Statistics to compare per mile maintenance costs across all States to draw any conclusions without taking into account the differences that should be expected in these parameters based upon differing State conditions.

If choosing to compare State data, the user must be prepared to thoughtfully select a set of peer States that have similar characteristics in relationship to the specific comparison being made. Improperly selected peer States are likely to yield invalid data comparisons.

Differences that the user needs to consider in determining suitability of peer States for data comparison purposes include characteristics such as urban/rural similarities, population density, degree of urbanization, climate, geography, differing State laws and practices that influence data definitions, administrative control of the public road system, similarity of the basic State economies, traffic volume similarities, and the degree of State functional centralization.

Beginning in 1994, FHWA provided a two-page “Peer State” table in each edition of Highway Statistics that lists some of these characteristics so that the data user might be made more aware of possible problems that may arise when comparing State-by-State data.

Selected Statistics by State

State	Resident Population (Thousands)	Driving-Age Population (Thousands)	Highway Motor Fuel Use (Thousands of Gallons)	Total Lane Miles	Total Road and Street Mileage ¹	Annual Vehicle-Miles of Travel (Millions)	Total Highway Fatalities	Fatalities per 100 Million VMT	Total Highway Injuries	Injuries per 100 Million VMT	State Motor Fuel Taxes And Other Related Receipts	Total Highway Capital Outlay ² (Thousands)	Total Disbursements for Highways ² (Thousands)	Payments into the Federal HTF (Thousands)	Apportionments from the HTF ³ (Thousands)
Alabama	4,273	3,325	2,925,306	193,245	93,340	51,433	1,143	2.22	47,963	107.23	530,399	479,737	1,266,350	486,254	327,193
Alaska	607	442	335,932	26,816	13,255	4,115	80	1.94	5,851	70.33	18,756	294,109	561,284	51,114	212,776
Arizona	4,428	3,401	2,591,315	118,005	54,895	42,123	993	2.36	71,806	58.66	478,129	646,351	1,342,003	379,343	250,050
Arkansas	2,510	1,929	1,820,622	158,027	77,746	27,840	615	2.21	19,477	142.94	340,052	414,471	868,271	317,013	243,407
California	31,878	23,862	15,425,685	381,417	170,506	278,043	3,989	1.43	300,104	92.65	2,635,798	4,459,389	9,222,772	2,238,990	1,519,635
Colorado	3,823	2,935	2,054,594	175,391	84,797	36,141	617	1.71	37,743	95.76	439,774	598,126	1,462,425	280,038	225,580
Connecticut	3,274	2,557	1,503,844	43,770	20,600	28,135	310	1.10	48,163	58.42	498,120	667,307	1,374,482	219,462	354,533
Delaware	725	568	407,486	12,369	5,715	7,666	116	1.51	10,115	75.79	93,345	257,892	476,335	63,206	76,895
Dist. of Col.	543	444	182,030	3,444	1,413	3,316	62	1.87	10,378	31.95	32,028	80,377	143,240	27,694	83,366
Florida	14,400	11,329	7,598,846	246,545	114,422	130,004	2,753	2.12	243,320	53.43	1,300,895	2,869,157	4,824,183	1,124,231	762,912
Georgia	7,353	5,617	5,391,750	234,292	111,746	89,132	1,574	1.77	145,057	61.45	412,268	1,326,859	2,338,758	854,673	519,944
Hawaii	1,184	909	413,750	8,927	4,142	8,030	148	1.84	10,994	73.04	67,167	248,534	431,381	56,736	116,844
Idaho	1,189	885	758,436	121,500	59,674	12,961	258	1.99	14,252	90.94	179,514	231,107	447,690	120,424	128,954
Illinois	11,847	9,030	5,770,508	287,275	137,577	96,730	1,477	1.53	144,022	67.16	1,134,506	1,964,005	3,688,748	806,523	694,109
Indiana	5,841	4,519	3,837,370	191,743	92,970	66,220	984	1.49	80,408	82.35	664,718	806,978	1,515,372	574,293	385,561
Iowa	2,852	2,223	1,897,047	230,835	112,708	26,880	465	1.73	30,826	87.20	374,546	697,003	1,360,382	253,833	212,153
Kansas	2,572	1,964	1,613,724	271,400	133,386	25,942	491	1.89	31,342	82.77	296,996	703,252	1,475,775	253,423	210,441
Kentucky	3,884	3,035	2,374,913	151,606	73,158	42,586	841	1.97	56,023	76.02	400,698	829,558	1,482,037	422,780	266,713
Louisiana	4,351	3,264	2,601,051	127,338	60,667	38,095	781	2.05	44,760	85.11	529,232	661,265	1,617,204	386,638	241,237
Maine	1,243	980	755,391	46,142	22,577	12,819	169	1.32	16,812	76.25	145,803	176,773	531,151	114,687	118,904
Maryland	5,072	3,916	2,518,045	65,162	29,680	46,187	608	1.32	48,806	94.63	604,614	760,282	1,692,907	367,322	268,408
Massachusetts	6,092	4,818	2,813,026	73,330	34,725	49,956	417	0.83	47,228	105.78	591,807	1,587,592	2,953,348	404,958	660,902
Michigan	9,594	7,345	5,343,599	247,195	117,620	90,215	1,505	1.67	139,695	64.58	752,129	1,198,982	2,372,198	767,765	478,604
Minnesota	4,658	3,554	2,745,903	267,851	130,613	44,465	576	1.30	47,963	92.71	507,770	1,189,725	2,363,741	312,675	288,527
Mississippi	2,716	2,052	1,811,835	151,279	73,202	30,562	811	2.65	33,144	92.21	334,857	445,621	931,440	290,764	187,609
Missouri	5,359	4,125	3,634,320	251,337	122,748	61,162	1,149	1.88	77,803	78.61	591,526	847,848	1,705,140	566,524	374,754
Montana	879	676	612,508	142,465	69,809	9,446	200	2.12	10,556	89.48	167,857	207,601	429,117	105,043	163,881
Nebraska	1,652	1,262	1,126,001	187,914	92,805	16,238	293	1.80	30,696	52.90	249,759	451,669	802,072	177,024	137,417
Nevada	1,603	1,228	1,008,500	93,623	45,039	14,158	348	2.46	24,023	58.94	233,563	340,578	583,981	140,391	132,872
New Hampshire	1,162	898	638,024	31,093	15,106	10,987	134	1.22	22,934	47.91	116,902	156,244	471,586	89,538	94,846
New Jersey	7,988	6,206	4,182,271	77,643	35,924	62,334	818	1.31	130,308	47.84	463,664	1,337,588	2,804,103	606,735	494,016
New Mexico	1,713	1,269	1,141,879	123,755	59,455	21,510	481	2.24	31,315	68.69	223,780	383,432	627,234	190,339	171,383
New York	18,185	14,115	6,369,283	238,074	112,347	118,641	1,564	1.32	287,074	41.33	1,325,956	3,286,133	7,984,826	956,360	1,101,551
North Carolina	7,323	5,688	4,447,041	204,132	97,509	78,935	1,493	1.89	150,881	52.32	1,184,149	1,123,979	2,162,138	688,975	451,624
North Dakota	644	496	477,738	175,753	86,808	6,741	85	1.26	5,889	114.47	93,112	190,250	339,716	78,866	124,534
Ohio	11,173	8,655	6,033,308	242,051	114,642	103,090	1,395	1.35	220,105	46.84	1,341,859	1,389,871	2,920,770	834,049	605,926
Oklahoma	3,301	2,523	2,329,971	232,158	112,664	39,427	772	1.96	53,378	73.86	367,146	479,727	1,002,583	369,914	242,441
Oregon	3,204	2,490	1,839,934	169,955	83,190	30,319	524	1.73	38,554	78.64	364,425	515,132	1,098,770	290,338	339,721
Pennsylvania	12,056	9,488	5,921,432	247,826	118,952	96,646	1,469	1.52	136,952	70.57	1,314,011	1,553,646	4,102,080	911,597	830,664
Rhode Island	990	780	420,887	12,720	6,001	7,120	69	.97	12,175	58.48	123,518	207,789	333,765	60,314	106,469
South Carolina	3,699	2,870	2,430,956	134,728	64,359	39,756	930	2.34	57,387	69.28	384,942	424,608	803,907	387,354	242,584
South Dakota	732	553	546,724	168,923	83,375	7,817	175	2.24	8,490	92.07	91,273	225,478	419,645	78,351	130,556
Tennessee	5,320	4,151	3,439,352	179,547	85,795	58,435	1,239	2.12	79,658	73.36	662,619	611,213	1,290,265	551,369	328,921
Texas	19,128	14,268	11,526,008	627,311	296,259	185,386	3,741	2.02	350,397	52.91	2,319,576	2,390,350	6,160,875	1,756,156	1,038,661
Utah	2,000	1,405	1,131,464	87,080	41,718	19,539	321	1.64	49,001	39.87	214,380	312,918	554,350	187,683	134,349
Vermont	589	459	400,367	29,199	14,192	6,377	88	1.38	3,568	178.73	67,405	108,849	259,196	57,168	80,238
Virginia	6,675	5,221	4,054,168	149,964	69,384	71,302	875	1.23	82,363	86.57	693,348	1,191,026	2,980,355	623,925	397,176
Washington	5,533	4,256	3,041,375	164,128	79,555	49,405	712	1.44	83,781	58.97	668,487	1,232,488	2,408,953	430,273	435,157
West Virginia	1,826	1,461	957,329	72,255	35,130	17,693	345	1.95	27,590	64.13	261,612	466,062	922,754	176,743	211,482
Wisconsin	5,160	3,976	2,920,969	228,937	111,435	52,782	761	1.44	66,069	79.89	675,345	1,005,410	2,326,650	441,967	321,782
Wyoming	481	366	551,383	70,348	34,115	7,360	143	1.94	6,605	111.43	53,461	193,668	344,604	102,031	125,248
U.S. TOTAL	265,284	203,787	146,675,200	8,177,823	3,919,450	2,482,202	41,907	1.69	3,733,804	66.48	27,617,596	44,228,009	92,582,912	22,033,866	17,653,510

¹ This mileage data does not include Puerto Rico.
² All units of government, 1995 data. Fiscal Year (October 1 - September 30).
³ Includes allocations.

Population, Drivers, Vehicles, Fuel and Travel by State ¹

State	Total Registered Vehicles	Total Licensed Drivers	Licensed Drivers per 1,000 Driving-Age Population	Registered Motor Vehicles per 1000 Population	Motor Vehicles per Licensed Driver	Persons per Registered Motor Vehicle	Gallons of Fuel per Vehicle	Miles per Gallon	Annual Miles per Vehicle	Vehicle-Miles per Capita	Vehicle-Miles per Licensed Driver
Alabama	3,323,683	3,138,237	944	778	1.06	1.29	880	17.58	15,475	12,037	16,389
Alaska	531,017	439,855	995	875	1.21	1.14	633	12.25	7,749	6,779	9,355
Arizona	2,982,523	2,727,312	802	674	1.09	1.48	869	16.26	14,123	9,513	15,445
Arkansas	1,633,343	1,752,229	909	651	0.93	1.54	1,115	15.29	17,045	11,093	15,888
California	25,213,707	20,249,200	849	791	1.25	1.26	612	18.02	11,027	8,722	13,731
Colorado	3,433,287	2,756,807	939	898	1.25	1.11	598	17.59	10,527	9,454	13,110
Connecticut	2,608,831	2,343,779	916	797	1.11	1.26	576	18.71	10,785	8,593	12,004
Delaware	593,007	529,291	932	818	1.12	1.22	687	18.81	12,927	10,576	14,484
Dist. of Col.	237,415	333,445	751	437	0.71	2.29	767	18.22	13,967	6,104	9,945
Florida	10,888,596	11,399,593	1,006	756	0.96	1.32	698	17.11	11,939	9,028	11,404
Georgia	6,282,672	4,966,348	884	854	1.27	1.17	858	16.53	14,187	12,121	17,947
Hawaii	785,917	733,486	807	664	1.07	1.51	526	19.41	10,217	6,784	10,948
Idaho	1,061,125	819,713	927	892	1.29	1.12	715	17.09	12,214	10,898	15,812
Illinois	8,816,876	7,609,618	843	744	1.16	1.34	654	16.76	10,971	8,165	12,712
Indiana	5,215,572	3,704,156	820	893	1.41	1.12	736	17.26	12,697	11,338	17,877
Iowa	2,869,445	1,955,601	880	1,006	1.47	0.99	661	14.17	9,368	9,426	13,745
Kansas	2,109,814	1,788,259	910	820	1.18	1.22	765	16.08	12,296	10,086	14,507
Kentucky	2,695,985	2,566,545	846	694	1.05	1.44	881	17.93	15,796	10,965	16,593
Louisiana	3,318,205	2,624,131	804	763	1.26	1.31	784	14.65	11,481	8,756	14,517
Maine	958,659	873,713	892	771	1.10	1.30	788	16.97	13,372	10,310	14,672
Maryland	3,634,579	3,377,470	863	717	1.08	1.40	693	18.34	12,708	9,107	13,675
Massachusetts	4,702,389	4,355,014	904	772	1.08	1.30	598	17.76	10,624	8,200	11,471
Michigan	8,010,396	6,716,789	914	835	1.19	1.20	667	16.88	11,262	9,403	13,431
Minnesota	3,860,894	2,830,232	796	829	1.36	1.21	711	16.19	11,517	9,546	15,711
Mississippi	2,181,727	1,700,132	828	803	1.28	1.24	830	16.87	14,008	11,252	17,976
Missouri	4,350,440	3,749,348	909	812	1.16	1.23	835	16.83	14,059	11,414	16,313
Montana	973,074	573,754	849	1,107	1.70	0.90	629	15.42	9,707	10,742	16,464
Nebraska	1,478,558	1,159,831	919	895	1.27	1.12	762	14.42	10,982	9,829	14,000
Nevada	1,095,676	1,116,795	910	683	0.98	1.46	920	14.04	12,922	8,831	12,677
New Hampshire	1,112,113	915,451	1,019	957	1.21	1.05	574	17.22	9,879	9,451	12,002
New Jersey	5,821,536	5,485,980	884	729	1.06	1.37	718	14.90	10,707	7,804	11,362
New Mexico	1,544,633	1,179,256	929	901	1.31	1.11	739	18.84	13,926	12,554	18,240
New York	10,635,602	10,483,665	743	585	1.01	1.71	599	18.63	11,155	6,524	11,317
North Carolina	5,759,234	5,187,288	912	786	1.11	1.27	772	17.75	13,706	10,779	15,217
North Dakota	679,047	449,225	906	1,055	1.51	0.95	704	14.11	9,927	10,475	15,006
Ohio	9,770,484	7,852,548	907	874	1.24	1.14	618	17.09	10,551	9,227	13,128
Oklahoma	3,081,723	2,395,825	950	934	1.29	1.07	756	16.92	12,794	11,944	16,457
Oregon	2,851,048	2,612,659	1,049	890	1.09	1.12	645	16.48	10,634	9,464	11,605
Pennsylvania	8,640,238	8,221,143	866	717	1.05	1.40	685	16.32	11,186	8,016	11,756
Rhode Island	695,928	668,940	858	703	1.04	1.42	605	16.92	10,231	7,190	10,644
South Carolina	2,790,575	2,574,575	897	754	1.08	1.33	871	16.35	14,247	10,749	15,442
South Dakota	751,071	518,592	937	1,025	1.45	0.98	728	14.30	10,408	10,673	15,074
Tennessee	4,830,482	3,805,600	917	908	1.27	1.10	712	16.99	12,097	10,985	15,355
Texas	13,486,868	12,568,265	881	705	1.07	1.42	855	16.08	13,746	9,692	14,750
Utah	1,445,088	1,319,263	939	722	1.10	1.38	783	17.27	13,521	9,767	14,811
Vermont	503,139	468,863	1,022	855	1.07	1.17	796	15.93	12,674	10,833	13,601
Virginia	5,576,132	4,692,071	899	835	1.19	1.20	727	17.59	12,787	10,681	15,196
Washington	4,602,920	3,908,217	918	832	1.18	1.20	661	16.24	10,733	8,929	12,641
West Virginia	1,406,285	1,274,453	873	770	1.10	1.30	681	18.48	12,581	9,691	13,883
Wisconsin	3,971,550	3,723,685	936	770	1.07	1.30	735	18.07	13,290	10,229	14,175
Wyoming	562,048	343,093	938	1,168	1.64	0.86	981	13.35	13,095	15,289	21,452
U.S. TOTAL	206,365,156	179,539,340	881	778	1.15	1.29	711	16.92	12,028	9,357	13,825

¹ Vehicle relationships exclude motorcycles.

Urbanized Areas with Populations Above 750,000

Urbanized Area	Location		Estimated Urbanized Population (1,000)	Federal-Aid Urbanized Land Area (Sq. Miles)	Persons per Square Mile	Total Highway Mileage	Total Freeway/ Expressway Mileage	Total Miles Per Urbanized Population	Total Daily Highway Vehicle-Miles (1,000)	Total Daily Freeway Vehicle-Miles (1,000)	Daily Vehicle-Miles per Capita	Average AADT* Total	% of Travel Served by Freeways	Average AADT on Freeways
	Prime State	Other State(s)												
New York-Northeastern NJ	NY	NJ	16,320	3,962	4,119	37,513	1,143	70.0	246,964	95,035	15.1	6,583	38.4	83,145
Los Angeles	CA		12,222	2,226	5,490	26,663	630	51.5	264,941	117,798	21.6	9,937	44.4	186,980
Chicago-Northwestern IN ¹	IL	IN	7,961	2,731	2,915	23,642	475	59.7	152,256	46,943	19.1	6,440	30.8	98,827
Philadelphia ¹	PA	NJ	4,538	1,350	3,361	13,234	345	76.0	73,690	21,383	16.2	5,568	29.0	61,979
San Francisco-Oakland	CA		3,890	1,152	3,376	9,295	331	85.1	81,023	42,795	20.8	8,717	52.8	129,290
Detroit	MI		3,768	1,304	2,889	12,915	281	74.6	86,811	29,262	23.0	6,722	33.7	104,135
Washington ^{2 3}	DC	MD, VA	3,449	999	3,452	9,959	308	89.3	79,506	32,687	23.0	7,983	41.1	106,126
Dallas-Forth Worth	TX		3,363	1,712	1,964	17,839	567	168.6	100,272	41,069	29.8	5,621	40.9	72,432
Houston	TX		3,059	1,538	1,988	15,443	424	138.6	78,735	35,151	25.7	5,098	44.6	82,903
Boston	MA		2,878	1,139	2,526	9,930	215	74.7	57,605	21,375	20.0	5,801	37.1	99,418
San Diego	CA		2,561	727	3,522	5,939	240	93.7	55,622	28,983	21.7	9,366	52.1	120,762
Atlanta	GA		2,449	1,757	1,393	12,117	298	121.7	89,530	35,086	36.5	7,389	39.1	117,738
Phoenix	AZ		2,340	1,054	2,220	9,233	132	56.4	50,430	13,344	21.5	5,462	26.4	101,090
Minneapolis-St. Paul	MN		2,263	1,192	1,898	10,397	306	135.2	51,946	22,932	22.9	4,996	44.1	74,941
Baltimore ³	MD		2,107	712	2,959	6,420	270	128.1	42,214	19,772	20.0	6,575	46.8	73,229
Miami-Hialeah	FL		2,058	546	3,769	5,607	118	57.3	36,233	11,548	17.6	6,462	31.8	97,864
St. Louis	MO	IL	1,968	1,057	1,861	8,069	295	149.9	56,082	23,764	28.4	6,950	42.3	80,555
Seattle	WA		1,948	844	2,308	6,937	250	128.3	47,735	22,098	24.5	6,881	46.2	88,392
Tampa-St Petersburg-Clearwater	FL		1,862	1,294	1,438	7,406	121	65.0	38,720	7,843	20.7	5,228	20.2	64,818
Denver	CO		1,770	720	2,458	6,681	201	113.6	37,262	14,882	21.0	5,577	39.9	74,039
Pittsburgh	PA		1,768	1,112	1,589	8,433	283	160.1	35,557	10,309	20.1	4,216	28.9	36,427
Cleveland	OH		1,767	838	2,108	5,562	224	126.8	38,349	16,019	21.7	6,895	41.7	71,513
San Jose	CA		1,593	358	4,449	4,081	126	79.1	35,425	14,930	22.2	8,680	42.1	118,492
Fort Lauderdale-Hollywood-Pompano Beach	FL		1,485	489	3,036	4,208	109	73.4	31,397	10,497	21.1	7,461	33.4	96,302
Norfolk-VA Beach-Newport News	VA		1,429	952	1,501	5,390	167	116.9	32,004	10,664	22.3	5,938	33.3	63,856
Portland-Vancouver	OR	WA	1,355	469	2,889	5,545	136	100.4	29,305	11,610	21.6	5,285	39.6	85,367
Kansas City	MO	KS	1,339	1,034	1,294	7,411	364	271.8	37,329	16,937	27.8	5,037	45.3	46,530
Riverside-San Bernardino	CA		1,325	513	2,582	4,738	138	104.2	29,388	14,986	22.1	6,203	50.9	108,594
Milwaukee	WI		1,250	512	2,441	4,966	114	91.2	30,681	8,803	24.5	6,178	28.6	77,219
Sacramento	CA		1,217	382	3,185	4,059	105	86.3	26,583	10,755	21.8	6,549	40.4	102,428
San Antonio	TX		1,193	485	2,459	5,139	211	176.9	29,581	13,279	24.7	5,756	44.8	62,993
Cincinnati	OH	KY	1,161	630	1,842	5,217	169	145.6	30,974	13,871	26.6	5,937	44.7	82,076
Orlando ¹	FL		1,084	667	1,625	3,578	149	137.5	26,777	7,694	24.7	7,484	28.7	51,637
Las Vegas	NV		1,074	270	3,977	2,894	72	67.0	16,779	5,504	15.6	5,798	32.8	76,444
Buffalo-Niagara Falls	NY		1,073	564	1,902	3,946	139	129.5	19,729	5,647	18.3	5,000	28.6	40,625
New Orleans	LA		1,070	270	3,962	3,288	76	71.0	14,387	5,358	13.4	4,376	37.2	70,500
Oklahoma City	OK		1,027	711	1,444	4,657	146	142.2	25,683	8,498	25.0	5,515	33.0	58,205
Indianapolis	IN		993	422	2,353	4,106	130	130.9	27,653	10,896	27.8	6,735	39.4	83,815
West Palm Beach-Boca Raton-Delray Beach	FL		967	556	1,739	2,595	86	88.9	18,510	6,814	19.1	7,133	36.8	79,232
Memphis	TN	AR, MS	964	409	2,356	3,205	87	90.2	20,940	5,725	21.7	6,534	27.3	65,804
Providence-Pawtucket	RI	MA	900	516	1,744	4,324	117	130.0	17,705	7,331	19.6	4,095	41.4	62,658
Columbus	OH		898	476	1,886	3,400	149	165.9	23,947	10,980	26.6	7,043	45.8	73,691
Salt Lake City	UT		862	353	2,441	2,946	81	94.0	18,558	6,947	21.5	6,299	37.4	85,765
Jacksonville	FL		819	727	1,126	3,649	139	169.7	21,522	8,150	26.2	5,898	37.8	58,633
Louisville	KY	IN	782	384	2,036	3,362	138	176.5	23,327	9,310	29.8	6,938	39.9	67,463
Tulsa	OK		757	395	1,916	2,749	113	149.3	16,729	5,631	22.0	6,085	33.6	49,831

* Annual average daily traffic.

¹ Some urbanized area data are inconsistently reported; for example, the Pennsylvania portion of Wilmington, Delaware is reported with Philadelphia; portions of Bristol, Connecticut are reported with Hartford or Waterbury; Kissimmee, Florida is reported with Orlando; and the Illinois portions of Aurora, Danville, Elgin, Crystal Lake, Joliet and Round Lake Beach are reported with Chicago. Other anomalies may exist.

² FHWA estimates used for District of Columbia portion of the Washington urbanized area.

³ 1995 data used for the District of Columbia and Maryland portions of the Washington, D.C. urbanized area and for all Maryland urbanized areas.

SOURCE: All data reported by States through the Highway Performance Monitoring System. Numbers may differ from subsequently published 1990 Census data.

The following Office of Highway Information Management printed publications may be obtained by contacting Federal Highway Administration, R&T Report Center, FAX number (301) 577-1421, telephone number (301) 577-0818. If you have questions concerning the contents of any of these reports, please call (202) 366-0180. *The reports with an ‘**’ can be found on the Office of Highway Information website at: <http://www.fhwa.dot.gov/ohim>*

1. Highway Statistics Summary to 1995, FHWA-PL-97-009**
2. Highway Statistics 1996, (Annual), FHWA-PL-98-003**
3. Highway Taxes and Fees, How They Are Collected and Distributed, 1995 (Biennial), FHWA PL-95-036
4. Traffic Monitoring Guide, February 1995, FHWA PL-95-031**
5. Nationwide Personal Transportation Survey Reports:

1990 NPTS:

- 5.1 Data Volume Books I FHWA PL-94-010A**
- 5.2 Data Volume Book II FHWA PL-94-010B**
- 5.3 Urban Travel Patterns FHWA PL-94-018
- 5.4 Travel Mode Special Reports FHWA PL-94-019
- 5.5 Demographic Special Reports FHWA PL-95-032
- 5.6 Special Report on Trip & Vehicle Attributes FHWA PL-95-033
- 5.7 Summary of Travel Trends FHWA-PL-92-027
- 5.8 Travel Behavior Issues in the 90's FHWA-PL-93-012

1995 NPTS:

- 5.9 Our Nation's Travel - 1995 NPTS Early Results Report FHWA-PL-97-028**
- 5.10 Transportation User's View of Quality FHWA-PL-98-013**

Nationwide Personal Transportation Survey Electronic Media:

1983-1990 NPTS CD-ROM (For copies: FAX (202) 366-3640)
 1995 NPTS CD-ROM (FHWA-PL-97-034) (For copies: (301) 577-0818, or FAX (301) 577-1421)
 1990 NPTS Website: <http://www.cta.ornl.gov/npts/1990/index.html>
 1995 NPTS Website: <http://www.cta.ornl.gov/npts>

6. Driver License Administration Requirements and Fees, 1996, FHWA PL-96-011**
7. Journey-to-Work Trends in the United States and its Major Metropolitan Areas 1960-1990, FHWA PL-94-012**
8. New Perspectives in Commuting , 1992, FHWA PL-92-026
9. A Customer's Guide to Using Highway Statistics, 1996, FHWA-PL-96-028

These reports may be obtained from the Office of Highway Information Management, Federal Highway Administration, FAX number (202) 366-7742, telephone number (202) 366-0180.

1. Monthly Motor Fuel Reported by States, (Monthly), FHWA PL-97-005**
2. Toll Facilities in the United States, 1995, FHWA-PL-95-034**
3. Traffic Volume Trends (Monthly)**
4. The Highway Performance Monitoring System (Brochure), FHWA PL-94-031**
5. Bulletin—Highway Funding 1992-1995, FHWA**

AADT	Average Annual Daily Traffic
AAMA	American Automobile Manufacturers Association
AV/SF	Average Volume/Service Flow
BTS	Bureau of Transportation Statistics
CAAA	Clean Air Act Amendments
CO	Carbon Monoxide
DOT	Department of Transportation
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FY	Fiscal Year
GDP	Gross Domestic Product
HS95	Highway Statistics 1995
HTF	Highway Trust Fund
POV	Privately Owned Vehicle
IRI	International Roughness Index
IS	Interstate System
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
MF	Motor Fuel
MPG	Miles Per Gallon
NAAQS	National Ambient Air Quality Standard
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NPTS	Nationwide Personal Transportation Survey
O ₃	Ozone
PM-10	Particulate Matter less than 10 Microns
PSI	Pollutant Standards Index
STRAHNET	Strategic Highway Network
US	United States
VMT	Vehicle-Miles of Travel

