The amount of use of different types of vehicles varies from year to year because of ownership trends and utility needs. As a result, VMTs for the vehicle types also change. During the last decade, truck VMT has been increasing at a much higher rate than passenger VMT.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
Figure 2-6 indicates that the annual average vehicle miles traveled (VMT) growth rate for toll roads exceeds 3.6 percent compared with the 2.1 percent average of all roadway types over the last 14 years. Although VMT from all roadway types is still growing, VMT growth rates have been declining since 2003, with the growth rate of toll VMT declining at a much slower pace than the national average.

While vehicle ownership is one of many indicators related to income and wealth, it also has strong implications for energy use and for the environment. The following figures show the status of vehicle ownership in 2006 as well as historical trends.

Figure 3-1. Numbers of Registered Vehicles—Automobiles, Trucks, and Buses, 1970–2006

The number of registered vehicles in the country has been growing since recordkeeping started, and the number of registered vehicles as compared to the number of licensed drivers has also been growing. Before 1975, the country had roughly 1.0 vehicle per licensed driver. Since then, the ownership of vehicles on a licensed driver basis has been increasing at an accelerating rate, reaching 1.2 at the end of 2006.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
The rate of vehicle ownership per capita varies markedly from State to State. We see in these maps that a State's rate of vehicle ownership ranges from 0.27 vehicles per capita in Nevada to 0.58 vehicles per capita in Iowa.

*Note: Colorado did not submit the 2006 vehicle registration data.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
The 2000 Census revealed that the United States had 281.4 million people, an increase of 33 million people in 10 years. By 2010, the population is projected to approach 310 million. The growth in numbers of licensed drivers is following the trend of population growth very closely. The illustrations in this section provide a brief overview of licensed drivers by State, age, sex, and rate per population.

Figure 4-1. Increase in Number of Licensed Drivers by Gender, 1970-2006

In 2006, 87 percent of the driving-age population was licensed to drive a motor vehicle as compared to 57 percent in 1950. In 2005, for the first time, the number of licensed female drivers surpassed male drivers.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
The number of licensed drivers per 1,000 residents differs significantly from State to State. The average percentage of residents who are licensed drivers ranges from a low of 58 percent to more than 85 percent of State residents.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
In 2006, there were nearly 203 million licensed drivers in the United States. As the average age of the U.S. population shifts upward with the “baby boom” bulge, the trend in licensed drivers follows. In 2006, the 40–44 and 45–49 age groups contained the largest share of drivers.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
Together, Americans drove nearly 3 trillion miles in 2006. As indicated in this graph, the average annual VMT per licensed driver had been increasing since 1970. However, this trend switched in 2005. We now see the annual VMT per licensed driver decreasing.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
For household-based travel, short trips account for the vast majority of trips. Over half of all vehicle trips are between 1 and 10 miles. However, these short trips account for less than one-third (28.3 percent) of all household-based vehicle miles travelled.

Conversely, trips of 100 miles or more account for less than one percent of all vehicle trips, but nearly 15 percent of all household-based vehicle miles.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, National Household Travel Survey
National data on travel by U.S. households shows that peak commute periods also include high levels of non-work travel for purposes such as family and personal, school and church, and social activities. Including trips by all modes of transportation, the number of non-work trips occurring in midday actually exceeds the number of commuting trips in peak travel periods. As most of the trips throughout the midday are local, short trips, they potentially have a greater impact on energy use and air quality than on highway congestion.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, National Household Travel Survey
The number of registered vehicles has increased each year of the last four decades, and the number of licensed drivers is also climbing. The result is more travel on the Nation’s highways—the number of vehicle miles traveled has been increasing. One key ingredient which made the VMT growth possible is fuel—gasoline, diesel, and other less common fuels.

Figure 5-1. Highway Fuel Usage, 1970–2006

FROM 1970 TO 2006, total highway fuel consumption increased from 92 billion gallons to nearly 175 billion gallons.

Data Source for Figures 5-1 and 5-2: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
Figure 5-2. Fuel Consumption by State, 2006

- Gallons (Millions)
- Gasoline
- Diesel

State: DC, VT, RI, ND, AK, DE, HI, SD, WY, MT, NH, ME, ID, WV, NE, NM, UT, NV, KS, CT, AR, OR, IA, MS, OK, CO, KY, WI, MA, SC, MN, MI, WI, LA, AL, AZ, TN, MO, IN, VA, NJ, NC, MI, GA, IL, PA, OH, NY, FL, TX, CA
6 Funding & Expenditures

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 has two accounts, highway and mass transit, and is dedicated to funding 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.

Table 6-1. Federal Highway-User Fees

<table>
<thead>
<tr>
<th>Motor Fuels</th>
<th>Cents per Gallon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline</td>
<td>18.4</td>
</tr>
<tr>
<td>Gasohol</td>
<td>18.4</td>
</tr>
<tr>
<td>Diesel and Kerosene Fuel</td>
<td>24.4</td>
</tr>
<tr>
<td>Special Fuels</td>
<td>18.3</td>
</tr>
<tr>
<td>Liquefied Petroleum Gas</td>
<td>13.6</td>
</tr>
<tr>
<td>Liquefied Natural Gas</td>
<td>11.9</td>
</tr>
<tr>
<td>Other Special Fuels</td>
<td>18.4</td>
</tr>
</tbody>
</table>

Other User Fees

<table>
<thead>
<tr>
<th>Category</th>
<th>Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tires</td>
<td>Tax is imposed on tires sold by Manufacturers, Producers, or importers at the rate of $.0945 ($.04725 in the case of a bias ply or super single tire) for each 10 lbs of the maximum rated load capacity over 3,500 lbs.</td>
</tr>
<tr>
<td>Truck and Trailer Sales</td>
<td>12% of retailer's sales price for tractors and trucks over 33,000 lbs gross vehicle weight (GVW) and trailers over 26,000 lbs GVW. The tax applies to parts and accessories sold in connection with vehicle sales.</td>
</tr>
<tr>
<td>Heavy Use Vehicles</td>
<td>Trucks 55,000–75,000 lbs. GVW, $100 plus $22 for each 1,000 lbs (or fraction thereof) in excess of 55,000 lbs. Trucks over 75,000 GVW, $550.</td>
</tr>
</tbody>
</table>

Revenue sources of the Federal Highway Trust Fund include the Federal fuel tax and a variety of other fees. The Federal gasoline tax rate has not changed since 1996.

Data Source for Table 6-1 and Figure 6-1: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics.
Figure 6-1. Ratio of Relative Trust Apportionments/Allocations to Relative Trust Fund Payments, 2006

This chart shows a comparison by State of Highway Trust Fund (HTF) Highway Account receipts attributable to highway users and the apportionments and allocations to the States from the HTF. The ratio is computed from each State’s percentage received from the total apportionments and allocations for the 50 States, the District of Columbia, and the U.S. Territories divided by the percentage each contributes to the total receipts. U.S. Territories do not contribute to the HTF.
The fuel tax rates have been changed several times since the highway trust fund was established. Variation in the amount of fuel sales also affects receipts. Fuel tax is collected by the Internal Revenue Service at the fuel refinery level.

Note: Under a Congressional mandate known as the Delayed Deposit Provision, about 5 billion dollars of FY 1998 Highway Trust Fund revenue was delayed until FY 1999.

Data Source for Figure 6-2, 6-3, 6-4, and 6-5: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
TOTAL HIGHWAY FUNDING by all units of government—Federal, State, local—reached $161 billion in 2006. The Federal share has been declining, from roughly 2.0 percent in 1970 to less than 1.4 percent in 2006.
Figure 6-4. State Disbursements for Highways by Type in Dollars, 2006

DISBURSEMENTS FOR HIGHWAYS have been grouped into:

1. Capital outlays: cost associated with land acquisition, design, construction, reconstruction, resurfacing, rehabilitation, restoration, and installation of guard rails, fencing, signs, and signals.

2. Maintenance cost: expenses associated with activities to keep highway in usable condition but do not extend the service life of a highway beyond its original design.

3. Administration and Research: general expenses of administering a highway program including overhead, engineering and research cost that are not assigned to specific road projects.

4. Enforcement and Safety: general expenses associated with traffic supervision activities of State highway patrols, driver education and training, motorcycle safety, vehicle inspection, enforcement of vehicle size and weight limitations.

5. Bond Retirement: service cost associated with borrowing funds for highway, road and street projects.

6. Grants to local government: Transfer of funds to local governments.
Figure 6-5. State Disbursements for Highways by Type as Percentage of Total, 2006
Revenue from toll is typically the only funding source for repaying money borrowed to construct a toll road and to provide for its ongoing maintenance and operations. Over the last 14 years, toll revenue has been increasing at an annual rate approaching 2 percent as compared with an annual 5 percent growth rate of the FHWA HTF.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
The Consumer Price Index (CPI) measures the changes in the cost of purchasing products and services. The CPI is computed by the Bureau of Labor Statistics. The higher the number is, the faster the product or service rises in price over time. FHWA prepares a similar cost index for highway construction activities. The Federal-aid highway Construction Index (CI) is computed by FHWA’s Office of Program Administration. It is a composite indicator covering the unit costs of excavation, resurfacing, and construction, and reflects cost changes for materials such as reinforcing steel, bituminous concrete, portland cement and other ingredients for highway projects across the country.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics
Our reliance on highways to commute to work, to shop, vacation, and other activities, as well as their use for commerce, is creating significant demand on the system. Performance, reliability, safety, and asset preservation are key concerns for transportation agencies. Operating speeds, congestion, and pavement and bridge condition are some of the ways to measure the performance, condition, and safety of the Nation’s highways.

Figure 7-1. Interstate Truck Operating Speeds
ONE OF MANY highway performance measures is travel speed. The Federal Highway Administration, Office of Freight Management and Operations, is working with the motor carrier and communications industries through American Trucking Research Institute to measure the speed and reliability of major truck routes based on the movements of more than 300,000 trucks. This map displays a snapshot of truck operating speeds that were observed at peak travel time (7:00–9:00 a.m. local time) during weekdays in May 2007.
The International Roughness Index (IRI) is one of the most widely used measures of the quality of ride smoothness. Pavements with an IRI rating of less than 170 are considered to have an acceptable ride quality, while those with an IRI of less than 95 can be considered to have a good or very good ride quality.

Data Source for Figure 7-2 and Figure 7-3: U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Performance Monitoring System
Figure 7-3. Pavement Surface Smoothness by State: Rural and Urban Interstate, 2006

International Roughness Index Scores:
- Good (less than 95)
- Acceptable (between 95 and 170)
- Poor (greater than 170)
Figure 7-4. Bridge Conditions, 1991–2007

The National Bridge Inventory data documents the conditions of bridges on all public roads, regardless of their ownership. Bridges are evaluated and rated as “not deficient,” “functionally obsolete,” or “structurally deficient.” A bridge rated “functionally obsolete” is not unsafe for all vehicles. Rather, it typically has an older design that lacks modern safety features such as adequate shoulder space, an appropriate railing system, or other features. A bridge rated “structurally deficient” is not necessarily unsafe either. Strict observance of signs limiting traffic or speed on the bridge will generally provide adequate safeguards for those who use the bridge.

As shown in Figure 7-4, the number of structurally deficient bridges has been declining since 1992. The number of functionally obsolete bridges has stayed relatively constant since 1992. As of December 2007, of the 599,766 bridges in the United States, 72,524 bridges were structurally deficient and 79,792 were functionally obsolete.

Data Source: U.S. Department of Transportation, Federal Highway Administration, Office of Bridge Technology, National Bridge Inventory
The fatality rate (fatalities per 100 million VMT) on the Nation's highways continues to decline. In 2006, the fatality rate reached 1.41, which is a historical low. Although the fatality rate is declining, there were still 42,642 fatalities in 2006.

The highway and transit authorization bill for 2005–2009, SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users), has authorized a new core safety program known as the Highway Safety Improvement Program. FHWA has been working with all other Federal, State, and local authorities and private organizations to develop new strategies and approaches to improve highway travel safety.