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**20 Years Behind:  
Highway Spending & Revenues by  
Minnesota's State Government, 1986-2006**

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## 20 Years Behind

Twenty years behind. That's been the bipartisan consensus in recent years when state leaders describe Minnesota's transportation system. "Minnesota is 20 years behind in transportation infrastructure," Republican Governor Tim Pawlenty told a Granite Falls crowd in spring 2007, repeating a line he has used often. DFL and Independence party leaders also routinely point to a 20-year lag when it comes to investments in transportation. In a state with a long tradition of public-sector investment and innovation aimed at spurring economic prosperity and improving the quality of life, this lag creates serious economic disadvantages for Minnesota and requires immediate attention.

But what does it mean to be 20 years behind? How far has Minnesota's transportation system slipped compared to 1986 when trends are adjusted for both inflation and the increased demand for transportation from a growing population and an expanding economy? To provide some answers and detail for those questions, Growth & Justice analyzed data on state and federal highway spending and revenues for the 20-year period from 1986 to 2006, the latest year for which statistics are available. This research starts a major project on *Smart Investments in Minnesota's Transportation Infrastructure* by Growth & Justice, a Minnesota-based economic and public policy think tank.

Over the last 20 years, state government spending for highways indeed has not kept pace with increases in inflation and vehicle miles traveled on Minnesota's roads, leaving a cumulative gap of \$13.89 billion over the full period compared to adjusted 1986 levels. The lag in highway spending has been more pronounced in Minnesota than the nation as a whole. As a result, Minnesota's drivers face longer delays from traffic congestion and rougher rides on the road.

The August 2007 collapse of the Interstate 35W bridge in Minneapolis brought attention to the state's transportation infrastructure challenges, but the issues are far greater than bridge conditions alone. For a number of years now, experts have cited measures showing increases in congestion and declines in pavement conditions.

*The 2007 Urban Mobility Report* from the Texas Transportation Institute (TTI) estimates that congestion affected 61 percent of peak-time travel in the Minneapolis-St. Paul area in 2005, with 41 percent of the area's lane miles clogged. TTI estimates that peak-time metro area drivers, together, wasted 59.7 million hours stuck in traffic in 2005, or 43 hours per traveler, up more than five fold from the 1986 level of 11.3 million hours. According to the TTI, the delays cost peak-time travelers \$790 each on average in 2005.<sup>1</sup> Road conditions, too, have become an issue in the metro area and statewide. For 2007, the percentage of pavement miles in good condition fell below the target for the fifth year in a row on the principal arterials of the state's trunk highway system, according to the Minnesota Department of Transportation (MnDOT). Pavement ratings on the rest of the trunk highway system fell below the target for the sixth straight year. Projecting out to 2011, MnDOT expects the percentage of pavement miles rated as good to fall farther and the share of miles dropping all the way to poor to reach 7.6 percent on principle arterials and 11.4 percent for the rest of the system.<sup>2</sup>

To assess the trends for highways, including bridges, this report focuses on state government spending and revenues for the 20-year period from 1986 to 2006, using consistent data from the Federal

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<sup>1</sup> Shrank, David and Tim Lomax, *The 2007 Urban Mobility Report*, Texas Transportation Institute, Texas A&M University System, September 2007, <http://mobility.tamu.edu/>. Twin Cities data is listed at [http://mobility.tamu.edu/ums/congestion\\_data/tables/minneapolis.pdf](http://mobility.tamu.edu/ums/congestion_data/tables/minneapolis.pdf).

<sup>2</sup> Minnesota Department of Transportation's Pavement Management Unit, *2007 Pavement Condition Executive Summary*, December 2007, [http://www.mnroad.dot.state.mn.us/pavement/pvmtmgmt/execsumm\\_2007.pdf](http://www.mnroad.dot.state.mn.us/pavement/pvmtmgmt/execsumm_2007.pdf).

Highway Administration's (FHWA's) annual *Highway Statistics* publications.<sup>3</sup> The research presented here will help inform Growth and Justice's project on *Smart Investments in Minnesota's Transportation Infrastructure*. That initiative will identify progressive, cost-effective, public-sector strategies to spur growth for Minnesota and expanded economic opportunity for Minnesota's people and places. While this report looks only at trends for highways, the *Smart Investments* project will undertake a much broader analysis of Minnesota's statewide transportation system, covering roads, transit and land-use patterns, and examining public-sector approaches for increasing mobility, access and economic prosperity.

## ***Trends in Highway Spending and Revenues and Why They Matter***

Growth and Justice calculations show that state government spending on Minnesota's highways and bridges throughout the period from 1986 to 2006, including federal dollars, fell \$13.89 billion short of the total investment needed to keep up with inflation and the dramatic increase in transportation demand, as measured by annual vehicle miles traveled. While state spending on highways outpaced inflation, it failed to increase enough to stay even with the increase in vehicle miles traveled since 1986. On the revenues side, the State of Minnesota's dollars for highways and bridges would have amounted to an additional \$12.64 billion over the 20-year period if revenues each year through 2006 had kept pace with the 1986 levels – again adjusted for inflation and miles traveled on the state's roadways. More than half the revenue gap stemmed from a slowdown in federal funding tied in part to the state's high use of gasohol, but Congress fixed much of that problem when it passed the most recent federal highway law. (That law factored in an increase for Minnesota of almost 50 percent in available federal highway dollars, unadjusted for inflation, compared to funding under federal law during the late 1990s and early 2000s.) Interestingly had the state looked only to expanding roadways as a solution for transportation problems, Minnesota by 2006 would need to have added 10,700 lane miles to the 15,900 existing lane miles on its major routes in order to have stayed even with the 1986 total, adjusted for the growth in miles traveled.

The challenges are significant, and action is required. The state needs a transportation system that is efficient, accessible, cost-effective, timely and reliable. The dollar gaps from 1986 to 2006 are daunting, but increased investments now in Minnesota's highway system and its broader transportation infrastructure stand out as critically important for a number of reasons.

Population growth is one reason to act. Vehicle miles traveled today already strain the state's roadways and try the patience of Minnesota's drivers. The U.S. Census Bureau estimates that Minnesota's population will expand by more than 1 million residents from 2007 to 2030, increasing the number of drivers on the roads and raising the vehicle miles traveled. The expected growth to 2030 comes after a population increase of more than 960,000 from 1986 to 2006. Without action and significant investment, Minnesota's transportation system will become increasingly inadequate for the needs of the state's residents.

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<sup>3</sup>The Federal Highway Administration of the U.S. Department of Transportation, *Highway Statistics*, annual reports for 1986 through 2006, <http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm>. Growth and Justice obtained 2006 data for vehicle miles traveled and highway finance from yet-to-be published tables provided by the FHWA in January 2008. The Minnesota Department of Transportation provides data to the FHWA for the *Highway Statistics* series, although FHWA adjusts some state dollars in keeping with the methodology it uses for the ongoing federal statistics series. Minnesota data reflect fiscal year time periods, from July 1 to June 30. The time period used by other states varies, with some using fiscal years and other calendar years. All dollar levels are calculated on a cash basis, and expenditures reflect disbursements, not budgeted amounts. The data in this report labeled "all states" and "all state governments" includes levels from each of the 50 states and from the District of Columbia. For complete notes and explanations about the *Highway Statistics* series go to *About Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/abouthss.htm> and *Guide to Reporting Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/guide.htm>.

Beyond the issue of population growth, the State of Minnesota will face rising costs for transportation projects and the potential loss of federal funds if action is delayed. When it comes to transportation spending, state government reluctance and delay put federal matching dollars at risk, with Minnesota chancing the loss of millions in available funds. With Congress having significantly increased the federal highway dollars available to Minnesota under current federal law, the state must take the steps necessary – and appropriate the funds needed – in order to put those federal dollars to work. Beyond this, project delays lead to increased project costs. As the Minnesota Department of Transportation noted in its 2007 report on trunk highway pavement conditions, roads that fall into serious disrepair require major and expensive rehabilitation and reconstruction work compared to lanes where problems are addressed before road conditions deteriorate. What's more, price increases over time also add to the costs for delayed projects.

And most importantly the status of Minnesota's transportation system affects the economic outlook for the state and both the economic well-being and quality of life for Minnesota residents. Economic growth and development are influenced – indeed, often shaped – by public-sector investment in infrastructure, notably transportation. The statewide transportation system allows the safe and easy movement of people and goods. It makes places accessible to people. And it lays the base for business activity that fosters economic prosperity. Commerce needs roads, and businesses incur costs from congestion delays and poor road conditions. Wise investments in transportation infrastructure help put Minnesota's households in a better position to benefit from economic growth. And a high-quality transportation system makes for faster commutes, reduced delays, fewer accidents, less fuel consumption and better air quality.

## ***Lane Miles and Beyond: Transit, Traffic Management and Land Use***

Clearly Minnesota must commit serious resources to improving and expanding its transportation infrastructure. Roads, transit and transportation innovations in the state have lagged behind the demand for travel. Since 1986, the estimated vehicle travel on Minnesota's roadways has risen by 22.71 billion miles to 56.52 billion miles in 2006. If Minnesota were to have addressed this increased demand for travel solely by adding roads and lanes, the state would need to have added another 10,700 lane miles to its major routes by 2006 to keep pace with growth in vehicle miles traveled. Major routes – interstates, freeways, expressways and other principle arterials – actually grew by 1,500 lane miles to 15,900 in 2006. Very rough estimates for highway construction costs in Minnesota put the price tag for a massive expansion of 10,700 lane miles at \$31 billion to \$35 billion in 2006 dollars, excluding the price of land for right-of-ways<sup>4</sup>. That price tag alone should prompt creative thinking about transit and other smart strategies for addressing Minnesota's transportation challenges.

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<sup>4</sup> The cost estimate for adding 10,700 lane miles on major routes in Minnesota is a rough one only and should be used with caution. The amount was derived from construction cost estimates per lane mile included in a 2003 MnDOT report entitled *Metro Versus Outstate Highway Construction Cost Comparison*. That report presents estimated construction costs per lane mile of \$3.1 million for an eight-county Twin Cities metro area and \$1.5 million for the rest of Minnesota based on let costs for construction from projects during the period from June 2001 to May 2003. The costs are for construction only and do not include right-of-way, utility relocation or project design, in most cases. For the estimates presented here, the lane-mile dollar amounts from MnDOT were weighted by the shares of Minnesota's 2000 population in the eight-county metro area (54.6 percent) and in the rest of the state (45.4 percent). The amounts were adjusted for inflation using 2002 price levels and applying price increases through to 2006 as tracked by both the price index for state and local government (resulting in the \$31 billion estimate) and Minnesota's construction cost index (resulting in the \$35 billion estimate). The construction cost index is relevant because the MnDOT estimates focused on construction costs. It's worth noting that meaningful averages for costs per lane mile are difficult to estimate because highway construction projects vary significantly in terms of type and location and consequently the 2001-03 period may not be typical.

Of course, Minnesota does not need to equal or surpass the 1986 mark for lane miles. The state likely had more lanes miles than necessary in 1986, so lane miles would not need to expand to the comparable 1986 level in order to offer adequate space for travel. Nor would state government spending on roadways necessarily have to rise to its comparable 1986 level. But trends over the last 20 years have left the state far behind 1986 in terms of its transportation system and have created significant problems for major sections of the state's transportation infrastructure.

Minnesota's state government certainly needs to spend more to address bottlenecks that clog traffic on many major routes and to fund maintenance and major overhauls on roads and bridges in need of attention. But the state also must pursue other strategies for meeting growing demands for transportation. Region-wide transit stands out as an important part of the solution for urban areas in the state, with its potential for improving the transportation access and mobility and the quality of life for many Minnesotans. Progress has been made with increased bus rapid transit service and with light-rail development. Already in the Twin Cities area, transit services reduce the annual peak-time traffic delays for drivers by 5.3 million hours, according to the 2005 Texas Transportation Institute report.<sup>5</sup> Significant increases in transit use can reduce the need for more lane miles in the metropolitan area.<sup>6</sup> And many transit approaches have the added benefit of reducing fuel consumption and air pollution.

Traffic management and operations strategies also have an impact on how much traffic Minnesota's roadways can handle without congestion. TTI estimates that traffic delays for peak travelers in the Twin Cities is 5.4 million hours lower than it otherwise would be thanks to traffic management approaches, including metered ramps on freeways, response strategies for accidents and incidents, high-occupancy vehicle lanes, and coordination of stop lights on main roads.<sup>7</sup> To further slow the demand for travel, state, regional and local governments also need to consider land-use policies that encourage denser development and shorter distances between work and home. In some areas of the state, high housing prices have forced families to move farther and farther out from central locations in order to afford homes.

Transportation will continue to rank as a major state policy issues for years to come. Growth and Justice will engage in research, dialogs and consensus building to put forth ideas for smart state investments in transportation infrastructure that can best address current and future challenges. This report looks at one element of the puzzle – state spending and revenues for highways and bridges.

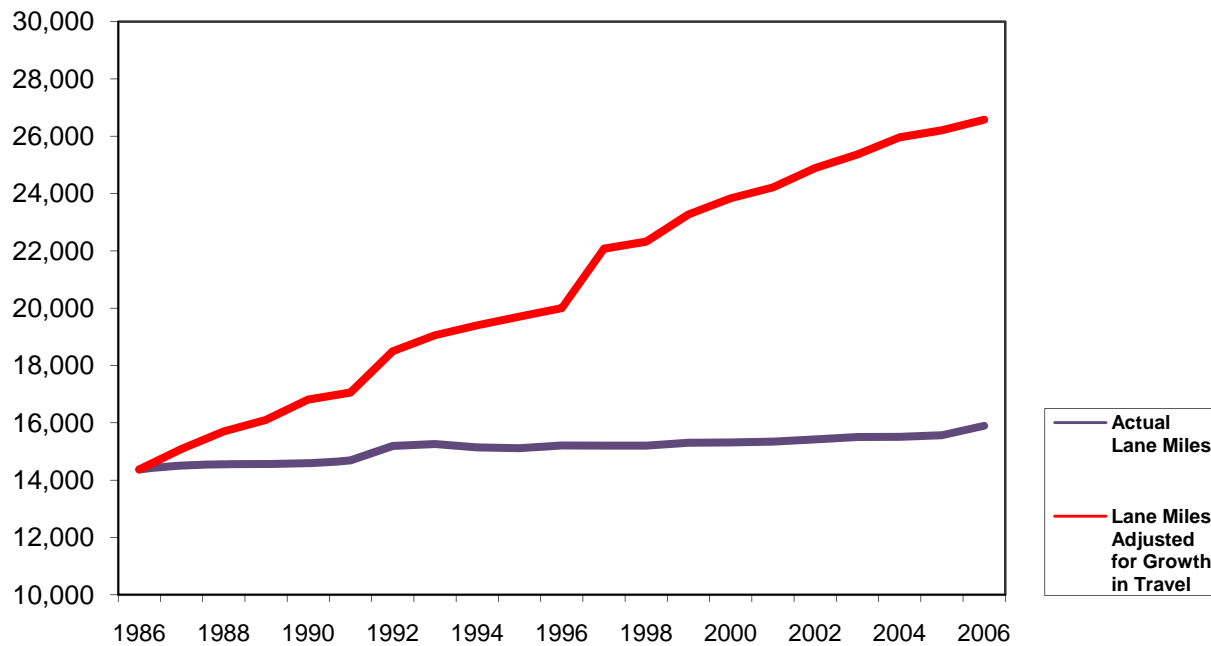
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<sup>5</sup>Shrank, David and Tim Lomax.

<sup>6</sup> Davis, Gary A., Kate Sanderson and Hun Wen Tao, *Capacity Expansion in the Twin Cities: The Roads-Transit Balance*, Minnesota Department of Transportation, December 2006, <http://www.lrrb.org/PDF/200644.pdf>.

<sup>7</sup> Shrank, David and Tim Lomax.

### Increase in Lane Miles for Major Routes Needed to Keep Pace with Growth in Minnesota's Miles Traveled, 1986-2006



## Summary of Findings

Throughout this report, dollar amounts are adjusted to account for inflationary price increases and for growth in demand for transportation as measured by estimated annual vehicle miles of travel on Minnesota's roadways. For inflation, the report uses the implicit price deflator for state and local governments from the U.S. Bureau of Economic Analysis, which stands as the best measure available for tracking changes over time in the price of state and local government purchases<sup>8</sup>.

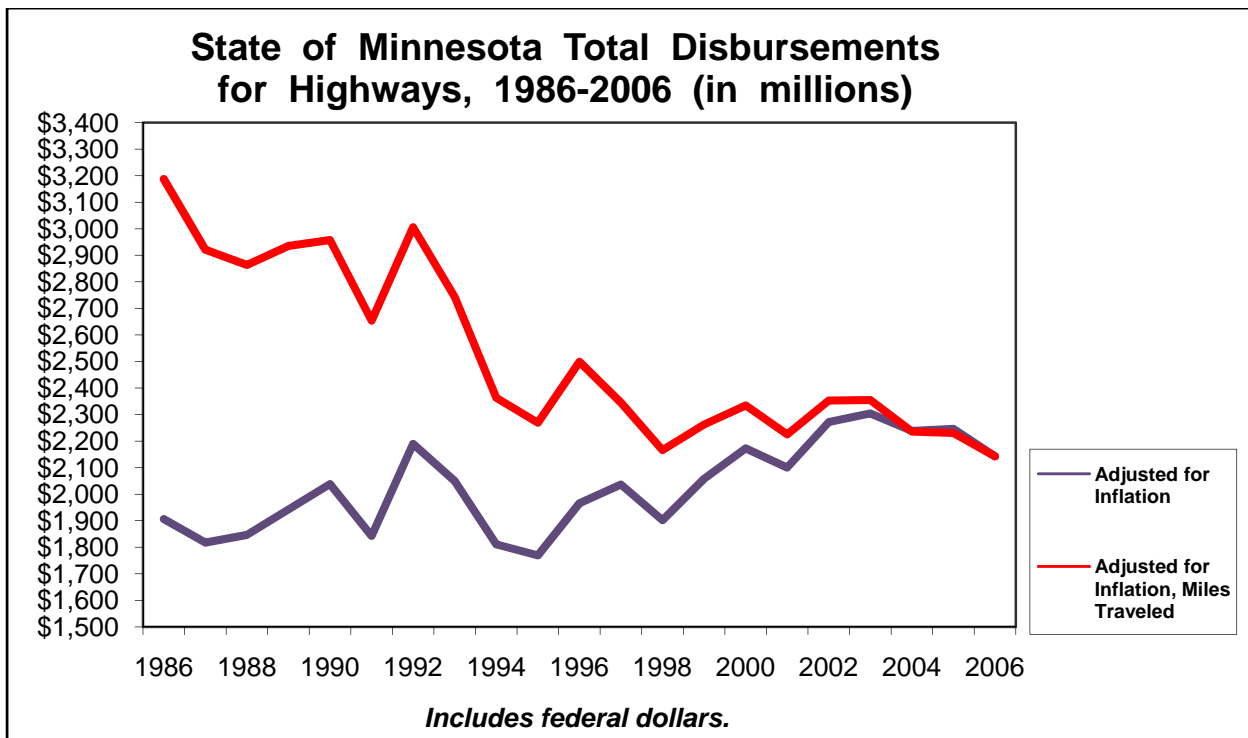
Adjustments for inflationary price increases account for upward shifts in costs but do not address upward shifts in the number of people driving the state's roadways, nor the increased miles those drivers now log. So the dollar amounts in this report have been adjusted using the FHWA's estimates for vehicle miles traveled in Minnesota, through to 2006. The adjustment for miles traveled is important for analyzing how Minnesota's highway system of today compares with that of 20 years ago. A simple comparison between the state government's highway financials in 1986 and 2006, without adjustments for a two-thirds increase in vehicle miles traveled over that period, would present an incomplete and somewhat misleading picture. Certainly the highway system in past years had the excess capacity to handle some increases in miles traveled. But in order to examine how the old system – excess capacity and all – compares with the current system, this analysis takes into account the vehicle miles traveled back then compared to now. (For more detail on these adjustments for inflation and vehicle miles traveled, see Appendix A. For tables with data on the factors presented in this report, see Appendix B.)

<sup>8</sup> Bureau of Economic Analysis of the U.S. Commerce Department, *National Income and Product Accounts Tables*, "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product," state and local government consumption expenditures and gross investment, January 2008, <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>. The bureau uses chain-weighted data to calculate implicit price deflators in order to capture the effect of changes in the components of gross domestic product.

The later pages of this report provide more detailed analysis and graphics regarding highway spending and revenues for Minnesota's state government over the last 20 years. ***This section presents summary findings, with dollar amounts in each case adjusted to account for increases in inflation and vehicle miles traveled from 1986 to 2006. The spending levels cited here include federal dollars, in addition to state funds.*** (For additional information about what some of the spending and revenue categories cover, see the more detailed sections found in the later pages of this report.)

### **Spending**

- **State's total highway spending falls:** Overall Minnesota's state government spending on highways and bridges from 1986 to 2006 – including federal dollars – fell short of the investment level deemed sufficient 20 years ago. Had Minnesota kept pace with the adjusted 1986 level throughout the 20-year period, then the state government would have spent another \$13.89 billion in total on highways. The 2006 highway spending level of \$2.14 billion is almost one-third – or \$1.04 billion – below the comparable 1986 level. The trend line for overall highway spending by Minnesota's state government lags the trend for overall spending by all states combined.



- **State capital outlays decline:** Looking only at the state and national highway systems covered by the FHWA's statistics for capital outlays, Minnesota's state government outlays for capital projects in 2006 lagged the 1986 level by almost half. Had Minnesota kept pace with the 1986 level throughout the 20-year period, then the state government would have spent an additional \$10.48 billion in total capital outlays. The state's capital outlays failed to keep pace even with inflation alone. Taken as a whole, other states did better than Minnesota in keeping up with inflation and miles traveled for this type of spending. Capital outlays by all states combined on the state and national highway systems outpaced inflation.
- **State spending increases on routine highway maintenance and services:** Again looking only at state and national highway systems covered by the FHWA statistics for this type of

spending, Minnesota's state government spending for routine maintenance and services rose from 1986 to 2006, with the State of Minnesota spending \$265.0 million more during the 20-year period than it would have if the dollars for each year had simply stayed even with the adjusted 1986 level. State spending in 2006 – at \$387.2 million, including federal dollars – amounted to 10.1 percent more than the comparable 1986 level. In contrast, combined spending by all state governments on maintenance and highway services for the state and national highway systems lagged behind for the 20-year period.

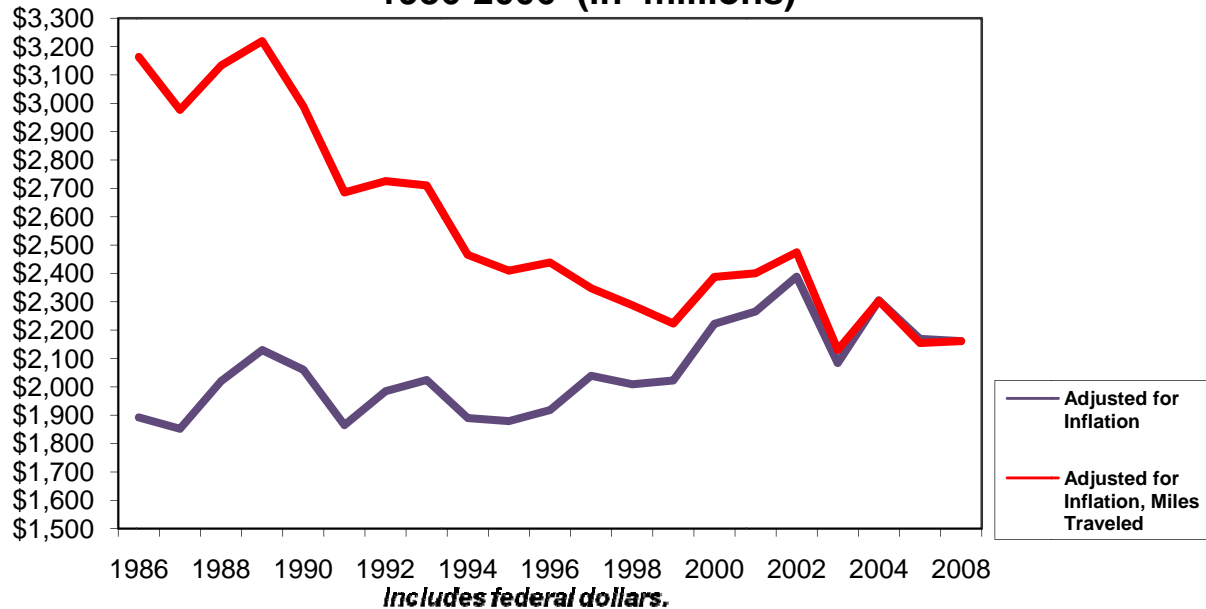
- **Highway grants-in-aid to local governments vary:** Minnesota's spending on highway grants-in-aid to local governments from 1986 to 2006 varied significantly from year to year, with adjusted amounts exceeding the 1986 level in 12 of the 20 years and falling short in eight. For the full period, Minnesota's total for highway grants-in-aid to local governments amounted to \$149.0 million more than would have been the case had spending in each of the 20 years simply kept pace with the adjusted 1986 level. The FHWA's tally for grants-in-aid includes federal dollars, which means the trend for Minnesota's grants overall may differ from the trends for county and municipal aid from state-generated revenues only. Highway grants-in-aid funding fared better in Minnesota than in the nation as a whole.

## **Revenues**

- **State's total highway revenues decline:** Minnesota's state government highway revenues, including federal funds, dropped markedly from 1986 to 2006. Had the state's revenues stayed even with the adjusted 1986 level, then state government would have received an additional \$12.64 billion in revenues for highways altogether over the 20-year period. The 2006 highway revenues of \$2.16 billion were almost one-third below the adjusted 1986 level. The lag in highway revenues for the State of Minnesota was more pronounced than the dip in highway revenues for all the states combined. Looking just at state-generated highway revenues from 1986 to 2006 – excluding federal funds and payments to the state by local governments – Minnesota's dollars available still dropped significantly, with a cumulative shortfall of \$6.20 billion for the full 20-year period compared to the total for revenues if the amount each year had stayed even with the adjusted 1986 level.



### Total Highway Revenues for State of Minnesota, 1986-2006 (in millions)



- State's gas tax revenues fall:** Revenues from Minnesota's gas tax dropped by more than one-third from 2006 to 1986. If gas tax revenues had increased enough every year to keep pace with inflation and miles traveled, the State of Minnesota would have had an additional \$3.86 billion, in all, available for highway spending over the 20-year period. 2006 gas tax revenues for all states combined lagged the comparable 1986 amount, but in percentage terms the drop for all states was less than the shortfall for Minnesota.
- Motor vehicle and carrier tax revenues vary:** Minnesota's revenues from motor vehicle and motor carrier taxes and fees increased from 1986 to 2001 but then dipped to end at \$542.9 million in 2006, down about one-quarter from the adjusted 1986 level. Revenues from this source were affected by a state law passed in 2000 that reduced annual fees for auto license tabs, a change offset by the dedication of some motor vehicle sales taxes to transportation funding. The upward trend in motor vehicle and carrier taxes and fees for much of the 20-year period resulted in \$903.4 million more in revenue for the state than would have been the case if these taxes and fees had simply kept up with the adjusted 1986 amount. Dollars collected by all states in 2006 from this source fell short of the adjusted 1986 level by 27.6 percent, compared to a drop of 24.4 percent for Minnesota.
- Federal highway funding declines:** Federal highway funds to Minnesota declined significantly over the period from 1986 to 2006, adjusted for inflation and miles traveled. That downward trend was driven in part by the federal tax treatment of gasohol – a problem Congress fixed recently. Cumulatively federal funds to the state from 1986 to 2006 amounted to \$6.76 billion less than if they had stayed even with the adjusted 1986 level. Federal funds to all state governments combined grew by 24.1 percent from 1986 to 2006 in inflation-adjusted dollars, but inflation-adjusted federal funding to Minnesota fell by 9.4 percent. While inflation-adjusted federal highway dollars to all state governments rose from 1986 to 2006, dollars adjusted for both inflation and miles traveled fell, dropping by about one-fourth. For Minnesota, the gasohol issue was significant, with the federal government's tax treatment of gasohol, up until recently, resulting in fewer motor fuel tax dollars flowing into the federal highway trust fund from the state. Minnesota requires ethanol and gasoline blends. As a result of the reduced trust fund contributions, Minnesota received fewer federal highway dollars. But federal tax preferences for

gasohol no longer affect highway trust fund contributions and highway dollars to the states, so, the federal highway funds available to Minnesota are increasing significantly. That said, federal highway funding for major projects covers 80 percent or more of the costs but only if state and local governments provide matching funds to pay for the remainder. Consequently the flow of federal highway funds to the state in the future depends significantly upon available state highway dollars.

- ***State highway bond proceeds down then way up:*** The State of Minnesota's proceeds from highways bonds spiked upward starting in 2002 to their highest levels in the last 20 years, after staying below the adjusted 1986 level through 2001. The 2006 level, at \$161.9 million, amounted to 79.1 percent more than the adjusted 1986 amount. Adjusting for inflation alone, the state's bond proceeds for highways in 2006 were at a level three times the 1986 mark. Highway revenues from bond proceeds in all states fluctuated over the last 20 years, ending in 2006 with an amount that fell short of the 1986 equivalent.

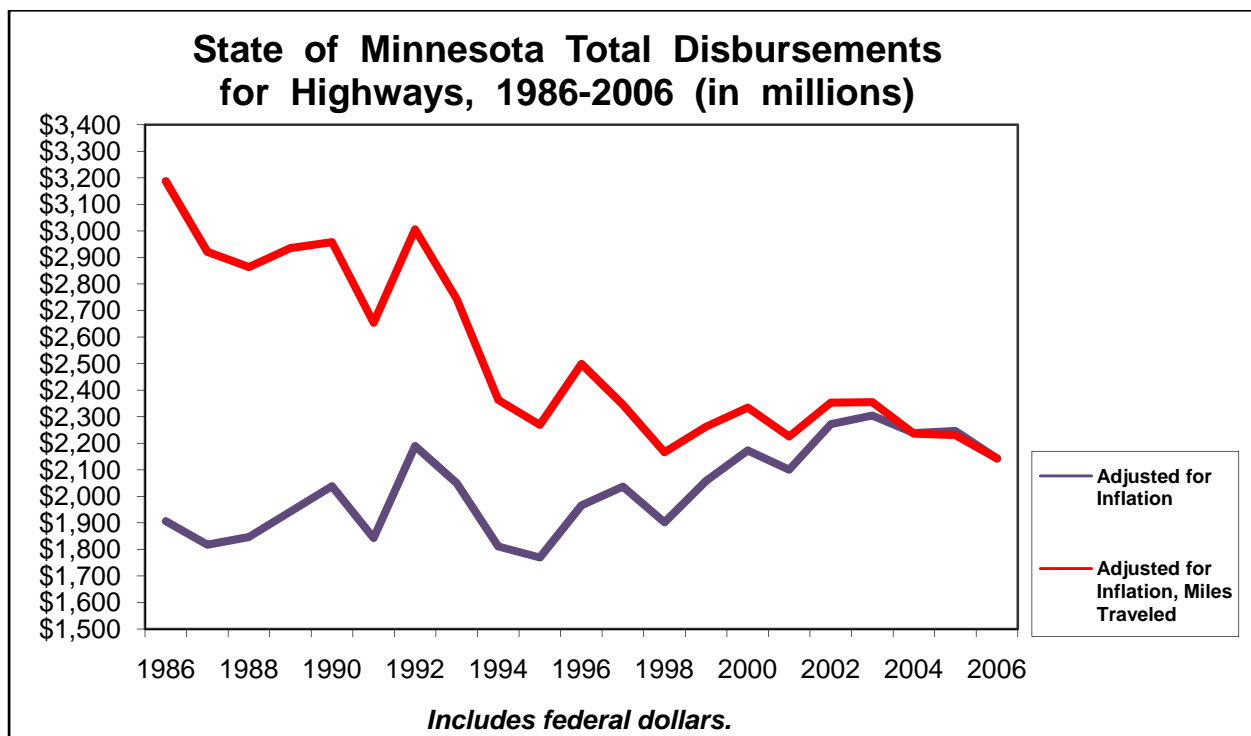
# State Government Spending on Highways & Bridges

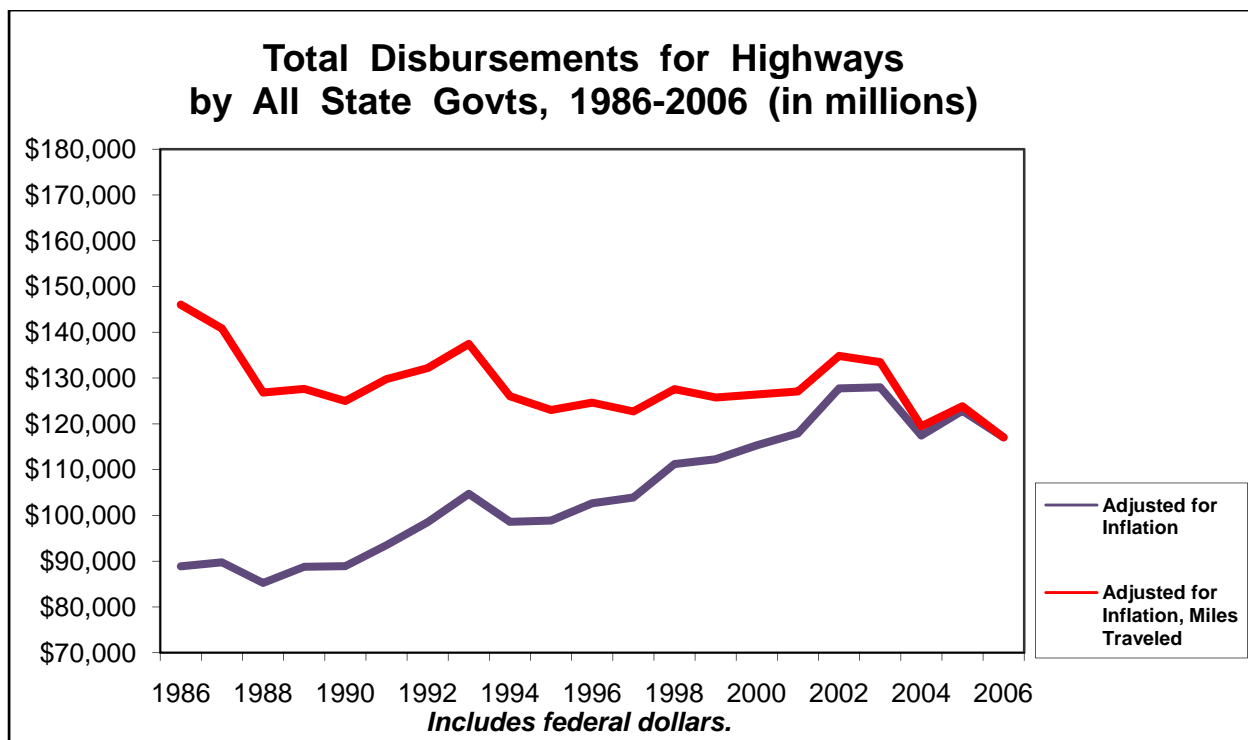
The following pages highlight information about State of Minnesota spending on highways and bridges and break out several types of expenditures, as tallied by the Federal Highway Administration and including federal dollars. This section of the report looks at total spending and then separately at the categories of capital outlays, highway maintenance and services and grants-in-aid to local governments. It does not break out data for spending on debt service; administration, research and planning; or law enforcement and safety, but those categories are included in the tally for total spending. (See Appendix B for data tables.)

## Total Spending on Highways and Bridges

Overall state government spending on highways and bridges from 1986 to 2006 in Minnesota – including federal dollars – fell well short of the investment needed to keep up with inflation and the dramatic increase in transportation demand, as measured by annual vehicle miles traveled. Adjusting total highway expenditures for inflation and vehicle miles, the 2006 level of \$2.14 billion is \$1.04 billion below the comparable 1986 level – a drop of one-third. Had Minnesota kept pace with increases in both inflation and miles traveled in each of the years from 1986 to 2006, then cumulatively the state government would have spent another \$13.89 billion on highways, as measured in 2006 dollars. State spending on highways outpaced inflation during the 20-year period, but failed in increase fast enough to stay even with both inflation and the increase in miles traveled.

The trend line for overall highway spending by Minnesota's state government differs from the trend for overall spending by all states, with Minnesota lagging the nation. Highway spending by all state governments in 2006 was one-fifth lower (down 19.8 percent) than what was needed to keep up with increases in inflation and miles traveled since 1986, compared to one-third lower (down 32.8 percent) in Minnesota.





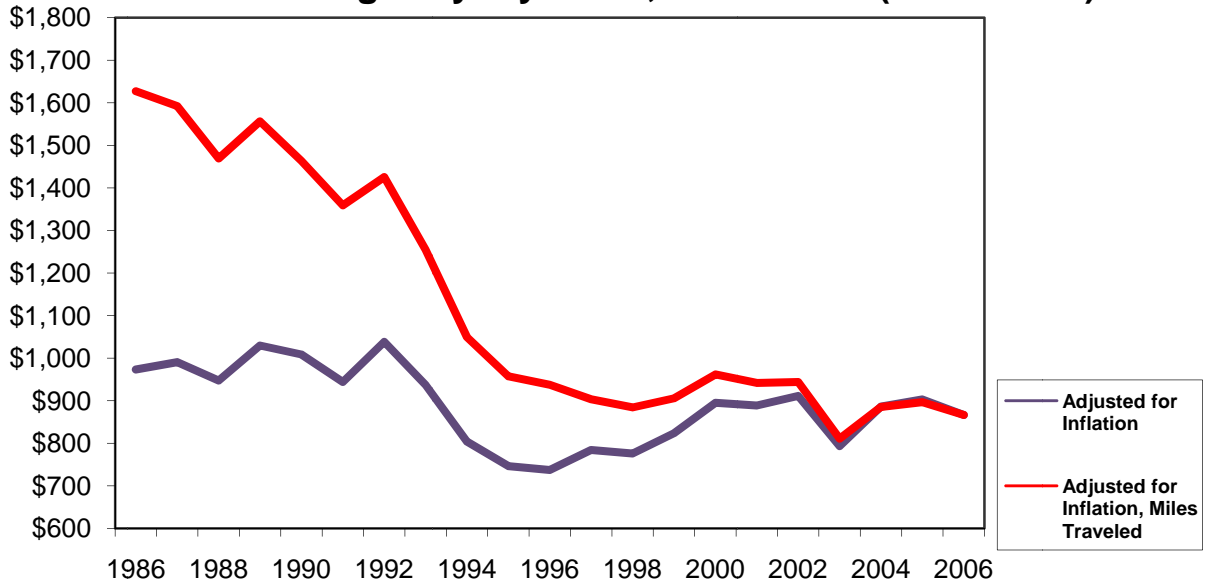
*Note: For each set of matching graphs throughout this report, except for the graphs on bond proceeds, the ratio of the lowest data point to the highest mark for the scale in the Minnesota graph is about equal to the ratio of the lowest data point to the highest mark for the scale in the all-state graph, and the ratio of the highest data point to the lowest mark for the scale in the Minnesota graph is about equal to the ratio of the highest data point to the lowest mark for the all-state graph, thus making the graphic presentations proportional although the scales themselves differ dramatically.*

## Capital Outlays for the State and National Highway Systems

Compared to the equivalent dollar amount in 1986, Minnesota's state government spending in 2006 on capital outlays for the state and national highway systems lagged by almost half, adjusted for inflation and vehicle miles traveled. (The FHWA's *Highway Statistics* series only tallies capital outlays for the state and national highway system.) As defined by the FHWA, capital outlays pay for new roads and bridges and major work on existing ones, including improvements, additions, betterments, resurfacing, restoration, rehabilitation and reconstruction. Accounting for inflation and miles traveled, the state government would need to have spent \$760.4 million more in 2006 alone to stay on par with the adjusted 1986 expenditures. The 2006 total for the state government's capital outlays for the state and national highway systems, including federally financed capital expenditures, was \$866.7 million. Cumulatively, the state government fell short by \$10.48 billion for total capital outlays throughout the 20-year period, measured against the level required each year to stay even with the 1986 amount, adjusted for inflation and miles traveled. The state's capital outlays failed to keep pace even with inflation alone.

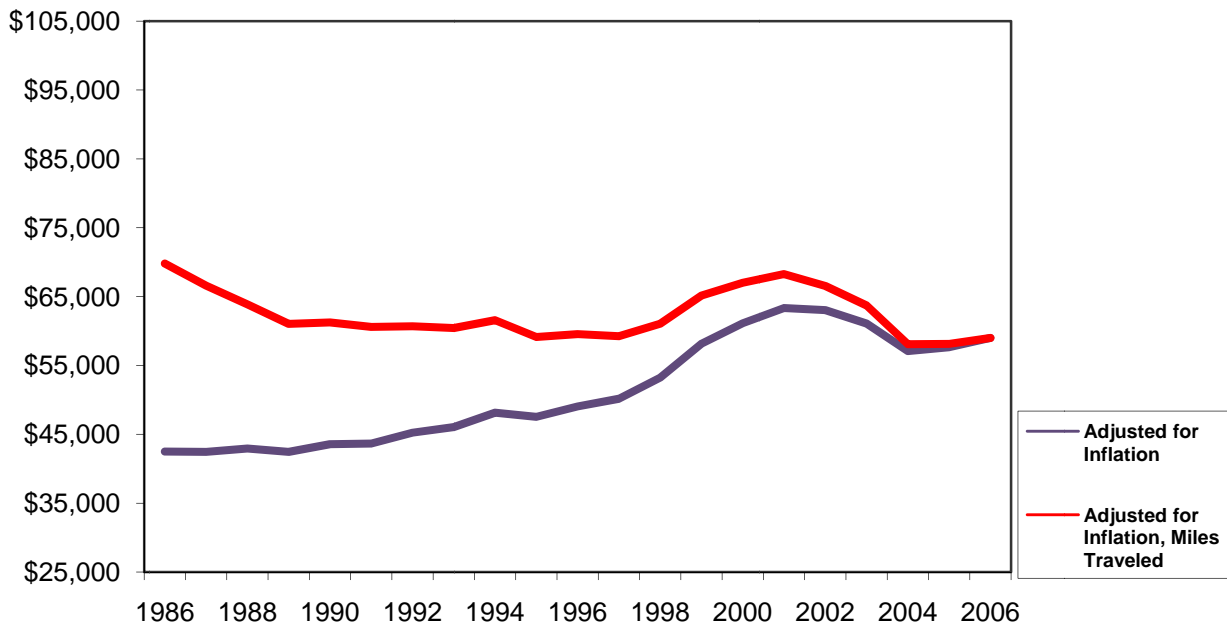
Taken as a whole, other states did better than Minnesota in keeping up with inflation and miles traveled for this type of spending. In 2006, capital outlays by all state governments combined for the state and national highway systems stood 15.5 percent below the 1986 level, adjusted for inflation and miles traveled. By contrast, Minnesota's 2006 level dropped 46.7 percent from the comparable 1986 amount. Nationally capital outlays outpaced inflation, rising 38.9 percent, compared to a drop of 10.9 in inflation-adjusted expenditures by the State of Minnesota.

### State of Minnesota Capital Outlays for State & National Highway Systems, 1986-2006 (in millions)



*Includes federal dollars.*

### Capital Outlays for State & National Highway Systems by All State Govts, 1986-2006 (in millions)



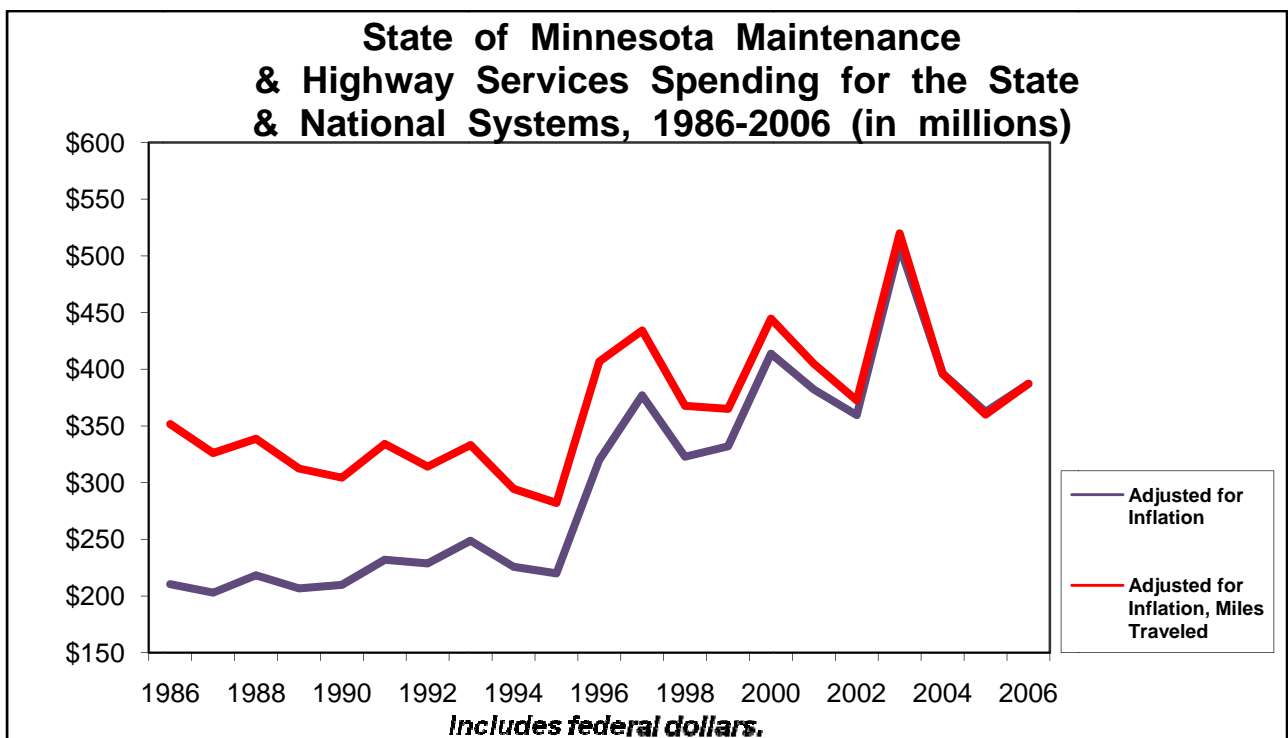
*Includes federal dollars.*

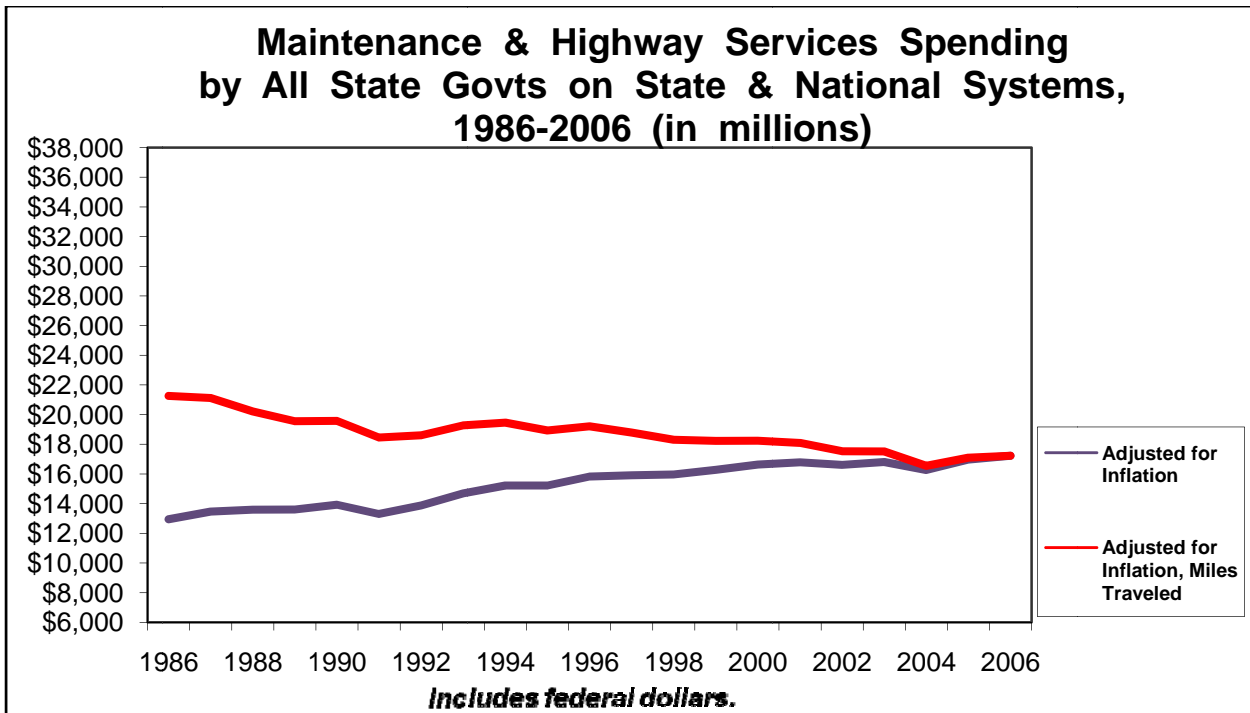
## **Expenditures for Highway Maintenance and Services on the State and National Systems**

State government expenditures in Minnesota for routine maintenance and services on the state and national highway systems rose faster than inflation and miles traveled in the 20 years from 1986 to 2006. (The FHWA's *Highway Statistics* series only tallies highway maintenance and services spending for the state and national highway system.) State spending in 2006 – at \$387.2 million, including federal dollars – amounted to 10.1 percent more than the comparable level in 1986. In outpacing inflation and miles traveled for maintenance and service expenditures, the State of Minnesota cumulatively spent \$265.0 million more from 1986 to 2006 than it would have if the dollars for each year had simply stayed even with the adjusted 1986 level.

In contrast to the trend in Minnesota, combined spending by all state governments on maintenance and highway services for state and national highway systems during the 20-year period lagged behind what was needed to account for increases in inflation and vehicle miles traveled. For all states combined, the 2006 spending level was short of the 1986 level by 19.0 percent, adjusted for inflation and miles traveled, compared to the 10.1 percent increase for the State of Minnesota.

As defined by the FHWA, the highway maintenance category covers spending on routine and preventative maintenance for roadways, bridges and tunnels, including surfacing, drainage operations, overhead grade separations, substructures, superstructures, stream bed operations and bridge painting. State governments spend maintenance dollars to offset the effects of deterioration from age, weather, use, damage, failure, and design and construction faults. However highway expenditures are categorized as capital outlays when made for improvements, additions, betterments, resurfacing, restoration, rehabilitation and reconstruction. The highway services category includes expenditures for traffic control operations and facilities, snow removal and sanding, litter pick-up and mowing, as well as other traffic control and service efforts.



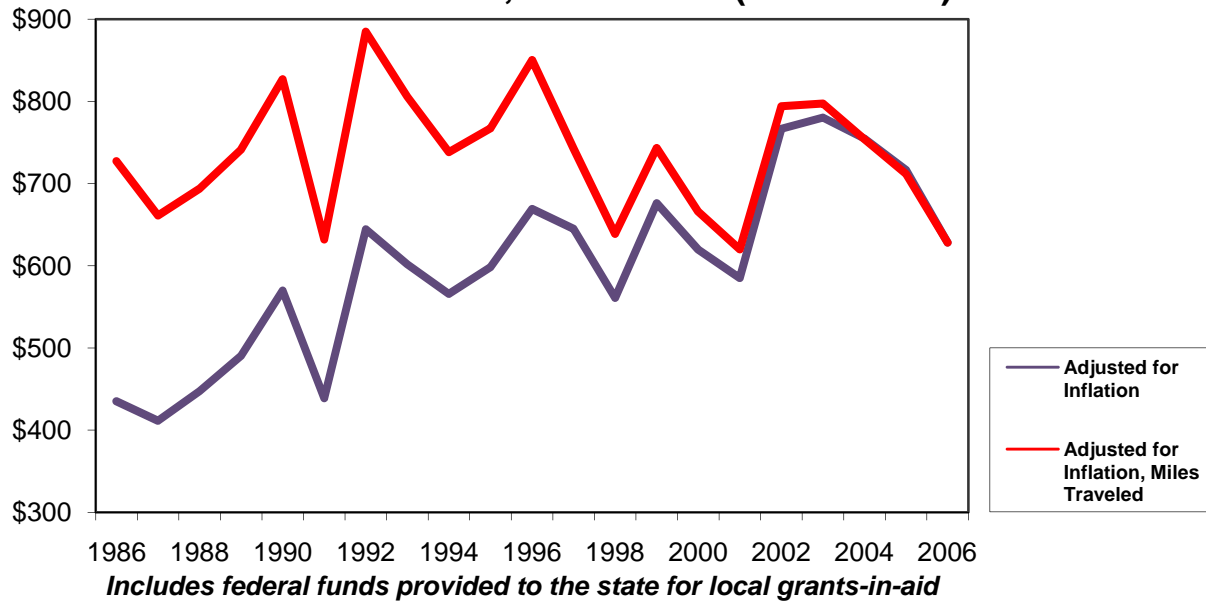


### **Highway Grants-in-aid to Local Governments**

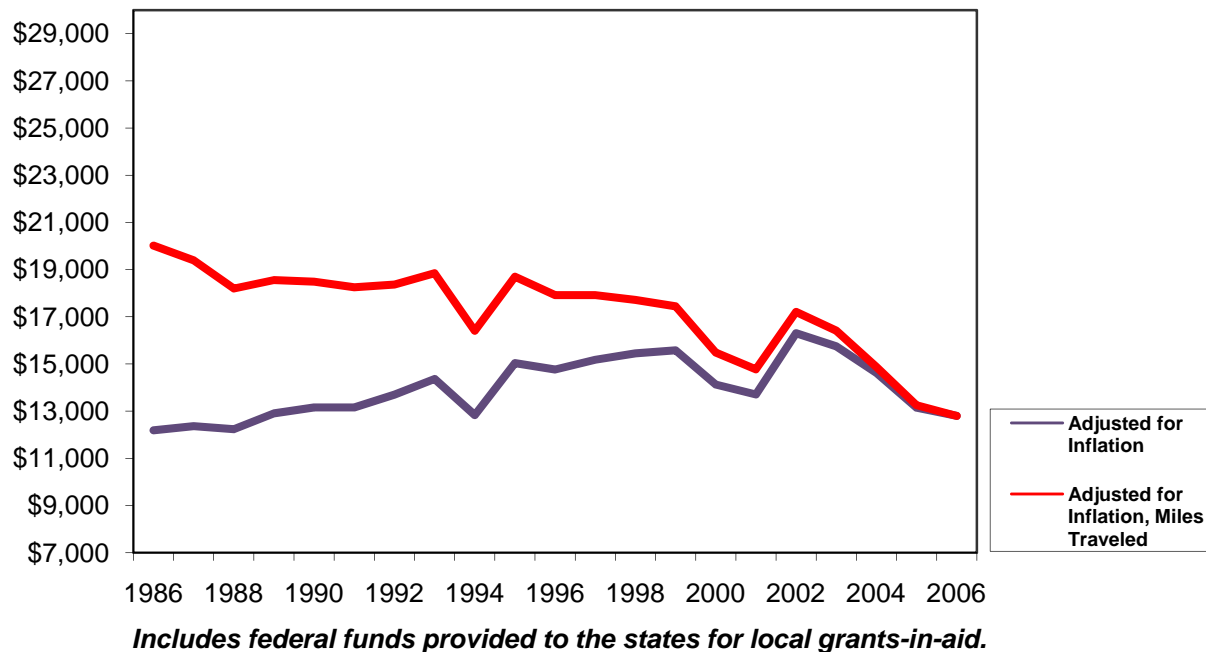
Minnesota's 2006 spending on highway grants-in-aid to local governments somewhat lagged the comparable 1986 amount, adjusted for increases in inflation and miles traveled, but disbursements varied significantly from year to year, with adjusted amounts exceeding the 1986 level in 12 of the 20 years and falling short in eight. The disbursements for grants-in-aid to local governments include state dollars as well as federal funds provided to the State of Minnesota and passed on to local governments. Minnesota's 2006 amount was greater than its 1986 level adjusted only for inflation, however the 2006 highway grants-in-aid amount fell short of what was needed to also account for rising vehicle miles. For the full 20-year period, Minnesota's total for highway grants-in-aid to local governments amounted to \$149.0 million more than would have been distributed had spending in each of the 20 years equaled the amount needed to simply keep pace with the 1986 level, adjusted for inflation and miles traveled. The FHWA's tally for grants-in-aid includes federal dollars, which means the trend for grants overall may differ from the trends for county and municipal aid from state-generated revenues only.

Highway grants-in-aid funding fared better in Minnesota than in the nation as a whole. The combined 2006 amount distributed by all states as grants-in-aid to local governments – again, including federal dollars and adjusting for inflation and miles traveled – fell short of the equivalent 1986 amount by more than one-third (36.1 percent), while Minnesota's 2006 level lagged the comparable 1986 mark by 13.6 percent. Unlike in Minnesota where highway grants to local governments exceeded the adjusted 1986 level for 12 years of the 20 years from 1986 to 2006, the grants by all state governments never reached their 1986 level, adjusted for inflation and miles traveled.

### Minnesota Highway Grants-in-aid to Local Govts, 1986-2006 (in millions)



### Highway Grants-in-aid to Local Govts by All States, 1986-2006 (in millions)





# State Government Revenues Used for Highways & Bridges

This section presents information about State of Minnesota revenues for highways and bridges, as tallied by the Federal Highway Administration, with break outs for several categories – motor fuel taxes, motor vehicle and carrier taxes, federal funding, and bond proceeds. It does not present separate listings for highway revenues from state government general funds, other state imposts (a category that includes motor vehicle sales taxes), miscellaneous state revenues used for highways, and highway payments to state government from local governments. However the revenue amounts for those categories are included in the tallies for total revenues. (See Appendix B for data tables.)

## ***Total Revenues for Highways and Bridges (including federal funds and local payments)***

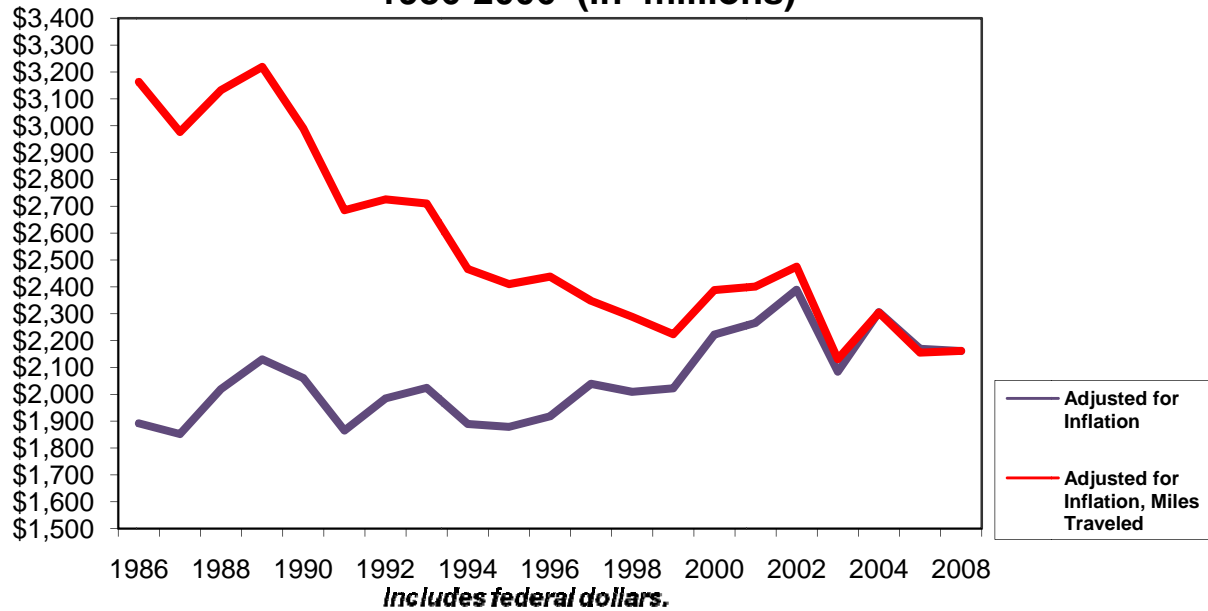
Total State of Minnesota revenues for highways and bridges, including federal funds, dropped markedly from 1986 to 2006 compared to what was needed to keep pace with inflation and the growing demands placed on Minnesota's transportation system. The FHWA tallies for the State of Minnesota show total highway revenues of \$2.16 billion in 2006, down \$1.00 billion, or 31.7 percent, from the 1986 level, adjusted for inflation and vehicle miles traveled. The revenue amount includes local government payments to the state of Minnesota for highway purposes. Revenues increased faster than inflation but slower than necessary to keep pace with inflation and miles traveled. On a cumulative basis, the State of Minnesota would have captured an additional \$12.64 billion in revenues to use for highways and bridges had revenues stayed even with the adjusted 1986 level.

The lag in highway revenues for the State of Minnesota from 1986 to 2006 was more pronounced than the dip in highway revenues for all the states combined. The 2006 amount for total highway revenues for all states – including federal dollars – was down about one-fifth (a drop of 19.2 percent) over the 20-year period, adjusted for inflation and miles traveled, compared to the drop of about one-third for Minnesota (down 31.7 percent).

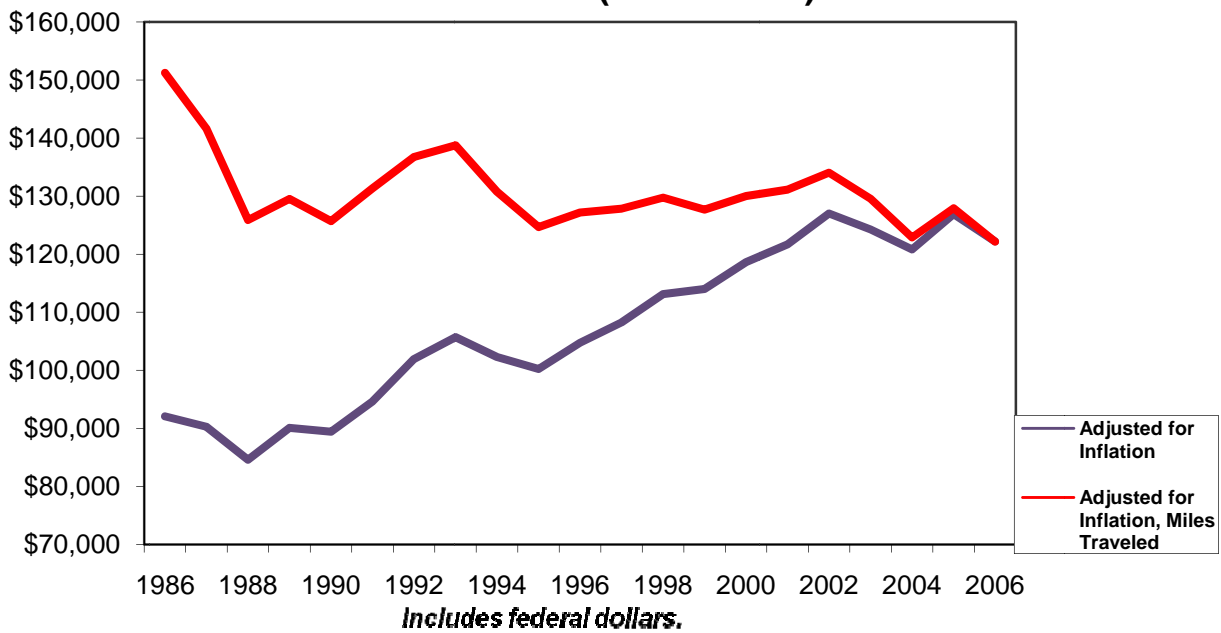
For these state government highway revenue tallies, Growth and Justice used FHWA data so that trends in Minnesota over a 20-year period can be compared to developments nationwide. In compiling consistent numbers for total highway revenues, the FHWA leaves out some highway-related Minnesota revenues not used for highways, including dollars set aside for Minnesota's Department of Natural Resources. In addition FHWA may re-categorize or leave out certain state-counted revenues in keeping with its established methodology for the numbers.

*Note again: For each set of matching graphs throughout this report, except for the graphs on bond proceeds, the ratio of the lowest data point to the highest mark for the scale in the Minnesota graph is about equal to the ratio of the lowest data point to the highest mark for the scale in the all-state graph, and the ratio of the highest data point to the lowest mark for the scale in the Minnesota graph is about equal to the ratio of the highest data point to the lowest mark for the all-state*

### Total Highway Revenues for State of Minnesota, 1986-2006 (in millions)



### Total Highway Revenues for All State Governments, 1986-2006 (in millions)



### State Revenues for Highways and Bridges (including state government funds only)

The best measure of state government revenues available for highways and bridges in Minnesota counts state dollars from all sources, including federal funds. For this reason, federal funds are included in the tally of Minnesota's state government highway revenues in the section immediately

above. However state revenues raised only by the state government – not from federal and local sources – better isolate the State of Minnesota’s efforts to secure dollars for transportation spending.

Looking just at state-generated highway revenues from 1986 to 2006, excluding federal funds and payments to the state by local governments, Minnesota’s dollars available still dropped significantly over the course of the 20-year period when adjusted for increases in inflation and miles traveled. The 2006 level dropped 28.9 percent from the comparable 1986 amount. The dollar drop in state highway revenues from state government sources, while still significant at \$643.7 million for the 2006 level of \$1.58 billion, is less than the \$1.00 billion decline for all revenues, including federal dollars. Had state-generated revenues kept up with inflation and miles traveled in each of the years from 1986 to 2006, then the state government would have had an additional \$6.20 billion available in total for the 20-year period.

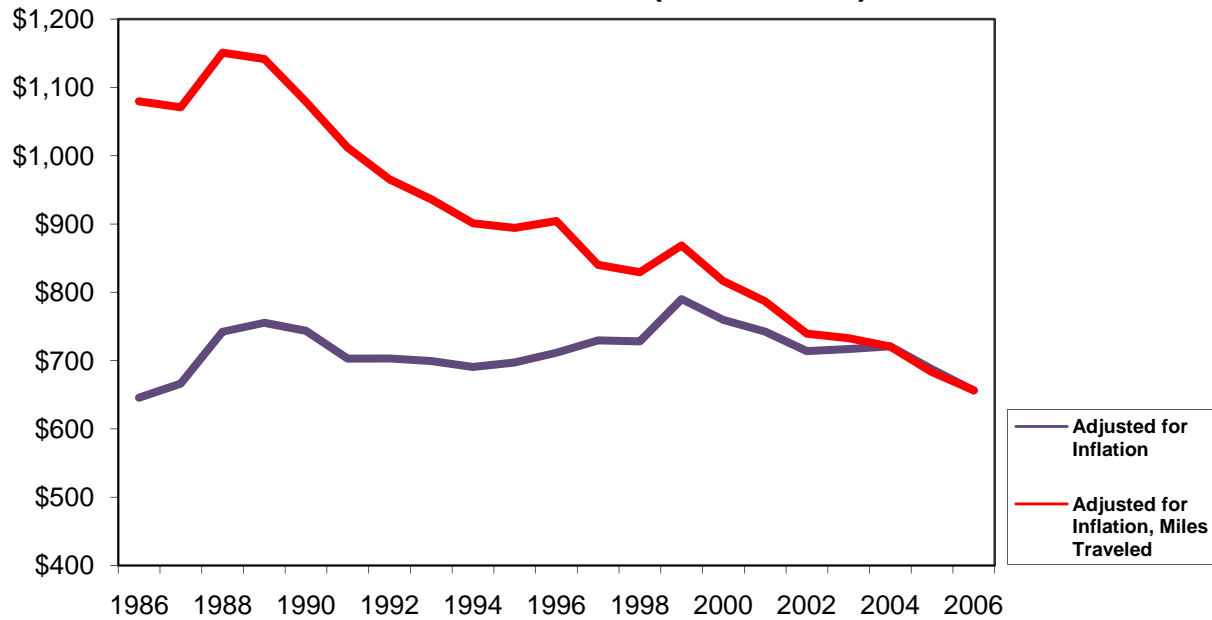
### ***Motor Fuel Taxes Used for Highways***

Revenues from Minnesota’s gas tax dropped by more than one-third from 2006 to 1986, adjusted for inflation and miles traveled. According to the FHWA data, the state collected \$656.4 million in motor fuel taxes in 2006, or \$423.2 million less than it would have needed to stay on par with the adjusted 1986 level. If gas tax revenues had increased enough every year to keep pace with inflation and miles traveled, the State of Minnesota would have had an additional \$3.86 billion in all available for highway spending over the 20-year period.

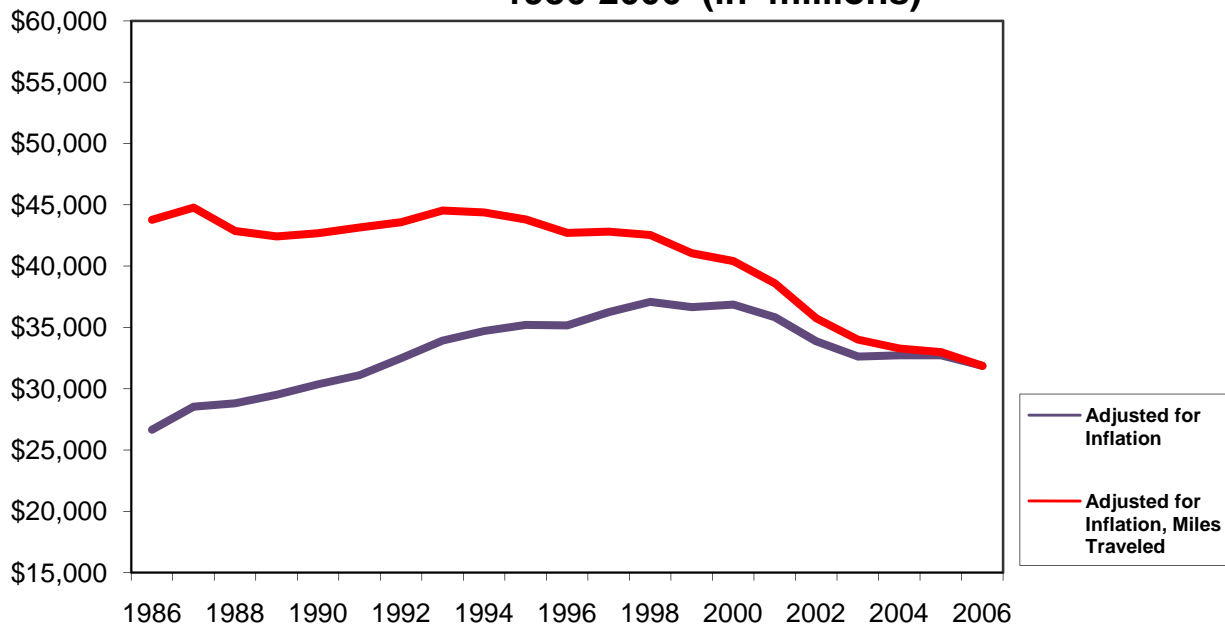
Interestingly the increase in vehicle miles traveled on Minnesota’s roadways and the resulting hike in fuel consumption kept state gas tax revenues slightly ahead of inflation over the 20-year period. The tax on gasoline, which stood at 17 cents per gallon in 1986 and was last raised to 20 cents in 1988, would need to have increased by 80.0 percent to 36 cents per gallon by 2006 in order to equal 1988’s 20-cent level. These calculations are based on changes in the price index for state and local governments. But while the real value of the gas tax per gallon fell significantly, gas tax revenues adjusted for inflation only – and not miles traveled – actually grew to a 2006 level that was 1.6 percent more than the inflation-adjusted 1986 amount. This is the case because drivers in 2006 were buying more gallons of gas.

In contrast to the situation in Minnesota, gas tax revenues in all the states combined rose significantly faster than inflation from 1986 to 2006, although the 2006 amount nationwide was still below the level needed to keep pace with increases in both inflation and vehicle miles traveled. Gas tax revenues for all the states in 2006 fell 27.2 percent short of the 1986 level adjusted for inflation and miles traveled, compared to a drop of 39.2 percent in Minnesota. Adjusting for inflation alone, gas tax revenues in all states increased 19.6 percent from 1986 to 2006, compared to the increase of 1.6 percent in Minnesota.

**Minnesota's Fuel Tax Revenues,  
1986-2006 (in millions)**



**Fuel Tax Revenues for All States,  
1986-2006 (in millions)**

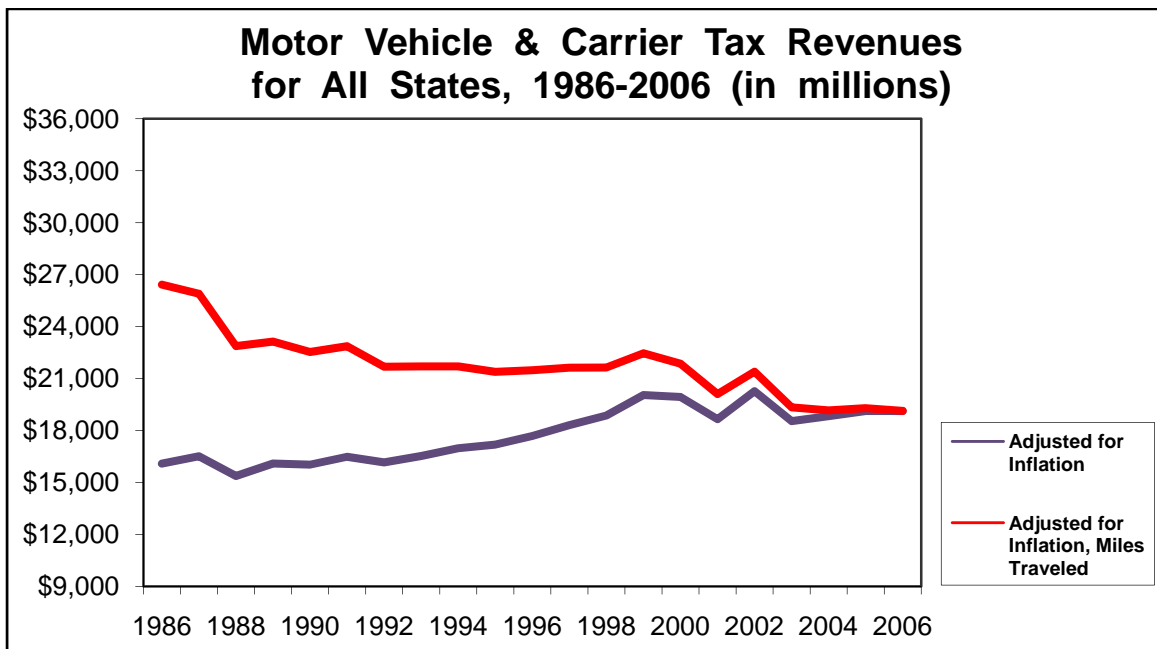
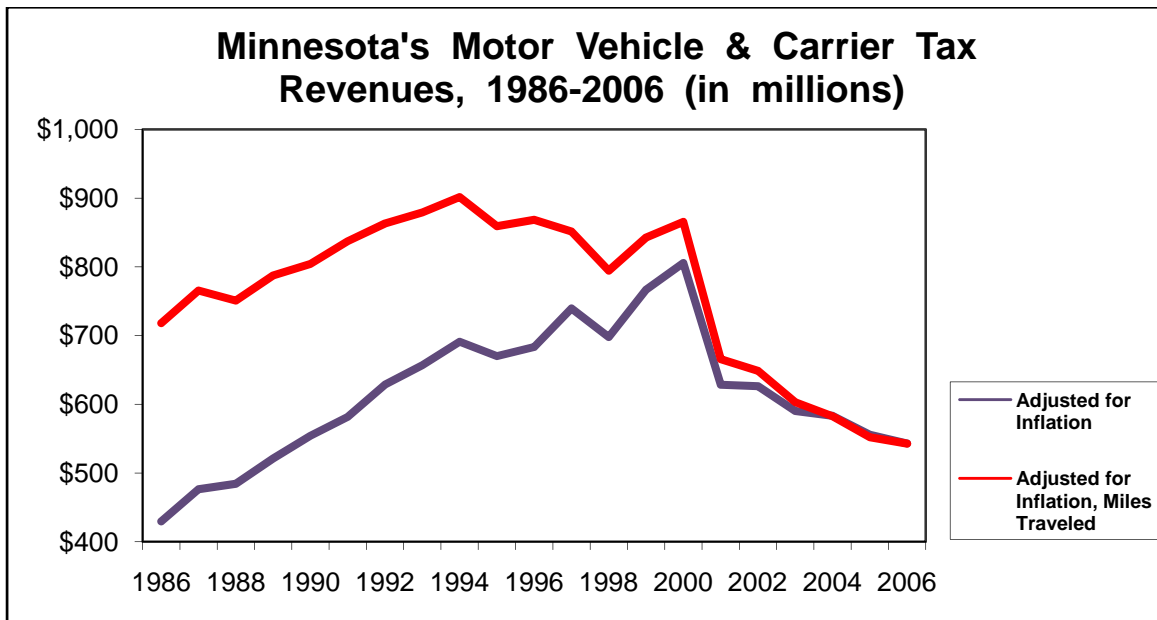


### ***Motor Vehicle and Carrier Taxes and Fees for Highways***

Minnesota's revenues from motor vehicle and motor carrier taxes increased faster than inflation and vehicle miles traveled from 1986 to 2001, before dipping and ending the period in 2006 at \$542.9 million, down one quarter – or \$175.3 million – from the adjusted 1986 level. Revenues from this source were affected by a state law passed in 2000 that reduced annual fees for auto license tabs, a

change offset by the dedication of some motor vehicle sales taxes to transportation funding. Tab fees are included as motor vehicle taxes and fees, but motor vehicle sales taxes are not. The FHWA's tally of motor vehicle and carrier taxes includes registration fees, dealer fees, and driver license fees, weight and capacity taxes, permit charges, title fees, and other taxes and fees imposed on ownership and operation of motor vehicles. The upward trend in motor vehicle and carrier taxes for much of the 20-year period from 1986 to 2006 resulted in \$903.4 million more in revenue to the state than would have been the case if these taxes and fees had simply kept up with inflation and miles traveled. Throughout the period, revenues to the State of Minnesota from this source grew faster than inflation alone.

Nationally motor vehicle and carrier taxes failed to keep up with the combined increases in inflation and vehicle miles traveled from 1986 to 2006. Dollars collected by all states together from this source in 2006 fell short of the adjusted 1986 level by 27.6 percent, compared to a drop of 24.4 percent for Minnesota.



## ***Federal Funds for Highways and Bridges***

Federal highway funding to Minnesota was significantly higher 20 years ago than in 2006, taking into account adjustments for inflation and miles traveled. At \$487.1 million, the 2006 federal highway funding level fell \$411.5 million short of the amount needed to equal the adjusted 1986 level, although more federal highway funds for Minnesota were available to in 2006 but not yet used. Cumulatively, federal highway funds to the State of Minnesota from 1986 to 2006 amounted to \$6.76 billion less than if the federal funds to the state each year had stayed even with the 1986 amount, adjusted for inflation and miles travel. Federal funds to the state also failed to keep pace with inflation alone from 1986 to 2006. Much of the slowdown in federal funds stemmed from the high use of gasohol in the state, but Congress fixed that problem when it passed the most recent federal highways law, so more federal highway funds for Minnesota have become available.

Nationally federal funds to all state governments combined grew by 24.1 percent from 1986 to 2006 in inflation-adjusted dollars, but inflation-adjusted federal funding to Minnesota fell by 9.4 percent. While inflation-adjusted federal highway dollars to all state governments rose from 1986 to 2006, dollars adjusted for both inflation and miles traveled fell nationally, dropping by about one-fourth (down 24.5 percent) over the period for all states combined, compared to almost one-half (down 45.8 percent) for Minnesota.

The drop-off in federal highway funds to Minnesota stemmed in part from how the federal government taxed gasohol, compared to gasoline, up until recently. Congress fixed the gasohol problem when it passed the most recent federal highways law – and consequently boosted available federal highway dollars to the state by almost 50 percent, unadjusted for inflation, compared to funding under the federal law during the late 1990s and early 2000. However the gasohol issue adversely affected Minnesota's federal funding for quite some time. Here's why:

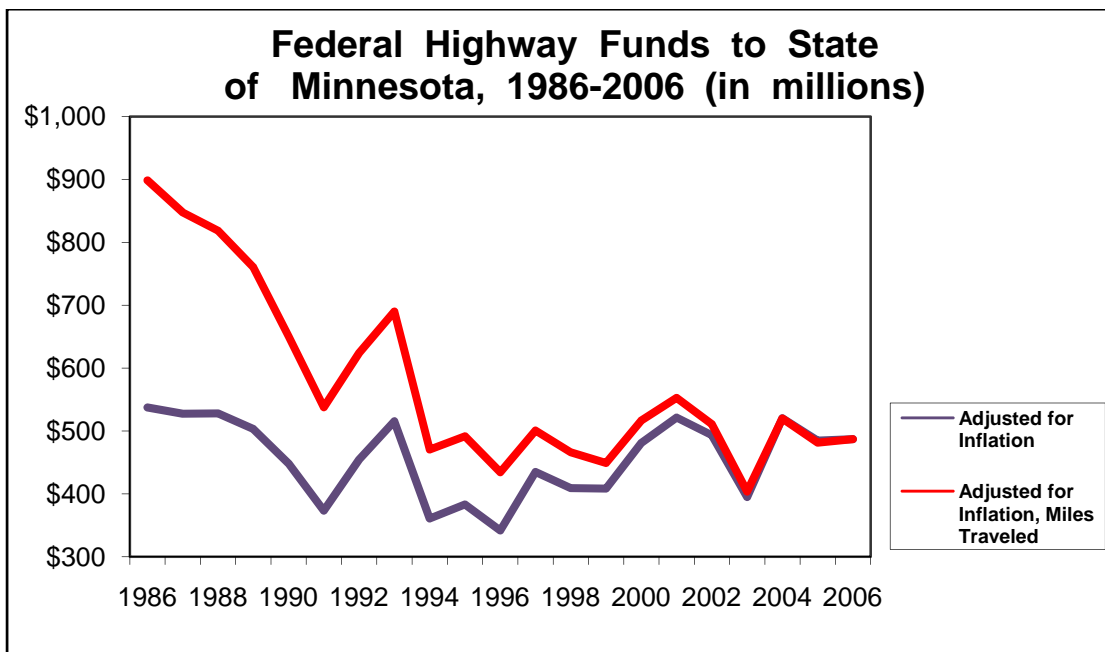
Minnesota required a motor fuel blend of 10 percent ethanol with 90 percent gasoline starting in the 1990s, when the federal tax incentives for gasohol production involved lower fuel taxes. Until the troublesome fuel tax provisions for gasohol were changed by Congress in late 2005, the tax treatment of gasohol lowered federal highway dollars for Minnesota. Minnesota's gasohol law, passed in 1991 and fully implemented in 1997, meant smaller contributions from the state to the federal Highway Trust Fund Account than if drivers had paid the higher per-gallon tax rate on gasoline. Indeed, for several years in the 1990s, Minnesota's payments into the trust fund declined even as vehicle miles traveled rose and gasoline purchases increased. Not only did the federal government assess a lower tax rate per gallon on gasohol, but a sizable portion of the tax on gasohol was diverted from the highway trust fund and used for federal deficit reduction. Consequently after additional take-downs on the per-gallon federal taxes, drivers for much of the last 20 years were paying about eight cents a gallon into the federal highway trust fund for gasohol compared to more than 15 cents for gasoline.

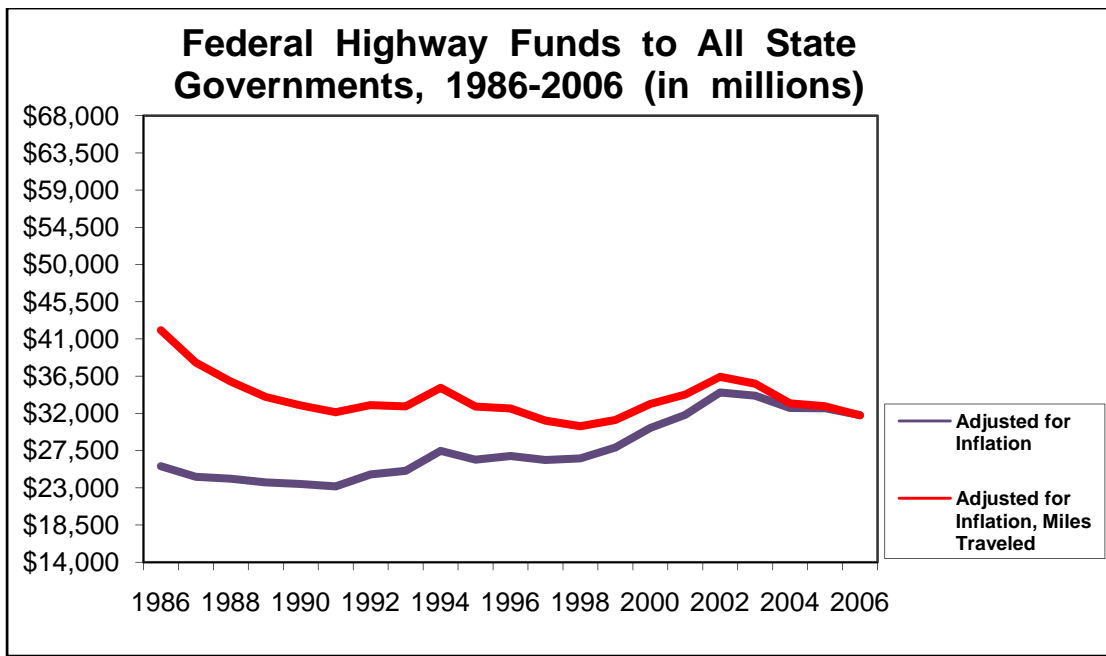
The lower per gallon highway trust fund contributions from gasohol adversely affected federal highway dollars to Minnesota in two ways. First highway funding to the states for the large federal Surface Transportation Program (STP) depends in part upon each state's level of tax payments into the highway trust fund. Fewer dollars in from Minnesota meant fewer dollars back for STP. Second the FHWA uses each state's contributions to the federal Highway Trust Fund Account in order to calculate an acceptable minimum level of federal highway funding based on the total allocations for about a dozen major federal programs. If a state's funding for those programs falls below a set percentage of that state's payments into the highway trust fund, then the state receives additional federal dollars to boost its highway funding to the minimum level. The minimum level was 85 percent through most of the 1990s, then was increased, first to 90 percent and later to 92 percent for 2008 and 2009. Because Minnesota for much of the 1990s and 2000s paid less into the highway trust fund for gasohol than it

would have for gasoline, it had a lower dollar level for its minimum allocation and less federal funding for years when its minimum allocation rule came into play.

Now the tax preferences for gasohol lower the dollars flowing into the federal government's general fund instead of the highway trust fund, and consequently tax breaks for gasohol no longer adversely affect states like Minnesota where gasohol use is common. As a result, the state will have more federal highway funds available to use, assuming it provides the required matching dollars. Federal dollars for major highway projects cover 80 percent or more of the costs but only if state and local governments provide matching funds to pay for the remainder. Consequently the flow of federal highway funds to a state depends significantly upon the state highway dollars available.

The inflation-adjusted decline in federal highway funding for Minnesota also may relate in part to completion of the interstate highway system in the state. In the mid- to late-1980s, Minnesota received federal Interstate Completion funds, granted to states for construction on gaps in the nation's interstate system and for bringing completed sections of the interstate up to federal standards. And, of course, federal highway funding to a state will fluctuate for any given set of years based on major construction projects underway and the significant flow of federal funds used to finance them. In some cases, federal funding now on the books for Minnesota will not be counted until planned project are underway and the dollars are actually spent.



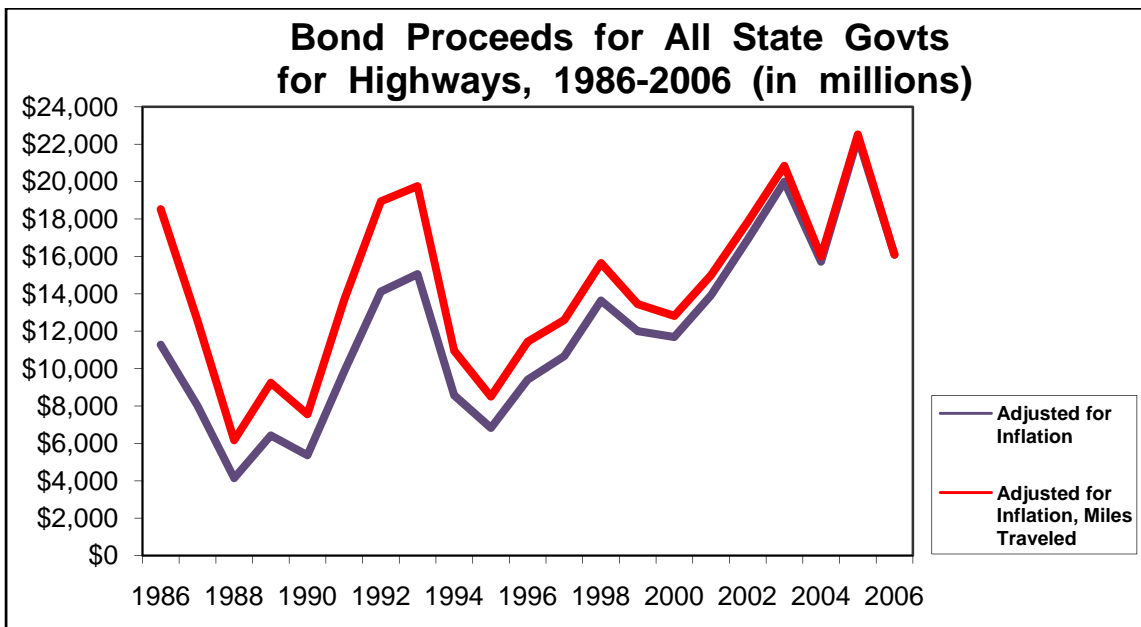
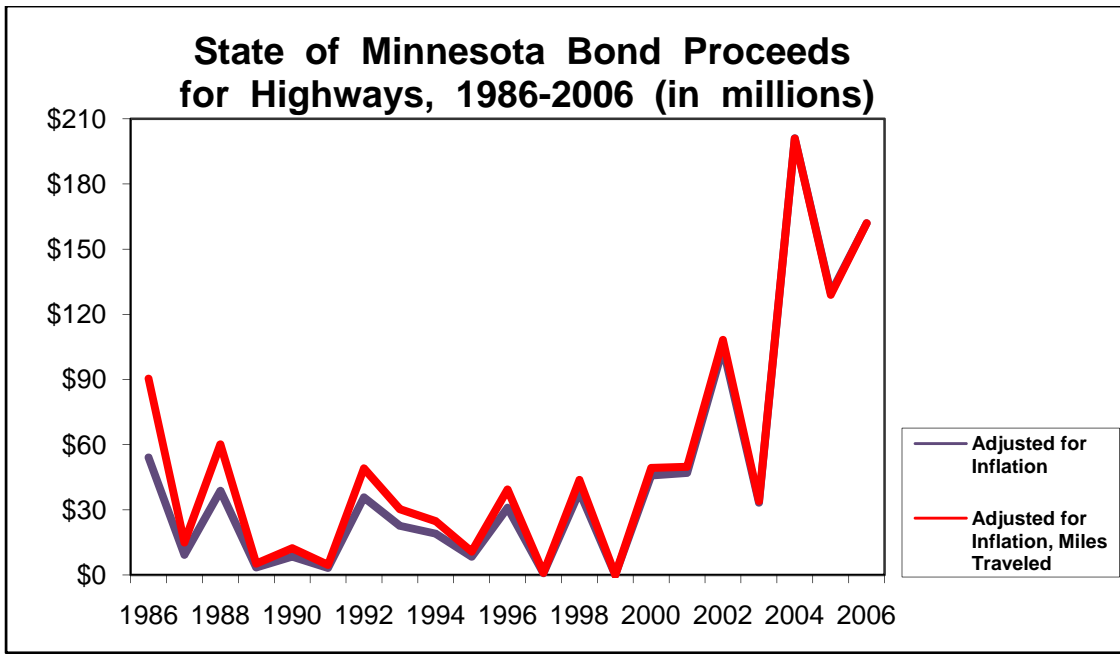


## ***State Bond Proceeds Used for Highways***

The State of Minnesota's proceeds from highways bonds – including state bonds used to finance local projects – spiked upward starting in 2002 to their highest levels in the last 20 years, adjusted for inflation and miles traveled. The 2006 level, at \$161.9 million, amounted to \$71.5 million more than the adjusted 1986 level, or 79.1 percent more in percentage terms. Adjusting for inflation alone, the state's bond proceeds for highways in 2006 were at a level three times the 1986 mark. For most years in the last 20, however, revenues from bond proceeds were below the adjusted 1986 amount. Because 1986 was a peak year for bond proceeds through to 2002, the state's overall amount from highway revenue bonds throughout the 20-year period registered at \$779.0 million lower than it would have been if the revenues had simply kept pace with the 1986 level adjusted for inflation and miles traveled. That said, bond financing differs from other highway revenue sources and should not necessarily be expected to track inflation or miles traveled. For instance, a state government's use of bonds for highway revenues will depend in part upon interest rates, the government's debt capacity thresholds, and the state's fiscal situation.

Highway revenues from bond proceeds in all states combined fluctuated over the last 20 years, ending in 2006 with an amount that fell short of the 1986 equivalent, adjusted for inflation and miles traveled. The growth in bond proceeds nationwide from 1986 to 2006 outpaced increases in inflation alone. In most cases, the FHWA tally for bond proceeds excludes obligations for terms of less than two years.





*Note: For the matching graphs on bond proceeds, the scales were based upon the separate high and low points for each set of data instead of upon the ratios of high and low data points to low and high marks on the scale. The proportional approach was impractical given that the range for Minnesota's data points included 0.*

## Appendix A

### Adjusting Dollar Levels for Past Years Based on Price Changes and Increases in Vehicle Miles Traveled through 2006

#### *Adjusting for Price Changes*

Throughout this report, the dollar levels for highway spending and revenues have been adjusted to reflect inflation and the growth in vehicle miles traveled through to 2006. For inflation, the report uses the price deflator for state and local government consumption expenditures and gross investment, as calculated by the U.S. Bureau of Economic Analysis for the National Income and Product Accounts. (The data come from “Table 1.1.9. Implicit Price Deflators for Gross Domestic Product,” state and local government consumption expenditures and gross investment.) The bureau uses chain-weighted data to calculate implicit price deflators in order to capture the effect of changes in the components of gross domestic product. This price index stands as the best measure available to track price changes for purchases by state and local governments. The price index reflects a broader basket of goods and investments than highway spending alone, but serves as an adequate stand in for gauging inflationary changes throughout the period from 1986 to 2006.

The implicit price deflator for state and local government spending is used to adjust for inflation throughout this report both because that index allows the Minnesota levels to be compared to comparable levels for all states combined – the price index may be applied to both state and national numbers – and because the price index is the best available measure for tracking changes in costs for state and local governments. Other analysts have sometimes adjusted highway spending levels for inflation using Minnesota’s construction cost index. However not all – or perhaps even most – highway spending by state government is for construction. In addition, Minnesota’s construction cost index cannot be applied to dollar levels for highway spending and revenues for all states.

#### *Adjusting for Increased Travel*

For the highway spending and revenue amounts included in this report, adjustments must be made to reflect the increased demands that travelers now place on Minnesota’s highways. Adjustments for inflationary price increases account for upward shifts in costs but do not address upward shifts in the number of people driving the state’s roadways nor the increased miles those drivers log now compared to 20 years ago. For this reason, the dollar amounts in this report have been adjusted using the Federal Highway Administration’s estimates for annual vehicle miles travel in Minnesota through to 2006. Adjustments for miles traveled are important because of the dramatic rise in travel on Minnesota roadways over the last 20 years. Based on data from the Minnesota Department of Transportation, the FHWA estimates that vehicles in the state traveled 33.81 billion miles on Minnesota roadways in 1986 but 56.52 billion in 2006 – an increase of more than two-thirds (up 67.2 percent, or 22.71 billion miles). By contrast, Minnesota’s population over that same period increased by just more than one-fifth (22.9 percent). The vehicle miles traveled on highways in all states and the District of Columbia from 1986 to 2006 is estimated to have increased 64.3 percent from 1.72 trillion in 1986 to 3.01 trillion in 2006, while the population rose by 24.7 percent.

While it is common practice to adjust highway dollars from past years to account for inflation, it is less common to adjust the dollar levels for vehicle miles traveled. The adjustment for miles traveled, however, is an important one, particularly in analyzing how Minnesota's highway system of today compares with the one from 20 years ago. A simple comparison between the state government's highway financials in 1986 and 2006, without adjustments for a two-thirds increase in vehicle miles traveled over that period, would present an incomplete and somewhat misleading picture. Certainly the highway system in past years had the excess capacity to handle some increases in miles traveled. But in order to examine how the old system – excess capacity and all – compares with the current system, this analysis must take into account the vehicle miles traveled back then compared to now.

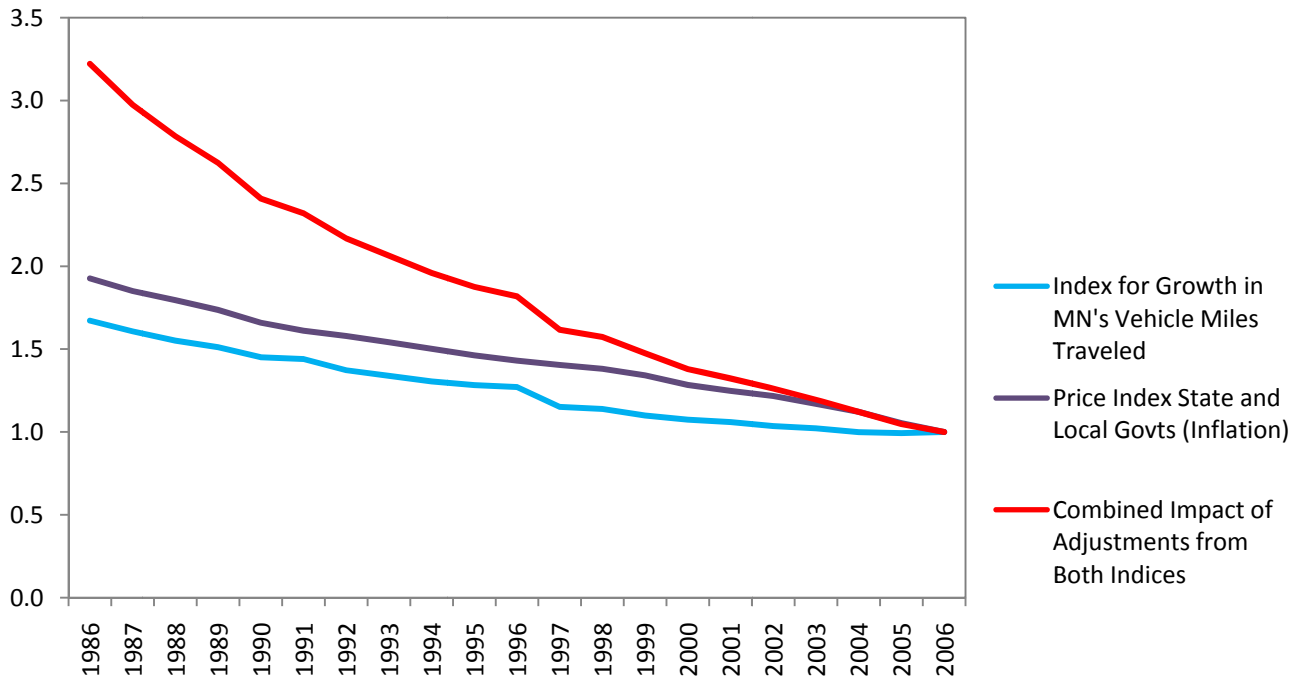
To adjust the dollar levels in this report for miles traveled, Growth and Justice compared the estimated number of vehicle miles traveled in each past year to the estimated number for 2006. Specifically, the 2006 levels for vehicle miles traveled in Minnesota and in all states were divided by the respective levels traveled in each past year back to 1986. Then the dollar amounts for any given past year were multiplied by the quotient derived from dividing vehicle miles traveled in 2006 by vehicle miles traveled in the past year. In the case of Minnesota, the resulting, adjusted dollar amount for, say, highway spending shows how much the state's government would have spent if the ratio of dollars to miles traveled in the past year were held steady but the miles traveled were at their 2006 level. In other words, in the case of Minnesota and highway spending, the adjusted number shows how much the State of Minnesota would need to have spent in earlier years at the 2006 level for vehicle miles traveled in order to keep the past dollar amount even in terms of spending per vehicle mile traveled on state roadways.

Here's an illustration of how the adjustment for vehicle miles traveled was made to the 1986 dollar amount for total state disbursements on highways: The FHWA reports the 1986 amount as \$989.6 million. Adjusted for inflation using the price index for state and local governments, this amount is equivalent to \$1.91 billion when stated in 2006 dollars. In order to adjust the level for changes in vehicle miles traveled, Growth and Justice took the estimated level for vehicle miles traveled on Minnesota's roadways in 2006 (56,518,000,000) and divided it by the estimated level for vehicle miles traveled on Minnesota's roadways in 1986 (33,806,000,000). The resulting quotient is 1.6718. Growth and Justice then multiplied the inflation-adjusted 1986 level for State of Minnesota highway disbursements (\$1.91 billion) by the quotient for vehicle miles traveled in 2006 and 1986 (1.6718) to arrive at an adjusted 1986 spending level of \$3.19 billion. The \$3.19 billion amount shows what the State of Minnesota would have spent on highways in 1986 both in terms of 2006 dollars (the adjustment for inflation) and in terms of dollars needed to put the 1986 amount on par with the 2006 level for vehicle miles traveled (the adjustment for miles traveled).

### ***Levels for Inflation and Travel Adjustments***

Both price levels and vehicle miles traveled increased significantly over the last 20 years. Inflation for state and local government purchases from 1986 to 2006 increased 92.7 percent, so price levels for similar goods and services almost doubled in that time. Vehicle miles traveled on Minnesota's roadways jumped 67.2 percent, so the adjustments made to 1986 dollar levels in order to account for the growth in miles traveled inflates the 1986 amounts by about one and two-thirds their original levels. Using standard multiplication to combine the two factors – the levels are not additive – the total adjustment for inflation and vehicle miles traveled results in an index that rose 222.1 percent from 1986 to 2006.

## Indices for Adjustments to Minnesota's Highway Dollars: Inflation & Vehicle Miles Traveled, 1986-2006



*Throughout this report, dollar levels from past years are adjusted upward to their 2006 equivalents using the price index and vehicle miles traveled.*

## Appendix B

# Data Tables

## Selected State Government Disbursements for Highways & Bridges in Minnesota, 1986-2006: Adjusted for Increases in Both Inflation & Vehicle Miles Traveled (VMT)

*Includes federal dollars. Also includes disbursements to local governments by the state government of both state and federal dollars.*

	<b>Total Disbursements for Highways (w/inflation &amp; VMT)</b>	<b>Capital Outlays (w/inflation &amp; VMT)</b>	<b>Maintenance &amp; Highway Services (w/inflation &amp; VMT)</b>	<b>Grants-in-aid Disbursements (w/inflation &amp; VMT)</b>
1986	3,187,679	1,627,104	351,707	727,390
1987	2,921,163	1,592,165	326,167	661,102
1988	2,863,634	1,469,166	338,655	693,862
1989	2,935,716	1,556,386	312,533	741,277
1990	2,957,738	1,463,678	304,458	826,960
1991	2,653,985	1,359,119	334,167	631,776
1992	3,006,233	1,425,601	314,133	884,867
1993	2,744,109	1,254,800	333,214	805,696
1994	2,363,510	1,049,097	294,569	738,186
1995	2,269,302	957,261	282,133	767,191
1996	2,498,915	937,390	406,861	850,363
1997	2,345,318	903,455	434,201	742,704
1998	2,166,193	884,058	367,767	638,638
1999	2,262,618	905,695	365,053	743,297
2000	2,334,419	961,861	444,660	665,751
2001	2,225,698	941,938	404,900	619,794
2002	2,353,121	943,859	372,532	794,033
2003	2,355,153	810,936	519,912	797,476
2004	2,236,381	885,272	395,907	753,942
2005	2,230,997	896,833	360,051	711,698
2006	2,142,807	866,704	387,218	628,172

Source: Inflation adjustments to 2006 levels calculated using the U.S. Bureau of Economic Analysis' National Income and Product Accounts Tables, "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product," state and local government consumption expenditures and gross investment, January 2008, <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>. Vehicle miles traveled and highway revenues taken from the Federal Highway Administration of the U.S. Department of Transportation, Highway Statistics, annual reports for 1986 through 2006, <http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm>. Data on miles traveled come from Section V on roadways, Table VM-2, "Functional System Travel" and count estimated travel on rural and urban interstates, freeways, expressways, and other principal arterials. Data on revenues come from Section IV on finance, Table SF-1, "Revenues Used by States for Highways." Growth and Justice obtained 2006 data for vehicle miles traveled and highway finance from yet-to-be published tables provided by the FHWA in January 2008. All dollar levels are calculated on a cash basis, and expenditures reflect disbursements, not budgeted amounts. For complete notes and explanations about the FHWA's Highway Statistics series go to About Highway Statistics at <http://www.fhwa.dot.gov/policy/ohpi/hss/about/hss.htm> and Guide to Reporting Highway Statistics at <http://www.fhwa.dot.gov/policy/ohpi/hss/guide.htm>.

## Selected State Government Revenues for Highways & Bridges in Minnesota, 1986-2006: Adjusted for Increases in Both Inflation & Vehicle Miles Traveled (VMT)

*Includes federal dollars. Also includes local government payments to the state. Bond proceeds include state bonds for local projects.*

	<b>Total Highway Revenues (w/inflation &amp; VMT)</b>	<b>Motor-Fuel Taxes (w/inflation &amp; VMT)</b>	<b>Motor Vehicle &amp; Motor Carrier Taxes (w/inflation &amp; VMT)</b>	<b>Federal Funds Payments (w/inflation &amp; VMT)</b>	<b>Bond Proceeds (w/inflation &amp; VMT)</b>
1986	3,163,226	1,079,593	718,199	898,603	90,414
1987	2,976,552	1,071,023	765,569	847,755	14,926
1988	3,132,672	1,150,837	750,917	818,746	60,088
1989	3,219,229	1,141,707	787,453	760,772	5,261
1990	2,989,603	1,079,144	804,236	650,705	12,320
1991	2,685,369	1,011,941	837,280	537,637	4,648
1992	2,725,522	965,487	863,258	624,349	49,082
1993	2,710,109	936,267	879,326	690,196	30,241
1994	2,465,721	901,094	901,615	470,654	24,767
1995	2,409,678	894,158	859,215	491,613	10,746
1996	2,438,131	904,361	868,505	434,373	39,318
1997	2,348,036	839,971	851,553	500,707	975
1998	2,288,051	829,225	794,588	466,125	43,747
1999	2,223,538	868,446	842,760	449,065	0
2000	2,387,591	816,152	865,521	516,722	49,250
2001	2,400,744	786,549	665,875	552,642	49,824
2002	2,474,543	739,383	648,727	511,085	108,234
2003	2,130,308	732,710	603,215	403,609	34,056
2004	2,303,467	720,323	582,773	519,916	200,884
2005	2,154,810	682,776	552,096	481,580	128,977
2006	2,161,259	656,351	542,863	487,106	161,912

Source: Inflation adjustments to 2006 levels were calculated using the U.S. Bureau of Economic Analysis' National Income and Product Accounts Tables, "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product," state and local government consumption expenditures and gross investment, January 2008, <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>. Vehicle miles traveled and highway revenues taken from the Federal Highway Administration of the U.S. Department of Transportation, Highway Statistics, annual reports for 1986 through 2006, <http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm>. Data on miles traveled come from Section V on roadways, Table VM-2, "Functional System Travel" and count estimated travel on rural and urban interstates, freeways, expressways, and other principal arterials. Data on revenues come from Section IV on finance, Table SF-1, "Revenues Used by States for Highways." Growth and Justice obtained 2006 data for vehicle miles traveled and highway finance from yet-to-be published tables provided by the FHWA in January 2008. All dollar levels are calculated on a cash basis, and expenditures reflect disbursements, not budgeted amounts. For complete notes and explanations about the FHWA's Highway Statistics series go to About Highway Statistics at <http://www.fhwa.dot.gov/policy/ohpi/hss/abouthss.htm> and Guide to Reporting Highway Statistics at <http://www.fhwa.dot.gov/policy/ohpi/hss/guide.htm>.

## Selected State Government Disbursements for Highways & Bridges in Minnesota,

### 1986-2006: Adjusted for Increases in Inflation Only

Includes federal dollars. Also includes disbursements to local governments by the state government of both state and federal dollars.

	<b>Total Disbursements for Highways (inflation-adjusted)</b>	<b>Capital Outlays (inflation-adjusted)</b>	<b>Maintenance &amp; Highway Services (inflation-adjusted)</b>	<b>Grants-in-aid Disbursements (inflation-adjusted)</b>
1986	1,906,696	973,245	210,372	435,085
1987	1,817,625	990,687	202,950	411,356
1988	1,846,684	947,428	218,390	447,453
1989	1,942,305	1,029,724	206,776	490,438
1990	2,038,149	1,008,606	209,799	569,850
1991	1,843,298	943,962	232,093	438,793
1992	2,189,436	1,038,264	228,783	644,447
1993	2,049,609	937,226	248,882	601,784
1994	1,811,462	804,058	225,766	565,767
1995	1,769,572	746,460	220,004	598,246
1996	1,965,998	737,482	320,094	669,015
1997	2,036,747	784,588	377,073	644,987
1998	1,902,116	776,284	322,933	560,783
1999	2,058,127	823,840	332,060	676,119
2000	2,172,631	895,198	413,843	619,611
2001	2,100,587	888,990	382,140	584,954
2002	2,271,683	911,194	359,639	766,553
2003	2,304,232	793,402	508,671	780,233
2004	2,238,439	886,086	396,271	754,636
2005	2,246,234	902,958	362,510	716,559
2006	2,142,807	866,704	387,218	628,172

Source: Inflation adjustments to 2006 levels were calculated using the U.S. Bureau of Economic Analysis' National Income and Product Accounts Tables, "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product," state and local government consumption expenditures and gross investment, January 2008, <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>. Highway revenue data taken from the Federal Highway Administration of the U.S. Department of Transportation, *Highway Statistics*, annual reports for 1986 through 2006, <http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm>, Section IV on finance, Table SF-1, "Revenues Used by States for Highways." Growth and Justice obtained 2006 data for vehicle miles traveled and highway finance from yet-to-be published tables provided by the FHWA in January 2008. All dollar levels are calculated on a cash basis, and expenditures reflect disbursements, not budgeted amounts. For complete notes and explanations about the FHWA's *Highway Statistics* series go to *About Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/about/hss.htm> and *Guide to Reporting Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/guide.htm>.



## Selected State Government Revenues for Highways & Bridges in Minnesota, 1986-2006: Adjusted for Increases in Inflation Only

Includes federal dollars. Also includes local government payments to the state. Bond proceeds include state bonds for local projects.

	<b>Total Highway Revenues (inflation-adjusted)</b>	<b>Motor-Fuel Taxes (inflation-adjusted)</b>	<b>Motor Vehicle &amp; Motor Carrier Taxes (inflation-adjusted)</b>	<b>Federal Funds Payments (inflation-adjusted)</b>	<b>Bond Proceeds (inflation-adjusted)</b>
1986	1,892,070	645,754	429,588	537,495	54,081
1987	1,852,090	666,419	476,358	527,496	9,287
1988	2,020,179	742,145	484,247	527,988	38,749
1989	2,129,881	755,367	520,989	503,336	3,481
1990	2,060,106	743,627	554,191	448,395	8,490
1991	1,865,095	702,833	581,524	373,411	3,229
1992	1,984,995	703,163	628,710	454,712	35,746
1993	2,024,214	699,309	656,779	515,516	22,587
1994	1,889,799	690,624	691,024	360,722	18,982
1995	1,879,036	697,253	670,005	383,354	8,380
1996	1,918,176	711,498	683,288	341,739	30,933
1997	2,039,108	729,457	739,516	434,830	847
1998	2,009,119	728,136	697,721	409,301	38,414
1999	2,022,579	789,957	766,593	408,480	0
2000	2,222,118	759,588	805,536	480,910	45,837
2001	2,265,793	742,335	628,445	521,576	47,024
2002	2,388,903	713,794	626,275	493,397	104,488
2003	2,084,248	716,867	590,173	394,882	33,320
2004	2,305,586	720,986	583,309	520,395	201,069
2005	2,169,527	687,439	555,866	484,869	129,858
2006	2,161,259	656,351	542,863	487,106	161,912

Source: Inflation adjustments to 2006 levels were calculated using the U.S. Bureau of Economic Analysis' National Income and Product Accounts Tables, "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product," state and local government consumption expenditures and gross investment, January 2008, <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>. Highway revenues taken from the Federal Highway Administration of the U.S. Department of Transportation, *Highway Statistics*, annual reports for 1986 through 2006, <http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm>, Section IV on finance, Table SF-1, "Revenues Used by States for Highways." Growth and Justice obtained 2006 data for vehicle miles traveled and highway finance from yet-to-be published tables provided by the FHWA in January 2008. All dollar levels are calculated on a cash basis, and expenditures reflect disbursements, not budgeted amounts. For complete notes and explanations about the FHWA's *Highway Statistics* series go to *About Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/abouthss.htm> and *Guide to Reporting Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/guide.htm>.

## Selected State Government Disbursements for Highways & Bridges in Minnesota, 1986-2006: *Unadjusted for Increases in Inflation & Vehicle Miles Traveled*

*Includes federal dollars. Also includes disbursements to local governments by the state government of both state and federal dollars.*

	<b>Total Disbursements for Highways (unadjusted)</b>	<b>Capital Outlays (unadjusted)</b>	<b>Maintenance &amp; Highway Services (unadjusted)</b>	<b>Grants-in-aid Disbursements (unadjusted)</b>
1986	989,575	505,114	109,183	225,809
1987	982,101	535,289	109,658	222,264
1988	1,028,357	527,591	121,614	249,172
1989	1,118,751	593,112	119,101	282,488
1990	1,228,208	607,796	126,427	343,397
1991	1,144,160	585,930	144,063	272,365
1992	1,386,626	657,559	144,894	408,145
1993	1,329,907	608,127	161,489	390,473
1994	1,206,117	535,362	150,321	376,702
1995	1,210,014	510,421	150,436	409,074
1996	1,373,901	515,376	223,692	467,529
1997	1,450,395	558,716	268,519	459,304
1998	1,377,045	561,994	233,789	405,981
1999	1,533,807	613,962	247,466	503,874
2000	1,692,476	697,358	322,383	482,676
2001	1,683,284	712,383	306,224	468,747
2002	1,865,817	748,397	295,385	629,598
2003	1,969,322	678,085	434,738	666,830
2004	1,995,379	789,871	353,242	672,694
2005	2,130,536	856,449	343,838	679,651
2006	2,142,807	866,704	387,218	628,172

Source: The Federal Highway Administration of the U.S. Department of Transportation, *Highway Statistics*, annual reports for 1986 through 2006, <http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm>, Section IV on finance, Table SF-2, "State Disbursements for Highways." Growth and Justice obtained 2006 data for vehicle miles traveled and highway finance from yet-to-be published tables provided by the FHWA in January 2008. All dollar levels are calculated on a cash basis, and expenditures reflect disbursements, not budgeted amounts. For complete notes and explanations about the FHWA's *Highway Statistics* series go to *About Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/abouthss.htm> and *Guide to Reporting Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/guide.htm>.

## Selected State Government Revenues for Highways & Bridges in Minnesota, 1986-2006: *Unadjusted for Increases in Inflation & Vehicle Miles Traveled*

*Includes federal dollars. Also includes local government payments to the state. Bond proceeds include state bonds for local projects.*

	<b>Total Highway Revenues (unadjusted)</b>	<b>Motor-Fuel Taxes (unadjusted)</b>	<b>Motor Vehicle &amp; Motor Carrier Taxes (unadjusted)</b>	<b>Federal Funds Payments (unadjusted)</b>	<b>Bond Proceeds (unadjusted)</b>
1986	981,984	335,146	222,956	278,960	28,068
1987	1,000,723	360,080	257,386	285,017	5,018
1988	1,124,971	413,276	269,661	294,019	21,578
1989	1,226,793	435,085	300,085	289,917	2,005
1990	1,241,440	448,117	333,961	270,207	5,116
1991	1,157,690	436,258	360,960	231,781	2,004
1992	1,257,148	445,331	398,178	287,981	22,639
1993	1,313,429	453,753	426,157	334,497	14,656
1994	1,258,276	459,835	460,101	240,178	12,639
1995	1,284,864	476,774	458,142	262,133	5,730
1996	1,340,482	497,217	477,503	238,818	21,617
1997	1,452,076	519,456	526,619	309,648	603
1998	1,454,510	527,137	505,118	296,315	27,810
1999	1,507,315	588,711	571,299	304,417	0
2000	1,731,026	591,718	627,511	374,628	35,707
2001	1,815,670	594,863	503,598	417,960	37,682
2002	1,962,094	586,265	514,383	405,245	85,820
2003	1,781,312	612,674	504,394	337,488	28,477
2004	2,055,235	642,698	519,971	463,888	179,236
2005	2,057,780	652,031	527,235	459,895	123,169
2006	2,161,259	656,351	542,863	487,106	161,912

Source: The Federal Highway Administration of the U.S. Department of Transportation, *Highway Statistics*, annual reports for 1986 through 2006, <http://www.fhwa.dot.gov/policy/ohpi/hss/index.htm>, Section IV on finance, Table SF-1, "Revenues Used by States for Highways." Growth and Justice obtained 2006 data for vehicle miles traveled and highway finance from yet-to-be published tables provided by the FHWA in January 2008. All dollar levels are calculated on a cash basis, and expenditures reflect disbursements, not budgeted amounts. For complete notes and explanations about the FHWA's *Highway Statistics* series go to *About Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/abouthss.htm> and *Guide to Reporting Highway Statistics* at <http://www.fhwa.dot.gov/policy/ohpi/hss/guide.htm>.

## Indices for Adjustment Factors: Price, Miles Traveled

	<i>Index for State &amp; Local Govt Prices (Inflation)</i>	<i>Index for Minnesota's Vehicle Miles Traveled</i>	<i>Combined Index for Inflation &amp; MN's Vehicle Miles Traveled</i>
1986	66.62	64.27	42.82
1987	69.36	66.86	46.37
1988	71.49	69.29	49.53
1989	73.94	71.09	52.56
1990	77.36	74.04	57.28
1991	79.68	74.63	59.46
1992	81.30	78.25	63.62
1993	83.29	80.25	66.85
1994	85.47	82.35	70.39
1995	87.78	83.79	73.55
1996	89.71	84.53	75.83
1997	91.41	93.31	85.30
1998	92.93	94.35	87.68
1999	95.67	97.74	93.50
2000	100.00	100.00	100.00
2001	102.87	101.41	104.32
2002	105.44	103.73	109.37
2003	109.71	105.12	115.33
2004	114.43	107.55	123.07
2005	121.76	108.18	131.72
2006	128.37	107.45	137.93

Source: Price index for state and local governments taken from the U.S. Bureau of Economic Analysis' National Income and Product Accounts Tables, "Table 1.1.9. Implicit Price Deflators for Gross Domestic Product," state and local government consumption expenditures and gross investment, January 2008, <http://www.bea.gov/national/nipaweb/SelectTable.asp?Selected=N>. The index for vehicle miles traveled was calculated using estimates for vehicle miles traveled taken from the Federal Highway Administration of the U.S. Department of Transportation, *Highway Statistics*, annual reports for 1986 through 2006, Section V on roadways, Table VM-2, "Functional System Travel." The combined index is calculated by multiplying the price index number for inflation from a given year by the corresponding index number for vehicle miles and then dividing by 100 because the index series are based on 100 rather than 1. The indices are constructed with 2000 equal to 100.

