

national transportation statistics



1997

United States
Department
of
Transportation

Bureau
of
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Statistics

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1997

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ACKNOWLEDGMENTS



**U.S. Department
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Secretary

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Deputy Secretary

**BUREAU OF
TRANSPORTATION
STATISTICS**

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Director

Robert Knisely
Deputy Director

Rolf R. Schmitt
*Associate Director for
Transportation Studies*

Philip N. Fulton
*Associate Director for
Statistical Programs
and Services*

Senior Editors

Kathleen Bradley
Sarah Maccalous

Major Contributors

Richard Feldman
Marilyn Gross

Other Contributors

Amy Girouard
Judy Holman
Trevor May
Robert Park
Susan Sandler

Cover

Susan J.Z. Hoffmeyer

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Project, Washington, DC 20503.



PB97-150106

(k)

2. REPORT DATE
December 1996

3. REPORT TYPE AND DATES COVERED
1960 - 1994/95

4. TITLE AND SUBTITLE

National Transportation Statistics 1997

5. FUNDING NUMBERS

KB701/K7004

6. AUTHORS

Marilyn Gross (617) 494-2088
Richard N. Feldman

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

U.S. DOT/Research and Special Programs Administration
Volpe National Transportation Systems Center
Cambridge, MA 02142

8. PERFORMING ORGANIZATION
REPORT NUMBER

DOT-VNTSC-BTS-96-4

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)

U.S. DOT/Bureau of Transportation Statistics
400 7th Street, S.W., Room 3430
Washington, DC 20590

10. SPONSORING/MONITORING
AGENCY REPORT NUMBER

DOT-VNTSC-BTS-96-4

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION/AVAILABILITY STATEMENT

U.S. DOT/Bureau of Transportation Statistics
400 7th Street, S.W., Room 3430
Washington, DC 20590
Telephone: (202) 366-3282

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

National Transportation Statistics is a compendium of selected national transportation and transportation-related statistics from a wide variety of government and private sources. The data illustrate transportation activity for the major transportation modes - air, automobile, bus, truck, transit, rail, water, and pipeline.

The NTS is divided into four chapters and several appendices. Chapter 1 of this document presents statistics about the extent of the physical network; travel and goods movement; vehicle, aircraft, and vessel inventories, as well as the condition and performance of the system. Chapter 2 focuses on the relationship between transportation and the economy. Data are provided on consumer and government expenditures on transportation and employment in and productivity of transportation industries. Chapter 3 details transportation's safety record, presenting data on fatalities, injuries, and accidents for each mode and for hazardous materials. Chapter 4 presents transportation energy use and related emissions data. Oil spill incidents are also reported in this section. Finally, Appendix A provides modal profiles.

Summary statistics, in five year increments, are provided for the years 1960-1994 and 1995, where available. In some instances, data extend back to 1955 and are forecast through 2006.

14. SUBJECT TERMS

Transportation, Statistics, Safety, Physical Extent, Travel and Goods Movement,
Economy, Environment, Energy, Inventory, Performance, Number of
Vehicle-/Passenger-Miles

15. NUMBER OF PAGES
352

16. PRICE CODE

17. SECURITY CLASSIFICATION
OF REPORT
UNCLASSIFIED

18. SECURITY CLASSIFICATION
OF THIS PAGE
UNCLASSIFIED

19. SECURITY CLASSIFICATION
OF ABSTRACT
UNCLASSIFIED

20. LIMITATION OF ABSTRACT

TABLE OF CONTENTS

TABLE OF CONTENTS

Introduction	xvii
Chapter 1. The Transportation System	1
Section A. Physical Extent	3
Section B. Travel and Goods Movement	13
Section C. Vehicle, Aircraft, and Vessel Inventory	31
Section D. Condition	43
Section E. Physical Performance	53
Chapter 2. Transportation and the Economy	61
Section A. Transportation and the Total Economy	63
Section B. Transportation and Consumer Expenditures	75
Section C. Transportation Sector Establishments, Employment, Revenues, and Productivity	81
Section D. Government Finance	95
Chapter 3. Transportation Safety	101
Section A. Multimodal	103
Section B. Air	113
Section C. Highway	121
Section D. Transit	137
Section E. Railroad	141
Section F. Water	147
Section G. Pipeline	151
Chapter 4. Transportation, Energy, and the Environment	155
Section A. Consumption of Energy by Transportation	157
Section B. Air Pollution	187
Section C. Oil Spills	201
Appendix A Modal Profiles - 1960, 1970, 1980, 1990, 1993, 1994, 1995	207
Air Carrier Profile	209
General Aviation Profile	215
Highway Profile	217
Automobile Profile	221
Truck Profile	225
Bus Profile	229
Transit Profile	232
Rail Profile	237
Water Transport Profile	240
Oil Pipeline Profile	244
Natural Gas Pipeline Profile	245
Appendix B Metric Conversion Tables	247
Appendix C Glossary	287
Index	311
Bibliography	329

Chapter 1. The Transportation System

Section A.	Physical Extent	
1-1.	Basic Intercity Mileage Within the United States, 1960-1995	5
1-2.	Number of U.S. Airports, 1980-1995	6
1-3.	Total Road and Street Mileage in the United States by Type of Surface, 1960-1995	7
1-4.	U.S. Public Road and Street Mileage by Type of Surface and Jurisdiction/Functional System, 1990-1995	8
1-5.	Number of U.S. Privately-Owned Tanker Ships by Ship Classification, 1975-1995	11
1-6.	Number and Size of the U.S. Merchant Fleet and Its Share of the World Fleet, 1960-1995	12
Section B.	Travel and Goods Movement	
1-7.	Passenger-Miles, 1960-1995	15
1-8.	Vehicle-Miles, 1960-1995	17
1-9.	Ton-Miles of Freight, 1960-1995	20
1-10.	Average Length of Haul, Domestic Freight & Passenger Modes, 1960-1995	21
1-11.	Top 50 Airports, Large Certificated Air Carriers: Scheduled and Nonscheduled Operations, 1995 and 1985	22
1-12.	Air Passenger Travel Arrivals between the United States and Foreign Countries, 1975-1995	23
1-13.	Air Passenger Travel Departures between the United States and Foreign Countries, 1975-1995	24
1-14.	Highway Vehicle-Miles Traveled vs. Lane Miles by Functional Class (Rural), 1985-1995	25
1-15.	Highway Vehicle-Miles Traveled vs. Lane Miles by Functional Class (Urban), 1985-1995	25
1-16.	Total Waterborne Commerce of the United States, 1960-1995	26
1-17.	Tonnage for Top 50 U.S. Ports, Ranked by Total Tons, 1995 and 1990	27
1-18.	Crude Oil Transported in the U.S. by Mode of Transportation, 1975-1994	28
1-19.	Refined Petroleum Products Transported in the U.S. by Mode of Transportation, 1975-1994	28
1-20.	Crude Oil and Refined Petroleum Products Transported in the U.S. by Mode of Transportation, 1975-1994	29
1-21.	Worldwide Commercial Space Launches, 1982-1995	30
Section C.	Vehicle, Aircraft, and Vessel Inventory	
1-22.	Number of Vehicles, 1960-1995	33
1-23.	Sales or Deliveries of New Vehicles by Mode, 1960-1995	36
1-24.	U.S. Automobiles in Fleets by Type of Use, 1965-1995	38
1-25.	Annual U.S. Motor Vehicle Production and Factory Sales, 1960-1995	38
1-26.	U.S. Retail New Passenger Car Sales, 1970-1995	39
1-27.	U.S. Retail Sales of New Cars by Sector, 1960-1995	39
1-28.	Period Sales, Market Shares, and Sales-Weighted Fuel Economies of New Domestic and Import Automobiles, Selected Sales Periods, 1980-1995	40
1-29.	Period Sales, Market Shares, and Sales-Weighted Fuel Economies of New Domestic and Import Light Trucks, Selected Sales Periods, 1980-1995	41
1-30.	World Motor Vehicle Production, 1961-1995	42
Section D.	Condition	
1-31.	Runway Pavement Condition at NPIAS Airports, 1986, 1990, 1993	45
1-32.	Highway Condition by Functional System, 1990-1995	46
1-33.	Average Age of Urban Transit Vehicles, 1985-1994	49
1-34.	Class I Railroad Locomotive Fleet by Year Built, 1990-1995	50

1-35.	Age and Percent Available for Service of Amtrak Locomotive and Car Fleet, 1972-1995	50
1-36.	U.S. Flag Vessels by Type and Age, 1990-1995	51
Section E.	Physical Performance	
1-37.	Passengers Denied Boarding by the Largest U.S. Air Carriers, 1986-1995	55
1-38.	Flight Operations Arriving On-Time for the Largest U.S. Air Carriers, 1988-1995	55
1-39.	Distribution of Air Carrier Delay Greater Than 15 Minutes by Cause, 1987-1994	56
1-40.	Total Cost of Air Carrier Delay (current dollars), 1987-1994	56
1-41.	Total Cost of Air Carrier Delay (constant 1994 dollars), 1987-1994	56
1-42.	Total Daily Person-Hours of Delay and Congestion Cost per Capita for 50 Urban Areas, 1982-1993	57
1-43.	Total Person-Hours of Delay by Highway Type and Roadway Congestion Index for 50 Urban Areas, 1993	58
1-44.	Amtrak On-Time Performance Trends, 1980-1995	59

Chapter 2. Transportation and the Economy

Section A.	Transportation and the Total Economy	
2-1.	Contribution of Transportation Sectors to Gross Domestic Product, 1960-1994	65
2-2.	U.S. Gross Domestic Product Attributed to Transportation-Related Final Demand (current dollars), 1991-1995	66
2-3.	U.S. Gross Domestic Product Attributed to Transportation-Related Final Demand (chained [1992] dollars), 1991-1995	67
2-4.	Gross Domestic Product by Major Social Function, 1991-1995	68
2-5.	National Transportation and Economic Trends, 1960-1995	69
2-6.	Passenger and Freight Transportation Expenditures, 1960-1995	70
2-7.	Average Price of Transportation Fuel to End-Users, 1960-1995	72
2-8.	Price Trend of Gasoline vs. Other Consumer Goods and Services, 1955-1995	73
2-9.	Per Capita Freight Statistics, 1960-1995	74
Section B.	Transportation and Consumer Expenditures	
2-10.	Average Passenger Fare, 1960-1995	77
2-11.	Personal Consumption Expenditures by Transportation Sector, 1960-1995	78
2-12.	Personal Consumption Expenditures by Type, 1960-1995	79
2-13.	Cost of Owning and Operating an Automobile, 1975-1996	80
2-14.	New Car Price Comparisons with Safety and Emissions Equipment, 1970-1995	80
Section C.	Transportation Sector Establishments, Employment, Revenues, and Productivity	
2-15.	Average Passenger Revenue per Passenger-Mile, 1960-1995	83
2-16.	Average Freight Revenue per Ton-Mile, 1960-1995	84
2-17.	Total Operating Revenues, 1960-1995	85
2-18.	Employment in Transportation and Related Industries, 1960-1995	87
2-19.	Wages and Salaries per Full-Time Equivalent Employee by Transportation Sector, 1960-1994	91
2-20.	Total Wages and Salaries by Transportation Sector, 1960-1994	92
2-21.	Productivity Indexes for Selected Transportation Industries, 1970-1994	93
2-22.	Class I Railroad Roadway and Structures Capital and Maintenance Expenditures, 1960-1995	94
Section D.	Government Finance	
2-23.	Federal Transportation-Related Budget Receipts by Type of Fund (current dollars), FY 1980-1994	97
2-24.	Federal Transportation-Related Budget Receipts by Type of Fund (constant 1987 dollars), FY 1980-1994	97
2-25.	Federal Transportation Outlays by Mode (current dollars), FY 1980-1994	98
2-26.	Federal Transportation Outlays by Mode (constant 1987 dollars), FY 1980-1994	98
2-27.	Government Expenditures for Transportation, FY 1982-1993	99
2-28.	Transportation-Related Federal Trust Funds' Cash Balances, FY 1982-1994	100

Chapter 3. Transportation Safety

Section A. Multimodal

- 3-1. Distribution of Transportation Fatalities, Injuries, and Accidents by Major Transportation Mode, 1960-1995 105
- 3-2. Highway-Rail Grade Crossing Fatalities, Injuries, Accidents, Train-Miles and Associated Rates, and Property Damage, 1970-1995 110
- 3-3. Hazardous Materials Fatalities, Injuries, Incidents, and Property Damage, 1975-1995 111

Section B. Air

- 3-4. U.S. Air Carrier Fatalities, Serious Injuries, Accidents, Fatal Accidents, and Aircraft-Miles Flown, Aircraft Departures and Associated Rates, 1960-1995 115
- 3-5. Number of Pilot-Reported Near Midair Collisions by Degree of Hazard, 1980-1995 116
- 3-6. Airline Passenger Screening Results by Type of Weapons Detected, Persons Arrested, and Bomb Threats Received, 1970-1995 117
- 3-7. Commuter Air Carrier Fatalities, Serious Injuries, Accidents, Fatal Accidents, and Aircraft-Miles Flown, Aircraft Departures and Associated Rates, 1975-1995 118
- 3-8. On-Demand Air Taxi Fatalities, Serious Injuries, Accidents, Fatal Accidents, and Aircraft Hours Flown and Associated Rates, 1975-1995 119
- 3-9. General Aviation Fatalities, Serious Injuries, Accidents, Fatal Accidents, and Aircraft Hours Flown and Associated Rates, 1960-1995 120

Section C. Highway

- 3-10. Motor Vehicle Fatalities and Vehicle-Miles and Associated Rates by Highway Functional System, 1991-1995 123
- 3-11. Motor Vehicle Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates, 1960-1995 124
- 3-12. Motor Vehicle Fatal Accidents by Posted Speed Limit, 1975-1995 125
- 3-13. Traffic Fatalities by Vehicle Type and Occupant Status, 1960-1995 126
- 3-14. Passenger Car Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates, 1975-1995 128
- 3-15. Injury Severity Among Passenger Car Occupants Involved in Fatal Crashes by Passenger Restraint Usage, 1985-1995 129
- 3-16. Fatalities by Highest Blood Alcohol Concentration (BAC) in the Crash, 1985-1995 131
- 3-17. Related Legislative Developments: Number of States with Different Types of Anti-DUI/DWI Legislation, 1986 and Biennially 1990-1996 131
- 3-18. Motorcycle Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates, 1970-1995 132
- 3-19. Truck Fatalities, Injuries, Accidents, and Vehicles-Miles and Associated Rates by Truck Size, 1975-1995 133
- 3-20. Bus Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates, 1975-1995 135

Section D. Transit

- 3-21. Transit Fatalities, Injuries, Incidents, Accidents, Vehicle-Miles and Associated Rates, and Property Damage, 1990-1995 139
- 3-22. Transit Fatalities, Injuries, and Incidents by Vehicle Type, 1990-1995 140

Section E. Railroad

- 3-23. Railroad Fatalities and Injuries by Victim Class, 1980-1995 143
- 3-24. Train Fatalities, Injuries, and Accidents by Type of Accident, 1980-1995 144
- 3-25. Railroad Fatalities, Injuries, Accidents, Train-Miles and Associated Rates, and Property Damage 1970-1995 145

Section F. Water

- 3-26. Waterborne Transport Fatalities, Injuries, and Accidents Resulting from Vessel Casualties, 1970-1995 149
- 3-27. Waterborne Transport Fatalities and Injuries Not Related to Vessel Casualties, 1970-1995 149
- 3-28. Recreational Boating Fatalities, Injuries, Accidents, Vessels Involved, Numbered Boats and Associated Rates, and Property Damage, 1960-1995 150

Section G. Pipeline

3-29.	Hazardous Liquid and Natural Gas Pipeline Fatalities, Injuries, Incidents, and Property Damage, 1970-1995	153
-------	---	-----

Chapter 4. Transportation, Energy, and the Environment

Energy Equivalents.....	156
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Section A. Consumption of Energy by Transportation

4-1.	U.S. Consumption of Energy from Primary Sources by Sector, 1955-1995	159
4-2.	U.S. Energy Consumption by the Transportation Sector, 1955-1995	160
4-3.	Fuel Consumption by Mode of Transportation, 1960-1995	161
4-4.	Energy Consumption by Mode of Transportation (trillion BTU), 1960-1995	163
4-5.	Fuel Consumption and Travel by Certificated Air Carriers, 1960-1995	165
4-6.	Fuel Consumption and Travel by All Motor Vehicles, 1960-1995	166
4-7.	Fuel Consumption and Travel by Passenger Cars and Motorcycles, 1960-1995	167
4-8.	Fuel Consumption and Travel by Trucks, 1960-1995	168
4-9.	Fuel Consumption and Travel by Buses, 1960-1995	169
4-10.	Electric Power and Primary Energy Consumed by the U.S. Transit Industry, 1960-1994	170
4-11.	Fuel Consumption and Travel by Class I Rail, 1960-1995	171
4-12.	Fuel Consumption and Travel by Amtrak, 1972-1995	172
4-13.	U.S. Government Energy Consumption, Fiscal Years, 1975-1995	173
4-14.	U.S. Government Energy Use by Agency and Source, FY 1985 and 1995	174
4-15.	Average Fuel Efficiency of U.S. Passenger Cars and Light Trucks, 1955-1996	175
4-16.	Energy Intensiveness of Passenger Modes, 1960-1995	176
4-17.	Energy Intensiveness of Certificated Air Carriers, 1960-1995	178
4-18.	Energy Intensiveness of Passenger Cars and Motorcycles, 1960-1995	179
4-19.	Energy Intensiveness of Trucks, 1960-1995	180
4-20.	Energy Intensiveness of Transit Motor Buses and School Buses, 1960-1995	181
4-21.	Energy Intensiveness of Class I Railroad Freight Service, 1960-1995	182
4-22.	Energy Intensiveness of Amtrak Service, 1975-1993	182
4-23.	U.S. Petroleum Production and Consumption, 1970-1995	183
4-24.	Petroleum Products Consumed by Type and Sector, 1985 and 1995	184
4-25.	Petroleum Products Consumed by Sector, 1955-1995	185
4-26.	Domestic Demand for Refined Petroleum Products by Sector, 1955-1995	185
4-27.	Domestic Demand for Gasoline, 1955-1995	186

Section B. Air Pollution

4-28.	Federal Emission Standards for Passenger Cars and Light-Duty Trucks, 1980-2006	189
4-29.	Federal Emission Standards for Heavy-Duty Gasoline Trucks, 1980-1998	190
4-30.	Federal Emission Standards for Heavy-Duty Diesel Trucks, 1980-1999	190
4-31.	National Emission Factors by Fuel and Vehicle Type, 1990-1995	191
4-32.	National Emissions of Carbon Monoxide, 1960-1995	193
4-33.	National Emissions of Nitrogen Oxides, 1960-1995	194
4-34.	National Emissions of Volatile Organic Compounds, 1960-1995	195
4-35.	National Emissions of Particulate Matter (PM-10), 1960-1995	196
4-36.	National Emissions of Sulfur Dioxide, 1960-1995	197
4-37.	National Emissions of Lead, 1970-1995	198
4-38.	Air Pollution Trends in Selected Metropolitan Statistical Areas, 1985-1994	199

Section C. Oil Spills

4-39.	Annual Oil Spills in U.S. Navigable Waters by Vessel Type, 1982-1995	203
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INTRODUCTION

national transportation statistics

1997

INTRODUCTION

National Transportation Statistics 1997 (NTS) is compiled and published by the Bureau of Transportation Statistics (BTS) of the U.S. Department of Transportation. The report presents basic information on America's transportation system at the national scale, including the physical network, economic performance, and its safety record, energy use, and related air emissions. This twenty-fifth edition is a companion volume to the Bureau's *Transportation Statistics Annual Report* (TSAR), which is a comprehensive analysis of the data presented in NTS.

The NTS is divided into four chapters and several appendices. Chapter 1 of this document presents statistics about the extent of the physical network; travel and goods movement; vehicle, aircraft, and vessel inventories, as well as the condition and performance of the system. Chapter 2 focuses on the relationship between transportation and the economy. Data are provided on consumer and government expenditures on transportation and employment in and productivity of transportation industries. Chapter 3 details transportation's safety record, presenting data on fatalities, injuries, and accidents for each mode and for hazardous materials. Chapter 4 presents transportation energy use and related emissions data. Oil spill incidents are also reported in this section. Finally, Appendix A provides modal profiles.

Summary statistics are presented in five-year increments for 1960 to 1990 and annually for 1990 to 1994, and 1995 when available. In some instances, data extend back to 1955 or are forecast through 2006. Because the compilation of statistical material is a time consuming process, reliable sources often represent a one to two year time lag. Extraordinary attempts have been made to incorporate the latest available information at the time of publication.

Although most of the statistics are available from various sources, such as government agencies and trade associations (see Bibliography), they are presented here in one convenient and comprehensive report. Particular attention has been given to referencing the data sources. The reader is urged to check these references if additional information or explanation regarding the data is required.

Readers are referred to the 1993 edition of the *National Transportation Statistics* for annual time series data dating back to 1960. It is important to note, however, that data contained in the 1993 historical compendium may have been revised and, therefore, may not be comparable to more recent editions.

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Chapter 1

THE TRANSPORTATION
SYSTEM

The Transportation System

SECTION A

Physical Extent

TABLE 1-1
Basic Intercity Mileage Within the United States
 5-Year Intervals 1960–1990 and Annually 1990–1995
 (Statute Miles)

Year	Airway	Highway ^a	Class I Rail	Amtrak	Inland Waterway	Oil Pipeline ^b			Gas Pipeline ^c			
						Crude Lines	Product Lines	Total	Distribution Mains	Transmission Pipelines ^d	Field & Gathering Lines	Total
1960	293,003	265,477	207,334	–	25,253	141,085	49,859	190,944	391,400	183,700	55,800	630,900
1965	268,275	268,898	199,798	–	25,380	149,424	61,443	210,867	494,500	211,300	61,700	767,500
1970	291,122	271,517	196,479	–	25,543	146,275	72,396	218,671	594,800	252,200	66,300	913,300
1975	313,178	265,905	191,520	–	25,543	145,679	80,210	225,889	648,200	262,600	68,500	979,300
1980	341,283 ^r	300,456	164,822	23,940	25,543	129,831	88,562	218,393	701,800	266,500	83,500	1,051,774
1985	373,891	301,006	145,764	–	25,777	117,812	95,793	213,605	753,391	271,162	94,322	1,118,875
1990	388,000	305,347	119,758	24,000	25,777	118,805	89,947	208,752	836,667	280,108	89,499	1,206,774
1991	390,000	305,226	116,626	24,596	25,777	115,860	87,968	203,828	857,417	281,591	86,262	1,225,270
1992	392,000	338,558	113,056	24,610	25,777	112,990	86,033	199,023	883,227	284,517	86,180	1,253,924
1993	392,000 ^r	341,351	110,425	25,123	25,777	112,990	86,033	199,023	914,030	272,215	77,304	1,263,549
1994	394,000	342,834	109,332	25,000	25,777	114,000	86,500	200,500	918,535	270,325	72,137	1,260,997
1995	NA	254,528	108,264	24,000	NA	NA	NA	NA	NA	NA	NA	NA

^r Revised.

NA Data not available at press time.

^a Prior to 1992, included Federal-Aid primary roads. From 1992 forward, includes the Interim National Highway System, as established by the Intermodal Surface Transportation Efficiency Act of 1991, plus other rural Federal-Aid arterial highways.

^b Includes petroleum and other liquid product lines, including gathering lines.

^c Excludes service pipe. Data not adjusted to common diameter equivalent. Mileage as of the end of each year.

^d After 1975, includes 5,000–6,200 miles of Underground Storage pipe.

Sources:

Airway:
 1960-1994: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 64.

Highway:
 1960-1995: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table HM-18, and similar tables in earlier editions. Sum of Interim National Highway System and other Rural Arterial mileage.

Class I Rail:
 1960-1995: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 44. Data represent aggregate length of roadway, excluding yard tracks, sidings, and parallel lines. Jointly used track is counted only once.

Amtrak:
 1980-1991: Amtrak, Corporate Planning and Development, personal communication.
 1992-1995: Ibid., Public Affairs, personal communication.

Inland Waterway:
 1960-1994: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 64.

Oil Pipeline:
 1960-1994: Ibid.

Gas Pipeline:
 1960-1994: American Gas Association (AGA), *Gas Facts*, 1995, Table 5-3, and similar tables in earlier editions.

▲ **TABLE 1-2**
Number of U.S. Airports*

5-Year Intervals 1980–1990 and Annually 1990–1995

Year	Public-Use vs. Private-Use						Certificated ^a vs		
	Public-Use			Private-Use			General Aviation		FAA Contracted Towers
	Total Public-Use Airports	Percent with Lighted Runways	Percent with Paved Runways	Total Private-Use Airports	Percent with Lighted Runways	Percent with Paved Runways	Certificated	General Aviation	
1980	4,814	66.4	72.0	10,347	15.0	14.1	730	14,431	432
1985	5,858	—	—	10,461	—	—	—	—	399
1990	5,589	71.3	70.7	11,901	7.0	31.5	680	16,810	402
1991	5,551	71.9	71.5	12,030	6.8	32.0	669	16,912	400
1992	5,545	72.3	71.6	12,301	6.6	32.2	664	17,182	416
1993	5,538	72.8	72.2	12,779	6.3	32.7	670	17,647	417
1994	5,474	73.5	72.9	12,869	6.2	33.0	672	17,671	402
1995	5,415	74.3	73.3	12,809	6.4	33.0	667	17,557	352 ^p

^p Preliminary.

* Certificated air carrier operations with aircraft seating more than 30 passengers.

^a Includes civil and joint use civil-military airports, heliports, STOLports, and seaplane bases in the U.S. and its territories.

Source: U.S. DOT/FAA, *Administrator's Fact Book*, July 1996, p. 17, and similar tables in earlier editions.

TABLE 1-3**Total Road and Street Mileage in the United States by Type of Surface**5-Year Intervals 1960–1990 and Annually 1990–1995
(Millions)

Year	Nonsurfaced	Gravel or Stone Surfaced	Paved
1960	0.989	1.327	1.230
1965	0.914	1.321	1.455
1970	0.784	1.288	1.658
1975	0.737	1.245	1.855
1980	0.604	1.255	2.005
1985	0.382	1.371	2.109
1990	0.362	1.259	2.259
1991	0.330	1.286	2.274
1992	0.350	1.256	2.295
1993	0.357	1.277	2.271
1994	0.342	1.229	2.336
1995	0.336	1.203	2.373

Source: U.S. DOT/FHWA, Highway Statistics, Summary to 1985, Table HM-212 and Highway Statistics, annual issues, Table HM-12.

TABLE 1-4

U.S. Public Road and Street Mileage by Type of Surface and Jurisdiction/Functional System* (Urban)

Annually 1990–1995

Year	Urban - Unpaved ^a								
	Principal Arterial - Interstate			Principal Arterial - Other Freeways & Expressways			Principal Arterial - Other		
	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control
1990	0	0	0	0	0	0	0	0	57
1991	0	0	0	0	0	0	0	0	30
1992	0	0	0	0	0	0	0	0	57
1993	0	0	0	0	0	0	0	0	7
1994	0	0	0	0	0	0	0	0	6
1995	0	0	0	0	0	0	0	0	7

Year	Minor Arterial			Collector			Local ^c	Total Urban Unpaved Mileage
	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control		
1990	17	0	383	47	0	1,003	39,619	41,069
1991	14	0	475	34	0	825	34,196	35,544
1992	1	0	439	55	0	873	35,809	37,177
1993	1	0	343	72	0	767	37,727	38,910
1994	1	0	341	50	0	745	32,252	33,389
1995	0	0	314	49	0	664	31,781	32,808

Year	Urban - Paved ^b								
	Principal Arterial - Interstate			Principal Arterial - Other Freeways & Expressways			Principal Arterial - Other		
	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control
1990	11,500	0	27	7,288	59	323	35,628	93	16,209
1991	11,586	0	17	7,325	62	327	35,807	93	16,419
1992	12,449	0	17	8,076	57	332	35,476	85	16,547
1993	12,861	0	17	8,325	59	473	36,297	82	16,449
1994	13,108	0	18	8,532	63	400	36,435	84	16,565
1995	13,144	0	20	8,551	55	364	36,370	54	16,365

Year	Minor Arterial			Collector			Local ^c	Total Urban Paved Mileage	Total Urban Mileage
	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control			
1990	19,644	63	54,549	7,963	47	69,188	493,656	645,110	757,363
1991	19,499	70	54,921	7,899	47	68,292	491,926	642,654	749,864
1992	22,421	130	57,377	9,479	51	72,199	513,230	674,887	785,160
1993	23,851	103	61,524	9,936	51	74,552	519,581	689,598	803,078
1994	24,490	119	62,901	10,344	62	74,897	532,178	704,991	813,591
1995	24,739	104	63,353	11,544	51	75,023	537,154	711,968	819,706

(continued on next page)

TABLE 1-4 (continued)**U.S. Public Road and Street Mileage by Type of Surface and Jurisdiction/Functional System* (Rural)**

Annually 1990–1995

Year	Rural - Unpaved ^a								
	Principal Arterial - Interstate			Principal Arterial - Other			Minor Arterial		
	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control
1990	0	0	0	0	0	0	36	0	0
1991	0	0	0	0	0	0	36	0	0
1992	0	0	0	0	0	0	646	0	0
1993	0	0	0	0	0	0	655	0	133
1994	0	0	0	0	0	0	651	0	0
1995	0	0	0	0	0	0	307	0	0

Year	Major Collector			Minor Collector ^c	Local ^c	Total Rural Unpaved Mileage
	State Control	Federal Control	Not State or Federal Control			
1990	2,883	615	47,966	102,708	1,425,672	1,579,844
1991	2,823	1,162	47,644	101,640	1,426,697	1,579,966
1992	1,656	1,089	48,132	98,861	1,418,775	1,568,513
1993	1,546	1,249	48,585	102,511	1,439,900	1,593,791
1994	1,620	1,096	48,630	107,758	1,377,714	1,536,818
1995	1,382	1,067	47,089	92,714	1,364,001	1,506,253

Year	Rural - Paved ^b								
	Principal Arterial - Interstate			Principal Arterial - Other			Minor Arterial		
	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control	State Control	Federal Control	Not State or Federal Control
1990	33,547	0	0	83,528	137	137	142,139	1,527	1,033
1991	33,677	0	0	85,411	125	193	140,214	1,542	1,074
1992	33,027	0	0	94,319	180	299	132,025	1,500	3,466
1993	32,652	0	0	95,560	176	465	131,331	1,508	4,301
1994	32,457	0	0	96,307	173	515	130,876	1,490	5,154
1995	32,580	0	0	97,346	129	473	130,550	1,430	4,864

Year	Major Collector			Minor Collector ^c	Local ^c	Total Rural Paved Mileage	Total Paved Mileage	Total Rural Mileage	Total Urban & Rural Mileage
	State Control	Federal Control	Not State or Federal Control						
1990	205,595	3,986	175,320	191,204	704,755	1,280,860	2,259,145	3,122,788	3,880,151
1991	205,861	3,306	175,941	191,860	720,229	1,297,197	2,273,723	3,139,435	3,889,299
1992	201,331	3,500	178,467	185,845	713,437	1,282,580	2,295,322	3,116,555	3,901,715
1993	198,724	3,500	179,071	179,850	679,926	1,241,071	2,271,225	3,101,643	3,904,721
1994	196,995	3,692	179,078	174,267	734,480	1,288,512	2,335,680	3,092,953	3,906,544
1995	197,345	3,654	181,175	181,367	755,047	1,318,588	2,372,851	3,092,520	3,912,226

(continued on next page)

TABLE 1-4 (continued)

U.S. Public Road and Street Mileage by Type of Surface and Jurisdiction/Functional System*

- * Includes the 50 States and the District of Columbia. When states did not submit reports, data were estimated by FHWA.
- a Unpaved mileage includes the following categories: Unimproved roadways using the natural surface and maintained to permit passability; Graded and Drained roadways of natural earth aligned and graded to permit reasonably convenient use by motor vehicles and which have adequate drainage to prevent serious impairment of the road by normal surface water—surface may be stabilized; and Soil, Gravel, or Stone, a graded and drained road with a surface of mixed soil, gravel, crushed stone, slag, shell, etc.—surface may be stabilized.
- b Paved mileage includes the following categories: Low Type, an earth, gravel, or stone roadway which has a bituminous surface course less than 1" thick—suitable for occasional heavy loads; Intermediate Type, a mixed bituminous or bituminous penetration road on a flexible base having a combined surface and base thickness of less than 7"; High-Type Flexible, a mixed bituminous or bituminous penetration roadway on a flexible base having a combined surface and base thickness of 7" or more—also includes brick, block, or combination roadways; High-Type Composite, a mixed bituminous or bituminous penetration roadway of more than 1" compacted material on a rigid base with a combined surface and base thickness of 7" or more; High-Type Rigid, a Portland Cement Concrete roadway with or without a bituminous wearing surface of less than 1".
- c Limited surface-type data are reported for the rural minor collector and rural/urban local functional systems. Distribution of surface types for these systems is estimated by FHWA. Note: State controlled mileage includes State highway agency, State park, State toll and other State agency roadways.

Source: 1990-1995: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table HM-12.

Table 1-5
Number of U.S. Privately-Owned Tanker Ships by Ship Classification
 5-Year Intervals 1975-1990 and Annually 1990-1995

Year	Ship Classification							Total
	Petroleum	Liquefied Petroleum Gas	Liquefied Natural Gas	Chemical	Asphalt	Sulphur	Tug/Barge	
1975	232	2	-	8	3	5	-	250
1980	252	3	13	7	2	5	6	288
1985	195	1	13	6	-	5	15	235
1990	174	1	10	5	-	3	13	206
1991	172	1	13	5	-	3	13	207
1992	163	1	13	8	-	3	13	201
1993	150	1	13	15	-	-	14	193
1994	139	1	13	16	-	-	14	183
1995	131	1	13	17	-	-	13	175

Source: U.S. DOT/MARAD, *Merchant Fleets of the World*, annual issues.

TABLE 1-6

Number and Size of the U.S. Merchant Fleet* and Its Share of the World Fleet

5-Year Intervals 1960-1990 and Annually 1990-1995

Year	Freighters									
	General Cargo ^a		Containership		Partial Containerships		RO/RO ^b		Total Freighters	
	Number of Ships	Tons (dwt) (thousands)	Number of Ships	Tons (dwt) (thousands)	Number of Ships	Tons (dwt) (thousands)	Number of Ships	Tons (dwt) (thousands)	Number of Ships	Tons (dwt) (thousands)
1960	-	-	-	-	-	-	-	-	2,138	21,877
1965	-	-	-	-	-	-	-	-	1,845	18,127
1970	-	-	-	-	-	-	-	-	1,076	11,733
1975	356	4,640	109	1,773	37	510	9	128	511	7,051
1980	259	3,329	121	2,289	68	940	23	327	471	6,885
1985	209	2,980	104	2,651	63	904	41	818	417	7,353
1990	166	2,632	92	2,892	59	835	50	967	367	7,326
1991	165	2,592	92	2,856	209	740	50	867	516	7,055
1992	182	2,738	83	2,722	30	456	54	1,060	349	6,976
1993	189	3,550	87	2,812	3	57	63	1,258	342	7,677
1994	173	3,429	86	2,802	3	57	67	1,330	329	7,618
1995	161	3,164	81	2,600	3	57	69	1,388	314	7,209

Year	Combination/ Passenger and Cargo		Bulk Carriers		Tankers		Total Number of Ships		U.S. Share of the World Fleet
	Number of Ships	Tons (dwt) (thousands)	Number of Ships	Tons (dwt) (thousands)	Number of Ships	Tons (dwt) (thousands)	U.S.	World Fleet	
1960	309	2,070	57	805	422	7,815	2,926	17,317	17%
1965	223	1,451	61	1,107	341	7,561	2,470	18,329	13%
1970	171	1,107	38	767	265	7,388	1,550	19,980	8%
1975	60	388	19	544	267	9,711	857	22,872	4%
1980	65	446	20	607	308	16,152	864	24,867	3%
1985	37	300	25	1,152	258	15,535	737	25,555	3%
1990	10	92	26	1,274	233	15,650	636	23,596	3%
1991	10	92	24	1,014	226	14,993	776	23,943	3%
1992	11	97	23	991	220	14,180	603	23,753	3%
1993	12	104	21	949	210	13,048	585	24,331	2%
1994	13	115	22	1,042	200	11,945	564	25,092	2%
1995	13	115	20	925	181	11,028	528	25,608	2%

a Includes barge carriers.

b Roll-On/Roll-Off vessels.

Note: dwt=deadweight tons.

Source: U.S. DOT/MARAD, *Merchant Fleets of the World*, annual issues.

The Transportation System

SECTION B

Travel and Goods Movement

5-Year Intervals 1960–1990 and Annually 1990–1995
(Millions)

[illegible]

▲ **TABLE 1-7** (continued)
Passenger-Miles

p	Preliminary.
r	Revised.
*	Included in passenger car and taxi; and other 2-axle 4-tire vehicles.
**	Included in Other.
a	Amtrak, 1971-1995.
NA	Data not available at press time.
Note:	In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources:

Air Carrier, Domestic, All Services:

- 1960-1970: CAB, *Handbook of Airline Statistics*, 1969, 1973, Part III, Table 2.
- 1975-1980: Ibid., *Air Carrier Traffic Statistics*, 1976, p.4;1981, p.2.
- 1985-1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, 1986-1996, p. 2, line 1.

General Aviation:

- 1960-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 47.

Passenger Car and Taxi:

- 1960-1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
- 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Motorcycle:

- 1970-1995: Ibid.

Other 2-axle 4-tire Vehicle:

- 1960-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
- 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Single-Unit 2-axle 6-tire or More Truck:

- 1970-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
- 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Combination Truck:

- 1960-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
- 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Intercity Bus:

- 1960-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 47.

School Bus:

- 1980-1995: National Safety Council, *Accident Facts*, 1996, p. 94, and similar tables in earlier editions.

Transit:

- 1980-1994: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Table 39, and similar tables in earlier editions.

Intercity/Amtrak:

- 1960-1980: Association of American Railroads (AAR), *Railroad Facts*, annual issues.
- 1985: Amtrak, *Statistical Appendix to Amtrak FY 1994 Annual Report*, p. 4.
- 1990-1995: Ibid., FY 1995, p. 3.

TABLE 1-8
Vehicle-Miles

5-Year Intervals 1960–1990 and Annually 1990–1995
(Millions)

Year	Air		Highway					
	Air Carrier, certificated, all services ^a	General Aviation	Passenger Car & Taxi	Motorcycle	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Trucks	Combination Truck	School Bus
1960	858	1,769	588,083	*	97,930	*	28,479	4,353
1965	1,134	2,562	709,300	*	141,159	*	32,497	4,684
1970	2,068	3,207	916,700	2,979	123,286	27,081	35,134	4,544
1975	1,948	3,939	1,033,950	5,629	200,700	34,606	46,724	6,055
1980	2,523	5,204	1,111,596	10,214	290,935	39,813	68,678	6,059
1985	3,046	4,817	1,260,565	9,086	373,072	46,980	79,600	4,876
1990	3,963	4,831	1,513,184	9,557	466,092	53,443	96,367	5,719
1991	3,854	4,510	1,533,552	9,178	472,848	53,787	96,642	5,743
1992	3,995	3,605	1,600,839	9,557	478,193	53,691	99,112	5,759
1993	4,157	3,253	1,547,366	9,906	573,398	56,781	103,123	6,126
1994	4,380 ^r	2,917	1,501,402 ^r	10,240 ^r	669,321 ^r	61,284 ^r	108,932 ^r	6,409 ^r
1995	4,618 ^p	NA	1,541,458	9,797	686,977	62,706	115,454	6,383
								5,000

▲ **TABLE 1-8** (continued)

Vehicle-Miles

5-Year Intervals 1960–1990 and Annually 1990–1995
(Millions)

Year	Transit						Rail						Total ^d
	Motor Bus	Light Rail	Heavy Rail	Trolley Bus	Commuter Rail	Demand Response	Ferry Boat	Other	Class I Rail Freight, Train-Miles	Class I Rail Freight, Car-Miles	Intercity/ ^c Amtrak, Train-Miles	Intercity/ ^c Amtrak, Car-Miles	
1960	1,576	75	391	101	—	—	—	—	404	28,170	209	2,208	725,709
1965	1,528	42	395	43	—	—	—	—	421	29,336	172	1,775	895,700
1970	1,409	34	407	33	—	—	—	—	427	29,890	93	690	1,119,502
1975	1,526	24	423	15	173	—	—	15	403	27,656	30	253	1,338,660
1980	1,677	18	385	13	179	—	—	15	428	29,277	30	235	1,540,767
1985	1,863	17	451	16	183	247	—	15	347	24,920	30	251	1,788,610
1990	2,130	24	537	14	213	306	2	16	380	26,159	33	305	2,160,611
1991	2,167	28	527	14	215	335	2	19	375	25,628	34	313	2,188,130
1992	2,178	29	525	14	219	364	2	24	390	26,128	34	307	2,262,930
1993	2,210	28	522	13	224	406	3	30	405	26,883	35	303	2,312,285
1994	2,163	34	532	14	231	553	2	28	441	28,485	35	304	2,373,317
1995	NA	NA	NA	NA	NA	NA	NA	NA	458	30,383	33	292	2,432,884

^p Preliminary.

^r Revised.

NA Data not available at press time.

* 1960–1965, motorcycle data included in Passenger Car and Taxi figures, and other Single-Unit 2-axle, 6-tire or more truck data included in other 2-axle, 4-tire vehicle figures.

^a All operations other than those operating under 14 CFR 121 & 14 CFR 135.

^b Series not continuous between 1980 and 1985.

^c Amtrak, 1971–1995.

^d Although both train-miles and car-miles are shown for rail, only train-miles are included in the Total.

Note: Previous editions of this publication have included estimated commercial bus data, estimated by Transportation Policy Associates. Transportation Policy Associates no longer provides this estimate; therefore, we have supplied bus data from the Federal Highway Administration. We continue to illustrate school bus vehicle mileage and transit bus vehicle mileage. All bus numbers have been derived using different methodologies and different sources, and are, therefore, not necessarily comparable.

(continued on next page)

TABLE 1-8 (continued)
Vehicle-Miles**Note:**

In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources:**Air Carrier, Domestic, All Services:**

1960-1970: CAB, *Handbook of Airline Statistics*, 1969, 1973.
 1975-1980: Ibid., *Air Carrier Traffic Statistics*, 1976-1981, annual issues, p. 2, line (27) plus line (50).
 1985-1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, 1986-1996, p. 2, line (27) plus line (50).

General Aviation:

1960-1980: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.
 1985-1995: Ibid., *General Aviation Activity and Avionics Survey*, annual issues, Table 3.3; mileage multiplied by 1.151 to convert from nautical miles.

Passenger Car and Taxi:

1960-1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Motorcycle:

1970-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Other 2-axle 4-tire Vehicle:

1970-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Single-Unit 2-axle 6-tire or More Truck:

1970-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Combination Truck:

1960-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Bus:

1960-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

School Bus:

1960-1965: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.
 1970-1975: Ibid., *Highway Statistics*, annual issues, Table VM-1.
 1980-1995: National Safety Council, *Accident Facts*, 1996, p. 95, and similar tables in earlier editions.

Transit:

1960-1994: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Table 5, and similar tables in earlier editions.

Class I Rail Freight:

Train- and Car-Miles:
 1960-1995: Association of American Railroads (AAR), *Railroad Facts*, 1996, pp. 33, 34.

Intercity/Amtrak:

Train-Miles:
 1960-1970: Ibid., *Yearbook of Railroad Facts*, 1975, p. 39.
 1975-1993: Amtrak, *Amtrak Annual Report*, annual issues.
 1994-1995: Ibid., Finance and Administration Department.

Car-Miles:

1960-1975: AAR, *Yearbook of Railroad Facts*, 1975, p. 40.
 1980-1993: Amtrak, State and Local Affairs Department and Public Affairs Department.
 1994-1995: Ibid., Finance and Administration Department.

TABLE 1-9

Ton-Miles of Freight

5-Year Intervals 1960–1990 and Annually 1990–1995

(Millions)

Year	Air Carrier, domestic, all services ^a	Truck, Inter-city	Class I Rail ^b	Domestic Water Transport ^c				Oil Pipeline
				Coastwise	Lakewise	Internal	Intraport	
1960	553	285,000	572,309	256,000	65,990	89,614	1,730	233,000
1965	1,353	359,000	697,878	302,546	75,918	109,701	1,638	306,393
1970	2,189	412,000	764,809	359,784	79,416	155,816	1,179	431,000
1975	3,470	454,000	754,252	315,846	68,517	180,399	1,222	507,000
1980	4,528	555,000	918,958	631,149 ^d	61,747	227,343	1,596	588,200
1985	5,156	610,000	876,984	610,977	48,184	232,708	1,102	564,300
1990	9,064	735,000	1,033,969	479,134	60,930	292,393	1,087	584,100
1991	8,858	758,000	1,038,875	502,133	55,339	289,959	968	578,500
1992	9,820	815,000	1,066,781	502,311	55,785	297,639	950	588,800
1993	10,675	861,000	1,109,309	448,404	56,438	283,894	922	592,900
1994	11,803 ^r	908,000	1,200,701	457,601	58,263	297,762	1,293	591,400 ^r
1995 ^p	12,479	921,000	1,305,688	440,300	59,700	306,300	1,300	599,000

P Preliminary.

r Revised.

a Includes revenue ton-miles of freight, U.S. and foreign mail, and express, as reported on U.S. DOT Form 41.

b Revenue Ton-Miles.

c Excludes intraterritorial traffic, for which ton-miles were not compiled.

d Reflects start up between 1975 and 1980 of Alaska pipeline and consequent water transport of crude petroleum from Alaskan ports to mainland U.S. for refining.

Sources:

Air Carrier, Domestic, All Services:

1960-1970: CAB, *Handbook of Airline Statistics*, 1969, 1973.

1975-1980: Ibid., *Air Carrier Traffic Statistics*, annual issues, 1976-1981, p. 2, line 3.

1985-1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, 1986-1996, p. 2, line 3.

Truck, Inter-city:

1960-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 44.

Class I Rail:

1960-1995: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 27.

Water Transport:

Coastwise, Lakewise, Internal, Intraport:

1960-1995: U.S. Army, Corps of Engineers, *Waterborne Commerce of the U.S.*, annual issues, Part 5, Section 1, Table 1-4, and similar tables in earlier editions.

Oil Pipeline:

1960-1970: Eno Transportation Foundation, Inc., *Transportation in America*, 1994.

1975-1994: Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, 1996, Table 1.

1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 44.

TABLE 1-10
Average Length of Haul, Domestic Freight and Passenger Modes
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Freight										Passenger			
	Air Carrier	Truck ^a	Class I Railroads	Water			Oil Pipeline			Air Carrier, Domestic, Scheduled	Bus, Intercity	Commuter Rail	Intercity/ Amtrak ^b	
				Internal	Lakewise	Coastwise	Crude	Petroleum Products						
1960	953	272	461	282	522	1,496	325	269	583	79	21	130		
1965	943	259	503	297	494	1,501	320	335	614	94	21	125		
1970	1,014	263	515	330	506	1,509	300	357	679	106	22	71		
1975	1,082	286	541	358	530	1,362	633	516	698	113	23	233		
1980	1,052	363	616	405	536	1,915	871	414	736	125	23	217		
1985	1,157	366	665	435	524	1,972	777	391	758	121	24	232		
1990	1,389	391	726	469	553	1,604	805	389	803	141	22	273		
1991	1,346	398	751	483	535	1,705	824	378	806	143	23	284		
1992	1,391	410	763	479	519	1,762	827 ^r	376 ^r	815	136	23	285		
1993	1,326 ^r	407 ^r	794	468	514	1,650	782 ^r	399 ^r	799 ^r	138	22	281 ^r		
1994	1,191	392	817	482	508	1,652	756	400	787	138	24	271		
1995	1,211	416	843	494 ^p	514 ^p	1,652 ^p	752	398	791	140	NA	257		

^p Preliminary.

^r Revised.

NA Data not available at press time.

^a Total Class I motor carriers of freight (LTL, specialized and others).

^b Amtrak, 1971–1995.

Sources:

Freight:
 Air Carrier: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 71.
 Truck: Ibid.

Class I Railroad: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 36.

Water Data: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, Section 1.

Oil Pipeline: 1960–1970: Transportation Policy Associates;

1975–1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 71.

Passenger:

Air: Ibid., p. 70.

Bus: Ibid.

Commuter Rail: Ibid., 1960–1991; 1992–1994: American Public Transit Association (APTA), *Transit Facts*, 1996, Table 5, and similar tables in earlier editions.

Intercity/Amtrak: Ibid., 1960–1980; 1985: Amtrak, *Statistical Appendix to Amtrak FY 1994 Annual Report*, p. 4; 1990–1995: Ibid., *Statistical Appendix to Amtrak FY 1995 Annual Report*, p. 3.

TABLE 1-11

Top 50 Airports*, Large Certificated Air Carriers: Scheduled and Nonscheduled Operations
1995 and 1985

1995			1985		Percent Change 1985- 1995
Rank	Airport	Total Enplaned Passengers	Rank	Total Enplaned Passengers	
1	Chicago (O'Hare), IL	29,885,987	1	21,510,371	39%
2	Atlanta, GA	27,556,894	2	20,678,095	33%
3	Dallas/Ft. Worth (Regional), TX	25,963,950	3	17,715,224	47%
4	Los Angeles, CA	21,072,273	4	15,957,127	32%
5	San Francisco, CA	15,013,265	7	10,948,098	37%
6	Denver, CO	14,328,457	6	13,862,996	3%
7	Phoenix, AZ	13,557,883	17	6,713,293	102%
8	Detroit, MI	13,293,568	14	7,163,840	86%
9	St. Louis, MO	12,736,060	10	9,555,195	33%
10	Las Vegas, NV	12,657,051	24	4,627,078	174%
11	Miami, FL	12,030,812	12	7,717,685	56%
12	Newark, NJ	11,899,633	5	14,272,558	-17%
13	Minneapolis/St. Paul, MN	11,835,783	13	7,250,302	63%
14	Houston (Intercontinental), TX	10,950,826	18	6,307,582	74%
15	Seattle-Tacoma, WA	10,731,233	20	5,709,488	88%
16	Boston, MA	10,507,611	11	9,112,901	15%
17	New York (La Guardia), NY	9,682,171	9	9,613,913	1%
18	Charlotte, NC	9,588,900	21	5,102,703	88%
19	New York (John F. Kennedy), NY	9,283,314	8	10,052,007	-8%
20	Pittsburgh, PA	9,209,903	15	7,002,343	32%
21	Orlando, FL	9,034,799	22	4,848,771	86%
22	Honolulu, HI	8,776,245	19	5,979,712	47%
23	Salt Lake City, UT	9,238,765	25	4,137,044	123%
24	Philadelphia, PA	8,019,756	23	4,760,972	68%
25	Washington (National), DC	6,888,150	16	6,729,402	2%
26	San Diego, CA	6,335,713	27	3,390,854	87%
27	Cincinnati, OH	5,964,637	40	2,014,386	196%
28	Baltimore, MD	5,665,816	31	3,408,608	66%
29	Portland, OR	5,453,011	36	2,526,852	116%
30	Tampa, FL	4,958,794	26	4,009,979	24%
31	Oakland, CA	7,750,857	41	2,007,517	286%
32	Washington (Dulles International), DC	4,573,723	38	2,286,181	100%
33	Kansas City, MO	4,533,185	30	3,424,127	32%
34	San Juan, PR	4,446,158	45	1,775,191	150%
35	San Jose, CA	4,267,071	37	2,299,624	86%
36	Ft. Lauderdale, FL	4,187,844	34	2,951,449	42%
37	Chicago (Midway), IL	4,169,909	64	1,238,005	237%
38	New Orleans, LA	3,982,632	35	2,912,675	37%
39	Houston (William P. Hobby), TX	3,904,297	28	3,709,815	5%
40	Memphis, TN	3,762,698	29	3,469,318	8%
41	Orange County, CA	3,452,728	52	1,583,591	118%
42	Dallas (Love Field), TX	3,412,022	32	3,220,588	6%
43	Sacramento, CA	3,198,568	60	1,349,631	137%
44	Ontario, CA	3,193,612	46	1,771,099	80%
45	Nashville, TN	3,134,042	58	1,395,487	125%
46	Albuquerque, NM	2,980,907	42	1,887,295	58%
47	Indianapolis, IN	2,968,300	47	1,746,752	70%
48	San Antonio, TX	2,965,785	39	2,162,423	37%
49	Raleigh/Durham, NC	2,791,046	61	1,345,077	108%
50	Columbus, OH	2,746,908	54	1,525,507	80%

* Rank order by total enplaned passengers.

Source: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, 1995, Table 4.11 and 1985, Table 4.10.

TABLE 1-12**Air Passenger Travel Arrivals Between the United States and Foreign Countries**

5-Year Intervals 1975–1990 and Annually 1990–1995

(Thousands)

	1975	1980	1985	1990	1991	1992	1993	1994	1995
Total Passengers	12,646	20,262	24,156	36,414	35,464	38,927	41,558	43,818	46,910
Flag of Carrier									
United States	6,502	10,031	11,798	19,145	18,910	20,537	21,940	23,291	24,582
Foreign	6,144	10,231	12,357	17,269	16,554	18,390	19,618	20,527	22,328
Country of Embarkation^a									
Australia	106	227	277	495	561	598	591	551	581
Bahama Islands	758	1,123	1,503	1,679	1,436	1,341	1,370	1,424	1,433
Barbados	76	135	216	228	197	191	208	196	222
Belgium	144	242	281	417	366	357	408	377	379
Bermuda	398	497	434	487	430	405	436	447	426
Brazil	212	300	352	584	635	645	711	878	1,112
Canada ^b	—	—	—	6,870	6,263	6,546	6,843	6,812	7,262
China/Taiwan	50	113	206	325	404	447	606	830	972
Colombia	173	315	279	286	305	343	389	443	481
Denmark	222	267	241	313	279	295	285	267	221
Dominican Republic	336	468	606	948	849	951	1,027	1,070	1,136
France	512	689	955	1,777	1,600	1,926	1,877	2,017	2,045
Germany	622	1,175	1,582	2,466	2,444	2,797	2,922	2,883	3,125
Grand Cayman	25	121	173	273	256	229	185	294	314
Greece	121	208	187	132	83	146	165	201	220
Haiti	91	133	192	233	217	154	200	137	314
Hong Kong	98	228	270	356	397	437	511	558	658
Ireland	220	220	274	448	418	569	582	660	642
Israel	84	189	294	204	202	231	293	332	412
Italy	431	537	662	792	716	885	903	953	1,007
Jamaica	457	429	707	975	907	888	982	1,040	1,124
Japan	1,095	1,624	2,435	4,528	4,510	4,972	4,999	5,149	5,676
Korea, South	105	234	390	826	827	971	1,070	1,166	1,335
Mexico	1,626	2,886	2,719	4,313	4,467	4,625	4,778	5,107	4,884
Netherlands	312	427	583	837	892	1,039	1,297	1,427	1,580
Netherlands, Antilles	213	327	407	388	353	290	360	390	339
Panama Republic	97	150	180	153	175	177	201	221	225
Philippines	108	194	145	246	261	315	318	375	397
Spain	306	312	419	558	520	659	600	578	604
Switzerland	236	312	452	616	525	549	603	676	733
United Kingdom	1,549	2,973	3,460	5,166	4,793	5,651	6,006	6,087	6,648
Venezuela	205	533	248	458	510	576	653	702	786

^a Country where passenger boarded a direct flight to the U.S.^b Canadian figure represents number of revenue passengers on scheduled commercial and charter flights. Does not include foreign (non-Canadian, non-U.S.) scheduled carriers.

Note: Covers passengers on international commercial flights arriving at U.S. airports. Excludes border crossers, crewmen, and military personnel. Travelers between U.S. ports in the 50 States, Puerto Rico, Guam, or the Virgin Islands, and any other outlying area are included. Data compiled from flight reports of U.S. Immigration and Naturalization Service. Table includes a selected sample of countries of embarkation to the U.S.

Sources: 1975-1994: U.S. DOT/RSPA/Volpe National Transportation Systems Center, *U.S. International Air Travel Statistics*, annual issues, Table IIa.
 1995: U.S. Department of Commerce, International Trade Administration, *U.S. International Air Passenger Statistics Report, Calendar Year 1995*.
 Canada: Statistics Canada, *Air Carrier Traffic at Canadian Airports*, annual issues.

TABLE 1-13
Air Passenger Travel Departures Between the United States and Foreign Countries

5-Year Intervals 1975–1990 and Annually 1990–1995

(Thousands)

	1975	1980	1985	1990	1991	1992	1993	1994	1995
Total Passengers	12,053	19,256	22,487	34,046	33,286	36,211	38,254	40,349	43,026
Flag of Carrier									
United States	5,912	9,369	10,696	17,628	17,530	18,858	20,232	21,355	22,231
Foreign	6,141	9,886	11,791	16,418	15,756	17,353	18,022	18,993	20,795
Country of Debarkation^a									
Australia	103	245	232	540	581	609	588	522	560
Bahama Islands	704	1,006	1,151	1,279	1,128	1,005	1,046	963	1,024
Barbados	74	126	204	230	199	185	207	208	217
Belgium	134	231	249	395	318	355	372	334	340
Bermuda	372	467	389	277	237	217	247	242	199
Brazil	206	291	322	560	592	659	696	826	1,024
Canada ^b	—	—	—	6,870	6,263	6,546	6,798	6,764	7,250
China/Taiwan	41	90	187	337	447	481	616	803	891
Colombia	171	299	294	277	294	324	353	415	461
Denmark	188	254	254	307	239	266	272	254	229
Dominican Republic	322	443	528	896	780	881	949	980	995
France	470	635	894	1,626	1,523	1,769	1,759	1,896	1,868
Germany	649	1,178	1,539	2,339	2,298	2,627	2,788	2,785	2,883
Grand Cayman	26	112	161	250	238	196	244	259	264
Greece	123	190	210	129	88	150	150	184	194
Haiti	81	124	169	201	178	139	180	118	292
Hong Kong	59	152	238	310	369	474	477	545	640
Ireland	163	212	233	311	263	316	324	380	409
Israel	105	186	255	259	249	294	317	367	426
Italy	409	495	660	731	694	873	878	918	955
Jamaica	416	382	607	888	821	796	887	909	987
Japan	1,183	1,602	2,255	4,471	4,431	4,795	4,757	4,954	5,452
Korea, South	60	186	333	723	759	887	961	1,082	1,252
Mexico	1,525	2,886	2,671	4,136	4,230	4,307	4,371	4,632	4,568
Netherlands	304	409	562	777	881	965	1,150	1,319	1,444
Netherlands, Antilles	184	282	395	377	341	309	347	368	295
Panama Republic	100	142	209	183	189	186	194	211	214
Philippines	81	160	165	195	194	241	249	228	281
Spain	260	273	397	540	513	637	576	553	573
Switzerland	224	306	434	600	527	543	593	657	712
United Kingdom	1,446	2,840	3,322	4,903	4,594	5,245	5,682	5,918	6,372
Venezuela	198	518	245	444	488	565	641	686	778

^a Country where passenger debarked a direct flight from the U.S.

^b Canadian figure represents number of revenue passengers on scheduled commercial and charter flights. Does not include foreign (non-Canadian, non-U.S.) scheduled carriers.

Note: Covers passengers on international commercial flights arriving at U.S. airports. Excludes border crossers, crewmen, and military personnel. Travelers between U.S. ports in the 50 States, Puerto Rico, Guam, or the Virgin Islands, and any other outlying area are included. Data compiled from flight reports of U.S. Immigration and Naturalization Service. Table includes a selected sample of countries of embarkation to the U.S.

Sources: 1975-1994: U.S. DOT/RSPA/Volpe National Transportation Systems Center, *U.S. International Air Travel Statistics*, annual issues, Table IId.
1995: U.S. Department of Commerce, International Trade Administration, *U.S. International Air Passenger Statistics Report, Calendar Year 1995*.
Canada: Statistics Canada, *Air Carrier Traffic at Canadian Airports*, annual issues.

TABLE 1-14**Highway Vehicle-Miles Traveled vs. Lane Miles by Functional Class (Rural)**

5-Year Intervals 1985–1990 and Annually 1990–1995

Year	Arterial Interstate Rural		Other Arterial Rural		Collector Rural		Total Arterial & Collector	
	VMT (millions)	Lane Miles	VMT (millions)	Lane Miles	VMT (millions)	Lane Miles	VMT (millions)	Lane Miles
1985	154,275	131,808	282,595	509,832	206,526	1,465,311	643,396	2,106,951
1990	200,173	135,858	330,866	517,222	240,460	1,464,508	771,499	2,117,588
1991	205,011	136,477	334,755	517,965	245,630	1,465,903	785,396	2,120,345
1992	205,557	133,557	344,062	526,413	234,910	1,432,564	784,529	2,092,534
1993	208,308	132,239	349,567	524,621	226,296	1,435,411	784,171	2,092,271
1994	215,568 ^r	131,288	357,329 ^r	529,838	230,529 ^r	1,432,275	803,426 ^r	2,093,401
1995	223,385	131,949	368,596	530,676	236,148	1,417,477	828,129	2,080,102

^r Revised.Note: Local VMT (vehicle-miles traveled) and local lane miles are not included.Source: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables HM-60, VM-2, & VM-2A.**TABLE 1-15****Highway Vehicle-Miles Traveled vs. Lane Miles by Functional Class (Urban)**

5-Year Intervals 1985–1990 and Annually 1990–1995

Year	Arterial Interstate Urban		Other Arterial Urban		Collector Urban		Total Arterial & Collector	
	VMT (millions)	Lane Miles	VMT (millions)	Lane Miles	VMT (millions)	Lane Miles	VMT (millions)	Lane Miles
1985	216,160	57,327	578,170	371,802 ^r	89,552	162,203	883,882	591,332
1990	278,901	62,306	699,233	397,192 ^r	106,297	167,218	1,084,431	626,716
1991	285,325	62,936	707,518	401,076 ^r	107,281	164,752	1,100,124	628,764
1992	303,265	67,135	745,618	415,660 ^r	116,065	175,602	1,164,948	658,397
1993	317,399	69,135	774,049	432,473	117,950	181,035	1,209,398	682,643
1994	330,577 ^r	70,847	797,899 ^r	442,555	120,088 ^r	183,394	1,248,644 ^r	696,796
1995	341,528	71,392	815,164	445,662	126,891	185,059	1,283,583	702,113

^r Revised.Note: Local VMT (vehicle-miles traveled) and local lane miles are not included.Source: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables HM-60, VM-2, & VM-2A.

TABLE 1-16

Total Waterborne Commerce of the United States

5-Year Intervals 1960–1990 and Annually 1990–1995

(Tons of 2,000 pounds)

Year	Foreign	Domestic	Total
1960	339,277,275	760,573,156	1,099,850,431
1965	443,726,809	829,169,434	1,272,896,243
1970	580,969,133	950,727,374	1,531,696,507
1975	748,707,407	946,326,959	1,695,034,366
1980	921,404,000	1,077,483,402	1,998,887,402
1985	774,323,283	1,014,111,539	1,788,434,822
1990	1,041,555,740	1,122,298,633	2,163,854,373
1991	1,013,557,036	1,078,551,426	2,092,108,462
1992	1,037,466,130	1,094,629,024	2,132,095,154
1993	1,060,041,217	1,068,179,971	2,128,221,188
1994	1,115,742,828	1,099,011,258	2,214,754,086
1995 ^p	1,147,400,000	1,093,000,000	2,240,500,000

^p Preliminary.

Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, annual issues, Part 5, Table 1-1.

TABLE 1-17
Tonnage for Top 50 U.S. Ports, Ranked by Total Tons
 1995 and 1990

1995			1990		Percent Change
Rank	Port	Total Tons	Rank	Total Tons	1990-1995
1	South Louisiana, LA	204,482,591	1	194,190,341	5.30%
2	Houston, TX	135,231,322	3	126,177,644	7.18%
3	New York, NY & NJ	119,341,574	2	140,019,925	-14.77%
4	Baton Rouge, LA	83,612,788	5	78,132,291	7.01%
5	Valdez, AK	80,955,084	4	95,953,448	-15.63%
6	New Orleans, LA	76,984,036	6	62,740,327	22.70%
7	Plaquemine, LA	72,897,301	8	56,597,710	28.80%
8	Corpus Christi, TX	70,456,033	7	62,023,736	13.60%
9	Long Beach, CA	53,227,490	10	52,425,196	1.53%
10	Tampa, FL	51,911,335	11	51,577,974	0.65%
11	Mobile, AL	50,972,223	15	41,136,444	23.91%
12	Texas City, TX	50,402,938	12	48,071,123	4.85%
13	Port Arthur, TX	49,799,977	20	30,679,583	62.32%
14	Pittsburgh, PA	48,849,508	19	35,492,000	37.64%
15	Norfolk Harbor, VA	47,658,182	9	53,722,136	-11.29%
16	Lake Charles, LA	46,569,641	16	40,882,808	13.91%
17	Los Angeles, CA	46,478,586	13	46,352,325	0.27%
18	Duluth-Superior, MN & WI	45,049,184	17	40,766,374	10.51%
19	Baltimore, MD	44,695,812	18	39,538,194	13.04%
20	Philadelphia, PA	40,634,284	14	41,830,443	-2.86%
21	Portland, OR	31,255,509	21	27,475,428	13.76%
22	Marcus Hook, PA	30,818,134	25	25,864,205	19.15%
23	St. Louis, MO and IL	30,137,632	22	27,113,022	11.16%
24	Huntington, WV	28,265,731	34	17,310,165	63.29%
25	Pascagoula, MS	26,926,582	24	26,479,086	1.69%
26	Seattle, WA	26,179,838	30	21,569,743	21.37%
27	Chicago, IL	25,329,030	28	22,541,443	12.37%
28	Paulsboro, NJ	24,780,664	27	23,331,201	6.21%
29	Newport News, VA	23,365,005	26	24,935,372	-6.30%
30	Beaumont, TX	20,937,132	23	26,728,664	-21.67%
31	Tacoma, WA	20,878,751	31	21,433,437	-2.59%
32	Richmond, CA	20,839,258	32	21,155,885	-1.50%
33	Freeport, TX	19,661,621	40	14,494,397	35.65%
34	Detroit, MI	18,660,925	33	17,734,781	5.22%
35	Port Everglades, FL	18,367,389	42	14,144,648	29.85%
36	Savannah, GA	17,379,724	44	13,568,910	28.08%
37	Boston, MA	16,744,386	29	21,901,737	-23.55%
38	Memphis, TN	15,944,945	47	12,359,212	29.01%
39	Indiana Harbor, IN	15,700,153	37	14,672,845	7.00%
40	Jacksonville, FL	15,692,999	36	15,119,932	3.79%
41	San Juan, PR	15,477,965	39	14,536,667	6.48%
42	Cleveland, OH	15,393,496	41	14,367,783	7.14%
43	Lorain, OH	14,964,284	43	13,966,900	7.14%
44	Toledo, OH	14,074,499	38	14,667,771	-4.04%
45	Oakland, CA	13,224,118	*	*	*
46	Anacortes, WA	13,109,828	35	15,437,562	-15.08%
47	Cincinnati, OH	13,068,362	46	12,626,080	3.50%
48	New Castle, DE	12,455,809	*	*	*
49	Honolulu, HI	11,545,102	50	11,341,358	1.80%
50	Portland, ME	11,456,007	*	*	*

* These ports were not in the top fifty in 1990. Included in the top fifty for 1990 were Grays Harbor, WA (45), Two Harbors, MN (48), and Ashtabula, OH (49).

Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, Calendar Year 1995, Part 5, Table 5-2.

TABLE 1-18

Crude Oil Transported in the U.S. by Mode of Transportation

5-Year Intervals 1975–1990 and Annually 1990–1994

(Billion Ton-Miles)

Year	Pipelines ^a		Water Carriers		Motor Carriers ^b		Railroads		Total Billion Ton-Miles
	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	
1975	288.0	86.9	40.6	12.2	1.4	0.4	1.5	0.5	331.5
1980	362.6	48.2	387.4 ^c	51.4	2.5	0.3	0.5	0.1	753.0
1985	334.4	42.5	449.2	57.1	1.8	0.2	0.8	0.1	786.2
1990	334.8	53.3	291.2	46.4	1.5	0.2	0.7	0.1	628.2
1991 ^r	336.1	51.6	312.8	48.0	1.6	0.2	0.8	0.1	651.3
1992 ^r	343.3	53.1	301.3	46.6	1.7	0.3	0.8	0.1	647.1
1993 ^r	328.7	56.0	255.5	43.5	1.8	0.3	0.9	0.2	586.9
1994	322.6	55.4	256.7	44.1	1.7	0.3	0.8	0.1	581.8

^r Revised.

^a The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 percent), plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16 percent).

^b The amounts carried by motor carriers are estimated.

^c Reflects entrance between 1975 and 1980 of Alaska pipeline, moving crude petroleum for water transport to U.S. refineries.

Note: Totals may not equal sum of columns due to rounding.

Source: Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, annual issues, Table 2.

TABLE 1-19

Refined Petroleum Products Transported in the U.S. by Mode of Transportation

5-Year Intervals 1975–1990 and Annually 1990–1994

(Billion Ton-Miles)

Year	Pipelines ^a		Water Carriers		Motor Carriers ^b		Railroads		Total Billion Ton-Miles
	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	
1975	219.0	42.5	257.4	50.0	26.2	5.1	12.6	2.4	515.2
1980	225.6	45.8	230.4	46.8	24.3	4.9	12.0	2.4	492.3
1985	229.9	56.2	141.2	34.5	26.9	6.6	11.3	2.8	409.3
1990	249.3	55.6	157.8	35.2	28.2	6.3	13.3	3.0	448.6
1991	242.4	55.7	152.2	35.0	27.2	6.3	13.0	3.0	434.8
1992	245.5	55.2	158.0	35.5	27.1	6.1	14.0	3.1	444.6
1993	264.2	59.0	146.2	32.7	23.0	5.1	14.3	3.2	447.7
1994	268.8	57.8	154.7	33.3	26.4	5.7	15.0	3.2	464.9

^a The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 percent), plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16 percent).

^b The amounts carried by motor carriers are estimated.

Note: Totals may not equal sum of columns due to rounding.

Source: Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, annual issues, Table 3.

TABLE 1-20**Crude Oil and Refined Petroleum Products Transported in the U.S. by Mode of Transportation**

5-Year Intervals 1975–1990 and Annually 1990–1994
(Billion Ton-Miles)

Year	Pipelines ^a		Water Carriers		Motor Carriers ^b		Railroads		Total Billion Ton-Miles
	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	
1975	507.0	59.9	298.0	35.2	27.6	3.3	14.1	1.7	846.7
1980	588.2	47.2	617.8 ^c	49.6	26.8	2.2	12.5	1.0	1,245.3
1985	564.3	47.2	590.4	49.4	28.7	2.4	12.1	1.0	1,195.5
1990	584.1	54.2	449.0	41.7	29.7	2.8	14.0	1.3	1,076.8
1991^r	578.5	53.3	465.0	42.8	28.8	2.7	13.8	1.3	1,086.1
1992^r	588.8	53.9	459.3	42.1	28.8	2.6	14.8	1.4	1,091.7
1993^r	592.9	57.3	401.7	38.8	24.8	2.4	15.2	1.5	1,034.6
1994	591.4	56.5	411.4	39.3	28.1	2.7	15.8	1.5	1,046.7

^r Revised.

^a The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 percent), plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16 percent).

^b The amounts carried by motor carriers are estimated.

^c Reflects entrance between 1975 and 1980 of Alaska pipeline, moving crude petroleum for water transport to U.S. refineries.

Source: Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, annual issues, Table 1.

TABLE 1-21

Worldwide Commercial Space Launches

Annually 1982–1995

Year	Titan	Atlas	Delta	Ariane	Long March	Total
1982	—	1	1	1	—	3
1983	—	1	5	2	—	8
1984	—	1	1	4	—	6
1985	—	3	—	3	—	6
1986	—	—	—	2	—	2
1987	—	—	1	2	—	3
1988	—	—	—	7	—	7
1989	—	—	1	6	—	7
1990	3	1	5	5	1	15
1991	0	2	4	7	—	13
1992	0	3	3	6	2	14
1993	0	1	1	6	0	8
1994	0	3	1	8	3	15
1995	0	5	1	8	3	17
Total	3	21	24	67	9	124

Note: The data in this chart apply only to commercial, "internationally competed" (noncaptive), satellite launches in the medium-to-large vehicle class.

Source: U.S. DOT/FAA, Office of Commercial Space Transportation, personal communication.

The Transportation System

SECTION C

Vehicle, Aircraft,
and Vessel Inventory

TABLE 1-22**Number of Vehicles**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Air		Highway ^a					
	Air Carrier, certificated, all services	General Aviation	Passenger Car & Taxi	Motorcycle	Truck		Commercial & Federal Bus	School & Other Bus ^c
					Single-Unit	Combination		
1960	2,135	76,549	61,671,390	574,032	—	—	76,000	196,000
1965	—	95,442	75,257,588	1,381,956	14,008,000	787,000	84,969	229,315
1970	2,690	125,618	89,243,557	2,824,098	17,891,996	905,082	90,271	288,750
1975	2,540	168,475	106,705,934	4,964,070	24,649,872	1,130,747	96,162	365,982
1980	2,818	202,487	121,600,843	5,693,940	32,249,718	1,416,869	110,576	418,225
1985	3,100	210,654	131,864,029	5,444,404	37,792,895	1,403,266	113,138	480,389
1990	4,727	196,800	143,453,040	4,259,462	43,106,594	1,611,293	118,726	508,261
1991	4,580	198,474	142,568,902	4,177,365	43,332,778	1,603,510	118,052	513,227
1992	4,884	183,620	144,213,429	4,065,118	43,849,290	1,654,777	118,894	525,838
1993	5,234	176,006	131,581,427	3,977,856	60,236,080	1,591,542	119,560	534,872
1994	5,221	170,600	133,929,661	3,756,553	61,866,575	1,578,706	122,705	547,718
1995	5,567	NA	136,066,045	3,767,029	63,101,208	1,677,264	125,057	560,447

Year	Transit ^b						
	Motor Bus	Light Rail	Heavy Rail	Trolley Bus	Commuter Rail	Demand Response	Other
1960	49,600	2,856	9,010	3,826	—	—	—
1965	49,600	1,549	9,115	1,453	—	—	—
1970	49,700	1,262	9,286	1,050	—	—	—
1975	50,811	1,061	9,608	703	—	—	—
1980	59,411	1,013	9,641	823	4,500	—	—
1985	64,258	717	9,326	676	4,035	14,490	867
1990	58,714	913	10,419	832	4,415	16,471	1,197
1991	60,377	1,095	10,331	752	4,370	17,879	1,496
1992	63,080	1,058	10,245	907	4,413	20,695	1,753
1993	64,850 ^r	1,025	10,261	851	4,494	23,527 ^r	2,087 ^r
1994	67,492 ^p	1,054 ^p	10,138 ^p	877 ^p	4,517 ^p	31,872 ^p	2,639 ^p
1995	NA	NA	NA	NA	NA	NA	NA

▲ **TABLE 1-22** (continued)

34 **Number of Vehicles**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Rail				Water Transport				
	Class I Rail		Amtrak		Non-Self-Propelled Vessels		Total Inland Water Vessels	Self-Propelled Towboats	Oceangoing Steam & Motor Ships (1,000 gross tons & over)
	Freight Cars ^d	Locomotive	Passenger Train Car	Locomotive	Dry Cargo Barge	Tanker Barge			
1960	1,658,292	29,031	—	—	14,025	2,429	20,657	4,203	957
1965	1,478,005	27,780	—	—	14,241	2,548	20,843	4,054	2,376
1970	1,423,921	27,077	—	—	15,890	3,281	22,908	4,248	1,579
1975	1,359,459	27,846	1,913	355	21,876	3,534	29,510	4,100	857
1980	1,168,114	28,094	2,128	419	27,426	4,166	36,285	4,693	864
1985	867,070	22,548	1,854	291	29,287	4,252	38,493	4,954	737
1990	658,902	18,835	1,983	318	27,091	3,913	36,222	5,218	636
1991	633,489	18,344	1,967	317	*	*	*	*	619
1992	605,189	18,004	1,962	329	26,984	3,905	39,210	5,205	603
1993	587,033	18,161	1,964	334	26,913	3,862	39,108	5,224	564
1994	590,930	18,505	1,951	352	26,723	3,966	39,064	5,179	543
1995	583,486	18,812	1,921	356	27,342	3,985	39,641	5,127	509

P Preliminary.

r Revised.

* Data for January 1, 1991 - June 30, 1991 included in 1990 figure.

NA Data not available at press time.

a Registered vehicles.

b Prior to 1984, excludes most rural and smaller systems funded via Sections 18 and 16(b)(2), Urban Mass Transportation Act of 1964, as amended. Also prior to 1984, includes total vehicles owned and leased.

c In some instances, church, industrial, and other buses and other private buses are included here; in other instances, privately-owned school buses could not be segregated from commercial buses, and are included with the latter.

d See Rail Profile for non-Class I freight cars:

Sources:

Certificated Air Carrier, All Services:
1960-1995: U.S. DOT/BTS, Office of Airline Information, personal communication.

General Aviation:

1960-1980: Ibid., U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.

1985-1994: Ibid., *General Aviation Activity and Avionics Survey*, annual issues, Table 3.1.

(continued on next page)

TABLE 1-22 (continued)
Number of Vehicles

Passenger Car & Taxi:	
1960-1980:	U.S. DOT/FHWA, <i>Highway Statistics, Summary to 1985</i> , Table VM-201.
1985-1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Motorcycle:	
1960-1980:	Ibid., <i>Highway Statistics, Summary to 1985</i> , Table MV-201.
1985-1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Truck:	
Single-Unit and Combination:	
1965-1980:	Ibid., <i>Highway Statistics, Summary to 1985</i> , Table MV-201.
1985-1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Bus:	
Commercial and Federal, and School:	
1990-1995:	Ibid., Table MV-10.
Transit:	
1960-1994:	American Public Transit Association (APTA), <i>Transit Fact Book</i> , 1996, Table 5, and similar tables in earlier editions.
Class I Rail:	
Freight Cars and Locomotives:	
1960-1995:	Association of American Railroads (AAR), <i>Railroad Facts</i> , 1996, pp. 48, 50. Excludes Amtrak.
Amtrak:	
Passenger Train-Cars and Locomotives:	
1975-1980:	Amtrak, State and Local Affairs Department.
1985-1994:	Ibid., <i>Statistical Appendix to Amtrak FY 1994 Annual Report</i> .
1995:	Ibid., Finance and Administration Department.
Water Transport:	
Non-Self-Propelled Vessels, Total Inland Water Vessels and Self-Propelled Vessels:	
1960-1995:	U.S. Army, Corps of Engineers, <i>Summary of U.S. Flag Passenger and Cargo Vessels</i> , annual issues. Sum of non-self-propelled vessels and self-propelled vessels.
Oceangoing Steam and Motor Ships:	
1960-1995:	U.S. DOT/MARAD, <i>Merchant Fleets of the World</i> , annual issues, Table 6, and similar tables in earlier editions.
Recreational Boats:	
1960-1995:	U.S. DOT/USCG, <i>Boating Statistics</i> , annual issues.

▲ **TABLE 1-23**
Sales or Deliveries of New Vehicles by Mode
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Civilian Aircraft (Shipments)				Highway					Water Transport		
	Transport ^a	Helicopters	General Aviation	Passenger Car & Taxi (new retail sales) ^b	Motorcycle (New retail sales) ^b	Truck (Factory sales, domestic) ^c	Bus (Includes school bus) (factory sales) [*]	Recreational Vehicle (Shipments)	Bicycle ^d	Amtrak (Deliveries)	Merchant Vessel	Recreational Boat ^g (Retail units sold)
1960	245	–	7,588	6,641,000	–	1,194,475	–	–	–	–	–	–
1965	233	598	11,852	9,333,000	–	1,716,564	35,241	192,830	–	–	–	–
1970	311	482	7,283	8,402,000	1,125,000	1,660,446	31,994	380,300	6,900,000	–	–	–
1975	315	864	14,072	8,538,000	940,000	2,231,630	40,530	339,600	7,300,000	–	–	–
1980	387	1,366	11,881	8,982,000	1,070,000	1,667,283	34,385	178,500	9,000,000	–	–	–
1985	278	384	2,029	10,978,000	710,000	3,356,905	33,533	351,700	11,400,000	–	–	–
1990	521	603	1,144	9,300,000	303,000	3,692,474	32,731	347,300	10,800,000	–	–	–
1991	589	571	1,021	8,175,000	280,000	3,363,445	24,058	293,700	11,600,000	–	–	–
1992	567	324	899	8,214,000	278,000	4,039,518	22,484	382,700	11,600,000	–	–	–
1993	408	258	964	8,518,000	293,000	4,870,675	24,549	420,200	13,000,000	–	–	–
1994	309	308	928	8,990,000	306,000	5,617,866	22,409	518,800	12,500,000	–	–	–
1995 ^p	256	292	1,077	8,672,000	NA	5,689,551	23,918	475,200	12,000,000	–	–	–

Year	Transit (Deliveries)				Class I Rail (Deliveries)			Water Transport		
	Motor Bus ^e	Light Rail	Heavy Rail	Trolley Bus	Commuter Rail	Freight Car ^f	Locomotive	Passenger Train-Car	Locomotive	Recreational Boat ^g (Retail units sold)
1960	2,415	0	416	0	214	57,047	389	–	–	–
1965	3,000	0	580	0	666	77,822	1,387	–	–	–
1970	1,424	0	308	0	302	66,185	1,029	–	–	–
1975	5,261	0	127	1	2,165	72,392	772	109	30	–
1980	4,572	32	130	98	152	85,920	1,480	109	17	569,700
1985	3,367	63	441	0	179	12,080	522	0	10	636,800
1990	4,779	55	10	118	83	32,083	530	58	0	504,100
1991	4,722	17	6	149	187	24,678	472	0	0	439,300
1992	3,426	35	163	0	110	25,761	323	0	20	456,150
1993	4,836	54	260	24	8	35,239	504	0	26	486,875
1994	6,068	72	55	36	47	48,819	821	65	18	563,200
1995 ^p	NA	NA	NA	NA	NA	60,853	928	76	10	649,460

(continued on next page)

TABLE 1-23 (continued)
Sales or Deliveries of New Vehicles by Mode

P	Preliminary.
r	Revised.
NA	Data not available at press time.
*	Included in Truck figure.
a	U.S.-manufactured fixed-wing aircraft over 33,000 pounds empty weight, including all jet transports plus four-engine turbo prop-powered Lockheed L-100.
b	Includes domestic and imported vehicles. Prior to 1985, all terrain vehicles (ATVs) were included in the motorcycle total. In 1995, the Motorcycle Industry Council revised its data for the years 1985 to present to exclude ATVs from its totals.
c	Includes large passenger or utility vehicles which may be considered cars in other tables.
d	Includes domestic and imported vehicles, 20 inches and above.
e	Buses or bus-type vehicles only. Excludes most rural and smaller systems prior to 1984.
f	Includes all railroads and private car owners.
g	Includes outboard, inboard, and sterndrive boats, canoes, and sailboards/personal watercraft. Also includes nonpowered and auxiliary sailboats until 1990, inflatable boats until 1992, and jet boats in 1995.
Sources:	
Civilian Aircraft:	
1960-1995:	Aerospace Industries Association, <i>Aerospace Facts & Figures</i> , annual issues.
Passenger Car & Taxi:	
1960-1995:	U.S. DOC, Bureau of Economic Analysis, <i>Survey of Current Business</i> , personal communication.
Motorcycle:	
1970-1994:	Motorcycle Industry Council, Inc., <i>Motorcycle Statistical Annual</i> , 1994, p. 10, and similar tables in earlier editions.
Truck:	
1960-1995:	American Automobile Manufacturers Association, (AAMA), <i>Motor Vehicle Facts & Figures</i> , 1996, p. 6, and similar tables in earlier editions.
Bus (includes School Bus):	
1960-1995:	Ibid.
Recreational Vehicle:	
1965-1995:	Ibid., p. 12, and similar tables in earlier editions.
Bicycle:	
1970-1995:	Bicycle Manufacturer's Association of America, personal communication.
Transit:	
1960-1994:	American Public Transit Association (APTA), <i>Transit Fact Book</i> , 1996, annual issues.
Class I Rail:	
1960-1995:	Association of American Railroads (AAR), <i>Railroad Facts</i> , 1996, p. 54, and similar tables in earlier editions.
Amtrak:	
1975-1980:	Ibid., p. 17, and similar tables in earlier editions.
1985:	Amtrak, <i>Statistical Appendix to Amtrak FY1994 Annual Report</i> p. 5.
1990-1995:	Ibid., FY 1995, p. 4.
Merchant Vessel:	
1960-1995:	U.S. DOT/MARAD, <i>Merchant Fleets of the World</i> , annual issues.
Recreational Boat:	
1980-1995:	Recreational Marine Manufacturers Association, <i>Boating</i> , 1995.

TABLE 1-24

U.S. Automobiles in Fleets by Type of Use

5-Year Intervals 1965–1990 and Annually 1990–1995
(Thousands)

Year	Use						
	Business Fleets ^a	Individually Leased	Government ^b	Utilities	Police	Taxi	Daily Rental
1965	716	323	880	366	158	136	139
1970	2,529	803	674	416	207	171	314
1975	2,934	1,072	628	497	278	193	354
1980	3,279	1,708	651	532	288	205	500
1985	3,484	1,800	528	540	233	140	760
1990	3,823	2,020	538	551	249	141	990
1991	3,446	2,008	504	544	250	141	1,160
1992	3,460	2,126	516	548	264	140	1,447
1993	2,607	2,400	401	386	264	140	1,501
1994	2,565	3,150	428	382	266	141	1,473
1995	1,326	3,600	1,214 ^c	376	269	139	1,518

^a Includes driver schools.

^b Does not include military vehicles.

^c Newly available data. In last year's chart, government fleet vehicles were undercounted by 786,000 cars and 1.5 million trucks.

Source: Bobit Publishing Company, *Automotive Fleet Fact Book*, annual issues.

TABLE 1-25

Annual U.S. Motor Vehicle Production and Factory Sales

5-Year Intervals 1960–1990 and Annually 1990–1995
(Thousands)

Year	Production			Factory Sales		
	Passenger Cars	Commercial Vehicles	Total Vehicles	Passenger Cars	Commercial Vehicles	Total Vehicles
1960	6,703	1,202	7,905	6,675	1,194	7,869
1965	9,335	1,803	11,138	9,306	1,752	11,057
1970	6,550	1,734	8,284	6,547	1,692	8,239
1975	6,717 ^r	2,270	8,987	6,713	2,272	8,985
1980	6,376	1,634	8,010	6,400	1,667	8,067
1985	8,185	3,468	11,653	8,002	3,464	11,467
1990	6,077	3,706	9,783	6,050	3,725	9,775
1991	5,439	3,372	8,811	5,407	3,387	8,795
1992	5,664	4,065	9,729	5,685	4,062	9,747
1993	5,981	4,917 ^r	10,898 ^r	5,962	4,895	10,857
1994	6,614	5,649	12,263	6,549	5,640	12,189
1995	6,350	5,635	11,985	6,310	5,713	12,023

^r Revised.

Note: Sum of components may not equal total due to independent rounding. Factory sales in 1980 were greater than production total because of sales from previous year's inventory.

Source: American Automobile Manufacturers Association (AAMA), *Motor Vehicle Facts & Figures*, 1996, p. 3, and similar tables in earlier editions.

TABLE 1-26**U.S. Retail New Passenger Car Sales**

5-Year Intervals 1970–1990 and Annually 1990–1995
(Thousands)

Year	Domestic	Imports				Total New Passenger Car Sales
		Japan	Germany	Other	Total	
1970	7,119	313	750	217	1,280	8,400
1975	7,053	808	493	271	1,571	8,624
1980	6,581	1,906	305	187	2,398	8,979
1985	8,205	2,218	424	196	2,838	11,042
1990	6,897	1,719	265	419	2,403	9,300
1991	6,137	1,500	193	345	2,038	8,175
1992	6,277	1,452	201	284	1,937	8,213
1993	6,742	1,328	186	262	1,776	8,518
1994	7,255	1,239	192	303	1,735	8,991 ^r
1995	7,129	981	208	317	1,506	8,635

^r Revised.

Source: American Automobile Manufacturers Association (AAMA), *Motor Vehicle Facts & Figures*, 1996, p. 20, and similar tables in earlier editions.

TABLE 1-27**U.S. Retail Sales of New Cars by Sector**

5-year Intervals 1960–1990 and Annually 1990–1995
(Thousands)

Year	Units by Consuming Sector				% of Total Sales	
	Consumer	Business	Government	Total	Consumer	Business
1960	5,645	930	66	6,641	85.0	14.0
1965	7,103	2,140	89	9,333	76.1	22.9
1970	6,252	2,056	94	8,402	74.4	24.5
1975	5,907	2,508	123	8,538	69.2	29.4
1980	6,100	2,758	124	8,982	67.9	30.7
1985	7,092	3,754	132	10,978	64.6	34.2
1990	5,677	3,477	147	9,300	61.0	37.4
1991	4,424	3,648	103	8,175	54.1	44.6
1992	4,566	3,529	119	8,214	55.6	43.0
1993	4,647	3,757	114	8,518	54.6	44.1
1994 ^r	4,612	4,255	124	8,990	51.3	47.3
1995	4,308	4,204	160	8,672	49.7	48.5

^r Revised.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, personal communication.

▲ TABLE 1-28

Period Sales, Market Shares, and Sales-Weighted Fuel Economies of New Domestic and Import Automobiles, Selected Sales Periods*

5-Year Intervals 1980–1990 and Annually 1990–1995

	1980	1985	1990	1991 ^r	1992 ^r	1993 ^r	1994 ^r	1995
Minicompact								
Total sales, units	428,346	52,295	76,698	96,290	107,634	84,345	57,198	44,752
Market share, %	4.7	0.5	0.8	1.1	1.3	1.0	0.6	0.5
Fuel economy, mpg	29.4	32.7	26.4	29.0	30.6	29.9	27.8	27.0
Subcompact								
Total sales, units	3,441,480	2,382,339	2,030,226	225,623	2,074,351	1,944,892	2,015,280	1,518,209
Market share, %	37.8	21.7	22.0	26.9	25.6	23.2	22.6	17.4
Fuel economy, mpg	27.3	30.1	31.3	31.6	31.8	31.9	31.3	31.7
Compact								
Total sales, units	599,423	3,526,118	3,156,481	2,425,398	2,451,498	2,655,378	3,077,203	3,289,735
Market share, %	6.6	32.1	34.2	28.9	30.2	31.7	34.5	37.7
Fuel economy, mpg	22.3	29.6	28.9	28.8	28.7	29.3	29.8	30.2
Midsize								
Total sales, units	3,073,103	3,117,817	2,511,503	2,305,773	2,249,553	2,445,842	2,359,898	2,498,521
Market share, %	33.8	28.4	27.2	27.5	27.7	29.2	26.5	28.6
Fuel economy, mpg	21.3	24.9	25.9	25.9	25.8	25.7	25.6	25.9
Large								
Total sales, units	1,336,190	1,516,249	1,279,092	1,161,319	1,140,775	1,186,991	1,339,863	1,320,608
Market share, %	14.7	13.8	13.9	13.9	14.1	14.2	15.0	15.1
Fuel economy, mpg	19.3	22.3	23.5	23.3	23.7	24.0	24.2	24.1
Two-seater								
Total sales, units	215,964	373,697	170,465	134,890	83,192	70,480	67,020	53,045
Market share, %	2.4	3.4	1.8	1.6	1.0	0.8	0.8	0.6
Fuel economy, mpg	21.0	27.6	28.0	27.3	25.9	24.8	23.9	24.7
Fleet								
Total sales, units	9,094,506	10,968,515	9,224,465	8,379,963	8,107,003	8,387,928	8,916,462	8,724,870
Market share, %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel economy, mpg	23.2	27.0	27.6	27.7	27.7	27.8	27.8	28.0

^r Revised.

* These figures represent only those sales that could be matched to corresponding EPA fuel economy values.

Source: Oak Ridge National Laboratory, *Light-Duty Vehicle MPG and Market Shares Systems*, 1996.

TABLE 1-29
Period Sales, Market Shares, and Sales-Weighted Fuel Economies of
New Domestic and Import Light Trucks, Selected Sales Periods*

5-Year Intervals 1980–1990 and Annually 1990–1995

	1980	1985	1990	1991 ^r	1992 ^r	1993 ^r	1994 ^r	1995
Small Pickup								
Total sales, units	516,412	863,584	678,488	628,098	586,752	332,470	365,322	356,856
Market share, %	23.3	20.4	15.0	15.5	13.4	6.6	6.4	6.0
Fuel economy, mpg	25.5	26.8	25.2	25.7	25.0	24.9	25.3	25.6
Large Pickup								
Total sales, units	1,115,248	1,690,931	1,573,729	1,309,283	1,452,192	1,877,806	2,199,224	2,183,793
Market share, %	50.3	39.9	34.9	32.3	33.1	37.1	38.4	36.8
Fuel economy, mpg	17.0	19.0	18.9	18.8	18.9	19.6	20.1	19.4
Small Van								
Total sales, units	13,649	437,660	932,693	888,165	968,361	1,129,459	1,263,933	1,257,116
Market share, %	0.6	10.3	20.7	21.9	22.0	22.3	22.1	21.2
Fuel economy, mpg	19.6	23.9	23.1	22.6	22.5	22.9	22.1	22.8
Large Van								
Total sales, units	328,065	536,242	398,877	308,317	350,013	388,435	407,737	401,056
Market share, %	14.8	12.7	8.8	7.6	8.0	7.7	7.1	6.8
Fuel economy, mpg	16.3	16.4	16.9	17.4	16.9	17.3	17.4	17.1
Small Utility								
Total sales, units	75,875	477,706	738,294	782,588	867,934	948,797	1,042,584	1,225,131
Market share, %	3.4	11.3	16.4	19.3	19.8	18.8	18.2	20.6
Fuel economy, mpg	16.9	22.1	21.9	21.1	20.9	21.3	20.7	20.8
Large Utility								
Total sales, units	167,288 ^r	229,242	192,544	131,740	167,199	378,710	445,601	509,914
Market share, %	7.5	5.4	4.3	3.3	3.8	7.5	7.8	8.6
Fuel economy, mpg	14.5 ^r	16.6	16.1	16.4	16.9	17.5	17.8	17.4
Fleet								
Total sales, units	2,216,537	4,235,365	4,514,625	4,043,191	4,392,451	5,055,677	5,724,401	5,933,866
Market share, %	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Fuel economy, mpg	18.1	20.4	20.5	20.6	20.4	20.5	20.4	20.2

^r Revised.

* These figures represent only those sales that could be matched to corresponding EPA fuel economy values.

Source: Oak Ridge National Laboratory, *Light Duty Vehicle MPG and Market Shares Systems*, 1996.

▲ **TABLE 1-30**

World Motor Vehicle Production

10-Year Intervals 1961–1991 and Annually 1994–1995

(Thousands)

Country	Passenger Cars					Commercial Vehicles					Total				
	1961	1971	1981	1991	1995	1961	1971	1981	1991	1995	1961	1971	1981	1991	1995
Argentina	78	193	139	114	338	227	58	60	33	25	70	59	136	253	172
Australia	182	393	352	278	329	314	49	77	40	15	9	30	231	470	392
Austria	8	1	7	14	45	43	5	6	8	6	3	3	13	7	15
Belgium	–	279	216	253	409	386	1	17	41	84	71	82	1	296	257
Brazil	98	342	406	705	1,249	1,297	47	174	374	255	333	328	145	516	780
Canada	328	1,083	203	1,072	1,216	1,339	63	277	520	833	1,106	1,078	391	1,360	1,323
China	–	–	–	40	250	321	–	–	–	604	1,100	1,114	–	–	–
Commonwealth of Independent States^a															
Czech Republic ^b	59	149	181	173	152	189	17	28	49	29	28	27	76	177	230
France	988	2,694	2,612	3,188	3,175	3,051	217	316	408	423	383	424	1,205	3,010	3,019
Germany	1,802	3,829	3,758	4,809	4,094	4,360	411	312	358	391	262	307	2,213	4,141	4,116
India	22	42	42	177	249	330	32	47	107	177	238	306	54	89	149
Italy	694	1,701	1,257	1,631	1,341	1,422	65	116	176	245	194	245	759	1,817	1,434
Japan	250	3,718	6,974	9,753	7,801	7,611	789	2,093	4,206	3,492	2,753	2,585	1,039	5,811	11,180
Korea, South	–	–	69	1,158	1,806	1,986	–	–	65	340	506	541	–	–	134
Malaysia	–	–	–	–	171	241	–	–	–	–	8	6	–	–	–
Mexico	–	154	355	720	856	699	–	57	242	269	266	236	–	211	597
Netherlands	13	78	78	85	92	100	6	13	12	26	23	32	19	91	90
Poland	14	86	248	155	326	258	22	60	60	30	25	5	36	146	308
Spain	55	453	855	1,774	1,822	1,959	20	79	132	308	321	375	75	532	987
Sweden	110	287	258	269	353	388	22	30	55	75	82	102	132	317	314
Taiwan	–	–	–	–	291	282	–	–	–	–	132	124	–	–	–
United Kingdom	1,004	1,742	955	1,237	1,467	1,532	443	456	230	217	228	233	1,447	2,198	1,184
United States	5,522	8,584	6,253	5,439	6,614	6,350	1,131	2,088	1,690	3,372	5,649	5,635	6,653	10,672	7,943
Yugoslavia, Fed. Republic	15	114	240	216	8	8	5	18	27	26	2	2	20	132	266
Total	11,391	26,440	26,782	34,431	35,316	35,816	3,815	6,946	9,721	15,206	14,043	14,118	9,356	33,175	37,230

^a Formerly U.S.S.R.

^b Formerly Czechoslovakia.

Note: Production in this table refers to vehicles locally manufactured. Total may not equal sum of components due to rounding.

Source: American Automobile Manufacturers Association (AAMA), *Motor Vehicle Facts & Figures*, 1996, p. 13, and similar tables in earlier editions.

The Transportation System

SECTION D

Condition

Table 1-31
Runway Pavement Condition at NPIAS* Airports
 1986, 1990, 1993
 (Percent)

Year	Commercial Airports			Public Airports		
	Good	Fair	Poor	Good	Fair	Poor
1986	78	15	7	61	28	11
1990	78	17	5	61	29	10
1993	79	18	3	68	25	7

* U.S. DOT/FAA's National Plan of Integrated Airport Systems

Note: Runway pavement condition is classified as follows:

Good: All cracks and joints are sealed.

Fair: Mild surface cracking, unsealed joints, and slab edge spalling.

Poor: Large open cracks, surface and edge spalling, vegetation growing through cracks and joints.

Source: U.S. DOT/FAA, *National Plan of Integrated Airport Systems (NPIAS), 1990-1999*, and *National Plan of Integrated Airport Systems (NPIAS), 1993-1997*.

TABLE 1-32

Highway Condition by Functional System (Rural)

Annually 1990–1994

(Miles of pavement)

Year	Rural Interstate														Total Reported	%
	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%			
1990	—	2,904	8.7	*	*	10,694	31.9	*	*	19,949	59.5	—	—	33,547	100.0	
1991	—	2,534	7.5	*	*	10,651	31.6	*	*	20,492	60.8	—	—	33,677	100.0	
1992	—	1,733	5.2	4,670	14.1	5,754	17.4	9,105	27.6	11,765	35.6	—	—	33,027	100.0	
1993	2,353	2,269	7.5	7,240	23.9	5,686	18.8	10,255	33.8	4,849	16.0	—	—	30,299	100.0	
1994	621	2,045	6.4	8,356	26.2	7,537	23.7	10,401	32.7	3,497	11.0	—	—	31,836	100.0	
1995	1,326	551	1.8	1,403	4.5	13,424	43.0	11,538	36.9	4,338	13.9	—	—	31,254	100.0	

	Other Principal Arterial														
	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%	Total Reported	%
Year	—	2,878	3.4	*	*	35,680	42.6	*	*	45,244	54.0	—	—	83,802	100.0
1990	—	3,012	3.5	*	*	38,126	44.5	*	*	44,591	52.0	—	—	85,729	100.0
1991	—	3,098	3.3	5,625	5.9	32,884	34.7	26,983	28.5	26,208	27.6	—	—	94,798	100.0
1992	11,234	8,682	10.2	23,909	28.1	19,526	23.0	21,236	25.0	11,614	13.7	—	—	84,967	100.0
1993	3,624	2,125	2.3	7,296	7.8	51,132	54.8	24,947	26.7	7,871	8.4	—	—	93,371	100.0
1994	8,683	3,906	4.4	6,804	7.6	45,607	51.1	24,884	27.9	8,064	9.0	—	—	89,265	100.0
1995															

Year	Minor Arterial												Unpaved	%	Total Reported	%
	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%					
1990	—	6,435	4.4	*	*	69,988	48.4	*	*	68,276	47.2	36	0.0	144,735	100.0	
1991	—	5,979	4.2	*	*	67,681	47.4	*	*	69,170	48.4	36	0.0	142,866	100.0	
1992	—	5,408	3.9	9,740	7.1	50,058	36.4	34,851	25.3	36,918	26.8	666	0.5	137,641	100.0	
1993	732	16,446	12.0	31,846	23.2	36,554	26.6	32,234	23.5	20,116	14.7	—	—	137,196	100.0	
1994	3,232	4,394	3.3	13,125	9.7	74,352	55.1	33,192	24.6	9,876	7.3	—	—	134,939	100.0	
1995	15,708	4,503	3.7	10,963	9.0	66,398	54.7	29,013	23.9	10,566	8.7	—	—	121,443	100.0	

Year	Major Collector														Total Reported	
	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%			
1990	—	38,621	8.9	*	*	191,698	43.9	*	*	157,759	36.2	48,287	11.1	436,365	100.0	
1991	—	33,223	7.6	*	*	197,924	45.3	*	*	157,464	36.1	48,126	11.0	436,737	100.0	
1992	—	34,075	7.8	47,953	11.0	140,233	32.3	76,886	17.7	88,496	20.4	46,532	10.7	434,175	100.0	
1993	—	30,307	7.0	54,732	12.6	154,750	35.8	74,875	17.3	71,024	16.4	46,987	10.9	432,675	100.0	
1994	—	27,888	6.5	48,791	11.3	144,326	33.5	69,532	16.1	94,529	21.9	46,045	10.7	431,111	100.0	
1995	—	28,260	6.5	49,334	11.4	132,848	30.8	75,103	17.4	102,123	23.7	44,046	10.2	431,712	100.0	

Year	Minor Collector														Total Reported	%
	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%			
1990	—	31,944	10.9	*	*	99,686	33.9	*	*	63,876	21.7	98,406	33.5	293,912	100.0	
1991	—	26,472	9.0	*	*	107,260	36.5	*	*	62,274	21.2	97,494	33.2	293,500	100.0	
1992	—	24,154	8.5	32,998	11.6	69,242	24.3	30,183	10.6	32,952	11.6	95,177	33.4	284,706	100.0	
1993	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
1994	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
1995	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	

Year	Total Rural**												Unpaved	%	Total Reported	%
	Not Re-ported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%					
1990	—	82,782	8.3	*	*	407,746	41.1	*	*	355,104	35.8	146,729	14.8	992,361	100.0	
1991	—	71,220	7.2	*	*	421,642	42.5	*	*	353,991	35.7	145,656	14.7	992,509	100.0	
1992	—	68,468	7.0	100,986	10.3	298,171	30.3	178,008	18.1	196,339	19.9	142,375	14.5	984,347	100.0	
1993	14,319	57,704	8.4	117,727	17.2	216,516	31.6	138,600	20.2	107,603	15.7	46,987	6.9	685,137	100.0	
1994	7,477	36,452	5.3	77,568	11.2	277,347	40.1	138,072	20.0	115,773	16.7	46,045	6.7	691,257	100.0	
1995	25,717	37,220	5.5	68,504	10.2	258,277	38.3	140,538	20.9	125,091	18.6	44,046	6.5	673,676	100.0	

(continued on next page)

TABLE 1-32 (continued)**Highway Condition by Functional System (Urban)**

Annually 1990–1995

(Miles of pavement)

Urban Interstate														
Year	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%	Total Reported
1990	—	993	8.6	*	*	3,717	32.2	*	*	6,817	59.1	—	—	11,527
1991	—	881	7.6	*	*	3,744	32.3	*	*	6,978	60.1	—	—	11,603
1992	—	884	7.1	1,651	13.2	2,122	17.0	3,487	28.0	4,322	34.7	—	—	12,466
1993	1,454	1,228	10.7	2,830	24.8	2,315	20.3	3,000	26.3	2,051	18.0	—	—	11,424
1994	416	1,562	12.3	3,598	28.3	3,024	23.8	3,341	26.3	1,185	9.3	—	—	12,710
1995	857	222	1.8	1,057	8.6	6,237	50.7	3,389	27.5	1,402	11.4	—	—	12,307

Other Freeways and Expressways														
Year	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%	Total Reported
1990	—	172	2.2	*	*	3,365	43.9	*	*	4,133	53.9	—	—	7,670
1991	—	176	2.3	*	*	3,412	44.2	*	*	4,126	53.5	—	—	7,714
1992	—	220	2.6	499	5.9	2,740	32.4	2,380	28.1	2,626	31.0	—	—	8,465
1993	1,406	770	10.3	2,409	32.3	1,608	21.6	1,560	20.9	1,104	14.8	—	—	7,451
1994	725	337	4.1	861	10.4	3,917	47.4	1,812	21.9	1,343	16.2	—	—	8,270
1995	1,166	372	4.8	767	9.8	4,269	54.7	1,594	20.4	802	10.3	—	—	7,804

Other Principal Arterial														
Year	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%	Total Reported
1990	—	3,063	5.9	*	*	25,462	49.0	*	*	23,451	45.1	11	0.0	51,987
1991	—	3,469	6.6	*	*	25,687	49.1	*	*	23,166	44.3	27	0.1	52,349
1992	—	3,535	6.8	6,003	11.5	18,171	34.8	11,188	21.4	13,218	25.3	50	0.1	52,165
1993	13,107	6,238	15.7	10,970	27.6	9,088	22.9	7,682	19.3	5,750	14.5	—	—	39,728
1994	5,887	5,125	10.9	5,883	12.5	19,297	40.9	9,349	19.8	7,549	16.0	—	—	47,203
1995	11,352	5,152	12.4	6,097	14.7	19,565	47.2	6,608	15.9	4,022	9.7	—	—	41,444

Minor Arterial														
Year	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%	Total Reported
1990	—	6,691	9.0	*	*	36,202	48.5	*	*	31,393	42.1	370	0.5	74,656
1991	—	5,565	7.4	*	*	37,398	49.9	*	*	31,553	42.1	463	0.6	74,979
1992	—	6,329	7.9	11,519	14.3	27,411	34.1	15,416	19.2	19,283	24.0	410	0.5	80,368
1993	—	6,944	8.1	12,204	14.2	33,153	38.6	16,207	18.9	17,001	19.8	313	0.4	85,822
1994	—	5,918	6.7	10,798	12.3	33,470	38.1	17,974	20.5	19,386	22.1	306	0.3	87,852
1995	—	5,948	6.7	12,040	13.6	32,634	36.9	18,087	20.4	19,517	22.1	284	0.3	88,510

Collector														
Year	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%	Total Reported
1990	—	12,938	16.5	*	*	39,427	50.4	*	*	24,838	31.7	1,045	1.3	78,248
1991	—	8,662	11.2	*	*	41,255	53.5	*	*	26,334	34.2	846	1.1	77,097
1992	—	8,653	10.5	13,934	16.9	29,077	35.2	14,323	17.3	15,747	19.1	923	1.1	82,657
1993	—	9,204	10.8	14,339	16.8	32,798	38.4	14,658	17.2	13,549	15.9	830	1.0	85,378
1994	—	8,416	9.8	13,959	16.2	34,460	40.0	14,668	17.0	13,802	16.0	793	0.9	86,098
1995	—	8,463	9.7	14,648	16.8	34,036	39.0	14,998	17.2	14,472	16.6	714	0.8	87,331

Total Urban**														
Year	Not Reported	Poor	%	Mediocre	%	Fair	%	Good	%	Very Good	%	Unpaved	%	Total Reported
1990	—	23,857	10.6	*	*	108,173	48.3	*	*	90,632	40.4	1,426	0.6	224,088
1991	—	18,753	8.4	*	*	111,496	49.8	*	*	92,157	41.2	1,336	0.6	223,742
1992	—	19,621	8.3	33,606	14.2	79,521	33.7	46,794	19.8	55,196	23.4	1,383	0.6	236,121
1993	15,967	24,384	10.6	42,752	18.6	78,962	34.4	43,107	18.8	39,455	17.2	1,143	0.5	229,803
1994	7,028	21,358	8.8	35,099	14.5	94,168	38.9	47,144	19.5	43,265	17.9	1,099	0.5	242,133
1995	13,375	20,157	8.5	34,609	14.6	96,741	40.8	44,676	18.8	40,215	16.9	998	0.4	237,396

(continued on next page)

TABLE 1-32 (continued)

Highway Condition by Functional System

* Included in adjacent columns (see note below).

** Total of functional systems shown: data not published for local roads, or for Rural Minor Collector system after 1992.

Note: Pavement condition is stratified using the "Present Serviceability Rating" (PSR) or the "International Roughness Index" (IRI). PSR values range from 0.1 to 5.0 where 5.0 denotes new pavement in excellent condition and 0.1 denotes pavement in extremely poor condition. Poor = ≤ 2.0 ; mediocre = 2.1 to 2.5 ; fair = 2.6 to 3.4 ; good = 3.5 to 3.9 and very good >3.9 . In 1990 and 1991, poor = ≤ 2.0 ; mediocre/fair = 2.1 to 3.4 (combined) and good/very good = 3.5 to 5.0 (combined). On the IRI scale, lower values indicate smoother roads. Poor >220 , mediocre = 171–220, fair = 95–170, good = 60–94, and very good <60 . Some states did not report for all required mileage. Totals only reflect those states reporting usable or partially usable data. Column percentages may not sum to 100 and may differ slightly from percentages in source tables, which were adjusted so that they would.

Source: Rural Major Collector, Urban Minor Arterial, Urban Collector:

1990-1995: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table HM-63 and revisions.

All other functional systems:

1990-1994: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table HM-63 and revisions.

1995: U.S. DOT/FHWA, *Highway Statistics*, 1995, Table HM-64.

Table 1-33
Average Age of Urban Transit Vehicles
 Annually 1985-1994
 (Years)

Year	Locomotives*	Rapid Rail	Unpowered Commuter Rail Cars	Powered Commuter Rail Cars	Light Rail Vehicles	Articulated Buses	Full-Size Buses	Mid-Size Buses	Small Buses	Vans
1985	16.3	17.1	19.1	12.3	20.6	3.36	8.13	5.63	4.76	3.75
1986	15.1	16.5	18.3	12.5	16.9	4.02	8.32	5.98	4.44	3.46
1987	16.9	15.2	19.6	13.3	17.2	4.85	8.24	5.92	3.91	3.14
1988	14.9	15.2	17.3	14.3	18.9	5.91	8.22	6.53	4.16	3.63
1989	14.6	15.4	18.0	15.0	15.6	6.67	8.35	6.53	4.06	2.89
1990	15.7	16.2	17.6	15.9	15.2	7.56	8.20	6.64	3.86	2.84
1991	15.3	16.9	17.3	16.5	16.6	8.15	8.01	6.68	4.02	2.95
1992	15.8	17.7	19.3	17.6	17.0	9.11	8.29	6.79	4.12	3.08
1993	15.6	17.8	18.6	18.2	14.9	9.53	8.46	6.42	3.95	3.09
1994	15.3	15.8	20.1	16.0	16.7	9.10	9.90	7.20	4.40	3.90

* Commuter train locomotives only. Locomotives used in intercity passenger services by Amtrak are not included.

Source: U.S. DOT/FTA, National Transit Database (formerly Section 15).

TABLE 1-34

Class I Railroad Locomotive Fleet by Year Built

Annually 1990–1995

(Locomotive Units)

Year	Year Built ^a											Total
	Before 1970	1970-1974	1975-1979	1980-1984	1985-1989	1990	1991	1992	1993	1994	1995	
1990	5,117	3,852	4,432	2,837	1,989	608	—	—	—	—	—	18,835
1991	4,353	3,617	4,375	2,826	1,985	605	583	—	—	—	—	18,344
1992	4,038	3,384	4,292	2,784	1,970	604	595	337	—	—	—	18,004
1993	3,766	3,248	4,352	2,730	1,968	604	595	340	558	—	—	18,161
1994	3,535	3,184	4,275	2,625	1,971	599	594	339	602	781	—	18,505
1995	6,048 ^b	^c	4,254	2,754	1,890	2,965 ^d	^e	^e	^e	^e	901	18,812

^a Disregards year of rebuilding.

^b Includes data for 1970-1974.

^c Included with data in Before 1970 column.

^d Includes data for 1991-1994.

^e Included in 1990 figure.

Source: Association of American Railroads (AAR), *Railroad Facts*, annual issues, p. 49.

TABLE 1-35

Age and Percentage Available for Service of Amtrak Locomotive and Car Fleet

1972, 5-Year Intervals 1975–1990 and Annually 1990–1995

Year	Locomotives		Cars	
	Percent Available for Service ^a	Average Age ^b (Years)	Percent Available for Service ^a	Average Age ^b (Years)
1972	—	22.3	—	22.0
1975	87	14.4	82	24.7
1980	83	7.4	77	14.3
1985	93	7.0	90	14.2
1990	84	12.0	90	20.0
1991	86	13.0	92	21.0
1992	83	13.0	90	21.5
1993	84	13.2	89	22.6
1994	85	13.4	88	22.4
1995	88	13.9	90	21.8

^a Year-end daily average. Active Units less Backshop Units undergoing heavy maintenance less Bad Ordered Units undergoing progressive maintenance and running repairs.

^b Year-end average.

Note: 1972 was Amtrak's first full fiscal year.

Source: 1972-1980: Amtrak, Annual Reports.

1985: Ibid., *Statistical Appendix to Amtrak FY 1994 Annual Report*, p. 5.

1990-1995: Ibid., *FY 1995*, p. 4.

Table 1-36
U.S. Flag Vessels by Type and Age

Annually 1990-1995
 (Number of Vessels)

Vessel Type	1990-1991						1992					
	Age* (years)						Age* (years)					
	<=5	6-10	11-15	16-20	21-25	>25	<=5	6-10	11-15	16-20	21-25	>25
Dry Cargo	80	161	212	141	82	196	900	36	73	135	73	124
Tanker	6	38	50	35	38	86	257	5	28	54	33	82
Towboat	132	706	1,029	844	750	1,718	5,210	134	398	1,137	926	1,874
Passenger ^a	151	120	110	80	65	188	721	219	198	203	169	287
Offshore Supply/Crewboats ^b	85	318	474	144	84	51	1,168	93	208	567	189	91
Dry Barge	2,335	4,570	7,639	6,374	2,607	3,372	27,110	3,224	1,783	9,114	6,696	2,475
Tank/Liquid Barge ^b	162	316	829	750	759	1,049	3,874	296	121	902	740	677
Total	2,951	6,229	10,343	8,368	4,385	6,660	39,342	4,007	2,809	12,112	8,826	4,154

Vessel Type	1993						1994					
	Age* (years)						Age* (years)					
	<=5	6-10	11-15	16-20	21-25	>25	<=5	6-10	11-15	16-20	21-25	>25
Dry Cargo	25	67	135	70	41	128	470	46	103	200	130	206
Tanker	3	22	43	33	31	73	205	4	12	36	44	74
Towboat	135	205	1,221	968	674	2,008	5,219	146	151	1,135	966	664
Passenger ^a	207	221	211	164	129	311	1,243	157	185	123	122	82
Offshore Supply	103	107	597	218	106	64	1,197	107	61	540	309	130
Dry Barge	3,558	1,070	8,810	6,772	2,904	3,713	26,982	3,630	1,171	7,903	6,314	3,873
Tank Barge ^c	325	68	869	791	655	1,256	3,970	399	36	754	799	638
Total	4,356	1,760	11,886	9,016	4,540	7,553	39,306	4,489	1,719	10,691	8,684	5,509

Vessel Type	1995						Total ^c
	Age* (years)						
	<=5	6-10	11-15	16-20	21-25	>25	
Dry Cargo	38	90	168	135	80	213	726
Tanker	5	8	34	38	29	64	178
Towboat	168	134	959	988	726	2,146	5,127
Passenger ^a	149	195	133	121	91	263	954
Offshore Supply	119	58	463	412	141	92	1,288
Dry Barge	3,975	1,483	6,387	6,507	4,897	3,966	27,375
Tank Barge ^c	489	46	611	736	697	1,403	3,985
Total	4,943	2,014	8,755	8,937	6,661	8,147	39,641

* Age is based upon the year the vessel was built or rebuilt.

a Includes passenger excursion/sightseeing, combination passenger and dry cargo vessels and ferries.

b In 1992, offshore supply boats were designated as crewboats and tank barges were designated as liquid barges.

c Total may be greater than sum of columns because of unclassified vessels or those of unknown age.

Source: U.S. Army Corps of Engineers, *Waterborne Transportation Lines of the United States*, annual issues.

The Transportation System

SECTION E

Physical Performance

TABLE 1-37**Passengers Denied Boarding by the Largest* U.S. Air Carriers**

Annually 1986–1995

(Thousands)

Year	Voluntary	Involuntary	Total Passengers Denied Boarding
1986	557	167	724
1987	705	169	874
1988	648	128	776
1989	616	107	723
1990	561	67	628
1991	599	47	646
1992	718	46	764
1993	632	51	683
1994	771 ^r	53 ^r	824 ^r
1995	794	49	843

^r Revised.

* Data includes nonstop scheduled service flights between points within the United States (including territories) by the ten largest U.S. air carriers, i.e., those with at least one percent of total domestic scheduled-service passenger revenues (Alaska, America West, American, Continental, Delta, Northwest, Southwest, TWA, United, USAir).

Note: Number of passengers who hold confirmed reservations and are denied boarding ("bumped") from a flight because it is oversold. These figures do not include passengers affected by cancelled, delayed, or diverted flights.

Source: U.S. DOT/OST, *Air Travel Consumer Report*, April 1996, p. 24, and similar tables in earlier editions.

TABLE 1-38**Flight Operations Arriving On-Time for the Largest* U.S. Air Carriers**

Annually 1988–1995

(Percent)

Year	Percent On-Time Flight Operations
1988	80.0
1989	76.3
1990	79.4
1991	82.5
1992	82.3
1993	81.6
1994	81.5
1995	78.6

* Data includes nonstop scheduled service flights between points within the United States (including territories) by the ten largest U.S. air carriers, i.e., those with at least one percent of total domestic scheduled-service passenger revenues (Alaska, America West, American, Continental, Delta, Northwest, Southwest, TWA, United, USAir).

Source: U.S. DOT/OST, *Air Travel Consumer Report*, February 1996, p. 4, and similar tables in earlier editions.

Table 1-39

Distribution of Air Carrier Delay Greater Than 15 Minutes by Cause

1987-1994

(Percent)

Cause	1987	1988	1989	1990	1991	1992	1993	1994
Weather	67	70	57	56	65	65	72	75
Terminal Volume	11	9	29	35	27	27	22	19
Center Volume	13	12	8	2	0	0	0	0
Closed Runways/Taxiways	4	5	3	3	3	3	3	2
NAS (National Airspace System) Equipment	4	3	2	1	2	2	2	2
Other	1	1	1	4	3	3	3	2
Total Operations Delayed (thousands)	356	338	394	393	298	281	276	248

Note: Data subject to revision.

Source: U.S. DOT/FAA, *Aviation System Capacity Enhancement Plan*, 1995, Table 1-1.

Table 1-40

Total Cost of Air Carrier Delay

1987-1994

(Millions of Current Dollars)

Item	1987	1988	1989	1990	1991	1992	1993	1994
Operating Cost	1,895	2,159	2,365	2,829	2,485	2,478	2,509	2,514
Passenger Delay Cost	4,649	4,959	5,363	5,861	5,695	6,272	6,495	7,014
Total Delay Cost	6,544	7,118	7,728	8,690	8,180	8,750	9,004	9,528

Note: Operating cost is calculated using total delay hours and an estimated cost per delay hour (ranging from 1,304 in 1987 to 1,495 in 1994). Passenger delay cost is calculated using passenger delay hours and an estimated value of passenger time per hour (ranging from \$34 in 1987 to \$44 in 1994).

Source: U.S. DOT/FAA, *Total Cost for Air Carrier Delay*, 1995.

Table 1-41

Total Cost of Air Carrier Delay

1987-1994

(Millions of Constant 1994 Dollars)

Item	1987	1988	1989	1990	1991	1992	1993	1994
Operating Cost	2,450	2,679	2,798	3,184	2,684	2,595	2,562	2,514
Passenger Delay Cost	6,015	6,147	6,380	6,613	6,186	6,569	6,644	7,014
Total Delay Cost	8,465	8,825	9,178	9,798	8,870	9,165	9,206	9,528

Note: Total may not equal sum of components due to rounding.

Source: U.S. DOT/FAA, *Total Cost for Air Carrier Delay*, 1995.

TABLE 1-42**Total Daily Person-Hours of Delay and Congestion Cost Per Capita for 50 Urban Areas**

4-Year Intervals 1982-1990, Annually 1992-1993

(Thousands)

Daily Person-Hours of Delay (thousand)						1993 Congestion Cost
Urban Area	1982	1986	1990	1992	1993	Per Capita (Dollars)
1 Albuquerque, NM	12	19	28	29	35	230
2 Atlanta, GA	145	249	297	334	388	590
3 Austin, TX	31	55	60	62	74	470
4 Baltimore, MD	70	119	160	194	205	350
5 Boston, MA	244	358	426	446	437	520
6 Charlotte, NC	15	28	38	45	47	320
7 Chicago, IL	405	606	669	779	788	370
8 Cincinnati, OH	25	32	53	70	78	220
9 Cleveland, OH	26	39	69	81	89	180
10 Columbus, OH	29	37	60	68	68	250
11 Corpus Christi, TX	2	4	3	6	6	80
12 Dallas, TX	201	327	331	341	346	600
13 Denver, CO	104	136	170	191	211	460
14 Detroit, MI	340	408	521	604	673	590
15 El Paso, TX	6	10	12	17	18	120
16 Fort Lauderdale, FL	46	65	89	99	105	290
17 Fort Worth, TX	71	118	123	131	147	440
18 Hartford, CT	15	26	43	46	56	330
19 Honolulu, HI	47	58	67	79	86	450
20 Houston, TX	369	468	485	509	537	660
21 Indianapolis, IN	11	13	22	25	36	130
22 Jacksonville, FL	40	48	70	76	83	380
23 Kansas City, MO	21	27	35	54	60	160
24 Los Angeles, CA	1,273	1,987	2,306	2,367	2,402	710
25 Louisville, KY	19	23	26	35	42	180
26 Memphis, TN	15	18	26	33	36	140
27 Miami, FL	170	199	288	288	312	560
28 Milwaukee, WI	32	47	58	62	62	180
29 Minneapolis - St. Paul, MN	51	88	129	147	144	240
30 Nashville, TN	21	37	51	49	46	270
31 New Orleans, LA	46	80	85	83	85	270
32 New York, NY	1,310	1,498	1,900	2,048	2,128	450
33 Norfolk, VA	43	78	94	93	90	330
34 Oklahoma City, OK	18	25	27	32	35	150
35 Orlando, FL	26	40	46	53	66	250
36 Philadelphia, PA	252	312	344	369	380	250
37 Phoenix, AZ	130	176	212	240	248	420
38 Pittsburgh, PA	75	120	149	153	161	290
39 Portland, OR	51	62	90	109	117	390
40 Sacramento, CA	37	57	87	92	106	310
41 Salt Lake City, UT	10	13	19	27	32	130
42 San Antonio, TX	39	76	78	89	99	290
43 San Bernardino-Riverside, CA	117	198	251	284	292	790
44 San Diego, CA	66	121	211	219	210	300
45 San Francisco-Oakland, CA	420	683	815	803	828	780
46 San Jose, CA	117	202	237	249	245	580
47 Seattle - Everett, WA	129	221	329	369	377	720
48 St. Louis, MO	114	143	160	160	182	320
49 Tampa, FL	36	47	59	64	63	290
50 Washington, DC	368	533	673	769	789	820

Source: Texas Transportation Institute, *Urban Roadway Congestion - 1982 to 1993, Volume 2*, TTI Research Report 1131-8, 1996.

TABLE 1-43

Total Person-Hours of Delay by Highway Type and Roadway Congestion Index for 50 Urban Areas

1993

Urban Area	Freeway/Expressway		Principal Arterial		Roadway Congestion Index*
	Recurring	Incident	Recurring	Incident	
1 Albuquerque, NM	3,370	3,700	10,010	11,010	0.96
2 Atlanta, GA	102,170	112,390	45,550	50,100	1.16
3 Austin, TX	22,250	24,470	6,080	6,690	0.95
4 Baltimore, MD	34,650	79,700	23,570	25,930	1.04
5 Boston, MA	63,500	222,240	30,290	33,310	1.07
6 Charlotte, NC	7,020	5,610	11,750	12,930	0.92
7 Chicago, IL	168,840	202,610	123,490	135,840	1.26
8 Cincinnati, OH	26,840	21,470	6,590	7,250	1.03
9 Cleveland, OH	30,320	21,230	9,500	10,450	0.98
10 Columbus, OH	20,260	14,180	9,600	10,560	0.93
11 Corpus Christi, TX	1,430	1,580	920	1,010	0.75
12 Dallas, TX	85,530	153,950	17,580	19,340	1.07
13 Denver, CO	48,800	48,800	33,860	37,240	1.07
14 Detroit, MI	102,210	224,860	100,460	110,500	1.23
15 El Paso, TX	5,140	5,660	1,790	1,970	0.77
16 Fort Lauderdale, FL	20,300	30,450	15,810	17,390	0.98
17 Fort Worth, TX	36,810	66,260	6,810	7,490	0.95
18 Hartford, CT	8,380	22,640	6,680	7,340	0.93
19 Honolulu, HI	18,410	33,130	8,050	8,860	1.13
20 Houston, TX	152,090	212,920	30,940	34,040	1.13
21 Indianapolis, IN	6,880	10,330	5,350	5,880	0.89
22 Jacksonville, FL	11,960	17,950	17,520	19,270	0.96
23 Kansas City, MO	8,300	25,720	6,710	7,390	0.78
24 Los Angeles, CA	626,810	752,170	258,220	284,050	1.54
25 Louisville, KY	4,320	4,750	11,630	12,790	0.93
26 Memphis, TN	4,200	4,620	9,330	10,270	0.93
27 Miami, FL	39,560	59,340	71,590	78,740	1.32
28 Milwaukee, WI	14,970	14,970	9,410	10,350	1.00
29 Minneapolis - St. Paul, MN	37,340	33,610	21,020	23,120	1.02
30 Nashville, TN	7,860	8,650	9,550	10,510	0.93
32 New Orleans, LA	15,720	28,300	11,430	12,580	1.09
31 New York, NY	316,050	790,140	284,050	312,450	1.15
33 Norfolk, VA	13,830	34,580	11,130	12,250	0.92
34 Oklahoma City, OK	4,030	4,430	9,430	10,370	0.86
35 Orlando, FL	12,860	19,290	9,680	10,640	0.82
36 Philadelphia, PA	31,570	66,290	98,300	108,130	1.04
37 Phoenix, AZ	43,140	17,260	65,900	72,490	1.08
38 Pittsburgh, PA	11,870	34,410	39,340	43,270	0.82
39 Portland, OR	21,270	42,540	14,290	15,720	1.11
40 Sacramento, CA	20,300	12,180	24,860	27,340	1.04
41 Salt Lake City, UT	9,400	5,640	5,060	5,570	0.92
42 San Antonio, TX	28,440	31,280	9,150	10,060	0.91
43 San Bernardino, CA	74,210	89,050	33,520	36,870	1.21
44 San Diego, CA	81,580	48,950	17,850	19,640	1.21
45 San Francisco - Oakland, CA	236,930	308,000	55,950	61,540	1.33
46 San Jose, CA	68,450	82,140	21,760	23,940	1.05
47 Seattle - Everett, WA	99,580	139,420	29,950	32,950	1.23
48 St. Louis, MO	29,110	34,930	38,910	42,800	0.96
49 Tampa, FL	5,510	8,260	17,390	19,130	1.06
50 Washington, DC	138,160	303,950	90,030	99,030	1.41

* Congestion Index value above 1.0 indicates an undesirable level of congestion.

Source: Texas Transportation Institute, *Urban Roadway Congestion - 1982 to 1993, Volume 2*, TTI Research Report 1131-8, 1996.

Table 1-44**Amtrak On-Time Performance Trends**

5-Year Intervals 1980-1990 and Annually 1990-1995

(Percent)

Year	Short Distance	Long Distance	System-wide
1980	71	76	69
1985	82	78	81
1990	82	53	76
1991	82	59	77
1992	82	61	77
1993	79	47 *	72
1994	78	49	72
1995	81	57	76

* A 14% decrease from Fiscal Year 1992 attributed to extensive Midwest floods.

Note: All percentages based on Amtrak Fiscal Year (October 1-September 30).

Sources: 1980: Amtrak, *National Railroad Passenger Corporation Annual Report, 1984*.
 1985: Ibid., *Statistical Appendix to Amtrak FY 1994 Annual Report, 1994*.
 1990-1995: Ibid., *FY 1995*.

Chapter 2

TRANSPORTATION
AND THE ECONOMY

Transportation
and the Economy

SECTION A

Transportation and the Total Economy

TABLE 2-1
Contribution of Transportation Sectors to Gross Domestic Product
 5-Year Intervals 1960–1990 and Annually 1990–1994
 (Billions of Current Dollars)

Year	Air	Trucking & Warehousing	Local & Interurban Passenger Transit	Railroad	Water	Pipeline, Except Natural Gas	Transportation Services	Total Transportation
1960	2.0	7.5	1.8	8.4	1.8	0.6	0.9	21.0
1965	3.4	10.7	2.1	9.1	2.2	0.7	1.3	26.1
1970	6.3	15.0	2.8	10.0	2.9	1.0	1.6	33.3
1975	10.2	24.3	3.4	12.5	4.0	1.8	3.1	49.1
1980	18.1	40.3	5.3	20.6	7.2	5.2	6.3	84.9
1985	27.2	53.6	7.4	22.2	8.3	6.1	11.2	108.8
1990 ^r	39.4	75.8	9.0	19.6	9.7	5.0	17.8	176.4
1991 ^r	40.8	77.9	10.2	21.9	10.7	5.0	19.4	185.8
1992 ^r	43.0	82.2	10.9	22.1	10.3	4.9	19.6	192.8
1993 ^r	48.6	88.4	11.3	23.0	10.3	6.2	20.8	207.6
1994 ^p	51.1	95.1	11.7	24.3	10.6	5.7	24.3	222.8

^p Preliminary.

^r Revised.

Note: Totals may not equal sum of columns due to rounding.

Source: 1960–1985: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, November 1993, Table 6, p. 30, Table 10, pp. 42–43.

1990–1994: Ibid., August 1996, Table 10, p. 150.

TABLE 2-2
U.S. Gross Domestic Product Attributed to Transportation-Related Final Demand

Annually 1991-1995

(Billions of Current Dollars)

	1991	1992	1993	1994	1995
Personal Consumption of Transportation					
Motor Vehicles & Parts	187.6	206.9	226.1	245.3	247.8
Gasoline & Oil	103.9	106.6	108.1	109.9	114.6
Transport Services	145.3	158.1	169.6	181.3	192.5
Total Personal Consumption of Transportation	436.8	471.6	503.8	536.5	554.9
Gross Private Domestic Investment					
Transportation Structures	3.2	3.7	4.1	4.9	5.6
Transportation Equipment	79.5	86.2	99.2	117.1	124.9
Total Gross Private Domestic Investment	82.7	89.9	103.3	122.0	130.5
Exports (+)					
Civilian Aircraft, Engines & Parts	36.6	37.7	32.7	31.5	26.2
Automotive Vehicles, Engines & Parts	40.0	47.0	52.4	57.6	60.9
Passenger Fares	15.9	16.6	16.6	17.5	18.3
Other Transportation	23.3	23.7	24.0	26.1	28.3
Total Exports	115.8	125.0	125.7	132.7	133.7
Imports(-)					
Civilian Aircraft, Engines & Parts	11.7	12.6	11.3	11.3	10.7
Automotive Vehicles, Engines & Parts	85.7	91.8	102.4	118.3	124.9
Passenger Fares	10.0	10.6	11.3	12.7	13.4
Other Transportation	25.2	25.5	26.6	28.4	29.5
Total Imports	132.6	140.5	151.6	170.7	178.5
Net Exports of Transportation-Related Goods & Services	-16.8	-15.5	-25.9	-38.0	-44.8
Government Transportation-Related Purchases					
Federal Purchases	16.2	16.8	17.7	19.3	21.0
State & Local Purchases	89.2	95.3	99.5	102.8	106.2
Defense-Related Purchases	15.8	11.3	9.8	8.6	9.4
Total Government Transportation-Related Purchases	121.2	123.4	127.0	130.7	136.6
Total Final Uses of Transportation	623.9	669.4	708.2	751.2	777.2
Gross Domestic Product	5,916.7	6,244.4	6,550.2	6,931.4	7,245.8
Total Transportation in Gross Domestic Product	10.5	10.7	10.8	10.8	10.7

Source: U.S. DOT/BTS, based on U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*.

TABLE 2-3**U.S. Gross Domestic Product Attributed to Transportation-Related Final Demand**

Annually 1991-1995

(Billions of Chained [1992] Dollars)

	1991	1992	1993	1994	1995
Personal Consumption of Transportation					
Motor Vehicles & Parts	193.2	206.9	218.6	228.2	221.0
Gasoline & Oil	103.4	106.6	109.1	110.4	113.3
Transport Services	152.3	158.1	162.6	171.3	177.0
Total Personal Consumption of Transportation	448.9	471.6	490.3	509.9	511.3
Gross Private Domestic Investment					
Transportation Structures	3.2	3.7	3.9	4.4	4.9
Transportation Equipment	81.7	86.2	97.5	111.7	118.0
Total Gross Private Domestic Investment	84.9	89.9	101.4	116.1	122.9
Exports (+)					
Civilian Aircraft, Engines & Parts	37.8	37.7	31.8	29.8	24.0
Automotive Vehicles, Engines & Parts	40.8	47.0	51.9	56.6	59.1
Passenger Fares	16.3	16.6	16.3	16.8	16.6
Other Transportation	23.4	23.7	23.6	25.8	27.5
Total Exports	118.3	125.0	123.6	129.0	127.2
Imports(-)					
Civilian Aircraft, Engines & Parts	12.0	12.6	11.0	10.7	9.8
Automotive Vehicles, Engines & Parts	87.2	91.8	100.7	112.6	115.6
Passenger Fares	10.3	10.6	11.5	12.8	12.8
Other Transportation	25.5	25.5	26.4	28.4	29.1
Total Imports	135.0	140.5	149.6	164.5	167.3
Net Exports of Transportation-Related Goods & Services	-16.7	-15.5	-26.0	-35.5	-40.1
Government Transport-Related Purchases					
Federal Purchases	16.6	16.8	17.0	18.0	18.0
State & Local Purchases	90.0	95.3	96.9	98.2	107.8
Defense-Related Purchases	15.8	11.3	9.7	8.4	9.1
Total Government Transport-Related Purchases	122.4	123.4	123.6	124.6	134.9
Total Final Uses of Transportation	639.5	669.4	689.3	715.1	729.0
Gross Domestic Product	6,079.0	6,244.4	6,383.8	6,604.2	6,739.0
Total Transportation Gross Domestic Product	10.5	10.7	10.8	10.8	10.8

Source: U.S. DOT/BTS, based on U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*.

▲ TABLE 2-4
Gross Domestic Product by Major Social Function
 Annually 1991-1995
 (Billions of Current Dollars)

	1991		1992		1993		1994		1995	
	Billion Current Dollars	Percent of Total	Billion Current Dollars	Percent of Total	Billion Current Dollars	Percent of Total	Billion Current Dollars	Percent of Total	Billion Current Dollars	Percent of Total
Food	779.1	13.2	802.5	12.9	832.6	12.7	874.9	12.6	915.9	12.6
Housing	1,371.0	23.2	1,467.5	23.5	1,568.4	23.9	1,688.8	24.4	1,762.9	24.3
Transport	623.9	10.5	669.4	10.7	708.2	10.8	751.2	10.8	777.2	10.7
Health	804.4	13.6	879.5	14.1	944.6	14.4	1,009.7	14.6	1,067.7	14.7
Education	407.8	6.9	427.6	6.8	449.6	6.9	476.5	6.9	503.9	7.0
Other	1,930.5	32.6	1,997.9	32.0	2,046.8	31.2	2,130.4	30.7	2,218.1	30.6
Total Gross										
Domestic Product	5,916.7	100.0	6,244.4	100.0	6,550.2	100.0	6,931.4	100.0	7,245.8	100.0

Source: U.S. DOT/BTS, based on U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, various 1996 issues.

TABLE 2-5
National Transportation and Economic Trends
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Passenger-Miles ^r		Ton-Miles		Population		Gross Domestic Product			
	(billions)	Index ^r	(billions)	Index	(millions)	Index	Industrial Production Index	Current Dollars ^r (billions)	Index	Chained (1992) Dollars (billions)
1960	1,553	54	1,504	50	181	79	38	527	19	2,232
1965	1,844	64	1,855	62	194	85	58	719	26	2,875
1970	2,245	78	2,206	74	205	90	61	1,036	37	3,388
1975	2,543	88	2,285	76	216	95	66	1,631	59	3,865
1980	2,894	100	2,989	100	228	100	84	2,784	100	4,612
1985	3,266	113	2,949	99	238	104	94	4,181	150 ^r	5,330
1990	3,677	127	3,196	107	250	110	106	5,744	206 ^r	6,139
1991	4,047	140	3,233	108	253	111	104	5,917	213 ^r	6,079
1992	4,195	145	3,337	112	255	112	108	6,244	224 ^r	6,244
1993	4,266	147	3,364	113	258	113	112	6,550	235 ^r	6,384
1994	4,383	151	3,527 ^r	118 ^r	261	114	118	6,931	249	6,604
1995 ^P	–	–	3,646	124	263	115	122	7,246	260	6,739

^P Preliminary.

^r Revised.

Note: Index (1980=100), except Industrial Production Index (1987=100).

Sources:

Passenger-Miles:

1960-1994: Summation of all modes from Table 1-7. (This edition of NTS.)

Ton-Miles:

1960-1995: Summation of all modes from Table 1-9. (This edition of NTS.)

Population:

1960-1995: U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 1996, Table 2.

Industrial Production Index:

1960-1995: Council of Economic Advisors, *Economic Report of the President*, annual issues, Table B-104, and similar tables in earlier editions.

Gross Domestic Product:

1960-1993: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, January-February 1996, Tables 1 and 2, pp. 107, 110.

1994-1995: Ibid., April 1996, Tables 1-9 and 1-10, p.14.

TABLE 2-6

Passenger and Freight Transportation Expenditures

5-year Intervals 1960–1990 and Annually 1990–1995

(Millions of Current Dollars)

Type of Expenditure	1960	1965	1970	1975	1980	1985	1990 ^f	1991	1992	1993 ^f	1994 ^f	1995 ^P
Passenger Transportation Expenditures												
Highway												
Auto Purchases & Ownership ^a	52,370	71,628	96,997	156,550	276,699	410,313	518,026	491,152	525,813	565,428	594,373	598,813
Local												
Bus ^b	668	727	921	2,348	4,649	6,774	8,326	8,639	8,966	9,361	10,069	10,279
Taxi	1,107	1,113	2,145	3,416	5,195	5,636	7,111	7,556	7,333	7,556	7,778	8,258
School Bus	486	707	1,219	2,174	3,833	5,900	7,605	7,879	8,080	7,618	7,847	9,082
Intercity												
Bus	559	629	799	1,016	1,709	1,989	1,750	1,875	1,899	1,667	1,410	1,497
Total Highway Passenger Transportation Expenditures	55,190	74,804	102,081	165,504	292,085	430,612	542,818	517,101	552,071	591,630	621,477	627,929
Air (Includes International)	3,555	5,682	10,565	18,851	38,135	50,319	73,410	73,155	74,051	74,977	77,233	81,947
Rail^c	759	598	464	1,212	2,976	3,875	4,521	4,414	4,571	5,278	4,917	5,103
Transit^c	669	727	920	2,349	4,648	6,774	8,325	8,639	8,966	9,361	10,068	10,280
Water (Includes International)	281	345	287	294	304	576	1,345	1,357	1,425	1,412	1,483	1,658
Total Passenger Transportation Bill	60,454	82,156	114,317	188,210	338,148	492,156	630,419	604,666	641,084	682,658	715,177	726,917

(continued on next page)

TABLE 2-6 (continued)
Passenger and Freight Transportation Expenditures
 5-year Intervals 1960–1990 and Annually 1990–1995
 (Millions of Current Dollars)

Type of Expenditure	1960	1965	1970	1975	1980	1985	1990 ^r	1991	1992	1993 ^r	1994 ^r	1995 ^p
Freight Transportation Expenditures												
Highway												
Local												
Truck	14,289	23,779	28,819	37,287	60,545	82,200	108,350	109,650	116,000	122,050	125,712	128,352
Intercity												
Bus	42	70	122	156	235	245	126	131	130	128	128	130
Truck	17,958	23,628	33,553	47,400	94,551	123,200	162,300	164,600	176,800	189,700	204,876	219,627
Total Highway Freight Transportation Expenditures	32,289	47,477	62,494	84,843	155,331	205,645	270,776	274,381	292,930	311,878	330,716	348,109
Air	354	708	1,171	1,838	4,013	6,817	13,706	14,353	14,950	15,805	17,239	18,869
Oil Pipeline	895	1,051	1,396	2,220	7,548	8,910	8,387	8,101	8,521	8,421	8,273	8,288
Rail	9,028	9,923	11,869	16,509	27,858	29,150	30,067	30,128	30,744	30,775	33,121	34,360
Water	3,487	3,903	5,257	8,221	15,498	18,449	20,121	20,671	20,247	20,768	21,150	22,236
Other	1,714	1,869	1,791	2,208	3,488	4,642	7,774	8,071	8,324	8,659	9,405	9,272
Total Freight Transportation Bill	47,767	64,931	83,978	115,839	213,736	273,612	350,831	355,705	375,716	396,306	419,904	441,134
Total Highway Passenger & Freight Transportation Expenditures												
Total Passenger & Freight Transportation Bill	108,221	147,087	198,295	304,049	551,884	765,768	981,250	960,371	1,016,800	1,078,964	1,135,081	1,168,051
Highway Passenger & Freight Transportation Percent of GDP												
Total Passenger & Freight Transportation Percent of GDP	16.7	17.0	15.9	15.4	16.1	15.2	14.2	13.4	13.5	13.8	13.7	13.5
Total Passenger & Freight Transportation Percent of GDP												
Percent of GDP	20.6	20.5	19.1	18.6	19.8	18.3	17.1	16.2	16.3	16.5	16.4	16.1
Gross Domestic Product (GDP) (billions of current dollars)^r	526.6	719.1	1,035.6	1,630.6	2,784.2	4,180.7	5,743.8	5,916.7	6,244.4	6,550.2	6,931.4	7,245.8

p Preliminary.

r Revised.

a Includes business expenditures for passenger cars.

b One-half of amount for "Bus and Transit" shown in source. Figures include operating revenues, federal, state, and local government operating subsidies, and capital grants.

c Data from 1980 include federal/state authorities operating subsidies and capital grants paid to state/local authorities who have taken over commuter services from railroads. Figures also include federal operating subsidies and capital grants for Amtrak and the Northeast Corridor.

Notes: Air includes aircraft and operating costs, intercity and domestic and international air passenger federal excise taxes.

Sources: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, pp. 40, 42. GDP: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, January-February 1996, Table 1, p. 107; April 1996, Tables 1-9, p. 14.

TABLE 2-7
Average Price of Transportation Fuel to End-Users
 5-Year Intervals 1960–1990 and Annually 1990–1995
 (Current Cents per Gallon)

Year	Aviation Fuel (excluding taxes)		Highway Fuel					Railroad Fuel, Diesel
	Aviation Gasoline ^a	Jet Fuel Kerosene ^a	Gasoline (including taxes)			Diesel No. 2 ^a (excluding taxes)		
			Leaded	Unleaded Premium ^b	Unleaded Regular ^b		All Types	
1960	—	—	31.1	—	—	—	—	9.0
1965	—	—	31.2	—	—	—	—	9.1
1970	—	—	35.7	—	—	—	—	10.7
1975	41.1	29.8	56.7	—	—	—	—	30.0
1980	108.4	86.8	119.1	—	124.5	122.1	81.8	82.6
1985	120.1	79.6	111.5	134.0	120.2	119.6	78.9	77.8
1990	112.0	76.6	114.9	134.9	116.4	121.7	72.5	69.2
1991	104.7	65.2	—	132.1	114.0	119.6	64.8	67.2
1992	102.7	61.0	—	131.6	112.7	119.0	61.9	63.3
1993	99.0	58.0	—	130.2	110.8	117.3	60.2	63.1
1994	95.7 ^r	53.4	—	130.5	111.2	117.4	55.4	59.9
1995 ^p	100.5	54.0	—	133.6	114.7	120.5	56.0	60.0

^p Preliminary.

^r Revised.

^a Average price for sales to end-users by refiners.

^b Average retail price.

Sources: Railroad Fuel: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 60.
 Other Data: U.S. DOE/EIA, *Annual Energy Review 1995*, Tables 5.20, 5.21.

TABLE 2-8**Price Trend of Gasoline vs. Other Consumer Goods and Services**

5-Year Intervals 1955–1990 and Annually 1990–1995

(Current dollars)

Year	Retail Price of Regular Grade Gasoline (cents per gallon)			Price Indexes of Motor Fuel and Other Consumer Items (Index: 1982–1984 = 100)					
	Service Station Price Excl. Taxes	State & Federal Taxes	Service Station Price Incl. Taxes*	All Items	Food	Shelter	Apparel & Upkeep	Motor Fuel	Medical Care
1955	21.42	7.65	29.07	26.8	27.8	22.7	42.9	22.1	18.2
1960	20.99	10.14	31.13	29.6	30.0	25.2	45.7	24.4	22.3
1965	20.70	10.45	31.15	31.5	32.2	27.0	47.8	25.1	25.2
1970	24.55	11.14	36.69	38.8	39.2	35.5	59.2	27.9	34.0
1975	44.93	11.77	56.70	53.8	59.8	48.8	72.5	45.1	47.5
1980	105.30 ^r	13.80 ^r	119.10	82.4	86.8	81.0	90.9	97.4	74.9
1985	89.50 ^r	22.00 ^r	111.50	107.6	105.6	109.8	105.0	98.7	113.5
1990	88.00 ^r	26.90 ^r	114.90	130.7	132.4	140.0	124.1	101.2	162.8
1991	81.20	32.80	114.00	136.2	136.3	146.3	128.7	99.4	177.0
1992	79.10	33.60	112.70	140.3	137.9	151.2	131.9	99.0	190.1
1993	75.40	35.40	110.80	144.5	140.9	155.7	133.7	98.0	201.4
1994	72.00 ^r	39.20 ^r	111.20	148.2	144.3	160.5	133.4	98.5	211.0
1995	74.30	40.40	114.70	152.4	148.4	165.7	132.0	100.0	220.5

^r Revised.

* Regular unleaded gasoline for years 1991–1995; prior to 1991, price is for regular leaded.

Sources: Price of Regular Grade Gasoline: American Petroleum Institute, *Basic Petroleum Data Book*, Section VI, Table 5, and similar tables in earlier editions.Price Indexes of Motor Fuel/Consumer Items: Council of Economic Advisors, *Economic Report of the President*, February 1996, Tables B-56 and B-57, and similar tables in earlier editions.

TABLE 2-9

Per Capita Freight Statistics

5-Year Intervals 1960-1990 and Annually 1990-1995

Year	Freight Tons (millions)	Freight Ton- Miles (billions)	Population (thousands)	Gross Domestic Product (billions of [chained] 1992 dollars)	Gross National Product (billions of 1992 dollars)	Freight Tons per Capita	Freight Ton- Miles per Capita	Freight Ton- Miles per Dollar of GDP ^r	Freight Ton- Miles per Dollar of GNP ^r
1960	3,606	1,504 ^r	180,671	2,232	2,275	20	8,325 ^r	0.67	0.66
1965	4,435	1,855	194,303	2,875	2,895	23	9,546	0.65	0.64
1970	5,060	2,206 ^r	205,052	3,388	3,408	25	10,759 ^r	0.65	0.65
1975	4,962	2,285	215,793	3,865	3,895	23	10,587	0.59	0.59
1980	5,542	2,989	227,726	4,612	4,668	24	13,123	0.65	0.64
1985	5,646	2,949	238,466	5,330	5,353	24	12,368	0.55	0.55
1990	6,424	3,196	249,913 ^r	6,139	6,159	26	12,787	0.52	0.52
1991	6,465	3,233	252,650 ^r	6,079	6,094	26	12,795	0.53	0.53
1992	6,722	3,337	255,419 ^r	6,244	6,256	26	13,065 ^r	0.53	0.53
1993	6,946	3,364	258,137 ^r	6,384	6,394	27	13,030 ^r	0.53	0.53
1994 ^r	7,308	3,527	260,660	6,604	6,597	28	13,530	0.53	0.53
1995 ^p	7,413	3,646	263,034	6,739	6,732	28	13,860	0.54	0.54

^p Preliminary.

^r Revised.

Note: In 1996, the Bureau of Economic Analysis switched from 1987 to 1992 as its base year for calculating constant dollars. As a result, all the Gross Domestic and Gross National Product figures, plus the ratios on which they are based, have been changed.

Source: Freight Tons: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 46.

Freight Ton-Miles: See Table 1-9.

Population: U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 1996, Table 2.

Gross Domestic Product and Gross National Product: 1960-1993: U.S. Department of Commerce, Bureau of Economic Analysis,

Survey of Current Business, January-February 1996, Table 2, p. 110.

1994-1995: *Ibid.*, April 1996, Table 1.10, p. 14.

Transportation
and the Economy

SECTION B

Transportation and Consumer
Expenditures

TABLE 2-10**Average Passenger Fare**

5-Year Intervals 1960–1990 and Annually 1990–1995

(Current Dollars)

Year	Air Carrier, domestic, scheduled service	Class I Bus, Intercity ^a	Transit, All Modes ^b (unlinked)	Commuter Rail	Intercity/Amtrak ^c
1960	34.12	2.46	0.14	0.64	4.22
1965	34.12	2.73	0.16	0.71	3.92
1970	40.65	3.81	0.22	0.84	3.19
1975	53.64	5.46	0.27	1.04	12.96
1980	84.55	10.57	0.30	1.41	17.72
1985	92.53	11.02	0.53	2.85	26.15
1990	107.86	20.18	0.67	2.90	38.51
1991	106.86	21.86	0.70	3.01	40.32
1992	103.60	—	0.72	3.09	40.19
1993	109.80	—	0.77 ^r	3.09	39.37
1994	103.21	—	0.81	3.21	38.16
1995	106.60	—	NA	NA	39.03

^r Revised.^a Regular route intercity service.^b Prior to 1984, excludes commuter railroad, automated guideway, urban ferryboat, demand response, and most rural and smaller systems.^c Amtrak, 1971–1995.

NA Data not available at press time.

Sources:**Air Carrier, Domestic, Scheduled Service:**1960-1970: Civil Aeronautics Board (CAB), *Handbook of Airline Statistics*, 1969, 1973.1975-1980: Ibid., *Air Carrier Financial Statistics*, 1976-1981, annual issues, p. 1, line 3 and *Air Carrier Traffic Statistics*, 1976-1981, annual issues, p. 2, line 16 (passenger revenue/revenue passenger enplanements)1985-1995: U.S. DOT/BTS, Office of Airline Information, *Air Carrier Financial Statistics*, 1986-1996, annual issues, p. 1, line 3; *Air Carrier Traffic Statistics*, 1986-1996, annual issues, p. 2, line 16 (passenger revenue/revenue passenger enplanements).**Class I Bus, Intercity:**1960-1980: American Bus Association (ABA), *Bus Facts*, annual issues.

1985-1991: Transportation Policy Associates.

Transit:1960-1994: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Table 5, (passenger fares/passenger trips) and similar tables in earlier editions.**Commuter Rail:**

1960-1994: Ibid., annual issues.

Intercity/Amtrak:1960-1970: Association of American Railroads (AAR), *Railroad Facts*, annual issues.

1975-1980: Amtrak, State and Local Affairs Department and Public Affairs Department.

1985: Amtrak, *Statistical Appendix to Amtrak FY 1994 Annual Report*, pp. 1, 4 (transportation revenues/Amtrak system passenger trips).1990-1995: Ibid., *FY 1995*, pp. 1, 3 (transportation revenues/Amtrak system passenger trips).

TABLE 2-11
Personal Consumption Expenditures by Transportation Sector

5-Year Intervals 1960–1990 and Annually 1990–1995

(Millions of Current Dollars)

Year	User-Operated Transportation							Total
	New Cars & Net Purchases of Used Cars	New & Used Trucks & RVs	Tires, Tubes, Accessories & Parts	Repair & Rental	Gasoline & Oil	Tolls	Insurance Premiums Less Claims Paid	
1960	16,571	606	2,487	5,519	12,004	310	2,029	39,526
1965	25,191	1,284	3,450	7,567	14,751	463	2,379	55,085
1970	26,754	2,667	6,087	12,329	21,921	652	3,752	74,162
1975	36,775	7,739	10,287	19,803	39,703	821	3,776	118,904
1980	57,243	11,849	17,926	34,022	86,689	1,104	9,443	218,276
1985	110,679	40,754	24,251	60,514	97,205	1,524	10,003	344,930
1990	124,040	56,876	29,426	87,277	109,245	2,036	18,043	426,943
1991	107,257	51,447	28,929	85,180	103,867	2,060	22,649	401,389
1992	117,563	59,515	29,799	94,353	106,595	2,294	25,533	435,652
1993	127,315	67,162	31,611	102,003	108,068	2,502	26,764	465,425
1994	137,430	73,529	34,382	112,958	109,893	2,540	27,268	498,000
1995	137,285	73,849	36,636	121,197	114,595	2,614	28,027	514,203

Year	Purchased Intercity Transportation					Purchased Local Transportation			Total Transportation
	Railroad	Intercity Bus	Airline	Other	Total	Mass Transit System	Taxi	Total	
1960	306	290	676	35	1,307	1,417	609	2,026	42,859
1965	284	375	1,276	54	1,989	1,449	612	2,061	59,135
1970	214	532	3,063	182	3,991	1,808	1,180	2,988	81,141
1975	267	737	5,878	387	7,269	2,072	1,968	4,040	130,213
1980	300	1,403	12,754	910	15,367	2,927	1,866	4,793	238,436
1985	484	1,347	17,552	1,722	21,105	4,239	2,572	6,811	372,846
1990	802	1,013	23,908	2,817	28,540	5,215	2,577	7,792	463,275
1991	817	1,103	22,961	2,633	27,514	5,310	2,625	7,935	436,838
1992	790	1,053	23,263	2,754	27,860	5,431	2,586	8,017	471,528
1993	781	902	25,473	2,911	30,067	5,484	2,805	8,289	503,781
1994	736	800	25,320	3,143	29,999	5,612	2,949	8,561	536,560
1995	746	870	26,866	3,340	31,822	5,768	3,039	8,807	554,832

Note: All BEA personal consumption expenditure data are subject to periodic revision. Most of the data in this table differ from earlier versions. Totals may not equal sum of columns due to rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, personal communication.

TABLE 2-12**Personal Consumption Expenditures by Type**

5-Year Intervals 1960–1990 and Annually 1990–1995

(Millions of Current Dollars)

Year	Food & Tobacco	Clothing, Accessories & Jewelry	Personal Care	Housing	Household Operation	Medical Care	Personal Business	Transportation
1960	89,217	32,742	5,568	48,150	46,698	22,107	14,576	42,859
1965	108,821	41,384	8,103	65,424	62,105	34,093	20,909	59,135
1970	154,584	57,640	11,812	93,967	84,806	59,982	32,031	81,141
1975	238,194	85,619	16,731	147,035	135,376	107,867	52,961	130,213
1980	376,223	132,272	26,553	255,179	232,585	206,444	101,246	238,436
1985	497,272	188,265	39,092	407,050	342,047	366,708	182,590	372,846
1990	672,481	262,738	57,325	586,346	436,154	615,567	290,094	463,275
1991	693,791	265,733	59,079	616,458	448,436	668,746	318,907	436,838
1992	709,524	283,520	63,140	646,804	470,641	733,207	341,656	471,528
1993	732,680	296,629	65,060	673,234	503,516	787,108	353,950	503,781
1994	763,321	310,524	67,670	706,614	528,148	833,675	361,864	536,560
1995	794,370	320,190	70,040	743,724	554,347	883,106	373,426	554,832

Year	Recreation	Education & Research	Religious & Welfare Activities	Foreign Travel & Other, Net	Total	Transportation as a Percentage of Total	Disposable Personal Income (DPI)	Transportation as a Percentage of DPI
1960	18,476	4,346	5,300	2,121	332,159	12.90	362,935	11.81
1965	26,838	6,857	7,740	2,858	444,265	13.31	493,919	11.97
1970	43,075	12,464	12,089	4,514	648,105	12.52	727,104	11.16
1975	70,513	20,466	19,688	4,445	1,029,108	12.65	1,159,178	11.23
1980	116,306	33,316	38,322	3,540	1,760,423	13.54	1,973,285	12.08
1985	185,885	52,873	62,625	7,525	2,704,779	13.78	3,001,971	12.42
1990	281,611	80,699	100,445	-7,428	3,839,307	12.07	4,166,788	11.12
1991	292,025	86,140	104,099	-15,159	3,975,094	10.99	4,343,711	10.06
1992	310,753	93,069	115,647	-19,692	4,219,796	11.17	4,613,673	10.22
1993	339,026	99,265	121,250	-21,372	4,454,127	11.31	4,790,209	10.52
1994	374,843	105,361	131,219	-18,889	4,700,911	11.41	5,021,665	10.68
1995	401,744	110,745	137,388	-19,040	4,924,870	11.27	5,320,782	10.43

Note: All BEA personal consumption expenditure data are subject to periodic revision. Most of the data in this table differ from earlier versions. Totals may not equal sum of columns due to rounding.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, personal communication.

TABLE 2-13
Cost of Owning and Operating an Automobile

5-Year Intervals 1975–1990 and Annually 1990–1996

Year	Variable Costs (current cents per mile)				Current Dollars per 10,000 Miles			Total Cost per Mile ^{ab} (current cents)
	Gas & Oil	Percentage Gas & Oil of Total Cost	Maintenance	Tires	Variable Cost	Fixed Cost ^{ab}	Total Cost ^{ab}	
1975	4.8	26.3	1.0	0.7	645	1,186	1,831	18.3
1980	5.9	21.0	1.1	0.6	762	2,033	2,795	28.0
1985	5.6	21.6	1.2	0.7	742	1,840	2,582	25.8
1990	5.4	13.7	2.1	0.9	840	3,092	3,932	39.3
1991	6.6	14.7	2.2	0.9	970	3,535	4,505	45.1
1992	5.9	12.4	2.2	0.9	900	3,843	4,743	47.4
1993	5.9	12.6	2.4	0.9	920	3,785	4,705	47.0
1994	5.6	11.6	2.5	1.0	910	3,924	4,834	48.3
1995	5.8	11.5	2.6	1.2	960	4,102	5,062	50.6
1996	5.6	10.6	2.8	1.2	960	4,300	5,260	52.6

^a Based on 10,000 miles per year.

^b Fixed and total operating costs preceding 1985 are not comparable with figures after 1985. Fixed cost depreciation from 1975–1984 is based on receipt of average trade-in value after four years. After 1984, the depreciation is based on receipt of average trade-in value after six years.

Note: Prior to 1985, the cost figures are for a mid-sized, current model, American car equipped with a variety of standard and optional accessories. After 1985, the cost figures are for a composite of three current model American cars, each equipped with a similar package of accessories. For the complete set of assumptions underlying each year's figures, readers are encouraged to consult the source publication.

Source: American Automobile Association (AAA), *Your Driving Costs*, annual issues.

TABLE 2-14
New Car Price Comparisons with Safety and Emissions Equipment

5-Year Intervals 1970–1990 and Annually 1990–1995

(Dollars)

Year	Estimated Average New Car Price for a 1967 "Comparable Car"		
	With Added Safety & Emissions Equipment ^a	Without Added Safety & Emissions Equipment ^b	Price Difference for Added Safety & Emissions Equipment
1970	3,601	3,459	142
1975	4,686	4,103	583
1980	6,863	5,764	1,099
1985	8,984	6,958	2,026
1990	10,581	7,938	2,643
1991	11,152	8,224	2,928
1992	11,458	8,424	3,034
1993	11,806	8,631	3,175
1994	12,427	8,925	3,502
1995	12,866	9,115	3,751

^a 1967 "Average Transaction Price" plus the value of added safety and emissions equipment as determined by the U.S. Bureau of Labor Statistics (BLS) all inflated to current dollars using the BLS "New Car Consumer Price Index - All Urban Consumers."

^b 1967 "Average Transaction Price" inflated to current dollars.

Source: American Automobile Manufacturers Association (AAMA), *Motor Vehicle Facts & Figures 1996*, p. 60, and similar tables in previous editions.

Transportation
and the Economy

SECTION C

Transportation Sector Establishments,
Employment, Revenues, and Productivity

TABLE 2-15
Average Passenger Revenue per Passenger-Mile

5-Year Intervals 1960–1990 and Annually 1990–1995

(Current Cents)

Year	Air Carrier, domestic, scheduled service		Class I Bus, ^a Intercity		Commuter Rail		Intercity/Amtrak ^b		Consumer Price Index
	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index	
1960	6.09	53	2.71	37	2.92	44	3.03	37	29.60
1965	6.06	53	2.88	40	3.30	49	3.14	38	31.50
1970	6.00	52	3.60	50	3.75	56	4.02	49	38.80
1975	7.68	67	4.85	67	4.57	68	5.71	70	53.80
1980	11.49	100	7.26	100	6.70	100	8.18	100	82.40
1985	12.21	106	9.91	137	12.08	180	11.27	138	107.60
1990	13.43	117	11.55	159	13.45	201	14.12	173	130.70
1991	13.24 ^r	115 ^r	12.03	166	13.04 ^r	195 ^r	14.14	173	136.20
1992	12.85	112	11.78	162	13.25 ^r	198 ^r	14.05	172	140.30
1993	13.74	120	11.98	165	14.34 ^r	214	14.03	172	144.50
1994	13.12 ^r	114 ^r	11.61	160	13.55	202	13.66 ^r	167	148.20
1995 ^p	13.48	117	11.61	160	13.89	207	14.57	178	152.40

^p Preliminary.

^r Revised.

^a Regular route intercity service.

^b Amtrak, 1971–1995.

Note: Index (1980 = 100), except Consumer Price Index (1982–1984 = 100)

Sources:
Air Carrier, Domestic, Scheduled Service:

1960–1970: Civil Aeronautics Board (CAB), *Handbook of Airline Statistics*, 1969, 1973.

1975–1980: Ibid., *Air Carrier Financial Statistics*, 1976–1981, annual issues, p. 2, lines 1, 2, and 3; *Air Carrier Traffic Statistics*, 1976–1981, annual issues, p. 4/5, lines 7, 8, and 9.

1985–1995: U.S. DOT/BTS, Office of Airline Information, *Air Carrier Financial Statistics*, annual issues, 1986–1995, p. 1, lines 1, 2, and 3; *Air Carrier Traffic Statistics*, annual issues, 1986–1995, p. 2, lines 7, 8, and 9.

Class I Bus, Intercity:

1960–1965: Interstate Commerce Commission (ICC), *Transport Economics*, annual issues.

1970–1980: American Bus Association (ABA), *Bus Facts*, annual issues.

1985: ICC, *Transport Statistics in the U.S., Motor Carriers, Part 2*, annual issues.

1990–1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 50.

Commuter Rail:

1960–1994: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Table 5 (passenger fares/passenger miles), and similar tables in earlier editions.

1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 50.

Intercity/Amtrak:

1960–1970: Association of American Railroads (AAR), *Railroad Facts*, annual issues.

1975–1980: Eno Transportation Foundation, Inc., *Transportation in America*, 1994, p. 50.

1985: Amtrak, *Statistical Appendix to Amtrak FY 1994 Annual Report*, pp. 1, 4 (transportation revenues/passenger-miles).

1990–1995: Ibid., *FY 1995*, pp. 1, 3 (transportation revenues/passenger-miles).

Consumer Price Index:

1960–1995: Council of Economic Advisors, *Economic Report of the President*, annual issues.

TABLE 2-16

Average Freight Revenue per Ton-Mile

5-Year Intervals 1960-1990 and Annually 1990-1995
(Current Cents)

Year	Air Carrier, domestic, scheduled service		Class I Intercity Motor Carriers of Property		Class I Rail		Inland Waterway Carrier		Oil Pipeline		Producer Price Index ^r
	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index	Avg.	Index	
1960	22.80	49	6.31	35	1.40	49	-	-	0.32	24	33.4
1965	20.46	44	6.46	36	1.27	44	0.35	45	0.28	21	34.1
1970	21.91	47	8.50	47	1.43	50	0.30	39	0.27	20 ^r	39.3
1975	28.22	61	11.60	64	2.04	71	0.52	68	0.37	28	58.2
1980	46.31	100	18.00	100	2.87	100	0.77	100	1.33*	100	88.0
1985	48.77	105	22.90	127	3.04	106	0.80	104	1.57	118	104.7
1990	64.64 ^r	140 ^r	24.38	135	2.66	93	0.76	99	1.44	108	119.2
1991	64.82 ^r	140 ^r	24.82	138	2.59	90	0.78	101	1.40	106	121.7
1992	65.74 ^r	142 ^r	23.08 ^r	128	2.58	90	0.76	99	1.49	113	123.2
1993	71.38	154	24.95	139	2.52	88	0.76 ^r	99	1.42	107	124.7
1994	72.23 ^r	156 ^r	25.01	139	2.49	87	0.74 ^r	96	1.40	106	125.5
1995	75.47	163	25.08	139	2.40	84	0.73	95	1.40	106	127.9

^r Revised.

* Reflects entrance of Alaska pipeline moving crude petroleum to U.S. refineries between 1975 and 1980.

Note: Index (1980 = 100), except Producer Price Index (1982-1984=100).

Sources:

Air Carrier, Domestic, Scheduled Service:

1960-1970: CAB, *Handbook of Airline Statistics*, 1969, 1973.

1975-1980: Ibid., *Air Carrier Financial Statistics*, 1976-1981, annual issues, p. 2, line 4; *Air Carrier Traffic Statistics*, 1976-1981, annual issues, pp. 4/5, line 18 (freight operating revenue/freight revenue ton-miles).

1985-1995: U.S. DOT/BTS, Office of Airline Information, *Air Carrier Financial Statistics*, 1986-1996, annual issues, p. 1, line 4; *Air Carrier Traffic Statistics*, 1986-1996, annual issues, p. 2, line 18 (freight operating revenues/freight revenue ton-miles).

Class I Intercity Motor Carriers of Property:

1960-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 49.

Class I Rail:

1960-1995: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 30.

Inland Waterway Carrier:

1960-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 49.

Oil Pipeline:

1960-1995: Ibid.

Producer Price Index:

1960-1995: Council of Economic Advisors, *Economic Report of the President*, annual issues.

TABLE 2-17
Total Operating Revenues

5-Year Intervals 1960–1990 and Annually 1990–1995
(Millions of Current Dollars)

Year	Air Carrier, domestic, all services	Trucking and Courier Services, Except Air ^r	Class I Bus, Intercity	Transit ^a	Class I Rail	Intercity/ Amtrak ^b	Water Transport (Domestic) ^c
1960	2,178	–	463	1,407	9,514	637	1,722 ^r
1965	3,691	–	607	1,444	10,208	416	1,822
1970	7,180	–	722	1,707	11,992	248	2,070
1975	12,020	–	955	3,451	16,402	253	3,293
1980	26,440	–	1,397	6,510	28,258	454	7,219
1985	37,629	–	1,233	12,195	28,586	832	7,703
1990	57,961	127,314	943	16,053	28,370	1,308	7,940 ^r
1991	56,165	126,772	981	16,533 ^r	27,845	1,359	8,329
1992	57,654	135,437	938	16,915	28,349	1,325	8,287
1993	63,233	143,601	928	17,276 ^r	28,825	1,403	8,028
1994	65,949	157,910	958	18,134 ^p	30,809	1,413	7,745 ^r
1995	70,710 ^p	NA	1,195	NA	32,279	1,497	7,239 ^p

Year	Oil Pipeline ^d	Gas Pipeline ^e				Total (Investor- Owned)
		Transmission Companies	Distribution Companies	Integrated Companies	Combination Companies	
1960	895	3,190	–	–	–	8,696
1965	1,051	4,088	–	–	–	11,525
1970	1,396	5,928	–	–	–	16,380
1975	2,220	11,898	5,938	6,962	5,753	30,550
1980	7,548	41,604	14,013	17,300	13,001	85,918
1985	8,910	45,738	21,510	17,396	19,301	103,945
1990	8,387	21,756	18,750	10,117	15,404	66,027
1991	8,101	19,818	17,812	11,047	15,245	63,922
1992	8,521	20,193	19,854	10,279	16,079	66,405 ^r
1993	8,421	19,873 ^r	20,307 ^r	12,506 ^r	17,279 ^r	69,966 ^r
1994	8,273 ^r	14,242	20,911	11,827	16,851	68,831
1995	8,288 ^p	NA	NA	NA	NA	NA

▲ **TABLE 2-17** (continued)

Total Operating Revenues

p	Preliminary.
r	Revised.
NA	Data not available at press time.
a	Excludes commuter rail, automated guideway, urban boat, demand response, and most rural and smaller systems prior to 1984. Includes operating assistance.
b	Amtrak, 1971–1995.
c	Includes foreign traffic moving on domestic inland waterways.
d	Oil pipeline revenues are much smaller than those of gas pipeline because oil pipeline companies are common carriers and include transport costs only.
e	Data not directly comparable from year to year due to acquisition and mergers. Prior to 1975, pipeline companies are not broken down by distribution, integrated, or combination. Total numbers for these companies are 1960=5,505; 1965=7,437; 1970=10,542.
<u>Sources:</u>	
Air Carrier, Domestic, All Services:	
1960-1970:	CAB, <i>Handbook of Airline Statistics</i> , 1969, 1973.
1975-1980:	Ibid., <i>Air Carrier Financial Statistics</i> , annual issues, 1976-1981, p. 1.
1985-1995:	U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, 1986-1996, p. 1.
Trucking and Courier Services Except Air:	
1990-1994:	U.S. Department of Commerce, Bureau of the Census, <i>Motor Freight Transportation and Warehousing Survey</i> , 1994.
Class I Bus, Intercity:	
1960-1993:	ICC, <i>Annual Report of the ICC</i> , 1994, Appendix F, Table 6 and similar tables in earlier editions.
1994-1995:	U.S. DOT/BTS, from quarterly reports submitted by carriers.
Transit:	
1960-1994:	American Public Transit Association (APTA), <i>Transit Fact Book</i> , 1996, Table 23, and similar tables in earlier editions.
Class I Rail:	
1960-1995:	Association of American Railroads (AAR), <i>Railroad Facts</i> , 1996, p. 12.
Intercity/Amtrak:	
1960-1970:	Ibid.
1975-1992:	Amtrak, State and Local Affairs Department and Public Affairs Department.
1993-1995:	Ibid., <i>Statistical Appendix to Amtrak FY 1995 Annual Report</i> .
Water Transport:	
1960-1995:	Eno Transportation Foundation, Inc., <i>Transportation in America</i> , 1996, p. 40.
Oil Pipeline:	
1960-1995:	Ibid.
Gas Pipeline:	
1960-1994:	Transmission Companies: American Gas Association (AGA), <i>Gas Facts</i> , 1995, Table 12-3, and similar tables in earlier editions.
1975-1994:	Integrated Companies: Ibid., Table 12-4, and similar tables in earlier editions.
1975-1994:	Combination Companies: Ibid., Table 12-5, and similar tables in earlier editions.
1975-1994:	Distribution Companies: Ibid., Table 12-2, and similar tables in earlier editions.
1975-1994:	Total Investor-Owned Companies: Ibid., Table 12-1.

TABLE 2-18
Employment in Transportation and Related Industries
 5-Year Intervals 1960–1990 and Annually 1990–1995
 (Thousands)

Transport Sector	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994 ^r	1995
Air	191	229	352	363	453	522	745	733	730	740	753	788
Local & Interurban Passenger Transit												
Bus-Intercity & Rural	41	42	43	40	38	35	26	24	23	22	24	24
Local Transport	101	83	77	69	79	92	141	155	162	176	194	203
School Bus	–	–	–	65	80	91	111	115	118	122	126	134
Taxi	121	110	106	85	53	38	32	32	30	30	31	32
Other Local & Interurban	21	34	54	12	15	21	28 ^r	28	28	29 ^r	30	31
Liquid Pipeline	23	20	18	18	21	19	19	19	19	18	17	15
Natural Gas Pipeline (distribution)	–	–	–	51	52	62	65	63	66	62	62	61
(transmission)	–	–	–	37	45	46	37	38	46	34	32	28
(integrated)	–	–	–	55	53	43	40	40	35	39	39	36
(combination)	–	–	–	52	52	53	50	50	50	48	42	42
(noninvestor-owned)	–	–	–	11	13	12	12	12	12	11	11	11
Railroad	885	735	634	548	532	359	279	262	254	248	241	239
Transportation Services	–	85	115	134	198	275	345	344	348	363	389	413
Trucking & Warehousing	856	964	1,083	1,108	1,280	1,361	1,625	1,606	1,611	1,698	1,794	1,867
Water	232	228	212	194	211	185	177	184	173	168	172	174
Total	2,471	2,530	2,694	2,841	3,175	3,214	3,732	3,705	3,706	3,809 ^r	3,957	4,098
Equipment Manufacturing												
Aircraft & Parts	605	601	644	499	633	616	712	669	612	542	482	449
Motor Vehicles & Equipment	724	843	799	792	789	883	812	789	813	837	909	968
Railroad Equipment	43	56	51	57	71	33	33	30	29	31	35	37
Ship & Boat Building & Repairing	141	160	172	194	221	187	188	177	170	159	158	159
Tires	105	102	116	124	115	94	84	81	81	82	79	80
Other	155	193	167	157	167	241	244	225	207	188 ^r	177	172
Total	1,773	1,955	1,949	1,824	1,995	2,054	2,073	1,971	1,911	1,838 ^r	1,840	1,865

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TABLE 2-18 (continued)
Employment in Transportation and Related Industries
 5-Year Intervals 1960–1990 and Annually 1990–1995
 (Thousands)

Related Industries	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995
Automotive & Home Supply Stores	–	–	–	212	261	304	337	332	332	340	357	373
Automotive Repair, Services, & Parking	251	324	384	439	571	730	914	882	881	925	968	1,020
Gasoline Service Stations	461	522	613	622	561	588	647	626	616	617	634	647
Highway & Street Construction	294	324	331	297	268	264	239	218	215	222	226	227
Motor Vehicle Wholesalers	215	255	320	382	434	454	456	448	446	451	471	492
New & Used Car Dealers	–	–	–	731	745	856	924	879	875	908	963	996
Other Automotive Retail	807	902	1,004	112	122	140	155	146	143	148	162	174
Total	2,027	2,327	2,652	2,795	2,962	3,336	3,672	3,532	3,508	3,612	3,781	3,929
Government Employment												
U.S. DOT*	–	–	104	112	112	100	104	108	110	109	103	101
State & Local Highway	532	577	607	604	559	549	569	564	561	556	NA	NA
Total	532	577	711	716	671	649	673	672	671	665	103	101
Total Transportation	6,803	7,389	8,007	8,177	8,803	9,253	10,150	9,880	9,796	9,924	9,681	9,993

r Revised.

* U.S. DOT was created in 1966.

NA Data not available at press time.

Sources:

Transport Sector:

Air:

1960-1992: U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 45.
 1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 45.

Local and Interurban Passenger Transit:

Bus (intercity and rural):

1960-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 413.
 1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 413.

Local Transport:

1960-1975: Ibid., *Employment and Earnings*, 1979, SIC 45.
 1980-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 411.
 1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 411.

School Bus:

1975-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 415.
 1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 415.

Taxi:

1960-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 412.
 1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 412.

(continued on next page)

TABLE 2-18 (continued)
Employment in Transportation and Related Industries

Other Local and Interurban:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , difference between total of SIC 41 and sum of 413, 415, and 412.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, difference between total of SIC 41 and sum of 413, 415, and 412.
Liquid Pipeline:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 46.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 46.
Natural Gas Pipeline, Transmission, Distribution, Integrated and Combination, and Noninvestor-Owned:	
1975-1993:	American Gas Association (AGA), <i>Gas Facts</i> , 1995, Table 16-2 and similar tables in earlier editions.
1993-1995:	Ibid., Policy Analysis Group.
Railroad:	
1960-1992:	U.S. Department of Labor, Bureau of Labor Statistics, <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 40.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 40.
Transportation Services:	
1965-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 47.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 47.
Trucking and Warehousing:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 42.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 42.
Water:	
1960:	Ibid., <i>Employment and Earnings</i> , 1979, SIC 44.
1965-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 44.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 44.
Equipment Manufacturing:	
Aircraft and Parts:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 372.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 372.
Motor Vehicles and Equipment:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 371.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 371.
Railroad Equipment:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 374.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 374.
Ship and Boat Building and Repairing:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 373.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 373.
Tires:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 301.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 301.
Other:	
1960-1992:	Ibid., <i>Employment, Hours and Earnings, United States, 1909-1994</i> , SIC 37 minus above Equipment and Manufacturing classifications, except SIC 301.
1993-1995:	Ibid., Office of Employment and Unemployment Statistics, SIC 37 minus above Equipment and Manufacturing classifications, except SIC 301.

▲ **TABLE 2-18** (continued)
9 **Employment in Transportation and Related Industries**

Related Industries:

Automotive and Home Supply Stores:

1975-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 553.
1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 553.

Automotive Repair, Services, and Parking:

1960-1970: Ibid., *Employment and Earnings*, 1979, SIC 45.
1975-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 75.
1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 75.

Gasoline Service Stations:

1960-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 554.
1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 554.

Highway and Street Construction:

1960-1975: Ibid., *Employment and Earnings*, 1979, SIC 45.
1980-1985: Ibid., *Supplement to Employment and Earnings, Revised Establishment Data*, annual issues, SIC 161.
1990-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 161.
1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 161.

Motor Vehicle Wholesalers:

1960-1970: Ibid., *Employment and Earnings*, 1979, SIC 45.
1975-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 501.
1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 501.

New and Used Car Dealers:

1975-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 551.
1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 551.

Other Automotive Retail:

1960-1992: Ibid., *Employment, Hours and Earnings, United States, 1909-1994*, SIC 55 minus SIC 551, 553, and 554.
1993-1995: Ibid., Office of Employment and Unemployment Statistics, SIC 55 minus SIC 551, 553, and 554.

Government Employment:

U.S. DOT

1970-1975: U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 1976, Table 409, and U.S. DOT/USCG, G-PMP, personal communication.

1980-1995: U.S. DOT/OST, *DOT Employment Facts, A Report to Management*, annual issues.

State and Local Highway:

1960-1993: U.S. Department of Commerce, Bureau of the Census, *Statistical Abstract of the United States*, 1996, Table 502, and similar tables in earlier editions.

TABLE 2-19**Wages and Salaries per Full-Time Equivalent Employee by Transportation Sector**

5-Year Intervals 1960–1990 and Annually 1990–1994

(Current Dollars)

Year	Air	Trucking & Warehousing	Local & Interurban Passenger Transit	Railroad	Water	Pipeline, Except Natural Gas	Transportation Services
1960	6,868	5,957	4,990	6,228	6,832	6,870	5,387
1965	8,122	8,035	5,438	7,415	7,770	8,500	6,605
1970	11,407	10,430	6,596	10,013	10,662	10,706	8,608
1975	17,084	12,709	9,299	15,363	14,247	16,765	11,233
1980	25,498	18,864	13,224	25,385	22,990	26,182	15,604
1985	31,798	22,291	15,813	36,746	28,435	36,947	20,207
1990	34,890	25,833	19,676	41,814	33,982	43,474	25,736
1991	36,870	26,641	19,982	45,640	34,778	46,684	26,972
1992 ^r	38,843	28,108	18,970	50,314	36,311	51,632	28,566
1993 ^r	39,149	28,398	19,286	50,256	37,230	49,895	29,176
1994 ^p	38,473	28,545	19,273	48,507	36,817	54,176	29,104

P Preliminary.

r Revised.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July and August issues, Table 6.6C or equivalent.

TABLE 2-20

Total Wages and Salaries by Transportation Sector

5-Year Intervals 1960–1990 and Annually 1990–1994

(Millions of Current Dollars)

Year	Air	Trucking & Warehousing	Local & Interurban Passenger Transit	Railroad	Water	Pipeline, except Natural Gas	Transportation Services	Total
1960	1,268	4,558	1,293	5,499	1,377	160	423	14,578
1965	1,860	6,215	1,397	5,466	1,585	153	541	17,217
1970	4,038	9,031	1,771	6,114	2,141	182	878	24,155
1975	5,900	13,800	2,400	8,100	2,600	300	1,500	34,600
1980	11,000	23,700	3,400	12,800	4,600	600	3,000	59,100
1985	15,581	29,535	4,238	12,567	5,033	702	5,274	72,930
1990	24,109	40,145	6,139	11,248	5,607	826	8,390	96,464
1991	24,961	40,787	6,514	11,775	5,947	887	8,685	33,808
1992 ^r	25,986	43,005	6,355	11,522	5,955	981	9,341	34,154
1993 ^r	26,504	45,551	6,750	11,207	5,994	948	9,949	34,848
1994 ^p	27,162	49,811	7,266	10,914	6,222	921	10,943	36,266

^p Preliminary.

^r Revised.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, *Survey of Current Business*, July and August issues, Table 6.3C, or equivalent.

TABLE 2-21**Productivity Indexes for Selected Transportation Industries**

5-Year Intervals 1970–1990 and Annually 1990–1994

Year	Air Transportation ^a	Railroad Transportation ^{b,r}	Petroleum Pipelines ^b
1970	45.4	36.2	75.8
1975	55.6	43.3	91.1
1980	70.8	54.6	88.6
1985	92.0	81.5	99.9
1990	92.9	118.5	102.5
1991	92.5	127.8	99.0
1992	96.9	139.6	100.2
1993	103.8	145.6	104.4
1994	105.7	NA	105.1

r Entire railroad transportation series has been revised due to a change in methodology.

a Output per employee.

b Output per hour.

NA Data not available at press time.

Note: Index (1987=100).

Note: Bus and truck data are no longer reported.

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Productivity and Technology, personal communication.

TABLE 2-22

Class I Railroad Roadway and Structures Capital and Maintenance Expenditures

5-Year Intervals 1960–1990 and Annually 1990–1995

(Thousands of Current Dollars)

Year	Capital Expenditures	Maintenance Expenditures
1960	285,664	1,191,690
1965	327,084	1,235,801
1970	358,344	1,612,585
1975	486,417	2,408,980
1980	953,467	4,940,091
1985	3,458,015	4,332,663
1990	2,643,966	4,278,075
1991	2,369,405	5,215,582
1992	2,736,002	4,373,006
1993	2,795,370	4,353,206
1994	3,151,601	4,400,909
1995	3,651,464	5,446,567

Note: A change in accounting practices of railroads after 1980 caused some changes in the definition of capital and maintenance expenditures. Class I railroads only.

Source: Association of American Railroads (AAR), *Railroad Facts*, 1996, pp. 15, 43.

Transportation
and the Economy

SECTION D

Government Finance

TABLE 2-23**Federal Transportation-Related Budget Receipts by Type of Fund**

5-Year Intervals Fiscal Year 1980–1990 and Annually Fiscal Year 1990–1994

(Millions of Current Dollars)

Year	Airport/ Airways Trust Fund	Highway Trust Fund		Water Receipts	Pipeline Safety Fund	Emergency Preparedness Fund	Total
		Highway Account*	Mass Transit Account				
1980	2,274	7,647	—	381	—	—	10,302
1985	3,598	12,908	1,420	463	—	—	18,388
1990	4,945	13,453	1,977	1,147	10	—	21,532
1991	6,206	15,304	3,149	1,325	11	—	25,995
1992	5,918	16,572	1,816	1,474	14	3	25,797
1993	6,096	16,864	2,735	1,591	15	10	27,310
1994	6,027	15,415	2,691	1,394	19	7	25,553

* Beginning in 1983, a portion of the fuel tax credited to the Highway Trust Fund is earmarked for transit.

Note: Totals may not equal sum of columns due to rounding.Source: U.S. DOT/BTS, *Federal Transportation Financial Statistics, Fiscal Years 1977-1994*.**TABLE 2-24****Federal Transportation-Related Budget Receipts by Type of Fund**

5-Year Intervals Fiscal Years 1980–1990 and Annually Fiscal Years 1990–1994

(Millions of Constant 1987 Dollars)

Year	Airport/ Airways Trust Fund	Highway Trust Fund		Water Receipts	Pipeline Safety Fund	Emergency Preparedness Fund	Total
		Highway Account*	Mass Transit Account				
1980	3,098	10,419	—	519	—	—	14,035
1985	3,713	13,321	1,465	478	—	—	15,264
1990	4,455	12,120	1,781	1,033	9	—	14,943
1991	5,383	13,273	2,731	1,149	9	—	17,162
1992	4,924	13,787	1,511	1,226	12	2	16,538
1993	4,900	13,556	2,198	1,279	12	8	17,053
1994	4,654	11,903	2,078	1,077	15	5	15,078

* Beginning in 1983, a portion of the fuel tax credited to the Highway Trust Fund is earmarked for transit.

Note: Totals may not equal sum of columns due to rounding.Source: U.S. DOT/BTS, *Federal Transportation Financial Statistics, Fiscal Years 1977-1994*.

TABLE 2-25

Federal Transportation Outlays by Mode

5-Year Intervals Fiscal Years 1980–1990 and Annually Fiscal Years 1990–1994
(Millions of Current Dollars)

Year	Air	Highway	Transit	Rail	Water	Pipeline	Unallocated	Total
1980	3,762	11,706	3,307	2,170	2,837	3	177	23,961
1985	4,947	15,031	3,427	1,057	3,065	4	182	27,715
1990	7,305	15,452	3,832	534	3,069	9	190	23,086
1991	8,282	15,860	3,917	779	3,355	9	270	32,473
1992	9,313	16,773	3,675	900	3,792	12	289	25,441
1993	10,049	18,081	3,517	814	3,865	14	333	26,624
1994	10,146	20,053	3,770	832	3,863	14	387	39,064

Note: Total may not equal sum of columns due to rounding.

Note: As a result of the following modifications, data in this table are not comparable to the corresponding table in last year's National Transportation Statistics. This table has been modified from last year in the following ways: Highway outlays include a more comprehensive list of outlays by agencies outside of the Department of Transportation as published by the U.S. DOT/FHWA's *Highway Statistics* report. Air outlays include revisions to National Aeronautics and Space Administration (NASA) expenditures. Water outlays include revisions to U.S. Army Corps of Engineers' Mississippi River and Tributaries Program, and the inclusion of the U.S. DOT/MARAD's Title XI Mortgage Guarantee Program outlays for 1994.

Source: U.S. DOT/BTS, *Federal Transportation Financial Statistics, Fiscal Years 1977-1994*.

TABLE 2-26

Federal Transportation Outlays by Mode

5-Year Intervals Fiscal Years 1980–1990 and Annually Fiscal Years 1990–1994
(Millions of Constant 1987 Dollars)

Year	Air	Highway	Transit	Rail	Water	Pipeline	Unallocated	Total
1980	5,125	15,948	4,505	2,957	3,865	4	241	27,520
1985	5,106	15,512	3,537	1,091	3,163	4	188	23,495
1990	6,581	13,921	3,452	481	2,765	8	171	20,798
1991	7,183	13,755	3,398	676	2,910	8	234	20,981
1992	7,748	13,954	3,057	749	3,155	10	240	28,914
1993	8,078	14,535	2,827	655	3,107	11	268	29,480
1994	7,835	15,485	2,911	642	2,983	10	299	22,330

Note: Total may not equal sum of columns due to rounding.

Note: As a result of the following modifications, data in this table are not comparable to the corresponding table in last year's National Transportation Statistics. This table has been modified from last year in the following ways: Highway outlays include a more comprehensive list of outlays by agencies outside of the Department of Transportation as published by the U.S. DOT/FHWA's *Highway Statistics* report. Air outlays include revisions to National Aeronautics and Space Administration (NASA) expenditures. Water outlays include revisions to U.S. Army Corps of Engineers' Mississippi River and Tributaries Program, and the inclusion of the U.S. DOT/MARAD's Title XI Mortgage Guarantee Program outlays for 1994.

Source: U.S. DOT/BTS, *Federal Transportation Financial Statistics, Fiscal Years 1977-1994*.

TABLE 2-27**Government Expenditures for Transportation**

Annually Fiscal Years 1982–1993

(Millions of Constant 1987 Dollars)

Year	State & Local Outlays Less Federal Grants	Federal Grants	Federal Outlays Less Grants
1982	45,317	15,597	11,290
1983	46,800	15,851	9,712
1984	47,605	17,002	11,013
1985	50,118	18,810	9,790
1986	54,255	19,072	9,482
1987	57,916	17,770	9,660
1988	59,109	18,282	9,315
1989	60,207	17,508	9,301
1990	61,575	17,825	9,554
1991	64,508	17,849	10,315
1992	65,782	17,774	11,139
1993	64,875	18,166	11,314

Note: This table has been modified from last year to incorporate the changes cited with Table 2-25. The highway portion of the federal grants was adjusted as follows: pre-1992 highway grants were estimated by allocating FHWA and NHTSA expenditures from the *Federal Transportation Financial Statistics* report, Table C-5a, between grants and direct expenditure in the same ratio as listed in the FHWA's *Highway Statistics* report. Grants to state and local governments from other sources for all years, and from all agencies since 1992, are taken directly from the *Highway Statistics* report.

Source: U.S. DOT/BTS, *Federal, State, and Local Transportation Financial Statistics, Fiscal Years 1982-1993*.

Table 2-28

Transportation-Related Federal Trust Funds' Cash Balances

Annually Fiscal Years 1982-1994

(Millions of Current Dollars and Constant 1987 Dollars)

Year	Highway Trust Fund				Airport & Airway Trust Fund	
	Highway Account		Transit Account		Current Dollars	Constant 1987 Dollars
	Current Dollars	Constant 1987 Dollars	Current Dollars	Constant 1987 Dollars		
1982	9,046	10,386	-	-	3,881	4,456
1983	9,062	9,958	522	574	4,787	5,260
1984	10,210	10,873	1,611	1,716	6,441	6,859
1985	10,361	10,693	2,524	2,605	7,426	7,664
1986	9,486	9,621	3,287	3,334	8,625	8,747
1987	9,412	9,412	4,202	4,202	9,935	9,935
1988	9,019	8,790	5,168	5,037	11,120	10,838
1989	10,551	9,879	6,057	5,671	12,938	12,114
1990	9,629	8,675	7,155	6,446	14,355	12,932
1991	10,246	8,886	9,250	8,023	15,263	13,238
1992	11,300	9,401	9,798	8,151	15,204	12,649
1993	11,523	9,263	10,617	8,535	12,850	10,330
1994	7,927	6,116	9,945	7,680	12,386	9,564

Year	Oil Spill Liability Trust Fund		Harbor Maintenance Trust Fund		Inland Waterway Trust Fund		Total All Funds	
	Current Dollars	Constant 1987 Dollars	Current Dollars	Constant 1987 Dollars	Current Dollars	Constant 1987 Dollars	Current Dollars	Constant 1987 Dollars
1982	-	-	-	-	55	63	12,982	14,905
1983	-	-	-	-	92	101	14,463	15,893
1984	-	-	-	-	133	142	18,395	19,590
1985	-	-	-	-	172	178	20,483	21,138
1986	-	-	-	-	240	243	21,638	21,945
1987	-	-	16	16	295	295	23,860	23,860
1988	-	-	8	8	315	307	25,630	24,981
1989	-	-	11	10	308	288	29,865	27,963
1990	345	311	30	27	281	253	31,795	28,644
1991	647	561	74	64	217	188	35,697	30,960
1992	866	720	121	101	186	155	37,475	31,177
1993	1,024	823	305	245	180	145	36,499	29,340
1994	993	767	451	348	214	165	31,916	24,646

Source: U.S. DOT/BTS, *Federal Transportation Financial Statistics, 1977-1994*.

Chapter 3

TRANSPORTATION SAFETY

In May 1994, the Secretary of Transportation issued the following definitional clarification:

“For purposes of statistical reporting on transportation safety, a transportation-related fatality shall be considered a death due to injuries in a transportation accident or incident that occurs within 30 days of that accident or incident.”

As most of the safety statistics contained in this report were compiled prior to this clarification, time periods between modes may vary. Refer to Appendix C for further definitions of fatality.

Transportation Safety

SECTION A

Multimodal

TABLE 3-1**Distribution of Transportation Fatalities, Injuries, and Accidents by Major Transportation Mode**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Fatalities								
	Air				Highway				
	U.S. Air Carrier ^a	Commuter Air Carrier ^b	On-Demand Air Taxi ^c	General Aviation ^d	Passenger Car	Motorcycle	Truck ^f	Bus	Other ^g
1960	499	—	—	787	—	790	—	—	35,609
1965	261	—	—	1,029	—	1,650	—	—	45,439
1970	146	—	*	1,310	—	2,280	—	—	50,347
1975	124 ^r	28	69	1,252	25,928	3,189	5,817	53	9,538
1980	1	37	105	1,239	27,449	5,144	8,748	46	9,704
1985	526	37	76	955	23,212	4,564	7,666	57	8,326
1990	39	7	50	766	24,092	3,244	9,306	32	7,925
1991	50	77	70 ^r	786 ^r	22,385	2,806	9,052	31	7,234
1992	33	21	68 ^r	857 ^r	21,387	2,395	8,683	28	6,757
1993	1	24	42	736 ^r	21,566	2,449	9,116	18	7,001
1994	239	25	63 ^r	723 ^r	21,997	2,320	9,574	18	6,807
1995 ^p	168	9	52	732	22,358	2,221	10,183	32	7,004

Year	Fatalities							Total ^m
	Rail		Transit ^k	Water		Pipeline		
	Highway-Rail Grade Crossing ^{h,j}	Railroad ^{h,j}		Waterborne Transport ^l	Recreational Boating	Liquid Pipeline	Gas Pipeline	
1960	1,421	924	—	—	819	—	—	—
1965	1,610	923	—	—	1,360	—	—	—
1970	1,440 ^r	785	—	178	1,418	4	26 ^r	—
1975	917	575	—	243	1,466	7	8 ^r	—
1980	833	584	—	206	1,360	4	15	—
1985	582	454	—	131	1,116	5	28 ^r	—
1990	698	599	339	85	865	3	6	46,372
1991	608	586	300	30	924	0	14	43,303
1992	579	591	273	96 ^r	816	5	10	41,095
1993	626	653	281	110 ^r	800	0	17	41,890
1994	615	611	320	69 ^r	784	1	21	42,628
1995 ^p	579	567	274	46	836	3	18	43,549

(continued on next page)

TABLE 3-1 (continued)

Distribution of Transportation Fatalities, Injuries, and Accidents by Major Transportation Mode

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Injuries								
	Air ^a				Highway ^e				
	U.S. Air Carrier ^a	Commuter Air Carrier ^b	On-Demand Air Taxi ^c	General Aviation ^d	Passenger Car	Motorcycle	Truck ^f	Bus	Other ^g
1960	—	—	—	—	—	—	—	—	—
1965	—	—	—	—	—	—	—	—	—
1970	107	—	—	715 ^r	—	—	—	—	—
1975	81 ^r	—	—	728	—	—	—	—	—
1980	19 ^r	14	43	675	—	—	—	—	—
1985	30	16	43	517	—	—	—	—	—
1990	39	11	36	391	2,376,000	84,000	547,000	33,000	191,000
1991	26	30	27	420	2,235,000	80,000	591,000	21,000	170,000
1992	13	5	19	418	2,232,000	65,000	579,000	20,000	174,000
1993	16	2	24	386	2,257,000	58,000	622,000	17,000	170,000
1994	35	6	32	452	2,332,000	56,000	649,000	15,000	162,000
1995 ^p	25	25	14	398	2,416,000	55,000	739,000	18,000	158,000

Year	Injuries							Total ^m
	Rail		Transit ^k	Water		Pipeline		
	Highway-Rail Grade Crossing ^h	Railroad ^{h,j}		Waterborne Transport	Recreational Boating	Liquid Pipeline	Gas Pipeline	
1960	3,367	16,113	—	—	929	—	—	—
1965	3,725	21,930	—	—	927	—	—	—
1970	3,272	17,934	—	105	780	21 ^r	233	—
1975	3,860	50,138	—	97	2,136	17 ^r	214	—
1980	3,890	58,356	—	180	2,650	15	177	—
1985	2,687	31,617	—	172	2,757	18	108	—
1990	2,407	22,736	54,556	175	3,822	7	69	3,291,000
1991	2,094	21,374	52,125	110	3,967	9	89	3,154,000
1992	1,975	19,408	55,089	167 ^r	3,683	38	80	3,126,000
1993	1,837	17,284	52,668	160 ^r	3,559	10	102	3,175,000
1994	1,961	14,850	58,193	179 ^r	4,084	1,858	110 ^r	3,271,000
1995 ^p	1,894	12,546	56,991	145	4,965	11	53	3,438,000

(continued on next page)

TABLE 3-1 (continued)**Distribution of Transportation Fatalities, Injuries, and Accidents by Major Transportation Mode**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Accidents							
	Air				Highway ^e			
	U.S. Air Carrier ^a	Commuter Air Carrier ^b	On-Demand Air Taxi ^c	General Aviation ^d	Passenger Car	Motorcycle	Truck ^f	Bus
1960	90	—	—	4,793	—	—	—	—
1965	83	—	—	5,196	—	—	—	—
1970	55	—	*	4,712	—	—	—	—
1975	37	48	154	3,995	—	—	—	—
1980	19	38	171	3,590	—	—	—	—
1985	21 ^r	21	154 ^r	2,739 ^r	—	—	—	—
1990	24	16 ^r	106 ^r	2,215 ^r	5,560,000	103,000	2,524,000	60,000
1991	26	22	87 ^r	2,175 ^r	5,178,000	106,000	2,519,000	56,000
1992	18	23	76	2,073 ^r	5,043,000	72,000	2,554,000	49,000
1993	23	16	69 ^r	2,039 ^r	5,045,000	72,000	2,776,000	51,000
1994	23 ^r	10	85 ^r	1,990 ^r	5,399,000	67,000	3,008,000	56,000
1995 ^p	35	12	76	2,066	5,523,000	63,000	3,071,000	58,000

Year	Accidents							Total ^m
	Rail		Transit ^k	Water		Pipeline (Incidents)		
	Highway-Rail Grade Crossing ^{h,i}	Railroad ^{h,j}		Waterborne Transport	Recreational Boating	Liquid Pipeline	Gas Pipeline	
1960	3,195	—	—	—	2,738	—	—	—
1965	3,820	—	—	—	3,752	—	—	—
1970	3,559	8,095	—	2,582	3,803	351	1,077 ^r	—
1975	12,076	8,041	—	3,310	6,308	254	1,338 ^r	—
1980	10,612	8,205 ^r	—	4,624	5,513	246	1,524	—
1985	6,919	3,275	—	3,439	6,237	183	334 ^r	—
1990	5,713	2,879	58,002	3,613	6,411	180	198 ^r	6,488,000
1991	5,386	2,658	46,467	2,222	6,573	216	233 ^r	6,132,000
1992	4,910	2,359	36,380	3,244 ^r	6,048	212	177 ^r	6,016,000
1993	4,892	2,611	30,559	3,425 ^r	6,335	230	217	6,121,000
1994	4,979	2,504	29,972	3,972 ^r	6,906	244	221 ^r	6,509,000
1995 ^p	4,633	2,459	25,683	4,196	8,686	188	161	6,632,000

^p Preliminary.^r Revised.

* Injuries are classified as serious.

^a Large carriers operating under 14 CFR 121, all scheduled and nonscheduled service.^b All scheduled service operating under 14 CFR 135 (commuter air carriers).^c Nonscheduled service operating under 14 CFR 135 (on-demand air taxis).^d All operations other than those operated under 14 CFR 121 and 14 CFR 135.^e Only includes Injuries & Accidents/Incidents data from police-reported crashes.^f Includes light and large trucks.^g Includes occupants of other vehicle types and non-vehicle occupants (e.g., pedalcyclists and pedestrians) for all years shown. For 1960-1970, NHTSA did not break out fatality data to the same level of detail as in later years, so Fatalities for those years also include occupants of passenger cars, trucks, and buses.^h Includes Amtrak.ⁱ Railroad Injuries & Highway-Rail Grade Crossing Fatalities & Accidents/Incidents data not comparable after 1970 due to change in reporting system.^j Fatalities and Injuries figures include those resulting from train accidents, train incidents and non-train incidents. Injury figures also include occupational illness. Railroad Accidents/Incidents figure includes train accidents only.

(continued on next page)

TABLE 3-1 (continued)

Distribution of Transportation Fatalities, Injuries, and Accidents by Major Transportation Mode

- j Fatalities and Injuries figures include those resulting from train accidents, train incidents and non-train incidents. Injury figures also include occupational illness. Railroad Accidents/Incidents figure includes train accidents only.
- k Includes motor bus, commuter rail, heavy rail, light rail, demand response, van pool, and automated guideway. Does not include other transit modes: cable car, ferry boat, inclined plane, and jitney. Fatalities and Injuries figures include those resulting from incidents of all types; Accidents/Incidents figure includes only collisions and derailments/vehicles going off the road.
- l Waterborne Transport Fatalities data for vessel casualties only.
- m Total does not equal sum of columns. Some Fatalities, Injuries, and Accidents/Incidents are included in the counts for more than one mode. To offset this double-counting, the following adjustments have been made in totaling: 1) Since the highway-rail grade crossing numbers include events involving motor vehicles, which are also included in Highway numbers, these have been subtracted out. 2) In Transit, commuter rail Fatalities, Injuries and Accidents, and motor bus, trolley bus, demand response, and van pool Accidents and Accident-related Fatalities and Injuries, all of which are also included in Highway-Rail Grade Crossing, Railroad, or Highway modes, have all been subtracted. For Injuries and Accidents/Incidents, totals have been rounded to the same precision level as highway data, which make up the major portion of the events recorded. 3) Some highway accidents involve two or more motor vehicles; therefore, instead of summing the four columns in this table which show the number of accidents involving individual vehicle types, the total number of motor vehicle accidents was taken from Table 3-11.

Note: See the following tables for detailed information on individual modes: 3-4, 3-7, 3-8, 3-9, 3-11, 3-14, 3-18, 3-19, 3-20, 3-21, 3-25, 3-26, 3-28, 3-29.

Note: The motor vehicle injury and accident data in this table come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

Sources:

Fatalities:

Aviation:

U.S. Air Carrier:

1960-1975: National Transportation Safety Board (NTSB), *Annual Review of Aircraft Accident Data Calendar Year 1981*.

1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 2.

Commuter Air Carrier:

1975: Ibid., *Annual Review of Aircraft Accident Data Calendar Year 1981*.

1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 5.

On-Demand Air Taxi:

1975: Ibid., *Annual Review of Aircraft Accident Data Calendar Year 1981*.

1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 6.

General Aviation:

1960-1975: Ibid., *Annual Review of Aircraft Accident Data*, annual issues.

1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 7.

Highway:

Passenger Car, Motorcycle, Truck, Bus, Other:

1960-1970: Estimated by NHTSA from data supplied by the National Center for Health Statistics, H.H.S., and State Accident Summaries (adjusted to 30-day deaths).

1975-1995: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

Rail:

Highway-Rail Grade Crossing:

1960-1965: National Safety Council, *Accident Facts*, 1974, 1984.

1975: U.S. DOT/FRA, Office of Policy and Program Development, personal communication.

1970-1991: Ibid., *Rail-Highway Crossing Accident/Incident and Inventory Bulletin*, annual issues, Table S.

1992-1995: Ibid., *Highway-Rail Crossing Accident/Incident and Inventory Bulletin*, annual issues, Table S.

Railroad:

1960-1975: National Safety Council, *Accident Facts*, 1974, 1984.

1980-1995: U.S. DOT/FRA, *Accident/Incident Bulletin*, annual issues, Table 7.

Transit:

1990-1995: U.S. DOT/FTA, *Safety Management Information Statistics (SAMIS)*, annual issues.

Waterborne Transport:

1970-1995: U.S. DOT/USCG, Office of Investigations and Analysis, Compliance Analysis Division, G-MOA-2.

Recreational Boating:

1960-1995: Ibid., *Boating Statistics*, annual issues.

Liquid and Gas Pipeline:

1970-1995: U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35.

(continued on next page)

TABLE 3-1 (continued)**Distribution of Transportation Fatalities, Injuries, and Accidents by Major Transportation Mode****Injuries:****Aviation:****U.S. Air Carrier:**1970-1975: National Transportation Safety Board (NTSB), *Annual Review of Aircraft Accident Data*, annual issues.

1980-1995: Ibid., Analysis and Data Division, RE-50.

Commuter Air Carrier:

1980-1995: Ibid.

On-Demand Air Taxi:

1980-1995: Ibid.

General Aviation:1970-1975: National Transportation Safety Board (NTSB), *Annual Review of Aircraft Accident Data*, annual issues.

1980-1995: Ibid., Analysis and Data Division, RE-50.

Highway:

Passenger Car, Motorcycle, Truck, Bus, Other:

1990-1995: U.S. DOT/NHTSA, *Traffic Safety Facts, 1995*, Table 4.**Rail:**

Highway-Rail Grade Crossing:

1960-1970: National Safety Council, *Accident Facts*, 1974, 1984.

1975: U.S. DOT/FRA, Office of Policy and Program Development, personal communication.

1980-1991: Ibid., *Rail-Highway Crossing Accident/Incident and Inventory Bulletin*, annual issues, Table S.1992-1995: Ibid., *Highway-Rail Crossing Accident/Incident and Inventory Bulletin*, annual issues, Table S.**Railroad:**1960-1975: National Safety Council, *Accident Facts*, 1974, 1984.1980-1995: U.S. DOT/FRA, *Accident/Incident Bulletin*, annual issues, Table 7.**Transit:**1990-1995: U.S. DOT/FTA, *Safety Management Information Statistics (SAMIS)*, annual issues.**Waterborne Transport:**

1970-1995: U.S. DOT/USCG, Office of Investigations and Analysis, Compliance Analysis Division, G-MOA-2.

Recreational Boating:1960-1995: Ibid., *Boating Statistics*, annual issues.**Liquid and Gas Pipeline:**

1970-1995: U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35.

Accidents:**Aviation:****U.S. Air Carrier:**1960-1975: National Transportation Safety Board (NTSB), *Annual Review of Aircraft Accident Data*, annual issues.1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 2.**Commuter Air Carrier:**1975: Ibid., *Annual Review of Aircraft Accident Data Calendar Year 1981*.1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 5.**On-Demand Air Taxi:**1975: Ibid., *Annual Review of Aircraft Accident Data Calendar Year 1981*.1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 6.**General Aviation:**1960-1975: Ibid., *Annual Review of Aircraft Accident Data*, annual issues.1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 7.**Highway:**

Passenger Car, Motorcycle, Truck, Bus:

1990-1995: U.S. DOT/NHTSA, *Traffic Safety Facts 1995*, Table 3 (rounded sum of fatal, injury, and property-damage crashes).**Rail:**

Highway-Rail Grade Crossings:

1960-1970: U.S. DOT/FRA, *Rail-Highway Grade Crossing Accidents*, annual issues.

1975-1980: Ibid., Office of Policy and Program Development, personal communication.

1985-1991: Ibid., *Rail-Highway Crossing Accident/Incident and Inventory Bulletin*, annual issues, Table S.1992-1995: Ibid., *Highway-Rail Crossing Accident/Incident and Inventory Bulletin*, annual issues, Table S.**Railroad:**1970-1995: Ibid., *Accident/Incident Bulletin*, annual issues, Table 4.**Transit:**1990-1995: U.S. DOT/FTA, *Safety Management Information Statistics (SAMIS)*, annual issues.**Waterborne Transport:**

1970-1995: U.S. DOT/USCG, Office of Investigations and Analysis, Compliance Analysis Division, G-MOA-2.

Recreational Boating:1960-1995: Ibid., *Boating Statistics*, annual issues.**Liquid and Gas Pipeline:**

1970-1995: U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35.

TABLE 3-2
Highway-Rail Grade Crossing Fatalities, Injuries, Accidents, Train-Miles and Associated Rates, and Property Damage
 5-Year Intervals 1970-1990 and Annually 1990-1995

Year	Fatalities	Injuries	Accidents	Train-Miles (millions)	Rates Per 100 Million Train-Miles			Property Damage		
					Fatality	Injury	Accident	Railroad Vehicle & Property	Highway Vehicles	Total Property Damage
1970	1,440 *	3,272	3,559 *	838.7	171.7	390.1	424.3	-	-	-
1975	917	3,860	12,076	755.0	121.5	511.3	1,599.5	-	-	-
1980	833	3,890	10,612	717.6	116.1	542.1	1,478.8	6,483,234	22,501,620	28,984,854
1985	582	2,687	6,919	570.9	101.9	470.7	1,211.9	8,718,772	16,999,739	25,718,511
1990	698	2,407	5,713	608.8	114.7	395.4	938.4	13,078,256	22,676,372	35,754,628
1991	608	2,094	5,386	576.8	105.4	363.0	933.8	13,275,120	18,207,755	31,482,875
1992	579	1,975	4,910	593.7	97.5	332.7	827.0	8,076,656	16,318,874	24,395,530
1993	626	1,837	4,892	614.0	102.0	299.2	796.8	10,255,804	16,664,973	26,920,777
1994	615	1,961	4,979	655.1	93.9	299.4	760.1	11,801,570	18,553,250	30,354,820
1995	579	1,894	4,633	669.8	86.4	282.8	691.7	10,123,598	17,777,590	27,901,188

* 1970 data not comparable to later years due to change in reporting system.

Note: Property damage figures in current dollars. Damage to highway vehicles includes damage from accidents at both public and private grade crossings.

Sources: **Fatalities, Injuries, Accidents, and Damage to Highway Vehicles:**

1970-1991: U.S. DOT/FRA, *Rail-Highway Crossing Accident/Incident and Inventory Bulletin*, Tables S & 11 and personal communication.

1992-1995: *Ibid.*, *Highway-Rail Crossing Accident/Incident and Inventory Bulletin*, Tables S & 11 and personal communication.

Train-Miles, Railroad Vehicle and Property Damage:

1970-1995: *Ibid.*, *Accident/Incident Bulletin*, annual issues, Tables 1 and 30.

TABLE 3-3**Hazardous Materials Fatalities, Injuries, Incidents, and Property Damage**

5-Year Intervals 1975-1990 and Annually 1990-1995

Year	Fatalities					
	Air		Highway		Railway	
	Accident-Related	Total	Accident-Related	Total	Accident-Related	Total
1975	0	0	21	27	0	0
1980	0	0	12	17	2	2
1985	0	0	7	8	0	0
1990	0	0	7	8	0	0
1991	0	0	10	10	0	0
1992	0	0	15	15	0	0
1993	0	0	14	15	0	0
1994	0	0	11	11	0	0
1995 ^P	0	0	5	6	0	0

Year	Fatalities							
	Water		Freight Forwarders		Other		Total	
	Accident-Related	Total	Accident-Related	Total	Accident-Related	Total	Accident-Related	Fatalities
1975	0	0	0	0	0	0	21	27
1980	0	0	0	0	0	0	14	19
1985	0	0	0	0	0	0	7	8
1990	0	0	0	0	0	0	7	8
1991	0	0	0	0	0	0	10	10
1992	0	0	0	0	0	0	15	15
1993	0	0	0	0	0	0	14	15
1994	0	0	0	0	0	0	11	11
1995 ^P	0	0	0	0	0	0	5	6

Year	Injuries					
	Air		Highway		Railway	
	Accident-Related	Total	Accident-Related	Total	Accident-Related	Total
1975	0	5	156	527	12	99
1980	0	8	43	493	4	121
1985	0	4	9	195	7	53
1990	0	59	9	311	9	73
1991	0	31	27	333	13	75
1992	0	27	34	461	64	116
1993	0	50	61	511	1	65
1994	0	57	95	425	16	95
1995 ^P	0	32	14	298	4	71

Year	Injuries							
	Water		Freight Forwarders		Other		Total	
	Accident-Related	Total	Accident-Related	Total	Accident-Related	Total	Accident-Related	Injuries
1975	0	2	0	15	0	0	168	648
1980	0	1	0	1	0	2	47	626
1985	0	0	0	1	0	0	16	253
1990	0	0	0	0	0	0	18	443
1991	0	0	0	0	0	0	40	439
1992	0	0	0	0	0	0	98	604
1993	0	0	0	0	0	0	62	626
1994	0	0	0	0	0	0	111	577
1995 ^P	0	0	0	0	0	0	18	401

(continued on next page)

TABLE 3-3 (continued)

Hazardous Materials Fatalities, Injuries, Incidents, and Property Damage

5-Year Intervals 1975-1990 and Annually 1990-1995

Year	Incidents					
	Air		Highway		Railway	
	Accident-Related	Total	Accident-Related	Total	Accident-Related	Total
1975	0	147	330	10,063	109	694
1980	0	223	347	14,161	134	1,271
1985	0	114	302	4,752	61	842
1990	0	297	249	7,299	48	1,279
1991	0	299	249	7,644	54	1,155
1992	1	421	247	7,792	36	1,130
1993	0	626	216	11,078	48	1,121
1994	0	927	246	13,997	52	1,157
1995 ^P	0	814	244	12,772	50	1,154

Year	Incidents						Total	Total
	Water		Freight Forwarders		Other			
	Accident-Related	Total	Accident-Related	Total	Accident-Related	Total		
1975	0	28	1	6	0	13	440	10,951
1980	2	34	0	2	3	28	486	15,719
1985	0	7	1	298	0	6	364	6,019
1990	0	7	0	0	0	0	297	8,882
1991	0	12	0	0	0	0	303	9,110
1992	1	8	0	0	0	0	285	9,351
1993	0	8	0	0	0	0	264	12,833
1994	0	6	0	0	0	0	298	16,087
1995 ^P	0	12	0	0	0	0	294	14,752

Property Damage (current dollars)						
Year	Air		Highway		Railway	
	Accident-Related	Total	Accident-Related	Total	Accident-Related	Total
1975	0	8,907	3,693,770	5,583,963	2,356,508	2,487,502
1980	0	12,285	3,781,955	7,324,410	2,357,102	2,952,458
1985	0	12,299	10,174,834	12,689,517	10,093,567	10,273,646
1990	0	142,038	14,131,962	20,189,768	10,659,969	11,951,572
1991	0	77,090	23,952,503	29,649,627	6,231,038	8,469,499
1992	0	99,529	18,216,499	23,996,753	9,378,024	10,999,302
1993	0	88,555	11,200,448	19,849,012	1,916,070	2,650,951
1994	0	177,543	13,528,150	25,248,690	12,013,577	18,673,002
1995 ^P	0	97,188	15,954,867	22,192,589	7,260,124	8,485,249

Property Damage (current dollars)							
Year	Water		Freight Forwarders		Other		Total
	Accident-Related	Total	Accident-Related	Total	Accident-Related	Total	
1975	0	6,144	300	3,345	0	160	6,050,578
1980	81,000	505,408	0	100	15,630	34,560	8,090,021
1985	0	3,242	50	13,918	0	515	6,235,687
1990	0	69,898	0	0	0	0	20,268,451
1991	0	154,395	0	0	0	0	24,791,931
1992	125,000	143,115	0	0	0	0	32,353,276
1993	0	213,091	0	0	0	0	30,183,541
1994	0	92,003	0	0	0	0	27,719,523
1995 ^P	0	173,511	0	0	0	0	13,116,518
							22,801,609
							25,541,727
							44,191,238
							23,214,991
							30,948,537

^P Preliminary.

^r Revised.

Note: Hazardous materials operations initiated in 1971.

Source: U.S.DOT/RSPA, Office of Hazardous Materials Transportation, DHM-63.

Transportation Safety

SECTION B

Air

TABLE 3-4
U.S. Air Carrier* Fatalities, Serious Injuries, Accidents, Fatal Accidents, and Aircraft-Miles Flown,
Aircraft Departures and Associated Rates
 5-Year Intervals 1960-1990 and Annually 1990-1995

Year	Fatalities	Serious Injuries	Total Accidents	Fatal Accidents	Aircraft-Miles Flown (millions)	Rates per 100 Million Aircraft-Miles Flown		
						Fatality	Serious Injury	Total Accident
1960	499	-	90	17	1,130	44.159	-	7.965
1965	261	-	83	9	1,768	14.762	-	4.695
1970	146	107	55	8	2,685	5.438	3.985	2.048
1975	124 ^r	81 ^r	37 ^r	3 ^r	2,325	5.333	3.484	1.591
1980	1	19 ^r	19 ^r	1	2,924	0.034	0.650	0.513
1985	526	30	21 ^r	7	3,631	14.486	0.826	0.578
1990	39	39	24	6	4,970	0.785	0.785	0.483
1991	50	26	26	4	4,851	1.031	0.536	0.536
1992	33	13	18	4	5,088	0.649	0.256	0.354
1993	1	16	23	1	5,299	0.019	0.302	0.434
1994	239	35	23 ^r	4	5,469	4.370	0.640	0.421
1995 ^p	168	25	35	3	5,661	2.968	0.442	0.618

Year	Aircraft Departures (thousands)	Rates per 100,000 Aircraft Departures		
		Fatality	Serious Injury	Total Accident
1960	-	-	-	-
1965	-	-	-	-
1970	-	-	-	-
1975	-	-	-	-
1980	5,479	0.018	0.347	0.274
1985	6,307	8.340	0.476	0.333
1990	8,225	0.474	0.474	0.292
1991	7,986	0.626	0.326	0.326
1992	8,084	0.408	0.161	0.223
1993	8,288	0.012	0.193	0.278
1994	8,460	2.825	0.414	0.272
1995 ^p	8,667	1.938	0.288	0.404

^p Preliminary.

^r Revised.

* Air carriers operating under 14 CFR 121, scheduled and nonscheduled service. Includes all scheduled and nonscheduled service accidents involving deregulated all cargo carriers and commercial operators of large aircraft when those accidents occurred during 14 CFR 121 operations.

Source:

1960-1975: National Transportation Safety Board

(NTSB), *Annual Review of Aircraft*

Accident Data, annual issues.

1980-1995: Ibid., *NTSB Aviation Accident Statistics*, annual issues, Table 2.

TABLE 3-5

Number of Pilot-Reported Near Midair Collisions by Degree of Hazard

5-Year Intervals 1980–1990 and Annually 1990–1995

Year	Degree of Hazard					Total
	Critical	Potential	No Hazard	Unclassified	Open	
1980	118	319	122	9	0	568
1985	180	423	133	22	0	758
1990	74	266	114	0	0	454
1991	52	197	99	0	0	348
1992	46	195	70	0	0	311
1993	35	159	61	0	2	257
1994^r	46	139	70	0	21	276
1995^P	29	119	53	0	40	241

P Preliminary.

r Revised.

Critical: A situation where collision avoidance was due to chance, rather than an act on the part of the pilot. Less than 100 feet of aircraft separation would be considered critical.

Potential: An incident which would probably have resulted in a collision if no action had been taken by either pilot. Closest proximity of less than 500 feet would usually be required in this case.

No Hazard: When direction and altitude would have made a midair collision improbable, regardless of evasive action taken.

Unclassified: No determination could be made, either due to insufficient evidence or unusual circumstances.

Open: Incidents that are still under investigation.

Source: U.S. DOT/FAA, Safety Data Services, ASY-100.

TABLE 3-6

Airline* Passenger Screening Results by Type of Weapons Detected, Persons Arrested, and Bomb Threats Received
 5-Year Intervals 1970–1990 and Annually 1990–1995

Year	Persons Screened (millions)	Type of Weapons Detected					Persons Arrested			Bomb Threats	
		Firearms			Other Weapons		Carrying Firearms/Explosives	Giving False Information	Against Airports	Against Aircraft	
		Handguns	Long Guns	Other ^a	Total Firearms	Other Dangerous Articles ^a					
1970	—	—	—	—	—	—	—	—	601	—	—
1975	—	—	—	—	—	—	—	—	1,853	449	—
1980	585	1,878	36	108	2,022	—	1,031	32	1,179	268	—
1985	993	2,823	90	74	2,987	—	1,310	42	477	153	—
1990	1,145	2,490	59	304	2,853	—	1,337	18	448	338	—
1991	1,015	1,597	47	—	1,644 ^r	275	893	28	498	388	—
1992	1,111	2,503	105	—	2,608	2,341	1,282	13	188	215	—
1993	1,150	2,707	91	—	2,798	3,867	1,354	31	304	248	—
1994	1,261	2,860	134	—	2,994	6,051	1,433	35	250	218	—
1995	1,263	2,230	160	—	2,390	4,414	1,194	68	346	327	—

^r Revised.

* Includes operators with an FAA operating certificate engaged in scheduled passenger or public charter passenger operations; and airports at which these operations are conducted.

^a For 1980 through 1990, "Other" was included in the firearms total. In 1991, "Other" became "Other Dangerous Articles" and is no longer included in the firearms total. Beginning in 1992, this category included stunning devices, chemical agents, martial arts equipment, knives, bludgeons, and certain other designated items.^b From 1992 through 1994, the method of counting "explosive/incendiary devices" deviated, so as to inflate numbers in this category. Individual items were counted, rather than packages (i.e., one box of firecrackers counted as 20 firecrackers; one box of ammunition counted as 50 cartridges). This situation has been rectified and a more valid count is now shown for 1995.

Sources: Passenger Screening Results: U.S. DOT/FAA, *Annual Report to Congress on Civil Aviation Security*, 1996, annual issues.
 Bomb Threats: Ibid., *Criminal Acts Against Civil Aviation*, 1995, annual issues.

▲ TABLE 3-7
Commuter Air Carrier* Fatalities, Serious Injuries, Accidents, Fatal Accidents, and Aircraft-Miles Flown
Flown, Aircraft Departures and Associated Rates
 5-Year Intervals 1975–1990 and Annually 1990–1995

Year	Fatalities	Serious Injuries	Total Accidents	Fatal Accidents	Aircraft-Miles Flown (millions)	Rates per 100 Million Aircraft-Miles Flown			
						Fatality	Serious Injury	Total Accident ^b	Fatal Accident ^b
1975	28	—	48	12	—	—	—	0.30	0.07
1980	37	14	38	8	192	19.27	7.29	0.20	0.04
1985	37	16	21	7	301	12.29	5.32	0.07	0.02
1990	7	11	16	4	450	1.56	2.44	0.04 ^r	0.01
1991 ^a	77	30	22	8	381	20.21	7.87	0.06	0.02
1992	21	5	23	7	442	4.75	1.13	0.05	0.02
1993	24	2	16	4	505	4.75	0.40	0.03	0.01
1994	25	6	10	3	610	4.10	0.98	0.02	0.01
1995 ^p	9	25	12	2	622	1.45	4.02	0.02	0.00

Year	Aircraft Departures (thousands)			Aircraft Departures		
	Fatalities	Serious Injury	Total Accident ^b	Fatalities	Serious Injury	Total Accident ^b
1975	—	—	3.30	—	—	0.82
1980	1,777	2.08	0.79	2.14	0.45	0.27
1985	2,561	1.44	0.62	0.82	0.27	0.13 ^r
1990	3,160	0.22	0.35	0.51 ^r	0.30	0.24
1991 ^a	2,648	2.91	1.13	0.83	0.12	0.08 ^r
1992	2,911	0.72	0.17	0.76	0.06	0.06 ^r
1993	3,322	0.72	0.06	0.48 ^r	0.08	0.06 ^r
1994	3,616	0.69	0.17	0.28 ^r	0.06	0.06 ^r
1995 ^p	3,506	0.26	0.71	0.34	0.06	0.06 ^r

P Preliminary.

r Revised.

* Air carriers operating under 14 CFR 135, all scheduled service. Includes accidents involving all-cargo air carriers when those accidents occurred during scheduled 14 CFR 135 operations.

a Total fatalities for 1991 do not include the 22 persons killed aboard an airliner when it and a commuter aircraft collided.

b Rates are based on all accidents including some involving operators not reporting traffic data to the U.S. Department of Transportation.

Sources:

National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 5.
 Serious Injuries: *Ibid.*, Analysis and Data Division, RE-50.

TABLE 3-8
On-Demand Air Taxi* Fatalities, Serious Injuries, Accidents, Fatal Accidents, and Aircraft Hours Flown
and Associated Rates

5-Year Intervals 1975–1990 and Annually 1990–1995

Year	Fatalities	Serious Injuries	Total Accidents	Fatal Accidents	Aircraft Hours Flown (thousands)	Rates per 100,000 Aircraft Hours Flown		
						Fatality	Serious Injury	Fatal Accident
1975	69	–	152	24	2,526	2.73	–	0.95
1980	105	43	171	46	3,618	2.90	1.19	1.27
1985	76	43	154	35	2,570	2.96	1.67	1.36
1990	50	36	106	28	2,249	2.22	1.60	1.24
1991	70	27	87	27	2,241	3.12	1.20	1.20
1992	68 ^r	19	76	24	2,009	3.38	0.95	1.19
1993	42	24	69	19	1,809	2.32	1.33	3.81 ^r
1994	63 ^r	32	85 ^r	26 ^r	1,993	3.16	1.61	4.26 ^r
1995 ^p	52	14	76	24	2,000	2.60	0.70	3.80

^p Preliminary.

^r Revised.

* Air carriers operating under 14 CFR 135, nonscheduled operations. Accidents on foreign soil and in foreign waters are excluded.

Sources:

National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 6.

Aircraft Hours Flown: Ibid., based on estimate by the U.S. DOT/FAA.

Serious Injuries: Ibid., Analysis and Data Division, RE-50.

▲ **TABLE 3-9**
General Aviation* Fatalities, Serious Injuries, Accidents, Fatal Accidents, and Aircraft Hours Flown and Associated Rates

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Fatalities	Serious Injuries	Total Accidents	Fatal Accidents	Aircraft Hours Flown (thousands)	Rates per 100,000 Aircraft Hours Flown		
						Fatality	Serious Injury	Fatal Accident
1960	787	–	4,793	429	13,121	36.53	–	3.27
1965	1,029	–	5,196	538	16,733	31.05	–	3.22
1970	1,310	715	4,712	641	26,030	18.10	2.75	2.46
1975	1,252	728	3,995	633	28,799	13.87	2.53	2.20
1980	1,239	675	3,590	618	36,402	9.86	1.85	1.70
1985	955	517	2,739 ^r	498	28,322	9.67	1.83	1.75
1990	766	391	2,215 ^r	442	28,510	7.77 ^r	1.37	1.55
1991	786 ^r	420	2,175 ^r	432	27,226	7.99 ^r	1.54	1.58
1992	857 ^r	418	2,073 ^r	446	23,792	8.71 ^r	1.76	1.87
1993	736 ^r	386	2,039 ^r	398	22,531	9.05	1.71	1.77
1994	723 ^r	452	1,990 ^r	402	21,873 ^r	9.10	2.07	1.83
1995 ^p	732	398	2,066	408	20,000	10.33	1.99	2.04

^p Preliminary.

^r Revised.

* U.S. registered civil aircraft not operated under 14 CFR 121 or 14 CFR 135. Accidents on foreign soil and in foreign waters are excluded.

Sources: 1960–1975: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.

1980–1995: National Transportation Safety Board (NTSB), *NTSB Aviation Accident Statistics*, annual issues, Table 7.

Aircraft Hours Flown: Ibid., based on estimate by the U.S. DOT/FAA.

Serious Injuries: Ibid., Analysis and Data Division, RE-50.

Transportation Safety

SECTION C

Highway

TABLE 3 -10
Motor Vehicle Fatalities and Vehicle-Miles and Associated Rates by Highway Functional System
 Annually 1991–1995

Year	Interstate Rural						Rural						Total Rural					
	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Other Arterial Rural			Collector Rural			Local Rural			Total Rural		
	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate
1991	2,564	205,011	1.25	9,370	334,755	2.80	8,034	245,630	3.27	4,445	98,157	4.53	24,413	883,553	2.76	24,413	883,553	2.76
1992	2,474	205,557	1.20	8,552	344,062	2.49	7,760	234,910	3.30	3,963	99,568	3.98	22,749	884,097	2.57	22,749	884,097	2.57
1993	2,599	208,308	1.25	8,874	349,567	2.54	7,772	226,296	3.43	3,955	102,661	3.85	23,200	886,832	2.62	23,200	886,832	2.62
1994	2,534	215,568	1.18	9,410	357,329	2.63	7,635	230,529	3.31	4,114	104,915	3.92	23,693	908,341	2.61	23,693	908,341	2.61
1995	2,691	223,385	1.20	9,900	368,596	2.69	7,381	236,148	3.13	4,015	105,156	3.82	23,987	933,285	2.57	23,987	933,285	2.57

Year	Interstate Urban						Urban						Total Urban					
	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Other Arterial Urban			Collector Urban			Local Urban			Total Urban		
	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate	Fatalities	VMT (millions)	Fatality Rate
1991	1,908	285,325	0.67	10,600	707,518	1.50	1,278	107,281	1.19	3,263	188,373	1.73	17,049	1,288,497	1.32	17,049	1,288,497	1.32
1992	1,865	303,265	0.61	9,982	745,618	1.34	1,086	116,065	0.94	3,553	198,106	1.79	16,486	1,363,054	1.21	16,486	1,363,054	1.21
1993	1,936	317,399	0.61	9,871	774,049	1.28	1,239	117,950	1.05	3,869	200,470	1.93	16,915	1,409,868	1.20	16,915	1,409,868	1.20
1994	2,107	330,577	0.64	10,430	797,899	1.31	1,257	120,088	1.05	3,189	200,683	1.59	16,983	1,449,247	1.17	16,983	1,449,247	1.17
1995	2,145	341,528	0.63	10,768	815,164	1.32	1,425	126,891	1.12	3,473	205,907	1.69	17,811	1,489,490	1.20	17,811	1,489,490	1.20

Note: Tables VM-2 and VM-2a from *Highway Statistics* have been used to revise vehicle-mile data that appeared in Tables FI-1 and FI-2 in the same publication. Fatality figures reflect original figures received by FHWA from NHTSA, and, when totalled, differ slightly from the revised NHTSA figures that appear in other tables in this volume.

Source: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables FI-1, FI-2, VM-2 and VM-2a.

TABLE 3-11
Motor Vehicle Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Fatalities	Injuries	Accidents	Vehicle-Miles (millions)	Rates per 100 Million Vehicle-Miles		
					Fatality	Injury	Accident
1960	36,399	–	–	718,762	5.1	–	–
1965	47,089	–	–	887,640	5.3	–	–
1970	52,627	–	–	1,109,724	4.7	–	–
1975	44,525	–	–	1,327,664	3.4	–	–
1980	51,091	–	–	1,527,295	3.3	–	–
1985	43,825	–	–	1,774,179	2.5	–	–
1990	44,599	3,231,000	6,471,000	2,144,362	2.1	151	302
1991	41,508	3,097,000	6,117,000	2,172,050	1.9	143	282
1992	39,250	3,070,000	6,000,000	2,247,151	1.7	137	267
1993	40,150	3,125,000	6,105,000	2,296,700	1.7	136	266
1994 ^r	40,716	3,215,000	6,492,000	2,357,588	1.7	136	275
1995 ^p	41,798	3,386,000	6,613,000	2,422,775	1.7	140	273

^p Preliminary.

^r Revised.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources:
Fatalities: 1960–1970: Estimated by U.S. DOT/NHTSA from data supplied by U.S. Dept. of H.H.S./National Center for Health Statistics and State Accident Summaries (adjusted to 30-day deaths).
 1975–1995: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

Accidents & Injuries:
 1990–1995: Ibid., Fatal Accident Reporting System (FARS) and General Estimates System (GES).

Vehicle-Miles:
 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 3-12
Motor Vehicle Fatal Accidents by Posted Speed Limit
 5-Year Intervals 1975–1990 and Annually 1990–1995

Year	Posted Speed											Total
	0-25 MPH	26-35 MPH	36-45 MPH	46-54 MPH	Total Under 55 MPH	55 MPH	60 MPH	65 MPH	70 MPH	Over 70 MPH	Un- known	
1975	2,617	6,099	4,276	2,241	15,233	16,094	—	—	—	—	7,834	39,161
1980	2,865	8,527	6,256	2,431	20,079	20,352	—	—	—	—	4,853	45,284
1985	2,504	7,889	6,813	2,072	19,278	18,862	—	—	—	—	1,055	39,195
1990	2,234	7,756	7,092	2,054	19,136	17,556	18	2,175	—	—	951	39,836
1991	2,097	6,908	6,608	1,894	17,507	16,543	9	2,078	—	—	800	36,937
1992	1,911	6,696	6,345	1,875	16,827	15,444	4	2,002	—	—	665	34,942
1993	1,895	6,759	6,454	1,877	16,985	15,980	9	2,155	—	—	651	35,780
1994 ^r	1,890	6,565	6,632	1,861	16,948	16,512	13	2,173	—	—	608	36,254
1995 ^p	1,848	6,653	6,902	1,890	17,293	16,720	16	2,324	38	10	820	37,221

^p Preliminary.

^r Revised.

Note: Congressional legislation implemented the national maximum 55 mph speed limit in 1974. Amendments in 1987 and 1991 allowed states to increase speed limits to 65 mph on rural interstates and similar highways. With the repeal of the National Maximum Speed Limit in late 1995, complete control of speed limits was returned to the states, some of which immediately raised their maximum limits to 70 mph or above. (Source: Advocates for Highway and Auto Safety.)

Source: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

TABLE 3-13
Traffic Fatalities by Vehicle Type and Occupant Status
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Occupant Fatalities by Vehicle Type							Truck		
	Passenger Car							Light Truck	Large Truck	Total
	Subcompact	Compact	Intermediate	Full	Unknown	Total ^a				
1960	–	–	–	–	–	–	–	–	–	–
1965	–	–	–	–	–	–	–	–	–	–
1970	–	–	–	–	–	–	–	–	–	–
1975	3,834	614	1,869	10,800	8,811	25,928	4,856	961	5,817	
1980	7,299	927	3,878	11,580	3,765	27,449	7,486	1,262	8,748	
1985	7,993	2,635	4,391	6,586	1,607	23,212	6,689	977	7,666	
1990	8,309	5,310	4,849	4,635	989	24,092	8,601	705	9,306	
1991	7,694	5,338	4,681	4,040	632	22,385	8,391	661	9,052	
1992	7,028	5,354	4,418	3,796	791	21,387	8,098	585	8,683	
1993	6,968	5,707	4,483	3,675	733	21,566	8,511	605	9,116	
1994 ^r	7,060	6,322	4,407	3,560	648	21,997	8,904	670	9,574	
1995 ^p	6,651	6,767	4,583	3,344	1,013	22,358	9,539	644	10,183	

(continued on next page)

TABLE 3-13 (continued)
Traffic Fatalities by Vehicle Type and Occupant Status
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Occupant Fatalities by Vehicle Type				Non-Occupant Fatalities				Total Traffic Fatalities
	Other Vehicles			Pedestrian	Pedal-cyclist ^c	Other	Total		
	Motorcycle ^b	Bus	Other & Unknown Vehicle Type						
1960	790	–	–	790	7,210	490	–	7,700	36,399 ^d
1965	1,650	–	–	1,650	7,990	690	–	8,680	47,089 ^d
1970	2,880	–	–	2,880	8,950	760	–	9,710	52,627 ^d
1975	3,189	53	938	4,180	7,516	1,003	81	8,600	44,525
1980	5,144	46	540	5,730	8,070	965	129	9,164	51,091
1985	4,564	57	544	5,165	6,808	890	84	7,782	43,825
1990	3,244	32	460	3,736	6,482	859	124	7,465	44,599
1991	2,806	31	466	3,303	5,801	843	124	6,768	41,508
1992	2,395	28	387	2,810	5,549	723	98	6,370	39,250
1993	2,449	18	425	2,892	5,649	816	111	6,576	40,150
1994 ^r	2,320	18	409	2,747	5,489	802	107	6,398	40,716
1995 ^p	2,221	32	480	2,733	5,585	830	109	6,524	41,798

^p Preliminary.

^r Revised.

^a 1960–1970: Includes taxis.

^b 1960–1970: Includes motor scooters and motor bikes.

^c 1960–1970: Includes deaths of pedalcyclists and motor vehicle occupants involved in a collision.

^d Prior to the introduction of NHTSA's Fatal Accident Reporting System in 1975, only the modes for which data are shown for 1960–1970 were broken out for data collection purposes. Other motor vehicle fatality victims were all combined into one category; these included, primarily, drivers and passengers in motor vehicles other than motorcycles and motor scooters, along with a few riders of animals, occupants of animal-drawn vehicles, occupants of street cars, unauthorized riders, etc., totaling 27,909 in 1960, 36,759 in 1965, and 40,637 in 1970. Although not shown in a separate column, these fatalities are included in the motor vehicle total.

Sources: 1960–1970: Estimated by U.S. DOT/NHTSA from data supplied by the National Center for Health Statistics, H.H.S., and State Accident Summaries (adjusted to 30-day deaths)

1975–1995: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

TABLE 3-14

Passenger Car Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates
5-Year Intervals 1975–1990 and Annually 1990–1995

Year	Fatalities	Injuries	Accidents	Vehicle-Miles (millions)	Rates per 100 Million Vehicle-Miles		
					Fatality	Injury	Accident
1975	25,928	—	—	1,033,950	2.5	—	—
1980	27,449	—	—	1,111,596	2.5	—	—
1985	23,212	—	—	1,260,565	1.8	—	—
1990	24,092	2,376,000	5,560,000	1,513,184	1.6	157	367
1991	22,385	2,235,000	5,178,000	1,533,552	1.5	146	338
1992	21,387	2,232,000	5,043,000	1,600,839	1.3	139	315
1993	21,566	2,257,000	5,045,000	1,547,366	1.4	146	326
1994	21,997	2,332,000	5,399,000	1,501,402	1.5	155	360
1995 ^p	22,358	2,416,000	5,523,000	1,541,458	1.5	157	358

^p Preliminary.

Note: The injury and accident data in this table come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources:

Fatalities:
1975–1995: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

Injuries & Accidents:
1990–1995: Ibid., Fatal Accident Reporting System (FARS) and General Estimates System (GES).

Vehicle-Miles:
1975–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 3-15**Injury Severity Among Passenger Car Occupants Involved in Fatal Crashes by Passenger Restraint Usage**

5-Year Intervals 1985–1990 and Annually 1990–1995

Injury Severity & Year	Restrained	Unrestrained	Unknown Restraint	Total
Fatal Injury				
1985 ^r	2,099	16,798	4,315	23,212
1990 ^r	5,705	15,729	2,658	24,092
1991 ^r	6,136	13,947	2,302	22,385
1992	6,392	12,855	2,140	21,387
1993	7,133	12,274	2,159	21,566
1994 ^r	7,828	12,190	1,979	21,997
1995 ^p	8,095	12,258	2,005	22,358
Incapacitating Injury				
1985 ^r	1,538	8,659	1,935	12,132
1990 ^r	3,675	6,792	1,312	11,779
1991 ^r	3,849	5,898	1,103	10,850
1992	3,862	5,504	1,105	10,471
1993	4,314	5,295	988	10,597
1994 ^r	4,543	4,983	897	10,423
1995 ^p	4,544	4,766	976	10,286
Non-Incapacitating Injury				
1985 ^r	1,309	4,706	1,726	7,741
1990 ^r	3,176	4,009	792	7,977
1991 ^r	3,174	3,415	647	7,236
1992	3,203	3,022	661	6,886
1993	3,566	2,844	566	6,976
1994 ^r	3,760	2,669	527	6,956
1995 ^p	4,026	2,600	526	7,152
Possible Injury				
1985 ^r	693	1,719	694	3,106
1990 ^r	2,416	1,508	362	4,286
1991 ^r	2,311	1,317	315	3,943
1992	2,305	1,125	301	3,731
1993	2,467	1,041	306	3,814
1994 ^r	2,498	981	252	3,731
1995 ^p	2,664	908	254	3,826

(continued on next page)

TABLE 3-15 (continued)

Injury Severity Among Passenger Car Occupants Involved in Fatal Crashes by Passenger Restraint Usage

5-Year Intervals 1985–1990 and Annually 1990–1995

Injury Severity & Year	Restrained	Unrestrained	Unknown Restraint	Total
No Injury				
1985 ^r	2,548	5,652	3,943	12,143
1990 ^r	6,150	2,542	2,319	11,011
1991 ^r	5,775	2,084	1,991	9,850
1992	5,740	1,716	1,819	9,275
1993	5,935	1,633	1,754	9,322
1994 ^r	6,157	1,402	1,483	9,042
1995 ^p	6,314	1,286	1,367	8,967
Unknown Injury				
1985 ^r	83	351	313	747
1990 ^r	70	122	297	489
1991 ^r	78	96	295	469
1992	105	98	251	454
1993	90	89	250	429
1994 ^r	48	67	264	379
1995 ^p	62	79	281	422
Total Fatal & Other Injuries				
1985 ^r	8,270	37,885	12,926	59,081
1990 ^r	21,192	30,702	7,740	59,634
1991 ^r	21,323	26,757	6,653	54,733
1992	21,607	24,320	6,277	52,204
1993	23,505	23,176	6,023	52,704
1994 ^r	24,834	22,292	5,402	52,528
1995 ^p	25,705	21,897	5,409	53,011

^p Preliminary.

^r Revised.

Source: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

TABLE 3-16**Fatalities by Highest Blood Alcohol Concentration (BAC) in the Crash**

5-Year Interval 1985–1990 and Annually 1990–1995

Year	BAC = 0.00		BAC = 0.01-0.09		BAC = 0.10 +		Total	Total Fatalities in Alcohol-Related Crashes	
	Number	Percent	Number	Percent	Number	Percent		Number	Percent
1985 *	21,109	48.2	4,604	10.5	18,111	41.3	43,825	22,716	51.8
1990	22,515	50.5	4,434	9.9	17,650	39.6	44,599	22,084	49.5
1991	21,621	52.1	3,957	9.5	15,930	38.4	41,508	19,887	47.9
1992 *	21,392	54.5	3,625	9.2	14,234	36.3	39,250	17,858	45.5
1993	22,677	56.5	3,496	8.7	13,977	34.8	40,150	17,473	43.5
1994 ^r	24,136	59.3	3,480	8.5	13,100	32.2	40,716	16,580	40.7
1995 ^p	24,524	58.7	3,710	8.9	13,564	32.5	41,798	17,274	41.3

^p Preliminary.^r Revised.

* Columns do not add to total in source table.

Source: U.S. DOT/NHTSA, National Center for Statistics and Analysis, *Traffic Safety Facts 1995*, p. 32.**TABLE 3-17****Related Legislative Developments: Number of States with Different Types of Anti-DUI/DWI Legislation in Effect as of January 1 of the Listed Year**

Year	BAC = 0.08 <i>Per Se</i> Laws	Lower Unlawful BAC Threshold for Youth (under 21 or other)	Administrative License Revocation for DUI/DWI Offenders*
1986	2	1	18
1990	4	1	27
1992	5	5	30
1994	10	14	33
1996	13	34 *	38

* Includes D.C.

Note: National Uniform Minimum Drinking Age Act, which standardized the minimum drinking age at 21, was enacted in 1984.Source: U.S. DOT/NHTSA, Office of Program Development and Evaluation, NTS-31.

TABLE 3-18

Motorcycle Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates
5-Year Intervals 1970–1990 and Annually 1990–1995

Year	Fatalities	Injuries *	Accidents	Vehicle-Miles (millions)	Rates per 100 Million Vehicle-Miles		
					Fatality	Injury *	Accident
1970	2,280	—	—	2,979	76.5	—	—
1975	3,189	—	—	5,629	56.7	—	—
1980	5,144	—	—	10,214	50.4	—	—
1985	4,564	—	—	9,086	50.2	—	—
1990	3,244	84,000	103,000	9,557	33.9	882	1,078
1991	2,806	80,000	106,000	9,178	30.6	876	1,155
1992	2,395	65,000	72,000	9,557	25.1	681	753
1993	2,449	58,000	72,000	9,906	24.7	581	727
1994	2,320	56,000	67,000	10,240 ^r	22.7	549	654
1995 ^p	2,221	55,000	63,000	9,797	22.7	561	643

^p Preliminary.

^r Revised.

* Although NHTSA rounds their accident and injury projections to the nearest thousand prior to publication, they calculate percentages and rates using the unrounded projections. Thus, NHTSA's injury rates shown here, are slightly different from the rates which would be obtained by dividing the figures in the injury column by the vehicle-miles.

Note: The injury and accident data in this table come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

Source: **Fatalities:**
1970: Estimated by U.S. DOT/NHTSA from data supplied by U.S. Dept. of H.H.S./National Center for Health Statistics and State Accident Summaries (adjusted to 30-day deaths).
1975–1995: U.S. DOT/NHTSA, *National Center for Statistics and Analysis*, Fatal Accident Reporting System (FARS).
Injuries & Accidents:
1990–1995: Ibid., Fatal Accident Reporting System (FARS) and General Estimates System (GES).
Vehicle-Miles:
1970–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 3-19
Truck Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates by Truck Size
 5-Year Intervals 1975–1990 and Annually 1990–1995

Year	Fatalities			Injuries			Accidents			Vehicle-Miles (millions)		
	Light	Large	Total	Light	Large	Total	Light	Large	Total	Light	Large	Total
1975	4,856	961	5,817	–	–	–	–	–	–	200,700	81,330	282,030
1980	7,486	1,262	8,748	–	–	–	–	–	–	290,935	108,491	399,426
1985	6,689	977	7,666	–	–	–	–	–	–	373,072	126,580	499,652
1990	8,601	705	9,306	505,000	42,000	547,000	2,152,000	372,000	2,524,000	466,092	149,810	615,902
1991	8,391	661	9,052	563,000	28,000	591,000	2,200,000	319,000	2,519,000	472,885	150,729	623,614
1992	8,098	585	8,683	545,000	34,000	579,000	2,191,000	363,000	2,554,000	476,193	152,803	628,996
1993	8,511	605	9,116	590,000	32,000	622,000	2,395,000	381,000	2,776,000	573,398	159,904	733,302
1994	8,904 ^r	670 ^r	9,574 ^r	619,000	30,000	649,000	2,564,000	444,000	3,008,000	669,321	170,216	839,537
1995 ^p	9,539	644	10,183	709,000	30,000	739,000	2,709,000	362,000	3,071,000	686,977	178,160	865,137

Rates per 100 Million Vehicle-Miles									
Year	Fatality			Injury			Accident		
	Light	Large	Total	Light	Large	Total	Light	Large	Total
1975	2.4	1.2	2.1	–	–	–	–	–	–
1980	2.6	1.2	2.2	–	–	–	–	–	–
1985	1.8	0.8	1.5	–	–	–	–	–	–
1990	1.8	0.5	1.5	108	28	89	462	248	410
1991	1.8	0.4	1.5	119	19	95	465	212	404
1992	1.7	0.4	1.4	114	22	92	458	238	405
1993	1.5	0.4	1.2	103	20	85	418	238	379
1994	1.3	0.4	1.1	92	18	77	383	261	358
1995 ^p	1.4	0.4	1.2	103	17	85	394	203	355

^p Preliminary.

^r Revised.

Note: Large trucks: Trucks over 10,000 pounds gross vehicle weight rating, including single-unit trucks and truck tractors.
 Light trucks: Trucks of 10,000 pounds gross vehicle weight rating or less, including pickups, vans, truck-based station wagons, and utility vehicles.

▲ **TABLE 3-19** (continued)

Truck Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates by Truck Size

Note: The injury and accident data in this table come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources: **Fatalities:** 1975–1995: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

Injuries & Accidents: 1990–1995: Ibid., Fatal Accident Reporting System (FARS) and General Estimates System (GES).

Vehicle-Miles: 1975–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 3-20
Bus* Fatalities, Injuries, Accidents, and Vehicle-Miles and Associated Rates
 5-Year Intervals 1975–1990 and Annually 1990–1995

Year	Fatalities	Injuries	Accidents	Vehicle-Miles (millions)	Rates per 100 Million Vehicle-Miles		
					Fatality	Injury	Accident
1975	53	–	–	6,055	0.9	–	–
1980	46	–	–	6,059	0.8	–	–
1985	57	–	–	4,876	1.2	–	–
1990	32	33,000	60,000	5,719	0.6	577	1,054
1991	31	21,000	56,000	5,743	0.5	366	980
1992	28	20,000	49,000	5,759	0.5	347	856
1993	18	17,000	51,000	6,126	0.3	278	837
1994	18	15,000	56,000	6,409 ^r	0.3	234	878
1995 ^p	32	18,000	58,000	6,383	0.5	282	913

^p Preliminary.

^r Revised.

* Bus includes school, transit and intercity buses.

Note: The injury and accident data in this table come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

Sources:

1975–1995: U.S. DOT/NHTSA, National Center for Statistics and Analysis, Fatal Accident Reporting System (FARS).

Fatalities:

1990–1995: Ibid., Fatal Accident Reporting System (FARS) and General Estimates System (GES).

Accidents & Injuries:

1975–1990: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Vehicle-Miles:

Transportation Safety

SECTION D

Transit

Table 3-21
Transit Fatalities, Injuries, Incidents, Accidents, Vehicle-Miles and Associated Rates, and Property Damage
 Annually 1990-1995

Year	Fatalities ^a	Injuries ^a	Incidents ^{ab} (includes accidents)	Accidents ^b	Vehicle-Miles (millions)	Rates per 100 Million Vehicle-Miles ^c			Property ^d Damage (current dollars)
						Fatality	Injury	Accident	
1990	339	54,556	90,163	58,002	3,242	10.5	1,683	1,789	37,972,669
1991	300	52,125	83,139	46,467	3,306	9.1	1,577	1,406	37,476,192
1992	273	55,089	73,831	36,380	3,355	8.1	1,642	1,084	37,454,950
1993	281	52,668	64,986	30,559	3,435	8.2	1,533	890	44,924,732
1994	320	58,193	70,693	29,972	3,556	9.0	1,636	843	38,376,397
1995	274	56,991	62,402	25,683	NA	NA	NA	NA	46,265,973

^a Totals do not include data for other transit modes (cable car, inclined plane, jitney, and ferry boat). This data appears in Table 3-22.

^b Accidents include collisions with other vehicles, objects and people (except suicides), and derailments/buses going off the road.

Incidents include accidents as well as personal casualties (inside vehicle, inside stations, and boarding and alighting vehicle), and fires.

^c Fatality and injury rates are based on total incidents including accidents.

^d Total does not include property damage for other transit modes (cable car, inclined plane, jitney, and ferry boat) which are detailed as follows: 1990-\$335,100, 1991-\$410,450, 1992-\$288,308, 1993-\$220,674, 1994-\$321,705, 1995-NA.

NA Data not available at press time.

Sources:

Fatalities, Injuries, Incidents, Accidents and Property Damage:

U.S. DOT/FTA, *Safety Management Information Statistics (SAMIS) Annual Report*, annual issues.

Vehicle-Miles:

American Public Transit Association (APTA), *Transit Fact Book*, 1996, Table 5, and similar tables in earlier editions.

Table 3-22

Transit Fatalities, Injuries, and Incidents by Vehicle Type

Annually 1990-1995

Fatalities								
Year	Motor Bus	Light Rail	Heavy Rail	Commuter Rail	Demand Response	Van Pool	Automated Guideway	Total ^d
1990	110	7	117	104	0	0	1	339
1991	88	13	103	93	3	0	0	300
1992	99	9	91	74	0	0	0	273
1993	83	15	83	98	2	0	0	281
1994	108	13	85	112	2	0	0	320
1995	82 ^a	15	79	92	6	0	0	274

Injuries								
Year	Motor Bus	Light Rail	Heavy Rail	Commuter Rail	Demand Response	Van Pool	Automated Guideway	Total ^e
1990	40,006	1,244	10,036	2,438	807	21	4	54,556
1991	38,619	1,251	9,285	2,308	622	40	0	52,125
1992	40,090	1,268	10,446	2,546	713	19	7	55,089
1993	38,873	982	10,532	1,560	652	59	10	52,668
1994	42,195	1,181	11,673	2,374	731	29	10	58,193
1995	41,111 ^b	1,303	11,238	2,374	932	25	8	56,991

Incidents								
Year	Motor Bus	Light Rail	Heavy Rail	Commuter Rail	Demand Response	Van Pool	Automated Guideway	Total ^f
1990	70,437	1,465	12,178	3,031	2,965	84	3	90,163
1991	63,453	1,543	14,102	2,716	1,241	83	1	83,139
1992	52,482	1,492	15,512	3,160	1,137	40	8	73,831
1993	45,580	1,136	15,082	2,111	946	121	10	64,986
1994	49,185	1,413	15,869	3,115	1,062	39	10	70,693
1995	42,733 ^c	1,271	14,316	2,847	1,167	58	10	62,402

^a Includes 2 trolley bus fatalities.

^b Includes 637 trolley bus injuries.

^c Includes 590 trolley bus incidents.

^d Total does not include fatalities from other transit modes (cable car, inclined plane, jitney, ferry boat) which are detailed as follows: 1990-2, 1991-1, 1992-0, 1993-1, 1994-0, 1995-0.

^e Total does not include injuries from other transit modes which are detailed as follows: 1990-378, 1991-327, 1992-399, 1993-383, 1994-616, 1995-598.

^f Total does not include incidents from other transit modes which are detailed as follows: 1990-186, 1991-411, 1992-400, 1993-411, 1994-650, 1995-536.

Source: U.S. DOT/FTA, *Safety Management Information Statistics (SAMIS) Annual Report*, annual issues.

Transportation Safety

SECTION E

Railroad

TABLE 3-23
Railroad Fatalities and Injuries by Victim Class

5-Year Intervals 1980–1990 and Annually 1990–1995

Year	Employees on Duty		Employees Not on Duty		Passengers on Trains		Nontrespassers	
	Fatalities	Injuries ^a	Fatalities	Injuries ^a	Fatalities	Injuries	Fatalities	Injuries
1980	97	56,331	4	671	4	593	739	3,849
1985	46	29,822	2	419	3	657	507	2,562
1990	40	20,970	0	326	3	473	551	2,339
1991	35	19,626	1	362	8	382	484	2,110
1992	34	17,755	1	310	3	411	475	1,909
1993	47	15,363	4	348	58	559	489	1,856
1994	31	13,080	0	306	5	497	505	1,913
1995	34	10,777	2	252	0	573	443	1,869

Year	Trespassers		Contractor Employees		Railroad & Grade Crossing			
	Fatalities	Injuries	Fatalities	Injuries ^a	Railroad Only ^b		Grade Crossing Only	
	Fatalities	Injuries ^a	Fatalities	Injuries ^a	Fatalities	Injuries ^a	Fatalities	Injuries ^a
1980	566	728	7	74	584	58,356	833	3,890
1985	474	734	4	110	454	31,617	582	2,687
1990	700	793	3	242	599	22,736	698	2,407
1991	663	769	3	219	586	21,374	608	2,094
1992	646	772	11	226	591	19,408	579	1,975
1993	675	733	6	262	653	17,284	626	1,837
1994	682	764	3	252	611	14,850	615	1,962 ^r
1995	660	700	7	269	567	12,546	579	1,894

^r Revised.

^a Includes occupational illness.

^b Includes fatalities and injuries resulting from train accidents, train incidents, and non-train incidents.

Source: U.S. DOT/FRA, *Accident/Incident Bulletin*, annual issues, Tables 7 and 9 and personal communication.

▲ **TABLE 3-24**

Train Fatalities, Injuries, and Accidents by Type of Accident
5-Year Intervals 1980–1990 and Annually 1990–1995

Year	Fatalities			Injuries			Accidents		
	Deraillments	Collisions	Other	Deraillments	Collisions	Other	Deraillments	Collisions	Other
1980	8	20	1	286	341	38	6,442	1,201	562
1985	2	6	0	197	223	56	2,495	366	414
1990	2	8	0	272	139	40	2,146	315	418
1991	10	5	4	174	103	49	1,936	261	461
1992	2	1	3	71	59	41	1,734	207	418
1993	53	14	0	179	87	42	1,930	205	476
1994	2	8	2	120	118	24	1,825	240	439
1995	2	7	5	90	151	53	1,742	235	482

Note: Train accidents only. Excludes all highway-rail grade crossing accidents.

Source: U.S. DOT/FRA, *Accident/Incident Bulletin*, annual issues, Tables 5, 14 and 15.

TABLE 3-25
Railroad Fatalities, Injuries, Accidents, Train-Miles and Associated Rates, and Property Damage
5-Year Intervals 1970–1990 and Annually 1990–1995

Year	Fatalities ^r	Injuries ^a	Accidents ^b	Train-Miles (millions)	Rates per 100 Million Train-Miles			Property Damage ^a (current dollars)
					Fatality	Injury	Accident	
1970	785	17,934 *	8,095	838.7	94.6	2,138.3	965.2	121,625,278
1975	575	50,138	8,041	755.0	76.2	6,640.8	1,065.0	177,398,202
1980	584	58,356	8,205	717.6	81.4	8,132.1	1,143.4	267,422,106
1985	454	31,617	3,275	570.9	79.5	5,538.1	573.7	179,299,050
1990	599	22,736	2,879	608.8	98.4	3,734.6	472.9	198,712,617
1991	586	21,374	2,658	576.8	101.6	3,705.6	460.8	209,661,875
1992	591	19,408	2,359	593.7	99.5	3,269.0	397.3	118,940,880
1993	653	17,284	2,611	614.0	106.4	2,815.1	425.3	180,649,256
1994	611	14,850	2,504	655.1	93.3	2,266.9	382.2	168,748,948
1995	567	12,546	2,459	669.8	84.6	1,873.0	367.1	189,223,819

^r Revised

* 1970 not comparable to later years due to change in reporting system.

^a Fatalities and injuries resulting from train accidents, train incidents and nontrain incidents; excludes highway-rail grade crossing accidents.

^b Train accidents only; excludes highway-rail grade crossing accidents.

Source: U.S. DOT/FRA, *Accident/Incident Bulletin*, annual issues, Tables 1, 4, 5, and 7.

Transportation Safety

SECTION F

Water

TABLE 3-26**Waterborne Transport Fatalities, Injuries and Accidents
Resulting from Vessel Casualties**

5-Year Intervals 1970–1990 and Annually 1990–1995

Year	Fatalities ^a	Injuries	Accidents ^b	Vessels ^c
1970	178	105	2,582	4,063
1975	243	97	3,310	5,685
1980	206	180 ^r	4,624	7,694
1985	131	172	3,439	5,694
1990	85	175	3,613	5,494
1991	30	110	2,222	3,514
1992 ^r	96	167	3,244	4,910
1993 ^r	110	160	3,425	5,309
1994 ^r	69	179	3,972	6,433
1995 ^p	46	145	4,196	6,849

^p Preliminary.^r Revised.^a Fatalities include the number of people who died or were declared missing subsequent to a marine accident.^b The term accidents is used here for what the U.S. Coast Guard calls "Marine Casualty cases".^c More than one vessel may be involved in a marine accident.Note: All deaths and injuries cited result from vessel accidents.Note: 1992-1995 data come from the Marine Safety Management Information System (MSMS) which derives its data from the Marine Safety Information System (MSIS). Data for prior years may not be directly comparable.Source: U.S.DOT/USCG, Office of Investigations and Analysis, Compliance Analysis Division, G-MOA-2.**TABLE 3-27****Waterborne Transport Fatalities and Injuries
Not Related to Vessel Casualties**

5-Year Intervals 1970-1990 and Annually 1990–1995

Year	Fatalities	Injuries	Vessels
1970	420	—	—
1975	330	—	321
1980	281	—	274
1985	130	—	128
1990	101	—	98
1991	56	—	51
1992 ^r	131	1,633	125
1993 ^r	131	1,542	120
1994 ^r	141	1,807	127
1995 ^p	137	1,916	131

^p Preliminary.^r Revised.Note: 1992-1995 data come from the Marine Safety Management Information System (MSMS) which derives its data from the Marine Safety Information System (MSIS). Data for prior years may not be directly comparable.Source: U.S.DOT/USCG, Office of Investigations and Analysis, Compliance Analysis Division, G-MOA-2.

▲ **TABLE 3-28**

Recreational Boating Fatalities, Injuries, Accidents, Vessels Involved, Numbered Boats and Associated Rates, and Property Damage

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Fatalities	Injuries	Accidents	Vessels Involved	Numbered Boats* (millions)	Rates per 100,000 Numbered Boats			Accident Reports with Alcohol Involvement	Property Damage (thousand current dollars)
						Fatality	Injury	Accident		
1960	819	929	2,738	3,785	2.5	32.8	37.1	109.5	–	3,192
1965	1,360	927	3,752	4,792	6.4	21.3	14.5	58.6	–	4,743
1970	1,418	780	3,803	4,762	7.4	19.2	10.5	51.4	–	8,173
1975	1,466	2,136	6,308	8,002	7.3	20.1	29.3	86.4	–	10,352
1980	1,360	2,650	5,513	6,954	8.6	15.8	30.8	64.1	–	16,385
1985	1,116	2,757	6,237	8,305	9.6	11.6	28.7	65.0	279	20,039
1990	865	3,822	6,411	8,591	11.0	7.8	34.7	58.3	568	23,809
1991	924	3,967	6,573	8,821	11.1	8.3	35.7	59.8	513	24,772
1992	816	3,683	6,048	8,206	11.1	7.3	33.2	54.5	504	34,800
1993	800	3,559	6,335	8,688	11.3	7.1	31.5	56.1	381	20,220
1994	784	4,084	6,906	9,722	11.4	6.9	35.8	60.6	389	25,190
1995 ^P	836	4,965	8,686	NA	11.7	7.1	42.4	74.2	NA	NA

^P Preliminary

* In 1994, the Coast Guard changed their methodology for calculating the number of recreational boats; from 1975 to present, the figures cited represent the number of numbered boats, not an estimate, as previously reported. Accident, fatality, and injury rates have been recalculated accordingly.

NA Data not available at press time.

Note: Only a small fraction of property damages and non-fatal accidents are reported to the Coast Guard.

Source: U.S. DOT/USCG, *Boating Statistics*, annual issues.

Transportation Safety

SECTION G

Pipeline

TABLE 3-29**Hazardous Liquid and Natural Gas Pipeline Fatalities, Injuries, Incidents, and Property Damage**

5-Year Intervals 1970–1990 and Annually 1990–1995

Year	Fatalities		Injuries		Incidents		Property Damage (current dollars)	
	Liquid	Gas	Liquid	Gas	Liquid	Gas	Liquid	Gas
1970	4	26 ^r	21	233	351	1,077 ^r	1,196,185	3,276,948
1975	7	8 ^r	17	214	254	1,338 ^r	2,175,810	4,969,247
1980	4	15	15	177	246	1,524	5,721,574	9,933,306
1985	5	28 ^r	18	108	183	334 ^r	5,132,647	22,912,613
1990	3	6	7	69	180	198 ^r	15,720,422	18,896,356
1991	0	14	9	89	216	233 ^r	25,388,944	19,696,987
1992	5	10	38	80	212	177 ^r	63,205,262	31,355,665
1993	0	17	10	102	230	217	28,873,651	38,381,923
1994	1	21	1,858	110 ^r	244	221 ^r	56,453,604	98,430,459
1995	3	18	11	53	188	161	32,518,689	20,908,423

^r Revised.

Note: Beginning with 1985 data, pipeline incidents are credited to the year in which they occurred, not the year in which the report was received. Gas numbers represent sum of transmission and gathering and distribution operators.

Note: Property Damage includes, but is not limited to, damage to the operator's facilities and to the property of others; gas lost; restoration of service and relighting; facility repair and replacement; leak locating; right of way cleanup; environmental cleanup and damage.

Source: U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35.

Chapter 4

TRANSPORTATION,
ENERGY, AND
THE ENVIRONMENT

ENERGY EQUIVALENTS

1 Btu of Energy equals approximately:

- 1 match tip
- 250 calories (International Steam Table)
- 0.25 kilocalories (food calories)

1 million Btu of Energy equals approximately:

- 90 pounds of coal
- 8 gallons of motor gasoline
- 10 therms of dry natural gas
- 11 gallons of propane
- 1.1 days of U.S. energy consumption per capita

1 Quadrillion^a Btu of Energy equals approximately:

- 45 million short tons of coal
- 60 million short tons of oven-dried hard wood
- 1 trillion cubic feet of dry natural gas
- 170 million barrels of crude oil
- 470 thousand barrels of crude oil per day for 1 year
- 19 days of U.S. petroleum imports
- 24 days of U.S. motor gasoline use

One Barrel of Crude Oil equals approximately:

- 15 days of U.S. petroleum consumption per capita
- 5.6 thousand cubic feet of dry natural gas
- 0.26 short tons (520 pounds) of coal
- 1.7 thousand kilowatthours of electricity^b

One short ton of Coal equals approximately:

- 102 days of U.S. coal consumption per capita
- 3.8 barrels of crude oil
- 21 thousand cubic feet of dry natural gas
- 6.5 thousand kilowatthours of electricity

1,000 Cubic Feet of Natural Gas equals approximately:

- 4.4 days of U.S. natural gas consumption per capita
- 300 kilowatthours of electricity^b

1,000 Kilowatthours of electricity equals approximately:

- 32 days of U.S. electricity use per capita

^a One quadrillion equals 1,000,000,000,000,000.

^b However, because of net energy losses associated with the generation of electricity, about three times as much fossil fuel is required to generate 1,000 kilowatthours: 1.8 barrels of crude oil, 0.47 short tons of coal, or 10,000 cubic feet of natural gas.

Note: One million Btu of fossil fuels burned at electric utilities can generate about 100 kilowatthours of electricity, while it takes about 300 kilowatthours of electricity generated at electric utilities to produce 1 million Btu of heat. Calculations are based on 1995 data where applicable.

Source: U.S. DOE/EIA, *Annual Energy Review* 1995, p. 364.

Transportation, Energy, and the
Environment

SECTION A

Consumption of Energy by Transportation

TABLE 4-1**U.S. Consumption of Energy from Primary Sources by Sector**

5-Year Intervals 1955–1990 and Annually 1990–1995
(Quadrillion BTU)

Year	Residential & Commercial ^a	% of Total	Industrial ^a	% of Total	Transportation ^a	% of Total	Electric Utilities	% of Total	Total Energy Consumption
1955	7.39	19.0	15.46	39.8	9.48	24.4	6.50	16.7	38.82
1960	8.75	20.0	16.29	37.2	10.56	24.1	8.19	18.7	43.80
1965	10.00	19.0	19.27	36.6	12.40	23.5	11.01	20.9	52.68
1970	12.14	18.3	21.96	33.1	16.06	24.2	16.27	24.5	66.43
1975	11.60	16.4	20.39	28.9	18.22	25.8	20.35	28.8	70.55
1980	10.72	14.1	21.07	27.7	19.66	25.9	24.51	32.3	75.96
1985	9.78	13.2	17.67	23.9	20.02	27.1	26.52	35.8	73.98
1990 ^b	10.19	12.1	21.82 ^r	25.9	22.57	26.8	29.60	35.2	84.17 ^r
1991 ^b	10.48	12.5	21.54 ^r	25.6	22.14	26.3 ^r	29.92	35.6	84.05 ^r
1992 ^b	10.69	12.5 ^r	22.54 ^r	26.4	22.50	26.4	29.55	34.7	85.26 ^r
1993 ^b	10.97 ^r	12.6	22.85 ^r	26.3	22.93	26.3 ^r	30.30	34.8 ^r	87.03 ^r
1994 ^{br}	10.84	12.2	23.57	26.5	23.63	26.6	30.88	34.7	88.90
1995 ^{bp}	11.17	12.3	23.87	26.3	24.02	26.5	31.62	34.9	90.62

^p Preliminary.

^r Revised.

^a Includes fossil and renewable sources consumed directly, but not electricity.

^b Discontinuity in data between earlier years and 1990 due to attempts to estimate sector consumption of renewable sources beginning in that year.

Note: Sum of components may not equal total due both to independent rounding and to substitution of Electric Utilities Energy Input figures for data from "Electricity" and "Electrical System Energy Losses" columns in sector consumption tables.

Source: U.S. DOE/EIA, *Annual Energy Review 1995*, Table 2.1, Table 10.1b; *Monthly Energy Review*, April 1996, Tables 2.3-2.6.

▲ **TABLE 4-2**

U.S. Energy Consumption by the Transportation Sector

160 5-Year Intervals 1955–1990 and Annually 1990–1995

Year	Coal		Natural Gas ^a		Petroleum		Total Fossil Fuels ^b	Electricity	Renewables	Net Transportation Consumption ^c	Electrical System Energy Losses	Gross Transportation Consumption		Total Energy Consumption
	Million Short Tons	Quadrillion BTU	Trillion Cubic Feet	Quadrillion BTU	Million Barrels	Quadrillion BTU						Quadrillion BTU	% of Total Energy Consumption	
1955	17.0	0.422	0.25	0.259	1,627.9	8.804	9.484 ^r	–	–	9.484	–	9.55	24.6	38.82
1960	3.0	0.076	0.35	0.359	1,881.2	10.126 ^r	10.561 ^r	0.011	–	10.572	0.027	10.60	24.2	43.80
1965	0.7	0.016	0.50	0.518	2,204.6	11.867 ^r	12.401 ^r	0.010	–	12.411	0.023	12.43	23.6	52.68
1970	0.3	0.007	0.72	0.740	2,839.7	15.310 ^r	16.057 ^r	0.009	–	16.066	0.021	16.09	24.2	66.43
1975	–	<0.001	0.58	0.595	3,266.8 ^r	17.614 ^r	18.209 ^r	0.010	–	18.219	0.025	18.25	25.9	70.55
1980	–	–	0.63	0.650 ^r	3,495.3 ^r	19.008 ^r	19.658 ^r	0.011	–	19.669	0.026	19.69	25.9	75.96
1985	–	–	0.50	0.519	3,595.3 ^r	19.504 ^r	20.024 ^r	0.013	–	20.037	0.030	20.07	27.1	73.98
1990	–	–	0.66	0.680	4,004.1 ^r	21.810 ^r	22.490 ^r	0.014	0.082	22.586	0.031	22.62	26.9	84.17 ^r
1991	–	–	0.60	0.620	3,942.0 ^r	21.456 ^r	22.076 ^r	0.014	0.065	22.155	0.030	22.19	26.4	84.05 ^r
1992	–	–	0.59	0.606	4,007.7 ^r	21.812 ^r	22.418 ^r	0.014	0.079	22.511	0.029	22.54	26.4	85.26 ^r
1993	–	–	0.63	0.642	4,080.7 ^r	22.201 ^r	22.842 ^r	0.013	0.088	22.943	0.028	22.97	26.4	87.03 ^r
1994 ^r	–	–	0.69	0.705	4,193.9 ^r	22.824 ^r	23.529 ^r	0.014	0.098	23.641	0.028	23.67	26.6	88.90
1995 ^p	–	–	0.71	0.735	4,263.2 ^r	23.182 ^r	23.917 ^r	0.013	0.105	24.035	0.028	24.06	26.6	90.62

^p Preliminary.

^r Revised.

^a Pipeline Fuel. Includes Supplemental Natural Gas.

^b Sum of Coal, Petroleum and Natural Gas.

^c Sum of Total Fossil Fuels, Electricity, and Renewables (from 1990 onward).

Note: Number of barrels of petroleum derived by multiplying figures in *Annual Energy Review*, Table 5.12b, by 365 or 366 (days per year).

Source: **Petroleum (barrels), Natural Gas (cubic feet), Renewables, Gross Transportation Consumption, and Total Energy Consumption:**

1955–1995: U.S. DOE/EIA, *Annual Energy Review 1995*, Tables 2.1, 5.12b, 6.6, 7.3, 10.1b.

Coal (BTUs), Petroleum (BTUs), Natural Gas (BTUs):

1955: Ibid., Tables A3–A5.

Coal (BTUs), Petroleum (BTUs), Natural Gas (BTUs), Electricity, Electrical System Energy Losses:

1960–1970: Ibid., *State Energy Data Report 1993*, Table 15.

Coal (BTUs), Petroleum (BTUs), Natural Gas (BTUs), Total Fossil Fuels:

1975–1995: Ibid., *Monthly Energy Review*, April 1996, Table 2.5.

TABLE 4-3
Fuel Consumption by Mode of Transportation
 5-Year Intervals 1960–1990 and Annually 1990–1995

	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995
Air												
Certificated Carriers^a												
Jet Fuel, (million gallons)	1,954	3,889	7,857	7,558	9,096	10,121	12,439	11,638	11,864	12,132	12,501	12,812
General Aviation^b												
Aviation Gasoline,												
(million gallons)	242	292	551	412	520	421	353	354	314	268	264	NA
Jet Fuel, (million gallons)	–	56	208	453	766	691	663	577	494	454	471	NA
Highway												
Gasoline, Diesel & Other												
Fuels (million gallons)												
Passenger Car	41,169	49,723	67,820	76,447	71,883	69,268	71,989	70,692	73,823	73,553	67,517	68,317
Motorcycle	*	*	60	113	204	182	191	184	191	198	205	196
Other 2-Axle 4-Tire Vehicle	–	13,848	12,313	17,903	23,594	29,021	32,937	32,531	33,127	36,476	44,423	44,949
Single-Unit 2-Axle 6-Tire	–	–	–	–	–	–	–	–	–	–	–	–
or More Truck	–	–	3,968	4,815	5,557	6,735	7,294	7,134	7,179	8,277	9,041	9,178
Combination Truck	–	6,658	7,348	9,654	12,703	15,280	17,469	17,157	17,691	17,719	18,674	19,662
Bus	827	875	820	1,053	1,018	835	895	864	877	947	980	964
Transit^c												
Electricity, (million kWh)	2,908	2,584	2,561	2,646	2,446	4,216	4,837	4,853	4,716	4,865	5,096	NA
Motor Fuel,												
(million gallons)												
Gasoline ^d	192	124	68	8	11	46	34	34	37	46	64	NA
Diesel	208	248	271	365	431	609	651	665	685	679	698	NA
Compressed Natural Gas (pounds)	–	–	–	–	–	–	–	–	6,352	9,939	16,182	NA
Rail												
Class I Railroads												
Distillate/Diesel Fuel,												
(million gallons)	3,472	3,742	3,808	3,736	3,955	3,144	3,134	2926	3,022	3,112	3,356	3,503
Amtrak	–	–	–	–	180	254	295	330	299	258	NA	NA
Electricity, (million kWh)	–	–	–	–	–	–	–	–	–	–	–	–
Distillate/Diesel Fuel,												
(million gallons)	–	–	–	–	63	64	65	82	82	83	NA	NA
Water												
Residual Fuel Oil,												
(million gallons)	3,952	3,093	3,774	4,060	8,952	4,590	6,326	6,773	6,563	5,282	5,386	5,886
Distillate/Diesel Fuel Oil,												
(million gallons)	787	652	819	1,098	1,478	1,699	2,065	2,046	2,219	2,155	2,189	2,339
Gasoline, (million gallons)	–	–	598	730	1,052	1,053	1,300	1,710	1,316	874	897	1,060
Pipelines, Natural Gas												
(million cubic feet)	347,075	500,524	722,166	582,963	634,622	503,766	659,816	600,891	587,710	624,308	685,362	700,335

TABLE 4-3 (continued)
Fuel Consumption by Mode of Transportation

r	Revised.
NA	Data not available at press time.
*	Included in passenger cars.
a	Domestic consumption only.
b	Includes fuel used in air taxi operations, but not commuter operations.
c	Prior to 1984, excludes commuter rail, automated guideway, urban ferryboat, demand response, and most rural and smaller systems. Series not continuous between 1983 and 1984.
d	Gasoline and all other nondiesel fuel except compressed natural gas (CNG).
Note:	In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources:

- Certificated Air Carrier:**
1960-1975: Civil Aeronautics Board (CAB), *Handbook of Airline Statistics*, 1977, Table 2.
1980: CAB, *Fuel Cost and Consumption, Twelve Months Ended December 31, 1984*.
1985-1995: U.S. DOT/BTS, Office of Airline Information, personal communication.
- General Aviation:**
1960-1980: U.S. DOT/FAA, *FAA Statistical Handbook of Aviation*, annual issues.
1985-1994: Ibid., *General Aviation Activity and Avionics Survey*, annual issues, Table 5-1, and similar tables in earlier editions.
- Highway:**
1960-1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.
- Transit:**
Electricity: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Table 58, and similar tables in earlier editions.
1960-1994: Ibid.
Motor Fuel: Ibid.
1960-1994: Ibid.
Compressed Natural Gas: Ibid.
1992-1994: Ibid.
- Class I Railroads:**
1960-1970: Association of American Railroads (AAR), *Statistics of Class I Railroads*, September 1971, p. 15.
1975: Ibid., *Railroad Ten-Year Trends*, 1986, Table III-D-2.
1980-1995: Ibid., *Railroad Facts*, 1996, p. 60.
- Amtrak:**
1975-1993: Amtrak, State and Local Affairs Department.
- Water:**
Residual and Distillate/Diesel Fuel Oil:
1960-1980: American Petroleum Institute, *Basic Petroleum Data Book*, annual issues, Tables 10, 10a, 12, and 12a.
1985-1995: U.S. DOE/EIA, *Fuel Oil and Kerosene Sales*, annual issues, Tables 2 and 4, and similar tables in earlier editions.
Gasoline:
1960-1995: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table MF-24, and similar tables in earlier editions.
- Pipeline:**
1960-1995: U.S. DOE, *Natural Gas Annual 1995*, Table 101, and similar tables in earlier editions.

TABLE 4-4
Energy Consumption by Mode of Transportation
 5-Year Intervals 1960–1990 and Annually 1990–1995
 (Trillion BTU)

	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995
Air												
Certificated Carriers ^a												
Jet Fuel	264	525	1,061	1,020	1,228	1,366	1,679	1,571	1,602	1,638	1,688	1,730
General Aviation ^b												
Aviation Gasoline	29	35	66	50	62	51	42	43	38	32	32	NA
Jet Fuel	–	8	28	61	103	93	90	78	67	61	64	NA
Highway												
Gasoline, Diesel & Other Fuels												
Passenger Car	5,146	6,215	8,478	9,556	8,985	8,659	8,999	8,837	9,228	9,194	8,440 ^r	8,540
Motorcycle	*	*	8	14	26	23	24	23	24	25	26 ^r	25
Other 2-Axle 4-Tire Vehicle ¹	–	1,731	1,539	2,238	2,949	3,628	4,117	4,066	4,141	4,560	5,553 ^r	5,619
Single-Unit 2-Axle 6-Tire or More Truck	–	–	550	668	771	934	1,012	989	996	1,148	1,254 ^r	1,273
Combination Truck	–	923	1,019	1,339	1,762	2,119	2,423	2,380	2,454	2,458	2,590 ^r	2,727
Bus	115	121	114	146	141	116	124	120	122	131	136 ^r	134
Transit^c												
Electricity	10	9	9	9	8	14	17	17	16	17	17	NA
Motor Fuel,												
Gasoline ^d	24	16	9	1	1	6	4	4	5	6	8	NA
Diesel	29	34	38	51	60	84	90	92	95	94	97	NA
Compressed Natural Gas	–	–	–	–	–	–	–	–	0	0	0	NA
Rail												
Class I Railroads												
Distillate/Diesel Fuel	482	519	528	518	549	436	435	406	419	432	465	486
Amtrak												
Electricity	–	–	–	1	1	1	1	1	1	1	NA	NA
Distillate/Diesel Fuel	–	–	–	9	9	9	11	11	11	12	NA	NA
Water												
Residual Fuel Oil	592	463	565	608	1,340	687	947	1,014	982	791	806	881
Distillate/Diesel Fuel Oil	109	90	114	152	205	236	286	284	308	299	304	324
Gasoline	–	–	75	91	132	132	163	214	165	109	112	133
Pipelines, Natural Gas	359	517	745	595	650	519	680	620	606	642	705	720
Total	7,158	11,207	14,943	17,126	18,982	19,113	21,143	20,769	21,278	21,648	22,295	22,590

(continued on next page)

▲
 TABLE 4-4 (continued)
 Energy Consumption by Mode of Transportation

r	Revised.
NA	Data not available at press time.
*	Included in passenger cars.
a	Domestic consumption only.
b	Includes fuel used in air taxi operations, but not commuter operations.
c	Prior to 1984, excludes commuter rail, automated guideway, urban ferryboat, demand response, and most rural and smaller systems. Series not continuous between 1983 and 1984.
d	Gasoline and all other nondiesel fuel, except compressed natural gas (CNG).
Note:	In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.
Sources:	See Table 4-3 for source material.

TABLE 4-5**Fuel Consumption and Travel by Certificated Air Carriers***

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number of Aircraft	Aircraft-Miles Flown (millions)		Fuel Consumption (thousand gallons)		Average Miles Flown Per Aircraft		Miles Per Gallon		Average Fuel Consumed per Aircraft (domestic only)
		Domestic Operations	International Operations	Domestic Operations	International Operations	Domestic Operations	International Operations	Domestic Operations	International Operations	
1960	2,135	858	182	1,954,236	565,520	487,119	0.32	0.44	0.32	915,333
1965	–	1,134	284	3,888,834	1,280,189	–	0.29	0.29	0.22	–
1970	2,690	2,068	475	7,856,593	2,242,579	945,353	0.26	0.26	0.21	2,920,667
1975	2,540	1,948	380	7,557,700	1,948,900	916,535	0.26	0.26	0.19	2,975,472
1980	2,818	2,523	401	9,096,023	1,937,715	1,037,615	0.28	0.28	0.21	3,227,829
1985	3,100	3,046	415	10,121,329	2,476,864	1,116,452	0.30	0.30	0.17	3,264,945
1990	4,727	3,963	760	12,439,037	3,977,103	999,154	0.32	0.32	0.19	2,631,487
1991	4,580	3,854	807	11,637,539	3,944,712	1,017,686	0.33	0.33	0.20	2,540,947
1992	4,884	3,995	904	11,864,119	4,079,249	1,003,071	0.34	0.34	0.22	2,429,181
1993	5,234	4,157	961	12,132,102	4,111,795	977,837	0.34	0.34	0.23	2,317,941
1994	5,221	4,380 ^r	980	12,500,554	4,326,861	1,026,623	0.35	0.35	0.23	2,394,283
1995	5,567	4,618 ^p	995	12,812,375	4,513,416	1,008,263	0.36	0.36	0.22	2,301,486

^p Preliminary.^r Revised.

* Includes Majors, Nationals, and Large Regional Carriers, scheduled and charter passenger, and all-cargo. U.S. owned air carriers only.

Note: Sum of components may not equal total due to independent rounding.**Sources:**

Number of Aircraft:
 1960–1995: U.S. DOT/BTS, Office of Airline Information, personal communication.

Aircraft-Miles Flown:

1960–1970: CAB, *Handbook of Airline Statistics*, 1973, Part III, Tables 2 & 3.

1975–1980: Ibid., *Air Carrier Traffic Statistics*, 1976, pp. 4, 14; 1981, pp. 2, 3.

1985–1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, 1986–1996, pp. 2, 3, line (27) plus line (50).

Fuel Consumed:

1960–1975: CAB, *Handbook of Airline Statistics*, 1977, Table 2.

1980: CAB, *Fuel Cost and Consumption, Twelve Months Ended, Dec. 31, 1984*.

1985–1995: U.S. DOT/BTS, Office of Airline Information, personal communication.

TABLE 4-6

Fuel Consumption and Travel by All Motor Vehicles

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number Registered (thousands)*	Vehicle-Miles Traveled (millions)	Fuel Consumed (million gallons)	Average Miles Traveled per Vehicle	Average Miles Traveled per Gallon	Average Fuel Consumed per Vehicle (gallons)
1960	74,475	718,845	57,878	9,652	12.42	777
1965	91,752	887,640	71,104	9,674	12.48	775
1970	111,242	1,109,724	92,329	9,976	12.02	830
1975	137,913	1,327,664	108,984	9,627	12.18	790
1980	161,490	1,527,295	114,960	9,458	13.29	712
1985	177,098	1,774,179	121,322	10,018	14.62	685
1990	193,057	2,144,362	130,775	11,107	16.40	677
1991	192,314	2,172,050	128,561	11,294	16.85	668
1992	194,427	2,247,151	132,888	11,558	16.90	683
1993	198,041	2,296,700	137,169	11,597	16.74	693
1994 ^r	201,802	2,357,588	140,839	11,683	16.74	698
1995	205,297	2,422,775	143,266	11,801	16.91	698

^r Revised.

* Includes personal passenger vehicles, buses, and motor trucks.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Source: 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-7
Fuel Consumption and Travel by Passenger Cars and Motorcycles
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number Registered (thousands)		Vehicle-Miles Traveled (millions)		Fuel Consumed (million gallons)		Average Miles Traveled per Vehicle		Average Miles Traveled per Gallon		Average Fuel Consumed per Vehicle (gallons)	
	Passenger Car	Motor- cycle	Passenger Car	Motor- cycle	Passenger Car	Motor- cycle	Passenger Car	Motor- cycle	Passenger Car	Motor- cycle	Passenger Car	Motor- cycle
1960	61,671	574	588,083	*	41,169	*	9,448	*	14.28	*	661	*
1965	75,258	1,382	709,300	*	49,723	*	9,265	*	14.27	*	649	*
1970	89,244	2,824	916,700	2,979	67,820	60	10,272	1,055	13.52	50	760	21
1975	106,706	4,964	1,033,950	5,629	76,447	113	9,690	1,134	13.52	50	716	23
1980	121,601	5,694	1,111,596	10,214	71,883	204	9,141	1,794	15.46	50	591	36
1985	131,864	5,444	1,260,565	9,086	69,268	182	9,560	1,669	18.20	50	525	33
1990	143,453	4,259	1,513,184	9,557	71,989	191	10,548	2,244	21.02	50	502	45
1991	142,569	4,177	1,533,552	9,178	70,692	184	10,757	2,197	21.69	50	496	44
1992	144,213	4,065	1,600,839	9,557	73,823	191	11,100	2,351	21.68	50	512	47
1993	131,581	3,978	1,547,366	9,906	73,553	198	11,760	2,490	21.04	50	559	50
1994 ^r	133,930	3,757	1,501,402	10,240	67,517	205	11,210	2,726	22.24	50	504	55
1995	136,066	3,767	1,541,458	9,797	68,317	196	11,329	2,601	22.56	50	502	52

^r Revised.

* Data included with passenger car information.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Source: 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Tables MV-201 and VM-201A.
 1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-8
Fuel Consumption and Travel by Trucks
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number Registered (thousands)	Vehicle-Miles Traveled (millions)	Total Fuel Consumed (million gallons)			Average Miles Traveled per Vehicle			Average Miles Traveled per Gallon			Average Fuel Consumed per Vehicle (gallons)		
			Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck
1960	11,945	126,409	—	—	—	—	—	—	—	—	—	—	—	—
1965	14,795	173,656	13,848	—	6,658	10,077	—	41,292	10.19	—	4.88	989	—	8,460
1970	18,797	185,501	12,313	3,968	7,348	8,676	7,356	38,819	10.01	6.82	4.78	866	1,078	8,119
1975	25,781	282,030	17,903	4,815	9,654	9,829	8,178	41,321	11.21	7.19	5.40	877	1,138	7,653
1980	33,667	399,426	23,594	5,557	12,703	10,437	9,103	48,472	12.33	7.16	5.41	846	1,271	8,966
1985	39,196	499,652	29,021	6,735	15,280	11,115	11,962	56,725	12.86	6.98	5.21	857	1,715	10,889
1990	44,718	615,902	32,937	7,294	17,469	11,993	12,595	59,807	14.15	7.33	5.52	847	1,719	10,841
1991	44,936	623,577	32,531	7,134	17,157	12,103	12,610	60,456	14.54	7.54	5.65	833	1,672	10,699
1992	45,504	630,996	33,127	7,179	17,691	12,096	12,440	59,894	14.44	7.48	5.60	838	1,663	10,691
1993	61,828	733,302	36,476	8,277	17,719	10,293	12,546	64,794	15.72	6.86	5.82	655	1,829	11,133
1994 ^r	63,445	839,537	44,423	9,041	18,674	11,713	12,971	69,001	15.07	6.78	5.83	777	1,914	11,829
1995	64,778	865,137	44,949	9,178	19,662	11,865	12,050	68,835	15.28	6.83	5.87	776	1,764	11,723

^r Revised.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources: 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985–1995: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-9**Fuel Consumption and Travel by Buses**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number Registered ^a	Total Vehicle- Miles Traveled ^a (millions)	Total Fuel Consumed (million gallons)	Average Miles Traveled per Vehicle	Average Miles Traveled per Gallon	Average Fuel Consumed per Vehicle (gallons)
1960	272,000	4,353	827	16,004	5.26	3,040
1965	314,000	4,684	875	14,903	5.35	2,784
1970	377,562	4,544	820	12,035	5.54	2,172
1975	462,156	6,055	1,053	13,102	5.75	2,279
1980	528,789	6,059	1,018	11,458	5.95	1,926
1985	593,485	4,876	835	8,216	5.84	1,407
1990	626,987	5,719	895	9,121	6.39	1,428
1991	631,279	5,743	864	9,097	6.65	1,369
1992	644,732	5,759	877	8,932	6.57	1,360
1993	654,432	6,126	947	9,361	6.47	1,447
1994	670,423	6,409 ^r	980 ^r	9,560 ^r	6.54 ^r	1,462 ^r
1995	685,504	6,383	964	9,311	6.62	1,406

^r Revised.^a Includes commercial, school and nonrevenue buses.

Sources: 1960–1965 and 1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1970–1975 and 1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-10
Electric Power, and Primary Energy Consumed by the U.S. Transit Industry*

5-Year Intervals 1960–1990 and Annually 1990–1994

Year	Number of Vehicles	Vehicle-Miles	Electric Power Consumed (million Kilowatt hours)	Primary Energy Consumed		
				Gasoline ^a (thousand gallons)	Diesel (thousand gallons)	CNG ^b Consumed (Pounds)
1960	65,292	2,143	2,908	191,900	208,100	—
1965	61,717	2,008	2,584	124,200	248,400	—
1970	61,298	1,883	2,561	68,200	270,600	—
1975	62,183	1,990	2,646	7,576	365,060	—
1980	75,388	2,287	2,446	11,400	431,400	—
1985	94,369	2,791	4,216	45,704	608,738	—
1990	92,961	3,242	4,837	33,906	651,030	—
1991	96,300	3,306	4,853	34,467	665,158	—
1992	102,151	3,355	4,716	37,179	684,944	6,352
1993 ^r	107,095	3,435	4,865	45,672	678,511	9,939
1994 ^p	118,589	3,556	5,096	64,204	698,295	16,182

^p Preliminary.

^r Revised.

* Prior to 1984, excludes commuter rail, automated guideway, urban ferryboat, demand response, and most rural and smaller systems.

^a Includes gasoline, propane, LPG, LNG, kerosene and others.

^b CNG = compressed natural gas.

Note: To convert to Btu use the following energy conversion factors: 1KWhr=3,412 Btu (if generation and distribution efficiency are taken into account ,1 KWhr=11,765 Btu); 1 gallon of gasoline=125,000 Btu; 1 gallon of diesel fuel=138,700 Btu.

Source: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Tables 58 and 60, and similar tables in earlier editions.

TABLE 4-11
Fuel Consumption* and Travel by Class I Rail
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number in Use		Miles Traveled (millions)		Fuel Consumed in Freight Service (million gallons)	Average Miles Traveled per Vehicle		Average Miles Traveled per Gallon		Average Fuel Consumed per Locomotive ^a (gallons)
	Locomotives ^a	Cars ^b	Freight Train-Miles ^c	Locomotive Unit-Miles	Car-Miles	Locomotive	Car	Train	Car	
1960	29,031	1,658,292	404.5	—	28,170	—	16,987	0.12	8.13	119,286
1965	27,780	1,478,005	420.9	—	29,336	—	19,848	0.12	8.17	129,302
1970	27,077	1,423,921	427.1	—	29,890	3,545 ^r	20,991	0.12	8.43	130,923
1975	27,846	1,359,459	402.6	1,479	27,656	3,657	53,114	0.11	7.56	131,329
1980	28,094	1,168,114	428.4	1,526	29,277	3,904	54,318	0.11	7.50	138,962
1985	22,548	867,070	347.2	1,228	24,920	3,110	54,462	0.11	8.01	137,928
1990	18,835	658,902	379.6	1,280	26,159	3,115	67,959	0.12	8.40	165,384
1991	18,344	633,489	375.0	1,238	25,628	2,906	67,488	0.13	8.82	158,417
1992	18,004	605,189	390.2	1,278	26,128	3,005	70,984	0.13	8.69	166,907
1993	18,161	587,033	405.4	1,320	26,883	3,088	72,683	0.13	8.71	170,035
1994	18,505	590,930	440.9	1,405	28,485	3,334	75,925	0.13	8.54	180,170
1995	18,812	583,486	458.3	1,445	30,383	3,480	76,813	0.13	8.73	184,988

^r Revised.

* Includes only fuel consumed in freight service. Does not include fuel used in yard, switching, or passenger service.

^a For 1960-1980, locomotive total includes small numbers of steam and electric units, which have not been compensated for in per locomotive fuel consumption figure.

^b Includes only cars owned by Class I railroads.

^c Based on the distance run between terminals and/or stations; does not include yard or passenger train-miles.

Sources:

All data except for Locomotive unit-miles:
 Association of American Railroads (AAR), *Railroad Facts*, 1996, pp. 33, 34, 40, 48, 50.
 Locomotive unit-miles:

1975: Ibid., *Railroad Ten-Year Trends*, 1985.

1980-1992: Ibid., annual issues, p. 123.

1993-1995: Ibid., *Analysis of Class I Railroads*, annual issues, p. 29.

TABLE 4-12

Fuel Consumption* and Travel by Amtrak

3 - 5-Year Intervals 1972–1990 and Annually 1990–1995

Year	Number in Use		Miles Traveled (millions)		Locomotive Fuel Consumed		Average Miles Traveled per Car
	Number of Locomotives	Number of Cars	Train-Miles	Car-Miles	Diesel (million gallons)	Electric kWh (millions)*	
1972	185	1,569	26	213	—	—	136,000
1975	355	1,913	30	253	63.1	180.3	132,000
1980	419	2,128	30	235	63.5	253.8	110,000
1985	291	1,854	30	251	64.8	295.1	135,000
1990	318	1,983	33	305	82.1	329.6	154,000
1991	317	1,967	34	313	82.0	302.5	159,000
1992	329	1,962	34	307	81.5	299.2	157,000
1993	334	1,964	35	303	82.8	257.7	154,000
1994	352	1,951	35	304	NA	NA	156,000
1995	356	1,921	33	292	NA	NA	152,000

* Does not include electric power generation and distribution losses; which, if included, would increase figures shown by about 20%.

NA Data not available at press time.

Sources:

Number of Locomotives and Cars:

1975–1980: Amtrak, State and Local Affairs Department.

1985–1994: Ibid., *Statistical Appendix to Amtrak FY 1994 Annual Report*.

1995: Ibid., Finance and Administration Department.

Train-Miles:

1972–1993: Ibid., *Amtrak Annual Report*, annual issues

1994–1995: Ibid., Finance and Administration Department.

Car-Miles:

1972: Ibid., *Train Information System Reports*.

1975: Association of American Railroads (AAR), *Yearbook of Railroad Facts*, 1975, p. 40.

1980–1993: Amtrak, State and Local Affairs Department and Public Affairs Department.

1994–1995: Ibid., Finance and Administration Department.

Fuel Consumed:

1975–1993: Ibid., State and Local Affairs Department.

TABLE 4-13**U.S. Government Energy Consumption**

5-Year Intervals Fiscal Years 1975-1990 and Annually Fiscal Years 1990-1995
(Trillion BTU)

Activity	1975	1980	1985	1990	1991	1992	1993	1994	1995 ^P
Agency									
Defense	1,558.1	1,183.1	1,250.6	1,241.7	1,269.3	1,104.0	1,048.8	977.0 ^r	977.0
Energy	85.2	47.4	52.3 ^r	43.4	41.8	44.4	43.6	41.2	41.2
Postal Service	59.2	27.2	27.8	30.6	30.8	31.7	33.7	35.0	35.0
Veterans Affairs	39.2	24.8	25.1	24.9	25.1 ^r	25.3	25.7	25.6 ^r	25.4
Transportation	28.5	19.2	19.5	19.0	17.9 ^r	18.4 ^r	20.7 ^r	19.7 ^r	18.4
General Services									
Administration	43.0	18.1	17.3	14.2	14.0	13.8	14.1	14.0	13.7
NASA	26.4	10.4	10.8	12.3	12.4	12.5	12.4	12.7 ^r	12.4
Justice	7.1	5.7	8.2	7.0	8.0	7.5	9.1	10.3	10.3
Agriculture	11.9	8.6	8.4	9.5	9.6	9.1	9.3	9.4 ^r	9.4
Health & Human Services	9.3	6.0	7.0	8.0	7.1	8.0	8.1	8.4 ^r	8.4
Interior	12.3	8.5	7.8	7.4	7.1 ^r	7.0	7.5	7.9 ^r	7.9
Other ^a	14.8	12.3	10.7	15.1	13.4	13.8	14.7 ^r	39.8 [*]	42.1
Total, All Agencies	1,895.0	1,371.2	1,445.5 ^r	1,433.0	1,456.4 ^r	1,295.4 ^r	1,247.9 ^r	1,200.9 ^r	1,201.1
Energy Source									
Petroleum	1,162.0	1,011.8	1,052.9	1,020.5	1,048.5 ^r	878.0 ^r	845.4 ^r	790.3 ^r	788.4
Jet Fuel	707.4	638.7	705.7	732.4	774.5	628.2 ^r	612.4 ^r	550.7 ^r	550.1
Distillate & Residual Fuel	384.7	307.7	290.8	244.1	235.9 ^r	205.1 ^r	192.1 ^r	202.4 ^r	202.1
Motor Gasoline	63.4	56.5	50.5	37.2	34.0 ^r	35.6	34.5	29.6 ^r	29.5
Liquified Petroleum									
Gases	5.4	4.0	4.0	6.3	3.7	8.1	5.7	7.0 ^r	6.2
Aviation Gasoline	21.1	4.9	1.9	0.5	0.4	1.0	0.7	0.6 ^r	0.5
Electricity	481.2	141.9	165.7 ^r	192.4	190.0	191.5	192.3	213.6 [*]	215.6
Natural Gas	166.2	147.3	149.1 ^r	157.1	153.8	151.2	153.1	143.7 ^r	144.1
Coal	77.9	63.5	64.0	44.2	45.9	51.8	38.5	35.0	35.0
Purchased Steam	7.6	6.8	13.8	18.8	18.2	22.8	18.7	18.3	18.0
Total, All Sources	1,895.0	1,371.2	1,445.5 ^r	1,433.0	1,456.4 ^r	1,295.4 ^r	1,247.9 ^r	1,200.9 ^r	1,201.1

^P Preliminary.

^r Revised.

^{*} Increase from previous years is result of initial reporting by the Tennessee Valley Authority of electricity consumed for utility station service use.

^a Includes National Archives and Records Administration, U.S. Department of Commerce, U.S. Department of Labor, U.S. Department of State, Environmental Protection Agency, Federal Communications Commission, Federal Trade Commission, National Science Foundation, Panama Canal Commission, Commodity Futures Trading Commission, Equal Employment Opportunity Commission, Nuclear Regulatory Commission, Office of Personnel Management, U.S. Department of Housing and Urban Development, U.S. Department of Treasury, Tennessee Valley Authority, Railroad Retirement Board, Small Business Administration, Federal Emergency Management Agency and U.S. Information Agency.

Note: Totals may not equal sum of components due to independent rounding. These data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the Department of Defense. U.S. Government energy use for electricity generation and uranium enrichment is excluded. However, other energy used by U.S. agencies that produce electricity or enrich uranium is included. The U.S. Government's fiscal year runs from October 1 through September 30.

Source: U.S. DOE/EIA, *Annual Energy Review 1995*, Table 1.12.

TABLE 4-14
U.S. Government Energy Use by Agency and Source

Fiscal Years 1985 and 1995

(Trillion BTU)

Agency	Petroleum					Electricity	Natural Gas	Coal & Other ^b	Total
	Motor Gasoline	Distillate & Residual Fuel Oils	Jet Fuel & Aviation Gas	Other ^a	Total				
1985									
Defense	25.4	265.0	699.3	2.3	992.1	101.1	106.4	51.0	1,250.6
Energy	1.5	3.6	0.5	0.2	5.7	18.8	6.8	21.0	52.3
Postal Service	9.9	3.1	0.0	0.2	13.2	9.6	4.5	0.5	27.8
Veterans Affairs	0.5	2.2	0.0	0.0	2.8	7.2	13.9	1.3	25.1
Transportation	1.3	8.0	5.5	0.0	14.8	3.8	0.9	0.0	19.5
General Services Admin.	0.1	1.1	0.0	0.0	1.2	10.3	3.3	2.5	17.3
NASA	0.3	0.8	1.6	0.0	2.7	5.2	2.6	0.3	10.8
Interior	4.0	0.9	0.1	0.3	5.2	1.6	1.5	0.1	8.4
Agriculture	1.8	0.4	0.1	0.1	2.4	1.2	4.2	0.4	8.2
Health & Human Services	2.2	1.6	0.1	0.8	4.6	1.5	1.4	0.2	7.8
Justice	0.4	2.1	0.0	0.1	2.6	2.5	1.9	0.1	7.0
Other ^c	2.9	2.1	0.4	0.0	5.4	3.0	1.9	0.4	10.7
Total	50.5	290.8	707.6	4.0	1,052.9	165.7	149.1	77.8	1,445.5
1995^p									
Defense	4.3	182.3	540.8	2.1	729.5	113.3	95.9	38.4	977.0
Energy	1.2	2.4	0.4	0.4	4.3	17.1	9.8	10.0	41.2
Postal Service	11.2	3.2	0.0	0.0	14.3	14.0	6.0	0.6	35.0
Veterans Affairs	0.3	1.4	0.0	0.0	1.6	8.9	13.6	1.3	25.4
Transportation	0.6	5.7	5.7	1.2	13.3	4.1	0.9	0.1	18.4
General Services Admin.	0.1	0.3	0.0	0.0	0.3	9.1	2.8	1.4	13.7
NASA	0.3	0.6	1.4	0.0	2.3	6.9	3.0	0.2	12.4
Justice	2.5	0.5	0.8	0.0	3.8	2.6	3.6	0.2	10.3
Agriculture	4.6	0.6	0.2	0.2	5.6	2.1	1.6	0.1	9.4
Health & Human Services	0.2	1.3	0.0	0.3	1.7	3.4	3.3	0.0	8.4
Interior	2.1	1.3	0.2	2.0	5.5	1.8	0.5	0.1	7.9
Other ^d	2.2	2.6	1.3	0.0	6.2	32.4	3.0	0.6	42.1
Total	29.5	202.1	550.7	6.2	788.5	215.6	144.1	53.0	1,201.1

^p Preliminary.

^a Includes liquefied petroleum gases and other.

^b Includes purchased steam, coal, and other.

^c Includes U.S. Department of Commerce, Panama Canal Commission, Tennessee Valley Authority, U.S. Department of Labor, U.S. Department of Housing and Urban Development, Federal Communications Commission, Office of Personnel Management, U.S. Department of State, Small Business Administration, National Science Foundation, U.S. Department of Treasury, and Environmental Protection Agency.

^d Includes National Archives and Records Administration, U.S. Department of Commerce, U.S. Department of Labor, U.S. Department of State, Environmental Protection Agency, Federal Communications Commission, Federal Trade Commission, Panama Canal Commission, Equal Employment Opportunity Commission, Nuclear Regulatory Commission, Office of Personnel Management, U.S. Department of Housing and Urban Development, U.S. Department of Treasury, Tennessee Valley Authority, Railroad Retirement Board, U.S. Information Agency, and Federal Emergency Management Agency.

Note: Totals may not equal sum of components due to independent rounding. These data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the Department of Defense. U.S. Government energy use for electricity generation and uranium enrichment is excluded. However, other energy used by U.S. agencies that produce electricity or enrich uranium is included. The U.S. Government's fiscal year runs from October 1 through September 30.

Source: U.S. DOE/EIA, *Annual Energy Review 1995*, Table 1.13.

TABLE 4-15**Average Fuel Efficiency of U.S. Passenger Cars and Light Trucks**

5-Year Intervals 1955–1990 and Annually 1990–1996

Year	Average U.S. Passenger Car ^b Fuel Efficiency (mpg) (Calendar Year)	New Vehicle Fuel Efficiency, (mpg) ^a (Model Year)				CAFE Standards (mpg) ^a (Model Year)	
		Passenger Car		Light Truck		Passenger Car	Light Truck
		Domestic	Imported	Domestic	Imported		
1955	14.53	16.0	—	—	—	—	—
1960	14.28	15.5	—	—	—	—	—
1965	14.27	15.4	—	—	—	—	—
1970	13.52	14.1	—	—	—	—	—
1975	13.52	15.1	—	—	—	—	—
1980	15.46	22.6	29.6	16.8	24.3	20.0	16.0/14.0*
1985	18.20	26.3	31.5	19.6	26.5	27.5	19.5
1990	21.02	26.9	29.9	20.3	23.0	27.5	20.0
1991	21.69	27.3	30.1	20.9	23.0	27.5	20.2
1992	21.68	27.0	29.2	20.5	22.7	27.5	20.2
1993	21.04	27.8	29.6	20.7	22.8	27.5	20.4
1994	22.24 ^r	27.3	29.6	20.5	22.0	27.5	20.5
1995	22.56	27.7	29.9	20.1	21.6	27.5	20.6
1996 ^c	—	28.4	29.7	20.6	22.1	27.5	20.7

^r Revised.^{*} 2WD/4WD. No combined figure available for this year.^a 55% city, 45% highway miles sales weighted harmonic average.^b In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.^c Through April 1996.**Sources:****Average Passenger Car Fuel Efficiency:**1955–1995: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table VM-1.**New Car Fuel Efficiency (based on model year production):**

1955–1975: U.S. DOT/NHTSA, Consumer Programs Division, NPS-32.

1980–1990: Ibid., EPA Final Fuel Economy Calculations for NHTSA.

1991–1996: Ibid., Manufacturers' preliminary estimates for NHTSA.

TABLE 4-16
Energy Intensity of Passenger Modes
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Air		Highway						
	Certificated Air Carrier		Motor-cycle	Truck			Bus		Amtrak
	Domestic Operations	International Operations		Passenger Car*	Other 2-Axle 4-Tire Vehicle	Single-Unit 2-Axle 6-Tire or More Truck	Combina-tion Truck	Transit Motor Bus	School Bus
1960	8,483	8,529	**	3,978	—	—	—	—	—
1965	9,863	8,646	**	4,173	7,761	—	28,417	—	—
1970	9,781	7,627	2,030	4,624	8,003	20,323	29,008	—	—
1975	7,502	7,049	1,976	4,864	7,240	19,298	28,658	—	2,383
1980	6,009	4,129	1,920	4,491	6,713	19,359	25,655	2,743	2,148
1985	4,918	4,566	1,883	4,040	6,526	19,884	26,625	3,395	2,089
1990	4,855	4,249	1,952	3,938	5,662	18,930	25,143	3,722	2,071
1991	4,647	4,253	2,278	3,312	5,695	18,396	24,547	3,768	1,977
1992	4,515	3,963	2,271	3,313	5,735	18,546	24,757	4,038	2,023
1993	4,522	3,861	2,271	3,415	5,266	20,218	23,832	3,946	1,995
1994	4,345	3,917	2,275	3,062	6,268	20,462	23,777	4,023	NA
1995	4,290	3,937	2,273	3,013	6,209	20,301	23,621	NA	NA

* This table is based on official U.S.DOT/FHWA data; however over time, the Nationwide Personal Transportation Survey (NPTS) consistently shows declining vehicle occupancy rates.

** Data included with passenger car information.

NA Data not available at press time.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Note: See Tables 4-17, 4-18, 4-19, 4-20, 4-21, and 4-22 for further notes regarding the calculation of the figures used in this table.

Sources:

- Certificated Air Carrier:**
 1960–1975: CAB, *Handbook of Airline Statistics*, 1969, 1973, Tables 2 and 13.
 1975–1980: *Ibid.*, *Air Carrier Traffic Statistics*, 1976, pp. 4, 14; 1981, pp. 2, 3.
 1980: *Ibid.*, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1984*.
 1985–1995: U.S. DOT/BTS, Office of Airline Information, *Air Carrier Traffic Statistics*, annual issues, pp. 2, 3, and personal communication.

Passenger Car:

(continued on next page)

TABLE 4-16 (continued)
Energy Intensiveness of Passenger Modes

1960–1980:	U.S. DOT/FHWA, <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985–1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Motorcycle:	
1970–1980:	Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985–1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Other 2-axle 4-tire Vehicle:	
1965–1980:	Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985–1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Single-Unit 2-axle 6-tires or More Truck:	
1970–1980:	Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985–1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Combination Truck:	
1965–1980:	Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985–1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Transit Motor Bus:	
1960–1994:	American Public Transit Association (APTA), <i>Transit Fact Book</i> , 1996, Tables 5 and 58. Eno Transportation Foundation, Inc., <i>Transportation in America</i> , 1996, p. 47.
School Bus:	
1980–1994:	Ibid., p. 56 and earlier editions. National Safety Council, <i>Accident Facts</i> , 1996, p. 94, and similar tables in earlier editions.
Amtrak:	
1975–1993:	Amtrak, State and Local Affairs Department.

TABLE 4-17
Energy Intensiveness of Certificated Air Carriers* (All Services)

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Aircraft-Miles (millions)		Seats per Aircraft		Available Seat-Miles (thousands)		Passenger-Miles (millions)	
	Domestic Operations	Inter-national Operations	Domestic Operations	Inter-national Operations	Domestic Operations	Inter-national Operations	Domestic Operations	Inter-national Operations
1960	858	182	61.7	77.2	52,929,571	14,044,857	31,099	8,951
1965	1,134	284	85.0	116.1	96,398,841	32,984,369	53,226	19,990
1970	2,068	475	105.4	136.9	218,019,678	65,044,421	108,442	39,695
1975	1,948	310	126.9	221.2	247,244,515	68,578,721	136,000	37,324
1980	2,523	401	139.0	243.8	350,716,595	97,761,972	204,368	63,354
1985	3,046	415	149.4	266.5	455,098,962	110,578,113	277,836	73,237
1990	3,963	760	144.0	240.3	570,558,491	182,652,086	345,873	126,363
1991	3,854	807	143.1	231.1	551,561,946	186,467,657	338,085	125,211
1992	3,995	905	141.9	227.4	567,040,000	205,829,175	354,764	138,950
1993	4,157	961	140.0	220.4	582,127,716	211,830,978	362,230	143,766
1994	4,380	980	136.6	215.4	598,131,985	211,108,649 ^r	388,399	149,108
1995	4,618	995	133.2	216.6	615,326,714	215,467,560	403,193	154,768

Year	Fuel Consumed (thousand gallons)		Seat-Miles per Gallon		Energy Intensiveness (BTU/passenger-mile)	
	Domestic Operations	Inter-national Operations	Domestic Operations	Inter-national Operations	Domestic Operations	Inter-national Operations
1960	1,954,236	565,520	27	25	8,483 ^r	8,529 ^r
1965	3,888,834	1,280,189	25	26	9,863	8,646 ^r
1970	7,856,593	2,242,579	28	29	9,781	7,627 ^r
1975	7,557,700	1,948,900	33	35	7,502	7,049
1980	9,096,023	1,937,715	39	50	6,009 ^r	4,129 ^r
1985	10,121,329	2,476,864	45	45	4,918	4,566
1990	12,439,037	3,977,103	46	46	4,855	4,249
1991	11,637,539	3,944,712	47	47	4,647	4,253
1992	11,864,119	4,079,249	48	50	4,515	3,963
1993	12,132,102	4,111,795	48	52	4,522	3,861
1994	12,500,554	4,326,861	48	49	4,345	3,917
1995	12,812,375	4,513,416	48	48	4,290	3,937

^r Revised.

* U.S. owned carriers only. Operation of foreign owned carriers in or out of U.S. not included.

Note: Aircraft-Miles includes all four air carrier groups (Majors, Nationals, Large Regionals, and Medium Regionals), scheduled and charter, passenger and all-cargo. Fuel Consumed includes Majors, Nationals, and Large Regionals, scheduled and charter, passenger and all-cargo. Passenger-Miles include all four air carrier groups, scheduled and charter, passenger service only. Heat equivalent factor used for BTU conversion is 135,000 BTU/gallon.

Sources: Aircraft-Miles and Passenger-Miles:

1960–1970: CAB, *Handbook of Airline Statistics*, 1969 & 1973, Part III, Tables 2 and 13.

1975–1980: Ibid., *Air Carrier Traffic Statistics*, 1976, pp. 4, 14; 1981, pp. 2, 3.

1985–1995: U.S. DOT/BTS, Office of Airline Information, Ibid., pp. 2, 3.

Seats per Aircraft and Available Seat-Miles:

1960–1970: CAB, *Handbook of Airline Statistics*, 1969 and 1973, Part III, Tables 2 and 13.

1975–1980: Ibid., *Air Carrier Traffic Statistics*, 1976, pp. 4, 14; 1981 pp. 2, 3.

1985–1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, pp. 2, 3.

Fuel Consumed:

1960–1975: CAB, *Handbook of Airline Statistics*, 1977, Table 2.

1960–1980: CAB, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1984*.

1985–1995: U.S. DOT/BTS, Office of Airline Information, personal communication.

TABLE 4-18**Energy Intensiveness of Passenger Cars and Motorcycles**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Vehicle-Miles (millions)		Passenger-Miles (millions) ^a		Fuel Consumed (million gallons)		Energy Intensiveness (BTU/passenger-mile)	
	Passenger Car	Motor- cycle	Passenger Car	Motor- cycle	Passenger Car	Motor- cycle	Passenger Car	Motor- cycle
1960	588,083	*	1,293,783	*	41,169	*	3,978	*
1965	709,300	*	1,489,530	*	49,723	*	4,173	*
1970	916,700	2,979	1,833,400	3,694	67,820	60	4,624	2,030
1975	1,033,950	5,629	1,964,505	7,149	76,447	113	4,864	1,976
1980	1,111,596	10,214	2,000,872	13,278	71,883	204	4,491	1,920
1985	1,260,565	9,086	2,142,961	12,084	69,268	182	4,040	1,883
1990	1,513,184	9,557	2,284,908	12,233	71,989	191	3,938	1,952
1991	1,533,552	9,178	2,668,380	10,096	70,692	184	3,312	2,278
1992	1,600,839	9,557	2,785,460	10,513	73,823	191	3,313 ^r	2,271
1993	1,547,366	9,906	2,692,417	10,897	73,553	198	3,415	2,271
1994 ^r	1,501,402	10,240	2,756,223	11,264	67,517	205	3,062	2,275
1995	1,541,458	9,797	2,834,653	10,777	68,317	196	3,013	2,273

^r Revised.

* Data included with passenger car information.

^a The Federal Highway Administration calculates passenger-miles (which they call person-miles) by multiplying vehicle-miles by an average occupancy rate for that vehicle type based on data provided by the Nationwide Personal Transportation Survey, conducted approximately every five years. For more information, see, for example, FHWA publication FHWA-PL-96-024, *Annual Vehicle Miles of Travel and Related Data*.

Note: This table is based on official U.S.DOT/FHWA data; however over time, the Nationwide Personal Transportation Survey (NPTS) consistently shows declining vehicle occupancy rates.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Note: The heat equivalent factor used for BTU conversion is 125,000 BTU/gal.

Source: 1960-1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1, for vehicle-miles and fuel consumption data.

TABLE 4-19

Energy Intensiveness of Trucks

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Vehicle-Miles (millions)			Passenger-Miles (millions)			Fuel Consumed (million gallons)			Energy Intensiveness (BTU/passenger-mile)		
	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck
1960	97,930	*	28,479	156,688	*	28,479	—	—	—	—	—	—
1965	141,159	*	32,497	223,031	*	32,497	13,848	*	6,658	7,761	—	28,417 ^r
1970	123,286	27,081	35,134	192,326	27,081	35,134	12,313	3,968	7,348	8,003	20,323	29,008
1975	200,700	34,606	46,724	309,078	34,606	46,724	17,903	4,815	9,654	7,240	19,298	28,658
1980	290,935	39,813	68,678	439,312	39,813	68,678	23,594	5,557	12,703	6,713	19,359	25,655
1985	373,072	46,980	79,600	555,877	46,980	79,600	29,021	6,735	15,280	6,526	19,884	26,625
1990	466,092	53,443	96,367	727,104	53,443	96,367	32,937	7,294	17,469	5,662 ^r	18,930	25,143
1991	472,848	53,787	96,942	714,000	53,787 ^r	96,942	32,531	7,134	17,157 ^r	5,695 ^r	18,396	24,547
1992	478,193	53,691	99,112	722,071	53,691	99,112	33,127	7,179	17,691	5,735 ^r	18,546 ^r	24,757 ^r
1993	573,398	56,781	103,123	865,831	56,781	103,123	36,476	8,277	17,719	5,266	20,218	23,832
1994 ^r	669,321	61,284	108,932	885,897	61,284	108,932	44,423	9,041	18,674	6,268	20,462	23,777
1995	686,977	62,706	115,454	904,979	62,706	115,454	44,949	9,178	19,662	6,209	20,301	23,621

^r Revised.

* Included in Other 2-Axle 4-Tire Vehicles.

Note: The heat equivalent factors used for BTU conversions are:

Automotive gasoline = 125,000 BTU/gal. (other 2-axle 4-tire vehicles).

Distillate/diesel fuel = 138,700 BTU/gal. (single-unit 2-axle 6-tire or more trucks and combination trucks).

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources: 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985–1995: *Ibid.*, *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-20**Energy Intensiveness of Transit Motor Buses and School Buses**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Vehicle-Miles (millions)		Passenger-Miles (millions)		Fuel Consumed (million gallons)		Energy Intensiveness (BTU/passenger- mile)	
	Motor Bus	School Bus	Motor Bus	School Bus	Motor Bus (Diesel)	School Bus (Gasoline)	Motor Bus	School Bus ^r
1960	1,576	1,481	—	—	208	—	—	—
1965	1,528	1,763	—	—	248	249	—	—
1970	1,409	2,100	—	—	271	300	—	—
1975	1,526	2,500	—	—	365	342	—	—
1980	1,677	3,000	21,790	41,000	431	380	2,743	1,200
1985	1,863	3,400	21,161	70,000	518	452	3,395	800
1990	2,130	3,800	20,981	74,200	563	472	3,722	800
1991	2,167	4,300	21,090	83,300	573	533	3,768	800
1992	2,178	4,400	20,336	90,000	592	576	4,038	800
1993	2,210 ^r	4,300	20,247 ^r	94,200	576 ^r	623	3,946 ^r	800
1994	2,163	4,400	20,238	85,000	587	680	4,023	1,000
1995	NA	5,000	NA	95,000	NA	NA	NA	NA

^r Revised.

NA Data not available at press time.

Note: The heat equivalent factors used for BTU conversions are:
 Automotive gasoline = 125,000 BTU/gal. (School Bus). Results have been rounded to match precision level of component data.
 Distillate/Diesel Oil = 138,700 BTU/gal. (Motor Bus).
 One barrel equals 42 gallons.

Sources: **School Bus:**

Vehicle Miles and Passenger Miles:

1960–1995: National Safety Council, *Accident Facts*, annual issues (vehicle- and passenger-miles).

Fuel Consumed:

1960–1994: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 56 and earlier editions.**Motor Bus:**1960–1994: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Tables 5 and 58, and similar tables in earlier editions.

TABLE 4-21

Energy Intensiveness of Class I Railroad Freight Service

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Revenue Freight Ton-Miles (millions)	Fuel Consumed in Freight Service (million gallons)	Energy Intensiveness (BTU/revenue freight ton-mile)
1960	572,309	3,463	839
1965	697,878	3,592	714
1970	764,809	3,545	643
1975	754,252	3,657	672
1980	918,958	3,904	589
1985	876,984	3,110	492
1990	1,033,969	3,115	418
1991	1,038,875	2,906	388
1992	1,066,781	3,005	391
1993	1,109,309	3,088	386
1994	1,200,701	3,334	385
1995	1,305,688	3,480	370

Note: The heat equivalent factor used for BTU conversion is 138,700 BTU/gal.

Source: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 40.

TABLE 4-22

Energy Intensiveness of Amtrak Service

5-Year Intervals 1975–1990 and Annually 1990–1993

Year	Revenue Passenger-Miles (millions)	Locomotive Fuel Consumed			Energy Intensiveness (BTU/revenue passenger-mile)*
		Diesel (million gallons)	Electric kWh (millions)*	Total Fuel Consumed (billion BTUs)*	
1975	3,931	63.1	180.3	9,367	2,383
1980	4,503	63.5	253.8	9,673	2,148
1985	4,785	64.8	295.1	9,995	2,089
1990	6,041	82.1	329.6	12,512	2,071
1991	6,274	82.0	302.5	12,406	1,977
1992	6,091	81.5	299.2	12,325	2,023
1993	6,199	82.8	257.7	12,364	1,995

* Does not include electric power generation and distribution losses; which, if included, would increase figures shown by about 20%.

Note: The heat equivalent factors used in BTU conversion are:

Diesel = 138,700 BTU/gal.

Electric = 3,412 BTU/kWh.

Source: Amtrak, State and Local Affairs Department, personal communication.

TABLE 4-23
U.S. Petroleum Production and Consumption
 5-Year Intervals 1970–1990 and Annually 1990–1995
 (Million Barrels per Day)

Year	Domestic Production			Gross Imports		Gross Exports Total	U.S. Net Imports Total	U.S. Petroleum Consumption ^a	World Petroleum Consumption	U.S. Consumption as a Percentage of World Petroleum Consumption ^b	Transportation Use as a Percentage of Domestic Petroleum Production ^b	Transportation Use as a Percentage of Domestic Petroleum Consumption ^b
	Crude Oil	Natural Gas Plant Liquids	Total	Crude Oil	Petroleum Products	Total						
1970	9.64	1.66	11.30	1.32	2.10	3.42	0.26	3.16	14.70	46.81 ^r	31.4	68.8
1975	8.37	1.63	10.01	4.10	1.95	6.06	0.21	5.85	16.32	56.20 ^r	29.0	89.4
1980	8.60	1.57	10.17	5.26	1.65	6.91	0.54	6.36	17.06	63.07	27.1	93.9
1985	8.97	1.61	10.58	3.20	1.87	5.07	0.78	4.29	15.73	60.10	26.2	93.1
1990	7.36	1.56	8.91	5.89	2.12	8.02	0.86	7.16	16.99	66.16	25.7	123.1
1991	7.42	1.66	9.08	5.78	1.84	7.63	1.00	6.63	16.71	66.71 ^r	25.0	118.9
1992	7.17	1.70	8.87	6.08	1.80	7.89	0.95	6.94	17.03	66.57	25.6	123.4
1993	6.85	1.74	8.58	6.79	1.83	8.62	1.00	7.62	17.24	66.55 ^r	25.9 ^r	130.3
1994 ^r	6.66	1.73	8.39	7.06	1.93	9.00	0.94	8.05	17.72	67.87	26.1	136.9
1995 ^p	6.53	1.76	8.29	7.24	1.59	8.83	0.95	7.88	17.70	NA	NA	140.9

^p Preliminary.

^r Revised.

^a Best estimate for U.S. petroleum consumption is the amount of petroleum products supplied to the U.S. in a given year.

^b Percentages shown are derived by calculation and do not appear directly in source tables.

NA Data not available at press time.

Note: Sum of components may not equal totals due to independent rounding.

Source: U.S. DOE/EIA, *Annual Energy Review 1995*, Tables 5.1, 5.12b, and 11.9.

TABLE 4-24

Petroleum Products Consumed by Type and Sector

1985 and 1995

Year & Refined Product	Residential & Commercial		Industrial		Transportation		Electric Utilities		Total	
	Million Barrels per Day	Quadrillion BTU	Million Barrels per Day	Quadrillion BTU	Million Barrels per Day	Quadrillion BTU	Million Barrels per Day	Quadrillion BTU	Million Barrels per Day	Quadrillion BTU
1985										
Asphalt & Road Oil	0.00	0.00	0.43	1.04	0.00	0.00	0.00	0.00	0.43	1.04
Aviation Gasoline	0.00	0.00	0.00	0.00	0.03	0.06	0.00	0.00	0.03	0.06
Distillate Fuel Oil	0.76	1.62	0.56	1.19	1.51	3.21	0.00	0.00	2.83	6.02
Heavy Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.44	1.00	0.44	1.00
Jet Fuel	0.00	0.00	0.00	0.00	1.22	2.52	0.00	0.00	1.22	2.52
Kerosene	0.09	0.19	0.02	0.04	0.00	0.00	0.00	0.00	0.11	0.23
Light Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.09	0.04	0.09
Liquefied Petroleum Gases	0.29	0.38	1.29	1.71	0.02	0.03	0.00	0.00	1.60	2.12
Lubricants	0.00	0.00	0.07	0.15	0.07	0.15	0.00	0.00	0.14	0.31
Motor Gasoline	0.05	0.10	0.11	0.21	6.67	12.79	0.00	0.00	6.83	13.10
Residual Fuel Oil	0.10	0.23	0.33	0.76	0.34	0.78	0.00	0.00	0.77	1.77
Other ^a	0.00	0.00	1.29	2.73	0.00	0.00	*	*	1.29	2.73
Total	1.30	2.51	4.10	7.83	9.85	19.54	0.48	1.09	15.73	30.97
1995^e										
Asphalt & Road Oil	0.00	0.00	0.49	1.19	0.00	0.00	0.00	0.00	0.49	1.19
Aviation Gasoline	0.00	0.00	0.00	0.00	0.02	0.04	0.00	0.00	0.02	0.04
Distillate Fuel Oil	0.64	1.36	0.53	1.13	1.99	4.23	0.00	0.00	3.16	6.72
Heavy Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.54	0.24	0.54
Jet Fuel	0.00	0.00	0.00	0.00	1.51	3.13	0.00	0.00	1.51	3.13
Kerosene	0.05	0.10	0.01	0.02	0.00	0.00	0.00	0.00	0.06	0.12
Light Oil	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.09	0.04	0.09
Liquefied Petroleum Gases	0.35	0.46	1.52	2.01	0.02	0.03	0.00	0.00	1.89	2.50
Lubricants	0.00	0.00	0.08	0.18	0.08	0.18	0.00	0.00	0.16	0.35
Motor Gasoline	0.01	0.02	0.10	0.19	7.67	14.71	0.00	0.00	7.78	14.92
Residual Fuel Oil	0.07	0.16	0.16	0.37	0.38	0.87	0.00	0.00	0.61	1.40
Other ^a	0.00	0.00	1.73	3.66	0.00	0.00	0.01	0.02	1.74	3.68
Total	1.13	2.11	4.61	8.74	11.68	23.17	0.29	0.66	17.70	34.68

^e Estimate.

* Less than 5,000 barrels per day.

^a Other in the industrial sector includes petrochemical feedstocks, special naphthas, waxes, petroleum coke, still gas, natural gasoline, pentanes plus, crude oil, and miscellaneous products. Other for electric utilities is petroleum coke.

Note: BTU data derived by multiplying barrels per day data by conversion factors in Table A1 in Appendix A of the source cited below and 365 days per year. Conversion factors for heavy and light oil and liquefied petroleum gases are from U.S. DOE/EIA personal communication. Sum of components may not equal total due to independent rounding.

Source: U.S. DOE/EIA, *Annual Energy Review 1995*, Tables 5.12a and 5.12b, and personal communication.

TABLE 4-25**Petroleum Products Consumed by Sector**

5-Year Intervals 1955–1990 and Annually 1990–1995

(Million Barrels per Day)

Year	Residential & Commercial	Industrial	Transportation	Electric Utilities	Total	Transportation as % of Total
1955	1.40	2.39	4.46	0.21	8.46	52.7
1960	1.71	2.71	5.14	0.24	9.80	52.4
1965	1.91	3.25	6.04	0.32	11.51	52.4
1970	2.18	3.81	7.78	0.93	14.70	52.9
1975	1.95	4.04	8.95	1.39	16.32	54.8
1980	1.52	4.84	9.55	1.15	17.06	56.0
1985	1.30	4.10	9.85	0.48	15.73	62.6
1990	1.14	4.32	10.97	0.55	16.99	64.6
1991	1.14	4.25	10.80	0.52	16.71	64.6
1992	1.12	4.55	10.95	0.42	17.03	64.3
1993	1.14	4.45	11.18	0.46	17.24	64.8
1994 ^r	1.11	4.69	11.49	0.43	17.72	64.8
1995 ^e	1.13	4.61	11.68	0.29	17.70	66.0

^e Estimate.^r Revised.**Note:** Sum of components may not equal total due to independent rounding.**Source:** U.S. DOE/EIA, *Annual Energy Review 1995*, Tables 5.12a and 5.12b.**TABLE 4-26****Domestic Demand for Refined Petroleum Products by Sector**

5-Year Intervals 1955–1990 and Annually 1990–1995

(Trillion BTU per Day)*

Year	Residential & Commercial	Industrial	Transportation	Electric Utilities	Total	Transportation as % of Total
1955	7.85	14.02	24.12	1.21	47.20	51.1
1960	9.53	15.72	27.69	1.50	54.44	50.9
1965	10.57	18.61	32.54	2.01	63.73	51.1
1970	11.78	21.35	41.96	5.81	80.90	51.9
1975	10.45	22.33	48.26	8.69	89.73	53.8
1980	8.31	26.02	51.95	7.19	93.47	55.6
1985	6.92	21.41	53.42	3.00	84.75	63.0
1990	5.94	22.78	59.73	4.62	93.07	64.2
1991	5.89	22.07	58.77	3.25	89.98	65.3
1992	5.79	23.61	59.62	2.62	91.64	65.1
1993	5.87	23.14	60.80	2.87	92.68	65.6
1994 ^r	5.72	24.25	62.53	2.68	95.17	65.7
1995 ^P	5.82	23.74	63.53	1.80	94.84	67.0

^P Preliminary conversion factor.^r Revised.^{*} Data derived by multiplying figures in Table 4-25 by conversion factors in each sector column in Table A3 in U.S. DOE/EIA's *Annual Energy Review 1995*.**Note:** Sum of components may not equal total due to independent rounding.**Source:** U.S. DOE/EIA, *Annual Energy Review 1995*, Tables 5.12a, 5.12b, and Table A3.

TABLE 4-27

Domestic Demand for Gasoline

5-Year Intervals 1955–1990 and Annually 1990–1995

(Thousand Gallons)

Year	Highway	Non-Highway				Total	Total Demand
		Agriculture	Aviation ^a	Marine	Other ^b		
1955	46,527,057 ^r	2,156,434	999,440	25,885	1,652,762	4,834,521	51,361,578 ^r
1960	55,428,618 ^r	2,291,666	1,323,769	60,633	1,656,267	5,332,335	60,760,953 ^r
1965	66,978,519 ^r	1,963,432	501,339	96,336	1,647,076	4,208,183	71,186,702 ^r
1970	85,598,364 ^r	1,931,966	393,012	598,159	1,079,713	4,002,850	89,601,217 ^r
1975	99,353,593 ^r	1,564,882	409,713	729,718	937,996	3,642,309	102,995,902 ^r
1980	101,183,014	1,059,044	412,883	1,052,185	1,130,531	3,654,643	104,837,657
1985	103,607,851	1,080,677	381,515	1,052,998	1,489,753	4,004,943	107,612,794
1990	109,529,456	681,220	360,942	1,300,421	1,733,499	4,076,082	113,605,538
1991	107,913,262	778,957	338,543	1,709,687	1,481,517	4,308,704	112,221,966
1992	110,974,379	805,524	344,302	1,319,171	1,439,298	3,908,295	114,882,674
1993	113,668,348	846,320	340,447	873,687	850,208	2,910,662	116,579,010
1994 ^r	115,681,981	911,996	364,231	896,700	861,956	3,034,883	118,716,864
1995	117,060,566	926,732	366,986	1,060,394	837,975	3,192,087	120,252,653

^r Revised.

^a Does not include aviation jet fuel.

^b Includes state, county, and municipal use, industrial and commercial, construction, and miscellaneous.

Source: 1955–1975: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables MF-24 and MF-26, and personal communication.
 1980–1985: Ibid., Tables MF-21A and MF-24.
 1990–1995: Ibid., personal communication, HPM-10.

Transportation, Energy, and the
Environment

SECTION B

Air Pollution

TABLE 4-28**Federal Emission Standards for Passenger Cars and Light-Duty Trucks^a**

5-Year Intervals 1980–1990 and Annually 1990–2006

Year	Passenger Cars					Light-Duty Trucks ^a				
	Hydrocarbons ^b	Carbon Monoxide	Nitrogen Oxides (Gasoline)	Nitrogen Oxides (Diesel)	Particulates	Hydrocarbons ^b	Carbon Monoxide	Nitrogen Oxides (Gasoline)	Nitrogen Oxides (Diesel)	Particulates
1980	0.41	7.0	2.0	-	-	1.70	18.0	2.3	-	-
1985	0.41	3.4	1.0	-	0.60	0.80	10.0	2.3	-	0.60
1990	0.41	3.4	1.0	-	0.20	0.80	10.0	1.2	-	0.26
1991	0.41	3.4	1.0	1.0	0.20	0.80	10.0	1.2	1.2	0.13
1992	0.41	3.4	1.0	1.0	0.20	0.80	10.0	1.2	1.2	0.13
1993	0.41	3.4	1.0	1.0	0.20	0.80	10.0	1.2	1.2	0.13
1994 ^c	0.25	3.4	0.4	1.0	0.08	0.25	3.4 ^d	0.4	1.0	0.13
1995 ^c	0.25	3.4	0.4	1.0	0.08	0.25	3.4 ^d	0.4	1.0	0.08
1996-2003 ^c	0.25	3.4	0.4	1.0	0.08	0.25	3.4	0.4	1.0	0.08
2004-2006 ^d	0.13	1.7	0.2	0.2	0.10	0.13	1.7	0.2	0.2	0.10

^a Applies to light trucks up to and including 3,750 pounds loaded vehicle weight (LVW).^b Nonmethane (reactive) hydrocarbons. 1991-1993 figures are total hydrocarbons.^c A set of intermediate in-use standards also applies during the phase-in period 1994-1997 for passenger cars and small light-duty trucks.^d After an EPA/OTA study due 6/1/97, EPA shall set standards by 12/31/99 more stringent than 1996 standards for passenger cars and certain light trucks, effective after 1/1/2003 but not later than Model Year 2006.Source: American Automobile Manufacturers Association (AAMA), *Motor Vehicle Facts & Figures*, 1996, p. 87.

TABLE 4-29

Federal Emission Standards for Heavy-Duty Gasoline Trucks^a

5-Year Intervals 1980–1990 and Annually 1990–1998

(Grams per Brake Horsepower-Hour)

Year	Hydrocarbons (HC)	Carbon Monoxide (CO)	Nitrogen Oxides (NOx)
1980	1.5	25.0	^b
1985	2.5	40.0	10.7
1990	1.9	37.1	6.0
1991	1.9	37.1	5.0
1992	1.9	37.1	5.0
1993	1.9	37.1	5.0
1994 *	1.9	37.1	5.0
1995 *	1.9	37.1	5.0
1996 *	1.9	37.1	5.0
1997 *	1.9	37.1	5.0
1998 *	1.9	37.1	4.0

* Heavy-duty trucks must meet these standards or standards which reflect the greatest degree of emission reduction achievable through the application of the technology available for HC 1994–1998, CO 1995–1998, and NOx and particulates in 1994–1998.

^a Applies to trucks greater than 8,500 pounds gross vehicle weight from model year 1980–1985; and greater than 14,000 pounds gross vehicle weight starting in 1990.

^b No standard was set for this year.

Source: U.S. Code of Federal Regulations, 40 CFR 86, Revised as of July 1, 1995, *Control of Air Pollution from New and In-Use Motor Vehicles and New and In-Use Motor Vehicle Engines : Certification and Test Procedures.*

TABLE 4-30

Federal Emission Standards for Heavy-Duty Diesel Trucks^a

5-Year Intervals 1980–1990 and Annually 1990–1999

(Grams per Brake Horsepower-Hour)

Year	Hydrocarbons (HC)	Carbon Monoxide (CO)	Nitrogen Oxides (NOx)	Particulates
1980	1.5	25.0	^b	^b
1985	1.3	15.5	10.7	^b
1990	1.3	15.5	6.0	0.60
1991	1.3	15.5	5.0	0.25
1992	1.3	15.5	5.0	0.25
1993	1.3	15.5	5.0	0.25
1994 *	1.3	15.5	5.0	0.10
1995 *	1.3	15.5	5.0	0.10
1996 *	1.3	15.5	5.0	0.10
1997 *	1.3	15.5	5.0	0.10
1998 *	1.3	15.5	4.0	0.10
1999 *	1.3	15.5	4.0	0.10

* Heavy-duty trucks must meet these standards or standards which reflect the greatest degree of emission reduction achievable through the application of the technology available for HC 1994–1998 and for NOx and particulates in 1995–1998.

^a Applies to trucks greater than 8,500 pounds gross vehicle weight beginning in model year 1980.

^b No standard was set for this year.

Source: U.S. Code of Federal Regulations, 40 CFR 86, Revised as of July 1, 1995, *Control of Air Pollution from New and In-Use Motor Vehicles and New and In-Use Motor Vehicle Engines : Certification and Test Procedures.*

TABLE 4-31
National Emission Factors by Fuel and Vehicle Type
 Annually 1990-1995
 (Grams per Mile)

Year	Gasoline					
	Light Duty Vehicle			Light Duty Truck		
	Exhaust HC	Non-Exhaust HC	Total HC	Exhaust HC	Non-Exhaust HC	Total HC
1990	2.05	1.16	3.21	24.68	1.81	26.49
1991	1.92	1.01	2.93	23.42	1.76	25.18
1992	1.81	0.96	2.77	22.40	1.72	24.12
1993	1.72	0.93	2.65	21.65	1.52	23.17
1994	1.66	0.91	2.57	21.10	1.67	22.77
1995	1.60	0.89	2.49	20.64	1.63	22.27

Year	Gasoline					
	Heavy Duty Vehicle			Motorcycle		
	Exhaust HC	Non-Exhaust HC	Total HC	Exhaust HC	Non-Exhaust HC	Total HC
1990	7.45	4.51	11.96	131.19	6.49	137.68
1991	6.79	4.12	10.91	120.49	6.28	126.77
1992	6.22	3.84	10.06	111.05	6.05	117.10
1993	5.53	3.71	9.24	101.92	5.85	107.77
1994	4.92	3.57	8.49	93.61	5.69	99.30
1995	4.54	3.57	7.91	85.60	5.54	91.14

(continued on next page) ▼

TABLE 4-31 (continued)
National Emission Factors by Fuel and Vehicle Type

Annually 1990-1995
 (Grams per Mile)

Year	Diesel					
	Light Duty Vehicle			Light Duty Truck		
	Exhaust HC	Non-Exhaust HC	Total HC	Exhaust HC	Non-Exhaust HC	Total HC
1990	0.73	-	0.73	1.68	1.55	1.55
1991	0.74	-	0.74	1.71	1.67	1.67
1992	0.75	-	0.75	1.72	1.68	1.68
1993	0.75	-	0.75	1.73	1.68	1.68
1994	0.76	-	0.76	1.74	1.66	1.66
1995	0.77	-	0.77	1.74	1.64	1.64

Year	Gasoline and Diesel					
	Heavy Duty Vehicle			Average of All Vehicles		
	Exhaust HC	Non-Exhaust HC	Total HC	Exhaust HC	Non-Exhaust HC	Total HC
1990	3.30	-	3.30	13.71	20.96	20.96
1991	3.08	-	3.08	13.38	19.34	19.34
1992	2.89	-	2.89	13.07	17.77	17.77
1993	2.75	-	2.75	12.76	16.41	16.41
1994	3.65	-	3.65	12.50	15.22	15.22
1995	2.54	-	2.54	12.28	14.11	14.11

Note: Vehicles types defined as follows: light duty vehicles (passenger cars up to 6,000 lbs. G.V.W.); light duty trucks (pick-ups and minivans up to 8,500 lbs. G.V.W.); heavy duty vehicles (8,501 lbs. or more G.V.W.); motorcycle (on-highway only).

Note: Based on MOBILE5a (26 March 1993), the most recent version of the EPA's highway vehicle emission factor model. Emission factors are national averages as of July 1 of each year and are based on the following assumptions: ambient temperature 75F, daily temperature range 60-84F, average traffic speed 19.6 m.p.h. (representative of overall traffic in urban areas), standard operating mode (cold-start, hot-start, stabilized), vehicle-miles travelled fractions, no inspection/maintenance or anti-tampering programs and gasoline volatility 9.0 psi RVP (Reid vapor pressure).

Source: U.S. Environmental Protection Agency, National Fuel and Vehicle Emission Laboratory, personal communication.

TABLE 4-32**National Emissions of Carbon Monoxide**

10-Year Intervals 1960–1990 and Annually 1990–1995
(Million Short Tons)

Year	Transportation ^a					Non-Transportation ^c					Total of All Sources
	Highway Vehicles	Off-Highway			Total	Stationary Fuel Combustion	Industrial Processes	Waste Disposal & Recycling	Miscellaneous ^d		
		Aircraft	Railroads	Recreational Marine Vessels						Other Off-Highway ^b	
1960	58.30	1.76	0.33	0.52	8.96	69.87	7.02	10.28	5.60	11.01	103.78
1970	88.03	0.51	0.07	0.98	0.13	89.72	4.63	9.84	7.06	16.84	128.08
1980	78.05	0.74	0.10	1.10	0.20	80.19	7.30	6.95	2.30	18.88	115.63
1990 ^P	62.86	0.97	0.12	1.21	0.27	65.43	5.06	5.23	1.69	23.25	100.65
1991 ^P	62.07	0.96	0.12	1.22	0.27	64.64	5.36	5.11	1.70	20.56	97.38
1992 ^P	59.86	0.98	0.12	1.23	0.27	62.46	5.60	5.19	1.72	19.06	94.04
1993 ^P	60.20	1.02	0.12	1.25	0.28	62.87	4.95	5.28	1.73	19.30	94.13
1994 ^P	61.83	1.06	0.12	1.26	0.29	64.56	4.88	5.42	1.75	22.17	98.78
1995 ^P	58.62	1.05	0.13	1.28	0.29	61.37	3.96	5.67	1.77	19.33	92.10

^P Preliminary.

^a There was a change in vehicular methodology between 1960 and 1970.

^b Other off-highway includes airport service vehicles and nonrecreational marine vessels.

^c There was a change in methodology between 1980 and 1990.

^d Miscellaneous includes other combustion and non-highway vehicles used for recreation, construction, industrial, lawn and garden, farm, light commercial, logging, and other purposes.

Note: The sum of subcategories may not equal total due to rounding.

Source: U. S. Environmental Protection Agency (EPA), *National Air Pollutant Emission Trends, 1900-1995*, Tables 3-1 and A-1.

▲ **TABLE 4-33**

National Emissions of Nitrogen Oxides

10-Year Intervals 1960–1990 and Annually 1990–1995
(Million Short Tons)

Year	Transportation ^a					Non-Transportation ^c					Total of All Sources
	Highway Vehicles	Aircraft	Railroads	Nonrecreational Marine Vessels	Other Off-Highway ^b	Total	Stationary Fuel Combustion	Industrial Processes	Waste Disposal & Recycling	Miscellaneous ^d	
1960	4.42	—	0.77	—	0.67	5.86	7.37	0.57	0.33	0.44	14.58
1970	7.39	0.07	0.50	0.04	0.10	8.09	10.06	0.78	0.44	1.26	20.63
1980	8.62	0.11	0.73	0.11	0.13	9.70	11.32	0.56	0.11	1.59	23.28
1990 ^p	7.49	0.14	0.93	0.17	0.17	8.90	11.48	0.77	0.08	1.81	23.04
1991 ^p	7.37	0.14	0.93	0.17	0.17	8.78	11.38	0.75	0.08	1.67	22.67
1992 ^p	7.44	0.14	0.95	0.18	0.17	8.88	11.42	0.77	0.08	1.70	22.85
1993 ^p	7.51	0.15	0.95	0.18	0.18	8.96	11.70	0.78	0.08	1.76	23.28
1994 ^p	7.67	0.15	0.95	0.19	0.18	9.14	11.63	0.80	0.09	2.00	23.66
1995 ^p	7.61	0.15	0.99	0.19	0.18	9.12	10.08	0.79	0.09	1.71	21.78

^a There was a change in methodology for highway vehicles and off-highway emission estimates from 1970 to 1980.

^b Other off-highway includes airport service and recreational marine vessels.

^c There was a change in methodology between 1980 and 1990.

^d Miscellaneous includes other combustion and non-highway vehicles used for recreation, construction, and other nontransportation uses.

Note: The sum of subcategories may not equal total due to rounding.

Source: U.S. Environmental Protection Agency (EPA), *National Air Pollutant Emission Trends, 1990-1995*, Tables 3-2 and A-2.

TABLE 4-34**National Emissions of Volatile Organic Compounds**

10-Year Intervals 1960–1990 and Annually 1990–1995

(Million Short Tons)

Year	Transportation ^a			Non-Transportation				Total of All Sources
	Highway Vehicles	Off-Highway ^b	Total	Stationary Fuel Combustion	Industrial Processes	Waste Disposal & Recycling	Miscellaneous	
1960	10.37	1.22	11.59	0.88	8.73	1.55	1.57	24.32
1970	12.97	0.69	13.66	0.72	12.33	1.98	1.95	30.65
1980	8.98	0.62	9.60	1.05	12.10	0.76	2.39	25.89
1990 ^p	6.85	0.73	7.58	0.92	10.38	2.26	2.46	23.60
1991 ^p	6.50	0.73	7.23	0.98	10.27	2.27	2.13	22.88
1992 ^p	6.07	0.74	6.81	1.02	10.44	2.27	1.88	22.42
1993 ^p	6.10	0.76	6.86	0.90	10.58	2.27	1.97	22.58
1994 ^p	6.40	0.77	7.17	0.89	10.78	2.27	2.17	23.28
1995 ^p	6.10	0.78	6.88	0.71	10.94	2.41	1.92	22.87

^p Preliminary.^a There is a change in methodology for highway vehicles and off-highway emission estimates from 1970 to 1980.^b Off-highway includes airport service, recreational marine vessels, aircraft, non-recreational marine vessels and railroads.Source: U. S. Environmental Protection Agency, *National Air Pollutant Emission Trends, 1900-1995*, Table 3-3, Table A-3.

TABLE 4-35

National Emissions of Particulate Matter (PM-10)*

10-Year Intervals 1960–1990 and Annually 1990–1995

(Million Short Tons)

Year	Transportation									Total, Transportation, Fuel Related & Other
	Transportation - Fuel-Related ^b						Other Transportation Sources			
	Highway Vehicles	Off-Highway				Total	Fugitive Dust		Total	
		Aircraft	Railroads	Marine Vessels	Other Off-Highway ^c		Unpaved Highways	Paved Highways		
1960	0.55	—	0.10	—	0.09	0.74	—	—	—	0.74
1970	0.44	0.02	0.03	0.01	0.01	0.50	—	—	—	0.50
1980	0.40	0.03	0.04	0.02	0.01	0.50	—	—	—	0.50
1990 ^p	0.36	0.04	0.05	0.03	0.02	0.49	11.34	5.99	17.33	17.82
1991 ^p	0.35	0.04	0.05	0.03	0.02	0.48	11.87	5.97	17.84	18.32
1992 ^p	0.34	0.04	0.05	0.03	0.02	0.48	11.54	5.94	17.48	17.96
1993 ^p	0.32	0.05	0.05	0.03	0.02	0.46	12.48	6.10	18.58	19.04
1994 ^p	0.32	0.05	0.05	0.03	0.02	0.47	12.04	6.38	18.42	18.89
1995 ^p	0.30	0.05	0.05	0.03	0.02	0.45	12.00	6.47	18.47	18.91

Year	Non-Transportation ^a					Total of All Sources ^d
	Stationary Fuel Combustion	Industrial Processes	Waste Disposal & Recycling	Natural Sources	Miscellaneous ^d	
1960	3.56	9.24	0.76	—	1.24	15.56
1970	2.87	7.67	1.00	—	1.00	13.04
1980	2.45	2.75	0.27	—	1.08	7.05
1990 ^p	1.08	0.66	0.24	4.36	19.18	43.34
1991 ^p	1.08	0.64	0.24	10.10	18.53	48.90
1992 ^p	1.11	0.65	0.25	4.63	19.13	43.72
1993 ^p	1.04	0.66	0.25	1.99	19.59	42.55
1994 ^p	1.03	0.69	0.25	2.59	21.18	44.62
1995 ^p	0.91	0.69	0.25	2.16	19.71	42.64

^p Preliminary.

* Fine particulate matter less than 10 microns.

^a There was a change in methodology between 1980 and 1990.

^b There was a change in vehicular methodology between 1960 and 1970.

^c Other off-highway includes airport service vehicles after 1960. Fugitive dust estimates were not available before 1990.

^d For the years 1990–1995 fugitive dust comprises approximately 75% of the miscellaneous total. Miscellaneous also includes agriculture and forestry, other combustion, wind erosion, and nonhighway vehicles used for recreation, lawn and garden, light commercial, construction, industrial, farm, and logging.

Note: Sum of subcategories may not equal total due to rounding.

Source: U.S. Environmental Protection Agency (EPA), *National Air Pollutant Emission Trends, 1900–1995*, Tables 3-5, and A-5.

TABLE 4-36**National Emissions of Sulfur Dioxide**

10-Year Intervals 1960–1990 and Annually 1990–1995
(Million Short Tons)

Year	Transportation ^a				Non-Transportation ^b				Total of All Sources
	Highway Vehicles	Off-Highway		Aircraft	Stationary Fuel Combustion	Industrial Processes	Waste Disposal & Recycling	Miscellaneous	
		Railroads	Marine Vessels						
1960	0.11	0.22	—	—	15.45	5.78	0.01	0.55	22.23
1970	0.41	0.04	0.04	0.00	23.46	7.09	0.01	0.11	31.16
1980	0.52	0.05	0.12	0.01	21.39	3.77	0.03	0.01	25.91
1990 ^P	0.57	0.07	0.19	0.01	19.60	1.95	0.04	0.01	22.43
1991 ^P	0.57	0.07	0.19	0.01	19.30	1.89	0.04	0.01	22.07
1992 ^P	0.58	0.07	0.20	0.01	19.02	1.92	0.04	0.01	21.84
1993 ^P	0.52	0.07	0.20	0.01	18.73	1.95	0.04	0.01	21.52
1994 ^P	0.30	0.07	0.21	0.01	18.42	1.99	0.04	0.01	21.05
1995 ^P	0.30	0.07	0.21	0.01	15.66	2.02	0.04	0.01	18.32

^p Preliminary.

^a There was a change in vehicular methodology between 1960 and 1970.

^b There was a change in methodology between 1980 and 1990.

Note: Sum of subcategories may not equal total due to rounding.

Source: U. S. Environmental Protection Agency (EPA), *National Air Pollutant Emission Trends, 1900–1995*, Tables 3-4, and A-4.

TABLE 4-37

National Emissions of Lead

5-Year Intervals 1970–1990 and Annually 1990–1995

(Thousand Short Tons)

Year	Transportation			Non-Transportation			Total of All Sources
	Highway Vehicles	Off-Highway	Total	Stationary Fuel Combustion	Industrial Processes	Waste Disposal & Recycling	
1970	171.96	8.34	180.30	10.62	26.36	2.20	219.47
1980	62.19	3.32	65.51	4.30	3.94	1.21	74.96
1990	1.69	0.20	1.89	0.50	2.47	0.80	5.67
1991	1.52	0.19	1.71	0.50	2.27	0.81	5.28
1992	1.44	0.19	1.63	0.49	1.92	0.81	4.86
1993 ^p	1.40	0.18	1.58	0.50	2.05	0.82	4.95
1994 ^p	1.39	0.19	1.58	0.49	2.13	0.83	5.03
1995 ^p	1.39	0.19	1.58	0.49	2.07	0.84	4.99

^p Preliminary.

Note: Sum of subcategories may not equal total due to rounding.

Source: U. S. Environmental Protection Agency (EPA), *National Air Pollutant Emission Trends, 1900–1995*, Tables 3-6 and A-6.

TABLE 4-38**Air Pollution Trends in Selected Metropolitan Statistical Areas**

Annually 1985-1994

(Number of PSI* Days Greater Than 100 at Trend Sites and All Monitoring Sites)

Metropolitan Statistical Area	Number of Trend Sites	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Total Number of Sites	PSI Days > 100 (1994)
Baltimore, MD	15	25	23	28	43	9	12	20	5	14	17	28	18
Chicago, IL	40	9	9	17	22	4	3	8	7	1	8	58	8
Cleveland-Lorain-Elyria, OH	25	1	2	7	21	6	2	7	1	2	4	40	7
Dallas, TX	9	27	9	13	14	7	8	1	3	5	1	23	7
Detroit, MI	25	2	5	9	17	10	3	8	0	2	8	35	8
El Paso, TX	16	32	43	32	16	33	27	10	13	6	10	19	10
Fort Worth/Arlington, TX	8	12	10	4	11	8	5	9	2	1	8	8	8
Hartford, CT	14	17	7	20	27	11	7	14	9	9	10	17	10
Houston, TX	28	64	55	67	61	42	61	42	31	26	29	30	32
Jersey City, NJ	8	26	8	12	18	2	7	8	1	5	1	9	7
Las Vegas, NV-AZ	8	56	40	7	30	46	21	15	5	8	12	11	12
Los Angeles, Long Beach, CA	37	208	226	201	239	226	178	182	185	146	136	41	136
New Haven, Meriden, CT	12	11	7	17	16	7	10	22	3	11	8	13	8
New York, NY	24	65	58	44	46	18	18	22	4	6	8	34	9
Oakland, CA	22	12	8	14	10	3	5	6	2	3	3	29	3
Orange County, CA	10	78	66	58	65	66	47	42	43	25	14	12	14
Philadelphia, PA-NJ	36	31	23	36	35	20	14	25	3	22	6	52	18
Phoenix-Mesa, AZ	22	88	88	42	26	30	9	4	9	7	7	28	9
Pittsburgh, PA	31	9	8	13	25	9	11	4	2	5	2	50	8
Riverside-San Bernardino, CA	34	168	170	171	180	177	143	141	150	139	122	58	124
Sacramento, CA	18	75	69	52	76	60	43	44	21	10	11	39	13
St. Louis, MO-IL	46	10	13	17	18	13	8	6	3	5	11	61	13
Salt Lake City-Ogden, UT	19	21	36	8	11	17	6	19	10	2	10	31	11
San Diego, CA	21	88	70	61	84	90	60	39	37	17	16	27	16
Ventura, CA	14	31	84	54	83	59	36	49	25	16	24	16	24
Wilmington-Newark, DE-MD	8	10	9	16	31	7	5	6	2	3	1	12	7

* The Pollutant Standards Index (PSI) integrates information from five major pollutants (particulate matter-10, sulfur dioxide, carbon monoxide, ozone and nitrogen dioxide) across an entire monitoring network into a single number that represents the worst daily air quality experienced in an urban area. A PSI value of 100 corresponds to the standard established under the Clean Air Act (CAA), and a PSI greater than 100 indicates that at least one criteria pollutant exceeded air quality standards on a given day; therefore, air quality would be in the unhealthy range on that day.

Source: U.S. Environmental Protection Agency, *National Air Quality and Emissions Trends Report, 1994, 1995.*

Transportation, Energy, and the
Environment

SECTION C

Oil Spills

TABLE 4-39
Annual Oil Spills in U.S. Navigable Waters by Vessel Type
 Annually 1982-1995

Year	Tankships		Tank Barges		Other Vessels		Total Vessels		Nonvessel*		Total Vessels and Nonvessels	
	Incidents	Volume (gallons)	Incidents	Volume (gallons)	Incidents	Volume (gallons)	Incidents	Volume (gallons)	Incidents	Volume (gallons)	Incidents	Volume (gallons)
1982	279	1,219,922	547	2,146,576	1,383	412,484	2,209	3,778,982	5,275	6,565,814	7,484	10,344,796
1983	258	145,822	523	1,807,897	1,444	378,537	2,225	2,332,256	5,691	6,047,592	7,916	8,379,848
1984	238	4,663,952	499	2,484,481	1,530	1,863,435	2,267	9,011,868	5,991	8,994,010	8,258	18,005,878
1985	164	732,397	385	3,683,548	1,113	446,966	1,662	4,862,911	4,507	3,573,337	6,169	8,436,248
1986	196	1,164,962	516	1,510,064	900	160,890	1,612	2,835,916	3,381	1,446,062	4,993	4,281,978
1987	158	1,547,462	413	550,108	1,208	848,200	1,779	2,945,770	3,062	663,114	4,841	3,608,884
1988	222	852,287	486	3,164,017	1,300	369,985	2,008	4,386,289	2,990	2,199,715	4,998	6,586,004
1989	200	11,272,324	504	746,833	1,564	674,660	2,268	12,693,817	4,345	784,879	6,613	13,478,696
1990	249	4,977,251	458	1,042,025	1,779	417,882	2,486	6,437,158	5,692	1,527,849	8,178	7,965,007
1991	220	92,334	428	241,346	1,780	396,809	2,428	730,489	6,141	3,024,014	8,569	3,754,503
1992	193	118,075	322	149,212	4,795	398,145	5,310	665,432	4,181	1,210,235	9,491	1,875,667
1993	172	69,541	314	697,653	4,944	409,963	5,430	1,177,157	3,542	890,231	8,972	2,067,388
1994	174	69,440	385	876,501	4,736	330,973	5,295	1,276,914	4,145	18,236,001	9,440	19,512,915
1995 ^p	56	124,040	105	268,269	3,278	353,022	3,439	745,331	1,759	284,047	5,198	1,029,378

^p Preliminary.

* Non-vessel includes facilities, pipelines, and other unknown sources.

Source: U.S. DOT/USCG, Marine Safety and Environment Protection, G-MRI-1, Resource Management Directorate, Office of Information Resources (Data Administration Division), personal communication.

APPENDICES

APPENDIX A

Modal Profiles - 1960, 1970, 1980, 1990, 1993, 1994, 1995

The Modal Profiles present financial, inventory, performance and safety data comparisons for 1960, 1970, 1980, 1990, 1993, 1994, and 1995, where available. In some cases, not all of the types of data in these profiles are available for every mode, nor are they always applicable. The following list indicates the type of data usually included in each group:

- I. Financial
 - A. Expenditures (Federal, State, Local and private modes)
 - B. Operating Revenue (for-hire modes)
 - C. Operating expenses
- II. Inventory
 - A. Number of Companies
 - B. Number of Vehicles
 - C. Number of Employees
 - D. Mileage
- III. Performance
 - A. Vehicle-Miles
 - B. Passenger-Miles
 - C. Number of Passengers Carried
 - D. Ton-Miles
 - E. Tons of Freight Hauled
 - F. Average Passenger Trip Length
 - G. Average Length of Freight Hauled
- IV. Safety
 - A. Fatalities
 - B. Injuries
 - C. Accidents/Incidents
 - D. Fatality and Accident Rates

Specific source references are obtained as follows: the letter directly to the right of the data element applies to all subsequent data elements in that column until the next letter appears. In some cases, data are shown that may not appear directly in the sources listed. These were obtained by addition/subtraction of referenced data or of other data in its column, and are marked accordingly.

For example: **Automobile Profile**

1995

137,285^a reference letter 'a' also applies to the two subsequent data elements
36,636
114,595

7,043^b reference letter 'b' refers to a different data source.
823

The source and page or table numbers are found at the end of each modal profile. All source publications are listed in the Bibliography.

AIR CARRIER PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994	1995
Operating Revenues (thousand dollars)							
Domestic ¹							
Majors, all services	1,942,635 ^a	6,272,775 ^a	23,012,073 ^b	53,333,552 ^d	58,234,624 ^d	59,846,676 ^d	63,224,450 ^d
Nationals, all services	146,481	736,831	3,182,418	4,167,552 ^e	4,434,617 ^e	5,465,021 ^e	6,270,288 ^e
Large Regionals, all services	—	—	245,806	459,404 ^f	563,800 ^f	637,296 ^f	1,215,506 ^f
Total	2,178,339	7,180,161	26,440,297	57,960,508	63,233,041	65,948,993	70,710,244
International							
Majors, all services	705,938	2,109,497	5,976,221 ^c	16,761,376 ^d	19,308,162 ^d	19,222,842 ^d	19,820,215 ^d
Nationals, all services	—	—	465,923	901,352 ^e	1,640,483 ^e	2,697,137 ^e	2,616,897 ^e
Large Regionals, all services	—	—	—	327,627 ^f	377,528 ^f	444,450 ^f	779,687 ^f
Total	705,938	2,109,497	6,442,144	17,990,355	21,326,173	22,364,429	23,216,799
Total Certificated*	2,884,227	9,289,658	32,882,441	75,950,863	84,559,214	88,313,422	93,927,043
Operating Expenses (thousand dollars)							
Domestic							
Majors, all services	1,907,785	6,256,039	23,150,527 ^b	54,209,401 ^d	56,180,007 ^d	57,824,115 ^d	58,692,901 ^d
Nationals, all services	144,309	745,629	3,058,289	4,297,823 ^e	4,312,612 ^e	5,285,783 ^e	6,105,423 ^e
Large Regionals, all services	—	—	257,183	445,862 ^f	664,856 ^f	648,039 ^f	1,110,760 ^f
Total	2,052,094	7,001,668	26,465,999	58,953,086	61,157,445	63,757,937	64,904,084
International							
Majors, all services	665,660	2,065,605	6,171,366 ^c	17,746,006 ^d	19,959,995 ^d	18,875,302 ^d	18,997,478 ^d
Nationals, all services	—	—	470,729	853,361 ^e	1,616,868 ^e	2,503,462 ^e	2,399,412 ^e
Large Regionals, all services	—	—	—	315,113 ^f	386,703 ^f	463,257 ^f	731,992 ^f
Total	665,660	2,065,605	6,642,095	18,914,480	21,963,566	21,842,021	22,128,882
Total Certificated*	2,717,754	9,067,273	33,108,094	77,867,566	83,121,041	85,599,958	88,037,966

II. INVENTORY²

Number of Carriers

Total Domestic							
& International	55 ^g	39 ^g	72 ^g	62 ^g	75 ^g	82 ^g	86 ^g
Majors	—	—	12	12	11	11	11
Nationals	—	—	17	16	19	23	26
Regionals	—	—	43	34	45	48	49

Number of Aircraft

Available for Service

Total Domestic							
& International	2,135	2,690	2,818	4,727	5,234	5,221	5,567
Majors	—	—	2,071	3,854	4,049	4,085	4,039
Nationals	—	—	432	650	577	819	1,143
Regionals	—	—	315	223	608	317	385

Number of Employees

Total Domestic							
& International	169,872	304,690	354,264	588,926	577,761	586,083	608,887
Majors	118,189	214,021	318,973	549,100	533,020	526,379	540,593
Nationals	12,470	24,913	29,922	32,077	24,853	46,670	57,036
Regionals	—	—	5,369	7,749	19,888	13,034	11,264

AIR CARRIER PROFILE (page 2 of 6)

III. PERFORMANCE	1960	1970	1980	1990	1993	1994	1995
Aircraft Revenue-							
Miles (thousands)							
Domestic							
Certificated,							
all services*	858,451 ^h	2,067,598 ^h	2,523,375 ⁱ	3,963,263 ^j	4,157,067 ^j	4,379,830 ^j	4,618,364 ^j
Majors, all services*	716,961	1,778,065	2,113,669	3,547,339 ^k	3,664,219 ^k	3,760,064 ^k	3,854,369 ^k
Nationals, all services*	94,794	247,055	330,528	351,946 ^l	407,604 ^l	519,312 ^l	615,704 ^l
Large Regionals,							
all services*	—	—	56,995	60,542 ^m	67,483 ^m	78,573 ^m	102,324 ^m
International							
Certificated,							
all services*	181,605	474,666	400,971 ⁿ	760,338 ^o	960,679 ^o	979,765 ^o	995,362 ^o
Majors, all services*	—	—	330,391	666,231 ^p	830,665 ^p	809,242 ^p	815,704 ^p
Nationals, all services*	—	—	66,499	48,812 ^q	84,053 ^q	119,839 ^q	122,950 ^q
Large Regionals,							
all services*	—	—	2,948 ^r	60,542 ^r	37,531 ^r	41,067 ^r	49,825 ^r
Medium Regionals,							
all services							
Domestic &							
International*	—	—	23,204	9,017 ^s	26,191 ^s	31,500 ^s	52,850 ^s
Total Certificated*	1,040,056	2,542,264	2,924,346	4,723,601	5,117,746	5,359,595	5,613,726
Aircraft Revenue-Hours							
Domestic							
Certificated,							
all services*	3,672,900	5,133,161	6,247,795 ⁱ	9,717,375 ^j	10,261,249 ^j	10,721,374 ^j	11,351,765 ^j
Majors, all services*	2,802,317	4,066,480	4,941,327	8,524,236 ^k	8,684,170 ^k	8,864,840 ^k	9,023,772 ^k
Nationals, all services*	606,146	908,935	919,187	1,016,491 ^l	1,319,331 ^l	1,579,771 ^l	1,938,061 ^l
Large Regionals,							
all services*	—	—	267,522	167,826 ^m	188,436 ^m	223,951 ^m	275,084 ^m
International							
Certificated,							
all services*	608,736	977,325	819,518 ⁿ	1,556,760 ^o	1,935,029 ^o	1,978,381 ^o	2,015,670 ^o
Majors, all services*	—	—	668,199	1,351,349 ^p	1,652,637 ^p	1,607,155 ^p	1,619,755 ^p
Nationals, all services*	—	—	140,329	101,533 ^q	173,456 ^q	251,902 ^q	255,334 ^q
Large Regionals,							
all services*	—	—	7,583	88,641 ^r	89,383 ^r	97,967 ^r	124,737 ^r
Medium Regionals,							
all services							
Domestic &							
International*	—	—	123,411	24,059 ^s	88,865 ^s	74,169 ^s	130,692 ^s
Total Certificated*	4,281,636	6,110,486	7,190,724	11,298,194	12,196,278	12,699,755	13,367,435
Revenue Passenger-							
Miles (thousands)							
Domestic							
Certificated,							
all services	31,098,944	108,441,978	204,367,599 ⁱ	345,872,950 ^j	362,229,819 ^j	388,398,689 ^j	403,193,247 ^j
Majors, all services	29,430,428	99,903,229	182,984,795	327,112,620 ^k	335,559,963 ^k	352,063,855 ^k	360,719,108 ^k
Nationals, all services	1,170,779	7,642,071	20,466,712	16,756,818 ^l	21,773,268 ^l	31,339,182 ^l	33,767,785 ^l
Large Regionals,							
all services	—	—	711,868	1,752,615 ^m	3,906,406 ^m	3,757,414 ^m	5,685,593 ^m

AIR CARRIER PROFILE (page 3 of 6)

	1960	1970	1980	1990	1993	1994	1995
International							
Certificated,							
all services	8,950,672 ^h	39,695,392 ^h	63,354,387 ⁿ	126,362,697 ^o	143,766,253 ^o	149,107,689 ^o	154,767,765 ^o
Majors, all services	—	—	54,318,160	118,268,507 ^p	130,976,454 ^p	133,299,897 ^p	137,377,165 ^p
Nationals, all services	—	—	8,659,592	6,794,533 ^q	10,440,299 ^q	13,459,194 ^q	15,372,664 ^q
Large Regionals,							
all services	—	—	330,288	1,219,706 ^r	2,023,723 ^r	1,964,944 ^r	1,749,118 ^r
Medium Regionals,							
all services							
Domestic &							
International*	—	—	250,571	330,848 ^s	1,315,959 ^s	1,621,892 ^s	3,289,579 ^s
Total Certificated*	40,049,616	148,137,370	267,972,557	472,566,495	505,996,072	537,506,378	557,961,012
Average Passenger							
Revenue/Passenger							
Mile (Domestic,							
Scheduled Service)	6.09	6.00	11.49	13.43	13.74	13.12	13.48
Average Passenger							
Fare (Domestic							
Scheduled Service)	34.12	40.65	84.55	107.86	109.80	103.21	106.60
Revenue Passenger							
Enplanements							
(thousands)							
Domestic							
Certificated,							
all services*	56,352	153,662	275,182 ⁱ	428,767 ^j	450,559 ^j	489,351 ^j	505,858 ^j
Majors, all services*	48,678	122,866	223,237	393,927 ^k	401,810 ^k	428,328 ^k	432,076 ^k
Nationals, all services*	5,949	26,726	47,145	32,015 ^l	41,918 ^l	53,361 ^l	59,047 ^l
Large Regionals,							
all services*	—	—	3,748	2,566 ^m	5,426 ^m	6,138 ^m	10,266 ^m
International							
Certificated,							
all services*	5,904	16,820	26,514 ⁿ	46,126 ^o	49,148 ^o	51,330 ^o	52,790 ^o
Majors, all services*	—	—	23,949	42,207 ^p	42,504 ^p	42,702 ^p	43,589 ^p
Nationals, all services*	—	—	2,343	2,632 ^q	4,691 ^q	6,608 ^q	7,134 ^q
Large Regionals,							
all services*	—	—	149	1,246 ^r	1,710 ^r	1,741 ^r	1,836 ^r
Medium Regionals,							
all services							
Domestic &							
International*	—	—	1,125	300 ^s	1,648 ^s	1,803 ^s	4,700 ^s
Total Certificated*	62,256	169,922	302,821	475,193	499,707	540,681	558,648
Revenue Passenger							
Load Factor (%) (Scheduled Service only)							
Domestic							
Certificated	58.5	48.9	58.0 ⁱ	60.4 ^j	62.0 ^j	64.7 ^j	65.4 ^j
Majors	59.5	49.3	58.1	60.6 ^k	62.1 ^k	65.0 ^k	65.8 ^k
Nationals	41.9	43.6	58.4	56.6 ^l	61.0 ^l	62.6 ^l	61.4 ^l
Large Regionals	—	—	47.7	48.7 ^m	55.0 ^m	60.0 ^m	63.0 ^m
International							
Certificated	62.2 ^h	53.0 ^h	62.8 ⁿ	69.1 ^o	67.7 ^o	70.6 ^o	71.8 ^o
Majors	—	—	62.8	69.1 ^p	67.7 ^p	70.8 ^p	72.2 ^p
Nationals	—	—	65.5	73.4 ^q	67.3 ^q	68.2 ^q	67.9 ^q
Large Regionals	—	—	73.9	66.5 ^r	62.0 ^r	46.8 ^r	53.1 ^r
Medium Regionals							
Domestic &							
International*	—	—	46.7	0.0 ^s	66.8 ^s	53.8 ^s	55.8 ^s

AIR CARRIER PROFILE (page 4 of 6)

	1960	1970	1980	1990	1993	1994	1995
U.S. International Passenger Travel							
Total Passenger Arrivals (thousands)							
Flag of Carrier:							
United States	1,332 ^t	5,531 ^t	10,031 ^u	19,145 ^u	21,940 ^u	23,291 ^u	24,582 ^v
Foreign	1,234	4,343	10,231	17,269	19,618	20,527	22,328
Total Passenger-Departures (thousands)							
Flag of Carrier:							
United States	1,200	4,949	9,369	17,628	20,232	21,355	22,231
Foreign	1,136	4,147	9,886	16,418	18,022	18,993	20,795
Total Revenue Ton-Miles (thousands)[#]							
Domestic							
Certificated,							
all services	3,732,949 ^h	13,876,802 ^h	24,964,907 ⁱ	43,651,162 ^j	46,897,801 ^j	50,631,589 ^j	52,799,046 ^j
Majors, all services	3,332,483	12,589,057	21,427,534	39,107,033 ^k	42,510,563 ^k	44,952,734 ^k	46,142,919 ^k
Nationals, all services	121,157	850,477	3,336,057	3,561,283 ^l	3,261,576 ^l	4,510,285 ^l	4,904,260 ^l
Large Regionals,							
all services	—	—	180,042	945,929 ^m	915,213 ^m	1,002,552 ^m	1,373,610 ^m
International							
Certificated,							
all services	1,291,336	6,308,701	9,689,067 ⁿ	19,975,915 ^o	22,784,463 ^o	24,879,791 ^o	26,284,695 ^o
Majors, all services	—	—	7,377,733	17,803,825 ^p	19,711,155 ^p	20,681,991 ^p	21,455,376 ^p
Nationals, all services	—	—	2,261,534	1,229,849 ^q	2,178,389 ^q	3,201,089 ^q	3,488,079 ^q
Large Regionals,							
all services	—	—	44,438	835,701 ^r	695,844 ^r	862,184 ^r	1,199,052 ^r
Medium Regionals,							
all services	—	—	—	—	—	—	—
Domestic & International*							
	—	—	28,178	143,457 ^s	409,524 ^s	300,545 ^s	520,445 ^s
Total Certificated*	5,024,285	20,185,503	34,682,153	63,770,534	69,682,264	75,511,380	79,083,741
Revenue Ton-Miles of Freight (thousands)							
Domestic							
Certificated,							
all services	552,756	2,189,331	4,528,316 ⁱ	9,063,864 ^j	10,675,106 ^j	11,802,778 ^j	12,479,274 ^j
Majors, all services	321,176	1,809,996	3,129,087	6,395,767 ^k	8,954,572 ^k	9,746,354 ^k	10,071,014 ^k
Nationals, all services	3,850	53,558	1,289,510	1,885,600 ^l	1,084,235 ^l	1,387,322 ^l	1,527,970 ^l
Large Regionals,							
all services	—	—	108,864	770,670 ^m	524,572 ^m	626,842 ^m	804,125 ^m
International							
Certificated,							
all services	268,156 ^h	1,566,105 ^h	3,353,371 ⁿ	7,339,660 ^o	8,407,835 ^o	9,970,189 ^o	10,842,981 ^o
Majors, all services	—	—	1,945,660	5,976,973 ^p	6,613,507 ^p	7,351,998 ^p	7,717,661 ^p
Nationals, all services	—	—	1,395,575	550,409 ^q	1,134,359 ^q	1,855,167 ^q	1,985,874 ^q
Large Regionals,							
all services	—	—	11,409	713,733 ^r	493,472 ^r	666,863 ^r	1,024,140 ^r
Medium Regionals,							
all services	—	—	—	—	—	—	—
Domestic & International*							
	—	—	3,124	110,372 ^s	278,224 ^s	138,421 ^s	191,471 ^s
Total Certificated*	820,907	3,755,436	7,884,811	16,513,896	19,082,941	21,772,967	23,322,255

AIR CARRIER PROFILE (page 5 of 6)

IV. SAFETY	1960	1970	1980	1990	1993	1994	1995
Air Carrier Fatalities							
Operating under							
14 CFR 121 (airlines)							
Scheduled services	—	—	0 ^x	39 ^x	1 ^x	239 ^x	168 ^x
Nonscheduled services	—	—	1	0	0	0	2
Operating under							
14 CFR 135							
Scheduled services (commuters)	—	—	37	7	24	25	9
Nonscheduled services (on-demand air taxis)	—	—	105	50	42	63	52
Total*	499	146	143	96	67	327	229
Fatal Air Carrier Accidents							
Operating under							
14 CFR 121 (airlines)							
Scheduled services	—	—	0	6	1	4	2
Nonscheduled services	—	—	1	0	0	0	1
Operating under							
14 CFR 135							
Scheduled services (commuters)	—	—	8	4	4	3	2
Nonscheduled services (on-demand air taxis)	—	—	46	28	19	26	24
Total*	17	8	55	38	24	33	29
Air Carrier Accidents							
Operating under							
14 CFR 121 (airlines)							
Scheduled services	—	—	15 ^x	22 ^x	22 ^x	19 ^x	33 ^x
Nonscheduled services	—	—	4	2	1	4	2
Operating under							
14 CFR 135							
Scheduled services (commuters)	—	—	38	16	16	10	12
Nonscheduled services (on-demand air taxis)	—	—	171	106	69	85	76
Total*	90 ^w	55 ^w	227	146	108	118	123

* Data derived by addition/subtraction and may not appear directly in the data source. Increase in medium regional figures for 1992 due to inclusion of Continental Micronesia and Atlas Air.

Total Revenue Ton-Miles includes Passenger, Freight, Express and Mail.

1 Domestic encompasses operations within and between the 50 states of the United States, the District of Columbia, Puerto Rico and the Virgin Islands. It also encompasses Canadian and Mexican transborder operations (U.S. airlines only). All other operations are considered international. Total may not equal sum of components for 1960 & 1970. This profile uses the current classification of air carriers. Not all 1960 & 1970 carriers could be fit into these categories.

2 Includes scheduled and nonscheduled (charter) operators. By Sec. 2 of the Airline Deregulation Act of 1978 "charter air carrier" and "charter air transportation" replaced supplemental air carriers and supplemental air transportation which were formerly Sec. 101(36) and (37) of the Act. The 24 pre-deregulation supplemental carriers now have scheduled service authority.

- Sources:**
- a Civil Aeronautics Board, *Handbook of Airline Statistics*, 1969, 1973, pp. 69, 71.
 - b Ibid., *Air Carrier Financial Statistics*, December 1981, pp. 3/28, 44.
 - c Ibid., pp. 4/28, 44.
 - d U.S. DOT, *Air Carrier Financial Statistics*, December issues, p. 3.
 - e Ibid., pp. 30, 31.
 - f Ibid., p. 65.
 - g Ibid., U.S. DOT/BTS, Office of Airline Information, personal communication.
 - h Civil Aeronautics Board, *Handbook of Airline Statistics*, 1973, Part III, Tables 2, 4, 7, 13.
 - i Ibid., *Air Carrier Traffic Statistics*, December 1981, pp. 2, 5, 46, 84.

AIR CARRIER PROFILE (page 6 of 6)

- j U.S. DOT, *Air Carrier Traffic Statistics*, December issues, p. 2.
- k Ibid., p. 5.
- l Ibid., pp. 52, 53.
- m Ibid., pp. 118, 119.
- n Civil Aeronautics Board, *Air Carrier Traffic Statistics*, December 1981, pp. 3, 6, 85, 115.
- o U.S. DOT, *Air Carrier Traffic Statistics*, December issues, p. 3.
- p Ibid., p 6.
- q Ibid., pp. 52, 53.
- r Ibid., pp. 118, 119.
- s Ibid., p. 178.
- t U.S. Department of Justice, Immigration and Naturalization Service, *Report of Passenger Travel Between the U.S. and Foreign Countries*, 1960,1970.
- u U.S. DOT/RSPA *U.S. International Air Travel Statistics*, annual issues, Tables IIa and IIc.
- v U.S. Department of Commerce, International Trade Administration, *U.S. International Air Passenger Statistics Report*, Calendar Year 1995, Tables IIa, IIc.
- w National Transportation Safety Board, RE-50, personal communication.
- x Ibid., *NTSB Aviation Accident Statistics*, 1995.

GENERAL AVIATION PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994	1995
Expenditures (million dollars)							
Aircraft	202 ^a	339 ^a	2,853 ^a	3,518 ^a	3,230 ^a	3,910 ^a	4,435 ^a
Operating Costs	693	1,696	5,200	6,754	6,245	6,509	6,786
Total	895	2,035	8,053	10,272	9,475	10,419	11,221

II. INVENTORY

Number of

Active Aircraft

Corporate	—	6,835 ^b	14,860 ^b	10,100 ^b	9,855 ^b	9,652 ^b	NA
Business	—	26,900	49,391	33,100	27,811	25,554	NA
Instructional	—	10,727	14,862	18,600	15,608	14,568	NA
Personal	—	65,398	96,222	112,600	102,146	100,839	NA
Aerial Application	—	5,455	7,294	6,200	4,979	4,215	NA
Aerial Observation	—	—	—	4,900	4,804	4,936	NA
External load	—	—	—	—	147	133	NA
Other Work [#]	—	2,054	2,813	1,400	1,039	1,214	NA
Air Taxi	—	—	—	5,800	3,764	3,927	NA
Sight Seeing	—	—	—	—	1,626	1,336	NA
Other	—	8,249	17,045	4,100	4,228	4,226	NA
Total	76,549 ^b	125,618	202,487	196,800	176,006	170,600	NA

III. PERFORMANCE

Number of Hours

Flown (thousands)

Corporate	—	—	5,332 ^c	2,913 ^c	2,659 ^c	2,548 ^c	NA
Business	5,699 ^c	7,204 ^c	8,434	4,417	3,345	3,055	NA
Instructional	1,828	6,791	5,748	7,244	4,680	4,156	NA
Personal	3,172	6,896	8,894	9,276	7,938	8,116	NA
Aerial Application	—	—	2,044	1,872	1,167	1,210	NA
Aerial Observation	—	—	—	1,745	1,750	1,750	NA
External Load	—	—	—	—	105	172	NA
Other Work [#]	—	—	1,053	572	175	226	NA
Air Taxi	—	—	—	2,249	1,452	1,670	NA
Sight Seeing	—	—	—	—	412	323	NA
Other	2,422	5,139	4,925	475	656	640	NA
Total	13,121	26,030	36,430	30,763	24,340	23,866	NA

Vehicle-miles

(millions)	1,769 ^d	3,207 ^d	5,204 ^d	4,831 ^d	3,253 ^d	2,917 ^d	NA
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Passenger-miles

(millions)	2,300 ^a	9,100 ^a	14,700 ^a	13,000 ^a	10,900 ^a	11,100 ^a	11,300 ^a
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Fuel consumed

(million gallons)	242 ^e	759 ^e	1,286 ^e	1,016 ^e	722 ^e	735 ^e	NA
Aviation Gasoline	242	551	520	353	268	264	NA
Jet Fuel	—	208	766	663	454	471	NA

GENERAL AVIATION PROFILE (page 2 of 2)

IV. SAFETY	1960	1970	1980	1990	1993	1994	1995
Number of Fatalities							
Corporate	—	28 ^f	66 ^f	21 ^f	13 ^f	5 ^f	15 ^f
Business	—	148	126	81	65	61	73
Instructional	—	93	73	60	48	47	44
Personal	—	726	803	500	471	472	493
Aerial Application	—	41	32	17	14	17	14
Other	—	174	152	96	129	134	109
Total*	787 ^f	1,310	1,239	766	736	723	732
Number of Accidents							
Fatal	429	641	618 ^g	442 ^g	398 ^g	402 ^g	408 ^g
Total	4,793	4,712	3,590	2,215	2,039	1,990	2,066
Accident Rate (per 100,000 Aircraft Hours Flown)							
Fatal	3.3	2.5	1.7	1.6	1.8	1.8	2.0
Total	36.5	18.1	9.9	7.8	9.1	9.1	10.3

* Totals may not equal sum of fatalities due to differences in methodology used to count collisions involving aircraft in different categories.

In 1960, 1970, 1980, classified as "Industrial."

NA Data not available at press time.

Note: Sum of components may not equal totals.

- Sources:**
- a Eno Transportation Foundation, Inc., *Transportation in America*, 1996, pp. 42, 47.
 - b U.S. DOT/FAA, *General Aviation Activity and Avionics Survey*, 1990-1994, annual issues, Table 3.1.
 - c Ibid., Table 3.2.
 - d Ibid., Table 3.3.
 - e Ibid., Table 5.1.
 - f National Transportation Safety Board, RE-50, personal communication.
 - g Ibid., *NTSB Aviation Accident Statistics*, 1996.

HIGHWAY PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994	1995
Government Receipts							
(million dollars)							
Federal							
Highway Trust Fund ¹	2,858 ^a	5,526 ^a	7,672 ^a	13,230 ^b	16,709 ^b	14,991 ^b	20,423 ^b
Other	205	618	2,438	1,196	1,154	1,272	1,045
Total Federal	3,063	6,144	9,830	14,426	17,863	16,263	21,468
State & Local							
State & D.C.	6,055	11,737	19,666	40,026	47,008	47,699	48,965
Local	2,367	3,866	10,219	20,842	23,509	25,759	26,470
Total State & Local*	8,422	15,603	29,885	60,868	70,517	73,458	75,435
Total	11,485	21,747	39,715	75,294	88,380	89,721	96,903
Government Expenditures							
(million dollars)							
Federal							
Highway Trust Fund	—	—	—	358	788	965	1,033
Other*	—	—	—	306	312	341	188
Total Federal	202 ^c	431 ^c	906 ^c	664	1,100	1,306	1,221
State & Local							
State & D.C.	7,125	14,100	25,936	45,609	53,114	55,569	56,981
Local	3,435	6,304	14,953	29,135	32,212	33,317	34,302
Total State & Local*	10,560	20,404	40,889	74,744	85,326	88,886	91,283
Total	10,762	20,835	41,795	75,408	86,426	90,192	92,504
State Highway User Tax Revenues**							
(million dollars)							
Motor Fuel Tax	3,374 ^d	6,433 ^d	9,485 ^d	19,658 ^e	24,852 ^e	25,840	26,881 ^e
Other Motor Fuel Receipts ²	22	44	92	220	138	101	108
Motor Vehicle Registration Fees	1,514 ^f	2,873 ^f	5,173 ^f	10,257 ^g	12,219 ^g	12,385 ^g	11,941 ^g
Other Motor Vehicle Fees ³	235	577	1,490	3,353	4,091	4,505	4,416
Motor Carrier Taxes ⁴	110	176	323	695	772	875	770
Miscellaneous Fees	68	181	615	1,761	2,418	2,575	5,549
Total	5,323	10,284	17,177	35,944	44,489	46,281	49,665

II. INVENTORY

Rural/Urban Mileage

by Jurisdiction

Rural Mileage Under State							
Control	658,896 ^h	707,002 ^h	701,846 ⁱ	702,562 ⁱ	692,403 ⁱ	690,385 ⁱ	690,952 ⁱ
Under Federal Control*							
Under Local Control	111,912	187,696	262,010	178,196	179,567	173,617	170,458
County Roads	1,742,404	1,732,981	1,686,693	1,617,051	1,629,949	1,625,164	1,627,008
Town & Township Roads	538,651	510,174	507,856	437,493	430,590	423,907	424,529
Other Local Roads	64,262	31,559	75,221	187,486	169,134	179,880	179,573
Total Rural Mileage	3,116,125	3,169,412	3,233,626	3,122,788	3,101,643	3,092,953	3,092,520

HIGHWAY PROFILE (page 2 of 4)

	1960	1970	1980	1990	1993	1994	1995
Urban Mileage							
Under State							
Control	50,158 ^h	74,103 ^h	79,359 ⁱ	95,790 ⁱ	107,317 ⁱ	109,970 ⁱ	111,781 ⁱ
Under Federal							
Control ⁺	—	—	753	1,024	1,311	1,482	1,509
Under Local Control							
County Roads	—	—	27,515	95,985	114,448	115,377	117,506
Town & Township Roads	—	—	19,474	42,772	84,380	74,614	60,563
Other Local Roads	379,410	486,567	496,131	521,792	495,622	512,148	528,347
Total Urban Mileage	429,568	560,670	623,232	757,363	803,078	813,591	819,706
Total Rural & Urban Mileage	3,545,693	3,730,082	3,856,858	3,880,151	3,904,721	3,906,544	3,912,226
Rural/Urban Mileage by Functional System							
Rural Mileage							
Interstate	—	—	31,997 ^j	33,547 ^j	32,652 ^j	32,457 ^j	32,580 ^j
Other Principal Arterial	—	—	82,732	83,802	96,201	96,995	97,948
Minor Arterial	—	—	149,089	144,735	137,928	138,171	137,151
Major Collector	—	—	439,050	436,365	432,675	431,111	431,712
Minor Collector	—	—	299,557	293,912	282,361	282,025	274,081
Local	—	—	2,231,201	2,130,427	2,119,826	2,112,194	2,119,048
Total Rural Mileage	3,116,125 ^j	3,169,412 ^j	3,233,626	3,122,788	3,101,643	3,092,953	3,092,520
Urban Mileage							
Interstate	—	—	9,219	11,527	12,878	13,126	13,164
Other Freeways & Expressways	—	—	6,713	7,670	8,857	8,995	8,970
Other Principal Arterial	—	—	44,338	51,987	52,835	53,090	52,796
Minor Arterial	—	—	66,581	74,656	85,822	87,852	88,510
Collector	—	—	68,213	78,248	85,378	86,098	87,331
Local	—	—	428,168	533,275	557,308	564,430	568,935
Total Urban Mileage	429,568	560,670	623,232	757,363	803,078	813,591	819,706
Total Rural & Urban Mileage	3,545,693	3,730,082	3,856,858	3,880,151	3,904,721	3,906,544	3,912,226
U.S. Roads & Streets							
Surfaced Mileage							
State Control	667,214 ^k	747,658 ^k	753,000 ^l	619,131 ^m	551,568 ^m	551,605 ^m	553,787 ^m
Federal, County & Local Control	1,862,368	2,143,820	2,605,000	2,899,073	2,996,547	3,013,372	3,022,219
Total	2,556,970	2,946,463	3,358,000	3,518,204	3,548,115	3,564,977	3,576,006
Percent Surfaced	72.1	78.9	84.9	90.7	90.8	91.3	91.4
Non-Surfaced Mileage							
State Control	41,840	33,447	28,000	663	243	261	120
Federal, County & Local Control	862,359	617,461	569,000	361,284	356,363	341,307	336,100
Total	988,723	783,619	597,000	361,947	356,606	341,568	336,220

HIGHWAY PROFILE (page 3 of 4)

	1960	1970	1980	1990	1993	1994	1995
Total Mileage							
State Control	709,054 ^k	781,105 ^k	781,000 ^l	619,794 ^m	551,811 ^m	551,866 ^m	553,907 ^m
Federal, County & Local Control	2,724,727	2,761,281	3,174,000	3,260,357	3,352,910	3,354,678	3,358,319
Total	3,545,693	3,730,082	3,955,000	3,880,151	3,904,721	3,906,544	3,912,226
Number of Employees							
Highways – State							
& Local Govt.	532,000 ⁿ	607,000 ⁿ	559,000 ⁿ	569,000 ⁿ	541,100 ⁿ	NA	NA
Highway & Street Construction	294,000 ^o	331,000 ^o	268,400 ^o	238,700 ^o	222,300 ^p	226,100 ^p	227,400 ^o

III. PERFORMANCE
**Vehicle-Miles of
Travel by Highway
Class (millions)⁺⁺**

Rural							
Interstate	10,514 ^q	79,516 ^q	135,084 ^r	200,173 ^r	208,308 ^r	215,568 ^r	223,385 ^r
Other Principal Arterial	–	–	132,958	175,133	203,113	207,569	215,568
Minor Arterial	–	–	129,816	155,733	146,454	149,760	153,028
Major Collector	–	–	150,186	190,512	178,170	182,000	186,212
Minor Collector	–	–	39,282	49,948	48,126	48,529	49,936
Local	–	–	84,704	97,379	102,661	104,915	105,156
Total Rural	400,463	539,472	672,030	868,878	886,832	908,341	933,285
Urban							
Interstate	13,365	81,532	161,242	278,901	317,399	330,577	341,528
Other Freeways & Expressways	–	–	79,690	127,465	142,063	147,534	151,536
Other Principal Arterial	–	–	229,469	335,543	354,993	364,200	370,358
Minor Arterial	–	–	175,030	236,225	276,993	286,165	293,270
Collector	–	–	83,043	106,297	117,950	120,088	126,891
Local	–	–	126,791	191,053	200,470	200,683	205,907
Total Urban	318,299	570,252	855,265	1,275,484	1,409,868	1,449,247	1,489,490
Total Rural & Urban	718,762	1,109,724	1,527,295	2,144,362	2,296,700	2,357,588	2,422,775

**Highway Demand
for Petroleum**

(thousand barrels)							
Motor Fuel	1,373,648 ^s	2,198,290 ^s	2,737,139 ^s	3,113,695 ^s	3,265,937 ^s	3,353,320 ^s	3,411,102 ^s
Asphalt Paving Products & Road Oils	87,179 ^t	140,111 ^t	125,040 ^t	176,843 ^t	173,149 ^v	176,751 ^v	177,543 ^v
Total	1,460,827	2,338,401	2,862,179	3,290,530	3,439,086	3,513,209	3,588,645

IV. SAFETY

Total Fatalities	36,399 ^u	52,627 ^u	51,091 ^u	44,599 ^u	40,150 ^u	40,716 ^u	41,798 ^u
Total Injuries	–	–	–	3,231,000	3,125,000	3,215,000	3,386,000
Total Accidents	–	–	–	6,471,000	6,105,000	6,492,000	6,613,000

HIGHWAY PROFILE (page 4 of 4)

- NA Data not available at press time.
- * Figures obtained by addition/subtraction and may not appear directly in data source.
- ** Revenues not necessarily allocated to highway expenditures.
- + Mileage in Federal parks, forests, and reservations that are not a part of the state and local highway system.
- ++ Highway category classifications changed several times before 1980. Actual 1960 data categories were: Main Rural Roads, Local Rural Roads and Urban Streets; 1970 data categories were: Rural Interstate, Rural Other Arterial, Other Rural, Urban Interstate and Other Urban.
- 1 The Federal Highway Trust Fund was created with the enactment of the Highway Revenue Act of 1956. The total receipts shown for 1995 are overstated by approximately \$1.59 billion due to a fiscal year 1994 error by the Treasury Department in reconciling estimated deposits to the actual tax revenue. The correction was made after the close of fiscal year 1994 and is shown in fiscal year 1995 receipts.
- 2 Includes distributors and dealers licenses, inspection fees, fines and penalties, and miscellaneous receipts.
- 3 Includes drivers licenses, title fees, special titling taxes, fines and penalties, estimated service charges and local collections.
- 4 Includes carrier gross receipt taxes; mileage, ton-mile and passenger-mile taxes; special license fees and franchise taxes; and certificate or permit fees.

Note: The injury and accident data in this profile come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

- Sources:**
- a U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table HF-211.
 - b Ibid., *Highway Statistics*, 1960, 1970, 1980, 1990, 1991, 1992, 1993, 1994, Table HF-10 & HF-10A.
 - c Ibid., *Highway Statistics, Summary to 1985*, Table HF-212.
 - d Ibid., Table MF-201.
 - e Ibid., *Highway Statistics*, Table MF-1.
 - f Ibid., *Highway Statistics, Summary to 1985*, Table MV-202.
 - g Ibid., *Highway Statistics*, Table MV-2.
 - h Ibid., *Highway Statistics, Summary to 1985*, Table M-203.
 - i Ibid., *Highway Statistics*, Table HM-10.
 - j Ibid., Table HM-20.
 - k Ibid., Table M-2.
 - l American Automobile Manufacturers Association (AAMA), *Motor Vehicle Facts & Figures*, 1996, p. 69.
 - m U.S. DOT/FHWA, *Highway Statistics*, Table HM-12.
 - n U.S. Department of Commerce, *Statistical Abstract of the United States*, 1996, Table 507.
 - o U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 161.
 - p Ibid., Office of Employment and Unemployment Statistics, SIC 161.
 - q U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201.
 - r Ibid., *Highway Statistics*, Table VM-2, VM-2A.
 - s Ibid., Table VM-1.
 - t Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 57.
 - u U.S. DOT/NHTSA, National Center for Statistics and Analysis, NRD-30, personal communication.
 - v U.S. Department of Energy, Energy Information Administration, *Petroleum Supply Annual*, annual issues, Tables 2.

AUTOMOBILE PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994	1995
Personal Auto Expenditures (million dollars)							
New & Used Cars*	16,571 ^a	26,754 ^a	57,243 ^a	124,040 ^a	127,315 ^a	137,430 ^a	137,285 ^a
Tires, Tubes, Accessories, & Parts	2,487	6,087	17,926	29,426	31,611	34,382	36,636
Gasoline & Oil	12,004	21,921	86,689	109,245	108,068	109,893	114,595
Tolls	310	652	1,104	2,036	2,502	2,540	2,614
Insurance Premiums less Claims Paid	2,029	3,752	9,443	18,043	26,764	27,268	28,027
Repair, Greasing, Washing, Parking, Storage, Rental & Leasing Auto	5,519	12,329	34,022	85,180	102,003	112,958	121,197
Registration Fees	863 ^b	1,668 ^b	2,892 ^b	6,054 ^b	7,369 ^b	7,423 ^b	7,043 ^b
Driver's License Fees	119	222	370	638	738	823	823
Total*	39,902	73,385	209,689	374,662	406,370	432,717	448,221
Taxi Expenditures (million dollars)	609 ^a	1,180 ^a	1,866 ^a	2,577 ^a	2,805 ^a	2,949	3,039 ^a
Business New Auto Expenditures (million dollars)	4,758	7,556	20,771	49,627	62,594	74,691	72,388
Government New Auto Expenditures (million dollars)	154	280	766	1,742	1,513	1,744	2,193
Total Business/ Government New Auto Expenditures*	4,912	7,836	21,537	51,369	64,107	76,435	74,581

II. INVENTORY

Number of Vehicle Registrations							
Passenger							
Cars & Taxis	61,671,390 ^c	89,243,557 ^c	121,600,843 ^c	143,453,040 ^d	131,581,427 ^d	133,929,661 ^d	136,066,045 ^d
Motorcycles	574,032	2,824,098	5,693,940	4,259,462	3,977,856	3,756,553	3,767,029
Motor Vehicle Licensed Drivers	87,252,563 ^e	111,542,787 ^e	145,298,996 ^e	167,015,250 ^e	173,149,313 ^e	175,403,465 ^e	176,628,482 ^e
Number of Employees							
Taxicabs	120,700 ^f	106,400 ^f	52,500 ^f	32,400 ^f	30,200 ^g	30,800 ^g	31,800 ^g
Automotive Dealers & Service Stations	1,267,200 ^h	1,617,400 ^h	1,688,500 ^h	2,063,100 ^h	2,013,800 ⁱ	2,116,200 ⁱ	2,190,000 ⁱ
New & Used Car Dealers	658,100 ^j	763,200 ^j	745,200 ^j	924,300 ^j	908,300 ^k	962,500 ^k	995,600 ^k
Wholesalers of Motor Vehicles, Parts & Supplies	313,000 ^l	351,300 ^l	434,300 ^l	456,000 ^l	451,300 ^m	471,400 ^m	492,400 ^m
Auto Repair, Services, & Parking	251,000 ⁿ	384,000 ⁿ	570,900 ⁿ	913,700 ⁿ	924,700 ^o	968,300 ^o	1,019,800 ⁿ

AUTOMOBILE PROFILE (page 2 of 4)

III. PERFORMANCE	1960	1970	1980	1990	1993	1994	1995
Vehicle-Miles							
(millions) ¹							
Rural Highway							
Interstate Rural	—	62,342 ^p	89,488 ^p	129,960 ^d	123,646 ^d	120,814 ^d	123,825 ^d
Other Arterial Rural	—	182,213	180,857	217,144	219,844	214,116	220,219
Other Rural	—	179,533	180,314	218,256	197,250	196,235	200,055
All Rural	303,283 ^p	424,088	450,659	565,360	540,740	531,165	544,099
Urban Highway²							
Interstate Urban	—	69,369	124,480	209,429	226,909	218,594	226,048
Other Urban	—	426,222	546,671	747,952	789,623	761,883	781,109
All Urban	284,800	495,591	671,151	957,381	1,016,532	980,477	1,007,156
Total Rural & Urban Highway	588,083	919,679	1,121,810	1,522,741	1,557,272	1,511,642	1,551,255
Vehicle-Miles*							
(millions)							
Passenger Cars & Taxis	588,083 ^c	916,700 ^c	1,111,596 ^c	1,513,184	1,547,366	1,501,402	1,541,458
Motorcycles	**	2,979	10,214	9,557	9,906	10,240	9,797
Total	588,083	919,679	1,121,810	1,522,741	1,557,272	1,511,642	1,551,255
Passenger-Miles							
(millions)							
Passenger Cars & Taxis	1,293,783 ^q	1,833,400 ^q	2,000,872 ^q	2,284,908	2,692,417	2,756,223	2,834,653
Motorcycles	**	3,694	13,278	12,233	10,897	11,264	10,777
Average Miles Traveled per Vehicle*							
Passenger Cars & Taxis	9,446 ^c	10,272 ^c	9,141 ^c	10,548	11,760	11,210	11,329
Motorcycles	**	1,055	1,794	2,244	2,490	2,726	2,601
Fuel Consumed*							
(million gallons)							
Passenger Cars & Taxis	41,169	67,820	71,883	71,989	73,553	67,517	68,317
Motorcycles	**	60	204	191	198	205	196
Average Fuel Consumption per Vehicle (gallons)*							
Passenger Cars & Taxis	661	760	591	502	559	504	502
Motorcycles	**	21	36	45	50	55	52
Average Miles Traveled Per Gallon of Fuel Consumed*							
Passenger Cars & Taxis	14.3	13.5	15.5	21.0	21.0	22.2	22.6
Motorcycles	**	50.0	50.0	50.0	50.0	50.0	50.0

AUTOMOBILE PROFILE (page 3 of 4)

IV. SAFETY	1960	1970	1980	1990	1993	1994	1995
Number of							
Occupant &							
Non Occupant							
Fatalities							
Passenger Cars	—	—	27,449 ^s	24,092 ^s	21,566 ^s	21,997 ^s	22,358 ^s
Motorcycles, total	790 ^t	2,280 ^t	5,144	3,244	2,449	2,320	2,221
Motorcycles	—	—	4,961	3,129	2,336	—	—
Other &							
Unknown	—	—	65	66	113	—	—
Bicycles ³	490	760	965	859	816	802	830
Pedestrians ³	7,210	8,950	8,070	6,482	5,649	5,489	5,585
Occupant Fatality							
Rate Per 100 Million							
Vehicle-Miles							
Passenger Cars	—	—	2.5	1.6	1.4	1.5	1.5
Motorcycles	—	—	50.4	33.9	24.7	22.7	22.7
Per 10,000							
Registered Vehicles							
Passenger Cars	—	—	2.6	2.0	1.8	1.6	1.6
Motorcycles	—	—	9.0	7.6	6.2	6.2	5.9
Number of							
Vehicles in							
All Accidents							
Passenger Cars	—	—	—	8,358,000 ^r	7,452,000 ^r	7,927,000 ^r	8,164,000 ^r
Motorcycles	—	—	—	105,000	72,000	68,000	64,000
Number of							
Vehicles in							
Fatal Accidents							
Passenger Cars	—	—	39,059 ^r	34,085	30,233	30,273	30,840
Motorcycles	—	—	5,194	3,276	2,477	2,339	2,262
Vehicle Involvement							
Rate (fatal accidents)							
Per 100 Million							
Vehicle-Miles							
Passenger Cars	—	—	3.5 ^s	2.4 ^s	2.1 ^s	2.0 ^s	2.0 ^s
Motorcycles	—	—	50.4	34.3	25.0	22.8	23.1
Per 10,000							
Registered Vehicles							
Passenger Cars	—	—	3.2	2.8	2.5	2.3	2.3
Motorcycles	—	—	9.0	7.7	6.2	6.2	6.0

* Figures obtained by addition/subtraction and may not appear directly in data source.

** Included in passenger car and taxi.

+ In 1960 motorcycles were included with passenger cars and taxis.

1 Includes passenger cars, taxis, and motorcycles.

2 Urban consists of travel on all roads and streets in urban places of 5,000 or greater population.

3 Involvement only with motor vehicle.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Note: The injury and accident data in this profile come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

Sources: a U.S. Department of Commerce, Bureau of Economic Analysis, personal communication.

AUTOMOBILE PROFILE (page 4 of 4)

- b U.S. DOT/FHWA, Office of Highway Information Management, *Highway Statistics*, 1960, 1970, 1980, 1990, 1993, 1994, 1995, Table MV-2.
- c Ibid., *Highway Statistics, Summary to 1985*, Tables MV-201 and VM-201A.
- d Ibid., *Highway Statistics*, 1990, 1991, 1994, 1995, Table VM-1.
- e Ibid., Table DL-22.
- f U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 412.
- g Ibid., Office of Employment and Unemployment Statistics, SIC 412.
- h U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 55.
- i Ibid., Office of Employment and Unemployment Statistics, SIC 55.
- j U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 551.
- k Ibid., Office of Employment and Unemployment Statistics, SIC 551.
- l U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 501.
- m Ibid., Office of Employment and Unemployment Statistics, SIC 501.
- n U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 75.
- o Ibid., Office of Employment and Unemployment Statistics, SIC 75.
- p U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201
- q Estimated using vehicle-miles from Ibid., *Highway Statistics*, 1960, 1970, 1980 and vehicle occupancy rates from FHWA's Nationwide Personal Transportation Surveys.
- r U.S. DOT/NHTSA, National Center for Statistics and Analysis, *Traffic Safety Facts 1995*, Table 3 (Total accident involvement figures rounded to thousands).
- s Ibid., Table 4; rates calculated using vehicle-mile figures cited earlier in this profile.
- t Ibid., *Motor Vehicle Safety 1977*, Table A-4.

TRUCK PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994	1995
Total Operating Revenues*							
(million dollars)	—	—	—	127,314 ^a	143,601 ^a	157,910 ^a	NA
Local Trucking	—	—	—	31,397	35,953	39,400	NA
Trucking, except Local	—	—	—	74,465	82,558	91,971	NA
Local trucking with storage	—	—	—	4,115	4,259	4,282	NA
Courier Services, except by air	—	—	—	17,337	20,831	22,257	NA
Total Operating Expenses*							
(million dollars)	—	—	—	118,968	135,144	147,911	NA
Local Trucking	—	—	—	28,049	33,383	36,444	NA
Trucking, except Local	—	—	—	70,965	78,716	87,078	NA
Local trucking with storage	—	—	—	3,885	4,052	4,131	NA
Courier Services, except by air	—	—	—	16,069	18,993	20,258	NA
Truck Highway-User Taxes (million dollars)¹							
State	1,709 ^b	3,429 ^b	6,731 ^b	12,691 ^b	13,197 ^b	13,157 ^b	NA
Federal	1,121	2,203	3,157	6,665	9,059	10,679	NA
Total	2,830	5,632	9,888	19,356	22,255	23,836	NA

II. INVENTORY

Number of Truck Registrations

Other 2-Axle							
4-Tire Vehicles	—	14,210,591 ^k	27,875,934 ^k	38,863,550 ^j	55,710,076 ^j	57,141,967 ^j	57,897,398 ^j
Single-Unit 2-Axle							
6-Tire or More Vehicles	—	3,681,405	4,373,784	4,243,044	4,526,004	4,724,608	5,203,810
Combination	—	905,082	1,416,869	1,611,293	1,591,542	1,578,706	1,677,264
Total	11,945,477^c	18,797,078	33,666,587	44,717,887	61,827,622	63,445,281	64,778,472

Number of Employees

Trucking & Courier Services	770,000 ^d	998,500 ^d	1,182,000 ^d	1,503,400 ^d	1,566,200 ^e	1,651,900 ^f	1,720,600 ^f
Truck Drivers & Deliverymen	1,477,000 ^g	1,565,000 ^g	1,931,000 ^g	2,148,000 ^g	2,252,000 ^g	2,321,000 ^g	2,861,000 ^g

Number of

Trucking and Courier Establishments*	—	—	69,796 ^h	90,709 ^h	105,159 ^h	108,971 ^h	NA
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III. PERFORMANCE

Vehicle-Miles

(millions)

Rural Highway							
Interstate Rural	—	16,835 ⁱ	45,063 ⁱ	69,646 ^j	84,088 ^j	94,071 ^j	98,849 ^j
Other Arterial Rural	—	47,433	80,926	112,727	128,651	142,059	147,243
Other Rural	—	48,567	92,347	117,698	129,840	137,316	139,277
All Rural	81,722ⁱ	112,835	218,336	300,071	342,579	373,445	385,369
Urban Highway²							
Interstate Urban	—	11,886	36,202	69,019	89,976	111,356	114,900
Other Urban	—	60,780	144,888	246,812	300,747	354,735	364,867
All Urban	44,687	72,666	181,090	315,831	390,723	466,092	479,768
Total Rural & Urban Highway	126,409	185,501	399,426	615,902	733,302	839,537	865,137

TRUCK PROFILE (page 2 of 4)

	1960	1970	1980	1990	1993	1994	1995
Vehicle-Miles							
(millions)							
Other 2-Axle							
4-Tire Vehicles	97,930 ^k	123,286 ^k	290,935 ^k	466,092 ^j	573,398 ^j	669,321 ^j	686,977 ^j
Single-Unit							
2-Axle 6-Tire							
or More Trucks	—	27,081	39,813	53,443	56,781	61,284	62,706
Combination Trucks	28,479	35,134	68,678	96,367	103,123	108,932	115,454
All Trucks	126,409	185,501	399,426	615,902	733,302	839,537	865,137
Passenger-Miles							
(millions)							
Other 2-Axle							
4-Tire Vehicles	156,688 ⁱ	192,326 ⁱ	439,312 ⁱ	727,104	865,831	885,897	904,979
Single-Unit							
2-Axle 6-Tire							
or More Trucks	— ^k	27,081 ^k	39,813 ^k	53,443	56,781	61,284	62,706
Combination Trucks	28,479	35,134	68,678	96,367	103,123	108,932	115,454
Average Miles							
Traveled per Vehicle							
Other 2-Axle							
4-Tire Vehicles	—	8,676	10,437	11,993	10,293	11,713	11,865
Single-Unit							
2-Axle 6-Tire							
or More Trucks	**	7,356	9,103	12,595	12,546	12,971	12,050
Combination Trucks	—	38,819	48,472	59,807	64,794	69,001	68,835
All Trucks	10,583 ^k	9,869	11,864	13,773	11,860	13,232	13,355
Ton-Miles (millions)							
Intercity	285,000 ^g	412,000 ^g	555,000 ^g	735,000 ^g	861,000 ^g	908,000 ^g	921,000 ^g
Fuel Consumed							
(million gallons)							
Other 2-Axle							
4-Tire Vehicles	—	12,313 ^k	23,594 ^k	32,937 ^j	36,476 ^j	44,423 ^j	44,949 ^j
Single-Unit							
2-Axle 6-Tire							
or More Trucks	—	3,968	5,557	7,294	8,277	9,041	9,178
Combination Trucks	—	7,348	12,703	17,469	17,719	18,674	19,662
All Trucks	15,882 ^k	23,630	41,854	57,700	62,472	72,138	73,789
Average Fuel							
Consumption per							
Vehicle (gallons)							
Other 2-Axle							
4-Tire Vehicles	—	866	846	847	655	777	776
Single-Unit							
2-Axle 6-Tire							
or More Trucks	—	1,078	1,271	1,719	1,829	1,914	1,764
Combination Trucks	—	8,119	8,966	10,841	11,133	11,829	11,723
All Trucks	1,330	1,257	1,243	1,290	1,010	1,137	1,139
Average Miles Traveled Per							
Gallon of Fuel Consumed							
Other 2-Axle							
4-Tire Vehicles	—	10.01	12.33	14.15	15.72	15.07	15.28
Single-Unit							
2-Axle 6-Tire							
or More Trucks	—	6.82	7.16	7.33	6.86	6.78	6.83
Combination Trucks	—	4.78	5.41	5.52	5.82	5.83	5.87
All Trucks	7.96	7.85	9.54	10.67	11.74	11.64	11.72
Average Length							
of Haul (Domestic Freight)							
(miles)	272 ^g	263 ^g	363 ^g	391 ^g	407 ^g	392 ^g	416 ^g

TRUCK PROFILE (page 3 of 4)

IV. SAFETY	1960	1970	1980	1990	1993	1994	1995
Occupant Fatalities							
Light Trucks	—	—	7,486 ^m	8,601 ^m	8,511 ^m	8,904 ^m	9,539 ^m
Large Trucks	—	—	1,262	705	605	670	644
All Trucks	—	—	8,748	9,306	9,116	9,574	10,183
Occupant Fatality Rate							
Per 100 Million							
Vehicle-Miles							
Light Trucks	—	—	2.6 ^m	1.8 ^m	1.5 ^m	1.3 ^m	1.4 ^m
Large Trucks	—	—	1.2	0.5	0.4	0.4	0.4
All Trucks	—	—	2.2	1.5	1.2	1.1	1.2
Per 10,000							
Registered Vehicles							
Light Trucks	—	—	2.5	1.7	1.5	1.5	1.5
Large Trucks	—	—	2.2	1.2	1.0	1.1	0.9
All Trucks	—	—	2.4	1.7	1.5	1.5	1.5
Vehicle Involvement Rate in Fatal Crashes							
Per 100 Million							
Vehicle-Miles							
Light Trucks	—	—	4.3	2.8	2.3	2.3	2.3
Large Trucks	—	—	5.0	3.2	2.7	2.7	2.5
All Trucks	—	—	4.5	2.9	2.4	2.4	2.4
Per 10,000							
Registered Vehicles							
Light Trucks	—	—	4.2	3.1	2.7	2.7	2.8
Large Trucks	—	—	9.3	8.2	7.0	7.4	6.5
All Trucks	—	—	5.0	3.7	3.1	3.2	3.2

* Local trucking (SIC 4212) - Establishments primarily engaged in furnishing trucking or transfer services without storage for freight generally weighing more than 100 pounds.

Trucking, except Local (SIC 4213) - Establishments primarily engaged in furnishing "over-the-road" trucking services or trucking services and storage services, including household goods either as common carriers or under special or individual contracts or agreements, for freight generally weighing more than 100 pounds.

Local trucking, without Storage (SIC 4214) - Establishments primarily engaged in furnishing both trucking and storage services, including household goods.

Courier Services, except by Air (SIC 4215) - Establishments primarily engaged in the delivery of individually addressed letters, parcels, and packages (generally under 100 pounds).

** Included in Other 2-Axle 4-Tire Vehicles.

1 Sum of components may not equal total due to independent rounding.

2 Urban consists of travel on all roads and streets in urban places of 5,000 or greater population.

NA Data not available at press time.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Note: The injury and accident data in this profile come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

- Sources:**
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 - e Ibid., *Employment and Earnings*, June 1995, SIC 421.
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 - g Eno Transportation Foundation, Inc., *Transportation in America*, 1996, pp. 44, 61, 71.

TRUCK PROFILE (page 4 of 4)

- h U.S. Bureau of the Census, *County Business Patterns*, annual issues.
- i U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201.
- j Ibid., *Highway Statistics*, 1960, 1970, 1980, 1990-1995, annual issues, Table VM-1.
- k U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
- l U.S. DOT/FHWA, *Highway Statistics*, 1960, 1970, 1980, 1990-1995, annual issues, Table VM-1 (prior to 1990, calculated using FHWA's Nationwide Personal Transportation Survey).
- m U.S. DOT/NHTSA, National Center for Statistics and Analysis, NRD-30, personal communication.

BUS PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994	1995
Expenditures (thousand dollars)							
School Bus	486,000 ^a	1,219,000 ^a	3,833,000 ^a	7,605,000 ^a	7,618,000 ^a	7,847,000 ^a	9,082,000 ^a
Operating Revenues (thousand dollars)							
Intercity Bus, Class I	463,100 ^b	721,700 ^b	1,397,378 ^b	943,268 ^b	928,165 ^b	958,310 ^c	1,194,862 ^c
Operating Expenses (thousand dollars)							
Intercity Bus, Class I	405,400	639,000	1,318,372	1,026,213	880,141	995,993	1,256,794

II. INVENTORY

Number of Operating Companies							
Intercity Bus, Class I	143	71	61	31	30	27	28
Number of Vehicles							
Commercial & Federal Bus	76,000 ^d	90,271 ^d	110,576 ^d	118,726 ^d	119,560 ^d	122,705 ^d	125,057 ^d
School & Other Bus	196,000	288,750	418,225	508,261	534,872	547,718	560,447
Number of Employees							
Intercity & Rural Bus	40,500 ^e	43,400 ^e	38,000 ^e	26,300 ^e	22,400 ^f	23,600 ^g	23,900 ^g
School Bus	-	-	79,900	111,200	121,500	125,900	134,100

III. PERFORMANCE

Vehicle-Miles (millions)							
All Buses							
Rural Highway							
Interstate Rural	-	339 ^h	533 ^h	567 ⁱ	574 ⁱ	683 ⁱ	711 ⁱ
Other Arterial Rural	-	944	991	995	1,072	1,154	1,134
Other Rural	-	1,266	1,511	1,885	1,867	1,893	1,972
All Rural	2,255 ^f	2,549	3,035	3,447	3,513	3,730	3,817
Urban Highway[†]							
Interstate Urban	-	277	560	453	514	627	580
Other Urban	-	1,718	2,464	1,819	2,099	2,052	1,986
All Urban	2,098	1,995	3,024	2,272	2,613	2,679	2,566
Total Rural & Urban Highway	4,353	4,544	6,059	5,719	6,126	6,409	6,383
School Bus	1,481 ^j	2,100 ^j	3,000 ^j	3,800 ^j	4,300 ^j	4,400 ^j	5,000 ^j
Revenue							
Passenger-Miles (millions)							
Intercity Bus, total	19,300 ^a	25,300 ^a	27,400 ^a	23,000 ^a	24,700 ^a	28,200 ^a	29,000 ^a
School Bus	-	-	41,000 ^j	74,200 ^j	94,200 ^j	85,000 ^j	95,000 ^j
Number of Revenue Passengers (thousands)							
Intercity Bus, total	366,000	401,000	370,000	334,000	339,900	343,200	358,900
Average Miles Traveled per Vehicle							
All Buses	16,004 ^h	12,035 ^h	11,458 ^h	9,121 ⁱ	9,361 ⁱ	9,560 ⁱ	9,311 ⁱ

BUS PROFILE (page 2 of 3)

	1960	1970	1980	1990	1993	1994	1995
Fuel Consumed (million gallons)							
All Buses	827 ^h	820 ^h	1,018 ^h	895 ⁱ	947 ⁱ	980 ⁱ	964 ⁱ
Average Fuel Consumption per Vehicle (gallons)							
All Buses	3,040	2,172	1,926	1,428	1,447	1,462	1,406
Average Miles Traveled per Gallon of Fuel Consumed							
All Buses	5.3	5.5	6.0	6.4	6.5	6.5	6.6
Average Passenger Revenue/ Passenger-Mile (cents)							
All Buses	2.71 ^a	3.60 ^a	7.26 ^a	11.55 ^a	11.98 ^a	11.61 ^a	11.61 ^a

IV. SAFETY

Number of Fatalities							
School Bus							
Occupants	—	—	9 ^k	11 ^k	13 ^k	3 ^k	13 ^k
Other Vehicle							
Occupants	—	—	88	64	86	64	71
Non-Occupants	—	—	53	40	42	38	37
Total School Bus-related	—	—	150	115	141	105	121
Occupant Fatalities							
School Buses	—	—	14	13	6	2	12
Cross Country Buses	—	—	23	2	1	7	6
Transit Buses	—	—	6	3	5	6	0
Other & Unknown	—	—	3	14	6	6	14
Total All Buses	—	—	46	32	18	18	32
Fatalities in Vehicular Accidents							
All Buses	—	—	390	340	286	286	306
Occupant Fatality Rate Per 100 Million Vehicle-Miles							
All Buses	—	—	0.8	0.6	0.3	0.3	0.5
Per 10,000 Registered Vehicles							
All Buses	—	—	0.9	0.5	0.3	0.3	0.5
Vehicle Involvement Rate Per 100 Million Vehicle-Miles							
All Buses	—	—	5.4	5.1	4.3	4.0	4.2
Per 10,000 Registered Vehicles							
All Buses	—	—	6.2	4.6	4.0	3.8	3.9

¹ Urban consists of travel on all roads and streets in urban places of 5,000 or greater population.

Note: The injury and accident data in this profile come from NHTSA's General Estimates System (GES). The data from GES, which began operation in 1988, are obtained from a nationally representative probability sample selected from all police-reported crashes, and the GES sample includes only crashes where a police accident report (PAR) was completed and the crash resulted in property damage, injury, or death. The resulting figures do not take into account accidents which were not reported to the police or which did not result at least in damage to property. Earlier editions of NTS, particularly the 1993 Historical Compendium, used accident and injury figures estimated by the National Safety Council, which used a different set of methods to arrive at its figures. Thus, the injury and accident figures in this edition of NTS may not be comparable with those found in earlier editions.

Sources: ^a Eno Transportation Foundation, Inc., *Transportation in America*, 1996, pp. 42, 47, 48, 50.

^b Interstate Commerce Commission (ICC), *Annual Report of the ICC*, annual issues, Appendix F, Tables 1, 6.

BUS PROFILE (page 3 of 3)

- c U.S. DOT/BTS, from quarterly reports submitted by carriers. Operating revenues do not include data from two Class I carriers that did not file reports; operating expenses do not include data from three Class I carriers that did not file reports.
- d Ibid., U.S. DOT/FHWA, Office of Highway Information Management, *Highway Statistics*, 1960, 1970, 1980, 1990-1995, annual issues, Table MV-10.
- e U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 45, 413, 415.
- f Ibid., *Employment and Earnings*, SIC 413, 415.
- g Ibid., Office of Employment and Unemployment Statistics, SIC 413, 415.
- h U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
- i Ibid., *Highway Statistics*, annual issues, Table VM-1.
- j National Safety Council, *Accident Facts*, annual issues, pp. 94, 95.
- k U.S. DOT/NHTSA, National Center for Statistics and Analysis, NRD-30, personal communication.

TRANSIT PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994
Passenger Operating						
Revenues (thousand dollars)						
Passenger	1,335,000 ^a	1,639,000 ^a	2,556,800 ^b	5,890,800 ^b	6,350,900 ^c	6,840,500 ^c
Motor Bus	—	—	—	2,967 ^d	3,117	3,330
Heavy Rail	—	—	—	1,741	1,913	1,976
Light Rail	—	—	—	83	103	133
Trolley Bus	—	—	—	46	52	55
Demand Response	—	—	—	41	94	178
Ferry Boat ¹	—	—	—	56	40	41
Commuter Rail	—	—	—	952	996	1,083
Vanpool	—	—	—	*	10	9
Other ²	—	—	—	26	27	36
Other Operating Revenue	72,000	68,000	248,300	895,000	764,000 ^e	802,200 ^e
Total Operating Revenues	1,407,000	1,707,000	2,805,100	6,785,800	7,114,900	7,642,700
Operating Assistance**						
State & Local	—	—	2,611,200	8,297,400	9,194,800	9,562,200
Federal	—	—	1,093,900	970,000	966,500	929,300
Total Operating Assistance	—	—	3,705,100	9,267,400	10,161,300	10,491,500
Total Revenues	1,407,000	1,707,000	6,510,200	16,053,200	17,276,200	18,134,200
Operating Expenses						
(million dollars)						
Motor Bus	—	—	—	8,903	10,110 ^c	10,821 ^c
Heavy Rail	—	—	—	3,825	3,669	3,786
Light Rail	—	—	—	237	316	413
Trolley Bus	—	—	—	109	132	133
Demand Response	—	—	—	518	793	1,146
Ferry Boat ¹	—	—	—	171	185	200
Commuter Rail	—	—	—	1,939	2,088	2,225
Vanpool	—	—	—	*	18	17
Other ²	—	—	—	41	39	41
Total Operating Expenses*	—	—	6,247	15,742	17,350 ^g	18,782 ^g
Depreciation and Amortization	—	—	277,600	1,593,100	2,479,300	2,902,400
Other Reconciling Items	—	—	186,500	643,900	850,100	1,009,900
Total Expenses	1,376,500 ^f	1,995,600 ^f	6,710,600	17,979,100	20,679,200	22,694,600
Average Passenger Revenue/						
Passenger-Mile (dollars)						
Motor Bus	—	—	—	0.14 ^h	0.15 ^c	0.16 ^c
Heavy Rail	—	—	—	0.15	0.19	0.18
Light Rail	—	—	—	0.15	0.15	0.18
Trolley Bus	—	—	—	0.24	0.28	0.29
Demand Response	—	—	—	0.10	0.17	0.28
Ferry Boat ¹	—	—	—	0.20	0.15	0.14
Commuter Rail	—	—	—	0.13	0.14	0.14
Vanpool	—	—	—	*	0.04	0.04
Other ²	—	—	—	0.21	1.13	1.33
Total	—	—	—	0.14	0.16	0.17

TRANSIT PROFILE (page 2 of 5)

	1960	1970	1980	1990	1993	1994
Average Passenger Fare (dollars)						
Motor Bus	-	-	-	0.52 ^h	0.58 ^c	0.62 ^c
Heavy Rail	-	-	-	0.74	0.93	0.90
Light Rail	-	-	-	0.47	0.55	0.66
Trolley Bus	-	-	-	0.36	0.43	0.47
Demand Response	-	-	-	0.60	1.16	2.04
Ferry Boat ¹	-	-	-	1.11	0.83	0.87
Commuter Rail	-	-	-	2.90	3.09	3.21
Vanpool	-	-	-	*	1.43	1.50
Other ²	-	-	-	0.90	1.17	1.28
Total	-	-	-	0.67	0.77	0.81

II. INVENTORY**Number of Systems**

Motor Bus	1,236 ^h	1,075 ^h	1,022 ^h	2,685	1,934	2,250
Heavy Rail	31	15	11	12	14	14
Light Rail	~	~	9	17	20	22
Trolley Bus	19	6	5	5	5	5
Demand Response	-	-	-	3,193	3,917	5,214
Ferry Boat ¹	-	-	16	27	27	25
Commuter Rail	-	-	18	14	16	16
Vanpool	-	-	-	-	51	55
Other ²	-	-	5	35	13	13
Total [#]	1,286	1,096	1,055	5,078	5,088	5,973

Number of Vehicles

Motor Bus	49,600 ⁱ	49,700 ⁱ	59,411 ⁱ	58,714 ⁱ	64,850	67,492
Heavy Rail	9,010	9,286	9,641	10,419	10,261	10,138
Light Rail	2,856	1,262	1,013	913	1,025	1,054
Trolley Bus	3,826	1,050	823	832	851	877
Demand Response	-	-	-	16,471	23,527	31,872
Ferry Boat ¹	-	-	-	108	109	110
Commuter Rail	-	-	4,500	4,415	4,494	4,517
Vanpool	-	-	-	-	1,818	2,361
Other ²	-	-	-	1,089	160	168
Total	65,292	61,298	75,388	92,961	107,095	118,589

Number of Employees³

Motor Bus	121,300 ⁱ	101,598 ^j	-	162,189 ^k	177,167	179,112
Heavy Rail	35,100	36,442	-	46,102	52,433	51,943
Light Rail	+	+	-	4,066	3,920	5,086
Trolley Bus	+	+	-	1,925	1,944	1,960
Demand Response	-	-	-	22,740	30,021	36,802
Ferry Boat ¹	-	-	-	2,813	2,344	2,764
Commuter Rail	-	-	-	21,443	20,634	22,526
Vanpool	-	-	-	-	173	204
Other ²	-	-	-	898	883	613
Total	156,400	138,040	189,300 ^j	262,176	289,519	301,010

TRANSIT PROFILE (page 3 of 5)

III. PERFORMANCE	1960	1970	1980	1990	1993	1994
Revenue Vehicle-Miles (millions)						
Motor Bus	1,576 ¹	1,409 ^m	1,677 ^m	2,130 ^m	2,210 ^c	2,163 ^c
Heavy Rail	391	407	385	537	522	532
Light Rail	75	34	18	24	28	34
Trolley Bus	101	33	13	14	13	14
Demand Response	—	—	—	306	406	553
Ferry Boat ¹	—	—	2	2	3	2
Commuter Rail	—	—	179	213	224	231
Vanpool	—	—	—	—	26	26
Other ²	—	—	13	16	4	2
Total	2,143	1,883	2,287	3,242	3,435	3,556
Unlinked Passenger Trips (millions)						
Motor Bus	—	5,034 ⁿ	5,837 ⁿ	5,677 ⁿ	5,381	5,402
Heavy Rail	—	1,881	2,108	2,346	2,046	2,206
Light Rail	—	124	133	175	188	203
Trolley Bus	—	182	142	126	121	118
Demand Response	—	—	—	68	81	87
Ferry Boat ¹	—	—	63	50	48	47
Commuter Rail	—	—	280	328	322	338
Vanpool	—	—	—	—	7	6
Other ²	—	—	4	29	23	28
Total	—	7,332	8,567	8,799	8,217	8,435
Passenger-Miles (millions)						
Motor Bus	—	—	21,790 ^o	20,981 ^o	20,247	20,238
Heavy Rail	—	—	10,558	11,475	10,231	10,780
Light Rail	—	—	381	571	705	722
Trolley Bus	—	—	219	193	188	187
Demand Response	—	—	—	431	562	636
Ferry Boat ¹	—	—	**	286	260	294
Commuter Rail	—	—	6,516	7,082	6,940	7,996
Vanpool	4,197	4,592	—	*	227	204
Other ²	—	—	390	124	24	27
Total	—	—	39,854	41,143	39,384	41,084
Average Trip Length (miles)						
Motor Bus	—	—	—	—	3.8	3.7
Heavy Rail	—	—	—	—	5.0	4.9
Light Rail	—	—	—	—	3.7	3.6
Trolley Bus	—	—	—	—	1.6	1.6
Demand Response	—	—	—	—	6.9	7.3
Ferry Boat ¹	—	—	—	—	5.4	5.7
Commuter Rail	—	—	—	—	21.5	23.7
Vanpool	—	—	—	—	33.9	32.4
Other ²	—	—	—	—	1.1	1.0
Total	—	—	—	—	4.8	4.9
Average Speed (miles per hour)						
Motor Bus	—	—	—	—	13.0	13.0
Heavy Rail	—	—	—	—	20.4	20.7
Light Rail	—	—	—	—	13.6	14.4
Trolley Bus	—	—	—	—	8.1	8.2
Demand Response	—	—	—	—	13.5	14.0
Ferry Boat ¹	—	—	—	—	6.6	8.4
Commuter Rail	—	—	—	—	33.9	33.8
Vanpool	—	—	—	—	31.9	32.6
Other ²	—	—	—	—	6.7	5.7
Total	—	—	—	—	14.6	14.7

TRANSIT PROFILE (page 4 of 5)

	1960	1970	1980	1990	1993	1994
Energy Consumption						
(Gasoline & Diesel)						
(million gallons)						
Motor Bus	—	—	—	563 ^h	584 ^p	602 ^p
Heavy Rail	—	—	—	—	0	0
Light Rail	—	—	—	—	0	0
Trolley Bus	—	—	—	—	0	0
Demand Response	—	—	—	15	59	77
Ferry Boat ¹	—	—	—	20	20	20
Commuter Rail	—	—	—	53	60	61
Vanpool	—	—	—	—	2	2
Other ²	—	—	—	34	0	0
Total	400	339	442	685	724	763
Energy Consumption						
(million kWh)						
Motor Bus	—	—	—	—	—	—
Heavy Rail	—	—	—	3,284	3,287 ^q	3,431 ^q
Light Rail	—	—	—	239	281	286
Trolley Bus	—	—	—	69	79	103
Demand Response	—	—	—	—	0	0
Ferry Boat ¹	—	—	—	—	0	0
Commuter Rail	—	—	—	1,226	1,196	1,251
Vanpool	—	—	—	—	0	0
Other ²	—	—	—	19	22	26
Total	2,908	2,561	2,446	4,837	4,865	5,096

IV. SAFETY

Fatalities, all modes	—	—	—	339 ^r	281 ^r	320 ^r
Injuries, all modes	—	—	—	54,556	52,668	58,193
Incidents, all modes	—	—	—	90,163	64,986	70,693

1 Excludes international, rural, rural interstate, island and urban park ferries.

2 Includes cable car, inclined plane, aerial tramway, monorail and automated guideway.

3 Based on employee equivalents of 2,080 hours equals one employee; beginning in 1993 equals actual employees.

* Included in Other.

** Beginning in 1992, local operating assistance and other revenue declined by about \$500 million due to change in accounting procedures at the New York City Transit Authority. Beginning in 1992, total operating expense declined by about \$400 million due to a change in accounting procedures at the New York City Transit Authority.

Total is not sum of all modes since many systems operate more than one mode.

~ Included in Heavy Rail figure.

+ Included in Motor Bus figure.

Sources: a American Public Transit Association (APTA), *Transit Fact Book*, annual issues, Table 5a.

b Ibid., Tables 20, 21.

c Ibid., 1996, Table 5.

d Ibid., annual issues, Tables 23, 24.

e Ibid., 1996, Table 23.

f Ibid., annual issues, Table 6A.

g Ibid., 1996, Table 29.

h Ibid., annual issues, Table 6.

i Ibid., Tables 18, 19.

TRANSIT PROFILE (page 5 of 5)

- j Ibid., Table 13.
- k Ibid., Table 53.
- l Ibid., Table 11.
- m Ibid., Table 39, 47.
- n Ibid., Table 31.
- o Ibid., Table 38.
- p Ibid., 1996, Table 58.
- q Ibid., Table 60.
- r U.S. DOT/FTA, *Safety Management Information Statistics (SAMIS) Annual Report 1994*.

RAIL PROFILE

I. FINANCIAL	1960	1970 ⁺	1980	1990	1993	1994	1995
A. Class I¹							
Operating Revenues							
(million dollars)							
Passenger	640 ^a	421 ^a	446 ^a	94 ^a	83 ^a	88 ^a	89 ^a
Freight	8,025	10,922	26,350	27,471	27,991	29,931	31,356
Other	849	649	1,462	805	751	790	835
Total	9,514	11,992	28,258	28,370	28,825	30,809	32,279
Operating Expenses							
(million dollars) ²							
	8,775	11,478	26,355	24,652	24,517	25,511	27,897
B. Amtrak							
Operating Revenues							
(million dollars)							
Transportation-							
Related	—	138 ^b	368 ^b	978 ^b	1,268 ^b	1,152 ^b	1,165 ^b
Other	—	163	85	330	135	262	332
Total	—	301	454	1,308	1,403	1,413	1,497
Operating Expenses							
(million dollars)	—	286	1,081	2,012	2,134	2,400	2,305

II. INVENTORY

A. Class I¹							
Number of Vehicles							
Freight Cars ³	1,658,292	1,423,921 ^a	1,168,114 ^a	658,902 ^a	587,033 ^a	590,930 ^a	583,486 ^a
Other Freight Cars	307,194	360,260	542,713	553,359	586,099	601,482	635,441
Total Freight Cars	1,965,486	1,784,181	1,710,827	1,212,261	1,173,132	1,192,412	1,218,927
Locomotives	29,031	27,077	28,094	18,835	18,161	18,505	18,812
Number of Companies	106	71	38	14	12	12	11
Number of Employees	780,494	566,282	458,994	216,424	192,526	189,962	188,215
Miles of Road Owned	207,334	196,479	164,822	119,758	110,425	109,332	108,264
B. Amtrak							
Number of Vehicles							
Passenger							
Train-Cars	—	1,569 ^b	2,128 ^b	1,983 ^c	1,964 ^c	1,951 ^c	1,921 ^l
Locomotives	—	185	419	318	334	352	356
Number of Employees	—	1,500^d	21,416^d	24,000^d	24,978^a	25,049^e	23,646
System Route Mileage	—	—	23,940^f	24,000^f	25,123^e	25,000	24,000

RAIL PROFILE (page 2 of 3)

III. PERFORMANCE	1960	1970 ⁺	1980	1990	1993	1994	1995
A. Class I¹							
Car Mileage							
(thousands)							
Freight	28,170,000 ^a	29,890,000 ^a	29,277,000 ^a	26,159,000 ^a	26,883,000 ^a	28,485,000 ^a	30,383,000 ^a
Train Mileage							
(thousands)							
Freight	404,464	427,065	428,498	379,582	405,446	440,896	458,271
Locomotive Mileage							
(thousands)							
Freight	421,900 ^g	1,278,200 ^g	1,319,010 ^g	1,144,559 ^g	1,187,098 ^g	1,261,482 ^g	1,293,851 ^g
Train & Yard Switching	—	—	212,040	135,806	133,370	143,224	150,840
Total	—	—	1,531,050	1,280,365	1,320,468	1,404,705	1,444,691
Revenue Ton-Miles of Freight (millions)							
	572,309 ^a	764,809 ^a	918,958 ^a	1,033,969 ^a	1,109,309 ^a	1,200,701 ^a	1,305,688 ^a
Average Length of Haul (miles)							
Freight	461	515	616	726	794	817	843
Fuel Consumed in Freight Service (million gallons)							
	3,463	3,545	3,904	3,115	3,088	3,334	3,480
Average Miles Traveled per Vehicle							
Locomotive	—	—	54,318	67,959	72,683	75,925	76,813
Car	16,987	20,991	25,063	39,701	45,795	48,204	52,072
Average Miles Traveled per Gallon							
Train	0.12	0.13	0.11	0.12	0.13	0.13	0.13
Car	8.13	9.40	7.50	8.40	8.71	8.54	8.73
B. Amtrak							
Passenger Train Car-Miles (thousands)							
	—	213,261 ^h	235,200 ^h	300,855 ^h	303,243 ^e	304,065 ⁱ	292,360 ⁱ
Passenger Train-Miles (thousands)							
	—	26,302	29,500	32,892	34,771	34,802	32,988
Passenger Locomotive-Miles (thousands)							
	—	—	40,600	49,403	50,621	50,565	48,373
Revenue Passengers Carried (thousands)							
	—	16,644	20,800	22,126	22,066	21,169	20,725
Revenue Passenger-Miles (thousands)							
	—	3,038,603	4,503,200	6,057,000 ^c	6,199,000 ^c	5,921,000 ^c	5,545,000 ^c
Average Passenger Fare (dollars)							
	—	8.3 ⁱ	17.7	38.5	39.4	38.2	39.0
Average Passenger Revenue/Passenger-Mile (cents)							
	—	4.5	8.2	14.1	14.0	13.7	14.6
Average Passenger Trip Length (miles)							
	—	182.6	217.0	273.0	280.9	271.1	256.7
Locomotive Fuel Consumed							
Diesel (million gallons)	—	—	63.5 ^m	82.1 ^m	82.8 ^m	NA	NA
Electric kWh (millions)	—	—	253.8	329.6	257.7	NA	NA

RAIL PROFILE (page 3 of 3)

IV. SAFETY⁴	1960	1970⁺	1980	1990	1993	1994	1995
Number of Fatalities, Railroads & Grade Crossings							
Passengers							
on Trains	34 ^j	10 ⁱ	4 ^j	3 ^k	58 ^k	5 ^k	0 ^k
Employees on Duty	215	179	97	40	47	31	34
Employees Not on Duty	—	—	4	0	4	0	2
Trespassers	637	607	566	700	675	682	660
Non-Trespassers	1,459	1,535	739	551	489	505	443
Contractor Employees	—	—	7	3	6	3	7
Total Railroad & Grade Crossing	2,345	2,225	1,417	1,297	1,279	1,226	1,146
Grade Crossing only	1,421	1,440	833	698	626	615	579
Railroad only*	924	785	584	599	653	611	567

+ Amtrak data in this column are for 1972, Amtrak's first full year of operation.

* Figures may not appear directly in data source.

1 Excluding Amtrak and all non-Class I railroads, except for Section IV.

2 Operating expenses include equipment, joint facility rents, leased roads and equipment, and all taxes except Federal income.

3 Class I freight cars owned.

4 Safety figures from U.S. DOT/FRA are for all railroads.

NA Data not available at press time.

Note: Amtrak figures are based on Amtrak fiscal year (October 1–September 30).

- Sources:**
- a Association of American Railroads (AAR), *Railroad Facts*, annual issues, 1990-1996, pp. 3, 10, 12, 13, 14, 33, 34, 36, 40, 44, 48, 50, 56, 78.
 - b Amtrak, *National Railroad Passenger Corporation Annual Report*, 1972, 1980, 1990, 1993-1995.
 - c Ibid., *Statistical Appendix to Amtrak FY 1994 Annual Report*, and *FY 1995 Annual Report*, pp. 1, 4, & 5.
 - d Ibid., Human Resources Information Center.
 - e Ibid., Public Affairs.
 - f Ibid., Route Miles by Railroad, Corp. Planning & Development.
 - g Association of American Railroads (AAR), *Analysis of Class 1 Railroads*, 1980 (Series 3), 1991 (Series 14), 1993 (Series 16), 1994 (Series 17), 1995 (Series 17), p. 29.
 - h Amtrak, *Train Information System Reports*.
 - i Ibid., *Train Earnings Reports*.
 - j U.S. DOT/FRA, Systems Support Division, RRS-22, personal communication.
 - k Ibid., *Accident/Incident Bulletin*, 1993, 1994, Tables 7 and 9.
 - l Amtrak, Finance and Administration Department, personal communication.
 - m Amtrak, State and Local Affairs Department.

WATER TRANSPORT PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994	1995
Operating Revenues (million dollars)							
Domestic Freight	1,722 ^a	2,070 ^a	7,219 ^a	7,940 ^a	8,028 ^a	7,745 ^a	7,239 ^a
Coastal Waterways	747	834	3,155	3,066	3,218	2,929	2,727
Inland Waterways	461	621	2,395	2,956	2,816	2,868	2,846
Great Lakes	227	239	513	615	561	577	277
Locks, Channels	287	376	1,156	1,303	1,433	1,371	1,389
International Freight	1,765	3,187	8,279	12,181	12,740	13,405	14,997
Total Passenger	281	287	304	1,345	1,412	1,483	1,658
Domestic							
Passenger, Intercity	14	12	21	58	61	64	78
International							
Passenger ¹	267	275	283	1,287	1,351	1,419	1,580
Revenues of U.S. Commercial Fishing Fleet (domestic landings), (million dollars)	354 ^b	613 ^b	2,237 ^b	3,522 ^b	3,471 ^b	3,807 ^b	3,770 ^b
II. INVENTORY							
Number of Domestic Inland Vessel Operators[#]	228 ^c	380 ^c	403 ^c	565 ^c	560 ^c	555 ^c	557 ^c
Number of Employees							
Ship and Boat Building, & Repairing	141,200 ^d	171,800 ^d	220,500 ^d	187,800 ^d	159,400 ^e	158,200 ^f	158,700 ^f
Water Transportation [*]	232,000	212,300	211,200	176,600	168,200	172,400	174,300
Number of Employees²							
Passenger/Combo	8,560 ^g	2,178 ^g	618 ^g	642 ^g	600 ^g	642 ^g	642 ^g
Cargo	28,668	22,257	9,878	7,019	6,219	6,056	5,423
Tankers	12,053	10,567	8,722	4,471	4,841	4,626	4,169
Total	49,281	35,000	19,218	12,132	11,660	11,324	10,234
Mileage of Commercially Navigable Waterways	25,253 ^a	25,543 ^a	25,543 ^a	25,777 ^a	25,777 ^a	25,777 ^a	NA
Number of Vessels							
Total							
Non-Self-Propelled	16,777 ^h	19,377 ^h	31,662 ^h	31,017 ^h	30,785 ^h	30,723 ^h	31,360 ^h
Dry Cargo Barges & Scows	14,025	15,890	27,426	27,091	26,913	26,723	27,342
Tank Barge	2,429	3,281	4,166	3,913	3,862	3,966	3,985
Railroad Car Floats	323	206	70	13	10	34	33
Total							
Self-Propelled	6,543	6,455	7,130	8,216	8,323	8,341	8,281
Dry Cargo/ Passenger	1,796	1,761	2,036	2,205	2,332	2,785	2,804
Ferries, Railroad Car	31	17	67	579	572	175	172
Tankers	489	421	330	214	195	202	178
Towboats/Tugs	4,203	4,248	4,693	5,218	5,224	5,179	5,127

WATER TRANSPORT PROFILE (page 2 of 4)

	1960	1970	1980	1990	1993	1994	1995
U. S. Merchant Marine (over 1,000 gross tons)							
Total U. S. Flag	2,926 ⁱ	1,550 ⁱ	864 ⁱ	636 ⁱ	564 ⁱ	543 ⁱ	509 ⁱ
Passenger/Cargo	309	171	65	10	12	13	13
Freighters	2,138	1,076	308	367	321	308	295
Bulk Carriers	57	38	20	26	21	22	20
Tankers	422	256	471	233	210	200	181
Privately Owned	1,008	793	578	408	367	354	319
Government Owned	1,918	786	286	228	197	189	190
Number of Recreational Boats (thousands) **							
	2,500 ^j	7,400 ^j	8,600 ^j	10,996 ^j	11,283 ^j	11,430 ^j	11,735 ^j

III. PERFORMANCE**Ton-Miles**

(thousands)

Domestic Water

Freight

Coastwise	256,000,000 ^k	359,784,000 ^k	631,149,247 ^k	479,133,600 ^k	448,404,000 ^k	457,600,661 ^k	440,300,000 ^k
Internal	89,614,000	155,816,000	227,342,991	292,393,300	283,894,000	297,762,360	306,300,000
Lakewise	65,990,000	79,416,000	61,747,114	60,929,900	56,438,000	58,263,444	59,700,000
Intraport	1,730,000	1,179,000	1,596,412	1,087,000	921,900	1,292,733	1,300,000
Total ***	413,334,000	596,195,000	921,835,764	853,543,800	789,657,900	814,919,198	807,700,000

Tons of**Freight Hauled**

(thousands)

Domestic

Coastwise	209,197	238,440	329,609	298,637	271,717	277,029	266,600
Internal	291,057	472,123	534,979	622,595	607,253	618,409	620,300
Lakewise	155,109	157,059	115,124	110,159	109,854	114,777	116,100
Intraport	105,210	83,105	97,771	91,908	79,356	88,796	83,100
Total ***	760,573	950,727	1,077,483	1,122,299	1,068,180	1,099,011	1,086,100

Export

Great Lakes

Ports ***	23,150	35,932	45,077	32,898	25,560	26,449	27,774 ^p
Coastal Ports	104,810	205,697	358,806	408,688	385,698	349,363	434,854 ^p
Total	127,961	241,629	403,883	441,586	411,258	375,812	462,628 ^p

Imports

Great Lakes

Ports ***	12,851	26,406	15,515	17,578	18,083	23,072	18,873 ^p
Coastal Ports	198,466	312,934	502,006	582,412	630,700	637,491	610,731 ^p
Total	211,317	339,340	517,521	599,970	648,783	660,563	629,604 ^p

Tons of Freight,**Intraterritorial**

(thousands)

	1,017	1,630	3,588	4,529	4,965	5,927	NA
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Average Haul, Domestic System

(miles)

Coastwise	1,496	1,509	1,915	1,604	1,650	1,652	1,652
Internal	282	330	405	469	468	482	494
Lakewise	522	506	536	553	514	508	514

WATER TRANSPORT PROFILE (page 3 of 4)

	1960	1970	1980	1990	1993	1994	1995
Cargo Capacity (short tons)							
Total							
Non-Self-Propelled							
Vessels	16,355,657 ^h	24,026,024 ^h	44,875,116 ^h	48,603,351 ^h	49,545,827 ^h	49,708,960 ^h	51,140,530 ^h
Dry Cargo Barges	12,147,006	17,695,275	34,486,851	37,973,654	38,826,724	38,643,518	39,971,443
Tankers	4,208,651	6,330,749	10,388,265	10,629,697	10,719,103	11,065,442	11,169,087
Total							
Self-Propelled							
Vessels	15,905,881	19,284,050	23,906,346	19,723,788	17,653,677	16,867,458	15,783,399
Dry Cargo/							
Passenger	12,188,956	10,815,977	8,011,587	7,042,263	7,044,279	7,118,193	6,484,707
Tankers	3,716,925	8,468,073	15,894,753	12,681,525	10,609,398	9,749,265	9,298,692
Fuel Consumption (thousand barrels)							
Diesel Fuel							
& Distillate	18,730 ^a	19,503 ^a	35,201 ^a	52,310 ^a	53,337 ^a	NA	NA
Residual Fuel Oil	94,084	89,850	213,131	148,764	171,407	NA	NA
Gasoline	9,200	14,238	25,048	30,962	20,802	NA	NA
Total	122,014	123,591	273,380	232,036	245,546	NA	NA

IV. SAFETY

Number of Fatalities in

Waterborne Transport⁴

Freight	—	30 ^l	8 ^l	0 ^l	2 ^l	0 ^l	0 ^l
Tankship	—	4	4	5	0	3	0
Passenger Vessel	—	1	5	3	11	4	4
Tug/Towboat	—	22	14	13	2	1	1
Offshore Supply Vessel	—	—	—	2	4	1	2
Fishing Vessel	—	77	60	47	57	38	18
Recreational Vessel ⁵	—	—	—	3	18	12	20
MODU ⁶	—	—	—	0	1	1	0
Platform ⁷	—	—	—	1	0	2	0
Freight Barge	—	—	—	0	0	0	0
Tank Barge	—	+	—	0	1	0	0
Miscellaneous ⁸	—	44	56	11	14	7	1
Total	382	178	206	85	110	69	46

Number of Injuries in Waterborne

Transport⁴

Freight	—	14	8	10	4	6	1
Tankship	—	19	9	13	5	10	5
Passenger Vessel	—	10	10	51	45	39	50
Tug/Towboat	—	10	27	19	13	17	18
Offshore Supply Vessel	—	—	—	9	2	3	10
Fishing Vessel	—	13	28	31	42	51	32
Recreational Vessel ⁵	—	—	—	2	29	16	19
MODU ⁶	—	—	—	13	2	0	0
Platform ⁷	—	—	—	9	2	3	1
Freight Barge	—	—	—	3	2	0	0
Tank Barge	—	+	—	3	4	3	3
Miscellaneous ⁸	—	39	98	12	10	31	6
Total	1,398	105	180	175	167	179	145

WATER TRANSPORT PROFILE (page 4 of 4)

	1960	1970	1980	1990	1993	1994	1995
Total Number of Vessels Involved in Marine Accidents³	2,904 ^j	4,063 ^j	7,694 ^j	5,494 ^j	5,309 ^j	6,433 ^j	6,849 ^j
Number of Fatalities in Recreational Boating							
Inboard	—	119 ^j	100 ^j	50 ^j	50 ^j	36 ^j	NA
Outboard	—	774	609	454	391	341	NA
Inboard/Outboard	—	28	47	53	52	49	NA
Jet	—	—	10	25	40	58	NA
Sail	—	44	43	20	7	13	NA
Manual (oars, paddle)	—	205	272	182	190	140	NA
Other	—	29	14	5	10	12	NA
Propulsion Unknown	—	219	265	76	60	135	NA
Total	819 ^j	1,418	1,360	865	800	784	836 ^j

^p Preliminary.

^{*} Includes commercial port, marina and other employees; excludes employees of non-for-hire private businesses.

^{**} The U.S. Coast Guard changed its methodology for counting number of boats. Figures cited represent number of numbered boats, not estimates as previously noted

^{***} Figures obtained by addition/subtraction and may not appear directly in data source.

[#] Does not include vessel operators whose primary area of operation is fishing, towing, passenger transport, ferrying or crew boat utility service.

⁺ Included in Tankship figure.

¹ Revenues paid by American travelers to U.S. and foreign flag carriers.

² Estimate based on established active jobs for licensed and unlicensed personnel on oceangoing ships of 1,000 gross-tons and over, privately owned and operated, Government-owned ships under BBC, ship managers and GAA supplemented by MSC employment totals for ships with Civil Service crews. 1995 figures are as of April 1, 1996.

³ Casualties to commercial vessels under U.S. Coast Guard jurisdiction.

⁴ Data from 1993 to 1995 is taken from the Marine Safety Management Information System (MSMS) which derives its data from the Marine Safety Information System (MSIS). Data for prior years may not be directly comparable.

⁵ Recreational Vessels are those pleasure craft which have been involved in a marine casualty with a commercial vessel or pleasure craft which had an accident outside the jurisdiction of the State Boating Accident Program. In 1990 the figure cited is for State Numbered Boats.

⁶ Mobile Offshore Drilling Unit.

⁷ Platform is a platform on the outer continental shelf of the U.S..

⁸ Miscellaneous includes vessels in commercial industrial or research service, and unclassified vessels.

NA Data not available at press time.

- Sources:**
- ^a Eno Transportation Foundation, Inc., *Transportation in America*, 1996, pp. 40, 42, 57.
 - ^b U.S. Department of Commerce, National Marine Fisheries Services, *Fisheries of the United States*, annual issues, p. 2.
 - ^c U.S. DOT/MARAD, MAR-450, personal communication.
 - ^d U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings, United States, 1909-1994*, SIC 373, 44.
 - ^e Ibid., *Employment and Earnings*, June 1995, SIC 373, 44.
 - ^f Ibid., Office of Employment and Unemployment Statistics, SIC 373, 44.
 - ^g U.S. DOT/MARAD, *U.S. Merchant Marine Data Sheet*, July 1996.
 - ^h U.S. Army, Corps of Engineers, *Summary of U.S. Flag Passenger & Cargo Vessels*, annual issues.
 - ⁱ U.S. DOT/MARAD, *Merchant Fleets of the World*, annual issues.
 - ^j U.S. DOT/USCG, *Boating Statistics*, annual issues.
 - ^k U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, annual issues, Part 5, Section 1, Table 1.
 - ^l U.S. DOT/USCG, Office of Investigations and Analysis, Compliance Analysis Division, G-MOA-2, personal communication.

OIL PIPELINE PROFILE

I. FINANCIAL	1960	1970	1980	1990	1993	1994	1995
Operating Revenues (million dollars)							
FERC-Regulated	770 ^a	1,188 ^a	6,340 ^a	7,045 ^a	6,900 ^a	6,950 ^a	6,962 ^a
Non-Regulated	125	208	1,208	1,342	1,521	1,323	1,326
Total	895	1,396	7,548	8,387	8,421	8,273	8,288

II. INVENTORY							
Number of							
FERC-Regulated Companies	87 ^c	101 ^c	130 ^c	150 ^c	145 ^c	158 ^c	161 ^c
Number of Employees,							
Pipeline Companies*	23,100 ^d	17,600 ^d	21,300 ^d	18,500 ^d	18,400 ^e	17,100 ^e	14,900 ^e
Miles of Pipeline (statute miles) ¹							
Crude Lines	141,085 ^b	146,275 ^b	129,831 ^b	118,805 ^b	112,990 ^b	114,000 ^b	NA
Product Lines	49,859	72,396	88,562	89,947	86,033	86,500	NA
All Lines	190,944	218,671	218,393	208,752	199,023	200,500	NA

III. PERFORMANCE							
Intercity Ton-Miles (millions)							
Crude Oil	189,500 ^f	366,800 ^f	362,600 ⁱ	334,800 ⁱ	328,700 ⁱ	322,600 ⁱ	NA
Petroleum Products	43,500	64,200	225,600	249,300	264,200	268,800	NA
Total	233,000	431,000	588,200	584,100	592,900	591,400	599,000
Tons Transported (millions)							
Crude Oil	328.4	457.2	416.1 ^f	415.8 ^f	—	—	NA
Petroleum Products (delivered from lines)	140.0	333.1	544.7	641.6	—	—	NA
Total	468.4	790.3	960.8	1,057.4	1,046.8 ^f	1,057.9 ^f	NA
Average Length of Haul (statute miles)							
Crude Oil	325 ^g	300 ^g	871 ^g	805 ^g	782 ^g	756 ^g	752 ^g
Petroleum Products	269	357	414	389	399	400	398

IV. SAFETY							
Fatalities*	—	4 ^h	4 ^h	3 ^h	0 ^h	1 ^h	3 ^h
Injuries	—	21	15	7	10	1,858	11
Incidents	—	351	246	180	230	244	188

FERC Federal Energy Regulatory Commission. In 1960 and 1970, these were ICC-Regulated companies.

* Includes companies whose pipelines carry crude petroleum, petroleum products, and non-petroleum pipeline liquids.

1 Regulated plus unregulated mileage of crude oil trunk and gathering lines, plus refined oil trunk lines.

Sources: ^a Eno Transportation Foundation, Inc., *Transportation in America*, annual issues, p. 40.

^b Ibid., p. 64.

^c Federal Energy Regulatory Commission (FERC), personal communication.

^d U.S. Department of Labor, Bureau of Labor Statistics, *Employment, Hours and Earnings*, United States, 1909-1994, SIC 46.

^e Ibid., Office of Employment and Unemployment Statistics, SIC 46

^f Eno Transportation Foundation, Inc., *Transportation in America*, annual issues, p. 59.

^g Ibid., p. 71.

^h U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35, personal communication.

ⁱ Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, 1995.

NATURAL GAS PIPELINE PROFILE

I. FINANCIAL	1960	1970	1980	1990	1992	1993	1994
(All amounts in millions of dollars)							
Transmission Pipeline Companies							
Total Operating Revenues	3,190 ^a	5,928 ^a	41,604 ^b	21,756 ^b	20,193 ^b	19,873 ^b	14,242 ^b
Operating Expenses							
Operation Expenses	2,031	4,094	36,075	16,429	14,295	13,735	8,038
Maintenance Expenses	64	109	405	629	639	680	595
Total Operation & Maintenance Expenses	2,095	4,203	36,480	17,058	14,934	14,415	8,633
Taxes							
Federal Taxes*	167	202	1,327	768	1,136	991	1,206
State & Local Taxes*	96	174	664	477	659	589	604
Total Taxes	263	376	1,991	1,245	1,795	1,580	1,810
Total Operating Expenses⁺	2,698	5,088	39,709	19,484	17,795	17,350	11,664
Distribution Pipeline Companies							
Total Operating Revenues	—	—	14,013 ^a	18,750 ^c	19,854 ^c	20,307 ^c	20,911 ^c
Operating Expenses							
Operation Expenses	—	—	11,539	14,020	14,370	14,825	15,279
Maintenance Expenses	—	—	252	524	581	585	589
Total Operation & Maintenance Expenses	—	—	11,791	14,544	14,951	15,411	15,868
Taxes							
Federal Taxes*	—	—	351	581	715	710	703
State & Local Taxes*	—	—	785	1,045	1,178	1,177	1,228
Total Taxes	—	—	1,136	1,625	1,892	1,887	1,932
Total Operating Expenses⁺	—	—	13,263	17,125	17,980	18,445	19,040
Integrated Pipeline Companies							
Total Operating Revenues	—	—	17,300 ^d	10,117 ^d	10,279 ^d	12,506 ^d	11,827 ^d
Operating Expenses							
Operation Expenses	—	—	14,870	7,525	7,610	9,208	8,556
Maintenance Expenses	—	—	285	302	333	389	369
Total Operation & Maintenance Expenses	—	—	15,155	7,827	7,943	9,597	8,924
Taxes							
Federal Taxes*	—	—	388	254	322	453	456
State & Local Taxes*	—	—	499	568	568	687	717
Total Taxes	—	—	887	823	890	1,139	1,173
Total Operating Expenses⁺	—	—	16,532	9,268	9,560	11,433	10,850
Combination Pipeline Companies							
Total Operating Revenues	—	—	13,001 ^e	15,404 ^e	16,079 ^e	17,279 ^e	16,851 ^e
Operating Expenses (million dollars)							
Operation Expenses	—	—	10,804	11,744	11,780	12,699	12,142
Maintenance Expenses	—	—	278	455	508	509	547
Total Operation and Maintenance Expenses	—	—	11,082	12,198	12,288	13,208	12,689
Taxes							
Federal Taxes*	—	—	261	433	505	592	600
State & Local Taxes*	—	—	572	830	949	987	992
Total Taxes	—	—	833	1,264	1,454	1,579	1,592
Total Operating Expenses⁺	—	—	12,285	14,260	14,707	15,750	15,333

II. INVENTORY

Pipeline Mileage

Miles of Transmission Pipeline							
Steel Pipe	—	—	262,200 ^g	276,900 ^g	280,300 ^g	268,600 ^g	273,500 ^g
Plastic Pipe**	—	—	4,400	3,100	4,100	3,500	2,500
Other	—	—	300	100	100	100	100
Total Transmission Pipeline	183,700 ^f	252,200 ^f	266,900	280,100	284,500	272,200	276,100
Miles of Distribution Pipeline							
Steel Pipe	—	—	560,100	581,900	587,200	595,100	586,000
Plastic Pipe**	—	—	78,100	202,100	244,300	268,500	284,000
Other	—	—	61,900	52,600	51,800	50,400	48,500
Total Distribution Pipeline	391,400	594,800	700,100	836,700	883,200	914,000	918,500

NATURAL GAS PIPELINE PROFILE (page 2 of 2)

	1960	1970	1980	1990	1992	1993	1994
Number of Employees							
Investor-Owned Companies							
Transmission Pipeline Companies	31,400 ^h	32,400 ^h	45,200 ⁱ	37,400 ⁱ	45,500 ⁱ	34,200 ⁱ	31,000 ⁱ
Distribution Pipeline Companies	-	-	52,100	64,700	66,000	61,800	62,400
Integrated Pipeline Companies	-	-	53,200	39,900	35,000	39,100	39,400
Combination Pipeline Companies	-	-	52,200	50,100	49,900	48,200	42,900
Total for Investor-Owned Companies			202,700	192,100	196,400	183,400	175,800
Total Employees	206,400	211,700	215,400	204,200	208,400	194,600	187,200
Number of Interstate Natural Gas Pipeline Companies							
	87 ^j	89 ^j	91 ^j	132 ^j	126 ^k	135 ^k	150 ^k

III. PERFORMANCE

Total Marketed Production							
(million cubic feet)	12,771,038 ^l	21,920,642 ^l	20,179,724 ^l	18,593,792 ^l	18,711,808 ^l	18,981,915 ^l	19,709,525 ^l
Total Delivered to Consumers							
(million cubic feet)	10,382,681 ^m	19,018,462 ^m	18,216,233 ^m	16,818,882 ^m	17,785,833 ^m	18,482,847 ^m	18,898,635 ^m
Total Consumed							
(million cubic feet)	11,966,537	21,139,386	19,877,293	18,715,090	19,544,364	20,279,095	20,707,717
Total Gas Used as a Pipeline Fuel							
(million cubic feet)	347,075	722,166	634,622	659,816	587,710	624,308	685,362

IV. SAFETY

Fatalities	-	26 ⁿ	15 ⁿ	6 ⁿ	10 ⁿ	17 ⁿ	21 ⁿ
Injuries	-	233	177	69	80	102	110
Incidents	-	1,077	1,524	198	177	217	221

- * Figures obtained by addition/subtraction and may not appear directly in data source.
- ** Includes fiberglass.
- + Does not add due to omission of line from source table for depreciation and other non-cash expenses.
- ++ Includes employment of non-investor-owned-companies.

- Sources:**
- a American Gas Association (AGA), *Gas Facts*, 1980, Table 134.
 - b Ibid., annual issues, Table 12-3.
 - c Ibid., annual issues, Table 12-2.
 - d Ibid., annual issues, Table 12-4.
 - e Ibid., annual issues, Table 12-5.
 - f Ibid., Table 44.
 - g Ibid., Table 5-1.
 - h Ibid., Table 153.
 - i Ibid., Table 16-2.
 - j U.S. Department of Energy/EIA, *Statistics of Interstate Natural Gas Pipeline Companies*, annual issues, preface.
 - k Federal Energy Regulatory Commission (FERC), personal communication.
 - l U.S. Department of Energy/EIA, *Natural Gas Annual*, 1995, Table 99.
 - m Ibid., Table 101.
 - n U.S. DOT/RSPA, Office of Pipeline Safety, DPS-35, personal communication.

APPENDIX B

Metric Conversion Tables

The data conversions from U.S. to metric units to create the tables in this section used more precise conversion factors than those shown on the inside back cover. The actual conversion factors used were:

- 1 mile = 1.609344 kilometers
- 1 ton = 0.9071847 metric tonnes
- 1 gallon = 3.785412 liters
- 1 BTU = 1055.056 joules



TABLE 1-1M**Basic Intercity Aggregate Route Distance Within the Continental United States**

5-Year Intervals 1960–1990 and Annually 1990–1995

(Kilometers)

Year	Airway	Highway ^a	Class I Rail	Amtrak	Oil Pipeline ^b			Gas Pipeline ^c			Total	
					Inland Waterway	Crude Lines	Product Lines	Distribution Mains	Transmission Pipelines ^d	Field & Gathering Lines		
1960	471,543	427,244	333,672	–	40,641	227,054	80,240	307,295	629,897	295,636	89,801	1,015,335
1965	431,747	432,749	321,554	–	40,845	240,475	98,883	339,358	795,821	340,054	99,297	1,235,172
1970	468,515	436,964	316,202	–	41,107	235,407	116,510	351,917	957,238	405,877	106,700	1,469,814
1975	504,011	427,933	308,222	–	41,107	234,448	129,085	363,533	1,043,177	422,614	110,240	1,576,031
1980	549,242 ^f	483,537	265,255	38,528	41,107	208,943	142,527	351,469	1,129,438	428,890	134,380	1,692,666
1985	601,719	484,422	234,584	–	41,484	189,600	154,164	343,764	1,212,465	436,393	151,797	1,800,655
1990	624,425	491,408	192,732	38,624	41,484	191,198	144,756	335,954	1,346,485	450,790	144,035	1,942,114
1991	627,644	491,214	187,691	39,583	41,484	186,459	141,571	328,029	1,379,879	453,177	138,825	1,971,881
1992	630,863	544,856	181,946	39,606	41,484	181,840	138,457	320,296	1,421,416	457,886	138,693	2,017,995
1993	630,863 ^f	549,351	177,712	40,432	41,484	181,840	138,457	320,296	1,470,989	438,088	124,409	2,033,485
1994	634,082	551,738	175,953	40,234	41,484	183,465	139,208	322,673	1,478,239	435,046	116,093	2,029,378
1995	NA	409,623	174,234	38,624	NA	NA	NA	NA	NA	NA	NA	NA

^f Revised.

NA Data not available at press time.

^a Prior to 1992, included Federal-Aid primary roads. From 1992 forward, includes the Interim National Highway System, as established by the Intermodal Surface Transportation Efficiency Act of 1991, plus other rural Federal-Aid arterial highways.^b Includes petroleum and other liquid product lines, including gathering lines.^c Excludes service pipe. Data not adjusted to common diameter equivalent. Mileage as of the end of each year.^d After 1975, includes 8,000–10,000 kilometers of Underground Storage pipe.**Sources:****Airway:** 1960–1994: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 64.**Highway:** 1960–1995: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table HM-18, and similar tables in earlier editions. Sum of Interim National Highway System and other Rural Arterial mileage.**Class I Rail:** 1960–1995:Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 44. Data represent aggregate length of roadway, excluding yard tracks, sidings, and parallel lines. Jointly used track is counted only once.**Amtrak:** 1980–1991: Amtrak, Corporate Planning and Development
1992–1994: Ibid., Public Affairs.**Inland Waterway:**1960–1994: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 64.**Oil Pipeline:**

1960–1994: Ibid.

Gas Pipeline:1960–1994: American Gas Association (AGA), *Gas Facts*, 1995, Table 5-3, and similar tables in earlier editions.

TABLE 1-7M

Passenger-Kilometers

5-Year Intervals 1960–1990 and Annually 1990–1995
(Millions)

Year	Air		Highway						
	Air Carrier, certificated, domestic, all services	General Aviation	Passenger Car & Taxi	Motor-cycle	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Intercity Bus	School Bus
1960	50,049	3,700	2,082,142	*	252,165	—	45,833	31,100	—
1965	85,659	7,100	2,397,166	*	358,934	—	52,299	38,300	—
1970	174,520	14,600	2,950,571	5,945	309,519	43,583	56,543	40,700	—
1975	218,871	18,300	3,161,564	11,505	497,413	55,693	75,195	40,900	—
1980	328,898	23,700	3,220,091	21,369	707,004	64,073	110,527	44,100	66,000
1985	447,134	19,800	3,448,761	19,447	894,597	75,607	128,104	38,300	112,700
1990	556,629	20,900	3,677,203	19,687	1,170,160	86,008	155,088	37,000	119,400
1991	544,095	19,600 ^r	4,294,341	16,248	1,149,072	86,562	156,013	37,200	134,100
1992	570,937	17,200	4,482,763	16,919	1,162,061	86,407	159,505	36,400	144,800
1993	582,953	17,500 ^r	4,333,025	17,537	1,393,420	91,380	165,960	39,800 ^r	151,600
1994	625,068 ^r	17,900 ^r	4,435,711 ^r	18,128 ^r	1,425,713 ^r	98,627 ^r	175,309 ^r	45,400 ^r	136,800
1995	648,876 ^p	18,200 ^p	4,561,932	17,344	1,456,423	100,916	185,805	46,700 ^p	152,900

Year	Transit								Rail
	Motor Bus	Light Rail	Heavy Rail	Trolley Bus	Commuter Rail	Demand Response	Ferry Boat	Other	Intercity/Amtrak ^a
1960	—	—	—	—	6,754	—	—	—	27,462
1965	—	—	—	—	6,643	—	—	—	21,340
1970	—	—	—	—	7,390	—	—	—	9,944
1975	—	—	—	—	7,263	—	—	—	6,326
1980	35,068	613	16,991	352	10,486	—	**	628	7,247
1985	34,055	563	16,781	492	10,515	586	**	707	7,765
1990	33,766	919	18,467	311	11,397	694	460	200	9,748
1991	33,941	1,065	16,943	314	11,819	731	454	238	10,095
1992	32,728	1,128	17,280	320	11,780	797	436	352	9,803
1993	32,584	1,135	16,465	303	11,169	904	418	404	9,976
1994 ^p	32,570	1,162	17,349	301	12,868	1,024	473	372	9,529
1995	NA	NA	NA	NA	NA	NA	NA	NA	8,924

^p Preliminary.

^r Revised.

* Included in passenger car and taxi.

** Included in Other.

^a Amtrak, 1971-1995.

NA Data not available at press time.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources: **Air Carrier, Domestic, All Services:**

1960-1970: CAB, *Handbook of Airline Statistics*, 1969, 1973, Part III, Table 2.

1975-1980: Ibid., *Air Carrier Traffic Statistics*, 1976, p. 4; 1981, p. 2.

1985-1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, 1986-1996, p. 2, line 1.

General Aviation:

1960-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 47.

(continued on next page)

TABLE 1-7M (continued)**Passenger-Kilometers****Passenger Car and Taxi:**1960-1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.**Motorcycle:**

1970-1995: Ibid.

Other 2-axle 4-tire Vehicles:1960-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.**Single-Unit 2-axle 6-tires or More Truck:**1960-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.**Combination Truck:**1960-1980: Ibid., *Highway Statistics, Summary to 1985*, Table VM-201A.1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.**Intercity Bus:**1960-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 47.**School Bus:**1980-1995: National Safety Council, *Accident Facts*, 1996, p. 94, and similar tables in earlier editions.**Transit:**1980-1994: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Table 39, and similar tables in earlier editions.**Intercity/Amtrak:**1960-1980: Association of American Railroads (AAR), *Railroad Facts*, annual issues.1985: Amtrak, *Statistical Appendix to Amtrak FY 1994 Annual Report*, p. 4.1990-1995: Ibid., *FY 1995*, p. 3.

▲ **TABLE 1-8M**

Vehicle-Kilometers

5-Year Intervals 1960–1990 and Annually 1990–1995
(Millions)

Year	Air			Highway					
	Air Carrier, certificated, all domestic, all services ^a	General Aviation	Passenger Car & Taxi	Motor-cycle	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Bus	School Bus
1960	1,381	2,847	946,428	*	157,603	*	45,833	7,005	2,383
1965	1,825	4,123	1,141,508	*	227,173	*	52,299	7,538	2,837
1970	3,328	5,161	1,475,286	4,794	198,410	43,583	56,543	7,313	3,380
1975	3,135	6,339	1,663,981	9,059	322,995	55,693	75,195	9,745	4,023
1980	4,060	8,375	1,788,940	16,438	468,214	64,073	110,527	9,751	4,828
1985	4,902	7,752	2,028,883	14,622	600,401	75,607	128,104	7,847	5,472
1990	6,378	7,775	2,435,234	15,381	750,102	86,008	155,088	9,204	6,116
1991	6,202	7,258	2,468,013	14,771	760,975	86,562	155,530	9,242	6,920
1992	6,429	5,802	2,576,301	15,381	769,577	86,407	159,505	9,268	7,081
1993	6,690	5,235	2,490,244	15,942	922,795	91,380	165,960	9,859	6,920
1994	7,049 ^r	4,694	2,416,272 ^r	16,480 ^r	1,077,168 ^r	98,627 ^r	175,309 ^r	10,314 ^r	7,081
1995	7,432 ^p	NA	2,480,736	15,767	1,105,582	100,916	185,805	10,272	8,047

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TABLE 1-8M (continued)
Vehicle-Kilometers

Year	Transit							Rail				Total ^d	
	Motor Bus	Light Rail	Heavy Rail	Trolley Bus	Commuter Rail	Demand Response	Ferry Boat		Class I Rail Freight, Train-Miles	Class I Rail Freight, Car-Miles	Intercity/ ^c Amtrak ^c , Train-Miles		Intercity/ ^c Amtrak ^c , Car-Miles
1960	2,537	120	629	162	*	—	—	—	650	45,335	336	3,554	1,167,915
1965	2,460	67	636	69	*	—	—	—	678	47,212	277	2,857	1,441,490
1970	2,268	54	655	53	*	—	—	—	687	48,103	150	1,110	1,801,664
1975	2,456	38	681	25	278	—	—	24	649	44,508	48	407	2,154,365
1980	2,699	28	619	21	288	—	—	25	689	47,117	48	378	2,479,624
1985	2,998	27	725	25	295	398	—	24	558	40,105	48	404	2,878,489
1990	3,428	39	864	22	343	492	4	26	612	42,099	53	491	3,477,166
1991	3,487	44	848	22	346	539	4	31	604	41,244	55	504	3,521,453
1992	3,505	46	846	22	352	585	4	39	628	42,049	55	494	3,641,832
1993	3,556	45	840	21	360	653	4	48	653	43,264	56	488	3,721,262
1994	3,481	55	856	22	371	889	3	46	710	45,842	56	489 ^r	3,819,483
1995	NA	NA	NA	NA	NA	NA	NA	NA	737	48,897	53	470	3,915,347

^P Preliminary.

^r Revised.

NA Data not available at press time.

* 1960-1965, motorcycle data included in Passenger Car and Taxi figures, and other Single-Unit 2-axle, 6-tire or more truck data included in other 2-axle, 4-tire vehicles figures.

^a All operations other than those operating under 14 CFR 121 & 14 CFR 135.

^b Series not continuous between 1980 and 1985.

^c Amtrak, 1971-1995.

^d Although both train-miles and car-miles are shown for rail, only train-miles are included in the Total.

Note: Previous editions of this publication have included estimated commercial bus data, estimated by Transportation Policy Associates. Transportation Policy Associates no longer provides this estimate; therefore, we have supplied bus data from the Federal Highway Administration. We continue to illustrate school bus vehicle mileage and transit bus vehicle mileage. All bus numbers have been derived using different methodologies and different sources, and are, therefore, not necessarily comparable.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

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▲ **TABLE 1-8M** (continued)
Vehicle-Kilometers

254

Sources:	Air Carrier, Domestic, All Services: 1960-1970: CAB, <i>Handbook of Airline Statistics</i> , 1969, 1973. 1975-1980: Ibid., <i>Air Carrier Traffic Statistics</i> , 1976-1981, annual issues, p. 2, line (27) plus line (50). 1985-1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, 1986-1996, p. 2, line (27) plus line (50).
General Aviation:	1960-1980: U.S. DOT/FAA, <i>FAA Statistical Handbook of Aviation</i> , annual issues. 1985-1995: Ibid., <i>General Aviation Activity and Avionics Survey</i> , annual issues, Table 3.3; mileage multiplied by 1.151 to convert from nautical miles.
Passenger Car and Taxi:	1960-1980: U.S. DOT/FHWA, <i>Highway Statistics, Summary to 1985</i> , Table VM-201A. 1985-1995: Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Motorcycle:	1970-1980: Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A. 1985-1995: Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Other 2-axle 4-tire Vehicles:	1970-1980: Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A. 1985-1995: Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Single-Unit 2-axle 6-tires or More Trucks:	1970-1980: Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A. 1985-1995: Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Combination Truck:	1960-1980: Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A. 1985-1995: Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Bus:	1960-1980: Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A. 1985-1995: Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
School Bus:	1960-1965: Ibid., <i>Highway Statistics, Summary to 1985</i> , Table VM-201A. 1970-1975: Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1. 1980-1995: National Safety Council, <i>Accident Facts</i> , 1996, p. 95, and similar tables in earlier editions.
Transit:	1960-1994: American Public Transit Association (APTA), <i>Transit Fact Book</i> , 1996, Table 5, and similar tables in earlier editions.
Class I Rail Freight:	
Train- and Car-Miles:	1960-1995: Association of American Railroads (AAR), <i>Railroad Facts</i> , 1996, p. 33.
Intercity/Amtrak:	
Train-Miles:	1960-1970: Ibid., <i>Yearbook of Railroad Facts</i> , 1975, p. 39. 1975-1993: Amtrak, <i>Amtrak Annual Report</i> , annual issues. 1994-1995: Ibid., Finance and Administration Department.
Car-Miles:	1960-1975: AAR, <i>Yearbook of Railroad Facts</i> , 1975, p. 40. 1980-1993: Amtrak, State and Local Affairs Department and Public Affairs Department 1994-1995: Ibid., Finance and Administration Department.

TABLE 1-9M**Tonne-Kilometers of Freight**

5-Year Intervals 1960–1990 and Annually 1990–1995

(Millions)

Year	Air Carrier, domestic, all services ^a	Truck, Inter-city	Class I Rail ^b	Domestic Water Transport ^c				Oil Pipeline
				Coastwise	Lakewise	Internal	Intraport	
1960	807	416,000	835,555	373,753	96,344	130,834	2,526	340,174
1965	1,975	524,000	1,018,883	441,708	110,838	160,161	2,392	447,325
1970	3,196	602,000	1,116,600	525,275	115,946	227,487	1,721	629,248
1975	5,066	663,000	1,101,187	461,126	100,033	263,378	1,785	740,206
1980	6,611	810,000	1,341,653	921,460 ^d	90,149	331,914	2,331	858,756
1985	7,528	891,000	1,280,372	892,009	70,347	339,747	1,609	823,862
1990	13,233	1,073,000	1,509,566	699,522	88,956	426,886	1,587	852,770
1991	12,932	1,107,000	1,516,729	733,100	80,794	423,332	1,413	844,594
1992	14,337	1,190,000	1,557,471	733,360	81,444	434,544	1,387	859,632
1993	15,585	1,257,000	1,619,560	654,658	82,398	414,477	1,346	865,618
1994	17,232 ^r	1,326,000	1,752,990	668,084	85,063	434,725	1,887	863,428 ^r
1995 ^p	18,219	1,345,000	1,906,268	642,826	87,160	447,190	1,898	874,523

^p Preliminary.^r Revised.^a Includes revenue ton-miles of freight, U.S. and foreign mail, and express, as reported on U.S. DOT Form 41.^b Revenue Ton-Miles.^c Excludes intraterritorial traffic, for which ton-miles were not compiled.^d Reflects start up between 1975 and 1980 of Alaska pipeline and consequent water transport of crude petroleum from Alaskan ports to mainland U.S. for refining.**Sources:****Air Carrier, Domestic, All Services:**1960-1970: CAB, *Handbook of Airline Statistics*, 1969, 1973.1975-1980: Ibid., *Air Carrier Traffic Statistics*, annual issues, 1976-1981, p. 2, line 3.

1985-1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, 1986-1996, p. 2, line 3.

Truck, Inter-city:1960-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 44.**Class I Rail:**1960-1995: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 27.**Water Transport:****Coastwise, Lakewise, Internal, Intraport:**1960-1995: U.S. Army Corps of Engineers, *Waterborne Commerce of the U.S.*, annual issues, Part 5, Section 1, Table 1-4, and similar tables in earlier editions.**Oil Pipeline:**1960-1970: Eno Transportation Foundation, Inc., *Transportation in America*, 1994.1975-1994: Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, 1996, Table 1.1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 44.

▲ **TABLE 1-10M**
Average Length of Haul, Domestic Freight and Passenger Modes
 5-Year Intervals 1960-1990 and Annually 1990-1995
 (Kilometers)

Year	Freight						Passenger			
	Air Carrier	Truck ^a	Class I Railroads	Water		Oil Pipeline	Air Carrier, Domestic, Scheduled	Bus, Intercity	Commuter Rail	Intercity/Amtrak ^b
1960	1,534	438	742	454	840	523	938	127	33	209
1965	1,518	417	810	478	795	515	988	151	34	201
1970	1,632	423	829	531	814	483	1,093	171	36	114
1975	1,741	460	871	576	853	1,019	1,123	182	37	375
1980	1,693	584	991	652	863	1,402	1,184	201	37	349
1985	1,862	589	1,070	700	843	1,250	1,220	195	38	373
1990	2,235	629	1,168	755	890	1,296	1,292	227	35	439
1991	2,166	641	1,209	777	861	1,326	1,297	230	37	457
1992	2,239	660	1,228	771	835	1,331 ^r	1,312	219	37	459
1993	2,134 ^r	655 ^r	1,278	753	827	1,259 ^r	1,286 ^r	222	35	452 ^r
1994	1,917	631	1,315	776	818	1,217	1,267	222	39	436
1995	1,949	669	1,357	795 ^p	827 ^p	1,210	1,273	225	NA	413

^p Preliminary.

^r Revised.

NA Data not available at press time.

^a Total Class I motor carriers of freight (LTL, specialized and others).

^b Amtrak, 1971-1995.

Sources:

Freight:

Air Carrier: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 71.

Truck: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 71.

Class I Railroad: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 36.

Water Data: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, Part 5, Section 1.

Oil Pipeline:

1960-1970: Transportation Policy Associates.

1975-1995: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 71.

Passenger:

Air: Ibid., p. 70.

Bus: Ibid.

Commuter Rail: Ibid., 1960-1991; 1992-1994: American Public Transit Association (APTA), *Transit Facts*, 1996, Table 5, and similar tables in earlier editions.

Intercity/Amtrak: Ibid., 1960-1980; 1985: Amtrak, *Statistical Appendix to Amtrak FY 1994 Annual Report*, p. 4; 1990-1995: Ibid., *Statistical Appendix to Amtrak FY 1995 Annual Report*, p. 3.

TABLE 1-14M**Highway Vehicle-Kilometers Traveled vs. Lane Kilometers by Functional Class (Rural)**

5-Year Intervals 1985–1990 and Annually 1990–1995

Year	Arterial Interstate Rural		Other Arterial Rural		Collector Rural		Total Arterial & Collector	
	VKT (millions)	Lane Kilometers	VKT (millions)	Lane Kilometers	VKT (millions)	Lane Kilometers	VKT (millions)	Lane Kilometers
1985	248,282	212,124	454,793	820,495	332,371	2,358,189	1,035,445	3,390,809
1990	322,147	218,642	532,477	832,388	386,983	2,356,897	1,241,607	3,407,928
1991	329,933	219,638	538,736	833,584	395,303	2,359,142	1,263,972	3,412,365
1992	330,812	214,939	553,714	847,180	378,051	2,305,488	1,262,577	3,367,607
1993	335,239	212,818	562,574	844,296	364,188	2,310,070	1,262,001	3,367,184
1994	346,923 ^r	211,288	575,065 ^r	852,692	371,000 ^r	2,305,023	1,292,989 ^r	3,369,002
1995	359,503	212,351	593,198	854,040	380,043	2,281,208	1,332,744	3,347,600

^r Note: Local VKT (vehicle-kilometers traveled) and local lane kilometers are not included.Source: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables HM-60, VM-2, & VM-2A.**TABLE 1-15M****Highway Vehicle-Kilometers Traveled vs. Lane Kilometers by Functional Class (Urban)**

5-Year Intervals 1985–1990 and Annually 1990–1995

Year	Arterial Interstate Urban		Other Arterial Urban		Collector Urban		Total Arterial & Collector	
	VKT (millions)	Lane Kilometers	VKT (millions)	Lane Kilometers	VKT (millions)	Lane Kilometers	VKT (millions)	Lane Kilometers
1985	347,876	92,259	930,474	598,357	144,120	261,040	1,422,470	951,657
1990	448,848	100,272	1,125,306	639,219	171,068	269,111	1,745,223	1,008,602
1991	459,186	101,286	1,138,640	645,469	172,652	265,143	1,770,478	1,011,898
1992	488,058	108,043	1,199,956	668,940	186,789	282,604	1,874,802	1,059,587
1993	510,804	111,262	1,245,711	695,998	189,822	291,348	1,946,337	1,098,607
1994	532,012 ^r	114,017	1,284,094 ^r	712,223	193,263 ^r	295,144	2,009,369 ^r	1,121,384
1995	549,636	114,894	1,311,879	717,223	204,211	297,824	2,065,727	1,129,941

^r Revised.^r Note: Local VKT (vehicle-kilometers traveled) and local lane kilometers are not included.Source: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables HM-60, VM-2, & VM-2A.

TABLE 1-16M

Total Waterborne Commerce of the United States

5-Year Intervals 1960–1990 and Annually 1990–1995

(Metric tonnes)

Year	Foreign	Domestic	Total
1960	307,787,153	689,980,330	997,767,483
1965	402,542,172	752,209,824	1,154,751,996
1970	527,046,309	862,485,328	1,389,531,636
1975	679,215,904	858,493,338	1,537,709,243
1980	835,883,611	977,476,457	1,813,360,068
1985	702,454,235	919,986,472	1,622,440,707
1990	944,883,432	1,018,132,149	1,963,015,580
1991	919,483,436	978,445,352	1,897,928,787
1992	941,173,400	993,030,703	1,934,204,103
1993	961,653,173	969,036,527	1,930,689,700
1994	1,012,184,823	997,006,198	2,009,191,021
1995 ^P	1,040,903,725	991,552,877	2,032,547,320

P Preliminary.

Note: Total may not equal sum of columns due to rounding.

Source: U.S. Army Corps of Engineers, *Waterborne Commerce of the United States*, annual issues, Part. 5, Table 1-1.

TABLE 1-18M**Crude Oil Transported in the U.S. by Mode of Transportation**

5-Year Intervals 1975–1990 and Annually 1990–1994

(Billion Tonne-Kilometers)

Year	Pipelines ^a		Water Carriers		Motor Carriers ^b		Railroads		Total Tonne- Kilometers
	Tonne- Kilometers	Percent of Total	Tonne- Kilometers	Percent of Total	Tonne- Kilometers	Percent of Total	Tonne- Kilometers	Percent of Total	
1975	420.5	86.9	59.3	12.2	2.0	0.4	2.2	0.5	484.0
1980	529.4	48.2	565.6 ^c	51.4	3.6	0.3	0.7	0.1	1,099.4
1985	488.2	42.5	655.8	57.1	2.6	0.2	1.2	0.1	1,147.8
1990	488.8	53.3	425.1	46.4	2.2	0.2	1.0	0.1	917.2
1991 ^r	490.7	51.6	456.7	48.0	2.3	0.2	1.2	0.1	950.9
1992 ^r	501.2	53.1	439.9	46.6	2.5	0.3	1.2	0.1	944.7
1993 ^r	479.9	56.0	373.0	43.5	2.6	0.3	1.3	0.2	856.9
1994	471.0	55.4	374.8	44.1	2.5	0.3	1.2	0.1	849.4

^r Revised.^a The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 percent), plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16 percent).^b The amounts carried by motor carriers are estimated.^c Reflects entrance between 1975 and 1980 of Alaska pipeline, moving crude petroleum for water transport to U.S. refineries.**Note:** Totals may not equal sum of columns due to rounding.**Source:** Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, annual issues, Table 2.

TABLE 1-19M

Refined Petroleum Products Transported in the U.S. by Mode of Transportation

5-Year Intervals 1975–1990 and Annually 1990–1994

(Billion Tonne-Kilometers)

Year	Pipelines ^a		Water Carriers		Motor Carriers ^b		Railroads		Total Billion Ton- Miles
	Billion Ton- Miles	Percent of Total	Billion Ton- Miles	Percent of Total	Billion Ton- Miles	Percent of Total	Billion Ton- Miles	Percent of Total	
1975	219.0	42.5	257.4	50.0	26.2	5.1	12.6	2.4	515.2
1980	225.6	45.8	230.4	46.8	24.3	4.9	12.0	2.4	492.3
1985	229.9	56.2	141.2	34.5	26.9	6.6	11.3	2.8	409.3
1990	249.3	55.6	157.8	35.2	28.2	6.3	13.3	3.0	448.6
1991	242.4	55.7	152.2	35.0	27.2	6.3	13.0	3.0	434.8
1992	245.5	55.2	158.0	35.5	27.1	6.1	14.0	3.1	444.6
1993	264.2	59.0	146.2	32.7	23.0	5.1	14.3	3.2	447.7
1994	268.8	57.8	154.7	33.3	26.4	5.7	15.0	3.2	464.9

a The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 per-
cent), plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16
percent).

b The amounts carried by motor carriers are estimated.

Note: Totals may not equal sum of columns due to rounding.

Source: Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, annual issues, Table 3.

TABLE 1-20M**Crude Oil and Refined Petroleum Products Transported in the U.S. by Mode of Transportation**

5-Year Intervals 1975–1990 and Annually 1990–1994

(Billion Tonne-Kilometers)

Year	Pipelines ^a		Water Carriers		Motor Carriers ^b		Railroads		Total Billion Ton-Miles
	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	Billion Ton-Miles	Percent of Total	
1975	507.0	59.9	298.0	35.2	27.6	3.3	14.1	1.7	846.7
1980	588.2	47.2	617.8 ^c	49.6	26.8	2.2	12.5	1.0	1,245.3
1985	564.3	47.2	590.4	49.4	28.7	2.4	12.1	1.0	1,195.5
1990	584.1	54.2	449.0	41.7	29.7	2.8	14.0	1.3	1,076.8
1991 ^r	578.5	53.3	465.0	42.8	28.8	2.7	13.8	1.3	1,086.1
1992 ^r	588.8	53.9	459.3	42.1	28.8	2.6	14.8	1.4	1,091.7
1993 ^r	592.9	57.3	401.7	38.8	24.8	2.4	15.2	1.5	1,034.6
1994	591.4	56.5	411.4	39.3	28.1	2.7	15.8	1.5	1,046.7

^r Revised.^a The amounts carried by pipeline are based on ton-miles of crude and petroleum products for Federally regulated pipelines (84 percent), plus an estimated breakdown of crude and petroleum products for the ton-miles for pipelines not Federally regulated (16 percent).^b The amounts carried by motor carriers are estimated.Source: Association of Oil Pipe Lines, *Shifts in Petroleum Transportation*, annual issues, Table 1.

TABLE 4-1M**U.S. Consumption of Energy from Primary Sources by Sector**

5-Year Intervals 1955–1990 and Annually 1990–1995

(Petajoules)

Year	Residential & Commercial ^a	% of Total	Industrial ^a	% of Total	Transportation ^a	% of Total	Electric Utilities	% of Total	Total Energy Consumption
1955	7.39	19.0	15.46	39.8	9.48	24.4	6.50	16.7	38.82
1960	8.75	20.0	16.29	37.2	10.56	24.1	8.19	18.7	43.80
1965	10.00	19.0	19.27	36.6	12.40	23.5	11.01	20.9	52.68
1970	12.14	18.3	21.96	33.1	16.06	24.2	16.27	24.5	66.43
1975	11.60	16.4	20.39	28.9	18.22	25.8	20.35	28.8	70.55
1980	10.72	14.1	21.07	27.7	19.66	25.9	24.51	32.3	75.96
1985	9.78	13.2	17.67	23.9	20.02	27.1	26.52	35.8	73.98
1990 ^b	10.19	12.1	21.82 ^r	25.9	22.57	26.8	29.60	35.2	84.17 ^r
1991 ^b	10.48	12.5	21.54 ^r	25.6	22.14	26.3 ^r	29.92	35.6	84.05 ^r
1992 ^b	10.69	12.5 ^r	22.54 ^r	26.4	22.50	26.4	29.55	34.7	85.26 ^r
1993 ^b	10.97 ^r	12.6	22.85 ^r	26.3	22.93	26.3 ^r	30.30	34.8 ^r	87.03 ^r
1994 ^{br}	10.84	12.2	23.57	26.5	23.63	26.6	30.88	34.7	88.90
1995 ^{bp}	11.17	12.3	23.87	26.3	24.02	26.5	31.62	34.9	90.62

P Preliminary.

r Revised.

a Includes fossil and renewable sources consumed directly, but not electricity.

b Discontinuity in data between earlier years and 1990 due to attempts to estimate sector consumption of renewable sources beginning in that year.

Note: Sum of components may not equal total due both to independent rounding and to substitution of Electric Utilities Energy Input figures for data from "Electricity" and "Electrical System Energy Losses" columns in sector consumption tables.**Sources:** U.S. DOE/EIA, *Annual Energy Review 1995*, Table 2.1, Table 10.1b; *Monthly Energy Review*, April 1996, Tables 2.3-2.6.

TABLE 4-3M**Fuel Consumption by Mode of Transportation (Metric Units)**

5-Year Intervals 1960–1990 and Annually 1990–1995

	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995
Air												
Certificated Carriers^a												
Jet Fuel, (million liters)	7,397	14,721	29,742	28,610	34,432	38,312	47,087	44,055	44,910	45,925	47,321	48,499
General Aviation^b												
Aviation Gasoline, (million liters)	916	1,105	2,086	1,560	1,968	1,594	1,336	1,340	1,189	1,014	999	NA
Jet Fuel, (million liters)	–	212	787	1,715	2,900	2,616	2,510	2,184	1,870	1,719	1,783	NA
Highway												
Gasoline, Diesel & Other												
Fuels (million liters)												
Passenger Cars	155,842	188,222	256,727	289,383	272,107	262,208	272,508	267,598	279,450	278,428	255,580	258,608
Motorcycles	–	–	227	428	772	689	723	697	723	750	776	742
Other 2-Axle 4-Tire Vehicles	–	52,420	46,610	67,770	89,313	109,856	124,680	123,143	125,399	138,077	168,159	170,150
Single-Unit 2-Axle 6-Tire or More Trucks	–	–	15,021	18,227	21,036	25,495	27,611	27,005	27,175	31,332	34,224	34,743
Combination Trucks	–	25,203	27,815	36,544	48,086	57,841	66,127	64,946	66,968	67,074	70,689	74,429
Buses	3,131	3,312	3,104	3,986	3,854	3,161	3,388	3,271	3,320	3,585	3,710	3,649
Transit^b												
Electricity, (million kWh)	2,908	2,584	2,561	2,646	2,446	4,216	4,837	4,853	4,716	4,865	5,096	NA
Motor Fuel, (million liters)												
Gasoline ^d	727	469	257	30	42	174	129	129	140	174	242	NA
Diesel	787	939	1,026	1,382	1,632	2,305	2,464	2,517	2,593	2,570	2,642	NA
Compressed Natural Gas (kilograms)	–	–	–	–	–	–	–	–	2,881	4,508	7,340	NA
Rail												
Class I Railroads												
Distillate/Diesel Fuel, (million liters)	13,143	14,165	14,415	14,142	14,971	11,901	11,863	11,076	11,440	11,780	12,704	13,260
Amtrak	–	–	–	180	254	295	330	303	299	258	NA	NA
Electricity, (million kWh)	–	–	–	–	–	–	–	–	–	–	–	–
Distillate/Diesel Fuel, (million liters)	–	–	–	238	242	246	310	310	310	314	NA	NA
Water												
Residual Fuel Oil, (million liters)	14,960	11,708	14,286	15,369	33,887	17,375	23,947	25,639	24,844	19,995	20,388	22,281
Distillate/Diesel Fuel Oil, (million liters)	2,979	2,468	3,100	4,156	5,595	6,431	7,817	7,745	8,400	8,158	8,286	8,854
Gasoline, (million liters)	–	–	2,264	2,763	3,982	3,986	4,921	6,473	4,982	3,308	3,396	4,013
Pipelines, Natural Gas												
(million cubic meters)	9,828	14,173	20,449	16,508	17,970	14,265	18,684	17,015	16,642	17,678	19,407	19,831

(continued on next page)

▲ **TABLE 4-3M** (continued)
Fuel Consumption by Mode of Transportation (Metric Units)

264

r	Revised.
NA	Data not available at press time.
*	Included in passenger cars.
a	Domestic consumption only.
b	Includes fuel used in air taxi operations, but not commuter operations
c	Prior to 1984, excludes commuter rail, automated guideway, urban ferry boat, demand response, and most rural and smaller systems. Series not continuous between 1983 and 1984.
d	Gasoline and all other nondiesel fuel except compressed natural gas (CNG).
Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.	
Sources:	
Certificated Air Carrier:	
1960-1970:	CAB, <i>Handbook of Airline Statistics</i> , 1971, pp. 66, 67.
1975:	U.S. DOT/FAA, <i>FAA Statistical Handbook of Aviation</i> , 1975, Table 6.27.
1980:	CAB, <i>Fuel Cost and Consumption, Twelve Months Ended December 31, 1984</i> , total of Tables 2, 3, 4, 6 and 7 and similar tables in earlier editions.
1985-1995:	U.S. DOT/BTS, Office of Airline Information, personal communication.
General Aviation:	
1960-1980:	Ibid., FAA, <i>FAA Statistical Handbook of Aviation</i> , annual issues.
1985-1994:	Ibid., <i>General Aviation Activity and Avionics Survey</i> , annual issues, Table 5-1, and similar tables in earlier editions.
Highway:	
1960-1980:	Ibid., FHWA, <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985-1995:	Ibid., <i>Highway Statistics</i> , annual issues, Table VM-1.
Transit:	
Electricity:	
1960-1994:	APTA, <i>Transit Fact Book</i> , 1996, Table 58, and similar tables in earlier editions.
Motor Fuel:	
1960-1994:	Ibid.
Compressed Natural Gas:	
1992-1994:	Ibid.
Class I Railroads:	
1960-1970:	AAR, <i>Statistics of Class I Railroads</i> , September 1971, p. 15.
1975:	Ibid., <i>Railroad Ten-Year Trends</i> , 1986, Table III-D-2.
1980-1995:	Ibid., <i>Railroad Facts</i> , 1996, p. 60.
Amtrak:	
1975-1993:	Amtrak, State and Local Affairs Department.
Water:	
Residual and Distillate/Diesel Fuel Oil:	
1960-1980:	American Petroleum Institute, <i>Basic Petroleum Data Book</i> , annual issues, Tables 10, 10a, 12, and 12a.
1985-1995:	U.S. DOE/EIA, <i>Fuel Oil and Kerosene Sales</i> , annual issues, Tables 2 and 4, and similar tables in earlier editions.
Gasoline:	
1960-1995:	U.S. DOT/FHWA, <i>Highway Statistics</i> , annual issues, Table MF-24, and similar tables in earlier editions.
Pipeline:	
1960-1995:	U.S. DOE, <i>Natural Gas Annual 1995</i> , Table 101, and similar tables in earlier additions.

TABLE 4-4M**Energy Consumption by Mode of Transportation**5-Year Intervals 1960–1990 and Annually 1990–1995
(Quadrillion joules)

	1960	1965	1970	1975	1980	1985	1990	1991	1992	1993	1994	1995
Air												
Certificated Carriers ^a												
Jet Fuel	278	554	1,119	1,077	1,296	1,442	1,772	1,658	1,690	1,728	1,781	1,825
General Aviation ^b												
Aviation Gasoline	31	37	70	52	66	53	45	45	40	34	33	NA
Jet Fuel	–	8	30	65	109	98	94	82	70	65	67	NA
Highway												
Gasoline, Diesel & Other Fuels												
Passenger Cars	5,429	6,558	8,944	10,082	9,480	9,135	9,494	9,323	9,736	9,700	8,904	9,010
Motorcycles	*	*	8	15	27	24	25	24	25	26	27	26
Other 2-Axle 4-Tire Vehicles ¹	–	1,826	1,624	2,361	3,112	3,827	4,344	15,393	4,369	4,811	5,859	5,928
Single-Unit 2-Axle 6-Tire or More Trucks	–	–	581	705	813	986	1,067	15,393	1,051	1,211	1,323	1,343
Combination Trucks	–	974	1,075	1,413	1,859	2,236	2,556	15,393	2,589	2,593	2,733	2,877
Buses	121	128	120	154	149	122	131	126	128	139	143	141
Transit^c												
Electricity	10	9	9	10	9	15	17	17	17	18	18	NA
Motor Fuel, Gasoline ^d	25	16	9	1	1	6	4	4	5	6	8	NA
Diesel	30	36	40	53	63	89	95	97	100	99	102	NA
Compressed Natural Gas	–	–	–	–	–	–	–	–	0	0	0	NA
Rail												
Class I Railroads												
Distillate/Diesel Fuel	508	548	557	547	579	460	459	428	442	455	491	513
Amtrak												
Electricity	–	–	–	1	1	1	1	1	1	1	NA	NA
Distillate/Diesel Fuel	–	–	–	9	9	10	12	12	12	12	NA	NA
Water												
Residual Fuel Oil,	624	489	596	641	1,414	725	999	1,070	1,037	834	851	930
Distillate Fuel Oil,	115	95	120	161	216	249	302	299	325	315	320	342
Gasoline	–	–	79	96	139	139	171	226	174	115	118	140
Pipelines, Natural Gas	379	545	786	627	686	548	717	654	639	677	743	760
Total, All Modes in Table	7,552	11,824	15,766	18,069	20,027	20,165	22,307	60,246	22,449	22,840	23,523	23,834

(continued on next page)

▲ **TABLE 4-4M** (continued)
Energy Consumption by Mode of Transportation

r	Revised.
NA	Data not available at press time.
*	Included in passenger cars.
a	Domestic consumption only.
b	Includes fuel used in air taxi operations, but not commuter operations.
c	Prior to 1984, excludes commuter rail, automated guideway, urban ferry boat, demand response, and most rural and smaller systems. Series not continuous between 1983 and 1984.
d	Gasoline and all other nondiesel fuel, except compressed natural gas (CNG)
Note:	In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.
Sources:	See Table 4-3M for source material.

TABLE 4-5M**Fuel Consumption and Travel by Certificated Air Carriers***

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number of Aircraft	Aircraft-Kilometers Flown (millions)		Fuel Consumption (thousand liters)		Average Kilometers Flown Per Aircraft	Liters per 100 Kilometers Traveled		Average Fuel Consumed per Aircraft
		Domestic Operations	International Operations	Domestic Operations	International Operations		Domestic Operations	International Operations	
1960	2,135	1,381	293	7,397,588	2,140,726	783,943	535.74	730.87	3,464,913
1965	—	1,825	457	14,720,839	4,846,043	—	806.62	1060.28	—
1970	2,690	3,328	764	29,740,441	8,489,085	1,521,398	893.61	1110.50	11,055,926
1975	2,540	3,135	612	28,609,008	7,377,389	1,475,021	912.57	1206.34	11,263,389
1980	2,818	4,060	645	34,432,195	7,335,050	1,669,880	848.01	1136.61	12,218,664
1985	3,100	4,902	668	38,313,400	9,375,951	1,796,755	781.58	1403.84	12,359,161
1990	4,727	6,378	1,223	47,086,880	15,054,973	1,607,982	738.29	1230.89	9,961,261
1991	4,580	6,202	1,299	44,052,880	14,932,360	1,637,806	710.25	1149.76	9,618,533
1992	4,884	6,429	1,455	44,910,578	15,441,638	1,614,287	698.53	1061.39	9,195,450
1993	5,234	6,690	1,547	45,925,004	15,564,838	1,573,676	686.47	1006.40	8,774,361
1994	5,221	7,049 ^r	1,577	47,319,747	16,378,952	1,652,190	671.30	1038.51	9,063,349
1995	5,567	7,432 ^p	1,601	48,500,118	17,085,139	1,622,642	652.59	1066.96	8,712,074

^p Preliminary.^r Revised.

* Includes Majors, Nationals, and Large Regional Carriers, scheduled and charter passenger, and all-cargo. U.S. owned air carriers only.

Note: Sum of components may not equal total due to independent rounding.

Sources:

Number of Aircraft: 1960–1995: U.S. DOT/BTS, Office of Airline Information, personal communication.

Aircraft-Miles Flown:

1960–1970: CAB, *Handbook of Airline Statistics*, 1973, Part III, Tables 2 & 3.1975–1980: Ibid., *Air Carrier Traffic Statistics*, 1976 pp. 4, 14; 1981, pp 2,3.1985–1995: U.S. DOT/BTS, Office of Airline Information, *Ibid.*, annual issues, 1986–1996, pp. 2, 3, line (27) plus line (50).

Fuel Consumed:

1960–1975: CAB, *Handbook of Airline Statistics*, 1977, Table 2.1980–1980: CAB, *Fuel Cost and Consumption, Twelve Months Ended, Dec. 31, 1984*.

1985–1995: U.S. DOT/BTS, Office of Airline Information, personal communication.

TABLE 4-6M

Total Motor Vehicle Fuel Consumption and Travel

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number Registered (thousands)*	Vehicle-Kilometers Traveled (millions)	Fuel Consumed (million liters)	Average Kilometers Traveled per Vehicle	Average Liters per 100 Kilometers Traveled	Average Fuel Consumed per Vehicle (liters)
1960	74,475	1,156,869	219,092	15,534	18.94	2,942
1965	91,752	1,428,518	269,158	15,569	18.84	2,934
1970	111,242	1,785,928	349,503	16,054	19.57	3,142
1975	137,913	2,136,668	412,549	15,493	19.31	2,991
1980	161,490	2,457,943	435,171	15,220	17.70	2,695
1985	177,098	2,855,264	459,254	16,123	16.08	2,593
1990	193,057	3,451,016	495,037	17,876	14.34	2,564
1991	192,314	3,495,576	486,656	18,176	13.92	2,531
1992	194,427	3,616,439	503,036	18,600	13.91	2,587
1993	198,041	3,696,180	519,242	18,664	14.05	2,622
1994	201,802	3,794,170	533,134	18,801	14.05	2,642
1995	205,297	3,899,078	542,321	18,992	13.91	2,642

r Revised.

* Includes personal passenger vehicles, buses, and motor trucks.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Source: 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-7M
Fuel Consumption and Travel by Passenger Cars and Motorcycles
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number Registered (thousands)		Vehicle-Kilometers Traveled (millions)		Fuel Consumed (million liters)		Average Kilometers Traveled per Vehicle		Average Liters per 100 Kilometers Traveled		Average Fuel Consumed per Vehicle (liters)	
	Passenger Car	Motor-cycle	Passenger Car	Motor-cycle	Passenger Car	Motor-cycle	Passenger Car	Motor-cycle	Passenger Car	Motor-cycle	Passenger Car	Motor-cycle
1960	61,671	574	946,428	*	155,842	*	15,205	*	16.47	*	2,504	*
1965	75,258	1,382	1,141,508	*	188,222	*	14,894	*	16.49	*	2,456	*
1970	89,244	2,824	1,475,286	4,794	256,727	227	16,531	1,698	17.40	4.7	2,877	79
1975	106,706	4,964	1,663,981	9,059	289,383	428	15,594	1,825	17.39	4.7	2,710	87
1980	121,601	5,694	1,788,940	16,438	272,107	772	14,712	2,887	15.21	4.7	2,237	136
1985	131,864	5,444	2,028,683	14,622	262,208	689	15,385	2,686	12.93	4.7	1,987	125
1990	143,453	4,259	2,435,234	15,381	272,508	723	16,976	3,611	11.19	4.7	1,900	170
1991	142,956	4,177	2,468,013	14,771	267,598	697	17,264	3,536	10.84	4.7	1,878	167
1992	144,213	4,065	2,576,301	15,381	279,450	723	17,865	3,784	10.85	4.7	1,938	178
1993	131,581	3,978	2,490,244	15,942	278,428	750	18,926	4,008	11.18	4.7	2,116	189
1994	133,930	3,757	2,416,272	16,480	255,580	776	18,041	4,386	10.58	4.7	1,908	207
1995	136,066	3,767	2,480,736	15,767	258,608	742	18,232	4,185	10.42	4.7	1,901	197

^r Revised.

* Data included with passenger car information.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Source: 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Tables MV-201 and VM-201A.

1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

▲ **TABLE 4-8M**
Fuel Consumption and Travel by Trucks
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number Registered (thousands)	Vehicle-Kilometers Traveled (millions)	Total Fuel Consumed (million liters)			Average Kilometers Traveled per Vehicle			Average Liters per 100 Kilometers Traveled			Average Fuel Consumed per Vehicle (liters)		
			Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination
1960	11,945	203,436	—	—	—	—	—	—	—	—	—	—	—	—
1965	14,795	279,472	52,420	—	25,203	16,217	—	66,453	23.08	—	48.20	3,744	—	32,025
1970	18,797	298,535	46,610	15,021	27,815	13,963	11,838	62,473	23.50	34.49	49.21	3,278	4,081	30,734
1975	25,781	453,883	67,770	18,227	36,544	15,818	13,161	66,500	20.98	32.71	43.56	3,320	4,308	28,970
1980	33,667	642,814	89,313	21,036	48,086	16,797	14,650	78,008	19.08	32.85	43.48	3,202	4,811	33,940
1985	39,196	804,112	109,856	25,495	57,841	17,888	19,251	91,290	18.29	33.70	45.15	3,244	6,492	41,219
1990	44,718	991,198	124,680	27,611	66,127	19,301	20,270	96,250	16.62	32.09	42.61	3,206	6,507	41,038
1991	44,936	1,003,550	123,143	27,005	64,946	19,478	20,294	97,295	16.18	31.20	41.63	3,153	6,329	40,500
1992	45,504	1,015,490	125,399	27,175	66,968	19,467	20,020	96,390	16.29	31.45	42.00	3,172	6,295	40,470
1993	61,828	1,180,135	138,077	31,332	67,074	16,565	20,191	104,276	14.96	34.29	40.41	2,479	6,924	42,143
1994 ^r	63,445	1,351,104	168,159	34,224	70,689	18,850	20,875	111,046	15.61	34.69	40.35	2,941	7,245	44,778
1995	64,778	1,392,303	170,150	34,743	74,429	19,095	19,393	110,779	15.39	34.44	40.07	2,937	6,677	44,376

^r Revised.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources: 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
 1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-9M**Fuel Consumption and Travel by Buses**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number Registered ^a	Total Vehicle- Kilometers Traveled ^a (millions)	Total Fuel Consumed (million liters)	Average Kilometers Traveled per Vehicle	Average Liters per 100 Kilometers Traveled	Average Fuel Consumed per Vehicle (liters)
1960	272,000	7,005	3,131	25,755	44.72	11,508
1965	314,000	7,538	3,312	24,007	43.97	10,539
1970	377,562	7,313	3,104	19,369	42.46	8,222
1975	462,156	9,745	3,986	21,085	40.91	8,627
1980	528,789	9,751	3,854	18,440	39.53	7,291
1985	593,485	7,847	3,161	13,222	40.28	5,326
1990	626,987	9,204	3,388	14,679	36.81	5,406
1991	631,279	9,242	3,271	14,641	35.37	5,182
1992	644,732	9,268	3,319	14,375	35.80	5,148
1993	654,432	9,859	3,584	15,065	36.35	5,477
1994	670,423	10,314 ^r	3,710 ^r	15,385 ^r	35.97 ^r	5,534 ^r
1995	685,504	10,272	3,649	14,985	35.53	5,322

^r Revised.^a Includes commercial, school and nonrevenue buses.

Sources: 1960–1965 and 1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1970–1975 and 1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-10M

Electric Power, and Primary Energy Consumed by the Transit Industry*

5-Year Intervals 1960–1990 and Annually 1990–1994

Year	Vehicles	Vehicle-Kilometers	Electric Power Consumed (million Kilowatt hours)	Motor Fuel Consumed		
				Gasoline ^a (thousand liters)	Diesel (thousand liters)	CNG Consumed (Kilograms)
1960	65,292	3,470	2,908	726,421	787,744	—
1965	61,717	3,252	2,584	470,148	940,296	—
1970	61,298	3,049	2,561	258,165	1,024,332	—
1975	62,183	3,222	2,646	28,678	1,381,903	—
1980	75,388	3,703	2,446	43,154	1,633,027	—
1985	94,369	4,520	4,216	173,008	2,304,324	—
1990	92,961	5,250	4,837	128,348	2,464,417	—
1991	96,300	5,354	4,853	130,472	2,517,897	—
1992	102,151	5,433	4,716	140,738	2,592,795	2,881
1993 ^r	107,095	5,562	4,865	172,887	2,568,444	4,508
1994 ^p	118,589	5,758	5,096	243,039	2,643,334	7,340

^p Preliminary.

^r Revised.

* Prior to 1984, excludes commuter rail, automated guideway, urban ferry boat, demand response, and most rural and smaller systems.

^a Includes gasoline, propane, LPG, LNG, kerosene and others.

^b CNG = compressed natural gas

Note: To convert to joules use the following energy conversion factors: 1KWhr=3,599,851 joules; (if generation and distribution efficiency are taken into account 1 KWhr=12,412,734 joules); 1 liter of gasoline=34,839,537 joules; 1 liter of diesel fuel=38,657,950 joules.

Source: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Tables 58 and 60, and similar tables in earlier editions.

TABLE 4 -11M
Fuel Consumption* and Travel by Class I Rail
 5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Number in Use		Kilometers Traveled (millions)			Fuel Consumed in Freight Service (million liters)	Average Kilometers Traveled per		Average Liters per 100 Kilometers Traveled		Average Fuel Consumed per Locomotive ^a (liters)
	Locomo- tives ^a	Cars ^b	Freight Train- Kilometers ^c	Locomotive Unit- Kilometers	Car- Kilometers		Locomotive	Car	Train	Car	
1960	29,031	1,658,292	651.0	–	45,335	13,109	–	27,339	2,014	28.9	451,548
1965	27,780	1,478,005	677.4	–	47,212	13,597	–	31,943	2,007	28.8	489,460
1970	27,077	1,423,921	687.4	–	48,103	13,419	–	33,782	1,952	27.9	495,597
1975	27,846	1,359,459	647.9	2,380	44,508	13,843	85,478	32,740	2,137	31.1	497,136
1980	28,094	1,168,114	689.4	2,456	47,117	14,778	87,416	40,336	2,144	31.4	526,029
1985	22,548	867,070	558.8	1,976	40,105	11,773	87,647	46,253	2,107	29.4	522,114
1990	18,835	658,902	610.9	2,060	42,099	11,792	109,369	63,892	1,930	28.0	626,045
1991	18,344	633,489	603.5	1,992	41,244	11,000	108,611	65,107	1,823	26.7	599,673
1992	18,004	605,189	628.0	2,057	42,049	11,375	114,238	69,481	1,811	27.1	631,813
1993	18,161	587,033	652.4	2,124	43,264	11,689	116,972	73,699	1,792	27.0	643,651
1994	18,505	590,930	709.6	2,261	45,842	12,621	122,190	77,576	1,779	27.5	682,016
1995	18,812	583,486	737.6	2,326	48,897	13,173	123,618	83,801	1,786	26.9	700,257

* Includes only fuel consumed in freight service. Does not include fuel used in yard, switching, or passenger service.

^a For 1960–1980, locomotive total includes small numbers of steam and electric units, which have not been compensated for in per locomotive fuel consumption figure.

^b Includes only cars owned by Class I railroads.

^c Based on the distance run between terminals and/or stations; does not include yard or passenger train-miles.

Sources: **All data except for Locomotive unit-miles:**

1960–1995 Association of American Railroads (AAR), *Railroad Facts*, 1996, pp. 33, 34, 40, 48, 50.

Locomotive unit-miles:

1975: *Ibid.*, *Railroad Ten-Year Trends*, 1985.

1980–1992: *Ibid.*, annual issues, p. 123.

1993–1995: *Ibid.*, *Analysis of Class I Railroads*, annual issues, p. 29.

TABLE 4-12M
Fuel Consumption and Travel by Amtrak

3 - 5-Year Intervals 1972–1990 and Annually 1990–1995

Year	Number in Use		Kilometers Traveled (millions)		Locomotive Fuel Consumed		Average Kilometers Traveled per Car
	Number of Locomotives ^a	Number of Cars ^b	Train-Kilometers ^c	Car-Kilometers	Diesel (million liters)	Electric kWh (millions)*	
1972	185	1,569	42	343	–	–	218,477
1975	355	1,913	48	407	238.9	180.3	212,788
1980	419	2,128	48	378	240.4	253.8	177,724
1985	291	1,854	48	404	245.3	295.1	217,878
1990	318	1,983	53	491	310.8	329.6	247,529
1991	317	1,967	55	504	310.4	302.5	256,088
1992	329	1,962	55	494	308.5	299.2	252,027
1993	334	1,964	56	488	313.4	257.7	248,484
1994	352	1,951	56	489	NA	NA	250,764
1995	356	1,921	53	470	NA	NA	244,627

* Does not include electric power generation and distribution losses; which, if included, would increase figures shown by about 20%.

NA Data not available at press time.

Sources: Number of Locomotives and Cars:

1975–1980: Amtrak, State and Local Affairs Department.

1985–1994: Ibid., *Statistical Appendix to Amtrak FY 1994 Annual Report*.

1995: Ibid., Finance and Administration Department.

Train-Miles:

1972–1993: Ibid., *Amtrak Annual Report*, annual issues.

1994–1995: Ibid., Finance and Administration Department.

Car-Miles:

1972: Ibid., Train Information System Reports.

1975: Association of American Railroads (AAR), *Yearbook of Railroad Facts*, 1975, p. 40.

1980–1993: Amtrak, State and Local Affairs Department and Public Affairs Department.

1994–1995: Ibid., Finance and Administration Department.

Fuel Consumed:

1975–1993: Ibid., State and Local Affairs Department.

TABLE 4-13M**U.S. Government Energy Consumption**

5-Year Intervals Fiscal Years 1975-1990 and Annually Fiscal Years 1990-1995

(Petajoules)

Activity	1975	1980	1985	1990	1991	1992	1993	1994	1995 ^P
Agency									
Defense	1,643.9	1,248.2	1,319.5	1,310.1	1,339.2	1,164.8	1,106.5	1,030.8 ^r	1,030.8
Energy	89.9	50.0	55.2 ^r	45.8	44.1	46.8	46.0	43.5	43.5
Postal Service	62.5	28.7	29.3	32.3	32.5	33.4	35.6	36.9	36.9
Veterans Affairs	41.4	26.2	26.5	26.3	26.5 ^r	26.7	27.1	27.0 ^r	26.8
Transportation	30.1	20.3	20.6	20.0	18.9 ^r	19.4 ^r	21.8 ^r	20.8 ^r	19.4
General Services									
Administration	45.4	19.1	18.3	15.0	14.8	14.6	14.9	14.8	14.5
NASA	27.9	11.0	11.4	13.0	13.1	13.2	13.1	13.4 ^r	13.1
Justice	7.5	6.0	8.7	7.4	8.4	7.9	9.6	10.9	10.9
Agriculture	12.6	9.1	8.9	10.0	10.1	9.6	9.8	9.9 ^r	9.9
Health & Human Services	9.8	6.3	7.4	8.4	7.5	8.4	8.5	8.9 ^r	8.9
Interior	13.0	9.0	8.2	7.8	7.5 ^r	7.4	7.9	8.3 ^r	8.3
Other ^a	15.6	13.0	11.3	15.9	14.1	14.6	15.5 ^r	42.0 [*]	44.4
Total, All Agencies	1,999.3	1,446.7	1,525.1 ^r	1,511.9	1,536.6 ^r	1,366.7 ^r	1,316.6 ^r	1,267.0 ^r	1,267.2
Energy Source									
Petroleum	1,226.0	1,067.5	1,110.9	1,076.7	1,106.2 ^r	926.3 ^r	891.9 ^r	833.8 ^r	831.8
Jet Fuel	746.3	673.9	744.6	772.7	817.1	662.8 ^r	646.1 ^r	581.0 ^r	580.4
Distillate & Residual Fuel	384.8	324.6	306.8	257.5	248.9 ^r	216.4 ^r	202.7 ^r	213.5 ^r	213.2
Motor Gasoline	66.9	59.6	53.3	39.2	35.9 ^r	37.6	36.4	31.2 ^r	31.1
Liquified Petroleum									
Gases	5.7	4.2	4.2	6.6	3.9	8.5	6.0	7.4 ^r	6.5
Aviation Gasoline	22.3	5.2	2.0	0.5	0.4	1.1	0.7	0.6 ^r	0.5
Electricity	507.7	149.7	174.8 ^r	203.0	200.5	202.0	202.9	225.4 [*]	227.5
Natural Gas	175.4	155.4	157.3 ^r	165.7	162.3	159.5	161.5	151.6 ^r	152.0
Coal	82.2	67.0	67.5	46.6	48.4	54.7	40.6	36.9	36.9
Purchased Steam	8.0	7.2	14.6	19.8	19.2	24.1	19.7	19.3	19.0
Total, All Sources	1,999.3	1,446.7	1,525.1 ^r	1,511.9	1,536.6 ^r	1,366.7 ^r	1,316.6 ^r	1,267.0 ^r	1,267.2

^P Preliminary.^r Revised.^{*} Increase from previous years is result of initial reporting by the Tennessee Valley Authority of electricity consumed for utility station service use.

^a Includes National Archives and Records Administration, U.S. Department of Commerce, U.S. Department of Labor, U.S. Department of State, Environmental Protection Agency, Federal Communications Commission, Federal Trade Commission, National Science Foundation, Panama Canal Commission, Commodity Futures Trading Commission, Equal Employment Opportunity Commission, Nuclear Regulatory Commission, Office of Personnel Management, U.S. Department of Housing and Urban Development, U.S. Department of Treasury, Tennessee Valley Authority, Railroad Retirement Board, Small Business Administration, Federal Emergency Management Agency and U.S. Information Agency.

Note: Totals may not equal sum of components due to independent rounding. These data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the Department of Defense. U.S. Government energy use for electricity generation and uranium enrichment is excluded. However, other energy used by U.S. agencies that produce electricity or enrich uranium is included. The U.S. Government's fiscal year runs from October 1 through September 30.

Source: U.S. DOE/EIA, *Annual Energy Review 1995*, Table 1-12.

TABLE 4-14M
U.S. Government Consumption by Agency and Source

Fiscal Years 1985 and 1995

(Petajoules)

Agency	Petroleum					Electricity	Natural Gas	Coal & Other ^b	Total
	Motor Gasoline	Distillate & Residual Fuel Oils	Jet Fuel & Aviation Gas	Other ^a	Total				
1985									
Defense	26.8	279.6	737.8	2.4	1,046.7	106.7	112.3	53.8	1,319.5
Energy	1.6	3.8	0.5	0.2	6.0	19.8	7.2	22.2	55.2
Postal Service	10.4	3.3	0.0	0.2	13.9	10.1	4.7	0.5	29.3
Veterans Affairs	0.5	2.3	0.0	0.0	3.0	7.6	14.7	1.4	26.5
Transportation	1.4	8.4	5.8	0.0	15.6	4.0	0.9	0.0	20.6
General Services Admin.	0.1	1.2	0.0	0.0	1.3	10.9	3.5	2.6	18.3
NASA	0.3	0.8	1.7	0.0	2.8	5.5	2.7	0.3	11.4
Interior	4.2	0.9	0.1	0.3	5.5	1.7	1.6	0.1	8.9
Agriculture	1.9	0.4	0.1	0.1	2.5	1.3	4.4	0.4	8.7
Health & Human Services	2.3	1.7	0.1	0.8	4.9	1.6	1.5	0.2	8.2
Justice	0.4	2.2	0.0	0.1	2.7	2.6	2.0	0.1	7.4
Other ^c	3.1	2.2	0.4	0.0	5.7	3.2	2.0	0.4	11.3
Total	53.3	306.8	746.6	4.2	1,110.9	174.8	157.3	82.1	1,525.1
1995 ^p									
Defense	4.5	192.3	570.6	2.2	769.7	119.5	101.2	40.5	1,030.8
Energy	1.3	2.5	0.4	0.4	4.5	18.0	10.3	10.6	43.5
Postal Service	11.8	3.4	0.0	0.0	15.1	14.8	6.3	0.6	36.9
Veterans Affairs	0.3	1.5	0.0	0.0	1.7	9.4	14.3	1.4	26.8
Transportation	0.6	6.0	6.0	1.3	14.0	4.3	0.9	0.1	19.4
General Services Admin.	0.1	0.3	0.0	0.0	0.3	9.6	3.0	1.5	14.5
NASA	0.3	0.6	1.5	0.0	2.4	7.3	3.2	0.2	13.1
Justice	2.6	0.5	0.8	0.0	4.0	2.7	3.8	0.2	10.9
Agriculture	4.9	0.6	0.2	0.2	5.9	2.2	1.7	0.1	9.9
Health & Human Services	0.2	1.4	0.0	0.3	1.8	3.6	3.5	0.0	8.9
Interior	2.2	1.4	0.2	2.1	5.8	1.9	0.5	0.1	8.3
Other ^d	2.3	2.7	1.4	0.0	6.5	34.2	3.2	0.6	44.4
Total	31.1	213.2	581.0	6.5	831.9	227.5	152.0	55.9	1,267.2

^P Preliminary.

^a Includes liquefied petroleum gases and other.

^b Includes purchased steam, coal, and other.

^c Includes U.S. Department of Commerce, Panama Canal Commission, Tennessee Valley Authority, U.S. Department of Labor, U.S. Department of Housing and Urban Development, Federal Communications Commission, Office of Personnel Management, U.S. Department of State, Small Business Administration, National Science Foundation, U.S. Department of Treasury, and Environmental Protection Agency.

^d Includes National Archives and Records Administration, U.S. Department of Commerce, U.S. Department of Labor, U.S. Department of State, Environmental Protection Agency, Federal Communications Commission, Federal Trade Commission, Panama Canal Commission, Equal Employment Opportunity Commission, Nuclear Regulatory Commission, Office of Personnel Management, U.S. Department of Housing and Urban Development, U.S. Department of Treasury, Tennessee Valley Authority, Railroad Retirement Board, U.S. Information Agency, and Federal Emergency Management Agency.

Note: Totals may not equal sum of components due to independent rounding. These data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the Department of Defense. U.S. Government energy use for electricity generation and uranium enrichment is excluded. However, other energy used by U.S. agencies that produce electricity or enrich uranium is included. The U.S. Government's fiscal year runs from October 1 through September 30.

Source: U.S. DOE/EIA, *Annual Energy Review 1995*, Table 1-13.

TABLE 4-15M**Average Fuel Efficiency of U.S. Passenger Cars and Light Trucks**

5-Year Intervals 1955–1990 and Annually 1990–1996

Year	Average U.S. Passenger Car ^b Fuel Efficiency (liters per 100 kilometers) (Calendar Year)	New Vehicle Fuel Efficiency, (liters per 100 kilometers) ^a (Model Year)				CAFE Standards (liters per 100 kilometers) ^a (Model Year)	
		Passenger Cars		Light Trucks		Passenger Car	Light Truck
		Domestic	Imported	Domestic	Imported		
1955	16.19	14.7	—	—	—	—	—
1960	16.47	15.2	—	—	—	—	—
1965	16.48	15.3	—	—	—	—	—
1970	17.40	16.7	—	—	—	—	—
1975	17.40	15.6	—	—	—	—	—
1980	15.21	10.4	7.9	14.0	9.7	11.8	14.7/16.8*
1985	12.92	8.9	7.5	12.0	8.9	8.6	12.1
1990	11.19	8.7	7.9	11.6	10.2	8.6	11.8
1991	10.84	8.6	7.8	11.3	10.2	8.6	11.6
1992	10.85	8.7	8.1	11.5	10.4	8.6	11.6
1993	11.18	8.5	7.9	11.4	10.3	8.6	11.5
1994	10.58 ^r	8.6	7.9	11.5	10.7	8.6	11.5
1995	10.43	8.5	7.9	11.7	10.9	8.6	11.4
1996 ^c	—	8.3	7.9	11.4	10.6	8.6	11.4

^r Revised.

* 2WD/4WD. No combined figure available for this year.

^a 55% city, 45% highway miles sales weighted harmonic average.

^b In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

^c Through April 1996.**Sources: Average Passenger Car Fuel Efficiency:**1955–1995 U.S. DOT/FHWA, *Highway Statistics*, annual issues, Table VM-1.**New Car Fuel Efficiency (based on model year production):**

1955–1975: U.S. DOT/NHTSA, Consumer Programs Division, NPS-32.

1980–1990: Ibid., EPA Final Fuel Economy Calculations for NHTSA.

1991–1996: Ibid., Manufacturers' preliminary estimates for NHTSA.

▲ **TABLE 4-16M****Energy Intensiveness of Passenger Modes**

5-Year Intervals 1960–1990 and Annually 1990–1995

(Thousand Joules per Passenger-Kilometer)

Year	Air			Highway						
	Certificated Air Carrier		Inter-national Operations	Passenger Car*	Motor-cycle	Truck			Bus	
	Domestic Operations					Other 2-Axle 4-Tire Vehicle*	Single-Unit 2-Axle or More Truck	Combina-tion Truck	Transit Motor Bus	School Bus
1960	5,561	5,592		2,608	—	—	—	—	—	—
1965	6,466	5,668		2,736	—	5,088	—	18,630	—	—
1970	6,412	5,000		3,031	1,331	5,246	13,323	19,017	—	—
1975	4,918	4,622		3,189	1,295	4,747	12,652	18,788	—	—
1980	3,939	2,707		2,944	1,259	4,401	12,692	16,819	1,798	800
1985	3,224	2,993		2,649	1,234	4,278	13,035	17,455	2,226	500
1990	3,183	2,786		2,582	1,279	3,712	12,410	16,483	2,440	500
1991	3,046	2,788		2,171	1,493	3,734	12,060	16,093	2,470	500
1992	2,960	2,598		2,172	1,489	3,760	12,158	16,230	2,647	500
1993	2,965	2,531		2,239	1,489	3,452	13,255	15,624	2,587	500
1994	2,848	2,568		2,007	1,491	4,109	13,414	15,588	2,637	700
1995	2,812	2,581		1,975	1,490	4,070	13,309	15,485	NA	NA

* This table is based on official U.S. DOT/FHWA data; however over time, the Nationwide Personal Transportation Survey (NPTS) consistently shows declining vehicle occupancy rates.

NA Data not available at press time.

Note: See Tables 4-14A, 4-15A, 4-16A, 4-17A, 4-18A, and 4-20A for further notes regarding the calculation of the figures used in this table.

Sources:**Certificated Air Carrier:**

1960–1975: CAB, *Handbook of Airline Statistics*, 1969, 1973, & 1977, Tables 2 and 13.

1975–1980: Ibid., *Air Carrier Traffic Statistics*, annual issues, pp. 4, 5, 15, and similar tables in earlier editions.

1980: Ibid., *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1984*.

1985–1995: U.S. DOT/BTS, Office of Airline Information, *Air Carrier Traffic Statistics*, annual issues, pp. 2, 3, and personal communication.

Passenger Car:

1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

Motorcycle:

1970–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

(continued on next page)

TABLE 4-16M (continued)
Energy Intensiveness of Passenger Modes

Other 2-axle 4-tire Vehicle:	
1965–1980:	U.S. DOT/FHWA, <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985–1995:	<i>Ibid.</i> , <i>Highway Statistics</i> , annual issues, Table VM-1.
Single-Unit 2-axle 6-tires or More Truck:	
1970–1980:	U.S. DOT/FHWA, <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985–1995:	<i>Ibid.</i> , <i>Highway Statistics</i> , annual issues, Table VM-1.
Combination Truck:	
1965–1980:	U.S. DOT/FHWA, <i>Highway Statistics, Summary to 1985</i> , Table VM-201A.
1985–1995:	<i>Ibid.</i> , <i>Highway Statistics</i> , annual issues, Table VM-1.
Transit Motor Bus:	
1960–1994:	American Public Transit Association (APTA), <i>Transit Fact Book</i> , 1996, Tables 5 and 58, Eno Transportation Foundation, Inc., <i>Transportation in America</i> , 1996, p. 47.
School Bus:	
1980–1994:	Eno Transportation Foundation, Inc., <i>Transportation in America</i> , 1996, p. 56 and earlier editions. National Safety Council, <i>Accident Facts</i> , 1996, p. 94, and similar tables in earlier editions.
Amtrak:	
1975–1993:	Amtrak, State and Local Affairs Department.

TABLE 4-17M
Energy Intensiveness of Certificated Air Carriers* (All Services)

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Aircraft-Kilometers (millions)		Seats per Aircraft		Available Seat-Kilometers (thousands)		Passenger-Kilometers (millions)	
	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations
1960	1,381	293	61.7	77.2	85,181,888	22,603,006	50,049	14,405
1965	1,825	457	85.0	116.1	155,138,896	53,083,196	85,659	32,171
1970	3,328	764	105.4	136.9	350,868,661	104,678,849	174,520	63,883
1975	3,135	499	126.9	221.2	397,901,477	110,366,753	218,871	60,067
1980	4,060	645	139.0	243.8	564,423,648	157,332,643	328,898	101,958
1985	4,902	668	149.4	266.5	732,410,784	177,958,223	447,134	117,864
1990	6,378	1,223	144.0	240.3	918,224,884	293,950,039	556,629	203,362
1991	6,202	1,299	143.1	231.1	887,652,908	300,090,605	544,095	201,508
1992	6,429	1,456	141.9	227.4	912,562,422	331,249,948	570,937	223,618
1993	6,690	1,547	140.0	220.4	936,843,747	340,908,913	582,953	231,369
1994	7,049	1,577	136.6	215.4	962,600,121	339,746,438 ^r	625,068	239,966
1995	7,432	1,601	133.2	216.6	990,272,355	346,761,425	648,876	249,075

Year	Fuel Consumed (thousand liters)		Seat-Kilometers per Liter		Energy Intensiveness (thousand joules/passenger- kilometer)	
	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations	Domestic Operations	Inter- national Operations
1960	7,397,588	2,140,726	12	11	5,561 ^r	5,592 ^r
1965	14,720,839	4,846,043	11	11	6,466	5,668 ^r
1970	29,740,441	8,489,085	12	12	6,412	5,000 ^r
1975	28,609,008	7,377,389	14	15	4,918	4,621
1980	34,432,195	7,335,050	16	21	3,939 ^r	2,707 ^r
1985	38,313,400	9,375,951	19	19	3,224	2,993
1990	47,086,880	15,054,973	20	20	3,183	2,786
1991	44,052,880	14,932,360	20	20	3,046	2,788
1992	44,910,578	15,441,638	20	21	2,960	2,598
1993	45,925,004	15,564,838	20	22	2,964	2,531
1994	47,319,747	16,378,952	20	21	2,848	2,568
1995	48,500,118	17,085,139	20	20	2,812	2,581

^r Revised.

* U.S. owned carriers only. Operation of foreign owned carriers in or out of U.S. not included.

Note: Aircraft-Miles includes all four air carrier groups (Majors, Nationals, Large Regionals, and Medium Regionals), scheduled and charter, passenger and all-cargo. Fuel Consumed includes Majors, Nationals, and Large Regionals, scheduled and charter, passenger and all-cargo. Passenger-Miles include all four air carrier groups, scheduled and charter, passenger service only. Heat equivalent factor used for joule conversion is 37,626,700 joules/liter.

Sources: Aircraft-Miles and Passenger-Miles:

1960–1970: CAB, *Handbook of Airline Statistics*, 1969 & 1973, Part III, Tables 2 and 13.

1975–1980: Ibid., *Air Carrier Traffic Statistics*, 1976, pp. 4, 14; 1981, pp. 2, 3.

1985–1995: U.S. DOT/BTS, Office of Airline Information, Ibid., pp. 2, 3.

Seats per Aircraft and Available Seat-Miles:

1960–1970: CAB, *Handbook of Airline Statistics*, 1969 and 1973, Part III, Tables 2 and 13.

1975–1980: Ibid., *Air Carrier Traffic Statistics*, 1976, pp. 4, 14; 1981, pp. 2, 3.

1985–1995: U.S. DOT/BTS, Office of Airline Information, Ibid., annual issues, pp. 2, 3.

Fuel Consumed:

1960–1975: CAB, *Handbook of Airline Statistics*, 1977, Table 2.

1960–1980: CAB, *Fuel Cost and Consumption, Twelve Months Ended Dec. 31, 1984*.

1985–1995: U.S. DOT/BTS, Office of Airline Information, personal communication.

TABLE 4-18M**Energy Intensiveness of Passenger Cars and Motorcycles**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Vehicle-Kilometers (millions)		Passenger-Kilometers (millions) ^a		Fuel Consumed (million liters)		Energy Intensiveness (thousand joules/passenger- kilometer)	
	Passenger Cars	Motor- cycles	Passenger Cars	Motor- cycles	Passenger Cars	Motor- cycles	Passenger Cars	Motor- cycles
1960	946,428	*	2,082,142	*	155,842	*	2,608	*
1965	1,141,508	*	2,397,166	*	188,222	*	2,736	*
1970	1,475,286	4,794	2,950,571	5,945	256,727	227	3,031	1,331
1975	1,663,981	9,059	3,161,564	11,505	289,383	428	3,189	1,295
1980	1,788,940	16,438	3,220,091	21,369	272,107	772	2,944	1,259
1985	2,028,683	14,622	3,448,761	19,447	262,208	689	2,649	1,234
1990	2,435,234	15,381	3,677,203	19,687	272,508	723	2,582	1,279
1991	2,468,013	14,771	4,294,341	16,248	267,598	697	2,171	1,493
1992	2,576,301	15,381	4,482,763	16,919	279,450	723	2,172	1,489
1993	2,490,244	15,942	4,333,025	17,537	278,428	750	2,239	1,489
1994 ^r	2,416,272	16,480	4,435,711	18,128	255,580	776	2,007	1,491
1995	2,480,736	15,767	4,561,932	17,344	258,608	742	1,975	1,490

^r Revised.

* Data included with passenger car information.

^a The Federal Highway Administration calculates passenger-miles (which they call person-miles) by multiplying vehicle-miles by an average occupancy rate for that vehicle type based on data provided by the Nationwide Personal Transportation Survey, conducted approximately every five years. For more information, see, for example, FHWA publication FHWA-PL-96-024, *Annual Vehicle Miles of Travel and Related Data*.

Note: This table is based on official U.S. DOT/FHWA data; however over time, the Nationwide Personal Transportation Survey (NPTS) consistently shows declining vehicle occupancy rates.

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Note: The heat equivalent factor used for joule conversion is 34,839,537 joules/liter.

Source: 1960-1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.
1985-1995: Ibid., *Highway Statistics*, annual issues, Table VM-1, for vehicle-miles and fuel consumption data.

▲ **TABLE 4-19M**

Energy Intensiveness of Trucks

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Vehicle-Kilometers (millions)			Passenger-Kilometers (millions)			Fuel Consumed (million liters)		Energy Intensiveness (thousand joules/passenger-kilometer)		
	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Other 2-Axle 4-Tire Vehicles	Single-Unit 2-Axle 6-Tire or More Truck	Combination Truck
1960	157,603	*	45,833	252,165	—	45,833	—	—	—	—	—
1965	227,173	*	52,299	358,934	—	52,299	52,420	*	25,203	5,088	18,630 ^r
1970	198,410	43,583	56,543	309,519	43,583	56,543	46,610	15,021	27,815	5,246	13,323
1975	322,995	55,693	75,195	497,413	55,693	75,195	67,770	18,227	36,544	4,747	12,652
1980	468,214	64,073	110,527	707,004	64,073	110,527	89,313	21,036	48,086	4,401	12,692
1985	600,401	75,607	128,104	894,597	75,607	128,104	109,856	25,495	57,841	4,278	13,035
1990	750,102	86,008	155,088	1,170,160	86,008	155,088	124,680	27,611	66,127	3,712 ^r	12,410
1991	760,975	86,562	156,013	1,149,072	86,562	156,013	123,143	27,005	64,946	3,734	12,060
1992	769,577	86,407	159,505	1,162,061	86,407	159,505	125,399	27,175	66,968	3,760 ^r	12,158 ^r
1993	922,795	91,380	165,960	1,393,420	91,380	165,960	138,077	31,332	67,074	3,452	13,255
1994 ^r	1,077,168	98,627	175,309	1,425,713	98,627	175,309	168,159	34,224	70,689	4,109	13,414
1995	1,105,582	100,916	185,805	1,456,423	100,916	185,805	170,150	34,743	74,429	4,070	13,309
											15,485

^r Revised.

* Included in Other 2-Axle 4-Tire Vehicles.

Note: The heat equivalent factors used for joule conversions are: Automotive gasoline = 34,839,537 joules/liter. (other 2-axle 4-tire vehicles) Distillate/diesel fuel = 38,657,950 joules/liter. (single-unit 2-axle 6-tire or more trucks and combination trucks).

Note: In 1995, the Federal Highway Administration revised its vehicle type categories for data from 1993 and later. These new categories include Passenger Cars, Other 2-Axle 4-Tire Vehicles, Single-Unit 2-Axle 6-Tire or More Trucks, and Combination Trucks. Other 2-Axle 4-Tire Vehicles include vans, pickup trucks, and sport/utility vehicles. In previous years, some minivans and sport/utility vehicles were included in the Passenger Car category. Single-Unit 2-Axle 6-Tire or More Trucks are on a single frame with at least 2 axles and 6 tires. Pre-1993 data have been reassigned to the closest available category.

Sources: 1960–1980: U.S. DOT/FHWA, *Highway Statistics, Summary to 1985*, Table VM-201A.

1985–1995: Ibid., *Highway Statistics*, annual issues, Table VM-1.

TABLE 4-20M**Energy Intensiveness of Transit Motor Buses and School Buses**

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Vehicle-Kilometers (millions)		Passenger-Kilometers (millions)		Fuel Consumed (million liters)		Energy Intensiveness (thousand joules/passenger-kilometer)	
	Motor Bus	School Bus ^r	Motor Bus	School Bus	Motor Bus (Diesel)	School Bus (Gasoline)	Motor Bus	School Bus ^r
1960	2,536	2,383	—	—	787	—	—	—
1965	2,459	2,837	—	—	939	943	—	—
1970	2,268	3,400	—	—	1,026	1,136	—	—
1975	2,456	4,000	—	—	1,382	1,295	—	—
1980	2,699	4,800	35,068	66,000	1,632	1,438	1,798	800
1985	2,998	5,500	34,055	113,000	1,961	1,711	2,226	500
1990	3,428	6,100	33,766	119,000	2,131	1,787	2,440	500
1991	3,487	6,900	33,941	134,000	2,169	2,018	2,470	500
1992	3,505	7,100	32,728	145,000	2,241	2,180	2,647	500
1993	3,557 ^r	6,900	32,584 ^r	152,000	2,180 ^r	2,358	2,587 ^r	500
1994	3,481	7,100	32,570	137,000	2,222	2,576	2,637	700
1995	NA	8,000	NA	153,000	NA	NA	NA	NA

^r Revised.

NA Data not available at press time.

Note: The heat equivalent factors used for joule conversions are: Automotive gasoline = 34,839,537 joules/liter. (School Bus). Results have been rounded to match precision level of component data. Distillate/Diesel Oil = 38,657,950 joules/liter. (Motor Bus). One barrel equals 42 gallons.

Sources: **School Bus:**
1960–1995: National Safety Council, *Accident Facts*, annual issues (vehicle- and passenger-miles).
Fuel Consumed:
1960–1994: Eno Transportation Foundation, Inc., *Transportation in America*, 1996, p. 56 and earlier editions.
Motor Bus:
1960–1994: American Public Transit Association (APTA), *Transit Fact Book*, 1996, Tables 5 and 58, and similar tables in earlier editions.

TABLE 4-21M

Energy Intensiveness of Class I Railroad Freight Service

5-Year Intervals 1960–1990 and Annually 1990–1995

Year	Revenue Freight Tonne-Kilometers (millions)	Fuel Consumed in Freight Service (million liters)	Energy Intensiveness (thousand joules/revenue freight tonne-kilometer)
1960	835,555	13,109	606
1965	1,018,883	13,597	516
1970	1,116,600	13,419 ^r	465 ^r
1975	1,101,187	13,843	486
1980	1,341,653	14,778	426
1985	1,280,372	11,773	355
1990	1,509,566	11,792	302
1991	1,516,729	11,000	280
1992	1,557,471	11,375	282
1993	1,619,560	11,689	279
1994	1,752,990	12,621	278
1995	1,906,268	13,173	267

Note: The heat equivalent factor used for joule conversion is 38,657,950 joules/liter.

Source: Association of American Railroads (AAR), *Railroad Facts*, 1996, p. 40.

TABLE 4-26M**Domestic Demand for Refined Petroleum Products by Sector**

5-Year Intervals 1955–1990 and Annually 1990–1995

(Petajoules per Day)*

Year	Residential & Commercial	Industrial	Transportation	Electric Utilities	Total	Transportation as % of Total
1955	8.28	14.79	25.45	1.28	49.80	51.1
1960	10.05	16.59	29.21	1.58	57.44	50.9
1965	11.15	19.63	34.33	2.12	67.24	51.1
1970	12.43	22.53	44.27	6.13	85.35	51.9
1975	11.03	23.56	50.92	9.17	94.67	53.8
1980	8.77	27.45	54.81	7.59	98.62	55.6
1985	7.30	22.59	56.36	3.17	89.42	63.0
1990	6.27	24.03	63.02	4.87	98.19	64.2
1991	6.21	23.29	62.01	3.43	94.93	65.3
1992	6.11	24.91	62.90	2.76	96.69	65.1
1993	6.19	24.41	64.15	3.03	97.78	65.6
1994 ^r	6.04	25.59	65.97	2.83	100.41	65.7
1995 ^p	6.14	25.05	67.03	1.90	100.06	67.0

^p Preliminary conversion factor.^r Revised.* Data derived by multiplying figures in Table 4-25 by conversion factors in each sector column in Table A3 in U.S. DOE/EIA's *Annual Energy Review 1995*.Note: Sum of components may not equal total due to independent rounding.

TABLE 4-27M
Domestic Demand for Gasoline

5-Year Intervals 1955–1990 and Annually 1990–1995

(Kiloliters)

Year	Highway	Non-Highway				Total	Total Demand
		Agriculture	Aviation ^a	Marine	Other ^b		
1955	176,124,080 ^r	8,162,991	3,783,292	97,985	6,256,385	18,300,654	194,424,734 ^r
1960	209,820,156 ^r	8,674,900	5,011,011	229,521	6,269,653	20,185,085	230,005,241 ^r
1965	253,541,290 ^r	7,432,399	1,897,775	364,671	6,234,861	15,929,706	269,470,996 ^r
1970	324,025,074 ^r	7,313,287	1,487,712	2,264,278	4,087,159	15,152,436	339,177,522 ^r
1975	376,094,283 ^r	5,923,723	1,550,933	2,762,283	3,550,701	13,787,640	389,881,923 ^r
1980	383,019,395	4,008,918	1,562,932	3,982,954	4,279,526	13,834,329	396,853,725
1985	392,198,402	4,090,808	1,444,191	3,986,031	5,639,329	15,160,359	407,358,762
1990	414,614,117	2,578,698	1,366,314	4,922,629	6,562,008	15,429,650	430,043,767
1991	408,496,157	2,948,673	1,281,525	6,471,870	5,608,152	16,310,220	424,806,377
1992	420,083,746	3,049,240	1,303,325	4,993,606	5,448,336	14,794,507	434,878,253
1993	430,281,529	3,203,670	1,288,732	3,307,265	3,218,388	11,018,055	441,299,583
1994 ^r	437,903,959	3,452,281	1,378,764	3,394,379	3,262,859	11,488,283	449,392,242
1995	443,122,471	3,508,062	1,389,193	4,014,028	3,172,081	12,083,364	455,205,836

^r Revised.

^a Does not include aviation jet fuel.

^b Includes state, county, and municipal use, industrial and commercial, construction, and miscellaneous.

Source: 1955–1975: U.S. DOT/FHWA, *Highway Statistics*, annual issues, Tables MF-24 and MF-26, and personal communication.
1980–1985: Ibid., Tables MF-21A and MF-24.
1990–1995: Ibid., personal communication, HPM-10.

APPENDIX C

Glossary

GLOSSARY

Key

AIR - Air Carrier
AUTO - Automobile
ENERGY - Energy
GA - General Aviation
GAS - Gas Pipeline
HAZMAT - Hazardous Materials
HWY - Highway
OIL - Oil Pipeline
RAIL - Railroad
RECBOAT - Recreational Boating
TRANSIT - Transit
TRUCK - Truck
WATER - Water Transport

- 14 CFR 121 (AIR): Revenue operations of air carriers, commercial operators and deregulated all cargo carriers, using large aircraft.
- 14 CFR 135 (AIR): Commuter air carriers (scheduled) and on-demand air taxi operators (unscheduled) revenue operations, using small aircraft.
- ACCIDENT (AUTO): An occurrence involving a commercial motor vehicle operating on a public road which results in a fatality; bodily injury to persons, who as a result of the injury, immediately receives medical treatment away from the scene of the accident; or, one or more motor vehicles incurring disabling damage as a result of the accident, requiring the vehicle to be transported away from the scene by a tow truck or other vehicle.
- ACCIDENT (RECBOAT): Occurrences involving recreational vessels or their equipment are required to be reported whenever they result in 1. a death; 2. a person is injured and requires medical treatment beyond first aid; 3. damage to the vessel and other property damage totaling more than \$200; or 4. a person's disappearing from the vessel under circumstances indicating death or injury.
- ACCIDENT (TRANSIT): An incident involving a moving vehicle. Includes a vehicle, object, or person (except suicides) or a derailment/left roadway.
- ACTIVE AIRCRAFT (GA): All legally registered civil aircraft which flew one or more hours.
- AERIAL APPLICATION FLYING (GA): The operation of aircraft for the purpose of dispensing any substance for plant nourishment soil treatment, propagation of plant life pest control, or fire control, including flying to and from the application site.
- AERIAL OBSERVATION FLYING (GA): Any use of an aircraft for aerial mapping and photography, survey, patrol, fish spotting, search and rescue, hunting, highway traffic advisory, or sightseeing, not included under Part 135.
- AIR CARRIER (AIR): The commercial system of air transportation consisting of certificated air carriers, air taxis (including commuters), supplemental air carriers, and commercial operators of large aircraft. The following define several types of air carriers:
- Certificated Air Carrier - An air carrier holding a Certificate of Public Convenience and Necessity issued by the U.S. Department of Transportation (DOT) to conduct scheduled services interstate. Nonscheduled or charter operations may also be conducted by these carriers. These carriers operate large aircraft (30 seats or more for a maximum load of 7,500 pounds or more) in accordance with FAR Part 121.
 - Supplemental Air Carrier - One of a class of air carriers holding Certificates of Public Convenience and Necessity issued by the U.S. DOT, authorizing them to perform

passenger and cargo charter services supplementing the scheduled service of the certificated route air carriers. Both international and domestic charter operations are for a temporary period. The authority of supplemental air carriers to engage in military charters is of an indefinite period. In addition, they can perform on an emergency basis, as may be authorized by the DOT, scheduled operations including the transportation of individually ticketed passengers and individually way billed cargo.

- Commercial Operator (of large aircraft) - An air carrier certificated with FAR Part 121 or 127 to conduct scheduled services on specified routes. These air carriers may also provide nonscheduled or charter services as a secondary operation. Four carrier groupings have been designated for statistical and financial data aggregation and analysis: Majors (annual operating revenues greater than \$1 billion), Nationals (annual operation revenue between \$100 million and \$1 billion), Large Regionals (annual operating revenues between \$10 million and \$99,999,999), and Medium Regionals (annual operating revenues less than \$10 million).

AIR TAXI (AIR):

A class of air carriers, operating pursuant to FAR Part 135, engaged in the nonscheduled air transportation of persons, property, or mail for compensation or hire in aircraft with 30 or fewer passenger seats and a payload capacity of 7,500 pounds or less. Air taxis do not hold Certificates of Public Convenience and Necessity and do not hold specific route authority.

AIRCRAFT ACCIDENT (AIR):

As defined by the National Transportation Safety Board, it is "an occurrence associated with the operation of an aircraft which takes place between the time any person boards the aircraft with the intention of flight until such time as all such persons have disembarked, and in which any person suffers death or serious injury as a result of being in or upon the aircraft or by direct contact with the aircraft or anything attached thereto, or in which the aircraft receives substantial damage."

AIRCRAFT REVENUE HOURS (AIR):

The airborne hours in revenue service, computed from the moment an aircraft leaves the ground until it touches the ground again.

AIRCRAFT REVENUE MILES (AIR):

The miles (computed in airport-to-airport distances) for each interairport hop actually completed in revenue service, whether or not performed in accordance with the scheduled pattern. For this purpose, operation to a flag stop is a hop completed even though a landing is not actually made. In cases where the interairport distances are inapplicable, aircraft miles flown are determined by multiplying the normal cruising speed for the aircraft type by the airborne hours.

ALL-CARGO CARRIER (AIR):

One of a class of air carriers holding an All Cargo Air Service Certificate issued under section 418 of the Federal Aviation Act and certificated in accordance with FAR Part 121 to provide domestic air transportation of cargo.

AMTRAK (RAIL):

Operated by the National Railroad Passenger Corporation of Washington, D.C. This rail system was created by President Nixon in 1970 and was given the responsibility for the operation of intercity, as distinct from suburban, passenger trains between points designated by the Secretary of Transportation.

ARTERIAL (HWY):

A major highway, primarily for through traffic, usually on a continuous route.

ASPHALT (ENERGY):

A dark-brown-to-black cement-like material containing bitumens as the predominant constituents, obtained by petroleum processing. The definition includes crude asphalt as well as the following finished products; cements, fluxes, the asphalt content of emulsions (exclusive of water), and petroleum distillates blended with asphalt to make cutback asphalt.

AVERAGE HAUL (RAIL):

The average distance, in miles, one ton is carried. It is computed by dividing ton-miles by tons of freight originated.

AVERAGE LENGTH OF HAUL (MILES) (OIL):	The total number of ton-miles divided by the total number of tons transported.
AVERAGE LENGTH OF HAUL (MILES) (TRUCK):	The average distance in miles one ton is carried. Computed by dividing total ton-miles by tons of freight originated.
AVERAGE PASSENGER TRIP LENGTH (BUS):	Calculated by dividing revenue passenger-miles by the number of revenue passengers.
AVERAGE PASSENGER TRIP LENGTH (RAIL):	Calculated by dividing the number of revenue passenger-miles by the number of revenue passengers carried.
AVIATION GASOLINE (AVGAS) (GA):	All special grades of gasoline for use in aviation reciprocating engines, as given in American Society of Testing Materials (ASTM) Specification MIL-G5572. Excludes blending components, that will be used in blending or compounding into finished aviation gasoline.
AVIATION GASOLINE, FINISHED (ENERGY):	All special grades of gasoline for use in aviation reciprocating engines, as given in American Society for Testing and Materials (ASTM) Specification D910, and Military Specification MIL-G-5572. Excludes blending components that will be used in blending or compounding into finished aviation gasoline.
BARREL (OIL):	A volumetric unit of measure for crude oil and petroleum products equivalent to 42 U.S. standard gallons at 60 degrees Fahrenheit.
BTU—BRITISH THERMAL UNIT (ENERGY):	The amount of energy required to raise the temperature of one pound of water by 1°F at or near 39.1°F and 1 atmosphere of pressure. One BTU is about equal to the heat given off by a blue-tip match.
BULK CARRIER (WATER):	A ship designed with specialized holds for carrying dry or liquid commodities, in unpackaged bulk form, such as oil, grain, ore, and coal. Bulk carriers may be designed to carry a single bulk product (crude oil tanker), or accommodate several bulk product types (ore/bulk/oil carrier) on the same voyage or on a subsequent voyage after its holds are cleaned.
BUNKER C/NUMBER 6 FUEL OIL (WATER):	A high viscosity oil used mostly by ships, industry, and large-scale heating installations. This heavy fuel requires preheating in the storage tank to permit pumping and additional preheating to permit atomizing at the burners.
BUSINESS FLYING (GA):	Individual use of an aircraft not for compensation or hire by individuals for the purpose of transportation required by businesses in which they are engaged.
CAR-MILE (RAIL):	The movement of a car the distance of one mile. An empty car-mile is a mile run by a freight car without a load; a loaded car-mile is a mile run by a freight car with a load. In the case of intermodal movements, the car-miles generated will be loaded or empty depending on whether the trailers/containers are moved with or without a waybill, respectively.
CASUALTY (WATER):	Casualties involving commercial vessels are required to be reported to the Coast Guard whenever the casualty results in: • actual physical damage to property in excess of \$25,000; • material damage affecting the seaworthiness or efficiency of a vessel; • stranding or grounding; • loss of life; or

- injury causing any person to remain incapacitated for a period in excess of 72 hours, except injury to harbor workers not resulting in death and not resulting from vessel casualty or vessel equipment casualty.

CERTIFICATE OF PUBLIC
CONVENIENCE AND
NECESSITY (AIR):

A certificate issued to an air carrier under Section 401 of the Federal Aviation Act, by the Department of Transportation, authorizing the carrier to engage in air transportation.

CLASS A CARRIERS BY
INLAND AND COASTAL
WATERWAYS (WATER):

A Class A carrier by water is one with an average annual operation revenue that exceeds \$500,000.

CLASS B CARRIERS BY
INLAND AND COASTAL
WATERWAYS (WATER):

A Class B carrier by water is one with an average annual operating revenue greater than \$100,000 but less than \$500,000.

CLASS I RAILROAD
(RAIL):

A railroad with an annual gross operating revenue in excess of \$250 million based on 1991 dollars.

COACH SERVICE (AIR):

Transport service established for the carriage of passengers at special reduced passenger fares that are predicated on both the operation of specifically designated aircraft space and a reduction in the quality of service regularly and ordinarily provided.

COASTWISE TRAFFIC
(WATER):

Domestic traffic which moves over the ocean, or the Gulf of Mexico; e.g., between New Orleans and Baltimore, New York and Puerto Rico, San Francisco and Hawaii, Puerto Rico and Hawaii. Traffic between Great Lakes ports and seacoast ports, when having a carriage over the ocean, is also deemed to be coastwise. The Chesapeake Bay and Puget Sound are considered internal bodies of water rather than arms of the ocean; traffic confined to these areas is deemed to be "internal" rather than coastwise.

COKE (OIL):

The residue left by petroleum which has been distilled to dryness.

COLLISION WITH
VEHICLE (TRANSIT):

An incident in which a transit vehicle strikes or is struck by another vehicle. Reports are made if the incident results in a death, injury, or property damage over \$1,000.

COLLISION WITH
OBJECT (TRANSIT):

An incident in which a transit vehicle strikes an obstacle other than a vehicle or person (e.g., building, utility pole). Reports are made if the accident results in a death, injury, or property damage over \$1,000.

COLLISION WITH
PEOPLE (TRANSIT):

An incident in which a transit vehicle strikes a person. Except where specifically indicated, collisions with people do not include suicide attempts. Reports are made if the incident results in a death, injury, or property damage over \$1,000.

COMBINATION TRUCKS
(TRUCK):

A tractor not pulling a trailer; a tractor pulling at least one full or semi-trailer; or a single-unit truck pulling at least one trailer.

COMMERCIAL BUS
(BUS):

Any bus used to carry passengers at rates specified in tariffs; charges may be computed per passenger (as in regular route service) or per vehicle (as in charter service).

COMMUTER AIR
CARRIER (AIR):

A small certificated air taxi operator who performs at least five round trips per week between two or more points and publishes flight schedules which specify the times, days of the week, and points between which such flights are performed.

COMMUTER RAIL (TRANSIT):	Urban passenger train service for short distance travel between a central city and adjacent suburb. Does not include rapid rail transit or light rail service.
COMPACT CAR (AUTO):	An automobile industry designation usually consisting of cars with a wheelbase between 100 and 104 inches.
CORPORATE FLYING (GA):	The use of aircraft owned or leased, and operated by a corporate or business firm for the transportation of personnel or cargo in furtherance of the corporation's or firm's business, and which are flown by compensation for piloting.
CRUDE OIL (OIL):	A mixture of hydrocarbons that exists in the liquid phase in natural underground reservoirs and remains liquid at atmospheric pressure after passing through surface-separating facilities.
CRUDE OIL GATHERING LINES (OIL):	A network of pipelines transporting crude oil from individual wells to compressor station, processing point, or main trunk pipeline.
CRUDE OIL TRUNK LINES (OIL):	One of three types of pipeline network that is used to transport crude oil to the refineries for processing.
DEADWEIGHT TONNAGE (WATER):	The carrying capacity of a vessel in long tons (2,240 pounds). It is the difference between the light ship weight and the displacement loaded.
DEMAND AIR TAXI (GA):	Use of an aircraft operating under Federal Aviation Regulations, Part 135, passenger and cargo operations, including charter and excluding commuter air carrier.
DEMAND RESPONSE VEHICLE (TRANSIT):	A non-fixed-route vehicle with a lighting at pre-arranged times at any location within the system's service area.
DERAILMENT/LEFT ROADWAY (TRANSIT):	A noncollision incident in which a transit vehicle leaves the rails or road on which it travels. This also includes rollovers. Reports are made for all occurrences.
DISTILLATE FUEL OIL (OIL):	A general classification for one of the petroleum fractions produced in conventional distillation operations. It is used primarily for space heating, on and off highway diesel engine fuel (including railroad engine fuel and fuel for agricultural machinery), and electric power generation. Included are products known as No. 1, No. 2, and No. 4 fuel oils and No. 1, No. 2, and No. 4 diesel fuels and a petroleum distillate which meets the Specifications for No. 1 heating or fuel oil as defined in American Society for Testing and Materials (ASTM) D 396 and/or the Specifications for No. 1 diesel fuel as defined in ASTM Specification D 975.
DISTRIBUTION MAINS (GAS):	Generally, mains, services, and equipment that carry or control the supply of gas from the point of local supply to and including the sales meters.
DOMESTIC FREIGHT (WATER):	All waterborne commercial movements between points in the United States, Puerto Rico and the Virgin Islands, excluding traffic with the Panama Canal Zone. Cargo moved for the military in commercial vessels is reported as ordinary commercial cargo; military cargo moved in military vessels is omitted.
DOMESTIC OPERATIONS (AIR):	All air carrier operations having destinations within the 50 United States, the District of Columbia, the Commonwealth of Puerto Rico and the U.S. Virgin Islands.

**DOMESTIC PASSENGER
(WATER):**

Any person traveling on a public conveyance by water between points in the United States, Puerto Rico, and the Virgin Islands.

**DRY CARGO BARGES
(WATER):**

Large flat-bottomed, non-self-propelled vessels used to transport dry bulk materials such as coal and ore.

ECONOMY (AIR):

Transport service established for the carriage of passengers at fares and quality of service below that of coach service.

**ELECTRIC UTILITY
(ENERGY):**

A corporation, person, agency, authority, or other legal entity or instrumentality, that owns and/or operates facilities within the United States, its territories, or Puerto Rico, for the generation, transmission, distribution, or sale of electricity, primarily for use by the public, and that files forms listed in the Code of Federal Regulations, Title 18, Part 141.

**ENERGY EFFICIENCY
(ENERGY):**

In reference to transportation, the inverse of energy intensiveness: the ratio of outputs from a process to the energy inputs; for example, miles traveled per gallon of fuel (mpg).

EXPORTS (WATER):

Outbound international freight including re-export of foreign merchandise; or shipments of goods from the 50 states and the District of Columbia to foreign countries and to Puerto Rico, the Virgin Islands and other U.S. possessions and territories.

FATAL INJURY (AIR):

Any injury that results in death within thirty days of the accident.

**FATAL MOTOR VEHICLE
TRAFFIC CRASH: (AUTO)**

A police reported crash that involves a motor vehicle in transport on a trafficway and in which at least one person dies within 30 days of the crash.

FATALITY (HAZMAT):

Death that was due to a hazardous material.

FATALITY (RAIL):

Death of any person from an injury within 30 days of the accident/incident; or 2. Death of a railroad employee from occupational illness within 365 days after the occupational illness was diagnosed by a physician.

FATALITY (RECBOAT):

All deaths (other than deaths by natural causes) and missing persons resulting from an occurrence that involves a vessel or its equipment.

FATALITY (TRANSIT):

A transit-caused death confirmed within 30 days of a transit accident.

FATALITY (WATER):

All deaths and missing persons resulting from a vessel casualty.

**FEDERAL EXPENDITURES
(HWY):**

Intergovernmental payments to the State, District of Columbia, and local governments plus direct expenditures for capital outlay, maintenance, administration, and research.

**FERC-REGULATED
PIPELINE (OIL):**

A pipeline company operating in interstate commerce under a grant of authorization from the Federal Energy Regulatory Commission and subject to economic regulation by the Commission. Such a pipeline company is required to report relevant statistics to the FERC.

FERRY BOAT (TRANSIT):

A vessel which is limited in its use to the carriage of deck passengers or vehicles or both, operates on a short run on a frequent schedule between two points over the most direct water routes, other than in ocean or coastwise service, and is offered as a public service of a type normally attributed to a bridge or tunnel.

**FIELD AND GATHERING
PIPELINES (GAS):**

A network of pipelines (mains) transporting natural gas from the individual wells to a compressor station, processing point, or main trunk pipeline.

FIRST-CLASS SERVICE (AIR):	Transport service established for the carriage of passengers moving at either standard fares or premium fares, or at reduced fares not predicated upon the operation of specifically allocated aircraft space, and for whom standard or premium quality services are provided.
FIXED-WING AIRCRAFT (AIR):	Aircraft having nonrotating wings fixed to the airplane fuselage and outspread in flight.
FOREIGN FLAG AIR CARRIER (AIR):	A foreign air carrier that makes stops within the borders of the United States.
FOSSIL FUELS (ENERGY):	Any naturally occurring organic fuel such as petroleum, coal, and natural gas.
FREIGHT REVENUE (RAIL):	Revenue from the transportation of freight and from the exercise of transit, stopoff, diversion, and reconsignment privileges, as provided for in tariffs.
FREIGHTERS (WATER):	General cargo carriers, full containerhips, partial containerhips, roll-on/rolloff (Ro-Ro) ships, and barge carriers.
FULL-SIZE CAR (AUTO):	An automobile industry designation usually consisting of cars with a wheelbase between 110 and 114 inches.
GAS TRANSMISSION (GAS):	Pipelines transporting natural gas, flammable gas or gas which is toxic or corrosive in transmission or gather operations. • Accident - 1. An event that involves the release of gas from a pipeline or of liquefied natural gas or gas from an LNG facility resulting in a death, or personal injury necessitating in-patient hospitalization; or estimated property damage, including cost of gas lost, of the operator or others, or both, of \$50,000 or more; 2. An event that results in an emergency shutdown of an LNG facility; or 3. an event that is significant, in the judgment of the operator, even though it did not meet the criteria of (1.) or (2.). • Fatality - Death resulting from the failure or escape of gas. • Injury - An injury involving lost time or other than onsite medical treatment.
GAS, COMBINATION COMPANY (GAS):	A company that supplies both gas and some other utilities service (electricity, water, etc). A combination utilities derives at least 5 percent but less than 95 percent of its total sales revenues from gas operations.
GAS, DISTRIBUTION COMPANY (GAS):	A company that obtains the major portion of its gas operating revenues from the operation of a retail gas distribution system, and which operates no transmission system other than incidental connections within its own system or the system of another company. A distribution company obtains at least 90 percent of its gas operating revenues from sales to ultimate customers and classifies at least 90 percent of mains (other than service pipe) as distribution.
GAS, INTEGRATED COMPANY (GAS):	A company that obtains a significant portion of its gas operating revenues from the operations of both a retail gas distribution system and gas transmission system. An integrated company obtains less than 90 percent but more than 10 percent of its gas operating revenues from either its retail or transmission operations or does not meet the classification of mains established for distribution.
GAS, TRANSMISSION COMPANY (GAS):	A company which obtains at least 90 percent of its gas operating revenues from sales for resale and/or transportation of gas for others and/or main line sales to industrial customers and classifies at least 90 percent of mains (other than service pipe) as field and gathering, storage and/or transmission.

GASOHOL (ENERGY):	A blend of finished motor gasoline (leaded or unleaded) and alcohol (generally ethanol but sometimes methanol) limited to 10 percent by volume of alcohol.
GASOLINE (ENERGY):	A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, obtained by blending appropriate refinery streams to form a fuel suitable for use in spark ignition engines. Motor gasoline includes both leaded or unleaded grades of finished motor gasoline, blending components, and gasohol.
GENERAL AVIATION (GA):	(1) That portion of civil aviation that encompasses all facets of aviation, except those air carriers holding a Certificate of Public Convenience and Necessity. (2) All civil aviation activity except that of air carriers certificated in accordance with Federal Aviation Regulations (FAR) Parts 121, 123, 127, and 135. The types of aircraft used in general aviation activities cover a wide spectrum from corporate multi-engine jet aircraft piloted by professional crews to amateur-built single engine piston acrobatic planes, balloons, and dirigibles. (3) All civil aviation operation other than scheduled air services and nonscheduled air transport operations for taxis, commuter air carriers, and air travel clubs which do not hold Certificates of Public Convenience and Necessity.
GROSS VEHICLE WEIGHT (GVW) (TRUCK):	The maximum rated capacity of a vehicle, including the weight of the base vehicle, all added equipment, driver and passengers, and all cargo loaded into or on the vehicle. Actual weight may be less than or greater than GVWR.
HAZARDOUS MATERIAL (HAZMAT):	A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated.
HEAVY RAIL (TRANSIT):	An electric railway with the capacity for a "heavy volume" of traffic and characterized by exclusive rights-of-way, multicar trains, high speed and rapid acceleration, sophisticated signaling, and high platform loading. Also known as "subway," "elevated (railway)," or "metropolitan railway (metro)."
HIGHWAY TRUST FUND (HWY):	This is a grant-in-aid type fund administered by the FHWA. That is, most funds for highway improvements are apportioned to States in accordance with formulas that give weight to population, area and mileage.
HIGHWAY-RAIL GRADE CROSSING (RAIL):	A location where one or more railroad tracks cross a public highway, road, or street or a private roadway at grade, including sidewalks and pathways at, or associated with, the crossing.
HIGHWAY-RAIL GRADE-CROSSING ACCIDENT (RAIL):	Any impact between railroad on-track equipment and an automobile, bus, truck, motorcycle, bicycle, farm vehicle, or pedestrian, at a highway-rail grade crossing.
IMPORTS (WATER):	Receipts of goods into the 50 States and the District of Columbia from foreign countries and from Puerto Rico, the Virgin Islands, and other U.S. possessions and territories.
INCIDENT (HAZMAT):	Any unintentional release of hazardous material while in transit or storage.
INCIDENT (TRANSIT):	Collisions, derailments, personal casualties, fires, and property damage in excess of \$1,000, associated with transit agency revenue vehicles; all other facilities on the transit property; and service vehicles, maintenance areas, and rights-of-way.
INJURY (RAIL):	1. Injury to any person other than a railroad employee that requires medical treatment; or 2. Injury to a railroad employee that requires medical treatment or results in restriction of work or motion for one or more workdays, one or more lost workdays, termination of employment, transfer to another job, or loss of consciousness.

INJURY (RECBOAT):	All injuries meeting the criteria set forth above, resulting from an occurrence that involves a vessel or its equipment.
INJURY (TRANSIT):	Any physical damage or harm to a person; there are no thresholds, all injuries are reported.
INJURY (WATER):	All personal injuries resulting from a vessel casualty.
INLAND AND COASTAL WATERWAYS: INLAND AND COASTAL CHANNELS (WATER):	These terms include the Atlantic Coast Waterways, the Atlantic Intracoastal Waterway, the New York State Barge Canal System, the Gulf Coast Waterways, the Gulf Intracoastal Waterway, the Mississippi River System (including the Illinois Waterway), Pacific Coast Waterways, the Great Lakes, and all other channels (waterways) of the United States, exclusive of Alaska, that are usable for commercial navigation.
INSTRUCTIONAL FLYING (GA):	Any use of an aircraft for the purpose of formal instruction with the flying instructor aboard, or, with the maneuvers on the particular flight(s) specified by the flight instructor; excludes proficiency flying.
INTERCITY BUS-CLASS I (BUS):	An interstate motor carrier of passengers with an average annual gross revenue of at least \$1,000,000 is defined by the ICC as a Class I carrier.
INTERCITY BUS-TOTAL (BUS):	This figure includes Class I, II, and III interstate carriers, all of which report to the Interstate Commerce Commission, and intrastate carriers.
INTERMEDIATE CAR (AUTO):	An automobile industry designation usually consisting of cars with a wheelbase between 105 and 109 inches.
INTERNAL TRAFFIC (WATER):	Includes all local (intraport) traffic and traffic between ports or landings wherein the entire movement takes place on inland waterways. Also termed internal, are movements involving carriage on both inland waterways and the water of the Great Lakes, and inland movements that cross short stretches of open water that link inland systems. Also known as Internal Water Transportation.
INTERNATIONAL (FOREIGN) FREIGHT (WATER):	Movements between the United States and foreign countries and between Puerto Rico, the Virgin Islands and foreign countries. Trade between U.S. territories and possessions (i.e., Guam, Wake, American Samoa, etc.) and foreign countries is excluded. Traffic to or from the Panama Canal Zone is included.
INTERNATIONAL OPERATIONS (AIR):	In general, operations outside the territory of the United States, including operations between the United States and foreign countries, and the U.S. and its territories or possessions. Includes both the combination passenger/cargo carriers and the all-cargo carriers engaged in international and territorial operations.
INTERNATIONAL PASSENGER (WATER):	Any person traveling on a waterborne public conveyance between the United States and foreign countries and between Puerto Rico and the Virgin Islands and foreign countries.
INTERSTATE (HWY):	(1) Travel between two or more states. (2) Limited access divided facility of at least four lanes designated by the Federal Highway Administration as part of the Interstate System.
INTRATERRITORIAL TRAFFIC (WATER):	Traffic between ports in Puerto Rico and the Virgin Islands, which are considered as a single unit.

JET ENGINE (AIR):	An engine which converts fuel and air into a fast-moving stream of hot gases which effect propulsion of the device of which the engine is a part.
JET FUEL (AIR):	The term includes kerosene-type jet fuel and naphtha-type jet fuel. Kerosene-type jet fuel is a kerosene quality product used primarily for commercial turbojet and turboprop aircraft engines. Naphtha-type jet fuel is a fuel in the heavy naphtha range used primarily for military turbojet and turboprop aircraft engines.
KEROSENE-TYPE JET FUEL (AIR):	A quality kerosene product with an average gravity of 40.7 degrees API and a 10 percent distillation temperature of 400 degrees Fahrenheit. It is covered by American Society of Testing Materials (ASTM) Specification D1655 and Military Specification MIL-T-5624L (Grades JP-5 and JP-8). A relatively low freezing point distillate of the kerosene type; it is used primarily for a commercial turbojet and turboprop aircraft engines.
LAKELIKE OR GREAT LAKES (WATER):	These terms apply to traffic between U.S. ports on the Great Lakes system. The Great Lakes system is treated as a separate system rather than as a part of the inland system.
LARGE REGIONALS (AIR):	Air carrier groups with annual operating revenues between \$10,000,000 and \$100,000,000.
LARGE-SIZE CAR (AUTO):	An automobile industry designation usually consisting of cars with a wheelbase of greater than 114 inches.
LARGE TRUCK (TRUCK):	Trucks over 10,000 lbs gross vehicle weight rating (GVWR), including single-unit trucks, tractor trailer combinations, truck with cargo trailer(s), and truck-tractors pulling no trailer (buses, motor homes, and farm and construction equipment, other than trucks, are excluded).
LIGHT RAIL (TRANSIT):	A streetcar-type vehicle operated on city streets, semi-exclusive rights-of-way, or exclusive rights-of-way. Service may be provided by step-entry vehicles or by level boarding.
LIGHT TRUCK (TRUCK):	Trucks of 10,000 pounds gross vehicle weight rating (GVWR) or less, including pickups, vans, truck-based station wagons, and utility vehicles.
LINE MILEAGE (RAIL):	The aggregate length of roadway of all line-haul railroads. It does not include the mileage of yard tracks or sidings, nor does it reflect the fact that a mile of railroad may include two or more parallel tracks. Jointly-used track is counted only once.
LIQUID PETROLEUM GAS (LPG) (GAS):	Consists of propane and butane and is usually derived from natural gas. In locations where there is no natural gas and the gasoline consumption is low, naphtha is converted to LPG by catalytic reforming.
LIQUID TRANSMISSION (OIL):	Pipelines carrying hazardous material, petroleum and petroleum products in liquid form. • Accident - Release of the commodity transported as presented in 49 CFR Section 195.50. • Fatality - Death resulting from the escape of liquid. • Injury - An injury requiring medical treatment other than on-site first aid.
LIQUEFIED NATURAL GAS (LNG) (GAS):	A pipeline facility that is used for liquefying or solidifying natural gas or synthetic gas or transferring, storing or vaporizing liquefied natural gas.
LOCAL (WATER):	Freight movements within the confines of a port, whether the port has only one or several arms or channel, (except car-ferry and general ferry). The term is also applied to marine products, sand, and gravel taken directly from the Great Lakes.
LOCAL RURAL ROADS (AUTO):	Streets outside urban boundaries other than principal arteries of travel.

LOCAL STREETS AND ROADS (HWY):	Streets whose primary purpose is feeding higher order systems, providing direct access with little or no through traffic.
LOCOMOTIVE (RAIL):	A self-propelled unit of equipment designed for moving other railroad rolling equipment in revenue service including a self-propelled unit designed to carry freight or passenger traffic, or both, and may consist of one or more units operated from single control.
LOCOMOTIVE-MILE (RAIL):	The movement of a locomotive unit, under its own power, the distance of one mile.
MAIN RURAL ROADS (AUTO):	Streets outside urban boundaries that are generally recognized as principal arteries of travel.
MAINS (GAS):	A distribution line that serves as a common source of supply for more than one gas service line.
MAJOR INJURY (HAZMAT):	1. Injuries requiring hospitalization; 2. Injuries involving second- or third-degree burns; or 3. Injury-related lost time at work of one or more days, such as would be caused by inhalation of strong, irritating vapors, is classified as a major injury. All other reported injuries are considered minor.
MAJORS (AIR):	Air carrier groups with annual operating revenues exceeding \$1,000,000,000.
MARITIME CARRIERS (WATER):	Carriers which operate on the open sea; i.e., their operations must include a foreign or international component, and may include a domestic component.
MARITIME REVENUE (WATER):	Revenue received for operations in international or foreign shipping.
MEDIUM REGIONALS (AIR):	Air carrier groups with annual operating revenues less than \$10,000,000 or that operate only aircraft with 60 seats or less (or 18,000 lbs. maximum payload).
MINI-SUBCOMPACT CAR (AUTO):	An automobile industry designation usually consisting of cars with a wheelbase of less than 95 inches.
MINOR ARTERIALS (HWY):	Streets and highways linking cities and larger towns in rural areas, in distributing trips to small geographic areas in urban areas (not penetrating identifiable neighborhoods).
MOTOR BUS (TRANSIT):	Rubber-tired, self-propelled, manually steered bus with fuel supply onboard the vehicle. Motor bus types include: intercity, school, and transit.
MOTOR GASOLINE, FINISHED (ENERGY):	A complex mixture of relatively volatile hydrocarbons, with or without small quantities of additives, that have been blended to form a fuel suitable for use in spark-ignition engines and conforming to ASTM Specification D439. Included are the following:
LEADED REGULAR:	A gasoline having an antiknock index $(R + M)/2$ greater than or equal to 87 and less than or equal to 90, and containing more than 0.05 grams of lead or 0.005 grams of phosphorus per gallon.
UNLEADED REGULAR:	Motor gasoline having an antiknock index, calculated as $(R + M)/2$ of 87, containing not more than 0.05 grams of lead per gallon, and not more than 0.005 grams of phosphorus per gallon.
LEADED PREMIUM:	Motor gasoline having an antiknock index, calculated as $(R + M)/2$, greater than 90, and containing more than 0.05 grams of lead per gallon or more than 0.005 grams of phosphorus per gallon.

UNLEADED PREMIUM:	Motor gasoline having an antiknock index, calculated as (R + M)/2, greater than 90, containing not more than 0.05 grams of lead per gallon or 0.005 grams of phosphorus per gallon.
MOTORCYCLE (AUTO):	All two- or three-wheeled motorized vehicles. Typical vehicles in this category have saddle type seats and are steered by handle bars rather than a wheel. This category includes motorcycles, motor scooters, mopeds, motor powered bicycles, and three-wheeled motorcycles.
MULTIPURPOSE PASSENGER VEHICLE (AUTO):	A motor vehicle with motive power, except a trailer, designed to carry 10 persons or less, which is constructed either on a truck chassis, or with special features for occasional off-road operation.
NAPHTHA-BASE JET FUEL (AIR):	A fuel in the heavy naphtha boiling range with an average gravity of 52.8 degrees American Petroleum Institute (API) and 20 to 90 percent distillation temperatures of 290 to 470 degrees Fahrenheit, meeting Military Specification MIL-T-5624L (Grade JPJ-4). JP-4 is used for turbojet and turboprop aircraft engines, primarily by the military. Excludes ram-jet and petroleum rocket fuels.
NATIONALS (AIR):	Air carrier groups with annual operating revenues between \$100,000,000 and \$1,000,000,000.
NATURAL GAS (GAS):	A naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in porous geologic formations beneath the earth's surface, often in association with petroleum. The principal constituent is methane.
NO. 2 DISTILLATE FUEL OIL (OIL):	A petroleum distillate which meets the specifications for No. 2 heating oil and/or the specifications for diesel fuel grade No. 2.
NON-SELF-PROPELLED (WATER):	Vessels not containing within themselves the means for their own propulsion.
NON-VESSEL-CASUALTY- RELATED DEATH (WATER):	Death that occurs onboard a commercial vessel but not as a result of a vessel casualty, such as collision, fire, or explosion.
NONOCCUPANT (AUTO):	Any person who is not an occupant of a motor vehicle (e.g., pedestrians, pedalcyclists) or who is an occupant of a motor vehicle that is not in transport.
NONREGULATED PIPELINE (OIL):	A pipeline company not operating as a common carrier in interstate commerce, hence required neither to secure a grant of operating authority from the Federal Energy Regulatory Commission nor to report to it.
NONREVENUE FLIGHTS (AIR):	Flights and flight stages involving training, test, technical, positioning for scheduled flights, ferry, company business, publicity and forced returns for which no remuneration is received.
NONSCHEDULED FREIGHT (AIR):	Property carried in charter operations.
NONSCHEDULED SERVICE (AIR):	Revenue flights that are not operated in regular scheduled service, such as charter flights, and all nonrevenue flights incident to such flight.

NONTRESPASSERS (RAIL):	A person who is lawfully on any part of railroad property that is used in railroad operations, or a person who is adjacent to railroad premises when injured, as the result of railroad operations.
OCCUPANT (AUTO):	Any person who is in or upon a motor vehicle in transport. Includes the driver, passengers, and persons riding on the exterior of a motor vehicle (e.g., a skateboard rider who is set in motion by holding onto a vehicle).
OCCUPANT (TRUCK):	Any person who is in or upon a motor vehicle in transport. Includes the driver, passengers, and persons riding on the exterior of a motor vehicle (e.g., a skateboard rider set in motion by holding onto a vehicle).
OPEC (OIL):	Organization for Petroleum Exporting Countries including Saudi Arabia, Iran, Venezuela, Libya, Indonesia, United Arab Emirates, Algeria, Nigeria, Ecuador, Gabon, Iraq, Kuwait, and Qatar.
OPERATING EXPENSES (AIR):	Expenses incurred in the performance of air transportation, based on overall operating revenues and overall operating expenses. Does not include nonoperating income and expenses, nonrecurring items, or income taxes.
OPERATING EXPENSES (OIL):	Expenditures necessarily made while providing services by which operating revenue is earned.
OPERATING EXPENSES (RAIL):	Expenses of furnishing transportation service, including maintenance and depreciation of the plant used in the service.
OPERATING EXPENSES (TRANSIT):	The total of all expenses associated with operation of an individual mode by a given operator. At the required level, total operating expense is reported on line 14 of Form 301 for a single mode system, and is derived from Form 310 for a multimodal system. Operating expenses include distributions of "joint expenses" to individual modes, and exclude "reconciling items" such as interest expenses and depreciation. Do not confuse with 'vehicle operations expense.'
OPERATING EXPENSES (TRUCK):	This includes expenditures for equipment maintenance, supervision, wages, fuel, equipment rental, terminal operations, insurance, safety, and administrative and general functions.
OPERATING REVENUES (AIR):	Revenues from the performance of air transportation and transport related incidental services. Includes (1) transport revenues from the carriage of all classes of traffic in scheduled and nonscheduled services, (2) nontransport revenues consisting of Federal subsidy (where applicable), and revenues for services related to air transportation.
OPERATING REVENUE (OIL):	Revenue from the transportation of oil and from services incidental to such transportation.
OPERATING REVENUE (RAIL):	The amount of money that a carrier receives from transportation operations.
OPERATING REVENUE (TRANSIT):	Includes passenger revenue and revenue from charter and contract services.
OTHER (GA):	Experimentation, R&D, testing, government demonstration, air shows, and air racing.

OTHER DISTILLATE

FUEL OILS (OIL):

All other refined petroleum products not included in any other category and which, when produced in conventional distillation operations, have a boiling range from 10% point at 167° C to 90% point at 375° C. Included are products known as No. 1 and No. 4 distillate fuel oils and diesel oils.

OTHER PRINCIPAL

ARTERIAL (HWY):

Major streets or highways, many with multi-lane or freeway design, serving high-volume traffic corridor movements that connect major generators of travel.

OTHER REVENUE (RAIL):

This is a general heading that includes revenues from miscellaneous operations (i.e., dining and bar car services), income from lease of road and equipment, miscellaneous rent income, income from nonoperating property, profit from separately operated properties, dividend income, interest income, income from sinking and other reserve funds, release or premium on funded debt, contributions from other companies, and other miscellaneous income.

OTHER REVENUE

VEHICLES (TRANSIT):

Other modes of transit service such as cable cars, personal rapid transit systems of varying designs, monorail vehicles, inclined railway cars, etc., not covered otherwise.

OTHER TRANSPORT
RELATED REVENUES

(AIR):

Revenues from services such as in-flight sales, rentals and sales of services, supplies, and parts.

OTHER 2-AXLE 4-TIRE
VEHICLES (TRUCK):

Includes vans, pickup trucks, and sport/utility vehicles.

OTHER WORK (GA):

Construction work (not FAR Part 135), helicopter hoist, parachuting, aerial advertising, and towing gliders.

PASSENGER (AUTO):

Any occupant of a motor vehicle who is not a driver.

PASSENGER ACCIDENT
(TRANSIT):

A passenger-based combination of incidents related only to the use of a transit vehicle. These result from collision with a vehicle, object, or person (except suicides); a derailment/left roadway; personal casualty on vehicle; or personal casualty entering/exiting the vehicle.

PASSENGER CAR
(AUTO):

(1) A unit of rolling equipment intended to provide transportation for members of the general public and includes self-propelled cars designed to carry baggage, mail, express and passengers. (2) A motor vehicle with motive power, except a multipurpose passenger vehicle, motorcycle, or trailer, designed for carrying 10 persons or less. (3) All sedans, coupes, and station wagons for the purpose of carrying passengers and including those passenger cars pulling recreational or other light trailers. (4) Any motor vehicle that is a convertible; 2-door sedan or hardtop; a 3- or 5-door hatchback coupe; an automobile with pickup body; or station wagon.

PASSENGER-MILE (AIR):

One passenger transported one mile. Total passenger-miles are computed by summation of the products of the aircraft miles flown on each interairport flight stage multiplied by the number of passengers carried on that flight stage.

PASSENGER-MILE
(TRANSIT):

The total number of miles traveled by transit passengers (e.g., one bus traveling 3 miles while carrying 5 passengers results in 15 passenger-miles).

PASSENGER-MILES
(AUTO):

This figure represents the total distance traveled by all passengers in passenger cars and taxis. One passenger traveling one mile generates one passenger-mile.

PASSENGER-MILE, INTERCITY (WATER):	Moving one passenger one mile on a trip between two cities generates one intercity passenger-mile.
PASSENGER REVENUES (AIR):	Revenues from the transportation of passengers by air.
PASSENGER REVENUE (RAIL):	Revenue from the sale of tickets.
PASSENGER REVENUE (TRANSIT):	Money, including fares and transfer, zone, and park-and-ride parking charges, paid by transit passengers; also known as "farebox revenue." Prior to 1984, data does not include fare revenues collected by contractors operating transit service.
PASSENGER TRAIN- CARS (RAIL):	Cars typically found in passenger trains include coaches, sleeping cars (formerly called Pullman cars), parlor cars, dining cars, lounge cars, baggage cars, crew-dormitory cars, and observation cars.
PASSENGER VESSELS (WATER):	Domestic passenger service, other than short-haul ferry, is limited. However, two operators offer coastwise and river system cruises with small cruise vessels accommodating about 100 passengers each. One operator provides cruises within the Hawaiian Islands, using a refurbished transatlantic passenger liner. The State of Alaska seasonally operates several large passenger/vehicle ferries between Seattle and points in southeastern Alaska, plus service between points, in and around Cook Inlet and Prince William Sound.
PASSENGER/ COMBINATION VESSELS (WATER):	Ships with a capacity for 13 or more passengers.
PEDALCYCLIST (HWY):	A person on a vehicle that is powered solely by pedals.
PEDESTRIAN (AUTO):	Any person not in or upon a motor vehicle or other vehicle.
PERSONAL CASUALTY ENTER/EXIT (TRANSIT):	An incident in which a person is hurt while getting on or off a transit vehicle (e.g., falls or door incidents), but not as a result of a collision, derailment/left roadway, or fire.
PERSONAL CASUALTY ESCALATOR (TRANSIT):	An incident in which a person is hurt while using an escalator in a transit facility.
PERSONAL CASUALTY LIFTS (TRANSIT):	An incident in which a person is hurt while using a lift to get on or off a transit vehicle, but not as a result of a collision, derailment/left roadway, or fire.
PERSONAL CASUALTY ON VEHICLE (TRANSIT):	An incident in which a person is injured on a transit vehicle, but not as a result of a collision, derailment/left roadway, or fire.
PERSONAL CASUALTY STATION/STOP (TRANSIT):	An incident in which a person is hurt while using a transit facility. This includes anyone on transit property (e.g., patrons, transit employees, trespassers), but does not include incidents resulting from illness or criminal activity.
PERSONAL FLYING (GA):	Flying by individuals in their own or rented aircraft for pleasure, or personal transportation not in furtherance of their occupation or company business. This category included practice flying (for the purpose of increasing or maintaining proficiency) not performed under supervision of an accredited instructor, and not part of an approved flight training program.

PETROLEUM (OIL):	A generic term applied to oil and oil products in all forms such as crude oil, lease condensate, unfinished oils, petroleum products, natural gas plant liquids, and nonhydrocarbon compounds blended into finished petroleum products.
PETROLEUM CONSUMPTION, ELECTRIC UTILITY SECTOR (OIL):	Domestic demand for all fuel oils at electric utilities.
PETROLEUM CONSUMPTION, INDUSTRIAL SECTOR (OIL):	Domestic demand for petroleum products for use by establishments engaged in processing unfinished materials into another form or product. Excludes industrial space heating.
PETROLEUM CONSUMPTION, "OTHER" SECTOR (OIL):	Domestic demand for miscellaneous products and for some agricultural uses.
PETROLEUM CONSUMPTION, RESIDENTIAL AND COMMERCIAL (OIL):	Domestic demand for petroleum products by private households and nonmanufacturing establishments. Includes industrial space heating and road paving.
PETROLEUM CONSUMPTION, TRANSPORTATION SECTOR (OIL):	Domestic demand for petroleum products for on-highway use, aircraft and vessel bunkering, and railroad use.
PIPELINE (OIL):	All parts of an onshore pipeline facility through which oil moves, including, but not limited to, line pipe, valves, and other appurtenances connected to line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.
PROPERTY DAMAGE (TRANSIT):	The dollar amount required to repair or replace transit property (including stations, right of way, bus stops, and maintenance facilities) damaged during an incident.
PSI (ENERGY):	Pounds per square inch.
RAIL MOTOR CARS (RAIL):	Self-propelled passenger rail cars which are driven by electric motors energized from an electrified roadway or by a generator driven by a diesel or gas turbine engine.
RAIL RAPID TRANSIT (TRANSIT):	Transit service using rail cars driven by electricity usually drawn from a third rail, configured for passenger traffic and usually operated on exclusive rights-of-way. It generally uses longer trains and has longer station spacing than light rail.
REFINED PRODUCT TRUNK LINES (OIL):	One of three types of pipeline network that is used to transport refined petroleum products (i.e., gasoline, kerosene, residual oil, etc.) from the refineries to local distribution centers near large market areas.
RENTAL (GA):	Aircraft owned for the purpose of renting; commercial flying club, leased, and rental aircraft activity.
REPRESSURING (GAS):	Forcing gas, under pressure, into the oil reservoir in an attempt to increase the recovery of crude oil; also done with water.

RESIDUAL FUEL OIL (OIL):	The heavier oils that remain after the distillate fuel oils and lighter hydrocarbons are distilled away in refinery operations and that conform to American Society for Testing and Materials (ASTM) Specifications D396 and 976. Included are No. 5, a residual fuel oil of medium viscosity; Navy Special, for use in steam-powered vessels in government service and in shore power plants; and No. 6, which includes Bunker C fuel oil and is used for commercial and industrial heating, electricity generation, and to power ships. Imports of residual fuel oil include imported crude oil burned as fuel.
REVENUE (AIR):	Pertaining to transport activities for which remuneration is received by the carrier.
REVENUE (TRUCK):	The total amounts received by carriers for transportation and other services.
REVENUE PASSENGER (AIR):	Person receiving air transportation from an air carrier for which remuneration is received by the carrier. Air carrier employees or others, except ministers of religion, elderly individuals and handicapped individuals, receiving air transportation against whom reduced rate charges (less than the applicable tariff) are levied are considered nonrevenue passengers. Infants, for whom a token fare is charged, are not counted as passengers.
REVENUE PASSENGER ENPLANEMENTS (AIR):	The total number of passengers boarding aircraft. Includes both originating and connecting passengers.
REVENUE PASSENGER LOAD FACTOR (AIR):	The percent that revenue passenger-miles are of available seat-miles in revenue passenger services, representing the proportion of aircraft seating capacity that is actually sold and utilized.
REVENUE PASSENGER-MILE (AIR):	One revenue passenger transported one mile in revenue service. Revenue passenger-miles are computed by summation of the products of the revenue aircraft-miles flown on a flight stage, multiplied by the number of revenue passengers carried on that flight stage.
REVENUE PASSENGER-MILE (RAIL):	One revenue passenger traveling one mile generates one revenue passenger-mile. The revenue passenger-miles reported thus represent the total distance traveled by all railroad passengers.
REVENUE PASSENGER MILES (BUS):	One revenue passenger carried one mile generates one passenger-mile. The revenue passenger-miles reported thus represent the total distance traveled by all bus passengers.
REVENUE PASSENGER TON-MILE (AIR):	One ton of revenue passenger weight (including all baggage) transported one mile. The passenger weight standard for both "Domestic" and "International" operations is 200 pounds.
REVENUE PASSENGERS (BUS):	Passengers on a commercial bus by or for whom a fare is paid.
REVENUE PASSENGERS (TRANSIT):	Single-vehicle transit rides by initial-board (first-ride) transit passengers only; excludes all transfer rides and all nonrevenue rides.
REVENUE PASSENGERS CARRIED (RAIL):	Number of one-way trips made by persons holding tickets.
REVENUE TON-MILE (AIR):	One ton of revenue traffic transported one mile.

REVENUE TON-MILE
OF FREIGHT (AIR):

One short ton of freight transported one mile. Ton-miles are computed by summation of the products of the aircraft miles flown on each interairport flight stage multiplied by the number of tons carried on that flight stage.

REVENUE TON-MILES
(RAIL):

Revenue freight traffic measured in ton-miles.

REVENUE VEHICLE
MILES (TRANSIT):

One vehicle (bus, trolley bus, streetcar, etc.) traveling one mile, while revenue passengers are on board generates one revenue vehicle-mile. The revenue vehicle-miles reported thus represent the total mileage traveled by vehicles in scheduled or unscheduled revenue-producing services.

ROAD OIL (ENERGY):

Any heavy petroleum oil, including residual asphaltic oil, used as a dust palliative and surface treatment on roads and highways. It is generally produced in six grades from 0, the most liquid, to 5, the most viscous.

ROADWAY (HWY):

That part of a trafficway used for motor vehicle travel.

RURAL HIGHWAY (HWY):

Any highway, road, or street that is not an urban highway.

RURAL MILEAGE (HWY):

Roads outside city, municipal district, or urban boundaries.

SCHEDULED SERVICE

(AIR):

Transport service operated pursuant to published flight schedules, including extra sections and related nonrevenue flights.

SCHOOL BUS (BUS):

A passenger motor vehicle which is designed or used to carry more than 10 passengers, in addition to the driver, and which, the Secretary of Transportation determines, is likely to be significantly used for the purpose of transporting pre-primary, primary, or secondary school students to such schools from home or from such schools to home.

SCHOOL BUS -
RELATED CRASH (BUS):

Any crash in which a vehicle, regardless of body design, used as a school bus, is directly or indirectly involved, such as a crash involving school children alighting from a vehicle.

SCOWS (WATER):

Large, flat-bottomed non-self-propelled vessels used to transport sand, gravel, or refuse.

SELF-PROPELLED
TOWBOAT (WATER):

A self-propelled compact, shallow-draft boat with a squared bow and towing "knees" for pushing tows of barges on inland waterways.

SERIOUS INJURY (AIR)
(GA):

An injury which:

- requires hospitalization for more than 48 hours, commencing within seven days from the date when the injury was received;
- results in a fracture of any bone (except simple fractures of fingers, toes or nose);
- involves lacerations which cause severe hemorrhages, nerve, muscle, or tendon damage;
- involves injury to any internal organ; or
- involves second- or third-degree burns, or any burns affecting more than 5 percent of the body surface.

SINGLE-UNIT 2-AXLE
6-TIRE OR MORE
TRUCK (TRUCK):

A large truck on a singles frame with at least 2 axles and 6 tires.

STATE AND LOCAL EXPENDITURES (HWY):	Disbursements for capital outlay, maintenance and traffic surfaces, administration and research, highway law enforcement and safety, and interest on debt.
STREETCARS (TRANSIT):	Relatively lightweight passenger rail cars operating singly or in short trains, or fixed rails in right-of-way, that are not always separated from other traffic for much of the way. Streetcars do not necessarily have the right-of-way at grade crossings with other traffic.
SUBCOMPACT CAR (AUTO):	An automobile industry designation usually consisting of cars with a wheelbase between 95 and 99.
TANKERS (WATER):	An oceangoing ship specially designed to haul liquid bulk cargo in world trade.
TANKSHIP (WATER):	Carries liquid cargo in bulk, stowed in cargo tanks within vessel hull. Cargo is pumped aboard by a shore terminal and unloaded using the vessel's installed pumping system. It is one of the largest and newest vessels used in domestic commerce, with sizes ranging from 16,000 to 190,000 deadweight tons. Commonly referred to as "tanker." Approximately 180 are presently in domestic service.
TAXES ASSIGNABLE TO OPERATIONS (TRUCK):	Includes the amount of federal, state, county, municipal, and other taxing district taxes which relate to motor carrier operations and property use therein (except income taxes on ordinary income).
TON-MILE (WATER):	Water carriage ton-miles were first compiled and published in calendar year 1962. The distances used are statute miles. Domestic ton-miles are calculated by multiplying the tons of commerce being moved by the number of miles actually moved on the water (e.g. 50 short tons moving 200 miles on a particular waterway would yield 10,000 ton-miles for that waterway). The ton-mile parameter measures the total performance of waterway. Ton-miles are not computed within ports. For coastwise traffic this represents the mileage on the shortest route that safe navigation permits.
TON-MILES (TRUCK):	The movement of one ton of freight the distance of one mile. Ton-miles are computed by multiplying the weight in tons of each shipment transported by the distance hauled.
TONS OF FREIGHT HAULED (WATER):	The figures for tons of freight hauled on domestic waterways include exports and imports.
TRAFFICWAY (HWY):	Any right-of-way open to the public as a matter of right or custom for moving persons or property from one place to another, including the entire width between property lines or other boundaries.
TRAIN ACCIDENT (RAIL):	Any collision, derailment, fire, explosion, act of God, or other event involving operation of railroad on-track equipment and resulting in reportable damage to track or on-track equipment above an established dollar threshold.
TRAIN-MILE (RAIL):	The movement of a train a distance of one mile measured by the distance between terminals and/or stations, and includes yard switching miles, train switching miles, and work train miles. Yard switching miles may be computed on any reasonable, supportable, and verifiable basis. In the event actual mileage is not computable by other means, yard switching miles may be computed at the rate of 6 mph for the time actually engaged in yard switching service.
TRANSMISSION PIPELINE (GAS):	Pipelines (mains) installed for the purpose of transmitting gas from a source or sources of supply to one or more distribution centers, or to one or more large-volume customers, or a pipeline installed to interconnect sources of supply. In typical cases, transmission lines differ from gas mains in that they operate at higher pressures, are longer, and the distance between connections is greater.

TRANSPORT-RELATED
EXPENSES (AIR):

Expenses from services related to air transportation such as in-flight sales of liquor, food and other items; ground, restaurant and food services, rental expense as lessor, interchange sales, general service sales, mutual aid, substitute service, and air cargo service (other than actual air movement).

TRANSPORT-RELATED
REVENUES (AIR):

Revenues from the transportation by air of all classes of traffic in scheduled and nonscheduled services.

TRESPASSERS (RAIL):

Any person whose presence on railroad property used in railroad operation is prohibited or unlawful.

TROLLEY BUS
(TRANSIT):

Rubber-tired electric transit vehicle, manually steered, propelled by a motor drawing current, normally through overhead wires, from a central power source not onboard the vehicle.

TUG (WATER):

Powered vessel developing not less than 37 KW and designed for the towing of dumb barges, pushed - towed barges, and rafts, but not for the carriage of goods.

U.S. FLAG CARRIER OR
AMERICAN FLAG
CARRIER (AIR):

One of a class of air carriers holding a Certificate of Public Convenience and Necessity issued by the DOT, approved by the President, authorizing scheduled operations over specified routes between the U.S. (and/or its territories) and one or more foreign countries.

UNLINKED PASSENGER
TRIPS (TRANSIT):

The number of passengers who board public transportation vehicles. A passenger is counted each time he/she boards a vehicle even through he/she may be on the same journey from origin to destination.

URBAN HIGHWAY
(AUTO):

Any road or street within the boundaries of an urban area. An urban area is an area including and adjacent to a municipality or urban place with 5,000 or more population. The boundaries of urban areas are fixed by the state highway departments, subject to the approval of the Federal Highway Administration, for purposes of the Federal-Aid highway program.

URBAN MILEAGE (HWY):

Roads inside city, municipal district, or urban boundaries: includes extensions of the state primary system, and state secondary roads within delimited incorporated and unincorporated places, and mileage under local control; i.e., local city streets, roads, and public ways not under state control within such places.

VANPOOL (TRANSIT):

Public-sponsored commuter service operating under prearranged schedules for previously formed groups of riders in 8- to 18 seat vehicles. Drivers are also commuters who receive little or no compensation besides the free ride.

VEHICLE MAINTENANCE
(TRANSIT):

All activities associated with revenue and nonrevenue (service) vehicle maintenance, including administration, inspection and maintenance, and servicing (cleaning, fueling, etc.) vehicles. In addition, it includes repairs due to vandalism, and accident repairs of revenue vehicles.

VEHICLE-MILE (BUS):

One vehicle traveling the distance of one mile. Thus, total vehicle-miles is the total mileage traveled by all vehicles.

VEHICLE-MILES (AUTO):

Vehicle-miles are the miles of travel by all types of motor vehicles as determined by the states on the basis of actual traffic counts and established estimating procedures.

VEHICLE-MILES (TRUCK):	The miles of travel by all types of motor vehicles, as determined by the state highway departments, on the basis of actual traffic counts and established estimating procedures.
VEHICLE-MILES (TRANSIT):	The total number of miles traveled by transit vehicles. Commuter rail, heavy rail, and light rail report individual car-miles, rather than train-miles for vehicle-miles.
VEHICLE OPERATIONS (TRANSIT):	All activities associated with transportation administration, including revenue vehicle movement control, scheduling, ticketing and fare collection, system security, and revenue vehicle operation.
VESSEL-CASUALTY- RELATED DEATH (WATER):	Death that occurs onboard a commercial vessel as a result of a vessel casualty, such as collision, fire, or explosion.
WATERBORNE TRANSPORTATION (WATER):	Transport of freight and/or people by commercial vessels under USCG jurisdiction.

INDEX

national transportation statistics

1997



INDEX

Accident Rates

air carrier	115, 118, 119
bus	135
general aviation	120
highway-rail grade crossing.....	110
motor vehicle.....	124
motorcycle.....	132
passenger car	128
railroad.....	145
recreational boating.....	150
truck.....	133

Accidents - *see also Fatalities; Injuries*

air carrier	105, 115, 118, 119
bus.....	105, 135
general aviation	105, 120
hazardous materials	111
highway-rail grade crossing.....	105, 110
motor vehicle,	
by posted speed limit.....	125
number of.....	124
motorcycle	105, 132
passenger car.....	105, 128, 129
pipeline,	
gas	105, 153
liquid.....	105, 153
railroad	105, 144, 145
recreational boating	105, 150
transit	105, 139, 140
truck	105, 133
waterborne	105, 149

Air Carrier - *see also Air Travel; Aircraft, Airports; General Aviation*

accidents	105, 115, 118, 119
bomb threats.....	117
collisions, near midair	116
delay	56
departures.....	115, 118
emissions.....	193, 194, 196, 197
employment.....	87
energy,	
consumption	174
intensiveness	176, 178
expenditures,	
freight.....	70
passenger	70
personal consumption	78
fares, passenger.....	77
fatalities	105, 115, 118, 119

fuel,	
consumption	161, 165, 178
price	72
gross domestic product	65
hours flown	119
injuries, serious	105, 115, 118, 119
length of haul	21
miles,	
flown, aircraft	115, 118, 165, 178
intercity	5
passenger	15, 178
per gallon	165
seat	178
ton	20
vehicle	17
on-time performance	55
passengers denied boarding	55
productivity, output per employee	93
profile	209
rates,	
accident	115, 118, 119
fatality	115, 118, 119
injury	115, 118, 119
revenues,	
freight, per ton-mile	84
operating	85
passenger, per passenger-mile	83
seats, per aircraft	178
screening, passenger	117
vehicles,	
number of	33
shipments	36
wages and salaries	91, 92

Air Taxi - *see* Air Carrier

Air Travel - *see also* Air Carrier; Airports

arrivals, international	23
departures, international	24
expenditures	70, 78
passengers,	
denied boarding	55
enplanements	22
screening	117

Aircraft - *see also* Air Carrier

emissions	193, 194, 196, 197
gross domestic product	66, 67

Airports - *see also* Air Travel

bomb threats	117
enplanements	22
number of	6
runway condition	45
top 50, scheduled and nonscheduled	22
trust fund	97, 100

Alcohol

anti-DUI/DWI legislation	131
involvement in recreational boating fatalities	150
involvement in motor vehicle fatalities	131

Amtrak - see also Railroad

energy,	
consumption	163
intensiveness	182
fares, passenger	77
fuel, consumption	161, 172, 182
length of haul	21
miles,	
car	17
passenger	15
train	17
on-time performance	59
profile	237
revenues,	
operating	85
passenger, per passenger-mile	83
vehicles,	
age	50
delivered	36
number of	33

Automobile - see Motor Vehicle; Passenger Car**Bicycle - see also Pedalcyclists**

sales	36
-------------	----

Boating - see Inland Waterways; Recreational Boating; Water Transport**Bus - see also Motor Vehicle; School Bus; Transit**

accidents	105, 135
employment	87
energy,	
consumption	163
intensiveness	176, 181
expenditures,	
freight	70
passenger	70
personal consumption	78
fares, passenger	77
fatalities	105, 126, 135
fuel, consumption	161, 169, 181
injuries	105, 135
length of haul	21
miles,	
passenger	15, 181
per gallon	169
vehicle	17, 135, 169, 181
profile	229

◀ Index

rates,	
accident.....	135
fatality	135
injury.....	135
registrations.....	169
revenues,	
operating	85
passenger, per passenger-mile	83
vehicles,	
number of.....	33
sales, factory	36

Cargo - *see Freight*

Commuter Air Carrier - *see Air Carrier*

Commuter Rail - *see also Transit*

fares, passenger.....	77
length of haul	21
miles	
passenger	15
vehicle	17
revenue, per passenger-mile.....	83
vehicles,	
delivered.....	36
number of.....	33

Congestion - *see Delay*

Conversion, Metric.....247

Delay

air carrier	56
highway.....	57, 58

Demand Response - *see Transit*

Economy - *see also Expenditures; Fares; Freight; Price; Revenues; Wages and Salaries*

gross domestic product	65, 66, 67, 68, 69, 70, 74
gross national product.....	74

Electric Power

consumption, Amtrak.....	161, 172, 182
consumption, petroleum	184, 185
consumption, transit.....	170

Electricity - *see Energy*

Emissions - *see Pollution*

Employment

air.....	87
automotive, wholesale & retail by type	87
bus	87
government, transportation-related	87
highway and street construction	87
pipeline	87

railroad.....	87
taxi.....	87
transit.....	87
transportation equipment manufacturing, by type.....	87
transportation services	87
trucking and warehousing	87
water	87

Energy - *see also Fuel*

consumption,	
by sector.....	159, 160
modal breakdown	163
U.S. government agencies.....	173, 174
conversion factors	inside back cover
crude oil, transported by mode.....	28
equivalents	156
intensiveness,	
air carrier	176, 178
Amtrak.....	176, 182
bus.....	176, 181
modal breakdown	176
motorcycle	176, 179
passenger car	176, 179
railroad, Class I	182
school bus.....	176, 181
transit	181
trucks	176, 180
petroleum and petroleum products,	
consumption.....	183, 184, 185
production	183
transportation of.....	28, 29

Expenditures - *see also this heading under individual modes*

consumption, personal.....	78, 79
freight, modal breakdown	70
passenger, modal breakdown.....	70
railroad roadway and structures, capital and maintenance.....	94
transportation, government	98, 99

Fares

gross domestic product.....	66, 67
passenger, average	77

Fatalities - *see also Accidents; Injuries*

air carrier	105, 115, 118, 119
alcohol-related, motor vehicle.....	131
bus.....	105, 126, 135
general aviation	105, 120
hazardous materials	111
highway-rail grade crossing	105, 110
motorcycle	105, 126, 132
motor vehicle.....	123, 124, 126, 131
passenger car.....	105, 126, 128, 129
pedalcyclist.....	126
pedestrian	126

pipeline,	
gas	105, 153
liquid	105, 153
railroad	105, 143, 144, 145
recreational boating	105, 150
transit	105, 139, 140
truck	105, 126, 133
waterborne	105, 149

Fatality Rates

air carrier	115, 118, 119
bus	135
general aviation	120
highway-rail grade crossing	110
motorcycle	132
motor vehicle	123, 124
passenger car	128
railroad	145
recreational boating	150
truck	133

Fleets

automobile	38
merchant vessel	12
police	38
taxi	38

Freight

average length of haul	21
expenditures	70
revenue per ton-mile	84
ton-miles,	
modal breakdown	20
per capita	74
per GDP	74
per GNP	74
tons, per capita	74
tons, water	27

Fuel - *see also Energy; Petroleum and Petroleum Products*

consumption,	
air carrier	161, 165, 178
Amtrak	161, 172, 182
bus	161, 169, 181
general aviation	161
motorcycle	161, 167, 179
motor vehicle	166
passenger car	161, 167, 179
pipeline	161
railroad	161, 171, 182
school bus	181
transit	161, 170, 181
truck	161, 168, 180
U.S. government	173, 174
water	161

demand	185, 186
efficiency,	
air carrier	165
bus	169
motor vehicle	166
motorcycle	167
passenger car	40, 167, 175
railroad	171
truck	41, 168, 175
price	72, 73

Gasoline - *see Fuel*

General Aviation - *see also Air Carrier*

accidents	105, 120
fatalities	105, 120
fuel,	
consumption	161
price	72
hours flown	120
injuries	105, 120
miles,	
passenger	15
vehicle	17
profile	215
rates,	
accident	120
fatality	120
injury	120
vehicles,	
number of	33
shipments	36

Hazardous Materials

fatalities	111
incidents	111
injuries	111
property damage	111

Heavy Rail - *see Transit*

Helicopter

shipments	36
-----------------	----

Highway - *see also Bus; Motorcycle; Passenger Car; Truck*

condition	46
emissions	191, 193, 194, 195, 196, 197, 198
employment	87
fuel, price	72
miles,	
by surface	7, 8
intercity	5
lane	25
profile	217
surface	7, 8

◀ Index

traffic delay,	
urban areas	57, 58
trust fund	97, 100
vehicle-miles	17, 25

Highway-Rail Grade Crossing

accidents	105, 110
fatalities	105, 110
injuries	105, 110
property damage	110
rates,	
accident	110
fatality	110
injury	110

Incidents - *see Accidents*

Indexes

consumer price	83
industrial production	69
producer price, freight revenue	84
productivity	93

Injuries - *see also Accidents; Fatalities*

air carrier	105, 115, 118, 119
bus	105, 135
general aviation	105, 120
hazardous materials	111
highway-rail grade crossing	105, 110
motor vehicle	124
motorcycle	105, 132
passenger car	105, 128, 129
pipeline,	
gas	105, 153
liquid	105, 153
railroad	105, 143, 144, 145
transit	105, 139, 140
truck	105, 133
recreational boating	105, 150
waterborne	105, 149

Injury Rates

air carrier	115, 118, 119
bus	135
general aviation	120
highway-rail grade crossing	110
motorcycle	132
motor vehicle	124
passenger car	128
railroad	145
recreational boating	150
transit	139
truck	133

Inland waterways - *see also* Water Transport

length of haul	21
miles,	
intercity	5
ton	20
revenue, average freight per ton-mile	84
trust fund	100
vessels, number of	33
water profile	240

International

arrivals, air carrier	23
departures, air carrier	24
merchant fleet	12
production, motor vehicle	38, 42
tons, waterborne	26

Light Rail - *see* Transit**Locomotive - *see* Amtrak; Railroad****Metric Conversion** 247**Motor Carriers of Property - *see* Truck****Motor Vehicle - *see also* Bus; Motorcycle; Passenger Car; School Bus; Truck**

accidents,	
number of	124
fatal, by posted speed limit	125
alcohol-related fatalities	131
emissions	191, 193, 194, 195, 196, 197, 198
fatalities	123, 124, 126, 131
fuel consumption	166
gross domestic product	66, 67
injuries	124
miles,	
per gallon	166
per vehicle	166
production,	
U.S.	38
world	42
automobile profile	221
rates,	
accident	124
fatality	123, 124
injury	124
registrations	166
sales, factory	38
vehicles, number of	33

Motorcycle

accidents	105, 132
automobile profile	221
emissions	191
energy, intensiveness	176, 179
fatalities	105, 126, 119

◀ Index

fuel, consumption	161, 167, 179
injuries	105, 119
miles,	
passenger	15, 179
vehicle	17, 167, 179
rates,	
accident	132
fatality	132
injury	132
registrations	167
vehicles,	
number of	33
sales	36

Natural Gas - see Energy; Pipeline

Oil - see Energy; Pipeline; Petroleum and Petroleum Products; Pollution

On-Time Performance

air carrier	55
Amtrak	59

Passenger

arrivals, international	23
denied boarding at airports	55
departures, international	24
enplanements	22
expenditures	70
fares, average	77
length of haul	21
miles, modal breakdown	15
revenue per passenger-mile, modal breakdown	83
screening at airports	117

Passenger Car - see also Motor Vehicle

accidents	105, 128, 129
emissions	189
employment, related industries	87
energy, intensiveness	176, 179
expenditures, personal consumption	78
fatalities	105, 126, 128, 129
fleets	38
fuel,	
CAFE standards	175
consumption	161, 167, 179
efficiency	40, 175
price	72
injuries	105, 126, 128, 129
miles,	
passenger	15, 179
per gallon	40, 167, 175
vehicle	17, 167, 179
operating costs	80
price comparisons	80
profile	221

rates,	
accident	128
fatality	128
injury	128
registrations	167
restraint usage	129
vehicles,	
number of	33
production,	
United States	38,42
world	42
sales,	
factory	38
new	36, 39, 40
period	40
retail	36, 39
Passenger-miles - see individual modes	
modal breakdown	15
Pedalcyclist - see also Bicycle	
fatalities	126
Pedestrian	
fatalities	126
Petroleum and Petroleum Products	
consumption	183, 184, 185
demand, by sector	185
exports and imports	183
production	183
spills	203
transport	28, 29
Pipeline	
employment	87
expenditures,	
freight	70
fatalities	105, 153
fuel, consumption	161
gross domestic product	65
incidents	105, 153
injuries	105, 153
length of haul	21
miles,	
intercity	5
ton	20
profile,	
natural gas	245
oil	244
productivity, output per hour	93
property damage	153
revenues,	
freight per ton-mile	84
operating	85

transport,	
crude oil	28
crude oil and refined petroleum products	29
petroleum products, refined	28
trust fund	97, 100
wages and salaries	91, 92

Pollution

air, trends	199
carbon monoxide	189, 190, 193
lead	198
hydrocarbons	189, 190
nitrogen oxides	189, 190, 194
oil spills	203
particulate matter	189, 190, 196
sulfur dioxide	197
volatile organic compounds	195

Population, U.S.	195
-----------------------	-----

Ports

tonnage	27
---------------	----

Price

car comparisons with safety and emissions equipment	80
fuel	72, 73

Productivity - *see Indexes*

Property Damage

hazardous materials	111
highway-rail grade crossing	110
pipeline,	
gas	153
liquid	153
railroad	145
transit	139

Railroad - includes Class I; - *see also Amtrak*

accidents	105, 144, 145
emissions	193, 194, 196, 197
employment	87
energy, intensiveness	182
expenditures,	
capital and maintenance, roadway and structures	94
freight	70
passenger	70
personal consumption	78
fatalities	105, 143, 144, 145
fuel,	
consumption	161, 171, 182
efficiency	171
price	72
gross domestic product	65
injuries	105, 143, 144, 145
length of haul	21

miles,	
car	17, 171
intercity	5
passenger	15
ton	20
train	17, 145, 171
productivity, output per hour	93
profile	237
property damage	145
rates,	
accident	145
fatality	145
injury	145
revenues,	
freight per ton-mile	84
operating	85
transport,	
crude oil	28
crude oil and refined petroleum products	29
petroleum products, refined	28
vehicles,	
age of	50
delivered	36
number of	33
year built	50
wages and salaries	91, 92

Receipts

budget, transportation-related	97
--------------------------------------	----

Recreational Boating - *see also Water Transport*

accidents	105, 150
alcohol involvement	150
emissions	193
fatalities	105, 150
injuries	105, 150
property damage	
rates,	
accident	150
fatality	150
injury	150
vessels,	
involved in accidents	150
numbered	150
sales	36

Recreational Vehicles

shipments	36
-----------------	----

Revenues

Federal, by fund type	97
freight per ton-mile	84
operating	85
passenger per passenger-mile	83

Salaries - *see Wages and Salaries*

School Bus - *see also Bus; Motor Vehicle*

employment.....	87
energy, intensiveness	181
expenditures, passenger	70
fuel, consumption	181
miles,	
passenger	15, 181
vehicle	17, 181
vehicles,	
number of.....	33

Space

commercial launches, worldwide	30
--------------------------------------	----

Speed Limit

motor vehicle fatal accidents	125
-------------------------------------	-----

Streetcar - *see Transit*

Subway - *see Transit*

Tanker

number of.....	11, 12, 51
oil spills.....	203

Taxi - *see also Passenger Car*

employment.....	87
expenditures, personal consumption	78
fleets.....	38

Ton-miles - *see also this heading under individual modes*

freight,	
per capita	74
per GDP.....	74
per GNP.....	74
modal breakdown	20
petroleum products,	
crude oil	28
crude oil and refined petroleum products	29
petroleum products, refined	28

Tons - *see Freight*

Transit - *see also Bus; Commuter Rail*

accidents	139
electric power, consumption	170
employment.....	87
energy,	
consumption	170
intensiveness.....	176, 181
expenditures,	
passenger	70
personal consumption	78
fares, passenger.....	77

fatalities	105, 139, 140
fuel, consumption	161, 170, 181
gross domestic product	65
incidents	105, 139, 140
injuries	105, 139, 140
miles,	
passenger	17, 181
vehicle	15, 170, 181
profile	232
rates	
accident	139
fatality	139
injury	139
revenues, operating	85
trust fund	97, 100
vehicles,	
age	49
delivered	36
number of	33, 170
wages and salaries	91, 92

Trolley Coach/Bus - *see Transit*

Truck - *see also Highway; Motor Vehicle*

accidents	105, 133
emissions	189, 190, 191
employment	87
energy, intensiveness	176, 180
expenditures, freight	70
fatalities	105, 126, 133
fuel,	
CAFE standards	175
consumption	161, 168, 180
efficiency	41, 175
gross domestic product	65
injuries	105, 133
length of haul	21
miles,	
passenger	15, 180
per gallon	41, 168, 175
ton	20
vehicle	17, 168, 180
profile	225
rates,	
accident	133
fatality	133
injury	133
registrations	168
revenues,	
freight per ton-mile	84
operating	85
transport,	
crude oil	28
crude oil and refined petroleum products	29
petroleum products, refined	28

vehicles,	
number of.....	33
sales,	
period	41
factory	36
wages and salaries.....	91, 92

Vehicle-miles - *see individual modes*

modal breakdown	17
-----------------------	----

Wages and Salaries - *see also this heading under individual modes*

per full-time employee, by transportation sector.....	91
by transportation sector	92

Water Transport - *see also Inland Waterway; Recreational Boating; Tanker*

accidents.....	105, 149
employment.....	87
expenditures,	
freight	70
passenger	70
fatalities	105, 149
fuel, consumption	161
gross domestic product	65
injuries.....	105, 149
length of haul	21
miles, tons.....	20
pollution, oil spills	203
profile	240
receipts, U.S. budget.....	97
revenues,	
freight per ton-mile	84
operating.....	85
tons	26, 27
transport,	
crude oil	28
crude oil and refined petroleum products	29
petroleum products, refined	28
trust fund, harbor maintenance	150
vessels,	
age	51
emissions.....	194, 196, 197
involved in accidents	149
number of.....	12, 33
sales	36
wages and salaries.....	91, 92

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METRIC/U.S. UNITS CONVERSION FACTORS

U.S. UNITS TO METRIC

LENGTH (APPROXIMATE)

1 inch (in) = 2.5 centimeters (cm)
 1 foot (ft) = 30 centimeters (cm)
 1 yard (yd) = 0.9 meter (m)
 1 mile (mi) = 1.6 kilometers (km)

AREA (APPROXIMATE)

1 square inch (sq in, in²) = 6.5 square centimeters (cm²)
 1 square foot (sq ft, ft²) = 0.09 square meter (m²)
 1 square yard (sq yd, yd²) = 0.8 square meter (m²)
 1 square mile (sq mi, mi²) = 2.6 square kilometers (km²)
 1 acre = 0.4 hectare (ha) = 4,000 square meters (m²)

MASS - WEIGHT (APPROXIMATE)

1 ounce (oz) = 28 grams (gm)
 1 pound (lb) = .45 kilogram (kg)
 1 short ton = 2,000 pounds (lb) = 0.9 tonne (t)

VOLUME (APPROXIMATE)

1 teaspoon (tsp) = 5 milliliters (ml)
 1 tablespoon (tbsp) = 15 milliliters (ml)
 1 fluid ounce (fl oz) = 30 milliliters (ml)
 1 cup (c) = 0.24 liter (l)
 1 pint (pt) = 0.47 liter (l)
 1 quart (qt) = 0.96 liter (l)
 1 gallon (gal) = 3.8 liters (l)
 1 cubic foot (cu ft, ft³) = 0.03 cubic meter (m³)
 1 cubic yard (cu yd, yd³) = 0.76 cubic meter (m³)

TEMPERATURE (EXACT)

$$^{\circ}\text{C} = 5/9(^{\circ}\text{F} - 32)$$

METRIC TO U.S. UNITS

LENGTH (APPROXIMATE)

1 millimeter (mm) = 0.04 inch (in)
 1 centimeter (cm) = 0.4 inch (in)
 1 meter (m) = 3.3 feet (ft)
 1 meter (m) = 1.1 yards (yd)
 1 kilometer (km) = 0.6 mile (mi)

AREA (APPROXIMATE)

1 square centimeter (cm²) = 0.16 square inch (sq in, in²)
 1 square meter (m²) = 1.2 square yards (sq yd, yd²)
 1 square kilometer (km²) = 0.4 square mile (sq mi, mi²)
 10,000 square meters (m²) = 1 hectare (ha) = 2.5 acres

MASS - WEIGHT (APPROXIMATE)

1 gram (gm) = 0.036 ounce (oz)
 1 kilogram (kg) = 2.2 pounds (lb)
 1 tonne (t) = 1,000 kilograms (kg) = 1.1 short tons

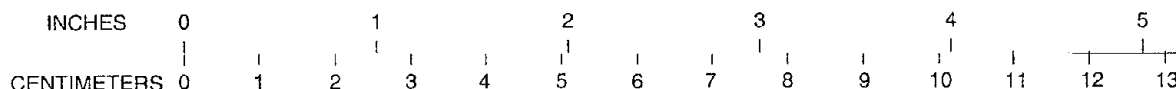
VOLUME (APPROXIMATE)

1 milliliter (ml) = 0.03 fluid ounce (fl oz)
 1 liter (l) = 2.1 pints (pt)
 1 liter (l) = 1.06 quarts (qt)
 1 liter (l) = 0.26 gallon (gal)
 1 cubic meter (m³) = 36 cubic feet (cu ft, ft³)
 1 cubic meter (m³) = 1.3 cubic yards (cu yd, yd³)

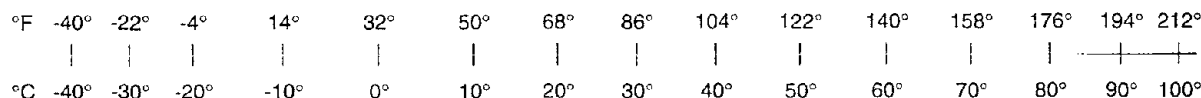
TEMPERATURE (EXACT)

$$^{\circ}\text{F} = 9/5(^{\circ}\text{C}) + 32$$

QUICK INCH-CENTIMETER LENGTH CONVERSION



QUICK FAHRENHEIT-CELSIUS TEMPERATURE CONVERSION



For more exact and or other conversion factors, see NIST Miscellaneous Publication 286, Units of Weights and Measures. Price \$2.50. SD Catalog No. C13 10286.

Updated 9/1/96

Introduction

The Transportation System

Transportation and the Economy

Transportation and the Environment

Transportation, Energy, and the Environment

Modal Profiles

Metric Conversion Tables

Glossary

Index

Bibliography

