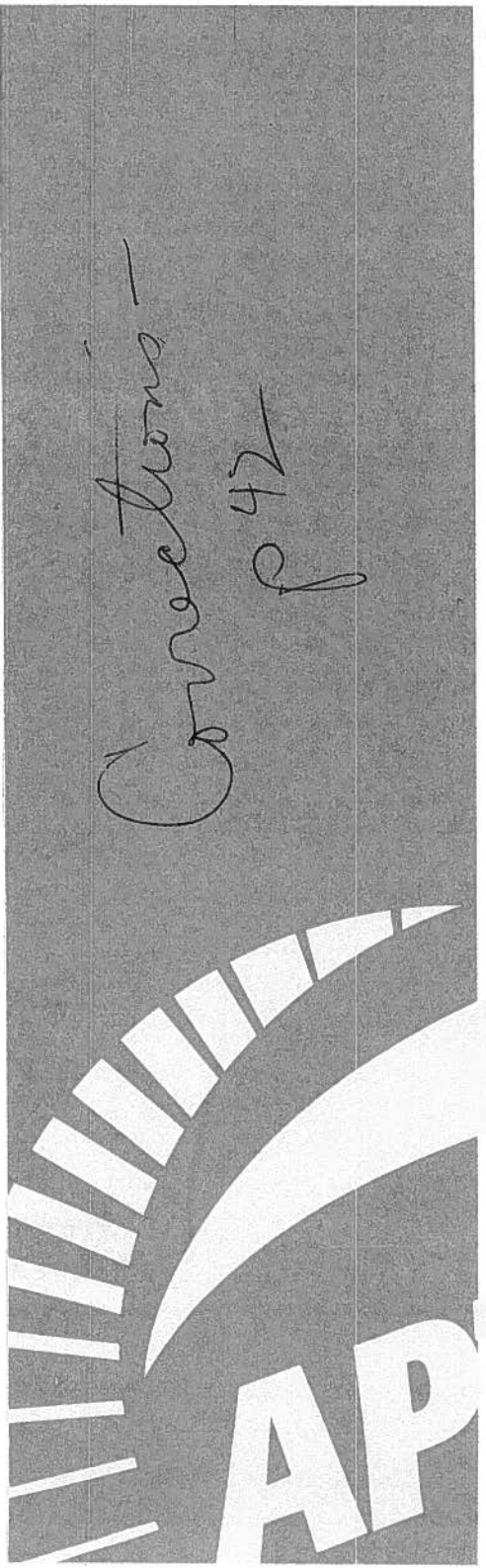
American Public Transportation Association

2002 Public Transportation Fact Book



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APTA's Vision Statement

Be the leading force in advancing public transportation.

APTA's Mission Statement

APTA serves and leads its diverse membership through advocacy, innovation, and information sharing to strengthen and expand public transportation.

WHAT IS APTA?

File:*APTA*

APTA is the American Public Transportation Association. Originally founded more than one hundred years ago, APTA is a nonprofit international association of more than 1,400 organizations responsible for planning, designing, constructing, financing, and operating public transportation systems. In addition, APTA members include business organizations that supply products and services to the public transportation industry, as well as academic institutions, state associations, metropolitan planning organizations and departments of transportation. Over 90 percent of persons using public transportation in the United States and Canada are carried by APTA members. APTA is governed by a Board of Directors representing the diverse membership of the organization and an 18-member executive committee of public transportation leaders, elected annually by the entire APTA membership. APTA members provide safe, efficient and cost-effective public transportation services and products that enhance the quality of life in our communities by improving transportation choices, congestion reduction, economic development, a cleaner environment, and mobility opportunities. APTA's mission is to serve and lead its diverse membership through advocacy, innovation, and information sharing to strengthen and expand public transportation.

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Notes

File: NOTES

The **Public Transportation Fact Book** (formerly the **Transit Fact Book**) was first published in 1943. Available data are expanded by standard statistical methods to estimate U.S. national totals. *All data are for the U.S. only, except for the section on Canada.* Data for Canada were provided by the Canadian Urban Transit Association (CUTA).

This book includes only public transportation data and excludes taxicab, unregulated jitney, school, sightseeing, intercity, military, and non-public service (e.g., governmental and corporate shuttles), and special application systems (e.g., amusement parks, airports, and international, rural, rural interstate, island, and urban park ferries).

Data are based on the annual National Transit Database (NTD) report published by the United States Government's Federal Transit Administration (FTA). APTA supplements these data with special surveys. Where applicable, data are calculated based on 1990 U.S. Census Bureau urbanized area population categories.

The number of employees is based on the concept of employee equivalents where each employee equivalent is equal to 2,080 labor hours. Beginning in 1993, the number of employees is based on the actual number of persons at the end of the fiscal year. Data are not continuous between 1992 and 1993.

Federal government funding data are based on reports prepared by the United States Department of Transportation.

Because of the time required to compile the large amount of data for this book, data for the last calendar year reported are preliminary and will be refined when additional data become available.

Many of the tables in this book will be updated prior to the next edition. See APTA's web site, www.apta.com, under "Information Center," then under "Statistics," under the appropriate subject for updated data.

Summary

What is Public Transportation?

Public transportation includes all multiple-occupancy vehicle services designed to transport customers on local and regional routes. These services are: private and public buses; rail; ferryboats; Amtrak, intercity bus, and taxi services operated under contract to a public transportation agency; any vanpool service operated by or under such a contract; and other transportation services for senior citizens and persons with disabilities.

Public Transportation's Customers

How many people use public transportation? In 2000, Americans took 9.4 billion trips using public transportation, an increase of 2.1 percent more than the previous year, outpacing growth in other travel modes. In 2000, public transportation ridership increased for the fifth straight year. This level of usage amounts to an increase of over 20 percent since 1995. The equivalent of almost a million new trips on public transportation were added each day in 2000.

Passengers waiting to board Dallas Area Rapid Transit light rail trains in Texas.

APTA estimates that about 14 million Americans ride on public transportation each weekday. The U.S. Department of Transportation estimates another 25 million use public transportation less frequently but on a regular basis. Within any given two-month period, nearly 12 percent of the national population uses public transportation, according to the 1995 National Personal Transportation Survey (NPTS). In the largest U.S. cities, 21 percent of the public or 28 million people use public transportation at least once in a typical two-month period. Ridership is also highest in large cities, during peak travel periods and for work trips.

Why do people use public transportation? Public transportation provides opportunities for people from every walk of life by making transportation choices and options available. Public transportation provides people with easy access to services and places important in everyday life. Access to public transportation gives people mobility, choice and freedom to accomplish what is important to them.

For everyone, including these Southeastern Pennsylvania Transportation Authority riders in Philadelphia, public transportation is there when it's needed by providing opportunities, freedom, and mobility.

Where do people go on public transportation? According to APTA data, work is the most popular destination with 54 percent of all trips ending at workplaces. Next, 15 percent of trips go to schools; 9 percent to shop; 9 percent, social visits; and 5.5 percent, medical appointments.

As the type of the trip varies on public transportation, so does the average distance traveled. Vanpool customers take the longest trips (34.6 miles). Next, commuter rail, 22.8 miles; demand response, 8.0 miles; ferryboat, 6.2 miles; heavy rail, 5.3 miles; light rail, 4.2 miles; bus, 3.7 miles; and other modes, 1.6 miles or less.

Many different types of people ride public transportation. Data collected by APTA shows the diversity of public transportation's customers. People age 65 and older represent 7 percent of riders; 18 years and under, 10 percent; women, 52 percent; White, 45 percent; African-American, 31 percent; Hispanic, 18 percent; and Asians and Native Americans, 6 percent.

Public transportation users come from all household income levels. The majority of passengers fall in the income range of $15,000 to $50,000; below $15,000, 27 percent; more than $50,000, nearly 20 percent.

The U.S. Department of Transportation's 1995 National Personal Transportation Survey estimated that 8 million of the 100 million U.S. households did not own a car, truck, van, motorcycle, or motor scooter. An additional 30 million households owned only one vehicle.

Public Transportation Modes

Modes are different ways to get around on public transportation. Road modes include bus, trolleybus, vanpool, jitney, and demand response service. Rail modes include heavy rail, light rail, commuter rail, automated guideway transit, inclined plane, cable car, monorail, and aerial tramway. Water modes include ferryboat. An explanation of each mode is found in the definitions section.

The Syracuse, New York CNY Centro system uses this typical demand response vehicle to transport disabled persons unable to use its fixed route buses.

Number of Providers
Approximately 6,000 public transportation systems operate in the U.S. and Canada. The majority of these agencies operate more than one mode of service. An estimated 2,250 agencies provide bus service, 5,200 operate demand response service, and 150 operate other modes. Two-thirds of U.S. public transportation agencies provide service designed to meet the needs of senior citizens and persons with disabilities. Also, many agencies typically contract service with private operators, further increasing the number of total public transportation providers.

Fixed Guideways
Rail service operates on a separate right-of-way known as a fixed guideway. Rail fixed guideway route mileage is divided among commuter rail (4,181 miles), heavy rail (1,332), light rail (481), and other modes (27).

In 2001, 22 miles of commuter rail, 151 miles of light rail, 24 miles of heavy rail, and 9 miles of automated guideway were under construction.

Bus services on restricted busways and high-occupancy-vehicle lanes and trolleybus services are also fixed guideway services.

In 2000, 1,004 route miles of bus fixed guideway were in operation at all times, and another 687 operated only part of the day. For trolleybus, 4 miles operated at all times, and 465 part of the day.

By law, ferryboat services are also considered fixed guideway—there are over 400 route miles of ferryboat service.

The Public Sector's Investment in Public Transportation
In fiscal year 2001, the fourth year of funding under the Transportation Equity Act for the 21st Century (TEA-21), the federal investment in public transportation is $6.3 billion. TEA-21 funding provides the federal resources to ensure that public transportation remains safe and in good condition. Financial support by federal, state and local governments also helps people make a choice among travel modes. Public expenditures to operate, maintain and invest in public transportation systems in America amount to $15.4 billion each year, according to the 1997 study *"Dollars and Sense: The Economic Case for Public Transportation in America,"* by the Campaign for Efficient Passenger Transportation. These expenditures have a positive and high return on the public investment made by taxpayers. The study reports that the estimated mobility and

efficiency benefits of public transportation have a value between $62 billion and $78 billion annually, increasing the economic return on the public's dollars by nearly six times the total annual investment of $15.4 billion (1995 dollars).

But unmet needs still exist in public transportation. According to the U.S. Department of Transportation, in today's dollars, $17 billion is needed annually to maintain and improve performance of the nation's transit systems.

Growing Investment Needs

The nation's transportation systems are showing signs of stress. In early 2001, the American Society of Civil Engineers (ASCE) released a "report card" on the nation's infrastructure. Since 1998, the last year ASCE issued the report card, public transportation received a reduced grade, or a "C Minus" from a "C." The ASCE report finds that improvements to transit bus and rail facilities are not keeping up with the strain placed on transit systems by increased ridership. In addition, the report predicted that transit is expected to experience the sharpest growth of any form of transportation this decade. The ASCE report also finds that spending on public transportation must increase by 41 percent to maintain current conditions.

In early 2002, APTA's Reauthorization Task Force documents needs in excess of $42 billion a year for capital, planning and research funds. This recommendation uses Fiscal Year 2003 dollars and current ridership growth rates. APTA's Task Force recommends a 12 percent annual growth rate in the federal transit program over the life of the reauthorization period –FY 2004-2009.

What it Costs to Operate Public Transportation

Public transportation funds come from two main sources, capital and operating. Capital funds are used to finance infrastructure needs such as new construction and rehabilitation of existing facilities. The federal government contributes 47 percent of all capital funding for public transportation. Up to 80 percent of the total capital cost may be federally-funded. The balance is typically paid for by a combination of state and local funds; many state and local governments provide more than the required minimum 20 percent of matching funds. In many cases, capital projects are financed solely by state and local funds. Public transportation agencies raise 27 percent of capital funds from taxes levied by the transportation system, tolls, fees, and non-governmental sources. States contribute 11 percent; local governments, 15 percent.

In 2000, public transportation received a total of $9.6 billion in capital funds from all sources. Bus-related projects received 49 percent; fixed guideway modernization, 30 percent; new start transit projects, 18 percent, and 2 percent for planning.

Operating funds provide income for operational expenses. Most operating funds originate from local sources (74 percent). Passenger fares pay for 36 percent of operating expenses, local governments contribute 22 percent, and non-governmental sources and taxes levied by the transportation system, tolls and fees, 17 percent. State and federal governments contribute 21 percent and 4 percent, respectively.

In 2000, an adult passenger paid an average of $1.13 in base cash fare when riding on public transportation. Zone and other surcharges increase the amount paid in many areas. Because children, senior citizens, and persons with disabilities usually ride free or at half-fare, and others use discounted passes and tickets, the average fare for an unlinked or single trip is often less. For example, passengers pay $0.50 for trolleybus, $0.57 for light rail, $0.77 for bus, $0.94 for heavy rail, $1.64 for demand response, and $3.32 for commuter rail.

It takes regular capital and operating investments to keep public transportation on the move. **Capital expenses** represent money set aside for infrastructure and rolling stock and their renovation and replacement, plus planning, design, land acquisition and related costs. In 2000, public transportation invested $9.6 billion in capital needs. Facilities cost 56 percent; vehicles, 33 percent; and equipment and services, 11 percent. Of these categories, heavy rail expenses accounted for 30 percent; bus, 34 percent; commuter rail, 19 percent; and light rail, 13 percent.

Among the capital projects constructed in recent years is this massive MTA Long Island Rail Road train storage yard west of Penn Station in New York City.

In 2000, public transportation spent $22.6 billion on **operating expenses**. Salaries and wages cost 46 percent; fringe benefits, 24 percent; purchased transportation, 12 percent; and fuel and supplies, 10 percent. Services, utilities, insurance and other costs fill out the operating expense list. Of the money used to operate and maintain the vehicles used in revenue service, scheduling and operation of revenue vehicles represent 45 percent; vehicle maintenance, 19 percent; non-vehicle maintenance, 10 percent; purchased transportation, 12 percent; and 14 percent, general administration.

Employees

In 2000, the nation's 358,000 public transportation employees provided services to the highest levels of passengers since the inception of the federal transit program. These employees operate, maintain and manage all modes of public transportation. The majority of employees, or 61 percent, work in bus service, followed by 15 percent in demand response, 14 percent in heavy rail, and 7 percent in commuter rail.

A bus operator at Pace Suburban Bus outside Chicago takes time to share a special moment with a young passenger.

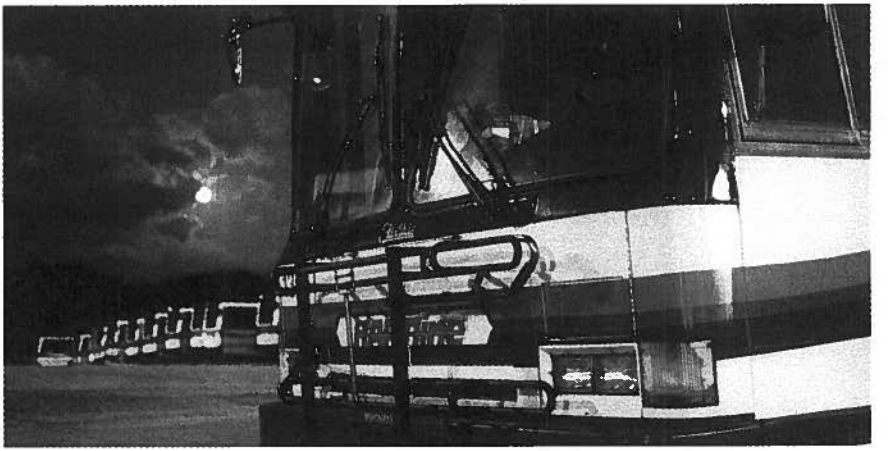
A full 64 percent of the total number of public transportation employees serve as operators or conductors on board vehicles, and other vehicle operations employees. Vehicle maintenance personnel are 18 percent; non-vehicle maintenance, 9 percent; and administration, 10 percent.

In addition, an estimated 10,000 - 20,000 professionals work under contract to public transportation systems or are employed by engineering firms, manufacturers of public transportation equipment, consultants, local governments and private businesses.

Vehicles
The public transportation fleet is comprised of 131,000 vehicles in active service. Of this number, buses represent 58 percent; demand response vehicles, 25 percent; heavy rail cars, 8 percent; commuter rail cars, 4 percent; light rail cars, 1 percent; and all other modes, 5 percent.

The age of vehicles varies by mode and by each agency that operates them. The average age for buses is 6.9 years; demand response vehicles, 2.6 years; commuter rail vehicles, 20.4 years; heavy rail vehicles, 22.5 years; and light rail vehicles, 17.9 years.

The length of vehicles varies by mode. For example, although the standard length of a bus is 40 feet, vehicles range from 15 to 65 feet long. The average length of a bus is 39.3 feet; demand response vehicles, 21.5 feet; commuter rail cars, 85.0 feet; heavy rail cars, 61.4 feet; and light rail cars, 72.8 feet. Vanpool vehicles are more compact at 17.4 feet. Ferryboats are the longest at 235.6 feet.



The sun sets on the fleet of the Hillsborough Area Regional Transit Authority after a long day of providing bus service for Tampa, Florida residents.

Energy Consumption
In 2000, public transportation vehicles used nearly 889 million gallons of fossil fuels and 5.5 billion kilowatt-hours of electricity, less than 1 percent of all energy consumed in the U.S.

Among fossil fuels, diesel ranked as the highest consumed at 88 percent. Top users of diesel fuel are buses, 81 percent; commuter rail at 9

percent; demand response, 6 percent; and ferryboats, 4 percent. Among the non-diesel fuels, vehicles also used fossil fuels such as gasoline (29 percent), compressed natural gas (53 percent), propane (5 percent), and liquified natural gas (12 percent).

Most electricity, 64 percent, is consumed by heavy rail vehicles; commuter rail, 25 percent; and light rail, 8 percent.

This compressed natural gas bus is operated by the Sacramento Regional Transit District in California.

Benefits of Public Transportation

Public transportation benefits the quality of life in communities across the country by providing safe, efficient and economical transportation service. Importantly, public transportation is also a vital component for a healthy economy. While public transportation benefits the people who use it, society in general benefits from its availability. Investing in public transportation:

Saves Money:

For most people, public transportation saves money. It is more cost efficient to use public transportation, especially to the central business district of an urban area.

For every dollar earned, the average household spends 18 cents on transportation, 98 percent of which is for buying, maintaining and operating cars, the largest source of household debt after mortgages.

Americans living in transit-intensive metropolitan areas save $22 billion annually in transportation costs. Savings add up for everyone: every $10 million invested in public transportation saves more than $15 million, for both highway and transit users. This includes savings of about $1,500 and 200 gallons of gas – per year.

In addition, transit availability can reduce the needs for additional cars, a yearly expense of between $4,800 and $9,700.

Annual costs for public transportation may range from $200 to $2,000 depending on mileage traveled and include transfer, distance or zone, time-of-day, express, and parking charges.

A 1999 study, *"Public Transportation and the Nation's Economy,"* by Cambridge Systematics, Inc., estimated that for every $10 million invested in public transportation, more than $15 million is saved in transportation costs to both highway and public transportation users. These include operating, fuel and congestion costs.

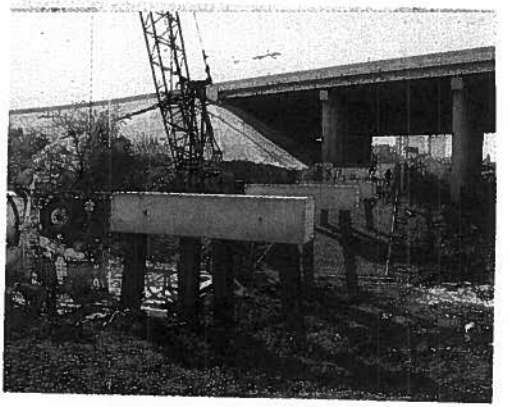
Creates Jobs: The public transportation industry creates jobs for the nation's economy. In addition to the 350,000 people directly employed by the public transportation industry and thousands of others employed in the directly related engineering, construction, manufacturing and retail industries, other jobs are created. For every $10 million invested in capital projects for public transportation, more than 300 jobs and a $30 million gain in sales for business are realized, according to the 1999 Cambridge Systematics study.

Provides Access to Jobs: During the 1990s, federal and state governments took steps toward moving people off welfare and into the workforce. At the same time, a healthy economy has created thousands of new jobs. Transportation is a key force in moving former welfare recipients into the workforce as permanent wage earners. APTA's *1999 Access to Work Best Practices Survey* reveals that an estimated 94 percent of welfare recipients attempting to move into the workforce do not own cars and rely on public transportation.

Under the current $75 million federal access to jobs initiative, public transportation systems around the nation cooperatively work with state and local social service agencies to coordinate services to identify and assess mobility needs and to improve employment accessibility in their region. These new and expanded services will provide access to jobs for 8 million households without a car. TEA-21 guarantees $500 million for these programs for a five-year period.

Employers around the country are taking advantage of the expanded labor pool that public transportation provides. Almost half of the nation's Fortune 500 companies, representing over $2 trillion in annual revenue, are headquartered in America's transit-intensive metropolitan areas. Examples of cities where companies have located near public transportation are many and include Chicago, Atlanta and Dallas.

Stimulates Economic Development: New analysis confirms the important and positive economic impact of public transportation investment on new development and business revenues. The Cambridge Systematics study estimated that each $10 million in capital investment yields $30 million in increased sales, while each $10 million operating investment yields $32 million. The net return on the public investment is as high as six to one.



Communities throughout the country are spurring economic development by investing in public transportation projects like this commuter rail system in Dallas/Ft. Worth, Texas. This investment pays off with a return that is as high as 6 to 1.

Ease Traffic Congestion: Public transportation helps to alleviate the crowded conditions on our nation's increasingly crowded network of roadways. The amount of time car drivers spent stuck in traffic is 36 hours in a year according to the 2001 *Texas Transportation Institute (TTI) Annual Urban Mobility Report.* Also, drivers in half of the cities studied spent at least half as much time stuck in traffic as they did on vacation each year. These findings apply to small-to-medium sized cities as well as larger metropolitan areas.

The answer to more congestion is not building more roads. If adding more roads represented the only option, each of the cities in the TTI study would require an average of 39 more lane miles to keep pace with one year of increased traffic demand.

Public transportation takes cars off the road. APTA estimates that if all Americans who take transit to work drove alone, they would fill a nine-lane freeway from Boston to Los Angeles. In St. Louis, a full MetroLink light rail train removes 125 cars from the roads, and the entire system removes 12,500 cars from daily rush-hour traffic.

More Americans perceive traffic congestion as a growing problem. Recent public opinion polls suggest that nearly half of Americans believe that traffic is a serious problem where they live, especially among suburban residents. Most people (57 percent) do not feel their commute will get better over the next three years, and nearly a quarter (24 percent) feel they will spend more time commuting, according to recent public opinion polls. (Transit Cooperative Research Program Report #63, "Enhancing the Visibility and Image of Transit in the United States and Canada")

This Toronto GO Transit train carries 1,600 passengers. If they all drove instead, the adjacent freeway would be totally gridlocked.

Fosters More Livable Communities: Public transportation is a catalyst to strengthen community life through partnering with cities, small towns, and rural areas. These partnerships create transportation systems that enhance the quality of life. Public transportation's successful partnerships with communities bring together both the goals of transportation systems and the livability goals of communities, according to a Project for Public Spaces, Inc., report *"How Transportation and Community Partnerships are Shaping America."* Public transportation

facilities and transportation corridors are "natural focal points for communities" for economic and social activities that help create strong neighborhood centers that are more economically stable, safe, and productive. These are areas where people can drive less or walk. When commuters ride public transportation or walk, face-to-face contact with neighbors tends to increase, which works to bring a community closer.

In the recent "Transportation for Livable Cities" by Vukan R. Vuchic, Professor of Transportation at the University of Pennsylvania, the author dispels the myth that automobile-based transportation provides freedom of choice and maximum mobility. The availability of public transportation in a community provides mobility and accessibility for all people, according to Vuchic. Transportation systems in urban areas with integrated, multimodal transportation options provide more trip choices and increase the ability to travel between activities. Vuchic believes that the ability to travel in an area conveniently, without a car, is an important component of an area's livability.

More livable communities reduce the investment required for an expansion of a roadway network. According to "*Dollars and Sense: The Economic Case for Public Transportation in America*," public transportation use reduces roadway related costs – traffic enforcement, emergency services, right-of-way acquisition - by an estimated $1 billion to $1.7 billion per year.

The Charleston Area Regional Transportation Authority in South Carolina helps move both residents and tourists through Charleston's quaint streets.

Provides Mobility for Seniors

By the year 2020, 40 percent of the U.S. population will be senior citizens and many will be unable to drive. In fact, one-fourth of today's 75 + age group does not drive. Meeting the transportation needs of seniors is a major community objective as well as a national goal. Public transportation services such as mini buses represent a lifeline for seniors, linking them with family, friends and a changing society.

Makes Available Access for Rural Areas

Public transportation is equally important to America's rural heartland, where 40 percent of residents have no access to public transportation services and another 28 percent have negligible access. Transportation service is seen as vital for rural America's 30 million non-drivers, who include senior citizens, low-income families and people with disabilities.

Boosts Real Estate Values: Public transportation fuels local development and in turn impacts local property values. For example, in the case of developments near the light rail system in Dallas, Texas, a 1999 University of North Texas study found that taxable values of properties located near Dallas Area Rapid Transit (DART) stations jumped by 25 percent between 1994 and 1998, as compared to values in neighborhoods not located near rail stations.

Improves Air Quality: Public transportation enables people to conserve energy and promote cleaner air. A 1996 FTA study reports that each year, America's public transportation use avoids the emission of more than 126 million pounds of hydrocarbons, a primary cause of smog, and 156 million pounds of nitrogen oxides, that can cause respiratory disease. Public transportation vehicles help reduce air pollution. For every mile traveled, less pollutants are emitted than by a single-passenger automobile. For example, buses emit 80 percent less carbon monoxide than single-occupant automobiles and rail transportation emits almost no carbon monoxides. Public transportation also reduces auto-fuel consumption by 1.5 billion gallons annually, according to the FTA study. Some transit systems around the country are reducing reliance on diesel fuel for their bus fleets and investing in compressed national gas vehicles, buying low- sulfur fuel-burning buses or planning a switch to diesel-electric hydrid buses. Other systems are replacing aging diesel buses with new ones to reduce emissions.

Reduces Energy Consumption: Public transportation can significantly reduce dependency on gasoline. For example, switching to public transportation, a person commuting 60 miles each way on a daily basis, using a car that travels 15 miles per gallon (m.p.g.) could save an estimated 1,888 gallons of gasoline each year. At 30 m.p.g, the savings amount to 944 gallons.

For a 40-mile trip, 1,259 gallons would be saved at 15 m.p.g. or 629 gallons at 30 m.p.g. Even switching to public transportation for a shorter 5-mile commute each way can save 157 gallons at 15 m.p.g. or 79 gallons at 30 m.p.g.

Ensures Safety: Public transportation continues to be one of the safest modes of travel in the U.S. Safe travel is a high priority of public transportation systems, federal, state and local governments and APTA. According to the National Safety Council, riding a transit bus is 170 times safer than car travel. By train, customers are 25 times safer than traveling by car.

The public transportation industry and APTA continue to promote partnerships in safety. During 1999-2000, a record 53 public transportation systems participated in the rail, commuter rail or bus safety audit programs offered by APTA. These comprehensive programs are designed to examine every area of operations to ensure the safety of public transportation passengers.

Why Is Public Transportation So Safe?

- Transit vehicle operators are highly trained to drive defensively and anticipate potential safety problems.
- Public transportation vehicles are generally much larger and more substantially built than personal automobiles or vans.
- Most people on rail cars and busways travel on separate rights-of-way. Light rail, commuter rail and cable cars encounter grade crossings, many of which are protected by crossing gates.
- Passengers ride approximately 3-4 feet above the ground, offering protection from the most common area of impact.
- Providing more security than roadways, many transit systems feature new visual, voice and data communications systems linking vehicles, stations and riders with state-of-the-art operations centers.

Enhances Mobility During Emergencies: During many types of crisis conditions, including both natural and man-made, people rely on public

transportation as a valued service. For example, on September 11, 2001, public transportation systems in the New York City area moved people safely away from the World Trade Center disaster. After the attack on the Pentagon, transit systems in the Washington, D.C. area evacuated hundreds of thousands in an early rush hour. Nationwide, transit systems evacuated tens of thousands of travelers from closed airports in major cities. Emergency plans went into effect at many systems to secure the safety of passengers. Not a single life was lost among the millions of people traveling on public transportation that day. In 1998, when a tornado made an unprecedented visit to Nashville, Tennessee, public transportation services helped with evacuations and emergency transportation. Also, in 1998, public transportation provided invaluable service in the Daytona Beach, Florida area when parts of Volusia County were ravaged by wildfires. Public transportation vehicles operated around the clock to transport firefighters to the site of the wildfires; to evacuate nursing homes, adult day care facilities, and hospitals; and to bring out-of-town firefighters from the airport.

More recently, local transit systems across North Carolina offered direct assistance to the victims of Hurricane Floyd in September 1999, by evacuating and rescuing hundreds of residents during and after the hurricane. In August 1999, Calgary Transit provided immediate and vital assistance to evacuate residents of southeast Calgary when a nearby oil recycling plant was consumed by fire after more than 40 explosions erupted at the site. In November 1999, the Mass Transportation Authority of Flint, Michigan successfully evacuated residents and employees of a senior citizens housing complex after a gas explosion destroyed the facility. In September 2001, New York and New Jersey transit systems helped evacuate hundreds of thousands of people from Manhattan after terrorist attacks.

SECTION II

Profile of U.S. Public Transportation

TABLE 1 *File: AGENCIES*

Number of Transit Agencies by Mode

MODE	NUMBER
Aerial Tramway	1
Automated Guideway Transit	5
Bus	2,262
Cable Car	1
Commuter Rail	19
Demand Response	5,252
Ferryboat (b)	33
Heavy Rail	14
Inclined Plane	5
Light Rail	25
Monorail	2
Trolleybus	5
Vanpool	67
TOTAL (a)	6,000

(a) Total is not sum of all modes since many agencies operate more than one mode.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

35 Largest Transit Agencies, Fiscal Year 2000, Ranked by Number of Unlinked Passenger Trips

RANK	TRANSIT AGENCY	URBANIZED AREA
1	Metropolitan Transportation Authority (includes MTA New York City Transit, MTA Long Island Rail Road, MTA Metro-North Railroad, MTA Long Island Bus, and MTA Staten Island Railway)	New York, NY
2	Regional Transportation Authority (includes Chicago Transit Authority, Northeast Illinois Regional Commuter Railroad Corporation, and PACE Suburban Bus)	Chicago, IL
3	Los Angeles County Metropolitan Transp Authority	Los Angeles, CA
4	Massachusetts Bay Transportation Authority	Boston, MA
5	Washington Metropolitan Area Transit Authority	Washington, DC
6	Southeastern Pennsylvania Transp Authority	Philadelphia, PA
7	San Francisco Municipal Railway	San Francisco, CA
8	New Jersey Transit Corporation	New York, NY
9	Metropolitan Atlanta Rapid Transit Authority	Atlanta, GA
10	New York City Department of Transportation	New York, NY
11	Mass Transit Administration, Maryland Dept of Trp	Baltimore, MD
12	King County Department of Transportation	Seattle, WA
13	Metropolitan Transit Authority of Harris County	Houston, TX
14	San Francisco Bay Area Rapid Transit District	San Francisco, CA
15	Tri-County Metropolitan Transp District of Oregon	Portland, OR
16	Miami-Dade Transit Agency	Miami, FL
17	San Diego Metropolitan Transit Development Board (includes San Diego Transit Corporation and San Diego Trolley)	San Diego, CA
18	Port Authority of New York and New Jersey	New York, NY
19	Port Authority of Allegheny County	Pittsburgh, PA
20	Regional Transportation District	Denver, CO
21	Metro Transit	Minneapolis, MN
22	Milwaukee County Transit System	Milwaukee, WI
23	Dallas Area Rapid Transit Authority	Dallas, TX
24	Alameda-Contra Costa Transit District	San Francisco, CA
25	City & County of Honolulu Dept of Transp Services	Honolulu, HI
26	Greater Cleveland Regional Transit Authority	Cleveland, OH
27	Orange County Transportation Authority	Los Angeles, CA
28	Santa Clara Valley Transportation Authority	San Jose, CA
29	Regional Transit Authority of Orleans and Jefferson	New Orleans, LA
30	Bi-State Development Agency	Saint Louis, MO
31	Regional Transportation Comm of Southern Nevada	Las Vegas, NV
32	VIA Metropolitan Transit	San Antonio, TX
33	City of Detroit Department of Transportation	Detroit, MI
34	Capital Metropolitan Transportation Authority	Austin, TX
35	Connecticut Transit	Hartford, CT

TABLE 3

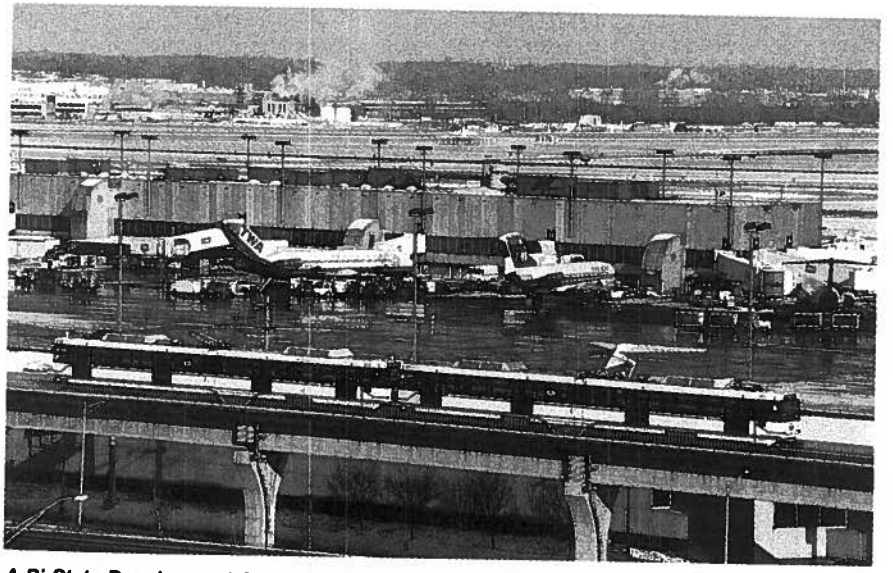
File: AIRPORT

Airports With Direct Rail Public Transportation Access (a)

CITY	AIRPORT	RAIL TYPE	STATUS
Atlanta, GA	Hartsfield-Atlanta	HR	Open
Baltimore, MD	Baltimore-Washington	LR	Open
Chicago, IL	Midway	HR	Open
Chicago, IL	O'Hare	HR	Open
Cleveland, OH	Cleveland-Hopkins	HR	Open
Minneapolis, MN	Minneapolis-St. Paul	LR	Construction
New York, NY	Kennedy	AG	Construction
Newark, NJ	Newark	AG	Open
Philadelphia, PA	Philadelphia	CR	Open
Portland, OR	Portland	LR	Open
Saint Louis, MO	Lambert-St. Louis	LR	Open
San Francisco, CA	San Francisco	HR	Construction
South Bend, IN	Michiana	CR	Open
Washington, DC	Reagan National	HR	Open

AG = automated guideway, HR = heavy rail, LR = light rail, CR = commuter rail

(a) Includes airports where rail line is open or under construction. Excludes airports that require a bus or van ride between the station and terminal and airports that only have internal rail circulation systems.



A Bi-State Development Agency light rail train at the St. Louis airport. Such connections benefit not only travelers but also the thousands of persons who work at large airports.

TABLE 4

File: GUIDMILE

Rail Route Mileage & Status of Future Projects (a)

MODE	STATUS	MILES (b)
AG	construction	9.4
AG	open	19.0
AG	planning	4.7
AG	proposed	0.7
AG TOTAL		**33.8**
CC	open	3.5
CC TOTAL		**3.5**
CR	construction	22.3
CR	design	307.6
CR	open	4,181.4
CR	planning	2,926.0
CR	proposed	861.1
CR TOTAL		**8,298.4**
HR	construction	24.2
HR	design	1.0
HR	open	1,331.5
HR	planning	60.0
HR	proposed	124.9
HR TOTAL		**1,541.6**
IP	open	1.5
IP TOTAL		**1.5**
LR	construction	150.6
LR	design	156.5
LR	open	481.3
LR	planning	553.0
LR	proposed	303.0
LR TOTAL		**1,644.4**
MO	design	8.3
MO	open	2.7
MO	proposed	14.0
MO TOTAL		**25.0**

TABLE 4

File: GUIDMILE

Rail Route Mileage & Status of Future Projects (a)

MODE	STATUS	MILES (b)

? = Uncertain, unknown, or not reported; AG=automated guideway transit; CC=cable car; CR=commuter rail; HR=heavy rail; IP=inclined plane; LR=light rail; MO=monorail; TR=aerial tramway.
(a) Data as of July 2001, plus updated information where known.
(b) Segments used by more than one route counted for each route using those segments. Mileage listed is end-to-end mileage. Excludes data for a few routes for which mileage was not reported.

Source: APTA survey

One of the new heavy rail lines opened in the 1990s was the Los Angeles County Metropolitan Transportation Authority Red Line.

TABLE 5 *Title: GUIDECON*

Rail Routes Under Construction (a)

LOCATION	MILES
AUTOMATED GUIDEWAY	
New York, NY	9.4
TOTAL	**9.4**
COMMUTER RAIL	
Dallas, TX	7.6
Los Angeles, CA	1.0
New York, NY	0.2
Washington, DC	13.5
TOTAL	**22.3**
HEAVY RAIL	
Miami, FL	1.4
New York, NY	0.4
San Francisco, CA	8.5
San Juan, PR	10.7
Washington, DC	3.2
TOTAL	**24.2**
LIGHT RAIL	
Dallas, TX	21.5
Houston, TX	7.5
Los Angeles, CA	13.6
Memphis, TN	2.0
Minneapolis, MN	12.0
New Orleans, LA	3.7
New York, NY	43.0
Philadelphia, PA	8.3
Pittsburgh, PA	5.3
Portland, OR	5.8
Sacramento, CA	6.3
San Diego, CA	5.9
San Jose, CA	11.9
Tacoma, WA	1.6
Tampa, FL	2.2
TOTAL	**150.6**

(a) Data as of July 2001, plus updated information where known.
Source: APTA survey

TABLE 6

File: MBTBFGMILES

Bus and Trolleybus Fixed Guideway Directional Route Miles (a)

URBANIZED AREA	TRANSIT AGENCY	EXCLU-SIVE ROW	CON-TROLLED ROW
BUS			
Atlanta, GA	Metropolitan Atlanta RTA	0.2	13.6
Boston, MA	Massachusetts Bay TA	1.1	2.0
Charlotte, NC	Charlotte Area TS	5.6	0.0
Chicago, IL	Chicago TA	3.7	0.0
Cincinnati, OH	Southwest Ohio RTA	0.1	0.0
Dallas, TX	First Transit	33.0	0.0
Dallas, TX	Dallas Area RT	43.7	9.3
Denver, CO	Regional Trp Dist	17.1	13.3
Hartford, CT	Connecticut Transit	27.4	0.0
Honolulu, HI	Honolulu DPT Services	1.2	34.7
Houston, TX	Metro TA of Harris County	173.0	8.9
Kansas City, MO	Kansas City Area TA	0.0	1.1
Los Angeles, CA	Foothill Transit – Laidlaw Transit	23.6	0.0
Los Angeles, CA	Foothill Transit – Ryder/ATE	23.6	0.0
Los Angeles, CA	Long Beach PTC	0.5	0.0
Los Angeles, CA	Los Angeles County MTA	48.4	0.0
Los Angeles, CA	Torrance Transit	14.6	0.0
Madison, WI	Madison Metro	12.5	0.0
Miami, FL	Miami-Dade TA	16.7	24.6
Milwaukee, WI	Waukesha Transit Comm	5.1	0.0
Minneapolis, MN	Metro Transit	177.4	30.6
New Orleans, LA	Regional TA	11.4	0.0
New York, NY	MTA New York City Transit	1.3	42.4
New York, NY	New York City DOT-GTJC	0.3	13.8
New York, NY	New York City DOT-Liberty Lines Express	0.0	8.2
New York, NY	New York City DOT-NY Bus Tours	0.0	3.5
New York, NY	New York City DOT-Queens Surface	0.0	5.5
New York, NY	New Jersey TC	0.0	29.6
New York, NY	Academy Lines	0.0	3.1
New York, NY	Hudson Transit	0.0	2.9
New York, NY	Lakeland Bus	0.0	2.9
New York, NY	Suburban Transit	0.0	3.1
New York, NY	Westchester County DOT – Liberty Lines	0.0	4.2
Norfolk, VA	Transp Dist Comm of Hampton Roads	0.0	39.9
Orlando, FL	Central Florida RTA	2.5	0.0
Philadelphia, PA	Southeastern PA TA	2.5	0.0
Pittsburgh, PA	Port Auth of Allegheny County	39.8	0.0
Phoenix, AZ	City of Phoenix PTD	0.0	69.6
Portland, OR	Tri-County Metro TD of Oregon	1.8	0.0
Providence, RI	Rhode Island PTA	1.6	0.0
Saint Louis, MO	Bi-State Development Agency	6.4	2.7
San Diego, CA	San Diego Transit Corp	0.6	0.4
San Francisco, CA	Alameda-Contra Costa TD	0.3	39.5

TABLE 6 (continued)

Bus and Trolleybus Fixed Guideway Directional Route Miles (a)

URBANIZED AREA	TRANSIT AGENCY	EXCLU-SIVE ROW	CON-TROLLED ROW
San Francisco, CA	Golden Gate Bridge, Hwy & TD	0.0	20.5
San Francisco, CA	San Francisco MTA	0.0	8.5
San Jose, CA	Santa Clara Valley TA	0.0	153.4
San Juan, PR	Metropolitan Bus Auth	17.1	0.0
Seattle, WA	King County Metro Transit	212.5	2.0
Seattle, WA	Snohomish County PTBA	57.2	4.8
Tacoma, WA	Pierce Transit	19.8	0.0
Tampa, FL	Hillsborough Area RTA	0.0	1.1
Toledo, OH	Toledo Area RTA	0.0	1.0
Washington, DC	Alexandria Transit Co	0.0	7.4
Washington, DC	Washington Metro Area TA	0.0	79.1
Williamsport, PA	Williamsport BOT	0.2	0.0
	TOTAL	1,003.8	687.2
TROLLEYBUS			
Boston, MA	Massachusetts Bay TA	0.6	21.0
Dayton, OH	Miami Valley RTA	0.0	124.0
Philadelphia, PA	Southeastern PA TA	0.0	42.5
San Francisco, CA	San Francisco MTA	0.0	164.3
Seattle, WA	King County Metro Transit	3.4	113.2
	TOTAL	4.0	465.0

(a) Fixed guideways are vehicle lanes reserved for transit use and/or other high-occupancy vehicles. Exclusive ROW (right-of-way) are reserved at all times; controlled ROW only part of the time--usually just during peak hours. Some double-counting occurs when more than one transit agency uses the same fixed guideway.

Source: Federal Transit Administration, National Transit Database, 2000.

The pleasantly landscaped 16th Street Mall in Denver, Colorado exemplifies a type of fixed guideway common in the central business districts of larger cities. Buses of the Regional Transportation District shuttle constantly between the two end stations of the mile-long mall.

Funding, Capital

Highlights. . . . . .

- $9.6 billion was received from all sources in 2000.
- 47.2% came from the federal government,
  10.8% from state governments,
  15.3% from local governments,
  26.7% was raised by transit agencies from directly-levied taxes, advertising, interest income, and other sources.
- Federal capital and operating appropriations totaled $6.7 billion for 2002.
- Federal capital and planning grant approvals for 2000 totaled $7.4 billion.
- 49.2% went for bus-related projects,
  30.3% for fixed-guideway modernization,
  18.2% for new start transit projects,
  2.3% for planning projects.

TABLE 7

File: CAPFUND

Capital Funding Sources, Millions of Dollars

YEAR	FEDERAL ASSISTANCE	STATE ASSISTANCE	LOCAL ASSISTANCE	DIRECTLY GENERATED (a)	LOCAL PLUS DIRECTLY GENERATED	TOTAL
1990	2,872.5	696.8	1,176.9	189.3	1,366.2	4,935.5
1991	2,773.5	695.4	1,012.3	1,074.5	2,086.8	5,555.7
1992	2,673.0	801.0	830.0	1,131.7	1,961.8	5,435.7
1993	2,432.4	1,325.5	1,079.6	1,002.1	2,081.7	5,839.6
1994	2,622.8	1,047.8	997.9	1,164.2	2,162.1	5,832.7
1995	3,422.2	1,020.3	888.2	1,899.6	2,787.8	7,230.3
1996	3,592.8	915.9	926.0	1,649.1	2,575.1	7,083.8
1997	4,275.6	1,037.0	898.8	1,638.1	2,536.9	7,849.5
1998	3,919.0	932.2	1,032.2	2,009.4	3,041.6	7,892.8
1999	3,960.4	911.5	1,128.2	2,974.6	4,102.8	8,974.7
2000 P	4,525.6	1,030.5	1,469.2	2561.7	4,030.9	9,587.0
2000 % of Total	47.2%	10.8%	15.3%	26.7%	42.0%	100.0%

P = Preliminary

(a) Includes non-governmental funding, subsidies from non-transit sectors of a transit agency's operations, and, beginning in 1991, taxes levied directly by a transit agency and bridge and tunnel tolls.

TABLE 8

File: FEDAPP

Federal Public Transportation Appropriations, Federal Fiscal Years 1995-2002, Millions of Dollars

PROGRAM	1995	1996	1997	1998	1999	2000	2001	2002
MAJOR CAPITAL INVESTMENT PROGRAM:	1,724.9	1,665.0	1,900.0	2,000.0	2,307.0	2,490.1	2,694.6	2,891.0
New Starts/Extensions	646.6	666.0	760.0	800.0	902.8	969.1	1,060.1	1,136.4
Fixed-Guideway Modernization	725.0	666.0	760.0	800.0	902.8	980.4	1,056.1	1,136.4
Bus/Bus Facility (a)	353.3	333.0	380.0	400.0	501.4	540.6	578.4	618.2
FORMULA PROGRAM:	2,491.9	2,052.9	2,149.2	2,500.0	2,800.0	3,048.0	3,286.7	3,542.0
Urbanized Area	2,299.8	1,891.2	1,978.0	2,303.7	2,548.2	2,772.9	2,935.1	3,200.0
Nonurbanized Areas	132.9	110.1	115.1	134.1	177.9	193.6	205.0	223.4
Elderly & Disabled	59.2	51.6	56.0	62.2	67.0	72.9	77.2	84.6
Rural Transportation Access	—	—	—	—	2.0	3.7	4.7	7.0
Alaska Railroad	—	—	—	—	4.8	4.8	4.8	4.8
Other	—	—	—	—	—	—	59.9	22.2
PLANNING & RESEARCH:	93.1	85.5	85.5	92.0	98.0	106.7	109.8	116.0
Metropolitan Planning	41.5	39.5	39.5	39.5	43.8	49.6	52.0	55.4
Rural Transit Assistance Program	4.6	4.5	4.5	4.5	5.3	5.3	5.2	5.2
All Other Research & Training	47.0	41.5	41.5	48.0	48.9	51.8	52.6	55.4
University Research Centers	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Access to Jobs/Reverse Commute	—	—	—	—	75.0	75.0	99.8	125.0
Interstate Transfer	48.0	—	—	—	—	—	—	—
Washington DC Metro	200.0	200.0	200.0	200.0	50.0	—	—	—
FTA Administration	42.3	40.7	41.0	45.7	54.0	60.0	63.9	67.0
TOTAL	4,606.2	4,050.1	4,381.7	4,843.7	5,390.0	5,785.7	6,260.7	6,747.0

Source: U.S. Department of Transportation, Federal Transit Administration.
(a) Includes Clean Fuels Funds beginning FY 1999.

TABLE 9 *File: CAPUSE*

Federal Capital and Planning Grant Approvals by Use, Millions of Dollars

FEDERAL FISCAL YEAR	BUS (a)	FIXED-GUIDEWAY MODERNIZATION (a)	NEW STARTS (a)	PLANNING (b)	TOTAL
1990	760.9	998.9	603.7	64.4	2,427.9
1991	826.0	1,029.2	515.2	80.5	2,450.9
1992	941.7	1,153.8	492.5	80.8	2,668.8
1993	1,295.2	1,146.0	996.5	77.9	3,515.6
1994	1,401.6	1,474.3	657.2	97.2	3,630.3
1995	1,988.7	1,767.2	1,677.7	100.2	5,533.8
1996	1,465.7	1,482.3	1,109.3	122.8	4,180.1
1997	1,582.6	1,501.1	922.4	118.6	4,124.7
1998	1,640.9	1,598.2	898.0	88.2	4,225.3
1999	2,300.7	1,994.7	996.2	103.4	5,395.0
2000	3,622.0	2,232.8	1,343.4	167.8	7,366.0
2000 % of Total	49.2%	30.3%	18.2%	2.3%	100.0%

(a) Includes total funding for listed usage from capital, formula, and other funding programs.
(b) Includes funds used for planning from all funding programs.
Source: U.S. Department of Transportation, Federal Transit Administration.

TABLE 10

File: CAPPROG

Federal Capital and Planning Grant Approvals by Source Funding Program, Millions of Dollars

FEDERAL FISCAL YEAR	CAPITAL INVESTMENT (a)	FORMULA (b)	PLANNING (c)	OTHER (d)	TOTAL
1990	1,134.6	997.4	47.9	248.0	2,427.9
1991	1,073.6	1,069.8	54.5	253.0	2,450.9
1992	973.7	1,261.3	55.9	377.9	2,668.8
1993	1,745.9	1,473.3	50.5	245.9	3,515.6
1994	1,547.1	1,706.3	53.0	323.9	3,630.3
1995	2,608.5	2,520.1	52.5	352.7	5,533.8
1996	1,690.5	2,123.9	50.7	315.0	4,180.1
1997	1,716.3	2,130.0	76.0	202.4	4,124.7
1998	1,648.3	2,311.8	53.9	211.3	4,225.3
1999	2,064.7	3,270.0	57.4	2.9	5,395.0
2000	2,708.6	4,490.4	114.0	53.0	7,366.0
2000 % of Total	36.8%	61.0%	1.5%	0.7%	100.0%

(a) Bus and Bus Facilities, Fixed-Guideway Modernization, and New Start programs.
(b) Urbanized Area, Rural, and Elderly Individuals and Individuals with Disabilities, Over-the-Road Bus, Job Access/Reverse Commute formula programs.
(b) Metropolitan Planning, State Planning, Rural Transportation Assistance Program, and Consolidated Planning Grants.
(c) Federal Aid Urban Systems, Interstate Transfer, and National Capital Transportation Act.

TABLE 11

File: FLEXFUND

Flexible Highway Funds Transferred to Public Transportation, Millions of Dollars (a)

FEDERAL FISCAL YEAR	CONGESTION MITIGATION & AIR QUALITY IMPROVEMENT PROGRAM	SURFACE TRANSPORTATION PROGRAM	INTERSTATE SUBSTITUTE & EARMARKED FEDERAL HIGHWAY ADMINISTRATION FUNDS	TOTAL
1992	177.0	25.2	101.6	303.8
1993	298.4	146.9	23.9	469.2
1994	317.0	183.2	109.5	609.7
1995	484.1	200.3	117.4	801.8
1996	344.6	324.2	111.3	780.1
1997	257.9	207.9	48.3	514.1
1998	223.3	243.9	0.1	467.3
1999	573.0	384.4	11.8	969.2
2000	864.0	708.4	26.7	1,599.1
2001	633.1	532.1	68.2	1,233.4
2001 % of Total	51.3%	43.1%	5.5%	100.0%

(a) Under Provisions of Intermodal Surface Transportation Efficiency Act of 1991.
Source: U.S. Department of Transportation, Federal Transit Administration.

TABLE 12

File: CFSTATE

Federal Obligations by State, 2000, Millions of Dollars

Alabama	48.1
Alaska	10.4
Arizona	73.7
Arkansas	15.0
California	1,668.1
Colorado	118.4
Connecticut	163.4
Delaware	20.2
District of Columbia	143.4
Florida	246.8
Georgia	197.7
Hawaii	33.1
Idaho	7.3
Illinois	375.2
Indiana	75.5
Iowa	22.8
Kansas	15.1
Kentucky	30.4
Louisiana	88.9
Maine	14.1
Maryland	137.3
Massachusetts	240.0
Michigan	104.7
Minnesota	159.7
Mississippi	9.8
Missouri	163.1
Montana	6.8
Nebraska	9.9
Nevada	46.8
New Hampshire	9.3
New Jersey	434.7
New Mexico	21.4
New York	967.5
North Carolina	65.0
North Dakota	6.4
Ohio	177.2
Oklahoma	27.1
Oregon	80.1
Pennsylvania	326.4
Rhode Island	36.1
South Carolina	25.8
South Dakota	3.4
Tennessee	36.7
Texas	528.3
Utah	85.9
Vermont	12.0
Virginia	80.7
Washington	254.0
West Virginia	45.7
Wisconsin	52.3
Wyoming	2.3
Puerto Rico & Territories	163.8
TOTAL	7,687.8

Source: Federal Transit Administration.

TABLE 13 Annual

File: COSTIMP

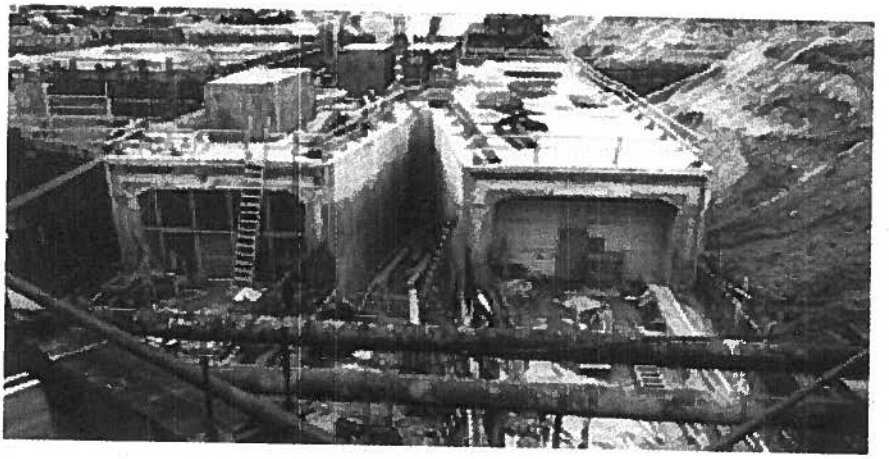
Cost to Improve Public Transportation Conditions and Performance, 1998-2017, Millions of 1997 Dollars

CATEGORY (a)	Costs to Maintain Conditions	Incremental Cost to Improve Conditions	Incremental Cost to Maintain Performance	Incremental Cost to Improve Performance	Total
BUS					
Replacement and Rehabilitation	1,832	613	0	0	2,445
Fleet Expansion	0	0	1,002	0	1,002
New Bus	0	0	0	546	546
Elderly and Disabled	159	139	0	0	298
Nonurbanized Area	110	93	0	0	203
Subtotal Bus	2,101	845	1,002	546	4,494
RAIL					
Replacement and Rehabilitation	4,916	723	0	0	5,639
Fleet Expansion	0	0	2,765	0	2,765
New Rail	0	0	0	3,151	3,151
Subtotal Rail	4,916	723	2,765	3,151	11,555
TOTAL	7,017	1,568	3,767	3,697	16,049

Source: U.S. Department of Transportation, *1999 Status of the Nation's Highways, Bridges, and Transit: Condition and Performance.*
(a) Each category includes vehicles and non-vehicle costs.

Expenses, Capital

Tunnel construction for a heavy rail line at the Washington Metropolitan Area Transit Authority. Some tunnels are bored deep underground by special machines. This one employs the cut-and-cover method--digging a trench, building the tunnel, and then covering it up.



Highlights. . . . . .

- $9.6 billion was spent in 2000.
- 32.7% was used for rolling stock,
  56.4% for facilities,
  10.9% for other capital expenses.
- 33.9% was used for bus projects,
  18.6% for commuter rail,
  29.8% for heavy rail,
  13.0% for light rail,
  4.7% for other modes.

Notes on Capital Costs

File: CAPCOST

Capital expense costs reported to the Federal Transit Administration exclude expenses of purchased transportation contractors. Data in the following tables include APTA estimates for such expenses.

Because most capital projects take several years to complete, and data are reported each year as spent, it is not possible to correlate data to particular projects. Yearly totals rise and fall based on construction schedules, so comparison of data for various years has little value because of the differing projects included in each year.

Bond Expenses are not considered capital expenses by the FTA. Interest payments are considered a reconciling item for operating expenses. Principal repayments are not reported since the funds from bond issues have already been spent on rolling stock, facilities, and other equipment.

Rolling Stock expenses include revenue vehicles and locomotives only. Service vehicles are included in "other." They do not include fare collection or revenue vehicle movement control equipment (radios or cellular phones) or leased tires and tubes. They include replacement, rehabilitation, remanufacture, fleet expansion, major component (engines, transmissions, etc.), and rail overhaul costs.

Facilities include construction and rehabilitation of maintenance facilities, crime prevention and security equipment, service and support equipment, operational support (computer hardware and software, bus diagnostic equipment, etc.), transit malls, transfer facilities, intermodal terminals, shelters, passenger stations, depots, terminals, HOV facilities, transit ways, park-and-ride facilities, track, line equipment and structures, signals and communications, and power equipment and substations. Design, engineering, demolition, land acquisition, and relocations costs are included.

Other includes service vehicles, construction of general administration facilities, furniture, equipment not an integral part of buildings and structures, data processing equipment, fare collection equipment, and revenue vehicle movement control equipment (radios, cellular phones).

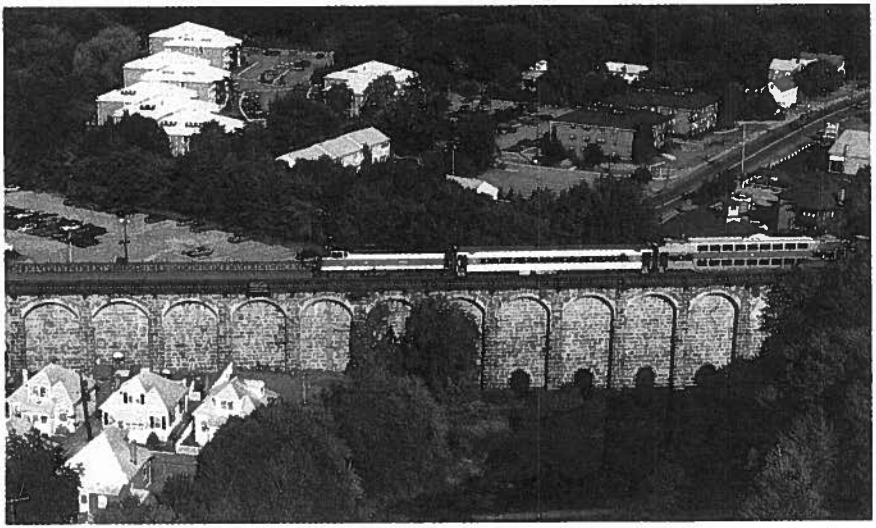
Construction Costs

File: CONCOST

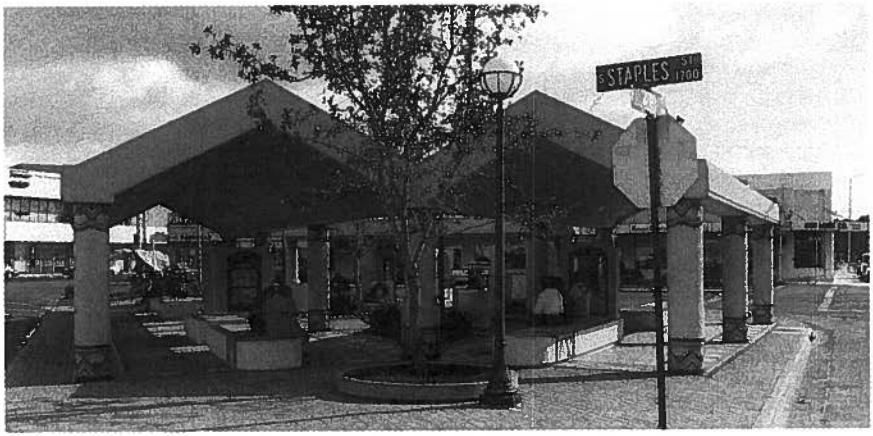
Although data for public transportation infrastructure construction costs (e.g., new rail lines, high-occupancy-vehicle lanes, and busways) are reported to the Federal Transit Administration National Transit Database, data are not reported by complete project--only by year by mode, which could cover several projects being constructed simultaneously. Also, most projects are constructed over a period of several years, and only broad category data (vehicles, facilities, and other) are reported. Details on mileage, number of stations, size of parking lots, and other variables are not reported. Dozens of variables impact the cost of a project, and some costs, such as the quality of construction and the artistic beauty of a project, cannot be accurately measured. A few of those variables include:

1) land acquisition,
2) land clearance and demolition,
3) relocation of existing businesses and residences,
4) availability of "free" or low-cost right-of-way such as abandoned railroads,
5) utility relocation,
6) number, size, and length of stations,
7) number of tracks or lanes,
8) length of trackage or roadway,
9) number and size of maintenance yards and facilities,
10) proportion in deep tunnel, shallow tunnel, on the surface, and elevated,
11) number and size of parking lots or garages,
12) number and size of bridges,
13) station and right of way enhancements such as landscaping, works of art, information kiosks, benches, telephones, concession booths, fountains, etc.,
14) type and number of fare vending and collection machines,
15) inflation over the several-year time period needed for most projects,
16) the going labor costs for and number of construction workers,
17) type and number of propulsion, signal, communication, and other operating systems,
18) when the project was constructed,
19) the number of vehicles required,
20) interest and other financing charges.

For these reasons, it is not possible to develop accurate comparative construction cost data on a per-mile or any other basis since the detailed data on the above (and other) variables are not reported to allow identification of comparable projects.



The rehabilitated Canton Viaduct built in the mid-1800s and still in use today by the Massachusetts Bay Transportation Authority commuter rail trains to Boston. A proportion of capital funds are spent to modernize old infrastructure such as this.



Not all projects are large and costly. This attractive small bus transfer center is used by the Corpus Christi Regional Transportation Authority in Texas.

TABLE 14

File: CAPEXMOD

Capital Expense by Mode, Millions of Dollars

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1992	1,301.9	1,310.5	67.6	2,054.1	494.9	34.8	171.9	5,435.7
1993	1,567.3	1,645.1	91.8	1,901.5	488.3	18.8	126.8	5,839.6
1994	1,470.3	1,436.4	99.3	2,070.1	544.1	57.4	155.1	5,832.7
1995	2,050.8	1,689.2	86.2	2,560.5	688.4	15.5	139.7	7,230.3
1996	2,035.6	1,690.1	105.2	2,228.0	849.9	19.2	155.8	7,083.8
1997	2,423.5	1,817.5	118.5	2,346.1	876.5	54.1	213.3	7,849.5
1998	2,804.9	1,402.2	131.5	2,350.8	967.2	67.0	169.2	7,892.8
1999	3,249.0	1,622.0	122.0	2,706.7	1,004.8	89.8	180.4	8,974.7
2000 P	3,248.8	1,783.5	134.2	2,852.2	1,244.8	148.9	174.6	9,587.0
2000 % of Total	33.9%	18.6%	1.4%	29.8%	13.0%	1.5%	1.8%	100.0%

P= Preliminary

TABLE 15 *File: CAPEXTYP*

Capital Expense by Type, Millions of Dollars

YEAR	ROLLING STOCK	FACILITIES	OTHER	TOTAL
1992	1,347.7	2,986.9	1,101.1	5,435.7
1993	1,616.2	2,826.3	1,397.1	5,839.6
1994	1,340.6	3,159.2	1,332.9	5,832.7
1995	1,834.5	3,836.9	1,558.9	7,230.3
1996	1,834.4	3,810.7	1,438.7	7,083.8
1997	2,355.7	4,468.1	1,025.7	7,849.5
1998	2,721.8	4,267.9	903.1	7,892.8
1999	3,239.4	4,697.8	1,037.5	8,974.7
2000 P	3,138.6	5,405.2	1,043.2	9,587.0
2000 % of Total	32.7%	56.4%	10.9%	100.0%

P = Preliminary

TABLE 16

File: CAPEXM&T

Capital Expense by Mode and Type, 2000, Millions of Dollars

TYPE	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
Rolling Stock	1,822.1	428.5	90.0	495.6	174.7	27.0	100.7	3,138.6
Facilities	918.8	1,276.4	23.4	2,053.1	956.0	110.0	67.5	5,405.2
Other	507.9	78.6	20.8	303.5	114.1	11.9	6.4	1,043.2
TOTAL	3,248.8	1,783.5	134.2	2,852.2	1,244.8	148.9	174.6	9,587.0
% of Total	33.9%	18.6%	1.4%	29.8%	13.0%	1.5%	1.8%	100.0%

All data are preliminary

IMPACTS OF PUBLIC TRANSPORTATION ON THE U.S. ECONOMY

EMPLOYMENT:

- **CAPITAL INVESTMENT:** 314 jobs created in the year following for each $10 million investment.
- **OPERATING INVESTMENT:** 570 jobs created for each $10 million investment in the short run.

BUSINESS SALES:

- **CAPITAL INVESTMENT:** $30 million in increased sales per each $10 million investment.
- **OPERATING INVESTMENT:** $32 million in increased sales per each $10 million investment.

HIGHWAY & PUBLIC TRANSPORTATION USER COSTS: $15 million in operating, fuel, and congestion costs per each $10 million investment.

BUSINESS OUTPUT: $2 million per each $10 million investment in first year, increasing to $31 million per each $10 million in the 20th year.

PERSONAL INCOME: $0.8 million per each $10 million investment in first year, increasing to $18 million per each $10 million in the 20th year.

STATE & LOCAL GOVERNMENT REVENUE: 4%-16% increase due to income and employment increases resulting from public transportation investments.

Source: *Public Transportation and the Nation's Economy*, Cambridge Systematics, 1999.

Funding, Operating

Highlights. . . . . .

- $24.2 billion was received from all sources in 2000.

- 36.1% came from passengers,
  21.9% from local governments,
  20.5% from state governments,
  4.1% from the federal government,
  17.4% is raised by transit agencies from directly-levied taxes, advertising, interest income, and other sources.

- Average adult base cash fare was $1.13.

- Average fare paid per unlinked trip was $0.93.
  for bus it was $0.77,
  commuter rail $3.32,
  demand response $1.64,
  ferryboat $1.13,
  heavy rail $0.94,
  light rail $0.57,
  trolleybus $0.49,
  vanpool $1.79,
  other modes $0.66.

TABLE 17

File: OPFUND

Operating Funding Sources, Millions of Dollars

YEAR	DIRECTLY GENERATED FUNDS (b)			GOVERNMENT FUNDS				TOTAL PUBLIC FUNDS (d)	TOTAL
	PASSENGER FARES (a)	OTHER	TOTAL	LOCAL (b)	STATE	FEDERAL	TOTAL		
1990	5,890.8	895.0	6,785.8	5,326.8	2,970.6	970.0	9,267.4	9,267.4	16,053.2
1991	6,037.2	766.8	6,804.0	5,373.4	3,199.5	955.9	9,728.8	9,728.8	16,532.8
1992 (c)	6,152.5	645.9	6,798.4	5,268.1	3,879.5	969.1	10,116.7	10,116.7	16,915.1
1993	6,350.9	764.0	7,114.9	5,490.6	3,704.2	966.5	10,161.3	10,161.3	17,276.2
1994	6,756.0	2,270.6	9,026.6	4,171.2	3,854.4	915.6	8,941.2	10,570.3	17,967.8
1995	6,800.9	2,812.2	9,613.1	3,980.9	3,829.6	817.0	8,627.5	10,171.7	18,240.6
1996	7,416.3	2,928.2	10,344.5	4,128.5	4,081.8	596.4	8,806.7	10,502.1	19,151.2
1997	7,545.7	3,308.4	10,854.1	4,095.1	3,918.7	647.0	8,660.8	10,524.4	19,514.9
1998	7,969.6	3,684.7	11,654.3	4,376.9	4,279.4	751.2	9,407.5	11,360.9	21,061.8
1999	8,282.4	3,647.6	11,930.0	4,539.8	4,878.6	871.8	10,290.2	12,574.7	22,220.2
2000 P	8,745.8	4,216.7	12,962.5	5,318.8	4,967.1	994.2	11,280.1	13,239.0	24,242.6
2000 % of Total	36.1%	17.4%	53.5%	21.9%	20.5%	4.1%	46.5%	54.6%	100.0%

P = Preliminary

(a) Includes fares retained by contractors; beginning 1991 includes fare subsidies formerly included in "other".

(b) "Local" includes taxes levied directly by transit agency and other subsidies from local government such as bridge and tunnel tolls and non-transit parking lot funds. Beginning 1994, such funds reclassified from "local" to "other".

(c) Beginning 1992, "local" and "other" declined by about $500 million due to change in accounting procedures at New York City Transit Authority.

(d) Includes "Total Government Funds" plus that portion of "Other Directly Generated Funds" included in "Local Government Funds" beginning in 1994 consisting of transit agency-raised taxes, tolls, and other dedicated funds.

TABLE 18

File: FAREMODE

Passenger Fares by Mode, Millions of Dollars (a)

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	2,966.8	952.2	40.9	1,740.8	82.6	45.8	61.7	5,890.8
1991 (b)	3,098.4	958.0	68.9	1,700.6	97.8	51.6	61.9	6,037.2
1992	3,058.8	970.1	75.8	1,830.3	97.8	48.7	71.0	6,152.5
1993	3,116.7	995.5	93.9	1,913.3	102.5	52.4	76.6	6,350.9
1994	3,249.5	1,083.1	170.7	1,975.7	135.1	54.5	87.4	6,756.0
1995	3,287.2	1,077.5	146.3	2,018.2	126.5	54.0	91.2	6,800.9
1996	3,515.0	1,145.6	156.9	2,321.5	144.2	54.7	78.4	7,416.3
1997	3,557.8	1,177.6	170.4	2,350.9	138.6	56.9	93.5	7,545.7
1998	3,991.2	1,255.2	141.5	2,297.4	149.7	55.3	79.3	7,969.6
1999	4,175.0	1,308.7	158.6	2,323.3	163.5	59.5	93.8	8,282.4
2000 P	4,375.5	1,374.6	171.6	2,482.7	181.2	59.5	100.7	8,745.8
2000 % of Total	50.0%	15.7%	2.0%	28.4%	2.1%	0.7%	1.1%	100.0%

P = Preliminary

(a) These data are not available from the Federal Transit Administration National Transit Database reports. Estimates made by APTA from transit agency estimates, which are made according to each agency's procedures.

(b) Beginning in 1991 includes fare subsidies formerly classified as "Other" Operating Funding.

Effects of Fare Increases on Ridership

There is a direct relationship between public transportation fares and ridership. A 1991 APTA study, "Effects of Fare Changes on Bus Ridership," found that on average, a 10 percent increase in bus fares would result in a 4 percent decrease in ridership.

The study also found that bus riders in small cities are more responsive to fare increases than those in large cities are, and peak-hour commuters are much less responsive to fare changes than other passengers.

Electronic turnstiles such as these at the Port Authority Trans Hudson system in New Jersey are designed to accept electronic passes and tickets pre-purchased at vending machines or from sales agents. Some types also accept tokens and cash.

Passes provide unlimited rides during a specified time period, thereby providing reduced fares for frequent riders. This example is from New York's Metropolitan Transportation Authority.

TABLE 19

File: FARES

Passenger Fares Summary

YEAR	PASSENGER FARES RECEIVED PER UNLINKED TRIP	ADULT BASE CASH FARE (a)		PER CENT OF SYSTEMS WITH (c)		
		HIGHEST	AVERAGE (b)	PEAK PERIOD SURCHARGES	TRANSFER SURCHARGES	ZONE OR DISTANCE SURCHARGES
1990	0.669	2.75	0.730	6.5	28.8	38.9
1991	0.704	6.00	0.823	5.5	24.2	39.4
1992	0.724	6.00	0.860	5.6	26.6	39.0
1993	0.773	6.00	0.860	5.6	26.6	39.0
1994	0.850	6.00	0.955	6.4	25.2	37.7
1995	0.876	7.00	0.992	6.5	23.8	36.9
1996	0.933	7.00	1.047	7.0	22.9	32.6
1997	0.888	7.00	1.058	7.0	22.9	32.6
1998	0.871	7.00	1.065	6.1	21.9	32.9
1999	0.903	4.00	1.087	6.5	26.8	35.0
2000	0.934	5.00	1,128	7.5	21.6	33.2
2001 P	NA	7.00	1.194	7.0	20.1	32.4

P = Preliminary

(a) Lowest base fare is $0.00 (free).

(b) Unweighted average of adult base cash fares; excludes surcharges; each transit agency counted equally.

(c) Per cents represent an approximately 300-transit-agency sample, not estimated for all transit agencies.

TABLE 20 *File: FAREAVG*

Average Passenger Fare Per Unlinked Passenger Trip by Mode, 2000, Dollars

MODE	FARE PER UNLINKED PASSENGER TRIP
Bus	0.77
Commuter Rail	3.32
Demand Response	1.64
Ferryboat (b)	1.13
Heavy Rail	0.94
Light Rail	0.57
Trolleybus	0.49
Vanpool	1.79
Other (a)	0.66
TOTAL	0.93

All data are preliminary

(a) Includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.

(b) Excludes international, rural, rural interstate, island, and urban park ferries.

TABLE 21

Federal Operating Grant Approvals for Urbanized Areas, Millions of Dollars

FISCAL YEAR	GRANT APPROVALS UNDER FEDERAL TRANSIT ACT
1990	765.4
1991	779.4
1992	768.4
1993	795.7
1994	757.4
1995	763.9
1996	416.7
1997	450.2
1998	214.8
1999	122.1
2000	195.9

Source: U.S. Department of Transportation, Federal Transit Administration.

Expenses, Operating

Highlights. . . . . .

- $22.6 billion was spent in 2000.

- 44.7% was for vehicle operations,
  18.8% for vehicle maintenance,
  9.6% for non-vehicle maintenance,
  14.7% for general administration,
  12.2% for purchased transportation.

- over 80% of all costs were labor-related,
  45.9% was for salaries and wages,
  23.9% for fringe benefits,
  5.7% for services,
  12.2% for purchased transportation, about 75% of which was labor-related.
  10.0% was for materials and supplies,
  3.2% for utilities,
  2.2% for casualty and liability costs,
  -3.1% for all other expenses.

- 57.2% was for buses,
  17.3% for heavy rail,
  11.9% for commuter rail,
  8.0% for demand response,
  2.7% for light rail,
  2.9% for all other modes.

TABLE 22

File: EXF&0

Operating Expense for 2000 By Function and Object Class, Millions of Dollars

FUNCTION AND OBJECT CLASS	VEHICLE OPERATIONS	VEHICLE MAINTENANCE	NON-VEHICLE MAINTENANCE	GENERAL ADMINISTRA-TION	PURCHASED TRANSPORT-ATION	TOTAL
Salaries & Wages	5,605.4	2,085.3	1,412.5	1,297.0	0.0	10,400.2
Fringe Benefits	3,007.9	966.4	728.1	710.5	0.0	5,412.9
Services	107.3	204.6	150.0	827.7	0.0	1,289.6
Fuels & Lubricants	563.0	76.5	2.9	0.0	0.0	642.4
Materials & Supplies	130.4	929.0	242.2	315.6	0.0	1,617.2
Utilities	123.4	41.8	358.8	195.8	0.0	719.8
Casualty & Liability	33.1	7.5	11.6	454.3	0.0	506.5
Purchased Transp.	0.0	0.0	0.0	0.0	2,761.0	2,761.0
Other	540.4	-44.0	-728.4	-472.1	0.0	-704.1
Total	10,110.9	4,267.1	2,177.7	3,328.8	2,761.0	22,645.5
			PER CENT			
Salaries & Wages	24.75%	9.21%	6.24%	5.73%	0.00%	45.93%
Fringe Benefits	13.28%	4.27%	3.22%	3.14%	0.00%	23.90%
Services	0.47%	0.90%	0.66%	3.66%	0.00%	5.69%
Fuels & Lubricants	2.49%	0.34%	0.01%	0.00%	0.00%	2.84%
Materials & Supplies	0.58%	4.10%	1.07%	1.39%	0.00%	7.14%
Utilities	0.54%	0.18%	1.58%	0.86%	0.00%	3.18%
Casualty & Liability	0.15%	0.03%	0.05%	2.01%	0.00%	2.24%
Purchased Transp.	0.00%	0.00%	0.00%	0.00%	12.19%	12.19%
Other	2.39%	-0.19%	-3.22%	-2.08%	0.00%	-3.11%
Total	44.65%	18.84%	9.62%	14.70%	12.19%	100.00%

TABLE 23

File: EXFUN

Operating Expense by Function Class, Millions of Dollars

YEAR	VEHICLE OPERATIONS	VEHICLE MAINTENANCE	NON-VEHICLE MAINTENANCE	GENERAL ADMINISTRATION	PURCHASED TRANSPORTATION	OPERATING EXPENSE	DEPRECIATION & AMORTIZATION	OTHER RECONCILING ITEMS	TOTAL EXPENSE
1990	6,653.3	3,038.8	1,592.0	3,449.9	1,008.1	15,742.1	1,593.1	643.9	17,979.1
1991	6,726.6	2,992.4	1,604.7	3,584.5	1,633.2	16,541.4	1,763.3	1,027.2	19,331.9
1992 (a)	7,659.7	3,047.5	1,783.9	2,674.2	1,616.1	16,781.4	2,033.9	1,218.3	20,033.6
1993	7,941.4	3,049.3	1,845.0	2,714.0	1,800.1	17,349.8	2,479.3	850.1	20,679.2
1994	8,211.9	3,184.5	1,819.4	2,752.0	1,952.1	17,919.9	2,768.6	964.1	21,652.6
1995	8,281.9	3,218.2	1,829.0	2,589.5	1,930.1	17,848.7	2,600.6	1,090.6	21,539.9
1996	8,331.9	3,295.1	1,802.2	2,744.3	2,167.2	18,340.7	2,885.0	1,034.4	22,260.1
1997	8,602.1	3,372.6	1,838.8	2,919.9	2,202.7	18,936.1	3,105.5	1,117.2	23,158.8
1998	9,176.7	3,579.2	1,783.9	3,065.8	2,132.9	19,738.5	3,434.5	1,144.8	24,317.8
1999	9,333.0	3,742.1	1,906.8	3,164.4	2,365.8	20,512.1	3,692.2	1,333.3	25,537.6
2000 P	10,110.9	4,267.1	2,177.7	3,328.8	2,761.0	22,645.5	4,076.2	1,472.0	28,193.7
2000 % of Total	44.7%	18.8%	9.6%	14.7%	12.2%	100.0%	18.0%	6.5%	124.5%

P = Preliminary

(a) Beginning 1992, operating expense declined about $400 million due to change in accounting procedures at New York City Transit Authority.

TABLE 24 *File: EXOBJ*

Operating Expense by Object Class, Millions of Dollars

YEAR	SALARIES & WAGES	FRINGE BENE-FITS	SERV-ICES	MATER-IALS & SUPPLIES	UTILITIES	CASUAL-TY & LIABILITY	PURCH-ASED TRANS-PORTA-TION	OTHER	TOTAL
1990	7,226.3	3,986.0	794.3	1,608.4	552.9	640.5	1,008.1	-74.4	15,742.1
1991	7,394.5	3,998.4	818.0	1,559.7	575.9	625.6	1,633.2	-63.9	16,541.4
1992 (a)	7,670.5	4,318.6	907.8	1,529.1	608.5	557.8	1,616.1	-427.0	16,781.4
1993	7,932.1	4,400.3	914.0	1,536.1	624.0	587.8	1,800.1	-444.6	17,349.8
1994	8,223.8	4,451.7	849.3	1,593.9	644.0	614.2	1,952.1	-409.1	17,919.9
1995	8,213.1	4,484.0	849.3	1,613.4	628.9	512.8	1,930.1	-382.9	17,848.7
1996	8,437.6	4,401.4	923.9	1,677.0	667.2	502.7	2,167.2	-436.3	18,340.7
1997	8,771.7	4,503.7	1,055.2	1,734.1	685.0	502.5	2,202.7	-518.8	18,936.1
1998	9,211.2	4,843.6	1,170.7	1,851.5	660.8	473.9	2,132.9	-606.1	19,738.5
1999	9,495.1	5,052.3	1,213.9	1,883.7	675.5	449.7	2,365.8	-623.9	20,512.1
2000 P	10,400.2	5,412.9	1,289.6	2,259.6	719.8	506.5	2,761.0	-704.1	22,645.5
2000 % of Total	45.9%	23.9%	5.7%	10.0%	3.2%	2.2%	12.2%	-3.1%	100.0%

P = Preliminary

(a) Beginning 1992, operating expense declined about $400 million due to change in accounting procedures at New York City Transit Authority.

TABLE 25

File: EXMODE

Operating Expense by Mode, Millions of Dollars

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	8,903.1	1,938.5	517.8	3,825.0	237.1	108.6	212.0	15,742.1
1991	9,501.4	1,942.4	608.5	3,858.6	291.1	113.5	225.9	16,541.4
1992 (a)	9,881.2	2,012.6	667.3	3,555.1	308.9	124.4	231.9	16,781.4
1993	10,109.6	2,088.4	793.0	3,668.6	315.9	131.9	242.5	17,349.8
1994	10,144.1	2,227.8	942.7	3,786.2	412.8	132.9	273.4	17,919.9
1995	10,320.5	2,211.2	1,000.4	3,522.9	376.1	138.9	278.7	17,848.7
1996	10,574.9	2,294.1	1,186.6	3,401.9	441.6	134.6	307.0	18,340.7
1997	10,944.0	2,278.1	1,284.5	3,473.7	472.5	140.2	343.1	18,936.1
1998	11,428.9	2,360.6	1,405.4	3,529.6	500.2	146.5	367.3	19,738.5
1999	11,713.8	2,574.9	1,419.3	3,693.4	545.6	166.9	398.2	20,512.1
2000 P	12,966.2	2,685.3	1,804.9	3,930.8	606.4	177.6	474.3	22,645.5
2000 % of Total	57.2%	11.9%	8.0%	17.3%	2.7%	0.8%	2.1%	100.0%

P = Preliminary

(a) Beginning 1992 operating expense declined about $400 million due to change in accounting procedures at New York City Transit Authority.

What Cutting Costs Really Means

File: CUTCOST

Public transportation managers are constantly faced with demands from units of government, voters, the media, and others to operate more efficiently. All too often, the demand is to "cut costs". What does this really mean?

Casualty and liability costs comprise 2.2% of the total, but efforts to reduce risk exposure (fewer miles operated, fewer accidents, and/or fewer employees) and therefore premiums and claims are often overwhelmed by litigation awards, inflation and state- or regionwide premium increases to cover insurer losses elsewhere.

Utility costs cover another 3.2% of the total. A large portion is for propulsion power to operate electric rail cars and trolleybuses. More efficient electric motors and propulsion systems are resulting in lower unit costs, but the total savings are modest. Some non-propulsion costs (heat and air-conditioning) are weather-related and uncontrollable. Others (lights, telephone, water, trash removal) are relatively fixed.

Fuel costs are 2.8% of expenses, but are hard to control due to unstable oil prices and consumption being partly a function of weight (the number of people on the vehicle). Some efficiency improvements in engines have been made, but the only way to really cut fuel costs is to operate fewer miles.

Tires, tubes, and other materials and supplies comprise 7.2% of costs. Buying fewer office supplies, spare parts, and cleaning supplies can be done, but with the result of decreased efficiency, delays in repairs, and postponing costs to the future when they will be more expensive due to inflation. Safety may suffer if too-bare-bones-an-approach results.

The bottom line, then, is that the only way to make substantial cost savings is to cut labor costs, which add up to almost 85% of all costs. They are comprised of salaries and wages (45.9%) and fringe benefits (23.9%), plus an estimated 75% of services (5.7%) and purchased transportation (12.2%) which are labor-related. There are 4 ways to do this: reduce the amount of service operated and therefore the number of employees needed, improve efficiency so that fewer employees are needed, reduce salaries, wages, and fringe benefits, and convert some functions or service operated to services or purchased transportation. Because labor contracts usually prohibit or severely restrict the last two options, it is seldom possible to reduce compensation (except by lowering rates for future employees) or to contract out services or transportation.

The almost unavoidable result is fewer miles and hours operated, which almost inevitably means fewer riders. It is a vicious cycle that has plagued public transportation throughout its history.

Passengers

Highlights. . . . . .

- 9.4 billion unlinked trips were taken in 2000,
  60.7% were by bus,
  28.1% by heavy rail,
  all other modes totaled only 11.2%.

- Average trip length was longest for vanpools at 34.6 miles,
  commuter rail trips averaged 22.8 miles,
  demand response trips 8.0 miles,
  ferryboat trips 6.2 miles,
  heavy rail trips 5.3 miles,
  bus trips 3.7 miles,
  light rail trips 4.2 miles,
  all other modes did not exceed 1.6 miles.

- 52% of trips are taken by women,
  7% by those 65 and older,
  10% by those 18 and under,
  31% by African Americans,
  18% by Hispanics,
  6% by Asian-heritage and Native Americans.
  54% are work-related,
  15% school-related,
  9% shopping-related,
  5.5% medically-related,
  9% socially-related,
  27% are by those with family incomes below $15,000,
  55% by those with family incomes from $15,000-$50,000,
  17% by those with family incomes over $50,000.
  1% by people with disabilities.

Number of People Using Public Transportation

File: PEOPLE

Michigan State University in East Lansing, Michigan and colleges across the country know that public transportation is the smart choice to solving their transportation and parking issues.

All ridership data reported in this book relate to trips taken--not to people--because that is how data is collected and reported. The heavy use of passes, transfers, joint tickets, and cash by people transferring from one vehicle to another, one mode to another, and from one public transportation agency to another makes it impossible to count people. Only boardings (called unlinked passenger trips) can be counted with any accuracy. At the largest public transportation agencies, even the number of boardings may be estimated for at least a portion of the ridership (e.g., free shuttle vehicles without fareboxes and light rail service using the "proof-of-payment" system).

The majority of people using public transportation take two trips per day (one to work in the morning and one home in late afternoon or evening). A small proportion--perhaps 5%--make only one public transportation trip (e.g., they ride public transportation to the airport and then fly out of town, or they ride public transportation in the morning to work, but ride home with a friend in an automobile at night). A somewhat larger proportion (primarily the public transportation-dependent) take 4, 6, 8, or even 10 trips per day.

At most agencies perhaps 10% to 30% of riders must transfer to a second (and sometimes a third) vehicle to reach their final destination. Some transfer from bus to bus, from bus to train, from one agency's vehicle to another agency's vehicle, etc.; thus, there is a large amount of double-counting of people.

APTA's best estimate, taking these factors into account, is that the number of people using public transportation on any day is about 45% of the number of trips reported. Over 14 million people use public transportation on a typical weekday, a 20% increase since 1995. Saturday ridership is normally about one-half weekday ridership, and Sunday ridership is often one-half to two-thirds of Saturday ridership. In many smaller cities, public transportation service does not operate on Sundays; in a lesser number, there is no Saturday service.

Public Transportation Ridership Trends

File:RIDETRND

Public transportation's popularity has been affected by changing social and economic forces. In the beginning of the 20th Century, ridership grew steadily until the Great Depression. Between 1929 and 1939, people took fewer work trips and often could not afford to take leisure trips. Conditions during World War II inspired motor fuel rations along with economic prosperity, positioning public transportation as the dominate mode on the transportation landscape. Ridership peaked in 1946, when Americans took 23.4 billion trips on trains, buses and trolleys.

After World War II, ridership experienced a decline due to inexpensive fuel and government policies favoring low-density suburban development and the sprawl created by the new interstate highway system. By 1960, ridership dropped to 9.3 billion trips and continued to decline until 1972 when transit trips taken totaled 6.5 billion. From 1973 until the mid-1990s, public transportation ridership tallied modest gains based on federal, state and local commitments to improve America's transportation infrastructure.

At the end of the 20th Century, public transportation reported record surges in ridership. Public transportation delivered more than 9 billion trips in 1999, representing the highest level of ridership in nearly 40 years. Since 1995, ridership has grown by 20 percent. All major modes of public transportation have reported more riders. Reasons for increased ridership include a strong economy, improved customer service and higher levels of public and private investment in public transportation. Most notably, the landmark Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and the Transportation Equity Act for the 21st Century (TEA-21) funding bills represented milestones for the federal transit program and brought about significant policy changes to favor public transportation.

Most significant is that public transportation ridership rose at a faster rate than automobile use (2 percent) and domestic air travel (3 percent) in 1999.

Recent research provides a description of how people in a community use public transportation services. According to the Transit Cooperative Research Program (TCRP) report *"Enhancing the Visibility and Image of Transit in the United States and Canada,"* 29 percent of those surveyed reported using public transportation at least once in the past month. Regular users, or those who have used public transportation at least once in the past month, accounted for 12 percent of those surveyed.

TABLE 26

File: TRIPS

Unlinked Passenger Trips by Mode, Millions

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	5,677	328	68	2,346	175	126	79	8,799
1991	5,624	318	71	2,172	184	125	81	8,575
1992	5,517	314	72	2,207	188	126	77	8,501
1993	5,381	322	81	2,046	188	121	78	8,217
1994	4,871	339	88	2,169	284	118	80	7,949
1995	4,848	344	88	2,033	251	119	80	7,763
1996	4,887	352	93	2,157	261	117	81	7,948
1997	5,013	357	99	2,430	262	121	92	8,374
1998	5,399	381	95	2,393	276	117	89	8,750
1999	5,648	396	100	2,521	292	120	91	9,168
2000 P	5,678	413	105	2,632	320	122	93	9,363
2000 % of Total	60.7%	4.4%	1.1%	28.1%	3.4%	1.3%	1.0%	100.0%

TABLE 27

File: BUSTRIPS

Bus Unlinked Passenger Trips by Population of Urbanized Area, Millions

YEAR	2,000,000 AND OVER	500,000 - 1,999,999	250,000 - 499,999	100,000 - 249,999	50,000 - 99,999	LESS THAN 50,000	TOTAL
1990 (a)	3,604	1,270	230	227	89	257	5,677
1991	3,537	1,261	233	230	95	268	5,624
1992	3,447	1,244	232	239	95	260	5,517
1993	3,323	1,253	231	237	94	243	5,381
1994	3,034	1,126	183	208	75	245	4,871
1995	3,003	1,128	182	207	77	251	4,848
1996	2,960	1,215	176	207	77	252	4,887
1997	2,989	1,251	182	207	79	305	5,013
1998	3,168	1,412	185	229	80	325	5,399
1999	3,315	1,480	192	237	85	339	5,648
2000 P	3,333	1,488	193	238	85	341	5,678
2000 % of Total	58.7%	26.2%	3.4%	4.2%	1.5%	6.0%	100.0%

P = Preliminary

(a) Beginning in 1990 transit agencies assigned by population of urbanized area based on 1990 United States Census.

TABLE 28 File:UZATRIPS

Annual Unlinked Passenger Trips for Urbanized Areas Over 1,000,000 Population, 2000

RANK (a)	URBANIZED AREA	UNLINKED TRIPS
1	New York, NY-Northeastern NJ	3,224,332,300
2	Los Angeles, CA	588,948,500
3	Chicago, IL-Northwestern IN	597,236,000
4	Philadelphia, PA-NJ	328,696,400
5	Detroit, MI	57,126,600
6	San Francisco-Oakland, CA	436,634,300
7	Washington, DC-MD-VA	381,059,400
8	Dallas-Fort Worth, TX	74,377,100
9	Houston, TX	100,472,000
10	Boston, MA	355,240,800
11	San Diego, CA	102,808,300
12	Atlanta, GA	170,014,500
13	Minneapolis-Saint Paul, MN	79,452,100
14	Phoenix, AZ	39,930,400
15	Saint Louis, MO-IL	54,174,200
16	Miami-Hialeah, FL	86,990,900
17	Baltimore, MD	115,429,200
18	Seattle, WA	130,572,100
19	Tampa-St. Petersburg-Clearwater, FL	19,373,100
20	Pittsburgh, PA	78,557,400
21	Cleveland, OH	64,478,400
22	Denver, CO	77,132,100
23	San Jose, CA	58,446,000
24	Norfolk-Virginia Beach-Newport News, VA	19,266,900
25	Kansas City, MO-KS	15,585,300
26	Fort Lauderdale-Hollywood-Pompano Beach, FL	28,469,900
27	Milwaukee, WI	73,546,800
28	Cincinnati, OH-KY	31,252,900
29	Portland, OR-Vancouver, WA	93,711,200
30	Riverside-San Bernardino, CA	22,464,700
31	San Antonio, TX	45,431,800
32	Sacramento, CA	30,021,000
33	New Orleans, LA	62,959,200

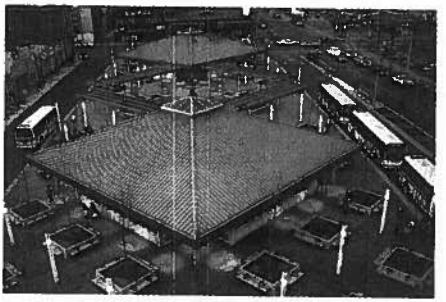
(a) By urbanized area population in 1990 Census.
Source: Federal Transit Administration National Transit Database.
Data for some areas may be understated since not all transit agencies report to the federal government.

TABLE 29

File: WKDYTRIP

Average Weekday Unlinked Passenger Trips by Mode, 2000

MODE	AVERAGE WEEKDAY UNLINKED TRIPS	PER CENT OF TOTAL
Bus	19,788,000	61.8%
Commuter Rail	1,445,000	4.5%
Demand Response	372,000	1.2%
Ferryboat	164,000	0.5%
Heavy Rail	8,686,000	27.2%
Light Rail	1,034,000	3.2%
Other Rail	78,000	0.2%
Trolleybus	388,000	1.2%
Vanpool	50,000	0.2%
TOTAL	32,005,000	100.0%



Many cities have built special transfer centers in their central business districts to make transferring between buses as easy as possible. Many also operate timed-transfer service, in which all routes converge on the center at the same time and depart simultaneously to minimize waiting time. This Regional Transportation Commission center is in Reno, Nevada.

Bicycle racks on buses, trains, and ferries, such as on Omnitrans buses in San Bernardino, California, increase ridership by allowing cyclists to ride public transportation for part of their journeys.

TABLE 30

File: PASSMILE

Passenger Miles by Mode, Millions

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	20,981	7,082	431	11,475	571	193	410	41,143
1991	21,090	7,344	454	10,528	662	195	430	40,703
1992	20,336	7,320	495	10,737	701	199	453	40,241
1993	20,247	6,940	562	10,231	705	188	511	39,384
1994	18,832	7,996	577	10,668	833	187	492	39,585
1995	18,818	8,244	607	10,559	860	187	533	39,808
1996	19,096	8,351	656	11,530	957	184	604	41,378
1997	19,604	8,038	754	12,056	1,035	189	663	42,339
1998	20,360	8,704	735	12,284	1,128	182	735	44,128
1999	21,205	8,766	813	12,902	1,206	186	779	45,857
2000 P	21,241	9,402	839	13,844	1,356	192	792	47,666
2000 % of Total	44.6%	19.7%	1.8%	29.0%	2.8%	0.4%	1.7%	100.0%

P = Preliminary

TABLE 31

File: AGE

Age of Public Transportation Riders by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	18 AND UNDER	19-64	65 AND OVER
Under 50,000	21%	61%	18%
50,000-199,999	19%	68%	13%
200,000-500,000	15%	70%	15%
500,000-999,999	9%	77%	14%
1 million and more	10%	84%	6%
NATIONAL AVERAGE	10%	83%	7%

Source: APTA, *Americans in Transit*, 1992.

TABLE 32

Annual Family Income of Public Transportation Riders by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	UNDER $15,000	$15,000-$50,000	ABOVE $50,000
Under 50,000	61%	36%	3%
50,000-199,999	55%	39%	6%
200,000-500,000	54%	38%	8%
500,000-999,999	52%	42%	6%
1 million and more	25%	57%	18%
NATIONAL AVERAGE	28%	55%	17%

Source: APTA, *Americans in Transit*, 1992.

TABLE 33

File: ETHNIC

Ethnicity and Race of Public Transportation Riders by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	WHITE	BLACK	HISPANIC	OTHER
Under 50,000	82%	6%	9%	3%
50,000-199,999	63%	24%	8%	5%
200,000-500,000	48%	34%	14%	4%
500,000-999,999	45%	41%	9%	5%
1 million and more	45%	31%	18%	6%
NATIONAL AVERAGE	45%	31%	18%	6%

Source: APTA, *Americans in Transit*, 1992.

TABLE 34

Purpose of Public Transportation Trips by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	WORK	SCHOOL	SHOPPING	MEDICAL	SOCIAL	OTHER
Under 50,000	20%	9%	8%	34%	27%	2%
50,000-199,999	39%	22%	12%	6%	9%	12%
200,000-500,000	46%	19%	13%	5%	8%	9%
500,000-999,999	51%	15%	11%	5%	6%	12%
1 million and more	55%	15%	9%	5%	9%	7%
NATIONAL AVERAGE	54%	15%	9%	5%	9%	8%

Source: APTA, *Americans in Transit*, 1992.

TABLE 35

File: GENDER

Gender of Public Transportation Riders by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	MALE	FEMALE
Under 50,000	36%	64%
50,000-199,999	43%	57%
200,000-500,000	39%	61%
500,000-999,999	38%	62%
1 million and more	49%	51%
NATIONAL AVERAGE	48%	52%

Source: APTA, *Americans in Transit*, 1992.

This woman exiting a Reno, Nevada Regional Transportation Commission bus is among the tens of thousands of disabled people using public transportation each day.

TABLE 36

Public Transportation Passengers with Disabilities by Population Group

POPULATION OF URBANIZED AREA/ URBAN PLACE	PER CENT WITH DISABILITIES
Under 50,000	1.2%
50,000-199,999	1.1%
200,000-500,000	1.4%
500,000-999,999	2.5%
1 million and more	6.0%
NATIONAL AVERAGE	5.2%

Source: APTA, *Americans in Transit*, 1992.

TABLE 37

File: PROPEN

Socioeconomic Characteristics Indicating a High Propensity for Public Transportation Use

CHARACTERISTIC	TRANSIT SHARE PERCENT
Central city dweller	11.5
Renter	9.5
Household with no vehicles	39.1
Women	6.0
Young (21-24 years)	6.4
Older (75+ years)	6.4
High income	
$75,000-$99,000	6.6
Over $100,000	5.8
1-worker household	6.1
4-worker household	7.5
Female worker living alone in a central city	16.3
Black	14.8
Asian	11.0
Hispanic	8.8
ALL COMMUTERS	5.1

Source: *Commuting in America II: The Second National Report on Commuting Patterns and Trends*, Eno Transportation Foundation, Inc., Lansdowne, VA, © 1996.

TABLE 38

Travel Time by Mode, 1990

MODE	TRAVEL TIME (MINUTES)
ALL COMMUTERS	22
Drive alone	21
2-person carpool	24
3-person carpool	29
4-person carpool	35
Bus, trolleybus	38
Heavy rail, light rail	45
Commuter rail	59
Bike, walk	11
Taxi	17
Ferryboat	58
Motorcycle	23

Source: *Commuting in America II: The Second National Report on Commuting Patterns and Trends*, Eno Transportation Foundation, Inc., Lansdowne, VA, © 1996.

TABLE 39 *Title: TRLENGTH*

Average Unlinked Trip Length by Mode, 2000

MODE	AVERAGE TRIP LENGTH (MILES)
Bus	3.7
Commuter Rail	22.8
Demand Response	8.0
Ferryboat (b)	6.2
Heavy Rail	5.3
Light Rail	4.2
Trolleybus	1.6
Vanpool	34.6
Other (a)	1.0
TOTAL	5.1

(a) Includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

TABLE 40

Means of Transportation to Work, 1990

MEANS	PER CENT
Automobiles/Vans/Motorcycles	
Single-occupant	73.4%
2-person carpool	10.5%
3-or-more-person carpool/vanpool	2.8%
Transit	5.1%
Walked	3.9%
Worked at home	3.0%
Bicycle	0.4%
Taxi	0.2%
All Other	0.7%
TOTAL	100.0%

Source: Federal Highway Administration, *New Perspectives in Commuting*, 1992.

TABLE 41 *File: HIGHEST*

Cities with Highest Percentage of Workers Using Public Transportation, 1990

CITY	PER CENT USING PUBLIC TRANSPORTATION
New York, NY	53.4
Hoboken, NJ	51.0
Jersey City, NJ	36.7
Washington, DC	36.6
San Francisco, CA	33.5
Boston, MA	31.5
Chicago, IL	29.7
Philadelphia, PA	28.7
Atlantic City, NJ	26.2
Arlington, VA	25.4
Newark, NJ	24.6
Cambridge, MA	23.5
Pittsburgh, PA	22.2
Baltimore, MD	22.0
Evanston, IL	20.9
Atlanta, GA	20.0
White Plains, NY	19.1
Camden, NJ	18.1
Oakland, CA	17.9
Hartford, CT	17.1
New Orleans, LA	16.9
Idaho Falls, ID	16.5
Minneapolis, MN	16.0
Seattle, WA	15.9
Berkeley, CA	15.2
Albany, NY	15.1

Source: U.S. Census Bureau, *1990 Census, Journey to Work, Characteristics of Workers in Metropolitan Areas*

Service Operated

Highlights. . . . . .

- 4.1 billion miles and 274.0 million hours of service were operated.

- Buses operated 56.7% of vehicle miles,
  heavy rail 14.6%,
  demand response 18.6%,
  commuter rail 6.6%,
  all other modes 3.5%.

- Buses operated 63.6% of vehicle hours,
  demand response 18.6%,
  heavy rail 11.3%,
  commuter rail 3.4%,
  all other modes 3.1%.

- If all service had been operated by buses, twice as many bus miles would need to have been operated.

- Average revenue service speed was highest for vanpools at 31.0 m.p.h.,
  commuter rail was 28.5 m.p.h.,
  heavy rail 20.5 m.p.h.,
  light rail 15.3 m.p.h.,
  demand response 14.8 m.p.h.,
  bus 12.8 m.p.h.,
  ferryboat 8.0 m.p.h.,
  trolleybus 7.4 m.p.h.,
  all others were 7.5 m.p.h.

TABLE 42 *File: VEHMILE*

Vehicle Miles Operated by Mode, Millions

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL	TOTAL BUS MILE EQUIV-ALENTS (a)
1990	2,129.9	212.7	305.9	536.7	24.2	13.8	18.3	3,241.5	4,127.5
1991	2,166.6	214.9	335.0	527.2	27.6	13.6	21.5	3,306.4	4,159.1
1992	2,178.0	218.8	363.5	525.4	28.6	13.9	26.4	3,354.6	4,187.0
1993	2,209.6	223.9	406.0	522.1	27.7	13.0	32.2	3,435.1	4,233.8
1994	2,162.0	230.8	463.7	531.8	34.0	13.7	31.5	3,467.5	4,248.2
1995	2,183.7	237.7	506.5	537.2	34.6	13.8	36.7	3,550.2	4,313.9
1996	2,220.5	241.9	548.3	543.1	37.6	13.7	45.2	3,650.3	4,397.2
1997	2,244.6	250.7	585.3	557.7	41.2	14.0	52.3	3,745.8	4,499.5
1998	2,174.6	259.5	670.9	565.7	43.8	13.6	65.5	3,793.6	4,504.1
1999	2,275.9	265.9	718.4	577.7	48.7	14.2	71.4	3,972.2	4,675.0
2000 P	2,314.8	270.9	758.9	595.2	52.8	14.5	73.7	4,080.8	4,788.1
2000 % of Total	56.7%	6.6%	18.6%	14.6%	1.3%	0.4%	1.8%	100.0%	

P = Preliminary

(a) Estimate based on average seating plus standing capacity of vehicle compared to that of a bus (70 passengers): light rail = 1.7, heavy rail = 2.6, commuter rail = 2.2, trolleybus = 1.0, demand response = 0.2, other = 1.0.

TABLE 43

File: VEHHOUR

Vehicle Hours Operated by Mode, Millions

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	163.0	6.5	24.4	28.4	2.0	1.8	1.4	227.5
1991	163.8	6.4	26.3	24.6	2.2	1.8	1.4	226.5
1992	165.1	6.5	28.7	25.6	2.2	1.8	1.6	231.5
1993	166.2	6.6	30.5	27.2	2.1	1.8	1.8	236.2
1994	162.1	6.9	32.6	27.3	2.5	1.8	1.5	234.7
1995	162.9	7.2	34.9	27.6	2.5	1.8	1.6	238.5
1996	165.5	7.3	37.0	28.0	2.7	1.8	1.9	244.2
1997	167.0	7.5	39.5	28.8	2.8	1.8	2.1	249.5
1998	164.0	7.9	44.1	29.3	2.9	1.8	2.3	252.3
1999	170.1	8.5	48.2	29.9	3.2	1.9	2.5	264.3
2000 P	174.3	9.4	50.9	30.9	3.5	2.0	3.0	274.0
2000 % of Total	63.6%	3.4%	18.6%	11.3%	1.3%	0.7%	1.1%	100.0%

P = Preliminary

TABLE 44 *Title: SPEED*

Average Vehicle Speed in Revenue Service by Mode, 2000

MODE	AVERAGE SPEED (MILES PER HOUR)
Bus	12.8
Commuter Rail	28.5
Demand Response	14.8
Ferryboat (b)	8.0
Heavy Rail	20.5
Light Rail	15.3
Trolleybus	7.4
Vanpool	31.0
Other (a)	7.5
TOTAL	14.7

(a) Includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

TABLE 45

Vehicle Revenue Miles and Vehicle Revenue Hours by Mode, 2000

MODE	VEHICLE REVENUE MILES (MILLIONS)	VEHICLE REVENUE HOURS (MILLIONS)
Bus	2,001.7	156.6
Commuter Rail	247.9	8.7
Demand Response	645.8	43.8
Ferryboat (b)	3.0	0.4
Heavy Rail	578.2	28.3
Light Rail	52.1	3.4
Trolleybus	13.9	1.9
Vanpool	65.9	2.1
Other (a)	3.3	0.4
TOTAL	3,611.8	245.6

(a) Includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.
(b) Excludes international, rural, rural interstate, island, and urban park ferries.

Vehicles

Heavy rail, automated guideway, bus, and demand response vehicles at the Miami-Dade Transit Agency in Miami, Florida.

Highlights. . . . . .

- There were about 131,000 active vehicles providing public transportation service in 2000.

- Buses comprised 57.0%,
  demand response vehicles 25.2%,
  heavy rail cars 8.0%,
  commuter rail cars 3.9%,
  light rail cars 1.2%.
  all other modes 4.7%.

- Average age of buses was 6.9 years,
  demand response vehicles 2.6 years,
  commuter rail cars 20.4 years,
  heavy rail cars 22.5 years,
  light rail cars 17.9 years.

- Average length of buses was 39.3 feet,
  demand response vehicles 21.5 feet,
  commuter rail cars 85.0 feet,
  heavy rail cars 61.4 feet,
  light rail cars 72.8 feet.

- 9.8% of buses used alternative power,
  demand response vehicles 5.8%,
  commuter rail cars 48.4%,
  heavy and light rail cars and trolleybuses 100%.

- 86.2% of buses were wheelchair accessible,
  90.9% of demand response vehicles,
  66.0% of commuter rail cars,
  98.6% of heavy rail cars,
  77.1% of light rail cars.

- Over 4,100 buses and about 300 demand response vehicles used compressed natural gas and CNG blends,
  nearly 300 used propane,
  nearly 900 used liquefied natural gas and LNG blends.

- About 300 to 400 new rail cars are built each year,
  6,000 to 8,000 buses and demand response vehicles,
  over 3,500 of the buses are 40 to 60 feet in length, and about 2,500 are below 27.5 feet.

- The new bus market is dominated by 7 manufacturers,
  about 34% of new buses may have alternative power sources,
  about 70% will be 40 feet in length,
  the average 40-foot bus costs about $288,000.

- The new rail car market is split among 6 major manufacturers,
  new rail cars cost from $1.0 to $2.5 million apiece,
  new locomotives run from $2.0 million for diesel to about $4.0 million for electric.

TABLE 46

File: VEHACT

Active Passenger Vehicles by Mode

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	58,714	4,415	16,471	10,419	913	832	1,197	92,961
1991	60,377	4,370	17,879	10,331	1,095	752	1,595	96,399
1992	63,080	4,413	20,695	10,245	1,058	907	1,853	102,251
1993	64,850	4,494	23,527	10,261	1,025	851	2,308	107,316
1994	68,123	4,517	28,729	10,138	1,054	877	2,505	115,943
1995	67,107	4,565	29,352	10,157	999	885	2,809	115,874
1996	71,678	4,665	30,804	10,201	1,140	871	3,003	122,362
1997	72,770	4,943	32,509	10,242	1,229	859	3,808	126,360
1998	72,142	4,963	29,646	10,301	1,220	880	4,703	123,855
1999	74,228	4,883	31,884	10,306	1,297	859	5,059	128,516
2000 P	75,013	5,073	33,080	10,591	1,577	951	5,208	131,493
2000 % of Total	57.0%	3.9%	25.2%	8.0%	1.2%	0.7%	4.0%	100.0%

P = Preliminary

TABLE 47 *File: VEHAGE*

Average Vehicle Age by Mode, 2001

MODE	AVERAGE AGE (YEARS)
Bus	6.9
Commuter Rail	20.4
Commuter Rail Locomotive	16.5
Demand Response	2.6
Ferryboat	23.6
Heavy Rail	22.5
Jitney	2.5
Light Rail	17.9
Other Rail	49.1
Trolleybus	16.9
Vanpool	2.3

Source: APTA survey. Data reported are not national totals.

TABLE 48 *File: VEHLEN*

Average Vehicle Length by Mode, 2001

MODE	AVERAGE LENGTH (FEET)
Bus	39.3
Commuter Rail	85.0
Commuter Rail Locomotive	60.1
Demand Response	21.5
Ferryboat	235.6
Heavy Rail	61.4
Jitney	23.0
Light Rail	72.8
Other Rail	45.4
Trolleybus	46.6
Vanpool	17.4

Source: APTA survey. Data reported are not national totals.

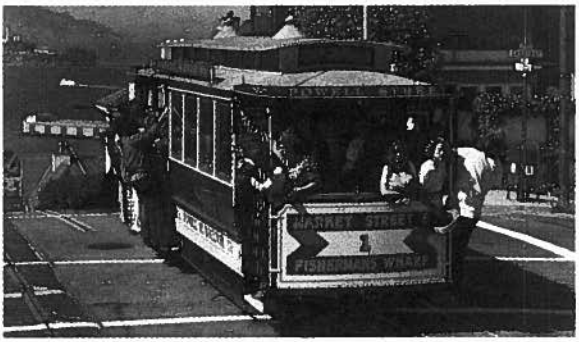
Commuter rail trains are pulled (or pushed) by diesel or electric locomotives or are all-electric without locomotives. This METRA train in Chicago uses double-deck cars, but in older cities of the northeast tunnel and bridge clearances only allow single-deck cars.

Heavy rail trains such as this MTA New York City Transit train are totally electified and use totally segregated right-of-way, thus allowing very frequent service carrying very "heavy" numbers of people.

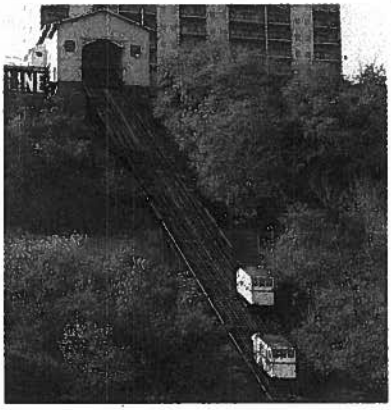
Light rail trains are also electric, but operate partly on non-segregated right-of-way such as city streets--often with single cars--and thus carry "light" loads of people compared to heavy rail. This train is operated by Baltimore, Maryland's Mass Transit Administration.

More Rail Vehicles

File: RAILPIC2



The only transit system to operate cable cars is California's San Francisco Municipal Railway. These small cars are unpowered and move by clamping onto a moving cable in a trough underneath the street.



A few cities with very steep hills use an inclined plane, where cars are pulled and lowered by a cable operated from an engine house. This is the Monongahela Incline operated by the Port Authority of Allegheny County in Pittsburgh, Pennsylvania.

Ferryboats

Several coastal and inland cities have found the water to be a perfect right-of-way. This Golden Gate Ferry is in San Francisco.

Buses

File: BUSPIC

Houston's Metropolitan Transit Authority of Harris County operates this 40-foot-long bus, the most common. Most are high-floor models having two or three steps, but this is a low-floor model without steps.

In the largest cities, some routes require even larger buses. This articulated bus is 60 feet long and bends in the middle; it is operated by the Orange County Transportation Authority in Orange County, California.

Demand response service uses vans and minibuses because very few people are on board at one time. Indianapolis Public Transportation Corporation uses this van.

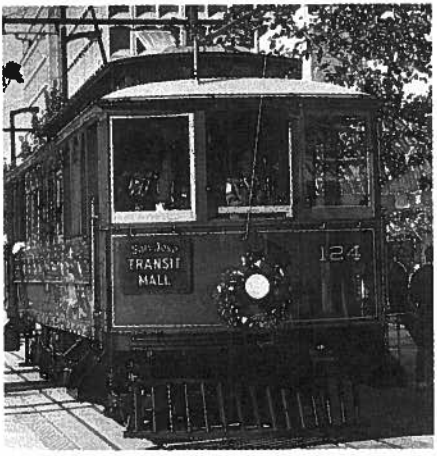
Trolleys

File: TROLLPIC

Three types of vehicles are commonly called "trolleys."

This trolleybus is a rubber-tired vehicle without an engine that is powered from two electric wires. Only five cities have them; this Dayton, Ohio version is operated by the Miami Valley Regional Transit Authority.

Often called a trolley, this vehicle with a body that imitates an old streetcar is called a "trolley replica bus." Its data are included with bus statistics, since it is rubber-tired and has an on-board power source. This is a Central Oklahoma Transportation and Parking Authority vehicle in Oklahoma City.



The original "trolley" was a rail car usually powered by one overhead wire. Often called a "streetcar," it is today called "light rail." This vehicle is at the Santa Clara Valley Transportation Authority in San Jose, California.

TABLE 49 *File: VEHALPOW*

Alternative Power Vehicles by Mode, 2001 (a)

MODE	PER CENT USING ALTERNATIVE POWER
Bus	9.8%
Commuter Rail	48.4%
Commuter Rail Locomotive	23.6%
Demand Response	5.8%
Ferryboat	37.3%
Heavy Rail	100.0%
Jitney	0.0%
Light Rail	100.0%
Other Rail	100.0%
Trolleybus	100.0%
Vanpool	0.6%

(a) Alternative power includes all power except straight diesel and gasoline.

Source: APTA survey. Data reported are not national totals.

This bus is powered by the most popular alternative power, compressed natural gas. Due to the low-floor configuration, the CNG tanks are located on the roof of the bus. The Pinellas Suncoast Transit Authority that serves the St. Petersburg, Florida area is the operator of this bus.

TABLE 50

File: VEHPOWER

Passenger Vehicle Power Sources (a) (NOT National Totals)

POWER SOURCE	BUS	COMMUTER RAIL CAR	COMMUTER RAIL LOCO-MOTIVE	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
Compressed Natural Gas	4,058	0	0	256	0	0	0	21	4,335
CNG Blends	79	0	0	52	0	0	0	0	131
Diesel	49,541	13	449	5,757	0	0	0	310	56,070
Diesel with Trap	202	0	0	8	0	0	0	0	210
Electric Battery & Hybrid	80	0	0	4	0	0	0	0	84
Electric Third Rail or Catenary	0	2,457	45	0	10,588	1,558	735	56	15,439
Electric & Diesel	0	0	94	0	0	4	216	18	332
Ethanol & Blends	15	0	0	0	0	0	0	0	15
Gasoline	204	0	0	3,806	0	0	0	3,246	7,256
Liquefied Natural Gas	575	0	0	48	0	0	0	0	623
LNG Blends	267	0	0	0	0	0	0	0	267
Methanol	12	0	0	0	0	0	0	0	12
Propane	57	0	0	215	0	0	0	0	272
Other (b)	100	0	0	4	0	0	0	0	104
Unpowered	0	2,602	1	0	3	0	0	49	2,655
TOTAL	55,190	5,072	589	10,150	10,591	1,562	951	3,700	87,805

(a) Data as of January 1, 2001 from APTA survey of about 300 transit agencies.
(b) Includes bio or soy diesel blends, hydrogen, jet fuel, and propane blends.

TABLE 51

File: BUSPOWER

Bus Power Sources (NOT National Totals)

CALEN-DAR YEAR	CNG & BLENDS	DIESEL	ELECTRIC BATTERY/ HYBRID	ETHANOL & BLENDS	GASO-LINE	LNG & BLENDS	METH-ANOL	PRO-PANE	OTHER (a)	TOTAL
1993	225	50,595	18	86	257	80	160	28	176	51,625
1994	353	49,716	31	86	283	287	351	28	203	51,338
1995	678	50,158	37	82	243	357	399	31	202	52,187
1996	1,074	48,050	41	82	234	347	396	29	91	50,344
1997	1,562	47,177	24	347	230	347	63	25	66	49,841
1998	2,148	47,174	33	395	250	346	19	12	70	50,447
1999	2,494	47,745	41	375	194	707	17	9	26	51,608
2000	3,072	49,249	68	57	197	772	12	25	12	53,464
2001	4,137	49,743	80	15	204	842	12	57	100	55,190
2001 % of Total	7.5%	90.2%	0.1%	0.0%	0.4%	1.5%	0.0%	0.1%	0.2%	100.0%

Source: Data from APTA surveys of about 300 transit agencies represent about 67% of all buses.
(a) Includes bio or soy diesel blends, hydrogen, jet fuel, and propane blends.

TABLE 52 *Title: VEHACC%*

Accessible Vehicles by Mode, 2001

MODE	ACCESSIBLE VEHICLES (a)	VEHICLES REPORTED	PER CENT ACCESSIBLE (a)
Bus	47,550	55,190	86.2%
Commuter Rail	3,347	5,072	66.0%
Demand Response	9,227	10,150	90.9%
Ferryboat	14	51	27.5%
Heavy Rail	10,442	10,591	98.6%
Jitney	252	252	100.0%
Light Rail	1,205	1,562	77.1%
Other Rail	59	105	56.2%
Trolleybus	487	951	51.2%
Vanpool	62	3,292	1.9%

(a) Accessible vehicles include accessibility via lift, ramp, and station.
Source: APTA survey. Data reported are not national totals.

Traditional high-floor buses with steps such as this one at Riverside Transit Agency in California use lifts to accommodate wheelchair users.

Community Transit in Snohomish County, Washington operates low-floor buses with a floor only 12-16 inches off the ground that use an extendable ramp for wheelchair access.

TABLE 53

File: ROADACC

Road Vehicles by Type of Wheelchair Accessibility (NOT National Totals)

YEAR	BUS				DEMAND RESPONSE				TROLLEYBUS			
	LIFT	RAMP	NONE	TOTAL	LIFT	RAMP	NONE	TOTAL	LIFT	RAMP	NONE	TOTAL
1993	26,087	123	25,415	51,625	4,031	246	772	5,049	453	0	510	963
1994	27,986	174	23,178	51,338	4,585	313	739	5,637	477	0	457	934
1995	30,841	351	20,995	52,187	5,391	412	708	6,511	523	0	502	1,025
1996	31,690	583	18,071	50,344	5,797	504	650	6,951	526	0	502	1,028
1997	32,629	1,050	16,162	49,841	6,449	514	541	7,504	489	0	512	1,001
1998	34,831	1,733	13,883	50,447	6,967	559	568	8,094	470	0	473	943
1999	36,744	2,805	12,059	51,608	6,338	760	585	7,683	492	0	473	965
2000	38,828	4,464	10,172	53,464	7,235	1,151	623	9,009	487	0	464	951
2001	40,878	6,675	7,637	55,190	8,015	1,245	890	10,150	487	0	464	951
2001% of Total	74.1%	12.1%	13.8%	100.0%	79.0%	12.3%	8.7%	100.0%	51.2%	0.0%	48.8%	100.0%

Source: Data from APTA surveys. Trolleybus data are national totals, bus data represent about 67%, demand response data represent about 22% of national totals.

TABLE 54 *File: CRHRACC*

Commuter and Heavy Rail Cars by Type of Wheelchair Accessibility (NOT National Totals)

YEAR	COMMUTER RAIL					HEAVY RAIL				
	LIFT	RAMP	STATION	NONE	TOTAL	LIFT	RAMP	STATION	NONE	TOTAL
1993	10	63	1,359	3,117	4,549	0	0	8,614	1,779	10,393
1994	58	136	1,349	3,090	4,633	4	0	9,664	701	10,365
1995	58	234	1,717	2,643	4,652	4	0	9,655	698	10,357
1996	63	312	2,767	1,545	4,687	0	0	9,779	654	10,433
1997	87	660	2,662	1,429	4,838	0	0	9,740	651	10,391
1998	155	693	2,790	1,428	5,066	0	0	9,764	604	10,368
1999	197	664	2,332	1.917	5,110	0	0	10,240	180	10,420
2000	201	798	2,304	1,861	5,164	0	0	10,264	155	10,419
2001	211	1,294	1,842	1,725	5,072	0	0	10,442	149	10,591
2001% of Total	4.2%	25.5%	36.3%	34.0%	100.0%	0.0%	0.0%	98.6%	1.4%	100.0%

Source: Data from APTA surveys. Commuter rail data represent 99% of rail cars; heavy rail data are national totals. "Lift" and "ramp" columns refer to on-vehicle lifts and ramps; "station" column includes car-floor-level platform boarding and platform lifts.

TABLE 55

File: LRORACC

Light and Other Rail Cars by Type of Wheelchair Accessibility (a) (NOT National Totals)

YEAR	LIGHT RAIL					OTHER RAIL (a)				
	LIFT	RAMP	STATION	NONE	TOTAL	LIFT	RAMP	STATION	NONE	TOTAL
1993	71	0	435	738	1,244	0	0	37	46	83
1994	75	2	480	666	1,223	0	0	26	48	74
1995	96	11	498	624	1,229	0	0	35	48	83
1996	171	12	510	582	1,275	1	0	34	48	83
1997	123	65	549	575	1,312	1	0	42	45	88
1998	123	65	828	373	1,389	1	0	53	45	99
1999	123	17	914	369	1,423	1	0	52	46	99
2000	123	143	950	370	1,568	1	0	52	46	99
2001	131	200	874	357	1,562	1	0	58	46	105
2001% of Total	8.4%	12.8%	56.0%	22.8%	100.0%	1.0%	0.0%	55.2%	43.8%	100.0%

Source: Data from APTA surveys. Light rail data represent 98% and other rail data represent 60% of national totals. "Lift" and "ramp" columns refer to on-vehicle lifts and ramps; "station" column includes level-platform boarding and platform lifts.
(a) Includes aerial tramway, automated guideway, cable car, inclined plane, and monorail.

TABLE 56 File: NEWVEH

New Passenger Vehicles Delivered by Mode

YEAR	RAIL CARS (c)			BUSES & DEMAND RESPONSE (a)				TROLLEY BUS	TOTAL (b)
	COMMUTER RAIL	HEAVY RAIL	LIGHT RAIL	29 SEATS OR FEWER	30-39 SEATS	40 SEATS OR MORE	TOTAL		
1990	83	10	55	1,389	489	2,901	4,779	118	5,045
1991	187	6	17	1,781	411	2,530	4,722	149	5,081
1992	110	163	35	1,322	549	1,555	3,426	0	3,734
1993	8	260	54	1,919	566	2,351	4,836	24	5,182
1994	47	55	72	2,502	433	2,483	5,418	36	5,628
1995	38	72	38	2,823	733	2,466	6,022	3	6,173
1996	111	10	39	2,620	1,531	1,865	6,016	3	6,179
1997	198	34	76	2,910	1,090	2,329	6,329	0	6,637
1998	122	120	80	2,696	1,381	3,058	7,135	54	7,511
1999	132	122	123	2,829	1,259	2,727	6,815	0	7,192
2000	116	204	136	3,146	1,653	2,897	7,696	0	8,152
2001 P	54	751	111	NA	NA	NA	NA	NA	NA
2000 % of Total	1.4%	2.5%	1.7%	38.6%	20.3%	35.5%	94.4%	0.0%	100.0%

P = Preliminary

(a) Buses and demand response only; excludes vanpool vans. Bus comprises about 25% of the 29-seats-or-fewer size group and virtually 100% of the other size groups.

(b) Excludes vanpool vans, ferryboats, and other modes not listed.

(c) Source for rail modes; *Railway Age*, January issue.

TABLE 57

File: NEWBUSLG

New Buses & Demand Response Vehicles Delivered by Length (a)

YEAR	27'5" AND BELOW	27'6" - 32'5"	32'6" - 37'5"	37'6" - 45'0"	ARTICULATED/ DOUBLE DECKED	TOTAL
1990	932	450	567	2,782	48	4,779
1991	1,430	395	357	2,460	80	4,722
1992	968	338	584	1,482	54	3,426
1993	1,594	333	374	2,435	100	4,836
1994	2,333	147	350	2,513	75	5,418
1995	2,436	420	358	2,695	113	6,022
1996	2,282	383	405	2,885	61	6,016
1997	2,316	603	641	2,591	178	6,329
1998	2,206	556	463	3,698	212	7,135
1999	2,100	770	387	3,240	318	6,815
2000 P	2,556	747	274	3,528	591	7,696
2000 % of Total	33.2%	9.7%	3.6%	45.8%	7.7%	100.0%

(a) Buses comprise about 5% of the 27'5"-and-below size group and virtually 100% of the other size groups.
P = Preliminary

TABLE 58

File: BUSMKT1

New Bus and Trolleybus Market, 2000-2005 (a) (NOT National Totals)

CATEGORY	BUILT IN 2000		ON ORDER JANUARY 2001		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	4,654	100.0%	7,609	100.0%	13,337	100.0%
Wheelchair accessibility						
Via lift	2,550	54.8%	2,688	35.3%	6,366	47.7%
Via ramp (low floor)	2,104	45.2%	4,921	64.7%	6,887	51.7%
Via stations	0	0.0%	0	0.0%	0	0.0%
Non-accessible	0	0.0%	0	0.0%	84	0.6%
Type						
Articulated (55'-60')	591	12.7%	305	4.0%	951	7.1%
Intercity (35'-45')	86	1.8%	28	0.4%	1,315	9.9%
45' Transit (45')	19	0.4%	145	1.9%	378	2.8%
40' Transit (37'6"-42'5")	3,011	64.7%	6,045	79.5%	8,583	64.4%
35' Transit (32'6"-37'5")	226	4.9%	307	4.0%	717	5.4%
30' Transit (27'6"-32'5")	464	10.0%	511	6.7%	540	4.1%
Suburban (35'-45')	27	0.6%	10	0.1%	326	2.4%
Trolley Replica (all lengths)	80	1.7%	16	0.2%	83	0.6%
Van/Mini (<27'6")	150	3.2%	242	3.2%	444	3.3%

(a) Data from APTA survey including about 75% of buses and trolleybuses.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 58 (continued)

File: BUSMKT2

New Bus and Trolleybus Market, 2000-2005 (a) (NOT National Totals)

CATEGORY	BUILT IN 2000		ON ORDER JANUARY 2001		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	4,654	100.0%	7,609	100.0%	13,337	100.0%
Length						
55-60 feet	591	12.7%	305	4.0%	931	7.0%
45-51 feet	172	3.7%	215	2.8%	700	5.3%
38-41 feet	2,970	63.8%	6,013	79.0%	9,898	74.2%
33-37 feet	228	4.9%	308	4.1%	752	5.6%
28-32 feet	518	11.1%	520	6.8%	580	4.3%
18-27 feet	175	3.8%	248	3.3%	476	3.6%
Seating Capacity						
60 or more seats	591	12.7%	126	1.7%	845	6.3%
50-59 seats	158	3.4%	362	4.8%	745	5.6%
41-49 seats	1,346	28.9%	1,609	21.1%	6,108	45.8%
36-40 seats	1,693	36.4%	4,402	57.8%	4,145	31.1%
25-35 seats	525	11.3%	777	10.2%	794	6.0%
Below 25 seats	341	7.3%	333	4.4%	700	5.2%

(a) Data from APTA survey including about 75% of buses and trolleybuses.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 58 (continued)

File: BUSMKT3

New Bus and Trolleybus Market, 2000-2005 (a) (NOT National Totals)

CATEGORY	BUILT IN 2000		ON ORDER JANUARY 2001		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	4,654	100.0%	7,609	100.0%	13,337	100.0%
Manufacturer						
El Dorado-National	120	2.6%	214	2.8%	NA	NA
Electric Transit	0	0.0%	250	3.3%	NA	NA
Gillig	980	21.1%	1,609	21.1%	NA	NA
Motor Coach Industries	187	4.0%	113	1.5%	NA	NA
Neoplan	142	3.1%	435	5.7%	NA	NA
New Flyer	1,104	23.7%	1,560	20.5%	NA	NA
North American Bus	474	10.2%	1,383	18.2%	NA	NA
Nova BUS	587	12.6%	730	9.6%	NA	NA
Orion	784	16.8%	882	11.6%	NA	NA
All others	276	5.9%	433	5.7%	NA	NA
Power Source						
Compressed natural gas	785	16.9%	1,632	21.4%	2,385	17.9%
Diesel (inc particulate trap)	3,712	79.7%	5,028	66.1%	8,873	66.5%
Dual-power	22	0.5%	428	5.6%	142	1.1%
Electric catenary	0	0.0%	350	4.6%	60	1.4%
Gasoline	21	0.5%	0	0.0%	7	0.0%
Liquefied natural gas	81	1.7%	117	1.5%	465	3.5%
Propane	31	0.7%	42	0.6%	37	0.3%
All others	2	0.0%	12	0.2%	51	0.4%
Undecided	NA	NA	NA	NA	1,317	9.9%

(a) Data from APTA survey including about 75% of buses and trolleybuses.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 59

File: RAILMKT1

New Rail Car Market, 2000-2005 (a) (NOT National Totals)

CATEGORY	BUILT IN 2000		ON ORDER JANUARY 2001		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	125	100.0%	3,329	100.0%	1,867	100.0%
Wheelchair accessibility						
Via on-board lift	20	16.0%	23	0.7%	660	35.4%
Via on-board ramp (low floor)	9	7.2%	228	6.8%	55	2.9%
Via stations	96	76.8%	3,078	92.5%	1,152	61.7%
Non-accessible	0	0.0%	0	0.0%	0	0.0%
Type						
Single-level articulated	40	32.0%	363	10.9%	81	4.3%
Single-level non-articulated	57	45.6%	2,896	87.0%	1,234	66.1%
2-level	26	20.8%	42	1.3%	316	16.9%
3-level	2	1.6%	28	0.8%	236	12.7%

(a) Data from APTA survey including about 99% of commuter, heavy, light, and other rail cars.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 59 (continued)

File: RAILMKT2

New Rail Car Market, 2000-2005 (a) (NOT National Totals)

CATEGORY	BUILT IN 2000		ON ORDER JANUARY 2001		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	125	100.0%	3,329	100.0%	1,867	100.0%
Length						
86-105 feet	44	35.2%	169	5.1%	197	10.5%
80-85 feet	53	42.4%	722	21.7%	1,146	61.4%
70-79 feet	25	20.0%	493	14.8%	0	0.0%
60-69 feet	0	0.0%	247	7.4%	0	0.0%
40-59 feet	3	2.4%	1,698	51.0%	524	28.1%
Seating Capacity						
130 or more seats	8	6.4%	70	2.1%	550	29.4%
100-129 seats	29	23.2%	403	12.1%	507	27.2%
75-99 seats	44	35.2%	197	5.9%	224	12.0%
50-74 seats	35	28.0%	599	18.0%	62	3.3%
40-49 seats	3	2.4%	1,325	39.8%	0	0.0%
Below 40 seats	6	4.8%	735	22.1%	524	28.1%

(a) Data from APTA survey including about 99% of commuter, heavy, light, and other rail cars.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 59 (continued)

File: RAILMKT3

New Rail Car Market, 2000-2005 (a) (NOT National Totals)

CATEGORY	BUILT IN 2000		ON ORDER JANUARY 2001		POTENTIAL ORDERS (b)	
	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
Total	125	100.0%	3,329	100.0%	1,867	100.0%
Manufacturer						
AAI Corp-CAF	0	0.0%	190	5.7%	NA	NA
ABB Daimler-Benz	6	4.8%	30	0.9%	NA	NA
Adtranz-Stadler	0	0.0%	20	0.6%	NA	NA
Alstom	0	0.0%	230	6.9%	NA	NA
Bombardier	22	17.6%	1,558	46.8%	NA	NA
Breda	19	15.2%	225	6.8%	NA	NA
CAF	0	0.0%	68	2.0%	NA	NA
Gomaco	3	2.4%	0	0.0%	NA	NA
Kawasaki	1	0.8%	767	23.0%	NA	NA
Kinki Sharyo	21	16.8%	30	0.9%	NA	NA
RTA of New Orleans	0	0.0%	23	0.7%	NA	NA
Siemens	23	18.4%	185	5.6%	NA	NA
Skoda	0	0.0%	3	0.1%	NA	NA
Sumitomo	30	24.0%	0	0.0%	NA	NA
Power Source						
Diesel	0	0.0%	20	0.6%	0	0.0%
Diesel & electric	0	0.0%	0	0.0%	0	0.0%
Electric	82	65.6%	2,999	90.1%	1,315	70.4%
Unpowered	43	34.4%	310	9.3%	552	29.6%

(a) Data from APTA survey including about 99% of commuter, heavy, light, and other rail cars.
(b) DATA ARE TENTATIVE; SOME POTENTIAL ORDERS MAY NOT OCCUR.

TABLE 60

File: B&RCOST

Average New Bus and Van Costs, 2000-2001, Thousands of Dollars (a) (NOT National Totals)

TYPE OF VEHICLE	BUS	TROLLEYBUS	DEMAND RESPONSE	VANPOOL
Articulated (55'-60')	413	813	NA	NA
Intercity (35'-45')	415	NA	NA	NA
45' Transit (45')	391	NA	NA	NA
40' Transit (37'6"-42'5')	288	545	NA	NA
35' Transit (32'6"-37'5")	252	NA	NA	NA
30' Transit (27'6"-32'5")	222	NA	108	NA
Suburban (35'-45')	293	NA	NA	NA
Trolley replica (all lengths)	266	NA	NA	NA
Van/Mini (<27'6")	143	NA	56	23

(a) Data from APTA survey of 10% of non-rail transit agencies. Cost includes amount paid to manufacturer or agent. Not all orders were reported. Each year of a multi-year order is counted as a separate order.

TABLE 61

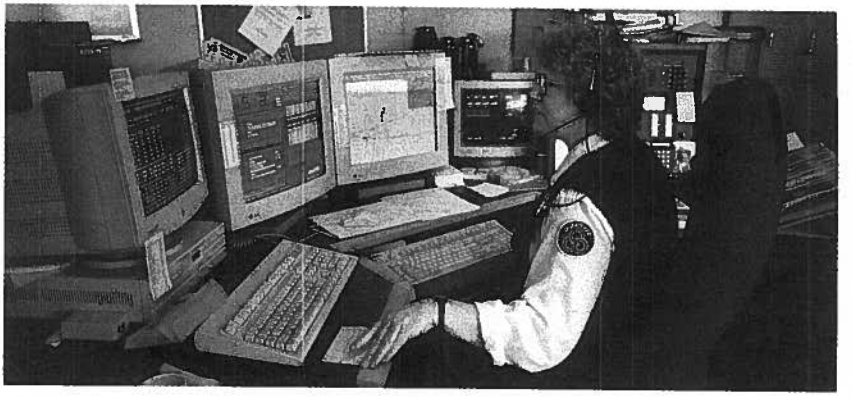
Average New Rail Vehicle Costs, 2000-2001, Thousands of Dollars (a) (NOT National Totals)

TYPE OF VEHICLE	LIGHT RAIL	HEAVY RAIL	COMMUTER RAIL CAR	COMMUTER RAIL LOCOMOTIVE	OTHER
1-level cab	NA	1,461	1,184	NA	NA
1-level non-cab	NA	1,217	1,261	NA	NA
2-level cab	NA	NA	1,870	NA	NA
2-level non-cab	NA	NA	2,057	NA	NA
3-level cab	NA	NA	NA	NA	NA
3-level non-cab	NA	NA	1,681	NA	NA
Diesel	NA	NA	NA	1,900	NA
Diesel-electric	NA	NA	NA	3,955	NA
Electric	NA	NA	NA	3,836	NA
Articulated cab	2,515	NA	NA	NA	NA

(a) Data from APTA survey of 90% of rail transit agencies. Cost includes amount paid to manufacturer or agent. Not all orders were reported. Each year of a multi-year order is counted as a separate order.

Employees

Many employees labor behind the scenes, such as this Tri-County Metropolitan Transportation District customer information representative in Portland, Oregon.



Highlights. . . . . .

- There were about 346,000 operating employees, plus about 12,000 capital employees, in 2000.

- 63.8% were vehicle operations employees,
  17.6% vehicle maintenance employees,
  8.5% non-vehicle maintenance employees,
  10.1% general administration employees.

- Bus employees were 60.9%,
  heavy rail 13.6%,
  demand response 15.0%,
  commuter rail 6.8%,
  light rail 1.9%,
  all other modes 1.8%.

- Average compensation per employee (salaries and fringe benefits) was about $44,200.

TABLE 62

File: EMPMODE

Operating Employees by Mode (a) (b)

YEAR	BUS	COMMUTER RAIL	DEMAND RESPONSE	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	162,189	21,443	22,740	46,102	4,066	1,925	3,711	262,176
1991	163,555	21,083	24,196	47,423	4,175	1,826	3,599	265,857
1992	163,387	21,151	25,863	47,493	3,849	1,691	3,668	267,102
1993	177,167	20,634	30,021	52,433	3,920	1,944	3,400	289,519
1994	174,373	22,596	35,450	51,062	5,140	1,848	3,618	294,087
1995	181,973	22,320	39,882	45,644	4,935	1,871	3,866	300,491
1996	190,152	22,604	44,667	45,793	5,728	2,084	3,916	314,944
1997	196,861	21,651	44,029	45,935	5,940	2,037	4,306	320,759
1998	198,644	22,488	48,406	45,163	6,024	2,053	4,974	327,752
1999	204,179	22,896	51,186	46,311	6,058	2,140	5,115	337,885
2000 P	211,095	23,518	52,021	47,087	6,572	2,223	3,899	346,415
2000 % of Total	60.9%	6.8%	15.0%	13.6%	1.9%	0.7%	1.1%	100.0%

P = Preliminary

(a) Based on employee equivalents of 2,080 labor hours equals one employee; beginning 1993 equals actual employees. Series not continuous between 1992 and 1993.

(b) Excludes capital employees and an estimated 10,000-20,000 individuals not employed by transit agencies and whose compensation is classified as "services"--e.g. boiler repairman, marketing consultant, independent auditor.

TABLE 63

File: EMPJOB

Employees by Function (a) (b)

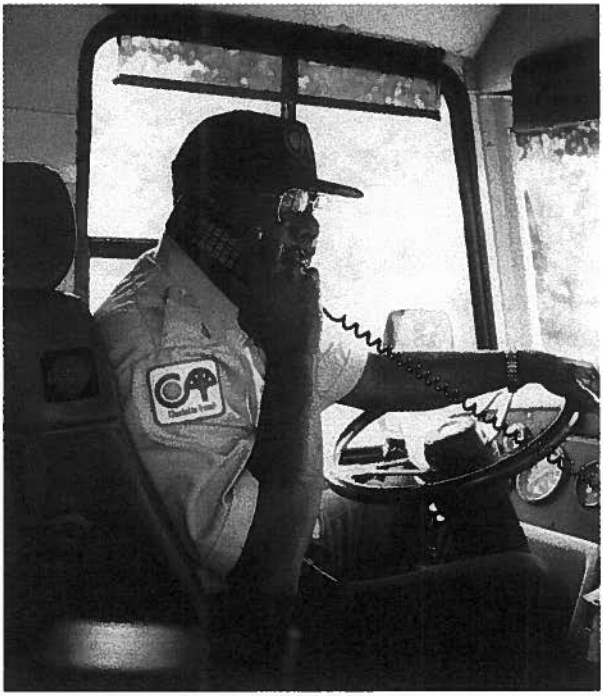
YEAR	VEHICLE OPERATORS (c)	VEHICLE MAINTENANCE	NON-VEHICLE MAINTENANCE	GENERAL ADMINISTRATION	OPERATING TOTAL	CAPITAL	TOTAL
1990	150,556	31,424	44,282	35,914	262,176	10,663	272,839
1991	153,281	31,861	42,708	38,007	265,857	10,288	276,145
1992 (c)	169,549	48,270	24,062	25,221	267,102	11,893	278,995
1993	179,426	53,041	28,043	29,009	289,519	9,665	299,184
1994	183,673	51,405	27,004	32,005	294,087	10,207	304,294
1995	190,675	51,905	27,329	30,582	300,491	10,695	311,186
1996	199,615	54,645	27,239	33,445	314,944	11,682	326,626
1997	207,510	53,322	27,232	32,695	320,759	13,081	333,840
1998	209,047	57,128	28,335	33,242	327,752	10,963	338,715
1999	215,185	59,018	28,914	34,768	337,885	11,938	349,823
2000 P	220,851	61,020	29,423	35,121	346,415	11,753	358,168
2000 % of Total	63.8%	17.6%	8.5%	10.1%	100.0%		

P = Preliminary

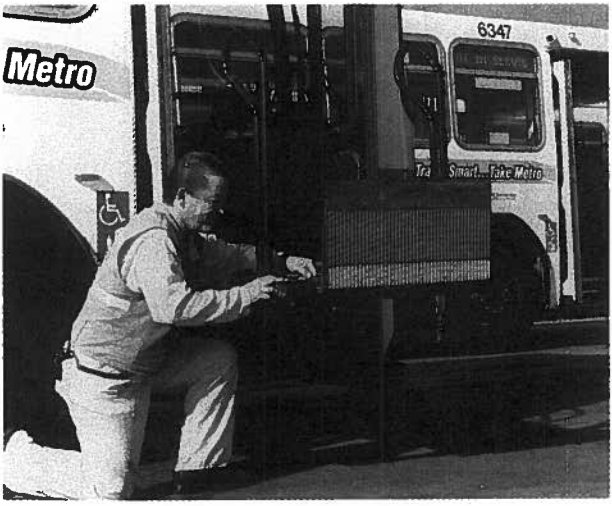
(a) Based on employee equivalents of 2,080 labor hours equals one employee; beginning 1993 equals actual employees. Series not continuous between 1992 and 1993.

(b) Excludes an estimated 10,000-20,000 individuals not employed by transit agencies and whose compensation is classified as "services."

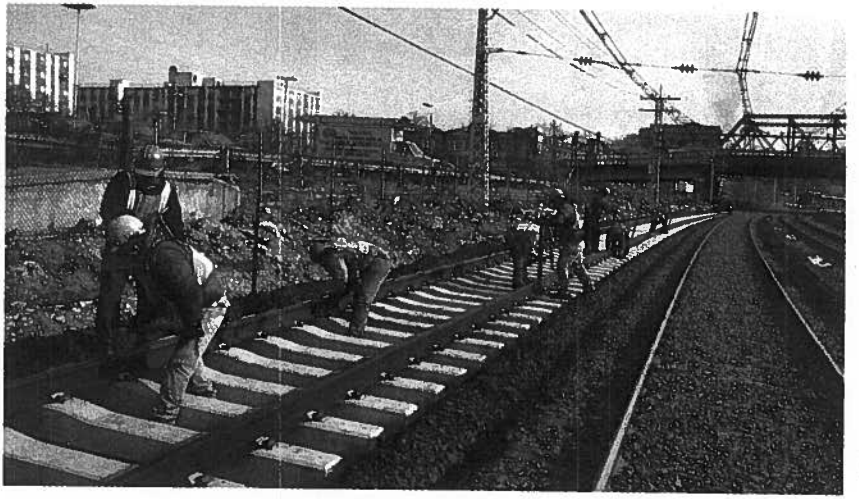
(c) Beginning 1992, ticketing, fare collection, and security employees reclassified from "General Administration" to "Other Vehicle Operations," and vehicle maintenance administrative and support employees reclassified from "Non-Vehicle Maintenance" to "Vehicle Maintenance."



Bus operators are often the only public transportation employees most riders ever see. The Charlotte Area Transit System in Charlotte, North Carolina employs this operator.



Mechanics must undergo extensive training to be able to repair the various types of equipment used by a transit agency. This wheelchair lift mechanic is at the Los Angeles County Metropolitan Transportation Authority.



Track workers at the MTA Metro-North Railroad in New York City pursue their never-ending task of making sure the roadbed and track are in good repair.

Commuter railroads still employ one of the oldest transportation professions--the conductor. This one is also in New York, but at the MTA Long Island Rail Road--the first to become a public transportation agency.

TABLE 64 *File: EMPCOMP*

Employee Compensation, Millions of Dollars

YEAR	NUMBER OF EMPLOYEES (a)(b)	SALARIES AND WAGES	FRINGE BENEFITS	COMPENSATION	COMPENSATION PER EMPLOYEE (ACTUAL DOLLARS)
1990	272,839	7,226.3	3,986.0	11,212.3	41,095
1991	276,145	7,394.5	3,998.4	11,392.9	41,257
1992	278,995	7,670.5	4,318.6	11,989.1	42,972
1993	299,184	7,932.1	4,400.3	12,332.4	41,220
1994	304,294	8,223.8	4,451.7	12,675.5	41,655
1995	311,186	8,213.1	4,484.0	12,697.1	40,802
1996	326,626	8,437.6	4,401.4	12,839.0	39,308
1997	333,840	8,771.7	4,503.7	13,275.4	39,766
1998	338,715	9,211.2	4,843.6	14,054.8	41,494
1999	349,823	9,495.1	5,052.3	14,547.4	40,177
2000 P	358,168	10,400.2	5,412.9	15,813.1	44,150

P = Preliminary

(a) Based on employee equivalents of 2,080 labor hours equals one employee; beginning 1993 equals actual employees. Employee data not continuous between 1992 and 1993.

(b) Excludes an estimated 10,000-20,000 individuals not employed by transit agencies and whose compensation is classified as "services."

Energy and Environment

Highlights. . . . . .

- About 889 million gallons of fossil fuels and 5.5 billion kilowatt-hours of electricity were used to move transit vehicles in 2000.

- 88.4% of all fossil fuels used was diesel,
  80.8% of all diesel was used by buses,
  9.0% by commuter rail,
  6.1% by demand response,
  4.1% by ferryboats,
  less than 0.1% by other modes.

- 29.0% of the non-diesel fuel used was gasoline,
  53.2% compressed natural gas,
  12.2% liquefied natural gas,
  4.8% propane,
  0.8% other modes.

- 64.4% of the electric power used was by heavy rail,
  24.9% by commuter rail,
  8.4% by light rail,
  2.3% by other modes.

- Fully loaded buses are 6 times more fuel efficient than single-occupant automobiles,
  fully loaded rail cars are 15 times more fuel efficient,
  a commuter using transit saves 200 gallons of gasoline a year.

- Public transportation uses less than 1% of the energy consumed in this country.

- Buses emit only 20% as much carbon monoxide as single-occupant automobiles per passenger mile,
  only 10% as much hydrocarbons,
  only 75% as much nitrogen oxides,
  Rail public transportation emits 25% as much nitrogen oxides and almost no hydrocarbons and carbon monoxides

TABLE 65

File: FOSFUEL

Fossil Fuel Consumption by Mode, Thousands of Gallons (a)

YEAR	DIESEL						NON-DIESEL (c)
	BUS	COMMUTER RAIL	DEMAND RESPONSE	FERRY BOAT (b)	OTHER	TOTAL	
1990	563,151	52,681	15,497	19,627	74	651,030	33,906
1991	572,861	54,315	17,422	20,465	95	665,158	34,467
1992	592,049	54,951	16,896	20,926	122	684,944	38,188
1993	575,740	59,766	22,890	19,968	147	678,511	47,251
1994	565,064	61,900	29,949	21,146	167	678,226	64,838
1995	563,767	63,064	28,958	22,307	190	678,286	71,470
1996	577,680	61,888	30,923	21,991	232	692,714	76,305
1997	597,636	63,195	32,020	23,881	220	716,952	83,369
1998	606,631	69,200	38,275	25,269	246	739,621	89,883
1999	618,204	73,005	43,202	28,721	237	763,369	93,092
2000 P	635,160	70,818	48,088	31,780	179	786,025	103,078
2000 % of Total	80.8%	9.0%	6.1%	4.1%	0.0%	100.0%	

P = Preliminary

(a) Data includes passenger vehicles and locomotives; excludes non-passenger-vehicle and non-vehicle consumption.

(b) Excludes international, rural, rural interstate, island, and urban park ferries.

(c) Prior to 1992, includes gasoline only. Series not continuous between 1991 and 1992.

TABLE 66

File: ALTFUEL

Non-Diesel Fossil Fuel Consumption by Fuel, Thousands of Gallons (a)

YEAR	COMPRESSED NATURAL GAS	GASOLINE	LIQUIFIED NATURAL GAS	METHANOL	PROPANE (LIQUID PETROLEUM GAS)	OTHER	TOTAL
1992	1,009	32,906	191	1,583	2,487	12	38,188
1993	1,579	37,928	474	4,975	2,098	197	47,251
1994	4,835	43,921	1,450	12,269	1,871	492	64,838
1995	10,740	42,769	2,236	11,174	3,686	865	71,470
1996	15,092	41,495	2,862	7,268	5,235	4,353	76,305
1997	23,906	41,547	4,030	965	5,150	7,771	83,369
1998	37,268	35,645	5,331	958	6,631	4,050	89,883
1999	44,398	32,699	7,672	1,433	5,604	1,286	93,092
2000 P	54,794	29,908	12,567	131	4,988	690	103,078
2000 % of Total	53.2%	29.0%	12.2%	0.1%	4.8%	0.7%	100.0%

P = Preliminary

(a) Data includes passenger vehicles; excludes non-passenger-vehicle and non-vehicle consumption.

TABLE 67 *File: ELECPOWR*

Electric Power Consumption by Mode, Millions of Kilowatt Hours (a)

YEAR	COMMUTER RAIL	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER	TOTAL
1990	1,226	3,284	239	69	19	4,837
1991	1,239	3,248	274	72	20	4,853
1992	1,124	3,193	297	80	22	4,716
1993	1,196	3,287	281	79	22	4,865
1994	1,244	3,431	282	103	21	5,081
1995	1,253	3,401	288	100	26	5,068
1996	1,255	3,332	321	69	30	5,007
1997	1,270	3,253	361	78	26	4,988
1998	1,299	3,280	381	74	39	5,073
1999	1,322	3,385	416	75	39	5,237
2000 P	1,370	3,549	463	77	51	5,510
2000 % of Total	24.9%	64.4%	8.4%	1.4%	0.9%	100.0%

P = Preliminary

(a) Data includes passenger vehicles and locomotives; excludes non-passenger-vehicle and non-vehicle consumption.

TABLE 68

FiLe: FUELAUTO

Examples of Fuel Savings to a Person Commuting to Work on Public Transportation

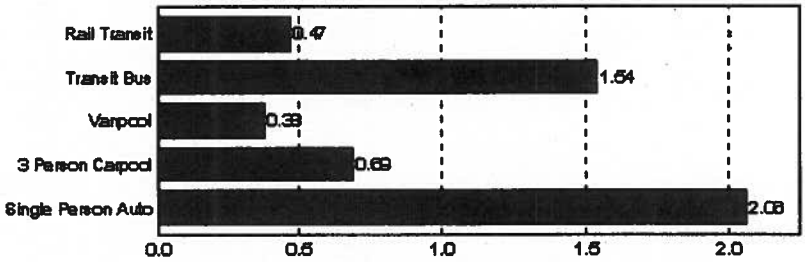
LENGTH OF TRIP	MILES TRAVELED PER YEAR (a)	ANNUAL FUEL SAVINGS, GALLONS BASED ON FOLLOWING FUEL EFFICIENCIES					
		15 MILES PER GALLON	20 MILES PER GALLON	25 MILES PER GALLON	30 MILES PER GALLON	35 MILES PER GALLON	40 MILES PER GALLON
2 miles	944	62.9	47.2	37.8	31.5	27.0	23.6
5 miles	2,360	157.3	118.0	94.4	78.7	67.4	59.0
10 miles	4,720	314.7	236.0	188.8	157.3	134.9	118.0
20 miles	9,440	629.3	472.0	377.6	314.7	269.7	236.0
30 miles	14,160	944.0	708.0	566.4	472.0	404.6	354.0
40 miles	18,880	1,258.7	944.0	755.2	629.3	539.4	472.0
50 miles	23,600	1,573.3	1,180.0	944.0	786.7	674.3	590.0
60 miles	28,320	1,888.0	1,416.0	1,132.8	944.0	809.1	708.0

(a) Based on 472 trips per year based on 365 days minus 52 Saturdays minus 52 Sundays minus 7 holidays minus 10 days vacation minus 8 days sick leave times 2 trips per day.

Pollution Reduction Resulting From Transit Use

Emissions of Nitrogen Oxides*

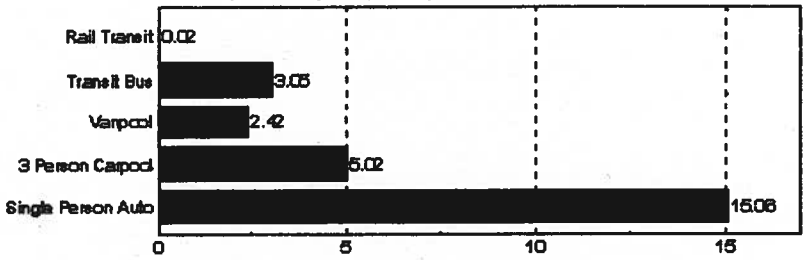
(Estimated grams/passenger-mile for work trips)



*Damages lung tissues. Also precursor of ozone which irritates respiratory tract and eyes, decreases the lungs' working ability and causes both cough and chest pain.

Emissions of Carbon Monoxide*

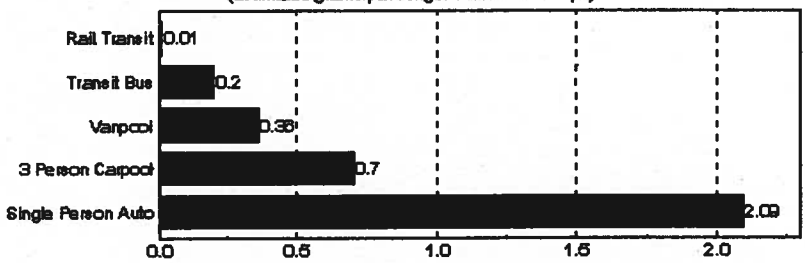
(Estimated grams/passenger-mile for work trips)



*Limits blood's ability to transport oxygen to body tissues.
Can cause dizziness, headaches, impaired coordination and death.

Emissions of Hydrocarbons*

(Estimated grams/passenger-mile for work trips)



*Precursor of ozone which irritates respiratory tract and eyes, decreases the lungs' working ability and causes both cough and chest pain.

Source: APTA, *Mass Transit - The Clean Air Alternative*, 1991.

TABLE 69 *File: EMISSTD*

New Bus Engine Emission Standards, 1998
Grams per Brake Horsepower-Hour

EMISSION	STANDARD
POLLUTANTS	
Hydrocarbons	1.30
Carbon Monoxide	15.50
Nitrogen Oxides	4.00
Particulate Matter	0.05
SMOKE (a)	
Acceleration Mode	20%
Lug Mode	15%
Peak during either mode	50%

(a) Emissions measured in percent opacity during different operating modes.

Source: Federal Transit Administration, *Sourcebook on Transit-Related Environmental Regulations*, 1994.

2004 Model Year Diesel Engine Emission Standards

At the manufacturer's option:

2.4 grams emitted per brake horsepower-hour for all non-methane hydrocarbons plus Nitrogen Oxide, with no limit on non-methane hydrocarbons, OR

2.5 grams if non-methane hydrocarbons are limited to 0.5 grams.

Source: Environmental Protection Agency

Other Environmental Requirements Affecting Transit

Transit agencies are also or will be subject to environmental regulations on the following:

- Diesel-electric locomotive emissions
- Scrap tires
- Vehicle air-conditioning system refrigerants
- Stormwater runoff from transit facilities
- Hazardous waste management
- Underground storage tanks
- Asbestos and lead-based paint removal
- Hazardous wastes in rights-of-way

Safety and Crime

SAFETY

Public transportation safety data, collected by the Federal Transit Administration since 1979, include incidents, fatalities, and injuries that do NOT involve criminal activity. However, these data for many transit agencies were incomplete or inaccurate because those systems were not in full compliance with the FTA reporting requirements. In addition, it has been impossible to separate out patron-only data for the various types of safety incidents because data reported combined patrons, employees, and other persons (e.g., automobile and other vehicle occupants, pedestrians, bicyclists). Only total patron fatalities data (which are zero 98% of the time) have been reasonably reliable.

In 1995, the FTA improved its efforts to ensure compliance and revised its reporting form to report patron, employee, and other data separately for each type of incident. By 1996 most of the reporting problems had been eliminated.

Great caution must be exercised in attempting to compare public transportation safety data to airlines, automobiles, intercity buses, intercity trains, school buses, and other modes of transportation. Public transportation's operating environment is unique compared to these other modes due to the unique nature of public transportation vehicles, stations, and methods of operation and the huge numbers of people involved. Among the unique factors are:

- No other mode of transportation operates in an environment so fraught with the potential for injury--twice a day for three or four hours a continuing flow of thousands of people bump into and jostle one another in the constricted spaces of public transportation vehicles and on the platforms, ramps, stairways, escalators, and elevators of public transportation stations and transfer centers.

- Most public transportation buses and vans have built-in lifts or ramps to accommodate those using wheelchairs, walkers, and other mobility aids, while most rail, bus, and ferry stations have

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- Most public transportation buses and vans have built-in lifts or ramps to accommodate those using wheelchairs, walkers, and other mobility aids, while most rail, bus, and ferry stations have

stairways, escalators, or elevators. All these have a significant risk factor resulting in a disproportionate number of safety incidents. No other mode of travel depends on such equipment to any significant extent.

- Minor incidents with less than $1,000 in transit agency property damage are **not** counted as safety incidents unless a fatality, injury, or fire occurs. Such incidents (e.g., a 2-mile-an-hour collision with a post or another vehicle resulting in a dented bumper or broken taillight) are so common that they are considered "wear-and-tear" incidents that have no safety implications.

- A fatality is defined as a death confirmed within 30 days of an incident. Lingering injuries resulting in death months later are counted as injuries due to the impracticality of attempting to keep track of such injuries over long periods of time.

- All fires are counted even if they involve something as minor as a cigarette burning in a trash can.

- Heavy and commuter rail stations act as magnets for those contemplating suicide, with about one-third of all deaths reported to the FTA for these two modes being suicides. In addition, there are numerous injuries to persons failing in suicide attempts as well as to public transportation vehicle occupants (due to sudden braking) and to others in the wrong place at the wrong time. These casualties inflate the public transportation total, but are obviously beyond the transit agency's control.

- Unlike other transportation modes, the vast majority (over 80%) of safety incidents occur in urbanized areas with over 1,000,000 population.

CRIME

1995 was the first year crime (technically called security) data relating to incidents, fatalities, and injuries resulting from criminal or illegal activities were collected by the Federal Transit Administration. On the assumption that almost no crime exists in small communities, only data for transit agencies in or serving urbanized areas over 200,000 population are collected. Data are derived from the FBI Uniform Crime Reporting Program.

The data for 1995 were quite incomplete since many transit agencies had not complied with the prescribed definitions and procedures. Some larger transit agencies still have not solved these problems. Even when they do, there will be several inherent problems with the data that will make much of it non-comparable:

- Some acts (such as drunkenness and loitering) are crimes in some states, counties, and cities, but not in others.

- Arrests may be handled by police forces in any of the dozens or hundreds of cities, towns, villages, and counties that the agency serves. A few of the largest agencies also have their own police forces. Accurate totals will require accumulation of data from each of these police forces, most of which probably cannot readily separate public transportation crimes from all other crimes in their jurisdiction. Failure of even one jurisdiction with numerous crime incidents to provide data will make the agency's data grossly inaccurate.

- Minor offenses such as trespassing and drunkenness are only counted if an arrest is made. When a citation or warning is issued, it is as if the incident never occurred. There will probably be considerable variances among police forces regarding the proportion of arrests vs. citations.

- Some crimes such as homicides have a high enforcement priority. Crimes low on the priority list such as drunkenness tend to be under-reported since scarce police resources have to be allocated to the most serious crimes, and the public, understanding that, does not report many less-serious crimes.

TABLE 71

File: SAFESUMM

Safety Summary by Mode, 2000 (NOT National Totals)

CATEGORY	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
INCIDENTS (excluding suicides)								
Collisions	24,153	238	3,055	331	334	122	204	28,437
On-Vehicle (b)	16,644	904	1,331	1,713	555	211	501	21,859
Other (c)	3,206	1,077	179	10,675	424	46	249	15,856
Fires (d)	309	119	44	2,278	69	3	1	2,823
FATALITIES (excluding suicides)								
Patron Vehicle (e)	19	1	13	19	5	0	1	58
Patron Other (c)	0	0	1	19	0	0	0	20
Employees	5	0	0	1	0	0	0	6
Other Persons	77	64	3	0	17	0	0	161
INJURIES (excluding suicide attempts)								
Patron Vehicle (e)	26,910	572	1,709	1,375	665	232	254	31,717
Patron Other (c)	675	348	91	6,335	259	14	125	7,847
Employees	7,867	985	744	3,079	262	85	442	13,464
Other Persons	6,409	55	553	35	152	37	26	7,267

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since data for systems not reported by the FTA comprises a significant portion of these modes.
(b) Includes derailments/vehicles going off road, and non-collision inside-vehicle, boarding/alighting, and in-vehicle fires.
(c) Includes non-collision parking facility, right-of-way, station/bus stop, and in-station and right-of-way fires.
(d) Excludes arson fires. Many fires are double-counted in the other three categories.
(e) Includes collision, derailments/vehicles going off road, and non-collision inside-vehicle, boarding/alighting, and in-vehicle fires.

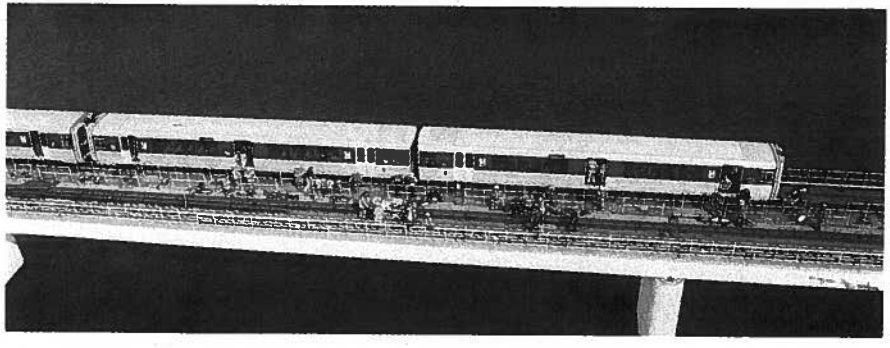
TABLE 72

File: SAFEINCV

Non-Suicide Vehicle-Related Safety Incidents by Mode (NOT National Totals)

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	38,683	1,338	3,253	2,494	823	537	425	47,553
1998	39,330	1,125	3,739	2,569	780	498	414	48,455
1999	40,286	1,075	4,180	2,228	809	390	1,053	50,021
2000	40,797	1,142	4,386	2,044	889	333	705	50,296
2000 % of Total	81.1%	2.3%	8.7%	4.1%	1.8%	0.6%	1.4%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since purchased service not reported by the FTA comprises a significant portion of these modes.



Transit systems routinely train for disasters and other unpreventable incidents. Drills such as this Washington Metropolitan Area Transit Authority evacuation of a train on a bridge over the Potomac River involve WMATA employees, fire and rescue personnel from both Washington, DC and Arlington, Virginia, and local power company employees.

TABLE 73

File: SAFEFATV

Patron Non-Suicide Vehicle-Related Safety Fatalities by Mode (NOT National Totals)

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	15	1	4	22	0	0	0	42
1998	27	12	6	19	1	0	0	65
1999	13	2	5	22	2	0	0	44
2000	19	1	13	19	5	0	1	58
2000 % of Total	32.8%	1.7%	22.4%	32.8%	8.6%	0.0%	1.7%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since purchased service not reported by the FTA comprises a significant portion of these modes.

TABLE 74

Patron Non-Suicide Vehicle-Related Safety Injuries by Mode (NOT National Totals)

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	27,420	761	1,287	1,728	650	435	182	32,463
1998	28,518	520	1,517	1,668	622	400	236	33,481
1999	28,727	497	1,747	1,235	736	239	683	33,864
2000	26,910	572	1,709	1,375	665	232	254	31,717
2000 % of Total	84.9%	1.8%	5.4%	4.3%	2.1%	0.7%	0.8%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since purchased service not reported by the FTA comprises a significant portion of these modes.

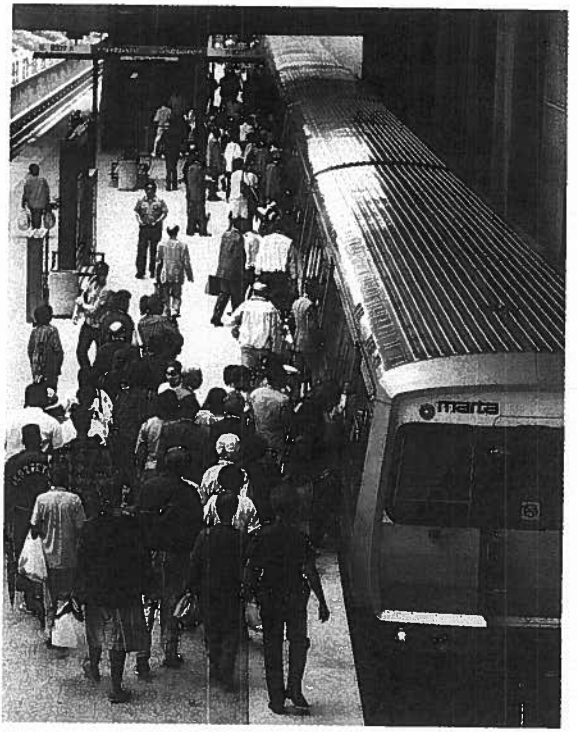
TABLE 75

File: NATSAFE

Fatality Rates by Mode of Travel, 1997-1999 Average Deaths per 100 Million Passenger Miles

TYPE OF VEHICLE	DEATH RATE
Automobiles	0.87
Intercity & commuter railroads	0.06
Airlines	0.04
Intercity buses	0.04
Transit buses	0.05
Heavy, light, & other rail vehicles	Not reported

Source: *Injury Facts*, National Safety Council, 2001.



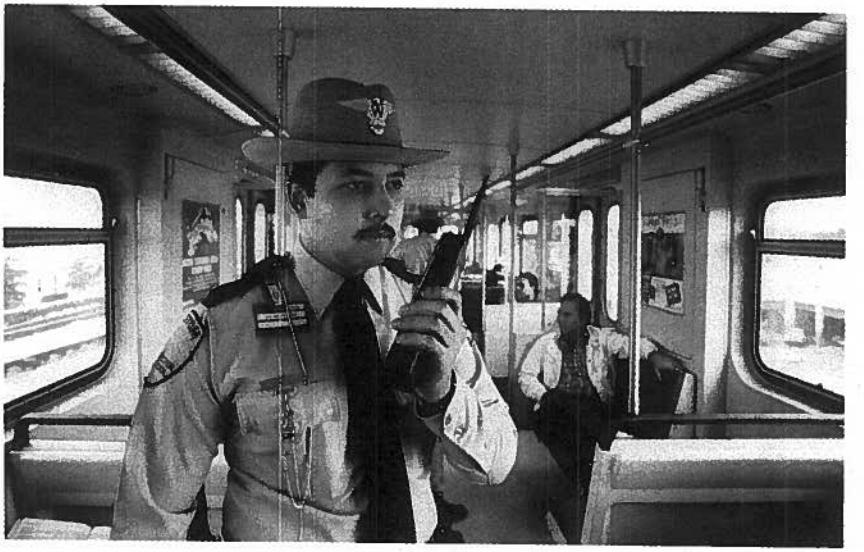
The Metropolitan Atlanta Rapid Transit Authority heavy rail system, one of the numerous new rail systems built since 1973, illustrates several factors affecting safety--station design, a security presence, and crowded platforms.

TABLE 76 *File: SECSUMM*

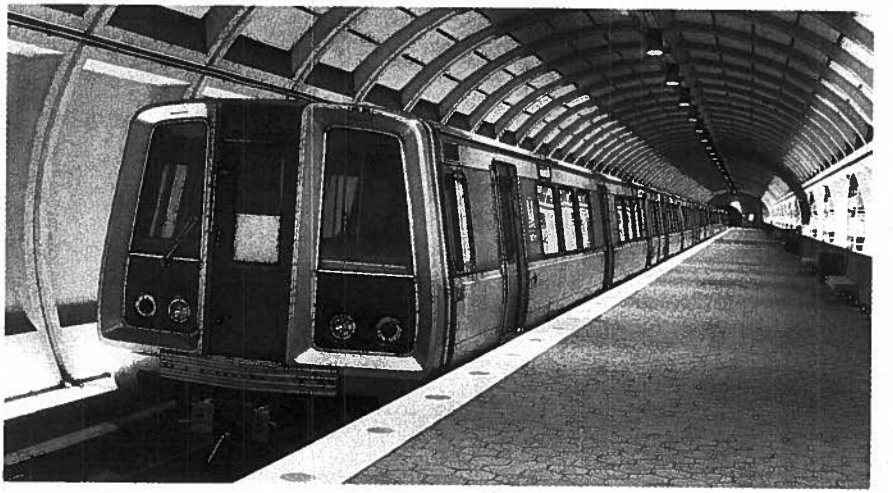
Crime Incidents by Mode, 2000 (NOT National Totals)

TYPE OF CRIME	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
VIOLENT CRIMES AGAINST PATRONS								
Homicide	6	0	0	4	0	0	0	10
Personal (c)	1,457	112	6	2,896	350	24	23	4,868
Property (d)	1,959	1,455	4	7,806	809	40	40	12,113
VIOLENT CRIMES AGAINST NON-PATRONS (EMPLOYEES AND OTHER PERSONS)								
Homicide	1	1	0	0	0	0	0	2
Personal (c)	539	93	14	137	75	7	1	866
Property (d)	758	1,051	21	1,335	194	23	10	3,392
OTHER CRIMES (b)								
Burglary & Arson	166	197	6	98	135	0	11	613
Disorderly Conduct (e)	3,745	706	6	21,087	1,737	16	17	27,314
Drunkenness (e)	3,337	170	1	1,240	1,316	3	20	6,087
Fare Evasion (e)	591	179	3	28,933	24,124	19	14	53,863
Vandalism (e)	4,579	264	7	1,200	1,215	21	26	7,312
Other (e)	4,687	1,504	5	7,107	2,448	37	65	15,853
TOTAL	21,825	5,732	73	71,843	32,403	190	227	132,293

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.
(a) Data may significantly understate total since data for systems not reported and data for urbanized areas under 200,000 population not reported by the FTA comprises a significant portion of these modes.
(b) Data include patrons and non-patrons. Patron-only data not collected.
(c) Includes forcible rape, robbery, aggravated assault.
(d) Includes larceny/theft and motor vehicle theft.
(e) Only includes incidents where arrests were made; when a citation is issued, the incident is not reported.



Most large transit systems have their own police forces, or contract with private security firms. Most smaller systems depend on local police and sheriff's departments for security. This officer is at the Miami-Dade Transit Agency in Miami, Florida.



Modern rail station design minimizes crime by eliminating columns, dark corners, and other areas where criminals can lurk. This Washington Metropolitan Area Transit Authority heavy rail station illustrates such design.

TABLE 77

File: SECURVIO

Violent Crime Incidents by Mode (NOT National Totals) (b)

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	5,425	3,178	62	15,771	1,081	858	134	26,509
1998	4,478	2,933	45	11,731	1,237	145	133	20,702
1999	4,839	2,612	51	12,613	1,069	166	175	21,525
2000	4,886	2,909	51	12,276	1,563	94	85	21,864
2000 % of Total	22.3%	13.3%	0.2%	56.2%	7.2%	0.4%	0.4%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.

(a) Data may significantly understate total since data for systems not reported and data for urbanized areas under 200,000 population not reported by the FTA comprises a significant portion of these modes.

(b) Includes homicide, forcible rape, robbery, aggravated assault, larceny/theft, motor vehicle theft, burglary, and arson.

TABLE 78

Non-Violent Crime Incidents by Mode (NOT National Totals) (b)

YEAR	BUS (a)	COMMUTER RAIL	DEMAND RESPONSE (a)	HEAVY RAIL	LIGHT RAIL	TROLLEY BUS	OTHER (a)	TOTAL (a)
1997	25,615	7,688	148	69,022	6,615	958	4,564	114,610
1998	17,664	6,314	86	61,928	18,188	571	4,143	108,894
1999	20,581	3,399	41	55,826	23,702	222	453	104,224
2000	16,939	2,823	22	59,567	30,840	96	142	110,429
2000 % of Total	15.3%	2.6%	0.0%	54.0%	27.9%	0.1%	0.1%	100.0%

Source: Federal Transit Administration, National Transit Database. Data reported include about 450 of the largest transit agencies.

(a) Data may significantly understate total since data for systems not reported and data for urbanized areas under 200,000 population not reported by the FTA comprises a significant portion of these modes.

(b) Only includes incidents where arrests were made; when a citation is issued, the incident is not reported.

Mode Summaries

Lymmo, a special circulator bus service on reserved lanes in the central business district of Orlando, Florida, is operated by LYNX, the Central Florida Regional Transportation Authority.

This section contains data presented elsewhere in this book arranged by mode. Also included are modal information on average fare per unlinked trip, operating expense object classes and functions, average weekday unlinked passenger trips, vehicles, employees, and energy consumption.

Lists of the 35 largest bus agencies, ferryboat agencies, and trolleybus agencies are provided, as are lists of commuter rail, heavy rail, light rail, and other rail agencies with the number of stations of each.

"Other Rail" includes aerial tramway, automated guideway transit, cable car, inclined plane, and monorail.

Bus National Total Data, Fiscal Year 2000

Agencies, Number of	2,262
Fares Collected, Passenger	$4,375,500,200
Fare per Unlinked Trip, Average	$0.77
Expense, Operating Total (a)	$12,966,152,300
Salaries and Wages (b)	$6,037,051,000
Fringe Benefits (b)	$3,058,839,900
Services (b)	$738,505,400
Fuel and Lubricants (b)	$527,576,500
Materials and Supplies, Other (b)	$939,298,400
Utilities (b)	$159,951,900
Casualty and Liability (b)	$302,581,300
Purchased Transportation (b) (c)	$1,270,794,000
Other (b)	($68,446,100)
Vehicle Operations (c)	$6,586,878,300
Vehicle Maintenance (c)	$2,591,066,900
Non-vehicle Maintenance (c)	$522,469,200
General Administration (c)	$1,994,943,900
Expense, Capital Total	$3,248,778,100
Rolling Stock	$1,822,081,300
Facilities	$918,793,000
Other	$507,903,700
Trips, Unlinked Passenger, Average Weekday	19,788,000
Trips, Unlinked Passenger, Annual	5,677,669,700
Miles, Passenger	21,241,012,600
Trip Length, Average (miles)	3.7
Miles, Vehicle Total	2,314,776,400
Miles, Vehicle Revenue	2,001,671,700
Hours, Vehicle Total	174,336,600
Hours, Vehicle Revenue	156,605,000
Speed, Vehicle in Revenue Service, Average (m.p.h.)	12.8
Vehicles, Total	78,441
Active	75,013
Age, Average (years)	6.9
Air-conditioned	88.7%
Lifts, Wheelchair	74.1%
Ramps, Wheelchair	12.1%
Accessible Only via Stations	0.0%
Power Source, Diesel or Gasoline	90.2%
Power Source, Alternative	9.8%
Rehabilitated	6.1%
Employees, Operating	211,095
Vehicle Operations	142,896
Vehicle Maintenance	38,569
Non-vehicle Maintenance	7,531
General Administration	22,099
Employees, Capital	3,397
Diesel Fuel Consumed (gallons)	635,160,100
Other Fuel Consumed (gallons)	63,771,400
Electricity Consumed (kwh)	1,128,500

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 80

File: 35MBAG

35 Largest Bus Transit Agencies, Fiscal Year 2000, Ranked by Number of Unlinked Passenger Trips

RANK	TRANSIT AGENCY	URBANIZED AREA
1	Metropolitan Transportation Authority (includes MTA New York City Transit and MTA Long Island Bus, and MTA Metro-North Railroad)	New York, NY
2	Los Angeles County Metropolitan Transp Authority	Los Angeles, CA
3	Regional Transportation Authority (includes Chicago Transit Authority and PACE Suburban Bus)	Chicago, IL
4	Southeastern Pennsylvania Transp Authority	Philadelphia, PA
5	New Jersey Transit Corporation	New York, NY
6	Washington Metropolitan Area Transportation Auth	Washington, DC
7	New York City Department of Transportation	New York, NY
8	Massachusetts Bay Transportation Authority	Boston, MA
9	Metropolitan Transit Authority of Harris County	Houston, TX
10	San Francisco Municipal Railway	San Francisco, CA
11	Mass Transit Administration, Maryland Dept of Trp	Baltimore, MD
12	Metropolitan Atlanta Rapid Transit Authority	Atlanta, GA
13	Metro Transit	Minneapolis, MN
14	King County Department of Transportation	Seattle, WA
15	Milwaukee County Transit System	Milwaukee, WI
16	Regional Transportation District	Denver, CO
17	Alameda-Contra Costa Transit District	San Francisco, CA
18	City and County of Honolulu Dept of Trp Services	Honolulu, HI
19	Port Authority of Allegheny County	Pittsburgh, PA
20	Miami-Dade Transit Agency	Miami, FL
21	Tri-County Metropolitan Transp District of Oregon	Portland, OR
22	Orange County Transportation Authority	Los Angeles, CA
23	Dallas Area Rapid Transit Authority	Dallas, TX
24	San Diego Metropolitan Transit Development Board (includes San Diego Transit Corporation)	San Diego, CA
25	Greater Cleveland Regional Transit Authority	Cleveland, OH
26	Regional Transit Authority of Orleans and Jefferson	New Orleans, LA
27	Regional Transportation Comm of Southern Nevada	Las Vegas, NV
28	Santa Clara Valley Transportation Authority	San Jose, CA
29	VIA Metropolitan Transit	San Antonio, TX
30	City of Detroit Department of Transportation	Detroit, MI
31	Bi-State Development Agency	Saint Louis, MO
32	Capital Metropolitan Transportation Authority	Austin, TX
33	Connecticut Transit	Hartford, CT
34	City of Phoenix Public Transit Department	Phoenix, AZ
35	Metropolitan Bus Authority	San Juan, PR

TABLE 81 *File: CRSUM*

Commuter Rail National Total Data, Fiscal Year 2000

Agencies, Number of	19
Fares Collected, Passenger	$1,374,541,800
Fare per Unlinked Trip, Average	$3.32
Expense, Operating Total (a)	$2,685,289,400
Salaries and Wages (b)	$1,127,016,600
Fringe Benefits (b)	$746,915,500
Services (b)	$178,901,400
Fuel and Lubricants (b)	$55,383,800
Materials and Supplies, Other (b)	$205,605,100
Utilities (b)	$165,281,800
Casualty and Liability (b)	$75,700,900
Purchased Transportation (b) (c)	$192,839,400
Other (b)	($62,355,100)
Vehicle Operations (c)	$941,954,300
Vehicle Maintenance (c)	$613,613,800
Non-vehicle Maintenance (c)	$474,918,500
General Administration (c)	$461,963,500
Expense, Capital Total	$1,783,445,800
Rolling Stock	$428,462,600
Facilities	$1,276,384,200
Other	$78,599,000
Trips, Unlinked Passenger, Average Weekday	1,445,000
Trips, Unlinked Passenger, Annual	412,863,900
Miles, Passenger	9,402,009,300
Trip Length, Average (miles)	22.8
Miles, Vehicle Total	270,947,000
Miles, Vehicle Revenue	247,917,500
Hours, Vehicle Total	9,413,900
Hours, Vehicle Revenue	8,696,300
Speed, Vehicle in Revenue Service, Average (m.p.h.)	28.5
Vehicles, Total (Passenger Cars Only)	5,244
Active	5,073
Age, Average (years)	20.4
Air-conditioned	98.9%
Lifts, Wheelchair	4.2%
Ramps, Wheelchair	25.5%
Accessible Only via Stations	36.3%
Power Source, Diesel or Gasoline	0.3%
Power Source, Alternative	48.4%
Rehabilitated	36.3%
Employees, Operating	23,518
Vehicle Operations	8,599
Vehicle Maintenance	6,603
Non-vehicle Maintenance	5,582
General Administration	2,734
Employees, Capital	2,646
Diesel Fuel Consumed (gallons)	70,817,800
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	1,370,452,100

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 82

File: CRAGENCY

Commuter Rail Transit Agencies (a)

PRIMARY CITY SERVED	TRANSIT AGENCY	DIRECT-IONAL ROUTE MILES	TRACK MILES	CROSS-INGS	STA-TIONS	ACCESS-IBLE STA-TIONS (b)
Baltimore, MD	Mass Transit Admin, Maryland DOT (MARC)	373.4	455.1	40	40	19
Boston, MA	Massachusetts Bay Transportation Authority	710.2	583.8	0	120	74
Burlington, VT	Vermont Transportation Auth (Champlain Flyer)	25.0	12.5	NA	3	3
Chicago, IL	Northeast Illinois Reg Commuter Rail Corp (METRA)	940.4	1,144.0	512	227	115
Chicago, IL	Northern Indiana Commuter Transp District	179.8	130.4	117	18	7
Dallas, TX	Trinity Railway Express	51.6	34.3	24	7	7
Los Angeles, CA	Southern California Regional Rail Auth (Metrolink)	770.0	635.1	398	47	47
Miami, FL	Tri-County Commuter Rail Authority (Tri-Rail)	142.2	150.9	72	19	19
New Haven, CT	Connecticut Dept of Transp (Shoreline East)	101.2	103.9	3	8	8
New York, NY	Metropolitan Transp Auth Long Island Rail Road	638.2	701.1	397	124	97
New York, NY	Metropolitan Transp Auth Metro-North Railroad	545.7	797.6	162	108	20
New York, NY	New Jersey Transit Corporation	975.2	988.5	329	162	46
Philadelphia, PA	Pennsylvania Department of Transportation	144.4	144.4	7	14	4
Philadelphia, PA	Southeastern Pennsylvania Transportation Auth	449.2	695.4	116	177	30
San Diego, CA	North San Diego County Tr Devel Bd (Coaster)	82.2	108.0	34	8	8
San Francisco, CA	Peninsula Corridor Joint Powers Board (Caltrain)	153.6	129.5	49	35	14
San Jose, CA	Altamont Commuter Express	172.0	179.4	127	9	9
Seattle, WA	Central Puget Sound Reg Tr Auth (Sound Transit)	78.6	107.5	43	6	6
Syracuse, NY	ON TRACK	3.5	3.5	NA	3	3
Washington, DC	Virginia Railway Express	177.5	190.0	23	18	18
TOTAL		6,713.9	7,294.9	NA	1,153	554

(a) Excludes commuter-type services operated independently by AMTRAK.
(b) Some stations are wheelchair accessible, but may not comply with other provisions of the Americans with Disabilities Act.
Source: Federal Transit Administration National Transit Database plus other sources.

TABLE 83 *File: DRSUM*

Demand Response National Total Data, Fiscal Year 2000

Agencies, Number of	5,252
Fares Collected, Passenger	$171,568,600
Fare per Unlinked Trip, Average	$1.64
Expense, Operating Total (a)	$1,804,863,300
Salaries and Wages (b)	$308,917,400
Fringe Benefits (b)	$113,216,300
Services (b)	$37,796,100
Fuel and Lubricants (b)	$28,049,500
Materials and Supplies, Other (b)	$29,395,500
Utilities (b)	$7,926,500
Casualty and Liability (b)	$20,461,900
Purchased Transportation (b) (c)	$1,239,403,500
Other (b)	$19,696,600
Vehicle Operations (c)	$370,980,800
Vehicle Maintenance (c)	$85,363,300
Non-vehicle Maintenance (c)	$15,491,800
General Administration (c)	$93,623,900
Expense, Capital Total	$134,244,000
Rolling Stock	$90,045,400
Facilities	$23,367,500
Other	$20,831,000
Trips, Unlinked Passenger, Average Weekday	372,000
Trips, Unlinked Passenger, Annual	104,463,500
Miles, Passenger	838,804,500
Trip Length, Average (miles)	8.0
Miles, Vehicle Total	758,890,300
Miles, Vehicle Revenue	645,769,500
Hours, Vehicle Total	50,916,200
Hours, Vehicle Revenue	43,769,200
Speed, Vehicle in Revenue Service, Average (m.p.h.)	14.8
Vehicles, Total	34,535
Active	33,080
Age, Average (years)	2.6
Air-conditioned	97.5%
Lifts, Wheelchair	79.0%
Ramps, Wheelchair	12.3%
Accessible Only via Stations	0.0%
Power Source, Diesel or Gasoline	94.2%
Power Source, Alternative	5.8%
Rehabilitated	0.8%
Employees, Operating	52,021
Vehicle Operations	42,213
Vehicle Maintenance	4,701
Non-vehicle Maintenance	687
General Administration	4,420
Employees, Capital	25
Diesel Fuel Consumed (gallons)	48,087,500
Other Fuel Consumed (gallons)	34,586,200
Electricity Consumed (kwh)	0

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 84

File: FBSUM

Ferryboat National Total Data, Fiscal Year 2000

Agencies, Number of	33
Fares Collected, Passenger	$60,072,300
Fare per Unlinked Trip, Average	$1.13
Expense, Operating Total (a)	$268,412,700
Salaries and Wages (b)	$126,288,500
Fringe Benefits (b)	$34,668,700
Services (b)	$13,627,000
Fuel and Lubricants (b)	$21,567,000
Materials and Supplies, Other(b)	$27,900,700
Utilities (b)	$2,719,400
Casualty and Liability (b)	$4,535,700
Purchased Transportation (b) (c)	$34,808,700
Other (b)	$2,297,000
Vehicle Operations (c)	$171,220,700
Vehicle Maintenance (c)	$27,532,400
Non-vehicle Maintenance (c)	$13,247,700
General Administration (c)	$21,603,200
Expense, Capital Total	$139,814,000
Rolling Stock	$82,967,300
Facilities	$54,654,100
Other	$2,192,700
Trips, Unlinked Passenger, Average Weekday	164,000
Trips, Unlinked Passenger, Annual	53,344,100
Miles, Passenger	330,028,300
Trip Length, Average (miles)	6.2
Miles, Vehicle Total	3,029,400
Miles, Vehicle Revenue	2,990,400
Hours, Vehicle Total	378,000
Hours, Vehicle Revenue	374,900
Speed, Vehicle in Revenue Service, Average (m.p.h.)	8.0
Vehicles, Total	119
Active	119
Age, Average (years)	23.6
Air-conditioned	0.0%
Lifts, Wheelchair	0.0%
Ramps, Wheelchair	3.9%
Accessible Only via Stations	23.5%
Power Source, Diesel or Gasoline	62.7%
Power Source, Alternative	37.3%
Rehabilitated	0.0%
Employees, Operating	2,682
Vehicle Operations	2,156
Vehicle Maintenance	226
Non-vehicle Maintenance	155
General Administration	145
Employees, Capital	100
Diesel Fuel Consumed (gallons)	31,780,400
Other Fuel Consumed (gallons)	NA
Electricity Consumed (kwh)	0

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 85 *File: FBAGENCY*

Ferryboat Transit Agencies (a)

PRIMARY CITY SERVED	TRANSIT AGENCY
Alameda, CA	Harbor Island Ferry
Balboa, CA	Balboa Island Ferry
Baytown, TX	Harris County Lynchburg Ferry
Boston, MA	Massachusetts Bay Transportation Authority
Bremerton, WA	Kitsap Transit
Chicago, IL	Wendella RiverBus
Cincinnati, OH	Anderson Ferry Boat
Corpus Christi, TX	Corpus Christi Regional Transportation Authority
Galveston, TX	Texas Department of Transportation
Hartford, CT	Connecticut Department of Transportation
Jacksonville, FL	Florida Department of Transportation
Long Beach, CA	Long Beach Public Transportation Company
New Orleans, LA	Louisiana Dept of Transportation and Development
New York, NY	Fox Navigation
New York, NY	New York City Department of Transportation
New York, NY	Port Authority of New York & New Jersey
Norfolk, VA	Transportation District Commission of Hampton Roads
Oakland, CA	Alameda-Oakland Ferry Service
Philadelphia, PA	Delaware River Port Authority RiverLink Ferry
Port Huron, MI	Blue Water Area Transportation Commission
Port Townsend, WA	Washington State Department of Transportation
Portland, ME	Casco Bay Island Transit District
Providence, RI	Rhode Island Public Transit Authority
San Diego, CA	Coronado Ferry
San Francisco, CA	Angel Island-Tiburon Ferry Company
San Francisco, CA	Golden Gate Bridge, Highway & Transportation Dist
San Francisco, CA	Red & White Fleet
San Francisco, CA	Vallejo Baylink Ferry
San Juan, PR	Puerto Rico Ports Authority
Seattle, WA	King County Department of Transportation
Seattle, WA	Washington State Department of Transportation
Tacoma, WA	Pierce County Ferry Operations
Tacoma, WA	Washington State Department of Transportation

(a) Excludes international, rural, island, and urban park ferries.

TABLE 86

Trolleybus Transit Agencies

PRIMARY CITY SERVED	TRANSIT AGENCY
Boston, MA	Massachusetts Bay Transportation Authority
Dayton, OH	Miami Valley Regional Transit Authority
Philadelphia, PA	Southeastern Pennsylvania Transp Authority
San Francisco, CA	San Francisco Municipal Railway
Seattle, WA	Central Puget Sound Regional Transp Authority
Seattle, WA	King County Department of Transportation

TABLE 87

File: TBSUM

Trolleybus National Total Data, Fiscal Year 2000

Agencies, Number of	6
Fares Collected, Passenger	$59,441,200
Fare per Unlinked Trip, Average	$0.49
Expense, Operating Total (a)	$177,641,700
Salaries and Wages (b)	$92,608,500
Fringe Benefits (b)	$52,552,300
Services (b)	$12,580,200
Fuel and Lubricants (b)	$39,900
Materials and Supplies, Other (b)	$13,656,200
Utilities (b)	$4,236,000
Casualty and Liability (b)	$5,275,500
Purchased Transportation (b) (c)	$180,200
Other (b)	($3,487,000)
Vehicle Operations (c)	$100,739,900
Vehicle Maintenance (c)	$33,365,600
Non-vehicle Maintenance (c)	$13,443,200
General Administration (c)	$29,912,900
Expense, Capital Total	$148,884,500
Rolling Stock	$27,038,000
Facilities	$109,925,200
Other	$11,921,300
Trips, Unlinked Passenger, Average Weekday	388,000
Trips, Unlinked Passenger, Annual	122,397,900
Miles, Passenger	191,891,100
Trip Length, Average (miles)	1.6
Miles, Vehicle Total	14,524,900
Miles, Vehicle Revenue	13,946,400
Hours, Vehicle Total	1,962,800
Hours, Vehicle Revenue	1,894,100
Speed, Vehicle in Revenue Service, Average (m.p.h.)	7.4
Vehicles, Total	1,053
Active	951
Age, Average (years)	16.9
Air-conditioned	12.9%
Lifts, Wheelchair	51.2%
Ramps, Wheelchair	0.0%
Accessible Only via Stations	0.0%
Power Source, Diesel or Gasoline	0.0%
Power Source, Alternative	100.0%
Rehabilitated	0.0%
Employees, Operating	2,223
Vehicle Operations	1,569
Vehicle Maintenance	343
Non-vehicle Maintenance	141
General Administration	170
Employees, Capital	23
Diesel Fuel Consumed (gallons)	0
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	76,933,500

(a) Sum of (b) lines OR sum of (c) lines.

Heavy Rail National Total Data, Fiscal Year 2000

Agencies, Number of	14
Fares Collected, Passenger	$2,482,742,600
Fare per Unlinked Trip, Average	$0.94
Expense, Operating Total (a)	$3,930,783,400
Salaries and Wages (b)	$2,340,741,500
Fringe Benefits (b)	$1,198,467,200
Services (b)	$219,677,400
Fuel and Lubricants (b)	$4,038,400
Materials and Supplies, Other (b)	$344,486,900
Utilities (b)	$330,143,100
Casualty and Liability (b)	$81,747,500
Purchased Transportation (b) (c)	$0
Other (b)	($588,518,700)
Vehicle Operations (c)	$1,619,546,200
Vehicle Maintenance (c)	$733,324,300
Non-vehicle Maintenance (c)	$999,149,700
General Administration (c)	$578,763,200
Expense, Capital Total	$2,852,239,500
Rolling Stock	$495,575,700
Facilities	$2,053,106,900
Other	$303,556,900
Trips, Unlinked Passenger, Average Weekday	8,686,000
Trips, Unlinked Passenger, Annual	2,632,186,700
Miles, Passenger	13,843,512,100
Trip Length, Average (miles)	5.3
Miles, Vehicle Total	595,243,000
Miles, Vehicle Revenue	578,204,100
Hours, Vehicle Total	30,894,400
Hours, Vehicle Revenue	28,261,000
Speed, Vehicle in Revenue Service, Average (m.p.h.)	20.5
Vehicles, Total	10,653
Active	10,591
Age, Average (years)	22.5
Air-conditioned	99.5%
Lifts, Wheelchair	0.0%
Ramps, Wheelchair	0.0%
Accessible Only via Stations	98.6%
Power Source, Diesel or Gasoline	0.0%
Power Source, Alternative	100.0%
Rehabilitated	54.0%
Employees, Operating	47,087
Vehicle Operations	20,065
Vehicle Maintenance	8,680
Non-vehicle Maintenance	13,872
General Administration	4,470
Employees, Capital	5,267
Diesel Fuel Consumed (gallons)	0
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	3,548,941,700

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 89

File: HRAGENCY

Heavy Rail Transit Agencies

PRIMARY CITY SERVED	TRANSIT AGENCY	DIRECT-IONAL ROUTE MILES	TRACK MILES	CROSS-INGS	STA-TIONS	ACCESS-IBLE STA-TIONS
Atlanta, GA	Metropolitan Atlanta Rapid Transit Authority	92.1	115.0	0	36	36
Baltimore, MD	Mass Transit Administration, Maryland DOT	29.4	34.4	0	14	14
Boston, MA	Massachusetts Bay Transportation Authority	76.3	107.7	0	53	37
Chicago, IL	Chicago Transit Authority	206.3	287.8	25	142	54 (a)
Cleveland, OH	Greater Cleveland Regional Transit Authority	38.2	41.9	0	18	8
Los Angeles, CA	Los Angeles County Metropolitan Transp Auth	31.9	34.1	0	16	16
Miami, FL	Miami-Dade Transit Agency	42.2	53.2	0	21	21 (a)
New York, NY	Metropolitan Transp Auth New York City Transit	492.9	834.2	0	468	41
New York, NY	Metropolitan Transp Auth Staten Island Railway	28.6	32.6	0	22	2
New York, NY	Port Authority of New York & New Jersey	28.6	43.1	2	13	6
Philadelphia, PA	Port Authority Transit Corp of PA & New Jersey	31.5	38.4	0	13	5
Philadelphia, PA	Southeastern Pennsylvania Transportation Auth	76.1	102.3	0	76	4
San Francisco, CA	San Francisco Bay Area Rapid Transit District	190.1	246.3	0	39	39
Washington, DC	Washington Metropolitan Area Transit Authority	193.5	206.8	0	78	78
TOTAL		1,557.7	2,177.8	27	1,009	361

(a) Some stations are wheelchair accessible, but may not comply with other provisions of the Americans with Disabilities Act.
Source: Federal Transit Administration National Transit Database plus other sources.

Light Rail National Total Data, Fiscal Year 2000

Agencies, Number of	25
Fares Collected, Passenger	$181,232,000
Fare per Unlinked Trip, Average	$0.57
Expense, Operating Total (a)	$606,419,000
Salaries and Wages (b)	$279,742,000
Fringe Benefits (b)	$160,018,500
Services (b)	$65,629,900
Fuel and Lubricants (b)	$730,100
Materials and Supplies, Other (b)	$46,599,600
Utilities (b)	$44,966,600
Casualty and Liability (b)	$10,373,300
Purchased Transportation (b) (c)	$4,554,400
Other (b)	($6,195,300)
Vehicle Operations (c)	$251,024,700
Vehicle Maintenance (c)	$144,577,100
Non-vehicle Maintenance (c)	$100,940,600
General Administration (c)	$105,322,200
Expense, Capital Total	$1,244,802,500
Rolling Stock	$174,704,000
Facilities	$956,046,000
Other	$114,052,500
Trips, Unlinked Passenger, Average Weekday	1,034,000
Trips, Unlinked Passenger, Annual	320,133,300
Miles, Passenger	1,355,934,000
Trip Length, Average (miles)	4.2
Miles, Vehicle Total	52,746,000
Miles, Vehicle Revenue	52,071,000
Hours, Vehicle Total	3,513,000
Hours, Vehicle Revenue	3,401,400
Speed, Vehicle in Revenue Service, Average (m.p.h.)	15.3
Vehicles, Total	1,768
Active	1,577
Age, Average (years)	17.9
Air-conditioned	79.5%
Lifts, Wheelchair	8.4%
Ramps, Wheelchair	12.8%
Accessible Only via Stations	56.0%
Power Source, Diesel or Gasoline	0.0%
Power Source, Alternative	100.0%
Rehabilitated	20.7%
Employees, Operating	6,572
Vehicle Operations	2,911
Vehicle Maintenance	1,644
Non-vehicle Maintenance	1,210
General Administration	807
Employees, Capital	291
Diesel Fuel Consumed (gallons)	0
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	463,240,500

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 91

File: LRAGENCY

Light Rail Transit Agencies

PRIMARY CITY SERVED	TRANSIT AGENCY	DIRECT-IONAL ROUTE MILES	TRACK MILES	CROSS-INGS	STA-TIONS (a)	ACCESS-IBLE STATIONS (a) (b)
Baltimore, MD	Mass Transit Administration, Maryland DOT	57.6	50.9	52	32	32
Boston, MA	Massachusetts Bay Transportation Authority	51.0	77.5	56	95	12
Buffalo, NY	Niagara Frontier Transit Metro System	12.4	14.1	8	14	7
Cleveland, OH	Greater Cleveland Regional Transit Authority	30.8	33.0	22	34	7
Dallas, TX	Dallas Area Rapid Transit Authority	40.8	46.7	66	20	20
Dallas, TX	McKinney Avenue Transit Authority	2.8	2.8	NA	0	0
Denver, CO	Regional Transportation District	28.0	28.5	34	20	20
Detroit, MI	Detroit Downtown Trolley	1.2	1.2	NA	0	0
Fort Worth, TX	Tandy Center Subway	1.0	1.0	0	2	0
Galveston, TX	Island Transit	4.9	4.9	57	3	3
Kenosha, WI	Kenosha Transit	1.9	1.9	14	1	0
Los Angeles, CA	Los Angeles County Metropolitan Transp Auth	82.4	85.7	77	36	36
Memphis, TN	Memphis Area Transit Authority	5.8	6.1	40	28	28
New Orleans, LA	Regional Transit Auth of Orleans & Jefferson	16.0	13.7	124	9	9
Newark, NJ	New Jersey Transit Corporation	22.1	24.9	16	23	12
Philadelphia, PA	Southeastern Pennsylvania Transportation Auth	69.3	171.0	1,702	64	0
Pittsburgh, PA	Port Authority of Allegheny County	34.8	44.8	39	13	13
Portland, OR	City of Portland Streetcar	4.8	4.8	NA	31	31
Portland, OR	Tri-County Metropolitan Transp Dist of Oregon	64.9	71.9	111	47	46
Sacramento, CA	Sacramento Regional Transit District	40.7	39.4	90	29	29
Saint Louis, MO	Bi-State Development Agency	34.0	36.2	12	18	18
Salt Lake City, UT	Utah Transit Authority	29.6	29.6	46	16	16
San Diego, CA	San Diego Trolley	96.6	96.6	96	49	49
San Francisco, CA	San Francisco Municipal Railway	70.0	70.0	191	11	0
San Jose, CA	Santa Clara Valley Transportation Authority	55.8	56.3	93	47	21
Seattle, WA	King County Department of Transportation	3.7	2.1	14	9	9
TOTAL		862.9	1,015.6	NA	651	418

(a) Many light rail lines have numerous stops in the street that do not meet the definition of station.
(b) Some stations are wheelchair accessible, but may not comply with other provisions of the Americans with Disabilities Act.
Source: Federal Transit Administration National Transit Database plus other sources.

TABLE 92 *File: ORSUM*

Other Rail National Total Data, Fiscal Year 2000

Agencies, Number of	16
Fares Collected, Passenger	$18,116,800
Fare per Unlinked Trip, Average	$0.66
Expense, Operating Total (a)	$165,643,100
Salaries and Wages (b)	$80,580,500
Fringe Benefits (b)	$44,886,700
Services (b)	$16,843,000
Fuel and Lubricants (b)	$23,600
Materials and Supplies, Other (b)	$8,806,000
Utilities (b)	$4,220,200
Casualty and Liability (b)	$2,955,600
Purchased Transportation (b) (c)	$6,574,900
Other (b)	$752,700
Vehicle Operations (c)	$60,281,000
Vehicle Maintenance (c)	$32,395,600
Non-vehicle Maintenance (c)	$37,714,600
General Administration (c)	$28,677,000
Expense, Capital Total	$16,537,700
Rolling Stock	$1,556,300
Facilities	$12,328,000
Other	$2,653,400
Trips, Unlinked Passenger, Average Weekday	78,000
Trips, Unlinked Passenger, Annual	27,419,000
Miles, Passenger	27,528,400
Trip Length, Average (miles)	1.0
Miles, Vehicle Total	3,364,900
Miles, Vehicle Revenue	3,286,800
Hours, Vehicle Total	448,400
Hours, Vehicle Revenue	440,100
Speed, Vehicle in Revenue Service, Average (m.p.h.)	7.5
Vehicles, Total	225
Active	212
Age, Average (years)	49.1
Air-conditioned	53.3%
Lifts, Wheelchair	1.0%
Ramps, Wheelchair	0.0%
Accessible Only via Stations	55.2%
Power Source, Diesel or Gasoline	0.0%
Power Source, Alternative	100.0%
Rehabilitated	8.6%
Employees, Operating	986
Vehicle Operations	413
Vehicle Maintenance	216
Non-vehicle Maintenance	239
General Administration	118
Employees, Capital	2
Diesel Fuel Consumed (gallons)	0
Other Fuel Consumed (gallons)	0
Electricity Consumed (kwh)	48,870,300

(a) Sum of (b) lines OR sum of (c) lines.

TABLE 93

File: ORAGENCY

Other Rail Transit Agencies

RAIL TYPE (a)	PRIMARY CITY SERVED	TRANSIT AGENCY	DIRECTIONAL ROUTE MILES	TRACK MILES	CROSSINGS	STATIONS	ACCESSIBLE STATIONS
AG	Detroit, MI	Detroit Transportation Corporation	2.9	2.9	0	13	13
AG	Jacksonville, FL	Jacksonville Transportation Authority	4.3	4.3	0	6	0
AG	Las Colinas, TX	Las Colinas Area Rapid Transit	2.8	1.4	0	4	4
AG	Miami, FL	Miami-Dade Transit Agency	8.5	9.4	0	21	21 (c)
AG	Morgantown, WV	West Virginia University	7.2	8.7	0	5	0
CC	San Francisco, CA	San Francisco Municipal Railway	8.8	8.8	NA	0 (b)	0 (b)
IP	Chattanooga, TN	Chattanooga Area Regional Transp Auth	2.0	1.0	0	2	2
IP	Dubuque, IA	Fenelon Place Elevator	0.1	0.1	0	2	0
IP	Johnstown, PA	Cambria County Transit Authority	0.2	0.2	0	2	0
IP	Los Angeles, CA	Angels Flight Railway	0.1	0.1	0	2	2
IP	Pittsburgh, PA	Port Authority of Allegheny County	0.5	0.5	0	4	3
MO	Las Vegas, NV	Las Vegas Monorail	1.6	1.6	0	2	2
MO	Seattle, WA	City of Seattle Monorail	1.1	1.1	0	2	0
TR	Mountain Village, CO	Mountain Village Metropolitan District	5.0	2.5	0	4	0
TR	New York, NY	Roosevelt Island Operating Corporation	1.2	0.6	0	2	0
	TOTAL		46.3	43.2	NA	71	47

(a) AG = automated guideway transit, CC = cable car, IP = inclined plane, MO = monorail, TR = aerial tramway
(b) Cable cars stop in the middle of the street and do not have stations.
(c) Stations are wheelchair accessible, but may not comply with other provisions of the Americans with Disabilities Act.
Source: Federal Transit Administration National Transit Database plus other sources.

TABLE 94 *File: VPSUM*

Vanpool National Total Data, Fiscal Year 2000

Agencies, Number of	67
Fares Collected, Passenger	$22,550,300
Fare per Unlinked Trip, Average	$1.79
Expense, Operating Total (a)	$40,293,500
Salaries and Wages (b)	$7,270,100
Fringe Benefits (b)	$3,317,200
Services (b)	$6,069,700
Fuel and Lubricants (b)	$5,006,700
Materials and Supplies, Other (b)	$1,471,200
Utilities (b)	$333,200
Casualty and Liability (b)	$2,872,900
Purchased Transportation (b) (c)	$11,844,600
Other (b)	$2,107,900
Vehicle Operations (c)	$8,254,300
Vehicle Maintenance (c)	$5,862,200
Non-vehicle Maintenance (c)	$321,400
General Administration (c)	$14,011,000
Expense, Capital Total	$18,215,900
Rolling Stock	$16,116,900
Facilities	$632,100
Other	$1,466,900
Trips, Unlinked Passenger, Average Weekday	50,000
Trips, Unlinked Passenger, Annual	12,565,000
Miles, Passenger	434,804,300
Trip Length, Average (miles)	34.6
Miles, Vehicle Total	67,309,000
Miles, Vehicle Revenue	65,906,100
Hours, Vehicle Total	2,163,100
Hours, Vehicle Revenue	2,122,900
Speed, Vehicle in Revenue Service, Average (m.p.h.)	31.0
Vehicles, Total	5,228
Active	4,877
Age, Average (years)	2.3
Air-conditioned	93.3%
Lifts, Wheelchair	1.6%
Ramps, Wheelchair	0.3%
Accessible Only via Stations	0.0%
Power Source, Diesel or Gasoline	99.4%
Power Source, Alternative	0.6%
Rehabilitated	0.0%
Employees, Operating	231
Vehicle Operations	29
Vehicle Maintenance	38
Non-vehicle Maintenance	6
General Administration	158
Employees, Capital	2
Diesel Fuel Consumed (gallons)	179,200
Other Fuel Consumed (gallons)	4,719,200
Electricity Consumed (kwh)	0

(a) Sum of (b) lines OR sum of (c) lines.

Public Transportation vs. Automobile Costs

Numerous people use public transportation to save money, including social and recreational riders such as this family boarding the San Diego Trolley in California.

Highlights. . . . . .

- Typical cost to a user to ride public transportation for a year ranges from $189 to $2,077, depending on base fare, surcharges, and discounts available.
- Typical single-occupant personal vehicle driving costs range from $5,510 per year for a small car to $10,508 per year for a large car, depending on mileage.
- $2 to $3 billion per year is paid by society for highways and motor vehicle use, but only 53% to 68% of that amount is paid by users.

TABLE 95

FILe: TRANCOST

Examples of Cost of Riding Public Transportation

COST	$0.50 BASE FARE	$0.75 BASE FARE	$1.00 BASE FARE	$1.25 BASE FARE	$1.50 BASE FARE
BASE ANNUAL COST (472 TRIPS)					
No discounted fare media used	236.00	354.00	472.00	590.00	708.00
Monthly passes with 20% discount used	188.80	283.20	377.60	472.00	566.40
ADDITIONAL ANNUAL COSTS (including 20% discount)					
$.25 surcharge to transfer to another vehicle	94.40	94.40	94.40	94.40	94.40
$2.00 zone or distance surcharge ($.50 each for 4 zones)	755.20	755.20	755.20	755.20	755.20
$.50 peak-hour surcharge	188.80	188.80	188.80	188.80	188.80
$.25 surcharge for express service	94.40	94.40	94.40	94.40	94.40
$2.00 per day parking surcharge	755.20	755.20	755.20	755.20	755.20
TOTAL ANNUAL COST (including 20% discount)					
Including transfer surcharge only	283.20	377.60	472.00	566.40	660.80
Including distance surcharge only	944.00	1,038.40	1,132.80	1,227.20	1,321.60
Including distance and peak-hour surcharges	1,132.80	1,227.20	1,321.60	1,416.00	1,510.40
Including distance and express surcharges	1,038.40	1,132.80	1,227.20	1,321.60	1,416.00
Including distance and parking surcharges	1,699.20	1,793.60	1,888.00	1,982.40	2,076.80

Annual number of trips estimate based on 365 days minus 52 Saturdays minus 52 Sundays minus 7 holidays minus 10 days vacation minus 8 days sick leave times 2 trips per day.

TABLE 96

FiLe: DRIVCOST

Automobile Driving Costs, 2001

CATEGORY	SMALL CAR	MIDSIZE CAR	LARGE CAR	SPORT UTILITY VEHICLE	VAN
OPERATING COSTS (cents per mile)					
Gasoline & Oil	6.9	7.8	9.1	8.5	7.6
Maintenance	3.7	3.9	4.1	4.0	4.0
Tires	1.5	1.7	2.2	1.7	1.5
SUBTOTAL	12.1	13.4	15.4	14.2	13.1
OWNERSHIP COSTS (cost per year)					
Insurance	1,055	907	1,012	1,064	922
License, registration, taxes	166	207	251	300	269
Depreciation	2,980	3,470	4,194	3,829	3,611
Finance charge	632	861	1,104	1,045	914
SUBTOTAL	4,833	5,446	6,561	6,238	5,716
DEPRECIATION FOR EXCESS MILEAGE (per 1000 miles over 15,000 miles annually)	155	165	173	151	161
TOTAL ANNUAL COST					
10,000 miles per year	5,510	6,169	7,679	6,521	5,991
15,000 miles per year	6,648	7,456	8,873	8,368	7,681
20,000 miles per year	8,028	8,951	10,508	9,833	9,141

Source: American Automobile Association and Runzheimer International, *Your Driving Costs, 2001 Edition*. Data for a popular model of each type listed with ownership costs based on 60,000 miles before replacement.

TABLE 97 *File: PUBCOST*

Cost of Motor Vehicle Use in 1990, Billions of Dollars (a)

	LOW	HIGH
1. NATIONAL PAYMENTS		
New Vehicles & financing costs	265.4	265.4
Gasoline & oil	124.0	124.0
Other automobile	167.3	179.8
Highway freight transportation	278.1	278.1
Less taxes also reported in item 2	-39.2	-39.2
TOTAL	795.6	808.2
2. TAXES & OTHER FEES PAID BY USERS	70.3	72.3
3. HIDDEN PRIVATE SECTOR EXPENDITURES		
Free nonresidential parking (excluding taxes)	101.4	217.8
Other hidden costs	45.1	71.1
Less payments for parking	-57.9	-32.6
TOTAL	88.6	256.3
4. PUBLIC EXPENDITURES FOR HIGHWAY INFRASTRUCTURE & SERVICES		
Highway construction, maintenance, services, and administration	76.5	76.5
Police	7.9	12.6
Fire	1.4	3.2
Court, judicial system, and corrections	6.5	13.5
Other public expenditures	10.6	30.1
TOTAL	103.0	135.9
Less taxes also reported in item 2	-70.3	-72.3
NET TOTAL	32.6	63.6
5. NONMONETARY EXTERNAL COSTS		
Congestion time costs on others	128.9	149.5
Pain & suffering inflicted on others due to accidents	132.1	138.8
Mortality & morbidity effects of air pollution	40.0	200.0
Other external costs	25.5	96.7
TOTAL	326.5	585.0
6. NONMONETARY PERSONAL COSTS		
Personal pain & suffering due to accidents	132.1	138.8
Travel time excluding external congestion & paid freight drivers	677.7	814.3
Other nonmonetary personal costs	40.9	97.9
TOTAL	850.7	1,051.0
TOTAL COSTS OF MOTOR VEHICLE USE	2,164.3	2,836.4
PER CENT PAID BY USERS		
Motor vehicle user fees (Item 2 total) divided by public expenditures (Item 4 total)	68.3%	53.2%

Source: *Saving Energy in U.S. Transportation*, Office of Technology Assessment, Congress of the United States, July, 1994.

SECTION XV

Federal Legislation

History and Provisions of the Federal Transit Act
And Other Major Laws Affecting Public Transportation

File: FTA

In 1964 the United States Congress found that "the welfare and vitality of urban areas, the satisfactory movement of people and goods within such areas, and the effectiveness of housing, urban renewal, highway, and other federally aided programs were being jeopardized by the deterioration or inadequate provision of urban transportation facilities and services. . . ." In response, Congress enacted the Urban Mass Transportation Act of 1964, which provided federal aid to transit agencies for capital equipment purchases.

Continuing this commitment into its fourth decade, Congress enacted the Transportation Equity Act for the 21st Century (TEA 21). TEA 21 authorizes higher levels of funding for public transportation than any previous law, with the major portion of funding guaranteed to be included in budget amounts available for annual appropriations. It also continues and improves provisions of prior authorizing laws that are important to the continuing Federal commitment to improve public transportation service throughout America.

Landmarks in the evolution of the federal public transportation assistance program over the years include:

1961: The Housing and Urban Development Act of 1961 provided public transportation demonstration funding and mass transportation project loans.

1964: The Urban Mass Transportation Act of 1964 established the Urban Mass Transportation Administration (UMTA) within the Department of Housing and Urban Development to provide capital grants to transit agencies.

1966: The Urban Mass Transportation Act of 1966 expanded capital funding and allowed funding for research, planning, and training. UMTA

was moved to the newly created Department of Transportation (DOT).

1970: The Urban Mass Transportation Assistance Act of 1970 authorized a $3.1 billion program of capital grants.

1973: The Federal-Aid Highway Act of 1973 increased the federally funded portion of public transportation capital projects from 66 2/3% to 80% and authorized the use of Federal-Aid Urban Systems highway funds and Interstate Highway Transfers for qualifying public transportation projects.

1974: The National Mass Transportation Assistance Act of 1974 increased authorizations for discretionary capital funding and created a formula grant program to allocate funding directly to urbanized areas that could be used for either operations or capital projects.

1978: The Federal Public Transportation Act of 1978, Title III of the Surface Transportation Assistance Act of 1978 divided the formula grant program into categorical programs that included capital grants for bus purchases and additional operating grants for fixed guideway systems and places outside of urbanized areas.

1982: The Federal Public Transportation Act of 1982, Title III of the Surface Transportation Assistance Act of 1982 provided that 1 cent of a 5 cents per gallon increase in the Highway Trust Fund tax on motor fuels would be placed into a Mass Transit Account for capital projects, increased the portion of all funding allocated through the formula grant program, and altered the formula grant program allocation formula to include public transportation service data as well as population data.

1984: The Tax Reform Act of 1984 allowed employees to receive a *de minimis*, up to $15 per month, tax-free fringe benefit in the form of an employer-provided public transportation subsidy or pass.

1987: The Federal Mass Transportation Act of 1987, Title III of the Surface Transportation and Uniform Relocation Assistance Act of 1987 provided that a portion of the Highway Trust Fund Mass Transit Account would be allocated by formula for capital purposes.

1990: The Omnibus Budget Reconciliation Act of 1990 raised to 1.5 cents per gallon the portion of the Highway Trust Fund tax on motor fuels to be placed in the Mass Transit Account.

1990: The Americans with Disabilities Act of 1990 (ADA) required transit agencies to provide service accessible to persons with disabilities.

1990: The Clean Air Act Amendments of 1990 recast transportation planning to provide for improved air quality.

1991: The Federal Transit Act Amendments of 1991, Title III of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) extended public transportation assistance through FY 1997, increased the amounts authorized, re-named the transit law the Federal Transit Act and the Urban Mass Transportation Administration the Federal Transit Administration, and converted the rail modernization portion of Section 5309 major capital funds to a formula basis.

Surface Transportation, Title I of ISTEA provided that specific funds authorized through Federal-Aid Highways programs may be used for either public transportation or highway projects. These flexible funds are to be used for the mode of transportation best suited to meeting the needs of individual areas and states.

1991: The Omnibus Transportation Employee Testing Act of 1991 mandated the establishment of anti-drug and alcohol misuse programs for safety-sensitive employees of recipients and contractors to recipients of Major Capital Investment, Urbanized Area Formula, and Rural Area Formula public transportation funds.

1992: The Energy Policy Act of 1992 increased the tax-free amount of the public transportation commuter fringe benefit to $60 per month with an inflation provision, removed the cliff provision which had made the entire benefit taxable if the monthly limit was exceeded, and extended the benefit to vanpools.

1993: The Omnibus Budget Reconciliation Act of 1993 raised to 2 cents per gallon the portion of the Highway Trust Fund tax on motor fuels to be placed in the Mass Transit Account, effective October 1, 1995.

1994: The Federal Transit Act was codified as Title 49, Chapter 53–Mass Transportation, of the United States Code.

1997: The Taxpayer Relief Act of 1997 raised to 2.86 cents per gallon the portion of the Highway Trust Fund tax on motor fuels to be placed in the Mass Transit Account, effective October 1, 1997.

1997: Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was extended through March 31, 1998.

1998: The Federal Transit Act of 1998, Title III of the Transportation Equity Act for the 21st Century (TEA 21) extends the public transportation program through FY 2003. TEA 21 increases public transportation funding authorizations, up to 70 percent above ISTEA appropriation levels if all authorized amounts are appropriated. A total of $41 billion is authorized for the six-year period, of which $36 billion is guaranteed. Guaranteed amounts are protected in the budget process and can only be appropriated for public transportation uses. The guaranteed amounts, however, are subject to annual appropriation by the Congress.

TEA 21 retains and improves many provisions of ISTEA including the transportation planning process and flexible funding. The distribution of formula funds among sections 5307, 5310, and 5311 is revised. The definition of eligible uses of Urbanized Area Formula capital funds is expanded to include preventive maintenance and ADA related expenditures for all urbanized areas and to include operating expenditures for urbanized areas under 200,000 population. The Rail Modernization program formula is adjusted to increase the proportion of new funds for newer fixed-guideway systems. The public transportation commuter benefit is expanded to include employee purchase of public transportation passes with pre-tax dollars.

Two new programs are created. The Clean Fuels Formula Grant program provides funds for adoption of clean fuel technologies including purchase or lease of clean fuel buses and facilities. The Job Access and Reverse Commute program funds projects that improve job access for current and former welfare recipients and other eligible low-income individuals.

Funding Provisions of the Federal Transit Act

Funds for federal public transportation assistance come from two sources. Money from general governmental revenues is appropriated each year by Congress. As part of that process Congress sets a limit on the amount of money from the Highway Trust Fund Mass Transit Account that can be used to fund public transportation projects during the next year.

Transit agencies receive funds from several Federal Transit Act programs, which allocate funding to urbanized areas or states by formula or for specific projects through discretionary processes. The largest are:

Capital Investment, 49 USC 5309: Original grant program, begun in FY 1964, provides capital assistance to eligible public transportation projects in three categories: (1) construction of new fixed-guideway systems or extensions of existing systems called "New Starts," (2) modernization of existing fixed-guideway systems called "Rail Modernization," and (3) major bus related construction projects or equipment acquisition called "Bus Capital."

Status: Authorized through FY 2003.

Recipients of Funds: State or local public bodies and agencies.

Eligible Expenditures: Capital projects only.

Method of Allocation: Rail Modernization funds are distributed to urbanized areas with fixed-guideway systems in operation for at least seven years on a formula basis. New Start and Bus Capital funds are distributed to specific projects at the discretion of the Congress or the Federal Transit Administration if the Congress does not specify a distribution. Eligible New Start projects for FY 1998 through FY 2003 and some Bus Capital project amounts for FY 1999 and FY 2000 are authorized in TEA 21. Amounts for individual projects are specified in annual appropriations laws. Authorizing legislation designates 40% of the funds for New Starts, 40% for Rail Modernization, and 20% for Bus Capital.

Matching Ratio: 80% federal, 20% state and local.

Urbanized Area Formula (UAF), 49 USC 5307 and 5336: Apportions operating and capital assistance on a formula basis to urbanized areas.

Status: Authorized through FY 2003.

Recipients of Funds: Directly to urbanized areas of at least 200,000 population, through state governors to urbanized areas under 200,000 population.

Eligible Expenditures: For urbanized area of at least 200,000 population, capital expenditures by local decision. Eligible capital expenditures include acquisition of public transportation vehicles, construction of facilities including fixed-guideway rights-of-way, purchase of equipment, rehabilitation of buses, overhaul of rail vehicles, preventive maintenance, up to 10 percent of the apportioned amount for non-fixed-route ADA paratransit service, and other uses. For urbanized areas under 200,000

population, capital expenditures as for larger urbanized areas and operating expenditures.

Method of Allocation: By six formulas based on urbanized area population and mode of public transportation service. Amount is 91.23% of total UAF, RAF, and Elderly and Disabled funds beginning in FY 1999. These formulas are:

(1) Fixed guideway operations in urbanized areas of at least 200,000 population, basic formula, 28.87% of the UAF. The formula is 60% fixed guideway revenue vehicle miles operated and 40% fixed guideway route miles. Urbanized areas of at least 750,000 population that have commuter rail operations receive a minimum of 0.75% of this formula.

(2) Fixed guideway operations in urbanized areas of at least 200,000 population, incentive formula, 1.32% of the UAF. The formula is the number of fixed guideway passenger miles traveled multiplied by the number of fixed guideway passenger miles traveled per dollar of operating cost. Urbanized areas of at least 750,000 population that have commuter rail operations receive a minimum of 0.75% of this formula.

(3) Bus operations in urbanized areas of at least 1,000,000 population, basic formula, 40.31% of the UAF. The formula is 50% bus revenue vehicle miles operated, 25% urbanized area population, and 25% urbanized area population density weighted by population.

(4) Bus operations in urbanized areas from 200,000 to 999,999 population, basic formula, 14.61% of the UAF. The formula is 50% bus revenue vehicle miles operated, 25% urbanized area population, and 25% urbanized area population density weighted by population.

(5) Bus operations in urbanized areas of at least 200,000 population, incentive formula, 5.57% of the UAF. The formula is the number of bus passenger miles traveled multiplied by the number of bus passenger miles traveled per dollar of operating cost.

(6) Mass transportation operations in urbanized areas under 200,000 population, 9.32% of the UAF. The formula is 50% urbanized area population and 50% urbanized area population density weighted by population.

Matching Ratios: Operating assistance: 50% federal, 50% state and local. Capital assistance: 80% federal, 20% state and local.

Elderly and Disabled Persons, 49 USC 5310: Established by the UMT Act of 1970 to assure mass transportation availability to elderly and disabled persons.

Status: Authorized through FY 2003.

Recipients of Funds: Private, non-profit corporations and associations providing mass transportation services for the elderly and disabled or public bodies coordinating such service or providing service where no non-profit service is available, through state governors.

Eligible Expenditures: For capital equipment and cost of leased or contracted service.

Method of Allocation: Allocated by formula to states based on of elderly and disabled population. Amount is 2.4% of total UAF, RAF, and Elderly and Disabled funds beginning in FY1999.

Matching Ratio: 80% federal, 20% state and local.

Rural Area Formula (RAF), 49 USC 5311: Established by the STA Act of 1978 to apportion funds for mass transportation in rural areas outside of urbanized areas.

Status: Authorized through FY 2003.

Recipients of Funds: Mass transportation providers outside of urbanized areas through state governors.

Eligible Expenditures: Operations or capital projects.

Method of Allocation: Formula based on non-urbanized area population of each state. Amount is 6.37% of total UAF, RAF, and Elderly and Disabled funds beginning in FY 1999.

Matching Ratio: Operating assistance: 50% federal, 50% state and local. Capital assistance: 80% federal, 20% state and local.

Rural Transit Assistance Program, 49 USC 5311(b)(2): Established by the FMT Act of 1987 to provide research, technical assistance, and training grants and related support services to non-urbanized areas. Allocated separately from funds in remainder of section 5311.

Clean Fuels Formula Program, 49 USC 5308: Established by TEA 21 to expedite the adoption of clean fuels bus technologies.

Status: Authorized through FY 2003.

Recipients of Funds: Designated recipients in urbanized areas that make application for funds by January 1 of each fiscal year.

Eligible Expenditures: To purchase or lease clean fuel vehicles and related facilities, to improve existing facilities for clean fuel buses, and to re-power, retrofit, or rebuild pre-1993 engines under certain conditions. Eligible clean fuels include compressed natural gas, liquefied natural gas, biodiesel fuels, batteries, alcohol-based fuels, hybrid electric, fuel cell, clean diesel, and other low or zero emissions technology.

Method of Allocation: Funds are apportioned to grant applicants in air-quality non-attainment and maintenance areas under a formula that weighs bus fleet size and bus passenger miles by severity of non-attainment. Two thirds of funds must go to urban areas with at least 1,000,000 population and one third to urban areas under 1,000,000 population.

Matching Ratio: 80% federal, 20% state and local.

Job Access and Reverse Commute Program, Section 3037 of TEA 21: Established by TEA 21 to improve job access for current and former welfare recipients and eligible low-income individuals.

Status: Authorized through FY 2003.

Recipients of Funds: Local governmental authorities and agencies or nonprofit organizations selected by Metropolitan Planning Organizations in urbanized areas of at least 200,000 population and selected by the chief executive officer of the state for urbanized areas under 200,000 population.

Eligible Expenditures: Capital and operating costs of equipment, facilities, and associated capital maintenance items related to providing access to jobs, promoting public transportation use by workers with non-traditional work schedules, promoting the use of vouchers by appropriate agencies, the purchase or lease of vehicles for shuttle service at suburban locations, costs associated with adding reverse commute service or to otherwise facilitate transportation to suburban job opportunities, and promoting the

use of employer provided transportation and public transportation pass benefits. Planning and coordination activities are not eligible.

Method of Allocation: Awarded to eligible applicants on a competitive basis with consideration given to several factors including percentage of the population that are welfare recipients, need for additional services, coordination and use of existing services, proposal of innovative approaches, and other factors.

Matching Ratio: 50% federal, 50% state and local. Federal funds from agencies outside of the Department of Transportation that are eligible for use for transportation expenditures can be used for the state and local match.

Provisions of Other Major Federal Laws Affecting Public Transportation

Americans with Disabilities Act of 1990, prohibits discrimination based on disabilities in the areas of employment, public services, public accommodations and services operated by private entities, public transportation, and telecommunications.

Employers are prohibited from discriminating against any qualified individual with a disability in regard to job application procedures, the hiring, advancement or discharge of employees, employee compensation, job training, and other terms, conditions, or privileges of employment. All private company, state and local government, employment agency, and labor union employers with 15 or more employees had to comply by July 26, 1994.

All programs, activities and services provided or made available by state and local government, including public transportation, are prohibited from discriminating on the basis of disability, regardless of whether or not those entities receive federal financial assistance.

All new public transportation buses and rail cars must be accessible to the mobility, hearing, and sight-impaired. At least one car on every train must be accessible. All new passenger stations must be accessible, and older "key" stations must be retrofitted for accessibility, unless an extension was granted for extraordinarily expensive retrofitting. These provisions and those requiring complementary paratransit service for those unable to use fixed-route service were effective January 26, 1997.
Clean Air Act Amendments of 1990, recast transportation planning to

ensure that, in areas experiencing air quality problems, planning is geared to improved air quality as well as mobility. State and local officials are required to find ways to reduce emissions from vehicles (including public transportation buses), to develop projects and programs that will alter driving patterns to reduce the number of single-occupant vehicles, and to make alternatives such as public transportation a more important part of the transportation network. The Act focuses on the issue of "conformity", which is a determination made by the metropolitan planning organization and the U.S. Department of Transportation that transportation plans and programs in non-attainment areas meet the requirement of reducing pollutant emissions.

The Environmental Protection Agency imposed emissions standards as a result of the Act that require public transportation bus engines to meet increasingly strict emission standards, culminating in the following in 1998: nitrogen oxides--4.0 grams/brake horsepower-hour (a 33% reduction from the 1990 pre-law standard), and particulate matter (soot)--.05 g/bhh (a 92% reduction).

No reductions in the 1990 carbon monoxide and hydrocarbon emissions levels of 15.5 g/bhh and 1.3 g/bhh were mandated, since they are not feasible due to technological limitations.

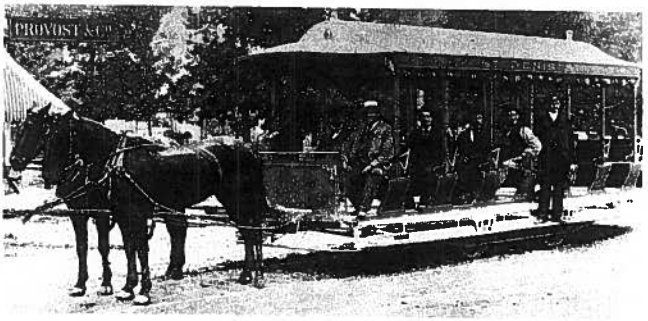
Omnibus Transportation Employee Testing Act of 1991, mandates regulations requiring recipients of financial assistance under the Capital Investment, Urbanized Area Formula, and Rural Area Formula sections of the Federal Transit Act and Section 103(e)4 of Title 23 of the United States Code to establish multifaceted anti-drug and alcohol-misuse programs for their own as well as contracted safety-sensitive employees. All transit agencies were required to implement such programs by January 1, 1996.

Safety-sensitive positions include revenue vehicle operators, dispatchers, maintenance staff, non-revenue vehicle operators if a Commercial Driver's License is required, police and security personnel carrying a firearm, and supervisors when performing safety-sensitive functions.

Commuter rail employees are exempt, since they are covered by Federal Railroad Administration regulations. Ferryboat employees are covered, but are also subject to Coast Guard regulations.

History

This 1887 Montreal, Canada horsecar typified public transportation prior to electrically-powered streetcars.



Public transportation, except for ferryboats, was not a part of life until the 19th century, since home, work, and recreation were almost always within walking distance of each other.

Today's public transportation evolved from three European developments in the late 18th and early 19th centuries: distances between housing and work in larger cities increased so that walking was no longer feasible for many people, horse-pulled stagecoaches were introduced to meet this need for the few who could afford it, and the railroad was invented. The horsecar--initially a horse-pulled stagecoach body on special wheels that ran on rails--was devised to operate on the unpaved or poorly paved streets of that era.

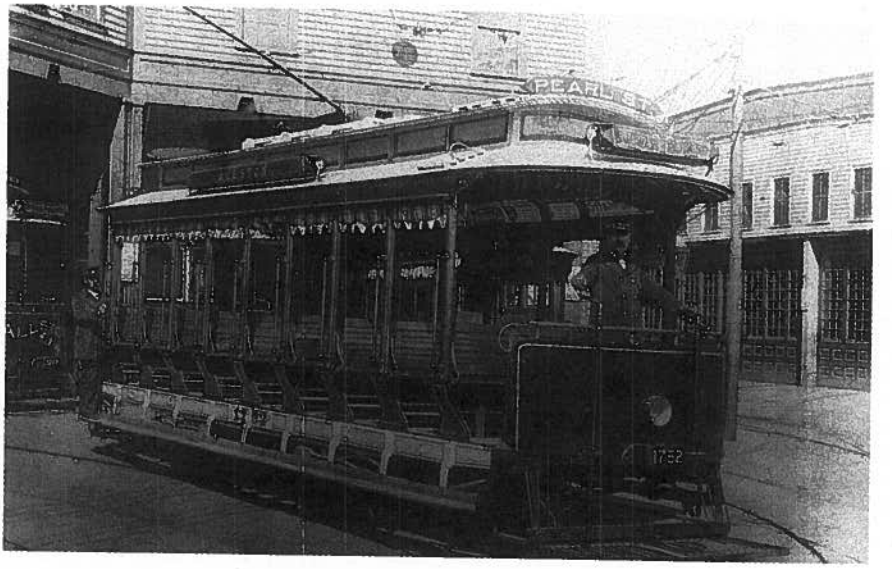
As technology developed, elevated steam railroads, cable-pulled cars, electric streetcars, and underground electric trains all became common, and many of these developments were pioneered in the U.S. All operated on rails, and it wasn't until the 1910-1920 period that improved street pavement and internal combustion engines led to the widespread introduction of buses. Only the largest cities today need the high-capacity rail vehicles developed in the 1800s.

The following pages highlight the most important milestones in U.S. public transportation history. It should be noted that some of these developments were preceded by similar developments in Europe and thus are not world "firsts."

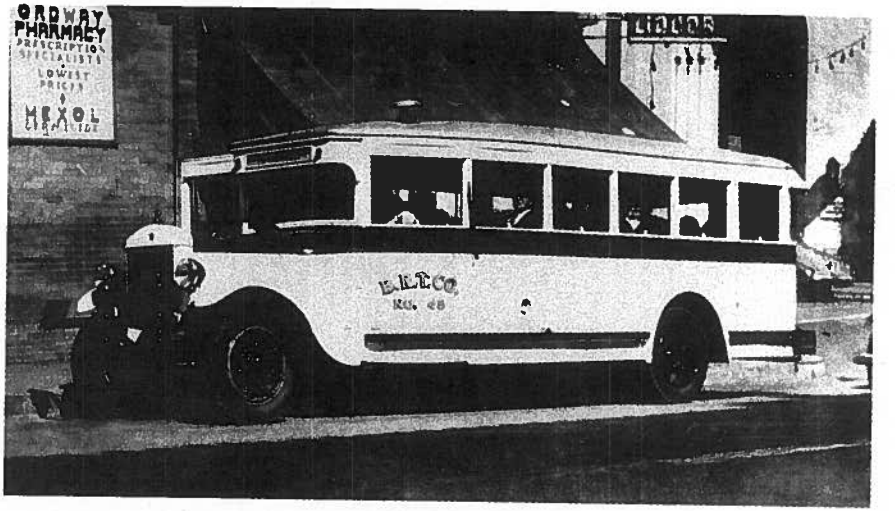
TABLE 98 *File: MILESTON*

Milestones in U.S. Public Transportation History

1630	Boston--reputed first publicly operated ferryboat
1740	New York--reputed first use of ox carts for carrying of passengers
1811	New York--first mechanically operated (steam-powered) ferryboat
1827	New York--first horse-drawn urban stagecoach (omnibus) line (Dry Dock & East Broadway)
1830	Baltimore--first railroad (Baltimore & Ohio Railroad Co.)
1832	New York--first horse-drawn street railway line (New York & Harlem Railroad Co.)
1835	New Orleans--oldest street railway line still operating (New Orleans & Carrollton line)
1838	Boston--first commuter fares on a railroad (Boston & West Worcester Railroad)
1850	New York--first use of exterior advertising on street railways
1856	Boston--first fare-free promotion
1861	New York--first failed attempt to form street railway labor organization
1868	New York--first cable-powered (& first elevated) line (West Side & Yonkers Patent Railway)
1870	New York--first pneumatic-powered (& first underground) line (Beach Pneumatic Railroad Co.)
1870	Pittsburgh--first inclined plane
1871	New York--first steam-powered elevated line (New York Elevated Railroad Co.)
1872	Great Epizootic horse influenza epidemic in eastern states kills thousands of horses (the motive power for most street railways)
1873	San Francisco--first successful cable-powered line (Clay St. Hill Railroad)
1874	San Francisco, CA--first recorded strike by street railway workers
1882	Boston--American Street Railway Association (APTA's original predecessor) formed
1883	New York--first publicly operated cable-powered line (Brooklyn Bridge)
1883	New York--first surviving street railway labor organization (Knights of Labor Local 2878)



The first U.S. rail car for underground use was put into service on a light rail line in Boston in 1897 by a predecessor of today's Massachusetts Bay Transportation Authority. That line is still in service today.



Early buses, such as this bus operated in Monterey, California in 1939, were usually boxy passenger compartments on a truck body. It wasn't until the 1930s that the engine-in-rear, flat-front design seen today became common.

TABLE 98 (continued)

Milestones in U.S. Public Transportation History

1884	Cleveland--first electric street railway line (East Cleveland Street Railway)
1884	first public transportation-only publication (The Street Railway Journal)
1886	Montgomery, AL--first semi-successful citywide street railway transit agency (Capital City Street Railway Co.)
1888	Richmond, VA--first successful electric street railway transit agency (Union Passenger Railway)
1889	New York--first major strike by street railway workers
1892	Indianapolis--first national street railway labor union founded (Amalgamated Association of Street Railway Employees of America, now called the Amalgamated Transit Union)
1893	Portland, OR--first interurban rail line (East Side Railway Co.)
1894	Boston--first public transportation commission (Boston Transit Commission)
1895	Chicago--first electric elevated rail line (Metropolitan West Side Elevated Railway)
1897	Boston--first electric underground street railway line (West End Street Railway/Boston Elevated Railway Co.)
1897	Boston--first publicly-financed public transportation facility (street railway tunnel)
1898	Chicago--first electric multiple-unit controlled rail line (Chicago & South Side Rapid Transit Railroad Co.)
1904	Bismarck, ND--first state-operated street railway (State of North Dakota Capital Car Line)
1904	New York--first electric underground (& first 4-track express) heavy rail line (Interborough Rapid Transit Co.)
1905	New York--first public takeover of a private public transportation company (Staten Island Ferry)
1905	New York--first bus line (Fifth Avenue Coach Co.)
1906	Monroe, LA--first municipal street railway
1908	New York--first interstate underground heavy rail line (Hudson & Manhattan Railroad to New Jersey)
1910	Hollywood, CA--first trolleybus line (Laurel Canyon Utilities Co.)
1912	San Francisco--first publicly operated street railway in a large city (San Francisco Municipal Railway)

TABLE 98 (continued)

Milestones in U.S. Public Transportation History

1912	Cleveland--first street railway to operate buses (Cleveland Railway)
1914	Los Angeles--first jitney
1916	Saint Louis--first public bus-only transit agency (St. Louis Division of Parks and Recreation Municipal Auto Bus Service)
1917	New York--last horse-drawn street railway line closed
1918	New York--APTA's predecessor organization first calls for public takeover of public transportation
1920	first bus not based on truck chassis (Fageol Safety Coach)
1921	New York--first successful trolleybus line
1923	Bay City, MI, Everett, WA, Newburgh, NY--first cities to replace all streetcars with buses
1926	highest peacetime public transportation ridership before World War II (17.2 billion)
1927	Detroit--first bus without cowl-type engine
1927	Philadelphia--first automobile park and ride lot and first bus-rail transfer facility for a non-commuter rail line
1932	New York--first publicly operated heavy rail line (Independent Subway)
1933	San Antonio--first large city to replace all streetcars with buses
1934	New York--Transport Workers Union of America founded
1935	Washington--Public Utility Holding Company Act of 1935 enacted requiring most power companies to divest themselves of public transportation operations and eliminating much private public transportation financing
1936	bus manufacturers began to assume control of or influence street railways, leading to rapid replacement of streetcars with buses
1936	New York--first industry-developed standardized street railway car (P.C.C. car) (Brooklyn & Queens Transit System)
1936	Washington--first large-scale federal government public transportation assistance (Public Works Administration)
1938	Chicago--first use of federal capital funding to build a public transportation rail line
1939	Chicago--first street with designated bus lane

Early heavy rail trains, such as this restored 1917 ceremonial train in New York City, were pretty spartan, lacking most of the amenities taken for granted today. Note the ceiling fans and non-recessed lights.

Many streetcar lines made an attempt at elegance. This restored San Antonio, Texas car has wooden seats, brass hardware, and interesting light fixtures.

The Presidents' Conference Committee (PCC) car was the industry's concerted attempt in the 1930s to standardize and modernize the numerous streetcar designs and win back riders. The Southeastern Pennsylvania Transportation Authority in Philadelphia operated this one.

A 1950s-era trolleybus manufactured by Twin Coach and formerly operated by the San Francisco Municipal Railway.

TABLE 98 (continued)

Milestones in U.S. Public Transportation History

1940	first time bus ridership exceeded street railway ridership
1940	San Francisco becomes last surviving cable car transit agency
1941	New York, NY--first racially-integrated bus operator workforce
1943	Los Angeles--first rail line in expressway median (Pacific Electric Railway)
1943	New York--first issue of *Transit Fact Book* (then called "The Transit Industry of the United States, Basic Data and Trends")
1946	highest-ever public transportation ridership (23.4 billion)
1946	Washington--U.S. Supreme Court bans racial segregation in interstate transportation
1952	San Francisco--last new PCC car for U.S. transit agency placed in service
1958	Washington--authority to allow railroads to discontinue commuter passenger service transferred from states to U.S. Interstate Commerce Commission
1961	Washington--first significant federal public transportation legislation (Housing & Urban Development Act of 1961)
1962	Seattle--first monorail (Seattle World's Fair)
1962	New York--first automated heavy rail line (Grand Central Shuttle)
1963	Chicago becomes last surviving city with interurban line (Chicago, South Shore, & South Bend Railroad)
1964	Washington--first major U.S. government public transportation program (Urban Mass Transportation Act of 1964)
1966	New York--first public takeover of commuter railroad (Long Island Rail Road Co.)
1966	Providence--first statewide transit agency (Rhode Island Public Transit Authority)
1968	Washington--agency administering federal public transportation program re-named Urban Mass Transportation Administration and moved to new Department of Transportation
1968	Minneapolis--first downtown transit mall (Nicollet Mall)
1968	Cleveland--first rail station at an airport opened

TABLE 98 (continued)

Milestones in U.S. Public Transportation History

1969	Washington--first transitway (Shirley Highway)
1969	Philadelphia--first modern heavy rail transit agency replacing former rail line (Port Authority Transit Corporation)
1970	Fort Walton Beach, FL--first dial-a-ride demand response transit agency
1971	Washington--first federally subsidized intercity passenger railroad (AMTRAK)
1972	San Francisco--first computer-controlled heavy rail transit agency (Bay Area Rapid Transit District)
1972	public transportation ridership hits all-time low (6.6 billion)
1973	Washington--some public transportation service required to be accessible to disabled (Rehabilitation Act of 1973)
1973	Washington--use of funds from cancelled Interstate Highway projects allowed for public transportation
1973	Boston, Dayton, OH, Philadelphia, San Francisco, & Seattle become last surviving trolleybus systems
1974	Boston, Cleveland, Newark, New Orleans, Philadelphia, Pittsburgh, & San Francisco become the last street railway systems
1974	Washington--first federal public transportation operating assistance legislation (National Mass Transportation Assistance Act of 1974)
1974	American Public Transit Association formed from merger of 2 organizations
1975	Morgantown, WV--first automated guideway transit agency (West Virginia University)
1977	San Diego--first wheelchair-lift-equipped fixed-route bus
1979	Washington--first standardized public transportation data accounting system (Section 15)
1980	San Diego--first completely new light rail transit agency in decades (San Diego Trolley)
1983	Washington--public transportation trust fund for capital projects created thru dedication of one cent of federal gas tax
1989	Miami--first completely new commuter rail transit agency in decades (Tri-County Commuter Rail Authority)
1990	Washington--virtually all public transportation service required to be accessible to disabled (Americans with Disabilities Act of of 1990)
1990	Washington--one cent dedicated portion of federal fuel tax increased to 1.5 cents
1991	Washington--public transportation buses subject to strict pollution controls (Clean Air Act of 1990)

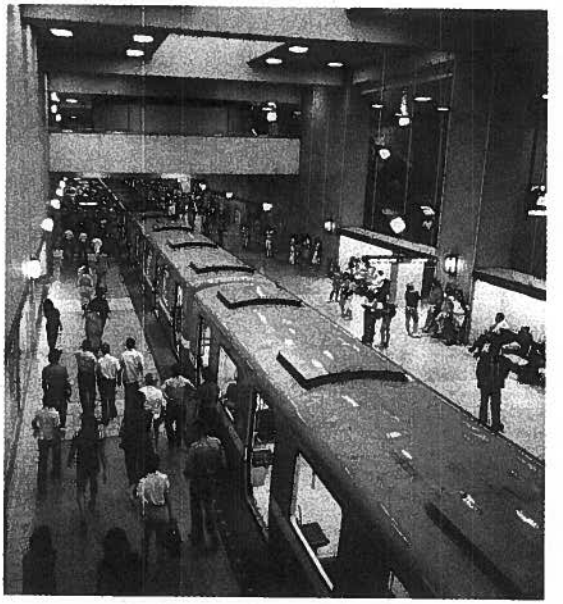
TABLE 98 (continued)

Milestones in U.S. Public Transportation History

1991	Washington--federal government allowed to subsidize its employees' commuting costs
1991	Washington--first general authorization of use of highway funds for public transportation (Intermodal Surface Transp. Efficiency Act of 1991)
1992	Washington--first limitation on amount of tax-free employer-paid automobile parking benefits and tripling of value of tax-free benefit for public transportation use (National Energy Policy Strategy Act)
1993	Washington--public transportation workers in safety-sensitive positions subjected to drug and alcohol testing
1995	Washington--1.5 cents dedicated portion of federal fuel tax increased to 2 cents
1998	Washington--major expansion and restructuring of federal public transportation program (Transportation Equity Act for the 21st Century)
2000	American Public Transit Association changes name to American Public Transportation Association

Canadian Statistics

The Montreal Transit Society operates the only rubber-tired rail system in the U.S. and Canada.



Data in this section are extracted from the **Summary of Canadian Transit Statistics** and predecessor documents published each year by APTA's Canadian counterpart, the Canadian Urban Transit Association. Although definitions of terms are generally similar to U.S. terms, many are somewhat different, and comparison of Canadian and U.S. data can be misleading as a result.

Public transportation use in Canada (as well as in the rest of the world) has historically been much greater than the U.S. because it has a less automobile-dependent culture than the U.S. Consequently, measures of public transportation use will be considerably higher than the U.S.

TABLE 99

FiLe: CANSUM

Canadian Fixed-Route Summary Statistics, Millions

YEAR	NUMBER OF AGENCIES (a)	REVENUE PASSENGER TRIPS	VEHICLE MILES	NON-GOVT OPERATING FUNDING (b)	OPERATING EXPENSE (b)
1990	77	1,532.4	487.1	1,312.9	2,451.4
1991	92	1,450.0	484.0	1,401.0	2,518.6
1992	92	1,398.7	479.8	1,404.8	2,644.0
1993	91	1,370.1	483.4	1,457.8	2,719.7
1994	88	1,353.2	482.2	1,465.0	2,707.4
1995	88	1,354.2	486.9	1,496.5	2,716.4
1996	86	1,348.6	479.3	1,576.2	2,754.3
1997	66	1,377.7	481.1	1,713.8	2,749.9
1998	68	1,387.2	474.9	1,743.8	2,755.5
1999	89	1,437.5	501.9	1,854.6	2,922.2
2000	92	1,487.4	513.5	2,000.1	3,107.5

(a) Number of agencies reporting.
(b) Monetary data are Canadian Dollars.
Source: Canadian Urban Transit Association.

TABLE 100

File CANVEH

Canadian Fixed-Route Active Passenger Vehicles by Mode

YEAR	LIGHT RAIL	HEAVY RAIL	COMMUTER RAIL	TROLLEY BUS	BUS	OTHER	TOTAL
1990	532	1,381 (a)	(a)	472	10,626	446	13,457
1991	527	1,379 (a)	(a)	272	10,992	372	13,542
1992	500	1,724 (a)	(a)	358	10,507	119	13,208
1993	547	1,679 (a)	(a)	308	10,776	255	13,565
1994	547	1,381	331	345	10,560	179	13,343
1995	548	1,381	359	305	10,542	85	13,220
1996	520	1,373	359	320	10,506	102	13,180
1997	520	1,381	336	322	10,481	36	13,076
1998	520	1,395	346	315	10,888	35	13,499
1999	520	1,419	505	304	11,244	37	14,029
2000	521	1,431	531	303	11,502	47	14,335

(a) Prior to 1994, heavy rail and commuter rail combined.
Source: Canadian Urban Transit Association.

TABLE 101

File: CANNEWVE

Canadian Fixed-Route New Passenger Vehicle Purchases by Mode

YEAR	LIGHT RAIL	HEAVY RAIL	COMMUTER RAIL	TROLLEY BUS	BUS	OTHER	TOTAL
1990	0	0	0	0	487	67	554
1991	0	0	0	0	528	8	536
1992	16	0	0	0	549	60	625
1993	0	0	0	0	163	45	208
1994	0	0	0	0	250	37	287
1995	20	0	0	0	348	61	429
1996	0	18	0	0	517	64	599
1997	0	80	0	9	283	19	391
1998	0	80	0	0	651	58	789
1999	0	56	0	0	706	43	805
2000	0	82	7	0	364	54	507

Source: Canadian Urban Transit Association.

TABLE 102

File: CANFARES

Canadian Fixed-Route Passenger Fares (a)

YEAR	AVERAGE OPERATING REVENUE PER REVENUE PASSENGER TRIP	ADULT BASE CASH FARE		
		HIGH	LOW	AVERAGE
1990	0.86	1.75	0.50	1.07
1991	0.97	2.00	0.75	1.18
1992	1.00	2.50	0.75	1.22
1993	1.06	2.60	0.75	1.31
1994	1.08	2.60	0.05	1.35
1995	1.11	2.60	0.05	1.45
1996	1.17	3.00	0.05	1.57
1997	1.21	2.60	1.20	1.69
1998	1.22	2.60	1.25	1.78
1999	1.26	2.60	1.00	1.68
2000	1.31	2.75	1.00	1.71

(a) Data reported in Canadian dollars.

Source: Canadian Urban Transit Association.

TABLE 103 *File: CANEMP*

Canadian Fixed-Route Employees by Type

YEAR	VEHICLE OPERATORS	OTHER VEHICLE OPERATIONS	VEHICLE MAINTENANCE	NON-VEHICLE MAINTENANCE	GENERAL ADMINISTRATION	TOTAL
1990	21,040	3,223	7,336	3,569	4,560	39,728
1991	21,502	3,135	7,936	2,641	4,364	39,578
1992	21,316	2,621	7,195	2,820	5,378	39,330
1993	21,240	2,619	6,657	3,272	4,283	38,071
1994	21,475	2,806	6,845	3,282	4,747	39,218
1995	21,495	2,835	6,964	3,227	4,477	38,976
1996	20,878	2,786	6,982	3,324	4,564	38,531
1997	20,158	3,099	6,651	3,714	4,459	38,078
1998	20,521	2,976	6,621	3,608	3,589	38,357
1999	21,310	2,826	6,836	3,725	4,145	39,548
2000	21,773	2,891	6,907	3,803	4,133	40,362

Source: Canadian Urban Transit Association.

North America's longest driverless automated rail system--nearly 18 miles long--is SkyTrain of Vancouver, British Columbia.

Canada also claims North America's most extensive system of dedicated busways--the City of Ottawa's transitways.

TABLE 104

File: CANDIS

Canadian Specialized Transit Services Summary Statistics, Millions

YEAR	NUMBER OF AGENCIES (a)	PASSENGER TRIPS	VEHICLE MILES	NON-GOVT OPERATING FUNDING (b)	OPERATING EXPENSE (b)
1991	47	4.6	17.0	15.9	64.4
1992	47	5.2	18.7	17.9	75.6
1993	50	7.2	29.3	19.2	118.3
1994	46	8.0	26.8	11.0	141.9
1995	49	8.6	28.8	12.9	144.9
1996	49	8.6	28.6	13.1	145.6
1997	51	8.8	29.1	14.5	146.2
1998	52	9.1	28.2	14.9	152.2
1999	59	10.4	31.5	33.0	170.8
2000	61	10.9	32.6	18.6	185.4

(a) Number of agencies reporting.
(b) Monetary data are Canadian Dollars.
Source: Canadian Urban Transit Association.

SECTION XVIII

Definitions

File: DEFINE

Definitions of terms defined by the Federal Transit Administration National Transit Database are from the latest NTD Reporting Manual. "(APTA)" indicates a term defined by APTA in the absence of an NTD definition.

GENERAL

Commuter (APTA)--A person who travels regularly between home and work or school.

Intermodal (APTA)--Those issues or activities which involve or affect more than one mode of transportation, including transportation connections, choices, cooperation and coordination of various modes. Also known as "multimodal."

Mass Transit (APTA)--Another name for "Mass Transportation" or "Public Transportation."

Mass Transportation--Transportation by bus, or rail, or other conveyance, either publicly or privately owned, providing to the public general or special service (but not including school buses or charter or sightseeing service) on a regular and continuing basis. Also known as "mass transit", "public transportation", and "transit".

Multimode Transit Agency (APTA)--A transit agency operating more than one mode of service.

Multimodal (APTA)--Another name for "intermodal".

National Transportation System (APTA)--An intermodal system consisting of all forms of transportation in a unified, interconnected manner to reduce energy consumption and air pollution while promoting economic development and supporting the Nation's preeminent position in international commerce. The NTS includes the National Highway System (NHS), public transportation and access to ports and airports.

Public Transit Agency--A public entity responsible for administering and managing transit activities and services. Public transit agencies can directly operate transit service or contract out for all or part of the total transit service provided.

Public Transportation (APTA)--Another name for "Mass Transportation" or "Transit."

Reverse Commuting (APTA)--Movement in a direction opposite the main flow of traffic, such as from the central city to a suburb during the morning peak period.

Ridesharing (APTA)--A form of transportation, other than a transit agency, in which more than one person shares the use of the vehicle, such as a van or car, to make a trip. Also known as "carpooling" or "vanpooling."

Transit (APTA)--Another name for "Mass Transportation" or "Public Transportation."

Transit Agency (APTA)--An entity (public or private) responsible for administering and managing transit activities and services. Transit agencies can directly operate transit service or contract out for all or part of the total transit service provided.

Transit System (APTA)--Another name for "Transit Agency."

GEOGRAPHY

Urban Place (APTA)--A U.S. Bureau of the Census-designated area (less than 50,000 population) consisting of closely settled territory not populous enough to form an urbanized area.

Urbanized Area (UZA)--An area defined by the U.S. Census Bureau that includes 1 or more incorporated cities, villages and towns (central place) and the adjacent densely settled surrounding territory (urban fringe) that together have a minimum of 50,000 persons. The urban fringe generally consists of contiguous territory having a density of at least 1,000 persons per square mile. UZAs do not conform to congressional districts or any other political boundaries.

INFRASTRUCTURE

Accessible Station (APTA)--A public transportation passenger facility which provides ready access, and does not have physical barriers that prohibit and/or restrict access by individuals with disabilities, including individuals who use wheelchairs.

Bus Lane (APTA)--Another name for "Busway".

Busway (APTA)--A roadway reserved for buses only. It may be a grade separated or controlled access roadway. Also known as "Bus Lane".

Commuter Lane (APTA)--Another name for "High-Occupancy Vehicle Facility."

Contraflow Lane (APTA)--Reserved lane for buses on which the direction of bus traffic is opposite to the flow of traffic on the other lanes.

Controlled Access Right-of-Way--Lanes restricted for at least a portion of the day for use by transit vehicles and/or other high occupancy vehicles. Use of controlled access lanes may also be permitted for vehicles preparing to turn. The restriction must be sufficiently enforced so that 95 percent of vehicles using the lanes during the restricted period are authorized to use them.

Exclusive Right-of-Way--Roadway or other right-of-way reserved at all times for transit use and/or other high occupancy vehicles. The restriction must be sufficiently enforced so that 95 percent of vehicles using the right-of-way are authorized to use it.

Fixed Guideway--A mass transit faciliity using and occupying a separate right-of-way or rail for the exclusive use of mass transportation and other high-occupancy vehicles; or using a fixed catenary system useable by other forms of transportation.

High-Occupancy Vehicle (HOV) Facility--Exclusive or controlled access right-of-way that is restricted to high occupancy vehicles (buses, passenger vans and cars carrying one or more passengers) for a portion or all of a day.

Kiss and Ride Facility (APTA)--A part of a park and ride facility where commuters who are passengers in non-transit vehicles are dropped off to board a mass transportation vehicle.

Park and Ride Facility (APTA)--A parking garage and/or lot used for parking passengers' automobiles, either free or for a fee, while they use transit agency facilities. Park-and-ride facilities are generally established as collector sites for rail or bus service. Park-and-ride facilities may also serve as collector sites for vanpools and carpools, and as transit centers.

Stations--The number of public transportation passenger facility.

Transfer Point (APTA)--A fixed location where passengers interchange from one route or vehicle to another that has little infrastructure--normally only shelters and/or benches.

Transit Center (APTA)--A fixed location where passengers interchange from one route or vehicle to another that has significant infrastructure such as a waiting room, benches, restrooms, sales outlet, ticket or pass vending machines, and/or other services.

Transitway (APTA)--Another name for "High-Occupancy Vehicle Facility."

MODES

Aerial Tramway—An electric system of aerial cables with suspended powerless passenger vehicles. The vehicles are propelled by separate cables attached to the vehicle suspension system and powered by engines or motors at a central location not on board the vehicle.

Automated Guideway Transit--A transit mode that is an electric railway (single or multi-car trains) of guided transit vehicles operating without vehicle operators or other crew on board the vehicle. Service may be on a fixed schedule or in response to a passenger activated call button. Automated guideway transit includes personal rapid transit, group rapid transit and people mover systems

Bus--A transit mode comprised of rubber tired passenger vehicles operating on fixed routes and schedules over roadways. Vehicles are powered by diesel, gasoline, battery or alternative fuel engines contained within the vehicle.

Cable Car—An electric railway with individually controlled transit vehicles attached to a moving cable located below the street surface and powered by engines or motors at a central location not on board the vehicle.

Carpool (APTA)--An arrangement where two or more people share the use and cost of privately owned vehicles in traveling together to and from pre-arranged destinations.

Commuter Rail--A transit mode that is an electric or diesel propelled railway for urban passenger train service consisting of local short distance travel operating between a central city and adjacent suburbs. Service must be operated on a regular basis by or under contract with a transit oprator for the purpose of transporting passengers within urbanized areas, or between urbanized areas and outlying areas. Such as rail service, using either locomotive hauled or self propelled railroad passenger cars, is generally characterized by multi-trip tickets, specific station to station fares, railroad employment practices and usually only one or two stations in the central business district. It does not include heavy rail rapid transit or light rail/street car transit service. Inter city rail service is excluded, except for that portion of such service that is operated by or under contract with a public transit industry for predominantly commuter services means that for any given trip segment (i.e., distance between any two stations), more than 50% of the average daily ridership travels on the train at least three times a week. Only the predominantly commuter service portion of an inter city route is eligible for inclusion when determining commuter rail route miles.

Demand Response--A transit mode comprised of passenger cars, vans or class C buses operating in response to calls from passengers or their agents to the transit operator, who then dispatches a vehicle to pick up the passengers and transport them to their destinations. A demand response operation is characterized by the following: (a) The vehicles do not operate over a fixed route or on a fixed schedule except, perhaps, on a temporary basis to satisfy a special need; and (b) typically, the vehicle may be dispatched to pick up several passengers at different pick-up points before taking them to their respective destinations and may even be interrupted en route to these destinations to pick up other passengers. The following types of operations fall under the above definitions provided they are not on a scheduled fixed route basis: many origins-many destinations, many origins-one destination, one origin-many destinations, and one origin-one destination.

Dial-a-Ride (APTA)--Another name for "Demand Response."

Ferryboat--A transit mode comprised of vessels carrying passengers and/or vehicles over a body of water, and that are generally steam or diesel-powered.

Fixed-Route (APTA)--Service provided on a repetitive, fixed-schedule basis along a specific route with vehicles stopping to pick up and deliver passengers to specific locations; each fixed-route trip serves the same origins and destinations, unlike demand response. Includes route deviation service, where revenue vehicles deviate from fixed routes on a discretionary basis.

Heavy Rail--A transit mode that is an electric railway with the capacity for a heavy volume of traffic. It is characterized by high speed and rapid acceleration passenger rail cars operating singly or in multi-car trains on fixed rails; separate rights-of-way from which all other vehicular and foot traffic are excluded; sophisticated signaling, and high platform loading.

Inclined Plane--A transit mode that is a railway operating over exclusive right-of-way on steep grades (slopes) with powerless vehicles propelled by moving cables attached to the vehicles and powered by engines or motors at a central location not on board the vehicle. The special tramway type of vehicles have passenger seats that remain horizontal while the undercarriage (truck) is angled parallel to the slope.

Jitney--A transit mode comprised of passenger cars or vans operating on fixed routes (sometimes with minor deviations) as demand warrants without fixed schedules or fixed stops.

Light Rail--Lightweight passenger rail cars operating singly (or in short, usually two-car, trains) on fixed rails in right-of-way that is not separated from other traffic for much of the way. Light rail vehicles are driven electrically with power being drawn from an overhead electric line via a trolley or a pantograph. Also known as "streetcar," "tramway," or "trolley car."

Metropolitan Railway (APTA)--Another name for "Heavy Rail."

Mode--A system for carrying transit passengers described by specific right-of-way, technology and operational features.

Monorail--A transit mode that is an electric railway of guided transit vehicles operating singly or in multi-car trains. The vehicles are suspended from or straddle a guideway formed by a single beam, rail, or tube.

Non-Fixed-Route (APTA)--Service not provided on a repetitive, fixed-schedule basis along a specific route to specific locations. Demand response is the only non-fixed-route mode.

Paratransit (APTA)--Another name for "Demand Response."

Rapid Rail (APTA)--Another name for "Heavy Rail."

Rapid Transit (APTA)--Rail or bus transit service operating completely separate from all modes of transportation on an exclusive right-of-way.

Regional Rail (APTA)--Another name for "Commuter Rail."

Suburban Rail (APTA)--Another name for "Commuter Rail."

Trolleybus--Electric rubber tired passenger vehicles, manually steered and operating singly on city streets. Vehicles are propelled by a motor drawing current through overhead wires via trolleys, from a central power source not on board the vehicle.

Urban Ferryboat (APTA)--Ferryboats that have at least one terminal within an urbanized area, excluding international, rural, rural interstate, island, and urban park ferries.

Vanpool--A transit mode comprised of vans, class C buses and other vehicles operating as a ridesharing arrangement, providing transportation to a group of individuals traveling directly between their homes and a regular destination within the same geographical area. The vehicles shall have a minimum seating capacity of seven persons, including the driver. For inclusion in the NTD, it is considered mass transit service if it is operated by a public entity or is one in which a public entity owns, purchases, or leases the vehicle(s). Vanpool(s) must also be in compliance with mass transit rules including Americans with Disabilities Act (ADA) provisions, and be open to the public and that availability must be made known. Other forms of public participation to encourage ridesharing arrangements such as the provision of parking spaces, use of high occupancy vehicle (HOV) lanes, coordination or clearing house service, do not qualify as public vanpools.

Transit Bus (APTA)--A bus with front and center doors, normally with a rear-mounted engine, low-back seating, and without luggage compartments or restroom facilities for use in frequent-stop service.

Trolley Replica Bus (APTA)--A bus with an exterior (and usually an interior) designed to look like a streetcar from the early 1900s.

Cable Car--Streetcar type of passenger vehicle operating by means of an attachment to a moving cable located below the street surface and powered by engines or motors at a central location not on board the vehicle.

Commuter Rail Car--Commuter rail passenger vehicle. There are two types:

Commuter Rail Passenger Coach--Commuter rail passenger vehicles not independently propelled and requiring one or more locomotives for propulsion.

Commuter Rail Self-propelled Passenger Car--Commuter rail passenger vehicles not requiring a separate locomotive for propulsion.

Commuter Rail Locomotive--Commuter rail vehicle used to pull or push commuter rail passenger coaches. Locomotives do not carry passengers themselves.

Downtown People Mover (APTA)--A type of automated guideway transit vehicle operating on a loop or shuttle route within the central business district of a city.

Ferryboat--Vessel for carrying passengers and/or vehicles over a body of water. The vessel is generally a steam or diesel-powered conventional ferry vessel. It may also be a hovercraft, hydrofoil or other high speed vessel.

Heavy Passenger Cars--Rail cars with motive capability, driven by electric power taken from overhead lines or third rails, configured for passenger traffic and usually operated on exclusive right-of-way.

High Occupancy Vehicle (HOV) (APTA)--Vehicles that can carry two or more persons. Examples of high occupancy vehicles are a bus, vanpool and carpool. These vehicles sometimes have exclusive traffic lanes called "HOV lanes," "busways," "transitways" or "commuter lanes."

VEHICLES

Accessible Vehicle--Public transportation revenue vehicles that do not restrict access, are usable, and provide allocated space and/or priority seating for individuals who use wheelchairs.

Active Vehicles in Fleet--The vehicles in the year end fleet that are available to operate in revenue service, including spares and vehicles temporarily out of service for routine maintenance and minor repairs.

Aerial Tramway--Unpowered passenger vehicles suspended from a system of aerial cables and propelled by separate cables attached to the vehicle suspension system. Engines or motors at a central location, not on board the vehicle, power the cable system.

Automated Guideway Vehicle--Guided transit passenger vehicles operating under a fully automated system (no crew on transit units).

Bus--A transit mode comprised of rubber tired passenger vehicles operating on fixed routes and schedules over roadways. Vehicles are powered by diesel, gasoline, battery or alternative fuel engine contained within the vehicle. Types include:

Articulated Bus--Extra-long (54 to 60 feet) bus with two connected passenger compartments. The rear body section is connected to the main body by a joint mechanism that allows the vehicle to bend when in operation for sharp turns and curves and yet have a continuous interior.

Double Decked Bus--High-capacity bus having two levels of seating, one over the other, connected by one or more stairways. Total bus height is usually 13 to 14.5 feet, and typical passenger seating capacity ranges from 40 to 80 people.

Intercity Bus (APTA)--A bus with front door only, separate luggage compartments, and usually with restroom facilities and high-backed seats for use in high-speed long-distance service.

Suburban Bus (APTA)--A bus with front doors only, normally with high-backed seats, and without luggage compartments or restroom facilities for use in longer-distance service with relatively few stops.

Inclined Plane Vehicles--Special type of passenger vehicles operating up and down slopes on rails via a cable mechanism.

Light Rail Vehicles--Rail cars with motive capability, usually driven by electric power taken from overhead lines, configured for passenger traffic and usually operating on non-exclusive right-of-way.

Monorail Vehicles--Guided transit passenger vehicles operating on or suspended from a single rail, beam or tube.

Passenger Vehicle (APTA)--A vehicle used to carry passengers in transit service.

Rehabilitation--The rebuilding of revenue vehicles to original specifications of the manufacturer. Rebuilding may include some new components but has less emphasis on structural restoration than would be the case in a remanufacturing operation, focusing on mechanical systems and vehicle interiors.

Streetcar (APTA)--Another name for "Light Rail Vehicle."

Trackless Trolley (APTA)--Another name for "Trolleybus."

Tramway (APTA)--Another name for "Light Rail Vehicle."

Trolley Car (APTA)--Another name for "Light Rail Vehicle."

Trolley Coach (APTA)--Another name for "Trolleybus."

Trolleybuses--Rubber-tired electrically powered passenger vehicles operating on city streets drawing power from overhead lines with trolleys.

Vans--Vehicles having a typical seating capacity of 5 to 15 passengers and classified as a van by vehicle manufacturers. A modified van is a standard van that has undergone some structural changes, usually made to increase its size and particularly its height. The seating capacity of modified vans is approximately 9 to 18 passengers.

OPERATING EXPENSES

Function--The activity performed or cost center of a transit agency. There are four basic functions and four optional functions for reporting. The four basic functions are:

Vehicle Operations--All activities associated with the subcategories of the vehicle operations function: transportation administration and support; revenue vehicle operation; ticketing and fare collection; and system security.

Vehicle Maintenance--All activities associated with revenue and non-revenue (service) vehicle maintenance, including administration, inspection and maintenance, and servicing (cleaning, fueling, etc.) vehicles. In addition, vehicle maintenance includes repairs due to vandalism and accident repairs of revenue vehicles.

Non-Vehicle Maintenance--All activities associated with facility maintenance, including: administration; repair of buildings, grounds and equipment as a result of accidents or vandalism; operation of electric power facilities; and maintenance of vehicle movement control systems; fare collection and counting equipment; structures, tunnels and subways; roadway and track; passenger stations, operating station buildings, grounds and equipment; communication systems; general administration buildings, grounds and equipment; and electric power facilities.

General Administration--All activities associated with the general administration of the transit agency, including transit service development, injuries and damages, safety, personnel administration, legal services, insurance, data processing, finance and accounting, purchasing and stores, engineering, real estate management, office management and services, customer services, promotion, market research and planning.

Operating Expenses--The expenses associated with the operation of the transit agency, and classified by function or activity and the goods and services purchased. It is the sum of "Vehicle Operations," "Vehicle Maintenance," "Non-Vehicle Maintenance," and "General Administration." Alternatively, it is the sum of the various object classes listed below.

Object Class--An object class is a grouping of expenses on the basis of goods and services purchased. Object Classes are as follows:

Salaries and Wages (APTA)--The pay and allowances due employees in exchange for the labor services they render in behalf of the transit agency. The allowances include payments direct to the employee arising from the performance of a piece of work. Also called "Labor."

Labor--The pay and allowances due employees in exchange for the labor services they render in behalf of the transit agency. The labor allowances include payments direct to the employee arising from the performance of a piece of work.

Fringe Benefits--The payments or accruals to others (insurance companies, governments, etc.) on behalf of an employee and payments and accruals direct to an employee arising from something other than a piece of work. These payments are transit agency costs over and above labor costs, but still arising from the employment relationship.

Employee Compensation (APTA)--Sum of "Salaries and Wages" and "Fringe Benefits."

Services--The labor and other work provided by outside organizations for fees and related expenses. In most instances, services from an outside organization are procured as a substitute for in-house employee labor, except in the case of independent audits which could not be performed by employees in the first place. The substitution is usually made because the skills offered by the outside organization are needed for only a short period of time or are better than internally available skills. The charge for these services is usually based on the labor hours invested in performing the service. Services include management service fees, advertising fees, professional and technical services, temporary help, contract maintenance services, custodial services and security services.

Materials and Supplies Consumed--The tangible products obtained from outside suppliers or manufactured internally. Freight-in, purchase discounts, cash discounts, sales and excise taxes (except on fuel and lubricants) are to be included in the cost of the material or supply. Charges to these expense accounts will be for the materials and supplies issued from inventory for use and for the materials and supplies purchased for immediate use, i.e., without going through inventory. Three types are:

> **Fuel and Lubricants**--The costs of gasoline, diesel fuel, propane, lubricating oil, transmission fluid, grease, etc., for use in vehicles.

Tires and Tubes--The lease payments for tires and tubes rented on a time period or mileage basis, or the cost of tires and tubes for replacement of tires and tubes on vehicles.

Other Materials and Supplies--The costs of materials and supplies not specifically identified issued from inventory or purchased for immediate consumption.

Utilities--The payments made to various utilities for utilization of their resources (e.g., electric, gas, water, telephone, etc.). Utilities include propulsion power purchased from an outside utility company and used for propelling electrically driven vehicles, and other utilities such as electrical power for purposes other than for electrically driven vehicles, water and sewer, gas, garbage collection, and telephone.

Casualty and Liability Costs--The cost elements covering protection of the transit agency from loss through insurance programs, compensation of others for their losses due to acts for which the transit agency is liable, and recognition of the cost of a miscellaneous category of corporate losses.

Purchased Transportation--Transportation service provided to a public transit agency or governmental unit from a public or private transportation provider based on a written contract. The provider is obligated in advance to operate public transportation services for a public transit agency or governmental unit for a specific monetary consideration. Purchased transportation does not include franchising, licensing operation, management services, cooperative agreements or private conventional bus service.

Other Expenses (APTA)--The sum of taxes, miscellaneous, and expense transfers expenses:

Taxes--The taxes levied against the transit agency by Federal, State and Local governments.

Miscellaneous Expenses--The expenses which cannot be attributed to any of the other major expense categories.

Expense Transfers--Accounts used for reporting adjustments and reclassifications of expenses previously reported. Expense transfers include reclassifications of expenses from one function to another; a composite category of expense encompassing labor; fringe benefits;

materials and services used in the transit agency's internal information system to reclassify costs between cost centers and work orders, and a credit account to be used for adjusting entries transferring expenses to receivables, property, or work in process for capital projects.

Depreciation and Amortization--The charges that reflect the loss in service value of the transit agency's assets. Depreciated items have a high initial cost and a useful life of more than one accounting period. In order to account for the reduction in value (usefulness) of this type of asset, a portion of the cost is expensed each year of the asset's life. Depreciation and amortization include the depreciation of the physical facilities such as guideways, tracks and roadbeds, elevated structures, passenger stations and parking facilities, revenue vehicles, operating stations, facilities (including buildings, equipment and furnishings) for power generation and distribution, revenue vehicle movement control, data processing, revenue collection and processing, and other general administration.

Other Reconciling Items (APTA)--Any other costs that cannot be captured in the depreciation and amortization categories.

Total Expense (APTA)--The sum of "Total Operating Expense," "Depreciation and Amortization," and "Other Reconciling Items."

OPERATING FUNDING

Operating Funding Source (APTA)--Funds used to pay for operating expense.

Government Funds (APTA)--Funds provided by federal, state, and/or local governments. For some purposes, also includes directly generated taxes, tolls, fees, and other imposed funding sources.

Federal Funds (APTA)--Financial assistance from the federal government to assist in paying the operating costs of providing transit service.

State Government Funds--Financial assistance obtained from a state government(s) to assist with paying the costs of providing transit services.

Local Government Funds--Financial assistance from local governments (below the state level) to help cover the operating costs of providing transit service.

Directly Generated Funds--Any funds where revenues are generated by or donated directly to the transit agency, including passenger fare revenues, advertising revenues, donations, bond proceeds and taxes imposed by the transit agency.

Passenger Fares--The revenue earned from carrying passengers in regularly scheduled and demand response service. Passenger fares include: the base fare; zone premiums; express service premiums; extra cost transfers; and quantity purchase discounts applicable to the passenger's ride.

Adult Base Cash Fare (APTA)--Minimum cash fare paid by an adult for one transit ride; excludes transfer charges, zone or distance charges, express service charges, peak period surcharges, and reduced fares.

Passenger Fares Received per Unlinked Passenger Trip (APTA)--"Passenger Fares" divided by "Unlinked Passenger Trips."

Peak Period Surcharge (APTA)--An extra fee required during peak periods (rush hours).

Transfer Surcharge (APTA)--An extra fee charged for a transfer to use when boarding another transit vehicle to continue a trip.

Zone or Distance Surcharge (APTA)--An extra fee charged for crossing a predetermined boundary.

Other Operating Funds (APTA)--The sum of school bus service revenues, freight tariffs, charter service revenues, auxiliary transportation revenues, non-transportation revenues, revenue accrued through a purchased transportation agreement, and subsidy from other sectors of operations:

School Bus Service Revenues--The revenue earned from operating vehicles under school bus contracts.

Freight Tariffs--The revenue earned from carrying all types of freight on runs whose primary purpose is passenger operations.

Charter Service Revenues--The revenue earned from operating vehicles under charter contracts.

Auxiliary Transportation Revenues--The revenue earned from operations closely associated with transportation operations. Revenue includes station concessions; vehicle concessions; advertising revenues; ID card fees; fare evasion and park and ride lot fines; automotive vehicle ferriage; and other.

Non-Transportation Revenues--The revenue earned from activities not associated with the provision of transit service. Non-transportation revenues include investment earnings and other non-transportation sources including revenues earned from sales of maintenance services on property not owned or used by the transit agency; rentals of revenue vehicles to other operators; rentals of transit agency buildings and property to other organizations; parking fees generated from parking lots not normally used as park and ride locations; donations; grants from private foundations; development fees; rental car fees; and other.

Revenue Accrued through a Purchased Transportation Agreement--Revenue accrued by a seller of transportation services through purchased transportation agreements, not including passenger fares for purchased transportation services from service provided under the purchased transportation agreement.

Subsidy from Other Sectors of Operations--The funds obtained from other sectors of a transit agency's operations to help cover the cost of providing transit services. Subsidies from other sectors of transit operations include subsidies from utility rates where the transit agency is a utility company; subsidies from bridge and tunnel tolls owned and operated by transit agency; and subsidies from other sources provided the same entity that operates the transit agency.

CAPITAL EXPENSES

Capital Expenses--The expenses related to the purchase of equipment. Equipment means an article of non-expendable tangible personal property having a useful life of more than one year and an acquisition cost which equals the lesser of a) the capitalization level established by the government unit for financial statement purposes or b) $5,000. Capital expenses do not include operating expenses that are eligible to use capital funds.

Rolling Stock--The revenue vehicles used in providing transit service for passengers. The term revenue vehicles includes the body and chassis and all fixtures and appliances inside or attached to the body or chassis, except fare collection equipment and revenue vehicle movement control equipment (radios). For rubber tired vehicles, it includes the cost of one set of tires and tubes to make the vehicle operational, if the tires and tubes are owned by the transit agency.

Facilities--Facility and facility-related projects include purchase, construction, rehabilitation or installation of maintenance facilities (including design and engineering, demolition, land acquisition, and relocation); crime prevention and security equipment; service and support equipment; operational support (computer hardware and software, bus diagnostic equipment and other activities that enhance system operations and efficiency while reducing operating costs); transit malls, transfer facilities, intermodal terminals, shelters, passenger stations, depots, terminals, high occupancy vehicle (HOV) facilities, transit ways, and park and ride facilities; track, line equipment and structures; signals and communications; and power equipment and substations.

Other (APTA)--Any other item not described above, such as service vehicles, construction of general administration facilities, furniture, equipment that is not an integral part of buildings and structures, data processing equipment (including computers and peripheral devices whose sole use is in data processing operations), fare collection equipment, and revenue vehicle movement control equipment.

CAPITAL FUNDING

Capital Funding Source (APTA)--Funds used to pay for capital expense.

Government Funds (APTA)--Funds provided by federal, state, and/or local governments. For some purposes, also includes directly generated taxes, tolls, fees, and other imposed funding sources.

> **Federal Funds** (APTA)--Financial assistance from the federal government to assist in paying the operating costs of providing transit service.
>
> **State Government Funds**--Financial assistance obtained from a state government(s) to assist with paying the costs of providing transit services.

Local Government Funds--Financial assistance from local governments (below the state level) to help cover the operating costs of providing transit service.

Directly Generated Funds--Any funds where revenues are generated by or donated directly to the transit agency, including passenger fare revenues, advertising revenues, donations, bond proceeds and taxes imposed by the transit agency.

EMPLOYEES

Capital Employee (APTA)--The employee labor hours whose cost is reimbursed under a capital grant or is otherwise capitalized.

Operating Employee (APTA)--The employees engaged in the operation of the transit system. They are:

General Administration Employee (APTA)--Executive, professional, supervisory, and secretarial transit system personnel engaged in general management and administration activities: preliminary transit system development, customer services, promotion, market research, injuries and damages, safety, personnel administration, general legal services, general insurance, data processing, finance and accounting, purchasing and stores, general engineering, real estate management, office management and services, general management, and planning.

Non-Vehicle Maintenance Employee (APTA)--Executive, professional, supervisory, and secretarial transit system personnel engaged in non-vehicle maintenance, personnel providing maintenance support to such personnel for inspecting, cleaning, repairing and replacing all components of: vehicle movement control systems; fare collection and counting equipment; roadway and track; structures, tunnels, and subways; passenger stations; communication system; and garage, shop, operating station, general administration buildings, grounds and equipment. In addition, it includes support for the operation and maintenance of electric power facilities.

Other Vehicle Operations Employee (APTA)--Executive, professional, and supervisory transit system personnel engaged in vehicle operations, personnel providing support in vehicle operations activities, personnel engaged in ticketing and fare collection activities, and personnel engaged in system security activities.

Vehicle Maintenance Employee (APTA)--Executive, professional, secretarial, and supervisory transit system personnel engaged in vehicle maintenance, personnel performing inspection and maintenance, vehicle maintenance of vehicles, performing servicing functions for revenue and service vehicles, and repairing damage to vehicles resulting from vandalism or accidents.

Vehicle Operator (APTA)--The personnel (other than security agents) scheduled to be aboard vehicles in revenue operations including vehicle operators, conductors, and ticket collectors.

PASSENGERS

Average Trip Length--The average distance ridden for an unlinked passenger trip by time period (weekday, Saturday, Sunday) computed as passenger miles divided by unlinked passenger trips.

Passenger Miles--The cumulative sum of the distances ridden by each passenger.

Revenue Passenger Trips (APTA)--The number of fare-paying transit passengers with each person counted once per trip; excludes transfer and non-revenue trips.

Unlinked Passenger Trips--The number of passengers who board public transportation vehicles. Passenger are counted each time they board vehicles no matter how many vehicles they use to travel from their origin to their destination.

SERVICE OPERATED

Average Speed (APTA)--Vehicle miles divided by vehicle hours.

Directional Route Miles--The mileage in each direction over which public transportation vehicles travel while in revenue service. Directional route miles are a measure of the route path over a facility or roadway, not the service carried on the facility; e.g. number of routes, vehicles or vehicle revenue miles. Directional route miles are computed with regard to direction of service, but without regard to the number of traffic lanes or rail tracks existing in the right-of-way. Directional route miles do not include staging or storage areas at the beginning or end of a route.

Miles of Track--The number of tracks per one mile segment of right-of-way. Miles of track are measured without regard to whether or not rail traffic can flow in only one direction on the track. All track is counted, including yard track and sidings.

Total Bus Mile Equivalents (APTA)--The number of vehicle miles that would have been operated by a transit mode if the service had been provided by buses. Based on average seating plus standing capacity of the vehicle as compared to the capacity including standees (70 people) of a standard-size bus.

Vehicle Hours--The hours a vehicle travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service. It is often called platform time. For conventional scheduled services, it includes revenue time and deadhead time.

Vehicle Miles--The miles a vehicle travels from the time it pulls out from its garage to go into revenue service to the time it pulls in from revenue service. It is often called platform time. For conventional scheduled services, it includes revenue time and deadhead time.

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